CIE-GROUP's
AVBIGBook

www.cie-group.com

www.cie-group.com

bigger - better - faster - wider

The brand new CIE-Group website is bigger and better than ever before; faster and easier to search through 1000's of products for the PA, AV, CCTV, electronics and test professional.

Full customer access to information on 1000's of products and ordering facilities 24 hours a day, 7 days a week, 365 days of the year

Fully searchable product database with product comparison facility, alternative & related product suggestions.

Secure Trade Log in Zone for CIE-Group customers, providing customer buy prices and order history information.

Accurate customer-specific pricing (available in GBP, Euros and Dollars).

Per-product stock level information for ease of ordering.

Secure e-commerce facilities - customer ordering made easy; wherever and whenever you need it!

cie-group

Contents

Company Profile

CIE-Group is one of the industry's longest established providers. With a history of almost 50 years providing innovative, high quality, cost effective solutions, we have developed a diverse and comprehensive portfolio of products to meet the demands of the AV, commercial audio, CCTV, entertainment, communications and OEM business sectors.

Committed to providing industry with innovative and unsurpassed pre- and post-sales service, our products are used by many of the UK's leading audio visual installers, sound system providers and blue chip companies, as well as distribution, public/private sector and high street leading brands.

CIE-Group is an exclusive 'tier 1' distributor for many market leading professional brands. Key to our success has been the diversity and innovation of our continually-developing product range, combined with the valuable relationships we build with our manufacturers and customers.

This partnership ensures direct access to an expert UK and international team of sales, training and technical advisers to support our customers all the way from initial site surveys, to product demonstrations to on-site end-client product training and support.

More than just a distributor...

What makes CIE-Group different to other distributors and resellers?

Giving our customers all the support and advice they need to make the best professional, informed decisions on the products they specify without compromise.

From simply providing detailed product information, training and advice, to UK-based service & repair facilities, assisting customer site surveys & demonstrations, to 'ready to install' full rack system design and build services; CIE-Group pride ourselves on supporting our customers – and your end clients – in achieving the very best results from the full range of products and services we provide.

How to Order

Our Sales Office is open between the hours of **8.30am** and **5.30pm** five days a week to service your orders. Our Sales Team is waiting to provide information and support on our full product range, in addition to our extensive on-line product and technical database, should you require it. We can accept your orders by phone, fax, email, online or by post.

And now with our new e-commerce facility, ordering is available 24 hours a day, every day of the week at www.cie-group.com.

Tel: +44 (0)115 9770075

Fax: +44 (0)115 9770081

Email: info@cie-group.com

www: www.cie-group.com

Mail to: CIE-Group Ltd Widdowson Close Blenheim Ind Est
Bulwell Nottingham NG6 8WB UK

Methods of Payment:

- **Credit Account**   (Contact the sales office for an application form)
- **Credit or Debit Card** (Most major cards accepted online or via telephone)
- **Cheque with order**   (Clearance required before goods can be released)
- **Bank Transfer**

Delivery Options:

Standerd Delivery:
Orders recieved before 3.30pm - 1~2 working days (Registered Carrier)
Orders recieved post 3.30pm - 2~3 working days (Registered Carrier)
(Charges based on consignment weight)

Next Day Delivery/Next Day AM/Saturday delivery/International
The CIE-Group Sales Team will advise on a range of flexible options to meet your specific needs on delivery times, dates and costs.

Affiliates

Approvals and memberships to which CIE-Group has a long term affiliation.

BSI **UKAS** QUALITY MANAGEMENT 003

Certificate No. FS 31532

CIE-Group is registered with the **British Standards Institute's ISO9001:2008 Quality Assurance System**, which guarantees our customers the very highest quality levels in Distribution and Design & Installation Planning for commercial sound, AV, CCTV and electronics equipment.

plasa member

A long-term member of PLASA - the Professional Lighting and Sound Association - the world's leading body for suppliers to the professional installation, events and entertainment technology industries.

Member of
BESA

An established member of BESA - the British Educational Suppliers Association - ensuring high quality, innovative products and services for the education sector.

ISCE supporting member

A key Supporting Member of ISCE - The Institute of Sound and Communications Engineers - the UK's leading collective of professional commercial AV engineers, suppliers and designers.

Symbol Glossary

To highlight any technologies, connectivity or compliance relative to each product, you'll find a series of symbols at the top of each product page.

Please use the below key as an explanation of each symbol...

100v Line Audio System	**Low Impedance Audio System**	**Channel 38 Compliant**	**Ingress Protection Rating**
EN54 - Compliant for Fire Alarm Systems	**Induction Loop Facility**	**RS232 Connectivity**	**RF Immunity**
MP3 Audio File Player	**I.P. Connectivity**	**HDMI - High Definition Multimedia Interface**	**DisplayPort**
DVI - Digital Video Interface	**3D Ready**	**HD Ready**	**USB - Universal Serial Bus**
Bluetooth Wireless Connectivity			

At CYP we understand that time is of the essence for every installation. If an installer runs into connectivity issues on site, CYP have an extensive range of effective 'get out of jail' solutions to help

GET OUT OF JAIL USING THE ESSENTIAL CYP/// SOLUTIONS

Now available from CIE-Group - see pages 237~344 for details of the full range.

Loudspeakers

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.
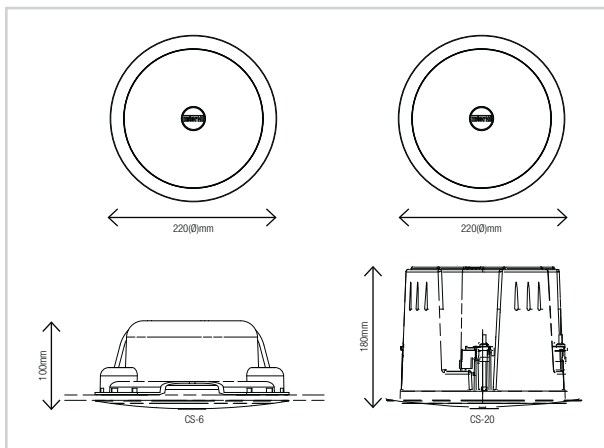
Soundfield

Induction Loops

interM

- **CS-6:** 6W Ceiling Speaker
- **CS-20:** 20W Ceiling Speaker

These high quality, fast-fit ceiling loudspeakers feature premium grade drivers for impressive acoustic performance and long-term reliability.

Ideal for paging and ambient background music applications such as offices, retail, waiting rooms, corridors, etc...

Features:

- Metal construction
- Fast-fix solution
- Simple unobtrusive design
- Premium grade speaker drivers
- CS-20 supplied with comprehensive hardware/rails as standard

220(Ø)mm 220(Ø)mm

100mm 180mm

CS-6 CS-20

Specifications:

Model:	CS–6	CS–20
Rated Power	6W	20W
Impedance	COM, 1.7kΩ, 4kΩ, 8kΩ 6W/1.7kΩ, 3.5W/4kΩ 1.75W/8kΩ	COM, 500kΩ, 1kΩ, 2kΩ 20W/500kΩ, 10W/1kΩ 5W/2kΩ
Frequency Response	150Hz ~ 15kHz	150Hz ~ 15kHz
SPL @ 1W/1m	92dB	92dB
Dimensions	220(Ø) x 100(D) mm	230(Ø) x 180(D) mm
Weight	0.7kg	2kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

ic audio

- **DL06-165T:**
  6W Quick-Fit Ceiling Speaker
- **DL06-165T/BS5839:** 6W Ceiling Speaker ♦

An all-round performer, the DL06-165T ceiling speaker is ideal for any paging and low ambient background music reproduction in many applications such as offices, retail, waiting rooms, corridors, etc.

Metal construction and high quality 100v transformer complete this installation-friendly ceiling speaker system.

Also available as an EN54-compliant version for approved fire alarm systems.

Features:

- Metal construction
- White RAL9010
- Quick-fit mounting system
- High quality 100v transformer
- Full range 6½" driver
- Optional steel backbox - F165

100mm
70mm
223mm Ø
197mm Ø
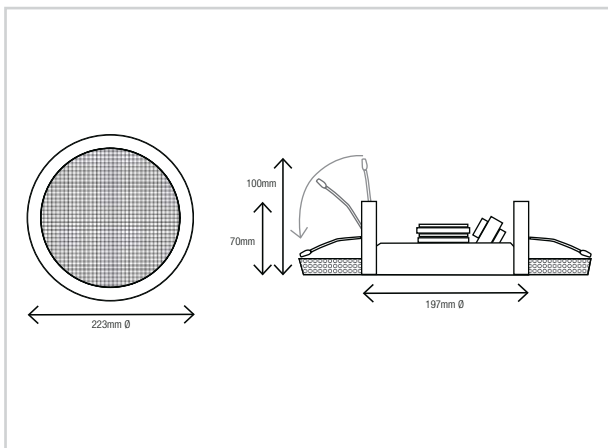
Specifications:

Model:	DL06–165T	DL06–165T/BS5839
100v Power Tappings	1.5, 3, 6W	1.5, 3, 6W
Frequency Response	100Hz ~ 16kHz	100Hz ~ 16kHz
SPL@1W/1m	97.9dB	97.9dB
Ceramic Terminal	No	Yes
Thermal Fuse	No	Yes
Heat Resistant Cable	No	Yes
Colour	White RAL9010	White RAL9010
Material	Metal	Metal
Dimensions	220(Ø) x 100(D) mm	220(Ø) x 120(D) mm
Weight	1.3kg	1.3kg

Need help choosing the right product?
Call our technical support team now on:
Tel. +44(0)115 977 0075

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Contractor

• **CSL106T:** 6W Ceiling Loudspeaker

Built-in speaker with painted metal grille for voice and background music applications.

Features:
- Dual cone loudspeaker with 5" woofer
- Power 3, 6W with 100v transformer
- Hole for mounting 150mm
- White RAL9016

150mm

150(Ø)mm

60mm

150mm
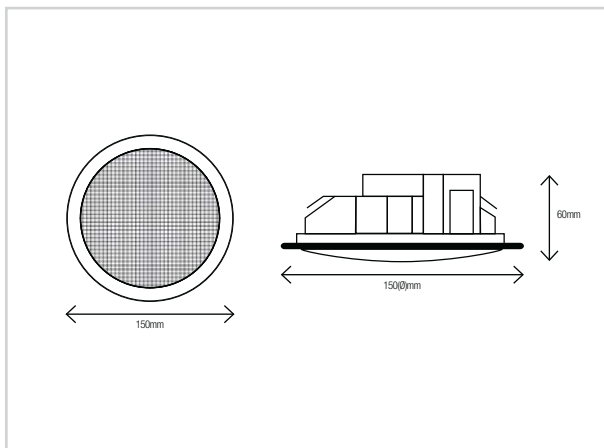
Specifications:

Model:	CSL106T
Rated Power	3, 6W
Loudspeaker	Dual cone, 5" woofer
Frequency Response	100Hz ~ 20kHz
SPL @ 1W/1m	93dB
Coulour	White RAL 9016
Input Voltage	100v
Dimensions	150(Ø) x 60(D) mm
Cut-out Diameter	150(Ø) mm
Weight	0.5kg

Audio Contractor (FBT)

CSL520TIC: 20W Ceiling Loudspeaker

ABS in-ceiling speaker with metal protection grille for voice and background music applications.

Features:
- White RAL9016
- Metal back cover
- Coaxial loudspeaker with 5" woofer and 1/2" tweeter
- 88dB ±3dB sensitivity @ 1W/1m
- Nominal power 2.5/5/10/20W/8Ω with 100v line transformer
- Hole for mounting 170mm

203mm   170(Ø)mm   145mm
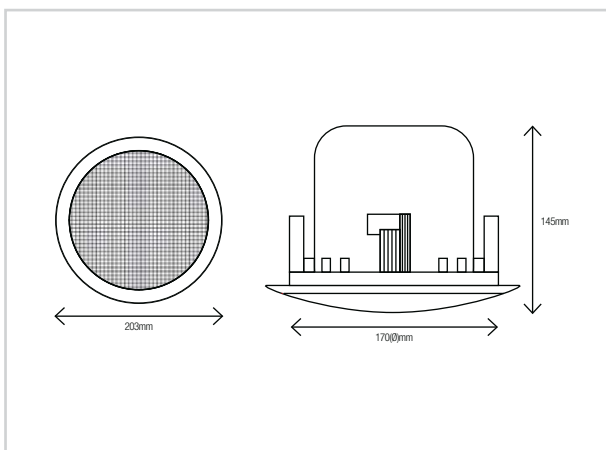
Specifications:

Model:	CSL520TIC
Rated Power	2.5, 5, 10, 20W/8Ω
Loudspeaker	Coaxial loudspeaker, 5" woofer, ½" tweeter
Frequency Response	100Hz ~ 20kHz
SPL @ 1W/1m	88dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	203(Ø) x 145(D) mm
Cut-out Diameter	170(Ø) mm
Weight	1.8kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Contractor

• CSL630TIC: 30W Ceiling Loudspeaker

ABS in-ceiling speaker with metal protection grille.

Features:
- White RAL9016
- Metal back cover
- Coaxial loudspeaker with 6" woofer and 1/2" tweeter
- 88dB ±3dB sensitivity @ 1W/1m
- Nominal power 3.8/7.5/15/30W/8Ω with 100/70v line transformer
- 90Hz ~ 20KHz Frequency Response
- Hole for mounting 200mm

230mm

150mm

200mm
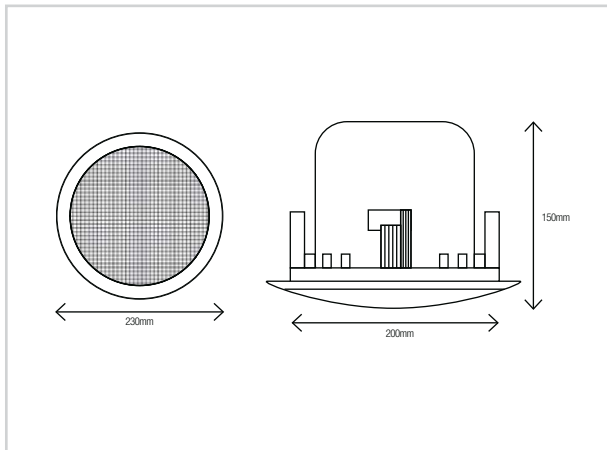
Specifications:

Model:	CSL630TIC
Rated Power	3.8, 7.5, 15, 30W/8Ω
Loudspeaker	Coaxial loudspeaker, 6" woofer, ½" tweeter
Frequency Response	90Hz ~ 20kHz
SPL @ 1W/1m	88dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	230(Ø) x 150(D) mm
Cut-out Diameter	200(Ø) mm
Weight	2.3kg

• CSL840TIC: 40W Ceiling Loudspeaker

ABS in-ceiling speaker with metal protection grille.

Features:
- White RAL9016
- Metal back cover
- Full range 2.5" Dual Cone
- 87dB ±3dB sensitivity @ 1W/1m
- Nominal power 1.5/3/6W with 100v line transformer
- 120Hz ~ 20KHz Frequency Response
- Hole for mounting 240mm

270mm

185mm

240mm
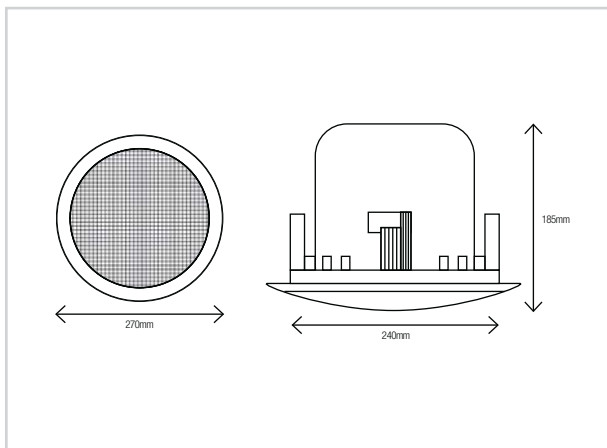
Specifications:

Model:	CSL840TIC
Rated Power	5, 10, 20, 40W/8Ω
Loudspeaker	Coaxial loudspeaker, 6" woofer, ½" tweeter
Frequency Response	50Hz ~ 20kHz
SPL @ 1W/1m	88dB
Colour	White RAL 9016
Input Voltage	100v
Dimensions	270(Ø) x 185(D) mm
Cut-out Diameter	240(Ø) mm
Weight	3.1kg

![Audio Contractor / FBT logo]

MCSL006/TWP:
6W Moisture-Proof Ceiling Speaker

This IP55-approved unit is ideal for installation in damp, humid environments such as changing rooms, bathrooms or even outdoors in protected areas.

One-piece construction and quick-fit spring mounting system complete a versatile package.

Features:
- Water / ingress resistance (IP55 rated)
- One-piece construction
- White RAL 9016
- Multi-tapping 100v transformer
- Quick-fit mounting system

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops
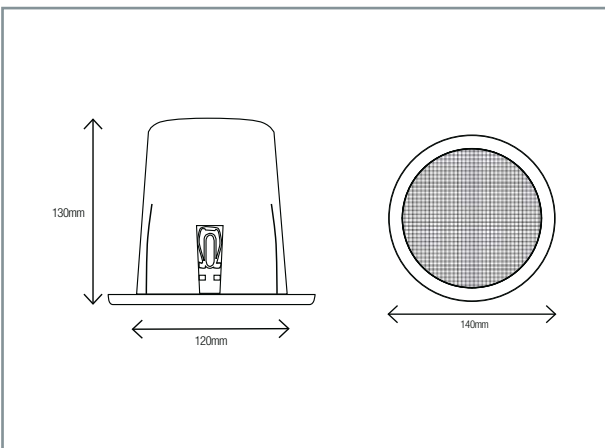
Specifications:

Model:	MCSL006/TWP
100v Power Tappings	1.5, 3, 6W
Frequency Response	150Hz ~ 18kHz
SPL @ 1W/1m	91dB
Colour	White RAL 9016
Material	ABS
Dimensions	140(Ø) x 130(D) mm
Weight	0.9kg

130mm
120mm
140mm

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

- **CU420:** 20W Indoor Column Speaker
- **CU440:** 40W Indoor Column Speaker

Inter-M's latest addition to their column speaker range, the new CU400 Series are stylish, high-quality loudspeakers featuring improved frequency response for both voice and music applications.

Ideal for church, mosque, high quality background music and AV systems.

Features:

- Stylish new design
- Robust construction
- Multi-position mounting bracket
- 100v Power tappings (rated and ½ power)
- Screw terminal connection
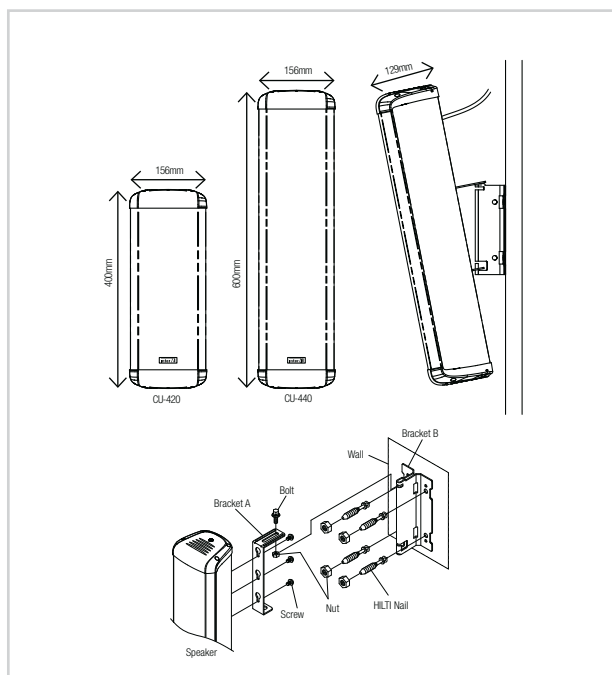
Specifications:

Model:	CU420	CU440
Rated Power	10, 20W	20, 40W
Frequency Response	180Hz ~ 14kHz	180Hz ~ 14kHz
SPL @ 1W/1m	94dB	97dB
Dimensions	156(W) x 400(H) x 129(D) mm	156(W) x 600(H) x 129(D) mm
Weight	3kg	5kg

inter**M**

- **CU520:** 20W Outdoor Column Loudspeaker
- **CU540:** 40W Outdoor Column Loudspeaker

Stylish and robust loudspeakers for installation in both indoor and outdoor applications.

Manufactured from aluminium extrusion with a steel grille, the loudspeaker drivers are proofed to withstand damp environments and can be used in indoor or protected outdoor installations, in shopping centres, car parks, atriums and leisure centres.

Features:

- Proofed drivers / loudspeakers for use in damp environments
- Robust aluminium construction
- Multi-position mounting bracket
- 100v Power tappings (rated and ½ power)
- Screw terminal connection
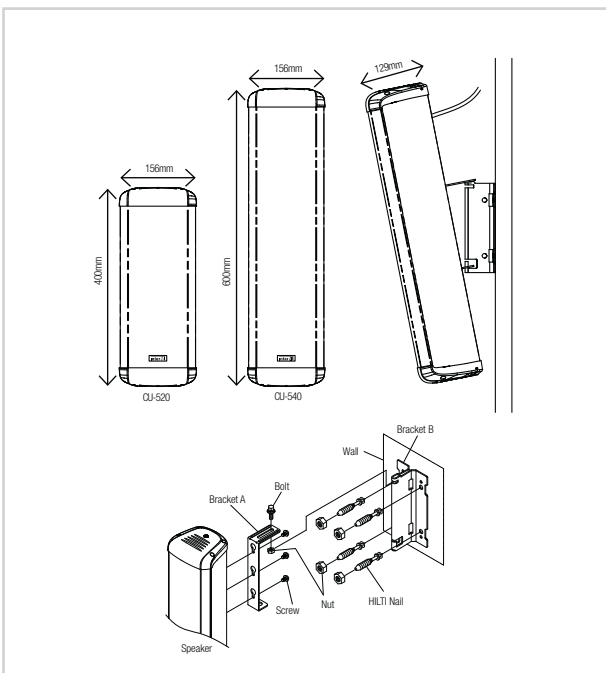
Specifications:

Model:	CU520	CU540
Rated Power	10, 20W	20, 40W
Frequency Response	180Hz ~ 14kHz	180Hz ~ 14kHz
SPL @ 1W/1m	94dB	97dB
Dimensions	156(W) x 400(H) x 129(D) mm	156(W) x 600(H) x 129(D) mm
Weight	3kg	5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

interM

- **CU920:** 20W Indoor Column Loudspeaker
- **CU930:** 30W Indoor Column Loudspeaker
- **CU940:** 40W Indoor Column Loudspeaker

Attractive, slimline column loudspeakers for installation in church, conference and sports hall applications.

These models are also ideal for installation in audio visual applications, when placed either side of a projector screen or plasma/LCD screen.

Finished in matt white, the units also feature perforated steel grille and are supplied with multi-position wall bracket.

Features:

- Attractive slimline design
- Multi-position bracket
- 100v Power tappings (rated and ½ power)
- Screw terminal connection
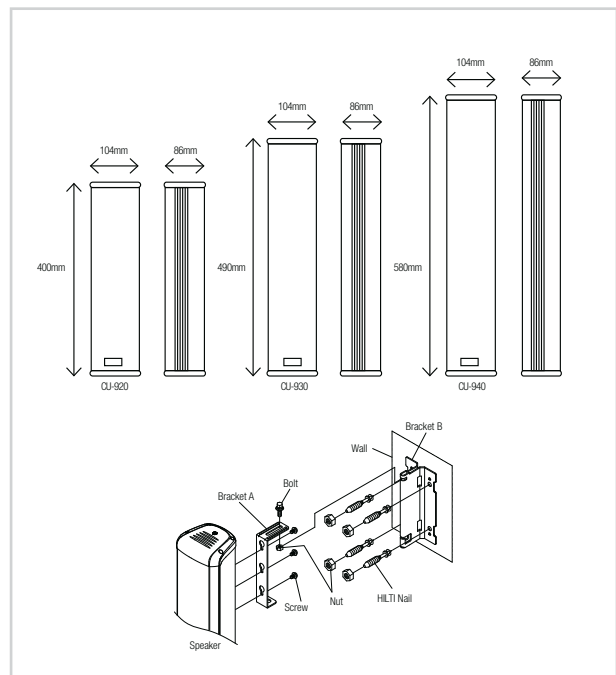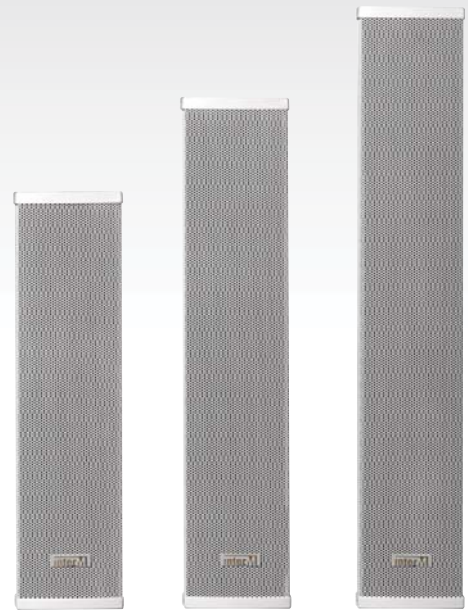
Specifications:

Model:	CU920	CU930	CU940
Rated Power	10, 20W	15, 30W	20, 40W
Frequency Response	220Hz ~ 15kHz	220Hz ~ 15kHz	220Hz ~ 15kHz
SPL @ 1W/1m	90dB	91dB	93dB
Enclosure Material	Aluminium	Aluminium	Aluminium
Dimensions	104(W) x 400(H) x 86(D) mm	104(W) x 490(H) x 86(D) mm	104(W) x 580(H) x 86(D) mm
Weight	2.35kg	2.85kg	3.35kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

MAJORCOM

B170T EN: 6W Suspended Ball Speaker

Compact, metal Suspended Ball Speaker ideal for retail, warehouse and open plan applications.

Termination is made by binding posts and tappings controlled via a screwdriver-adjustable switch. The product's two-way driver gives excellent voice and music reproduction.

Features:

- Compact size
- Binding post terminal connection
- Adjustable tapping selector
- Suspension eye
- White RAL9010
- Two-way, full-range driver
- 100v Power tappings

Connection Terminals

Suspension Eye

138mm

134(Ø)mm

170(Ø)mm
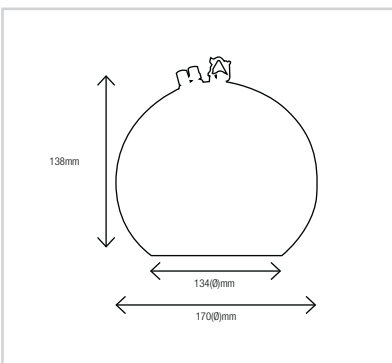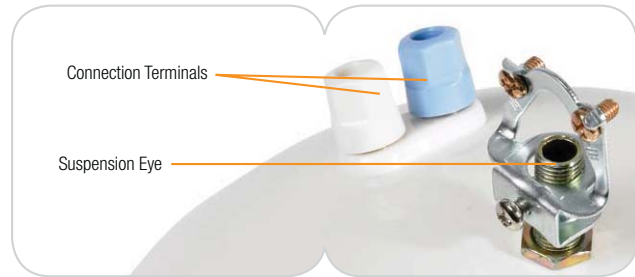
Specifications:

Model:	B170T EN
100v Power Tappings	2, 4, 6W
Frequency Response	100Hz ~ 15kHz
SPL @ 1W/1m	89dB
Colour	White RAL 9010
Material	Metal
Approx. Coverage	45m² @ 3m height
Dimensions	170(Ø) x 138(D) mm
Weight	1.3kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

MAJORCOM

B250T EN: 15W Suspended Ball Speaker

The industry standard for the distribution and retail 'shed' sectors, the B250T EN offers excellent voice clarity and music reproduction.

The unit features a 17cm bass unit with coaxial tweeter within a robust, yet lightweight ABS housing.

Cable termination is via binding posts and tappings adjusted via multi-step switch. The unit is supplied with a suspension eye for safety and security.

Features:
- Lightweight ABS construction
- Screw terminal connection
- Suspension eye
- White RAL 9010
- Full range coaxial driver
- 100v Power tappings

Connection Terminals

Suspension Eye

Wattage Adjustment

208mm

175(Ø)mm

250(Ø)mm
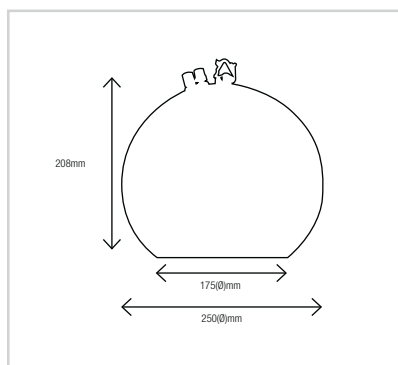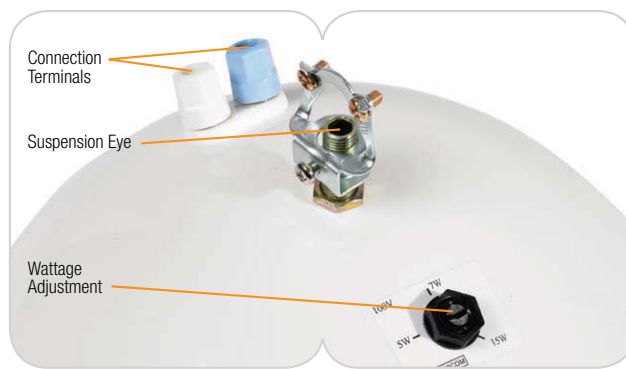
Specifications:

Model:	B250T EN
100v Power Tappings	5, 7, 15W
Frequency Response	70Hz ~ 20kHz
SPL @ 1W/1m	91dB
Colour	White RAL 9010
Material	ABS
Approx. Coverage	60m² @ 4.5m height
Dimensions	250(Ø) x 208(D) mm
Weight	3.5kg

MAJORCOM

• IMC250T EN: 30W Omni-suspended Loudspeaker

Using a parabolic dish to distribute the sound over a larger area, the IMC250T EN is ideal in larger retail outlets, shopping centres, distribution warehouses, etc.

Screw terminals and adjustable wattage selection are standard features of this cost-effective choice, which provides up to 5 times more coverage than conventional loudspeakers. Supplied with suspension eye for safety and security.

Features:
- ABS (Ball) / Metal (Dish)
- Screw terminal connection
- Suspension eye
- White RAL 9010
- Full-range, two-way driver
- 100v Power tappings

Connection Terminals

Suspension Eye

Wattage Adjustment

250mm
400mm
250(Ø)mm
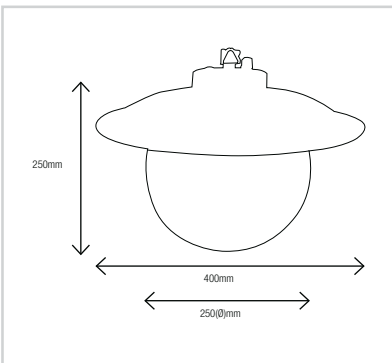
Specifications:

Model:	IMC250T EN
100v Power Tappings	10, 20, 30W
Frequency Response	70Hz ~ 20kHz
SPL @ 1W/1m	90dB
Colour	White RAL 9010
Material	ABS/Metal
Approx. Coverage	200m² @ 6m height
Dimensions	Ball: 250(Ø) mm Dish: 400(Ø) x 250(D) mm
Weight	3.5kg

info@cie-group.com +44 (0)115 977 0075 21

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

MAJORCOM

- **IMC300T:** 30W Low Profile
  Omni-suspended Loudspeaker
- **IMC400T:** 60W Low Profile
  Omni-suspended Loudspeaker

Offering the same advantages as the IMC250TEN, the IMC300T and IMC400T models are designed for installation in environments with lower height ceilings such as car parks and mezanine areas, but are just as effective in regular installations.

Fitted with 3-way loudspeaker systems, both models offer HiFi quality sound.

Features:
- ABS (Ball) / Metal (Dish)
- Multicore termination
- Multi-suspension points
- White RAL 9010
- HiFi quality sound
- 100v Power tappings
- Low Profile

220mm

380(Ø)mm

490(Ø)mm
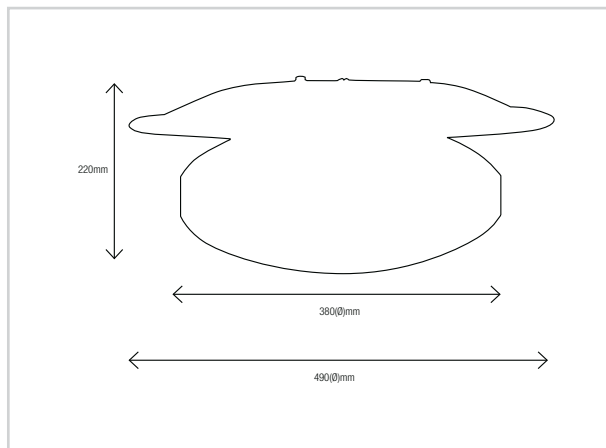
Specifications:

Model:	IMC300T	IMC400T
100v Power Tappings	10, 20, 30W	20, 40, 60W
Frequency Response	50Hz ~ 20kHz	50Hz ~ 20kHz
SPL @ 1W/1m	89dB	89dB
Colour	White RAL 9010	White RAL 9010
Material	ABS/Metal	ABS/Metal
Approx. Coverage	200m² @ 6m height	300m² @ 6m height
Dimensions	500(Ø) x 165(D) mm	500(Ø) x 165(D) mm
Weight	4.5kg	5.0kg

MAJORCOM

IMC500T: 120W Omni-suspended Loudspeaker

Largest of the Omni Series, the IMC500T is at home covering large areas such as sports halls, ice rinks, large warehouses, exhibition halls, etc.

This speaker provides a full range of music and high intelligibility voice reproduction; ideal for large scale, acoustically challenging environments.

Features:
- ABS
- Screw terminal connection
- Suspension eye
- White RAL 9010
- Full range two-way driver
- 100v Power tappings

IMC 500 T

480mm

482(Ø) mm

673(Ø)mm
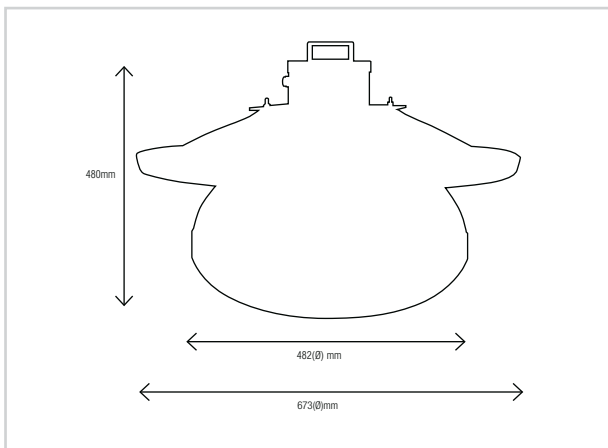
Specifications:

Model:	IMC500T
100v Power Tappings	60, 120W
Frequency Response	50Hz ~ 20kHz
SPL @ 1W/1m	97dB
Colour	White RAL 9010
Material	ABS
Approx. Coverage	500m² @ 7m height
Dimensions	673(Ø) x 480(D) mm
Weight	15kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

ic audio

- **DAS10-130T:** 10W Metal Sound Projector
- **DAS10-130T-EN54:** 10W EN54-compliant Metal Sound Projector 🔴

More robust metal version of the DAP Series projector, providing the same features and benefits but in a metal housing for added vandal resistance.

EN54-compliant version available for fire alarm systems.

Features:
- Robust metal case
- Weather / ingress resistance (IP65 rated)
- 100v Power tappings
- Voice & music capacity
- White RAL9010

163mm

167(Ø) mm
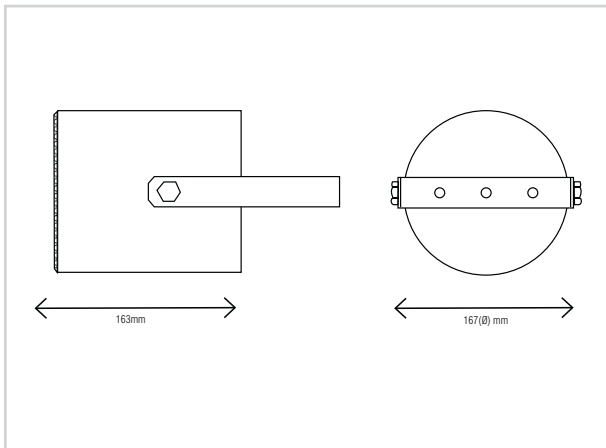
Specifications:

Model:	DAS10–130T	DAS10–130T–EN54
100v Power Tappings	1.5, 3, 6, 10W	1.5, 3, 6, 10W
Frequency Response	200Hz ~ 16kHz	200Hz ~ 16kHz
SPL @ 1W/1m	94.1dB	94.1dB
Colour	White RAL9010	White RAL9010
Material	Metal	Metal
IP Rating	IP65	IP65
Dimensions	167(Ø) x 163(D) mm	167(Ø) x 163(D) mm
Weight	3.1kg	3.1kg

ic audio

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

• **DAP20-130T:** 20W Sound Projector

The DAP20 is a general, all-purpose loudspeaker which provides excellent music reproduction and clear voice announcements.

IP65-rated, it will effectively operate indoors or outdoors in transport terminals, shopping centres, retail, warehousing and many other applications.

Features:

- Weather / ingress resistance (IP65 rated)
- Robust plastic housing
- 100v Power tappings
- Voice & music capable
- White RAL9010

140mm

195mm

140(Ø) mm
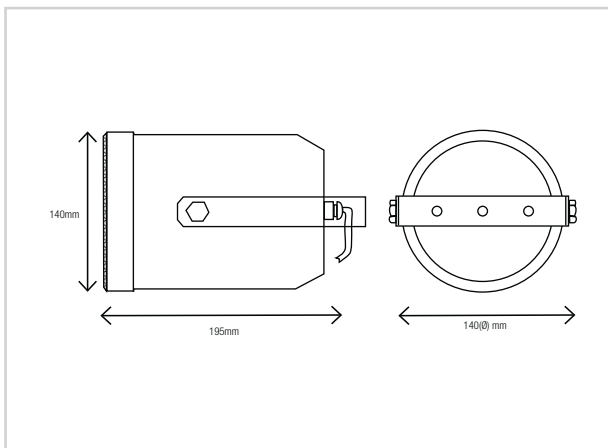
Specifications:

Model:	DAP20–130T
100v Power Tappings	2.5, 5, 10, 20W
Frequency Response	150Hz ~ 20KHz
SPL @ 1W/1m	99.5dB
Colour	White RAL9010
Material	ABS
IP Rating	IP65
Dimensions	140(Ø) x 195(D) mm
Weight	1.35kg

info@cie-group.com   +44 (0)115 977 0075

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

ic audio

• **DA10-260T:**
10W Bi-directional Loudspeaker

Ideal for installation in corridors, concourses, transport terminals and plant rooms.

Practical, vandal resistant and incorporating multi-tapping 100v transformer, the DA10 is ideal for voice messages and low level BGM reproduction.

Features:
• Vandal resistant
• Tough metal housing
• White RAL9010
• 100v Power tappings
• Integral mounting bracket

164(Ø) mm

199mm

90mm

164mm
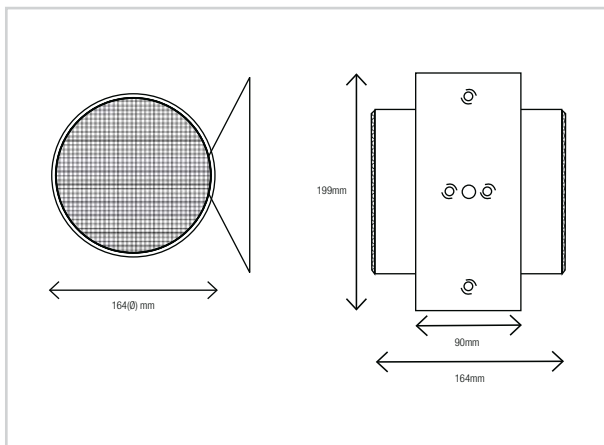
Specifications:

Model:	DA10–260T
100v Power Tappings	1.5, 3, 6, 10W
Frequency Response	150Hz ~ 14KHz
SPL @ 1W/1m	90.9dB
Colour	White RAL9010
Material	Metal
Dimensions	164(Ø) x 164(D) mm
	Bracket 199(L) x 90(W) mm
Weight	2.2kg

inter M

• CH-522: 20W Music Horn Loudspeaker

Proofed for outdoor use, the CH-522 can be used in areas where high quality voice and music reproduction are required; for example, distribution centres, production areas and leisure applications.

Features:
- Modern design
- Indoor/outdoor mounting
- Full range driver/loudspeaker
- 100v Power tappings
- Universal mounting bracket
- Conforms to IP54

294mm

326mm

209mm
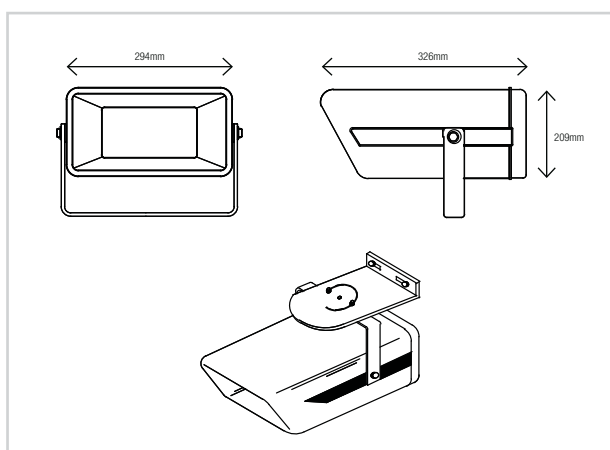
Specifications:

Model:	CH–522
100v Power Tappings	10, 20W
Connection	Multicore Cable
Frequency Response	110Hz ~ 20kHz
SPL @ 1W/1m	95dB
Dimensions	294(W) x 209(H) x 326 (D) mm
Weight	3.5kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

ic audio

• DK-MH 30/T Plus:
30W Outdoor Music Horn Loudspeaker

For applications which require high quality, high volume background music and paging, such as sports stadiums, race tracks and public venues.

The DK-MH 30/T is IP66-rated so can be mounted outside in the open.

Features:
- Weather/Ingress resistance (IP66 rated)
- Robust ABS construction
- 100v Power tappings
- Voice & music compatible
- High SPL
- Aluminum mounting bracket
- RAL 7035 grey

291mm

255mm

370mm
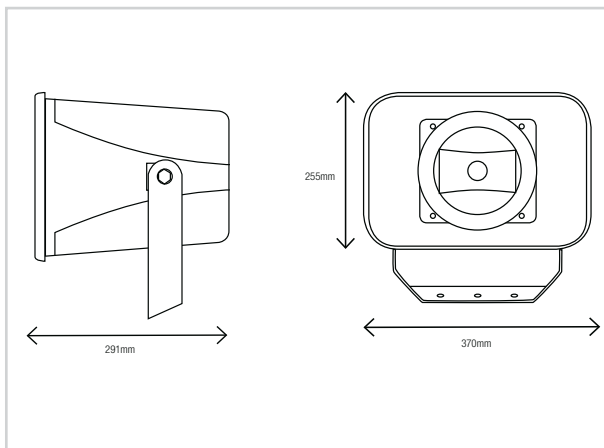
Specifications:

Model:	DK–MH 30/T Plus
100v Power Tappings	3.75, 7.5, 15, 30W
Frequency Response	80Hz ~ 14kHz
SPL @ 1W/1m	105.5dB
Colour	Grey RAL7035
Material	ABS
IP Rating	IP66
Dimensions	370(W) x 255(H) x 291(D) mm
Weight	4.3kg

interM

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

- **HS-20:** 20W Horn Loudspeaker
- **HS-S20:** 20W Horn Loudspeaker

For use in environments where clear, precise voice messages, announcements or emergency tones and signals are required.

The HS-20 and HS-S20 horns can be used in indoor or protected outdoor installations.

Features:

- Re-entrant horns
- Metal/ABS construction
- Indoor and protected outdoor use
- 100v Line / Low impedance operation
- Conforms to IP54

280mm
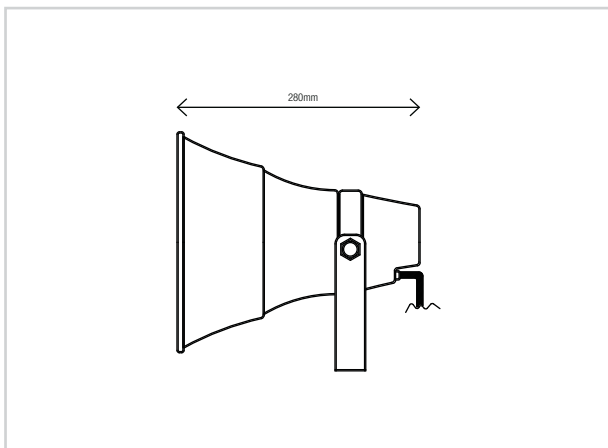
Specifications:

Model:	HS–20	HS–S20
Power/Taps	10, 20W @100v line, 20W/8Ω	10, 20W @100v line, 20W/8Ω
Connection	Multicore cable	Multicore cable
Frequency Response	380Hz ~ 6.5kHz	380Hz ~ 6.5kHz
SPL @ 1W/1m	106dB	106dB
Dimensions	250(Ø) x 280(D) mm	169(Ø) x 230(D) mm
Weight	2.5kg	1.5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

ic audio

- **DK15T:** 15W Re-entrant Horn Loudspeaker
- **DK30T:** 30W Re-entrant Horn Loudspeaker

The DK Horn Loudspeaker range is ideal for indoor and outdoor applications requiring high intelligibility and clarity in paging, warning and information systems.

IP66 approved, the units offer multi-tapping, 100v line transformer options as well as a Low Z, 20W setting.

Features:
- Weather / ingress resistance (IP66 rated)
- Robust ABS material
- Rotary 100v power tapping selector
- 1m cable (glanded)
- High SPL

DK15T: 207(Ø) mm
DK30T: 238(Ø) mm

DK15T: 273mm
DK30T: 302mm
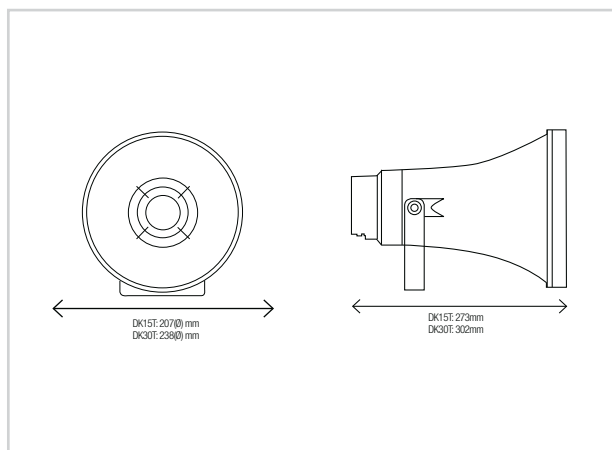
Specifications:

Model:	DK15T	DK30T
100v Power Tappings	1.87, 3.75, 7.5, 15W / 15w@20Ω	5, 10, 20, 30W / 30w@20Ω
Frequency Response	300Hz ~ 12.5kHz	300Hz ~ 6kHz
SPL @ 1W/1m	107dB	110dB
Colour	Grey RAL7035	Grey RAL7035
Material	ABS	ABS
IP Rating	IP66	IP66
Dimensions	207(Ø) x 273(D) mm	238(Ø) x 302(D) mm
Weight	1.9kg	2.6kg

- **AP15T:** 15W Re-entrant Horn Loudspeaker
- **AP30T:** 30W Re-entrant Horn Loudspeaker

Renowned as the leading industry standard paging horn series, AP15T/30T horns are utilised in many applications such as transport terminals, industrial paging, marine, nuclear and warning systems throughout the world.

Robust metal/ABS construction, multi-tapping wattage selection, flexible mounting brackets and full weather resistance for outdoor use completes the package.

Features:

- Weather/ingress resistance (IP67-rated when used with the BX range of glands)
- Robust metal/ABS construction
- Screwdriver adjustable Tappings
- High intelligibility
- Optional Gland/Termination - (BX1G for AP30T/BX2G for AP15T - see below)
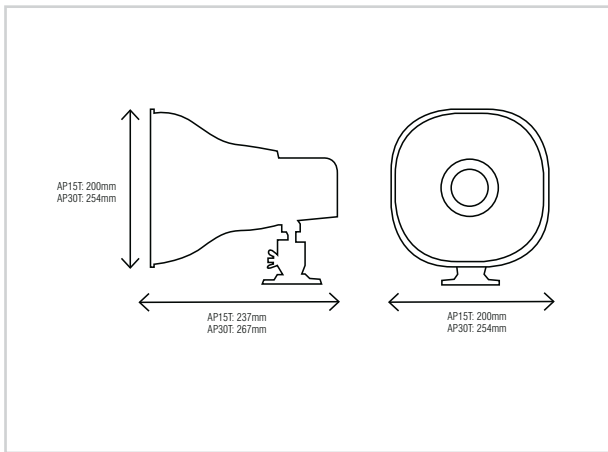
Specifications:

Model:	AP15T	AP30T
100v Power Tappings	2, 4, 7.7, 15W	4, 7, 15, 30W
Frequency Response	400Hz ~ 14kHz	300Hz ~ 12kHz
SPL @ 1W/1m	106dB	108dB
Colour	Grey	Grey
Material	Metal	Metal
IP Rating	IP67 (with BX2G)	IP67 (with BX1G)
Dimensions	200(H) x 200(W) x 237(D) mm	254(H) x 254(W) x 267(D) mm
Weight	2.27kg	2.86kg

- **BX1G for 30W Speakers:**
  Optional Waterproof Cable Gland Assembly
- **BX2G for 15W Speakers:**
  Optional Waterproof Cable Gland Assembly

Both the AP15T and AP30T are available with optional waterproof cable gland.

Need help choosing the right product?
Call our technical support team now on:
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Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Atlas Sound

• CJ-46: Wide Dispersion Horn/Flare Assembly

Extensively used in stadiums and outdoor events, the CJ46 offers maximum sound penetration in adverse sound conditions.

Units can be mounted individually or grouped / clustered and securely fixed using the heavy duty bracket. Standard 35mm thread allows the fitting of most industry-standard compression drivers (see below for suggested drivers).

Features:
- Robust glass fibre / metal construction
- Environment resistant for both indoor and outdoor use
- Fully serviceable components
- Operational temperature range of -35° ~ +66°C
- Multi-position mounting bracket

432mm
305mm
558mm
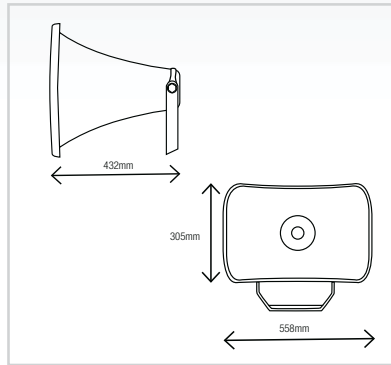
Specifications:

Model:	CJ–46
Colour	Black
Dispersion	120° x 60°
Dimensions	558(W) x 305(H) x 432(D) mm
Weight	6.58kg

• PD30T: 30W Driver

Specifications:

Model:	CJ46	PD30T**
Maximum Power	(as per driver)	30W RMS
100v Power Tappings	(as per driver)	4, 8, 15, 30W
Frequency Range	(Low Frequency Cut-off 115Hz)	120Hz ~ 14kHz
Maximum SPL (1m at rated power)	N/A	125dB (with CJ-46)
Dispersion	120º X 60º	N/A
Dimensions	584(W) x 380(H) x 432(D) mm	114(W) x 114(H) x 114(D) mm
Weight	7kg	2.1kg

Waterproof Cable Gland Assembly Option: **BX1G** for 30W Driver (pg 31)

*When fitted with waterproof gland
**Specifications when fitted to CJ-46

IP67-rated* 30 Watt Driver for use with the CJ-46 Projector.

ic audio

• HD35: 35W Compression Driver Assembly
• HD50: 50W Compression Driver Assembly

Supplied with industry standard 35mm threads, the HD35 and HD50 are compatible with most flares and horns on the market.

Manufactured from cast aluminum and ABS, the units are robust and weatherproof. Multi-tapping 100v transformers and field replaceable voice coils complete the package.

Features:
- Robust ABS construction
- 100v power tapping options
- Field replaceable voice coils (HDVC35 / HDVC50)

108mm
HD35
152mm

138mm
HD50
148mm
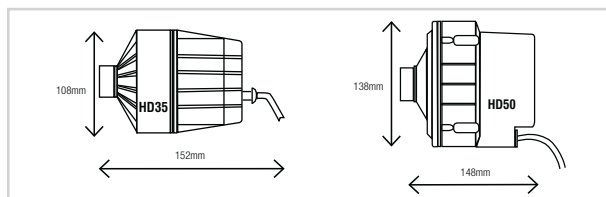
Specifications:

Model:	HD35	HD50
100v Power Tappings	10, 15, 20, 35W	15, 30, 50W
Frequency Response	510Hz ~ 3.27kHz	319Hz ~ 2.96kHz
SPL @ 1W/1m	113dB	111.5dB
Colour	Grey RAL9007	Grey RAL9007
Material	Aluminium/ABS	Aluminium/ABS
Dimensions	108(Ø) x 152(D) mm	138(Ø) x 148(D) mm
Weight	2.5kg	2.9kg

inter**M**

- **WS203:** 3W Wall Speaker
- **WS210:** 10W Wall Speaker
- **WS230:** 30W Wall Speaker

Inter-M's new-design wall speakers combine discreet styling and simplicity to provide an elegant voice/background music wall speaker for use in offices, waiting rooms, cafeterias, retail sites, etc.

Features:

- Modern, discreet styling
- Available in black or white
- Screw terminal connection
- High quality 100v line transformer
- WS203/210 - 6" full range driver
- WS230 - 6" 2-way driver

Amplifiers

Audio Signal Processing
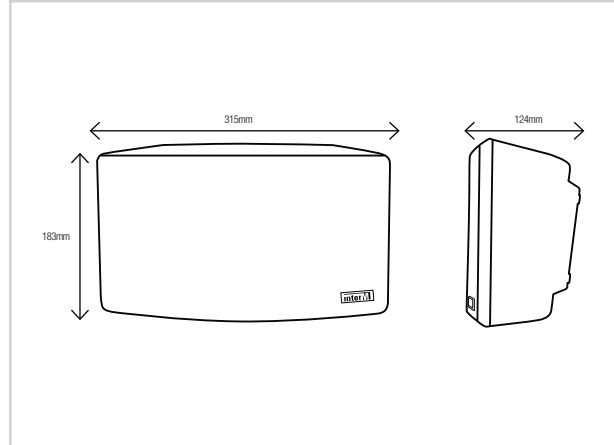
Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Specifications:

Model:	WS203	WS210	WS230
100v Power Tappings	1, 2, 3W	3, 5, 10W	10, 20, 30W
Frequency Response	137Hz ~ 16kHz	136Hz ~ 16kHz	126Hz ~ 16kHz
SPL @ 1W/1m	91dB	92dB	93dB
Dimensions	315(W) x 183(H) x 124(D) mm	315(W) x 183(H) x 124(D) mm	315(W) x 183(H) x 124(D) mm
Weight	1.2kg	1.4kg	2.2kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

ic audio

• **MS-15:** 15W Fashion Monitor Loudspeaker

The modern design of the MS-15 makes it ideal for installation in contemporary, modern environments such as bars, pubs, audio visual, conference, education or retail sites and is proofed for use in outdoor or damp environments.

Units are available in black or white and are supplied with a versatile multi-position mounting bracket.

Wattage tappings are via a multi-way removable Phoenix-type screw terminal block on the rear.

Features:

• Contemporary design
• Black or white options
• Multi-position mounting bracket
• High quality full-range driver
• Removable 'Phoenix' connection block
• Multi-tapping 100v transformer / LowZ 8Ω
• Weatherproof housing/driver

210mm

130mm

120mm
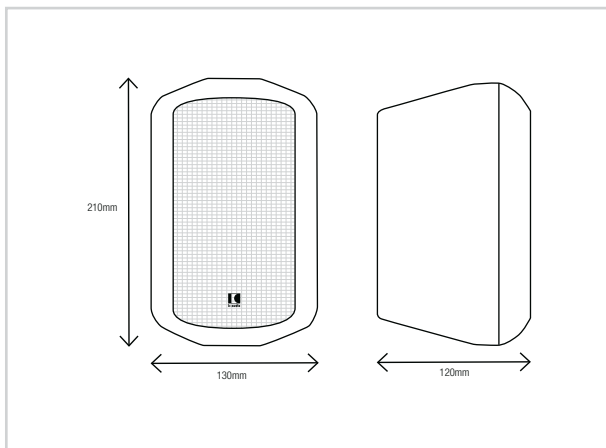
Specifications:

Model:	MS–15
100v Power Tappings	3.75, 7.5, 15W
Low Z 8Ω	15W
Frequency Response	109Hz ~ 17kHz
SPL @ 1W/1m	99.8dB
Colour Options	White (W) and Black (B)
Material	ABS
Dimensions	130(W) x 210(H) x 120(D) mm
Weight	2kg

Audio Contractor

PROJECT315BT:
15W Black Fashion Speaker

PROJECT315WHT:
15W White Fashion Speaker

Project speakers have been created and developed in order to provide a suitable solution for any loudspeaker installation: their characteristics allow their use in any environment, keeping the same high quality sound.

The Project range features a compact two-way system ensuring high power performance, wide dynamics, high-fidelity music reproduction and high speech intelligibility.

Features:
- 2-way Bass reflex systems with 0.5" dome tweeter
- Rated Power @ 8Ω - 30W
- 15W with 100v transformer
- Power tappings via rotary switch
- Complete with adjustable wall mounting bracket
- Safety chain included

205mm

162mm   142mm
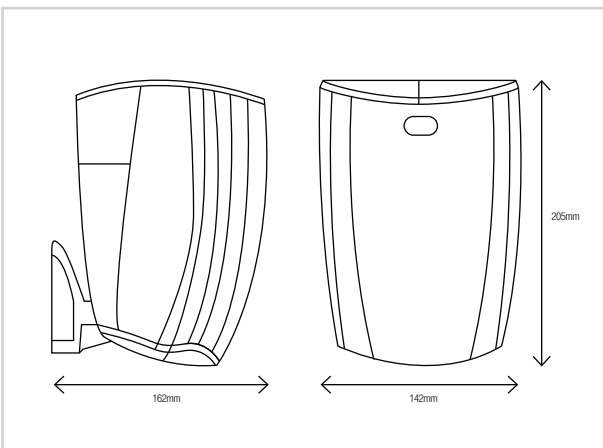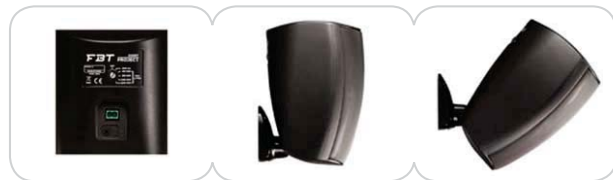
Specifications:

| Model:	PROJECT315BT / PROJECT315WHT
Rated power	1, 2, 4, 7.5, 15 with 100v / 30W @ 8Ω
Frequency Response	100Hz ~ 15kHz
SPL @ 1W/1m	85dB
Maximum SPL 1m	100dB
Dimensions	142(W) x 205(H) x 162(D) mm
Weight	2kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Contractor

- **PROJECT550BT:**
  50W Black Fashion Speaker
- **PROJECT550WHT:**
  50W White Fashion Speaker

Project speakers have been created and developed in order to provide a suitable solution for any loudspeaker installation; their characteristics allow their use in any environment, keeping the same high quality sound.

The Project range features a compact two-way system ensuring high power performance, wide dynamics, high-fidelity music reproduction and high speech intelligibility.

Features:

- 2-way Bass reflex systems with 0.5" dome tweeter
- 5" woofer + 1" tweeter
- 50W 100v line / 100W 8Ω output
- ABS housing with metal grille
- Frequency Response: 80Hz ~ 20kHz
- Max. SPL: 109dB
- Dispersion: 100° (H) x 100° (V)
- Fully adjustable die cast mounting bracket (ball joint)
- Supplied with safety wire

180mm   168m   240mm
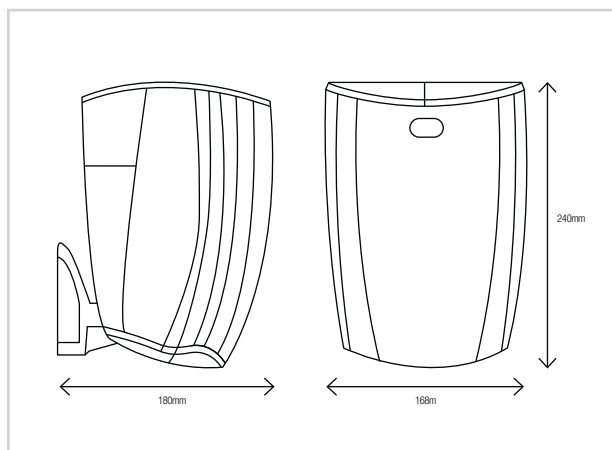
Specifications:

| Model:	PROJECT550BT / PROJECT550WHT
NOM/MAX Power	50W, 100W
Rated power	15, 25, 40, 50W / 100W @ 8Ω
Frequency Response	-10dB, 80Hz ~ 20kHz
SPL @ 1W/1m	89dB
Maximum SPL	109dB
Power requirement	100v/8Ω
Dispersion	100°(H) x 100°(V)
Connectors	Phoenix
Dimensions	168(W) x 240(H) x 180(D) mm
Weight	3.4kg

Audio Contractor

• PROJECT640BT:
40W Black Fashion Speaker

• PROJECT640WHT:
40W White Fashion Speaker

Project speakers have been created and developed in order to provide a suitable solution for any loudspeaker installation; their characteristics allow their use in any environment, keeping the same high quality sound.

The project range features a compact two-way system ensuring high power performance, wide dynamics, high-fidelity music reproduction and high speech intelligibility.

Features:
- 2-way Bass reflex systems with 0.5" dome tweeter
- 6.5" woofer + 1" tweeter
- 40W 100v line / 80W 8Ω output
- ABS housing with metal grille
- Frequency Response: 70Hz ~ 20kHz
- Max. SPL: 108dB
- Dispersion: 90° (H) x 90° (V)
- Fully adjustable die cast mounting bracket (ball joint)
- Supplied with safety wire
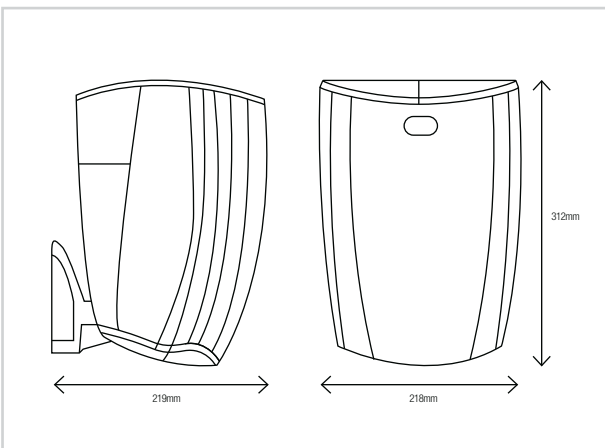
Specifications:

Model:	PROJECT640BT / PROJECT640WHT
NOM/MAX Power	40W, 80W
Rated power	10, 20, 30, 40W / 80W @ 8Ω
Frequency Response	-10dB, 70Hz ~ 20kHz
SPL @ 1W/1m	89dB
Maximum SPL	108dB
Power requirement	100v, 8Ω
Dispersion	90°(H) x 90°(V)
Connectors	Phoenix
Dimensions	218(W) x 312(H) x 219(D) mm
Weight	4.6kg

312mm

219mm

218mm

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Contractor

• STUDIO.PRO9 Series:
Pro Quality Loudspeaker Cabinets

Models:

- STUDIO.PRO 9B: 120W, Black, Low Impedance, Pro Quality Loudspeaker Cabinet
- STUDIO.PRO 9W: 120W, Grey, Low Impedance, Pro Quality Loudspeaker Cabinet
- STUDIO.PRO9 BT: 80W, Black, 100v Line, Pro Quality Loudspeaker Cabinet
- STUDIO.PRO9 WT: 80W, Grey, 100v Line, Pro Quality Loudspeaker Cabinet
- STUDIO.PRO9 BA: 80W + 20W, Black, Pro Quality, Active Loudspeaker Cabinet

Its lightweight construction makes the STUDIO Pro 9 Series the perfect solution for portable or permanent installations in audio visual, presentation or educational applications.

FBT's STUDIO Pro 9 Series music loudspeakers are stylish, extremely lightweight and robust, manufactured in high quality injection moulded polypropylene.

All models feature integral stand adapter, 2 x M6 anchoring points and are available in black or light grey.

Features:

- 2-way bass reflex system with 130mm woofer and 25mm high frequency tweeter
- 100V line versions tapped at 5, 20, 50, 80W
- Active Loudspeaker versions feature 80W + 20W internal amplifiers. ADAP (Advanced Dynamic Active Protection) designed to limit amplifier saturation and ensure consistent reliability if over driven
- Active versions feature control panel with Ground lift, Combo XLR/Jack inputs, XLR male output, limiter and level control

BS/52–TB
Adjustable
floor stand

SJ9UB Wall Mounting Brackets: Black / SJ9UW Wall Mounting Brackets: Grey RAL

SJ9B Adjustable Wall support: Black
SJ9W Adjustable Wall support: Grey RAL

Specifications:

Model:	STUDIO.PRO 9B & W	STUDIO.PRO 9BT & WT	STUDIO.PRO 9BA & WA
Colour	Black or Grey	Black or Grey	Black or Grey
Configuration	2-way	2-way	2-way
Recommended amplifier	120W RMS	80W RMS	-
Internal amplifier	-	-	80W + 20W
Long-term applicable power (AES)	60W	-	-
Short-term applicable power (IEC 268-5)	240W	-	-
Rated Impedance	8Ω	-	-
Transformer	-	100v	-
Frequency Response (@-6dB)	80Hz ~ 20kHz	80Hz ~ 20kHz	70Hz ~ 20kHz
Low frequency woofer	1 x 200 38(Ø) mm coil	1 x 200 38(Ø) mm coil	1 x 200 38(Ø) mm coil
High frequency tweeter	1 x Tweeter + horn 20(Ø) mm coil	1 x Tweeter + horn 20(Ø) mm coil	1 x Tweeter + horn 20(Ø) mm coil
SPL @ 1W/1m	95.5dB	95.5dB	95dB
Maximum SPL 1m	116.5dB	114.5dB	115dB
Dispersion	90º(H) x 60º(V)	90º(H) x 60º(V)	90º(H) x 60º(V)
Recommended HP filter	60Hz 24dB oct	60Hz 24dB oct	-
Crossover frequency	3.5kHz	3.5kHz	2.5kHz
Input connectors	Spring terminals	Spring terminals	Combo XLR-M/JACK
Dimensions	255(W) x 415(H) x 245(D) mm	255(W) x 415(H) x 245(D) mm	255(W) x 415(H) x 245(D) mm
Weight	4.8kg	4.8kg	5.4kg

Audio Contractor

STUDIO.PRO 14B:
250W PerformanceLoudspeaker Cabinet

STUDIO.PRO 14BA: 150W + 50W, Active, Performance Loudspeaker Cabinet

Features:

- Extremely light and sturdy enclosure made of injection moulded polypropylene, black colour, including integral handle
- Stand adapter, 2 M6 anchoring points
- 2-way bass-reflex system with 320mm woofer and 25mm high frequency tweeter
- STUDIO.PRO 14 BA with built-in class G amplifiers, 150W RMS for the woofer and 50W RMS for the high frequency unit; ADAP (Advance Dynamic Active Protection) designed to limit amplifier saturation and ensure complete reliability of the system even in extreme conditions
- Maximum SPL:
  STUDIO.PRO 14 B: 122/125dB
  STUDIO.PRO 14 BA: 121dB
- Dispersion (HxV) 90° x 60°
- 2 speakon input connectors
- STUDIO.PRO 14 BA: Control panel with Ground Lift switch, Combo XLR/JACK inputs, XLR male output, limiter, volume control
- STUDIO.PRO 14 BA: 24dB/oct active filters

SJ14UB Wall Mounting Brackets

BS/52–TB Adjustable floor stand

Specifications:

Model:	STUDIO.PRO 14B/W	STUDIO.PRO 14BA/WA
Colour	Black or Grey (RAL 7035)	Black or Grey (RAL 7035)
Configuration	2-way	2-way
Recommended amplifier	250W RMS	-
Internal amplifier	-	150W+50W RMS
Long-term applicable power (AES)	125W	-
Short-term applicable power (IEC 268-5)	500W	-
Rated Impedance	8Ω	-
Frequency Response (@-6dB)	60Hz ~ 20kHz	60Hz ~ 20kHz
Low frequency woofer	1 x 320 51(Ø)mm coil	1 x 320 51(Ø)mm coil
High frequency tweeter	1 x 25.4 + horn 25.4(Ø)mm coil	1 x 25.4 + horn 25.4(Ø)mm coil
SPL @ 1W/1m	98dB	98dB
Maximum SPL 1m	122, 125dB	121dB
Dispersion	90°(H) x 60°(V)	90°(H) x 60°(V)
Recommended HP filter	40Hz 24dB oct	40Hz 24dB oct
Crossover frequency	2.5kHz	2.5kHz
Input connectors	2 x speakon	2 x speakon
Dimensions	410(W) x 663(H) x 387(D) mm	410(W) x 663(H) x 387(D) mm
Weight	13.5kg	16kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

interM

- **SE8:** 100W Music Cabinet System
- **SE10:** 150W Music Cabinet System
- **SE12:** 250W Music Cabinet System
- **SE15:** 300W Music Cabinet System
- **SB15A:** 450W Sub Bass

The SE Series loudspeaker systems from Inter-M provide both high power and high sensitivity output. The accurate sound reproduction from the SE Series makes them ideal for a wide variety of applications such as houses of worship, night clubs, performing arts facilities, fitness centres, auditoriums and educational establishments for both portable and installed systems.

Trapezoidal in shape, the optimised enclosure design is constructed from high density MDF reducing internal resonance and optimising sound output. Each model is equipped with a heavy duty woofer providing distortion-free low frequency reproduction and 1" titanium diaphragm for smooth extended high frequency response, with in-built protection circuitry preventing the HF unit being overdriven.

The sub bass further enhances the SE Series by providing support for the lower level frequencies required in today's demanding performance environments.

Also included are 35mm top hat pole mounts in the base of each cabinet and multiple embedded M8 fixing points allow the fitting of appropriate bracket work or flying hardware.

Features:

- Trapezoidal two-way speaker system
- HF driver protection circuitry
- Titanium compression drivers
- Pole mount top hat and M8 rigging points for suspension / mounting hardware
- Optimised enclosure designed for smooth and extended response
- High quality MDF construction
- Advanced crossover design provides smooth and clear response
- Heavy duty grille
- Robust painted finish (Black)

Specifications:

Model:	SE8	SE10	SE12	SE15	SB15A
Rated Power	100W AES, 400W Peak	150W AES, 600W Peak	250W AES, 1000W Peak	300W AES, 1200W Peak	450W AES, 1800W Peak
Type	Ultra-compact, 2-way Passive	Compact, 2-way Passive	Compact, 2-way Passive	Compact, 2-way Passive	Compact, Sub Bass
Frequency Response	65Hz ~ 18KHz	55Hz ~ 18KHz	40Hz ~ 18KHz	38Hz ~ 18KHz	40Hz ~ 300KHz
Drivers	8" LF Driver, 1" HF compression driver	10" LF Driver, 1" HF compression driver	12" LF Driver, 1" HF compression driver	15" LF Driver, 1" HF compression driver	15" LF Driver
SPL @ 1W/1m	93dB	94dB	96dB	97dB	98dB
Maximum SPL	112dB (1m)	114dB (1m)	117dB (1m)	119dB (1m)	124dB (1m)
Nominal Impedance	8Ω	8Ω	8Ω	8Ω	8Ω
Crossover Frequency	2.5kHz	2.3kHz	2.15kHz	2kHz	-
Dispersion (-6dB)	75° horizontal, 60° vertical	75° horizontal, 60° vertical	75° horizontal, 60° vertical	75° horizontal, 60° vertical	-
Connectors	2 x NL4 (SPEAKON)	2 x NL4	2 x NL4	2 x NL4	2 x NL4
Fittings	3 x M8, 1 x mounting pole socket	6 x M8, 1 x mounting pole socket	6 x M8, 1 x mounting pole socket	6 x M8, 1 x mounting pole socket	1 x mounting pole socket (top)
Dimensions	296(W) x 460(H) x 290(D) mm	362(W) x 545(H) x 355(D) mm	422(W) x 665(H) x 415(D) mm	480(W) x 736(H) x 470(D) mm	470(W) x 636(H) x 540(D) mm
Weight	13kg	17.4kg	22.8kg	32kg	32kg

Honda Brand Centre

Honda Brand Centre is a £12 million transformation of their former headquarters into a state-of-the-art, modern showroom for their complete range of products. With Armstrong suspended ceilings already specified throughout all UK Honda showrooms, the application of i-ceilings Sound Panels was ideal in achieving fantastic background music and PA results with a loudspeaker solution which would not spoil the clean architectural lines of the interior.

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

(i) ceilings
SOUND SYSTEMS

• Ceiling speakers without seeing speakers

i-ceilings 'invisible' integrated Sound Panel loudspeakers from the world leaders in ceiling development.

In providing the ideal environment, the consideration of both acoustics and aesthetics is essential.

i-ceilings, the latest generation of integrated sound panels, uses state-of-the-art NXT technology to provide exceptional sound qualities without spoiling the aesthetic consistency of the ceiling plane.

Combining the innovation of the world's leading designers and suppliers of ceiling systems with the unique sound qualities of NXT technology, Armstrong have produced a unique concept in acoustic ceilings to provide an unparalleled sound system for foreground and background music, voice reinforcement, public address and active acoustics such as sound masking.

Features:

- New generation product design
- Completely 'unidentifiable' loudspeaker solution
- Matches over 90% of Armstrong suspended ceiling systems
- Installed up to 75% faster than standard ceiling speakers
- Unparalleled levels of intelligibility and dispersion of sound
- New 'Powered' & 'Surface-mount' versions also available

Retail

Education

The concept of i-ceilings

A unique concept in integrated acoustic ceiling systems, i-ceilings utilises NXT flat panel audio technology to provide a loudspeaker system designed to match Armstrong's market-leading range of suspended ceilings.

The i-ceilings concept allows for 'invisible' loudspeaker solutions which benefit from greatly increased sound dispersion, providing incredibly even levels of sound reproduction compared with the 'hot and cold spots' associated with traditional 'cone' loudspeaker technology.

Due to their aesthetic and acoustic qualities, i-ceilings Sound Panels are ideal in education, retail, boardrooms, offices, call centres, healthcare, hospitality and leisure, ensuring even coverage of high quality music and voice reproduction without compromise to the architectural environment.

The technology

The Armstrong i-ceilings range of Sound Panels utilises the unique loudspeaker technology 'NXT™'. Unlike conventional cone speakers which operate with a piston-like action, NXT technology introduces resonant vibrations to the entire surface of a lightweight flat panel via an electronic transducer system.

In effect, the panel within the ceiling tile is vibrating in much the same way as a piano or acoustic guitar. Like these musical instruments, i-ceilings panels generate highly diffuse and disperse sound energy (similar in nature to the light emitted from a fluorescent lamp).

Sound, therefore, is radiated in all directions to ensure highly intelligible voice and music reproduction and even sound coverage. This is different to the results of a conventional piston-like cone speaker which can cause highly directional and often unintelligible speech in large open spaces.
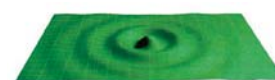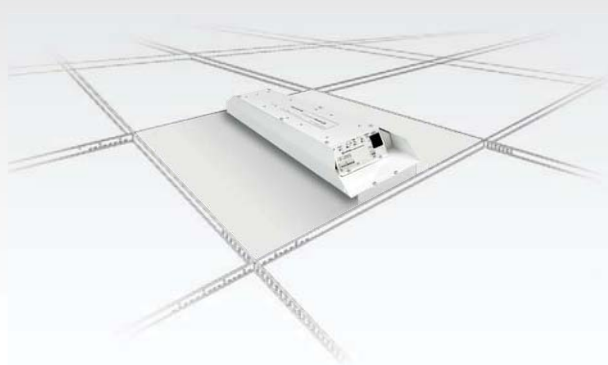
Uniform sound vibration pattern of a conventional cone speaker

Uncorrelated sound vibration pattern of an NXT Panel

Corporate
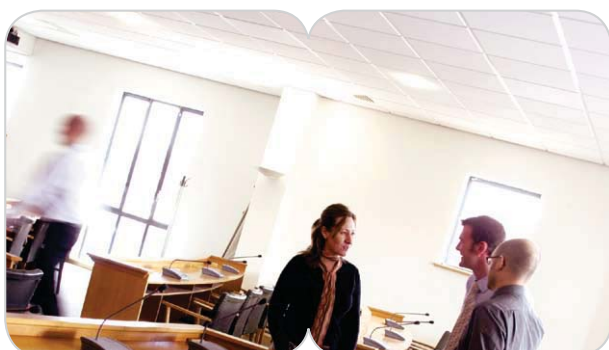
Leisure

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

i ceilings from Armstrong

• CS-1000: 8W Sound Panel Ceiling Speakers

CS-1000 Sound Panel with superior combined performance for music, public address and active acoustics to enhance privacy, comfort and workspace effectiveness. New development and remodelling ensures even greater performance and ease of installation from the complete i-ceilings range. Available to co-ordinate with Armstrong's most popular ceiling patterns, for new-build and retrofit installations.

Superior Aesthetics:
• Provides improved aesthetics over conventional visible speakers
• Seemlessly blends with the rest of the ceiling

Flexibility & Value:
• Quick, easy and less expensive to install and/or relocate
• Lays into standard 600 x 600 mm ceiling tile grid*
• Low profile and location in the ceiling plane reduces plenum conflicts

Acoustic Features:
• Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
• Omni-directional speaker design delivers more uniform sound for broader coverage
• High speech intelligibility over large areas
• Delivers music, public address and active acoustics through the same speaker eliminating redundant systems
• Low transducer self-noise
• Variable wattage tap for localised volume control (New external screw terminals for faster, easier installation)

Material:
• Steel frame, specially designed tubular membrane, painted scrim facing

Applications:
• Office
• Retail
• Education
• Leisure
• Healthcare

Frequency Response:
• Frequency range - nominal
• Armstrong CS-1000 Ultima
• Built in a ceiling, independently tested in an anechoic chamber
• Power: 1W
• Distance: 1 metre

*Also available in all standard European ceiling module sizes

Finishes:
• i-ceilings CS-1000 Panels are currently available in Armstrong's most popular ceiling tile finishes: Ultima, Optima, Dune, Fine Fissured, Orcal Neeva and Reno.

For details of non-standard, bespoke units, please call the CIE-Group sales office on +44 (0)115 9770075

Ultima/Optima Dune Fine Fissured

*All finish types also available in Orcal 'Clip-in' tile formats.

Orcal *

Part Numbers:

Part Number:	Product:	Finish:
BP6017ME	CS-1000	Ultima / Optima MicroLook
BP6018ME	CS-1000	Ultima / Optima Tegular
BP6019ME	CS-1000	Dune Plus MicroLook
BP6020ME	CS-1000	Dune Plus Tegular
BP6021ME	CS-1000	Fine Fissured MicroLook
BP6022ME	CS-1000	Fine Fissured Tegular

Specifications:

Model:	CS–1000
SPL @ 1W/1m	86.9dB / Max 95.9dB
Impedance	100v: 1, 2, 4 & 8W / 8Ω
Transducers	Quantity: 1
Power Capacity	8W
Dimensions	600(W) x 600(L) x 115(D) mm
Panel Weight	4.4kg

CS-4000: 8W Sound Panel Ceiling Speakers

The new 4 Transducer CS-4000 Sound Panel provides enhanced output and frequency range performance for AV, public address and active acoustics to enhance privacy, comfort and workspace effectiveness. New development and remodelling ensures even greater performance and ease of installation from the complete i-ceilings range. Available to co-ordinate with Armstrong's most popular ceiling patterns, for new-build and retrofit installations.

Superior Aesthetics:
- Provides improved aesthetics over conventional visible speakers
- Seemlessly blends with the rest of the ceiling

Flexibility & Value:
- Quick, easy and less expensive to install and/or relocate
- Lays into standard 600 x 600 mm ceiling tile grid*
- Low profile and location in the ceiling plane reduces plenum conflicts

Acoustic Features:
- 4 Transducer version for higher output levels and wider frequency range
- Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility
- Delivers music, public address and active acoustics through the same speaker eliminating redundant systems
- Low transducer self-noise
- Variable wattage tap for localised volume control (New external screw terminals for faster, easier installation)
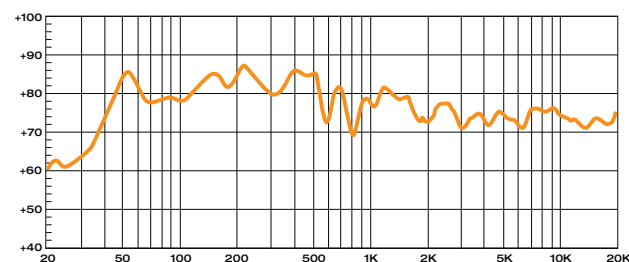
Material:
- Steel frame, specially designed tubular membrane, painted scrim facing

Applications:
- Office
- Retail
- Education
- Leisure
- Healthcare

Frequency Response:
- Frequency range - nominal
- Armstrong CS-4000 Ultima
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre
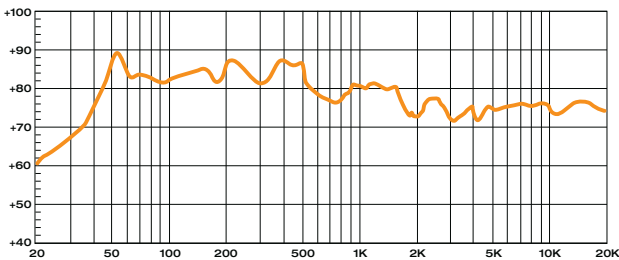
*Also available in all standard European ceiling module sizes

Finishes:
- i-ceilings CS-4000 Panels are currently available in Armstrong's most popular ceiling tile finishes: Ultima, Optima, Dune, Fine Fissured, Orcal Neeva and Reno.

  For details of non-standard, bespoke units, please call the CIE-Group sales office on +44 (0)115 9770075

Ultima/Optima

Dune

Fine Fissured

Orcal *

*All finish types also available in Orcal 'Clip-in' tile formats.

Part Numbers:

Part Number:	Product:	Finish:
BP4017ME	CS-4000	Ultima / Optima MicroLook
BP4018ME	CS-4000	Ultima / Optima Tegular
BP4019ME	CS-4000	Dune Plus MicroLook
BP4020ME	CS-4000	Dune Plus Tegular
BP4021ME	CS-4000	Fine Fissured MicroLook
BP4022ME	CS-4000	Fine Fissured Tegular

Specifications:

Model:	CS–4000
SPL @ 1W/1m	88.9dB / Max 97.4dB
Impedance	100v: 1, 2, 4, 8W / 8Ω
Transducers	Quantity: 4
Power Capacity	8W
Dimensions	600(W) x 600(L) x 115(D) mm
Panel Weight	4.6kg

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

i ceilings from Armstrong

Pro-Series: 30W Sound Panel Ceiling Speakers

Pro Series Sound Panel with superior combined performance for music and audio visual applications. New development and remodelling ensures even greater performance and ease of installation from the complete i-ceilings range. Available to co-ordinate with Armstrong's most popular ceiling patterns, for new-build and retrofit installations.

Superior Aesthetics:
- Provides improved aesthetics over conventional visible speakers
- Seemlessly blends with the rest of the ceiling

Flexibility & Value:
- Quick, easy and less expensive to install and/or relocate
- Lays into standard 600 x 600 mm ceiling tile grid*
- Low profile and location in the ceiling plane reduces plenum conflicts

Acoustic Features:
- Superior dispersion of sound over the full audible range
- Advanced membrane design produces high fidelity music for foreground and background applications
- Superior audio capabilities provide high quality active acoustics
- High power capacity generates high performance sound
- 'In' & 'out' terminals for both 100v and 8Ω
- Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility over large areas
- Delivers music, public address and active acoustics through the same speaker eliminating redundant systems
- Variable wattage tap for localised volume control (New external screw terminals for faster, easier installation)

Material:
- Steel frame, special honeycomb membrane, painted scrim facing

Applications:
- Office
- Education
- Healthcare
- Retail
- Leisure

Frequency Response:
- Frequency range - nominal
- Armstrong Pro Panel Ultima
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre

*Also available in all standard European ceiling module sizes

Finishes:
- i-ceilings CS-1000 Panels are currently available in Armstrong's most popular ceiling tile finishes: Ultima, Optima, Dune, Fine Fissured, Orcal Neeva and Reno.

  For details of non-standard, bespoke units, please call the CIE-Group sales office on +44 (0)115 9770075

Ultima/Optima   Dune   Fine Fissured

Orcal *

*All finish types also available in Orcal 'Clip-in' tile formats.

Part Numbers:

Part Number:	Product:	Finish:
BP6013ME	Pro Series	Ultima / Optima MicroLook
BP6014ME	Pro Series	Ultima / Optima Tegular
BP6015ME	Pro Series	Dune Plus MicroLook
BP6016ME	Pro Series	Dune Plus Tegular
BP6030ME	Pro Series	Fine Fissured MicroLook
BP6031ME	Pro Series	Fine Fissured Tegular

Specifications:

Model:	PRO Panel
SPL @ 1W/1m	93dB
Impedance	100v: 7.5, 15, 30W / 8Ω
Transducers	Quantity: 4
Power Capacity	30W
Dimensions	600(W) x 600(L) x 120(D) mm
Panel Weight	5.5kg

ceilings from **Armstrong**

low Z

- **CS-4000/Pwrd:** 8W i-ceilings Powered Sound Panel Ceiling Speakers
- **PRO/Pwrd:** 20W i-ceilings Powered Sound Panel Ceiling Speakers

i-ceilings CS-4000 and Pro Panels are now also available as powered versions, featuring our exclusively developed Integrated Panel Amplifier.

The 20W Panel Amplifier is factory-fitted and features line level volume control, tone controls and external speaker output.

All connections to the amplifier are externally accessible using removable screw terminals for fast and easy connection.

Acoustic Features:
- 20W Integrated Amplifier (30W Peak)
- Line Level Volume Control
- Low, Mid and High Tone Controls
- Available in self-powered CS-4000 and Pro Panel versions
- Powered Panel versions will power an additional passive CS4000 Sound Panel slave
- Fast and easy to install

Applications:
- AV Presentation Systems
- Education
- Healthcare
- Leisure
- Corporate

Material:
- Steel frame and bridge

Part Numbers:

Part Number:	Product:	Finish:
BP4017ME/Pwrd	CS-4000/Pwrd	Ultima / Optima MicroLook
BP4018ME/Pwrd	CS-4000/Pwrd	Ultima / Optima Tegular
BP4019ME/Pwrd	CS-4000/Pwrd	Dune Plus MicroLook
BP4020ME/Pwrd	CS-4000/Pwrd	Dune Plus Tegular
BP4021ME/Pwrd	CS-4000/Pwrd	Fine Fissured MicroLook
BP4022ME/Pwrd	CS-4000/Pwrd	Fine Fissured Tegular
BP6013ME/Pwrd	Pro Series/Pwrd	Ultima / Optima MicroLook
BP6014ME/Pwrd	Pro Series/Pwrd	Ultima / Optima Tegular
BP6015ME/Pwrd	Pro Series/Pwrd	Dune Plus MicroLook
BP6016ME/Pwrd	Pro Series/Pwrd	Dune Plus Tegular
BP6030ME/Pwrd	Pro Series/Pwrd	Fine Fissured MicroLook
BP6031ME/Pwrd	Pro Series/Pwrd	Fine Fissured Tegular

Specifications:

Model:	CS–4000/Pwrd	PRO/Pwrd
Frequency Range	80Hz ~ 18kHz	40Hz ~ 20kHz
Output Impedance	8Ω	8Ω
Output Power	8W RMS (max)	20W RMS (max)
Operating Voltage	230v AC	230v AC
SPL @ 1W/1m	88.9dB / 97.4dB Max	93dB 1m
Extension Speaker Output	8W	8W
Dimensions:	600(W) x 600(D) x 120(H) mm	600(W) x 600(D) x 120(H) mm
Panel Weight:	6.2kg per panel	7.1kg per panel

- **RVC1:** Remote Volume Control

RVC1 Wall-mounting remote volume control is available as an additional option.

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

i ceilings
from **Armstrong**

• **CS4500ME:** 8W Surface-mount Sound Panel Ceiling Speaker

The new CS4500 Sound Panel has been developed to provide all the acoustic benefits of an i-ceilings NXT loudspeaker, in environments featuring solid/plasterboard ceilings (ie. no suspended ceiling system available for installing standard i-ceilings Sound Panels).

This surface-mount solution features an i-ceilings CS Sound Panel fitted within a low-profile, steel 'back box' for direct mounting to a solid ceiling.

Acoustic Features:
- Compatible with 100v line and low impedance systems (8Ω Selector Terminal)
- Omni-directional speaker design delivers more uniform sound for broader coverage
- High speech intelligibility over large areas
- Delivers music, public address and active acoustics through the same speaker
- Variable wattage tap for localised volume control (internal screw terminals)

Applications:
- Office
- Education
- Healthcare
- Retail
- Leisure

Material:
- White, steel enclosure, specially designed membrane, white scrim facing

Frequency Response:
- Frequency range - nominal
- Armstrong CS4500
- Built in a ceiling, independently tested in an anechoic chamber
- Power: 1W
- Distance: 1 metre
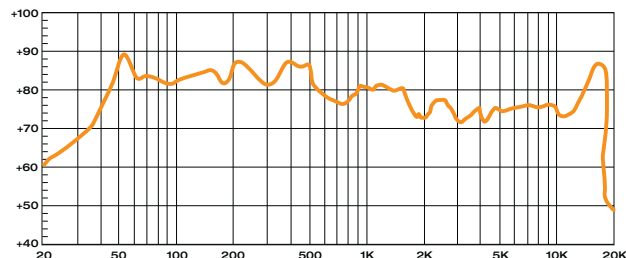
Back-box rear elevation

Specifications:

Model:	CS4500ME
SPL @ 1W/1m	88.9dB / Max 97.4dB
Frequency Range	50Hz ~ 18kHz
Impedance	100v: 1, 2, 4 & 8W / 8Ω
Transducers	Quantity: 4
Power Capacity	8W
Dimensions	500(W) x 500(L) x 70(D) mm
Panel Weight	4.3kg

Part Numbers:

Part Number:	Product:	Finish:
BP4500ME	CS4500ME	WHITE TEXTURED FINISH

Please Note: The CS5400 Sound Panel is not appropriate for wallmount applications

amina.

- **AIW1X:** 20W Plastered In-Wall Loudspeaker
- **AIW3X:** 40W Plastered In-Wall Loudspeaker
- **AIW5X:** 80W Plastered In-Wall Loudspeaker

The advent of high power vibrational element flat panel loudspeakers has given birth to the truly unseen loudspeaker.

This plastered in-wall (or in-ceiling) product type reproduces high definition sound with zero visual interference to room aesthetics. Entertainment systems can now be employed in every room of the home, whilst avoiding all the usual techno clutter.

This technology has the additional advantage of improving dispersion characteristics over a conventional loudspeaker, making speaker location and listening position much more flexible.

The width of an AIW product allows it to fit well within the centre spacing commonly used in modern wood or metal studwork construction methods (400mm space).

Applications:

- The **AIW1X** is an affordable, concealed sound source for use in all parts of the home where more modest sound levels are called for. From bedrooms and bathrooms to kitchens and hallways, it reproduces high quality audio without compromising style or design.
- The **AIW3X** is for use in all parts of the home including the main listening areas of home cinema, where good high levels of sound are required.
- The **AIW5X** can be reserved for those special areas of the home (e.g. home cinema rooms) where very loud, highly dynamic, high performance reproduction is required. In home cinema and other extended frequency range listening applications the addition of a sub woofer to your system is recommended. For those with monster taste in music or movie loudness, simply apply more than one AIW5 per channel.

Specifications:

Product:	AIW1X	AIW3X	AIW5X
Nominal Impedance	8Ω	8Ω	8Ω
Power Handling: (continuous)	20W	40W	80W
Sensitivity (with 1.5mm plaster skin) @ 1W/1m	82dB	85dB	88dB
Maximum SPL (with 1.5mm plaster skin)	95dB 1m/20W	99dB 1m/40W	105dB 1m/80W
Frequency Range	100Hz ~ 20kHz	100Hz ~ 20kHz	100Hz ~ 20kHz
Electrical Connection	Butt splice crimp or 2 part polarised connector	Butt splice crimp or 2 part polarised connector	Butt splice crimp or 2 part polarised connector
Minimum Aperture Depth	60mm from front of panel	60mm from front of panel	60mm from front of panel
Fixings Provided	Suitable for 12.5 and 16mm thick plasterboard	Suitable for 12.5 and 16mm thick plasterboard	Suitable for 12.5 and 16mm thick plasterboard
Box Quantity	Pairs	Pairs	Pairs
High Pass Filter Requirement	100Hz at 24dB/Octave (Minimum external required eg Amina APU2 protection device)	100Hz at 24dB/Octave (Minimum external required eg Amina APU2 protection device)	100Hz at 24dB/Octave (Minimum external required eg Amina APU2 protection device)
Dimensions	450(W) x 345(H) x 38(D) mm	450(W) x 345(H) x 38(D) mm	450(W) x 345(H) x 38(D) mm
Weight	1kg	1.13kg	1.76kg

For the very best results, your system electronics should also comprise in-line equalisation to compensate for slight variations in frequency response due to plaster depths and wall types

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Atlas Sound

InformaCast
by **singlewire** SM
software

InformaCast IP: Broadcasting & Loudspeaker Systems

Easily connect loudspeaker systems to existing computer networks with IP Speakers. Atlas Sound IP Speakers are a Power-over-Ethernet (PoE) loudspeaker range which require only a RJ-45 connector to connect to existing data networks.

The perfect choice for education, military/government, and large scale corporate applications, InformaCast IP Broadcasting Solution revolutionises communication, clock/bell and message playback functionality.

It provides the capability to simultaneously send a multicast audio stream and text messages to any combination of Cisco IP phones, Atlas Sound IP Speakers and PCs.

With the push of a single button on the phone or a single click from a PC, a user can send a live, recorded, or scheduled broadcast to one or more paging groups.

With InformaCast-compliant loudspeaker products from Atlas Sound, system designers and integrators will have the ability to deploy extremely large scale and complex paging systems over new or existing Cisco networks with the convenience of centralized administration by IT personnel.

Features of Atlas Sound IP Loudspeakers:
- Line out and amplified out
- Multicast support
- Minimal delay
- Easy to install - built-in test tones allow quick check of installation
- Can work with traditional high voltage wiring
- Available in several different configurations
- Inter-operates with Cisco VoIP networks and phones and with Singleware InformaCast Broadcasting application
- Web (HTTP) interface for status and control
- Software can be automatically upgraded for future needs

Options:
- A wireless network connection (802.11)
- PoE and non-PoE
- Synchronized clock display
- Several different speaker configurations:
  - Horns
  - Weatherproof
  - Ceiling Panels
  - Wall Panels
  - Vandal proof

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops
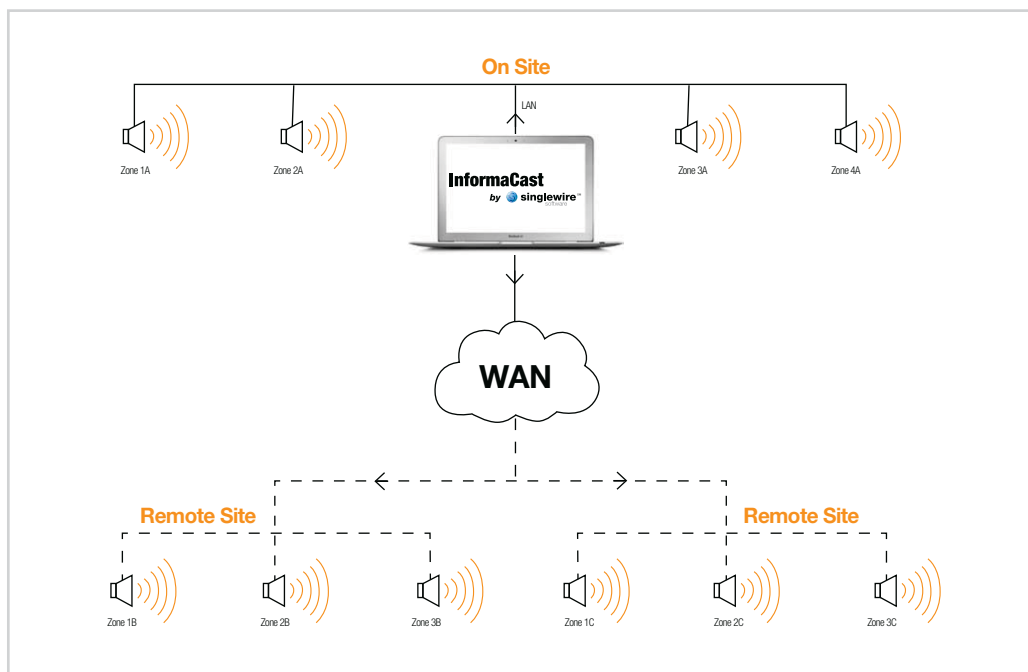
I128SYS: IP-Addressable Ceiling Loudspeaker System

Features:

- Use with InformaCast software, Cisco PoE networks & Cisco IP Telephones to create extremely versatile paging and messaging systems
- Highly efficient 8" dual cone loudspeaker system provides 94 dB average SPL @ 1W/1M and is capable of 103 dB @ 1 meter via the rated power of the internal IP addressable amplifier
- 105° dispersion in the 2kHz octave band (-6 dB)
- Wide frequency response of 86Hz ~ 8kHz (-3 dB) is perfect for speech and general messaging playback
- Built in 9W 8Ω PCB amplifier / control board

Loudspeaker Specifications:

Model:	I128SYS
Speaker Size	8" (203mm)
Power Handling	15W
Sensitivity (SPL @ 1W/1M)	94dB
Frequency Response[1]	86Hz ~ 8kHz
Dispersion[2]	105˚
Mounting Dimentions	194 mm Bolt Circle
Diameter & Depth	206(Ø) x 73(D) mm
Weight	0.9kg

[1] Measured in recommended enclosure
[2] 3dB down point, 2kHz octave band

Baffle Specifications:

Model:	I128SYS
Baffle Material	18-gauge CRS
Speaker Grille Material	22-gauge Perforated Steel
Colour	White
Loudspeaker cut-out dimension	232(W) x 175(H)mm
Dimentions	601 (W) x 303 (H) mm
Depth (Front of Baffle to Rear of Enclosure)	124mm

Amplifier/Controller Specifications:

Model:	I128SYS
Power Rating	9W RMS into 8Ω Load with 9v DC in
Inputs	RJ-45 Female on PCB accessable from rear of baffle
Outputs	2 Wire Main ± terminated to loudspeaker
Power Source	Cisco IEEE 802.3AF compliant POE network switches local 12 ~ 18v DC PSU
Network Control	Informacast on multicast enabled networks

601mm

232mm

175mm

303mm

73mm

Need help choosing the right product?
Call our technical support team now on:
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Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops
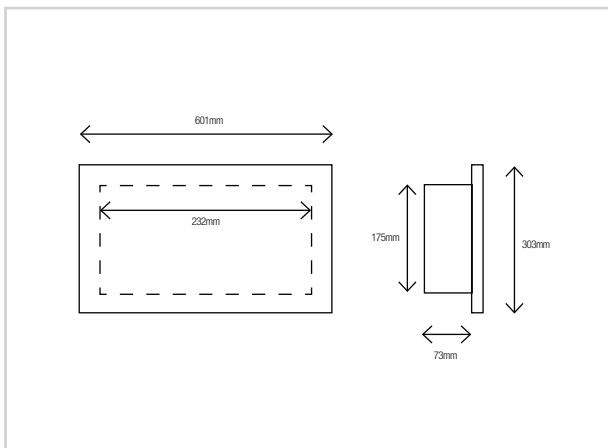
I8S: IP-Addressable Ceiling Loudspeaker System

Features:

- Use with InformaCast software, Cisco PoE networks & Cisco IP Telephones to create extremely versatile paging and messaging systems
- Highly efficient 8" dual cone loudspeaker system provides 94 dB average SPL @ 1W/1M and is capable of 103 dB @ 1 meter via the rated power of the internal IP addressable amplifier
- 105° dispersion in the 2kHz octave band (-6 dB)
- Wide frequency response of 86Hz ~ 8kHz (-3 dB) is perfect for speech and general messaging playback

Loudspeaker Specifications:

Model:	I8S
Speaker Size	8" (203mm)
Power Handling	15W
Sensitivity (SPL @ 1W/1M)	94dB
Frequency Response[1]	86Hz ~ 8kHz
Dispersion[2]	105°
Weight	0.9kg
Diameter & Depth	206(Ø) x 73(D) mm
Mounting Dimensions	194mm Bolt Circle

[1] Measured in recommended enclosure
[2] 3dB down point, 2kHz octave band

Baffle Specifications:

Model:	I8S
Baffle Material	18-gauge CRS
Overall Width x height	292 x 292 mm
Depth (Front of Baffle to rear of speaker)	76mm
Colour	White

Amplifier/Controller Specifications:

Model:	I8S
Power Rating	9W RMS into 8Ω Load with 9v DC in
Inputs	RJ-45 Female on PCB accessable from rear of baffle
Outputs	2 Wire Main ± terminated to loudspeaker
Power Source	Cisco IEEE 802.3AF compliant POE network switches local 12-18v DC PSU
Network Control	Informacast on multicast enabled networks

76mm
292mm
292mm

- **I8SC:** IP-Addressable Loudspeaker System with Clock
- **I8SCM:** IP-Addressable Loudspeaker System with Clock & Microphone

Features:

- Use with InformaCast software, Cisco PoE networks & Cisco IP Telephones to create extremely versatile paging and messaging systems
- Highly efficient 8" dual cone loudspeaker system provides 94 dB average SPL @ 1W/1M and is capable of 103dB @ 1 meter via the rated power of the internal IP addressable amplifier
- 105° dispersion in the 2kHz octave band (-6dB)
- Wide frequency response of 86Hz ~ 8kHz (-3dB) is perfect for speech and general messaging playback
- Network controlled, high visibility red LED clock
- Built-in microphone for ½ duplex communication (I8SCM model only)
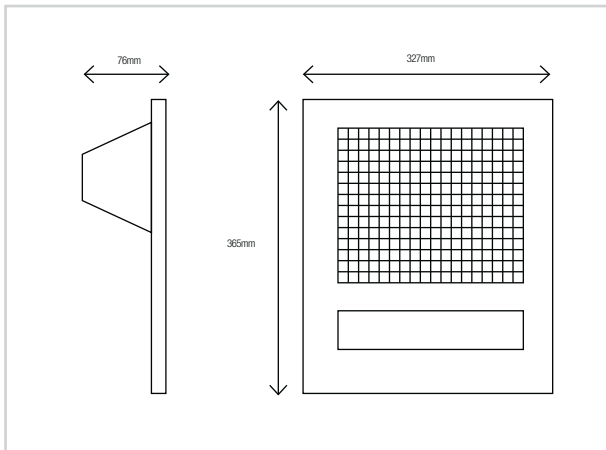
Loudspeaker Specifications:

Model:	I8SC / I8SCM
Speaker Size	8" (203 mm)
Power Handling	15W
Sensitivity (SPL @ 1W/1M)	94dB
Frequency Response[1]	86Hz ~ 8kHz
Dispersion[2]	105˚
Diameter & Depth	206(Ø) x 73(D) mm
Mounting Dimensions	194 mm Bolt Circle

1 Measured in recommended enclosure
2 3dB down point, 2kHz octave band

Baffle Specifications:

Model:	I8SC / I8SCM
Baffle Material	18-gauge CRS
Speaker Grille Material	22-gauge Perforated Steel
Loudspeaker cut-out dimension	232 x 175 mm
Overall Width x Height	327(W) x 365(H) mm
Depth (Front of Baffle to Rear of Speaker)	76 mm
Depth (Rear of Baffle to Rear of Speaker)	71 mm
Colour	White

Amplifier/Controller Specifications:

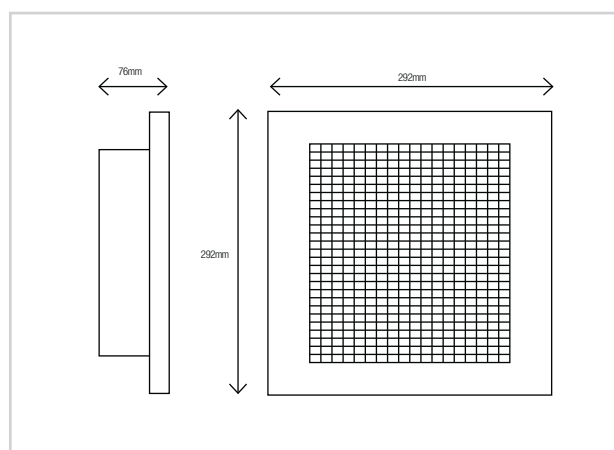| Model:	I8SC / I8SCM
Power Rating	9W RMS into 8Ω Load with 9VDC in
Inputs	RJ-45 Female on PCB accessable from rear of baffle
Outputs	2 Wire Main ± terminated to loudspeaker
Power Source	Cisco IEEE 802.3AF compliant POE network switches local 12-18VDC PSU
Network Control	Informacast on multicast enabled networks

Clock Specifications:

Model:	I8SC / I8SCM
Characters	5
LEDs per character	21
Character Height	64mm
Character Width	32mm
Viewable clock surface dimensions	241(W) x 64(H) mm
Clock Control	InformaCast on multicast enabled networks

Microphone Specifications (I8SCM model only):

Model:	I8SCM
Microphone Type	Omni directional subminiature electret condenser
Diameter	6mm

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

IHVP: IP-Addressable Horn Loudspeaker

Features:

- Use with InformaCast software, Cisco PoE networks & Cisco IP Telephones to create extremely versatile paging and messaging systems
- Highly efficient APF horn loudspeaker system provides 104 dB average SPL @ 1W/1M and is capable of 113 dB @ 1 meter via the rated power of the internal IP addressable amplifier
- 95° dispersion in the 2kHz octave band (-6 dB)
- Frequency response of 700Hz ~ 5.5kHz (±5 dB) is perfect for high intelligibility speech and general messaging playback

Please Note:

- Model IHVP is not designed for use outdoors or in applications where the product might be exposed to moisture or high humidity
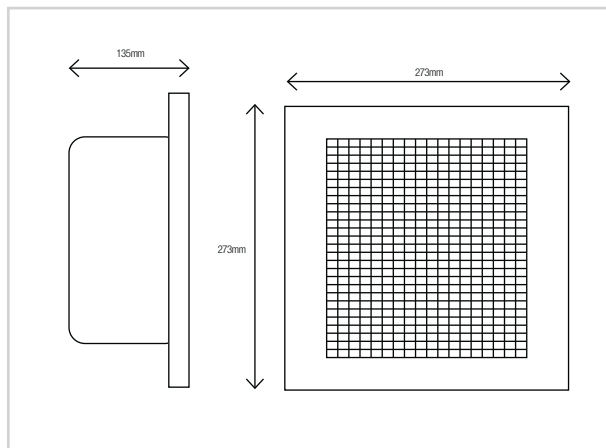
APF-15 Loudspeaker Specifications:

Model:	IHVP
Power Handling	15W continuous
Sensitivity	120dB at 15W (peak), 114dB at 15W / 1m (avg) 700 ~ 5.5kHz, 104dB 1W / 1m (avg) 700 ~ 5,5kHz
Frequency Response	600 ~ 14,000Hz (nominal), 700 ~ 5,5kHz ±5dB
Dispersion	95˚ (-6dB, 2000Hz octave band)
Finish	Grey baked epoxy

Baffle Specifications:

Model:	IHVP
Baffle Material	Cast aluminium
Speaker Grille Material	22-guage perforated stainless steel
Overall Dimensions	273(W) x 273(H) x 135(D) mm
Colour	White

Amplifier/Controller Specifications:

Model:	IHVP
Power Rating	9W RMS into 8Ω Load with 9v DC in
Inputs	RJ-45 Female on PCB accessable from rear of baffle
Outputs	2 Wire Main ± terminated to loudspeaker
Power Source	Cisco IEEE 802.3AF compliant POE network switches local 12-18v DC PSU
Network Control	Informacast on multicast enabled networks

135mm

273mm

273mm

Enclosures for Atlas Sound InformaCast:
IP-Compliant Loudspeaker Systems

Features:
- Enclosures specifically designed for optimum performance and installation ease with Atlas Sound InformaCast compliant loudspeaker systems
- Choice of surface or flush models and straight or slant front styling (I8S and I8SC enclosures only)

Applications:
- Install Atlas Sound InformaCast IP loudspeaker enclosures wherever requirements call for model I8S, I8SC, I8SCM, or IHVP loudspeaker/baffle/PCB amp control board systems. Units are particularly suited for use in classrooms, cafeterias, convention and medical facilities.

SEA-I8S
Slanted surface-mount enclosure is designed for use only with Atlas Sound loudspeaker system models I8S & 18SM. The slope front design allows for directional sound dispersion. The enclosure is constructed of 20-gauge CRS and finished in textured white epoxy.
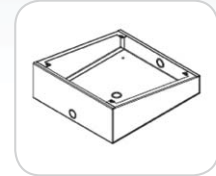
SEST-I8S
Straight surface-mount enclosure is designed for use only with Atlas Sound loudspeaker system models I8S & 18SM. The unit provides an architecturally pleasing appearance with crisp lines that blend well with most building interiors. The enclosure is constructed of 20-gauge CRS and finished in textured white epoxy.
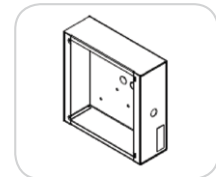
FEST-I8S
Flush mount enclosure is designed for use only with Atlas Sound loudspeaker system models I8S & 18SM. The unit includes a slot style mounting system to accommodate most any material thickness. The enclosure is constructed of 20-gauge CRS and finished in textured white epoxy.
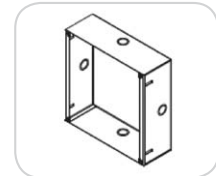
SEA-I8SC
Slanted surface mount enclosure is designed for use only with Atlas Sound loudspeaker system models I8SC & I8SCM. The slope front design allows for directional sound dispersion. The enclosure is constructed of 20-gauge CRS and finished in textured white epoxy.
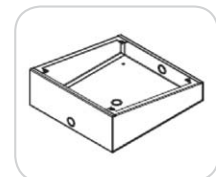
SEST-I8SC
Straight surface mount enclosure is designed for use only with Atlas Sound loudspeaker system models I8SC & I8SCM. The unit provides an architecturally pleasing appearance with crisp lines that blend well with most building interiors. The enclosure is constructed of 20-gauge CRS and finished in textured white epoxy.
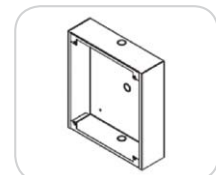
FEST-I8SC
Flush mount enclosure is designed for use only with Atlas Sound loudspeaker system models I8SC & I8SCM. The unit includes a slot style mounting system to accommodate most any material thickness. The enclosure is constructed of 20-gauge CRS and finished in textured white epoxy.
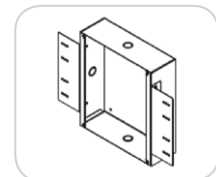
SEST-IH
Straight surface mount stainless steel enclosure is designed for use only with Atlas Sound loudspeaker system model IHVP. The enclosure is constructed of 18-gauge stainless steel and finished in textured white epoxy.
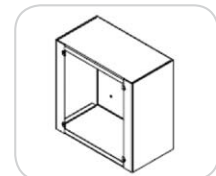
FEST-IH
Flush mount stainless steel enclosure is designed for use only with Atlas Sound loudspeaker system model IHVP. External mounting wings allow for easy installation into stud material. The enclosure is constructed of 18-gauge stainless steel.
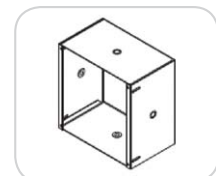
• IPS-ZC1: Single-zone IP-Compliant System Line Level Interface
• IPS-ZC2: Two-zone IP-Compliant System Line Level Interface

For larger applications where installation of multiple IP Loudspeakers is both impractical or cost prohibitive.

Providing the same function and control of the standard InformaCast IP devices, the IPZ 1/2 interfaces to conventional high impedance amplification systems at line level, thus allowing IP control and messages to be broadcast over mass / multiple loudspeaker networks.

Ideal for warehouse, large zone, site wide distribution applications.

Features:
- Use with InformaCast software, Cisco POE networks & Cisco IP Telephones to create extremely versatile paging and messaging systems
- Balanced line output to drive Atlas CP, Pa or AA series amplifiers
- Modular 1RU design allows for easy rack mounting and cable access
- Systems available with single (IPS-ZC1) or dual module (IPS-ZC2) configurations

IPS-ZC1

IPS-ZC2
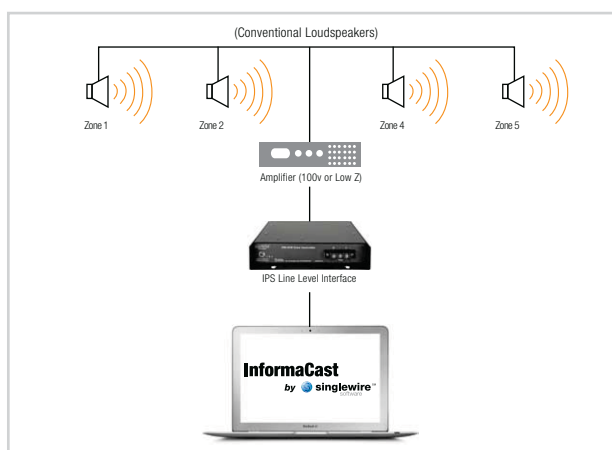
Specifications:

Parameter:	Specification	Conditions / Comments
Analog Output	Transformer balanced	3-Pole Terminal Block
Output Trim Range (Software Controlled)	+16 to -30 (Plus Mute)	½dB steps, gain above unity is digital, attenuation below unity is analog
Impedance	600Ω	Each leg to ground
Maximum Level	+23 (+24 Unloaded) dBu @ 1kHz, 2kΩ load	
Frequency Response	20Hz to 20kHz ± 1dB	
Dynamic Range	105dB min	A-Weighted
IM Distortion (SMPTE)	<0.01 0.01% 60Hz/7kHz, 4:1, +4dBu	
Crosstalk	100dB typ. 1kHz bandpass	
Audio Convertors	24 bit	
Audio Processing	24 bit and higher	
Propagation Delay	1.58ms min	
Ethernet	10Base-T	10 Mb/sec, RJ-45 connector
Max Cable Length	328ft / 100 meters	Standard Ethernet Cat 5 Cable Length Limits
Power Requirements	12 ~ 18v DC	Cisco IEEE 802.3AF compliant POE switches or local 12 ~ 18VDC PSU
Max Current Draw	800mA	
Construction	18 guage CRS	
Size	483(W) x 44(H) x 209(D) mm	1RU High with one or two modules installed
Weight	1.7kg	

(Conventional Loudspeakers)

Zone 1   Zone 2   Zone 4   Zone 5

Amplifier (100v or Low Z)

IPS Line Level Interface

InformaCast
by singlewire

Loudspeakers

Amplifiers

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

Loudspeakers

Amplifiers

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(wireless)

Portable P.A.

Soundfield

Induction Loops

interM

• PA935A: 35W Mixer Amplifier

Simple, compact mixer amplifier ideal for use in smaller installations such as waiting rooms, offices, factories, educational and retail applications.

Provides clear voice and full range BGM reproduction.

Features:

- Compact design
- 1 Mic input (¼" jack)
- 2 Mic/AUX switchable (¼" jack/stereo phono)
- Priority inputs, telephone, mic 1
- Bass/treble control
- 100v/8Ω/4Ω Low Z output option
- Optional 19" rack kit (BKT-PA935A)

19" Rack Mount Bracket
Option: BKT–PA935A
Bracket
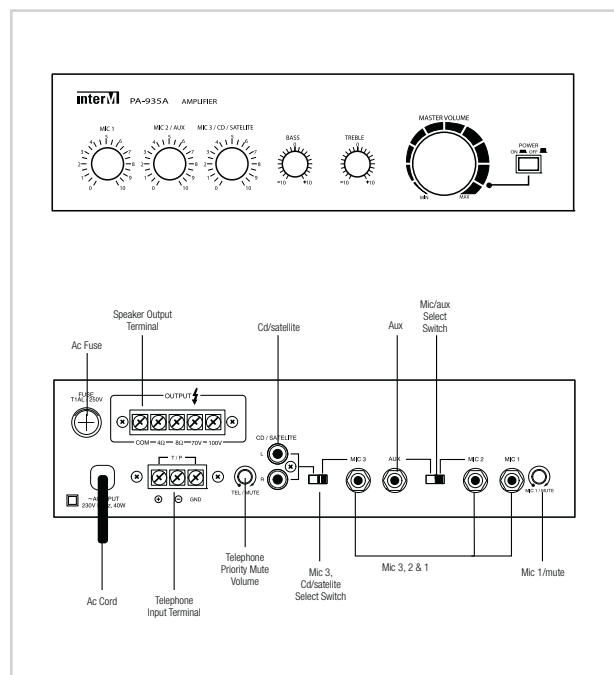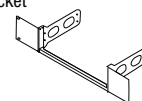
Specifications:

Model:	PA935A
Output Power	35W RMS @ 100v 35W RMS 8Ω/4Ω
Inputs	1 x Mic (¼" jack) 1 x Mic/Aux (¼" jack) 1 x Mic/Aux ~ Sat (¼" jack and stereo phono) Telephone (screw terminal)
Priority	Telephone, Mic 1
Input Sensitivity/Impedance	Mic 1,2,3 ~ -50dB/600Ω Aux ~ -15dB/10kΩ Sat ~ 0dB/10kΩ Telephone ~ 0.775v/600Ω
Frequency Response	80Hz ~ 15kHz
Power Requirement	230v AC, 50Hz
Rack Height	2U
Dimensions	290(W) x 76(H) x 185(D) mm
Weight	4.4kg

![inter M logo]

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

PA1000B: 30W Mixer Amplifier

Simple mixer amplifier ideal for use in reception areas, waiting rooms, factories, education, AV and retail applications.

Full range frequency response makes the unit ideal for any voice or background music system.

Features:

- 2 Mic inputs (¼" jack ~ 3 pin XLR)
- 1 AUX input (¼" jack)
- Line in ~ line out
- Priority inputs, telephone, mic 1
- Bass and treble control
- 100v Loudspeaker output
- 4, 8Ω Low Z output option
- Remote chime option
- Optional 19" rack kit (BKT-PA1000B)
- 2U high

19" Rack Mount Bracket
Option: **BKT–PA1000B Bracket**
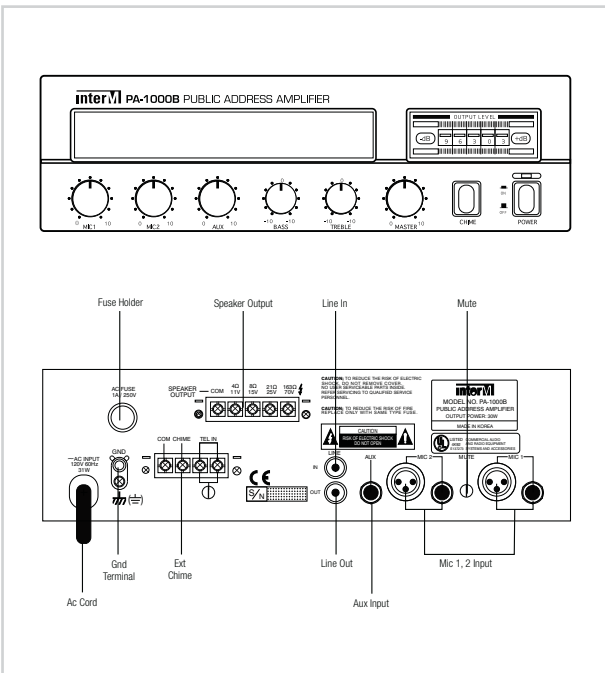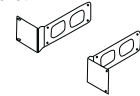
Specifications:

Model:	PA1000B
Output Power	30W RMS @ 100v 30W RMS 8Ω/4Ω
Inputs	1 x Mic (¼" jack and 3 pin XLR) 1 x Aux (¼" jack) 1 x Telephone (screw terminal)
Priority	Telephone, Mic 1
Input Sensitivity/Impedance	Mic: 1, 2 = ¼" jack~ 1mv/10kΩ Mic: 1, 2 = 3 pin XLR~F Aux ~ 100mv/10kΩ Telephone ~ 0.775v/600Ω
Frequency Response	60Hz ~ 20KHz
Line In	1v/10kΩ
Line Out	1v/600Ω
Power Requirement	230v AC, 50Hz
Rack height	2U
Dimensions	300(W) x 88(H) x 268(D) mm
Weight	4.6kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

- **A60:** 60W Mixer Amplifier
- **A120:** 120W Mixer Amplifier

This simple, economical desktop amplifier series provides a cost effective solution to basic PA and background music applications.

A60/A120 amplifiers are extensively used throughout the UK's leading high street and supermarket retail outlets.

Features:

- Clean, functional design
- 3 Mic inputs (combi XLR / ¼" jack)
- 2 AUX inputs (stereo phono)
- Bass and treble control
- Priority input ~ Mic 1
- Pheonix screw terminals for loudspeaker connection
- 2U high
- Optional 19" rack (BKT-A120)
  (Also fits A60 Amplifier)

19" Rack Mount Bracket
Option: BKT–A120
Bracket

Aux 1,2, Input   Mute Control

Ac Cord   Speaker Output Terminals   Mic 1,2, 3 Input Jack
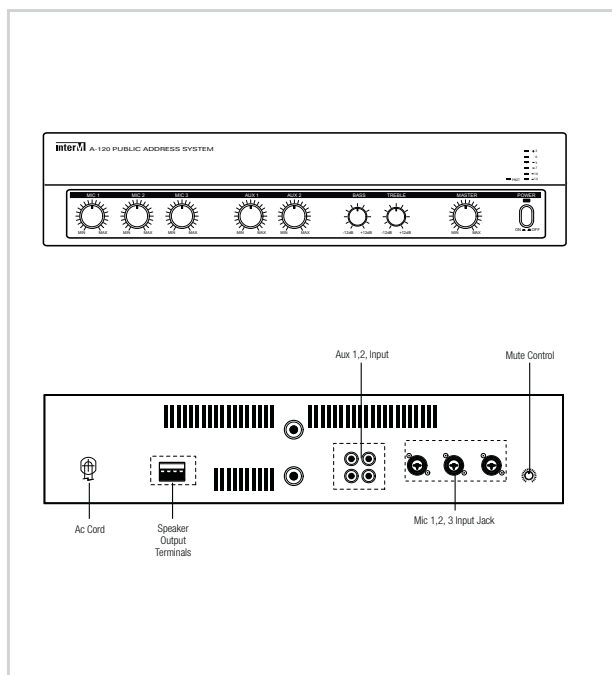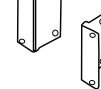
Specifications:

Model:	A60	A120
Output Power	60W RMS @ 100v 60W RMS @ 4Ω	120W RMS @ 100v 120W RMS @ 4Ω
Inputs	3 x Mic (combi ¼" XLR) 2 x Aux (stereo phono)	3 x Mic (combi ¼" XLR) 2 x Aux (stereo phono)
Priority	Mic 1	Mic 1
Input Sensitivity/Impedance	Mic: 1,2,3 ~ -60dB/600Ω Aux: -10dB/10kΩ unbalanced	Mic: 1,2,3 ~ -60dB/600Ω Aux: -10dB/10kΩ unbalanced
Frequency Response	80Hz ~ 16kHz	80Hz ~ 16kHz
Power Requirement	230v AC 50Hz	230v AC 50Hz
Rack Height	2U	2U
Dimensions	420(W) x 88(H) x 320(D) mm	420(W) x 88(H) x 320(D) mm
Weight	8.9kg	10.3kg

interM

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

• MA106: 60W Compact Mixer Amplifier

Inter-M's new MA106 is a highly compact 100v line/Low Z switchable desktop amplifier for standard PA and background music applications and is ideally suited to retail installations or where space is at a premium.

Only 1U in height and just 30cm wide, this newly-styled 60W D-class amplifier provides both power output and features beyond the expectations of a unit so small.

Features:

- Highly compact, desktop unit
- Stylish new design
- Phantom Power to Mic Input 1
- Separate Bass and Treble tone controls
- 100v line/4Ω switchable
- External mute and Telephone In
- Optional 19" Rackmount Kit

19" Rack Mount Bracket
Option: **BKT−MA106**

Ac Cord

Speaker Terminals

Mic/line Inputs

Tel In

Ext Mute

Tel Mute Level

Mic Mute Level
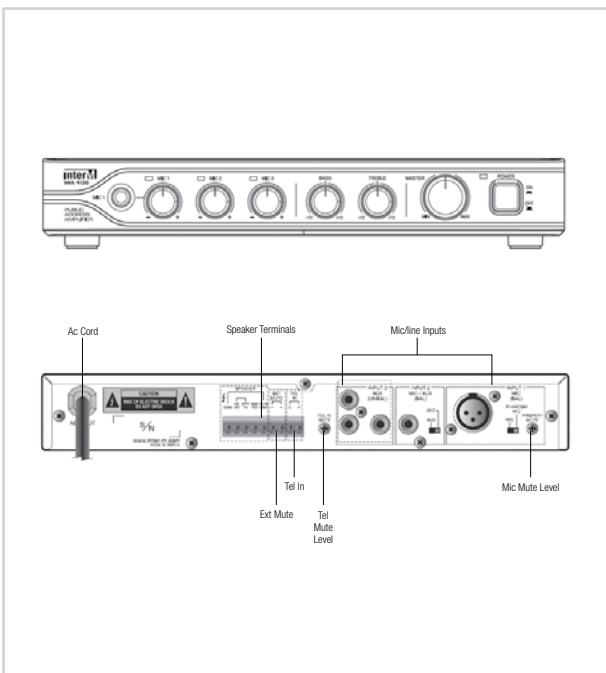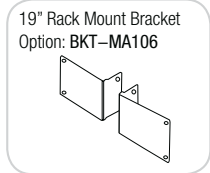
Specifications:

Model:	MA106
Output Power	60W RMS @ 100v/4Ω
Inputs	1 x balanced Mic (phono/XLR) complete with optional power 1 x balanced Mic/Aux (¼" jack) 1 x unbalanced Aux (¼" jack/dual phono)
Priority	1 = Tel Input, 2 = Mic 1
Frequency Response (±3dB)	80Hz ~ 15kHz
Operating Temperature	-10°C ~ +40°C
Power Requirement	230v AC, 50 ~ 60Hz
Rack Height	1U
Dimensions	300(W) x 44(H) x 230(D) mm
Weight	2.35kg

inter**M**

- **MA206:** 60W Mixer Amplifier
- **MA212:** 120W Mixer Amplifier
- **MA224:** 240W Mixer Amplifier

Utilising efficient D-class amplifier technology, the latest generation of Inter-M's market-leading range of professional installation mixer amplifiers are smaller, lighter, more feature-full and have been stylishly remodelled for today's more demanding professional audio installation market.

With 5 selectable speaker outputs, 6 individually-controlled mic/line inputs, 5-band equaliser and numerous other features all as standard, the new MA200 Series is ideal for user-manageable, zoned PA and background music in applications such as retail, education, corporate and church installations.

19" Rack Mount Bracket
Option: BKT–A120
Bracket

Features:

- 6 Mic/Line Inputs (3pin XLR / ¼" jack / dual phono)
- Priority Mute (Tel Input & Input 1)
- Link input (¼" jack)
- Amp In (¼" jack)
- Pre Amp Out (¼" jack)
- Chime/Siren
- External Mute (screw terminal)
- Remote Volume Control (screw terminal)
- Telephone In (screw terminal)
- Phantom Power (Inputs 1, 2 & 3)
- 'Active' LED display per input channel
- 5 Zone + All Loudspeaker Selector
- Optional 19" Rackmount Kit

Speaker Terminals · Amp In · Line Out · Line In · Ac Inlet · Function Terminals · Mic/line Inputs

Specifications:

Model:	MA206	MA212	MA224
Output Power	60W RMS @ 100v/4Ω	120W RMS @ 100v/4Ω	240W RMS @ 100v/4Ω
Inputs		3 x Mic/Line (3 pin XLR-F) 2 x Mic/Line (¼" jack) 1 x Line (dual phono) 1 x Telephone (screw terminal)	
Priority		1 = Tel Input, 2 = Mic 1	
Input Sensitivity/Impedance		Inputs: 1 ~ 5: Mic -50dBv/2kΩ, Line -10dBv/2kΩ Input 6: -10dBv/20kΩ Telephone: 0.775dBv/10kΩ	
Frequency Response (±3dB)		80Hz ~ 15KHz	
Operating Temperature		-10°C ~ +40°C	
Power Requirement		230v AC, 50Hz	
Rack Height		2U	
Dimensions		420(W) x 88(H) x 328(D) mm	
Weight	5.4kg	6.7kg	8.0kg

inter M

- **PA2000A:** 60W Mixer Amplifier
- **PA4000A:** 120W Mixer Amplifier
- **PA6000A:** 240W Mixer Amplifier

Ground-breaking amplifier series which, when released, set new standards in the industry; its outlook and host of features pushed it to the forefront of the PA, education, AV and church markets, where it remains today!

Features:

- 6 Inputs (5 x 3 pin XLR, 1 x stereo phono)
- Telephone input (screw terminals)
- Priority-telephone, mic 1, mic 2
- 5 Band graphic equaliser
- Line in
- Line out
- 5 Zone speaker selection
- Chime & Siren
- External mute terminal
- Bar graph LED output VU meter
- Optional 19" rack kits
  (BKT-PA2000A, BKT-PA4000A)

19" Rack Mount Bracket
Option: **BKT–PA2000A**
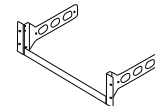
19" Rack Mount Bracket
Option: **BKT–PA4000A/ PA6000A**
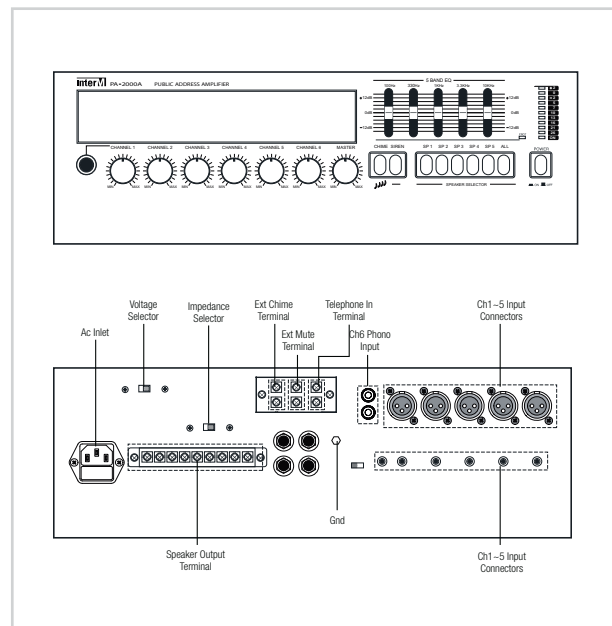
Specifications:

Model:	PA2000A	PA4000A	PA6000A
Output Power	60W RMS @ 100v 60W RMS @ 4Ω/8Ω	120W RMS @ 100v 120W RMS @ 4Ω/8Ω	240W RMS @ 100v 240W RMS @ 4Ω/8Ω
Inputs	5 x Mic/line (3 pin XLR~F) 1 x Mic/Aux (stereo phono) 1 x Telephone (screw terminal)	5 x Mic/line (3 pin XLR~F) 1 x Mic/Aux (stereo phono) 1 x Telephone (screw terminal)	5 x Mic/line (3 pin XLR~F) 1 x Mic/Aux (stereo phono) 1 x Telephone (screw terminal)
Priority	Telephone, Mic 1, Mic 2	Telephone, Mic 1, Mic 2	Telephone, Mic 1, Mic 2
Input Sensitivity/Impedance	Inputs 1 ~ 6: 1mv / 10kΩ Telephone -2dB/600Ω	Inputs 1 ~ 6: 1mv / 10kΩ Telephone -2dB/600Ω	Inputs 1 ~ 6: 1mv / 10kΩ Telephone -2dB/600Ω
Frequency Response	60Hz ~ 20KHz	60Hz ~ 20KHz	60Hz ~ 20KHz
Link in/out	**In:** 0dB, 47kΩ **Out:** -6dB, 600Ω	**In:** 0dB, 47kΩ **Out:** -6dB, 600Ω	**In:** 0dB, 47kΩ **Out:** -6dB, 600Ω
Power Requirement	230v AC, 50Hz	230v AC, 50Hz	230v AC, 50Hz
Rack Height	2U	2U	2U
Dimensions	420(W) x 100(H) x 320(D) mm	420(W) x 133(H) x 320(D) mm	420(W) x 133(H) x 320(D) mm
Weight	10kg	12kg	13.5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

• **PAM120A:** 120W Modular Mixer Amplifier

Best selling mixer amplifier providing a versatile and flexible solution for many applications including AV, church and high end retail installations.

Optional music modules add to the outstanding features of this market-leading product (see page 66 for details).

Features:

- 6 Mic/line inputs (3 Pin XLR)
- 2 Module option slots
- Link input (¼" jack)
- Amp in (¼" jack)
- Pre amp out (¼" jack)
- External chime (screw terminal)
- External mute (screw terminal)
- Individual EQ per input channel
- Individual phantom power (per mic input)
- Priority mic 1, mic 2 (switchable)
- 5 Zone loudspeaker selector
- Bar graph VU metre
- 230v AC/24v DC powered
- Optional 19" rack kit (BKT-PAM)
- 3U high

CD/USB/MP3 Player and Tuner Module: **PAM–MPM4**

CD Player: **PAM–CDM**

Tuner: **PAM–T**

19" Rack Mount Bracket Option: **BKT–PAM Bracket**
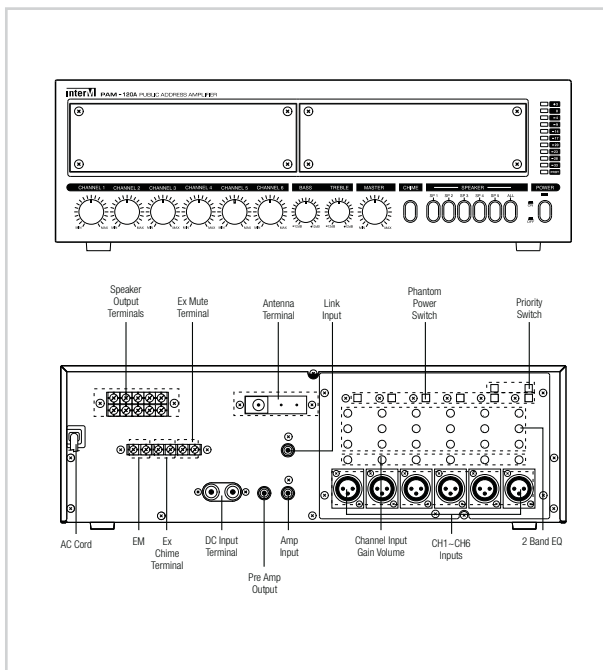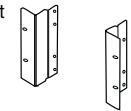
Specifications:

Model:	PAM120A
Output Power	120W RMS @ 100v 120W RMS @ 4Ω
Inputs	6 x Mic/line (3 pin XLR)
Priority	Mic 1, Mic 2
Phantom Power	22v DC individually switched per input
Input Sensitivity/Impedance	Inputs: 1 ~ 6 -60dB ~ 16dB 1mv/10kΩ
Frequency Response	80Hz ~ 20kHz
Link In	100mv/10kΩ
Amp In	1v/600Ω
Power Requirement	230v AC, 50Hz, 24v DC
Rack Height	3U
Dimensions	420(W) x 132(H) x 360(D) mm
Weight	13kg

Speaker Output Terminals

Ex Mute Terminal

Antenna Terminal

Link Input

Phantom Power Switch

Priority Switch

AC Cord

EM

Ex Chime Terminal

DC Input Terminal

Pre Amp Output

Amp Input

Channel Input Gain Volume

CH1–CH6 Inputs

2 Band EQ

interM

- **PAM340A:** 340W Modular Mixer Amplifier
- **PAM480A:** 480W Modular Mixer Amplifier

Larger power/output versions of the PAM120A, however with a number of subtle differences;

No 24v DC power option, no low impedance 4Ω loudspeaker option, but with the addition of a multi-zone paging mic interface allowing simple 5 zone paging using optional RM-05A (see page 66 for details).

Features:

- 6 Mic/line inputs (3 pin XLR)
- 2 Module option slots
- Link input (¼" jack)
- Amp input (¼" jack)
- Pre amp out (¼" jack)
- External chime (screw terminal)
- Zone mic interface (15 pin D-type)
- External mute (screw terminal)
- Individual EQ per input channel
- Individual phantom power (per mic input)
- Priority mic 1, mic 2 (switchable)
- 5 Zone loudspeaker selector
- Bar graph VU metre
- Optional 19" rack kit (BKT-PAM)
- 3U high

CD/USB/MP3 Player and Tuner Module: **PAM–MPM4**

CD Player: **PAM–CDA**

Tuner: **PAM–T**

RM–05A

19" Rack Mount Bracket Option: **BKT–PAM Bracket**

Speaker Output Terminals

Ex Mute

Antenna Terminal

Link Input

Phantom Power Switch

Priority Switch

AC Cord

EM

Ext Chime Terminal

Remote Control

Pre Amp Out

Amp Input

Channel Input Gain Volume

CH1~CH6 Inputs

3 Band EQ
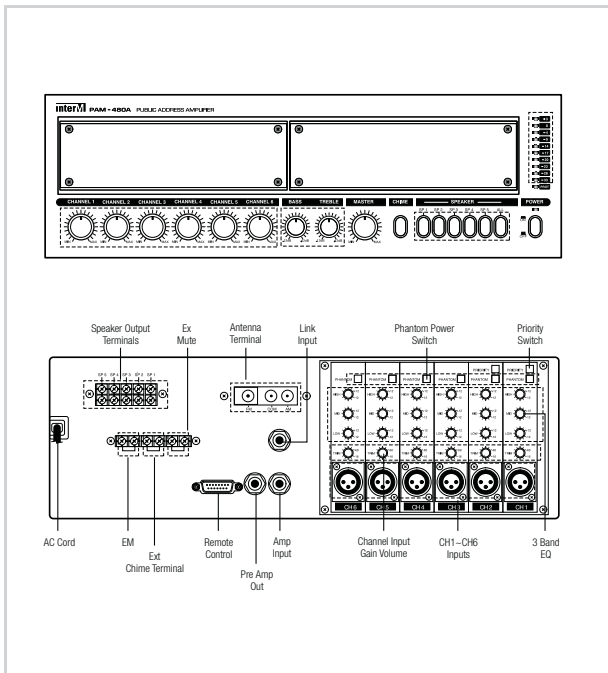
Specifications:

Model:	PAM340A	PAM480A
Output Power	340W RMS @ 100v	480W RMS @ 100v
Inputs	6 x Mic/Line (3 pin XLR)	6 x Mic/Line (3 pin XLR)
Priority	Mic 1, Mic 2	Mic 1, Mic 2
Phantom Power	22v DC individually switched per input channel	22v DC individually switched per input channel
Input Sensitivity/Impedance	Inputs: 1 ~ 6 -60dB ~ -16dB 1mv/10kΩ	Inputs: 1 ~ 6 -60dB ~ -16dB 1mv/10kΩ
Frequency Response	80Hz ~ 20kHz	80Hz ~ 20kHz
Power Requirement	230v AC 50Hz	230v AC 50Hz
Rack Height	3U	3U
Dimensions	420(W) x 132(H) x 360(D) mm	420(W) x 132(H) x 360(D) mm
Weight	13.5kg	15.5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

interM

• PAM-MPM4: CD/USB/MP3 Player and Tuner Module for PAM Series

Features:
- CD/USB/DRP (Digital Record and Playback : SD Memory)
- CD+USB, DRP (SD Memory) Portable FM Tuner
- CD Long-Life Function
- CD Copy Function (CD → USB or DRP)
- USB Hosting Function (USB ↔ DRP)
- FM 30 Memories

• PAM-CDM: CD/MP3 Player Module for PAM Series

Features:
- Single Compact Disc Player
- Random play funtion, music scan, time counter, repeat, forward track, reverse track, music search, play and pause
- CD-DA / CD-R / CD-RW / MP3 / WMA Player

• PAM-T: Tuner Module for PAM Series

Features:
- AM/FM Digital Tuner with 30 station memory
- It is recommended that an external antenna is fitted for optimum performance

• RM-05A: Remote 5 Zone Microphone

The RM-05A operates exclusively with the PAM-340A/480A and PCT-610/620 amplifiers and provides the facility of a simple 'one cable' multi-zone solution. The paging unit also includes output level LED VU metre, gain/level control and chime facility.

Power is provided by the host amplifier.

Features:
- Individual channel selection or all-call
- Flexible condenser-type gooseneck microphone
- Pre-announcement chime
- LED output level indicator

inter**M**

- **PCT-610:** 120W Integrated Mixer Amplifier
- **PCT-620:** 240W Integrated Mixer Amplifier

Fully integrated mixer amplifiers incorporating mic/line inputs with in-built Tuner and CD music sources.

With a whole host of functions, the PCT Series is ideal for high specification PA systems, church and AV applications using the RS232 control option for remote access and control.

Features:

- 120/240W Output
- 6 Inputs (Mic/Line XLR)
- Individual phantom power per input
- Priority mic 1, mic 2
- Telephone input (screw terminals)
- External mute (screw terminals)
- External chime (screw terminals)
- RM-05A Mic input (D-type) (see page 66 for details)
- RS232 Control (D-type)
- 230v AC/24v DC powered
- Aux in/out (¼" jack)
- In-built CD and tuner music sources
- IR Remote control (optional)
- 3U high, 19" rack mounting

Remote 5 Zone Microphone:
RM–05A

Speaker Output Terminals

Ex Chime
EM   Ex Mute   Music On Hold
Tel Input   Antenna Terminal   Priority Switch

Phantom Power Switch

Channel Input Gain Volume

AC Inlet   DC 24v Input   Aux Input/Output   CH1~CH6 Mic Inputs
Pre Output
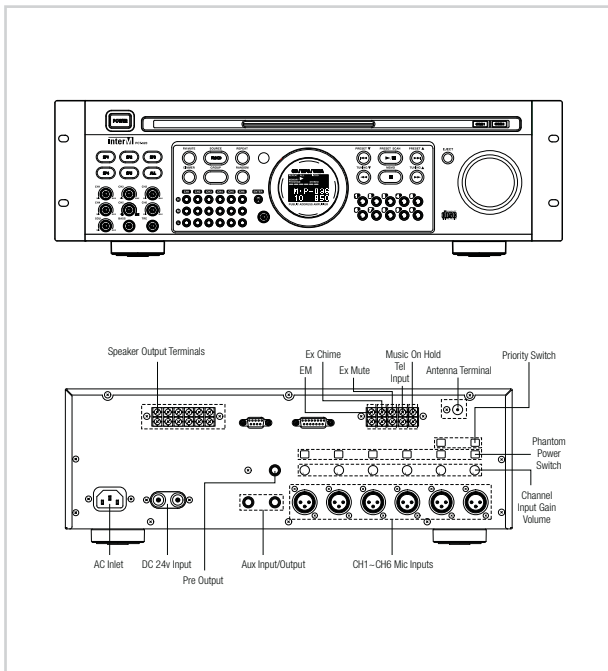
Specifications:

Model:	PCT–610	PCT–620
Output Power	120W RMS @ 100v	240W RMS @ 100v
Inputs	6 x Mic/Line Selectable (3 pin XLR)	6 x Mic/Line Selectable (3 pin XLR)
Priority	Mic 1, Mic 2, Chime, EM, Telephone Input	Mic 1, Mic 2, Chime, EM, Telephone Input
Phantom Power	Individually switched per input	Individually switched per input
Input Sensitivity/Impedance	Inputs 1~6 -60dB~-16dB 1mv/10kΩ	Inputs 1~6 -60dB~-16dB 1mv/10kΩ
Frequency Response	80Hz ~ 20kHz	80Hz ~ 20kHz
Link In	100mv/10kΩ	100mv/10kΩ
Amp In	1v, 47kΩ	1v, 47kΩ
Pre Amp Out	1v, 600Ω	1v, 600Ω
Power Requirement	230v AC, 50Hz, 24v DC	230v AC, 50Hz, 24v DC
Rack Height	3U	3U
Dimensions	482(W) x 132(H) x 380(D) mm	482(W) x 132(H) x 380(D) mm
Weight	8.5kg	9.5kg

info@cie-group.com   +44 (0)115 977 0075   **67**

Loudspeakers

Amplifiers

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

- **PA9312:** 120W Power Amplifier
- **PA9336:** 360W Power Amplifier
- **PA9348:** 480W Power Amplifier

For installations which require pure power, the Inter-M PA9000 Series of power amplifiers are reliable, robust work horses.

Units can be mains or DC powered so can easily operate in a critical system or in event/hire applications using battery power.

Connections and controls are rear panel mounted to deter tampering or accidental adjustment.

Features:

- 120W/360W/480W Output power (100v and 4Ω*/ 8Ω)
- Audio/line in - (3 pin XLR)
- Audio/line out - (3 pin XLR)
- Input level control (on rear)
- Ground lift and HPF switches
- Fan cooled
- Thermal protection circuit
- DC power terminals
- 3U high, 19" rack mounting
- * PA9312 only has 4Ω low Z output.
  PA9336 / PA9348 have 4Ω and 8Ω options.

Speaker Output Terminals

Input Connectors

High Pass Filter

AC Inlet

AC Fuse

Volume Control

Ground Lift

DC 24v Input
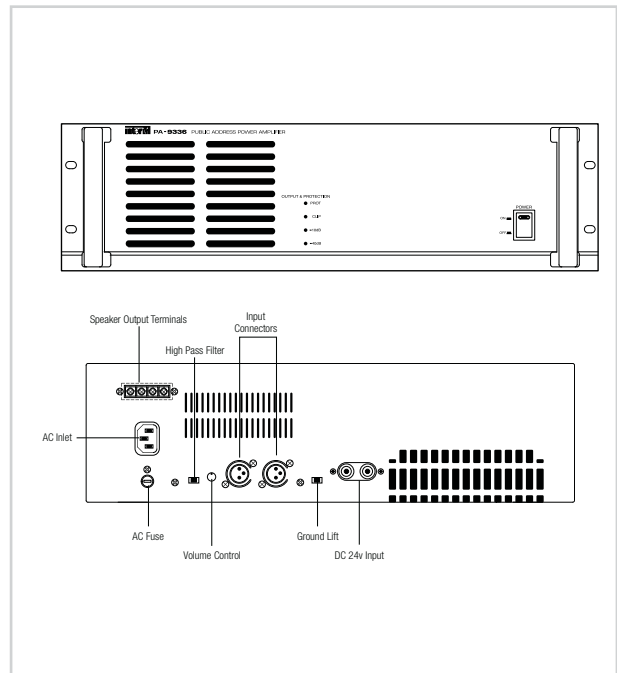
Specifications:

Model:	PA9312	PA9336	PA9348
Output Power	120W RMS @ 100v and 4Ω	360W RMS @ 100v and 4, 8Ω	480W RMS @ 100v and 4, 8Ω
Input Sensitivity/Impedance	1v/10kΩ	1v/10kΩ	1v/10kΩ
Output Sensitivity/Impedance	1v/10kΩ	1v/10kΩ	1v/10kΩ
Frequency Response	70Hz ~ 18kHz	70Hz ~ 18kHz	70Hz ~ 18kHz
Power Requirement	230v AC, 50Hz, 24v DC	230v AC, 50Hz, 24v DC	230v AC, 50Hz, 24v DC
Rack Height	3U	3U	3U
Dimensions	482(W) x 132(H) x 280(D) mm	482(W) x 132(H) x 280(D) mm	482(W) x 132(H) x 280(D) mm
Weight	14kg	21kg	22kg

inter M

PA2312: 2 x 120W Dual Channel Power Amplifier

A reliable dual-channel 100v line power amplifier for PA systems requiring 2 zones, or for space-saving integration into multi-zone rack builds.

The PA9312 can be mains or DC powered and will also operate, therefore, in critical system or portable event/hire applications using battery power.

Features:

- 2 x independent 120W output power
- 2 x XLR Balanced inputs
- 2 x Link outputs
- Thermal protection circuit
- High pass filter
- Fan cooled
- Ground lift switch
- 230v AC/24v DC powered
- 3U high, 19" rack mounting

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

Protection LEDs   Output Level Indicators

Level Control   Power Switch

Link Connector

Speaker Outputs   Ground Lift Switch

AC Inlet   Balanced Input

High Pass Filter   DC 24v Input
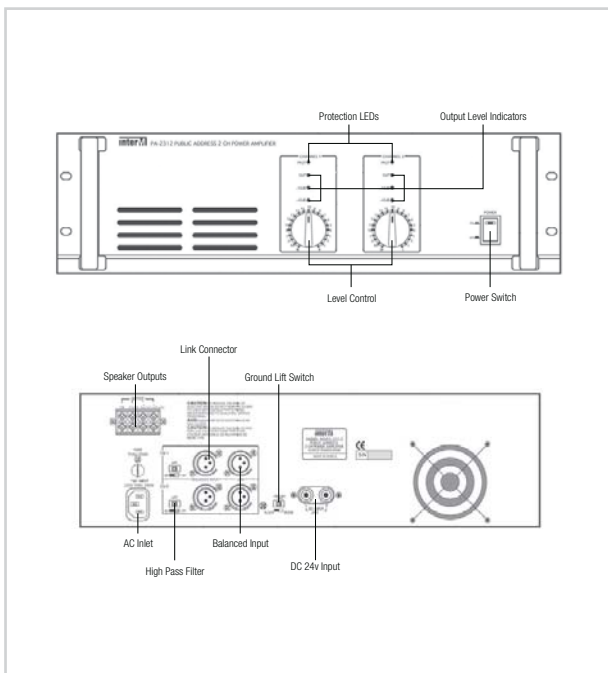
Specifications:

Model:	PA2312:
Output Power (THD 1%)	2 x 120W, 100v/28Ω
Frequency Response (+1/-3dB)	70Hz ~ 18kHz
THD at 1KHz Rated Output	Less than 1%
HPF	6dB/Oct at 400Hz
Signal to Noise Ratio	Better than 95dB
Input Sensitivity/Impedance	1v/10kΩ Balanced
Power Source	230v AC, 24v DC, 50Hz
Pack Height	3U
Dimensions	482(W) x 132(H) x 280(D) mm
Weight	20kg

Need help choosing the right product?
Call our technical support team now on:
Tel. +44(0)115 977 0075

inter**M**

• **DPA-430H:** 4 Channel 100v Line Power Amplifier (4 x 300W)

An ideal 100v line installation amplifier for applications where space is at a premium and for systems with multiple zones or requiring individual level control of each loudspeaker group.

The DPA-430H can operate as 4 individual channels or 2 x bridged channel amplifiers.

Featuring thermal, DC and overdrive protection, this powerful 4 x 300W amplifier is contained in a highly compact 1U 19" rack mounting enclosure.

Features:

- 4 x independent 300W output power
- 4 x Balanced inputs on phoenix connectors
- Thermal protection circuit
- High pass filter
- Fan cooled
- Individual volume and trim (internal) control per channel
- 1U high, 19" rack mounting

Ideal for use in conjunction with **PX8000** Audio Matrix (see page 85)

Volume

On/off Switch

Status LEDs

Input Terminals

Speaker Outputs

AC Inlet
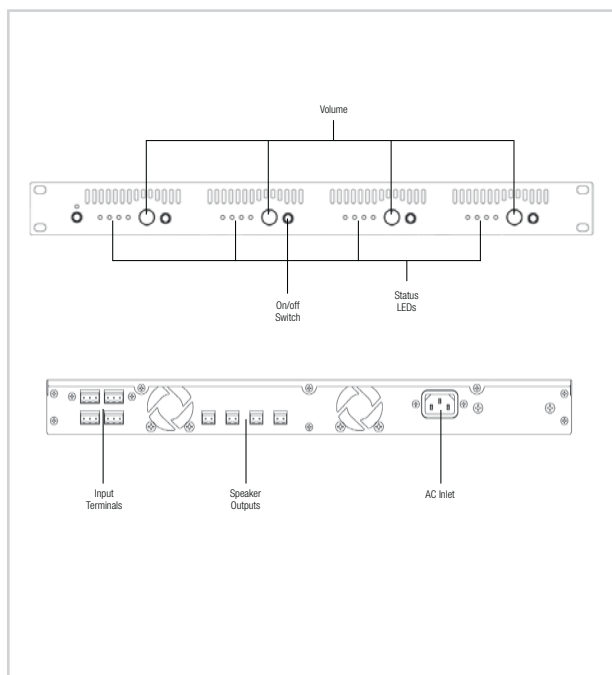
Specifications:

Model:	DPA–430H:
Inputs	300W x 4 channels
Output Voltage/Impedance	100v/33.3Ω
T.H.D (AES17) - Prated (300W, 1kHz) - 1/3 Prated (100W, 1kHz)	Less than 0.1% Less than 0.03%
High Frequency Response (+1, -3dB)	More than 20kHz
High Frequency Response	- High Pass Filter Off (-3dB ±2dB): 65Hz - High Pass Filter On (-3dB ±2dB): 400Hz
S/N (20kHz LPF, A-WTD)	Better than 100dB
Input Sensitivity/Impedance	1v/10kΩ Balanced
Operating Temperature	-10° ~ +40°C
Power Source	220 ~ 240v AC, 50/60Hz
Power Consumption	250W
Rack Height	1U
Dimensions	482(W) x 44(H) x 420(D) mm
Weight	9.6kg

Nottingham Magistrates' Court

Sited in the stylish canalside area of the City, the elegant yet imposing Nottingham Magistrates' Court features full PA and voice evacuation systems utilising the best of the Inter-M PA product range.

The suite of audio racks were designed and built entirely by CIE-Group's technical services team; ready to deliver to site for an almost 'plug-and-play' result. The system also features i-ceilings Sound Panels and Amina bespoke-built loudspeakers throughout.

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops
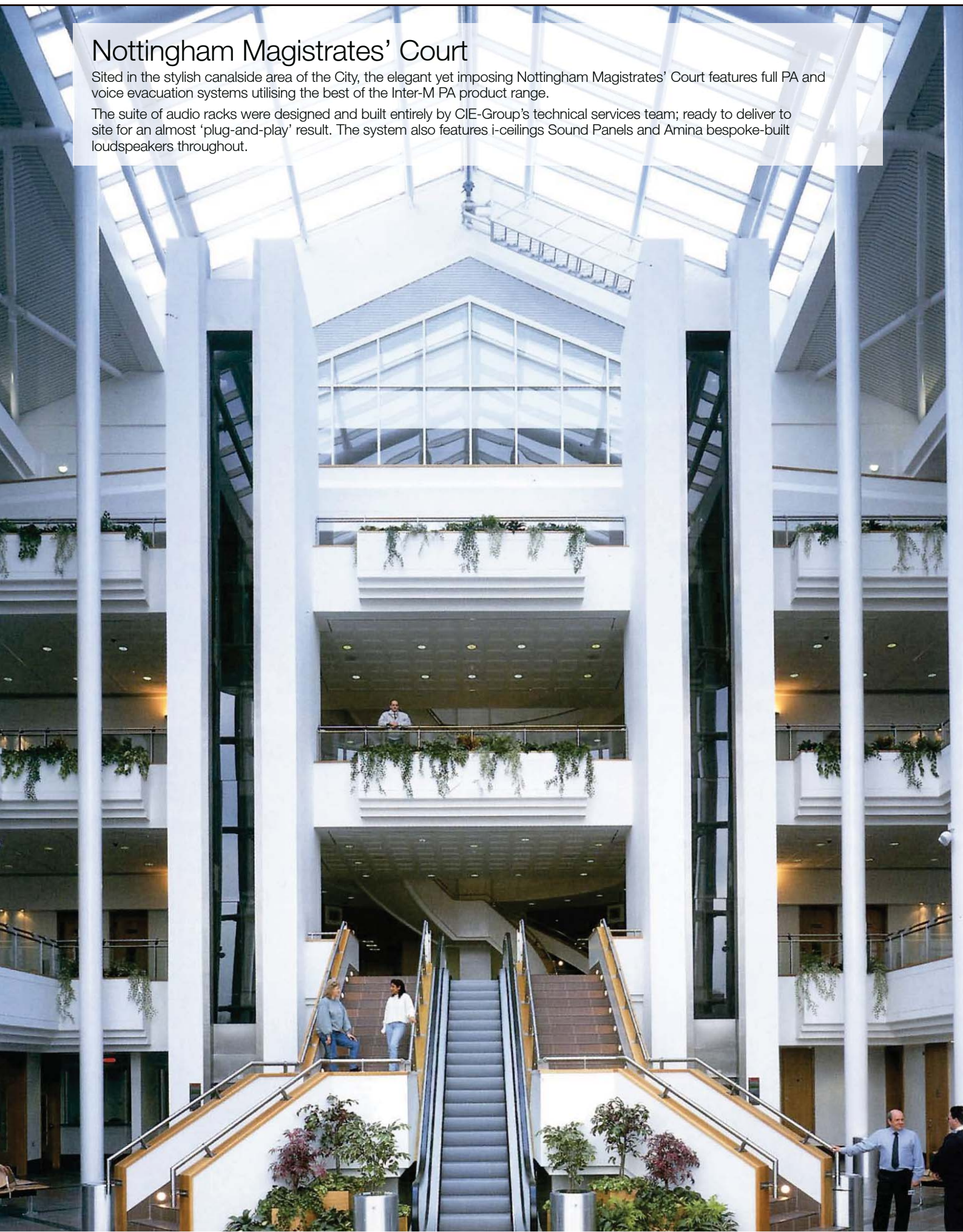
inter**M**

• Inter-M IPC System

'One of the most advanced, user-friendly paging and BGM systems that has ever been made to a realistic budget...'

Ideal for campus environments, the digital IPC System from Inter-M provides a highly functional, fully flexible, programmable means of broadcasting paging announcements, messages, class change and media files over a multi-zone site.

The IPC can be configured to operate as a standard centralised system, with all areas/zones wired back to a single point/location. However, the IPC comes into its own when installed as a distributed or de-centralised system, improving flexibility and reducing expensive wiring costs.

Features:

- Cat-X wiring structure
- 8 channel Matrix
- Easy to use Touch Screen Interface
- Up to 128 independent zone capability
- Fully programmable

- In-built Digital File Player and Scheduler
- Compact Multi-channel Digital Amplifiers
- Optional Remote Console options
- Stable, embedded Windows-XP platform
- Remote control, broadcasting & monitoring via standard Ethernet network

• SI-100: System Integration Main Controller

- 8 x MIC/Line Inputs
- Linkable with SR-100 Remote MIC Station (up to 8 x SR-100 Connections)
- USB Port built-in for external memory interface
- 16 x Contact input circuits for emergency broadcasting
- Audio matrix function
- AMX/Creston port for external source equipment (CD/Tuner, etc) control
- Weekly program timer/scheduler function

• SM-100: System Monitor

- 15" LCD and Touch Screen Monitor Panel
- Emergency MIC on front panel with cover
- Built-in Loudspeaker for monitoring input source and output signals to zones

Specifications:

Model:	SP–100:
Link Input	Load Output: @1kHz, 166.7Ω
Rated Power (THD ≤ 1%, 20kHz LPF)	60W
Input Level	0dBv
S/N (20kHz LPF, A-WTD)	More than 80dB
Frequency Response (±3dB)	100Hz ~ 15kHz

Model:	SR–100:
Input sensitivity/impedance (MIC)	-60dB/Balanced Input
T.H.D(20kHz LPF, MIC)	0.5%
S/N(20kHz LPF, MIC)	50dB
Frequency Response (MIC)	300Hz~10kHz
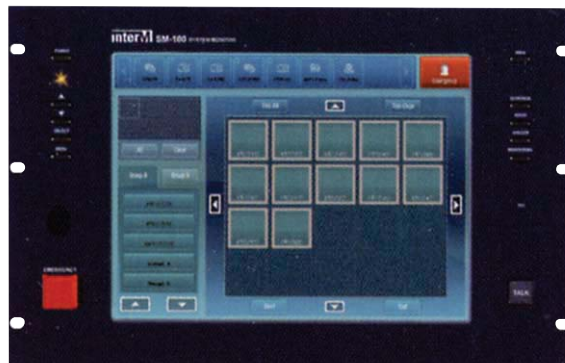
Specifications:

Model:	SI–100:
Input Sensitivity (±3dB)	BGM XLR MIC: -50dB/600Ω BGM Phone MIC: -20dB/20kΩ
Frequency Response	100Hz~15kHz
T.H.D	1.0%
S/N (20kHz LPF, BGM XLR MIC AUX, CD/MP3/AC97)	65dB
BGM AUX	-10dB/20kΩ
CDP/MP3/AC97	0dB/10kΩ

interM

• SP-100: 60W System Digital Amplifier

- 6 channel digital amplifier
- 6-bus broadcasting available via Cat5e connection
- Volume Control per channel and 5 band EQ
- Local input facility (Mic in or Aux in)
- AUTO/Manual I.D. allocation
- Interface with other units using control input and control output contacts

• SR-100: System Remote Mic Station
• SR-100KP: 12-Key Mic Station Keypad

- MIC/AUX/Speaker volume adjustable
- Simple interface via Cat-X connection
- One-touch broadcasting function using the [TALK] button
- Internal loudspeaker for BGM/Zone monitoring
- Expansion of zones using SR-100KP Expansion Keypad

• Centralised System

Main Building

SI-100 (System Integration Controller)

Cat-X

SR-100 (Remote Mic Station)

SP-100 (Power Digital Amplifiers)

• De-Centralised/Distributed System

Main Building	A-building	B-building
4F	4F	4F
3F	3F	3F
2F	2F	2F
1F	1F	1F

SP-100 (Power Digital Amplifiers)

SI-100 (System Integration Controller)

Below / Below / Below

SR-100 (Remote Mic Station)

SR-100 #1 #2 #3 #4

8

SM-100

AUX1
AUX1
AUX1
AUX1
AUX1

Cat-X

8

Ethernet

SI-100

Emergency (64CH Input)

Cat-X

SP-100 #1   6CH 60W
Cat-X
SP-100 #2   6CH 60W
Cat-X
SP-100 #3   6CH 60W
Cat-X
SP-100 #4   6CH 60W
Cat-X
SP-100 #128   6CH 60W

Remote Control PC

CD/Deck/Tuner

Digi-Link
Serial Control

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

interM

- **R150 PLUS:** 2 x 75W Stereo Reference Amplifier
- **R300 PLUS:** 2 x 150W Stereo Reference Amplifier
- **R500 PLUS:** 2 x 250W Stereo Reference Amplifier

A series of 2 channel, convection-cooled (no fans) low impedance amplifiers.

The units are ideal for 'silent' systems in church, audio visual and recording studios, etc. Simple controls and visual clip/signal/ protection LEDs complete a versatile, cost effective package.

Features:

- Convection cooled
- Stereo operation (4/8Ω)
- Bridged mono operation (8Ω)
- Inputs (XLR~¼" jack)
- Outputs (speakon~binding posts)
- Mains powered
- 2U high, 19" rack mounting

Input   Mode Selector   Input

INPUT   OUTPUT   INPUT
CHANNEL 2   CHANNEL 1

AC Inlet   Outputs
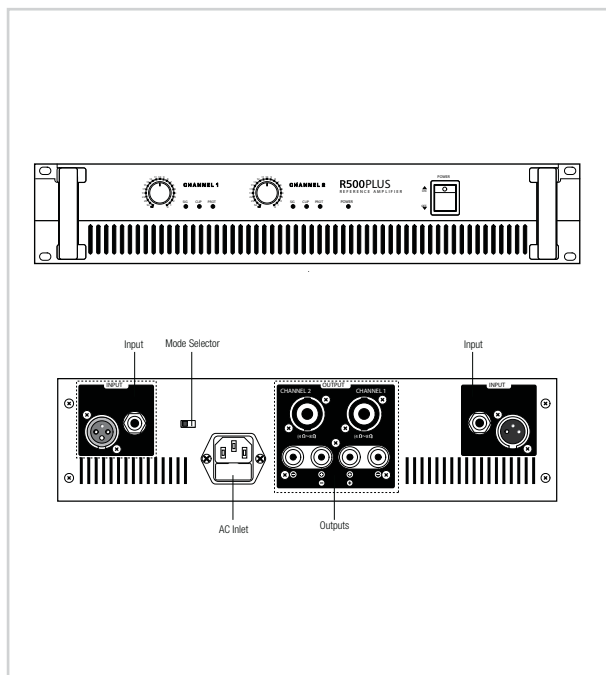
Specifications:

Model:	R150 PLUS	R300 PLUS	R500 PLUS
Output Power/Per Channel	50W @ 8Ω, 75W @ 4Ω	100W @ 8Ω, 150W @ 4Ω	160W @ 8Ω, 250W @ 4Ω
Output Power/Bridged Mono	150W @ 8Ω	300W @ 8Ω	500W @ 8Ω
Input/Sensitivity	0dB/0.775mv	0dB/0.775mv	0dB/0.775mv
Frequency Response	20Hz ~ 20kHz	20Hz ~ 20kHz	20Hz ~ 20kHz
Power Requirement	230v AC, 50Hz	230v AC, 50Hz	230v AC, 50Hz
Rack Height	2U	2U	2U
Dimensions	482(W) x 88(H) x 317(D) mm	482(W) x 88(H) x 317(D) mm	482(W) x 88(H) x 317(D) mm
Weight	7.2kg	8.4kg	10.4kg

inter M

- **V1000:** 2 x 340W Professional Low Z Amplifier
- **V2000:** 2 x 550W Professional Low Z Amplifier
- **V3000:** 2 x 1000W Professional Low Z Amplifier
- **V4000:** 2 x 1300W Professional Low Z Amplifier

High quality professional power amplifiers ideal for most low impedance systems and applications.

Combining compact size with power and flexibility, the V Series will operate down to 2Ω, and is further enhanced with comprehensive protection circuits for over-driving, DC and short circuit, as well as variable fan cooling.

Features:

- Variable fan cooling
- Comprehensive protection circuits
- Low impedance output (2/4/8Ω)
- Bridge mono option
- Balanced inputs (XLR~¼" jack)
- Outputs (speakon~binding post)
- Mains powered
- 2U high, 19" rack mounting

Volume Power

Input Connections

AC Inlet   Speaker Output Connectors
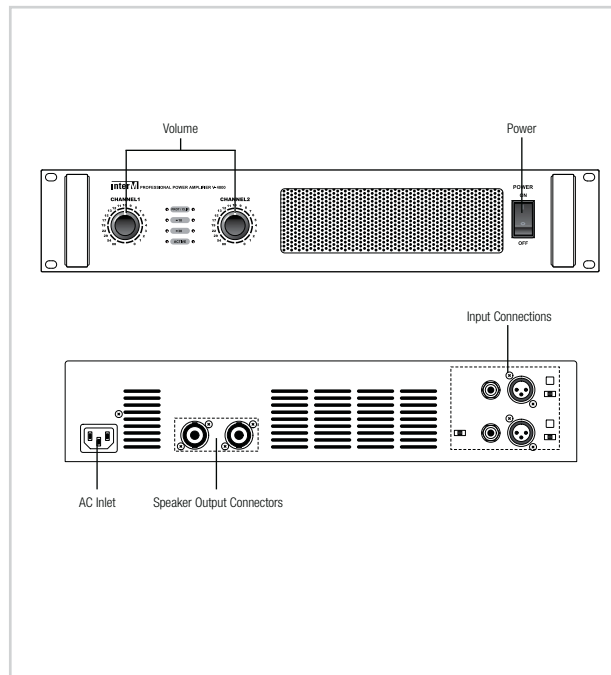
Specifications:

Model:		V1000	V2000	V3000	V4000
Continuous average output power per channel		180W	300W	550W	750W
STEREO mode (1kHz, both channels driven)	4Ω:	340W	550W	1000W	1300W
	2Ω:	600W	900W	1650W	2100W
Bridged Mono Mode	(THD 0.1%) 8Ω:	700W	1100W	2000W	2600W
	(THD 0.5%) 4Ω:	1200W	1900W	3300W	4200W
Input Sensitivity (Rated output power @ 4Ω)		1v	1v	0.94v	1.04v
Frequency Response (1W @ 8Ω)		20Hz ~ 20kHz: ±0.3dB	20Hz ~ 20kHz: ±0.3dB	20Hz ~ 20kHz: ±0.3dB	20Hz ~ 20kHz: ±0.3dB
Signal to Noise Ratio (Rated output power 8Ω)		107dB	107dB	105dB	106dB
Input Impedance		12kΩ Balanced	12kΩ Balanced	12kΩ Balanced	12kΩ Balanced
Indicators		Active, Clip/Port	Active, Clip/Port	Active, Clip/Port	Active, Clip/Port
Protection Circuitry		Full Short Circuit, Thermal Protection, Power ON/OFF Muting, DC Output Protection	Full Short Circuit, Thermal Protection, Power ON/OFF Muting, DC Output Protection	Full Short Circuit, Thermal Protection, Power ON/OFF Muting, DC Output Protection	Full Short Circuit, Thermal Protection, Power ON/OFF Muting, DC Output Protection
Cooling		Variable Speed Fans, front to rear air flow	Variable Speed Fans, front to rear air flow	Variable Speed Fans, front to rear air flow	Variable Speed Fans, front to rear air flow
Power Source		230v AC, 50Hz	230v AC, 50Hz	230v AC, 50Hz	230v AC, 50Hz
Rack Height		2U	2U	2U	2U
Dimensions		482(W) x 88(H) x 407(D) mm	482(W) x 88(H) x 407(D) mm	482(W) x 88(H) x 407(D) mm	482(W) x 88(H) x 407(D) mm
Weight		10.3kg	10.5kg	11.7kg	11.8kg

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Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

interM

- **QD-4240:** 4 Channel Low Z Amplifier (4 x 60W)
- **QD-4480:** 4 Channel Low Z Amplifier (4 x 120W)
- **QD-4960:** 4 Channel Low Z Amplifier (4 x 240W)

Ideal products if space is a premium, or if the system requires multiple zones or individual control of loudspeakers. Units can operate as 4 individual channels or as 2 stereo (2 channel) amplifiers.

Features include delayed switch-on function, protection circuits for overdrive, overheating and DC detection, as well as variable speed fan cooling, all in a compact 2U enclosure.

Features:
- 8Ω or 4Ω low impedance
- Fan cooled (variable speed)
- Inputs (XLR~¼" jack)
- Outputs (Binding post)
- LED indicators for clip/protection/signal
- Mains powered
- 2U high, 19" rack mounting
- 100v via optional OT Series Transformer Converters

Volume

Power

Input Connectors

AC Inlet

Input Connectors

Gain Volume

Mode Select Switch

Output Connectors

Mode Select Switch
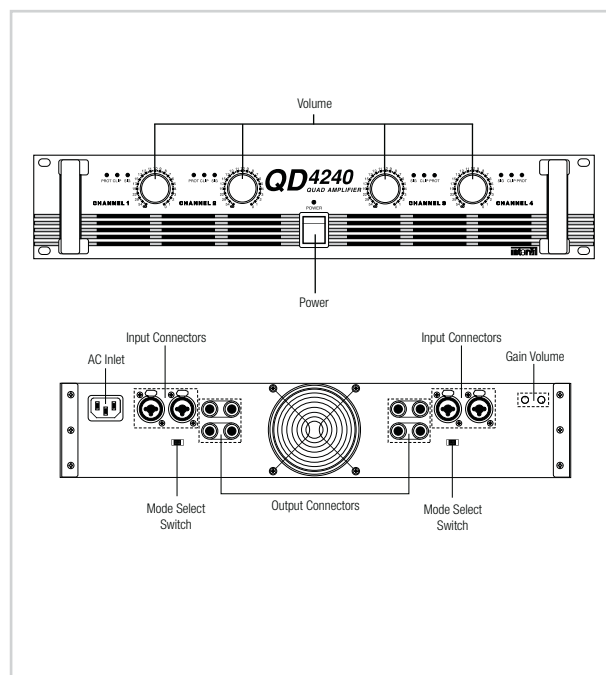
Specifications:

Model:	QD–4240	QD–4480	QD–4960
Output Power Per Channel	40W @ 8Ω, 60W @ 4Ω	80W @ 8Ω, 120W @ 4Ω	170W @ 8Ω, 240W @ 4Ω
Output Power Bridged Mono	120W @8 Ω	240W @ 8Ω	480W @ 8Ω
Input/Sensitivity	0dBm/20kΩ Balanced	0dBm/20kΩ Balanced	0dBm/20kΩ Balanced
Frequency Response	20Hz ~ 50kHz	20Hz ~ 50kHz	20Hz ~ 50kHz
Power Requirement	230v AC, 50Hz	230v AC, 50Hz	230v AC, 50Hz
Rack Height	2U	2U	2U
Dimensions	482(W) x 88(H) x 369(D) mm	482(W) x 88(H) x 369(D) mm	482(W) x 88(H) x 369(D) mm
Weight	11.5kg	15.5kg	17kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

interM

- **OT-4240:** Transformer Converter for QD-4240 Amplifier
- **OT-4480:** Transformer Converter for QD-4480 Amplifier
- **OT-4960:** Transformer Converter for QD-4960 Amplifier

Useful accessory for converting the 4 channel QD Series to power 100v line loudspeakers, offering space-saving benefits for amplifier systems with multiple loudspeakers or zones with small quantities of speakers.

Features:

- 4 x 100v Transformers
- Inputs (binding posts)
- Outputs (screw terminals)
- 2U high, rack mounting

Speaker Output Terminals

Amp Input Terminals
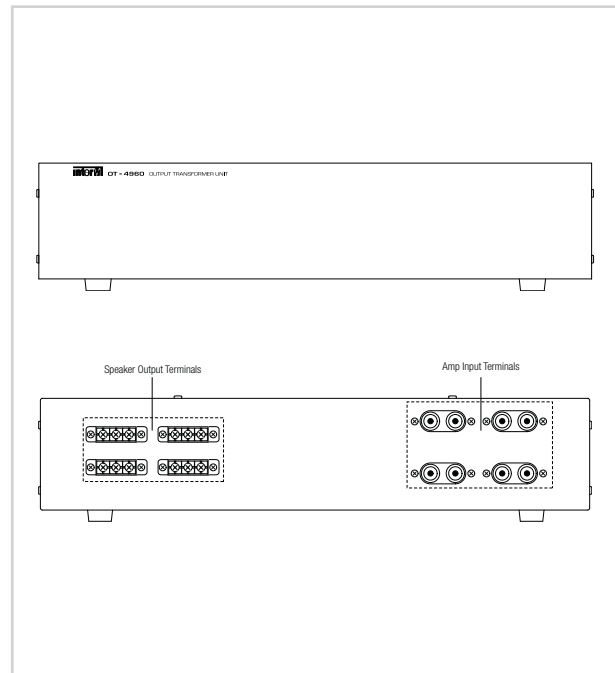
Specifications:

Model:	OT–4240	OT–4480	OT–4960
Output Power/Per Channel	60W 100v / 166.7Ω	120W 100v / 83.3Ω	240W 100v / 41.6Ω
Input Power/Impedance	60W @ 4Ω	120W @ 4Ω	240W @ 4Ω
Dimensions	482(W) x 88(H) x 310(D) mm	482(W) x 88(H) x 310(D) mm	482(W) x 132(H) x 310(D) mm
Weight	11.5kg	14.5kg	21.5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Clever Little Box.

• **IA235:** 2 x 35W Compact Stereo Amplifier

New to the Clever Little Box range, this stylish, ultra-compact 35W stereo amplifier is ideal for AV sound reinforcement applications such as boardrooms, classrooms and training/presentation suites.

Features:

- 2 x 35W Low Z outputs @ 4Ω
- Stylish, ultra-compact housing for stand-alone or AV cabinet/PC tower integration
- 3 x Input sources;
  Front - 3.5mm stereo jack
  Rear - 2 x dual phonos
- Input source selection switch on front facia
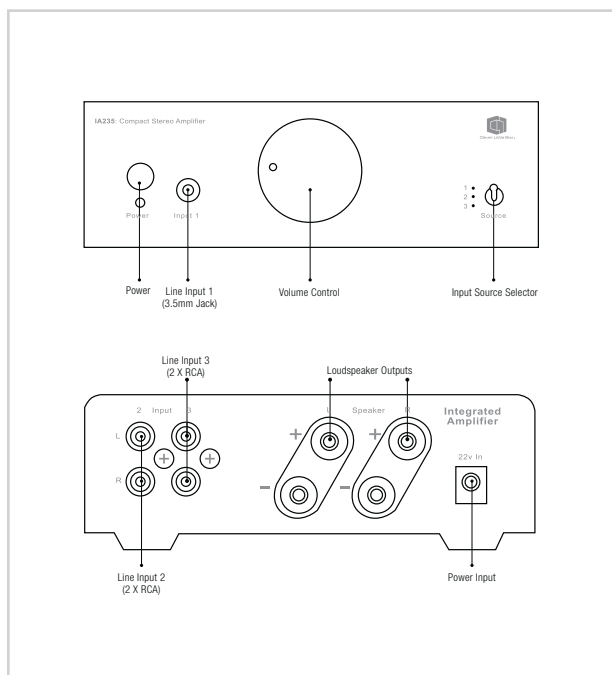
Specifications:

Model:	IA235
Output Power	2 x 35W RMS @ 4Ω
Line Inputs	Stereo 3.5mm jack 2 x Dual Phonos
Frequency Response	20Hz ~ 20kHz
Input Sensitivity	220mv (±20)
Dimensions	140(W) x 48(H) x 160(D) mm

Clever Little Box.

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

• AVID: In-wall Amplifier System

Stylish, but discreet 2 x 12W stereo amplifier for wall or dado conduit mounting. An ideal solution for AV and single-room voice or sound reinforcement applications.

Features:

- Stereo amplifier fitted to UK 2-gang Wallplate
- New higher power 2 x 12W output (RMS)
- 3 x Input Sources; Stereo Phono, 3.5mm Stereo Jack (Jack has priority) and Wired Input Terminal (on rear PCB)
- Line Level Sensitivity Switch
- Control of ON/OFF and volume via illuminated push buttons located on the front panel
- Infrared remote control of ON/OFF, volume, balance and tone facilities (supplied as standard)
- Clear LED level indicator / setting status display
- Screw terminations on the rear of the unit for loudspeakers, power and wired line input
- Separate loudspeaker balance adjustment to allow system set up (control located on rear of unit)
- Includes Plugtop Power Supply
- Also includes Wallmounted Bracket for remote control

Systems also feature:
IR Remote Control

Systems also feature:
Remote Wall Bracket

Available Accessories:
AVID S BOX Surface−mount BackBox

Available Accessories:
AVID IL 2xRCA~3.5mm Stereo Lead (1.5m)

Also available as complete systems:

- **AVID SYSTEM W:** Featuring 2 x 15W, 8Ω wallmount loudspeakers.

- **AVID SYSTEM C:** Featuring 2 x 6W, 8Ω ceiling loudspeakers.

Specifications:

Model:	AVID
Output Power	2 x 12W RMS @ 8Ω
Line Inputs	Stereo Phonos (L & R) Stereo 3.5mm Jack (priority) Screw Terminal (Rear PCB in parallel with 3.5mm Jack Input)
Frequency Response	40Hz ~ 20KHz
Input Sensitivity	200mv/1v
Power Requirements	24v DC, 1.25A
Dimensions	165(W) x 100(H) x 35(D) mm
Weight	0.26kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Clever Little Box.

CA9.2: Compact 12W Stereo Power Amplifier

This compact, lightweight but robust stereo amplifier is an ideal 'component' unit for machines requiring high quality sound reinforcement.

Features:

- Ideal for use in gaming, vending and gambling machines
- Switchable high pass/low pass/full range
- Stereo input via phono sockets
- Optional 230v power supply available
- Supplied with 12v power lead and speaker leads, both terminated with connector blocks

Specifications:

Model:	CA9.2
Output Power	2 x 12W RMS @ 4Ω
Signal to Noise Ratio	87dB @ 1kHz
Sensitivity	±3dBU, 550mv
Frequency Range	20Hz ~ 20KHz
Input Impedance (RCA)	1.5kΩ
Crossover Point	150Hz
Power	4A @ 12v DC
Dimensions	80(W) x 48(H) x 112(D) mm
Weight	0.3kg

CA9.4: Compact 4 Channel 12W Power Amplifier

This compact and lightweight, but robust 4 channel amplifier is an ideal 'component' unit for machines requiring high quality sound reinforcement.

Features:

- Ideal for use in gaming, vending and gambling machines
- Switchable high pass/low pass/full range
- Stereo input via phono sockets
- 2 x level controls
- Optional 230v power supply available
- Supplied with 12v power lead and speaker leads, both terminated with connector blocks

Specifications:

Model:	CA9.4
Output Power	4 x 12W RMS @ 4Ω
Signal to Noise Ratio	87dB @ 1kHz
Sensitivity	±3dBU, 550mv
Frequency Range	20Hz ~ 20KHz
Input Impedance (RCA)	1kΩ
Crossover Point	150Hz
Power	5A @ 12v DC
Dimensions	80(W) x 48(H) x 140(D) mm
Weight	0.38kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Signal Processing

Loudspeakers

Amplifiers

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

- ## **PP9213:** Mixer Pre-Amplifier

Comprehensive mixer pre-amplifier unit providing 12 inputs and outputs.

Ideal for multi-input applications such as church, conference, audio visual and complex PA systems where maximum system control is required.

Features:

- 9 x Mic inputs (XLR)
- 6 x Line mono (¼" jack)
- 3 x Line stereo (2 x ¼" jack)
- Line out (XLR~M)
- Sub 1, 2 out (¼" jack)
- Record out (¼" jack)
- Phantom power, inputs 1 & 2 (18v)
- Trim control per input
- EQ control per input
- Input/output level via fader
- EQ control of output
- 24v DC Terminal (binding post)
- 2U high, 19" rack mounting
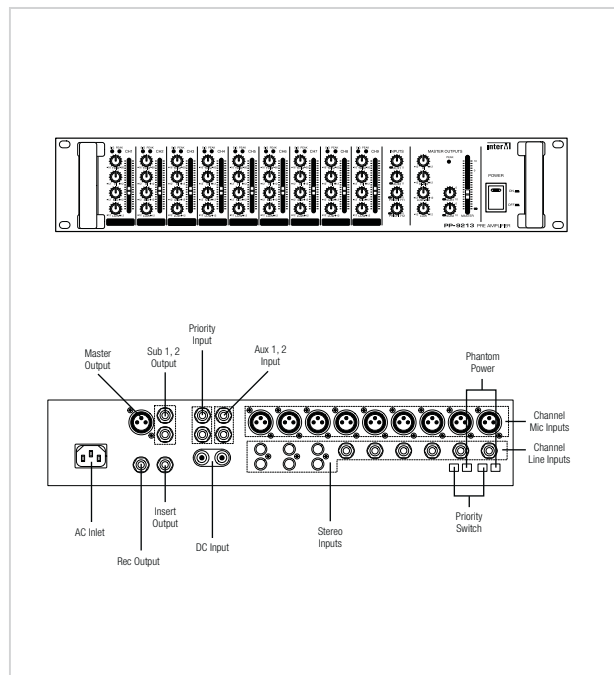
Specifications:

Model:	PP9213
Inputs	9 Mic (XLR)
	6 Mono Line (¼ " Jack)
	3 Stereo Line (2 x ¼" Jack)
Input Sensitivity/Impedance	Mic: -60dB/600Ω
	Line: -30dB/10kΩ
Output Sensitivity/ Impedance Master	+4dBm/600Ω Balanced
Sub Outs	+4dBm/600Ω Balanced
Rec Out	-10dB/10kΩ
Phantom Power	Mic: 1, 2 ~ 18v DC
Frequency Response	20Hz ~ 20kHz
Power Requirement	230v AC, 50Hz/24v DC
Rack Height	2U
Dimensions	482(W) x 88(H) x 280(D) mm
Weight	5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

interM

• PP9214: Mixer Pre-Amplifier

Two output pre-amplifier allowing any of the 10 input signals to be routed to either Output 1, Output 2 or both.

Ideal for dual zone applications in factories, leisure centres, hotels and general PA installations.

Features:

- 8 Mic inputs (XLR)
- 8 Line inputs (¼" jack)
- 2 Stereo inputs (phono/¼" jack)
- 2 Outputs (XLR)
- Phantom power (18v block switched)
- Record output (2 x ¼" jack)
- Priority, mic 1, priority input 1, priority input 2
- 3 Band EQ per output
- Signal allocation per input channel
- 24v DC powered option
- 2U high, 19" rack mounting
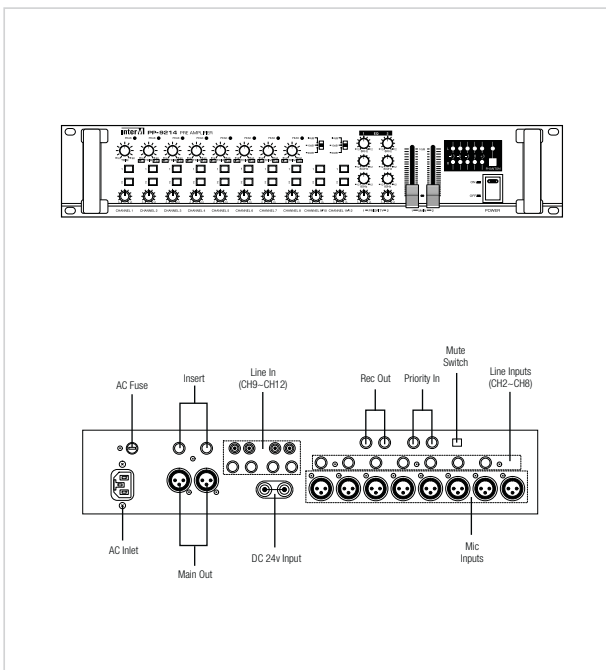
Specifications:

Model:	PP9214
Inputs	8 Mic (XLR) 8 Mono Line (¼" Jack) 2 Stereo Line (2 x ¼" Jack / 2 x Stereo Phono)
Input Sensitivity/Impedance	Mic: -60dB/600Ω Balanced Line: -30dB/10kΩ Balanced
Stereo	+4dB, -10dB, -20dB/10kΩ Unbalanced
Output Sensitivity/Impedance Master	+4dBm/600Ω Balanced
Rec Out	-6dB/10kΩ
Phantom Power	Mic: 1~8: 18v DC, Block Switched
Frequency Response	20Hz ~ 20kHz
Power Requirement	230v AC, 50Hz/24v DC
Rack Height	2U
Dimensions	482(W) x 88(H) x 280(D) mm
Weight	12.8kg

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Contractor

• M12X4 Pre Amplifier Mixer

Pre Amplifier with 8 inputs and 4 outputs.

Features:

- 4 Microphone/Line inputs (switchable)
- 4 Aux/Music inputs (only one selectable for use at a time)
- Priority microphone 1 over all inputs, 4 microphone inputs over Aux/Music inputs
- Microphone inputs 1 ~ 4 have selectable Phantom Power (24v)
- Master volume, stereo volume and tone controls
- Main output is mono or stereo selectable
- Seperate stereo and record outputs
- 19" Rack mounting, 1U high
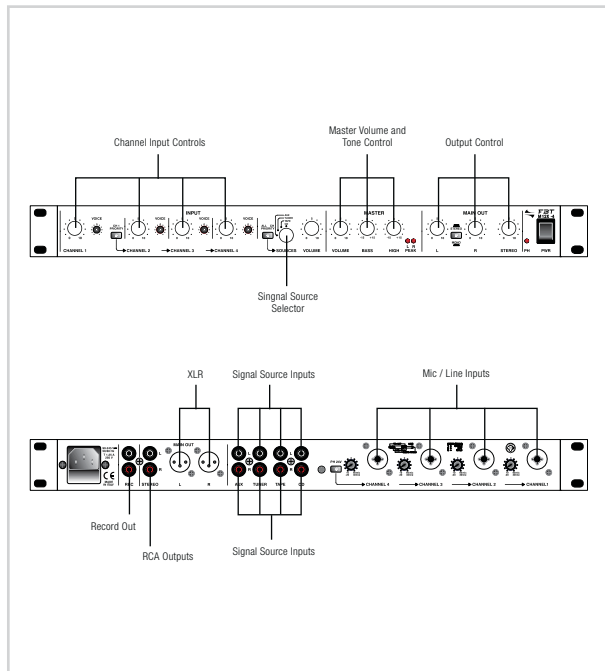
Specifications:

Model:	M12X4
Mono Channels Microphone	Impedance kΩ: 2.2 Max input signal dBu: 0 Max gain (@ main Out) dB: 65 Equivalent input noise (EIN) (between 22Hz ~ 22kHz unweighted): -118 CMRR (@main out, Gain 75dB) dB: -65
Phantom Power	24v
Mono Channels Line	Impedance kΩ: 33 Max input signal dBu: 30 Max gain (@ main Out) dB: 25
Mono Channels Tone	Voice dB: ±12
Stereo Channels Line	Impedance kΩ: 22 Max input signal dBu: 10 Max gain (@ main Out) dB: 10
Stereo Channels Tone	High Shelving (@ 12kHz) dB: ±15 Low Shelving (@ 80kHz) dB: ±15
General Outputs	Impedance kΩ: 600 Max output (main out) dBu: 22 Distortion + noise @ 16dBu: 0.025% (main out, 40dB gain): 96 Signal/noise ratio 20dB: 20Hz Frequency response (@0/1dB): 20kHz
Power Source	230v AC with internal power supply unit
Rack Height	1U
Dimensions	482(W) x 44(H) x 160(D) mm
Weight	2.1kg

Channel Input Controls

Master Volume and
Tone Control

Output Control

Signal Source
Selector

XLR

Signal Source Inputs

Mic / Line Inputs

Record Out

RCA Outputs

Signal Source Inputs

interM

PX8000: 8 x 8 Audio Matrix Controller

The InterM PX8000 provides a flexible, versatile, simple to operate multi-zone audio distribution system for applications such as hotels, leisure complexes, retail outlets and multi-room installations.

Features:

- 8 IN ~ 8 OUT Matrix Unit
- Simple and easy to use - clear LED indicators, illuminated buttons and fader-type volume controls
- BGM input level LED / output level meter (LEDs)
- Remote control per zone via LM8000 (selectable via front panel)
- Paging via remote MIC (up to 4 units) or via front panel zone control panel
- Auto address allocation for RM8000 / LM8000 on connection
- Monitor Loudspeaker - for monitoring the selected audio input source
- Emergency Message - in-built Digital Message Store allowing recording and broadcast of an emergency message, activated by dry contact closure per zone (If no emergency message is recorded, this facility can be used as an Emergency Mute)
- Multiple Units are linkable via D-sub 25pin

RM8000: Remote Microphone Station (optional)

LM8000: Remote Wall Controller with Audio Input (optional)

Specifications:

Model:	PX8000
Paging MIC	50dB (Balanced)
MIC Input	-
BGM Audio Input	8 x -10dB (Unbalanced)
Audio Output	0dB (Balanced)
Sampling Frequency	8kHz
Recording Duration	30 sec
Tone Control (Paging MIC)	±10dB @ 100Hz/10kHz
Tone Control (Audio Output)	±12dB @ 100Hz/10kHz
Total Harmonic Distortion	Less than 0.03% (20kHz LPF)
Signal to Noise Ratio	Greater than 75dB (20kHz LPF)
Power Source	230v AC
Rack Height	3U
Dimensions	482(W) x 132(H) x 380(D) mm
Weight	8.5kg

Model:	RM8000	LM8000
Paging MIC	-	-
MIC Input	60dB (Balanced)	-50dB (Balanced)
BGM Audio Input	-	-10dB (Balanced)
Audio Output	0dB (Balanced)	0dB (Balanced)
Sampling Frequency	-	-
Recording Duration	-	-
Tone Control (Paging MIC)	-	-
Tone Control (Audio Output)	-	-
Total Harmonic Distortion	-	-
Signal to Noise Ratio	-	-
Power Source	Powered from PX8000	Powered from PX8000 (option to fit to UK gang faceplate. Ref: PS/LM Plate)
Dimensions	200(W) x 70(H) x 206(D) mm	70(W) x 114(H) x 52(D) mm
Weight	1.4kg	0.13kg

Area Zone

Paging Consoles

x8

x4

LM8000

RM8000

Amplifier

Cat5e cabling

Conventional Loudspeaker cabling

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Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

interM

- **EQ2131:** 31 Band Graphic Equaliser
- **EQ2231:** 2 x 31 Band Graphic Equaliser

31 Band Graphic Equaliser (EQ-2131) and 31 Band Stereo EQ (EQ-2231) ideal for installations where detailed control of the sound is required, e.g. church, conference room or acoustically difficult environments.
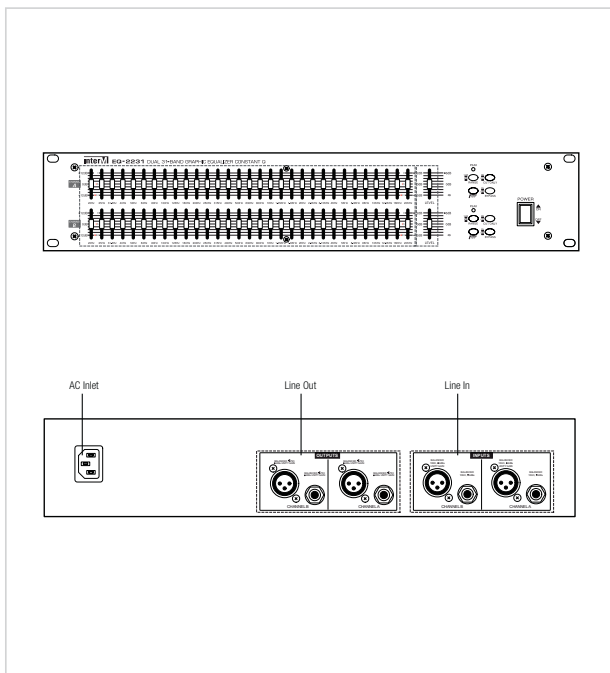
Stereo operation, bypass and HPF are standard.

Features:

- 31 Band control (sliders/faders)
- Input gain/level (sliders/faders)
- Bypass switch (per channel)
- HPF Switch (per channel)
- Inputs (XLR~¼" jack)
- Outputs (XLR~¼" jack)
- Mains powered
- 2U high, 19" rack mounting

Specifications:

Model:	EQ2131	EQ2231
Channels	1 x 31 Band	2 x 31 Band
EQ Frequency	1/3 Octave	1/3 Octave
Input Level/Impedance	0dB/600Ω Balanced	0dB/600Ω Balanced
Output Level/Impedance	0dB/600Ω Balanced	0dB/600Ω Balanced
High Pass Filter/HPF	80Hz	80Hz
Frequency Response	20Hz ~ 20kHz	20Hz ~ 20kHz
Power Requirement	230v AC, 50Hz	230v AC, 50Hz
Rack Height	2U	2U
Dimensions	482(W) x 88(H) x 280(D) mm	482(W) x 88(H) x 280(D) mm
Weight	4.5kg	4.5kg

AC Inlet   Line Out   Line In

interM

PM9208: 100v Line Monitor Panel

Ideal for large commercial installations, the PM9208 allows 8 separate 100v signals (speaker lines/amplifier outputs) to be monitored, using simple push switch selection and internal loudspeaker to select and listen to the required signal.

Visual indication of output is also provided via 10 segment LED meter.

Features:

- 8 Zone selection
- Monitor loudspeaker (1.5W)
- 10 Segment LED output meter
- 100v input/output (screw terminal)
- 24v DC powered
- 2U high, 19" rack mounting

Dc 24v Input

Audio Inputs (Hot)

Audio Inputs (Com)
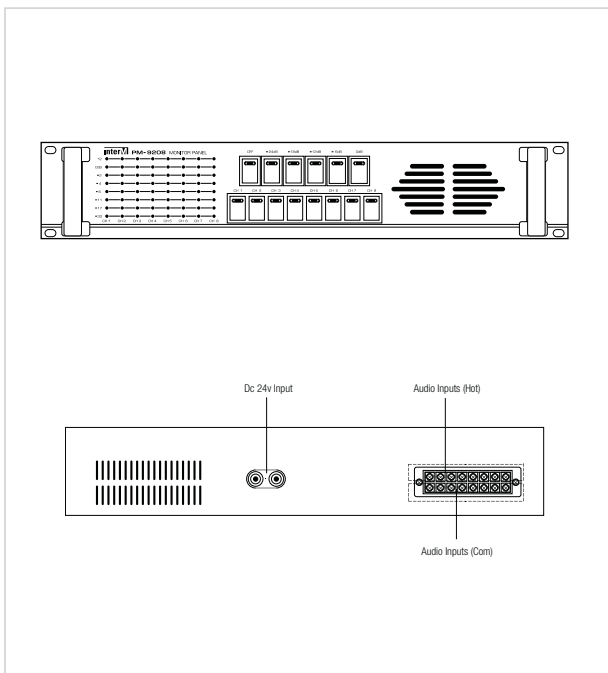
Specifications:

Model:	PM9208
Zones/Channels	8 x @ 100v Line
100v In / Out	Screw terminal on rear panel
Loudspeaker Power	1.5W
Visual Display	10 Segment LED
Power Requirement	24v DC
Rack Height	2U
Dimensions	482(W) x 88(H) x 280(D) mm
Weight	3.8kg

Loudspeakers

Amplifiers

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(wireless)

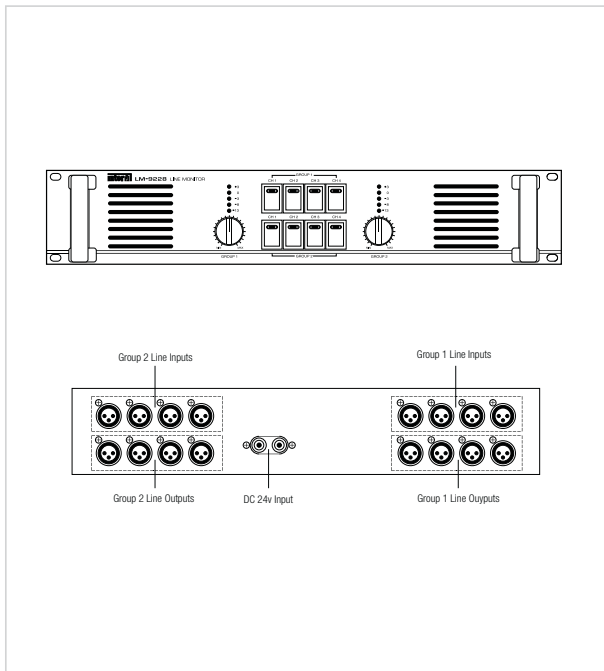Portable P.A.

Soundfield

Induction Loops

inter**M**

• **LM9228:** Line Level Monitor Panel

Similar in operation to the PM-9208, the LM-9228 will monitor up to 8 separate line level audio signals. Split into 2 groups of 4, each group has an individual line selector with visual LED indicator and volume control for the internal loudspeaker.

Inputs and outputs are XLR and the LM-9228 is easily integrated into any line level signal path.

Features:
- Group 1/4 individual channels
- Group 2/4 individual channels
- 2 x internal loudspeakers with volume control
- Inputs (XLR)
- Outputs (XLR)
- 24v DC powered
- 2U high, 19" rack mounting

Group 2 Line Inputs

Group 1 Line Inputs

Group 2 Line Outputs   DC 24v Input   Group 1 Line Ouyputs

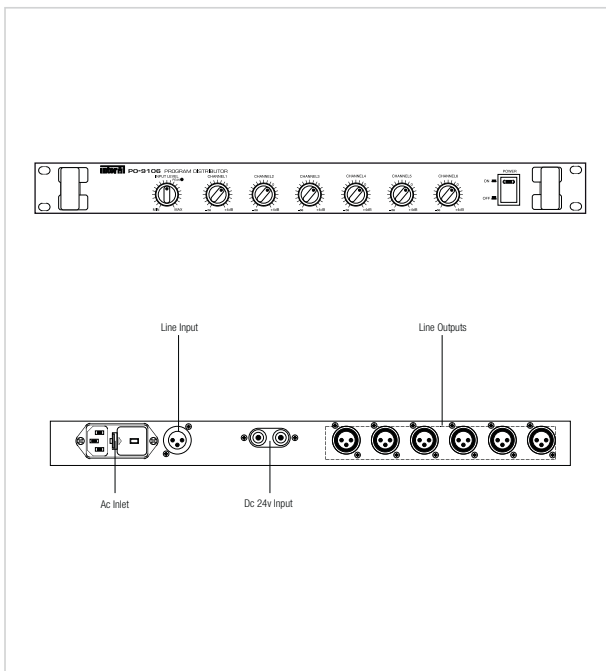## Specifications:

Model:	LM9228
Zones/Channels	8 x @ Line Level (2 x Groups of 4)
Line In / Out (per channel)	XLR
Loudspeaker Power	1.5W
Channel Activation	Latching Switch with in-built LED
Power Requirement	24v DC
Rack Height	2U
Dimensions	482(W) x 88(H) x 280(D) mm
Weight	7.5kg

inter M

PO9106: Program Distributor

Allows the distribution of a line level signal to six separate outputs, ensuring no loss of signal when using multiple amplifiers in larger industrial systems or for distribution of the level signals over long distances and/or to multiple destinations.

Features:

- 1 Input (XLR)
- 6 Outputs (XLR)
- LED output signal LEDs
- Independent level controls of input/output
- 230v AC/24v DC powered
- 1U high, 19" rack mounting

Line Input

Line Outputs

Ac Inlet

Dc 24v Input

Specifications:

Model:	PO9106
Input	1 Variable Level ~ XLR
Outputs	6 x Variable Level ~ XLR
Input Level/Impedance	1v/600Ω Balanced
Output Level/Impedance	1v/600Ω Balanced
Frequency Response	20Hz ~ 20kHz
Power Requirement	230v AC ~ 24v DC
Rack Height	1U
Dimensions	482(W) x 44(H) x 280(D) mm
Weight	4kg

Loudspeakers

Amplifiers

Audio Signal
Processing

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

inter M

• **PS9116:** 100v Line Loudspeaker Selector

The PS-9116 allows the selection of up to 16 individual loudspeakers/
zones fed by a 100v amplifier or 2 groups of 8 loudspeakers fed by
2 separate amplifiers.

Loudspeakers/zones are selected using switches with in-built LED
indicators or groups can be activated via voltage-free contacts on
the rear.

Features:
• 16 Individual zones
• LED indicator of selected zone
• Remote control of 2 x 8 groups via voltage-free contact
• 24v DC powered
• 1U high, 19" rack mounting

Remote Control   DC 24v Input   Speaker outputs

AMP IN
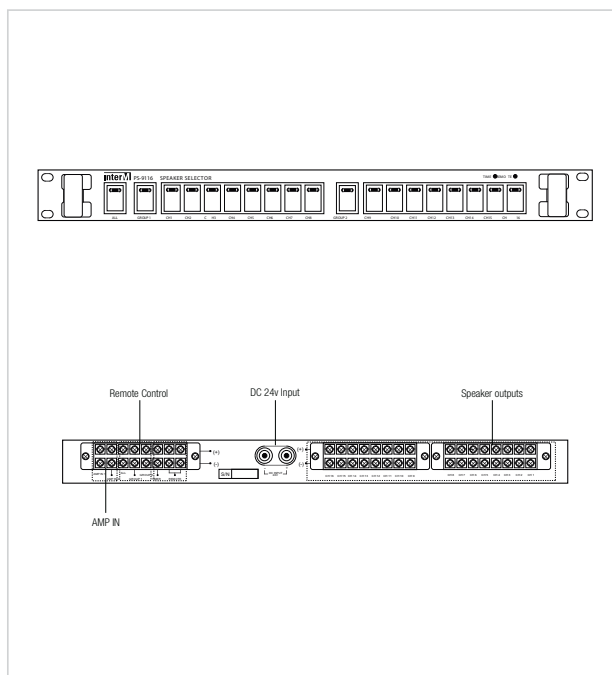
Specifications:

Model:	PS9116
Loudspeakers/Zones	16 Individual 2 x Groups of 8
Remote Control (All or 2 x Groups of 8)	Voltage-free contact ~ screw terminal on rear
Power Requirement	24v DC
Rack Height	1U
Dimensions	482(W) x 44(H) x 280(D) mm
Weight	4kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

interM

• PB9207: Battery Charger

For use with all Inter-M power amplifiers, the PB9207 allows the use of DC batteries for systems which require back-up in the event of mains failure.

By continuous monitoring of the batteries, the PB9207 will automatically charge, thus keeping the batteries in good condition until needed.

Status and condition of the batteries is shown on a clear LED display on the front panel.

Features:

- 1 large LED status/display shows volts and amps
- DC input terminals (on rear)
- Mains powered
- 2U high, 19" rack mounting
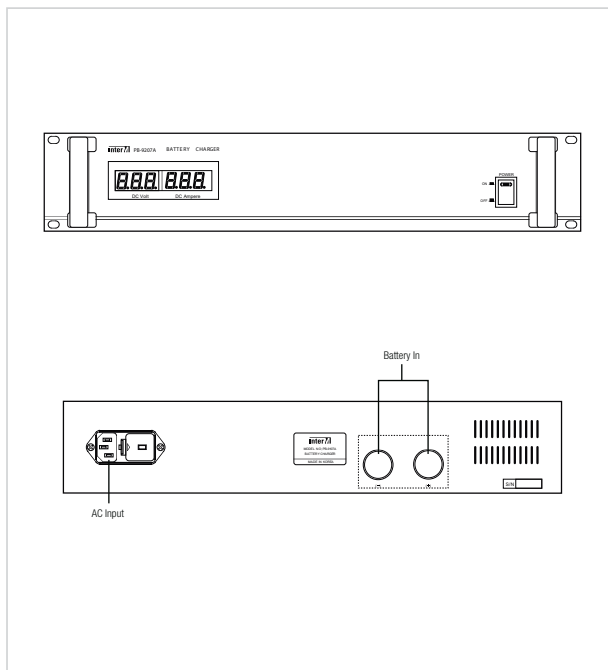
Specifications:

Model:	PB9207
Charging Current	3A
Charging Voltage	27.3v DC
Display	LED, Volts and Amps
Protection	Overcurrent and Overcharge
Power Requirement	230v AC, 50Hz
Rack Height	2U
Dimensions	482(W) x 88(H) x 280(D) mm
Weight	6.2kg

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Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

• AM81: Automatic Microphone Mixer

The Clockaudio AM81 is an 8 channel automatic microphone mixer ideal for multi channel microphone systems in conference and voice reinforcement applications.

By automatically sensing when a channel becomes active, the AM81 will simply control the level of the system dependent on the priority settings. The NOMA (Number of Open Microphones Attenuated) function will also control and adjust the mixer output to prevent feedback due to open microphone channels.

Expansion is easily achieved with up to 15 units able to be cascaded for medium to large system applications (120 microphones maximum).

Features:

- 8 x Microphone Inputs
- 1 x Aux/Music Input
- Individual Priority settings
- Main Output (Balanced)
- 8 x Individual Pre-Amp Outputs
- Simple LCD Display (to view and change settings and functions)
- Automatic or Manual operation
- NOMA facility (Number of Open Microphones Attenuated)
- Link In /Link Out for multi system use
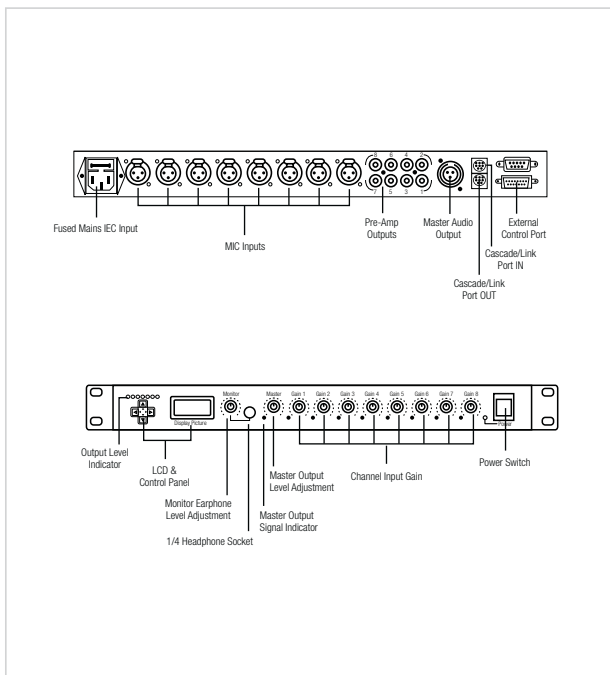
Specifications:

Model:	AM81
Input Impedance	MIC: 4300Ω, AUX 50kΩ
Output Impedance (balanced)	MIC: 15kΩ, Line 220Ω
Output Impedance (unbalanced)	1kΩ
Pre-Amplifier Output Impedance	3.3kΩ
Max Input Level	MIC: -18dBv, AUX 6dBv
Max Output Level (Balanced)	MIC: -18dBv, Line 21.5dBv
Standard Input Level (Balanced)	MIC: -28dBv, Unbalanced: AUX 2.5dBv
Pre-Amplifier Output Level (Balanced)	MIC -25dBv, Line 0dB
Pre-Amplifier Output Level	-4.4dBv
Max Gain	62dB
Frequency Response	20Hz ~ 20kHz
Noise	All channels with the max gain position (220Ω) -85dB
THD+N	≤0.5%
S/N	75dB
Phantom Power	+48v
Controlling Output Voltage	5v
Power Voltage	220v AC
Current Consumption	25W
Rack Height	1U
Dimension	430(W) x 44(H) x 221(D) mm
Weight	3.2kg

Fused Mains IEC Input

MIC Inputs

Pre-Amp Outputs

Master Audio Output

External Control Port

Cascade/Link Port IN

Cascade/Link Port OUT

Output Level Indicator

LCD & Control Panel

Monitor Earphone Level Adjustment

Master Output Level Adjustment

Master Output Signal Indicator

Channel Input Gain

Power Switch

1/4 Headphone Socket

Loudspeakers

Amplifiers

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Processing

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Generation

Audio System
Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

MR88: Digital Automatic Microphone Mixer

The MR88 Digital Automatic Microphone Mixer incorporates advanced DSP technology. It has been carefully designed to give outstanding performance and flexibility whilst maintaining simplicity of set-up and use.

Eight input channels, fully adjustable for microphone and line level, can be output from either or both of the two channels. The MR88 incorporates advanced DSP technology and has been carefully designed to give outstanding performance and flexibility whilst maintaining simplicity of set up and use. It provides eight input channels, fully adjustable for microphone or line levels, and two output channels. Flexible routing gives easy use of mono or stereo sources. Each input channel can be assigned to a four-level priority system.

The MR88 provides full set-up and control of the mixer via a user-friendly LCD interface on the front panel, allowing the mixer settings to be selected and adjusted without the need to remove the case covers.

Mixers may be linked together to make a large multi-source system with priority and NOMA information extending throughout. All settings are retained, even when the mixer is disconnected from the power supply.

Features:

- Easy set up with LCD display of all functions and settings from front panel and by PC through RS232 socket
- Fast, silent automatic microphone selection
- 8 Channel mic/line inputs on XLR connectors
- Record outputs for each input channel
- 2 Channel mic/line outputs on XLR connectors
- Output level LED meter
- 2 Band equalisation on each input channel
- Compression
- Multi-level channel priority system
- Easy use with mono or stereo inputs
- Dual mono or stereo outputs
- Security mode
- Adjustable limiters on each input prevent channel overloads
- Adjustable 'off' attenuation of each input channel
- Channel LEDs indicate active or locked out channels
- Select NOMA operation on/off
- Simple daisy-chain set up for multiple microphone operations
- 48v Phantom Power individually selectable for each channel
- Remote VCA control and RS232
- External TTL control and monitoring of channel selection
- 1U rack-mounting
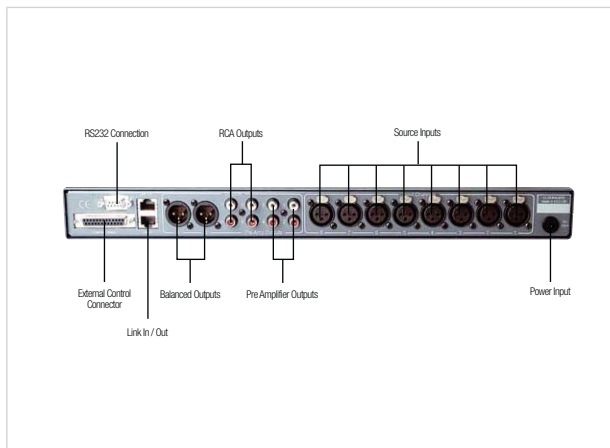
Specifications:

Model:		MR88
Input Impedance		2.4kΩ differential
Output Impedance	Balanced:	50Ω
	Pre-Amp Out:	560Ω
Max Input Level	Mic Level:	-23dBv
	Line Level:	+16dBv
Max Output Level		+19dBv
Nominal Output Level at 0dBv on Meter	Pre-Amp Out:	-10dBv
	Balanced:	-60dBv ~ +4dBv
Frequency Response		20Hz ~ 20kHz
THD+N		-70dB
Max Noma Attenuation		20dB
Phantom Power		+48v
Power Supply		15v DC
Operating Temperature		0° ~ 40°C
Rack Height		1U
Dimensions		483(W) x 44(H) x 215(D) mm
Weight		1.98kg

RS232 Connection   RCA Outputs   Source Inputs

External Control Connector   Balanced Outputs   Pre Amplifier Outputs   Power Input

Link In / Out

Audio Signal
Generation

Audio System
Tools

Microphones
(wired)

Microphones
(wireless)

Portable P.A.

Soundfield

Induction Loops

CT COMMUNICATION TECHNOLOGY

- **MIM020:** Multizone Microphone Input Mainframe
- **MPA050:** 5 Input Module

Communication Technology's MIM020 Multiple Input Mainframe is designed to provide a simple solution to microphone priority control for up to 20 inputs.

The multiple input mainframe is ideal for applications in conference and meeting room environments. Other applications include medical practices where each doctor will need to call 'next patient' using the system on a first come, first served basis.

MPA050 input modules feature 5 inputs each, where one input can be given priority over all others within the mainframe. This facility will allow the conference Chair to override delegates or, in the event of an emergency, a safety officer may take overall control throughout the whole building.

Each input has the benefit of automatic proximity bass cut and sound level limiting, so that all announcements will be more clearly reproduced.
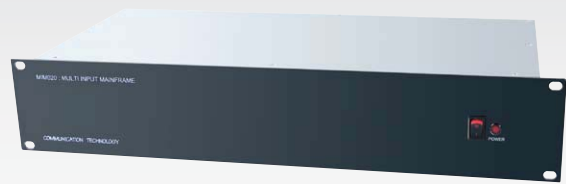
MPA050: 5 input Microphone Module

Specifications:

Model:	MIM020	MPA050
Powering	24v DC @ 150mA interfaced to a 2.5 mm sockets	-
Output	Balanced 0dBm, 600W source or -20dBm, 60W source	-
Output Interface	5 pin XLR	-
Frequency Response	±3dB 50Hz ~ 12KHz	Unlimited: ±3dB 100Hz ~ 10kHz Bass cut in limit: varible with voice proximity to -18dB @ 100Hz
Output Access	Suitable for VOX activated host amplifiers or for electronic access systems	-
Gong Function	When onboard selected as an option, fully automatic on using mic PTT	-
Input Capacity	4 x MPA050, 5-input modules	5 inputs per module
Input Sensitivity	-	Suitable for most 600W mics, -65dB
Input Gating	-	From attached mic PTT, or switched, all inputs 1st-come 1st-served; 1 input is switchable for overall priority
System Access	-	Provision made for each attached mic to be signalled by LED, that the system is available for use
Microphone Input	-	5 pin XLR (supplied)
Rack Height	2U	1U
Dimensions	483(W) x 200(H) x 88(D) mm	-

Loudspeakers

Amplifiers

Audio Signal
Processing

**Audio Signal
Generation**

Audio System
Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

Audio Signal Generation

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

AUDAC

### • **MCD15:** 5 Disc CD/MP3 Player

The MCD15 is a full-featured Multi CD/MP3 player, designed for fixed installation in commercial as well as professional sound system applications.

In addition to the standard functions of a CD MP3 player, the MCD15 offers a wide range of advanced functions.

It contains a programmed play mode allowing the user to create programs with up to 32 tracks, several repeat modes such as repeat track / repeat disk / repeat all disks.

Features:

- 5 Disc CD changer
- Intelligent disc scan
- 32 Track program memory
- 3 Mode random playback
- Low power consumption
- 20 bit and 8x oversampling digital filter
- Direct track selection
- 3U high, 19" Rack mounting kit available

19" Rack Mount Bracket
Option: **MCD–15BKT**
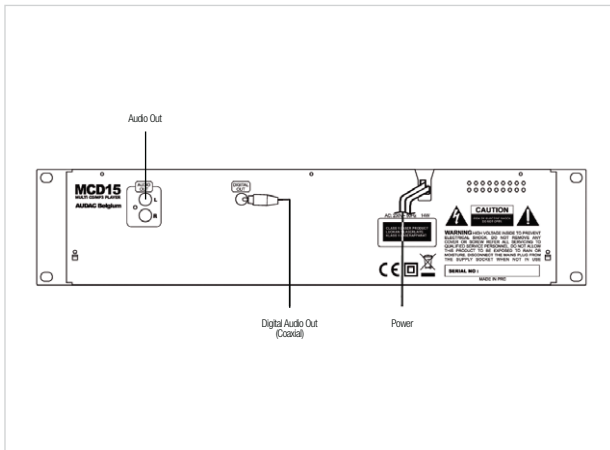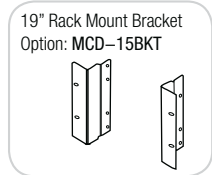
Specifications:

Model:	MCD15
Power consumption	14W
Discs	Audio compact discs 8cm, 12cm
Number of discs	5
Channels	2
Frequency Characteristics	20Hz ~ 20kHz
Dynamic Range	98dB
Signal/Noise Ratio	102dB
High Frequency Distortion	0.006%
Separation	95dB
Frequency Response	20Hz ~ 20kHz
Power Requirement	230v AC, 50Hz
Rack Height	3U
Dimensions	435(W) x 115(H) x 388(D) mm
Weight	6.2kg

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

● **PT9107S:** AM/FM Tuner

Slimline 19" rack-mounting tuner operating on AM and FM bands. 20 pre-set stations make the unit ideal for many commercial installations requiring radio broadcast.

Fixed/variable and stereo/mono output options are also available.

Features:

- AM/FM bands
- 20 Pre-set stations
- Mono output /fixed (¼" jack)
- Mono output/variable (¼" jack)
- Stereo output/variable (stereo phonos)
- 230v AC/24v DC powered
- 1U high, 19" rack mounting

AC Inlet   Digi-Link   DC 24v Input   Variable Mono Output

Fixed Mono Output   Antenna Terminal
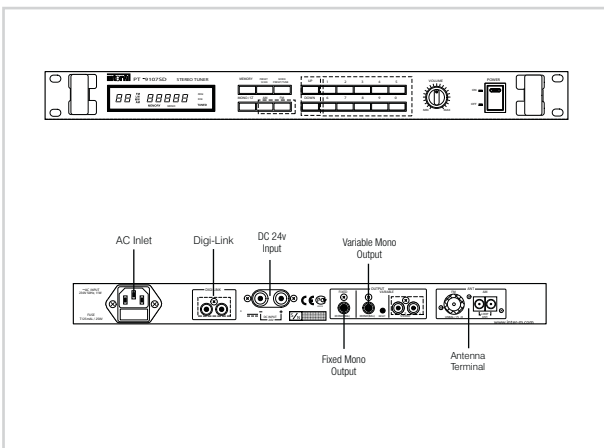
Specifications:

Model:	PT9107S
AM Range	522 ~ 1611kHz
FM Range	87.5 ~ 108.0MHz
Pre Set Stations	20
Output Levels	FM Stereo ~ 500mv Balanced FM Mono ~ 1v Balanced AM Mono ~ 240mv Balanced
Power Requirement	230v AC, 50Hz/24v DC
Rack Height	1U
Dimensions	482(W) x 44(H) x 280(D) mm
Weight	3.5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

inter**M**

• **PE9103A:** Chime/Siren Generator

Tone Generator allowing the selection of 4 chime/tone options or 2 siren options. It can be used as part of a larger system or can be used as a stand-alone generator.

Features:
- Chime/tone options: Rising 4 note, falling 4 note, 2 note
- Siren options: Continuous, oscillating
- Activation on front panel
- Rear panel remote access for chime options (screw terminals)
- Line level output (¼" jack)
- 24v DC powered
- 1U high, 19" rack mounting
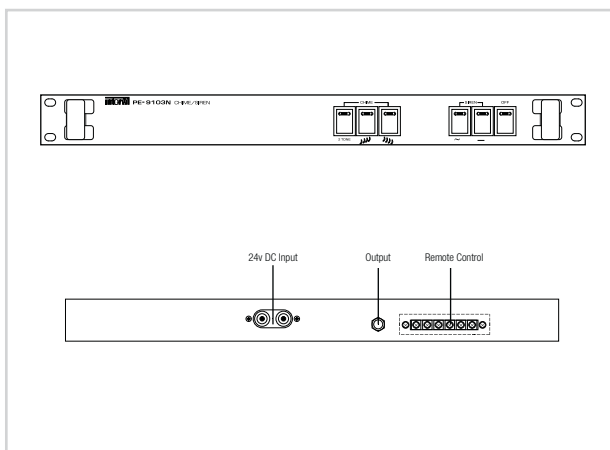
Specifications:

Model:	PE9103A
Chime Options	4 note ascending, 4 note descending and 2 tone (ding dong)
Siren Options	Continuous and oscillating
Remote Control (Chime only)	Screw terminal on rear panel
Output Level/Impedance	1v/10kΩ unbalanced
Power Requirement	24v DC
Rack Height	1U
Dimensions	482(W) x 44(H) x 280(D) mm
Weight	2.8kg

24v DC Input   Output   Remote Control

Audio System
Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

● **TPG-5:** Tone/Pulse Generator

The TPG-5 device holds 5 factory-set/embedded alarms and tones which can be used in schools, factories and retail sectors for class change, shift start & stop or security signalling purposes.

Activation of the tones is via voltage-free NO or NC contacts, buttons, switches, PIR devices, or via the TU-16A Timer Unit. A pulsed activation will allow just one loop of the required tone; however, if the activation contact remains, the tone will play continually until disengaged.

A line level audio output signal is provided for interface to the amplifier.

Features:

- 5 factory-set alarms and tones
- Activation via NO/NC contacts
- Screw terminals for fast, simple on-site installation
- Strong, robust, compact unit
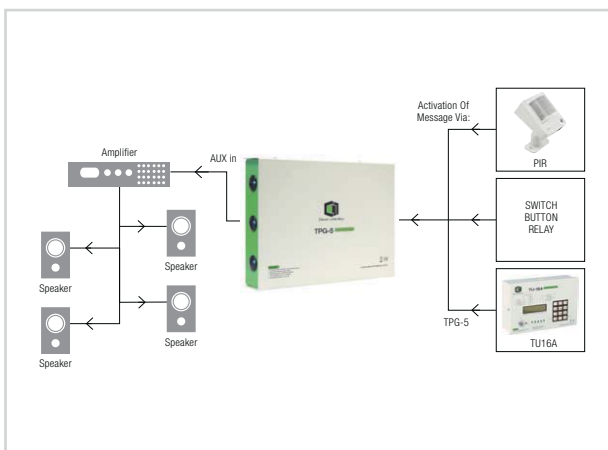
Specifications:

Model:	TPG–5
Audio Output	0.7v RMS over the frequency range
Output Configuration	Unbalanced
Activation	Voltage-free contact closure
S.P.C.O Rating	1A @ 24v DC, 0.5A @ 125v AC
Connections	Screw Terminals on PCB
Power Consumption	3vA @ 240v AC, 50mA @ 24v DC
Case Material	Powder coated steel
Dimensions	220(W) x 162(H) x 44(D) mm
Weight	1.8kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

LB-5A: Digital Audio Storage and Replay Unit

This latest generation of Clever Little Box incorporates MP3 technology to store and replay recorded voice messages, music or tones for security/safety, retail, museum/leisure and advertising applications.

Files are stored on an internal USB memory stick with an 8 hour* memory capacity allowing material to be changed or replaced easily.

The 15 channels can be individually accessed or activated by voltage-free NO or NC contacts, buttons, switches, PIR devices, or via the TU-16A Timer. A pulsed activation will allow just one loop of the required recording; however, if the activation contact remains, the recording will play continually until disengaged (Groups 1 & 2 only).

A line level audio output signal is provided for interface to the amplifier.

Features:

- MP3 audio storage technology
- Three configurable Groups of 5 Messages, 5 Chimes & 5 Tones
- Additional BGM music facility
- Audio File Group 1 has priority over 2, 3 & BGM; Groups 2 & 3 have priority over BGM
- Audio files stored on internal USB memory stick for fast, easy updates via Windows/Mac/PC
- Sample audio files supplied
- Line level output via stereo phonos or balanced mono screw terminals
- 3.5mm 'monitor' headphone jack socket
- 12v DC powered (supplied with mains adaptor)
- Adjustable interval timer
- Signal 'Looping' or 'One-shot' operation
- Secure, robust and stylish steel case (wall mountable)

*Dependent on memory stick storage capacity
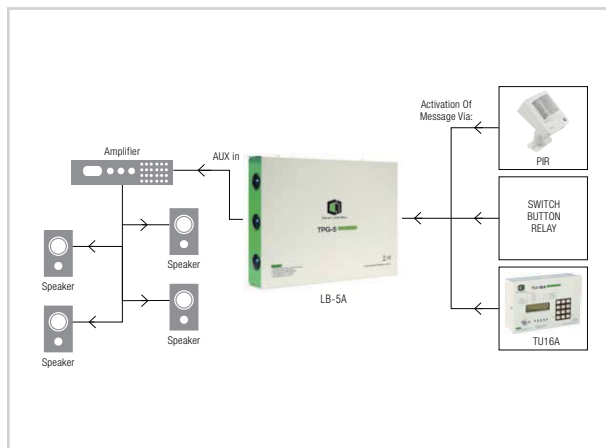
Specifications:

Model:	LB–5A	Comments
Directly Accessible Audio Files	Total 15	Split into three banks of five
Background Music Files	256 (Using 1Gb Memory Stick supplied)	Played in random order
Audio File Format	MP3	MPEG1 audio layer 3
MP3 Bit Rate	Up to 320Kbs	Any standard MP3 bit rate
Min Contact Closure Time	< 300mS	-
Wiring Termination Type	PCB screw terminals	-
USB Memory Stick Capacity	32Gb Maximum	Supplied with 1Gb
USB Memory Stick Format	FAT 16, FAT 32	-
Audio Outputs	Phono sockets Screw terminals 3.5mm stereo jack	Unbalanced stereo / mono Balanced mono Headphone monitoring
Audio Output Level	Line Level (775mv RMS)	Excl. headphone
Audio Frequency Response	30Hz ~ 18kHz ± 3dB	Affected by bit rate
Audio Output Impedance	Less than 1KΩ	–
Power Supply Input	12v DC ±15% @ 300mA	Unit supplied with plug top power supply fitted with 2.1mm DC Power Jack
PIR Supply Output	12v DC ±15% @ 100mA	The supplied PSU will power up to 3 PIRs
Power Consumption	2.5W typical	5.5W maximum
Operating Environmental Temperature	10ºC ~ 35ºC	-
Case Material	Painted mild steel	-
Dimensions	210(W) x 160(H) x 42(D) mm	Excl. power supply
Weight	1kg	-

Audio System Tools

Loudspeakers

Amplifiers

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Processing

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Generation

Audio System
Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

Loudspeakers

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Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Clever Little Box.

SONET4: Cat5 Audio Distribution System - 4 in / 4 out

The highly successful 'So.net' Sound-over-Ethernet System has been designed to simplify and speed up installations where multiple microphone or line level inputs need to be situated a distance from the amplifier equipment.

Types of installation include churches, schools, theatres and corporate boardrooms.

This extremely versatile and cost effective installation device removes the need for multiple cable runs from remote audio inputs to the amplifier equipment. The SONET4 System can transmit up to four microphone or line level signals down one screened Cat5e cable for up to 1000m.

Each input and output can be independently configured for balanced or unbalanced signals as well as line level or microphone level. There is also an option to provide phantom power to the microphone inputs independently.
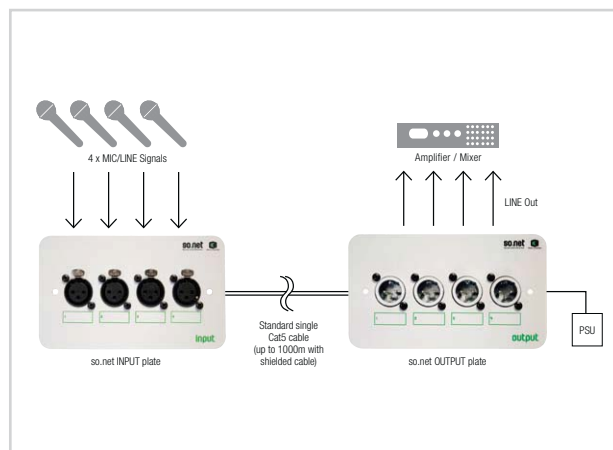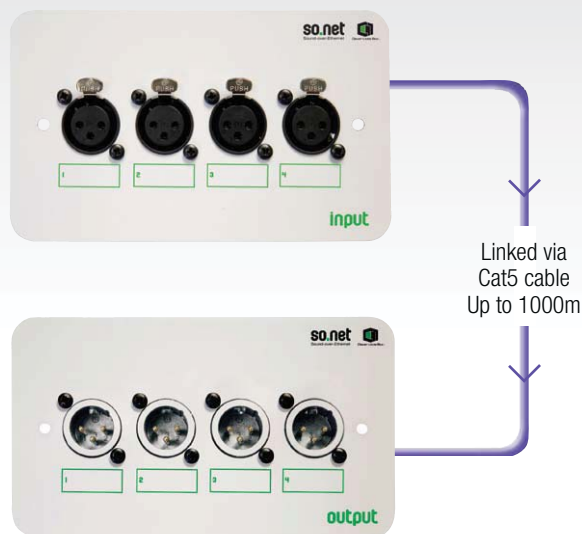
Each unit fits neatly into a standard UK double-gang back box and only requires a power supply at the output or amplifier end (PSU supplied as part of system).

Linked via Cat5 cable Up to 1000m

Features:

- Reduces installation time
- Up to 1000m between Input and Output plates achieveable
- Very high interference immunity
- Balanced or unbalanced inputs & outputs
- Line or Microphone level inputs & outputs
- Phantom power (max. 15v DC)
- Four XLR sockets on standard 2 gang plates
- No power required at input module
- Power Supply included as part of system

Please Note:

- When using Cat5 UTP (unshielded) cable, the So.Net system is only capable of transferring up to 3 channels. STP (shielded) Cat5 cable will allow for the maximum 4 channels.

Specifications:

Input Module:

Power	Over Cat5 cable
Ground	Over Cat5 cable screen (or spare pair)
Inputs x 4	Balanced XLR female
MIC/LINE in	Selectable by jumper
Phantom Power	15v jumper selectable
MIC Impedance	600Ω
MIC Level Input	10mv RMS
LINE Impedance	50kΩ
LINE Input Level	700mv RMS (1.5v RMS max)
Cat5 Termination	Screw terminals

Output Module:

Power Requirements	24v DC @ 100mA (regulated linear power supply recommended)
Outputs x 4	Balanced XLR male
MIC/LINE Out	Selectable by jumper
MIC Out Impedance	600Ω
MIC Level Output	20mv RMS (into 600Ω)
LINE Out Impedance	20kΩ
LINE Level Output	700mv RMS (into 20K)

General:

Channels	Four, individually configurable
Bandwidth	100Hz ~ 20kHz (-3dB)
Crosstalk	>60dB
Signal to Noise Ratio	>60dB
Cable Spec	Screened Cat5e cable (UTP can be used, but one pair required for ground, meaning only three channels would be available)
Cable Length	1000m maximum
Cat5 Termination	Screw terminals

Protected against short circuit on Cat5 cable to ground

4 x MIC/LINE Signals

Amplifier / Mixer

LINE Out

so.net INPUT plate

Standard single Cat5 cable (up to 1000m with shielded cable)

so.net OUTPUT plate

PSU

Loudspeakers

Amplifiers

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Generation

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Tools

Microphones
(Wired)

Microphones
(Wireless)

Portable P.A.

Soundfield

Induction Loops

TU-16A: 16 Event Timer Unit

The TU-16A is a versatile timer used to provide control of external equipment such as the TPG-5 and LB-5A units for schools, factories and retail sectors to signal class change, shift start & stop or security warning/announcement purposes.

A total of 16 events or activations can be programmed over a 24 hour time frame and duplicated over a 7 day period. 5 separate outputs allow activation of different sources at the predetermined times, set via a clear LCD interface.

Features:

- 16 events per day, 112 events per week
- 5 separate programmable outputs
- Latched or pulsed outputs
- Active output indication
- 40 year memory
- Illuminated display
- Anti-tamper key for programming security
- Screened metal enclosure
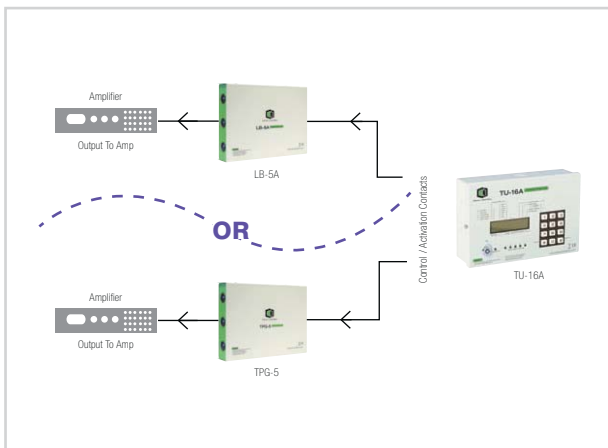
General:	TU–16A
Number of Time Events	16
Number of Output Channels	5
Number of Timing Modes	2 (Pulsed & Latched)
Operating Modes	24 hours or 7 days
Case Material	Powder coated steel
Power	230v AC or 24v DC
Dimensions	220(W) x 160(H) x 40.5(D) mm
Weight	1.8kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

ZSU-5A: Zone Selector Unit

The ZSU-5A provides the facility to take a high impedance 100v loudspeaker output from an amplifier and split it into 5 separate zones.

Each zone can be selected using either voltage-free contacts or ideally a multi-zone paging microphone.

As well as zoning capability, the ZSU-5A will also provide a switched 24v DC output and a voltage-free relay contact active whilst the unit is in use.

Ideal for small to medium sized commercial audio installations, units can also be linked to provide and meet larger system requirements.
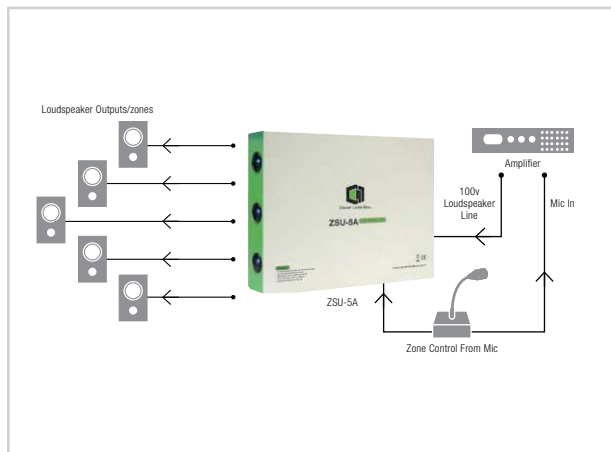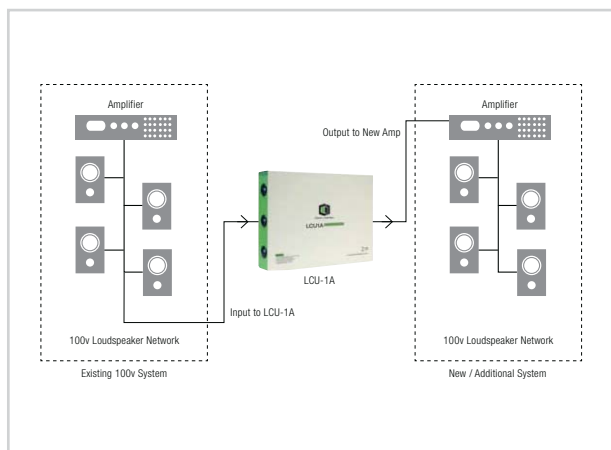
Specifications:

Model:	ZSU–5A
Case Material	Powder coated steel
Power	230v AC or 24v DC
Dimensions	220(W) x 162(H) x 44(D) mm
Weight	1.8kg

LCU-1A: Line Level Converter

This versatile interface is designed to convert a high impedance 100v loudspeaker signal to either a balanced variable line level or microphone level signal.

Especially useful if extending or adding to existing installations as it negates the need to run new cables from the existing amplifier or main equipment; simply tag onto the 100v loudspeaker circuit and feed the output into a local amplifier.

The unit provides two independent Mic or Line outputs, as well as including a DC capacitor to allow connection to VA or monitored systems.

Specifications:

Model:	LCU–1A
Case Material	Powder coated steel
Power	Passive (no power required)
Dimensions	220(W) x 162(H) x 44(D) mm
Weight	1.2kg

Loudspeakers

Amplifiers

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Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

PPS-2: Phantom Power Supply

The PPS-2 is a mains-operated microphone phantom voltage power supply designed to power electret-type microphones via the signal cable.

It has two independent channels which can be internally configured to provide a balanced 48v, 24v or 12v DC supply to the microphone.

The default setting is 48v, which is the de-facto standard, and is therefore suitable for the majority of electret or condenser type microphones.

Specifications:

Model:	PPS–2
Number of Channels	2
Phantom Voltage	12, 24 or 48v (selectable)
Input Configuration	Balanced
Input Connectors	2 x Female 3 pin XLR
Output Connectors	2 x Male 3 pin XLR
Insertion Loss	Negligible with <600Ω mics
Power Supply	230v 50Hz (110v option)
Consumption	<3W
Case Material	Metal
Complies With	DIN spec 45596 (P48)
Dimensions	156(W) x 80(H) x 203(D) mm
Weight	1.03kg (including mains lead)

PAM-10: Barrier Interface

This BT-approved device provides an isolated barrier between amplifiers and telecoms equipment or acts as a coupling device for sending and receiving long distance line level signals.

Traditionally used in applications such as military camps, trackside communications, music-on-hold and telecommunications.

Specifications:

Model:	PAM–10
Case Material	ABS
Power	Passive (no power required)
Dimensions	120(W) x 60(H) x 40(D) mm
Weight	0.5kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

EPA100: Telephone/PA Paging Interface

Public address access from a telephone extension can benefit most fast-moving enterprises.

Ezi-Page is designed to allow an analogue telephone extension port to which it is connected to be dialled from any other on the same PBX switch system, providing a paging announcement over a public address system. The user simply dials the extension number designated for Ezi-Page, waits for the ring tone to cease and then makes the required announcement.

Features:

- VOX access electronics maintain the line connection until the end of the announcement, approximately 5 seconds after Ezi-Page automatically clears down
- Connected to a PA system using either a designated microphone or line level amplifier input, this input can be VOX or electronic gate accessed
- Fully approved, it includes an optically isolated barrier transformer input and uses standard BT 4/500 interface plug connections
- Requires 24v regulated DC powering from the host PA system or plug-top power supply PSU24V
- Provided with a wall-mounting facility; interface connection is from below or can be housed within the PA system rack
- Installation is made simple; all terminations use standard interface connections

Specifications:

Model:	EPA100
Designated Extension	Analogue via BT 4/500 interface, 3m BT cable supplied
PA Output	700mv or 70mv, for line or microphone level amplifier input, VOX access amplifiers need no further connections. However, amplifiers with electronic access will require a contact closure available as 'volt free' on Ezi-Page interconnections
Powering	24v DC regulated from Communication Technology power supply type PSU24v or from the host PA amplifier
Dimensions	120(W) 180(H) x 70(D) mm

ANS-1: Ambient Noise Sensor/Level Regulating Module

This level regulating/ambient noise-following module is designed to receive audio signals from an ambient sensing microphone and, where required, adjust signal levels to the power amplifier of the public address installation.

The output level of the module will automatically and constantly adjust to follow the average rise and fall in the ambient noise in the area served by the host amplifier (airports, hotel reception areas, transport terminals, sports stadiums, etc). The ambient noise will be continuously sampled by the sensing microphone/s, sited as close to the source of change as possible.

Where large areas have various localised sources of variable 'ambient' noise, it may be desirable to cover each with a separate sensor, (for example, an underground railway would benefit from having one sensor at each end to detect the noise of trains arriving from either direction).

Features:

- Microphone input (sensor)   a. 200μv balanced low impedance
                                b. 150mv unbalanced high impedance
- Audio In/Out - 500mV, unbalanced
- Reaction time - 20seconds, 10dB range
- XLR IN (Female) OUT (Male)

Specifications:

Model:	ANS–1
Power Supply	24v DC @ 40mA, this can be derived from the host system, or plug top power supply PSU24v
Microphone Sensor Input Sensitivity	200μv balanced low impedance 150mv, unbalanced high impedance
Audio Input / Output Preferred Level	500mv unbalanced
Reaction Time (to noise change)	20 secs, 10dB range
Interface Connections	All signal & powering interfaces are XLR, inputs are female, output male
Dimensions	120(W) x 180(H) x 70(D) mm

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Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

VCA-1A: Voltage-controlled Attenuator

The VCA-1A is ideal for both commercial public address amplifiers and professional stereo amplifiers, allowing remote control of the volume levels via a remote 2 core cable link.

Comprising of a two-channel control box and two volume control plates, the main unit is positioned between the amplifier and pre amplifier/mixer increasing or decreasing the signal between the units.

Applications include bars, retail sites, classrooms and industrial sites.

The system can be configured to operate as:

- Mono   (1 channel in use)
- Stereo A   (2 independent channels in use)
- Stereo B   (1 plate controlling both channels simultaneously)

Mono Operation

Stereo Operation
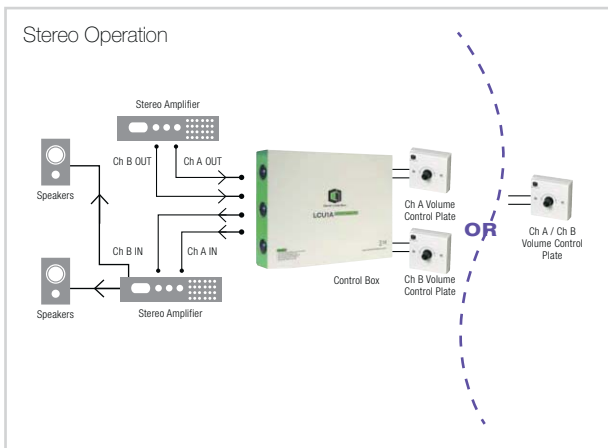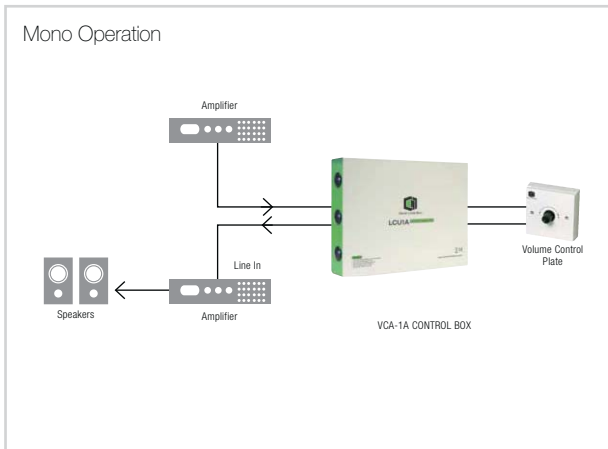
Specifications:

Model:	VCA–1A
Case Material	Powder coated steel
Power	230v AC or 24v DC
Dimensions	220(W) x 162(H) x 44(D) mm
Weight	1.5kg

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Induction Loops

- **SLA50:** 50W 100v Line Volume Control
- **SLA100:** 100W 100v Line Volume Control

The SLA range of 100v Line Attenuators (volume controls) offer the ability to control the level of individual loudspeaker lines via an elegant, flush-mounting wall control plate.

Both Models - SLA50 (50W) and SLA100 (100W) - feature 10-step plus off-position notched control knobs, connected to high quality audio transformer and fitted to attractive single gang (SLA50) or double gang (SLA100) faceplates with contemporary screwless finish.

As well as volume adjustment, the units incorporate volume restoration facility, which will override the setting of the control knob and output the volume to full, when presented with a 24v DC control voltage.
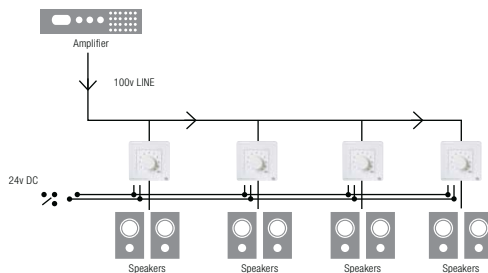
Adding the SLA to your loudspeaker network as shown will allow control of the loudspeakers located after the insertion point.
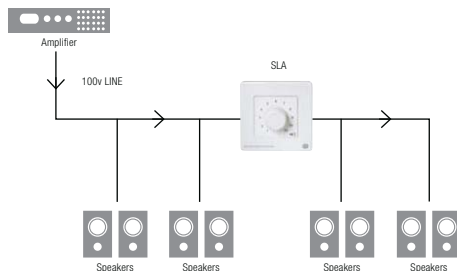
Adding the SLA to individual loudspeaker feeds will allow each unit to be set/controlled.
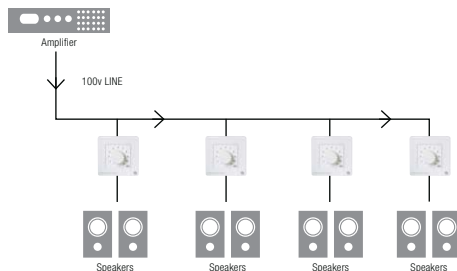
Switched 24v DC (eg. from fire alarm or emergency panel) will override the SLA individual settings and output the volume to full power.

Specifications:

Model:	SLA50	SLA100
Power Rating	50W RMS	100W RMS
Settings/Steps	Off, 1 x 6dB, 9 x 3dB Steps	Off, 1 x 6dB, 9 x 3dB Steps
Paging Override Voltage	24v DC	24v DC
Colour	White	White
Termination	Rear-mounted screw terminals	Rear-mounted screw terminals
Dimensions	86(W) x 86(H) x 44(D) mm	95(W) x 165(H) x 44(D) mm

- **LVC-25:** 25W 100v Line Volume Control
- **LVC100:** 100W 100v Line Volume Control
- **LVC300:** 300W 100v Line Volume Control

A range of 50/70/100v line remote volume controls for loads of 25, 100 and 300W with provision for local volume restoration for paging announcements by built-in 24v relay override.

Each control has been designed to provide excellent frequency response with minimum quiescent power loss, using uniquely wound auto-transformers for maximum efficiency.

LVC025/VA and LVC100/VA models include all the same features of the standard LVC025 and LVC100 products; the main difference is that the override relay is energised when the Volume Control is in normal use and de-energises in fail/safe override condition, to provide full volume restoration for emergency broadcasts.

Both controls are suitable for low frequency and DC line surveillance monitoring systems, normally associated with Voice Alarm facilities and are site adjusted.
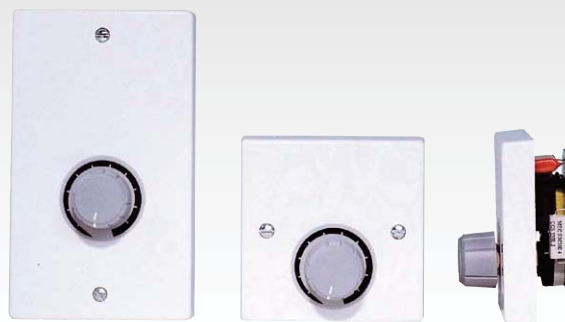
Features:

- A rugged, stepped, user control
- Collet fixed knobs
- Permanent push-on wiring connectors conveniently at one end of the PC board
- Easily adjustable, colour coded, on-board header receptacles for option selection (300W excluded, use terminal selection)
- Detailed diagrammatic instructions make preparation and installation easy
- Also suitable, by 'on-board' option selection, for three wire amplifier sourced paging override systems, TRI-WIRE
- LVC025 and LVC100 volume controls are fitted to ivory ABS UK switchplates
- Various metal front panel options are available at extra cost

Order Codes:

Model:	
LVC025/VA:	25W, including UK front panel, single switchplate - VA compliant
LVC025:	25W, including UK front panel, single switchplate
LVC025/PC:	25W, 'bare bones' PC only
LVC100/VA:	100W, including UK front panel, double switchplate - VA compliant
LVC100:	100W, including UK front panel, single switchplate
LVC100/PC:	100W, 'bare bones' PC only
LVC300:	300W, including front panel to mate with MK 5268 ALM flush backbox
LVC300/PC:	300W, 'bare bones' chassis only
LVC300/SM:	300W, mounted in surface fixing backbox
LVC600:	6W LowZ including UK front panel, single switchplate

Specifications:

Model:	LVC–25	LVC100	LVC300
Rated Input	25W, 100v	100W, 100v	300W, 100v
Maximum Load	30W	120W	330W
Maximum Input Voltage	100v, RMS 140v Peak (intended for use on 50, 70, 100v line distribution systems)		
Minimum Nominal Input Voltage	50v	50v	50v
Control Attenuation	60dB, in 12 steps, including 'Off'		
Paging Attenuation	12dB, in 4 steps (relay override function only)		-
Operating Frequency Range	150Hz ~ 15KHz	150Hz ~ 15KHz	40Hz ~ 15KHz
Override Relay: Consumption	400mW	400mW	900mW
Termination	Push-on screw terminations, fixing to PCB header pins. max cable size 2.5mm², stripping length 6mm		Screw termination max cable size 4mm²
Finish	Ivory plate with grey rotary switch		
Dimensions	87(W) x 87(H) x 38(D) mm	87(W) x 145(H) x 38(D) mm	122(W) x 178(H) x 84(D) mm

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Induction Loops

- **TW1010:** TRI-Wire Override Interface
- **TVC25:** 25W 100v Line Volume Control

TRI-WIRE TW1010 is an interface between the amplifier and loudspeaker(s) to allow low cost overall paging override and volume restoration, where a number of individual loudspeaker line volume controls are to be installed.

Without TRI-WIRE, each volume control would need to be fitted with an override relay requiring centrally sourced powering, involving 4 wire cabling. As the name suggests, the TRI-WIRE system uses only three wires linked to the volume controls, enabling a lower cost of installation.

A special TRI-WIRE line volume control, TVC25 is recommended for use with this system, though any of the Communication Technology Volume Control range is compatible.

TW1010 has the advantage of being low profile and suitable for all back boxes of at least 20mm depth, supplied standard with an ivory white plastic front panel. For installation in close proximity to the host amplifier.

Features:

- No remote relay powering necessary
- Lower cost of each volume control
- Compatibility with all types of paging access system, including VOX gates, passive or electronic access
- Requires only a few milliamps, can be powered from a 24v plug top supply, or the host amplifier
- TW1010 can easily be installed in a UK double switchplate back box or within the host amplifier
- May also be used to terminate all amplifier and loudspeaker cabling
- Auxiliary outputs for speech (paging) only, music only in addition to normal outputs are provided

Specifications:

Model:	TW1010
Supply Voltage	18 ~ 35v negative ground, 24v nominal
Supply Current	20mA on override
System Function	By direct 'PRESS TO TALK' connection on paging microphone or by grounded 24v access system
Volume Restoration Relay: Contacts	Silver nickel 2 Amp. Maximum switching voltage 150v AC
Maximum Input Power	120W RMS, 50, 70 or 100v line
Dimensions (face plate)	145(W) x 85(H) x 15(D) mm (2 gang plate) requires at least 25mm depth back box/enclosure

Model:	TVC25
Rated Input	25W
Maximum Load	30W
Maximum Input Voltage	100v RMS 140v Peak
Control Attenuation	60dB in 12 steps, including 'Off'
Operating Frequency Range	150Hz ~ 15kHz
Operating in Systems	Attenuation recommended below 150Hz
Terminations	Screw terminals; maximum cable size 3.5mm²
Dimensions	PCB: 65(H) x 50(D) mm. Overall depth 30mm. When mounted to supplied UK single gang switchplate, depth behind panel is 20mm

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Induction Loops

AVB5: Audio-via-Bluetooth Wireless Receiver

The new AVB5 is a low cost, simple, yet effective unit which allows wireless connection between any amplifier (or any device with a line input) and Bluetooth enabled devices, such as:

- MP3 Players
- Mobile Phones
- PC/Laptop Computers
- Microphone/Headsets

Each AVB5 unit has a unique pairing code to identify it, which is especially useful if operating multiple devices within a small area or location, the maximum operational range being 80 metres (dependent on the environmental conditions). A simple blue LED identifies when a connection to the AVB5 is successfully made.

Once paired, the unit streams the audio signal via a secure 2.4GHz A2DP protocol, avoiding any other Bluetooth enabled device within range.

Power is supplied by a 5vDC plugtop PSU (supplied) or via a USB A connection, which may be via a computer or other source with USB facility.

Features:

- Bluetooth Wireless link to amplifiers, pre-amps, HiFi, etc
- Unique pairing code to each unit
- Operating range up to 10 metres
- Powered via PSU or USB
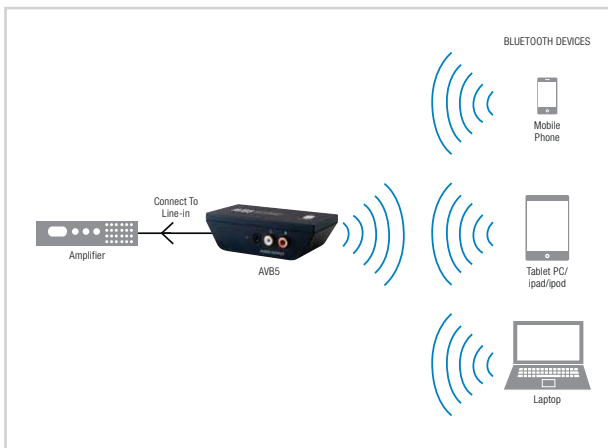
Order Codes:

Model:	AVB5
Inputs	2.4GHz A2DP Bluetooth Protocol
Outputs	3.5mm Stereo Jack or 2 x Phono Connectors
Pairing/ID	ID code located on the bottom of the unit
Range	10m max. (optimum conditions)
Power	5v DC via supplied PSU or via USB A connector
Dimensions	105(W) x 32(H) x 56(D) mm
Weight	0.08kg (not incl PSU)

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Call our technical support team now on:

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Induction Loops

Switchcraft

- **SC700:** AV Direct Box - Fully-shielded Jensen Isolation Transformer
- **SC700CT:** AV Direct Box - Fully-shielded Isolation Transformer

The SC700 Series gives you all the inputs and outputs you need to connect MP3 players, PCs, laptops, CD players and other audio devices to audio consoles, mic preamps, effects processors, house sound systems and other equipment with 3-pin XLR inputs.

Both the SC700 and SC700CT convert the outputs of your high-impedance stereo or mono line level audio devices and musical instrument to low-impedance, balanced and isolated mic level signals. All stereo inputs are summed to mono and output to a single 3-pin XLR connector.

The SC700 A/V Direct Box from Switchcraft comes loaded with genuine Jensen transformers, which provide optimal impedance and an impressively extended frequency range (10Hz ~ 40kHz).

Features:

- Left and right RCA inputs
- Left and right RCA thruputs
- 3.5mm stereo input
- Left and right 1/4" TS (unbalanced) inputs
- 20dB pad
- Pin-1 ground lift
- Recessed I/O panel
- Ultra-rugged extruded aluminium enclosure

Specifications:

Model:	SC700 / SC700CT
Type	Passive DI
Channels	1
Inputs	2 x RCA, 1 x 2.5mm stereo, 2 x ¼" jack
Outputs	1 x XLR, 2 x RCA thru
Dimensions	53(H) x 85(D) x 105(W) mm
Weight	0.27kg

Switchcraft®

- ## SC800: Instrument Direct Box -
  ## Fully-shielded Jensen Isolation Transformer
- ## SC800CT: Instrument Direct Box -
  ## Fully- shielded Isolation Transformer

Switchcraft's SC800 Direct Box Series efficiently converts your instrument's high-impedance line-level signal to a balanced and isolated microphone-level signal. That way, you can put an SC800 between your audio devices or instruments, then connect your line-level equipment to other equipment, such as audio consoles, premaplifiers, effects processors and recording gear.

The Switchcraft SC800 even employs Jensen transformers, for a high-quality design.

Features:

- Instrument direct box (SC800 Model only with Jensen transformer)
- Common Mode Rejection: Greater than 100dB at 60Hz
- Input Impedance: Greater tthen 150k at 1kHz
- Output Impedance: Less than 170k at 1kHz
- Phase Response: Less than 3 degrees at 20Hz, Less than 1 degree at 1kHz, Less than 16 degrees at 20kHz
- Total Harmonic Distortion + Noise: Less then .05% (At 20Hz, +4dBu), Less then .006% (At 1kHz, +4dBu)
- Maximum Input Level: +21dBu (At 20Hz with 1% THD), +41dBu (With 20dB Pad Engaged)
- Frequency Response: 10Hz to 40kHz (±0.3dB, ref 1kHz)
- Voltage Gain: -23dB, -43dB (With 20dB Pad Engaged)

Specifications:

Model:	SC800 / SC800CT
Type	Passive DI
Channels	1
Inputs	1 x ¼" jack
Outputs	1 x XLR, 2 x ¼" jack thru
Dimensions	53(H) x 85(D) x 105(W) mm
Weight	0.27kg

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Induction Loops

Switchcraft

- **SC900:** Instrument Box with Phantom Lift (Jensen Isolation Transformer)
- **SC900CT:** Instrument Box with Phantom Lift (Switchcraft Isolation Transformer)

Switchcraft SC900 Series are the first passive direct boxes with remote-controllable ground-lift switch. This ground-lift switch (called Phantom Lift) allows you to instantly disconnect the SC900's ground circuit by simply engaging +48v phantom power from the board. That way, if an irritating buzz starts to show up in the middle of the show, you don't have to fight the crowd and appear onstage to fix the issue!

Just flip on phantom power and the SC900CT cuts its ground. It's that simple! The SC900 Series also comes equipped with either Pro grade Jenson or Switchcraft's own custom transformers, so you get amazing isolation, impedance matching and extended frequency response.

Features:

- Phantom Lift - remote-cotrollable ground lift uses phantom power to trip ground line
- LED indicator illuminated to show lifted ground
- Two ground lift modes: manual and +48v lift
- Frequency response 20Hz ~ 20kHz
- Super-rugged all-metal design
- Unbalanced ¼" in and through connectors
- Balanced XLR output
- Switchable -20dB pad

Specifications:

Model:	SC900 / SC900CT
Type	Passive DI
Channels	1
Inputs	1 x ¼" jack
Outputs	1 x XLR, 1 x ¼" jack thru
Dimensions	53(H) x 85(D) x 105(W) mm
Weight	0.27kg

Switchcraft

RMAS8: 3-way Microphone Splitter with Dual-transformer Isolated Outputs

Switchcraft's RMAS8 is perfect for any situation where you need to send duplicate signals to different places with no degradation of the signal.

The front panel of the RMAS8 is equipped with eight XLR inputs and the back panel sports eight channels of inputs on DB25 with corresponding direct outs, also on DB25.

Transformer-isolated outputs (also on DB25) lets you send duplicate feeds to auxiliary tasks, such as monitor mixes or a recording deck. Two ground lift toggles per input and a 40dB pad complete the RMAS8's features.

Features:

- 8 input, 24 output dual transformer isolated audio splitter
- 8 Switchcraft front panel XLR inputs
- 40dB Line level pad on each channel
- Two ground lift toggle switches on each channel (1 for each transformer isolated output)
- 4 DB25 connectors (TASCAM pinout) to accomodate all of the units Inputs/Outputs

RMAS8PRO: 3-way Microphone Splitter with Dual-transformer Isolated Outputs on DB25

Switchcraft's RMAS8PRO sends duplicate signals to different places with no degradation of the signal.

The RMAS8PRO's front panel is equipped with eight XLR inputs and the back panel sports eight channels of of inputs on DB25 with corresponding direct outs, also on DB25. Jensen magnetically shielded (MU Metal) dual-isolated audio transformers let you send duplicate feeds to auxiliary tasks, such as monitor mixes or a recording deck.

Two ground lift toggles per input, a third set of Euro style terminal blocks, and a 40dB pad complete the RMAS8PRO's features.

Features:

- 8 input, 24 output dual transformer isolated audio splitter
- 8 Switchcraft front panel XLR inputs
- Line level pad on each channel
- Two ground lift toggle switches on each channel (1 for each transformer isolated output)
- 4 DB25 connectors (TASCAM pinout) to accomodate all of the units Inputs / Outputs
- Additional set of I/O connections utilising Euro style terminal blocks
- Jensen magnetically shielded (MU Metal) dual isolated audio transformers

Global Banking Group

The refurbishment of a major global banking Group's New York offices called for high quality, discreet microphones throughout its boardrooms. The Clockaudio CS-RF boundary layer mics were specified throughout to guarantee the very highest quality results.

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CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

• C2 Series: Cardioid/Hypercardioid Condenser Gooseneck Microphones

Cardioid Gooseneck microphone designed for use in controlled acoustic environments such as schools, universities and public address paging system.

Hypercardioid version for noisy environments such as financial establishments, transport termini and factory communications.

Features:
- Optimised for speech clarity
- Unobtrusive slimline design
- Fully flexible or semi-rigid shafts
- Choice of shaft length
- Choice of XLR or base-mounting
- Hypercardioid ideal for use in high ambient noise environments
- Engineered in high quality brass
- Finished in satin black

Model Dimensions:

Model:	Overall Length:	Shaft Diameter:
C22E/CT22E	180mm	8mm
C22/CT22	200mm	8mm
C23E/CT23E	280mm	8mm
C23/CT23	300mm	8mm
C24E/CT24E	380mm	8mm
C24/CT24	400mm	8mm
C25E/CT25E	480mm	8.5mm
C25/CT25	500mm	8.5mm

C=Cardioid / CT=Hypercardioid

Includes W2 Windshield:

Available Gooseneck Options

XLR Connector Mount

XLR Connector Mount: 3 or 5 pin male XLR, includes universal Phantom Power supply adaptor 9 ~ 48v with *selectable base cut filter and -10dB pre attenuation pad (*Non RF models only)

LED Halo

LED Halo: High bright Halo LED for speaker identification

ON/OFF Switch

ON/OFF Switch: Silent, magnetic ON/OFF switch with LED indicator (RF models only)

Knuckle Joint

Knuckle Joint: Unique design feature allowing horizontal rotation and verticle angle adjustment

RF-Immunity

RF-Immunity Immune to RF artefacts - fully shielded against Radio Frequency Interference (RFI) from GSM devices operating in the 800MHz ~ 1.2GHz band width

Specifications:

Model:	C2 Series	
Type	Condenser (back electret)	
Polar Pattern	Cardioid (C)	Hypercardiod (CT)
Frequency Response	70Hz ~ 14kHz ±3dB @ 1kHz (0dB = 1v/Pa)	60Hz ~ 12kHz ±3dB @ 1kHz (0dB = 1v/Pa)
Sensitivity	-47dB	- 51dB
Impedance	"E" Type Open Ended Type	200Ω 1.6kΩ
S/N Ratio		64dB(A)
Maximum SPL		115dB 1% THD
Power Requirements	"E" Type Open Ended Type Open ended 1.5	9 ~ 48v Phantom Power 1.5 ~ 9v max. through series resister
Optimum Operating Voltage	Open Ended Type	6v
Switchable Bass Filter	"E" Type	- 4dB per octave at 400Hz to - 6dB per octave at 100Hz
Switchable Pad	"E" Type	- 10dB
Cable	Open Ended Type	1m
Termination	"E" Type Open Ended Type	XLR M10 x 1 Thread with shake-proof washer and nut
Finish	Satin black	

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CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

• **C3100:** Short Gooseneck/C3 Slimline Gooseneck

Designed for use in boardrooms, conferencing and a wide variety of applications requiring easily detachable Gooseneck microphones with good consistant sound quality.

Features:

- Short flexible gooseneck
- Slimline unobtrusive design
- Engineered in high quality brass
- Tini QG connector for easy interchange
- Cardioid condenser microphone
- C3 series wideband quality
- Easy connection to SM20-RF, SM80-RF and SM80S-RF shock mounts, PPA-RF, S140-RF or CW9004 wireless microphone base
- Finished in satin black

Model Dimensions:

Model:	Length	Shaft
C3100	100mm	Semi-rigid
C310-R	100mm	Rigid
C312-SR	200mm	Semi-rigid
C313-SR	300mm	Semi-rigid
C314-SR	400mm	Semi-rigid

Includes W2 Windshield:

Specifications:

Model:	C 3
Type	Condenser (black electret)
Polar Pattern	Cardioid
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB ± 3dB @ 1kHz (0dB = 1v/Pa)
Impedance	200Ω
S/N Radio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	SM20-RF, SM80/PPA-RF, SM80S/PPA-RF, PPA-RF, S140-RF, CW9004
Termination	3 pin female Tini QG connector
Accessories	W2 Windshield included
Head Diameter	12mm
Shaft Diameter	6mm
Overall Length	125mm
Net Weight	0.29kg
Finish	Satin Black

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CLOCKAUDIO®
PROFESSIONAL MICROPHONE SYSTEMS

C3 Series: Cardioid Condenser Gooseneck & Knuckle Joint Microphones

Cardioid Condenser Microphones designed for use in conference halls, places of worship, broadcasting and paging systems. The Halo versions have been designed for use in conference and other situations where speaker identification is required.

Features:

- Response optimised for consistent sound quality
- Unobtrusive slimline design
- Superior grade components
- Choice of XLR or open ended base mounting
- High bright LEDs
- Engineered in high quality brass
- Finished in satin black
- Fully flexible or semi rigid gooseneck shaft
- Choice of shaft length
- C301/C301E fitted with knuckle joint giving both horizontal rotation and vertical angle adjustment

Model Dimensions:

Model:	Overall Length	Shaft Diameter
C31E	180mm	8mm
C31	100mm	8mm
C32E	280mm	8mm
C32	200mm	8mm
C33E/C33E Halo	380mm	8mm
C33/C33 Halo	300mm	8mm
C34E/C34E Halo	480mm	8mm
C34/C34 Halo	400mm	8mm
C35E	580mm	8mm
C35	500mm	8.5mm
C36E	680mm	8.5mm
C36	600mm	8.5mm
C301E/C301E Halo	180mm (Knuckle Joint)	8.5mm

Includes W2 Windshield:

Available Gooseneck Options

XLR Connector Mount

XLR Connector Mount: 3 or 5 pin male XLR, includes universal Phantom Power supply adaptor 9 ~ 48v with *selectable base cut filter and -10dB pre attenuation pad (*Non RF models only)

LED Halo

LED Halo: High bright Halo LED for speaker identification

ON/OFF Switch

ON/OFF Switch: Silent, magnetic ON/OFF switch with LED indicator (RF models only)

Knuckle Joint

Knuckle Joint: Unique design feature allowing horizontal rotation and verticle angle adjustment

RF-Immunity

RF-Immunity Immune to RF artefacts - fully shielded against Radio Frequency Interference (RFI) from GSM devices operating in the 800MHz ~ 1.2GHz band width

Specifications:

Model:	C3 Series	
Type	Condenser (back electret)	
Polar Pattern	Cardioid	
Frequency Response	50Hz ~ 18kHz	
Sensitivity	-47dB +/- 3dB @ 1kHz (0dB = 1 V/Pa)	- 51dB
Impedance	"E" Type	200Ω
	Open Ended Type	1.8kΩ
S/N Ratio		64dB(A)
Maximum SPL		125dB 1% THD
Power Requirements	"E" Type	9 - 48 volts phantom power
	Open Ended Type	1.5 - 9 volts max. through series resistor
Optimum Operating Voltage	Open Ended Type	6v
Switchable Bass Filter	"E" Type	- 4dB per octave at 400Hz to - 6dB per octave at 100Hz
Switchable Pad	"E" Type	- 10dB
Cable	Open Ended Type	1m (3')
Termination	"E" Type	Male 3 Pin XLR
	Open Ended Type	Male 5 Pin XLR
	Open Ended Type	M10 x 1 Thread with shake-proof washer and nut

HALO High Bright LED:

Operating Voltage	3.6v
Operating Current	30mA max.
Finish	Satin Black

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C800: Mini Shotgun Gooseneck Microphone

Slim, mini shotgun, hypercardioid microphones developed for speech purposes in a wide range of pro and live sound applications including places of worship, conference and leisure centres, banks and financial trading centres.

Features:
- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slim design
- Engineered in high quality brass
- Finished in satin black

Includes W8 Windshield:

Models:

Model:	Termination:
C800	Unterminated
C800-E	XLR Connector
C800E-RF	XLR Connector, RF-immunity
C800ES-RF	XLR Connector, RF-immunity with ON/OFF switch & LED

Specifications:

Model:	C800 / C800E
Type	Condenser (back electret)
Polar Pattern	Hypercardioid
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB +/- 3dB @ 1kHz (0dB = 1 V/Pa)
Impedance	C800E: 200Ω / C800: 1.8kΩ
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	C800E: 9 - 48v Phantom Power C800: 1.5 - 9v max. through series resistor Optimum operating voltage 6v
Switchable Bass Filter	C800E: 4dB per octave at 400Hz to - 6dB per octave at 100Hz
Switchable Pad	C800E: 10dB
Cable	C800: 2 metres
Termination	C800E: PPA Adaptor - Male XLR C800: M10 x 1 Thread with shakeproof washer and nut
Dimensions	C800E: 12(Ø)mm, 458mm overall length. With W8 windshield: 480mm C800: 12(Ø)mm, 375mm overall length. With W8 windshield: 397mm
Finish	Satin Black

C801: Mini Shotgun Knuckle Joint Microphone

Slim, mini shotgun, hypercardioid condenser microphone suitable for speech in a wide range of pro and live sound applications including places of worship, conference and leisure centres, banks and financial trading centres.

Fitted with a knuckle joint giving both lateral and vertical adjustment.

Includes W8 Windshield:

Features:
- Slim mini shotgun fitted with a knuckle joint giving both lateral and vertical movement
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slim design
- Engineered in high quality brass
- Finished in satin black

Models:

Model:	Termination:
C801	Unterminated
C801-E	XLR Connector
C801E-RF	XLR Connector, RF-immunity
C801ES-RF	XLR Connector, RF-immunity with ON/OFF switch & LED

Specifications:

Model:	C801 / C801E
Type	Condenser (back electret)
Polar Pattern	Hypercardioid
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB +/- 3dB @ 1kHz (0dB = 1 V/Pa)
Impedance	C801E: 200Ω / C801: 1.8kΩ
S/N Ratio	64dB(A)
Maximum SPL	125dB 1% THD
Power Requirements	C800E: 9 - 48v Phantom Power C801: 1.5 - 9v max. through series resistor
Switchable Bass Filter	C801E: 4dB per octave at 400Hz to - 6dB per octave at 100Hz
Switchable Pad	C801E: 10dB
Cable	C801: 2 metres
Termination	C801E: PPA Adaptor
Base Mounting	C801: Open ended C801: M10 x 1 Thread with shakeproof washer and nut
Dimensions	C801: 12(Ø)mm, 150mm overall length. With W8 windshield: 172mm C801E: 12(Ø)mm, 262mm overall length. With W8 windshield: 285mm
Finish	Satin Black

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- **C815E-RF:** Mini Shotgun Gooseneck Microphone
- **C816E-RF:** Semi-Rigid Mini Shotgun Gooseneck Microphone

Slimline, hypercardioid shotgun microphones for high quality speech in professional recording and live broadcasting applications.

Engineered in high quality brass and finished in satin black.

Features:

- Slim mini shotgun
- Optimised for speech clarity
- Superior grade components
- Unobtrusive slim design
- Engineered in high quality brass
- Finished in satin black

Includes W8 Windshield:

Specifications:

Model:	C815E–RF	C816E–RF
Type	Condenser (black electret)	Condenser (black electret)
Polar Pattern	Hypercardioid	Hypercardioid
Frequency Response	50Hz ~ 18kHz	50Hz ~ 18kHz
Sensitivity	-45dB +/- 3dB @ 1kHz (0dB = 1 V/Pa)	-45dB +/- 3dB @ 1kHz (0dB = 1 V/Pa)
Impedance	200Ω	200Ω
S/N Radio	64dB(A)	64dB(A)
Maximum SPL	125dB 1% THD	125dB 1% THD
Power Requirements	9 - 48v phantom power	9 - 48v phantom power
Termination	Male 3 Pin XLR	Male 3 Pin XLR
Dimensions	Head: 10(Ø) mm Shaft: 17(Ø) mm Overall Length: 315 mm	Head: 10(Ø) mm Shaft: 17(Ø) mm Overall Length: 440mm
Finish	Satin Black	Satin Black

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C420E: Twin Mount Cardioid Condenser Microphone

Cardioid condenser microphones mounted on twin rigid shafts vertically adjustable, individually, through 180°. Individually powered, providing live redundant capability so often required in a live broadcast situation. Finished in satin black.

Features:
- Optimised for consistent sound quality
- Integrated Phantom Power Adaptor
- 5 pin XLR mounting
- Shaft angles independently adjustable

Includes W2 Windshield:

Specifications:

Model:	C420E
Frequency Response	50Hz ~ 18KHz
Sensitivity	-44dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	200Ω
S/N Ratio	64dB(A)
Power Requirements	9 ~ 48v Phantom Power
Termination	Male 5 Pin XLR

C430E: Twin Mount Cardioid Condenser Microphone

Cardioid condenser microphones mounted on twin rigid shafts vertically adjustable, individually, through 180°.

Individually powered, providing live redundant capability so often required in a live broadcast situation. Finished in satin black.

Features:
- Integrated Phantom Power Adaptor
- 5 pin XLR mounting
- Shaft angles independently adjustable
- Three microphone head variants: C 900, C 3H & C 800H

Includes W2 Windshield:

Capsule Options available:

Rugged Cardioid condenser microphone capsule: **C 900**

Slimline Cardioid condenser microphone capsule: **C 3H**

Hyper-cardioid Mini shotgun condenser microphone capsule: **C 800H**

Specifications:

Model:	C430E
Frequency Response	50Hz ~ 18KHz
Sensitivity	-44dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	200Ω
S/N Ratio	64dB(A)
Power Requirements	9 ~ 48v Phantom Power
Termination	Male 5 Pin XLR

C440E: Twin Mount Cardioid Condenser Microphone

Cardioid condenser microphones mounted on twin rigid shafts vertically adjustable, individually, through 180°.

For use in a wide variety of applications including presentations, conferences, broadcasting and places of worship. Finished in satin black.

Features:
- Attractive slimline design
- Optimised for consistent sound quality
- Integrated Phantom Power Adaptor
- 3 pin XLR mounting
- Shaft angles independently adjustable

Includes W2 Windshield:

Specifications:

Model:	C440E
Frequency Response	50Hz ~ 18KHz
Sensitivity	-44dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
Switchable Bass Filter & -10dB Switchable Pad	Yes
S/N Ratio	64dB(A)
Termination	Male 3 Pin XLR
Dimensions	450 mm overall length, 7(Ø) mm rigid shafts

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• C900: Combination Series

A series of easily interchangeable microphones, stands and shafts giving flexibility in choice of microphone and accessories for a wide range of applications including broadcast, conference halls, places of worship, leisure centres, etc. Finished in satin black.

C3H: Includes W2 Windshield:

C 800H: Includes W8 Windshield

C900   C3H   C800H

Microphones:

Model:	
C900	Rugged wide band cardioid condenser microphone for multiple use
C3H	Short slimline cardioid condenser microphone for use in controlled acoustic environments
C800H	Hyper-cardioid condenser mini shotgun microphone useful in a wide range of pro and live sound speech applications

Specifications:

Model:	C900	C3H	C800H
Frequency Response	50Hz ~ 20kHz	50Hz ~ 18kHz	50Hz ~ 18kHz
Sensitivity	-48dB	-47dB ±3dB at 1kHz (0dB = 1v/Pa)	-47dB
Power Requirements	1.8KΩ	1.8KΩ All models 9 ~ 48v via a Phantom Power Adaptor (PPA)	1.8KΩ
S/N Ratio	68dB(A)	64dB(A)	64dB(A)
Termination		Male 3 pin Tini Q connector	
Dimensions	57 x 19 mm	45 x 12 mm	151 mm

• CA700:   Floor Standing 700mm Long Shaft
• CA700-RF: Floor Standing 700mm Long Shaft
• CA900:   Floor Standing 900mm Long Shaft
• CA900-RF: Floor Standing 900mm Long Shaft

Long, rigid shafts of 700mm and 900mm respectively. Each connects to a short (350mm) upright shaft by a separate, lockable swivel joint allowing adjustments to angle, height and reach.

Features:
• Long Shaft includes Phantom Power Adaptor at bottom end terminated in Male 3 pin XLR
• Knuckle joint at microphone end terminated with Tini QG 3 pin female connector
• Short shaft connects to SM 155 floor mounting, shock absorbing base
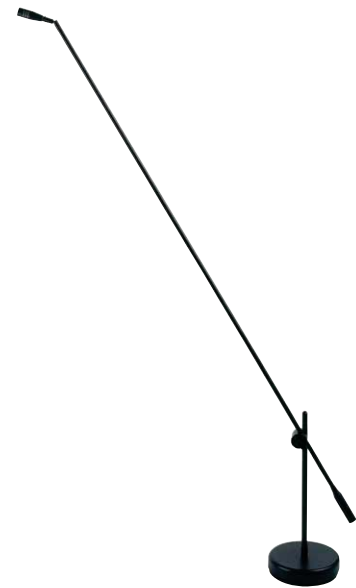
• CA30:   Semi Rigid 300mm Shaft
• CA30-RF: Semi Rigid 300mm Shaft
• CA40:   Semi Rigid 400mm Shaft
• CA40-RF: Semi Rigid 400mm Shaft

Semi-rigid 300mm and 400mm shafts fitted with Phantom Power Adaptor at the bottom end terminated in Male 3 pin XLR and knuckle joint at tip with Tini QG 3 pin Female connector.

Features:
• Integrated Phantom Power Adaptor
• Male 3 pin XLR termination
• Finished in satin black

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- ## CAK1:   Phantom Power Adaptor
- ## CAK1-RF: Phantom Power Adaptor

Phantom Power Adaptors with knuckle and Tini QG 3-pin Female connectors.

- ## S750: Table Mounting Microphone Base

Table microphone base fitted with knuckle and Tini QG 3-pin Female connector.

Terminated with 3m of cable requiring a Phantom Power Adaptor.

Diameter 75mm, height including connector 75mm.

- ## SM155: Floor Mounting Microphone Base

Floor mounting, shock absorbing microphone base with a diameter of 155mm and 42.5mm height.

- ## C901E-RF: Ready-made 900 Series Microphone
- ## C901ES-RF: Ready-made 900 Series Microphone with ON/OFF Switch & LED

These 'ready-made' C 900 Series Microphones feature the C 900 cardioid condenser capsule and CAK Phantom Power Adaptor with knuckle joint for horiziontal rotation and verticle angle adjustment.

Features:
- Integrated Phantom Power Adaptor
- Male 3 pin XLR termination
- Finished in satin black

C901E-RF   C901ES-RF

Specifications:

Model:	C901E–RF / C901ES–RF
Frequency Response	50Hz ~ 20KHz
Sensitivity	-48dB ±3dB @ 1KHz (0dB=1v/Pa)
Impedance	200Ω
S/N Ratio	68dB(A)
Power Requirements	9 ~ 48v Phantom Power
Termination	Male 3 Pin XLR

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• C3SE: Suspended Cardioid Microphones

Slim, wide band, cardioid condenser microphone designed to be suspended in places of worship, conference halls, theatres, etc.

Features:

- Response optimised for consistent sound quality
- Short, flexible shaft with knuckle joint for easy adjustment of vertical angle
- Made in high quality brass and finished in satin black or ivory
- 7.5m of cable attached
- Fully balanced and terminated in male 3 pin XLR
- Mounting plate option CP 73/73W

Models:

Model:	Colour
C3SE	Black
C3SE-RF	Black
C3SEW	Ivory
C3SEW-RF	Ivory

Includes W2 Windshield:

Specifications:

Model:	C3SE Series
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	200Ω
S/N ratio	64dB(A)
Power Requirements	9 ~ 48v Phantom Power
Termination	Male 3 pin XLR
Dimensions	Head:12(Ø) mm, Shaft: 6(Ø) x 100(L) mm

• C8SE: Suspended Hypercardioid Mini Shotgun Microphones

Slim, mini shotgun, hypercardioid condenser microphone designed to be suspended in places of worship, conference halls, theatres etc.

Features:

- Response optimised for consistent sound quality
- Short, flexible shaft with knuckle joint for easy adjustment of vertical angle
- Made in high quality brass and finished in satin black or ivory with 7.5m of cable attached
- Fully balanced and terminated in male 3 pin XLR
- Mounting plate option CP 73/73W

Models:

Model:	Colour
C8SE	Black
C8SE-RF	Black
C8SEW	Ivory
C8SEW-RF	Ivory

Includes W8 Windshield:

Specifications:

Model:	C8SE Series
Frequency Response	50Hz ~ 18kHz
Sensitivity	-67dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	200Ω
S/N ratio	64dB(A)
Power Requirements	9 ~ 48v Phantom Power
Termination	Male 3 pin XLR
Dimensions	Head:12(Ø) mm, Shaft: 6(Ø) x 300(L) mm

• CP73: Ceiling Mounting Plate

Available in black or ivory versions, this ceiling mounting plate is for use with our C3SE and C8SE Suspended Microphones.

Models:

Model:	Colour
CP73	Black
CP73W	Ivory

Plate Dimensions:

Model:	CP73 / CP73W
Diameter	73 mm
Depth	12 mm

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SM20-RF: Microphone Shock Mount

A low profile, through-table shock mount fitted with RF-immunity PPA with 3 pin Male Tini Q input connector.

Features:
- M25 threaded nut supplied
- Made in high quality brass, top
- Finished in satin black

Specifications:

Model:	SM20–RF
Height Above Surface	3mm
Diameter	31mm
Body Diameter	20mm
Depth Below Surface	75mm
Mounting hole	23.5mm

SM70: Microphone Shock Mount

Smooth, low profile 74mm diameter, surface fitting, shock absorbing microphone holder and base. Finished in matt black.

Specifications:

Model:	SM70
Overall Diameter	74mm
Height Above Surface	10mm
Body Diameter	51mm
Depth Below Surface	50mm

SM75: Microphone Shock Mount with 3-pin XLR

SM75x5: Microphone Shock Mount with 5-pin XLR

75mm diameter shock absorbing microphone base for permanent fitting above or below the surface.

Features:
- Supplied with female XLR and conversion adaptor for 3/8" BSW or 10mm screw fittings
- Finished in matt black

Specifications:

Model:	SM75
Height	32mm 64mm including XLR
Base Diameter	75mm

SM80: Microphone Shock Mounts

Low profile, table-mounted shock mounts fitted with flip cover to conceal connector when closed.

SM 80S model with remote momentary or latching switch facility and red LED:

Features:
- 3 pin & 5 pin XLR connector versions available
- Finished in satin nickel or matt black
- RF option also available (3 pin Male Tini QG)

Base Models:

Model:	
SM80	Standard
SM80S	Switch & LED
SM80-RF	RF-immunity

Specifications:

Model:	SM80 Series
Height Above Surface	3mm
Diameter	58mm
Body Diameter	51mm
Body Below Surface	XLR version 61mm RF version 166mm

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- **SM93:** Microphone Shock Mount - 3 pin XLR
- **SM95:** Microphone Shock Mount - 5 pin XLR

Low profile, recessed, shock absorbing microphone bases.

Features:
- 3 pin & 5 pin XLR connector versions available
- Wiring connections are made via 3-way/5-way screw terminal block
- Finished in matt black

Specifications:

Model:	SM93 / SM95	
Length	87mm	
Width	82mm	
Height Above Surface	9mm	
Depth Below Surface	SM 93:	32mm
	SM 95:	22mm

- **S133:** Microphone Shock Mount
- **S135:** Microphone Shock Mount
- **S140:** Microphone Shock Mount

These stylish, RF-Immune microphone bases feature fully-programmable touch pad switch & LED for PTT, PTM and latching.

Features:
- RF-immune
- Heavy die-cast construction
- Touch pad switch
- Fully programmable
- LED indicator

Models:

Model:	
S133	3 pin XLR in, 3 pin XLR out
S135	3 pin XLR in, 5 pin XLR out
S140	3 pin Tini Q in, 5 pin XLR out with integrated PPA

Specifications:

Model:	S133 / S135 / S140
Switching	Touch pad fully programmable for PTT, PTM & Latching
Indication	Red LED
Power Requirements	48v Phantom Power
Dimensions	120(L) x 100(W) x 32(H)mm (60mm with XLR)
Weight	0.64kg

- **S120:** Microphone Shock Mount
- **S120S:** Microphone Shock Mount with PTT Switch

Table microphone base fitted with M10x screw thread mounting hole.

Features:
- 'Press-to-Talk' or latching switch option

Specifications:

Model:	S120 / S120S
Height	32mm
Diameter	120mm
Weight	1.86kg

- **S120X Series:** Microphone Shock Mount

Table microphone base fitted with XLR connector.

Features:
- 'Press-to-Talk' or latching switch option
- 3 or 5 pin options

Models:

Model:	
S120X	3 pin XLR
S120XS	3 pin XLR & switch
S120X-2	3 pin XLR & 2m cable
S120XS-2	3 pin XLR, switch & 2m cable
S120X5	5 pin XLR
S120X5S	5 pin XLR & switch
S120X5-2	5 pin XLR & 2m cable
S120XS-2	5 pin XLR, switch & 2m cable

Specifications:

Model:	S120X
Height	57mm (with XLR)
Diameter	120mm
Weight	1.86kg

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CRM100-RF: Retractable Through-table Omni-directional Condenser Microphone

The CRM100-RF is a boundary layer, through-table, omni-directional condenser microphone with a built-in mechanism that will allow the user to make the microphone 'disappear' without having to physically remove it from the table.

This is achieved by simply pressing the top of the microphone downwards until it locks; then by pressing the microphone again it will raise itself back to its original position above the surface of the table.

Engineered in high quality brass with built-in shock mount and RF filter.

Features:
- Easy to install
- Low profile at surface level
- Unique ability to lock capsule away from sight when not in use
- Robust brass construction
- Omni-directional polar pattern
- Built-in RF filter
- Balanced output
- Supplied with 2m 2 core + screen cable
- Satin Nickel or Black Nextel finish

Specifications:

Model:	CRM100–RF
Type	Condenser (Back Electret)
Polar	Pattern Omni-directional
Frequency	Response 30Hz ~ 20kHz
Sensitivity	-42.5dB +/- 3dB @ 1kHz (0dB = 1v/Pa)
Impedance	200Ω
S/N Ratio	68dB(A)
Maximum SPL	120dB at 1kHz 1% T.H.D.
Power Requirements	9 ~ 48v Phantom Power
Termination	Open ended
Dimensions	Above Table: 15mm Diameter: 36mm Below Table: 111mm Diameter: 30mm

CRM102-RF: Retractable Through-table Cardoid Condenser Microphone

The CRM102-RF is a boundary layer, through-table, cardoid condenser microphone with a built-in mechanism that will allow the user to make the microphone 'disappear' without having to physically remove it from the table.

This is achieved by simply pressing the top of the microphone downwards until it locks; then by pressing the microphone again it will raise itself back to its original position above the surface of the table.

Engineered in high quality brass with built-in shock mount and RF filter.

Features:
- Easy to install
- Low profile at surface level
- Unique ability to lock capsule away from sight when not in use
- Robust brass construction
- Cardioid polar pattern
- Built-in RF filter
- Balanced output
- Supplied with 2m 2 core + screen cable
- Satin Nickel or Black Nextel finish

Specifications:

Model:	CRM102–RF
Type	Condenser (Back Electret)
Polar	Pattern Half Cardioid
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB +/- 3dB @ 1kHz (0dB = 1v/Pa)
Impedance	200Ω
S/N Ratio	64dB(A)
Maximum SPL	125dB at 1kHz 1% T.H.D.
Power Requirements	9 ~ 48v Phantom Power
Termination	Open ended
Dimensions	Above Table: 15mm Diameter: 36mm Below Table: 111mm Diameter: 30mm

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- **CS-RF Series:** Series Boundary Layer Professional Microphones

The CS Series (Consultant Series) was developed as a result of input and recommendations from key consultants in boardroom AV integration. The goal was to minimise the number of microphones on the conference table, but also keeping in mind performance, ease of installation and aesthetics, essential considerations in such projects.

The results of these discussions are the CS2-RF, CS3-RF and CS4-RF microphones.

Features:
- Half cardioid polar pattern
- Fully balanced
- High quality engineering in solid brass
- Non-reflective black Nextel or satin nickel

- **CS2-RF:**
Dual Element Boundary Microphone

The CS2-RF is a dual element boundary layer condenser microphone, with a half-cardioid polar pattern. It is designed to be placed in the middle of the conference table, with each element facing the participants.

This microphone accommodates bottom cable exit, for permanent mounting in boardroom situations.

These microphones are made of solid brass and include a 2m cable with open-ended termination. The Phantom Power Adaptor (PPA) is incorporated in the brass housing and will accept 9 ~ 48v DC (Phantom Power).

- **CS3-RF:**
Triple Element Boundary Microphone

The CS3-RF microphone has the same characteristics as the CS2-RF with the addition of a third element.

This microphone is to be positioned closer to the end of the conference table in order to capture the participants facing each other and also the participant sitting at the extremity of the table.

If the participant at the end of the table is further away, it is then possible to use a combination of a CS2-RF and CS1-RF (single element version) to accommodate this situation.

- **CS4-RF:**
Quadruple Element Boundary Microphone

The CS4-RF is a new addition that completes the CS-RF Series microphone family, offering a 4-element microphone in a single housing. Like the CS2 and 3, the CS4-RF offers half cardioid polar patterns and a bottom cable exit.

The CS4-RF can be positioned in the centre of a round conference table, giving maximum coverage from a small footprint. Engineered from high quality solid brass and finished in a durable non-reflective black Nextel or satin nickel.

The CS4- RF is also available in other customised colours and special finishes upon request.
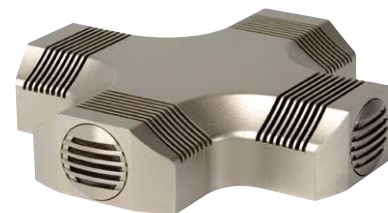
Specifications:

Model:	CS–RF
Microphone	Condenser (back electret)
Polar Pattern	Half cardioid
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
S/N Ratio	64dB(A)
Termination	Open ended multi-core cable

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• C002E-RF: Low Profile Boundary Microphone

Omni-directional, low profile, boundary layer condenser professional microphone. Ideal for applications such as conference tables, floors, pianos, etc.

Features:
- Omni-directional polar pattern
- Wide range, smooth response
- Very low profile
- Stone grey Nextel finish

Specifications:

Model:	C002E–RF
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB ±3dB at 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
S/N Ratio	64dB(A)
Termination	Male 3 pin XLR
Dimensions	75(Ø) x 9(D)mm

• C006E: Low Profile Boundary Microphone

Half cardioid small, light, sensitive professional boundary layer condenser microphone for use in a wide range of AV applications, including conference, lectern and theatre.

Features:
- Half cardioid polar pattern
- Fully balanced
- Low profile
- Stone grey Nextel finish

Specifications:

Model:	C006E
Frequency Response	50Hz ~ 18kHz
Sensitivity	-48dB ±3dB at 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power requirements	9 ~ 48v Phantom Power
Switchable Bass Filter & -10dB Switchable Pad	Yes
S/N Ratio	64dB(A)
Termination	Male 3 pin XLR
Dimensions	39(Ø) x 16(D)mm

• C008E: Tabletop Boundary Microphone
• C008E-RF: Tabletop Boundary Microphone (RF)

This cardioid boundary layer condenser microphone is particularly suitable for speech purposes in a wide range of pro and live sound applications including conference, lectern and theatre.

Features:
- Cardioid polar pattern
- Fully balanced
- High quality engineering in solid brass
- Concealed cable and fixing screw mounting
- Stone grey Nextel finish

Specifications:

Model:	C008E
Frequency Response	50Hz ~ 18kHz
Sensitivity	-47dB ±3dB at 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
S/N Ratio	64dB(A)
Termination	Male XLR
Dimensions	70(Ø) x 22(D)mm

• C009E-RF: Large Surface Boundary Microphone

Omni-directional boundary layer condenser microphone for easy use on large surfaces in a wide range of professional sound situations. Ideal for mounting on walls, floors, pianos, etc.

Features:
- Omni-directional polar pattern
- Wide range, smooth response
- Very low profile
- Stone grey Nextel finish

Specifications:

Model:	C009E–RF
Frequency Response	30Hz ~ 20kHz
Sensitivity	-42.5dB ±2dB at 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
S/N Ratio	68dB(A)
Termination	Male 3 pin XLR
Dimensions	160(Ø) x 9(D)mm

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- **C003E:** Through-table Boundary Microphone (Omni-directional)
- **C004E:** Through-table Boundary Microphone (Cardioid)

Omni-directional (C 003E) or Cardioid (C 004E) boundary layer condenser microphones designed for a wide range of installed audio, conferencing or security applications.

Features:

- Engineered in high quality brass
- Balanced output
- Simple through-table shock mounting
- Finished in satin black or matt white

Models:

Model:	Colour
C003E	Black
C003EW	White
C003E-RF	Black
C003EW-RF	White
C004E	Black
C004EW	White
C004E-RF	Black
C004EW-RF	White

Available in white
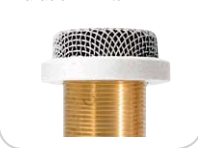
Specifications:

Model:	C003E–RF	C004E–RF
Polar Pattern	Omni-directional	Cardioid
Frequency Response	20Hz ~ 20kHz	100Hz ~ 16kHz
Sensitivity	-42dB	-47dB
	±3dB at 1kHz (0dB=1v/Pa)	
Impedance	200Ω	200Ω
Power Requirements	9 ~ 48v Phantom Power	
S/N Ratio	58dB(A)	60dB(A)
Termination	Male 3 pin XLR	Male 3 pin XLR

- **C011E-RF:** Through-table Boundary Microphone (Omni-directional)
- **C012E-RF:** Through-table Boundary Microphone (Cardioid)

These through-table omni (C 011E-RF) and cardioid (C 012E-RF) microphones were created for applications demanding sonic quality, but also requiring an extremely robust housing within an extreme environment.

Features:

- RF-immune
- Balanced output
- Simple through-table shock mounting
- Finished in satin black or matt white

Models:

Model:	Colour
C011E-RF	Black
C011EN-RF	Nickel
C012E-RF	Black
C012EN-RF	Nickel

Specifications:

Model:	C011E–RF	C012E–RF
Polar Pattern	Omni-directional	Cardioid
Frequency Response	50Hz ~ 20kHz	50Hz ~ 18kHz
Sensitivity	-42dB	-47dB
	±3dB at 1kHz (0dB=1v/Pa)	
Impedance	200Ω	200Ω
S/N Ratio	58dB(A)	60dB(A)
Termination	Male 3 pin XLR	Male 3 pin XLR

- **C015E-RF:** Tabletop Boundary Microphone (Omni-directional)
- **C016E-RF:** Tabletop Boundary Microphone (Cardioid)

New style omni-directional (C 015E-RF) and cardioid (C 016E-RF) boundary layer condenser microphones featuring programmable touch pad switching for professional AV applications such as meetings, conference and lectern installations.

Optimised for speech clarity, these RF-immunity boundary microphones feature built-in Phantom Power module and are finished in satin black.

Specifications:

Model:	C 015E–RF	C 016E–RF
Type	Condenser (Back Electret)	
Frequency Response	50Hz ~ 20kHz	50Hz ~ 18kHz
Sensitivity	-42dB ±3dB @ 1kHz (0dB = 1vPa)	-47dB ±3dB @ 1kHz (0dB = 1vPa)
Impedance	200Ω	200Ω
Switching	Programmable for PTT PTM & Latching	
Power Requirements	48v Phantom Power	
S/N Ratio	58dB(A)	60dB(A)
Termination	Male 5 pin XLR (optional 3 pin XLR variant), with remote switch ability.	

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C007E Series: 'Button' Boundary Microphones

Omni-directional, boundary layer condenser microphones suitable for surveillance and recording in sensitive areas such as banks, airports, railway stations, law courts, conference and convention centres.

Very low profile and easily mounted with M12 x 1 nut and washer supplied.

Features:

- Non-reflective Delrin with non-conductive body (Non-RF only)
- Omni-directional
- High quality engineering

Models:

Model:	
C007	Unterminated
C007E	XLR Connector
C007E-RF	XLR Connector, RF-immune
C007E-LED-RF	XLR, RF-immune, LED

RF versions available with bi-colour LED

Specifications:

Model:	C007	C007E	C007E–RF
Frequency Response	50Hz ~ 20kHz	50Hz ~ 20kHz	50Hz ~ 20kHz
Sensitivity	-42.5dB ±2dB at 1kHz (0dB=1v/Pa)		
Impedance	1kΩ	200Ω	200Ω
Power Requirements	2 ~ 10v max through series resistor	9 ~ 48v Phantom Power	9 ~ 48v Phantom Power (12v DC for LED version)
Switchable Bass Filter & -10dB Switchable Pad	-	Yes	-
S/N Ratio	40dB(A)	40dB(A)	58dB(A)
Termination	Open-ended	Male 3 pin XLR	Male 3 pin XLR with PPA-RF
Dimensions: Head Diameter	20 mm	20 mm	20 mm
Dimensions: Overall Length	25 mm	25 mm	25 mm

CH32: (Litetouch) Dual Colour Halo Ring & Touch Pad Switch

Comprising a dual-colour Halo ring and switch combination that can be used with all Clockaudio through-table products, the Litetouch allows users to easily identify the status of microphones, as well as mute the units for privacy.

With no moving parts, the switch is touch-sensitive, so there are no clicking noises when switching from one status to another. Both the switch and the Halo have been designed to operate remotely with all popular brands of electronic system control, so an integrator has complete freedom to assign function and LED colour.

Importantly, the Litetouch can be easily retrofitted to any Clockaudio through-table microphone product.

Features:

- Designed for remote switching
- Housing 32 LEDs to give 360° illumination
- 12, 24v DC operation
- Current consumption 40mA
- Retrofittable to all Clockaudio through-table microphones
- Fitted with 5 way socket terminal block supplied with fixing screws

Specifications:

Model:	CH32
Type	Dual Colour Halo Ring & Touch Sensitive Switch
LED Colour	Red and Green
Operating Voltage	12, 24v DC (Regulated). For 24v DC operation a 300Ω 1W resistor must be put in series with both the green and red LED wires.
Current Consumption	40mA
Termination	5 way socket terminal block (with fixing screws)
Dimensions	39(W) x 5(H) x 48(D) xmm
Hole Diameter	25 mm

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CT COMMUNICATION TECHNOLOGY

- **C98:** Gooseneck Microphone (Cardioid)
- **C100:** Gooseneck Microphone (Omni-directional)

A range of microphones designed for use where voice clarity is an essential requirement and offering both moving coil and electret capsules fitted to fully flexible or part flexible/rigid goosenecks.

Capsules are mounted in a computer-matched acoustic chamber fitted with an 'anti pop' blast screen. A stainless steel mesh protects the capsule from physical damage.

Moving coil capsule: With a polar diagram approximating to cardioid, this capsule has a significantly flat frequency response within speech range, with an added 'presence' lift at 3KHz.

Electret capsule: The polar diagram is unidirectional in characteristic and has a wide frequency response.

- ## Mounting Options:

The mounting options for C98 and C100 are subject to additional cost and require the code suffix to be added to the order code:

- **/UMC**   Circular universal mounting base; for right angled or parallel-with-surface mounting; 3 hole fixing to mounting surface.

- **/UBC**   Block mounting base; providing 2 hole fixing to mounting surface and right angled or parallel-to-surface microphone assembly.

Other mounting accessories for XLR terminated microphones:

- **DT37**   XLR socket fitted to adjustable angle mount; for desk/lectern top fitting.

- **AV260**   Desk/lectern mounting anti-vibration mount; gooseneck XLR inserts firmly through centre, with compressing ring lock.

- **DB-XLR**   XLR socket fitted to base with 'Press-to-Talk' switch and 5 pin XLR output.

UMC Mount   UBC Mount   DT37 Angle Mount

AV260 Anti-vibration Mount

Specifications:

Model:	C98	C100
Impedance @ 1kHz	300Ω floating	600Ω unbalanced
Polar Characteristic	Cardioid, approx	Omni-directional
Frequency Response	100Hz ~ 8kHz Presence lift @ 3kHz	100Hz ~ 15kHz
Polarising Voltage	-	1.5 ~ 9v DC from host amplifier or related source
Sensitivity	-72dB	-68dB

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F86 Series: Heavy Duty Gooseneck Microphones

The F86 range of gooseneck mounted, omni-directional, noise-reducing microphones provide maximum versatility combined with ease of installation.

Microphones for mobile and fixed use are included in the range, together with various end-fittings, alternative gooseneck lengths and accessories. Used in taxis and public service vehicle installations, they are also widely used for marine and heavy industrial applications.

Features:

- Computer-aided head design/capsule matching is used to obtain the required frequency response and maximum signal-to-noise characteristics
- A new one-piece head assembly, combined with the locking of the gooseneck to the head and end-fittings, deters tampering and vandalism
- The rugged dynamic microphone capsule provides optimum clarity over the speech frequencies and is fully protected for use in high humidity environments
- A line pre-amplifier is incorporated in the optional MFPA base-mounting
- A 'Press-to-Talk' switch can be fitted between the head and the gooseneck, or at the gooseneck base

Order Codes:

Model:	Description:
F86/CO	Dynamic gooseneck microphone, with head mounted PTT switch, 50mm
F86/15	Dynamic gooseneck microphone, forward facing, 150mm
F86/30	Dynamic gooseneck microphone, forward facing, 300mm
F86/45	Dynamic gooseneck microphone, forward facing, 450mm

Units are available in 600Ω and 2400Ω and can be fitted with a series of base options below
Please state when ordering.

•/UM	Circular universal base
•/UB	Block mounting base
•/MFPA	Circular flange base with pre-amp
•/DB	Round heavy duty desk base
•/PTT	Single pole PTT switch, mounted at the top (/T) or base (/B) of the gooseneck

F86

UM Mount

UB Mount

F86/CO Developed for the retail sector - includes PTT switch mounted in the microphone head

Desk Base

Specifications:

Model:	F86 Series	
Frequency Response	300Hz ~3.5kHz	
Impedance	600 or 2400Ω	
Output Level	-54dB @ 1kHz	
Finish	Anodised black	
Dimensions	Gooseneck length to capsule:	F86/15: 150 mm F86/30: 300 mm F86/45: 450 mm
Finish	Black PVC covered	

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- **D33:** 300mm Dynamic Gooseneck
- **D34:** 400mm Dynamic Gooseneck

Dynamic cardioid gooseneck microphones designed for speech purposes in a variety of commercial audio applications.

Features:
- Rugged all-metal construction
- Response optimised for speech
- Fully flexible or semi-rigid shaft
- Finished in satin black

Model Dimensions:

Model:	Overall Length	Connection Type
D33	300mm	Base Mount
D33E	350mm	3 pin XLR
D34	425mm	Base Mount
D34E	475mm	3 pin XLR

Specifications:

Model:	D33	D34
Frequency Response	150Hz ~ 12kHz	
Sensitivity	-63.5dB ±3dB @ 1kHz (0dB=1v/Pa)	
Impedance	200Ω	
Termination	M10 x 1 thread with shakeproof washer and nut or Male 3 pin XLR	
Head Diameter	20 mm	
Gooseneck Diameter	10 mm	
Gooseneck Length	300 mm	400 mm

- **D43:** 300mm Dynamic Gooseneck
- **D44:** 400mm Dynamic Gooseneck

Dynamic cardioid gooseneck microphones suitable for speech purposes in a variety of commercial audio applications.

Features:
- Rugged all-metal construction
- Response optimised for speech
- Finished in satin black

Model Dimensions:

Model:	Overall Length	Connection Type
D43	300mm	Base Mount
D43E	350mm	3 pin XLR
D44	400mm	Base Mount
D44E	450mm	3 pin XLR

Specifications:

Model:	D43/E	D44/E
Frequency Response	150Hz ~ 12kHz	
Sensitivity	-60dB ±3dB @ 1kHz (0dB=1v/Pa)	
Impedance	200Ω	
Termination	M10 x 1 thread with shakeproof washer and nut or Male 3 pin XLR	
Head Diameter	22mm	20mm
Gooseneck Diameter	10mm	8mm
Gooseneck Length	300mm	400mm

- **BUD100:** Single-zone, moving coil Microphone
- **BUD200:** Two-zone, electret Microphone
- **BUD100E:** Single-zone, moving coil Microphone
- **BUD200E:** Two-zone, electret Microphone

These simple yet robust paging microphones are available in single and 2-zone versions. Featuring a gooseneck mounted microphone well known for its voice clarity in almost any operating environment.

Ideal for applications such as shops, offices, garages, showrooms, transport termini; wherever there is a need for an elegant, yet strong paging microphone able to withstand heavy duty usage.

Each microphone has a 2.5m lead and requires only the fitting of an interface connector to suit the host amplifier.

Features:

- Suitable for passive or electronic access amplifiers
- Microphone incorporates speech blast screen
- Soft-touch 'Press-to-Talk' button/s, with minimal noise transfer
- All steel construction, weighted base, finished in scratch and chip resistant powder coat paint
- Anti-slip feet
- Fitted with a moving coil microphone capsule, perfect for most amplifier input sensitivities. For less sensitive amplifiers an electret version is available; requires DC powering from host amplifier
- 2.5m lead (free end)

Specifications:

Model:	BUD100 / BUD200	BUD100E / BUD200E
Microphone	Moving Coil	Electret
Sensitivity	Suitable for all amplifiers with at least 500uV (0.5mV) sensitivity	Suitable for all amplifiers with at least 1mV sensitivity
Impedance	600Ω	600Ω
Characteristics	Polar diagram approximates to cardioid presence lift at 3kHz	Omni-directional
Frequency Response	±6dB,100Hz ~ 12kHz	±6dB, 100Hz ~ 12kHz
Polarising Voltage	-	At least 4.5~9v max applied between polarised lead & ground
Polarising Current	-	400uA
Signal-to-Noise	-	Better than 40dB
Press-to-Talk	'Soft touch', momentary action, push button (2-on-2 zone)	
Cabling Supplied	2.5m screened mic pair + access pair/s	
Finish	Desk top: pearl white powder coat. Desk base: satin black powder coat Gooseneck & mic: matt black	
Dimensions	Base: 110(W) x 40(max H) x 140(D) mm Gooseneck length to capsule: 260mm	
Weight	0.7kg	

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- **DM105/CT:** Five-zone Paging Microphone
- **DM110/CT:** Ten-zone Paging Microphone

Incorporating 'soft-touch' zone selection, 'Press-to-Talk' and 'All-Call' switches to ensure no pops or clicks are heard when activated. LED indicators are provided to show the user which zone has been selected.

The elegant, yet robust gooseneck allows the user to position the microphone in the optimum position for high quality speech reproduction.

Soft plastic feet stop the units from slipping around the reception desk/counter surface when being used and 'key hole' slots are provided on the base to allow wall mounting.

Designed to operate with conventional relay switch systems, both versions are supplied with 1.5m 15-way 'D' type-to-open end leads, making installation quick and simple.

Features:

- 5/10 zone paging
- All Call
- Flexible Robust Gooseneck
- Wall mounting feature

Specifications:

Model:	DM105/CT	DM110/CT
Output Sensitivity	Mic Level: 1mv Line Level: 500mv	Mic Level: 1mv Line Level: 500mv
Output Impedance	Mic Level: 60Ω Line Level: 600Ω	Mic Level: 60Ω Line Level: 600Ω
Characteristics	Polar diagram approx to cardioid, presence lift @ 3kHz	Polar diagram approx to cardioid, presence lift @ 3kHz
Frequency Response	±6dB, 100Hz ~ 8kHz	±6dB, 100Hz ~ 8kHz
'Press-to-Talk'/'All Call'	'Soft touch' momentary action push button	'Soft touch' momentary action push button
Zone Selection	'Soft touch' latching action	'Soft touch' latching action
Terminations	15 Way 'D' male to unterminated open end (1.5m)	15 Way 'D' male to unterminated open end (1.5m)
Finish	Desk top: grey Desk base: satin black powder coat Gooseneck & mic: matt black	Desk top: grey Desk base: satin blac powder coat Gooseneck & mic: matt black
Dimensions	Base: 130(W) x 50(H) x 170(D) mm Gooseneck length to capsule:260mm	

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- **DPM102B:** Single-zone Pro Desk Paging Microphone
- **DPM202B:** Two-zone Pro Desk Paging Microphone

A range of pre-amplified paging microphones designed to meet the highest standards, where voice clarity is an essential requirement regardless of operating environment.

Aesthetic, elegant design is the first impression obtained from this high quality desk paging microphone series with fully flexible gooseneck. Available in single and two zone format.

Features:

- Pre-announcement 'gong'; switch selectable, this enables individual paging microphones within a system to prelude announcements with a simple, but attention grabbing, gong sound
- Paging sound level indicator, comprising a VU scaled composite 3 LED array
- Provision for plug-in digital sound processing (DSP) technology for automatic background noise level reduction (DSP350)
- 'Soft gate', noise-free, microphone audio activation and closure
- 'Press-to-Talk' button/s physically protected against accidental use
- 'Speak now' or 'system-in-use' LEDs, installer option
- Electronic or VOX access receptive to match host amplifier facilities
- Provision for local or remote powering
- Long line 0dBm 600Ω output, optionally available at 'microphone' level by on-board switch selection
- Basalt grey finish, satin silver base, anti-slip feet
- The standard capsule is moving coil electret, with noise-cancelling microphone capsule options available by special order
- Supplied with WC15W easy to connect wall connector plates

Wall Connection Plate: WC15W

- **DSP350:** Digital Signal Processor

Eliminate noise with DSP350 technology:

Digital Signal Processing (DSP) technology is used to electronically remove unwanted background noise from speech which enables announcements to be more easily understood. The technology is self-adapting to changing noise environment, no 'training' of the noise filter is required.

Installers can adjust the level of noise suppression to system requirements; the residual background noise still sounds natural, but up to 30dB lower.

Models:

Model:	Description:
DPM102B:	Single-zone with 600Ω line pre-amplifier with proximity auto bass cut and limiter
DPM202B:	Two-zone with 600Ω line pre-amplifier with proximity auto bass cut and limiter
DSP350:	Digital signal processor; increases the difference between unwanted background noise and speech announcements, even where this noise is at the same level as the announcement; plugs into DPM102/202, preset noise attenuation of up to 30dB

Specifications:

Model:	DPM Series
Output Level	Switchable 0dBm, 600Ω source or -20dBm, 60Ω source
Matching Impedance	600Ω both @ microphone level and amplified line level option
Frequency Response	Unlimited: ±3dB 100Hz, bass-cut on limit variable with voice proximity to -18dB @ 100Hz, proximity level limiting max 26dB
Powering	24v DC; normal or phantom powering @ 100mA max when using DSP350, 20mA without. 15 way 'D' interface for easy system integration and facility selection. A 1.8m lead is supplied, free-end unterminated, stripped and tinned, for fitting an installation interface connector appropriate to the facilities required.
Dimensions	Base: 130(W) x 50(H) x 170(D) mm Gooseneck length to capsule: 290mm

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Induction Loops

- **DPM102B/FM:** Single-zone Wall-mount Paging Microphone
- **DPM202B/FM:** Two-zone Wall-mount Paging Microphone

Developed from the standard DPM102B/202B Pro-Series, these microphones offer the same functionality but in a flush mounting format.

Supplied with a recessed backbox (MK LN5268) as standard, the microphone panel is attached via tamper-proof security type screws.

The heavy-duty, 3mm powder-coated front plate is designed to be robust and withstand day-to-day use in retail, transport and industrial applications. The 130mm flexible gooseneck, whilst shorter than the standard unit fitted to the DPM102B/202B, allows the microphone to be firmly positioned for the user without sagging or movement.

Features:

- Pre-announcement 'gong'; switch selectable, this enables individual paging microphones within a system to prelude announcements with a simple, but attention grabbing, gong sound
- Paging sound level indicator, comprising a VU scaled composite 3 LED array
- Provision for plug-in digital sound processing (DSP) technology for automatic background noise level reduction (DSP350)
- 'Soft gate', noise-free, microphone audio activation and closure
- 'Press-to-Talk' button/s physically protected against accidental use
- 'Speak now' or system in use LEDs, installer option
- Electronic or VOX access receptive to match host amplifier facilities
- Provision for local or remote powering
- Long line 0dBm 600Ω output, optionally available at 'microphone' level by on-board switch selection

Order Codes:

Model:	
DPM102B/FM:	Single-zone 600Ω line pre-amplifier with proximity auto bass cut and limiter
DPM202B/FM:	Two-zone 600Ω line pre-amplifier with proximity auto bass cut and limiter

Specifications:

Model:	DPM102B/FM / DPM202B/FM
Output Level	Switchable 0dBm, 600Ω source or -20dBm, 60Ω source
Matching Impedance	600Ω both @ microphone level and amplified line level option
Frequency Response	Unlimited: ±3dB 100Hz, bass cut on limit variable with voice proximity to -18dB @ 100Hz, proximity level limiting max 26dB
Powering	24v DC; normal or phantom powering @ 100mA max when using DSP350, 20mA without
Dimensions	Base: 140(W) x 202(H) mm (Backbox 114(W) x 175(H) mm) Gooseneck length to capsule: 130 mm

- **PRE600/P:** Microphone-to-Line Pre-Amplifier

The PRE600/P provides the ability to convert a standard microphone output to a variable line level output, especially useful if the microphone is located a distance from the host equipment.

Features:

- PRE600/P can easily be retrofitted to a system to provide a solution to overcome low signal problems
- Housed in a robust metal housing which can be wall or desk mounted, the unit may be powered by 24v DC via the host equipment or local plug top power supply
- An internal bass cut and speech level limiter provides a stable output to the amplifier system whilst all connections are made via a 15W 'D'-type connector

Specifications:

Model:	PRE600/P
Input Sensitivity	Better than 500μV, suitable for 200, 600Ω microphone
Output Level	Switchable 0dBm, 600Ω sources or -20dBm, 60Ω source
Powering	24v DC, switch selectable for 'normal' or 'phantom' power sourcing, normal powering via in-built co-axial 2.5mm DC socket or on 15 way 'D'
Connectivity	15 Way male 'D' connector
Dimensions	130(W) x 50(H) x 168(D) mm

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Induction Loops

- **DPM105/CAT:** Self-cancelling 5-zone Paging Point
- **DPM110/CAT:** Self-cancelling 10-zone Paging Point
- **ZRU010/CAT:** 1U Rack-mounting Relay/ Zone Processor

These new Pro-Range 5 and 10 zone self-cancelling paging points operate exclusively with the rack-mounted ZRU010 relay interface and central logic processor for up to 10 zones.

Whilst most system designers will switch zones of loudspeakers, this system is sufficiently versatile to operate between pre-amplifiers, 600Ω signal sources or with individual zone amplifiers.

Each paging point incorporates audio compression; an in-built pre-announcement 'gong' is a link-selectable option.

Communication and digital signalling between the ZRU010 central processor and each paging point uses standard CAT5 cabling - significantly saving on expensive cable installations!

Features:

- The system provides fully automatic 'All-Call'
- Pre-selection of zones prior to paging, self-cancelling after use
- Whilst waiting for paging access to the system, users can pre-select (reserve) their zones to be paged
- One paging point can be designated to have overall priority in the system
- Up to 8 paging points can comprise a multizone system (mixed 5 & 10 zones)
- 'Press-to-Talk'/'All-Call': momentary action button with LED indicating 'All-Call' or system occupied
- Zone selection: momentary action, electronic locking, buttons with individual LED to confirm selection acceptance
- Paging point output: utilises CAT5 cabling technology and is suitable for cabling lengths of up to 300m, unshielded

Now using CAT 5 connectivity

Specifications:

Model:	DPM105/CAT	DPM110/CAT
Press-to-Talk/All-Call	Momentary action button	Momentary action button
Zone Selection	Momentary action, electronic locking buttons with individual confirmation LEDs	Momentary action, electronic locking buttons with individual confirmation LEDs
Paging Point Output	0dBm, 600Ω, balanced, with pre-announcment gong provision	0dBm, 600Ω, balanced, with pre-announcment gong provision
Zone Relay Load	Will accept the output of a 250W amplifier, line voltage up to 100v or 600Ω line level switching	Will accept the output of a 250W amplifier, line voltage up to 100v or 600Ω line level switching
Power Requirement	24v DC ~ 30v 150mA	24v DC ~ 30v 150mA
Cabling Requirements	CAT5, 4 pair unshielded	CAT5, 4 pair unshielded
Finish	Microphone body: light grey Microphone top: basalt grey Microphone and Gooseneck: matt black	Microphone body: light grey Microphone top: basalt grey Microphone and Gooseneck: matt black
Dimensions	DPM105: 130(W) x 168(H) x 50(D) mm ZRU010: 483(W) x 170(H) x 43(D) mm	DPM110: 240(W) x 168(H) x 50(D) mm ZRU010: 483(W) x 170(H) x 43(D) mm
Weight	0.95kg	1.4kg

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• **DPS402:** Store & Forward Paging Microphone

- Operating as a normal 'live' paging microphone, the paging announcement is made and stored for broadcast
- The delay between paging completion and broadcast is internally pre-set on installation to 5, 15, 30 or 60 seconds
- Announcements may be pre-set on installation to be automatically repeated once, twice, three or four times, after which they are self cancelled
- Announcements can be up to 2 minutes in duration
- An announcement can be manually cancelled at any time, including during the original recording, if an error is made or the operator is interrupted
- An internal chime can be selected to pre-announce any messages. Alternatively, any pre-announcement chime already included in the host system can be triggered by DPS402; the announcement is automatically paused until the chime sequence is completed
- DPS402 works with electronic or VOX accessed amplifiers. The microphone output can be at 'normal' or line level by 'D' pin selection
- If the host system is multi-tasked - various functional inputs - and is equipped with 'system busy' outputs, DPS 02 will not broadcast whilst the system is in another use; if a priority use activates during a DPS402 announcement this will override the announcement which will recommence from its beginning after priority use ceases

• **DPS400:** 3 Message Store & Forward Paging Microphone

This is identical in function to DPS402 except that a facility to record and store up to 3 announcements that require individual or collective timed repeat is incorporated.

Examples would be to advertise 'special offers' in stores and supermarkets or to announce a delay in flight departure at an airport.

- Timed repeats - The user can select a repeat time of 5, 15, 30 or 45 minutes between replays or they can be remotely triggered at any time, for an evacuation message for example.
- Simple to operate - To record an announcement for repeated use, the user simply selects 'ENABLE' mode and proceeds with the announcement, which can be up to 1 minute in duration and manually cancelled at any time

Wall Connection Plate:
WC15W

Specifications:

Model:	DPS400	DPS402
Audio Output	775mv, 600W source 5mv 600Ω source	775mv, 600W source 5mv 600Ω source
DC Powering	24v DC @ 100mA	24v DC @ 100mA
Interface	15 way 'D' male	15 way 'D' male
Interface DC Supply	2.5mm DC power socket, also available on 15 way connector	2.5mm DC power socket, also available on 15 way connector
Frequency Response	200Hz ~ 8kHz	200Hz ~ 8kHz
Access Out Port	Dry contact closure when DPS wishes to access host system	Dry contact closure when DPS wishes to access host system
Access In Port	Remote Advert start	-
Busy In Port	If activated will not allow DPS to access host system	If activated will not allow DPS to access host system
Pause for Chime Report	4 seconds to allow for host system chime; selectable option to in-built chime	4 seconds to allow for host system chime; selectable option to in-built chime
Activity Display Port	By 'hi-bright' LEDs	By 'hi-bright' LEDs
Facilities	Storage for up to 3 announcements/adverts each of up to 60 secs duration, these may be individually played, or as a sequenced group, at intervals of 5, 15, 30 or 45mins, front panel selected	Store'n'Forward of a paging announcement up to 2mins duration. 'Repeat Frequency': 1, 2, 3, 4 times 'Repeat Delay': 5, 15, 30, 60 secs 'Preset on Installation'
Desk Top	Basalt grey powder coat	Basalt grey powder coat
Desk Base	Satin black powder coat with anti-slip feet	Satin black powder coat with anti-slip feet
Gooseneck/Microphone	Matt black	Matt black
Base Dimensions	130(W) x 50(H) x 170(D) mm	130(W) x 50(H) x 170(D) mm
Weight	0.9kg	0.9kg

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CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

- **D500:** Cardioid Dynamic Handheld Microphone
- **D500S:** Cardioid Dynamic Handheld Microphone (with ON/OFF switch)

Versatile, professional dynamic cardioid hand held microphone designed for a wide variety of vocal, speech and instrument applications. It has a wide smooth response, with neodymium magnet for high sensitivity and balanced output.

The 500S model has a silent magnetic reed ON/OFF switch.

Features:
- Rugged die-cast metal construction
- Cardioid polar pattern
- Wide, smooth response
- Balanced output
- Black, soft-touch finish for reduced handling noise
- Supplied in a presentation case

Specifications:

Model:	D500
Frequency Response	50Hz ~ 16kHz
Sensitivity	-55dB ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	500Ω balanced
Termination	Male 3 pin XLR

Includes SA 5 clip

- **C650E:** Cardioid Condenser Handheld Microphone

Professional cardioid condenser handheld microphone designed for vocal and speech applications.

Features:
- Rugged metal construction
- Wide response
- Shock mount suspension
- Balanced output
- Nextel finish

Specifications:

Model:	C650E
Frequency Response	50Hz ~ 20kHz
Sensitivity	-48dB ±3dB @ 1KHz (0db=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
Switchable Bass Filter & -10dB switchable Pad	Yes
S/N Ratio	68dB(A)
Termination	Male 3 pin XLR
Dimensions	Length: 225 mm Head: 49(Ø) mm

Includes SA 5 clip

- **C600:** Slimline Condenser Microphone

Professional slimline hand held cardioid condenser microphone designed for a wide range of vocal and speech applications. Also suitable for many musical instrument applications.

Features:
- Cardioid polar pattern
- Balanced output
- Engineered in high quality brass
- Finished in satin black

Specifications:

Model:	C600
Frequency Response	50Hz ~ 20kHz
Sensitivity	-47dB ±3dB at 1kHz (0dB=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
Switchable Bass Filter -10dB Switchable Pad	Yes
S/N Ratio	64dB(A)
Termination	Male 3 pin XLR
Dimensions	Length: 165 mm Head: 20(Ø) mm

Includes SA 3 clip

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PROFESSIONAL MICROPHONE SYSTEMS

• C850E: Shotgun Supercardioid Microphone

Supercardioid shotgun microphone for use in broadcast, film/video recording and theatre sound reinforcement.

Wide, smooth response and fully balanced output.

Features:
- Superior grade components
- Selectable bass roll-off and 10dB pad
- XLR termination
- Finished in satin black

Specifications:

Model:	C850E
Frequency Response	50Hz ~ 20kHz
Sensitivity	-48dB ±3dB @ 1kHz (0db=1v/Pa)
Impedance	200Ω
Power Requirements	9 ~ 48v Phantom Power
Switchable Bass Filter & -10dB switchable Pad	Yes
S/N Ratio	68dB(A)
Termination	Male 3 pin XLR

Includes W 85 windshield   Includes SA 8 clip

• D525E: Dynamic Supercardioid ENG Microphone

Designed for electronic news gathering and video production.

Features:
- Die-cast housing and steel grille screen
- Long shaft for easy handling
- Neodymium alloy magnet
- Optional soft protective case
- Finished in soft-touch satin black

Specifications:

Model:	D525E
Frequency Response	50Hz ~ 18kHz
Sensitivity	-54dBv (1.6mv/Pa)
Impedance	300Ω
Termination	Male 3 pin XLR
Dimensions	Length: 294 mm Head: 47(Ø) mm

Includes W 5 windshield   Includes SA 8 clip

• D550E: Dynamic Omni-directional ENG Microphone

Designed for reporting, interviewing and news gathering.

Features:
- High sensitivity Neodymium alloy magnet
- Patented shock suspension
- Long shaft for easy handling
- Die-cast housing and steel grille screen
- Finished in soft-touch satin black

Specifications:

Model:	D550E
Frequency Response	50Hz ~ 18kHz
Sensitivity	-54dBv (1.6mv/Pa)
Impedance	300Ω
Termination	Male 3 pin XLR
Dimensions	Length: 294 mm Head: 47(Ø) mm

Includes W 5 windshield   Includes SA 8 clip

CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

- **SM110:** Table Microphone Stand

Heavy, stable, shock-absorbing table microphone stand with SA3 microphone holder.

Features:
- Steel construction finished in satin black with neoprene shock mount for the microphone holder
- Overall height incl. microphone holder: 85 mm
- Base diameter: 110 mm
- Weight: 0.77kg

- **SA 3:** Microphone Holder & Stand Adaptor

Small swivel microphone holder and stand adaptor with 5/8" ~ 3/8" female thread.

Features:
- Finished in black plastic to avoid damage and microphone scratching
- Suitable for C 600 hand held microphone and all gooseneck microphones mounted on standard PPA (Phantom Power Adaptor)

- **SA 5:** Microphone Holder & Stand Adaptor

Swivel microphone holder and stand adaptor suitable for D500 Series handheld microphones.

Features:
- With 5/8" ~ 3/8" female thread and black rubber finish resistant to damage and microphone scratching

- **S210X:** Boom Stand

Microphone floor stand and boom arm combination. Folding base for ease of transport. Long legs for added stability.

Specifications:

Model:	S210X
Boom Arm Length	840mm
Finish	Black
Height	900 ~ 1605 mm
Weight	3.2kg

- **F237:** Aluminium Fishpole

Lightweight, adjustable 3-piece aluminium tube used for the remote positioning of microphones for recording and broadcasting.

Rough textured hand grips and secure locking rings. Protective carrying case included.

Specifications:

Model:	F237
Finish	Black
Height	950 ~ 3220 mm
Weight	0.8kg

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• **H500:** Monitor Headphones

Studio quality, cost-effective monitor head-phones, featuring removable jack-to-mini jack cable and soft case cover.

Features:

- Wide frequency response
- Closed diffused studio headphones
- Enhanced bass response
- High SPL capacity
- Excellent isolation from ambient noise

Specifications:

Model:	H500
Type	Dynamic closed-back circumaural
Sensitivity	96dB SPL ±3dB @ 1mw
Frequency	15Hz ~ 22kHz
Max Input Power	500mw
Impedance	24Ω
TDH	<0.3%
Cable	Plug-in single cable approx 3m
Connector	Gold-plated mini stereo jack
Stereo Adaptor	Gold-plated mini stereo jack to ¼" screw-on-adaptor
Weight	0.37kg

• **AH3000:** Active Protection Stereo Headphones

Designed as ear defenders for protection against hazardous noises with the ability to set essential listening levels to each ear to hear normally.

Suitable for use in a wide range of noisy environments including industrial and building locations, transport termini and sports and leisure locations.

Features:

- Defender system maintains preset listening level
- Wide bandwidth for natural sound to the ear
- Individual listening level adjustment for each ear
- Batteries operate for up to 50 hours from full charge
- Finished in cobalt blue Nextel with black trim

Specifications:

Model:	AH3000
Headphones	Micro dynamic
Design	Circumaural
Frequency Response	20Hz ~ 18kHz
Sensitivity	104dB ±3dB @1kHz
Ear Cup Attenuation	29dB
Microphone	Condenser (back electret)
Powering	3.6v 70mAH Ni-MH rechargeable batteries
Connector	Unterminated
Weight	0.42kg

• **H100:** Ear Defender Headphones
• **HS1000D:** Ear Defender Talk-back with Dynamic Microphone
• **HS1000E:** Ear Defender Talk-back with Condenser Microphone

The HS1000 is a ruggedly built headset with a choice of dynamic or condenser microphone, designed for a wide range of applications such as theatres, concert halls and studios. The earpieces effectively reduce high surrounding noise and equally contain the received sounds when working in quiet environments.

Includes **W 2 windshield**

Features:

- Wide band headphones
- Robust boom assembly
- Comfortable padded ear cups giving high ambient noise attenuation
- Finished in cobalt blue Nextel with black trim

Specifications:

Model:	HS1000D	HS1000E
Microphone	Dynamic	Condenser (back electret)
Polar Pattern	Noise cancelling	Noise cancelling
Frequency Range	150Hz ~ 10kHz	100Hz ~ 10kHz
Impedance	300Ω	1.6KΩ
Powering	1.5 ~ 9v DC through series resistor	
Cable Length	2m	2m
Connector	Unterminated	Unterminated
Weight	0.5kg	0.5kg

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WP600: Wall-Mounted Microphone

The WP600 is a flush-mounting microphone designed for applications in the retail and industrial sectors, providing a wall-mounting paging point for till positions, security locations and building access points, etc.

Generally for indoor use, the unit has a shock-mounted microphone capsule positioned behind a 3mm thick, 2 gang aluminium panel. The capsule is protected by a pin-proof screen to stop abuse and to ensure the unit is in working order when needed.

Connections to the unit are made via push-fit screw terminals and give the option of NO and NC operations for both the microphone output and switched voltage free contacts.

Features:

- Rugged aluminium faceplate
- Security mounting screws
- Shock-mounted capsule
- Selectable mic output (NO/NC)
- Selectable switched output (NO/NC)

Specifications:

Model:	WP600
Product IP Rating	IP62
Microphone Capsule	Dynamic
Frequency Response	±6dB, 300 ~ 3500kHz
Impedance	600Ω (2400Ω special order)
Output Level	-57dB @ 1kHz
Finish	Basalt grey, powder coat
Dimensions	90(W) x 150(H) mm
Minimum Backbox Depth	40 mm

VP892/600: 600Ω Impedance Vandal-proof Microphone

VP892/2400: 2400Ω Impedance Vandal-proof Microphone

The VP892 is a vandal-proof microphone with push switch and 'active' LED mounted on a UK double-gang switchplate designed to fit on backboxes of at least 40mm depth.

The switchplate is stainless steel with integral microphone grille designed for close-talk use; the entire assembly is showerproof to IP67 and designed for use in public places or in a manufacturing process where vandal resistance is judged to be appropriate or heavy-handed use an expectation.

Features:

- 'Push-to-Talk' switch and 'active' LED
- Rugged stainless steel faceplate
- IP67-rated
- 'Pin-proof' microphone capsule

Specifications:

Model:	VP892
Product IP Rating	IP67
Frequency Response	±6dB, 300Hz ~ 3.5kHz
Impedance	600Ω (2400Ω special order)
Output Level	-57dB @ 1kHz
Finish	Stainless steel
Dimensions	86(W) x 146(H) mm
Minimum Backbox Depth	30mm

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• SEC09: Omni-directional 'Fire Detector'- Housed Microphone

The SEC09 has been designed for security and surveillance applications. Offering easy mounting to walls or ceilings, the SEC09 has the appearance of an ordinary fire detector.

Electronics housed within the SEC09 offer screw terminals, eliminating the need for connectors.

Features:
- Omni-directional
- Built-in line level pre-amp
- Selectable sensitivity switching
- 9 ~ 48v Phantom power switchable for 12 ~ 24V dc operation
- Pick up range of 15 metres
- Red LED status indicators
- Sturdy ABS housing
- Easy to install
- Universal mounting to electrical conduit boxes

Specifications:

Model:	SEC09
Frequency Response	50Hz ~ 12kHz
Impedance	75Ω
Sensitivity	1.4v/PA
Dimensions	55(H) x 105(Ø) mm
Minimum Backbox Depth	30 mm

Wiring Information:

Model:	SEC09
Input: Pin 1	+24v AC / 12v DC
Pin 2	Phase +
Pin 3	Phase −
Pin 4	GND / -ac/dc
Line level set up	Switch pins 7, 5, 3 to ON
Phantom Power set up	Switch pins 8, 6, 4 to ON

• FM280: Dynamic Fist Microphone

A rugged fist microphone designed for use in high quality close-talk mobile or fixed applications; ideal for noisy environments such as factories, airside at airports and for two-way communications in taxicabs, buses, helicopters, construction sites and fire & rescue vehicles.

Features:
- The dynamic microphone capsule is shock-mounted within the housing, constructed from virtually unbreakable ABS plastics, contoured for safe, convenient handling
- The 'Press-to-Talk' grip switch, engineered for heavy use, operates 2 single-pole contact pairs; one pair mutes the microphone capsule when not in use, the other can be used as 'dry' contacts for system access or signalling
- 4 core heavy-duty coiled lead to free end
- Spring-mounted clip for easy storage

Specifications:

Model:	FM280
Microphone Housing	ABS plastic moulding
Capsule	Dynamic omni-directional
Sensitivity	-75dB ±3dB @ 1kHz
Impedance	200Ω
Frequency Response	±6dB, 300Hz ~ 6kHz
PTT Switch	2 Switch pairs: microphone - red/white access - blue/black
Operating Temperature	0°C ~ +55°C
Dimensions	45(W) x 100(H) x 45(D) mm
Weight	0.2kg

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CHIAYO

- ## UNITY SYSTEM 1H:
  VHF 16 Channel Handheld System
- ## UNITY SYSTEM 1BT:
  VHF 16 Channel Beltpack/Tieclip System
- ## UNITY SYSTEM 1BH:
  VHF 16 Channel Beltpack/Headset System

The new Unity System 1 Series of VHF 16 Channel Wireless Microphone Systems brings high performance and simplicity together to provide a full range of ready to use, complete systems.

Supplied in strong, lightweight ABS cases for safe storage and transportation.

Features:

- 16 Channel VHF
- High sensitivity and excellent image rejection
- Single compander design
- Pilotone control
- True Diversity reception
- Half-19" Receiver casing
- Balanced audio output (XLR) / Unbalanced audio output (phono jack)
- Selectable MIC or LINE output level
- RF test function
- AF, RF and Diversity LED bar indicators

Specifications:

Model:	UNITY SYSTEM 1 SERIES
Frequency Range	160 ~ 260MHz
Channels per Band	16 Selectable
Special Functions	Compander, Pilotone

Transmitters:	
Controls	ON/OFF, Channel Set, Gain
Power	3 x AA batteries. Up to 16 hours operating time*

Receiver:	
Display Screen	LCD bar indicators
Antennas	Compact (supplied). High gain external (optional)
Controls	ON/OFF, Channel Select, Squelch, Volume Control, RF Test
Indicators	AF, RF, Power On
Outputs	Balanced/Unbalanced
Power	12v DC via 230v PSU

* Measured with high quality ('Duracel' Alkaline) batteries

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CHIAYO

- **UNITY SYSTEM 7H:**
  UHF 100 Channel Handheld System

- **UNITY SYSTEM 7BT:**
  UHF 100 Channel Beltpack/Tieclip System

- **UNITY SYSTEM 7BH:**
  UHF 100 Channel Beltpack/Headset System

The new Unity System 7 Series of UHF 100 Channel Wireless Microphone Systems utilise the highest quality technology and components for true high performance, multichannel, wireless sound.

These high specification UHF systems offer 100 channel selection for greater control and resistance to interference.

Supplied as ready to use, complete systems and housed in strong, lightweight ABS cases for safe storage and transportation.

Features:

- 100 factory preset user-selectable UHF frequencies
- Advanced microprocessor control, with improved signal performance for interference-free, multi-channel operation
- Auto Scan function searches for the cleanest frequency
- True Diversity for highest quality reception with no dropouts
- Battery signal indicator on receiver panel monitors transmitter battery status
- LCD on both receiver and transmitter
- High sensitivity, high selectivity and high image/spurious rejections
- Anti-interference Pilotone control and RF Noise Squelch circuitries
- Balanced and unbalanced audio outputs
- Rack mountable with 19" rack mount kit (optional)
- UP, DOWN, MENU, SET function buttons
- White-in-blue LCD display
- RF/AF signal strength, Diversity A/B indicators
- Easy to read, programmable, multi-function LCD

Specifications:

Model:	UNITY SYSTEM 7 SERIES
Frequency Range	CH38: 600 ~ 900MHz
Channels per Band	100 Selectable
Special Functions	Compander, Pilotone

Transmitters:	
Display Screen	LCD, Channel/Frequency, Sensitivity, Battery Level indicator
Controls	ON/OFF, Gain, Channel Set
Power	2 x AA batteries. Up to 12 hours operating time*

Receiver:	
Display Screen	LCD showing full function read out
Antennas	Compact (supplied). High gain external (optional)
Controls	Volume, Channel, Auto Scan, Squelch via LCD readout
Indicators	Diversity reception, Weak TX Battery Alarm, RF & AF signal strengths
Outputs	Balanced/Unbalanced
Power	12v DC via 230v PSU

* Measured with high quality ('Duracel' Alkaline) batteries

Need help choosing the right product?
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CHIAYO

- The Chiayo range of Portables and Wireless Microphone Systems are available with a whole host of options, accessories and 'separates' to enhance or expand your system, including:

- ## Microphone Options for use with all UHF & VHF Systems:

  (Must be used with Beltpack Transmitter)

  Models:

Model:	Description
MC-76X	Slimline Headset Microphone
MC-73X	High Performance Headset Microphone
MC-70X	Aerobics Headset Microphone
MC-15X	Tieclip Microphone (Cardioid)
MC520X	Tieclip Microphone (Omni)
MC75X	Collar Microphone

MC–76X MC–73X MC–70X

MC–15X MC520X MC75X

- ## Unity System 1 Accessories:

  Models:

Model:	Description
AD-15	VHF Antenna Divider
RA-10	VHF Remote Antenna

AD–15 RA–10
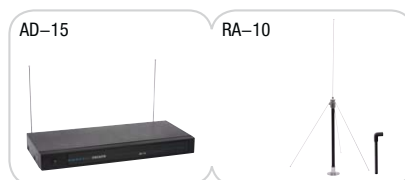
- ## Unity System 7 Accessories:

  Models:

Model:	Description
AD-85	UHF Antenna Divider
RA-80	UHF Remote Antenna
AB-80	UHF Antenna Booster
DA-80	UHF Directional Antenna

AD–85 RA–80 AB–80

DA–80
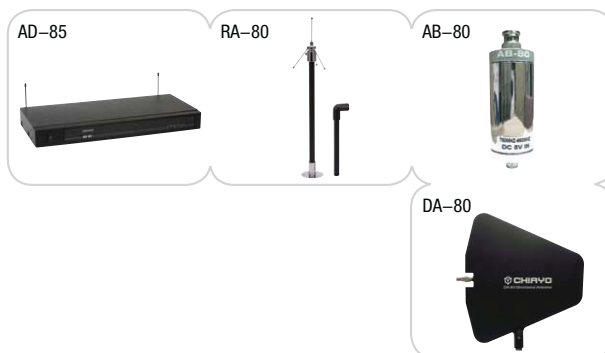
- ## All Unity System Accessories:

  Models:

Model:	Description
FM-800	Front-mounting Antenna Extender
MP-50	Rackmount Kit for UHF & VHF Receiver Units
MP-12	Rackmount Filler Panel

FM–800 MP–50 MP–12

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CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

- **CW9000 Series:** UHF Multi-channel Radio Microphone System

Versatile, flexible and easy to use, multi-channel system with two receiver, full diversity reception. UHF operation for resistance to interference (bands within the range 630 ~ 960MHz according to local regulation). 192 PLL pre-selectable channels per band. Compact half rack size, full diversity receiver with full controls, comprehensive LED display and balanced/unbalanced outputs.

Available with a choice of beltpack transmitter with lavalier microphone, handheld transmitter microphone or our innovative new wireless desktop base mounts for use with Clockaudio's full range of gooseneck microphones.

Each transmitter option features LCD display for frequency and battery status, easy-to-use controls for ON/OFF, frequency selection and AF levels. A full range of included and optional accessories are also available to complement the CW9000 Series.
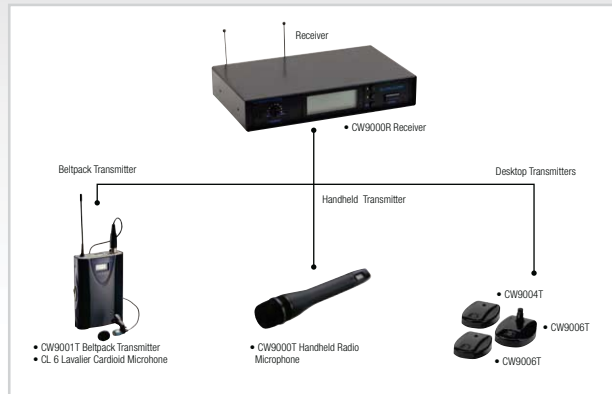
- **CW9000R:** UHF Receiver

Specifications:

Model:	CW9000R
System FM Carrier	UHF
Frequency Range	630 ~ 960MHz (bands according to regulation)
Channel Frequencies	192 PLL selectable channels per band
Frequency Stability	± 0.005%
S/N Ratio	>100dB
Audio Output Level	-12dB
AF Output Impedance	600Ω
Squelch	'Pilot Tone' and 'Noise Mute'
Power	External 12v DC; 500mA

- **CW9000T:** UHF Handheld Radio Microphone

Specifications:

Model:	CW9000T
Microphone	Dynamic Cardioid
LCD Display Information	Frequency, AF level and battery status
Power	2 x AA batteries giving more than 10 hours use

- **CW9001T:** UHF Beltpack Transmitter

Specifications:

Model:	CW9001T
System FM Carrier	UHF for reduced interference
Frequency Range	630 ~ 960MHz (bands according to regulation)
Channel Frequencies	192 PLL selectable channels per band
RF Output	10mW
Frequency Stability	±0.005%
Frequency Deviation	±48kHz
Frequency Response	50Hz ~ 15kHz
Dynamic Range	> +110dB
Controls	Power ON/OFF, Frequency and AF level set

- **Beltpack Microphone Options**

(see page 156 ~ 157 for details)

Lavalier Tieclip Microphone: **CL4**

Micro Lightweight Headworn Boom Mic: **CMH2000**

Rugged Lightweight Headworn Boom Mic: **HW1500**

Lightweight Headworn Boom Mic: **HW1200**

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PROFESSIONAL MICROPHONE SYSTEMS

- **CW9004T:** UHF Desk Wireless Microphone Transmitter - Tini QG XLR
- **CW9005T:** UHF Desk Wireless Microphone Transmitter - Built-in Microphone
- **CW9006T:** UHF Desk Wireless Microphone Transmitter - XLR

Microphones for use with CW 9004T Unit
(See page 119 for full specifications):

Model:	Length	Shaft
C3100	100mm	Flexible
C310-R	100mm	Rigid
C312-SR	200mm	Semi-rigid
C313-SR	300mm	Semi-rigid
C314-SR	400mm	Semi-rigid

CW9004T

CW9005T   CW9006T

Specifications:

Model:	CW9004T	CW9005T	CW9006T
Frequency Range	630 ~ 960MHz (According to local regulation)		
Channel Frequencies	192 PLL selectable channels per frequency band		
Polar Pattern	-	Omni-directional	-
Audio Bandwidth	-	50Hz ~ 18kHz	-
RF Output	10mW		
Frequency Deviation	±48kHz		
S/N Ratio	> 102dB		
Audio Frequency Response	50Hz ~ 15kHz		
Dynamic Range	> +110dB		
LCD Information	Frequency and battery status		
Switching	Programmable touch switch and LED indicator		
Power Supply	2 x AA batteries giving more than 9 hours use		
Output	-	-	24v Phantom Power
Connections	3 Pin Tini Q Mini XLR	-	3 Pin XLR
Dimensions & Weight	115(W) x 40(H) x 125(D) mm / 0.4kg		

- **CU2:** Intelligent Battery Charger

Features:
- Processor controlled
- Built-in active monitoring circuitry
- Pulse charging system
- Temperature sensor
- Two dedicated compartments for charging two CW9004T, CW9005T or CW9006T Transmitters
- Charging time: 6 hours
- Power Supply: Input 90 ~ 260v AC
                              Output 12v DC 1.25A

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CLOCKAUDIO
PROFESSIONAL MICROPHONE SYSTEMS

Wireless Microphone Accessories

- **S210X** (shown here with C816E microphone)

The S 210-X has a fixed height, folding, long legged stand with a die-cast base for stability and ease of transport. Fitted with a 3 pin XLR connector at the base and the top. Overall height 1023 mm. (For use with CW 9006T Transmitter)

- **AA9000:** Antenna Distribution Amplifier

Specifications:

Model:	AA9000
Carrier Frequency	470 ~ 870MHz
Antenna Inputs	2 (BNC)
Antenna Outputs	4 x pairs (BNC)
Output Connector Isolation	24dB
Nominal Cascade Gain	3dB
Inline Antenna Power	12v DC, 120mA
Power Supply	4 x 12v DC
Mains Input Voltage	90 ~ 264v AC 50/60 Hz

- **CW9000C:** Interchangeable Microphone Head

Specifications:

Model:	CW9000C
Type	Condenser (Back Electret)
Polar Diagram	Cardioid
Frequency Response	60Hz ~ 18kHz
Impedance	400Ω
Sensitivity	-50dB (0dB=1v/Pa)

- **AB9000:** Antenna Booster

Specifications:

Model:	AB9000
Carrier Frequency	470 ~ 870MHz
Antenna Gain	1.8dBi
Booster Gain	0dB +2/-1
Antenna Coverage	360°
Operating Voltage	12 ~ 18v DC
Inline Antenna Power	12v DC, 120mA

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- **CMH2000:** Micro Lightweight Headworn Microphone (Black)
- **CMH2000B:** Micro Lightweight Headworn Microphone (Beige)

An extremely lightweight and low profile professional microphone for use in theatres, presentations, broadcast studios and places of worship. Shaped and lightly sprung to fit any head contour and remain in place even during high activity. Flexible boom arm for optimum positioning of microphone.

Features:
- Omni-directional back electret condenser microphone
- Perspiration drip barrier to protect microphone
- Wide band, smooth response
- Black or beige, easy-clean finish

Specifications:

Model:	CMH2000
Microphone	Condenser (back electret)
Polar Pattern	Omni-directional
Frequency Response	30Hz ~ 18kHz
Sensitivity	-33dB ±3dB @ 1kHz 0dB=1v/Pa)
Impedance	4.4kΩ
Power Requirements	1.5 ~ 9v (Standard operating voltage 1.5v)
Termination	Tini Q Female 4 pin connector

- **HW1500:** Rugged Lightweight Headworn Microphone

Rugged and lightweight microphone for use in presentations, commentaries, broadcast reporting and by instructors - waterproof microphone makes it particularly suitable for aerobic and fitness instructors. Shaped, lightly sprung and with headband to fit all head contours comfortably and remain in place even with vigorous activity.

Features:
- Plastic injected headband, gooseneck and capsule head for protection against corrosion
- Flexible boom arm for optimum positioning of microphone
- Waterproof bi-directional close talking back electret condenser microphone with smooth low feedback response

Specifications:

Model:	HW1500
Microphone	Condenser (back electret)
Polar Pattern	Bi-directional close talking with W15 Windshield
Frequency Response	300Hz ~ 5kHz
Sensitivity	-44db ±3dB @ 1kHz (0dB=1v/Pa)
Impedance	1kΩ
Power Requirements	1.3 ~ 12v (Standard operating voltage 1.5v)
Termination	Tini Q Female 4 pin connector

Includes **W 15** windshield

- **HW1200:** Lightweight Headworn Microphone

A lightweight cardioid microphone for use in presentations, guided tour systems and telesales applications.

Specifications:

Model:	HW1200
Microphone	Condenser (back electret)
Polar Pattern	Cardioid
Frequency Response	50Hz ~ 18kHz
Sensitivity	-50db @ 1kHz (0dB=1v/Pa)
Impedance	680Ω
Power Requirements	1.5 ~ 9v DC (standard operating voltage 1.5v)
Termination	Tini Q Female 4 pin connector

Includes **W 12** windshield

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CLOCKAUDIO®
PROFESSIONAL MICROPHONE SYSTEMS

• CTH100: Throat Microphone

This throat microphone has been engineered to provide superb speech intelligibility even in high background noise environments.

Special attention has been given to ensure a comfortable wear over long durations with ergonomic strap and transducer housing design.

Features:

- Available with a variety of IP67 terminations and PTT switches
- Water immersion resistant
- Rugged and durable

Specifications:

Model:	CTH100
Generating Element	Electret Condenser
Frequency Response	350Hz ~ 8kHz
Sensitivity	Equivalent output to standard microphones
Current Drain	0.54mA @ 2.5v through 2.2kW
Bias Voltage	2.5 ~ 6v DC
Output Impedance	900Ω
Operating Temperature	-20ºC ~ +70ºC
Storage Temperature	-40ºC ~ +70ºC
Weight	0.05kg

• CL4: Lavalier Omni-directional Microphone (Black)
• CL4B: Lavalier Omni-directional Microphone (Beige)

Ultra miniature, omni-directional lavalier condenser microphone suitable for hands-free applications in pro-audio. Available in black or beige, complete with windshield and tie clip.

Specifications:

Model:	CL4
Frequency Response	50Hz ~ 18kHz
Sensitivity	-44dB @ 1kHz (0dB=1v/Pa)
Impedance	1kΩ
Power Requirements	1.5 ~ 9v (standard operating voltage 1.5v)
Termination	Tini Q Female 4 pin connector

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CHIAYO

- ## Coach400: Wireless Portable PA System (Wired Mic or UHF)

The new Coach 400 is an ideal 'personal' portable PA system, designed to be worn over the shoulder for walking tour guides, demonstrations and coaching or mounted on the Chiayo ST-30 tripod for use in classrooms, lecture theatres, trade fairs, etc.

Supplied as standard with handheld wired microphone, the Coach 400 can also be supplied with the SQ5016AT UHF handheld wireless microphone, or SM5016 beltpack & headset/tieclip microphone options.

This stylish, compact and lightweight little unit features an in-built 25W class D amplifier, 4" full-range loudspeaker, rechargeable battery and USB 2.0 MP3 player. Other features as standard include 2 alarm sounders for emergency broadcasting, Aux inputs & outputs and detachable shoulder strap for ease of carrying.

Features:

- High efficiency output power with built-in 25W class D power amplifier
- Truly wireless! Battery operation eliminates all cables so you can take it anywhere!
- 4" full range speaker system
- USB 2.0 MP3 player with LCD display
- 16 Channel UHF microphone receiver
- 2 alarm sounds for emergency broadcasting
- Lithium battery offers extended operation time and minimises weight and size
- 3.5mm stereo Aux In/Out connectors
- Can be worn over the shoulder or mounted on ST-30 tripod stand
- Suitable for indoor and outdoor applications

Specifications:

Model:	Coach400
Output Power	25W (RMS)
Speaker System	4" full range
THD	<0.5%
Audio Inputs	Mic In / Aux In / USB2.0
Audio Outputs	Aux Out
Power Supply	230v 1.5A/20v DC 2.5A
Battery Type	14.8v/2.4AH (Lithium)
Operating Life	Music: 5 ~ 6 hours, Voice: 10 ~ 12 hours
Charging Time	4 hours (approx.)
Frequency Response	50Hz ~ 20kHz ±3dB
Dimensions	156(W) x 156(H) x 205(D) mm
Weight	1.6kg

CHIAYO

- **Focus System 16H:**
  Focus 505 with Handheld Mic (UHF)
- **Focus System 16BH:**
  Focus 505 with Headset Microphone (UHF)
- **Focus System 16BT:**
  Focus 505 with Tieclip Microphone (UHF)

The new design Focus 505 has to be one of the most compact, lightweight, full-function portable systems there is!

This little unit features internal UHF microphone receiver, built-in 30W amplifier, full-range loudspeaker, CD with pitch control and USB MP3 player - all squeezed into a box no bigger than A4!

With output power and sound quality you'd expect from something much bigger, the Focus 505 is capable of coverage up to 400m².

Main Features:

- Truly wireless! Battery operation eliminates all cables for true portability
- Choice of wireless microphone options (Beltpack or Handheld)
- Choice of single or dual channel microphone receivers
- CD player with pitch control, plus complete USB MP3 player & IR remote control
- Built-in 30W amplifier
- Built-in 6½" full range speaker
- MIC IN / AUX IN with dedicated volume control
- AUX OUT to connect to PA system or input of AV system
- Loudspeaker Output for Focus extension speaker
- Charging / battery status indicators
- Tone control
- Tripod mountable (ST-40)
- Dual power supply AC or DC operation

Radio Frequency Features:

- For indoor & outdoor use
- UHF 16 CH Receiver
- Non-diversity receiving
- Compander circuit improves signal-to-noise ratio and reduces background noise
- Anti-interference pilotone circuit
- Built-in receiving antenna

System Package Details:

- **Focus System 16H:** Focus 505, 16 channel UHF with CD, USB MP3 and IR remote with UHF handheld microphone transmitter & canvas carry case
- **Focus System 16BH:** Focus 505, 16 channel UHF with CD, USB MP3 and IR remote with UHF beltpack transmitter, headset microphone & canvas carry case
- **Focus System 16BT:** Focus 505, 16 channel UHF with CD, USB MP3 and IR remote with UHF beltpack transmitter, tieclip microphone & canvas carry case

Audio Signal Processing

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Microphones (Wireless)

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Passive extension speaker for Focus 505: SP505	Active extension speaker for Focus 505: PA505R

See page 166 for a full range of accessories.

Specifications:

Model:	Focus 505
Output Power	30W (RMS)
Frequency Range	CH 38 ~ 606.125, 606.975, 607.650, 608.150, 608.475, 609.225, 609.750, 610.625, 610.975, 611.425, 611.750, 612.250, 612.575, 612.975, 613.450, 613.975 Licence required (visit www.jfmg.co.uk)
Oscillation Type	Quartz locked fixed frequency
Frequency Stability	±0.005%
Receiving Method	Non-Diversity
Frequency Response	50Hz ~ 15kHz
Speaker	6½" Full Range Driver
Audio Inputs	MIC IN, AUX IN
Audio Outputs	AUX OUT
Power Supply	230v AC / Internal Battery
Battery Recharge	3 ~ 4 hours
Battery Life	Music: 5 ~ 6 hours / Voice: 10 ~ 12 hours
Dimensions	213(W) x 313(H) x 215(D) mm
Weight	5.5kg

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Induction Loops

⚙CHIAYO

• **Focus500/IR:** Compact Portable Presentation System (Infrared)

The new Focus 500IR is an infrared version of our highly popular Focus range. With all the same features as our UHF versions (built-in amplifier & loudspeaker, CD player, USB MP3 player, 230v AC/internal battery operation, etc), the Focus500IR features an infrared microphone receiver/transmitter which allows for any number of adjacent, multi-room systems without the limitations of number of channels.

As the infrared microphone signal is light-based, the simple separation of walls and doors will allow any number of adjacent systems - such as a number of classrooms - without signal interference.

Features:

- Truly wireless! Battery operation and IR signal eliminates all cables for true portability
- Infrared wireless microphone signal for multi-room systems
- Supplied as standard with IR handheld microphone
- CD player with integrated USB MP3 player and IR remote control
- Built-in 30W amplifier
- Built-in 6½" full range speaker
- Dual power supply AC or DC operation

System Package Details:

- **Focus System IRH:** Focus 500 Infrared with CD, USB MP3 players infrared handheld microphone/transmitter & canvas carry case

(Please Note: The IR model is not suitable for outdoor use due to high light levels affecting the infrared signal.)

See page 166 for a full range of accessories.

Infrared Pendant Microphone: **IWM−402**

Infrared Handheld Microphone: **IWH−401**

Specifications:

Model:	Focus500/IR
Output Power	30W (RMS)
Receiving Method	Infrared
Frequency Response	50Hz ~ 15kHz
Speaker	6½" Full Range Driver
Audio Inputs	MIC IN, AUX IN
Audio Outputs	AUX OUT
Power Supply	230v AC / Internal Battery
Battery Recharge	3 ~ 4 hours
Battery Life	Music: 5 ~ 6 hours / Voice: 10 ~ 12 hours
Dimensions	213(W) x 313(H) x 215(D) mm
Weight	5.5kg

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Microphones (Wireless)

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CHIAYO

- **Challenger System 16H:** Challenger 1004 with Handheld Microphone (UHF)
- **Challenger System 16BH:** Challenger 1004 with Headset Microphone (UHF)
- **Challenger System 16BT:** Challenger 1004 with Tieclip Microphone (UHF)

Now further upgraded with a new 120W class D built-in amplifier, the new Challenger 1004 UHF is an all-in-one, multi-functional, multi-purpose, wireless portable sound system designed for both indoor and outdoor use, capable of high quality sound coverage up to 800m².

Compact and lightweight, it features CD player with pitch control and integrated USB MP3 player and will now allow for up to 4 UHF microphone receivers.

The Challenger 1004 also features easy to use controls and retractable handle to allow the unit to be easily transported.

Features:

- New 120W (RMS) class D internal amplifier and full-range loudspeaker
- Integral UHF wireless microphone receiver (plus option for an additional three receivers!)
- CD player with pitch control, complete with USB MP3 player & IR remote control
- Wired microphone/auxiliary inputs, plus line level output
- Extension loudspeaker output (8Ω)
- Optional matching extension loudspeaker (C1000 Companion)
- Internal rechargeable battery or mains operation
- Retractable handle & integrated wheels
- Tripod mountable
- Protective cover

System Package Details:

- **Challenger System 16H:** Challenger 1004, 16 channel UHF with CD, USB MP3 and IR remote with UHF handheld microphone transmitter and canvas cover
- **Challenger System 16BH:** Challenger 1004, 16 channel UHF with CD, USB MP3 and IR remote with UHF beltpack transmitter, lightweight headset microphone and canvas cover
- **Challenger System 16BT:** Challenger 1004, 16 channel UHF with CD, USB MP3 and IR remote with UHF beltpack transmitter, tie clip microphone and canvas cover

Now allowing up to 4 UHF Receivers!

The new Challenger 1004 now allows for up to four UHF receivers (therefore allowing for up to 4 different microphone channels).

Combined with the new RP–6016M Wireless Transmitter Module (seen overleaf), the new portable models now allow for even greater coverage, channel flexibility and the true freedom of 'going wireless'!

Specifications:

Model:	Challenger 1004
Output Power	120W (RMS)
Frequency Range (UHF / PLL)	CH 38 ~ 606.125, 606.975, 607.650, 608.150, 608.475, 609.225, 609.750, 610.625, 610.975, 611.425, 611.750, 612.250, 612.575, 612.975, 613.450, 613.975 Licence required (visit www.jfmg.co.uk)
Speaker	10" Full Range Driver
Battery Life	Music: 5 ~ 6 hours / Voice:10 hours
Battery Life (constant CD player use)	5 ~ 6 hours
Battery Recharge Time (approx)	6 hours
Built-in Charger	Yes
Music Options	CD Player with pitch control and integrated USB MP3 player
Power Requirement	230v AC / Internal Battery
Dimensions	350(W) x 500(H) x 300(D) mm
Weight	21kg

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Microphones (wireless)

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CHIAYO

- **RP-6016M:** Portable PA Wireless Transmitter Module (UHF)

Module for multiple unit wireless-linked systems. Where larger wire-free systems are required, the inclusion of the RP-6016M Module will transmit from a Master Unit to multiple active slave units, providing the same signal output as well as remote volume control to all units on the system.

The RP-6016M is compatible with all Challenger 1004 Systems.

Loudspeakers

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Microphones (Wired)

Microphones (Wireless)

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CHIAYO

- ## Portable PA System Controls on Rear Panels

- ## Coach 400:

1   On/Off & Master Volume
2   USB2.0 MP3 Player Port
3   MP3 Player Display
4   Alarm Tones
5   DC Power Supply Input
6   Aux Output
7   Aux Input
8   Wired Mic Input
9   Mic Volume Control
10 Aux/USB MP3 Volume Control
11 Tone Control
12 USB MP3 Player Controls
13 UHF Receiver Channel Selector
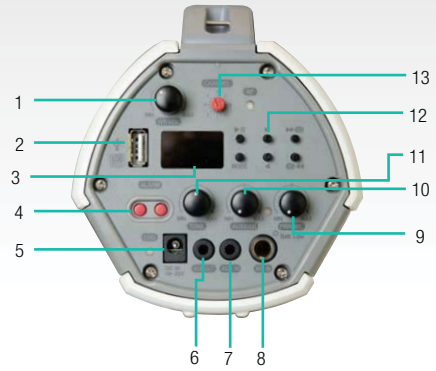
- ## Focus 505 & Focus 500IR:

1   CD Player Module
2   USB MP3 Player Input
3   Wired Microphone Input
4   Wired Microphone Level Control
5   Line Input/Output
6   Line Level Control
7   Tone Control
8   Wireless Microphone Level Controls
9   External/Extension Loudspeaker Output
10 Power On/Off
11 Voice Priority On/Off
12 DC Power Supply Input
13 Wireless Microphone Channel Selection
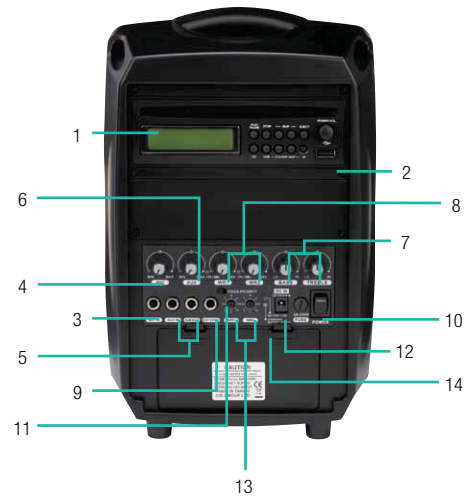
- ## Challenger 1004:

1   CD Player Module
2   USB MP3 Player Input
3   RF Receiver Module
4   Optional RP-6016M Wireless Transmitter Module (Module slot can alternatively be used for a 4th Receiver Module)
5   RP-6016M Antenna
6   Additional Receiver Module Slot
7   Retractable Handle
8   Optional Receiver Module Slot
9   Wired Microphone Input 1
10 Wired Microphone Input 2
11 Wired Microphone 1 Level Control
12 Wired Microphone 2 Level Control
13 Line Inputs/Outputs
14 Master Volume Control
15 Tone Control
16 Line Level Control
17 CD/MP3 Level Control
18 Active Bus Input/Output
19 Master/Slave Selector
20 Slave Bus Level Control
21 External/Extension Loudspeaker Output
22 Mains Power Input
23 Power On/Off
24 Voice Priority On/Off
25 Charging Indicator
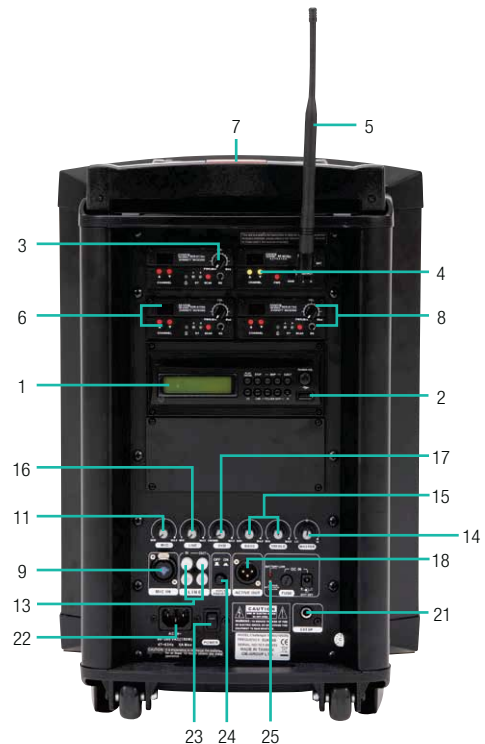
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CHIAYO

- The Chiayo range of Portables and Wireless Microphone Systems are available with a whole host of options, accessories and 'separates' to enhance or expand your system, including:

Coach, Focus & Challenger Transmitter Options:

Models:

Model:	Description
SQ1016/38	16ch UHF Handheld Microphone Transmitter
SM1016/38	16ch UHF Beltpack Transmitter

SQ1016/38   SM1016/38

Focus Accessories:

Models:

Model:	Description
SDR-500M	Additional UHF 16ch Mic Receiver (Factory fitted only)
SP505	Passive Extension Loudspeaker
PA505R	Active Extension Loudspeaker
ST-40	Tripod Stand
SB21	Canvas Carry Case

SDR–500M   SP505   PA505R

ST–40   SB21

Challenger 1004 Accessories:

Models:

Model:	Description
SDR6116M	Additional UHF 16ch Receiver Module
RP-6016M	UHF 16ch Transmitter Module
03180	Tripod Stand
C1000 SLAVE	Slave Challenge Active Companion Loudspeaker
DC40	Challenger Canvas Cover

SDR6116M   RP–6016M   03180

C1000   DC40

Microphone Options for use with all UHF & VHF Systems (must be used with Beltpack Transmitter):

Models:

Model:	Description
MC-76X	Slimline Headset Microphone
MC-73X	High Performance Headset Microphone
MC-70X	Aerobics Headset Microphone
MC-15X	Tieclip Microphone (Cardioid)
MC520X	Tieclip Microphone (Omni)
MC75X	Collar Microphone

MC–76X   MC–73X   MC–70X

MC–15X   MC520X   MC75X

IWM402: Infrared Pendant Microphone Transmitter

Discreet neck worn IR transmitter with built-in microphone.

Provides hands-free transmission of voice and AUX signals as part of an installed voice reinforcement system in schools, universities, AV installations and conference venues.

The use of IR transmission allows the system to be used licence free, and also provides a secure signal that will not overspill to adjoining rooms or systems.

Features:

- Pendant transmitter with inbuilt condenser microphone
- 2 x Input jacks (2.5mm) for use with external headset microphone & Aux line level
- Bicolor LED indicates power on and battery low
- 2 channels switchable
- Input audio level control serves as remote volume control
- Operating time up to 7 hours with one dedicated 1.2v NiMH battery
- Dedicated drop-in charger (HC-40) available

IWH401: Infrared Handheld Microphone Transmitter

Features:

- Multiple emitter array of high efficiency infrared emission LEDs for optimum IR transmission
- Bicolor LED indicates power-on and battery low
- 2 channels switchable
- Unidirectional condenser cartridge for optimum audio, minimal handling noise and maximum feedback rejection
- Rugged steel mesh ball with anti-roll ring
- Operating time up to 7 hours with one dedicated 1.2v NiMH battery
- Also can be suspended around the neck with a lanyard
- Dedicated drop-in charger (HC-40) available

HC40: Infrared Microphone Drop-in Charger

For use with IWM402 and IWH401 infrared microphones.

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CHANNEL 38

- **GT Set One:**
  9 x Receiver Guided Tour System (UHF)
- **GT Set Two:**
  19 x Receiver Guided Tour System (UHF)

A licence-free system of lightweight, 16 channel personal portable units developed for commentary or narration on guided tours, for individuals or for groups in situations such as museums, zoos, factories, gardens or outside events. Also suitable for language tuition, talk-back and multi-language translation.

UHF for reduced interference. 16 PLL selectable channels for easy and reliable operation.

Built-in microphone or loudspeaker for handheld use and external microphone or earpiece for use when clipped to a belt or pocket. Open space range >100m.

GT 300R Receiver   GT300T Belt Pack Transmitter

Features:

- UHF PLL Licence-free
- 16 Selectable Channels
- Single or multi receiver capability
- Lightweight portable units with audio level adjustment
- Receiver with built-in loudspeaker for handheld use, and external ear piece for use when clipped to a belt or pocket
- Transmitter with built-in condenser microphone for handheld use, and external microphone for use when clipped to a belt or pocket
- Powered by two AA Ni-MH rechargeable batteries giving 10 ~ 12 hours use on full charge
- Intelligent chargers for 2, 10, 20 units
- Accessories available - lanyard and disposable ear pads

System Package Details:

- **GT Set One:** 1 x DC 320 Charging Flight Case
  9 x GT 300R Receiver
  1 x GT 300T Belt Pack Transmitter
- **GT Set Two:** 1 x DC 320 Charging Flight Case
  19 x GT 300R Receiver
  1 x GT 300T Belt Pack Transmitter

Specifications:

Model:	GT402T	GT502T
System FM Carrier	UHF PLL Synthesized	UHF PLL Synthesized
Frequency Range	740MHz ~ 865MHz (bands according to regulation)	740MHz ~ 865MHz (bands according to regulation)
Channel Frequencies	16 Pre-programmed switchable	16 Pre-programmed switchable
Frequency Stability	±0.005%	±0.005%
Maximum Deviation	±50kHz with level limiting	±50kHz with level limiting
Dynamic Range	<80dB	<80dB
Powering	2 x AA Ni-MH batteries averaging 10 hours use on full charge	External 12v DC 500MA, AC Adaptor 115v ~ 230v AC

Model:	GT300R	GT300T
Includes	Ear piece	Omni-directional Condenser Microphone
System FM Carrier	UHF PLL Synthesized	UHF PLL Synthesized
Frequency Range	UHF 740 ~ 865MHz (according to local regulations)*	UHF 740 ~ 865MHz (according to local regulations)*
Channel Frequencies	16 Pre-programmed switchable	16 Pre-programmed switchable
Switchable Bandwidth	12MHz	12MHz
Frequency Stability	±0.005%	±0.005%
Maximum Deviation	±50kHz with level limiter	±50kHz with level limiter
Dynamic Range	<80dB	<80dB
Frequency Response	150Hz ~ 10kHz	-
RF Output	-	10mW
Powering	2 x AA Ni-MH batteries averaging 10 hours use on full charge	2 x AA Ni-MH batteries averaging 10 hours use on full charge

*UK licence free 863 ~ 865 MHz (CH70)

Model:	DC320 Charging Flight Case
Capacity	20 (receiver or transmitter belt style only)
Indicator LED	Red charging, green fully charged
Charging Current	120mA
Charging Time	Ni-MH (1300mAH) 10 ~ 12 hours
Charging Control	PWM (timer power OFF detector)

DC 302 2 Unit Desktop Charger (for hand held or belt style transmitter / receiver)
DC 310 10 Unit Charger in fitted flight case

Charging Flight Case (Transmitters sold separately): DC 320

Hand Held Transmitter: GT 402T

Transmitter: GT 502T

2 unit desktop charger: DC 302

2 unit desktop charger: DC 302

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Soundfield
Classroom Voice Reinforcement

● Soundfield Classroom Voice Reinforcement Systems

Young people spend at least 45% of their school day engaged in active listening activities, with today's classroom serving as a primarily auditory verbal environment.

However, a study in the journal of the American Medical Association showed that 14.9% of children aged 6 ~ 19 suffer from some degree of hearing impairment, either permanently or temporarily due to illness, infection or allergies.

Studies estimate that 80% of school children will have some form of hearing loss during an academic year and, with the importance of auditory learning in the classroom, the use of technology to enhance listening performance ultimately allows children to learn more efficiently.

One of the simplest and most effective solutions is an i-ceilings 'Soundfield Voice Reinforcement System'. Functioning as a mini public address system, it features an infrared wireless microphone, receiver, amplifier and either one or two 'i-ceilings Sound Panel' loudspeakers (dependent upon the size of classroom).

Thorn Grove Primary School's SEN inclusion scheme ensures that both its mainstream and hard of hearing pupils benefit from clear, effective communication using i-ceilings Soundfield Systems in all its classrooms.

● What is a Soundfield System?

'Soundfield' or a 'Soundfield Voice Reinforcement System' is essentially the integration of a 'mini-PA system' in the classroom.

Teachers' normal voice coverage

Without Soundfield, the clarity and volume of a teacher's voice will be less effective toward the back of the room.

Using Soundfield Voice Reinforcement

Using i-ceilings Soundfield Voice Reinforcement, the teacher's amplified voice will be heard at the same clear, effective level by all pupils in the room.

Under quiet classroom conditions, most teachers have enough natural volume in their voice to communicate effectively with a standard sized class. However, a number of acoustic factors (lively/noisy classes, reverberant room conditions, ambient noise from equipment and outdoor activities, hearing difficulties, etc.) can have a significant effect on clear, effective teacher/pupil communication.

The inclusion of a Soundfield System in the classroom will raise the teacher's voice above this ambient noise level, to give even voice coverage throughout the room and without the need to shout or raise one's voice. This will provide significant benefits for teacher/pupil communication and understanding.

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Soundfield
Classroom Voice Reinforcement

● The benefits of Soundfield in the classroom...

All children benefit from the improved speech clarity of a Soundfield System. Academic improvements are consistently noted in:

- Task behaviour
- Reduced voice strain
- Attentiveness
- Better attendance

- Less repetition required
- Understanding of instructions
- Improved verbal recognition

The inclusion of Soundfield Voice Reinforcement in the classroom provides wide ranging benefits not only to pupils and hard of hearing students, but also to teachers and acoustic/architectural designers and specifiers.

In addition to the above outstanding benefits, pupils also benefit from:

Pupils:
- More effective deciphering of language in early learning years
- Better understanding of teacher's voice for 'second language' learning
- Assists temporary hearing deficiency, common in early learning years

Teachers:
- Improved clarity of voice and understanding
- Reduced voice strain, illness and stress
- Less repetition required
- Assists inclusive teaching for SEN students

SEN students:
- Assists inclusive learning
- Easily integrates with induction loop systems
- Proven learning improvements for pupils with ADHD
- Many children with Down syndrome who have fluctuating conductive hearing loss perceive significantly more speech

Specifiers and Installers:
- Unparalleled even sound coverage
- Reduced number of loudspeakers required
- Reduced microphone feedback
- Reduced loudspeaker theft or damage
- Secure wireless signal for privacy rooms

Teacher wears lightweight 'pendant' infrared wireless microphone

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Soundfield
Classroom Voice Reinforcement

• The i-ceilings Soundfield Solution

In its simplest form, a Soundfield System consists of the following components:

- Wireless microphone worn by the teacher
- Wireless microphone receiver
- Amplifier
- Loudspeakers
- Connection cables

The i-ceilings Soundfield Solution benefits from further unique component features to provide what we truly believe is the most advanced and effective system on the market.

1) Teacher-worn Infrared Microphone
2) Infrared Microphone Receiver
3) i-ceilings unique Sound Panel Loudspeaker and Integrated Amplifier
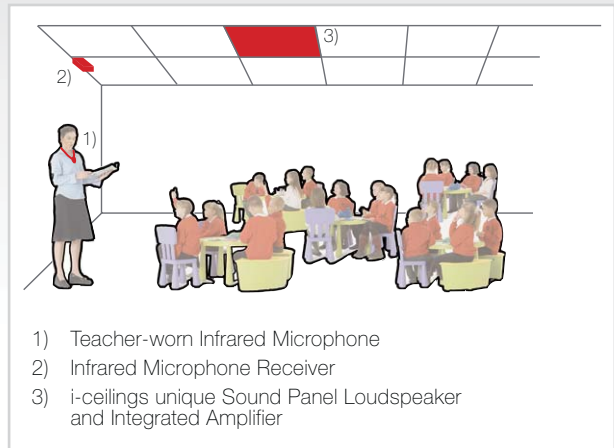
The unique i-ceilings Soundfield System features:

• i-ceilings Sound Panel Loudspeakers

Our 'i-ceilings Sound Panel' is a unique loudspeaker which fits into a suspended ceiling in the same manner as a standard ceiling tile.

This revolutionary Sound Panel loudspeaker provides unparalleled levels of even sound coverage, ensuring all students hear an equal volume level of the teacher's voice. Furthermore, i-ceilings panels are virtually unidentifiable in the ceiling ensuring aesthetic consistency and greatly reducing any problems of loudspeaker theft or vandalism.

• Infrared Wireless Microphone Technology

The i-ceilings Soundfield System also benefits from the use of an 'infrared' microphone system.

Many systems on the market use 'RF' (radio frequency) wireless microphone systems, which have many operational limitations such as the number of available frequency channels, license costs and signal overspill.

Our IR wireless system overcomes these limitations, being license-free and, by using light to transmit the microphone signal (just like your TV remote control), the signal cannot 'overspill' into adjoining classrooms; providing the ideal multi-room solution.

For more information on the benefits and application of Soundfield in the classroom, go online to:

www.soundfield.uk.com

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Soundfield
Classroom Voice Reinforcement

• i-ceilings 'in-ceiling' Soundfield Systems

Our flagship i-ceilings infrared Soundfield systems are arguably the most technically advanced and acoustically effective systems on the market.

System Benefits:
- Unobtrusive, yet highly effective voice reinforcement in the classroom
- Unidentifiable loudspeaker solution reduces damage or loss due to theft or vandalism
- Infrared wireless microphone technology allows unlimited adjacent room systems without licensing issues
- Easily integrated with other classroom/teaching technologies such as induction loops, personal FM hearing assistance systems, interactive whiteboards, laptops, etc,...

• Soundfield PACK A:
i-ceilings CS4000 / infrared Installed Soundfield System - (60m² coverage)

- 1 x CS4000ME/AMP   Amplified i-ceilings Sound Panel
- 1 x APA/APL   CD/MP3/Laptop Input Wallplate
- 1 x IWM-402   Pendant Transmitter/Microphone
- 2 x IS-20A   Infrared Sensors
- 1 x HC-40   Drop-in Charger for IWM-402
- 1 x IWR-220   Infrared Receiver

...plus connecting cables, equipment support tray, safety clip & wire, Transmitter batteries and manuals

• Soundfield PACK B:
i-ceilings 2 x CS4000/ infrared Installed Soundfield System - (120m² coverage)

- 1 x CS4000ME/AMP   Amplified i-ceilings Sound Panel
- 1 x CS4000ME   i-ceilings Sound Panel (Slave)
- 1 x APA/APL   CD/MP3/Laptop Input Wallplate
- 1 x IWM-402   Pendant Transmitter/Microphone
- 2 x IS-20A   Infrared Sensors
- 1 x HC-40   Drop-in Charger for IWM-402
- 1 x IWR-220   Infrared Receiver

...plus connecting cables, equipment support tray, safety clips & wires, Transmitter batteries and manuals

• Soundfield PACK C:
i-ceilings PRO AMP / infrared Installed Soundfield System - (60m² coverage)

- 1 x PRO ME/AMP   Amplified i-ceilings PRO Sound Panel
- 1 x APA/APL   CD/MP3/Laptop Input Wallplate
- 1 x IWM-402   Pendant Transmitter/Microphone
- 2 x IS-20A   Infrared Sensors
- 1 x HC-40   Drop-in Charger for IWM-402
- 1 x IWR-220   Infrared Receiver

...plus connecting cables, equipment support tray, safety clip & wire, Transmitter batteries and manuals

NB: Infrared Transmitters and Microphones:
These Soundfield Packs feature the IWM-402 Pendant Microphone / Transmitter as standard. A handheld microphone option is also available (Part No. IWH-401).

Headset Microphone: MC–76SJ

Pendant Microphone / Transmitter: IWM–402

Handheld Microphone: IWH–401

Need help choosing the right product? Call our technical support team now on:

Tel. +44(0)115 977 0075

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

Soundfield
Classroom Voice Reinforcement

• 'Surface-mount' Soundfield Systems

Though much of the success of our Soundfield systems has been based on our unique i-ceilings Sound Panel Loudspeakers, there are an increasing number of systems being installed into classrooms which do not feature a suspended ceiling.

Our Packs F & G have been developed for either wall-mounting (PACK F) or surface mounting to a solid or plasterboard ceiling (PACK G). Both systems feature our own UK designed and built IRX Wallmount Integrated Amplifier/Infrared Receiver, developed specifically for Soundfield classroom voice reinforcement.

Designed to be completely safe and child-friendly, the IRX features 20W amplifier, infrared wireless microphone technology, microphone & line inputs (for integration of laptop, MP3, DVD, etc) and level/tone control, whilst remaining extremely tamper-proof against potential 'wandering hands'.

• Soundfield PACK F:
Wallmount Loudspeakers / infrared
Installed Soundfield System - (60m² coverage)

- 1 x IRX — Wallmount Amplifier/IR Receiver
- 4 x FBT Project 315WT — Wallmount Loudspeakers
- 1 x IWM-402 — Pendant Transmitter/Microphone
- 2 x IS-20A — Infrared Sensors
- 1 x HC-40 — Charger for IWM-402

...plus connecting cables, safety clips & wires, Transmitter batteries and manuals

• Soundfield PACK G:
i-ceilings Ceiling Surface-mount / infrared
Installed Soundfield System - (60m² coverage)

- 1 x IRX — Wallmount Amplifier/IR Receiver
- 1 x CS4500 — Surface-mount i-ceilings Sound Panel Loudspeaker
- 1 x IWM-402 — Pendant Transmitter/Microphone
- 2 x IS-20A — Infrared Sensors
- 1 x HC-40 — Charger for IWM-402

...plus connecting cables, safety clip & wire, Transmitter batteries and manuals

NB: Infrared Transmitters and Microphones:
These Soundfield Packs feature the IWM-402 Pendant Microphone / Transmitter as standard. A handheld microphone option is also available (Part No. IWH-401).

Headset Microphone: MC–76SJ

Pendant Microphone / Transmitter: IWM–402

Handheld Microphone: IWH–401

Soundfield
Classroom Voice Reinforcement

- **Outreach Plates:** Audio Input Extension System

A range of wall, ceiling and desk mountable single gang audio input plates specifically designed to increase the audio input capability of any audio system. A total of six plates are available - one to suit virtually every conceivable variant of audio input connector - and each featuring a built-in mixer, pre-amp, input level control and balancing output.

See page 186 ~ 187 for full details of the Outreach Plate product range.

- **APJ:** 3.5mm Jack Outreach Plate

Accepts balanced or unbalanced microphones with 3.5mm mono jack plugs. Includes an onboard mic to line level converter, high gain pre-amplifier and 8V phantom power.

- **APL:** Dual Phono Line Level Outreach Plate

Accepts two line-level signals (usually from a stereo source such as a TV, CD, tape or DVD). Includes an on-board dual phono to mono converter. An ALS SCART to dual phono lead is also available to facilitate the connection of TVs, VCRs, etc, to the APL.

- **APQ:** ¼" Jack Outreach Plate

Accepts balanced or unbalanced microphones with 6.35mm (1/4") jack plugs. Includes an on-board mic to line level converter, high gain pre-amplifier and 8v phantom power.

- **APXM:** XLR Microphone Level Outreach Plate

Accepts balanced or unbalanced microphones with standard 3 pin female XLR connectors. Includes an on-board mic to line level converter, high gain pre-amplifier and 8v phantom power.

- **APXL:** XLR Line Level Outreach Plate

Accepts standard 3 pin female XLR feeds from audio equipment such as stage or church mixing desks, etc.

- **APM:** Omni-Directional Plated Mic Outreach Plate

A self-contained omni-directional electret microphone complete with on-board mic to line level converter. Ideal for mounting in ceilings, walls or desks, the unit offers excellent coverage (typically up to 25m^2 when located at a ceiling height of 2.5 ~ 3 metres).

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

✉ info@cie-group.com   ☎ +44 (0)115 977 0075   175

Parkfields Middle School, Blyth England

Parkfields Middle School's newly-built science laboratories embrace a whole host of educational technologies including interactive whiteboards, overhead PTZ cameras and remote control blackout blinds. Communication with students is significantly enhanced using i-ceilings Soundfield Classroom Voice Reinforcement.

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

Induction Loop Systems

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

• Which Induction Loop System should I use?

The PDA range of induction loop equipment is one of the most comprehensive in the UK. It comprises a huge range of amplifiers, microphones, connector plates and test equipment covering virtually every conceivable AFILS application.

Before deciding which induction loop system to use, you first need to ascertain the size of the area to be covered in square metres (m²). Bear in mind it may not be necessary to cover the whole of the area, for example in a church only the pews may require coverage.

To calculate the size of the area in square metres, multiply the length by the width. For example, a room 6m x 6m in size would equal 36m². The coverage provided by an AFILS amplifier is also quoted in square metres. The chart below, and information in the rest of this section, will help you select the best PDA Range product(s) for the job.

Designed to meet or exceed the requirements of BS7594 and EN60118-4 when correctly installed, all of the amplifiers in the PDA range offer excellent intelligibility, true current mode amplification, phantom power (for electret microphones) and full compatibility with the 'outreach plate' audio input extension system (except the PL1, VL1 and DL50). Many are also available in kit format for ease of specification, purchase and installation.

• Induction Loop Amplifier Selection Chart

PDA PRODUCT	SIZE OF AREA REQUIRING COVERAGE
PL1 portable loop kit ML1/K counter loop kit PDA102C counter loop kit VL1/B1 vehicle loop kit	Counters, desks, tables & other small areas up to 1.2m²
PDA102L/R/S small room kits DL50/K domestic loop kit	Rooms up to 49m² (7 x 7 m)
AK RANGE loop kits PDA200E amplifier	Rooms up to 120m² (11 x 11 m)
PDA200/2 professional loop amplifier	Rooms up to 200m² (14 x 14 m)
PDA500/2 professional loop amplifier	Rooms up to 500m² (22 x 22 m)
PDA1000/2 professional loop amplifier	Rooms up to 900m² (30 x 30 m)

ML1/K: Counter Induction Loop System

The ML1/K counter induction loop amplifier is ideal for use in post offices, banks, building societies, ticket offices and reception areas.

Mountable on a standard UK 25mm double gang back box, it can generate a loop listening field of approximately 1 to 1.5 metres and includes one microphone input, one balanced line level audio input and indicators for input peak, mains on and loop strength.

A number of easy to adjust user and engineer controls are also provided.

Microphone and loop cable are supplied as part of the kit.

Features:

- Attractive, compact design blends with any decor
- Ideal for banks, post offices, small meeting rooms, reception desks, ticket booths and any other application requiring restricted or small area coverage
- Requires no specialist audio experience or connectors - can be fitted by any competent electrician
- Space-saving double-gang wall-mounting amplifier fits standard UK 25mm back boxes (requires fixed mains wiring)
- Omni-directional AMT microphone (supplied) plugs directly into 3.5mm socket on the amplifier's front
- Line/outreach socket also provided (max. 3 outreach plates per system)
- User-adjustable mic. sensitivity and engineer adjustable loop drive and input level controls

Typical ML1/K counter/ticket booth application:
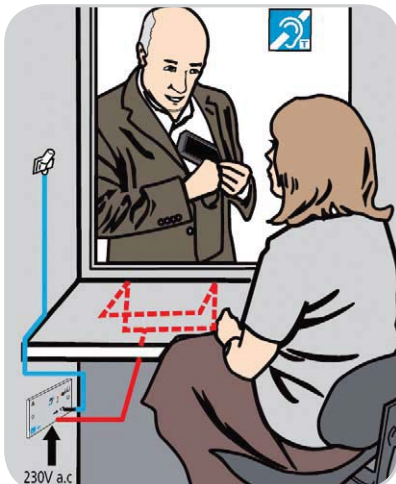
Specifications:

Model:	ML1/K
Type	Wall mounting (requires fixed mains wiring and a 25mm back box)
Coverage	1.2m² approx.
Inputs 1kHz	1 x 3.5 mm remote mic. socket; 1 x Line/Outreach socket
Indicators	Input level; power on; loop drive meter
Controls	On/off button; adjust auto-shut off timer
Kit Content	ML1 amplifier; AMT microphone; TX2 pre-formed counter loop; 'AFILS fitted' sticker
Dimensions	143(W) x 83(H) x 32(D) mm
Weight	0.3kg (amplifier only)

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

PDA102 Series: Induction Loop Kits

SigNET's PDA102 audio frequency induction loop amplifier is ideal for any application requiring restricted or small area coverage.

Available in a variety of cost-effective kit formats, it includes a 3.5mm microphone input (with 9v phantom power) and a unique 'Outreach' input which allows the connection of multiple microphone and line level inputs via a series of single gang audio connector plates.

The amplifier's input(s) can be easily adjusted for optimum performance using the rotary level control provided on its front and an adjustable drive control is also included, allowing the amplifier's output stage to be set-up to suit the exact characteristics of any room.

The PDA102's state-of-the-art audio processor features an automatic gain control which compensates for poor microphone techniques and helps suppress loud noises, hisses and clicks. The amplifier's true current mode amplification circuitry guarantees excellent and consistent sound quality for the hearing impaired.

The amplifier is designed to be free-standing or wall-mounted using the keyholes provided and installation is further aided by the provision of two set-up indicators (Peak and Limit) and a 'Power On' LED.

Features:

- Ideal for ticket counters, desktops, TV lounges, interview rooms, etc
- Provides max. square room coverage of 49m^2 (7 x 7 m). Kitted 'counter loop' version provides approximately 1.2m^2 coverage
- Attractive, compact design
- Includes one 3.5mm microphone input with 9v phantom power
- Compatible with SigNET's unique 'Outreach plate' audio input extension system (allows the connection of up to 10 additional mic. or line level inputs via a series of separately available audio connector plates)
- Input Limit, Output Peak and Power On indicators
- Adjustable Limit and Drive controls
- Compact free-standing design with keyholes provided for optional wall-mounting
- Available in a variety of cost-effective kit formats that are suitable for use in ticket counters, small meeting rooms and TV lounges
- Designed to meet or exceed the requirements of BS7594 and EN60118-4 when correctly installed
- Can be used to help building managers and service providers comply with the requirements of BS8300, the Disability Discrimination Act and the Care Standards Act

PDA102C: Counter Loop Kit

Everything required for a stand-alone counter loop system for a ticket office, reception desk, meeting room or any other area where a degree of privacy is required. Includes an AMT tie/desk microphone, a TX121 counter loop and two 'loop in use' stickers.
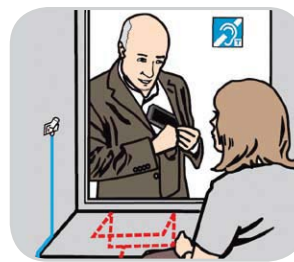
PDA102L: Small Room Kit (Tie/Desk Microphone version)

Ideal for council chambers, seminar rooms and doctors' surgeries up to 7m x 7m in size. Includes an AMT tie/desk microphone, 30m of loop cable and two 'Loop in Use' stickers.

PDA102R: Small Room Loop Kit (Plated Microphone version)

The PDA102R is similar to the PDA102L but instead of an AMT tie/desk mic. it includes an APM omni-directional plated microphone which is ideal for mounting in suspended ceilings. Also includes 30m of loop cable and two 'Loop in Use' stickers.
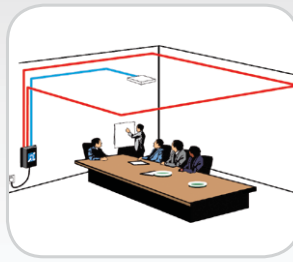
PDA102S: TV / Music Lounge Loop Kit

The PDA102S is designed for use in areas such as nursing home TV lounges where it allows hearing aid users to enjoy TV/radio broadcasts. It includes an APS scart lead, an APL dual phono Outreach connection plate, 30m of loop cable and two 'Loop in Use' stickers.

Outreach Compatible:

The PDA102 Series is fully compatible with SigNET's unique 'Outreach Plate' audio input extension system. This system allows the connection of multiple microphone or line level inputs via a range of specially designed single gang connector plates covering the most common variants of audio connector including XLR line, XLR mic., 3.5mm jack, dual phono and 1/4" jack.

A maximum of 10 plates (any mix) can be daisychained to the amplifier's Outreach socket using standard two pair audio cable such as Belden 8723.

Specifications:

Model:	PDA–102C/L/R/S
Rated supply voltage and frequency	230v AC @ 50/60Hz
Rated power consumption	20W
Maximum r.m.s. output current	2.1A
Maximum peak output current	2.8A
Maximum r.m.s. load voltage	5.5V
Total harmonic distortion	<0.1%
Maximum area of a square loop	49m^2 (7m x 7m)
Recommended loop conductor size	0.5mm^2 @ <35metres loop length or 1.0mm^2 @ >35metres to <50metres loop length (inc. tails)
Recommended number of turns	1
Frequency response –3dB	120Hz ~ 5kHz as per IEC 60118-4
Input signal level	Mic: -50dBV Unbalanced, Outreach: -10dBV balanced (referenced to full output 1kHz sine wave into 1Ω load with controls at max.)
Input impedance	Mic: 1kΩ; Outreach: 20kΩ
Microphone phantom power	9v DC
Signal to noise ratio	-62dB
AGC Ratio	2:1
Amplifier mode	True Current Mode
Control & indicator labels / functions	Green Power LED, Red Limit LED, Red Peak LED, Limit control, Drive control
Special features	Outreach plate connector allowing the connection of up 10 outreach plates
Connections	Mains - IEC Socket 230v 20W; Loop Output - 2 Way Push Terminal; Outreach – 4 Way Plugable screw terminal; Microphone – 3.5mm mono jack socket
Dimensions	136(W) x 56(H) x 175(D) mm
Weight	1.25kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield

Induction Loops

SigNET

• **DL50/K:** Domestic Induction Loop System (50m² coverage)

SigNET's DL50/K domestic loop amplifier kit includes everything you need to create a high quality stand-alone induction loop system for a bedroom, living room, TV lounge or study.

Carefully designed to sit discreetly alongside all types of audio-visual equipment, the amplifier features one set of phono inputs (for direct connection to television sets, etc), two microphone inputs and an alert input (for connection to fire alarms, doorbells, etc).

Screwdriver-adjustable drive, level, mix and tone controls are provided, allowing the system to be tailored to suit the exact requirements of any room, with installation further aided by the provision of a headphone socket, output current meter, input peak LED and an easy-to-follow installation guide.

Features:

- Kit includes:-
  1 x DL50 induction loop amplifier
  1 x Plug-top power supply
  1 x 33m reel of induction loop cable
  1 x SCART-to-double-phono audio lead
  1 x Microphone c/w mounting attachments
  1 x Microphone c/w mounting attachments

- Free-standing - ideal for bedrooms, living rooms, TV lounges, studies and other domestic applications

- Simple to adjust, tamper-resistant drive, level, tone and mic. priority controls

- Input peak, output current, signal present and power on LEDs

- Alert tone input for doorbells, fire alarms, security systems, etc.

- Attractively-designed amplifier provides max. square room coverage of 50m² (7m x 7m) or max. rectangular room coverage of up to 100m² (5 x 20 m) (Longer lengths of loop cable may be required for rectangular rooms)

- Headphone socket aids system set-up

- Connections provided for two 3.5mm electret microphones (one mic. is provided in the DL50/K kit) and one SCART-todouble-phono audio lead (other leads are available for purchase if required)

- Automatic compressor limiter

- Full 2Ω drive current capability for increased coverage at higher frequencies

- Fully compliant with EN60118-4 (formerly BS6083) and BS7594:1993

Typical DL50/K domestic TV lounge application
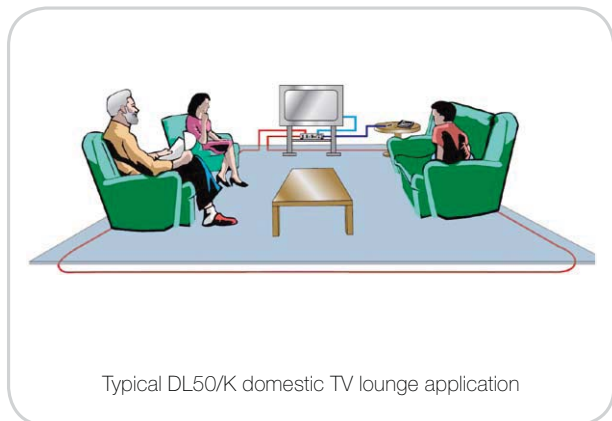
Specifications:

Model:	DL50/K
Type	Free standing, Plugtop mains lead supplied
Coverage	50m² approx.
Inputs:1kHz	2 x 3.5 mm microphone sockets, 1 x dual phono (line) socket, 1 x alert
Indicators	Input level; loop current meter; power on
Controls	Input level, loop drive, tone, microphone priority
Kit Content	DL50 amplifier, plug-top power supply, 33m of loop cable, SCART-to-double-phono lead, AMT microphone, 'AFILS fitted' sticker
Dimensions	185(W) x 40(H) x 85(D) mm
Weight	0.55kg

Loudspeakers

Amplifiers

Audio Signal Processing

Audio Signal Generation

Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield

Induction Loops

PDA200E: Wall-mounting Induction Loop Amplifier (120m² coverage)

The PDA200E has revolutionised the induction loop marketplace by bringing the ability to understand, install and appreciate the technology involved to a whole new client base.

Straightforward internal screw connectors and preset controls mean no specialist audio experience or audio connectors are required. By following the simple set-up procedure, no further adjustments are necessary, allowing a top quality assistive listening system for the hard of hearing to be set-up in its entirety by new and experienced installers alike.

No less than four easy-to-access inputs are provided:

- Balanced/unbalanced mic (with phantom power for use with electret mics)
- Balanced/unbalanced line (for the connection of TV and other audio feeds)
- Alert tone switch (a tone generator for use with doorbells, fire alarms, etc)
- 100v line (for the connection of PA system audio feeds)

The amplifier's state-of-the-art current drive audio processing circuitry includes an automatic compressor/limiter which maintains the loop signal within a small dynamic range to improve intelligibility. Manual adjustments can also be made using the amplifier's internal tamperresistant drive, level and tone controls, allowing the system to be tailored to suit the exact requirements of any room.

Features:

- Ideal for meeting rooms, lecture theatres, churches, schools, TV lounges, shops and other small to medium sized applications
- Provides max. square room coverage of 120m² (11 x 11 m) or max. rectangular room coverage of 250m² (10 x 25 m)
- Straightforward internal screw connectors
- Wall mountable for permanent installation – ideal for schools and colleges where rooms are often left unsupervised
- Internal tamper-resistant drive, level and tone controls
- One balanced/unbalanced microphone input
- One balanced/unbalanced line level input
- Alert tone switch input for doorbells, fire alarms, security systems, etc
- 100v line input for PA system connection
- Fully automatic compressor-limiter
- Full 2Ω drive capability for increased coverage at higher frequencies
- Compatible with SigNET's unique 'outreach plate' input extension system
- Available in a variety of kit formats to suit a host of typical loop installations
- Fully compliant with EN60118-4 (formerly BS6083) and BS7594:1993

A typical PDA200E meeting/seminar room installation using items supplied in our AKM1 kit

Inputs:

Model:	PDA200E
Three 5mm screw connector inputs are available - mic., line & 100v. If more than one is used, the signals are mixed	
MICROPHONE	
Input impedance	600Ω balanced/unbalanced
Sensitivity	2 ~ 5mv (-46dB to -50dB)
Phantom	12v
LINE	
Input impedance	>10kΩ balanced/unbalanced
Sensitivity	0dBv (300mv rms to 1.5v rms)
100V LINE	
Input impedance	200kΩ
Sensitivity	+40dBv
ALERT	Closing a volt-free switch across this input generates a 2kHz tone through the loop.

Outputs:

Model:	PDA200E
Type	Current mode
Loop connector	Screw connector
Cable	1.0-2.5m²
Loop coverage (square room)	120m² max. (e.g. 11 x 11 m)
Loop coverage (rectangular room)	Up to 250m² when shortest side of loop is no greater than 10m (e.g. 10 x 25 m)
Loop drive current	4A peak; 1.8A average
Loop impedance	0.2 ~ 2Ω @ 1kHz

Specifications:

Model:	PDA200E
Mains voltage	230v AC
Power consumption	<80vA
Fuses	Internal mains input fuse 1A 20 mm (HRC)
Bandwidth	40Hz ~ 8kHz
Input dynamic range	36dB
Distortion	<0.5% THD
The PDA200E includes an amplitude compression stage that limits overload and has a dynamically variable ratio from 1:1 to10:1	
LED indicators	Input peak (limit); output drive (1,2,3 peak current); power on (power)
User controls	One level control, adjustable between -35dB to +0dB for both line and microphone One output drive control, giving a loop current adjustable between 40mA & 2.1A One mid-range cut & boost tone control (frequency = 1kHz; cut= -17dB: boost =+17dB)
Dimensions	273(W) x 200(H) x 77(D) mm
Weight	2.9kg

Loudspeakers

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Audio System Tools

Microphones (wired)

Microphones (wireless)

Portable P.A.

Soundfield
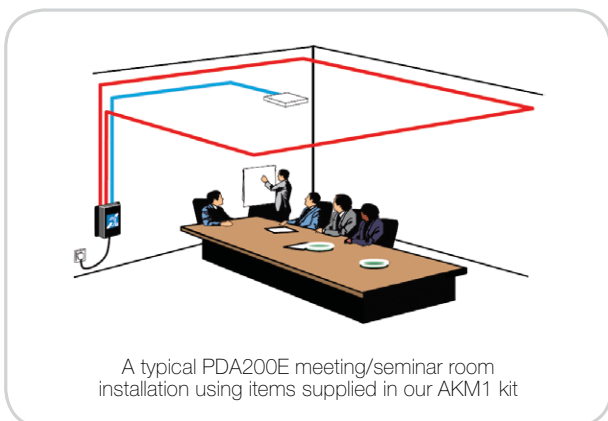
Induction Loops

- **PDA200/2:** Professional Induction Loop Amplifier (200m² coverage)
- **PDA500/2:** Professional Induction Loop Amplifier (500m² coverage)
- **PDA1000/2:** Professional Induction Loop Amplifier (900m² coverage)

This professional range of current mode audio-frequency induction loop amplifiers offer outstanding sound quality at a competitive price.

Each amplifier includes one balanced microphone input and one switchable balanced mic. or line level input, both of which will accept standard 3 pin XLR connectors. Optional 11v phantom power is also available on both inputs to allow the use of electret or condenser microphones.

By popular demand, each amplifier also features a four-way 'Outreach' input offering full compatibility with SigNET's unique Outreach Plate audio input extension system. This system allows the connection of up to 10 additional microphone or line level inputs via a range of specially designed single gang connector plates.

Other features include three level controls (one for each input), a loop drive control, an output current meter and a 'compression' activity display giving visible indication of the amplifier's compressor.

Features:

- Ideal for theatres, cinemas, churches, conference halls and other applications where top quality sound is a must
- Attractive free-standing design (optional wall and 19" rack-mounting kits available)
- Improved drive current capability provides up to 50% extra coverage
- Two XLR 3 pin input sockets - one balanced mic. and one switchable balanced mic./line
- Optional 11v phantom power available for electret or condenser microphones
- 'Outreach' input allows the connection of up to 10 additional mic. or line level inputs via a series of separately available single gang connector plates
- Adjustable level controls provided for all inputs - can be used individually or together as a three-input mixer
- Adjustable drive control allows the loop current to be adjusted to suit a room's individual characteristics
- Metal compensation control helps offset the frequency response problems associated with excessive metal in a building
- True output current meter
- Visible indication of the amplifier's compressor action via two LEDs
- 3.5mm headphone socket allows true monitoring of the output signal
- Advanced audio signal processing with automatic gain control
- On-board cooling fan on PDA500/2 and PDA1000/2 promotes stable operating temperature and increased reliability
- All models designed to meet or exceed the requirements of BS7594 and EN60118-4 when correctly installed

Typical PDA Pro-Range place of worship application

Pro–Range Amplifier	Max Sq. Room Coverage	Max 2:1 aspect ratio coverage
PDA200/2	200m²	240m²
PDA500/2	500m²	600m²
PDA1000/2	900m²	1100m²

Specifications:

Model:	PDA Pro Range
Type	Free-standing (optional wall or 2U 19" rack mount kits available); plugtop IEC mains lead provided
Coverage	200m² (PDA200/2); 500m² (PDA500/2); 900m² (PDA1000/2)
Inputs:1kHz	2 x XLR (one mic; one mic/line) and one outreach connector
Indicators	Loop drive meter; compression (high/low); power on
Controls	3 x input level controls, loop drive, metal compensation, on/off switch
Output type	Current mode
Loop connector	Four way binding posts
Recommended loop impedance	0.5 ~ 1Ω @ 1kHz. Will drive higher impedance loops with reduced area of coverage
Loop drive current @ 1Ω	PDA200/2: 6A, PDA500/2: 9A, PDA1000/2: 12A
Peak loop drive current (Measured over 5mS integration time)	PDA200/2: 8 Amps @ 1Ω, 13 Amps @ 0.5Ω, PDA500/2: 12 Amps @ 1Ω, 19 Amps @ 0.5Ω, PDA1000/2: 14 Amps @ 1Ω, 24 Amps @ 0.5Ω
Headphones	3.5mm jack socket allows monitoring of the loop signal via >32Ω headphones
Maximum area coverage	For a 400mA/M field strength ± 1dB PDA200/2 @ 6A max short term current: Square room = 200m²; Rectangular room (2:1 aspect ratio) = 240m² PDA500/2 @ 9A max short term current: Square room = 500m²; Rectangular room (2:1 aspect ratio) = 600m² PDA1000/2 @ 12A max short term current: Square room = 900m²; Rectangular room (2:1 aspect ratio) = 1100m²
Performance	Frequency response: 20Hz ~ 14 kHz + -3dB; Distortion: Less than 0.5%, S ~ N ratio: Better than –65dB any input
Metal Compensation	True 3dB/octave design counteracts frequency dependent absorption by metal in the proximity of the installation over a bandwidth of approximately 100Hz ~ 10kHz
Dimensions	380(W) x 80(H) x 220(D) mm
Weight	3.74kg (PDA200/2) / 3.46kg (PDA500/2) / 4.54kg (PDA1000/2)

Loudspeakers

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Audio System Tools

Microphones (Wired)

Microphones (Wireless)

Portable P.A.

Soundfield
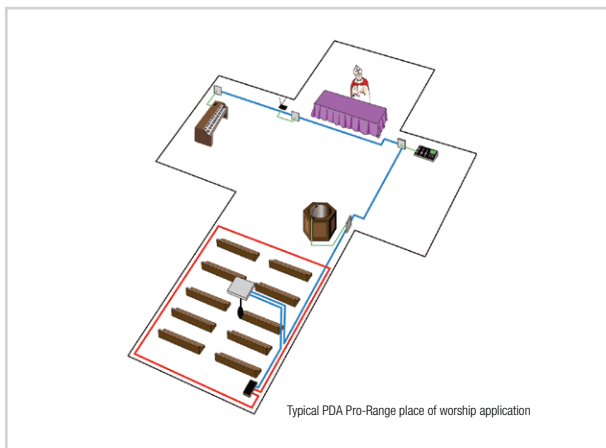
Induction Loops

FPROK: Fosmeter Induction Loop Test Kit

SigNET's new FPROK Fosmeter Pro induction loop test kit is designed to simplify the setup of an induction loop system and ensure its compliance with the latest version of BS EN 60118-4 (Magnetic field strength in audio-frequency induction loops for hearing aid purposes).

The kit includes the FPRO Fosmeter Pro induction loop tester (pictured right), an MP3 player c/w pre-loaded test tones and a set of headphones.

The Fosmeter Pro is a 400mA magnetic field strength meter and loop listener, complete with circuitry for measuring background noise, frequency response and metal compensation. It includes:

- A digital LCD display with a user-friendly interface to simplify testing

- Two 'soft' buttons which dynamically change their functions to suit the menu options being accessed

- Battery low indication and an auto-power off function that kicks in after 10 minutes of Fosmeter inactivity

- A 3.5mm headphone jack socket allowing users to listen to the loop signal using a set of HEAD1 headphones (supplied in FPROK kit)

The unit is powered from a 9v PP3 battery (provided) and is supplied in a protective canvas carrying case.

One FPROK Kit (plus ancillaries such as MP3 player/amplifier connection leads) is all it takes to ensure your loop installations comply with current British Standards.

Test Menus:

The Fosmeter Pro's test results are typically shown on its LCD as shown right. A summary of these tests appears below:

- **Field Strength Test:** Detects a pulsed 1kHz signal in accordance with BS EN 60118-4, calibrated at 400mA/m = 0dB L.

- **Background Noise Test:** Advises if the signal is acceptable, tolerable or too high in accordance with BS EN 60118-4.

- **Frequency Response Test:** Detects 100Hz, 1kHz and 5kHz in accordance with BS EN 60118-4. All three frequency readings are displayed on the same screen allowing you tell at a glance if the setup is within the +/- 3dB L required by the standard.

- **Metal Compensation Test:** This test goes beyond the scope of BS EN 60118-4 but adheres to the 3rd octave frequency spectrum advised in the standard, measuring 1kHz through 8kHz. For use with amplifiers with metal compensation controls/functions such as the PDA200/2, 500/2 & 1000/2.

- **Subjective Listening Test:** This test is designed to ensure hearing aid users receive an undistorted and clear signal in the covered area and is performed using a set of headphones (supplied) plugged into the unit's headphone socket.

Field strength	Background Noise	Frequency Resp.
Good	Acceptable	-12 -10 -13
+0.2 dB L	-41.8 dB L	100Hz 1kHz 5kHz
Hold Exit	Hold Exit	Hold Exit

Metal Comp.
1   2   4   8
Hold   Exit
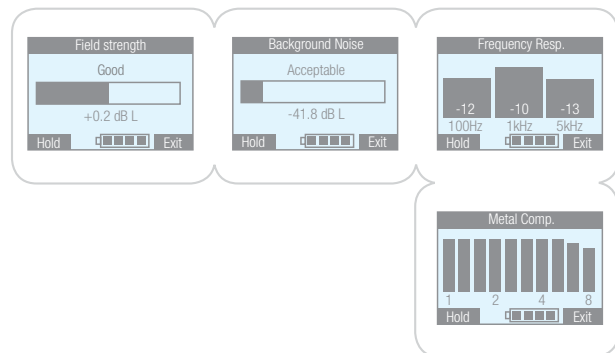
RXti2: Induction Loop Receiver

The RXti2 Induction Loop Receiver picks up audio signals from the loop through a pair of headphones (not supplied) and allows the signal quality to be assessed for testing purposes.

Designed to allow installers and the non hard of hearing to test and assess the quality and availability of a loop system. The RXTi2 may also be used in non hard of hearing applications such as multi-lingual translations, museum talk-through systems and stage talk-back systems.

Features:

- Soft start function
- 50Hz filter (to cut out mains hum pick up)
- Compact size
- 3.5mm headphone socket (for headset / earbud)
- Powered by 2 x AAA batteries

CAUTION: The audio output from the RXTi2 can exceed 100mW into 8Ω. This may cause hearing damage with long term exposure. Care should be taken not to use excessive volume when testing loop systems.

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Microphones (wireless)

Portable P.A.

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Induction Loops

• Outreach Plates: Audio Input Extension System

A range of wall, ceiling and desk mountable single gang audio input plates specifically designed to increase the audio input capability of any audio system. A total of six plates are available - one to suit virtually every conceivable variant of audio input connector - and each featuring a built-in mixer, pre-amp, input level control and balancing output.

Up to ten plates of any mix can be daisy-chained to one balanced line level input with cable lengths in excess of 100m easily achievable using standard two-pair audio cable (i.e. Belden 8723) with no recognisable degradation of audio signal quality.

All plates are surface mountable on 25mm single-gang back boxes and can be installed at the most convenient point on an installation, thus overcoming the need for long and potentially hazardous microphone/audio leads.

The system is ideal for conference centres, schools, leisure complexes, etc., where the need to have separate and spatially distributed audio inputs is a must.

An external DC power supply (Part No. APV) is available for stand-alone systems or for use with audio equipment that does not have a 12/24v auxiliary output.

Features:

- Can be connected to the balanced line level input of any audio system
- Fully cascadable – up to ten outreach plates can be daisy-chained to one balanced line level input
- Plates can be located at any convenient point on an installation
- Standard two-pair audio cable is ideal for most applications
- Network lengths of 100m easily achievable with no degradation of sound quality
- Built-in pre-amp, mixer and level controls included on all variants
- Overcomes the need for excessively long microphone and audio leads
- 12 ~ 32v DC operation
- +6dB overload capability
- Surface mountable on 25mm UK single gang back boxes
- Effectively acts as a multi-point distributed mixer with individual level controls
- Optional wall-mounting 'AFILS ACTIVE' and magnetic field strength indicators available for use with audio-frequency induction loop systems

A typical outreach plate system (shown connected to an audio-frequency induction loop amplifier)
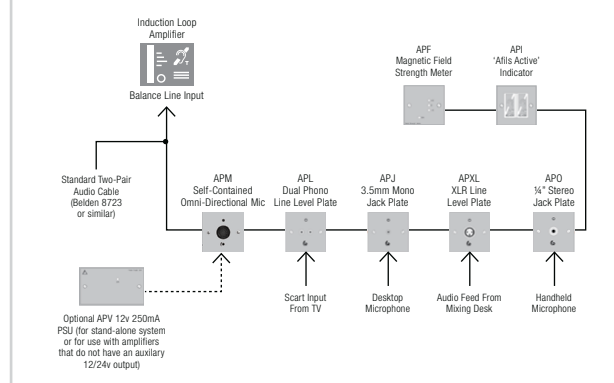
Power Requirements:

Supply volts	12 ~ 32v
Supply current	12 ~ 15mA

Common Specifications:

Common outreach plate characteristics between balanced line in and balanced line out	
Input - balanced/unbalanced line	1v (0dBv)
Output - balanced line	1v (0dBv) + 6dB (overload)
Frequency response	40Hz ~ 20kHz
Input impedence	>10KΩ
Output impedence	<100Ω
Insertion loss/gain	< ± 0.05dB
Insertion signal to noise ratio	>95dB
Insertion THD + noise	<0.01%

Individual Outreach Plate Specifications:

Model:	APJ Plate	APL Plate	APQ Plate
Input signal level	-50dBv (5mv mic)	-12dBv ~ +6dBv	-50dBv (5mv mic)
Gain	55dB	+6dB	55dB
Level control	0 ~ -46dB	-30dBv to +6dB	0 ~ -46dB
Input impedance	500Ω	>10kΩ	500Ω balance
Phantom volts	0, 8v (link select)	n/a	0, 8v (link select)
Signal to noise ratio	>75dB	>92dB	>75dB
THD + noise	<0.02%	<0.1%	<0.02%

Model:	APXM Plate	APXL Plate	APM Plate
Input signal level	-50dBv (5mv mic)	-12dBv to +6dBv	n/a
Gain	55dB	+6dB	55dB
Level control	0 ~ -46dB	-30dBv ~ +6dB	0 ~ -46dB
Input impedance	500Ω balanced	>10kΩ	n/a
Phantom volts	0, 8v (link select)	n/a	n/a
Signal to noise ratio	>75dB	>92dB	>75dB
THD + noise	<0.02%	<0.1%	<0.02%

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![SigNET]

• System Overview

The system normally has two inputs per outreach plate - a balanced line level input from the previous outreach plate and its own adjustable input. These inputs are mixed in a way that ensures the input from the previous stage is virtually unaffected whilst generating a composite signal for the output in the form of a balanced line level signal.

As very low levels of insertion loss and signal-to noise ratios can be guaranteed and the inherent interference advantage of having balanced and floating line level inputs and outputs, very long lengths of interconnecting cable may be used without significantly degrading the signal.

This, coupled with the system's cascadability, allows the designer to effectively 'tailor make' a distributed multiple input mixer that is compatible with virtually any audio system.

The Outreach Plate range:

Up to ten of the following outreach plates (any mix) can be daisy-chained to an audio system's balanced line level input:

• APJ: 3.5mm Jack Outreach Plate

Accepts balanced or unbalanced microphones with 3.5mm mono jack plugs. Includes an onboard mic-to-line level converter, high gain pre-amplifier and 8v phantom power.

• APL: Dual Phono Line Level Outreach Plate

Accepts two line-level signals (usually from a stereo source such as a TV, CD, MP3 or DVD). Includes an on-board dual phono to mono converter. An ALS SCART to dual phono lead is also available to facilitate the connection of TVs, VCRs, etc, to the APL.

• APQ: ¼" Jack Outreach Plate

Accepts balanced or unbalanced microphones with 1/4" jack plugs. Includes an on-board mic-to-line level converter, high gain pre-amplifier and 8v phantom power.

• APXM: XLR Microphone Level Outreach Plate

Accepts balanced or unbalanced microphones with standard 3 pin female XLR connectors. Includes an on-board mic-to-line level converter, high gain pre-amplifier and 8v phantom power.

• APXL: XLR Line Level Outreach Plate

Accepts standard 3 pin female XLR feeds from audio equipment such as stage or church mixing desks, etc.

• APM: Omni-Directional Plated Mic Outreach Plate

A self-contained omni-directional electret microphone complete with on-board mic-to-line level converter. Ideal for mounting in ceilings, walls or desks, the unit offers excellent coverage (typically up to 25m^2 when located at a ceiling height of 2.5 ~ 3 m).

Ancillary Devices:

Should the Outreach network be connected to an induction loop system, any of the following ancillary devices can be added:

• API: 'AFILS Active' Outreach Plate

Includes two ultra-bright LEDs in a translucent diffuser overprinted with the induction loop 'ear' symbol. The LEDs illuminate when the outreach network is powered to indicate that an AFILS system is installed. Current consumption is 30mA max.

• APF: Field Strength Meter Outreach Plate

Indicates the magnetic field strength generated by an induction loop system via three LEDs, labelled +6dB, 0dB and –6dB. The LEDs illuminate as appropriate whenever a signal is present and can be easily set up to indicate the magnetic field strength in the room centre.

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Loudspeakers

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Induction Loops

SigNET

• **PL1/K1:** Portable Induction Loop System (1.2m² coverage)

With more than 10% of the population suffering from some kind of hearing impairment, the PL1 is the ideal portable device to ensure that your environment meets the standards laid out by the DDA.

The attractively designed PL1 can be used in schools, shops, nursing homes, leisure centres, hotels, banks, GP surgeries, reception desks as well as many other private, public or civil applications where there is no permanent loop facility installed.

Made from durable ABS plastic, the unit is lightweight and tough enough to be transported and an integral battery allows the unit to be used in most environments.

The unit will cover an area of 1 ~ 2 m² and uses an integral microphone to pick up speech and conversations, (however, an external microphone may be added if required). Built-in 'cut-off timer' automatically shuts down the system after 10, 30, 60 minutes if the unit is not being used, helping to maintain battery life for prolonged use.

Features:

- Ideal for restricted person-to-person contact in areas such as banks, post offices, small meeting rooms, reception desks, open plan offices and ticket booths
- Portable, lightweight design means the system can be moved easily from location to location
- Simple one button operation
- Integral high performance microphone
- Five years' expected battery life under normal operating/charging conditions
- Auto shut-off facility (user selectable for 10, 30 or 60 minutes) helps preserve battery life
- Unit can be used as normal whilst charging from the mains

Typical PL1/K1 meeting room application

Typical PL1/K1 counter / ticket booth application
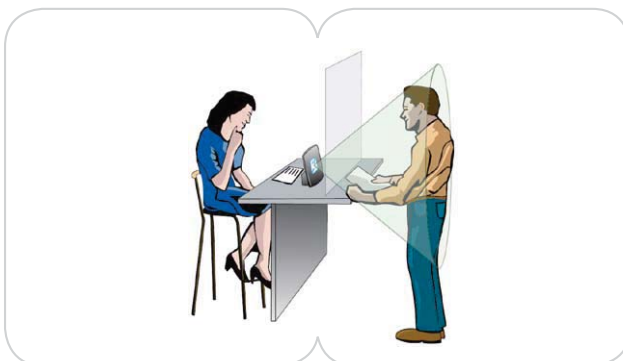
Specifications:

Model:	PL1/K1
Type	Portable
Coverage	1.2m² approximately
Inputs	2 x mic (one built-in mic. and one 3.5mm remote mic socket for AMT or AMD mics)
Indicators	Power on; input level; charging required; charging in progress, audio warning of imminent shutdown
Controls	On/off button; adjust auto-shut off timer
Dimensions	250(W) x 100(H) x 300(D) mm
Weight	1.7kg (including battery)

Loudspeakers

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(Wired)

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Induction Loops

contacta ■

IL-PL20: Portable Induction Loop System (1.2m² coverage)

The Contacta Portable Induction Loop System has been designed specifically to aid communication with people with hearing difficulties who wear a hearing aid featuring a 'T' facility. The system consists of two components; the main unit, stylishly constructed from robust ABS plastic, and a plug-in power adaptor.

It incorporates a rechargeable battery system to maintain performance at its peak and will give a minimum of 8 hours use. The battery life is monitored at all times using standby mode, incorporating a two colour display to show battery status. The display also shows that the unit is operational as it flashes in conjunction with any sounds present.

The unit is fully operational at all times and may still be used when recharging becomes necessary. An in-built socket allows for expansion using optional boundary microphones, etc. The IL-PL20 Portable Induction Loop is easy to carry and can be easily set up for use in a matter of seconds.

Features:
- Simple, stylish, robust design
- Lightweight and easy to carry
- In-built microphone and rechargeable battery
- Provides a minimum of 8 hours usage
- Battery status & operation LED display
- Microphone input for optional expansion boundary microphone
- Set-up for use in a matter of seconds

Soft Carry Case: IL–PL25
Rigid Carry Case: IL–PL24

Storage Shelf: IL–PL26

Specifications:

Model:	IL–PL20
Internal Microphone	Electret
Connections: Auxiliary Microphone	2.5mm Jack plug
Power	2.1mm Jack plug
Controls: Power On	Rocker switch
Output Voltage	12v DC
Battery Life	8 hours (min)
Dimensions	275(W) x 250(H) x 110(D) mm
Weight	1.6kg (including battery)

IL-PL21: External Boundary Microphone

Only for use with the IL-PL20 InfoLoop and IL-CL10 Clipboard Loop, this microphone features a notch filter for use when magnetic security fields are present.

Loudspeakers

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(wired)

Microphones
(wireless)

Portable P.A.

Soundfield

Induction Loops

contacta ◾

• **IL-CL10:** Clipboard Portable Induction Loop
(1.2m² coverage)

Designed for highly discreet communication with those with hearing
difficulties who wear a hearing aid featuring the 'T' facility.

Ideal for small group and one-to-one applications such as schools,
colleges and training rooms, as well as interviews, doctors surgeries,
customer service counters in retail, banking and public buildings.

Made from high impact ABS the unit is lightweight and includes internal
battery (lasts up to 8 hours on a single charge), microphone and LED
indicators which show if the unit is active or needs recharging.

Features:

• Simple, very discreet, robust design
• Lightweight and easy to carry
• In-built microphone and rechargeable battery
• Battery status & operation LED
• Microphone input for optional expansion boundary microphone
(Part No. IL-PL21)
• Set-up for use in a matter of seconds

Specifications:

Model:	IL–CL10
Integral Microphone	Electret
Connections: Auxiliary Microphone Power	 2.5mm Jack plug 2.1mm Jack plug
Controls: Power On	Rocker switch
Output Voltage	12v DC
Battery Life	28 hours (max)
Dimensions	230(W) x 320(H) x 40(D) mm
Weight	1.02kg (including battery)

Loudspeakers

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Microphones (Wireless)

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Soundfield

Induction Loops

contacta ■

- **STS-K001L:** SecuriCom Thru' Glass Speech Transfer System - Bridge Bar with Loop
- **STS-K002L:** SecuriCom Thru' Glass Speech Transfer System - Surface Mount with Loop
- **STS-K003L:** SecuriCom Thru' Glass Speech Transfer System - Flush Mount with Loop

Contacta SecuriCom™ systems enable clear voice communication between customers and service staff through glass security screens. Transactions can therefore be conducted efficiently and confidentially – without difficulty or delay – even in noisy environments. So business throughput and profitability can be maximised – and customer goodwill enhanced.

Every SecuriCom™ system uses the most advanced electronic circuitry. Its purpose-designed speaker and microphone modules ensure superb voice reproduction and reliable performance – year after year. Fitting is very straightforward, whether as part of a new build project or into existing counter facilities. Each system is stand-alone and individually plugged into the mains supply.

In use, it is hands-free for both staff and customer and is designed to remain 'ON' continuously during service hours. Communication is fully 'duplex', so there is no clipping of speech.

To provide communication assistance for users of hearing aids, any SecuriCom™ installation can be integrated with an Induction Loop system. This will aid compliance with the Disability Discrimination Act 1995.

STS-K001L

Typical Applications:

- Banks and building societies
- Benefit agencies
- Booking offices
- Bureaux de change
- Consulates and embassies
- Petrol stations
- High security environments
- Hospitals and clinics
- Passport offices
- Police stations
- Post offices
- Prisons and detention centres
- Reception counters
- Specialist vehicle applications
- Stations and airports
- Theatre information and sales kiosks
- ...and many more

Features:

- For use in noisy environments which require communication privacy
- Proximity microphones on both 'staff' and 'customer' side of screen
- Optimal voice pick-up with minimum background noise
- Easy installation: particularly suitable for retro-fitting

STS-K002L

Specifications:

Model:	STS–K001L / STS–K002L / STS–K003L
Coverage	Up to 1.2m²
Operating Current	1A
Speaker Impedance	4, 8Ω
Field Strength	Conforms to BS 6803 Pt14:1981
Quiescent Current	>50mA
Harmonic Distortion	Typically >0.02%
Power Requirement	Audio Amplifier -12v DC

Need help choosing the right product?
Call our technical support team now on:

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Christchurch Council Chambers

Christchurch Council Chambers in Dorset now benefits from greater clarity and flexibility during meetings, thanks to a fully-integrated Clockaudio wireless conference system designed and built by the CIE-Group in-house technical services team. The 40U rack features 14 x Clockaudio CW9000R UHF receivers, InterM QD amplifiers & EQs and induction loop systems, together with integrated charging stations for the 14 CW9005T wireless boundary microphones.

Racks & Cabinets

Brackets

Interactive & Projectors

Signage/3D

AV Signal Distribution

Faceplates

Cables

Connectors

Cameras

DVRs

Racks & Cabinets

≋euromet

• HT Series: High Specification 19" Rack Enclosures

Hi-tech Series of 19" enclosures, supplied in self assembly (flat pack) format for ease of transportation and storage.

Manufactured in 2mm plate steel, the units are sturdy and robust when assembled, with enclosures finished in RAL7035 (light grey) to blend into any environment.

Adjustable 19" profiles in both the front and rear of the enclosure allow flexibility for fitting equipment of various sizes into the housing.

A locking glazed door is also supplied to stop any unauthorised access to the enclosure contents. Further standard features include height adjustable feet, steel rear panel, removable access plate in bottom of enclosure and venting in the sides and top panels to assist with equipment cooling.

A full range of accessories is available (see pages 196 ~ 200).

Features:
- Self assembly (flatpack)
- High quality manufacture
- Adjustable 19" profiles (front & rear)
- Locking glazed door
- Adjustable feet
- Cable access via bottom plate
- Venting
- Stable when assembled
- 5 sizes available

Hi-tech rack cabinet, self-assembly kit, composed of:
- one base (L:595/D:525mm) with cable access (300 x 300 mm) and 4 attachments with M10 thread
- one roof (L:595/D:525mm) with cable access (200 x 100 mm), provided to install up to 4 fans
- two sides with vent slots
- one rear cover panel
- one lockable steel door with plexiglass panel, which can be hung either left or right handed as desired (2 x keys)
- four "omega"-section bars for adjustment in depth of vertical rack strips;
- four "L"-section vertical 19" rack strips
- four 90° fixing squares
- four adjustable levelling feet
- set of mounting hardware
- assembly instructions
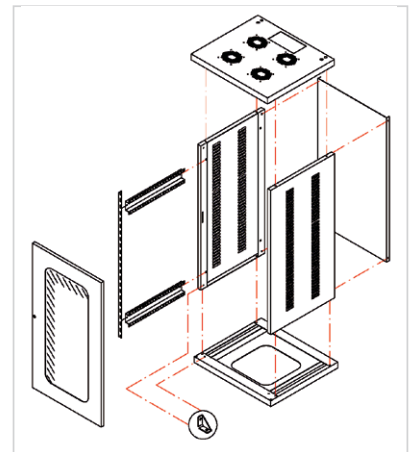
Specifications:

Model:	01511	01512	01513	01514	01515
Usable Height	12U	18U	22U	36U	40U
Master Pack	A: 0.057m³, 22kg	A: 0.057m³, 22kg	A: 0.057m³, 23kg	A: 0.057m³, 24kg	A: 0.057m³, 24kg
	B: 0.035m³, 18kg	B: 0.055m³, 26.8kg	B: 0.068m³, 31.3kg	B: 0.071m³, 20kg	B: 0.072m³, 27kg
				C: 0.072m³, 21.6kg	C: 0.071m³, 24.5kg
Mounting Height	532mm	800mm	978mm	1600mm	1778mm
External Height	616mm	884mm	1062mm	1684mm	1862mm
Internal Depth	450mm (max)	450mm (max)	450mm (max)	450mm (max)	450mm (max)
External Depth	525mm	525mm	525mm	525mm	525mm
Weight	37.6kg	46.5kg	53.3kg	60.9kg	70.8kg

Brackets

Interactive & Projectors

Signage/3D

AV Signal Distribution

Faceplates

Cables

Connectors

Cameras

DVRs

≋euromet

LP Series: Standard 19" Rack Enclosures

Euromet's cost-effective range of 19" enclosures, supplied in self-assembly (flat pack) format for ease of transportation and storage.

Manufactured in 2mm plate steel, the units are sturdy and robust when assembled and are finished in RAL9005 matt black. Fixed 19" profiles are standard in the front and back of the enclosure.

Other features include height adjustable feet and louvred venting and removable vented rear panel to assist with cooling of the installed equipment.

A full range of accessories is available (see pages 196 ~ 200).

Features:
- Self-assembly (flat pack)
- High quality manufacture
- Adjustable feet
- Venting
- Removable rear panel
- Available in 5 different sizes
- Stable construction
- Optional glazed door (supplied as option, see below)
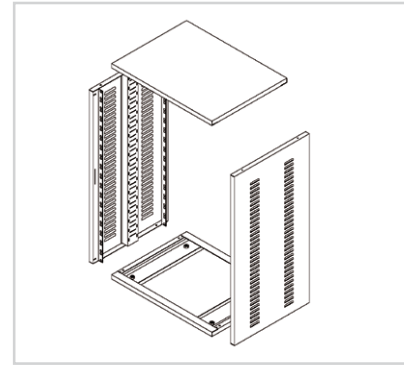
Specifications:

Model:	01226	01227	01228	01229	01230
Usable Height	8U	12U	18U	22U	26U
Master Pack	0.036m³, 20kg	0.04m³, 23.50kg	0.059m³, 28kg	0.059m³, 31.5kg	0.064m³, 33kg
External Height*	400mm	578mm	843mm	1022mm	1200mm
Internal Depth**	435mm	435mm	435mm	435mm	435mm
External Depth	500mm	500mm	500mm	500mm	500mm
Weight	11.2kg	22.6kg	26.8kg	30.3kg	31.7kg

*External height dimensions without wheels or feet
**When used with the Inter-M range of products the optional door will not fit to the front of the enclosure without the removal of the equipment's mounting handles.

Extra Deep 19" Rack Enclosures

Featuring extra deep internal useable depth (535 mm as opposed to the standard 435mm) the 19" Enclosures provide greater flexibility and space for work / equipment.

In addition, if required the 12U and 18U units can be 'stacked' to make a 30U Enclosure.

Specifications:

Model:	05370	05371
Useable Height	12U	18U
External Height	578mm	846mm
Internal Depth	535mm	535mm
External Depth	640mm	640mm

Enclosure Door Options

Lockable plexiglass doors, supplied with 2 keys and matt nickel-plated hinges with a maximum of 170° opening.

Specifications:

Model:	00540:	00541:	00542:	00543:	00544:
Master Pack Weight	1.7kg	2.68kg	3.7kg	4.59kg	5.25kg
Height	350mm	524mm	790mm	970mm	1150mm
Width	500mm	500mm	500mm	500mm	500mm
Weight	1.2kg	2.08kg	2.9kg	3.74kg	4.25kg

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● **00536:** 1U Rack Shelf

Rack shelf manufactured from steel plate (1.5 mm), finished RAL 9005, 1U, for accomodation of non-19" mounting equipment.

*Max load 40kg using this accessory:

Pair of horizontal equipment supports: **00565**

Specifications:

Model:	00536
Thickness	1.5mm
Materials	Steel
Net Weight	2.2kg
Max Load	20kg *

● **01911:** 2U Rack Shelf

Rack shelf manufactured from steel plate (1.5 mm), finished RAL 9005, 2U, for accomodation of non-19" mounting equipment.

*Max load 40kg using this accessory:

Pair of horizontal equipment supports: **00565**

Specifications:

Model:	01911
Thickness	1.5mm
Materials	Steel
Net Weight	2.35kg
Max Load	20kg *

● **01912:** 2U Lockable Rack Drawer

Lockable rack drawer manufactured from steel plate (1.5/2 mm) with telescopic slides, finished RAL 9005, 2U, for accomodation of tools, handbooks and small spare parts. Comes with two keys.

Specifications:

Model:	01912
Thickness	1.5/2mm
Materials	Steel
Net Weight	6kg
Max Load	20kg

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- **EU/R-P1:** 1U Rack Front Cover Panel

Front rack cover panel, 1U, made of aluminium (2mm), finished RAL9005, for blanking off unused sections.

Specifications:

Model:	EU/R–P1
Thickness	2mm
Materials	Aluminium
Colour	RAL 9005
Weight	0.15kg

- **EU/R-P2:** 2U Rack Front Cover Panel

Front rack cover panel, 2U, made of aluminium (2mm), finished RAL9005, for blanking off unused sections.

Specifications:

Model:	EU/R–P2
Thickness	2mm
Materials	Aluminium
Colour	RAL 9005
Weight	0.27kg

- **EU/R-P3:** 3U Rack Front Cover Panel

Front rack cover panel, 3U, made of aluminium (2mm), finished RAL9005, for blanking off unused sections.

Specifications:

Model:	EU/R–P3
Thickness	2mm
Materials	Aluminium
Colour	RAL 9005
Weight	0.39kg

- **EU/R-P4:** 4U Rack Front Cover Panel

Front rack cover panel, 4U, made of aluminium (2mm), finished RAL9005, for blanking off unused sections.

Specifications:

Model:	EU/R–P4
Thickness	2mm
Materials	Aluminium
Colour	RAL 9005
Weight	0.53 kg

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- **00618:** 1U Rack Front Ventilation Panel

  Front panel, 1U, in aluminium (2 mm), finished RAL 9005, punched for ventilation.

Specifications:

Model:	00618
Thickness	2mm
Materials	Aluminium
Colour	RAL 9005
Net Weight	0.14kg

- **02014:** 1U Rack Front Security Panel

  Front panel, 1U, made of steel plate (1.2 mm), finished RAL 9005, punched, for protection of projecting equipment.

Specifications:

Model:	02014
Thickness	1.2mm
Materials	Aluminium
Colour	RAL 9005
Net Weight	0.35kg

- **02015:** 2U Rack Front Security Panel

  Front panel, 2U, made of steel plate (1.2 mm), finished RAL 9005, punched, for protection of projecting equipment.

Specifications:

Model:	02015
Thickness	1.2mm
Materials	Aluminium
Colour	RAL 9005
Net Weight	0.48kg

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02012: 1U Plexiglass Security Rack Cover

Front panel, 1U, made of steel plate (1.2 mm), finished RAL 9005, with plexiglass window, to protect equipment. Avoids unauthorised access.
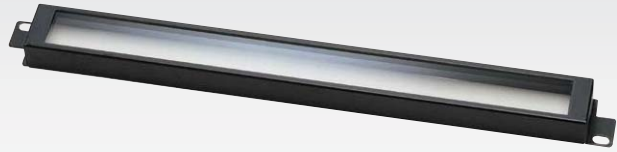
Specifications:

Model:	02012
Thickness	1.2mm
Materials	Steel
Colour	RAL 9005
Net Weight	0.41kg

02013: 2U Plexiglass Security Rack Cover

Front panel, 2U, made of steel plate (1.2 mm), finished RAL 9005, with plexiglass window, to protect equipment. Avoids unauthorised access.

Specifications:

Model:	02013
Thickness	1.2mm
Materials	Steel
Colour	RAL 9005
Net Weight	0.59kg

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• Hi-Tech Rack Upright Supports

Additional pair of 'omega'-section 19" rack strips with fixing holes, finished RAL7035. Permits fixing in different positions in depth on 'omega'-section horizontal strips.

Guarantees additional support for heavyweight equipment.

Specifications:

Model:	Hi–Tech Rack Upright Supports
Link With	Rack Series hi-tech
Thickness	2mm
Materials	Steel
Colour	RAL 7035

Specifications:

Model	Usable Height	Item	Net Weight	Height
01841	12U	Pair Rack Hi-Tech Upright 12U, RAL7035	1.4kg	532mm
01842	18U	Pair Rack Hi-Tech Upright 18U, RAL7035	2.1kg	800mm
01843	22U	Pair Rack Hi-Tech Upright 22U, RAL7035	2.6kg	978mm
01844	36U	Pair Rack Hi-Tech Upright 36U, RAL7035	4.2kg	1600mm
01845	40U	Pair Rack Hi-Tech Upright 40U, RAL7035	4.7kg	1778mm

• 02021: Non-Lockable Rack Wheels

Specifications:

Model:	02021
Net Weight	0.24kg
Max Load	50kg

• 02020: Lockable Rack Wheels

Specifications:

Model:	02020
Net Weight	0.24kg
Max Load	50kg

• 00565: Pair of Equipment Support Brackets

Pair of brackets made of steel plate (2mm), galvanized.

These bars guarantee an additional support of heavyweight equipment. Fixed by coupling on 'omega'-section uprights.

Specifications:

Model:	00565
Thickness	2mm
Materials	Steel
Treatments	Galvanization - Zincatura 8005
Net Weight	0.056kg

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PDUA-MH1023-0801:
8 Port Monitored PDU - 10A

PDUA-MH1623-0801:
8 Port Monitored PDU - 16A

This monitored Power Distribution Unit provides live current consumption monitoring to its built-in current meter and remotely via web interface.

When current consumption exceeds the pre-set threshold, the monitored PDU will send email alerts or 'trap' network notifications and isolate the PDU to prevent damage to the system.

Free Power Management Software is bundled in with the PDU, displaying power consumption and event data and allowing control of power conditioning.

Features:

- Built-in web server for real-time monitoring of current consumption
- Built-in true RMS current meter
- Audible alarm should power consumption exceed set threshold
- Email alert sent to remote monitor and powertrip, should power consumption exceed set threshold
- Built-in circuit breaker
- Only 1U high and suitable for rack mounting

System Racks with Monitored PDU installed

Remote Monitor with Power Management Software

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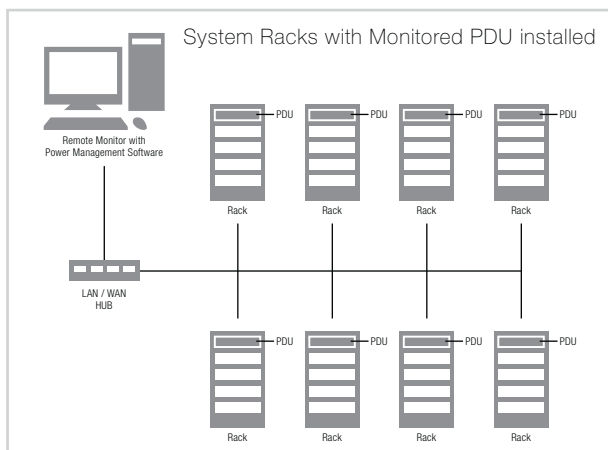
Specifications:

Model:	PDUA−MH1023−0801	PDUA−MH1623−0801
Number of Ports	8	8
Capacity	10A	16A
Input Voltage	230v	230v
Output Socket	IEC	IEC
Interface	RJ45: Ethernet for connecting to PC	
Frequency	50/60HZ full range	
LED indicator	Yellow LED x 1 (Current Meter), Green LED x 1 (IP Address)	
Alarm	Warning: 1 beeps per second Overload: 3 beeps per second Circuit Breaker: triggered - continuously beeps	
Meter	3 Digital Meter x 1 Range: 0A ~ 20A (true RMS) Resolution: 0.1A Precision: +/- 0.1 AMP	
Operating Temperatures	0 ~ 40°C	
Storage Temperatures	-25 ~ 65°C	
Humidity	0 ~ 90%	
Height	44mm (1u)	

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• PDUA-PH1623-0801:
8 Port Per-Outlet Monitoring PDU

This intelligent power management unit provides live current consumption monitoring per power outlet port, reporting directly to the unit's built-in current meter and remotely via web interface.

When current consumption of any individual power port exceeds the pre-set threshold, the POM PDU will send an email alert to the remote monitor (such as a computer, tablet, etc) and will isolate the individual outlet port to protect the system.

Features:

- Per-outlet port consumption monitoring
- Built-in web server for real-time monitoring of current consumption
- Built-in true RMS current meter
- Audible alarm (should power consumption exceed set threshold)
- Email alert sent to remote monitor and power trips (should power consumption exceed set threshold)
- Real time, remote on/off power control of each unit
- Built-in circuit breaker
- SNMP support
- Outlet and circuit status LED indicators
- Supports power-up sequence
- Only 1U high and suitable for rack mounting

System Racks with Monitored PDU installed

Remote Monitor with Power Management Software

LAN / WAN HUB

PDU   PDU   PDU   PDU

Rack   Rack   Rack   Rack

PDU   PDU   PDU   PDU

Rack   Rack   Rack   Rack

Specifications:

Model:	PDUA–PH1623–0801
Number of Ports	8
Capacity	16A
Input Socket	1/EC 320 C20
Output Socket	8/EC 320 C13
Power Cord	1/EC 320 C19 to C20, 3 metres
Circuit Breaker	1/16 Amp
Nominal Voltage	160 ~ 320v
Voltage	230v
Frequency	47, 63Hz full range
Temperature	-5 ~ 45°C
Humidity	0 ~ 90%
Conformance	FCC, CE, Ready for the UL
Meter	RJ-45 for Ethernet / Supports up to 8 PDUs via RJ-11 / 1RJ-11 for temperature/humidity detection / Reset for Hardware reset / 3Digits + 1Digit / Warning and Overload: 1 beep in 1 second/3 beeps in 1 second / Range: 0A ~ 20A (true RMS) / Resolution: 0.1A / Precision: /-2% +/-0.1 AMP / 1 digital for POM PDU identifcation
LED Indicator	Yellow LED: SSL is enabled Green LED: IP address Red LED: POM PDU connecting status
Dimensions	160(W) x 432(H) x 44(D) mm
Weight	6kg

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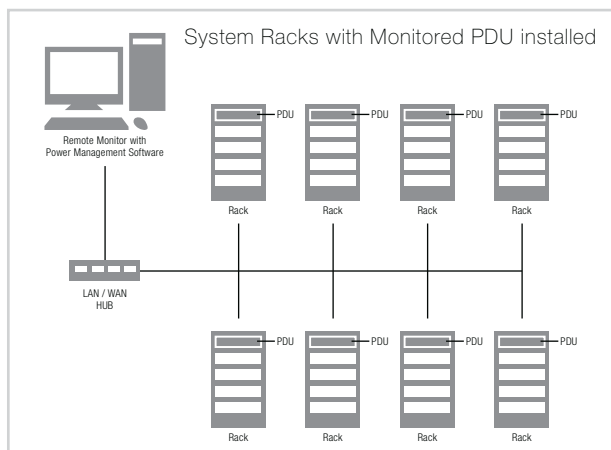
- **PDUA-SH1623-0801:**
  8 Port SNMP Switched POM PDU with Current Meter (horizontal)
- **PDUA-SV1623-1601:**
  16 Port SNMP Switched POM PDU with Current Meter (vertical)
- **PDUA-SH3223-2403:**
  24 Port SNMP Switched POM PDU with Current Meter (vertical)

The DataBay SNMP switched PDUs provide remote power management solutions which allow I.T. administrators to monitor servers and network devices should any power consumption issues arise.

These units allow remote and on-site power monitoring through event alerts by email, 'TRAP' (network notifications) and audible alarm.

Each unit's built-in digital current meter will indicate the total power consumption of each power strip. Using the software supplied, these units also provide remote on/off switching functionality.

Features:

- Integrated web server manages real time current consumption of PDU
- Built-in true RMS current meter
- Easy set up, meter display IP address
- Audible Alarm - 2 separate warning audible signals for threshold warning and overload
- Email and SNMP traps sent when power exceeds warning threshold or overload threshold
- Free utility software for managing multiple PDUs
- Circuit breaker power protection
- Low profile, slim design makes it easy to mount in server cabinets
- Real time, remote on/off power control of each unit
- LED on each unit to indicate power status
- Power-on sequencing to avoid in-rush of power

Specifications:

Model:	PDUA–SH1623–0801	PDUA–SV1623–1601	PDUA–SV3223–2403
Number of Ports	8	16	24
Input Voltage	230v	230v	230v
Capacity	16A	16A	32A
Breakers	1CB	1CB	3CB
Interface	RJ45 for Ethernet		
Frequency	50 ~ 60Hz full range		
LED Indicator	Yellow LED: SSL is enabled / Green LED: IP address		
Audible	Warning: 1 beep per second Overload: 3 beeps per second Circuit Breaker: triggered-continuous beeps		
Meter	3 Digitals Warning and overload - Meter will flash once per second Range: 0A ~ 20A (true RMS) Resolution: 0A ~ 20A: 0.1A Precision: 0.A ~ 20A: +/- 2% +/-0.1 Amp		
Operating Temperature	0 ~ 40°C		
Storage Temperature	-25 ~ 65°C		
Humidity	0 ~ 90%		

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Dedicated Rack Design & Build Facility

For many years, CIE-Group customers have also benefited from our comprehensive Audio Rack System Design & Build Service, to provide 'ready to install' PA, VA and AV Racks in some of the UK's largest and most successful installations.

Using our extensive portfolio of professional audio products, our highly skilled, UK-based Technical Services have a reputation for consistently producing some of the UK's highest quality, ready-to-install PA rack systems to customers' specifications.

There is no set limit to the size of system we can produce; anything from a small single zone speech-only system, to a multi-zone system combining speech and music. Monitoring and battery back-up can also be accommodated by our in-house Technical Services Facility.

To ensure that we build your system to your specific requirements, we have produced a technical questionnaire which, once completed by yourselves or with our assistance, outlines requirements such as number of zones, music sources, number of microphones, etc.

Each system is supplied assembled, wired and fully tested before leaving our workshops. As part of the Build Package, each System is supplied with a comprehensive operations manual incorporating user instructions for each individual piece of equipment, a schematic drawing of the System, a visual of the Rack layout and easy to use connection details. Finally, each System is given a unique identification number specific to your installation which allows our Technical Services Team to easily identify any system we have assembled, to efficiently assist with any after sales service requirements.

Call the CIE-Group sales desk or your area representative on +44 (0)115 9770075 for advice, free UK site surveys and a highly competitive quotation.

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- **SB10:** Low-Cost Loudspeaker Bracket

Low cost loudspeaker wall mounting bracket with 50 ~ 70 mm fixing centres.

Specifications:

Model:	SB10
Tilt	15° up/down, pan/swivel: 90°
Maximum load weight	5kg
Weight	0.1kg

- **01463:** Utility Swivel Loudspeaker Bracket

Wall-mounting bracket with wall plate (118 x 30 x 4 mm) and speaker fixing plate (111 x 40 x 4 mm). This assembly swivels in the horizontal plane and may also be tilted.

Lockable in optimum position by fixing the swivel nut.

Specifications:

Model:	01463
Material	Steel
Mount Rotates	180°
Maximum Load	5kg
Weight	0.55kg

- **01936:** Loudspeaker Bracket

Wall-mounting bracket with wall plate (30 x 40 x 3 mm) and speaker fixing plate (30 x 50 x 3 mm). This assembly swivels in the horizontal plane and may also be tilted.

Lockable in optimum position by fixing the swivel nut.

Specifications:

Model:	01936
Material	Steel
Mount Rotates	180°
Maximum Load	5kg
Weight	0.15kg

- **CIE-Group recommend that safety cables are fitted with all wall-mounted loudspeaker brackets.**

Local regulations may be in force in certain areas concerning the safe fixing of objects in public areas.

Specifications:

Model:	03279	03280	03281	03284	03518
Description	Safety Wire	Safety Wire	Safety Wire	Safety Wire	Security Clip
Gauge	3mm	3mm	3mm	1.5mm	-
Length	200mm	400mm	600mm	600mm	-
Supports	50kg	50kg	50kg	50kg	30kg

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- **00479:** Medium Duty Speaker Bracket

Wall-mounting bracket featuring speaker fixing plate with 6 holes.

Specifications:

Model:	00479
Material	Steel
Mount Rotates	360°
Maximum Load	10kg
Weight	0.8kg

- **00498:** Adjustable Heavy Duty Speaker Bracket

Adjustable wall-mounting bracket with arm L=260 mm and male attachment H=120mm, 35(Ø) mm to hold speaker. The arm, with an adjustable support to clamp the speaker, swivels in the horizontal plane and may also be tilted.

Position of support from the centre of male attachment min. 180mm, max. 260 mm. Wall plate 250 x 140 mm with 4 holes 10(Ø) mm to fix bracket.

Specifications:

Model:	00498
Material	Steel
Mount Rotates	120°
Female Attachment Dimensions	36(Ø)mm
Male Attachment Dimensions	35(Ø)mm
Maximum Load	40kg
Weight	2.3kg

- **03433:** Speaker Bracket with Rotational Adjustment

Adjustable wall-mounting bracket with 320 mm long arm and male attachment (120(L) mm x 35(Ø) mm). Features progressive inclination of 4° through a nylon wheel joint.

Specifications:

Model:	03433
Material	Steel
Mount Rotates	120°
Male Attachment Dimensions	35(Ø)mm
Maximum Load	40 kg
Weight	2.1kg

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● 03180: Tripod Speaker Stand

Floor-standing with tripod legs and full aluminium structure. The 03180 features solid centre pole and extra strength bracketed supports ensuring no breakage through twist or bend.

Height adjustable and lockable using nylon fixing clamp. Tripod legs can be fully closed for minimum space requirement during transportation.

Finished in black.

Specifications:

Model:	03180
Material	Aluminium
Female Attachment Dimensions	36(Ø)mm
Male Attachment Dimensions	35(Ø)mm
Footprint Diameter	1000mm
Closed Length	1255mm
Min/Max. Height	1305 ~ 2250 mm
Maximum Load	40kg
Weight	3.4kg

● 00564: Tripod Loudspeaker Stand

Aluminium tripod stand with adjustable height using a nylon fixing clamp. Comes with nylon flange with holes and slots for mounting of speaker.

Fully closing tripod legs assist in space reduction during transit.

Specifications:

Model:	00564
Material	Aluminium
Female Attachment Dimensions	26(Ø)mm
Male Attachment Dimensions	25(Ø)mm
Footprint Diameter	880mm
Closed Length	950mm
Min/Max. Height	1090 ~ 1830 mm
Maximum Load	15kg
Weight	1.6kg

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● **04754:** LCD/TFT Monitor Wall Bracket - White

Adjustable monitor wall bracket, nylon made. Plate 120 x 120 x 4 mm, 4 holes 4.5(Ø) mm distance 75 and 100mm, 4.5(Ø) mm (Standard Vesa).

The monitor is tiltable (± 25°) working on the central part of the swivel, fixable by its spanner which is supplied with the bracket. Wall plate 95(Ø) mm with 2 holes 4.5(Ø) mm, to fix bracket.

This support is fixable with all LCD/TFT monitors.

Specifications:

Model:	04754
Tilt Angle	50°
Materials	Nylon Base/Steel VESA Plate
Treatment	RAL 9010 White
Thickness	4mm
Closed Length	105mm
Max Load	5kg
Net Weight	0.98kg

● **04929:** LCD/TFT Monitor Wall Bracket - Black

Adjustable monitor wall bracket, nylon made. Plate 120 x 120 x 4 mm, 4 holes 4.5(Ø) mm distance 75 and 100 mm, 4.5(Ø) mm (Standard Vesa).

The monitor is tiltable (± 25°) working on the central part of the swivel, fixable by its spanner which is supplied with the bracket. Wall plate 95(Ø) mm with 2 holes 4.5(Ø) mm, to fix bracket.

This support is fixable with all LCD/TFT monitors.

Specifications:

Model:	04929
Tilt Angle	50°
Materials	Nylon Base/Steel VESA Plate
Treatment	RAL 9005 Black
Thickness	4mm
Closed Length	105mm
Max Load	5kg
Net Weight	0.98kg

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04681: LCD/TFT Monitor Wall Bracket - White

Adjustable monitor wall bracket, steel made. Plate 120 x 120 x 3 mm, 4 holes 4.5(Ø) mm distance 75 and 100 mm, 4.5(Ø) mm (Standard Vesa).

The monitor is tiltable (± 25°) working on the central part of the swivel, fixable by its spanner which is supplied with the bracket. Wall plate 95(Ø) mm with 2 holes 4.5(Ø) mm, to fix bracket.

This support is fixable with all TFT monitors.

Specifications:

Model:	04681
Tilt Angle	50°
Materials	Steel
Treatment	RAL 7035
Thickness	3mm
Closed Length	105mm
Max Load	15kg
Net Weight	1.77kg

05199: LCD/TFT Monitor Wall Bracket - Black

Adjustable monitor wall bracket, steel made. Plate 120 x 120 x 3 mm, 4 holes 4.5(Ø) mm distance 75 and 100 mm, 4.5(Ø) mm (Standard Vesa).

The monitor is tiltable (± 25°) working on the central part of the swivel, fixable by its spanner which is supplied with the bracket. Wall plate 95(Ø) mm with 2 holes 4.5(Ø) mm, to fix bracket.

This support is fixable with all TFT monitors.

Specifications:

Model:	05199
Tilt Angle	50°
Materials	Steel
Treatment	RAL 9005
Thickness	4mm
Closed Length	105mm
Max Load	15kg
Net Weight	1.77kg

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BF2750: Low-cost Display Screen Mount
(Flat to Wall)

Features:

- For screen sizes of 13" ~ 27"
- Integrated spirit level bubble
- Two-piece lockable design
- Maximum load weight: 25kg
- Aluminium allow construction

BT2750: Low-cost Display Screen Mount
(Adjustable)

Features:

- For screen sizes of 13" ~ 27"
- 15° up/down, 90° pan rotation
- Integrated spirit level bubble
- Two-piece lockable design
- Maximum load weight: 20kg
- Aluminium allow construction

BF7510: Low-cost Large Display Screen
Mount (Flat to Wall)

Features:

- For screen sizes of 27" ~ 75"
- Integrated spirit level bubble
- Expandable wall plate
- Maximum load weight: 90kg
- Steel construction

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- **08000:** LCD/Plasma Screen Floor Stand

This stand allows you to mount monitors with fittings with a 284 ~ 700 mm horizontal pitch and 80 ~ 480 mm vertical pitch.

The base has four arms for feet or castor installation.

Specifications:

Model:	08000
Link With	H290 ~ 760 V 85 ~ 480
Materials	Steel
Treatment	Anthracite
Closed Length	700(W) x 1820(H) x 700(D) mm
Max Load	50kg
Net Weight	22.5kg

- **07500:** LCD/Plasma Screen Floor Stand

Features:

- For monitors 35" ~ 50"
- Height adjustable from 1250 ~ 1650 mm, measured from floor to the media line of the monitor
- Designed so that the floor supports can be replaced with wheels, upon request
- Ideal for rental arrangements
- The folding legs of the base reduce the bulk of the support
- Can include a shelf for recording or decoder equipment

Available for mounts measuring:

- 200 x 200 mm
- 200 x 100 mm
- 120 x 150 mm
- 150 x 150 mm
- 100 x 100 mm
- 75 x 75 mm

Optional shelf: **07900**

Specifications:

Model:	07500
Closed Length	160(W) x 1950(H) x 160(D) mm
Max Dimension	1000(W) x 1950(H) x 1000(D) mm
Max Load	50kg
Ship Weight	17kg

~1m   ~1m

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Brackets

Interactive & Projectors

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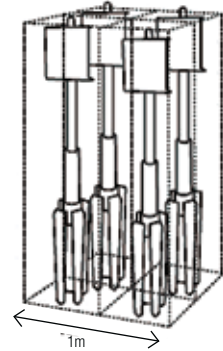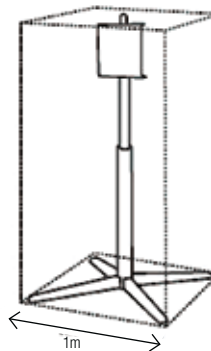
● **08100:** LCD/Plasma Screen Floor Stand with Wheels

This stand allows you to mount screens with VESA fittings 75 x 75, 100 x 100, or 200 x 100 mm.

The base can easily go through doorways and the four castors can be hidden.

Specifications:

Model:	08100
Link With	VESA Fino a 200 x 200
Mount Rotates	360°
Tilt Angle	0°
Materials	Steel
Treatment	Anthracite
Footprint Diameter	1000mm
Min/Max Height	1120 ~ 1520 mm
Closed Length	870(W) x 1250(H) x 520(D) mm
Max Load	30kg
Net Weight	17.5kg

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● **P100L:** Low-cost Projector Ceiling Mount Bracket

Features:

- Adjustable tilt, 360° rotation and integrated cable management
- Maximum load weight: 15kg
- Aluminium alloy construction

● **04382:** Universal Projector Ceiling Mount Bracket - Silver

● **04325:** Universal Projector Ceiling Mount Bracket - Black

Universal ceiling mount bracket, adjustable for dia/video-projectors, steel made, with arm L150 mm.

It is tiltable in vertical (+-25°) and in the horizontal plane (360°) working on the central part (H40 mm) of the assembly swivel. It can be fixed by its spanner which is supplied with the bracket.

The support will be fixed to the ceiling by a plate 160(Ø) mm with 38 mm holes and 3 buttonholes grant a very quick inspection for maintenance. To apply the Dia-Video to the support, you have to use 4 arms of different dimensions (78, 138, 168mm).

Specifications:

Model:	04382 / 04325
Mount Rotates	360°
Tilt Angle	50°
Materials	Steel
Thickness	1.5, 4mm
Closed Length	250mm
Max Load	10kg
Net Weight	2.20kg

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● **04326:** Telescopic Universal Projector Ceiling Mount Bracket - Black (400~600mm)

Ceiling mount bracket, adjustable for dia/video-projectors, steel made, with arm L:400~600mm. It is tiltable in vertical (±25°) and in the horizontal plane (360°) working on the central part (h40mm) of the assembly swivel. It can be fixed by its spanner which is supplied with the bracket.

The support will be fixed to the ceiling by a plate 160(Ø) mm with 38 mm holes and 3 buttonholes grant a very quick inspection for maintenance. To apply the Dia-Video to the support, use 4 arms of different dimensions (78, 138, 168mm).

Specifications:

Model:	04326
Mount Rotates	360°
Tilt Angle	50°
Max Monitor Size	No Limits
Materials	Steel
Treatment	Anthracite
Thickness	1.2, 4mm
Min/Max Height	400 ~ 600 mm
Closed Length	415mm
Max Load	10kg
Net Weight	2.60kg

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- **04934:** Telescopic Universal Projector Ceiling Mount Bracket - Black (780~1100mm)
- **05399:** Telescopic Universal Projector Ceiling Mount Bracket - Silver (780~1100mm)

Universal ceiling mount bracket, adjustable for dia/video-projectors, steel made, with arm L: 780 ~ 1100 mm. There are two holes D: 65 x 30 mm to enable the passage of the cables included VGA.

It's tiltable in the vertical (±25°) and in the horizontal plane (360°) working on the central part (H 40mm) of the assembly swivel. It can be fixed by its spanner which is supplied with the bracket. The support will be fixed to the ceiling by a plate 200(Ø) mm with 3 holes of 8mm, and 3 buttonholes grant a very quick inspection for maintenance.

To apply the Dia-Video to the support, you have to use 4 arms of different dimensions (78, 138, 168mm).

Specifications:

Model:	04934 / 05399
Mount Rotates	360°
Tilt Angle	50°
Max Monitor Size	No Limits
Materials	Steel
Treatment	Anthracite
Thickness	1.5, 2mm
Min/Max Height	780 ~ 1100 mm
Closed Length	780mm
Max Load	10kg
Net Weight	3.90kg

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● **04327:** Universal Projector Wall Mount Bracket - Black

Wall mount bracket, adjustable for dia/video-projectors, steel made, with arm L: 350mm.

It is tiltable in vertical (±25°) and in the horizontal plane (360°) working on the central part (H 40mm) of the assembly swivel. It can be fixed by its spanner which is supplied with the bracket. The support will be fixed to the ceiling by a plate 160(Ø) mm with 3 8mm holes, and 3 buttonholes grant a very quick inspection for maintenance.

To apply the Dia-Video to the support, you have to use 4 arms of different dimensions (78, 138, 168mm).

● **05054:** Universal Projector Wall Mount Bracket - Silver

Wall mount bracket, adjustable for dia/video-projectors, steel made, with arm L: 350mm.

It is tiltable in vertical (±25°) and in the horizontal plane (360°) working on the central part (H 40mm) of the assembly swivel. It can be fixed by its spanner which is supplied with the bracket. The support will be fixed to the ceiling by a plate 160(Ø) mm with 3 8mm holes, and 3 buttonholes grant a very quick inspection for maintenance.

To apply the Dia-Video to the support, you have to use 4 arms of different dimensions (78, 138, 168mm).
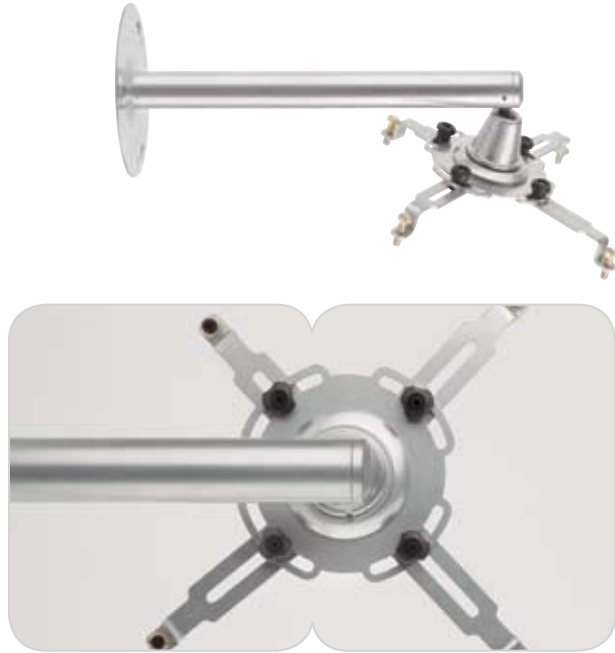
Specifications:

Model:	04327	05054
Mount Rotates	360°	360°
Tilt Angle	50°	50°
Materials	Steel	Steel
Treatment	Anthracite	Silver
Thickness	1.5, 4mm	1.5, 4mm
Min/Max Height	1040 ~ 1850 mm	1040 ~ 1850 mm
Closed Length	415mm	415mm
Max Load	10kg	10kg
Net Weight	2.70kg	2.70kg

Racks &
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• **05322:** Projector Floor Stand with Tripod Legs

Dia/Video adjustable steel and aluminium floor stand. Thanks to the new tilting system it is possible to tilt the steel plate working on the knob.

The steel plate is: 415 x 355 x 2 mm in order to prevent the equipment from falling down, we placed a small tube structure that gives a very nice design and utility. The height of the stand is adjustable from 1040 ~ 1850 mm working directly on it.

To facilitate transport and to save space the top plate section can be separated.

Specifications:

Model:	05322
Mount Rotates	360°
Tilt Angle	±12°
Materials	Aluminium
Footprint Diameter	1000mm
Thickness	1.5mm tubes
Min/Max Height	1040 ~ 1850 mm
Closed Length	1000mm
Max Load	10kg
Net Weight	6.75kg

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PNF

• Duo-Pen: Digital Interactive Pen

The DuoPen digital pen is an innovative USB input device which can convert any ordinary laptop or desktop computer monitor into a fully interactive touch screen device.

Using DuoPen you can enhance and improve the potential of your computer/PC's capabilities.

DuoPen adds the ability to operate the PC mouse facilities via the screen, incorporates handwriting and drawing options and is ideal as an interactive interface for design and gaming options.

Simple to install, the DuoPen immediately upgrades the PC/Laptop to provide full interactive functionality by using a combination of ultrasonic waves and infrared to plot or recognise the pen's location on the screen.

Features:

- Allows you to write directly onto the screen
- Enables full touchscreen functionality for use with an ordinary notebook/PC
- Note-taking function allows users to write on a normal piece of paper which is clipped into the receiver station and saved directly into your notebook/PC for later use
- Precise and fine writing ability with DuoPen's patented technology and Microsoft Ink Library
- Hover mode function which enables it to operate in free space, for smooth writing and gaming applications
- Virtual writing means no actual pressure is placed on the screen. Used for drawing delicate pictures and using air brush effects
- Word recognition supported on Windows Vista Premium and higher (including Windows 7) or by installing software from CD or internet free downloads
- Gesture (motion) recognition (also known as 'pen flicks'), allows the user to execute various pre-defined functions easily when using internet, e-mail or selected software
- Carry bag supplied with spare pen and fibre nib tips. Fibre nibs supplied for use on plastic LCD or LED screens.
- Real ball-point pen tip and electronic pen tip also included

converts your standard laptop/PC to a wireless touchscreen tablet!

Specifications:

Model:	Duo–Pen
Operating Area	170mm ~ 358mm
Power Source	5v DC (USB) / LR41 cell batteries
Technology	Ultrasonic and Infrared
Sampling Rate	Over 70Hz
Device Standard	HID pen device
Operating Temp/humidity	0 ~ 40°C / 20 ~ 80% Humidity
System Requirements:	
CPU	1GHz Pentium compatible
RAM	Over 512MB
OS	Windows XP / VISTA / Windows 7
Interface	USB port / CD-ROM driver

Windows and Apple Mac Compatible

- ## U-Board: 'Carry-anywhere' Virtual Interactive System

- ## U-Board/Wireless: Wireless 'Carry-anywhere' Virtual Interactive System

Our new UBoard system provides the ultimate in 'retrospective Virtual Interactive Systems': converting any conventional projector into a high performance virtual interactive board solution.

Stylish, simple to set-up and extremely portable, UBoard consists of a small magnetic-mount System Controller/Transmitter and UBoard EPen.

By mounting the UBoard Controller/Transmitter onto the edge of any conventional dry-wipe board - or simply onto any clear, light coloured wall - any flat surface can be immediately transformed into a fully-interactive working/teaching space; providing an advanced interactive software drawing/annotation package plus full control of any standard software installed on your computer.

Performance, functionality and incredible interactive features in this 'go-anywhere' pocket-sized solution!...

Features:
- High performance
- Dedicated ASIC chipset
- Fast response time
- High resolution
- Ultra smooth response

Best Writing Quality:
- Smooth writing touch and feel
- Virtual Pressure Brush effects without programming
- State-of-art noise filtering

Excellent Usability:
- 120" working area
- Slim, distinctive & stylish design
- Wireless connectivity
- High portability
- Rechargeable Battery
- No software installation
- Integrated Laser Pointer
- 100% Microsoft & Apple compatibility
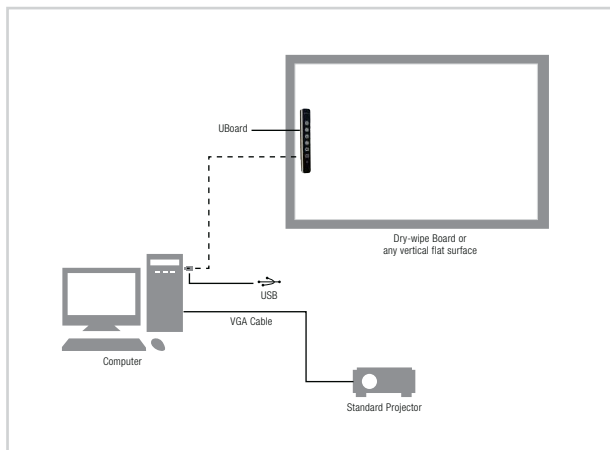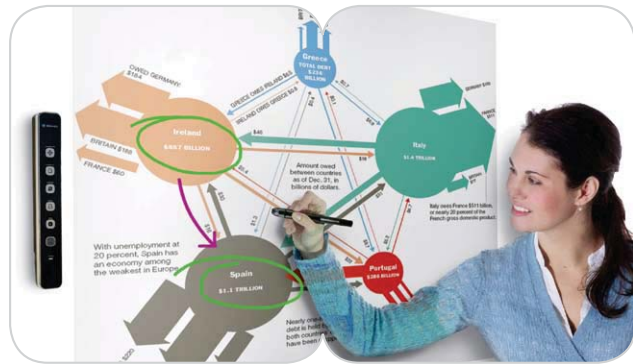
Specifications:

Model:	UBoard: Station
Effective Working Area	120 Inches
USB Device Class	Microsoft HID Pen
Sampling Frequency	40kHz
Power	USB 5v/100mA
Dimension	30(W) x 17(H) x 22(L) mm

Model:	UBoard: Digital Pen
Power	3.7v/180AH
Battery	Rechargeable Lithiumpolymer battery
Rechargeable terminal	3.5mm jack
Button	Right & Left Mouseclick
Battery monitoring	2 step LED Indicator
Full recharging time	2 hours
Continuous Operating time	15 hours
Power saving mode	Activating automatic power saving logic after 20 sec idle time
USB recharging cable	70cm
Active Laser pointer	Attachable to the digital pen / Shares power with the digital Pen

Model:	UBoard: Interface
Computer	IBM PC Compatible
CPU	Intel Pentium or Above Inter Compatible Type
Interface	USB 2.0 full speed or USB 1.1
Operating System	Windows XP/Vista/7/Apple Mac
RAM Minimum	1Gb

Model:	UBoard: Environment and Software
Humidity	0 ~ 90RH +35°C (non condensing)
Recommended operating temperature	15° ~ 40°C

UBoard

Dry-wipe Board or any vertical flat surface

USB

VGA Cable

Computer

Standard Projector

Signage/3D

AV Signal Distribution

Faceplates

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Clever Little Box.

- **PVI2600:** ProVue Interactive Projector
- **PVI2500SP:** ProVue Ultra Short Throw Interactive Projector

Our new Pro-Vue Interactive projectors provide a whole new dimension to interactive teaching and presentation; all the benefits of an interactive whiteboard... without the whiteboard!

The Pro-Vue features integrated infrared technology which means that virtually any surface can be used as an interactive screen!

From a conventional dry-wipe whiteboard, to retractable tripod screens - or simply walls, ceilings or even floors! - any surface can be used as a fully interactive screen. In addition, the size of your interactive 'screen' is only limited to the space available (imagine how big the screen could be using a simple, clear wall in the school hall?).

... And your interactive projector is fully portable. Easily stored/ transported in a lightweight canvas bag, Pro-Vue Interactive can be taken anywhere your interactive presentation needs to go; whether it be room-to-room, city-to-city or even international travel (try transporting conventional interactive whiteboard setup on your next flight!)

completely portable interactivity! – no whiteboard required!

Features:

- Available as Standard and new Ultra Short Throw versions
- High brightness: 2600 ANSI Lumens
- Supplied with both E-Pen & extendable E-Wand tools
- Easy installation & maintenance even when ceiling mounted:
  - Built-in auto detector sensor
  - Side change filter
  - Side change lamp
- Integrated security features:
  - Electric pin lock
  - Metal anchor lock
- Image freeze
- 4 x digital zoom
- 7 display modes
- 8W audio speaker
- Quiet (33dB at ECO-mode)
- Multi-language on-screen display
- RJ45 LAN remote control (optional)
- User definable start-up screen (logo capture)
- Low power consumption
- 6 auto functions: search, sync, ceiling, keystone, filter & lamp alert
- Superb quality images

Specifications:

Model:	PVI2600	PVI2500SP
Speaker	Mono 8W x 1	
Power Requirement	100v AC ~ 240v, 50/60Hz	
Power Consumption	Max 285W, Standby < 2.6W	310W
Standard Accessories	E-Wand, E-Pen, Remote Control, Canvas Carry Case, Driver CD-Rom, 1.5M USB Cable, User Manual	
Dimensions	325(W) x 97(H) x 260(D) mm	360(W) x 132(H) x 348(D) mm
Weight	3.4kg	4.1kg

Optical		
Projection System	3LCD technology	
Brightness	2600 lumens	2500 lumens
Contrast Ratio	500:1	500:1
Resolution	Native: XGA (1024 x 768) Maximum: UXGA (1600 x 1200) Aperture ratio: 4:3 native / 16:9 compatible	
Projection Lens	PVi2600: 1.2X zoom lens, f = 18.53 ~ 22.18 mm F/1.65 ~ F/1.93	
Lamp	200W UHP	210W UHP
Fan Noise	33dB @ ECO	
Throw Distance	1.11 ~ 10.57 m (approx. 100" at 2.88M)	0.636 ~ 1.26 m
Throw Ratio	1.41 ~ 1.7	0.63

Interactive Functions	
Light emitted	Infrared
CMOS Camera	Built into projector
Power Requirement	E-Pen - 2 x AAA Batteries E-Wand - 2 x AA Batteries
E-Wand Extendable Length	620 ~ 920 mm

PVI14V: ProVue Interactive Adaptor

This cost-saving 'Adaptor-only' version of ProVue Interactive allows any existing standard projector to be simply and effectively converted to an interactive projector, allowing almost any surface (such as walls, dry-wipe boards, curtains, ceilings or floors!) to be used as a virtual, fully interactive screen!

In addition, the size of your virtual interactive screen is only limited to the space available and positioning of your projector (imagine how big the screen could be using a simple, clear wall in the school assembly hall?).

Features:

- Converts your standard projector to interactive
- No whiteboard required
- Supplied with both E-Pen and extendable E-Wand control tools
- Ceiling mount, USB connection cable and software supplied
- Powered from USB interface connection
- Flexible positioning of unit

Adaptor attaches to convert any standard projector to interactive!

Signage/3D

AV Signal Distribution

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Cables

Connectors

Cameras
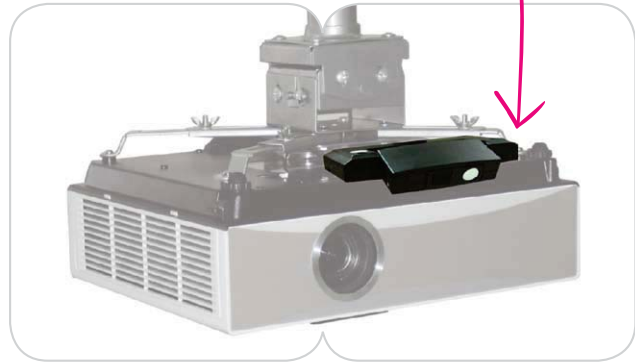
Specifications:

Model:	PVI14V
Interactive Technology	Infrared
Sensor Accuracy	±6 pixels
Throw Ratio	1.4
Screen Size	Up to 120 inch screen diagonal
Included Standard Accessories	E-Pen, extendable E-Wand, USB cable, mounting bracket, Quick Start Guide, Light Pen II Software
Power Consumption	<0.5W (powered from USB interface cable)
Dimensions	110(W) x 20(H) x 80(D)mm
Weight	0.8kg

Interactive Functions	
Light emitted	Infrared
CMOS Camera	Built into adaptor
Power Requirement	Adaptor via USB connection, E-Pen - 2 x AAA Batteries, E-Wand - 2 x AA Batteries
E-Wand Extendable Length	620 ~ 920 mm

System Requirements	
OS Required	Microsoft, Windows 98/2000/XP/Vista/Macintosh
Processor Type	Intel Pentium or above
RAM Size	128Mb (256Mb or above recommended)
Minimum Hard Drive Space	30Mb CD-Rom Driver & available USB 2.0 port

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Clever Little Box.

• **WI-VIEW300V:** Projector-to-Wireless Converter

The Wi-View 300V VGA Wireless Converter is an easy-installation unit which converts your standard VGA projector (or VGA screen, etc) to a wire-free device, allowing users to easily connect via their PC/laptop's wireless LAN facility.

With plug-and-play of the Wi-View hardware to the projector and simple, secure access software from the PC/laptop; fast, easy and wirefree presentation in the classroom/conference room is immediately available.

Supporting multi-user switching, any member of a conference/class can easily log into the Wi-View Server, switching their individual computer screen to the projector without moving computers or reconnecting cables.

Features:

- Fast, simple wireless presentation; no more cable swapping or trailing leads!
- Compatible with all projectors and screens featuring a VGA input
- Supports output resolution up to 1280x768 with 24 bit colour
- No installation CD required; software is directly downloaded from the Wi-View device
- Web-based user interface for easy configuration
- Conference control function, allowing host/chairperson to control multiple users during meetings
- Up to 128 (max) users in conference mode
- Also features standard Wireless LAN access point function
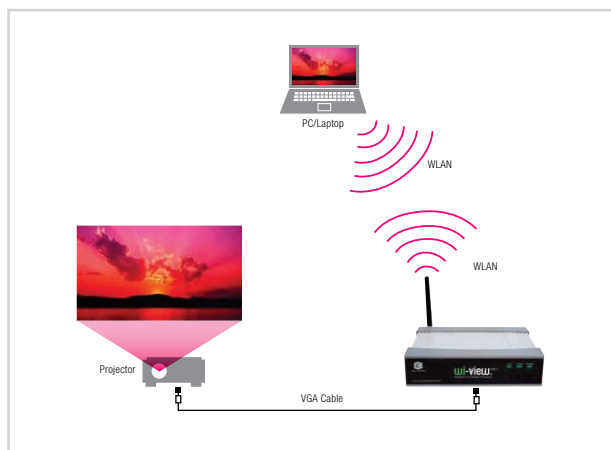
Specifications:

Model:	Wi–View300V
Wireless Standards	IEEE 802.11g
LAN Standards	IEEE 802.3u
Data Rate	Wireless: up to 54Mbps LAN: 10/100 Mbps with auto MDI/MDIX
Protocol	TCP/IP
IP Configuration	Automatic: DHCP Manual: static IP address
Security	IEEE Standard 64/128 bit WEP
Antenna	Detachable antenna with SMA connector
Transmission Power	2dBi external dipole antenna
Receiving Sensitivity	− 65dBm @ 54Mbps − 80dBm @ 11Mbps at 10-5 BER
Wireless Link Coverage	Up to 300 feet/100m (dependant on environment)
Video Streaming	MPEG1/2/4, HD Video Support
Supported Video Format	MPEG1/MPEG2/MPEG4(DivX, Xvid)/WMV9
Supported PC/NB Resolution Colour Depth	16/32 bit colour depth
Supported PC/NB Resolution	SVGA (800x600), XGA (1024x768), WXGA (1280x768)
Supported Output Resolution	SVGA (800x600). XGA (1024x768), WXGA (1280x768)
Supported Operation System	Windows Vista/XP/2003/2000
Power	5v DC, 2.5A
Interfaces	15-pin VGA, RJ-45, Power switch, Reset button, Stereo phono jack, Audio output
Dimensions	117(W) x 27(H) x 140(D) mm
Weight	0.28kg

PC/Laptop

WLAN

WLAN

Projector

VGA Cable

Racks & Cabinets

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• Projection Screens

Features:

- Full 7 year warranty!
- Aesthetically pleasing aluminium extruded case
- Brackets (reversible) can be mounted anywhere along the case for easy installation
- Quiet motor
- Compact tensioned
- Tabs are cut out of surface to prevent marking or coming off
- Flat tab-tensioned surface

• Manual Projection Screens: Rollerwall

Fibre Glass Matt White Surface, housed in a new design white square steel case. Four mounting points on each endcap ensure the screen can be firmly fixed to the wall or ceiling.

New robust design, 3cm black borders to all sides, (4cm on 244cm wide screens). 25cm additional black leader on 16/9 and 16/10 formats.
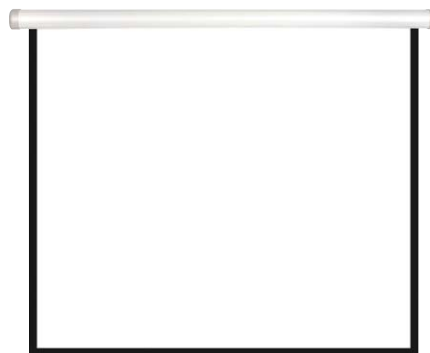
Model Dimensions:

Model	Format	Diag	VA: cm
105050	1/1	50" Diag	127 x 127 cm
106060	1/1	60" Diag	152 x 152 cm
107070	1/1	70" Diag	180 x 180 cm
108484	1/1	84" Diag	213 x 213 cm
109696	1/1	95" Diag	244 x 244 cm
1075D	4/3	75" Diag	152 x 114 cm
1089D	4/3	89" Diag	180 x 135 cm
10100D	4/3	100" Diag	203 x 152 cm
10120D	4/3	120" Diag	244 x 183 cm
1082D	16/9	82" Diag	180 x 101 cm
1092D	16/9	92" Diag	203 x 114 cm
10110D	16/9	110" Diag	244 x 137 cm
1084D	16/10	84" Diag	180 x 113 cm
1094D	16/10	94" Diag	203 x 127 cm
10113D	16/10	113" Diag	244 x 153 cm

Racks & Cabinets

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• **Electric Projection Screens:** Small - Non Tensioned, F-Type Electric c/w IR Control

This Mid Range Electric Screen with Fibre Glass Matt White Surface and a Tubular motor with limit switches, housed in a new design Matt White shaped steel case.

Sliding rear brackets with quick attach fixings assist easy fixed to the wall or ceiling. 3cm black borders to all sides, (4cm on 244cm wide screens). 25cm additional black leader on 16/9 and 16/10 formats. Supplied with IR control unit.
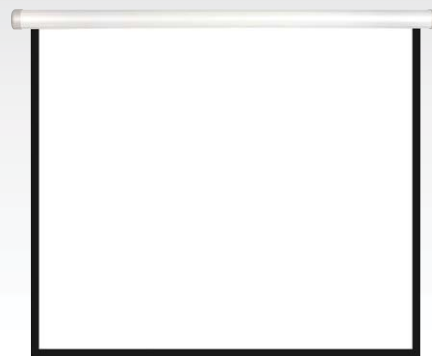
Model Dimensions:

Model	Format	Diag	Overall size: cm
5084D	4/3	84" Diag	171 x 128 cm
50100D	4/3	100" Diag	203 x 152 cm
50120D	4/3	120" Diag	244 x 183 cm
50150D	4/3	150" Diag	305 x 229 cm
5077D	16/9	77" Diag	171 x 96 cm
5092D	16/9	92" Diag	203 x 114 cm
50110D	16/9	110" Diag	244 x 137 cm
50138D	16/9	138" Diag	305 x 172 cm
5079D	16/10	79" Diag	180 x 101 cm
5094D	16/10	94" Diag	203 x 114 cm
50113D	16/10	113" Diag	244 x 137 cm
50142D	16/10	142" Diag	305 x 191 cm

• **Electric Projection Screens:** Small - Non Tensioned, Compact

High quality electric screen with quiet motor, ideal for small to medium rooms. Equipped with sliding brackets.

A wide choice of fabrics, standard is Matt White (Gain 1.2). Options for Lumi Grey, Cinesound and Rear Plus - call for pricing. 4/3, 16/10 versions come with 5cm black borders.

Custom sizes available.
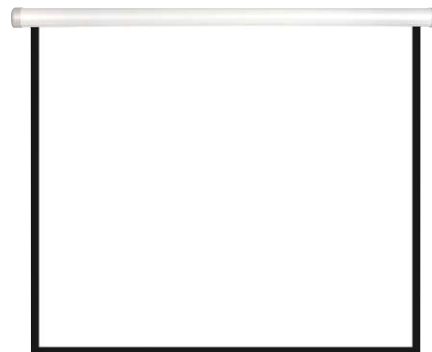
Model Dimensions:

Model	Format	VA: cm
COM160X160	1/1	160 x 160 cm
COM180X180	1/1	180 x 180 cm
COM200X200	1/1	200 x 200 cm
COM250X250	1/1	250 x 250 cm
COM160X120/4BB	4/3	160 x 120 cm
COM180X135/4BB	4/3	180 x 135 cm
COM200X150/4BB	4/3	200 x 150 cm
COM220X165/4BB	4/3	220 x 165 cm
COM250X190/4BB	4/3	250 x 190 cm
COM300X225/4BB	4/3	300 x 225 cm
COM160X100/4BB	16/10	160 x 100 cm
COM180X113/4BB	16/10	180 x 113 cm
COM200X125/4BB	16/10	200 x 125 cm
COM220X138/4BB	16/10	220 x 138 cm
COM250X156/4BB	16/10	250 x 156 cm
COM300X188/4BB	16/10	300 x 188 cm

For Lumi Grey surface add 5% to the trade price, for Rear Plus fabric add 10%, for Microperforated add 35%

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AG neovo

- **TS-15R:** 15" Touch Screen Display
- **TS-17R:** 17" Touch Screen Display

Stylish 15" and 17" touch screen displays with superb touch panel sensitivity and long-term durability built to last in demanding point-of-sale environments. The units provide durable touch screen functionality and feature highly accurate 5-wire resistive touch technology.

Their slim design demands less space than competing touch screen displays, and the VESA compliant design makes for easy mounting in a variety of environments.

Specially designed for use in point-of-sale systems, information kiosks, museum displays and other high-traffic public environments.

Features:

- Scratch resistant touch panel
- 5-wire resistive touch technology
- Sharp contrast ratio
- High brightness
- Lifetime 30 million finger-touch hits
- Dual serial touch interface
- Auto-adjustment for optimal settings
- Kensington security socket
- VESA compliant for wall/arm mounting

Specifications:

Model:	TS–15R	TS–17R
Panel Type	TFT LCD	TFT LCD
Panel Size	15.0" (381 mm)	17.0" (432 mm)
Max. Resolution	XGA 1024 x 768	SXGA 1280 x 1024
Pixel Pitch	0.297 mm	0.264 mm
Brightness	250 cd/m2 (Typical)	300 cd/m2 (Typical)
Contrast Ratio	700:1 (Typical)	800:1 (Typical)
Surface Treatments	Hard Coating (3H), Anti-glare Treatment	
Viewing Angle (H/V)	130°/120° (Typical)	160°/160° (Typical)
Display Colour	16.2M	16.2M
Response Time	4ms (GTG)	4ms (GTG)
Panel Life Time	50,000hrs (Minimum)	50,000hrs (Minimum)
Frequency (H/V)	H: 30kHz ~ 60 kHz V: 56Hz ~ 75Hz	H: 30kHz ~ 80kHz V: 56Hz ~ 75Hz
Max. Pixel Clock	80MHz	140MHz
Input: Touch Interface Analogue Digital	8-Pin Mini Dim 15-Pin D-Sub -	8-Pin Mini Dim 15-Pin D-Sub 24-Pin DVI-D
Power: AC-DC Adaptor Power Consumption	External AC 100 ~ 240v, 50 ~ 60Hz < 36W (On) < 2W (Stand-by) < 1W (Off)	External AC 100 - 240v, 50 ~ 60Hz < 42W (On) < 2W (Stand-by) < 1W (Off)
Touch Screen: Technology Optical Transmission Positional Accuracy Panel Resolution Active Force Panel Interface Glass Thickness Life Performance	5-wire Resistive > 80% < 2% of true position 1024 x 1024 5.1 ~ 8.16 gw Dual RS-232/USB interface 0.0787/2.0 mm 35million touches at single point	5-wire Resistive > 80% < 1% Deviation Error 1024 x 1024 < 300g Dual RS-232/USB interface 2.1 mm 35 million hits (finger)
Plug & Play: VESA	DCC 2B	DCC 2B ; DCC/CI
Operating Conditions: Temperature Humidity	0 °C ~ 40 °C 10% ~ 90%	0 °C ~ 40 °C 10% ~ 90%
Storage Conditions: Temperature Humidity	-20 °C ~ 60 °C 5% ~ 95%	-20 °C ~ 60 °C 5% ~ 95%
Mounting: VESA FPMPMI	Yes (100 mm)	Yes (100 mm)
Tilt	5° ~ 25° (+10° when bracket hooked)	
Dimensions:	386(W) x 360(H) x 169(D) mm	436(W) x 427(H) x 200(D) mm
Product Weight	4.6kg	7.5kg
Accessories Supplied	Quick Guide, CD ROM (user manual and touch screen drivers), 15-Pin D-Sub cable, power cord, power adaptor, RS-232 cable and USB cable	Quick Guide, CD ROM (user manual and drivers), 15-Pin D-Sub cable, 24-Pin DVI-D cable, AC power cord, power adaptor RS-232 cable and USB cable, support bracket

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Clever Little Box.

• DI705M: SmartPad 7" Android Tablet

Our latest entry to the exploding MID Market (moble internet devices), our new 'SmartPad' is an ultra-compact 7" interactive tablet built around the Google Android operating system.

Combining sleek, compact styling with powerful mobile media and internet computing, this 'go-anywhere' device is ideal for wire-free, mobile AV control, interactive teaching & learning or simply for personal work and play.

Packed with a whole host of high-end features; including bright, responsive 7" touchscreen, WiFi, webcam, 2Gb internal memory + SD card expansion, HDMI & HD support and internal loudspeakers - plus access to thousands of AV control, education, business and entertainment applications; the new MediaTouch gives you a whole lot more Tablet for a whole lot less money!

Features:

- Android 2.1 800MHz ARM11
- 7.0" 800 x 480 4:3 touch screen
- 512M DDR2 RAM
- 2Gb memory built-in, micro SD card expandable up to 32Gb
- Wi-Fi, HDMI, Webcam, TV-OUT, vibrate motor, remote controller
- HOST port for 3G dongle, USB flash drive, keyboard, mouse, GPS, etc external device connection
- Full HD 1080P supports MPEG-2, MPEG-4, AVS, H.264, WMV, AVI, MP4, RMVB, FLV, MKV
- Ebook support PDF, EPUB, TXT, HTM, HTML, RTF
- G-sensor
- 3400mAH polymer rechargeable battery for 6hrs use
- Music, movies, G-mail, e-mail, MSN, Skype, Facebook, Adobe Reader, FB Reader, Google Maps, YouTube, Flash
- 3 x 1W, 7Ω speakers
- 3.5mm earphone jack
- 5 Pin USB port
- 5v DC In
- Brushed Aluminium casing

Pre-loaded with:

android **skype** **Google** Maps

msn **f** **You Tube**

Google Mail **ADOBE® READER®** (Flash)

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Clever Little Box.

• Luminis AiO: All-in-One Digital Signage

Clever Little Box's latest generation Luminis AiO is the all-in-one solution for creating and running your own unique on-screen digital channel for enhancing communications and delivering eye-catching information.

Luminis AiO is straight out of the box and ready to use. It supports all Windows media file formats and allows you to create your own on-screen messages or play back web-based content.

Luminis AiO can be operated stand alone or can be configured in a network as 'Server' or 'Client' (same model configurable) networked and controlled remotely. Up to 100 Luminis 'client' players can be connected to your network.

Features:
- Latest generation high efficiency, low power consumption media player
- Fast and easy installation; up and running in minutes
- All-in-one plug and play solution
- Stand-alone or fully networked
- Simple and intuitive user interface
- Control locally or via web browser
- Use pre-designed display templates
- Design your own display templates
- Landscape & portrait display options

Play Back:
- Rich Site Summary (web feed)
- Still and moving images
- Video
- Flash animation
- Tickertape messages
- Powerpoint
- Web pages
- 5.1 audio playback
- Optional live TV feeds (Part No. USBTV)

Powerpoint Presentations

Live and recorded TV feeds

Slideshows and still images

RSS feeds

Tickertape Messages

Flash Animations

This is a staff announcement please be

Create, amend and control your own digital signage templates, content and schedules with Luminis AiO...

Specifications:

Model:	Luminis AiO
CPU	Intel Core 2 Duo, T3400
Chipset	Intel GM45 + ICH9M
Memory	200pin DDRII So-DIMM, 1Gb
Graphics	Intel GMA X4500MHD, HDMI Port x 1, D-Sub VGA Port x 2
Controller	Max Shared Video Memory is 512Mb
LAN	Intel Gigabit Ethernet 10/100/1000
Audio	Realtek ALC662 HD Audio CODEC on-board, stereo CH 5.1 with HDMI
Storage	SATA 2.5" HDD 160Gb
External I/O	2 x VGA Ports 4 x USB 2.0 Ports 1 x RS232 Port 1 x HDMI Port 2 x Audio connectors 1 x Audio Set Live Out 1 x Audio Set Mic-in 1 x Upgrade for Antenna Port
Power Requirements	Auto-ranging 110 ~ 240v , 4 ~ 2A , 60 ~ 50Hz, with IEC320 power inlet
Dimensions	166(W) x 48(H) x 157(D) mm
Weight	1.22kg

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Luminis 3D: Auto-Stereoscopic, Glasses-Free 3D Digital Signage

Using the same Windows-based digital signage platform as our 2D 'Luminis AiO', Luminis 3D combines all the functionality and ease of use of 'standard' digital signage with state-of-the-art lenticular screen technology, to provide what are the most truly 'outstanding' signage results you can imagine!!

Luminis 3D can be operated as a stand-alone unit, or can be configured in a network as 'Server' or 'Client' (same Model configurable). Individual Client units in stand-alone mode can be controlled directly or on the local network via a web interface. Alternatively, if a number of units are networked, they can be controlled and updated over a wide area network.

Featuring fully-controllable templates and schedules, the Luminis signage platform supports a combination of both 3D and 2D media content, supporting video, Flash, RSS, streamed images, web pages, PowerPoint, tickertape, plus much more!

Adopting lenticular screen technology provides the only true solution to glasses-free 3D – essential, of course, for public signage where there is no control over the audience (and certainly no chance to hand-out free spectacles to every passer-by!)

As digital signage becomes the 'norm', the ability to catch an audience's attention and literally stop them in their tracks is the ultimate goal; Luminis 3D delivers.

Features:

- Outstanding glasses-free 3D system
- Windows platform, supporting all standard Windows media files
- Fast and easy installation; up and running in minutes
- All-in-one, plug and play solution
- Simple and intuitive browser-based user interface
- Control and update locally or remotely via web browser
- Pre-designed and self-configured display templates
- 'Unlimited' number of media/content channels
- Fully-programmable scheduling
- Configurable user permissions

Supported 2D content:

- Flash
- JPEG/BMP/GIF stills and slideshows
- MPEG/AVI video
- html/web pages
- PowerPoint
- Rich Site Summary (RSS feed)
- Optional live TV feeds (Part No. USBTV)
- …plus 5.1 audio playback

Supported 3D content:

- 3D Studio Max*
- MAYA*
- Live-action filmed in 3D*

(*requires processing to auto-stereoscopic format via 'Mixture' software application)

See page 232 ~ 233 for details of the **Magnetic 3D** Range of glasses-free Auto-Stereoscopic 3D LCD Screens.

Specifications:

Model:	Luminis 3D
Mother board	BIOSTAR TA780G M2+
CPU	AMD Socket AM2 Athlon 64 x 2, 4400+ (2.3GHz)
Chipset	AMD 780G
Memory	2048Mb Corsair DDR2 800MHz 4 x DDR2 DIMM Memory Slot Max. Supports up to 4GB Memory
Graphics Controller	GeForce 9600GT GPU with DDR3 512MB
LAN	Realtek 8168C/8111C on-chip, supporting 1000/100/10M bps
Audio	ATI 791A. Realtek High Definition Audio
Storage	1 x 120GB 3½" SATA II hard disk drive
External I/O	1 x PS/2 Mouse, 1 x PS/2 Keyboard 1 x Standard VGA Port 4 x USB 2.0 ports 1 x RS232 port 1 x DVI port 3 x Audio connectors 1 x RJ-45 10/100/1Gb Base-T Ethernet LAN connector
Watchdog	1 x Hardware watchdog
Indicators	Power On switch and indicator
System Management	CPU temperature monitoring, system temperature monitoring, and voltage monitoring of Vcore, +3.3v, +5v, +12v, -12v are all available to the application for monitoring and reporting.
Power Requirements	230v AC with IEC320 power inlet.
Environmental Conditions	Operating temperature range +5 °C to +40 °C in free air Shock and vibration compatible with light industrial usage.
Dimensions	360(W) x 45(H) x 240(D) mm
Weight	3.5kg

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MAGNETIC3D

- ## ENABL3D: Auto-Stereoscopic, Glasses-Free, 3D LCD Screens

The new Enabl3D range from Magnetic represents the cutting edge of 'glasses-free' 3D screen technology.

Using the latest generation of auto-stereoscopic (or 'lenticular') LCD technology, Magnetic Enabl3D screens allow incredible resolution and outstanding 3D large format displays without the need for any special glasses, eyewear, headgear or projectors.

Providing the ultimate in eye-catching, crowd-stopping displays, media and digital signage; video images and content appear to fly out of the screen and float in mid air!

The effect truly has to be seen to be believed.

The Magnetic 3D proprietary overlay and industry-leading 3D render software combine to deliver truly stunning visual effects - all without the need for viewers to wear 3D glasses...

Features:

- Glasses-free 3D screen technology
- Autostereoscopic, Full-HD 1080p LCD screens
- 9-point multi-viewing 3D zones
- 176° ultra-wide viewing angle
- 50,000 hours viewing time
- Durable and discreet design and build
- IRFM technology helps prevent 'screen burn'
- Configurable Inputs/Outputs
- Active ambient light sensor for energy saving control

Part Numbers:

Part Number:	Screen sizes:
22Enable3D	22" 3D Stereoscopic Enabled Display Screen
26Enable3D	26" 3D Stereoscopic Enabled Display Screen
32Enable3D	32" 3D Stereoscopic Enabled Display Screen
42Enable3D	42" 3D Stereoscopic Enabled Display Screen
42Enable3DOF	42" 3D Stereoscopic Enabled open-frame Display Screen
47Enable3D	47" 3D Stereoscopic Enabled Display Screen
55Enable3D	55" 3D Stereoscopic Enabled Display Screen
57Enable3D	57" 3D Stereoscopic Enabled Display Screen
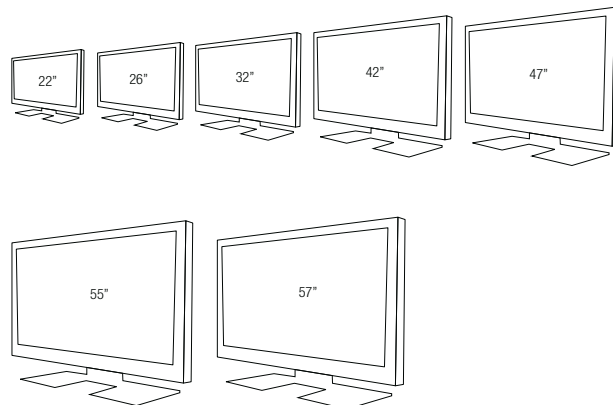
- ## How does 3D Auto-stereoscopic screen technology work?..

Also known as 'lenticular', this glasses-free system is regarded as the ideal long-term 3D solution. A sheet of transparent, cylindrical lenses (known as 'lenticules') is fixed to a professional-grade, high definition LCD screen. These lenticules reflect light in specific, duplex acute angles to generate different images to each eye.

MAGNETIC3D
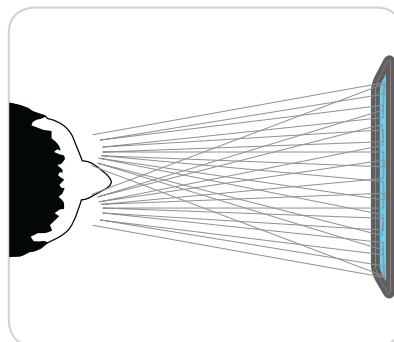
• **ENABL3D:** (contd)

Specifications:

Model:	22Enabl3D	26Enabl3D	32Enabl3D	42Enabl3DOF
3D Viewing Angle (Left/Right)	50°/50°	50°/50°	50°/50°	50°/50°
2D Viewing Angle	170°/160°	176°/176°	176°/176°	176°/176°
Brightness	280 nits	350 cd/m²	450 cd/m²	660 cd/m²
Contrast Ratio	1000:1	1500:1	3000:1	4000:1
Response Time	5ms	8ms	6.5ms	6.5ms
Supported Colours	TBD	16.7M colours	16.7M colours	16.7M colours
Horizontal/Vertical Frequency	30 ~ 82kHz, 50 ~ 75kHz	30 ~ 80kHz, 56 ~ 75kHz	35 ~ 65kHz, 56 ~ 75kHz	30 ~ 80kHz, 56 ~ 75kHz
Input/Output Connectors	VGA/DVI	DVI/VGA/Component/ AV/S-video	DVI/VGA/Component/ AV/S-video	DVI/VGA/Component/ AV/S-video
Mount Type	100 x 100mm VESA	200 x 200mm VESA	200 x 200mm VESA	
Power Supply	12v DC	230v AC	230v AC	230v AC
Normal Operation Power	<50W	<168W	<168W	<230W
Source Auto Detect		Yes	Yes	Yes
Operating Temperature	5° ~ 40°C	5° ~ 40°C	5° ~ 40°C	5° ~ 40°C
Display Diagonal	22"	26"	32"	42"
Optimum Viewing Distance	1.2 ~ 3 m	1.8 ~ 3.7 m	1.8 ~ 3.7 m	2.4 ~ 6 m
Perceived 3D Depth	0.3 m	0.45 m	0.5 m	0.6 m
Aspect Ratio	16:9	16:9	16:9	16:9
Display Resolution (WXGA)	1680 x 1050	1920 x 1200	1366 x 768	1920 x 1080
Dimensions (W x H x D)	503(W) x 418(H) x 240(D) mm	608(W) x 440(H) x 161(D) mm	793(W) x 483(H) x 94(D) mm	1018(W) x 610(H) x 124(D) mm
Weight	7.8kg	9kg	14kg	28kg

Additional Specifications:

Model:	42Enabl3D	22Enabl3D	26Enabl3D	32Enabl3D
3D Viewing Angle (Left/Right)	50°/50°	50°/50°	50°/50°	50°/50°
2D Viewing Angle	176°/176°	170°/160°	176°/176°	176°/176°
Brightness	661 cd/m²	280 nits	350 cd/m²	450 cd/m²
Contrast Ratio	4000:1	1000:1	1500:1	3000:1
Response Time	6.5ms	5ms	8ms	6.5ms
Supported Colours	16.7M colours	TBD	16.7M colours	16.7M colours
Horizontal/Vertical Frequency	30 ~ 80kHz, 56 ~ 75kHz	30 ~ 82kHz, 50 ~ 75KHz	30 ~ 80kHz, 56 ~ 75kHz	35 ~ 65kHz, 56 ~ 75kHz
Input/Output Connectors	DVI/VGA/Component / AV/S-video	VGA/DVI	DVI/VGA/Component/ AV/S-video	DVI/VGA/Component/ AV/S-video
Mount Type	200 x 200mm VESA	100 x 100mm VESA	200 x 200mm VESA	200 x 200mm VESA
Power Supply	230v AC	12v DC	230v AC	230v AC
Normal Operation Power	<230W	<50W	<168W	<168W
Source Auto Detect	Yes		Yes	Yes
Operating Temperature	5° ~ 40°C	5° ~ 40°C	5° ~ 40°C	5° ~ 40°C
Display Diagonal	42"	47"	55"	57"
Optimum Viewing Distance	3 ~ 6 m	3.7 ~ 7.3 m	4 ~ 7.8 m	4.8 ~ 8.5 m
Perceived 3D Depth	0.6 m	0.7 metres	0.8 metres	0.98 metres
Aspect Ratio	16:9	16:9	16:9	16:9
Display Resolution (WXGA)	1920 x 1080	1920 x 1080	1920 x 1079	1920 x 1080
Dimensions (W x H x D)	1022(W) x 615(H) x 124(D) mm	1136(W) x 686(H) x 126(D) mm	1265(W) x 835(H) x 135(D) mm	1358(W) x 793(H) x 154(D) mm
Weight	30kg	40kg	55kg	136kg

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Ag neovo

- **RX-W42:** 42" Widescreen Full HD Display Screen

A full HD, full-featured 42" display protected by NeoV™ Optical Glass and Anti-Burn-in™ technology.

With a feature list as big as its 42" screen, the RX-W42 brings the ideal combination of size and specs to the professional AV environment. Review highly-detailed, smooth and accurate images on a bright Full HD display with AG Neovo's Advanced Image Platform™. Save costs and time by taking advantage of multiple video inputs and convenient Picture-in-Picture (PIP) options.

And thanks to protective NeoV™ Optical Glass, Anti-Burn-in™ technology, long-life screen and a durable metal frame, this display will be performing for years to come.

Features:

- 1920 x 1080 Full HD resolution
- 4000:1 contrast ratio
- NeoV™ Optical Glass
- Anti-Burn-in™ technology
- Smart Omni Viewer: PIP, PBP & VOV functions
- Built-in Image enhancer: 3D Comb Filter/Deinterlace/Noise Reduction
- Multiple video inputs (BNC in x 2, BNC out x 2)
- RS-232 for individual and multi-display control
- Horizontal resolution up to 630TVL (NTSC), 650TVL (PAL)
- Built-in HDCP allows HD-format video
- Power DC-out design to power connected peripherals
- Selectable aspect ratio for ultimate image: Native, Overscan, Underscan
- NTSC/PAL/SECAM video system support
- Quick signal-switching time (≤0.8 sec)
- IR remote control
- Durable metal housing
- VESA standard wall mount
- Rigorous screening of the components for mission-critical 24/7 applications

NeoV™ Optical Glass protects against scratches, impacts and other physical damage

Viewing versatility with Picture-in-Picture (PIP), Picture-by-Picture (PBP) and Video-on-Video (VOV)

Anti-Burn-in™ technology prevents image sticking

Durable metal casing for enhanced strength and secure mounting

Specifications:

Model:	RX–W42
Panel -	
Panel Type	TFT LCD
Panel Size	42.0" (1067mm)
Max. Resolution	FHD 1920 x1080
Pixel Pitch	0.48455mm
Brightness	450 cd/m² (Typical)
Contrast Ratio	4000:1 (Typical)
Viewing Angle (H/V)	178°(H), 178°(v) (Typical)
Display Colour	16.7M
Response Time	6.5ms (GTG)
Horizontal resolution - TV Lines	630TVL (NTSC), 650TVL (PAL)
Frequency (H/V)	H: 24 ~ 82 kHz, V: 50 ~ 85 Hz
Input -	
VGA	15-Pin D-Sub
DVI	24-Pin DVI-D
CVBS	BNC x 2
S-Video	4-Pin mini DIN
Component(Y PbPr)	RCA x 2
Output -	
CVBS	BNC x 2
S-Video	4-Pin mini DIN
Audio -	
Audio In	1 x stereo audio in for PC (3.5Ø), 1 x stereo audio in for CVBS (RCA), 1 x stereo audio in for S-Video (RCA), 2 x stereo audio in for YPbPr (RCA)
Audio Out	1 x stereo audio out for CVBS (RCA)
Speaker	2W x 2
Power -	
DC Output	12v, 350 mA, DC jack 2.5Ø
Power	100 ~ 240v, 50 ~ 60 Hz
Consumption	< (165) W (On), < (10) W (Off)
NeoV™ Optical Glass -	
Thickness	3.0mm (0.12")
Reflection Rate	<1%
Transmission Rate	>96%
Coating Hardness	>9H
Operating Conditions -	
Temperature	0 °C ~ 40 °C
Humidity	10% ~ 85%
Mounting - VESA FPMPMI	Yes (600 x 400 mm, 400 x 200 mm)
Dimensions -	
w/o base	1011(W) x 604(H) x 106(D) mm
w/ base	1011(W) x 667(H) x 190(D) mm
Weight -	
w/o base	27.0 kg
w/ base	28.4 kg
Accessories	User manual, 15-Pin VGA cable, 24-Pin DVI cable, power cord, audio cable, IR remote control

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- **DS-42A22:** 2 x 2 Multi-Screen Video Wall System
- **DS-42A33:** 3 x 3 Multi-Screen Video Wall System
- **DS-42A44:** 4 x 4 Multi-Screen Video Wall System
- **DS-42A55:** 5 x 5 Multi-Screen Video Wall System
- **DS-MSC:** Multi-Screen Controller

Flexibility is the key to the CYP Digital Signage Solutions. There are three standard packages which provide a complete system solution for many commercial applications. The packages include a Single 42" screen option, 2x2, 3x3, 4x4 and a 5X5 complete digital signage system.

All CYP screen packages include built-in control modules and use the latest LED technology with screens operating at full HD resolutions of 1920 x 1080P, with bi-directional RS-232 control functionality enabled.

All package solutions are supplied with a full mounting system to enable the installer to secure the system to any wall or display area.

Features:

- Supports 4-Screen (2 x 2), 9-Screen (3 x 3), or 16-Screen (4 x 4), or 25-screen (5 x 5) video wall panel combinations
- Supports Full HD 1920 x 1080 resolution LCD panels
- Full two-way RS-232 Control
- Horizontal or Vertical Screen Orientation (both Mounting Kits available)
- Single Image or Independent Split Screen Images
- Independent Controller available for integration with third-party Screens
- 10mm Bezel
- ALSO AVAILABLE IN 47" 6mm Bezel option: Contact for details

Specifications:

DS–MSC (Multi–Screen Controller)	DS–42A22	DS–42A33	DS–42A44	DS–42A55
For use with third party screens to emulate a video wall. This controller will control the digital signage content for each screen on a video wall system using up to 16 screens. One controller is required per screen. If the user has only one HDMI or VGA source, then an appropriate Distribution Amplifier will be required to split the source signal to each of the Mult-Screen Controllers.	2 x 2 Video Wall System 4 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 4 x Wallmount Kit 1 x 4-way splitter 1 x IR remote and cable	3 x 3 Video Wall System 9 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 9 x Wallmount Kit 1 x 10-way splitter 1 x IR remote and cable	4 x 4 Video Wall System 16 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 16 x Wallmount Kit 1 x 16-way splitter 1 x IR remote and cable	5 x 5 Video Wall System 25 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 25 x Wallmount Kit 2 x 16-way splitter 1 x IR remote and cable

Stunning 3D Ready High Definition
watch any source on any screen

The OR-HD88S is the ultimate in HDMI matrix solutions for displaying any of the 8 input sources to any comination of, up to, 8 connected HD displays. This super reliable, robust solution supports 3D signals, 'Deep Colour' and High Definition Audio whilst also giving the ability to extend the HDMI signal for longer transmission lengths. A true installers choice where unbeaten quality and value are paramount.

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- **SP-H00102-0B:** 2 Port HDMI Splitter
- **SP-H00104-0B:** 4 Port HDMI Splitter
- **SP-H00108-0B:** 8 Port HDMI Splitter

Our HDMI Splitter Series provides a simple, high performance solution to broadcast a single HDMI source to 2, 4 or 8 output displays, therefore providing multiple displays of a single HDMI source such as Blu-ray player, HD TV, PS3, etc.

Features:
- Conforms to HDMI 1.3 specifications
- Fully HDCP 1.1 compliant
- 2, 4 or 8 HDMI display outputs from 1 HD source
- Maximum broadcast distance of 30 metres

SP-H00102-0B

SP-H00104-0B

SP-H00108-0B

HD Displays

HDMI Splitter

HDMI Source

(Up to 8 displays)
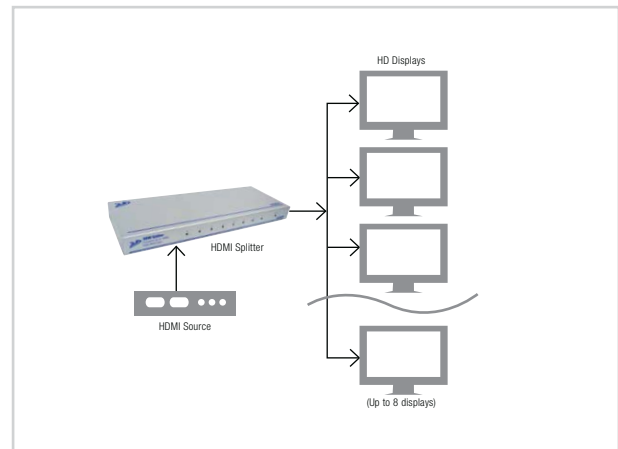
Specifications:

Model:	SP–H00102–0B	SP–H00104–0B	SP–H00108–0B
Description	2 port HDMI Splitter	4 port HDMI Splitter	8 port HDMI Splitter
Video Support	480i/720i/480p/720p/1080i/1080p	480i/720i/480p/720p/1080i/1080p	480i/720i/480p/720p/1080i/1080p
Transmission	Full HD (1080p) ~ 30m	Full HD (1080p) ~ 30m	Full HD (1080p) ~ 30m
EDID Emulation	Yes	Yes	Yes
Input	HDMI x 1	HDMI x 1	HDMI x 1
Output	HDMI x 2	HDMI x 4	HDMI x 8
HDMI Connector	HDMI Type A (19-pin female)	HDMI Type A (19-pin female)	HDMI Type A (19-pin female)
Display LED	2	4	8
Power Supply	5v / 1A DC	5v / 2.6A DC	5v / 2.6A DC
Maximum Cable Distance	30m	30m	30m
Dimensions	23(H) x 149(W) x 64(D) mm	23(H) x 149(W) x 64(D) mm	32(H) x 336(W) x 122(D) mm

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● **SW-H00401-0B:** 4 In/1 Out HDMI Switcher

Featuring four HDMI inputs to a single HDMI output, this unit provides fast and effective switching of up to four high definition video/audio sources such as Blu-ray players, games consoles, cable TV, HD and DVD signals.

Features:

- Conforms to HDMI 1.3 specifications
- Fully HDCP 1.1 compliant
- Compatible with all HDMI-equipped devices and HDCP-enabled HDTV devices
- Push button or remote switching of HDMI device ports
- Maximum signal transfer distance of 30 metres
- Ideal for home theatre, conference room and retail display applications
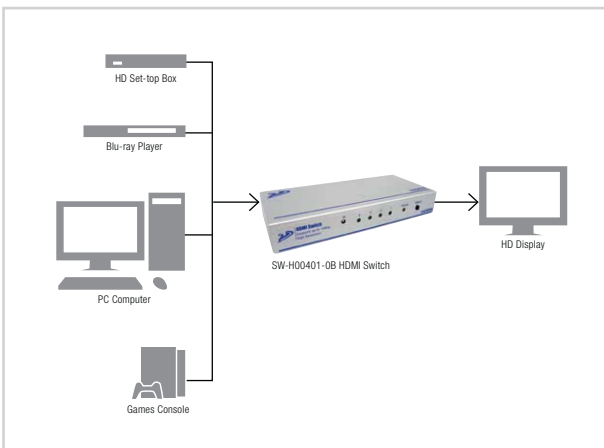
Specifications:

Model:	SW–H00401–0B
Description	4 port HDMI Switch
Source Inputs	HDMI x 4
Extension Output	HDMI x 1
Display	4 x Input Device LED, 1 x Power
EDID Emulation	Yes
Power Supply	5v DC, 2.6A
Operating Temperatures	0 ~ 50°C
Housing	Metal
Dimensions	23(H) x 149(W) x 64(D) mm
Weight	0.28kg

HD Set-top Box

Blu-ray Player

PC Computer

Games Console

SW-H00401-0B HDMI Switch

HD Display

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• EL-21SY: v1.3 HDMI 2-Way Switcher

The EL-21SY is a high performance HDMI switcher. It allows two HDMI sources to share one HDTV display.

Simply press the button to select your desired HDMI source to display on your HD display.

For vl.3 HDMI specified equipment, the EL-21SY will auto-switch when the sources are turned on/off.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 2-way Switcher
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA & WUXGA (1920x1200)
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- Auto-switch design
- Supports 'Deep Colour' (10, 12, & 16 bit)
- 3D Ready
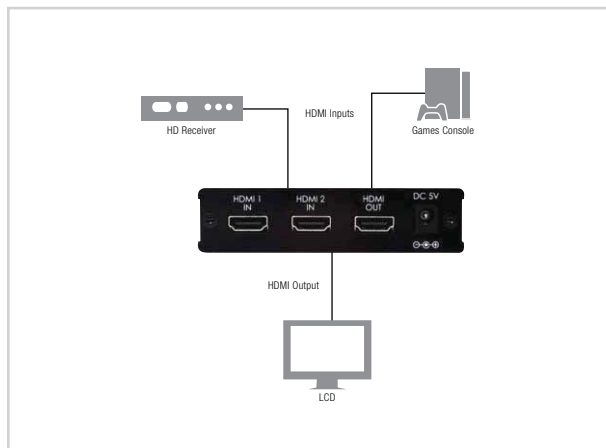
Specifications:

Model:	EL–21SY
Input	2 x HDMI
Output	1 x HDMI
Power	5V/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	101(W) x 25(H) x 92(D) mm
Weight	0.38kg

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● EL-31SY: v1.3 HDMI 3-Way Switcher

The EL-31SY is a high performance HDMI switcher with IR control. It allows the connection of up to three HDMI sources to a single HDMI input a HDTV.

A simple remote control selects your required HDMI source for display on the HDTV.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 3-way Switcher
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA & WUXGA (1920x1200)
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- IR Remote Control
- Supports 'Deep Colour' (10, 12 & 16 bit)
- 3D Ready
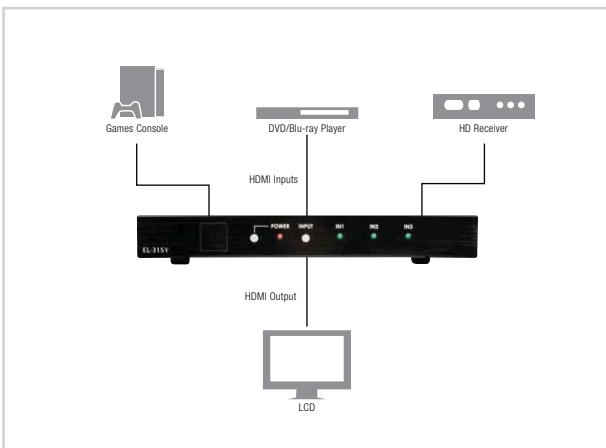
Specifications:

Model:	EL–31SY
Input	3 x HDMI
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	200(W) x 32(H) x 105(D) mm
Weight	0.42kg

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• **EL-41SY:** v1.3 HDMI 4-Way Switcher

The EL-41SY is a high performance HDMI switcher with IR control. It allows connectivity of up to four HDMI sources to a single HDMI input on a HDTV.

A simple remote control selects your required HDMI source for display on the HDVT.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 4-way Switcher
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA & WUXGA (1920x1200)
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- IR Remote Control
- Supports 'Deep Colour' (10, 12 & 16 bit)
- 3D Ready
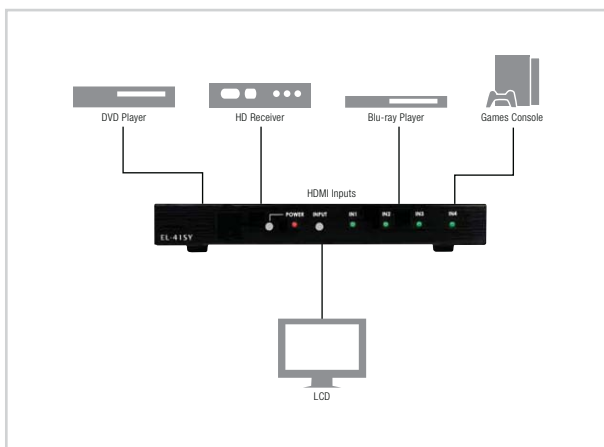
Specifications:

Model:	EL–41SY
Input	4 x HDMI
Output	1 x HDMI
Power	5v DC/2.6A (US/EU standards, CE/FCC/UL certified)
Dimensions	201(W) x 25(H) x 104(D) mm
Weight	0.42kg

CYP///

• EL-41AT: v1.3 HDMI & Digital Audio 4-way Switcher

The EL-41AT is a high performance v1.3 HDMI switcher with separate digital audio input and output. It allows your various HDMI sources to share one HDTV display.

Simply by pressing one button you can select your desired HDMI source for display on the HDVT, meanwhile the selected digital audio will be passed through the Optical (Toslink) or Coaxial output to play on your audio amplifier.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI & Digital Audio 4-way Switcher
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA & WUXGA (1920x1200)
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- IR Remote Control
- Supports 'Deep Colour' (10, 12 & 16 bit)
- 3D Ready

AV Signal Distribution

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DVRs
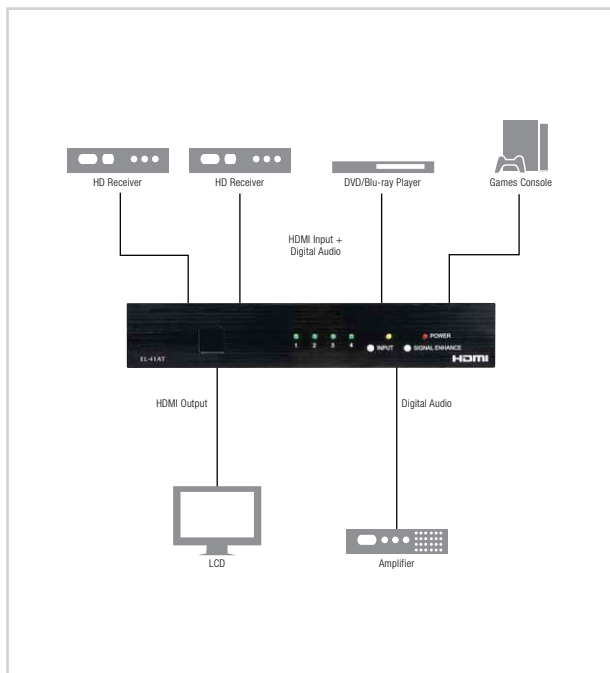
Specifications:

Model:	EL–41AT
Input	4 x HDMI, 4 x Coaxial (RCA), 4 x Optical (Toslink)
Output	1 HDMI, 1 x Coaxial (RCA), 1 x Optical (Toslink)
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240(W) x 50(H) x 110(D) mm
Weight	0.64kg

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• EL-41WAD: v1.3 HDMI 4-to-1 Mountable Switcher

The EL-41WAD is a high performance v1.3 HDMI switcher.

Featuring 4 HDMI inputs to 1 output, the switcher is designed for wall-mounting and includes system reset function which will reset the display every 10 minutes to a designated source.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 4-to-1 Mountable Switcher
- Resolutions Supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- IR remote control
- Supports 'Deep Colour' (10 & 12 bit)
- Supports xvYCC and CEC Bypass
- 3D Ready
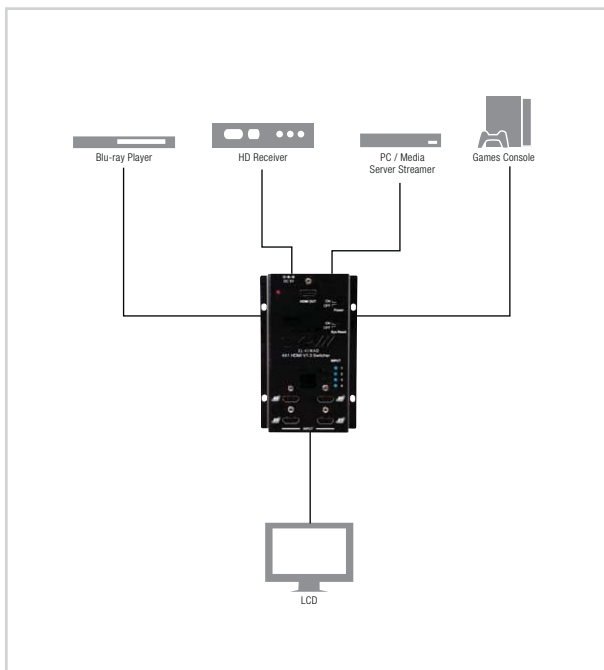
Specifications:

Model:	EL–41WAD
Input	4 x HDMI
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	93(W) x 31(H) x 148(D) mm
Weight	0.42kg

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EL-42S: v1.3 HDMI 4 Way Switcher with 2 Identical Outputs

The EL-42S switcher is compatible with v1.3 HDMI specifications, supporting up to 12 bit Deep Colour together with High Definition audio.

This switcher features additional analogue audio inputs for each of the four HDMI inputs. It has dual HDMI output which can be separately configured for audio routing, either internal (HDMI audio) or external (analogue stereo audio).

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 4 Way Switcher with 2 Identical Outputs
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA & WUXGA (1920x1200)
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- RS-232 & IR Remote Control
- Supports 'Deep Colour' (10, 12 & 16 bit)
- 3D Ready
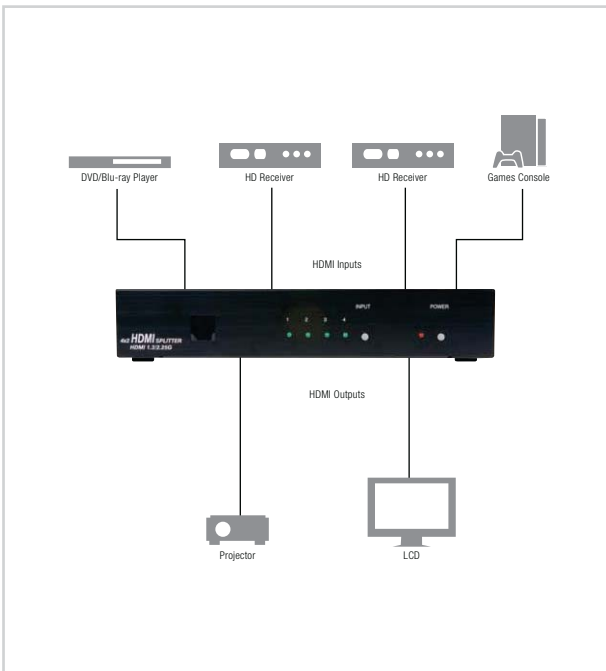
Specifications:

Model:	EL–42S
Input	4 x HDMI
Output	2 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240(W) x 50(H) x 104(D) mm
Weight	0.6kg

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• **EL-42SA:** v1.3 HDMI 4 by 2 Switcher with Analogue Audio Routing

v1.3 HDMI 4 by 2 Switcher with analogue audio routing, the EL-42SA switcher is compatible to v1.3 HDMI specifications, supporting up to 12 bit Deep Colour together with High Definition audio.

This switcher features additional analogue audio inputs for each of the four HDMI inputs. It has dual HDMI output which can be separately configured for audio routing, either internal (HDMI audio) or external (analogue stereo audio).

Features:

- v1.3 HDMI, HDCP 1.1, DVI 1.0 compliant
- HDMI 4 Way Switcher with 2 Identical Outputs and audio routing
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA & WUXGA (1920x1200)
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- RS232 & IR Remote Control. Supports 'Deep Colour' (10 & 12 bit)
- Additional analogue stereo audio inputs for routing to HDMI outputs
- Dual HDMI outputs for simultanious connection to two HD Displays
- Supports 3D signals

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Blu-ray Player   DVD Player   HD Receiver   Media Player / MP4

HDMI & Analogue Stereo Audio Inputs

HDMI Outputs

Amplifier

LCD   LCD
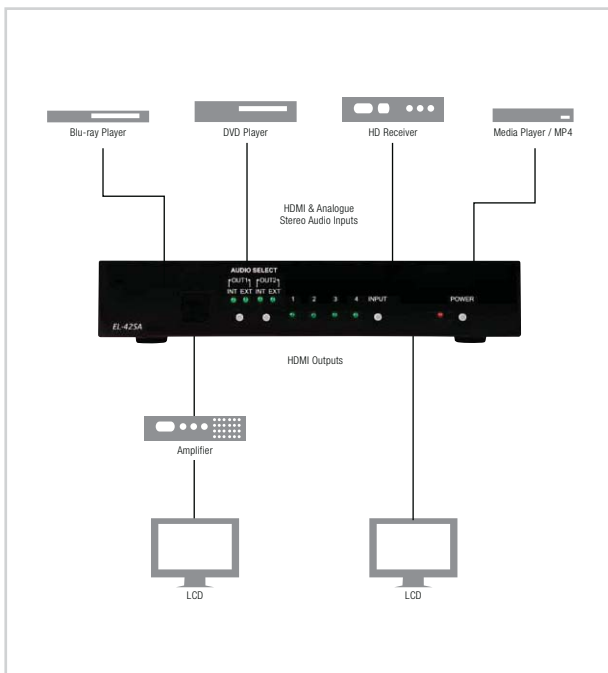
Specifications:

Model:	EL–42SA
Input	4 x HDMI, 8 x RCA (4 x Analogue Stereo)
Output	2 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240(W) x 50(H) x 104(D) mm
Weight	1.08kg

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• EL-C41C: v1.3 HDMI 4-Way Switcher with CEC Control

This is a high performance HDMI switcher which provides for various HDMI sources to share one HDTV display with CEC control functions of auto-off and auto-switch. It also support deep colour and xvYCC with RS-232 control.

Simply press one button to select your desired HDMI source for display on the HDTV or use the remote control to access your sources remotely.

Features:
- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 4-Way Switcher with CEC Control
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- RS-232 & IR Remote Control
- CEC Auto switch control function
- Supports 'Deep Colour' (10 & 12 bit)
- 3D Ready

DVD/Blu-ray Player   HD Receiver   HD Receiver   Games Console

HDMI Inputs

HDMI Outputs

Amplifier

TV

TV
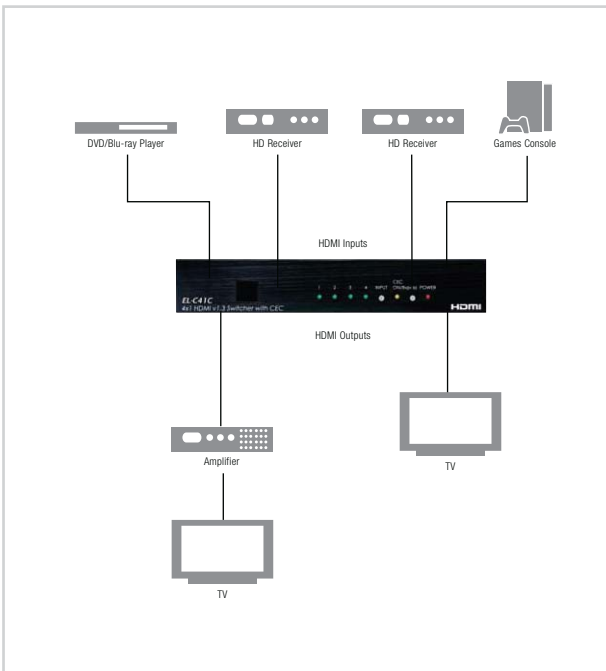
Specifications:

Model:	EL–C41C
Input	4 x HDMI, 1 x RS-232
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240(W) x 50(H) x 110(D) mm
Weight	0.5kg

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● **EL-C61C:** v1.3 HDMI 6-Way Switcher with CEC

This is a high performance HDMI switcher which provides up to 6 HDMI sources to share one HDTV display with CEC control functions of auto-off and auto-switch. It also support deep colour and xxYCC with RS-232 control.

Simply press one button to select your desired HDMI source for display on the HDTV or use remote control to control your sources in distant.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 6-Way Switcher with Consumer Electronics Control (CEC)
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- RS-232 & IR Remote Control
- CEC Auto switch control function
- Supports 'Deep Colour' (10 & 12 bit)
- 3D Ready
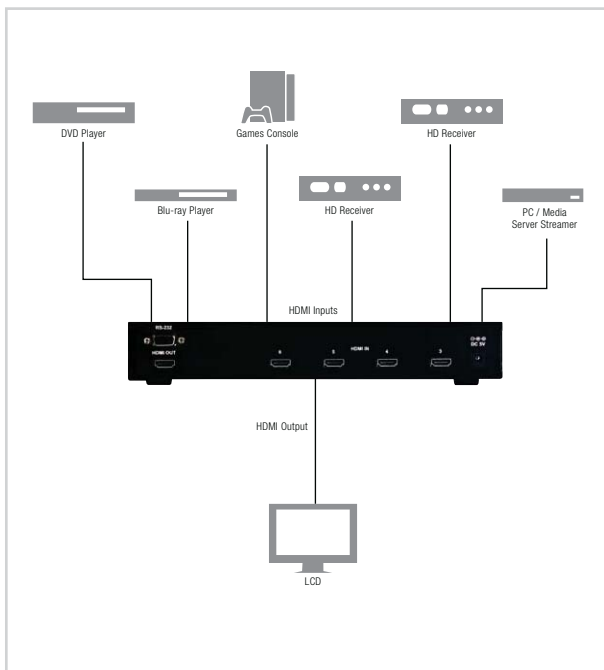
Specifications:

Model:	EL–C61C
Input	6 x HDMI, 1 x RS-232
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240(W) x 50(H) x 110(D) mm
Weight	0.54kg

CYP

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- ## **EL-C81C:** v1.3 HDMI 8-Way Switcher with CEC

This is a high performance HDMI switcher which provides up to 8 HDMI sources to share one HDTV display with CEC control functions of auto-off and auto-switch. It also support deep colour and xxYCC with RS-232 control.

Simply press one button to select your desired HDMI source for display on the HDTV or use remote control to control your sources in distant.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 8-Way Switcher with Consumer Electronics Control (CEC)
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA, UXGA
  - HDTV - 480i, 576i, 480p, 576p, 720p, 1080i, 1080p and 1080p 24fps
- High Definition Audio supported - Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal enhancement feature can improve signal quality after long distance transmission
- RS-232 & IR Remote Control
- CEC Auto switch control function
- Supports 'Deep Colour' (10 & 12 bit)
- 3D Ready
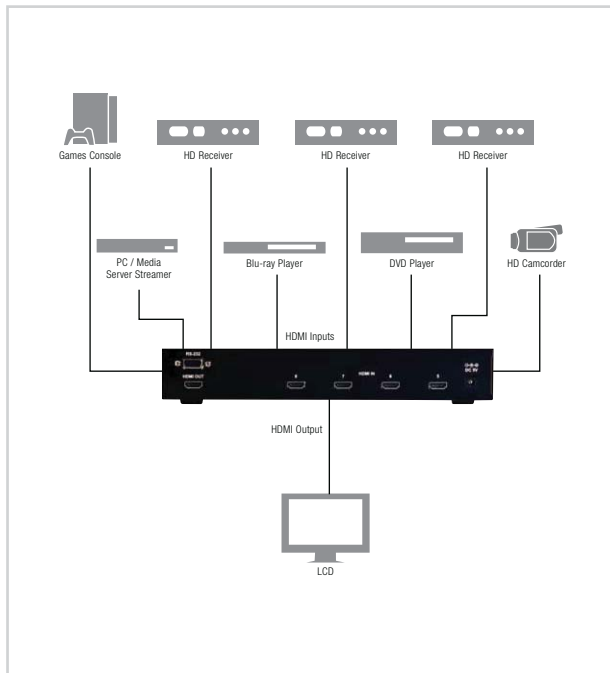
Specifications:

Model:	EL–C81C
Input	8 x HDMI, 1 x RS-232
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	280(W) x 45(H) x 115(D) mm
Weight	0.54kg

Racks & Cabinets

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- **OR-HD22S:** v1.3 HDMI 2 x 2 Matrix Switcher

This HDMI matrix provides an excellent and convenient solution for connecting all HDMI equipment. You can select which source to view on each display using the remote control.

This matrix can also transfer deep colour video and bitstream audio with maximum performance. It supports HDMI 1.3, HDCP 1.1 and DVI 1.0.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 2 x 2 Matrix Switcher
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- The HDMI input is compensated, clock/phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Supports IR remote control and IR extender together with RS-232 control
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
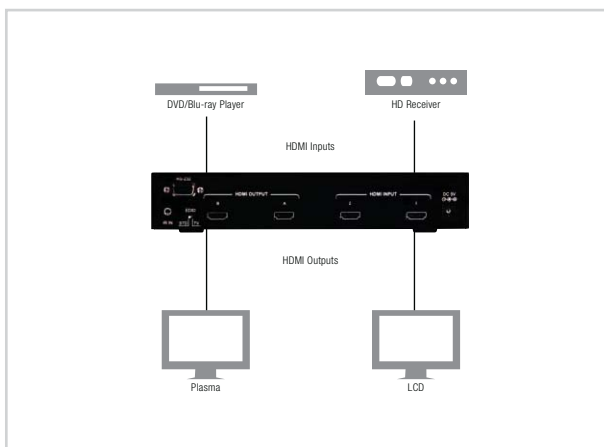
Specifications:

Model:	OR–HD22S
Input	2 x HDMI, 1 x IR Extender
Output	2 x HDMI, 1 x RS-232
Power	5v/3.2A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240(W) x 48(H) x 165(D) mm
Weight	0.88kg

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• OR-HD24S: v1.3 HDMI 2 x 4 Matrix Switcher

This HDMI matrix provides an excellent and convenient solution for connecting all HDMI equipment. You can select which source to view on each display using the remote control.

This matrix can also transfer deep colour video and bitstream audio with maximum performance. It supports HDMI 1.3, HDCP 1.1 and DVI 1.0.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 2 x 4 Matrix Switcher
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- The HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Supports IR remote control and IR extender together with RS-232 control
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready

DVD/Blu-ray Player

HD Receiver

HDMI Inputs

HDMI Outputs

Plasma   Projector   Amplifier   LCD
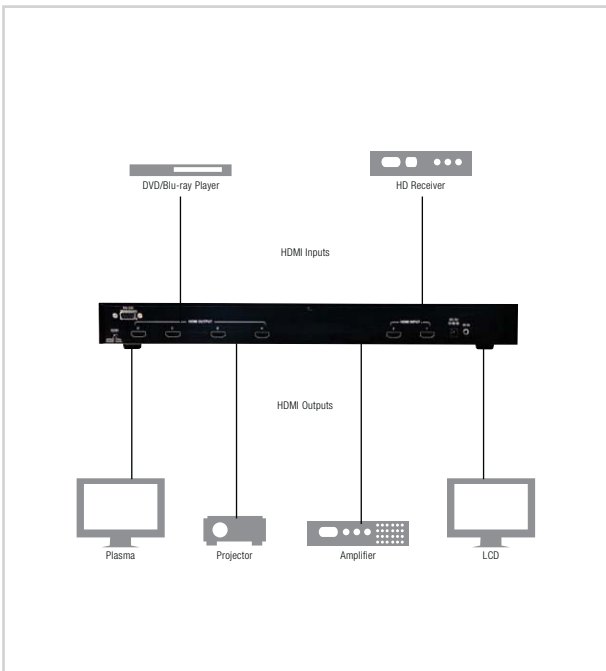
Specifications:

Model:	OR–HD24S
Input	2 x HDMI, 1 x IR Extender
Output	4 x HDMI, 1 x RS-232
Power	5v/6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	440(W) x 48(H) x 175(D) mm
Weight	1.76kg

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• **OR-HD42S:** v1.3 HDMI 4 x 2 Matrix Switcher

This HDMI matrix provides an excellent and convenient solution for connecting all HDMI equipment. You can select which source to view on each display using the remote control.

This matrix can also transfer deep colour video and bitstream audio with maximum performance. It supports HDMI 1.3, HDCP 1.1 and DVI 1.0.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 4 x 2 Matrix Switcher
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- The HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Supports IR remote control and IR extender together with RS-232 control
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
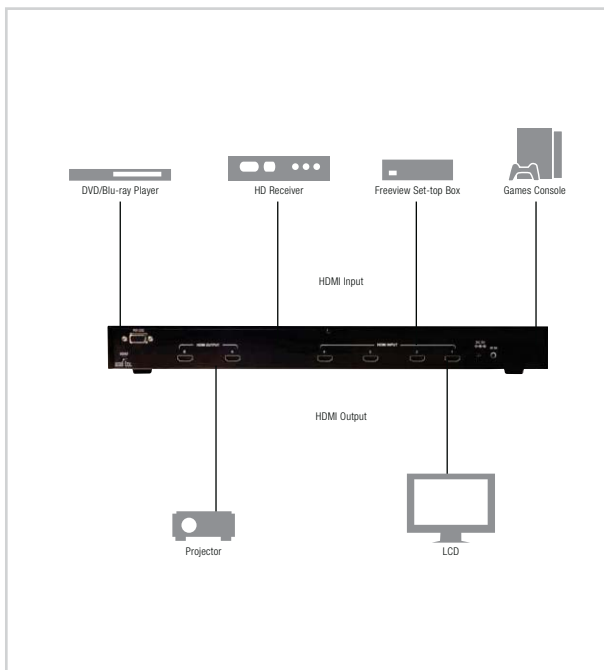
Specifications:

Model:	OR–HD42S
Input	4 x HDMI, 1 x IR Extender
Output	2 x HDMI, 1 x RS-232
Power	5v/6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	440(W) x 48(H) x 175(D) mm
Weight	1.76kg

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● **OR-HD44E:** v1.3 HDMI 4 x 4 Matrix Switcher

This HDMI matrix provides an excellent and convenient solution for connecting all HDMI equipment. You can select which source to view on each display using the remote control.

This matrix can also transfer deep colour video and bitstream audio with maximum performance. It supports HDMI 1.3, HDCP 1.1 and DVI 1.0.

Features:

- v1.3 HDMI, HDCP 1.1, DVI 1.0 compliant
- HDMI 4 x 4 Matrix Switcher
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- The HDMI input is compensated, clock/phase adjusted & jitter eliminated so the output is a brand new standard HDMI signal
- Supports IR remote control and IR extender together with RS-232 control
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
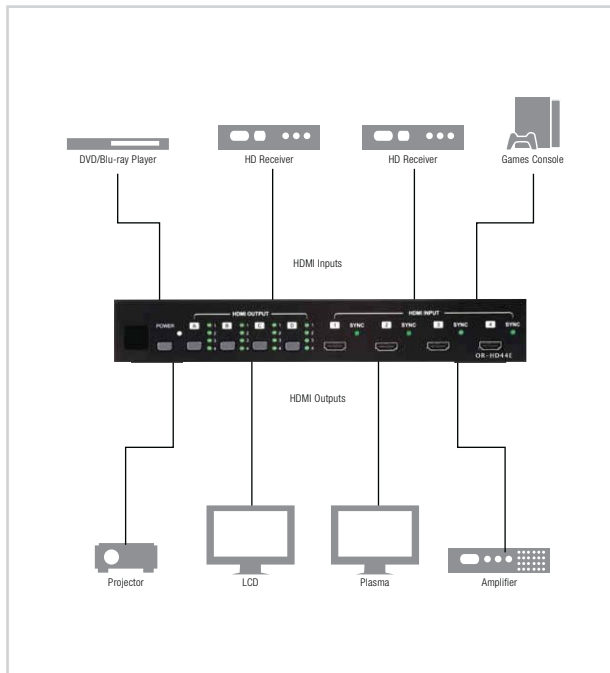
Specifications:

Model:	OR–HD44E
Input	4 x HDMI, 1 x IR Extender
Output	4 x HDMI, 1 x RS-232
Power	5v/3.2A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	280(W) x 50(H) x 145(D) mm
Weight	1.28kg

Racks &
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• **OR-HD44S:** v1.3 HDMI 4 x 4 Matrix
Switcher

The OR-HD44S provides an ideal solution for connecting and
distributing multiple HDMI sources to multiple HD displays.

The matrix can also transfer deep colour video and bitstream audio
with maximum performance and supports HDMI 1.3, HDCP 1.1 and
DVI 1.0.

Features:

• v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant

• HDMI 4 x 4 Matrix Switcher

• Resolutions supported:
   - PC - VGA to UXGA
   - HDTV - 480i to 1080p plus 1080p 24fps

• High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus
   and DTS-HD Master Audio plus LPCM

• The HDMI input is compensated, clock / phase adjusted, and jitter
   eliminated so the output is a brand new standard HDMI signal

• Supports IR remote control and IR extender together with RS-232 control

• Supports 'Deep Colour' (10 & 12 bit)

• Selectable EDID settings - TV (downstream) and STD (fixed)

• 3D Ready
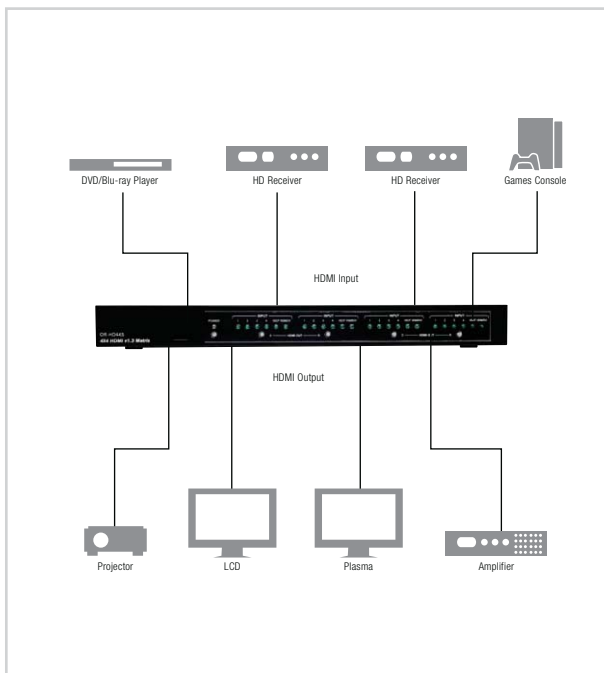
Specifications:

Model:	OR–HD44S
Input	4 x HDMI, 1 x IR Extender
Output	4 x HDMI, 1 x RS-232
Power	5v/6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	440(W) x 48(H) x 175(D) mm
Weight	1.8kg

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• **OR-HD88S:** v1.3 HDMI 8 x 8 Matrix Switcher

Compatible with v1.3 HDMI specifications, supporting 'Deep Colour' together with High Definition Audio. As multiple HDMI inputs and outputs increase, the need for a HDMI matrix that will inter-connect these HDMI devices is requested more and more.

The OR-HD88S 8 x 8 HDMI Matrix provides a robust and convenient solution for these installations.

Features:

- v1.3 HDMI, HDCP 1.1, DVI 1.0 compliant
- HDMI 8 x 8 Matrix Switcher
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- The HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal running up to 15m at 1080p
- RS-232 and IR remote control (Master & Zoned), plus IR extender
- Supports Deep Colour (10 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Recall, Memory & Key Lock function
- 4U 19" rack mountable on sliding track for easy access
- 3D Ready
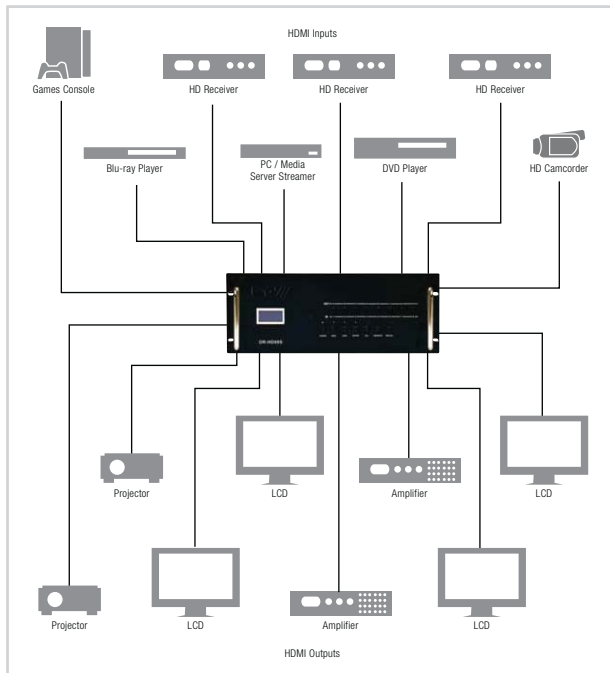
Specifications:

Model:	OR–HD88S
Input	8 x HDMI, Service Ports - 1 x RS-232, 1 x USB, 1 x IR Jack
Output	8 x HDMI, 1 x RS-232
Power	24v/6.25A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	482(W) x 176(H) x 325(D) mm
Weight	10.5kg

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• **OR-IR44:** Infrared 4 x 4 Matrix Switcher

The OR-IR44 infrared matrix is designed for controlling up to four IR sources from four display locations, using the original source remote controls or universal remote controls.

A true matrix design allows any of the four inputs to be routed to any (or all) of the IR outputs giving full independent source to screen control. This solution also has an additional master input and output.

In addition to the user-defined settings of the matrix, all incoming signals are routed to the master output, and all master input signals are routed to all of the outputs.

A 5-eye emitter can be connected to the master output, giving the ability to control all four sources, plus an AV matrix.

Features:

• Infrared 4 x 4 Matrix with additional master input & output

• Supports independent and total IR receiver and IR blaster selection and control

• Only infrared signals are supported, this product does not send any AV signals

• Supports 20 ~ 70kHz IR frequency

• Use your existing remote controls
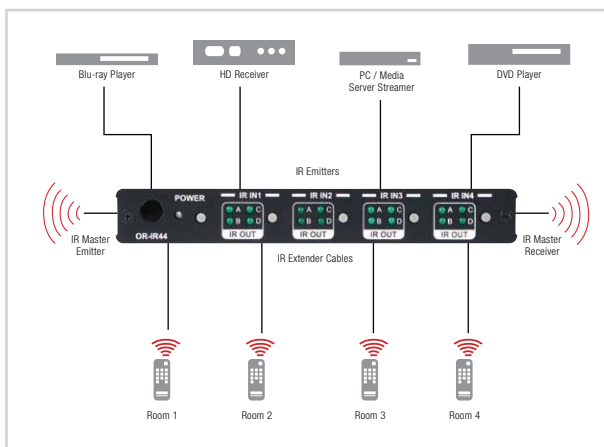
Specifications:

Model:	OR–IR44
Input	5 x mini-jack female (IR receivers)
Output	5 x mini-jack female (IR blaster)
Power	5v/1A DC (US/EU Standards, CE/FCC/UL (certified)
Dimensions	180(W) x 25(H) x 120(D) mm
Net Weight	0.84kg

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- **CHMX-22:** HDMI 2 x 2 Matrix Switcher
- **CHMX-24:** HDMI 2 x 4 Matrix Switcher
- **CHMX-42:** HDMI 4 x 2 Matrix Switcher

Multiple sources to multiple displays. Maximum convenience in HDMI signal distribution from multiple HDMI sources.

When an HDMI signal passes through a CYP matrix, the signal is automatically re-timed, level compensated, phase-error corrected and data jitter is eliminated, so the HDMI output is a regenerated, "brand new" HDMI signal that can run for another 20m and can also be cascaded.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- LED indicator or each output selector
- Supports high HDTV/PC resolutions up to & including 1080p
- RS232 Control Wired IR solution & IR remote
- Supports last memory storage
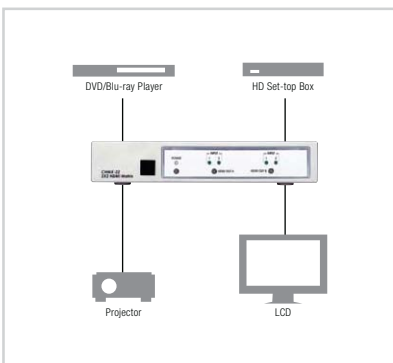
Specifications:

Model:	CHMX–22	CHMX–24	CHMX–42
Inputs	2 x HDMI female ports	2 x HDMI female ports	4 x HDMI female ports
Outputs	2 x HDMI female ports	4 x HDMI female ports	2 x HDMI female ports
Frequency Bandwidth	1.65 Gbps	1.65 Gbps	1.65 Gbps
Power	5v DC	5v DC	5v DC
Dimensions	438(W) x 49(H) x 175(D) mm	438(W) x 49(H) x 175(D) mm	240(W) x 49(H) x 165(D) mm
Weight	3.1kg	3.1kg	1.25kg

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- **QU-4M:** v1.3 HDMI 1-to-4 Splitter with System Reset

Each splitter in the Quantum Distribution Amplifier Series is compatible to v1.3 HDMI specifications, supporting 'Deep Colour' together with High Definition Audio.

Each buffered output can run 1080p up to 15 metres and can also be cascaded.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1-to-4 Splitter with System Reset function
- Resolutions supported: PC - VGA to UXGA; HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10, & 12)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Power & SYNC LED indicators
- Supports 3D signals
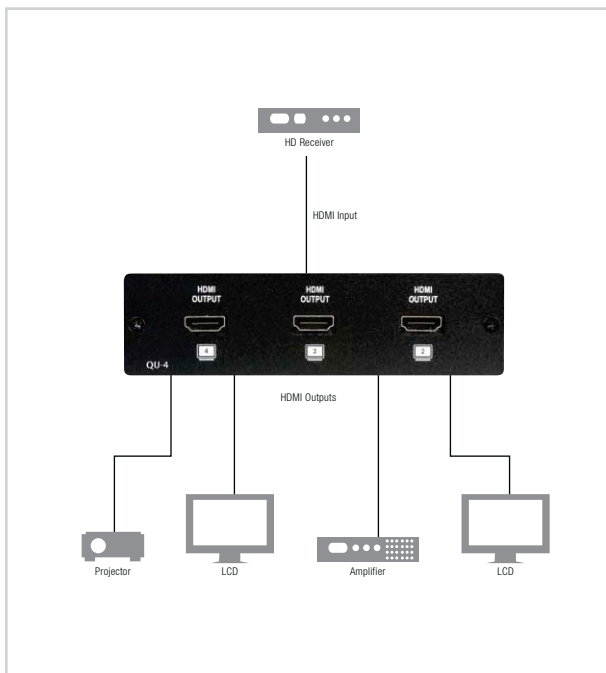
Specifications:

Model:	QU–4M
Input	1 x HDMI female port
Output	4 x HDMI female ports
Power	5v DC/2.6A (US/EU standards, CE/FCC/UL certified)
Dimensions	142(W) x 40(H) x 95(D) mm
Weight	0.56kg

CYP///

QU-12S: v1.3 HDMI 1-to-2 Distribution Amplifier

QU-12S HDMI distribution amplifier is an advanced solution within the Quantum Range of HDMI Distribution Amplifiers.

The QU-12S is compatible to v1.3 HDMI specifications, a cutting edge technology which defines the support of the transfer of Deep Colour (10-bit and 12-bit) video and new lossless compressed (LPCM 7.1ch Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio with a high bandwidth up to 225MHz (6.75Gbps).

Besides splitting and distributing, the QU-12S also boasts signal amplification and equalisation to provide high performance I/O of audio and video.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1-to-2 Splitter
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10, & 12 bit)
- 3D Ready
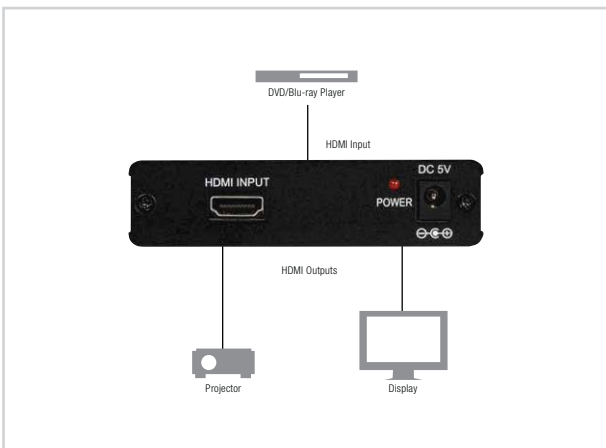
Specifications:

Model:	QU–12S
Input	1 x HDMI
Output	2 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 146(D) mm
Weight	0.5kg

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• **QU-14S:** v1.3 HDMI 1-to-4 Distribution Amplifier

The QU-14S HDMI Distribution Amplifier has a single HDMI input with 4 HDMI outputs.

The Silicon Image chipset based splitter is compatible with both Deep Colour and HD Audio. It boasts an extended HDMI output range of up to 20 metres. EDID management is handled by a simple switch.

A common application of this product is in commercial and residential installations where one HDMI source is required at multiple HDTVs.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1~ 4 Splitter
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10, & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready

DVD/Blu-ray Player

HDMI Input

HDMI Outputs

Projector   LCD   LCD   Amplifier
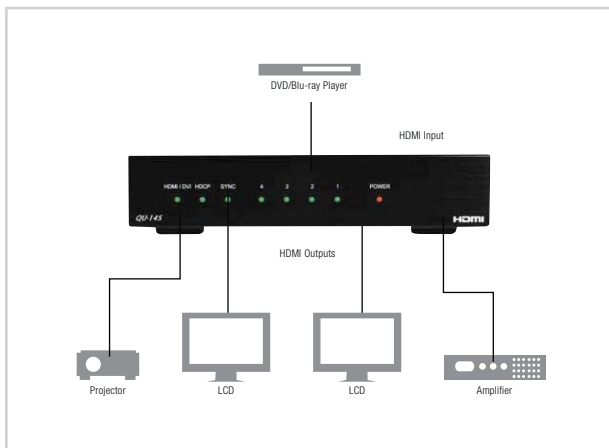
Specifications:

Model:	QU–14S
Input	1 x HDMI
Output	4 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	215(W) x 45(H) x 135(D) mm
Weight	0.58kg

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● **QU-4:** v1.3 HDMI 1-to-4 Distribution Amplifier

The HDMI v1.3 Distribution Amplifier Series is the most advanced solution to HDMI signal distribution.

The QU-4 is compatible to HDMI v1.3 specifications, a cutting edge technology which defines the support to transfer Deep Colour (10-bit and 12-bit) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio, with a high bandwidth up to 225MHz (6.75Gbps).

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant

- HDMI 1 ~ 4 distribution amplifier

- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps

- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM

- Auto signal amplification & equalisation improves signal transmission distances

- Supports CEC bypass

- Supports 'Deep Colour' (10, & 12 bit)

- Selectable EDID settings - TV (downstream) and STD (fixed)

- 3D Ready
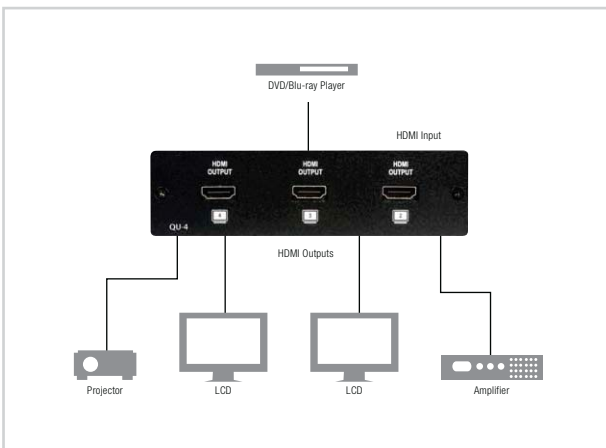
Specifications:

Model:	QU–4
Input	1 x HDMI
Output	4 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	142(W) x 40(H) x 95(D) mm
Weight	0.56kg

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• **QU-8MS:** v1.3 HDMI 1-to-8 Distribution Amplifier with System Reset

For multiple display output distribution, the QU-8MS provides a 1 In, 8 Out HDMI solution. Each buffered output can run 1080p up to 15 metres and can also be cascaded. The additional system reset function will generate a command every 10 minutes, which resets the displays to the designated HDMI input.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1 ~ 8 Splitter with System Reset function
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10, & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
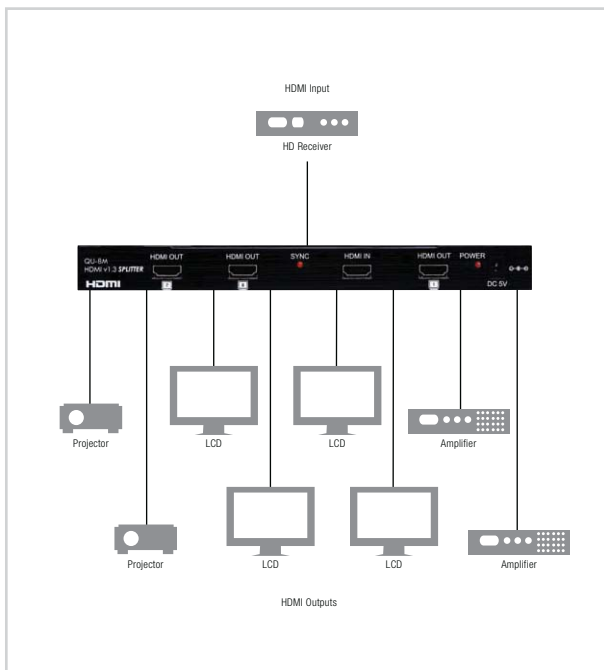
Specifications:

Model:	QU–8MS
Input	1 x HDMI
Output	8 x HDMI
Power	5v/5A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	240mm (W) x 105mm (D) x 30mm (H)
Weight	1kg

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QU-14WE: v1.3 HDMI 1-to-4 Mountable Distribution Amplifier

The QU-14WE Wall-Mountable HDMI Distribution Amplifier has a single HDMI input with 4 HDMI outputs.

The Explorer chipset based splitter is compatible with both Deep Colour and High Definition Audio with EDID boost and System Reset Controls.

It boasts an extended HDMI output range of up to 10 metres. EDID management is handled by a single switch.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1 ~ 4 Mountable Splitter
- Resolutions supported:
- PC - VGA to UXGA
- HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
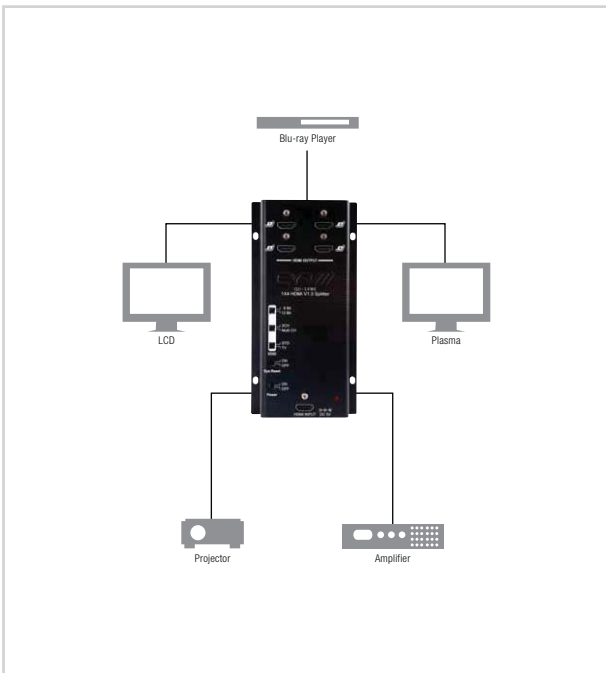
Specifications:

Model:	QU–14WE
Input	1 x HDMI
Output	4 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	94(W) x 32(H) x 187(D) mm
Weight	0.46kg

AV Signal Distribution

CYP///

● **QU-18WE:** v1.3 HDMI 1-to-8 Mountable Distribution Amplifier

The QU18WE Wall-Mountable HDMI Distribution Amplifier has a single HDMI input with 8 HDMI outputs.

The Explorer chipset based splitter is compatible with both Deep Colour and High Definition Audio with EDID boost and System Reset Controls. It boasts an extended HDMI output range of up to 10 metres. EDID management is handled by a single switch.

The QU-18WE has mounting lugs cleverly integrated into the casing for easy horizontal or vertical mounting.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1 ~ 8 Mountable Splitter
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
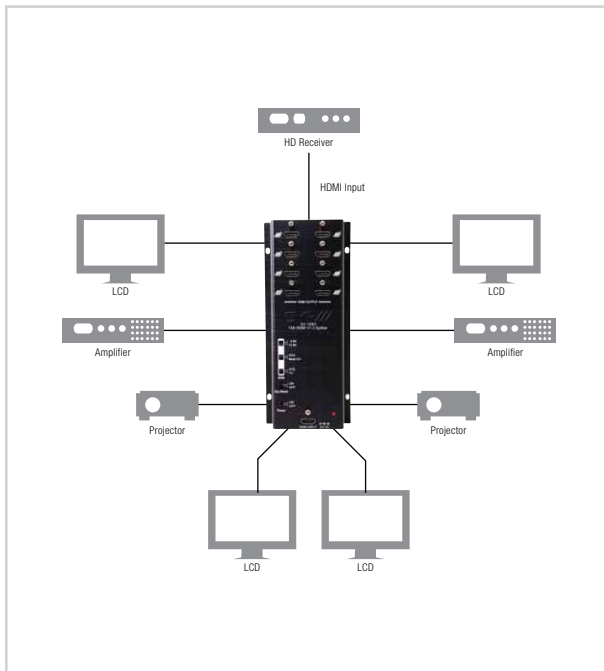
Specifications:

Model:	QU–18WE
Input	1 x HDMI Female Ports
Output	8 x HDMI Female port
Power	5v/3.2A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions:	93(W) x 32(H) x 220(D) mm
Net Weight	0.46kg

CYP///

AV Signal Distribution

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- **QU-18S:** v1.3 HDMI 1-to-8 Rack-mountable Distribution Amplifier

The QU-18S HDMI Distribution Amplifier has a single HDMI input with 8 HDMI outputs.

The Silicon Image chipset based splitter is compatible with both Deep Colour (10 & 12 bit) and HD Audio. It boasts an extended HDMI output range of up to 20 metres. EDID management is handled by a simple switch.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1 ~ 8 Splitter
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready

HDMI Input

HD Receiver

Projector   LCD   LCD   Amplifier

Projector   LCD   LCD   Amplifier
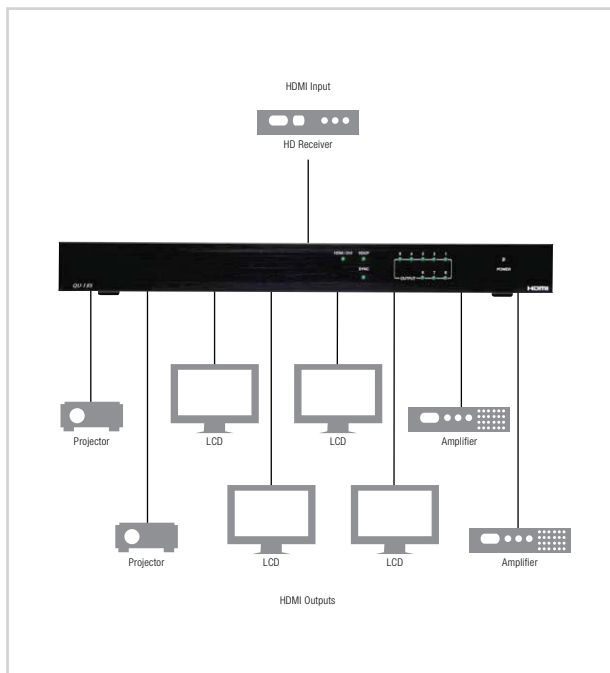
HDMI Outputs

Specifications:

Model:	QU–18S
Input	1 x HDMI
Output	8 x HDMI
Power	5v/6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	435(W) x 45(H) x 160(D) mm
Weight	1.75kg

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• QU-210S: v1.3 HDMI 2-to-10 Rack Mountable Distribution Amplifier

The QU-210S HDMI DIstribution Amplifier has 2 HDMI inputs and 10 HDMI outputs. The Silicon Image chipset based splitter is compatible with both Deep Colour and HIgh Definition Audio with EDID selection.

It boasts an extended HDMI output range of up to 20 metres. EDID management is handled by a simple switch.

Features:
- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 2 ~ 10 Splitter
- Resolutions supported:
  - PC - VGA to UXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10 & 12 bit)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- 3D Ready
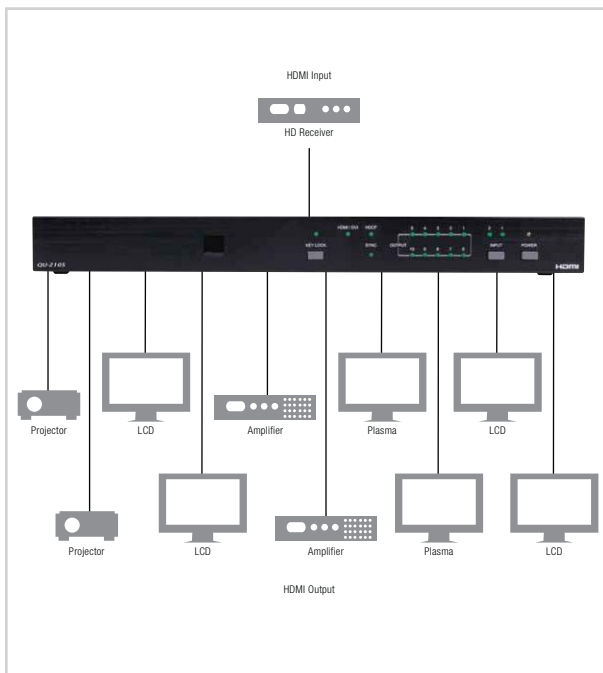
Specifications:

Model:	QU–210S
Input	2 x HDMI
Output	10 x HDMI
Power	5v/6A DC (US/EU standards, CE/FCC/UL certifi ed)
Dimensions	435(W) x 45(H) x 160(D) mm
Weight	1.76kg

CYP///

• RE-101: v1.3 HDMI-to-HDMI Repeater

The RE-101 Repeater uses v1.3 HDMI specifications, supporting 'Deep Colour' together with High Definition Audio with a high bandwidth up to 225MHz.

This solution allows distribution of HDMI up to a length of 30 metres.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Supports high definition up to 1080p @ 50/60Hz, output resolution follows input
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Equalises and recovers incoming TMDS data before re-transmitting so that the output is of optimal quality, regardless of incoming signal
- Supports CEC functions
- Supports 'Deep Colour' (10, & 12 bit)
- 3D Ready

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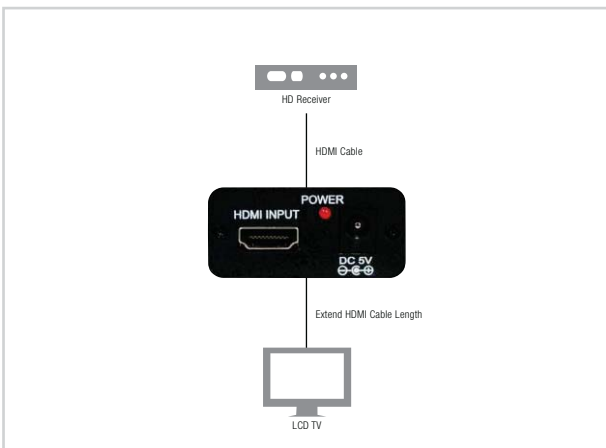
Specifications:

Model:	RE–101
Input	1 x HDMI
Output	1 x HDMI
Power	5v/2.6A DC (US/EU Standards, CE/FCC/UL Certified)
Dimensions	50(W) x 25(H) x 55(D) mm
Weight	0.26kg

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• RE-11HS: v1.3 HDMI-to-HDMI Equaliser

The RE-11HS Equaliser uses v1.3 HDMI specifications, supporting 'Deep Colour' together with High Definition Audio with a high bandwidth up to 225MHz.

The product supports cable lengths up to 40 metres from the source and 10 metres to the display.

Features:
- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI to HDMI Equaliser
- Resolutions Support: (Output resolution follows Input)
  - PC: VGA,SVGA,XGA,SXGA and UXGA (1600 x 1200)
  - HDTV: 480i, 576i, 480p, 576p, 720p, 1080i & 1080p + 1080P 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Corrects digital error and automatically provides equalisation up to 40dB
- Automatic equalisation up to 40dB
- 3D Ready
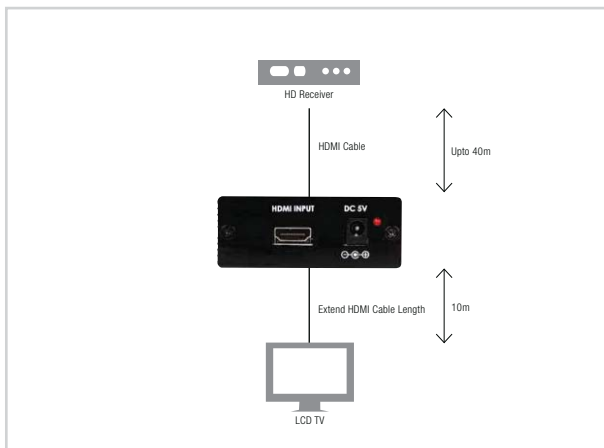
Specifications:

Model:	RE–11HS
Input	1 x HDMI
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	75(W) x 30(H) x 72(D) mm
Weight	0.26kg

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![DataBay logo]

HDMI

• Compact HDMI over Cat-X Extender Kit

Utilising cost effective and readily available single Cat-X cable, these units allow extended distances to be quickly covered between AV source and display devices. The configuration is normally in the form of a transmit unit and receive unit. Ideal for digital signage applications.

• **ET-HC0101-T:** HDMI to Cat-X Transmitter

Mini HDMI to Cat-X converter, perfect for HDMI expansion / digital signage whilst minimising the use of expensive HDMI cables.

Normally used in conjunction with a ET-HC0101-R Cat-X to HDMI Receiver.

• **ET-HC0101-R:** Cat-X to HDMI Receiver

Mini Cat-X to HDMI converter, which is normally used with the ET-HC0101-T Transmitter (above). The receiver has built-in EQ to allow fine tuning of the video image.

HDMI Source

HDMI Cable

ET-H C0101-T

Power Adaptor

Cat-X Cable

Power Adaptor

ET-H C0101-R

HDMI Cable

HDMI Display
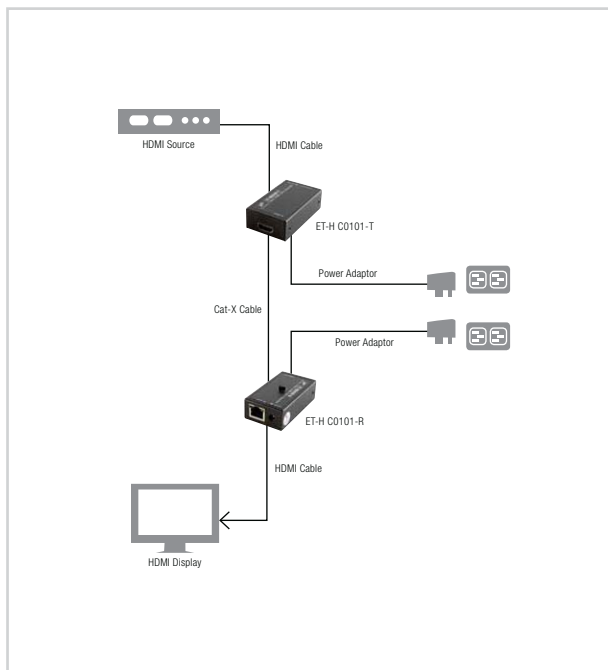
Incredibly compact sized units

Specifications:

Model:	ET–HC0101–T	ET–HC0101–R
Description	Mini HDMI Cat-X transmitter	Mini HDMI Cat-X receiver
AV Inputs	HDMI x 1	RJ-45 x 1
AV Remote Outputs	RJ-45 x 1	HDMI x 1
Resolution & Transmission Distance	480p @ 80m, 1080i / 720p @ 60m / 1080p @ 30m	480p @ 80m, 1080i / 720p @ 60m / 1080p @ 30m
Power	5v DC	5v DC
Dimensions	21(H) x 69(W) x 39(D) mm	21(H) x 69(W) x 39(D) mm

The use of low skew Cat-X cable is recommended for best performance.

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• **HDMI-HR:**
RJ-45/HDMI Receiver (non-powered)

Suitable as a short-range receiver (up to 10m) converting from RJ-45 to HDMI. This non-powered device plugs directly into a monitor's HDMI socket.

Note: some displays (particularly Samsung brand products) require a power source to function correctly; in this case please use the powered version below.

• **ET-HC0101-Z:**
RJ-45/HDMI Receiver (powered)

A powered version of the above product. This is required on some brands of flat screen displays, particularly Samsung products.

HDMI Display   HDMI-HR   Cat-X (up to   Local HD Display
                                             HDMI cable

HDMI Display   ET-HC0101-R   Cat-X (up to   HDMI Source

                                 Multi-port transceiver

HDMI Display   ET-HC0101-Z   Cat-X (up to

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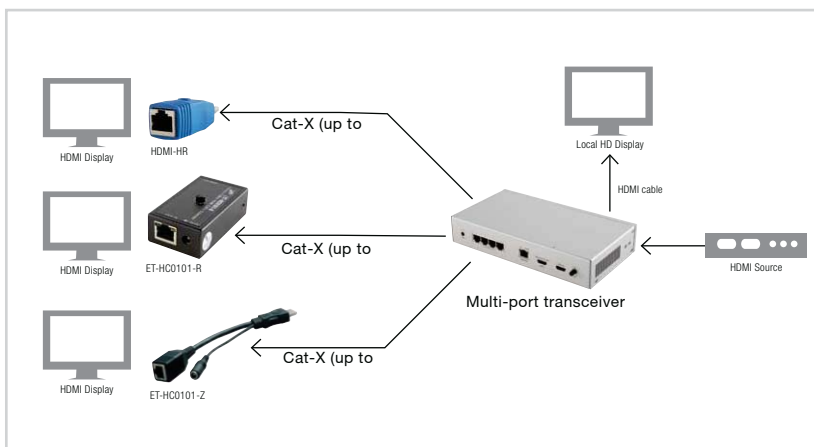
ET-HK0101-MC:
HDMI over Single Cat-X Extender

This HDMI 1.3 over Cat-X Kit extends single HDMI video/audio signals over a transmission distance of up to 40 metres in HDTV 1080p format and up to 60 metres in 1080i format.

Utilising only one cost-effective Cat-X LAN cable, your HD source signal can be extended to a HD display sited a signifcant distance from source.

Features:
- HDMI 1.3c compliant
- HDCP 1.1 compliant
- Supports 1080p up to 40 metres, 1080i up to 60 metres
- Adjustable 8-level EQ control switch to minimise cable skew
- Supports DTS-HD and Dolby True HD high bit rate audio

Transmitter

Receiver
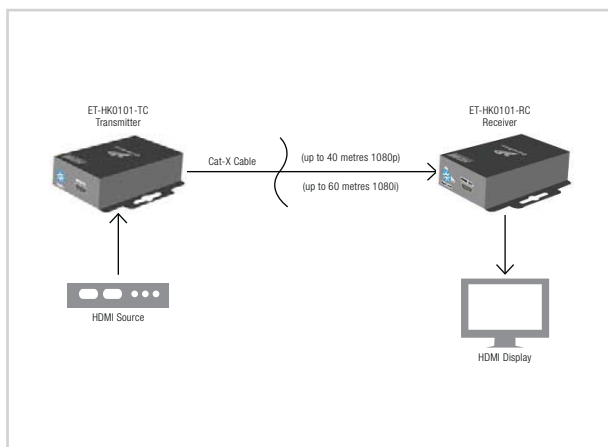
Specifications:

Model:	ET–HK0101–TC	ET–HK0101–RC
Unit	Transmitter	Receiver
Video Support	480i / 480p / 720p / 1080i / 1080p	
Transmissions	Full HD (1080p) ~ 40m (130ft) (CAT-5e) / 50m (165ft) (CAT-6) HD (720p/1080i) ~ 50m (165ft) (CAT-5e) / 60m (200ft) (CAT-6)	
Audio Support	Surround sound (up to 7.1ch) or stereo digital audio	
Equalisation	8 level digital control at RX	
Input	HDMI x 1	RJ-45 x 1
Output	RJ-45 x 1	HDMI x1
HDMI Connector	Type A (19-pin female)	
RJ-45 Connector	WE/SS 8P8C with 2 LED indicators	
Power Supply	Inter-lock 5v/4A DC	
Power Input	1W (max)	
Dimensions	25(H) x 85(W) x 60(D) mm	

ET-HK0101-TC
Transmitter

Cat-X Cable

(up to 40 metres 1080p)

(up to 60 metres 1080i)

ET-HK0101-RC
Receiver

HDMI Source

HDMI Display

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• ET-HD0101-MC: HDMI over Cat-X Extender Kit with IR Control Path

This HDMI 1.3 over Cat-X Kit extends single HDMI video/audio signals over a transmission distance of up to 40 metres in HDTV 1080p format and up to 60 metres in 1080i format.

IR Control Path

In addition, this HDMI over Cat-X extender kit also includes IR Control Path feature which allows the remote control functionality of your HD source (eg. Blu-ray / DVD player remote control) to function at the 'output display' end of the system, even though the HD source may be sited up to 60 metres away.

Features:

- HDMI 1.3c compliant
- HDCP 1.1 compliant
- Embedded IR (infrared) control path
- Supports 1080p up to 40 metres, 1080i up to 60 metres
- Adjustable 8-level EQ control switch to minimise cable skew
- Supports DTS-HD and Dolby True HD high bit rate audio
- IR Receiver & Blaster included

Transmitter

Receiver
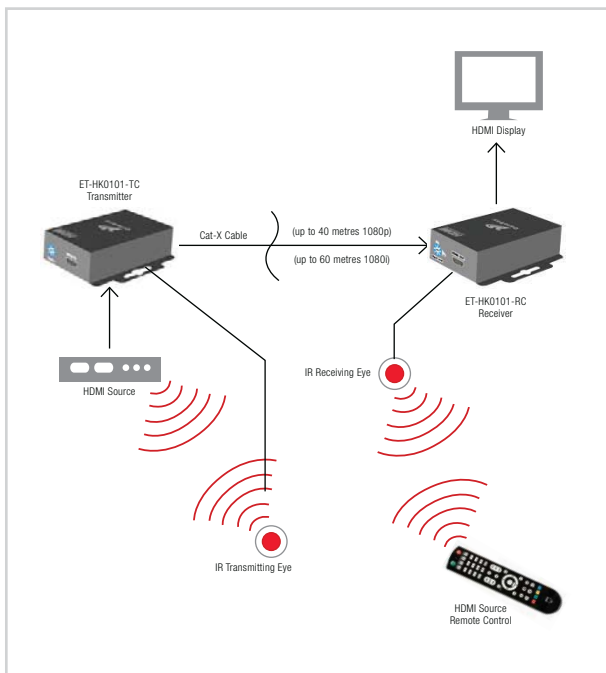
Specifications:

Model:	ET–HD0101–MC–TC	ET–HD0101–MC–RC
Unit	Transmitter	Receiver
Video Support	480i / 480p / 720p / 1080i / 1080p60	
Transmissions	Full HD (1080p) ~ 40m (130ft) (CAT-5e) / 50m (165ft) (CAT-6) HD (720p/1080i) ~ 50m (165ft) (CAT-5e) / 60m (200ft) (CAT-6)	
Audio Support	Surround sound (up to 7.1ch) or stereo digital audio	
Equalisation	8-level digital control at RX	
Input	HDMI x 1	RJ-45 x 1
Output	RJ-45 x 1	HDMI x 1
HDMI Connector	Type A (19-pin female)	
RJ-45 Connector	WE / SS 8P8C with 2 LED indicators	
Power Supply	Inter-lock 5v/4A DC	
Power Input	1W (max)	
Dimensions	25(H) x 85(W) x 60(D) mm	

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CA-HDMIAT:
HDMI over Cat-X Transmitter (up to 250m)

The CA-HDMIAT is a HDMI over Cat-X transmitter unit (which combines with the CA-HDMIR receiver units) and will extend an HDMI signal over two Cat-X cables up to 250m.

Receivers are available in 50, 100, 150 and 250m versions (CA-HDMI50R, CA-HDMI100R, CA-HDMI150R & CA-HDMI250R). Select receiver by the distance of transmission.

Features:
- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications
- Supports CAT-5/CAT-5E/CAT-6 cables
- Supports high definition input up to 1080P @ 50/60Hz
- Output resolution follows input
- Sources are selectable at input stage
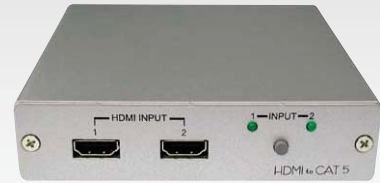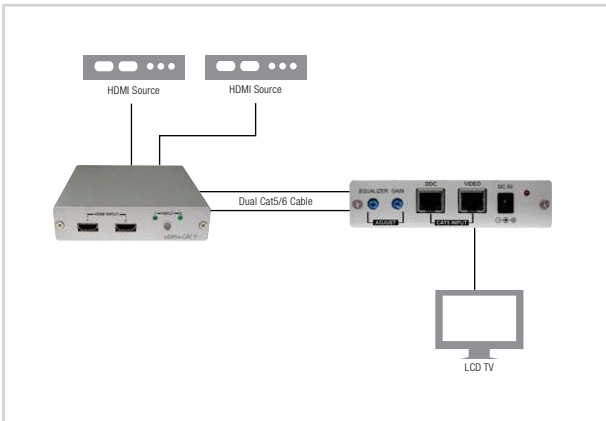
Specifications:

Model:	CA–HDMIAT
Inputs	2 x HDMI female port
Outputs	2 x RJ-45 (1 x CAT-5 video & 1 x CAT-5 for DDC outputs)
Power	5v/2.6A DC power supply
Dimensions	123(W) x 30(H) x 125(D) mm
Weight	0.7kg

CA-HDMI-50R: HDMI over CAT5 Receiver up to 50m
CA-HDMI-100R: HDMI over CAT5 Receiver up to 100m
CA-HDMI-150R: HDMI over CAT5 Receiver up to 150m
CA-HDMI-250R: HDMI over CAT5 Receiver up to 250m

The CA-HDMI Series are receiver units which combine with the CA-HDMIAT Transmitter for transmitting a HDMI signal up to 50, 100, 150, 200 metres in distance.

Features:
- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications
- Supports CAT-5/CAT-5E/CAT-6 cables
- Supports high definition input up to 1080P @ 50/60Hz
- Output resolution follows input
- Easy installation
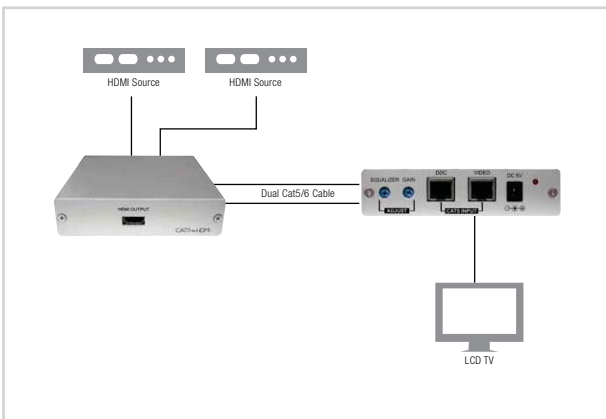
Specifications:

Model:	CA–HDMIxxxR
Input	1 x CAT-5 input for Video, 1x CAT-5 input for DDC
Output	1 x HDMI female port
Power	5v/2.6A DC power supply
Dimensions	123(W) x 125(D) x 30(H) mm
Weight	0.7kg

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- **PU-103:** v1.3 HDMI over Cat-X Extender Kit
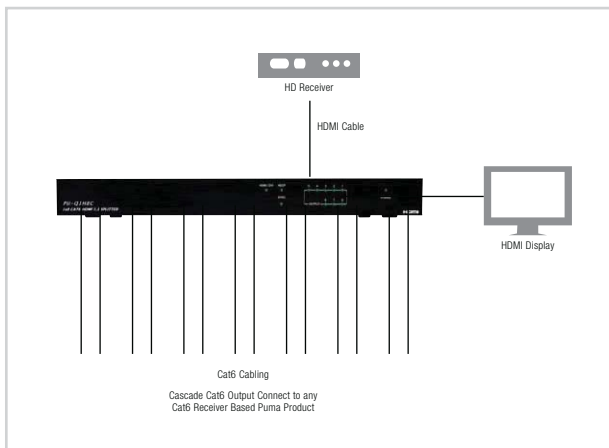
All the CYP PUMA, HDMI over CAT5e/6 transmitters and receivers are the perfect solution to extend HDMI signals via CAT cabling up to 30 metres.

For even longer distances, also use the PU-108 repeater, which can be cascaded.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.1 compliant
- Resolutions supported:
  - PC - VGA to WXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Compatible with CAT-5E and CAT-6 cables. CAT-6 is recommended for better performance
- Supports CEC functions
- Supports 'Deep Colour' (10, & 12 bit)
- Equalises and recovers incoming TMDS data before re-transmitting to ensure optimum signal quality
- 3D Ready
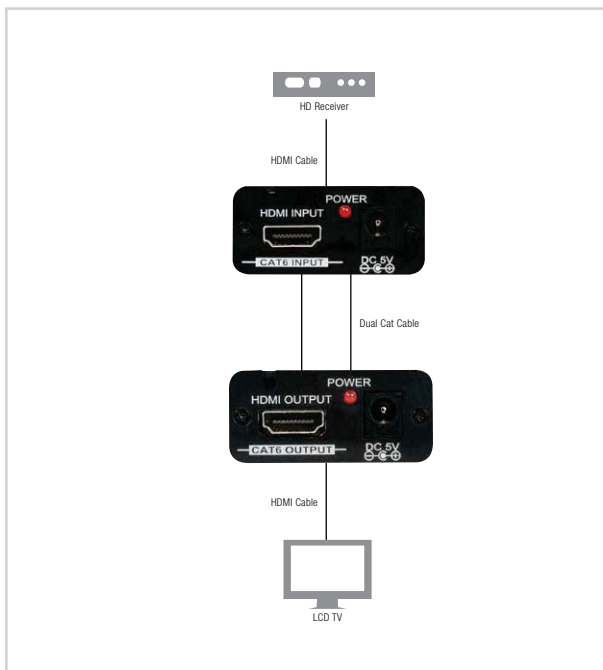
Specifications:

Model:		PU–103
Input:	Transmitter	1 x HDMI
	Receiver	1 x CAT5e/6 for Video, 1 x CAT5e/6 for DDC
Output:	Transmitter	1 x CAT5e/6 for Video, 1 x CAT5e/6 for DDC
	Receiver	1 x HDMI
Power		2 x 5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions		50(W) x 23(H) x 62(D) mm
Weight		0.34kg

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• **PU-106-KIT:** v1.3 HDMI over Cat-X Extender Kit with IR Pass-through

All the PUMA, HDMI over CAT5e/6 transmitters and receivers are the perfect solution to extend HDMI signals via CAT cabling up to 30 metres.

The PU-106 Kit also allows you to use your existing Remote Control to control your device with the included IR Reciever & Blaster.

Features:

• v1.3 HDMI, HDCP 1.1 and DVI 1.1 compliant
• HDMI over Cat-X Extender Set
• Resolutions supported:
  - PC - VGA to WXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
• High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
• Compatible with CAT-5e and CAT-6 cables. CAT-6 is recommended for better performance
• Supports CEC functions & IR blaster
• Supports 'Deep Colour' (10 & 12 bit)
• Equalises and recovers incoming TMDS data before re-transmitting to ensure optimum signal quality
• 3D Ready
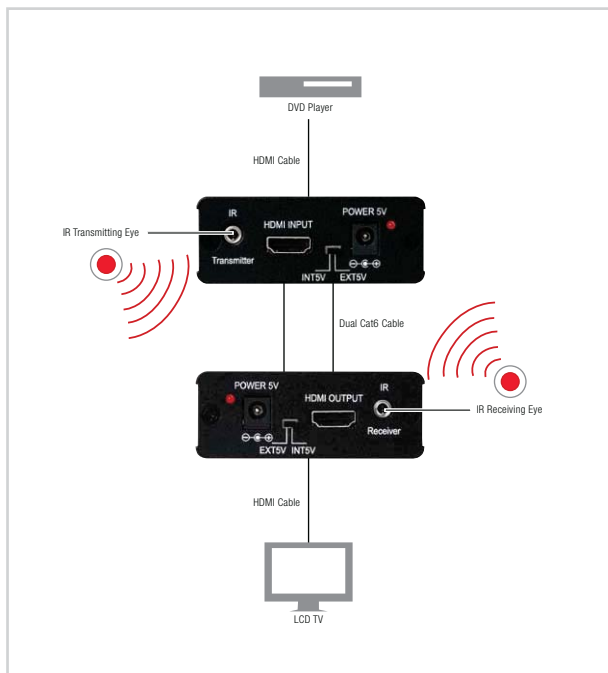
Specifications:

Model:		PU–106–KIT
Input	Transmitter	1 x HDMI, 1 x IR Jack
	Receiver	2 x CAT5e/6, 1 x IR Jack
Output	Transmitter	2 x CAT5e/6, 1 x IR Jack
	Receiver	1 x HDMI, 1 x IR Jack
Power		2 x 5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions		80(W) x 30(H) x 72(D) mm each
Weight		0.76kg

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• PU-108: v1.3 HDMI ~ Cat-X Repeater

A dedicated extender for extending the CAT6 cables used with the PU-103, PU-1103, and PU-1106 HDMI over CAT6 Extender Sets.

This great device will extend your cabling up to 25 metres either side of the repeater, allowing IR pass-through and can be cascaded up to 5 times.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.1 compliant
- HDMI over CAT5e / CAT6 Repeater
- Resolutions supported:
  - PC - VGA to WXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Compatible with CAT-5e and CAT-6 cables. CAT-6 is recommended for better performance
- Supports CEC functions
- Supports 'Deep Colour' (10 & 12 bit)
- Supports Infra Red control signals throughput when in use with PUMA product which enable IR control
- 3D Ready
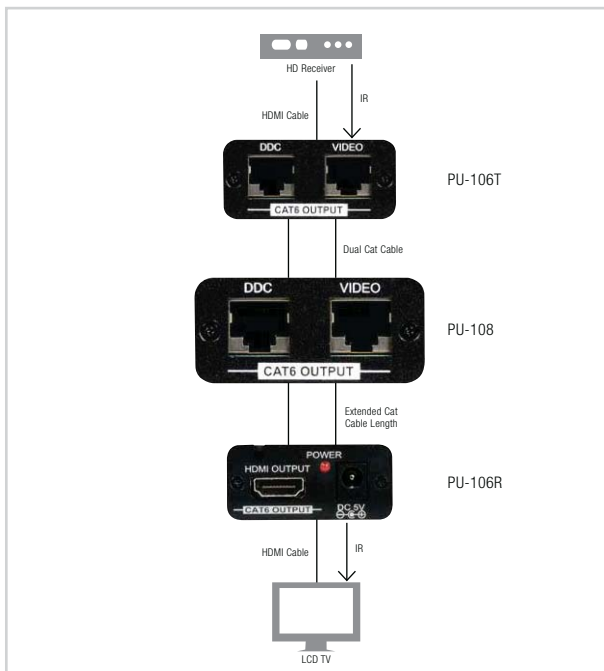
Specifications:

Model:	PU–108
Input	1 x CAT5e/6 for Video, 1 x CAT5e/6 for DDC
Output	1 x CAT5e/6 for Video, 1 x CAT5e/6 for DDC
Power	n/a - seperate power supply not required
Dimensions	50(W) x 23(H) x 70(D) mm
Weight	0.1kg

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- **PU-1103-KIT:** v1.3 HDMI over Cat-X Extender Kit
- **PU-1106-KIT:** v1.3 HDMI over Cat-X Extender Kit with IR Pass-through

A dedicated extender for extending the Cat6 cables used with the PU-103, PU-1103 and PU-1106 HDMI over Cat6 Extender Sets.

This great device will extend your cabling up to 30 metres either side of the repeater, allowing IR pass-through, and can be cascaded.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.1 compliant
- HDMI over CAT6 Extender Set
- Resolutions supported:
  - PC - VGA to WXGA
  - HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Compatible with CAT-5E and CAT-6 cables. CAT-6 is recommended for better performance
- Supports CEC functions
- Supports 'Deep Colour' (10, & 12 bit)
- Equalises and recovers incoming TMDS data before re-transmitting to ensure optimum signal quality
- 3D Ready
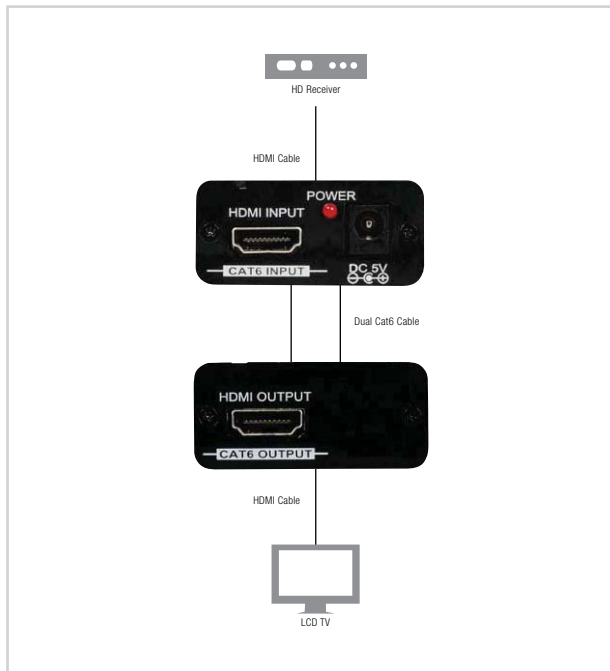
Specifications:

Model:		PU–1103–KIT
Input	Transmitter	1 x HDMI female port
	Receiver	1 x CAT5e/6 for video, 1 x CAT5e/6 for DDC
Output	Transmitter	1 x CAT5e/6 for video, 1 x CAT5e/6 for DDC
	Receiver	1 x HDMI female port
Power		1 x 5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions		50(W) x 23(H) x 72(D) mm each
Weight		0.38kg

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• **PU-22HC:** v1.3 HDMI/CAT6 to HDMI/Cat-X Cascader

The PU-22HC cascader with its dual input and outputs allows for great flexiblity within any HDMI over CAT6 system.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.1 compliant

- Resolutions supported:
  - PC - VGA to WUXGA
  - HDTV - 480i to 1080p plus 1080p 24fps

- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM

- Supports CEC functions

- Supports 'Deep Colour' (10 & 12 bit)

- Equalises and recovers incoming TMDS data before re-transmitting to ensure optimum signal quality

- 3D Ready
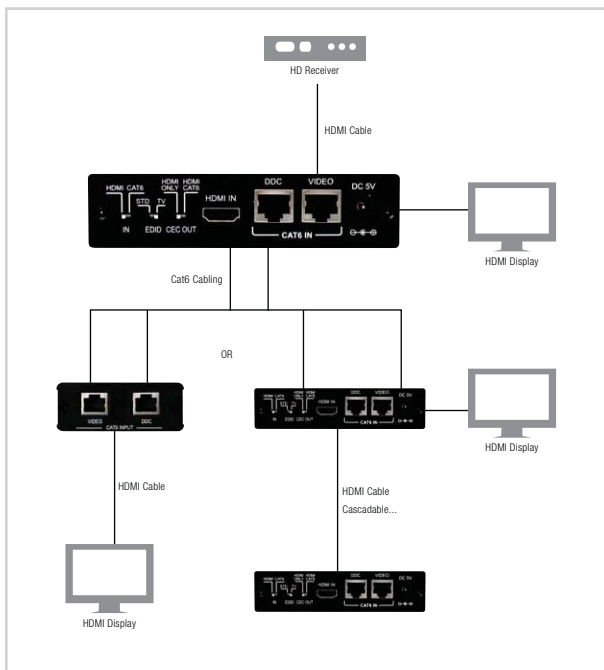
Specifications:

Model:	PU–22HC
Input	2 x CAT6, 1 x HDMI
Output	2 x CAT6, 1 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	125(W) x 30(H) x 120(D) mm
Weight	0.6kg

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• **PU-232:** RS-232 Control Over Cat-X
Extender Kit

The CAT5/6 RS-232 extender is an affordable, hardware-based solution providing control of any RS-232 protocol device. This transmitter and receiver set will extend the control of RS-232 for over 250m.

The RS-232 extender also provides full duplex transmission and hardware handshake signals, with no need for any set up or configuration.

Features:

• Extends any RS-232 compliant device up to 250 metres from the source to display
• Requires only one CAT5/6 cable
• Perfect for digital signage applications
• Baud Rate: 110 ~ 921600
• Data bit: 8bit
• 3D Ready
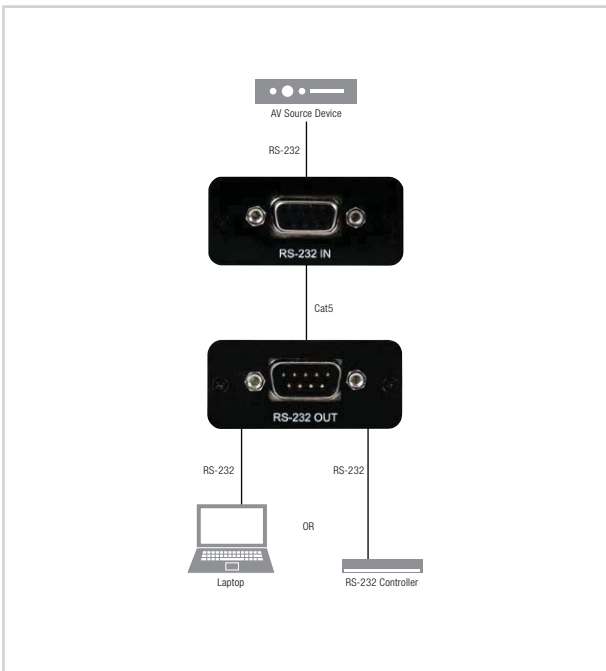
Specifications:

Model:	PU–232
Input	1 x RS-232 D-sub (9-pin female), 1 x CAT5/6
Output	1 x RS-232 D-sub (9-pin female), 1 x CAT5/6
Power	2 x 5V/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	50(W) x 23(H) x 61(D) mm
Weight	0.26kg

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- **PU-O4H4C:** v1.3 HDMI 4x4 Matrix with built-in HDMI over Cat-X outputs

CYP's PU-O products combine HDMI over Cat-X & HDMI Matrix switchers to provide versitility to HDMI installations.

The PU-O4H4C HDMI Matrix has 4 HDMI inputs and 4 Cat-X transmitter outputs.

Each of the four HDMI sources can be directed to any one of the four Cat-X outputs, so each display can show the same or a different source.

Features:

- v1.3 HDMI, HDCP 1.1, DVI 1.0 compliant
- HDMI 4 x 4 Matrix with built-in HDMI over Cat-X outputs
- Resolutions supported: PC - VGA to UXGA ; HDTV - 480i to 1080p + 1080p 24fps
- High Definition audio supported: Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio + LPCM
- The HDMI input is compensated, clock / phase adjusted and jitter eliminated so the output is a brand new standard HDMI signal
- RS-232 and IR remote control, plus IR extender
- Supports Deep Colour (10/12 bit)
- 3D Ready
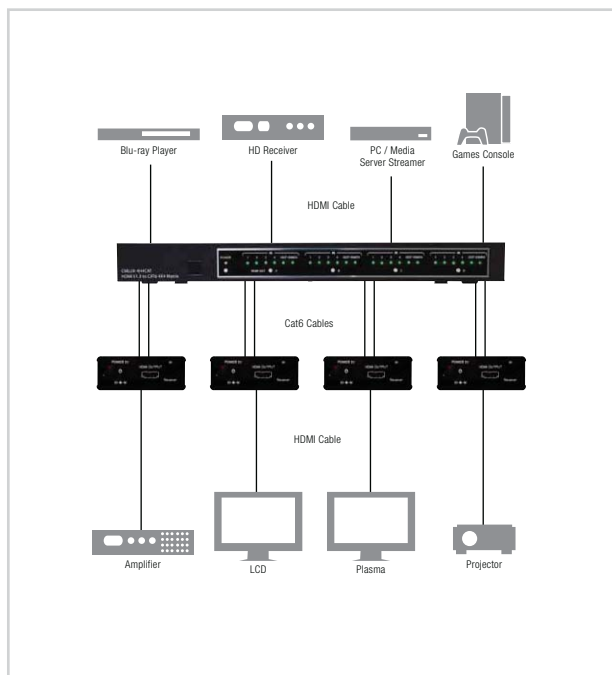
Specifications:

Model:	PU–O4H4C
Input	4 x HDMI, 1 x IR Jack
Output	8 x CAT5e/6 (2 for each output), 1 x IR Jack, 1 X RS-232
Power	5V/6A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	438(W) x 44(H) x 175(D) mm
Weight	3.08kg

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- ## PU-Q1C4H: 1-to-4 Cat-X to HDMI Splitter

CYP's PU-Q products combine HDMI over Cat-X with HDMI distribution to provide versitility to HDMI installations.

The PU-Q1C4H has 1 Cat-X receiver input and 1 Cat-X transmitter output with 3 HDMI outputs.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Resolutions supported: PC - VGA to UXGA; HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Cat-X I/O can run up to 30m @ 1080p. HDMI Output can run up to 10 metres
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Supports 'Deep Colour' (10, & 12)
- IR extender I/O
- System reset function switch generate a command every 10 minutes to the connected display which resets them to the correct HDMI input
- 3D Ready
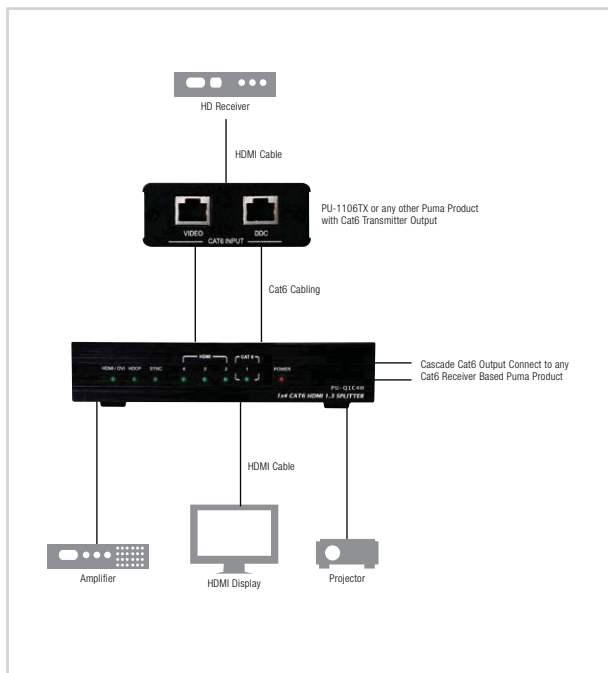
Specifications:

Model:	PU–Q1C4H
Input	2 x CAT5e/6 (2 for each input), 1 x IR Jack
Output	2 x CAT5e/6, (2 for each output), 1 x IR Jack, 3 x HDMI
Power	5v/2.6A DC, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	215(W) x 40(H) x 132(D) mm
Weight	0.7kg

AV Signal Distribution

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• **PU-Q1C8H:** 1-to-8 Cat-X to HDMI Splitter

CYP's PU-Q products range combines HDMI over Cat-X with HDMI distribution to provide versitility to HDMI installations.

The PU-Q1C8H has 1 Cat-X receiver input and 1 Cat-X transmitter output with 7 HDMI outputs.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Resolutions supported: PC - VGA to UXGA; HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Cat-X I/O can run up to 30m @ 1080p. HDMI Output can run up to 10 metres
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Supports 'Deep Colour' (10, & 12)
- IR extender I/O
- 3D Ready
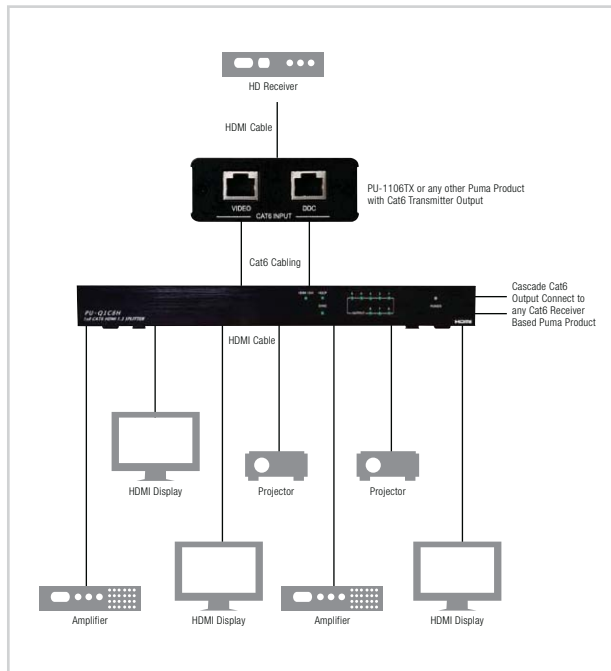
Specifications:

Model:	PU–Q1C8H
Input	2 x CAT5e/6 (2 for each input), 1 x IR Jack
Output	2 x CAT5e/6 (2 for each output), 1 x IR Jack, 7 x HDMI
Power	5v/6A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	435(W) x 50(H) x 160(D) mm
Weight	1.7kg

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PU-Q1H4C: 1-to-4 HDMI to Cat-X Splitter

All the PUMA, HDMI over Cat-X transmitters and receivers are the perfect solution to extend HDMI signals via Cat-X cabling up to 30 metres.

The PU-Q products within the PUMA range combine HDMI over Cat-X with HDMI distribution to provide versitility to HDMI installations.

The PU-Q1H4C has 1 HDMI input and 1 HDMI output and 3 Cat-X transmitter outputs.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- 1 ~ 4 HDMI to Cat-X splitter
- Resolutions supported: PC - VGA to UXGA; HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Cat-X I/O can run up to 30m @ 1080p. HDMI Output can run up to 10 metres
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Supports 'Deep Colour' (10, & 12)
- 3D Ready
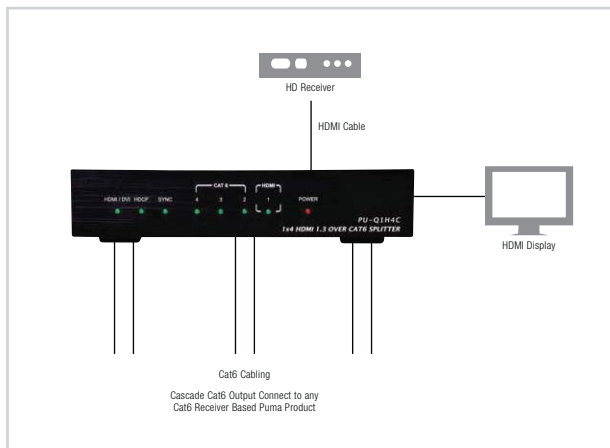
Specifications:

Model:	PU–Q1H4C
Input	1 x HDMI, 1 x IR Jack
Output	1 x HDMI, 1 x IR Jack, 6 x CAT5e/6 (2 for each output)
Power	5v/2.6A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	215(W) x 40(H) x 132(D) mm
Weight	0.72kg

AV Signal Distribution

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● **PU-Q1H8C:** 1-to-8 HDMI to Cat-X Splitter

All the PUMA, HDMI over Cat-X transmitters and receivers are the perfect solution to extend HDMI signals via CAT cabling up to 40m.

The PU-Q products within the PUMA range combine HDMI over Cat-X with HDMI distribution to provide versatility to HDMI installations.

The PU-Q1H8C has 1 HDMI input and 1 HDMI output with 7 Cat-X transmitter outputs.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- 1 ~ 8 HDMI to Cat-X splitter / transmitter
- Resolutions supported: PC - VGA to UXGA; HDTV - 480i to 1080p plus 1080p 24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Cat-X I/O can run up to 30m @ 1080p. HDMI Output can run up to 10 metres
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Supports 'Deep Colour' (10, & 12)
- IR extender I/O
- 3D Ready

HD Receiver

HDMI Cable

HDMI Display

Cat6 Cabling

Cascade Cat6 Output Connect to any
Cat6 Receiver Based Puma Product

Specifications:

Model:	PU–Q1H8C
Input	1 x HDMI, 1 x IR Jack
Output	1 x HDMI, 1 x IR Jack, 14 x CAT5e/6 (2 for each output)
Power	5v/6A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	435(W) x 50(H) x 160(D) mm
Weight	1.72kg

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• ET-HF0101-MG200: HDMI Fiber Optic Extender Kit (Multi-mode SC type)

This HDMI over Fiber Optic Extender Kit will boost your high resolution video/audio signal distance by up to 200 metres, whilst ruling out any RF interference issues characteristic of traditional copper wire cable.

Ideal for a wide range of video and signage applications requiring remote HDMI display.

Features:

- HDMI 1.3c compliant
- HDCP fully compliant without copper wire
- Long distance video and audio transmission - up to 200 metres
- Supports high resolution image quality
- No RF interference by optical fiber
- Class 1 laser product complies with EN 60825-1
- 3D Ready
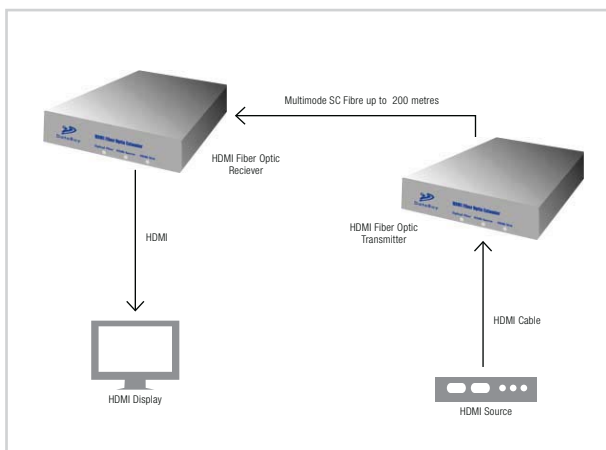
Specifications:

Model:	ET–HF0101–TG200	ET–HF0101–RG200
Model Name	HDMI Fiber Optic Transmitter	HDMI Fiber Optic Receiver
Maximum Resolution	1920x1080	
Maximum Length	1920 x 1080-200m, 62.5/ 125 MMF	
Input	HDMI x 1	SC x 2
Output	SC x 2	HDMI x 1
HDMI Connector	Type A (19-pin female)	
Fiber Optic Connector	SC Type	
Optical Property	VCSEL 850nm @ - 6dBm	
	FP LD 1550 nm @ - 3dBm	
	FP LD 1310 nm @ - 3dBm	
Power Supply	5v/600mA DC	
Dimensions	145(W) x 26(H) x 95(D) mm	

Multimode SC Fibre up to 200 metres

HDMI Fiber Optic Reciever

HDMI

HDMI Display

HDMI Fiber Optic Transmitter

HDMI Cable

HDMI Source

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- **VS-201H:** 1-to-2 VGA Splitter
- **VS-401H:** 1-to-4 VGA Splitter
- **VS-801H:** 1-to-8 VGA Splitter

With 350MHz bandwidth these units allow video to be simultaneously displayed across multiple displays quickly and effectively.

The bases of the units are magnetic to allow for easy attachment to most metal surfaces.

2/4/8 port VGA splitter

Display

Display

Display

Display

Display

PC Computer

UL2919 VGA Cable
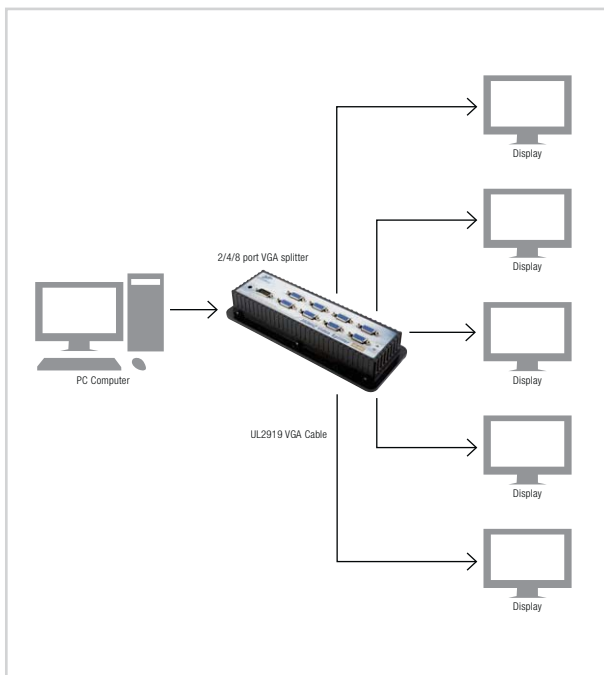
Specifications:

Model:	VS–201H	VS–401H	VS–801H
Power Consumption	DC 9v; 200mA	DC 9v; 200mA	DC 9v; 200mA
Cable Distance	65m (210 feet) max	65m (210 feet) max	65m (210 feet) max
Signal Type	VGA, SVGA, XGA, Multi-sync, TFT-LCD monitor	VGA, SVGA, XGA, Multi-sync, TFT-LCD monitor	VGA, SVGA, XGA, Multi-sync, TFT-LCD monitor
Connector	Input: HD15 male x 1 / Output: HD15 female x 1	Input: HD15 male x 1 / Output: HD15 female x 4	Input: HD15 male x 1 / Output: HD15 female x 8
LED Display	Power indicator x 1, Active indicator x 1	Power indicator x 1, Active indicator x 1	Power indicator x 1, Active indicator x 1
Enclosure	Plastic	Plastic	Plastic
Dimensions	100(W) x 23(H) x 56(D) mm	220(W) x 36(H) x 80(D) mm	220(W) x 36(H) x 80(D) mm

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• **SV-102:** 2-to-1 VGA Switch

Self-powered VGA switch allowing one of two VGA sources to be selected at any time.

The unit can be manually or auto switched.

Features:

- Switches two VGA sources to one monitor display
- Auto detect monitor and DDC2B signal for each port
- Auto scan function
- LED status indicates VGA channel
- Manual switch on unit
- Optional remote switch
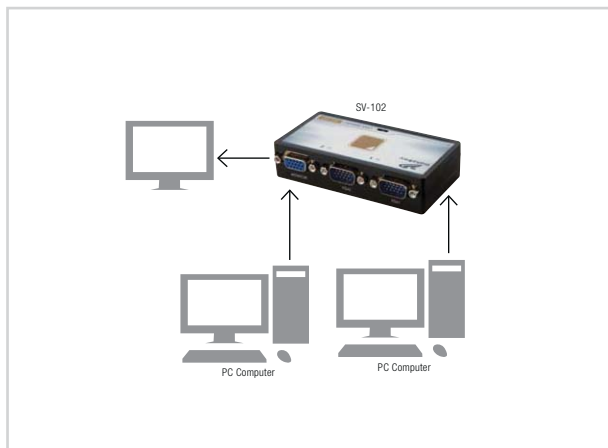
Specifications:

Model:	SV–102
VGA Select Method	Auto sensing, Front push button
Signal Type	VGA, XGA, SVGA, Multi-sync, TFT-LCD monitor
Extended Length	30m (max)
Connector	Input: 2 x D-sub 5, male / Output: 1 x D-sub15, female
LED Display	2 LEDs, VGA1 & VGA2
Enclosure	Plastic
Power	Self-powered via VGA connection
Dimensions	100(W) x 23(H) x 56(D) mm

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• SW-VA0201: 2-to-1 VGA and Audio Switch

This 2 x 1 VGA plus Audio Switch allows easy switching between two video & audio sources to one display and speaker system. Switching between two output signals can easily be done by the press of a button without sacrificing any downgrade of picture quality.

Features:

- Switches Video and Audio from two sources to one set of display monitor and speakers
- Pure hardware implementation - free from installation software or drivers
- User-friendly - frontal LED indicates active channel status
- Conveniently designed - no external power adaptor required
- Magnetic and removeable screw plate mountings
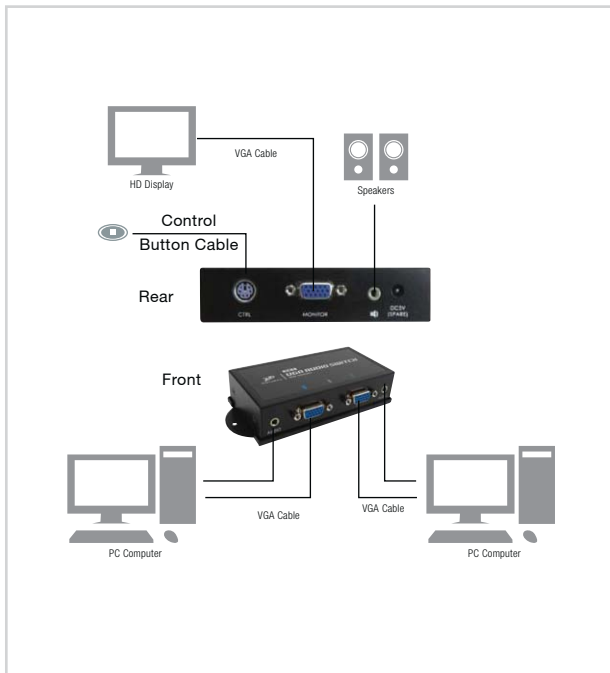
Specifications:

Model:	SW–VA0201
Input 5	VGA x 2 / 3.5mm Jack x 2
Output	VAG x 1 / 3.5 mm Jack x 1
Resolution	1920 x 1200
Audio	Stereo
Selection Method	Manual Select Button
Power Source	Passive Unit (no power required)
Enclosure	Metal
Dimensions	133(W) x 27(H) x 62(D) mm

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• VGA over Cat-X Range Extenders (up to 300m)

Utilising cost effective and readily available Cat-X cable, these units allow extended distances to be quickly and easily covered between AV source and display devices.

In the basic form, the configuration is a Transmit unit and a Receive unit; however, source signals can also be split to provide simultaneous multiple displays if required.

Whilst VGA is video only, these devices cleverly allow for the transmission of the audio signal as well!

- • **AVE-301T:** 1 Port Transmitter
- • **AVE-304T:** 4 Port Transmitter
- • **AVE-308T:** 8 Port Transmitter
- • **AVE-316T:** 16 Port Transmitter
- • **AVE-301R:** 1 Port Receiver
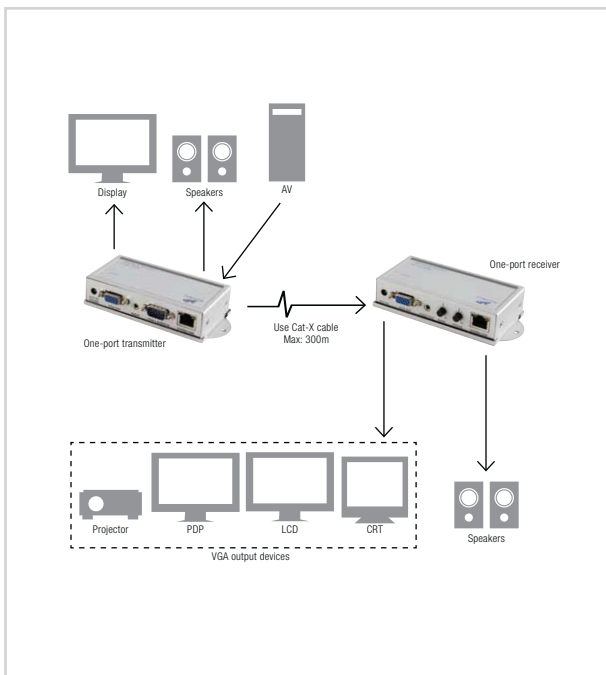
Transmitters:

Receiver:

Specifications:

Model:	AVE–301T	AVE–304T	AVE–308T	AVE–316T	AVE–301R
Description	1 port transmitter	4 port transmitter	8 port transmitter	16 port transmitter	1 port receiver
AV Inputs	VGA x 1, 3.5mm jack x 1	VGA x 1, 3.5mm jack x 1	VGA x 1, 3.5mm jack x 1	VGA x 1, 3.5mm jack x 1	RJ-45 x 1
AV Outputs	VGA x 1, RJ-45 x 1, 3.5mm jack x 1	VGA x 1, RJ-45 x 4, 3.5mm jack x 1	VGA x 1, RJ-45 x 8, 3.5mm jack x 1	VGA x 1, RJ-45 x 16, 3.5mm jack x 1	VGA x 1, 3.5mm Jack x 1
LED	Two colour LEDs	Two colour LEDs	Two colour LEDs	Two colour LEDs	Two colour LEDs
Video quality	Maximum VGA resolution and distance: 2048 x 1536 @ 300m	Maximum VGA resolution and distance: 2048 x 1536 @ 300m	Maximum VGA resolution and distance: 2048 x 1536 @ 300m	Maximum VGA resolution and distance: 2048 x 1536 @ 300m	Maximum VGA resolution and distance: 2048 x 1536 @ 300m
Dimensions	113(W) x 29(H) x 62(D) mm	240(W) x 44(H) x 130(D) mm	240(W) x 44(H) x 130(D) mm	240(W) x 44(H) x 130(D) mm	113(W) x 29(H) x 62(D) mm

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● **AVE-M180TR:** One-port VGA+Audio Mini Extender Kit

Possibly the world's smallest VGA+Audio Extender Kit, transmitting VGA and Audio over CAT-X cable up to 180 metres.

Each kit is supplied with both the transmitter and receiver units.

Features:

- Super compact design, allowing direct connection into the VGA sockets
- Pure hardware design, no software
- Support for VGA, SVGA, XGA, TFT, LCD and DDC2B function
- Transmitter takes power from USB port
- Receiver has built-in EQ adjustment for improved image quality
- Carries both Audio and Video signals
- Broadcast distance up to 180 metres

AVE-M180TR - Transmitter

AVE-M180TR - Receiver
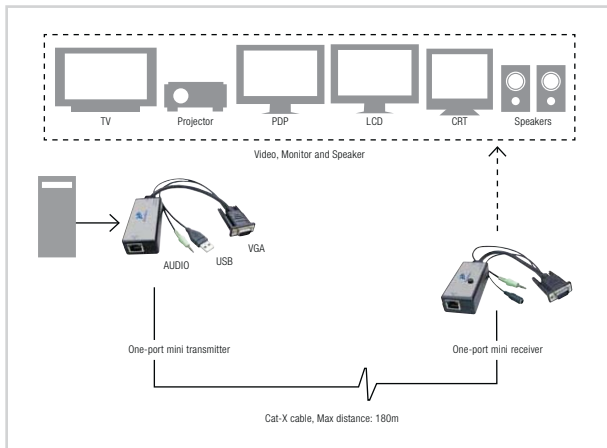
Specifications:

Model:	AVE–M180T:	AVE–M180R:
Description	Super mini AV Transmitter	Super mini AV Receiver
AV Inputs	VGA x 1, 3.5mm jack x 1	RJ-45 x 1
AV Outputs	RJ-45 x 1	VGA x 1, 3.5mm jack x 1
Video Control	-	Video EQ
LED	Power and video status	Power and video status
Video Quality	Maximum VGA resolution and distance: 2048 x 1536 @ 180m	Maximum VGA resolution and distance: 2048 x 1536 @ 180m
Power Source	5v DC from USB Port	5v DC supply
Environmental Condition	Operation temp: 0 ~ 50°C, Storage temp: -20 ~ 60°C, Humidity: 10 ~ 90%	Operation temp: 0 ~ 50°C, Storage temp: -20 ~ 60°C, Humidity: 10 ~ 90%

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• CA-COMPAT: Cat-X PC/HD Transmitter with Audio Selection

The CA-COMPAT is a PC/HD and audio transmitter (Tx) over Cat-X solution. It can extend Component or RGBHV signals through Cat-X Cables up to a distance of 100 metres.

System will require a receiver unit (CA-COMP50R or CA COMP100R).

Features:

- Supports HD / YCbCr / YPbPr format
- Supports CAT-5 / CAT-5E / CAT-6 cable
- Supports High Definition (HD) input source up to 1080p
- Supports PC input source up to UXGA
- Quick and Easy installation
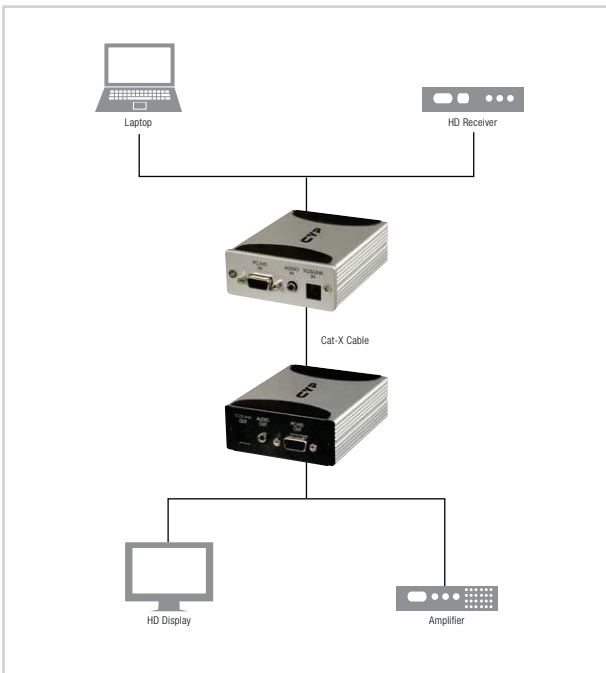
Specifications:

Model:	CA–COMPAT
Inputs	1 x 15-pin D-SUB, 1 x 3.5 stereo jack plug, 1 x Toslink SP/DIF digital audio
Ouputs	1 x RJ-45 with CAT-5/CAT-5E/CAT-6 Cable set
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	99(W) x 32(H) x 79(D) mm
Weight	0.2kg

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- **CA-COMP50R:** Cat-X PC/HD Receiver
  with Audio (50 metres)
- **CA-COMP100R:** Cat-X PC/HD Receiver
  with Audio (100 metres)

The CA-COMP PC/HD and audio receivers over Cat-X can receive Component or RGBHV signals through Cat-X Cables up to a distance of 50 or 100 metres - will require a transmitter unit (CA-COMPAT).

Features:

- Supports HD/YcbCr/YpbPr format
- Supports CAT-5/CAT-5E/CAT-6 cable
- Supports High Definition (HD) input source up to 1080p
- Supports PC input source up to UXGA
- Output signal resolution follows input
- Quick and Easy installation
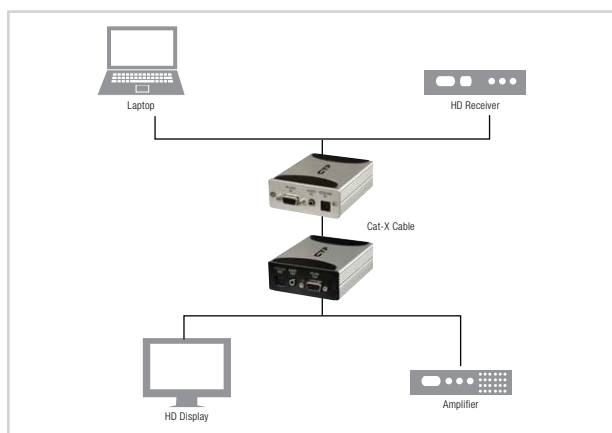
Specifications:

Model:	CA–COMP50R	CA–COMP100R
Inputs	1 x RJ-45 with CAT-5/ CAT-5E/CAT-6 Cable set	1 x RJ-45 with CAT-5/ CAT-5E/CAT-6 Cable set
Outputs	1 x 15-pin D-SUB, 1 x 3.5 stereo jack plug, 1 x Toslink SP/DIF digital audio	1 x 15-pin D-SUB, 1 x 3.5 stereo jack plug, 1 x Toslink SP/DIF digital audio
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	99(W) x 32(H) x 79(D) mm	99(W) x 32(H) x 79(D) mm
Weight	0.2kg	0.2kg

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● **CPCD-3A:** 1-to-3 HD/VGA + Audio
Distribution Amplifier

A three-way VGA splitter with audio, which will also accept YPbPr
& YCbCr via the 15-pin D-sub input.

Features:

● Supports: RGBHV (PC) or HDTV progressive scan component
(YPbPr) input signal via 15pin D sub connection
● Supports PC/HDTV resolution up to UXGA/1080p
● Accepts one VGA or HD component input and splits the signal into 3
buffered and identical outputs
● Supports stereo audio input and splits the signal into 3 identical outputs
via 3.5mm mini-stereo connector
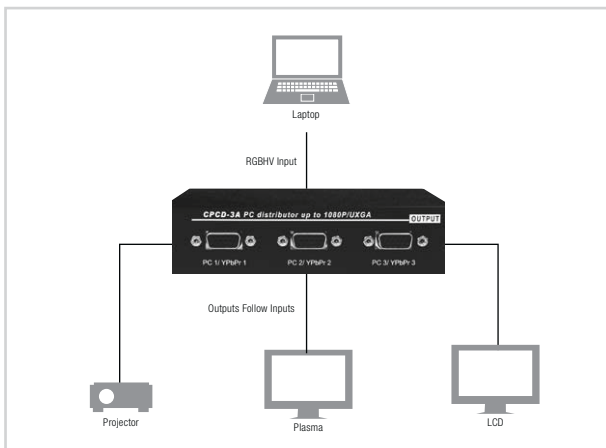
Specifications:

Model:	CPCD–3A
Inputs	15pin D sub and 3.5mm stereo audio jack plug
Outputs	3 buffered sets of 15pin D sub 1 x 3.5mm stereo jack plug
Power	5v DC
Dimensions	150(W) x 38(H) x 141(D) mm
Weight	0.8kg

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Transmitter:

• ET-DF0101-MG500: DVI Fiber Optic Extender Kit (Multi-mode LC type)

The ET-DF0101-MG500 DVI Fiber Optic Extender Kit boosts your DVI transmission distance by up to 500 metres from a DVI-D single link video source to remote monitor or projector.

With four fiber optic cables, it provides longer signal tramsmission distance whilst ruling out any RF interference issues characteristic of traditional copper wire cable.

Features:

- Long distance video transmission - up to 500 metres
- Supports high resolution image quality
- Supports Pseudo DDC detection function for EDID information
- No RF interference by optical fiber
- Class 1 laser product complies with EN 60825-1

Receiver:

Specifications:

Model No:	ET–DF0101–TG500	ET–DF0101–RG500
Description	DVI Fiber Optic Transmitter	DVI Fiber Optic Receiver
Maximum Resolution	1920x1200	
Maximum Length	(1920x1200)-300m [62.5/125μ MF] / 500m[50/125μ MMF]	
Input	1x DVI	4x LC
Output	4x LC	1x DVI
DVI Connector	DVI-D [25-pin male]	
Fiber Optic Connector	LC Type	
Optical Property	4 channels 850nm @ -6dBm ± 3dB	
Power Supply	5v/1A DC	
Dimensions	40(W) x 20(H) x 90(D) mm	

DVI Source

HD Display

4LC- LC SMF up to 500m

Transmitter

Receiver

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ET-DF0101-MG5K: DVI Fiber Optic Extender Kit (Single-mode LC type)

The ET-DF0101-MG5K DVI Fiber Optic Extender Kit boosts your DVI transmission distance by up to 5km from a DVI-D single link video source to remote display.

With four fiber optic cables, it provides longer signal tramsmission distance whilst ruling out any RF interference issues characteristic of traditional copper wire cable.

Features:

- Long distance video transmission - up to 5 kilometres
- Supports high resolution image quality
- Supports Pseudo DDC detection function for EDID information
- No RF interference by optical fiber
- Class 1 laser product complies with EN 60825-1

Transmitter:

Receiver:
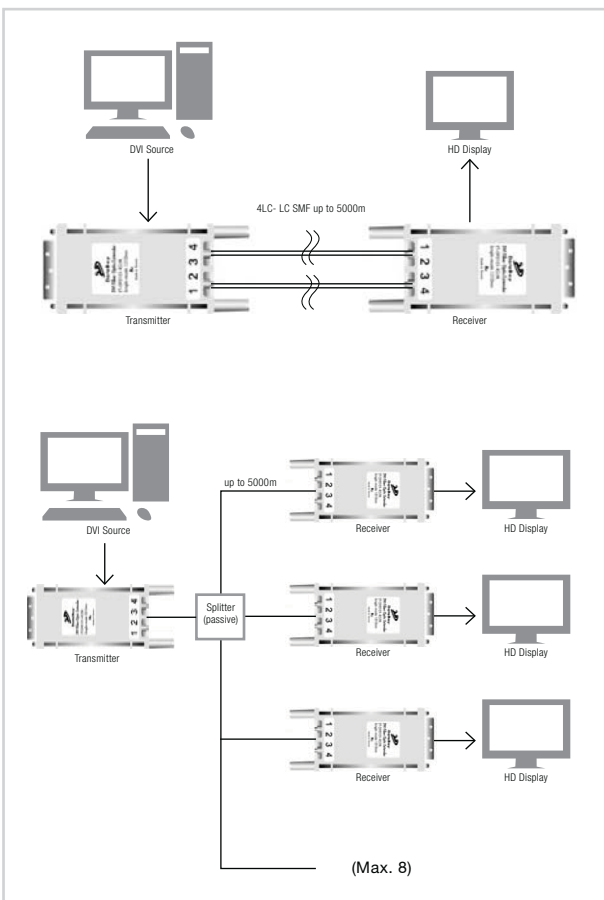
Specifications:

Model No:	ET-DF0101-TG5K	ET-DF0101-RG5K
Description	DVI Fiber Optic Transmitter	DVI Fiber Optic Receiver
Maximum Resolution	1920x1200	
Maximum Length	(1920x1200)-5000m (9/125μ SMF)	
Input	DVI x 1	LC x 4
Output	LC x 4	DVI x 1
DVI Connector	DVI-D (25-pin male)	
Fiber Optic Connector	LC Type	
Optical Property	4 channels 1310nm @ -4dBm ± 2dB	
Power Supply	5v/1A DC	
Dimensions	20(H) x 40(W) x 90(D) mm	

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• ET-IF0101-MG500:
DVI Fiber Optic Extender Kit with RS-232 & Audio (Single-mode LC type)

This DVI-over-Fiber Kit carries a single DVI video signal, plus audio and RS-232 signal for data control, extending the signals over a distance of up to 500 metres!

Features:
- Long distance video, audio and RS-232 signal transmission - up to 500 metres
- Supports high resolution image quality
- Supports Pseudo DDC detection function for EDID information
- No RF interference by optical fiber
- Class 1 laser product complies with EN 60825-1
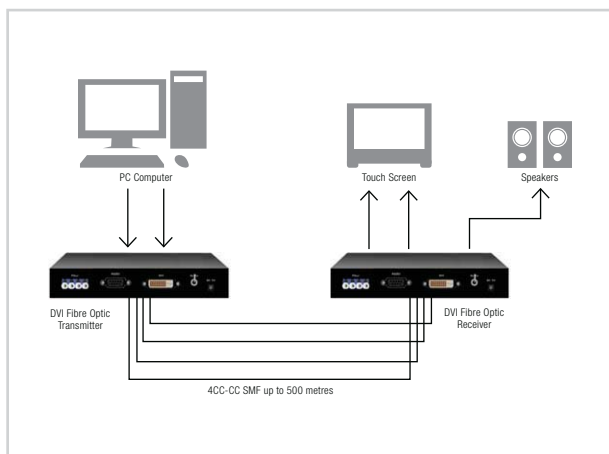
Specifications:

Model No:	ET−IF0101−TG500	ET−IF0101−RG500
Description	DVI Fiber Optic Transmitter	DVI Fiber Optic Receiver
Maximum Resolution	1920x1080	
Maximum Length	(1920x1080) ~ 500m (91/125 SMF) (The length difference between these 4 fibers should be < 0.5)	
Input	DVI-D x 1, RS-232 x 1, Audio Jack x 1	LC x 4
Output	LC x 4	DVI-D x 1, RS-232 x 1, Audio Jack x 1
DVI Connector	DVI-D (25-pin male)	
Fiber Optic Connector	LC Type	
Optical Property	4 channels 1310nm @ -4dBm ± 2dB	
Power Supply	5v/600mA DC	
Dimensions	180(W) x 30(H) x 87(D) mm	

Diagram labels: PC Computer, Touch Screen, Speakers, DVI Fibre Optic Transmitter, DVI Fibre Optic Receiver, 4CC-CC SMF up to 500 metres

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● **AU-11SA:** v1.3 HDMI Audio De-embedder with built-in Repeater

The AU-11SA is an advanced solution for HDMI-to-HDMI repeating with Audio de-embedding.

It is compatible with v1.3 HDMI specifications, a cutting edge technology which defines the transfer of deep colour (12 bit) video with a high bandwidth of up to 225MHz.

Connect to source and display (HDMI), select the required audio format and output your chosen audio format to your amplifier.

Features:

- Compliant with v1.3 HDMI, HDCP 1.1 and DVI 1.1 standards
- HDMI audio de-embedder with built-in repeater
- Supports un-compressed digital LPCM 7.1, 5.1 or 2 channels and compressed digital Bitstream (Dolby TrueHD, Dolby Digital Plus, and DTS-HD Master Audio)
- Output resolution follows input resolution up to 1080p. Video pass though, no scaling
- Supports LPCM 7.1, 5.1 or 2 channel output through multichannel analogue output ports
- Supports CEC bypass
- Supports 3D Signals

Blu-ray Player

Run Cabling Longer

Decoded Anologue Audio Output

HDMI Display

Amplifier
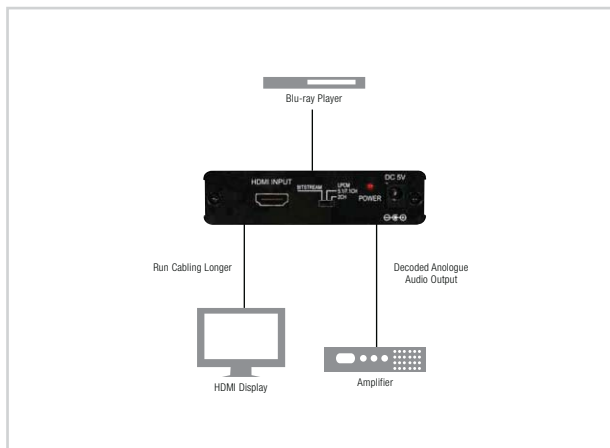
Specifications:

Model:	AU–11SA
Input	1 x HDMI
Output	1 x HDMI, 4 x 3.5mm stereo jack plugs, 1 x Optical (Toslink)
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 146(D) mm
Weight	0.5kg

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- **AU-11CA:** HDMI Audio Embedder with built-in Repeater

The AU-11CA Audio Embedder lets you insert an external audio signal into any HDMI source.

The device allows you to insert analogue or digital stereo and multi-channel digital surround sound signals (via Optical) to give users the capability to overcome audio issues within complex HDMI installation.

The AU-11CA also repeats the HDMI signal to allow an extended total HDMI cable range.

Features:

- Compliant with HDMI v1.3 , HDCP 1.2 and DVI 1.0
- Supports Optical Sample Rate up to 96kHz
- Supports LPCM Stereo, DTS and Dolby Digital via Optical input
- Supports up to 24bit resolution digital audio
- HDMI cable distance testing showed that with 1080p 8bit/12bit resolution, the input/output distance is up to 10 meters
- Low power consumption
- Supports HDMI Sample Rates up to 192kHz
- Supports 3D Signals
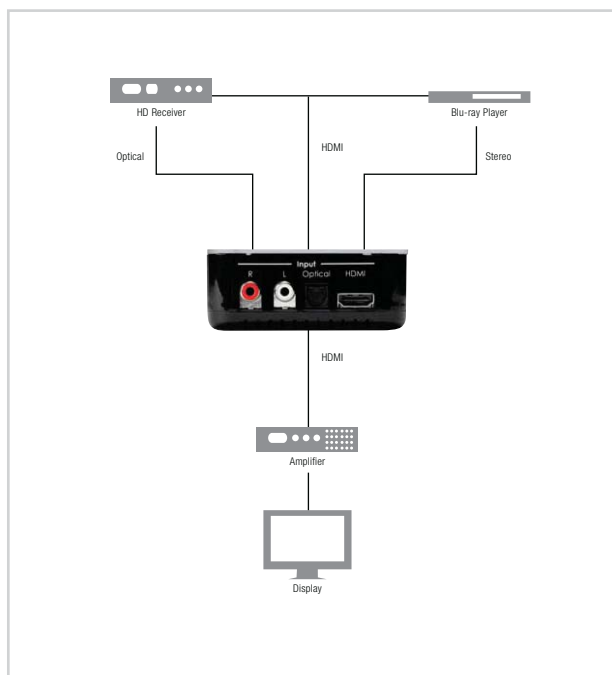
Specifications:

Model:	AU–11CA
Input	1 x HDMI, 1 x Optical, 1 x Analogue Stereo (2 x RCA)
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	85(W) x 35(H) x 85(D) mm
Weight	0.26kg

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- **AU-11CD:** v1.3 HDMI Audio De-Embedder (5.1) with built-in repeater

The AU-11CD is an advanced solution for repeating HDMI with integrated Audio de-embedding, up to 5.1.

Connect the AU-11CD between your source and display via HDMI and select the audio format required.

Features:

- Compliant with v1.3 HDMI, HDCP 1.2 and DVI 1.0
- Supports HDMI sample rate up to 192kHz
- Supports Optical sample rate up to 48kHz
- Supports TMDS clock frequency rate 225MHz
- Supports high-bit-rate (HBR) audio
- Input and Output HDMI cable length can run up to 10m at 1080p 8bit resolution
- Low power consumption
- Support built-in audio EDID switch of LPCM2, 5.1/7.1 or Bitstream
- Supports 3D signals
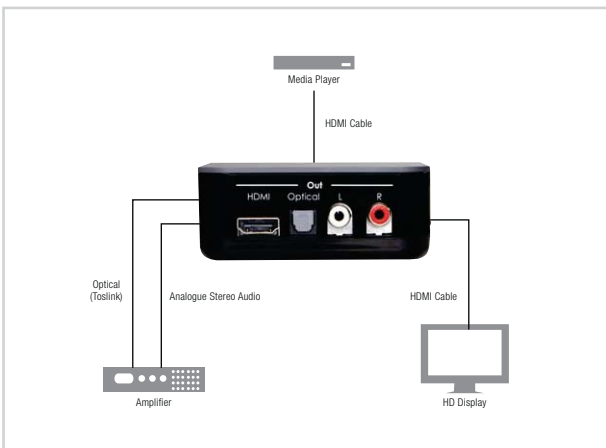
Specifications:

Model:	AU–11CD
Input	1 x HDMI
Output	1 x HDMI, 1 x Optical (Toslink), 2 x Analogue Audio L/R (RCA)
Power	5V/1.2A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	90(W) x 35(H) x 85(D) mm
Weight	0.24kg

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- **AU-D8S:** SRS TruVolume™ - HDMI Volume Control Processor

The AU-D8S HDMI Volume Control regulates TV-channel volume to your own comfortable audio level, preventing annoying audio fluctuations, especially during commercials or whilst channel surfing.

Features:

- v1.3 HDMI, HDCP 1.1, DVI 1.0 compliant
- SRS TruVolume™ maintains a steady volume, allowing listeners to set their desired volume once to enjoy television, music and all other content without annoying volume fluctuations
- Helps the hearing impaired by keeping channels at a consistent volume level so they can hear everything whilst keeping others in the room comfortable
- Simple switched operation "On / Off"
- HDMI signal amplification and equalisation for improved signal transmission
- Video signal is bypassed through the AU-D8S and is not processed, output resolution follows input
- HDCP compliant and supports CEC bypass
- Supports 3D signals
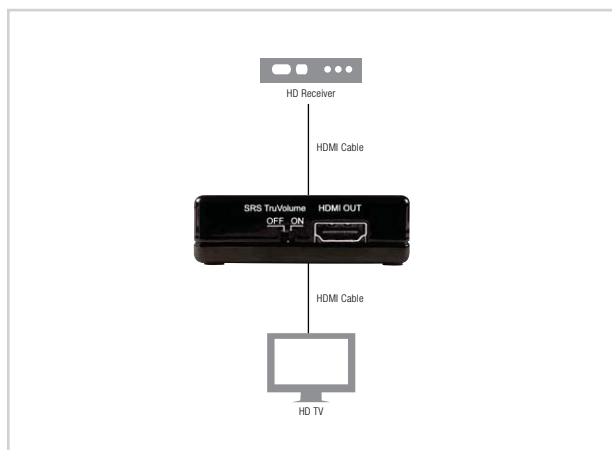
Specifications:

Model:	AU–D8S
Input	1 x HDMI
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	100(W) x 20(H) x 70(D) mm
Weight	0.22kg

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● **AU-D12:** Optical Audio Distribution Amplifier

The AU-D12 is a digital audio splitter with 1 Optical (Toslink) input to 2 Optical (Toslink) outputs, maintaining a reliable and loss-less audio signal transmission.

Features:
● 1:2 Optical (Toslink) Distribution Amplifier
● Supports S/PDIF standard of digital audio transmission
● Amplifies Optical (Toslink) output, extending another 5 metres
● Accepts Uncompressed 2-channel LPCM (Linear Pulse Code Modulation) & Compressed 2-channel and multi-channel Dolby and DTS audio signal
● Electromagnetic noise-free transmission
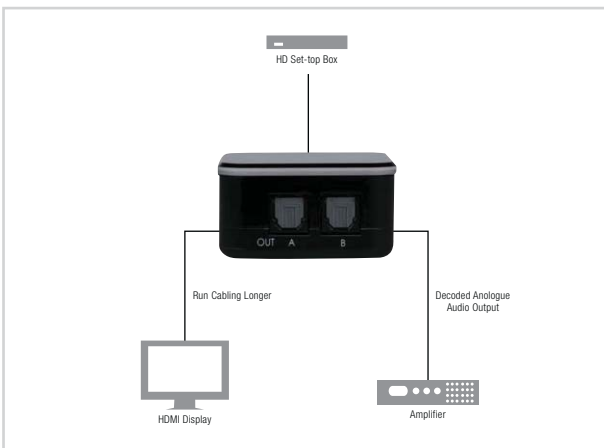
Specifications:

Model:	AU–D12
Input	1 x Optical (Toslink)
Output	2 x Optical (Toslink)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 45(D) mm
Weight	0.14kg

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Distribution

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• **AU-D2:** Digital Audio Coaxial/Optical
Converter

The AU-D2 is a versatile digital audio converter, either coaxial to optical
or optical to coaxial. Simply select one of the digital audio inputs for
two identical audio signals in both output formats.

Features:

• Digital Audio Coaxial/Optical bi-directional Converter

• Two-way conversion; Coaxial-to-Optical or Optical-to-Coaxial

• Supports amplification of digital audio and extends the transferring
distance through coaxial and/or optical cables

• Inputs accept audio signals from 2-channel PCM to 5.1. Output signal
follows input signal

• Select between input ports and distribute the audio signal to both Coaxial
and Optical output ports simultaneously
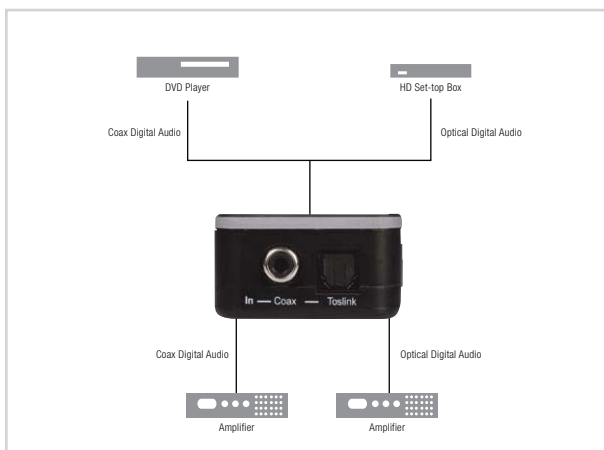
Specifications:

Model:	AU–D2
Input	1 x Coaxial (RCA), 1 x Optical (Toslink)
Output	1 x Coaxial (RCA), 1 x Optical (Toslink)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 55(D) mm
Weight	0.16kg

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- **AU-D3:** Digital to Analogue Audio
Converter (DAC)

The AU-D3 is designed to convert either Coaxial or Optical digital signals to analogue stereo audio.

This unit is particularly useful when connecting digital TVs to analogue amplifiers.

Features:

- Digital Audio to Stereo Audio Converter (DAC)
- Integrated digital interpolator filter
- Supports digital audio signal (Coaxial/Toslink) input and analogue audio signal (L/R) output
- Accepts uncompressed digital stereo audio input
- Accepts 32, 44.1, 48 and 96kHz sample rates

DVD Player

HD Receiver

Coax Digital Audio

Optical Digital Audio

OUT R L

Analogue Stereo Audio

Amplifier
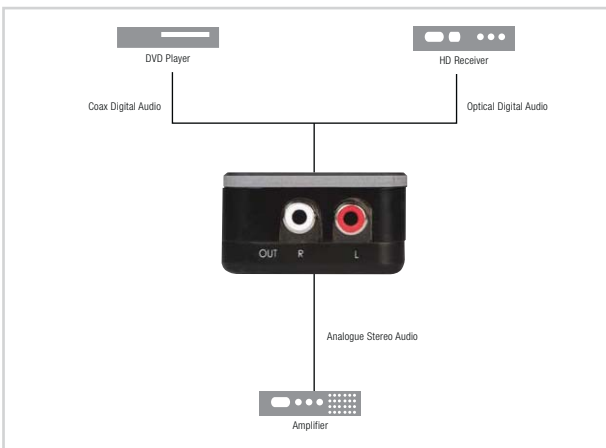
Specifications:

Model:	AU–D3
Input	1 x Optical (Toslink) & 1 x Coaxial (RCA)
Output	2 x Analogue Audio L/R (RCA)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 55(D) mm
Weight	0.16kg

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• **AU-D4:** Analogue-to-Digital Audio Converter

The AU-D4 is designed to convert analogue stereo audio to Digital
Coaxial and/or Optical (Toslink) outputs simultaneously.

Features:

• Analogue-to-Digital Audio Converter (ADC)
• Uncompressed 2-channel LPCM digital audio signal output
• Amplifies digital Optical (Toslink) output, extending another 5 metres
• Output sampling rate: 48kHz
• Electromagnetic noise-free transmission
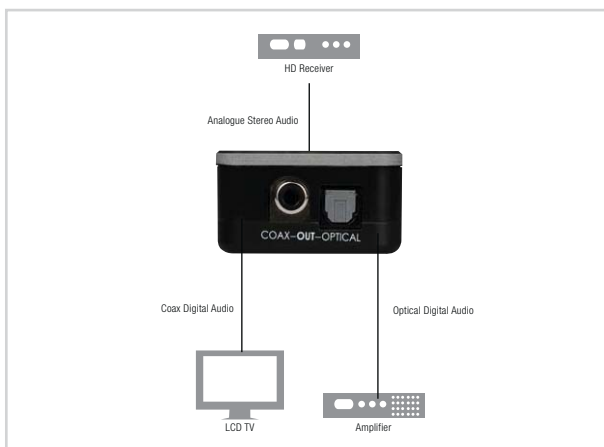
Specifications:

Model:	AU–D4
Input	2 x Analogue Audio L/R (RCA)
Output	1 x Coaxial (RCA), 1 x Optical (Toslink)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 55(D) mm
Weight	0.16kg

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• AU-D4T: Analogue-to-Digital Audio Converter with Audio Delay

The AU-D4T is designed to convert analogue stereo audio to digital Coaxial and/or Optical (Toslink) outputs simultaneously with the addition of integrated Audio delay controls.

Features:

- Audio delay technology provides a 150 metres delay on audio output for the user to compensate for lip sync (or A/V sync)
- Uncompressed 2-channel LPCM (Linear Pulse Code Modulation) digital audio signal output
- Amplifies digital optical (Toslink) output, extending signal range by an additional 5 metres
- Output sampling rate: 48kHz
- Simple switched operation ON/OFF
- Electromagnetic noise-free transmission
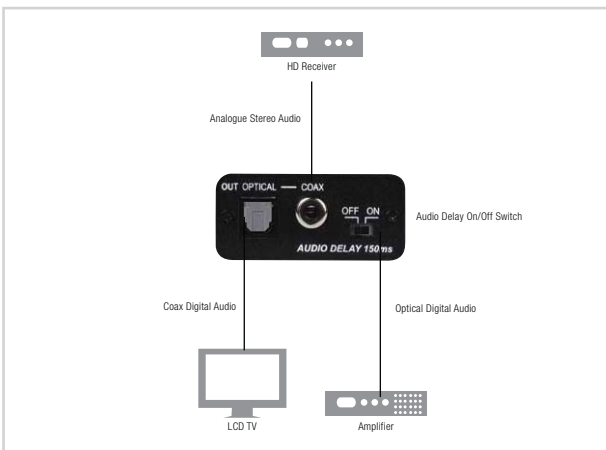
Specifications:

Model:	AU–D4T
Input	2 x Analogue Audio L/R (RCA)
Output	1 Coaxial (RCA) & 1 x Optical (Toslink)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	50(W) x 25(H) x 65(D) mm
Weight	0.16kg

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● **AU-D21:** Optical Audio Switcher

The AU-D21 is a Optical (Toslink) switcher, select between two Optical (Toslink) sources to one Optical (Toslink) output whilst maintaining a reliable and loss-less audio signal transmission.

Features:

- 2:1 Optical (Toslink) Switcher
- Supports S/PDIF standard of digital audio transmission
- Amplifies digital Optical (Toslink) output, extending another 5 metres
- Accepts uncompressed 2-channel LPCM (Linear Pulse Code Modulation), compressed 2-channel, multi-channel Dolby, and DTS audio signal
- Electromagnetic noise-free transmission

DVD Player

HD Receiver

Optical Digital Audio

OUT   OPTICAL

Optical Digital Audio

Amplifier
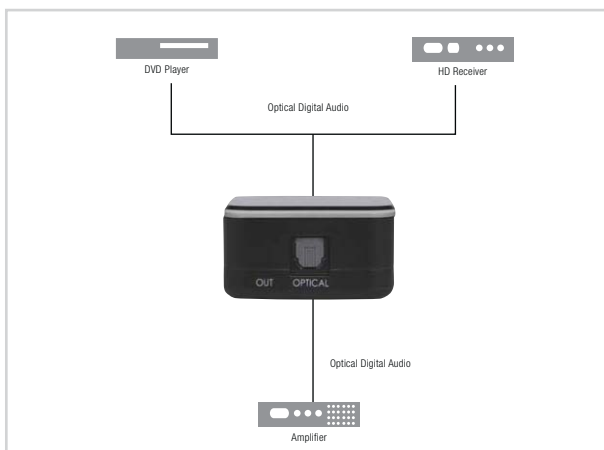
Specifications:

Model:	AU–D21
Input	2 x Optical (Toslink)
Output	1 x Optical (Toslink)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 45(D) mm
Weight	0.14kg

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• **AU-D9:** Bi-Directional Digital/Analogue Audio Converter

The AU-D9 is a versatile audio converter allowing users to convert analogue audio into digital or digital audio into analogue.

It can simultaneously output in all 3 audio formats without any signal loss.

Features:

- Bi-directional Digital/Analogue Audio Converter
- Three-way conversion: Coaxial to Optical & Analogue; Optical to Coaxial & Analogue; Analogue to Optical & Coaxial
- Integrated digital interpolator filter and Digital-to-Analogue Converter (DAC)
- Accepts uncompressed digital stereo audio input
- Supports sample rates from 16 ~ 100kHz
- Simultaneous digital and analogue audio outputs
- Provides electromagnetic-noise-free transmission
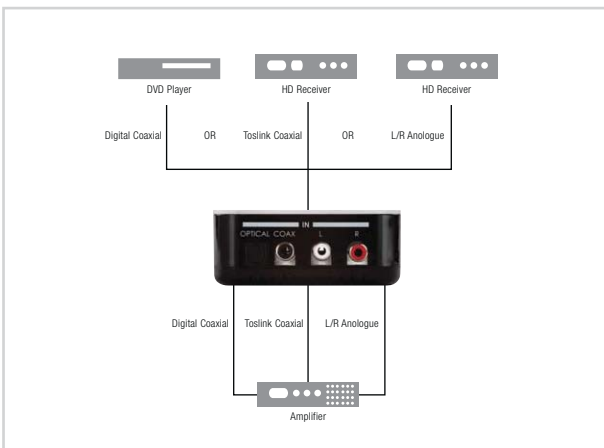
Specifications:

Model:	AU–D9
Input	1 x Coaxial (RCA), 1 x Optical (Toslink), 2 x RCA (Left/Right Audio)
Output	1 x Coaxial (RCA), 1 x Optical (Toslink), 2 x RCA (Left/Right Audio)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	95(W) x 35(H) x 85(D) mm
Weight	0.2kg

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• **AU-D150:** USB/Optical Digital Audio
Converter (DAC)

USB/Optical Digital Audio Converter (DAC) will convert a digital audio
signal to analogue, whilst simultaneously outputting a digital optical
signal. It is designed for easy installation of USB or optical sources
and can be powered by USB or via the included PSU.

The optical output can be linked with an amplifier or any sound
system with optical SPDIF input, whilst the analogue stereo output
can be connected to a TV or amplifier/speakers, for a simultaneous
analogue stereo output.

Features:

• USB 2.0 full speed compatible
• USB/Optical Digital Audio Converter (DAC)
• USB audio device class specification v1.0 Compatible
• Optical sampling rate supports up to 192kHz, 24bit
• USB Audio Support - High performance 16-bit Stereo,
  48/44.1kHz sampling rate
• Low power consumption
• USB or PSU powered (PSU supplied)
• Simultaneous analogue & optical stereo output
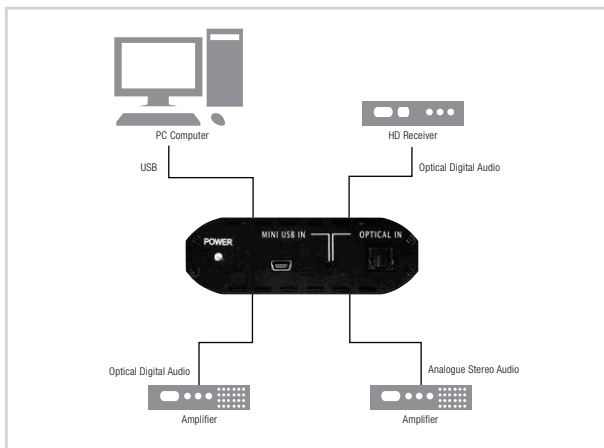
Specifications:

Model:	AU–D150
Input	1 x Mini USB, 1 x Optical (Toslink)
Output	2 x Analogue L/R, 1 x Optical (Toslink)
Power	5v DC - PSU Supplied or USB Cable powered
Dimensions	90(W) x 25(H) x 120(D) mm
Weight	0.3kg

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- **AU-D6S:** SRS TruVolume™ - Volume Control Processor

The AU-D6S Volume Control regulates TV-channel volume to your own comfortable audio level, preventing audio fluctuations whilst changing channels and reducing fluctuations during commercials.

Features:

- SRS TruVolume™ maintains a steady volume, allowing listeners to set their desired volume once to enjoy television, music and all other content without volume fluctuations
- Helps the hearing impaired by keeping channels at a consistent volume level so they can hear everything whilst keeping others in the room comfortable
- Simple switched operation "On / Bypass"
- Line Level inputs up to 2Vrms and Line Level outputs up to 1Vrms, via stereo RCA jacks
- Boosts low and high frequency content dynamically (20 bands/channel) using an advanced psycoacoustic modelling engine, making the entire listening experience come alive, regardless of the audio level

HD Receiver

Analogue Stereo Audio

OUT L R

Analogue Stereo Audio

Amplifier

Specifications:

Model:	AU–D6S
Input	2 x Analogue Audio L/R (RCA)
Output	2 x Analogue Audio L/R (RCA)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 55(D) mm
Weight	0.16kg

CYP///

- **AU-D11S:** SRS TruVolume™ - SCART Volume Control Processor

The AU-D11S SCART Volume Control Processor regulates TV-channel volume to your own comfortable audio level, preventing annoying audio fluctuations, especially during commercials or whilst channel surfing.

This product will output the video and processed audio via SCART, whilst simultaneously outputting the same processed audio via analogue audio RCA connections.

This is perfect for sending the processed audio to both the screen and a second location, such as an analogue audio amplifier.

Features:

- SRS TruVolume™ maintains a steady volume, allowing listeners to set their desired volume once to enjoy television, music and all other content without annoying volume fluctuations

- Helps the hearing impaired by keeping channels at a consistent volume level so they can hear everything whilst keeping others in the room comfortable

- Simple switched operation "On / Off"

- Line Level inputs up to 2Vrms and Line Level outputs up to 1Vrms

- Input via SCART, outputs via SCART and stereo RCA jacks

- Boosts low and high frequency content dynamically (20 bands/channel) using an advanced psychoacoustic modelling engine, making the entire listening experience come alive, regardless of the audio level

- SCART video signal bypassed to SCART output
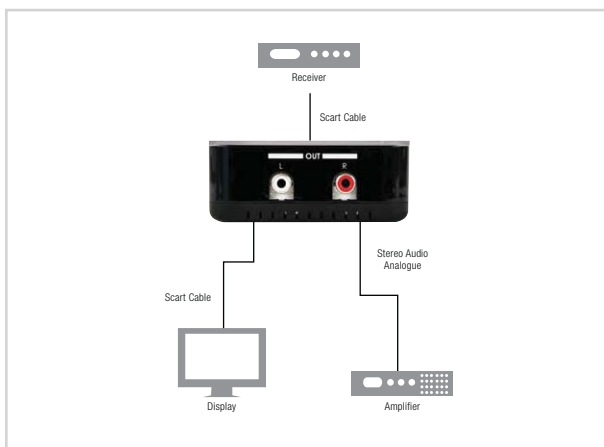
Specifications:

Model:	AU–D11S
Input	1 x Scart
Output	1 x Scart, 2 x Analogue Audio L/R (RCA)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	85(W) x 35(H) x 85(D) mm
Weight	0.2kg

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● **AU-D41:** 4-to-1 Digital Optical Audio
Switcher with IR Remote

The AU-D41 Optical Audio Switcher has four optical inputs and one
optical output.

This device allows users with multiple optical sources connection for
one output display. All signals are bypassed without delay.

The device has last memory function and IR remote control.

Features:

- 4 input digital optical audio switcher
- Optical sampling rate supports up to 192kHz
- Up to 24bit resolutions
- Low power consumption
- PCM2, AC3/5.1, Dolby 5.1 & DTS 5.1 pass through
- Amplifies Optical (Toslink) output, extending another 5 metres

Media Player / MP4   HD Receiver   Blu-ray Player   Games Console

Optical (Toslink)
Cables

Optical In

Optical (Toslink)
Cables

Amplifier
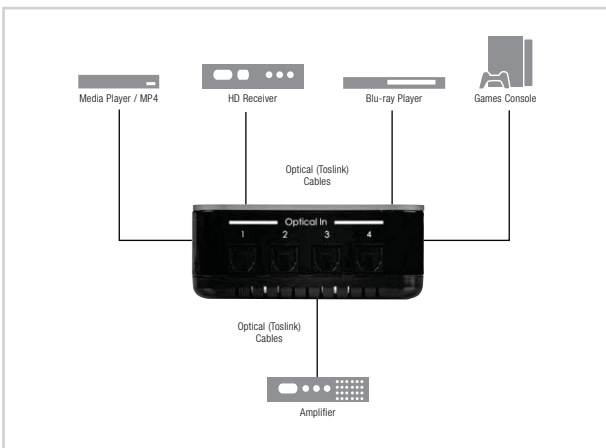
Specifications:

Model:	AU–D41
Input	4 x Optical (Toslink)
Output	1 x Optical (Toslink)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	85(W) x 85(H) x 85(D) mm
Weight	0.2kg

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- **AU-D18:** Analogue Stereo Lip Sync Corrector

This analogue stereo Lip Sync Corrector is a small device for delaying audio signal to overcome audio sync issues.

The AU-D18 Lip Sync corrector is able to adjust the timing to the display/amplifier so that users may receive both video and audio in sync. No more annoying sound mismatch.

The Lip Sync Corrector is easy to use with a simple setup and an affordable unit for sound delaying.

Features:

- Lip Sync corrector with adjustable delay between 0 & 300ms
- Sample Rates 48kHz
- Analogue to analogue signal bypass
- Low power consumption
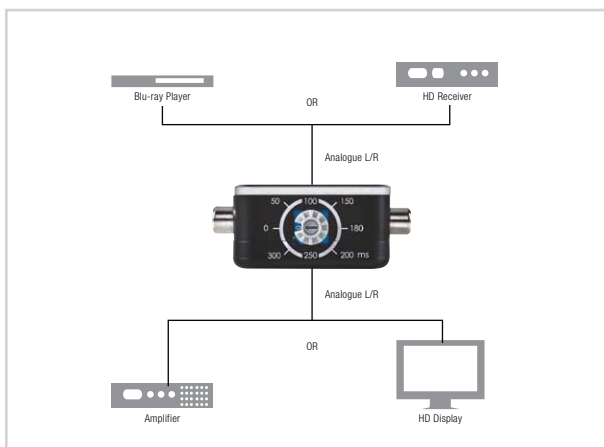
Specifications:

Model:	AU–D18
Input	2 x Analogue Audio (L/R stereo)
Output	2 x Analogue Audio (L/R stereo)
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	45(W) x 25(H) x 45(D) mm
Weight	0.14kg

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- **EL-5300:** Multimedia Converter, De-Interlacer & Switcher

The EL-5300 allows the user to convert, de-interlace and switch all their analogue and digital devices to HDMI.

All standard definition inputs can be de-interlaced for compatibility with all HDMI displays.

The EL-5300 has the additional benefit of RS-232 control.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Multimedia Converter, De-Interlacer & Switcher
- Supports a wide range of PC and HDTV resolutions from VGA to SXGA @ 60Hz and 480i ~ 1080p, including 1080p 24fps
- Accepts a variety of analogue/digital video & audio inputs
- Format conversion from 480i/576i to 480p/576p (de-interlaced)
- RS-232 & IR remote control
- Supports 150ms audio delay. (NOTE: This feature will not function when input is from HDMI source)
- 3D noise reduction (DNR) & Comb Filtering
- Supports 3D signals
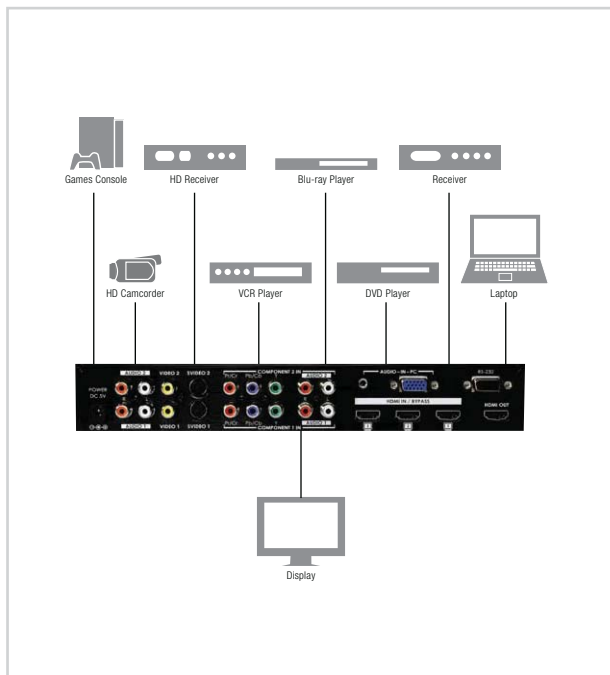
Specifications:

Model:	EL–5300
Input	3 x HDMI, 1 x 15pin D-sub + 1 x 3.5mm Stereo Audio Jack, 2 x Y/Pb/Pr with R/L Audio, 2 x CV/SV with R/L Audio, 1 x RS-232
Output	1 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	280(W) x 48(H) x 150(D) mm
Weight	0.94kg

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- **CHDD-41AR:** 4-to-1 Component Switcher

The CHDD-41AR HD/SD switcher is designed for switching between various HD and SD sources for sharing one TV display.

Simply by pressing a button on the remote control you can select your desired HD/SD source for display on the TV monitor.

Features:

- Component/Composite Switcher
- Ideal for home theatre and presentation application
- High bandwidth performance 650MHz at -3dB
- IR remote control
- Easy to install and operate; plug and play solution gets to work immediately
- CHDD-41AR can be controlled either through input selection button on the front panel or using included infrared control
- RS-232 interface allows control from a distant device
- Supports HDTV high resolution: 480i, 576i, 576p, 720p, 1080i and 1080p
- Supports audio formats: S/PDIF (digital) and L/R (analog)
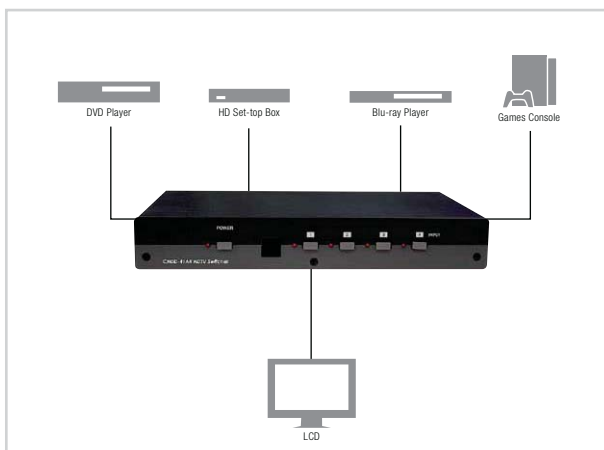
Specifications:

Model:	CHDD–414R
Inputs	4 sets - 3 x RCA + 2 x RCA Stereo Audio + 1 x RCA (S/PDIF)
Outputs	1 set - 3 x RCA + 2 x RCA Stereo Audio + 1 x RCA (S/PDIF)
Power	5v DC/2A
Dimensions	292(W) x 47.5(H) x 176(D) mm
Weight	1.7kg

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OR-YUV44S: Component 4 x 4 Matrix Switcher with Digital Audio

A high performance Component Video with Digital/Analogue Audio Matrix.

Each of the four HDTV audio/video sources can be directed to any one of the four outputs or all four displays can show one identical input source at the same time.

The OR-YUV44S also has the additional benefit of RS-232 control.

Features:

- Provides 4 x 4 matrix input/output of Component video (YPbPr/YCbCr) and Left/Right stereo & Coaxial digital audio signal
- Component 4 x 4 Matrix Switcher with Digital Audio
- Supports high resolution input/output:
  - HDTV: 480i, 576i, 480p, 576p, 1080i, and 1080p
- Buffered video and audio output
- IR remote control plus RS-232 control
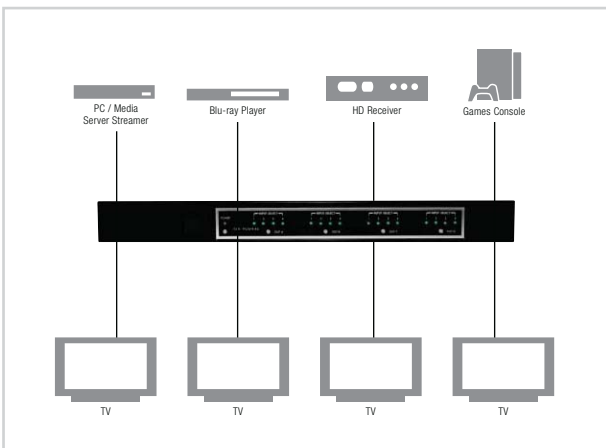
Specifications:

Model:	OR–YUV44S
Input	4 x Component (YPbPr/YCbCr), + Coaxial & L/R Audio, 1 x IR Extender
Output	4 x Component (YPbPr/YCbCr), + Coaxial & L/R Audio
Power	12v/1.25A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	435(W) x 48(H) x 125(D) mm
Weight	1.12kg

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• **CVSD-3A:** 1-to-3 Composite & S-Video +
Audio Distribution Amplifier

A versatile combination unit offering composite video or S-Video plus
stereo audio input delivering three buffered and isolated outputs.

However, if the composite video and the S-Video are from the same
source, the unit then becomes a 1-in, 6-out distributor!

Features:

• Composite & S-Video compatible
• Separate audio connections
• Can be utilised as a six way amp
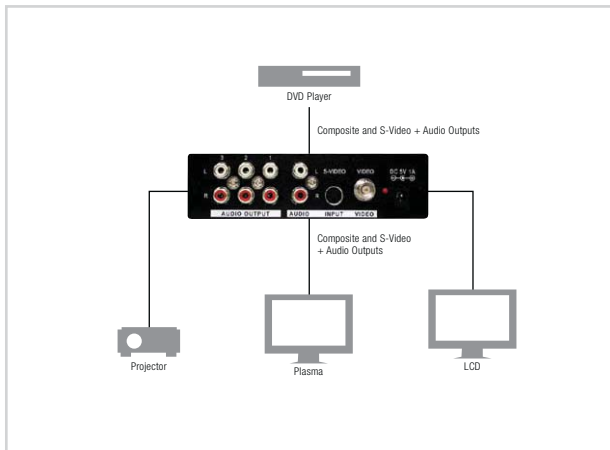
Specifications:

Model:	CVSD–3A
Inputs	1 x CV, 1 x SV, 2 x RCA L/R Audio
Outputs	3 x CV, 3 x SV, 3 sets L/R audio
Power	5v 2A
Dimensions	141(W) x 38(H) x 105(D) mm
Weight	0.42kg

• **SCAMP-2:** Active Scart Splitter

The SCAMP2 provides two equal scart outputs from any video source.
It's perfect for connecting the output of any DVD or Satellite/Cable
receiver when you need to retain an equal signal and feed to two
separate monitors.

Works with RGB, S-Video, composite Video + Stereo Audio signals.
Complete with DC power supply.

Features:

• Ideal for connecting output of any Digibox or DVD to two RGB TVs
  or monitors
• Full active circuitry - no signal loss
• Stereo audio, Composite video, S-Video and RGB compatible

Specifications:

Model:	SCAMP–2
Inputs	1 x Scart female port
Outputs	2 x Scart female ports
Power	DC 7.5V. 300mA
Dimensions	125(W) x 75(D) x 35(H) mm
Weight	0.14kg

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• CHDD-3C: 1-to-3 YUV + Audio Distribution Amplifier

Multi-functional distribution amplifier, which can deliver both high definition and standard video signals including audio (with a choice of analogue or digital audio) to three displays.

It will accept both standard component (YCbCr) and progressive component (YPbPr), RGBHV (red, green, blue + horizontal and vertical sync) via RCAs, standard composite.

Choice between stereo audio input or digital coaxial.

Features:

• Supports resolutions up to 1080p/UXGA
• Component/composite or RGB distribution amplifier
• Supports SD (Composite, YCbCr) and HDTV (YPbPr, RGsB) Input signal
• Accepts one component input and splits the input to 3 identical and buffered outputs
• Adjustable image scaling: Pan, Position and Zoom
• When input is composite video, it can connect up to 3 different video sources and output three identical and buffered signals for each video input
• Audio supported via SP/DIF

Specifications:

Model:	CHDD−3C
Inputs	3 x RCA (YUV), 2 x L/R Audio & 1 x coxial
Outputs	3 sets of 3 x RCA (YUV), 3 sets of L/R Audio & 3 x coaxial
Power	5v DC/2A
Dimensions	141(W) x 38(H) x 105(D) mm
Weight	0.55kg

• CHDD-8C: 1-to-8 YUV + Audio Distribution Amplifier

Multi-functional distribution amplifier which can deliver both high definition and standard video signals including audio (with a choice of analogue or digital audio) to three displays.

It will accept both standard component (YCbCr) and progressive component (YPbPr), RGBHV (red, green, blue + horizontal and vertical sync) via RCAs, standard composite.

Choice between stereo audio input or digital coaxial.

Features:

• Supports resolutions up to 1080p / UXGA
• Component/composite or RGB distribution amplifier
• Supports SD (Composite, YCbCr) and HDTV (YPbPr, RGsB) Input signal
• Accepts one component input and splits the input to 3 identical and buffered outputs
• Adjustable image scaling: Pan, Position and Zoom
• When input is composite video, it can connect up to 3 different video sources and output three identical and buffered signals for each video input
• Audio supported via SP/DIF

Specifications:

Model:	CHDD−8C
Inputs	3 x RCA (YUV), 2 x L/R Audio & 1 x coaxial
Outputs	8 sets of 3 x RCA (YUV), 3 sets of L/R Audio & 8 x coaxial
Power	5v DC/2A
Dimensions	437(W) x 47(H) x 170(D) mm
Weight	2.9kg

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• CP-255D: YUV/PC to DVI Scaler/Converter

Convert YPbPr/YCbCr/VGA/DVI-D to DVI (UXGA & 1080p). Upscale digital/analogue video signal from HD Component, PC and DVI input sources to DVI offering a wide-range of HDTV and PC resolutions, up to 1080p and WUXGA.

Features:

- HDCP 1.1 and DVI 1.0 compliant
- Scales any PC (VGA ~ WUXGA) /HD (480i to 1080p) resolutions up to 1080p DVI
- Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected
- Under/Over Scan function
- OSD Menu provides a choice of output resolutions, and picture adjustment on contrast,brightness, hue, saturation, sharpness, RGB (color tone) level, and aspect ratio size
- Remote control
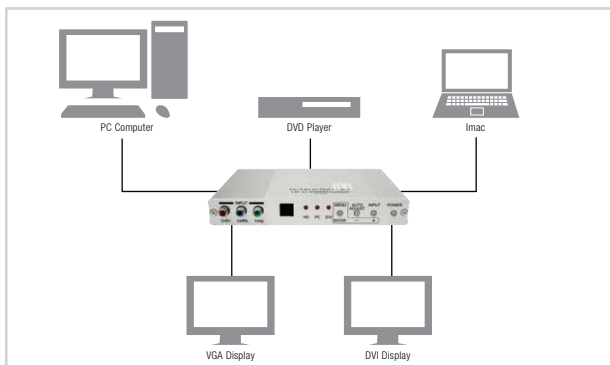
Specifications:

Model:	CP–255D
Inputs	1 x YUV (3 x RCA),1 x 15pin D-Sub,1 x DVI
Outputs	1 x DVI Female Port, 1 x 15pin D-Sub
Frequency	Bandwidth 1.65Gbps (single link)
Power	5v DC/2.6 Amp
Dimensions	180(W) x 124(D) x 25(H) mm
Weight	0.6kg

• CP-255H: YUV/PC to HDMI Scaler/Converter

Convert YPbPr/YCbCr/VGA/HDMI to HDMI (UXGA & 1080p). Upscale digital/analogue video signal from HD Component, PC and HDMI input sources (with independent audio on each), to HDMI offering a wide-range HDTV and PC resolutions, up to 1080p and WUXGA.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- Scales any PC (VGA ~ WUXGA) /HD (480i to 1080p) resolutions up to 1080p HDMI
- Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected
- Under/Over Scan function
- OSD Menu provides a choice of output resolutions, and picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (color tone) level, and aspect ratio size
- Remote control
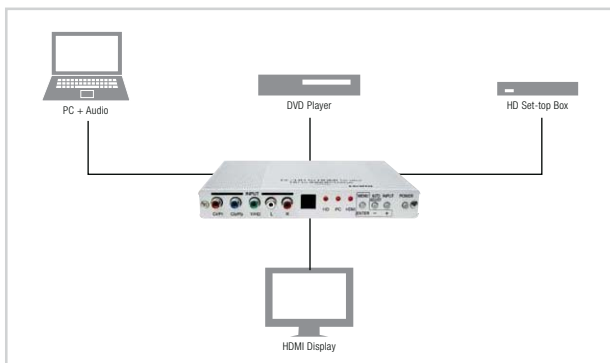
Specifications:

Model:	CP–255H
Inputs	1 x YUV (3 RCAs) + 1 x Audio L/R (RCAs), 1 x 15pin D-Sub , 1 x 3.5mm st. Jack, 1 x HDMI, 1 x 3.5mm Stereo Jack
Outputs	1 x HDMI Female Port
Frequency Bandwidth	1.65Gbps (single link)
Power	5v DC/2.6 Amp
Dimensions	180(W) x 25(H) x 124(D) mm
Weight	0.6kg

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● **CP-255I:** Analogue to HDMI Scaler/Converter

Multi-analogue inputs to HDMI (UXGA & 1080p). Upscale digital/analogue video signal from Composite, S-Video, PC, Component (HD) and HDMI input sources, to digital HDMI offering a wide-range HDTV and PC resolutions, up to 1080p and WUXGA plus digital/analogue audio signal conversion to digital audio format, outputting as Digital coaxial or combining with the HDMI output.

Features:

● HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
● Scales any PC (VGA to WUXGA) /HD (480i to 1080p) resolutions up to 1080p HDMI
● Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected
● Supports 50/60Hz frame rate conversion
● OSD Menu provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (color tone) level, and aspect ratio size
● Remote control
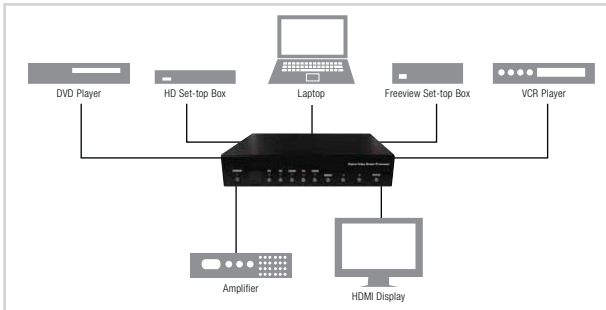
Specifications:

Model:	CP–255I
Inputs	1 x YUV (3 RCAs) 1 x S-Video, 1 x CV, + 3 x Audio L/R (RCAs), 1 x 15pin D-Sub, 1 x 3.5mm st. Jack, 1 x HDMI, 1 x 3.5mm Stereo Jack x 1 (for DVI), 1 x Coaxial (S/PDIF)
Outputs	1 x HDMI x 1 + 1 x Coaxial (S/PDIF)
Frequency Bandwidth	1.65Gbps (single link)
Power	5v DC
Dimensions	215(W) x 47(H) x 154(D) mm
Weight	1kg

● **CP-259H:** Up/Down HDMI Scaler/Converter

Scale up/down HDMI to display's native resolution. A solid HDMI to HDMI up and downscaling unit with in-built repeater.

It will take any resolution of HDMI input up to 1080p, converting 50/60Hz with selectable HDMI output up to 1080p.

Features:

● HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
● OSD Menu to select output resolution & picture adjustment
● Support digital audio format (Toslink) and L/R stereo
● Built in frame-buffer circuit for supporting 50/60Hz frame rate conversion
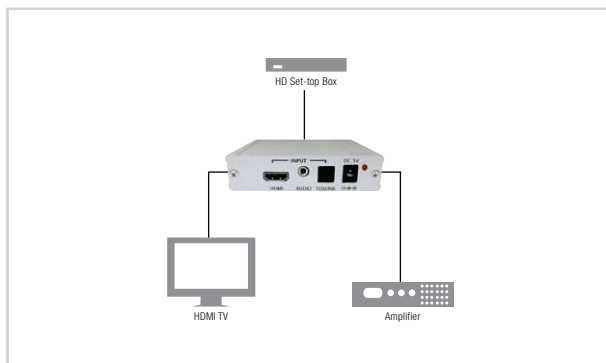
Specifications:

Model:	CP–259H
Inputs	1 x HDMI female port, 1 x Toslink + 1 x 3.5mm stereo jack plug
Outputs	1 x HDMI female port, 1 x Toslink + 1 x 3.5mm stereo jack plug
Frequency Bandwidth	1.65Gbps (single link)
Power	5v DC, 2.6A DC
Dimensions	102(W) x 25(H) x 145(D) mm
Weight	0.6kg

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● **SY-1080SC:** Scart-to-HDMI Scaler

The Synergy range of format converters provide solutions across the board in home and professional installation scenarios. The SY-1080SC scaler will take any SCART signal input and convert and scale up to 1080p HDMI output.

Features:

- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Automatic resolution selection and individual resolution selection button - from 576p up to 1080p
- Input video systems - NTSC3.58 / PAL / RGB 50Hz / RGB 60Hz auto-detection
- Analogue stereo audio input (from Scart)
- Automatic lip-sync (audio delay) ensures audio video synchronisation
- Supports Deep Colour (10 & 12 bit) at HDMI output
- Digital, Block & MPEG Noise reduction
- High Quality Image Enhancer (HQE) function
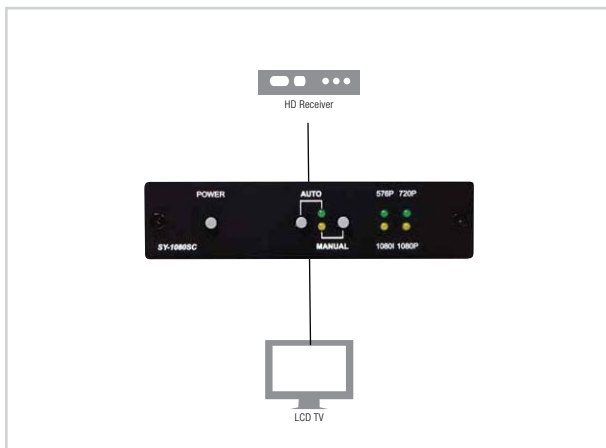
Specifications:

Model:	SY–1080SC
Input	1 x RGB Scart
Output	1 x HDMI
Power	5v/2.6A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	151(W) x 30(H) x 125(D) mm
Weight	0.34kg

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• SY-P290: PC/DVI-to-HDMI Converter

The SY-P290 is designed to convert and scale Digital or Analogue RGBHV or YUV to HDMI for improved viewing.

This unit offers a wide selection of output resolutions/formats, colour space and adjustment to obtain the best picture quality.

Features:
- v1.2 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Resolutions supported:
  - Input; PC - VGA to WUXGA; HDTV - 480i to 1080p
  - Output; PC - XGA & UXGA; HDTV - 720p & 1080p
- Audio Support: Input - Analogue stereo & Coax, PCM Stereo, DTS & Dolby Digital; Output - Follows Input
- Scale analogue RGBHV/YUV and/or DVI/HDMI resolutions to XGA/UXGA/720p/1080p
- Direct push button controls for Audio, Video & Timing
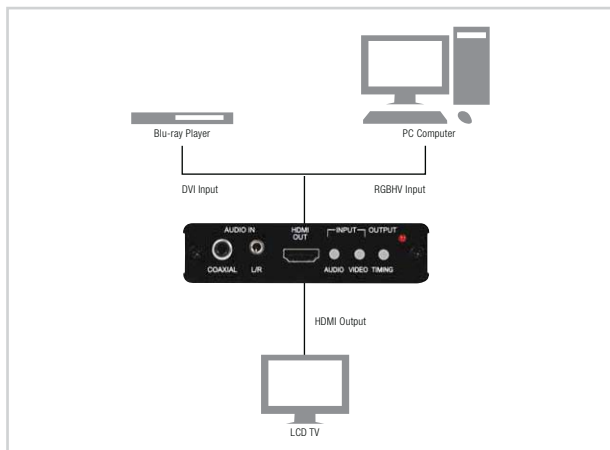
Specifications:

Model:	SY–P290
Input	1 x 15-Pin D-sub (RGBHV), 1 x DVI-D, 1 x Coaxial Audio (RCA), 1 x 3.5mm Stereo Audio Jack
Output	1 x HDMI
Power	5v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 160(D) mm
Weight	0.44kg

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● **SY-P291:** PC/HD to PC/HD Scaler Converter with Bypass Output

The SY-P291 is designed to convert and scale analogue PC/HD inputs offering a wide range of PC/HD resolutions and adjustments to obtain the best picture quality.

Features:

- RGBHV, YPbPr & YCbCr compatible
- Resolutions Supported:
  - PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA
  - SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p
- On Screen Menu with push button control
- Provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (colour tone) level and aspect ratio size
- Bypass output - mirrors input
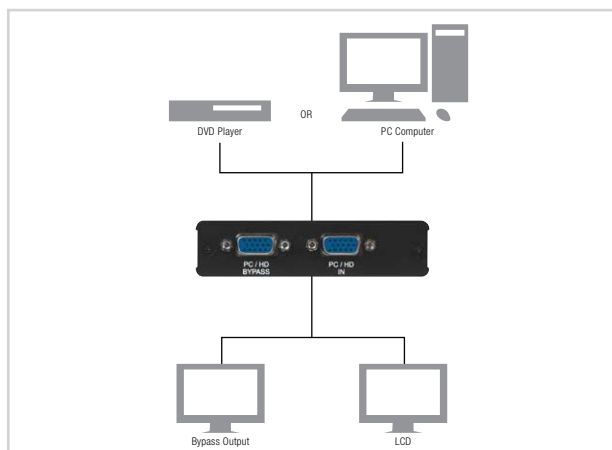
Specifications:

Model:	AU–D4
Input	1 x PC (15 pin D-sub)
Output	1 x PC (15 pin D-sub)
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 160(D) mm
Weight	0.46kg

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SY-P293: PC to HDMI Scaler Converter with Audio

The SY-P293 is designed to scale analogue video signal from a PC source to a digital HDMI output boasting a wide-range of HDTV and PC resolutions. Audio is combined with HDMI video output.

This unit offers a selection of colour space and adjustment to obtain the best picture quality.

Features:

- v1.2 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Scales any PC resolutions to PC or HDTV resolutions
- Resolutions Supported:
  - PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA
  - SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p
- Audio Support: Analogue Stereo, Digital stereo PCM, DTS, and Dolby Digital. Simply select from the audio input source this is then outputted to HDMI, Optical (Toslink), and mini-jack (stereo only) simultaneously
- On Screen Menu with push button control
- Provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (colour tone) level and aspect ratio size
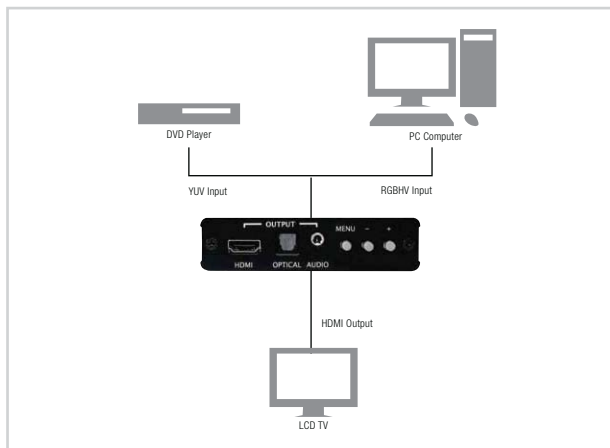
Specifications:

Model:	SY–P293
Input	1 x 15 Pin D-sub (RGBHV), 1 x 3.5mm Stereo Audio Jack 1 x Optical (Toslink)
Output:	1 x HDMI, 1 x 3.5mm Stereo Audio Jack, 1 x Optical (Toslink)
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 154(D) mm
Weight	0.7kg

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- **SY-P294:** Component (YUV) to HDMI Converter Scaler with Audio

The SY-P294 is designed to scale analogue video signals from a YUV source to a digital HDMI output boasting a wide-range of HDTV and PC resolutions. Audio is combined with HDMI video output.

This unit offers a selection of colour space and adjustment to obtain the best picture quality.

Features:

- v1.2 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Scales any YUV resolution to PC or HDTV resolutions
- Resolutions Supported:
  - PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA
  - SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p
- Audio Support: Analogue Stereo, Digital stereo PCM, DTS, and Dolby Digital. Simply select from the audio input source, this is then outputted to HDMI, Optical (Toslink) and mini-jack (stereo only) simultaneously
- A comprehensive OSD menu provides picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (colour tone) level and aspect ratio size
- Automatic detection of the connected screens factory setting, matching the resolution and refresh rate, when the NATIVE output is selected
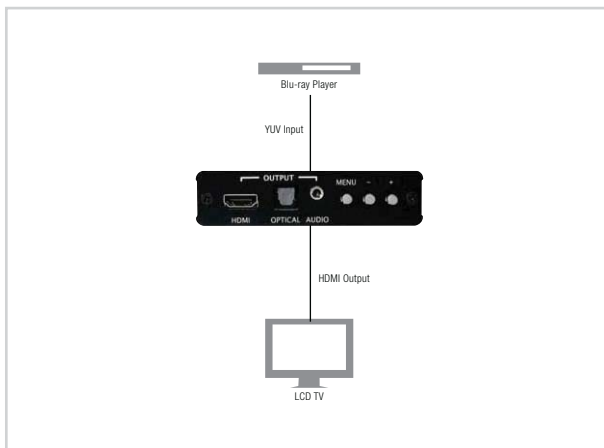
Specifications:

Model:	SY–P294
Input	1 x YUV (3 x RCA), 1 x 3.5mm Phono jack, 1 x Optical (Toslink)
Output	1 x HDMI, 1 x 3.5mm Phono jack, 1 x Optical (Toslink)
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 154(D) mm
Weight	0.7kg

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• **SY-P295N:** Analogue to HDMI Converter Scaler with Audio

The SY-P295N is designed to scale analogue video signals from a CV or SV source to a digital HDMI output, boasting a wide-range of HDTV and PC resolutions. Audio is combined with HDMI video output.

This unit offers a selection of colour space and adjustment options to obtain the best picture quality.

Features:

- v1.2 HDMI, HDCP 1.1 and DVI 1.0 compliant
- Video Support: Input - PAL & NTSC
- Resolutions Supported:
  - PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA
  - SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p
- Audio Support: Analogue Stereo, Digital stereo PCM, DTS, and Dolby Digital. Simply select from the audio input source, this is then outputted to HDMI, Optical (Toslink), and mini-jack (stereo only) simultaneously
- A comprehensive OSD menu provides picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (colour tone) level and aspect ratio size
- Automatic detection of the connected screens factory setting, matching the resolution and refresh rate, when the NATIVE output is selected
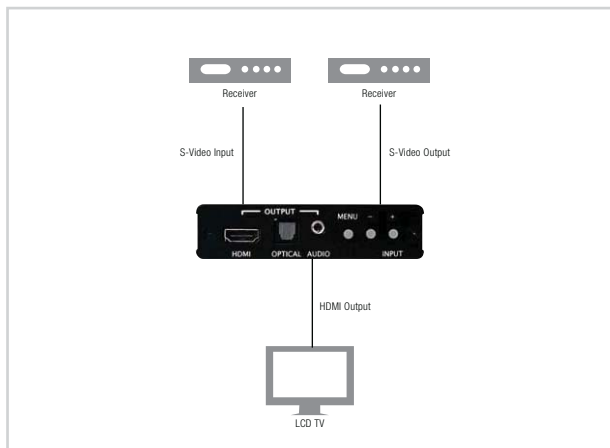
Specifications:

Model:	SY–P295N
Input	1 x S-Video, 1 x Composite Video, 1 x 3.5mm Stereo Audio Jack, 1 x Optical (Toslink)
Output	1 x HDMI, 1 x 3.5mm Stereo Audio Jack, 1 x Optical (Toslink)
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 187(D) mm
Weight	0.68kg

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• **SY-PT387:** Analogue HD Down-Scaler with Bypass Output

The SY-PT387 converts HD Component Video (YPbPr) to Composite or S-video signals for recording and distributing whilst maintaining the analogue HD for the main display.

Features:

- PAL & NTSC compatible
- Analogue HD Down-Scaler with Bypass Output
- Video Support: HD Component input (YPbPr) up to 1080p
- Composite and S-video simultaneous outputs
- Image Overscan/Underscan selection
- Output switched between NTSC/PAL
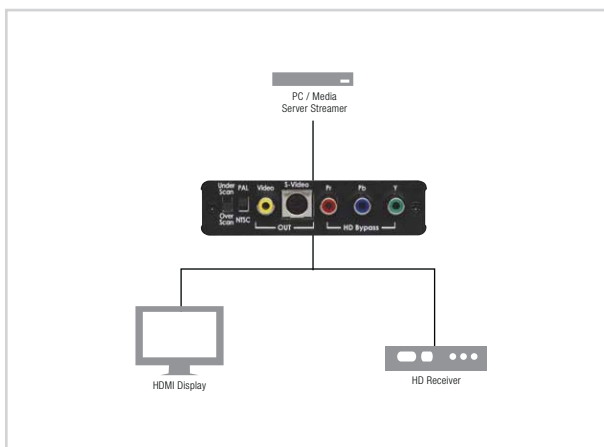
Specifications:

Model:	SY–PT387
Input	1 x Component (Y/Pb/Pr)
Output	1 x Composite, 1 x S-Video, 1 x Component bypass (Y/Pb/Pr)
Power	5v/2A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	102(W) x 25(H) x 154(D) mm
Weight	0.7kg

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CP-261D: PC/YUV to DVI Format Converter

Add a DVI output to an analogue video source. Convert the analogue RGBHV from your PC or the HD Progressive Scan Component Signal from your HD player for video only to a digital DVI format signal.

Features:
- Improves picture quality by utilizing the new digital video interface
- Accepts both PC VGA and YPbPr signal source
- Output format selectable between RGB amd YPbPr
- Output in both digital and analog format
- Easy to install

Specifications:

Model:	CP–261D
Inputs	1 x HD, 15pin D-sub (RGBHV or YPbPr)
Outputs	DVI-I
Power	5v 1A Centre-positive
Dimensions	76(W) x 30(H) x 105(D) mm
Weight	0.52kg
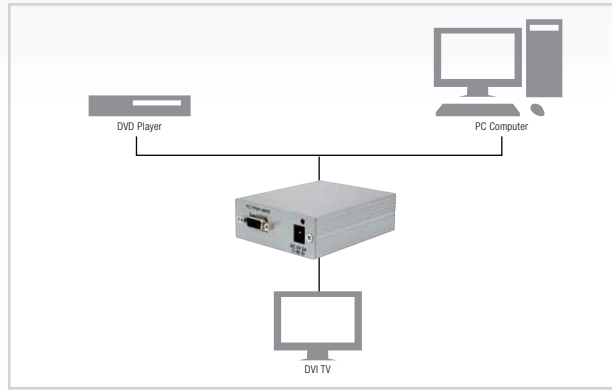
CP-260D: YUV to DVI-I Converter

The YPbPr to DVI-I format converter converts analogue YPbPr signal to digital DVI signal. For connecting a YPbPr output from Video equipment to a DVI input of a monitor or projector.

Its high bandwidth capability supports a wide range of PC and HDTV resolutions.

Features:
- Select digital output format between RGB and YPbPr
- Supports up to 1600 x 1200 @ 60 for PC input and 1920 x 1080p @ 60 for HD input
- Supports DDWG standard for DVI complaint monitors

Specifications:

Model:	CP–260D
Inputs	Analogue YPbPr on 3 x RCA connectors
Outputs	1 x DVI-I connector
Power	5v 500mA ~ 2A centre-positive
Dimensions	76(W) x 30(H) x 105(D) mm
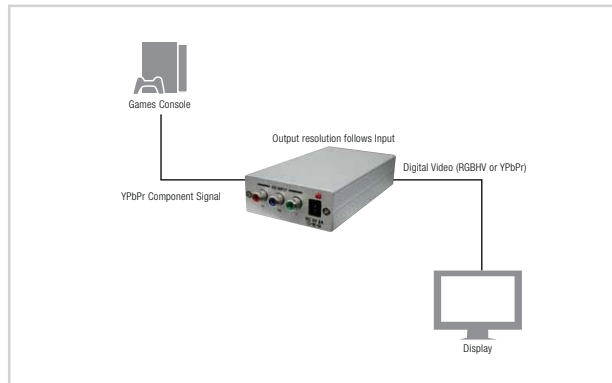
CP-264: RGBHV to YPbPr Colour Space Converter

A RGBHV to YPbPr Colour Space Converter enabling viewing a PC graphic image on a HDTV via YPbPr connection.

Since the input signal is not scaled, the signal timing of Input and output are the same.

Features:
- To view PC image on component HDTV
- Compatible with both interlaced and progressive RGB input
- Output follows Input

Specifications:

Model:	CP–264
Inputs	1 x 15pin D-Sub (RGBHV)
Outputs	1 x Component video (YPbPr----Y with composite sync, H+V composite sync) on 4 RCAs
Power	5v 2A centre +, 100 ~ 240v AC, 50 ~ 60Hz
Dimensions	50(W) x 23(H) x 52(D) mm
Weight	0.18kg

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- **CP-251F:** VGA/PC to DVI Scaler/Converter

VGA (RGBHV) or YUV (YPbPr/YCbCr) to DVI. Convert & scale up PC & interlaced or progressive scan component signals to DVI.

Auto detection of input resolution, offering a selectable range of output resolutions.

Features:

- Full OSD Menu
- Under-scan function to ensure full-screen picture availability
- Adjustment of clock and phase
- Controls inc: input/output set-up, picture & H/V phase adjustment, fine tuning, etc
- Resolutions range from VGA to WXGA & 480p to 1080i
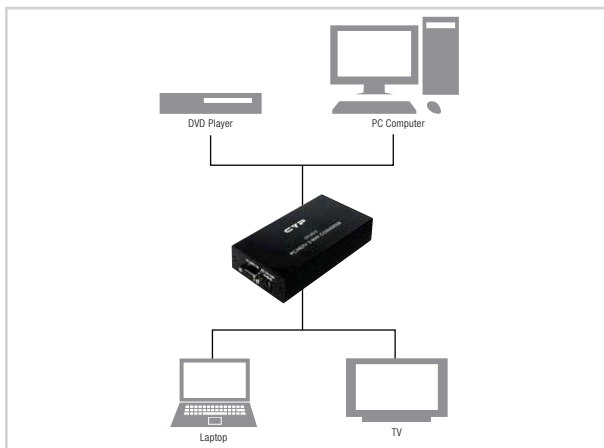
Specifications:

Model:	CP–251F
Inputs	PC/HD (15 pin Dsub)
Outputs	PC/HD (15 pin Dsub)
Power	5v 2A
Dimensions	75(W) x 30(H) x 140(D) mm
Weight	0.3kg

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● **CP-267S:** HDMI to DVI Converter with Audio

Convert HDMI to DVI with Digital Audio Breakout.

The CP-267S is an improved model converting digital HDMI to a DVI and Coaxial output up to 1080p. It enables you to connect your HDMI source to a DVI digital display and digital audio receiver.

With its built-in signal amplifier and equalisation for incoming TMDS data, it ensures that the output signal is of optimal quality.

Features:

• Compliant with HDMI 1.2, HDCP 1.1, & DVI 1.0
• Input format detection: Digital RGB or YPbPr
• Digital audio output supports PCM, Dolby Digital and DTS
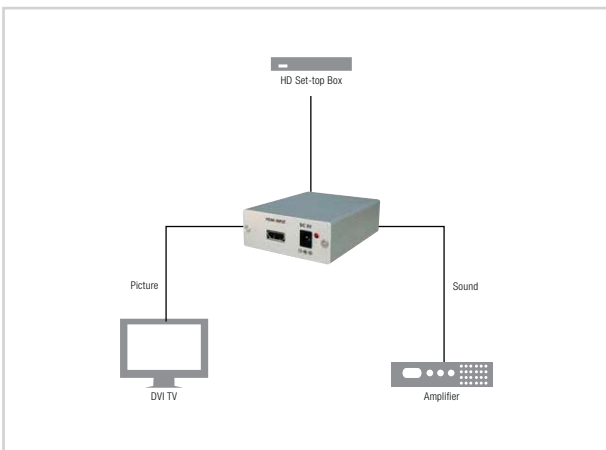
Specifications:

Model:	CP–267S
Inputs	1 x HDMI
Outputs	1 x DVI-I (RGB or YPbPr pass through), 1 x Coax (S/PDIF)
Power	5v/1A (US/EU standards, CE/FCC/UL certified)
Dimensions	105(W) x 30(H) x 76(D) mm
Weight	0.19kg

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- **CP-268S:** DVI to HDMI Converter with Audio

The CP-268S is an improved model converting digital DVI to a HDMI signal whilst combining the Coaxial Audio input at resolutions up to 1080p. It enables you to connect your DVI source to a HDMI digital display.

With its built-in signal amplifier and equalisation for incoming TMDS data, it ensures that the output signal is of optimal quality.

Features:

- Compliant with HDMI 1.2, HDCP 1.1, & DVI 1.0
- Input format detection: Digital RGB or YPbPr
- Digital audio input supports PCM, Dolby Digital and DTS
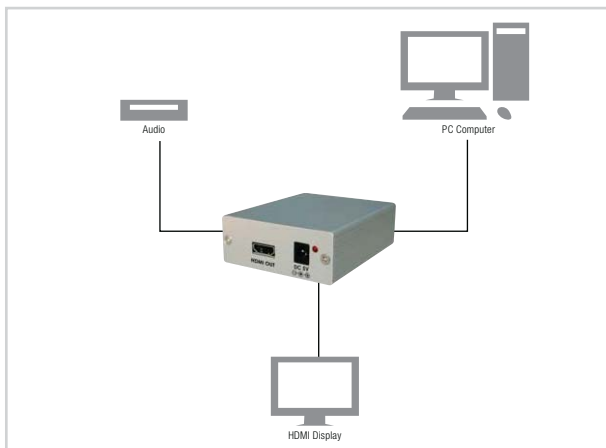
Specifications:

Model:	CP–268S
Inputs	1 x DVI-I (RGB or YPbPr pass through), 1 x Coax (S/PDIF)
Outputs	1 x HDMI
Power	5v/1A (US/EU standards, CE/FCC/UL certified)
Dimensions	105(W) x 30(H) x 76(D) mm
Weight	0.19kg

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• **CP-280H:** YUV to HDMI Format Converter (+Toslink)

Convert any YUV & Toslink (Digital Audio) signal to HDMI. Output resolution follows input (i.e the same resolution will be at the HDMI output).

There are two versions of this unit to choose from to match the audio connection you require (the alternative, CP-281H, has Coaxial and stereo audio).

Features:
- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 standards
- Analogue YCbCr/YPbPr & Digital Audio (Toslink)
- Resolutions up to and including 1080p
- Combining digital audio with HDMI signal
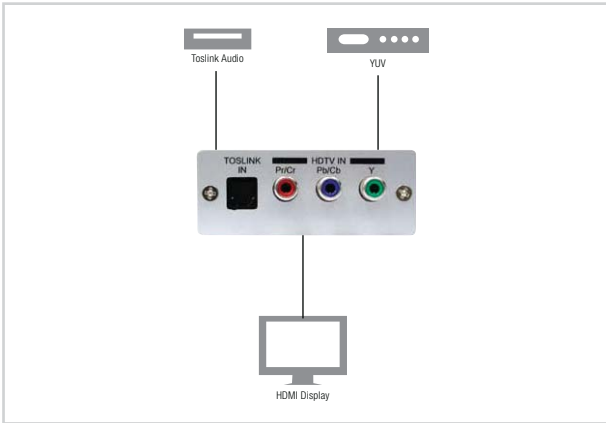
Specifications:

Model:	CP–280H
Inputs	3 x phono (RCA) - YUV + 1 x Toslink
Outputs	1 x HDMI Female Port
Power	5v DC/1A
Dimensions	76(W) x 30(H) x 105(D) mm
Weight	0.5kg

• **CP-281H:** YUV to HDMI Format Converter

Convert any YUV signal (either YPbPR or YCbCr) plus digital coaxial or stereo audio to HDMI.

There are two versions of this unit to choose from to match the audio connection you require (the alternative, CP-280H, has Toslink audio).

Features:
- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 standards
- Analogue YCbCr/YPbPr & Digital Audio (coaxial) & stereo audio
- Resolutions up to and including 1080p
- Combining digital or stereo audio with HDMI signal
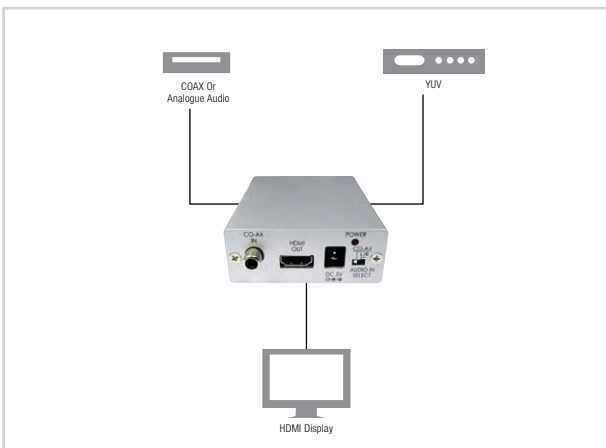
Specifications:

Model:	CP–281H
Inputs	3 x phono (RCA) - YUV + 1 x Coaxial, 1 x 3.5mm stereo jack plug
Outputs	HDMI female port
Power	5v DC
Dimensions	76.7(W) x 30(H) x 105(D) mm
Weight	0.5kg

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- **CP-292:** DVI-I to Component (HD)
  Scaler Box

Designed to upscale DVI-I input sources to a HD output offering a wide-range of HDTV resolutions up to 1080p.

This unit has a comprehensive OSD menu that allows user to select a variety of output resolutions and adjust for best picture quality.

Features:

- Provides output picture adjustment on contrast, brightness, sharpness, RGB (colour tone) level and aspect ratio size.
- Scales any PC/HD resolutions to HD (480i to 1080p) resolutions.
- Supports high resolution output: SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p
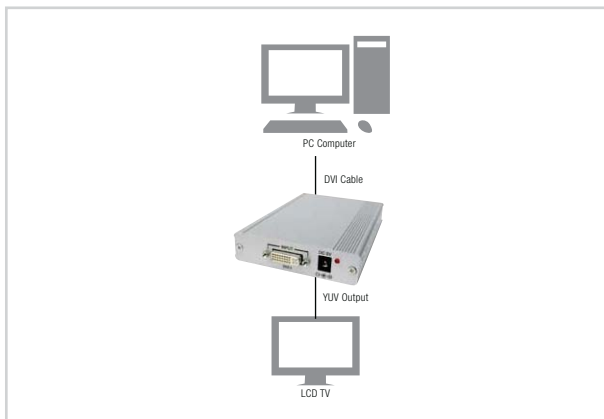
Specifications:

Model:	CP–292
Inputs	1 x DVI-I female port
Outputs	1 x Component (Y/Pb/Pr), 1 x DVI-I female port
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	157(W) x 25(H) x 102(D) mm
Weight	0.32kg

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• CPT-1370: PC to Video Overlay

This PC to Video overlay system is designed to overlay PC/Graphics onto Video signal and also can convert a variety of VGA sources to Video signal.

Features:

- Superimpose PC text and graphics onto another video signal
- Supports VGA to Video conversion. VGA: 640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200, Video: NTSC, NTSC4.43, PAL, PAL-M, PAL-N or SECAM
- Zoom and Pan functions plus remote control
- Support vertical and horizontal overscan/underscan control
- Auto frame rate conversion from 56Hz up to 85Hz
- Cross-platform compatibility for PC, Macintosh and Notebook
- No software driver required
- Simultaneous display on both the PC and TV monitor
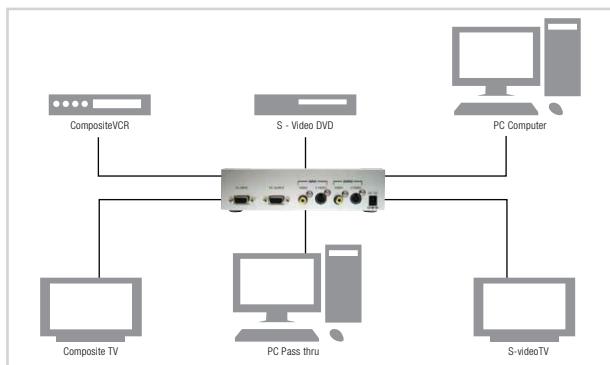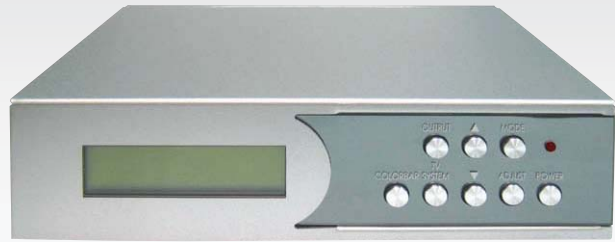
Specifications:

Model:	CPT–1370
Inputs	1 x PC, 1 x Video, 1 x S-Video
Outputs	1 x PC Pass through, 1 x Video, 1 x S-Video
Power	9v/2A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	191(W) x 140(D) x 48(H) mm
Weight	0.95kg

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• CPT-385A: PC to Video Scan Converter

Convert computer images to analogue video. This video scan converter is designed to convert a variety of computer images, from 640 x 480 up to 1600 x 1200, to interlaced NTSC or PAL video formats. Supports both composite and S-Video signals. Ideal for video conference, business presentation, lecturing room or viewing PC images on TV.

Features:

- Automatic detects and down converts PC images to NTSC or PAL
- Scales down PC video to Composite or S-Video
- Supports high-resolution PC input up to UXGA (1600x1200@60Hz)
- Over scan and Under scan selection
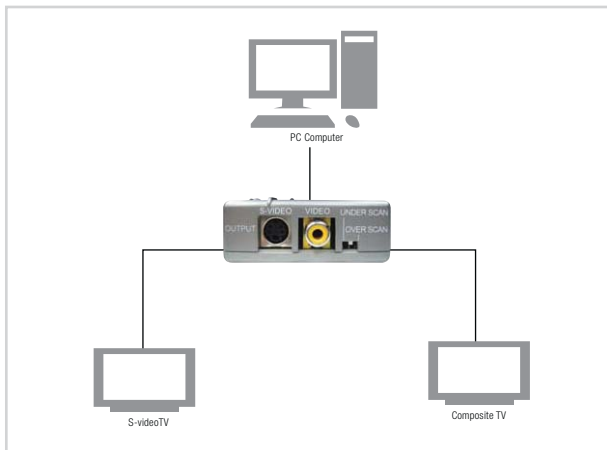
Specifications:

Model:	CPT–385A
Inputs	1 x 15pin D-Sub
Outputs	1 x CV or S-Video
Power	3.3v/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	64(W) x 18.5(H) x 100(D) mm
Weight	0.1kg

• CPT-386: VGA to Component Converter

Convert any PC images to Component (YCbCr) Video – outputting in 480i or 576i.

Features:

- Convert from PC resolutions to TV resolutions
- Supports resolutions PC Input from VGA up to UXGA (1600 x 1200 @ 60Hz)
- Supports output resolutions 480i or 576i
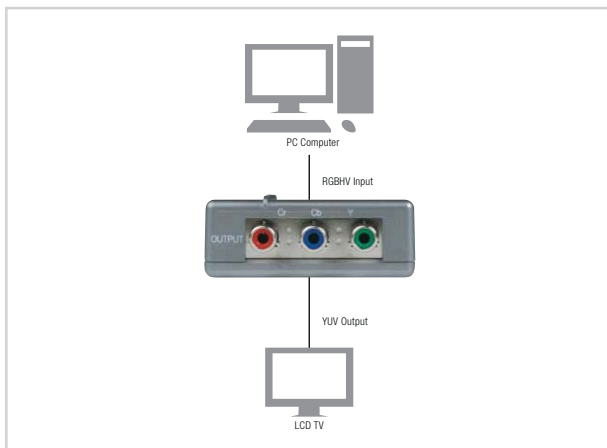
Specifications:

Model:	CPT–386
Inputs	RGBHV via 1 x 15 pin d sub
Outputs	YUV Component (3 x RCA)
Power	3.3V/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	100(W) x 23(H) x 64(D) mm
Weight	0.1kg

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● **CSY-2100:** Scart RGB to Component Converter

Convert any Scart RGB signal to a superb quality (red, green and blue) component video signal.

Features:
- Operates in NTSC 3.58, 4.43, PAL & SECAM
- Enhances picture quality by utilizing YUV input your display

RGB SCART IN

DVD Player

RGB Scart

POWER   OUTPUT   DC IN

YUV YCbCr TV
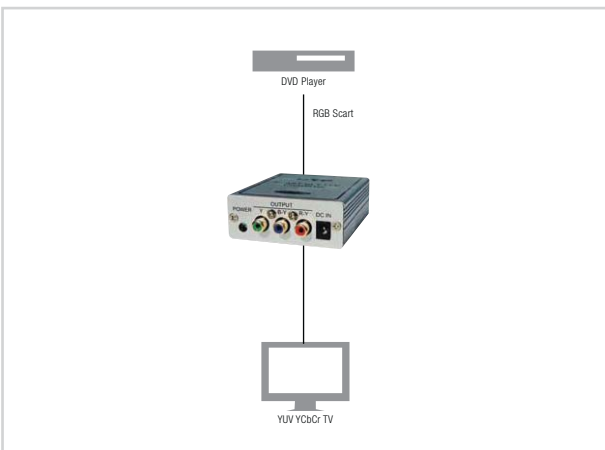
Specifications:

Model:	CSY–2100
Inputs	1 x RGB Scart
Outputs	3 x Phono (RCA) YUV
Power	DC 7.5v 500mA
Dimensions	100(W) x 29(H) x 76(D) mm
Weight	0.2kg

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- **CVLUX-1080P:** Analogue to HDMI
Converter 1080P

The CVLUX-1080P Scaler Box is designed to display both composite S-VHS video source images on any high definition screen with a wide-range of selectable viewing resolutions.

Features:

- HDMI 1.3 support deep colour 12 bit, HDCP 1.1, DVI 1.0 compliance
- Automatic lipsync (audio delay) ensures audio video synchronization
- Input video systems NTSC/PAL
- Automatic resolution selection and individual resolution selection button
- HDMI output with RGB color space design
- Resolutions: VGA, 480p, 576p, 720p, 1080i, 1080p @ 50/60
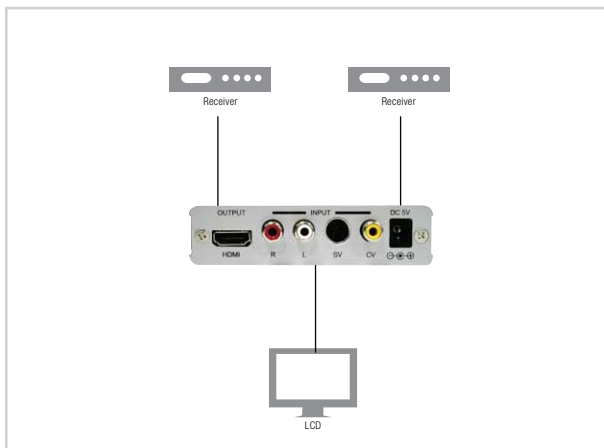
Specifications:

Model:	CVLUX–1080P
Inputs	1 x CV, 1 x SV, Audio 1 x set R/L on RCA
Outputs	1 x HDMI female port
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL) (certified)
Dimensions	100(W) x 25(H) x 157(D) mm
Weight	0.6kg

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• XA-HDMI: Pro HDMI Test Pattern Generator

The XA-HDMI Professional Pattern Generator offers a combination of various timings, patterns and colour spaces.

It can provide up to 4095 types of video testing signals. This generator also supports three types of audio testing signal, built-in sine wave, external analogue audio and external digital audio.

Its operation is simple yet comprehensive, use the remote or push buttons to select timings.

Features:

- v1.2 HDMI, HDCP 1.1 and DVI 1.0 Compliant
- Pro HDMI Test Pattern Generator
- Resolutions Supported:
  - PC - VGA to WUXGA
  - HDTV - 480i to 1080p (please refer to the manual for a full detailed list)
- Built in 1kHz Sine wave (adjustable sampling rate) together with analogue stereo & optical inputs fro audio referencing
- Provides total 35 timings and 39 patterns
- RS-232 & IR Remote control
- On-panel LED display and LED indicators (HDCP verification LED)

Amplifier

Analogue or Digital Audio Input

HDMI Output

HDMI Display
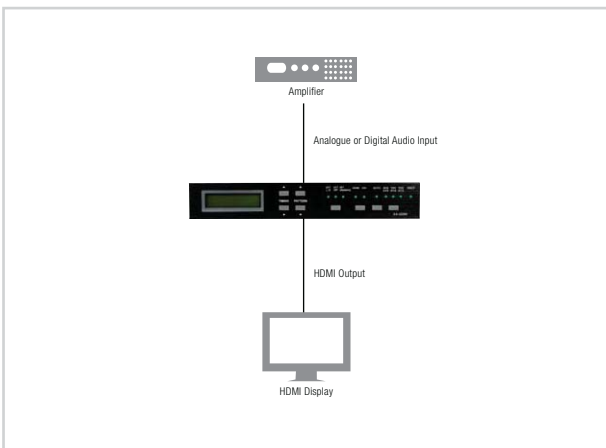
Specifications:

Model:	XA–HDMI
Input	1 x Audio L/R, 1 x Optical (Toslink)
Output	1 x HDMI, 1 x RS-232
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	280(W) x 45(H) x 145(D) mm
Weight	0.98kg

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• **XA-3:** Advanced HDMI & Audio Pattern
  Generator and Analyser

The XA-3 HDMI v1.3 compliant video test pattern generator is the most advanced device for your audio & video signals test.

With built-in 39 timings and 45 patterns, it outputs both analog and digital signals, providing thousands of types of testing signals.

This handy device can be conveniently controlled via the front panel buttons or the IR remote with an LCD display for easily identifying settings.

Other than testing your displays, this generator can also check the resolution of your sources and record them, check bandwidth and phase behavior of video transmission, verify video amplifiers/color temperature/video motion plus HDCP verification, data comparison, EDID check and many more other useful functions.

Features:

• HDMI v1.3, HDCP v1.1 and DVI v1.0 compliant
• Provides 39 timings and 51 patterns
• Timings include SD, HD up to 1080p, PC up to UXGA/WUXGA (Reduced Blanking)
• Graphic Tests and Data Analysis patterns included
• Output format with digital HDMI/DVI, or analog PC/HD (component)
• Supported color formats include RGB444, YCbCr444 AND YCbCr422
• Deep color support up to 8/10/12bits
• Selectable audio source from 7.1 CH, optical or internal sine wave
• Internal sinewave LPCM channel is selectable from 2CH, 5.1CH and 7.1CH
• Supports the following tests and analysis: HDCP, EDID, HDMI/DVI
• Auto run setting test mode
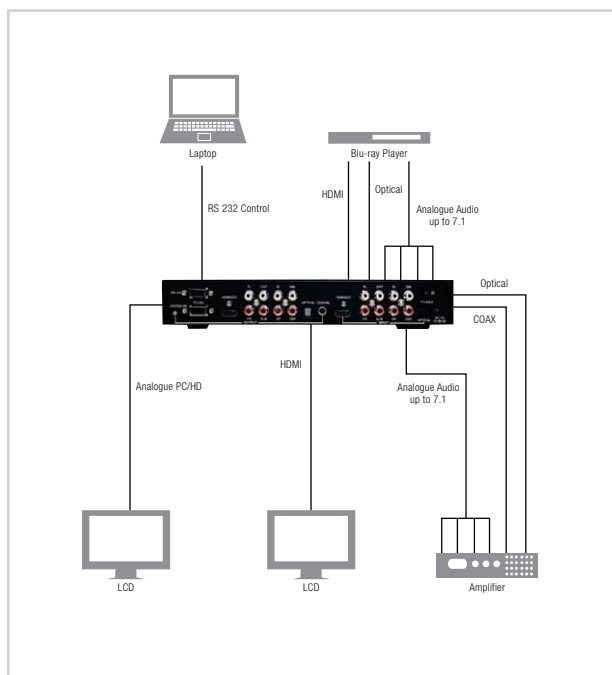
Specifications:

Model:	XA–3
Inputs	8 x Analogue Audio 7.1 (RCA), 1 x Optical (Toslink), 1 x HDMI, 1 x RS-232
Outputs	8 x Analogue Audio 7.1 (RCA), 1 x Optical (Toslink) 1 x Coaxial (RCA), 1 x HDMI, 1 x VGA (15 pin D-sub)
Power	5v/3A, DC (US/EU standards, CE/FCC/UL certified)
Dimensions	280(W) x 40(H) x 140(D) mm
Weight	1.96kg

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• XA-S11: EDID/CEC Selector

This high performance HDMI v1.3 switcher allows the user to set up a firm EDID and CEC connection between the source and the display, eliminating the time spent on signal configuration with synchronization before receiving a display.

Features:

- Compliant with HDMI 1.3 and DVI 1.0 standards
- Serial data rate at up to 2.25Gbps, capable of supporting the following digital video formats in Deep Colour Mode at up to 36 bits (12 bits/color)
- Resolutions Supported:
  - PC - VGA, SVGA, XGA, SXGA to UXGA
  - HDTV - 480i/p, 576i/p, 720p, 1080i/p
- Supports HD audio-Dolby Digital TrueHD and DTS-HD
- Embedded EDID RAM and Built-in CEC support with compliant CEC PHY
- Signal Enhancement feature allows you to improve signal quality after long distance transmission
- 3D Ready

PC / Media Server Streamer

HDMI Display
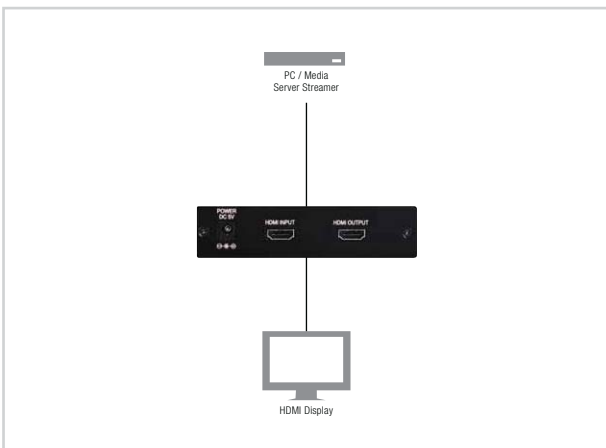
Specifications:

Model:	XA–S11
Input	1 x HDMI
Output	1 x HDMI
Power	5v/2.6A DC (US/EU standards, CE/FCC/UL (certified)
Dimensions	97(W) x 30(H) x 125(D) mm
Weight	0.55kg

CYP///

● **CCR-2SRGB:** Composite Video to Scart RGB Converter

Transform all those 'precious memories' from VHS tapes into high quality DVD recordings. This device will take the composite signal from your VCR output (or playing device) and reformat the signal into high quality scart RGB mode for perfect DVD recording. Compatible with all Scart connected equipment.

Features:

- Regenerates sync and restored colour burst to achieve an error-free output
- Auto recognition of TV system and converts to RGBS Scart
- Picture quality enhancement
- Audio source loop-through

VCR Player

HD Receiver   DVD Player
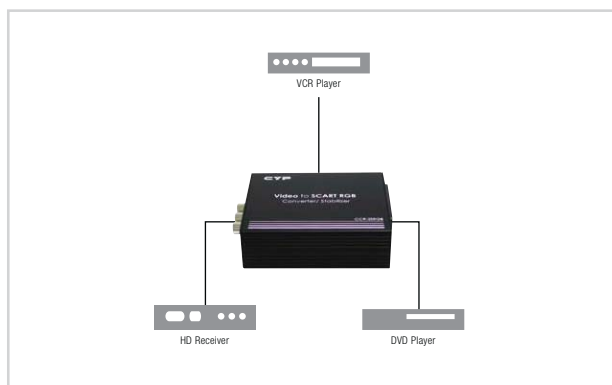
Specifications:

Model:	CCR–2SRGB
Inputs	1 x CV (RCA) + 2 audio (RCA)
Output	Scart
Power	7.5v DC, 500mA
Dimensions	105(W) x 30(H) x 76.7(D) mm
Weight	0.2kg

● **CCR-1SRGB:** Sync and Colour Restorer for RGB Recordings

Independently correct red, green & blue, contrast and brightness on a true RGB signal. The RGB Scart input and output also handles composite video and has the added benefit of allowing you to control contrast, brightness and overall colour only – handy for VCRs.

The smart incorporated sync pulse corrector ensures that your recordings remain steady throughout colour adjustment whilst the coloured LEDs guide you through the various controls and functions.

Features:

- Regenerates sync and restores colour burst to achieve an error-free standard video output
- RGB colour control of any scart RGB signal
- Colour, brightness and contrast control of both RGB and composite signals
- Supports both RGB and composite video inputs and outputs
- Stereo audio loop through

DVD Player   VCR Player

HD Receiver   DVD Player
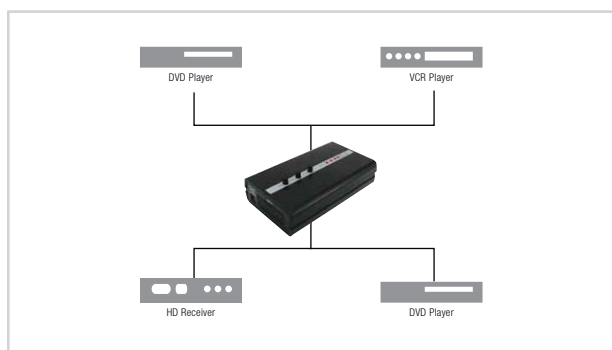
Specifications:

Model:	CCR–1SRGB
Input/Output	Scart (RGB & Composite)
Power	7.5v DC, 500mA
Dimensions	87.5(W) x 40(H) x 155(D) mm
Weight	0.25kg

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• CTB-100: Compact Time Base Corrector

Correct and transfer tapes to DVD, digital, full-frame synchroniser, which replaces all the sync signals from the source.

It restores vertical and horizontal sync, which is common on worn tapes, to a stable and jitter-free picture.

Features:

- NTSC, PAL & SECAM compatible
- Restores Colour burst
- Adjusts colour, contrast, sharpness and NTSC tint
- Supports both Composite and S-Video

VCR Player

HD Camcorder

Composite Input

S-Video Input

Composite DVD-R Player

S-Video DVD Player
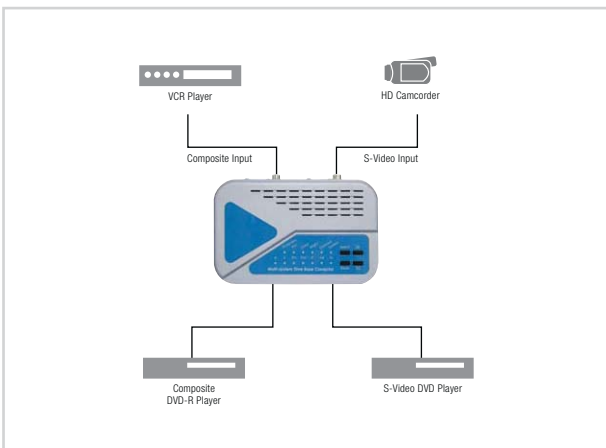
Specifications:

Model:	CCR–1SRGB
Inputs	1 x CV, 1 x SV
Outputs	1 x CV, 1 x SV
Power	12v DC, 1.25A
Dimensions	145(W) x 34(H) x 95(D) mm
Weight	0.18kg

AV Signal Distribution

ASTEL

- **TD-104:** 1-to-4 Video Distribution Amplifier
- **TD-204:** 2-to-4 Video Distribution Amplifier
- **TD-404:** 4-to-8 Video Distribution Amplifier

These high quality composite video distribution amplifiers feature 4/8 video outputs.

Standard BNC type input and output connectors enable the range to be used with CCTV amplifiers, switchers, cameras, monitors and VCRs, etc.

Features:
- Rack Mountable using optional rackmount kit
- High quality BNC connectors

TD-104: 1 In, 4 Out Video Distribution Amplifier

TD-204: 2 In, 4 Out Video Distribution Amplifier

TD-404: 4 In, 8 Out Video Distribution Amplifier
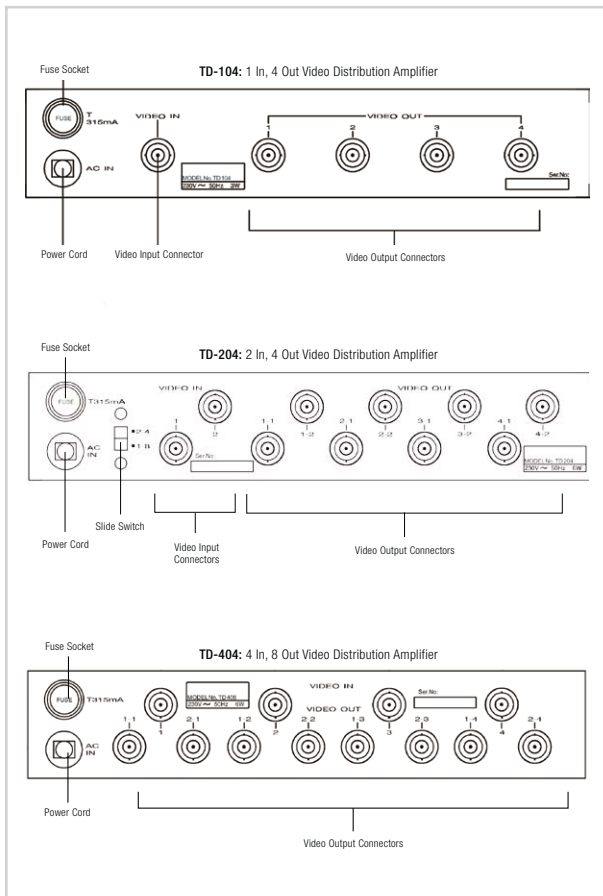
Specifications:

Model:	TD–104:
Video Input	1-2v pp, 75W, BNC
Video Output	1-2v pp/75W, BNC
Video Bandwidth	10MHz ±3dB
Signal/Noise Ratio	>55dB
Power Requirement	230v AC, 50Hz
Power Consumption	3W max
Dimensions	240(W) x 44(H) x 240(D) mm
Weight	2.2kg

Model:	TD–204:	TD–408:
Video Input	1-2v pp, 75W, BNC	4 x 1v pp, 75W, BNC
Video Output	1-2v pp/75W, BNC	8 x 1v pp at 75W BNC
Video Bandwidth	10MHz ±3dB	10MHz ±dB
Signal/Noise Ratio	>55dB	>55dB
Power Requirement	230v AC, 50Hz	230v AC, 50Hz
Power Consumption	6W max	6W max
Dimensions	44(H) x 216(W) x 240(D) mm	44(H) x 216(W) x 240(D) mm
Weight	2.5kg	2.5kg

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ASTEL

● **TD-816:** Video Distribution Amplifier

The TD-816 is a high quality video distribution amplifier with sixteen video outputs.

Internal jumpers allows the distribution of two video input to eight video outputs, four video inputs to four video outputs or eight video inputs to two video outputs.

Standard BNC type input and output connectors enables the TD-816 to be used with other CCTV amplifiers, switchers, cameras, monitors and video tape recorders.

Features:
- 2 In ~ 8 Out, 4 In ~ 4 Out, 8 In ~ 2 Out
- Rack mountable using optional rack mount kit

Power Switch

Fuse Socket

Power Cord

Video Output Connectors
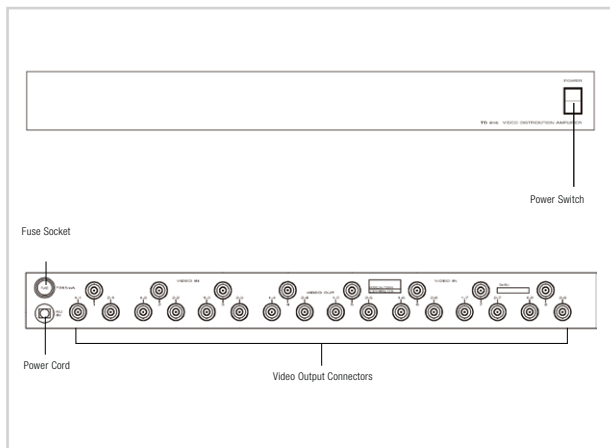
Specifications:

Model:	TD–816:
Video Input	1-2v pp, 75Ω, BNC
Video Output	1-2v pp, 75Ω, BNC
Video Bandwidth	10MHz ±dB
Signal/Noise Ratio	>55dB
Power Requirement	230v AC, 50Hz
Power Consumption	12W max
Dimensions	432(W) x 44(H) x 240(D) mm
Weight	4.7kg

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inter**M**

- ## VAMS-0808: 8 In-8 Out Audio & Video Matrix

A simple, yet effective 8 input / 8 output BNC Audio & Video Matrix Unit, allowing selection and allocation of separate audio and video signal sources.

This incredibly cost effective, 19" rack mounting unit features simple selection switches and highly visible LED display on the front panel to show which input (audio & video) is routed to which output. Alternatively, the unit can be controlled using RS232 via Crestron, AMX or Extron systems or equivalents via a 9pin D type connector.

Units may also be cascaded to increase the flexibility and application of the devices using the serial connector on the rear of the unit.

Features:

- 8 Audio/Video input & output with A/V thermal noise protection
- Low cross-talk and wide-band frequency response (±0.5dB)
- Allows system extension via cascading units (max. 4 units)
- RS-232C port for data communication
- Lock-out function on front panel controls
- Restores to the final stage setup in a case of power loss
- 19" rack mounting unit
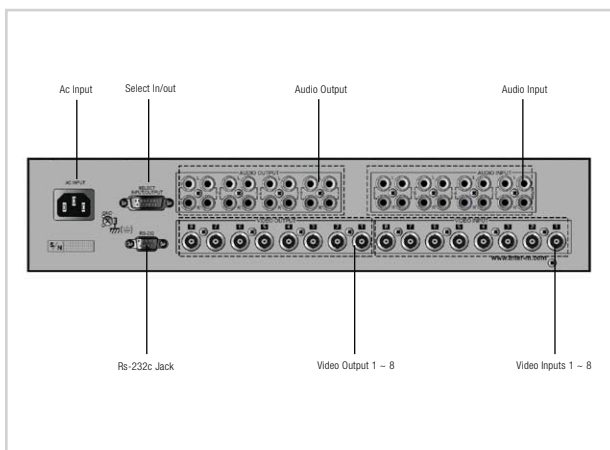
Specifications: Video

Model:	VAMS-0808
Input/Output Impedance	1VP-P 75W Composite Video BNC
Frequency Response (7MHz)	Below 0.5dB
Input/Output Level	1VP-P 140 IRE
Signal/Noise Ratio	60dB
Crosstalk	-60dB

Specifications: Audio

Model:	VAMS-0808
Input/Output Impedance	2.2VP-P.High Impedance Unbal/RCA
T.H.D+N(20Hz-20kHz)	<0.1%
Frequency Response	(20Hz ~ 20kHz): <±3dB
Signal/Noise Ratio	>90dB
Crosstalk	<-90dB

Specifications: Control

Model:	VAMS-0808
Interface	RS-232C
Data Bit	8 bit
Stop Bit	1 bit
Power Requirement	230v AC, 50/60Hz
Dimensions	482(W) x 88(H) x 220(D) mm

Faceplates

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Clever Little Box.

• **1GEIAVPLT:** Single-gang AV Input Plate

Features:
- 1 x Easy-Install, solderless VGA HD15F (VGAPCBUNITNEW)
- 4 x RCA audio sockets; 2 x left plus 2 x right
- 1 x RCA video socket

• **2GEIAVPLT:** Double-gang AV Input Plate

Features:
- 2 x Easy-Install, solderless VGA sockets (VGAPCBUNITNEW)
- 2 x RCA audio sockets; left and right
- 1 x RCA video socket
- 1 x 3.5mm PC audio socket
- 1 x USB B Male to USB B Female 3m whiteboard flying lead
- 1 x RJ-45 back-to-back socket

PCB Modules

A range of PCB modules featuring AV connectors with easy-termination screw terminals to the rear. Ideal for on-site installation where soldering is not appropriate or available and in conjuction with our range of Easy-Instal VGA Cables (VGA-FRL-XXM) on page 359.

CLB-VGAPCBUNIT: Solderless VGA Module

The module incorporates a HD 15-way female D-type and rear screw terminals for quick and easy installation on site. Supplied complete with a clear, easy to use wiring diagram.

CLB-VGA+3.5PCBUNIT: Solderless VGA + 3.5PCB Module

VGA + 3.5 unit to screw terminals.
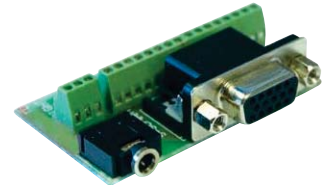
CLB-HDMI-PCB-TERM: Solderless HDMI Module

HDMI-ST Module, HDMI to screw terminals
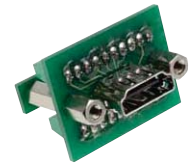
CLB-RJ45PCBUNIT: Solderless RJ45 Module

RJ45-ST Module, RJ45 to screw terminals.

CLB-USBPCBUNIT: Solderless USB Module

USB-ST Module, USB to screw terminals.

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Clever Little Box.

AVPLATE1: Single-gang VGA Plate

Features:

- 1 x Easy-Install, solderless VGA plate HD15F with rear screw terminations
- Ideal for use with our Easy-Install VGA cables

- AVPLATE1: Single-gang VGA Plate

AVPLATE2: Single-gang 3 x RCA Plate

Features:

- 2 x RCA audio sockets, left and right
- 1 x RCA composite video socket
- Solder connections at the rear

- AVPLATE2: Single-gang AV Plate

1GEIXLRM: Single-gang Male XLR Plate
1GEIXLRF: Single-gang Female XLR Plate

Features:

- Solderless rear screw terminations
- Quick and easy installation
- High quality Switchcraft XLR
- Available with a male or female XLR

- 1GEIXLRM: Single-gang male XLR Plate

- 1GEIXLRF: Single-gang female XLR Plate

Solderless screw-terminal rear connections

1GEIHDMI: Single-gang HDMI Plate
1GEIHDMIRA: Single-gang HDMI Plate (bottom HDMI access to rear)

Features:

- HDMI connection front and rear
- Rear socket is aligned for entry from side or below
- Designed for use with metal in-wall pattress with side knock-outs

- 1GEIHDMI: Single-gang HDMI plate

- 1GEIHDMI: HDMI rear connection side access

- 1GEIHDMIRA: Single-gang HDMI plate

- 1GEIHDMIRA: HDMI rear connection bottom access

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- **Outreach Plates:** Audio Input Extension System

A range of wall, ceiling and desk mountable single gang audio input plates specifically designed to increase the audio input capability of any audio system. A total of six plates are available - one to suit virtually every conceivable variant of audio input connector - and each featuring a built-in mixer, pre-amp, input level control and balancing output.

Up to ten plates of any mix can be daisy-chained to one balanced line level input with cable lengths in excess of 100m easily achievable using standard two-pair audio cable (i.e. Belden 8723) with no recognisable degradation of audio signal quality.

All plates are surface mountable on 25mm single-gang back boxes and can be installed at the most convenient point on an installation, thus overcoming the need for long and potentially hazardous microphone/audio leads.

- **APJ:** 3.5mm Jack Outreach Plate

Accepts balanced or unbalanced microphones with 3.5mm mono jack plugs. Includes an onboard mic-to-line level converter, high gain pre-amplifier and 8v phantom power.

- **APL:** Dual Phono Line Level Outreach Plate

Accepts two line-level signals (usually from a stereo source such as a TV, CD, MP3 or DVD). Includes an on-board dual phono to mono converter. An ALS SCART to dual phono lead is also available to facilitate the connection of TVs, VCRs, etc, to the APL.

- **APQ:** ¼" Jack Outreach Plate

Accepts balanced or unbalanced microphones with 1/4" jack plugs. Includes an on-board mic-to-line level converter, high gain pre-amplifier and 8v phantom power.

- **APXM:** XLR Microphone Level Outreach Plate

Accepts balanced or unbalanced microphones with standard 3 pin XLR female connectors. Includes an on-board mic-to-line level converter, high gain pre-amplifier and 8v phantom power.

- **APXL:** XLR Line Level Outreach Plate

Accepts standard 3 pin XLR female feeds from audio equipment such as stage or church mixing desks, etc.

- **APM:** Omni-Directional Plated Mic Outreach Plate

A self-contained omni-directional electret microphone complete with on-board mic-to-line level converter. Ideal for mounting in ceilings, walls or desks, the unit offers excellent coverage (typically up to 25m^2 when located at a ceiling height of 2.5-3m).

- **Ancillary Devices:**

Should the Outreach network be connected to an induction loop system, any of the following ancillary devices can be added:

- **API:** 'AFILS Active' Outreach Plate

Includes two ultra-bright LEDs in a translucent diffuser overprinted with the induction loop 'ear' symbol. The LEDs illuminate when the outreach network is powered to indicate that an AFILS system is installed. Current consumption is 30mA max.

- **APF:** Field Strength Meter Outreach Plate

Indicates the magnetic field strength generated by an induction loop system via three LEDs, labelled +6dB, 0dB and –6dB. The LEDs illuminate as appropriate whenever a signal is present and can be easily set up to indicate the magnetic field strength in the room centre.

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Clever Little Box.

- **VGAKIT-1G-10M:** 10m Cable Single-Gang Faceplate Kit
- **VGAKIT-1G-15M:** 15m Cable Single-Gang Faceplate Kit
- **VGAKIT-1G-20M:** 20m Cable Single-Gang Faceplate Kit

Features:
- 1 x Single-gang AV faceplate (1GEIAVPLT)
- 1 x VGA cable with easy route ferrule ends
- 2 x Twin RCA audio cables
- 1 x RCA video cable

- **VGAKIT-2G-10M:** 10m Cable Double-Gang Faceplate Kit
- **VGAKIT-2G-15M:** 15m Cable Double-Gang Faceplate Kit

Features:
- 1 x Double-gang AV faceplate (2GEIAVPLT) incorporating a 3m whiteboard USB B cable and back-to-back RJ45 socket
- 2 x VGA cable with easy route ferrule ends
- 1 x Twin RCA audio cables
- 1 x RCA video cable

- **AVWB1-10M:** 10m Cable Pre-Terminates AV Wallbox Kit
- **AVWB2-15M:** 15m Cable Pre-Terminates AV Wallbox Kit

This fully pre-terminated AV wallbox kit comes with all installation cables already internally connected, providing high speed 'plug and play' installation.

Features:
- Wallbox connections made from below for tidy, secure cable connectivity
- Wallbox features input connections for 2 x VGA, composite video, L and R RCA audio, whiteboard USB B, RJ-45 and HDMI)

Kit also includes:
- 2 x prewired VGA cables
- 1 x stereo 3.5mm plug-to-plug cable
- 1 x prewired USB lead
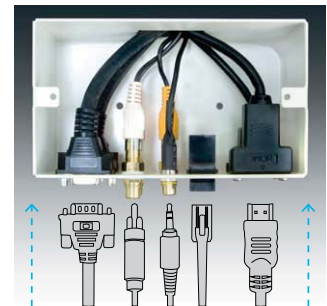
All external connections are made from below

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FB221X303X86BOX: Clever Little FloorBox

This UK designed and built Audio Visual FloorBox accepts a full range of input and output modules to meet the specific requirements of each individual AV system.

Manufactured in high quality galvanised steel and grey polycarbonate, our new 'Clever Little FloorBox' combines discreet and flexible design with safe and robust construction.

Specifications:

Model:	FB221X303X86BOX
Number of Module Spaces	Max. 3 x 2-gang Plates or 6 x Angled Plates or combination of above
Materials	Galvanised Steel High Impact Polycarbonate
Floor Cutout Dimensions	265 x 212 mm
Lid Recess Dimensions	239 x 150 mm
Lid Recess Depth	6mm
Depth Below Floor Level	84mm
Height Above Floor Level	4mm
Weight (without Modules)	2.17kg

FB2GANGMAINS

2-gang mains outlet.

FBRJPLATE

4 port blank RJ plate for use with FBRJMODULE.
(Modules sold separately)

FBRJMODULE

Snap in Cat5 module for use with FBRJPLATE.

FBANGLEDAV

Angled plate with 1 x VGA with screw terminal contacts for easy installation, 3 x Phono and 1 x 3.5mm sockets.

FBANGLE2XVGA

Angled plate with 2 x VGA with screw terminal contacts for easy installation.

FBANGLEVGA2XUSB

Angled plate with 1 x VGA with screw terminal contacts for easy installation, 1 x USB-B and 1 x USB-A couplers.

Need help choosing the right product?
Call our technical support team now on:
Tel. +44(0)115 977 0075

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Clever Little Box.

SONET4: Cat5 Audio Distribution System - 4 in / 4 out

The highly successful 'Sonet' Sound-over-Ethernet System has been designed to simplify and speed up installations where multiple microphone or line level inputs need to be situated a distance from the amplifier equipment.

Types of installation include churches, schools, theatres and corporate boardrooms.

This extremely versatile and cost effective installation device removes the need for multiple cable runs from remote audio inputs to the amplifier equipment. The SONET4 System can transmit up to four microphone or line level signals down one screened Cat5e cable for up to 1000m.

Each input and output can be independently configured for balanced or unbalanced signals as well as line level or microphone level. There is also an option to provide phantom power to the microphone inputs independently.

Each unit fits neatly into a standard UK double-gang back box and only requires a power supply at the output or amplifier end (PSU supplied as part of system).

Linked via Cat5 cable Up to 1000m

Features:

- Reduces installation time
- Up to 1000m between Input and Output plates achievable
- Very high interference immunity
- Balanced or unbalanced inputs & outputs
- Line or Microphone level inputs & outputs
- Phantom power (max. 15v DC)
- Four XLR sockets on standard 2 gang plates
- No power required at input module
- Power Supply included as part of system

Please Note:

- When using Cat5 UTP (unshielded) cable, the So.Net system is only capable of transferring up to 3 channels. STP (shielded) Cat5 cable will allow for the maximum 4 channels.

Specifications:

Input Module:

Power	Over Cat5 cable
Ground	Over Cat5 cable screen (or spare pair)
Inputs x 4	Balanced XLR female
MIC/LINE in	Selectable by jumper
Phantom Power	15v jumper selectable
MIC Impedance	600Ω
MIC Level Input	10mv RMS
LINE Impedance	50kΩ
LINE Input Level	700mv RMS (1.5v RMS max)
Cat5 Termination	Screw terminals

Output Module:

Power Requirements	24v DC @ 100mA (regulated linear power supply recommended)
Outputs x 4	Balanced XLR male
MIC/LINE Out	Selectable by jumper
MIC Out Impedance	600Ω
MIC Level Output	20mv RMS (into 600Ω)
LINE Out Impedance	20kΩ
LINE Level Output	700mv RMS (into 20K)

General:

Channels	Four, individually configurable
Bandwidth	100Hz ~ 20kHz (-3dB)
Crosstalk	>60dB
Signal to Noise Ratio	>60dB
Cable Spec	Screened Cat5e cable (UTP can be used, but one pair required for ground, meaning only three channels would be available)
Cable Length	1000m maximum
Cat5 Terminators	Screw terminals

Protected against short circuit on Cat5 cable to ground

4 x MIC/LINE Signals

Amplifier / Mixer

LINE Out

Standard single
Cat5 cable
(up to 1000m)

PSU

so.net INPUT plate

so.net OUTPUT plate

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Clever Little Box.

• HDMI 1.3 Cables

HDMI cables suitable for distributing high quality digital video and audio.

Featuring gold-plated connectors for improved performance, these cables are HDMI 1.3b compliant.

Models:

Model:	Description
HDMI1MTR	1 metre
HDMI3MTR	3 metres
HDMI5MTR	5 metres
HDMI10MTR	10 metres

• Blue LED HDMI 1.4 Cable

High quality and distinct male-to-male cables featuring blue LED-lit connectors and robust, flexible blue nylon braiding.

With gold-plated connectors for high performance, these cables are HDMI 1.4 compliant.

Models:

Model:	Description
STA-L5010B-1M	1 metre
STA-L5010B-3M	3 metres
STA-L5010B-5M	5 metres
STA-L5010B-10M	10 metres

• High Performance HDMI 1.4 Cable

High performance HDMI 1.4 compliant cable, featuring gold-plated connectors.

Models:

Model:	Description
STA-5010-1M-BLUE	1 metre
STA-5010-3M-BLUE	3 metres
STA-5010-5M-BLUE	5 metres
STA-5010-10M-BLUE	10 metres
STA-5010-1M-RED	1 metre
STA-5010-3M-RED	3 metres
STA-5010-5M-RED	5 metres
STA-5010-10M-RED	10 metres
STA-5010-1M-GREEN	1 metre
STA-5010-3M-GREEN	3 metres
STA-5010-5M-GREEN	5 metres
STA-5010-10M-GREEN	10 metres

Also available in Red... and Green.

• HDMI to Ferrule Cable

Cable assembly one end with HDMI connector on the other end cut off and crimping with ferrules fitted.

Models:

Model:	Description
HDMI-FRL-5M	5 metres
HDMI-FRL-10M	10 metres
HDMI-FRL-15M	15 metres

Mini HDMI Cables

Features:
- HDMI M/MINI HDMI M cable
- PE Inner Mold, Copper shell, Gold Plated
- Black & Orange 2 color molding, PVC
- Bare copper conductor, CCA braiding
- 3 Shielding,standard wire spec, Version 1.3v, 30AWG OD6.0mm UL20276, 1P+D+A+MY)*4P+1P+5C+AB+Jacket

Models:

Model:	Description
STA-201A-AC	1 metre
STA-201A-AC	3 metres
STA-201A-AC	5 metres

Mini HDMI - Standard HDMI Cables

Features:
- MINI HDMI M/M cable
- PE Inner Mold, Copper shell, Gold Plated
- Black & Orange 2 color molding, PVC
- Bare copper conductor, CCA braiding
- 3 Shielding,standard wire spec, Version 1.3v, 30AWG OD6.0mm UL20276, 1P+D+A+MY)*4P+1P+5C+AB+Jacket

Models:

Model:	Description
STA-201A-CC	1 metre
STA-201A-CC	3 metres
STA-201A-CC	5 metres

HDMI Couplers/Adaptors

Models:

Model:	Description
HDMI-RA-COUPLER	90° HDMI-to-HDMI Coupler
HDMI-HDMI F/F	HDMI-to-HDMI Coupler
HDMI-DVI-F/M	HDMI Female to DVI-D Male Adaptor
HDMI-DVI-M/F	HDMI Male to DVI-D Female Adaptor

HDMI-DVI 2M: HDMI to DVI-D 2 metre Cable
HDMI-DVI 5M: HDMI to DVI-D 5 metre Cable

Convenient convertor cables, allowing HDMI sources to be connected to DVI-D equipment and vice-versa.

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- **STA-DP002 (1M):** Premier DisplayPort Male-to-Male Cables -1 metre
- **STA-DP002 (2M):** Premier DisplayPort Male-to-Male Cables -2 metres
- **STA-DP002 (5M):** Premier DisplayPort Male-to-Male Cables -5 metres

Features:
- DisplayPort M/M cable, overall braid
- PE Inner mold, Copper Shell, Gold plated
- White molding, PVC
- Bare copper conductor, CCA braiding
- 3 shielding with standard wire spec, Version 1.3v, 30AWG OD7.3mm UL20276, 1P+D+A+MY) *4P+1P+5C+AB+PVC

- **CVT02-04CA0202:** Mini DisplayPort-to-DVI Cable -100mm

Features:
- Compliant with DisplayPort Interoperability specification v1.1a
- Support full DisplayPort link training
- Compliant with DVI 1.1 specification up to 1.65Gbps
- ESD protect: Human Body Mode at 8Kv, Machine Mode at 400v and Charged Device Mode at 2kv
- PC: VGA, SVGA, XGA, SXGA, and UXGA
- HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
- Standby mode current: 64uA
- Cable Type, Plastic Cover Assembly, Chip on DVI side, Length=100mm, CE/FCC, RoHS
- Length = 100mm

- **CVT02-03CA0202:** Mini DisplayPort-to-HDMI Cable -100mm

Features:
- Compliant with DisplayPort Interoperability specification v1.1a
- Support full DisplayPort link training
- Compliant with HDMI 1.3a specification up to 2.25Gbps
- ESD protect: Human Body Mode at 8kv, Machine Mode at 400v and Charged Device Mode at 2kv
- PC: VGA, SVGA, XGA, SXGA, and UXGA
- HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
- Standby mode current: 64uA
- Cable Type, Plastic Cover Assembly, Chip on HDMI side, Length=100mm, CE/FCC, RoHS
- Length = 100mm

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CVT02-05CA0202: Mini DisplayPort-to-VGA Cable -100mm

Features:
- DisplayPort 1.1a compliant receiver offering 1.62 and 2.7Gbps over 4 lanes
- Support full DisplayPort link training
- Video resolution up 1920 x 1200 x 60Hz
- ESD protect: Human Body Mode at 8Kv, Machine Mode at 400v and Charged Device Mode at 2kv
- PC: VGA, XGA, SVGA, SXGA, UXGA and WUXGA
- Cable Type, Plastic Cover Assembly, Chip on VGA side
- Length = 100mm
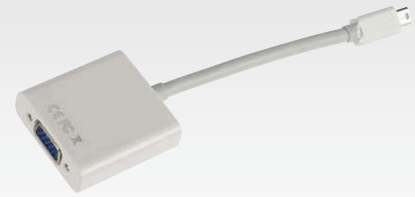
CVT01-04CA0205: DisplayPort Male-to-DVI Male Cable - 1.8m

Features:
- Compliant with DisplayPort Interoperability specification V1.1a
- Support full DisplayPort link training
- Compliant with DVI 1.1 specification up to 1.65Gbps
- ESD protect: Human Body Mode at 8kv, Machine Mode at 400v, and Charged Device Mode at 2kv
- PC: VGA, SVGA, XGA, SXGA, and UXGA
- HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
- Standby mode current: 64uA
- Length = 1.8 metres

CVT01-03CA0205: DisplayPort Male-to-HDMI Male Cable - 1.8m

Features:
- Compliant with DisplayPort Interoperability specification v1.1a
- Support full DisplayPort link training
- Compliant with HDMI 1.3a specification up to 2.25Gbps
- ESD protect: Human Body Mode at 8kv, Machine Mode at 400v and Charged Device Mode at 2kv
- PC: VGA, SVGA, XGA, SXGA, and UXGA
- HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
- Standby mode current: 64uA
- Length = 1.8 metres

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Clever Little Box.

- **CVT01-05AA0201:** DisplayPort-to-VGA Adaptor

  ### Features:
  - DisplayPort 1.1a compliant receiver offering 1.62 and 2.7Gbps over 4 lanes
  - Support full DisplayPort link training
  - Video resolution up 1920 x 1200 x 60Hz
  - ESD protect: Human Body Mode at 8kv, Machine Mode at 400v and Charged Device Mode at 2kv
  - PC: VGA, XGA, SVGA, SXGA, UXGA and WUXGA
  - W/Latch, W/LED, Adapter Type, Plastic Cover Ass'y, RoHS

- **CVT01-04CA0203:** DisplayPort-to-DVI Cable -100mm

  ### Features:
  - Compliant with DisplayPort Interoperability specification V1.1a
  - Support full DisplayPort link training
  - Compliant with DVI 1.1 specification up to 1.65Gbps
  - ESD protect: Human Body Mode at 8kv, Machine Mode at 400v, and Charged Device Mode at 2kv
  - PC: VGA, SVGA, XGA, SXGA, and UXGA
  - HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
  - Standby mode current: 64uA, RoHS
  - Length = 100mm

- **CVT01-03CA0203:** DisplayPort-to-HDMI Cable - 100mm

  ### Features:
  - Compliant with DisplayPort Interoperability specification V1.1a
  - Support full DisplayPort link training
  - Compliant with HDMI 1.3a specification up to 2.25Gbps
  - ESD protect: Human Body Mode at 8kv, Machine Mode at 400v, and Charged Device Mode at 2kv
  - PC: VGA, SVGA, XGA, SXGA, and UXGA
  - HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
  - Standby mode current: 64uA, RoHS
  - Length = 100mm

- **CVT01-05CA0203:** DisplayPort-to-VGA Cable - 100mm

  ### Features:
  - DisplayPort 1.1a compliant receiver offering 1.62 and 2.7Gbps over 4 lanes
  - Support full DisplayPort link training
  - Video resolution up 1920 X 1200 X 60Hz
  - ESD protect: Human Body Mode at 8kv, Machine Mode at 400v, and Charged Device Mode at 2kv
  - PC: VGA, XGA, SVGA, SXGA, UXGA and WUXGA, RoHS
  - Length = 100mm

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Low Profile VGA Cables

These Low Profile VGA cables are unobtrusive and attractively designed. Ideal for use in highly visible areas or in racks where space may be limited.

Male-to-Male Models:

Model:	Description
LPVGA-M/M-1.0M	1 metre
LPVGA-M/M-3.0M	3 metres
LPVGA-M/M-5.0M	5 metres
LPVGA-M/M-10.0M	10 metres
LPVGA-M/M-15.0M	15 metres
LPVGA-M/M-20.0M	20 metres

Male-to-Female Models:

Model:	Description
LPVGA-M/F-1.0M	1 metre
LPVGA-M/F-3.0M	3 metres
LPVGA-M/F-5.0M	5 metres
LPVGA-M/F-10.0M	10 metres
LPVGA-M/F-15.0M	15 metres
LPVGA-M/F-20.0M	20 metres

Low-profile VGA Moulding compared to standard size VGA moulding

Right-angle to Low Profile VGA Cables

15 way Male-to-Male VGA cables featuring low profile VGA connector at one end and right-angle VGA at the other.

Models:

Model:	Description
LPVGA-RA-1.0M	1 metre
LPVGA-RA-3.0M	3 metres
LPVGA-RA-5.0M	5 metres
LPVGA-RA-10.0M	10 metres

Right-angle to low-profile VGA Connectors

Easy-Install VGA Cables

Easy-Install Male VGA-to-Ferrule Free ends.

Ideal for use with our range of AV Wall Faceplates or Solderless VGA modules, these cables allow the VGA cable to be routed through tight spaces/conduit and then quickly terminated at the faceplate without the need to solder, helping to dramatically reduce installation times. The cables consist of 3 coax cores, 5 signal wires plus a screen wire.

Models:

Model:	Description
VGA-FRL-1.0M	1 metre
VGA-FRL-5.0M	5 metres
VGA-FRL-10.0M	10 metres
VGA-FRL-15.0M	15 metres
VGA-FRL-20.0M	20 metres
VGA-FRL-30.0M	30 metres
VGA-FRL-50.0M	50 metres

Premier Grade VGA Cables (Fully wired with all 15 pins)

Male-to-Male and Male-to-Female Premier Grade VGA Cables.

Utilising high quality, high performance cable, these premier grade VGA cables are suitable for use in the most demanding of applications. Fully wired with all 15 pins connected.

Models:

Model:	Description
SVGAPREM2.0M/M	2 metres
SVGAPREM10.0M/M	10 metres
SVGAPREM15.0M/M	15 metres
SVGAPREM20.0M/M	20 metres
SVGAPREM30.0M/M	30 metres
SVGAPREM50.0M/M	50 metres
SVGAPREM0.5M/F	0.5 metres
SVGAPREM2.0M/F	2 metres

90° Male-to-Female VGA Adaptor: VGA–M–F90

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Clever Little Box.

Low Smoke, Zero Halogen Premium VGA Cables

Features:
- Cable Assembly Type:VGA
- Connector Type A:VGA Plug
- Connector Type B:VGA Plug

Models:

Model:	Description
LSZH-VGA-1M	Low Smoke, Zero Halogen Premier VGA Cable - 1m male to male
LSZH-VGA-3M	Low Smoke, Zero Halogen Premier VGA Cable - 3m male to male
LSZH-VGA-5M	Low Smoke, Zero Halogen Premier VGA Cable -5m male to male
LSZH-VGA-10M	Low Smoke, Zero Halogen Premier VGA Cable - 10m male to male
LSZH-VGA-15M	Low Smoke, Zero Halogen Premier VGA Cable - 15m male to male
LSZH-VGA-20M	Low Smoke, Zero Halogen Premier VGA Cable - 20m male to male

The following cables enable the DataBay AVE-300 Series VGA Transmitters and Receivers (seen on page 289) to be converted to transmit Component Video or Composite Video.

Component Video Cables:

● **HD15F-YCBCR70:** Component Video Source Cable

Comprising of a high density 15 way female 'D' type connector to 5 x RCA (Phono) plugs. Cable length 0.7m. This cable is used in conjunction with the 'monitor cable' shown below.

The RCA connectors are used to connect to the source player in the following configuration:

Plug Colour	Cable Colour	Player Connection
Red	Red	Component Video: Red Connector
Green	Green	Component Video: Green Connector
Blue	Blue	Component Video: Blue Connector
White	Black	Audio: Left
Red	Black	Audio: Right

The 'D' type connector is then connected to the VGA input port of an AVE-300 Series Transmitter.

● **HD15M-YCBCR180:** Component Video Monitor Cable

Comprising of a high density 15 way female 'D' type connector to Comprising of a high density 15 way male 'D' type connector and 3.5mm plug to 5 x RCA (Phono) plugs. Cable length 1.8m. This cable is used in conjunction with the 'source cable' shown above.

The RCA connectors are used to connect to the monitor in the following configuration:

Plug Colour	Cable Colour	Monitor Connection
Red	Red	Component Video: Red Connector
Green	Green	Component Video: Green Connector
Blue	Blue	Component Video: Blue Connector
White	Black	Audio In: Left
Red	Black	Audio In: Right

The 'D' type connector is then connected to the VGA output port of an AVE-300 Series Receiver.

The 3.5mm plug is connected to the audio output port of the AVE-300 Series Receiver.

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Composite Video Cables:

The following cables enable the AVE-300 Series VGA Transmitters and Receivers (seen on page 289) to be converted to transmit Component Video or Composite Video.

- **HD15F-S3RCA70:** Composite Video Source Cable

Comprising of a high density 15 way female 'D' type connector to 3 x RCA (Phono) plugs and an S-Video Mini-Din plug. Cable length 0.7m. This cable is used in conjunction with the 'monitor cable' shown below.

The RCA connectors are used to connect to the source player in the following configuration:

Plug Colour	Cable Colour	Player Connection
Yellow	Black	Composite Video Out
White	Black	Audio Out: Left
Red	Black	Audio Out: Right

Alternatively, the S-Video Mini-Din plug could be used in place of the Yellow RCA plug.

The 'D' type connector is then connected to the VGA input port of an AVE-300 SeriesTransmitter.

- **HD15M-S3RCA180:** Composite Video Monitor Cable

Comprising of a high density 15 way male 'D' type connector and 3.5mm plug to 3 x RCA (Phono) plugs and an S-Video Mini-Din plug. Cable length 1.8m. This cable is used in conjunction with the 'source cable' shown above.

The RCA connectors are used to connect to the monitor in the following configuration:

Plug Colour	Cable Colour	Function
Yellow	Black	Composite Video In
White	Black	Audio In: Left
Red	Black	Audio In: Right

Note: If the video source is via S-Video then replace the Yellow RCA connector with the S-Video plug.

The 'D' type connector is then connected the VGA output port of an AVE-300 Series Receiver.

The 3.5mm plug is connected to the audio output port of the AVE-300 Series Receiver.

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- **DVI-DVI 2M:** 2 metre DVI-to-DVI Cable
- **DVI-DVI 5M:** 5 metre DVI-to-DVI Cable

- **DVI-A to VGA M/M 2M:** 2 metre DVI-to-VGA Cable

  Used to interconnect DVI-A and 15-way High Density VGA connectors.
  The cable has Male-to-Male orientation and is 2 m in length.

- **DVI to VGA F/M Adaptor:** DVI Female to VGA Male Adaptor

- **DVI to VGA M/F Adaptor:** DVI Male to VGA Female Adaptor

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Clever Little Box.

• Fibre Optic Cables

A complete range of pre-terminated, multimode Fibre Optic Cables.

Model:	Description:
FB-001-H	LC-LC: 50/125 MMD fibre 0.5m orange
FB-001	LC-LC: 50/125 MMD fibre 1m orange
FB-002	LC-LC: 50/125 MMD fibre 2m orange
FB-003	LC-LC: 50/125 MMD fibre 3m orange
FB-004	LC-LC: 50/125 MMD fibre 5m orange
FB-005	LC-LC: 50/125 MMD fibre 10m orange
FB-031	LC-LC: 50/125 MMD fibre 15m orange

Model:	Description:
FB-006-H	LC-ST: 50/125 MMD fibre 0.5M orange
FB-006	LC-ST: 50/125 MMD fibre 1m orange
FB-007	LC-ST: 50/125 MMD fibre 2m orange
FB-008	LC-ST: 50/125 MMD fibre 3m orange
FB-009	LC-ST: 50/125 MMD Fibre 5m Orange
FB-010	LC-ST: 50/125 MMD Fibre 10m Orange
FB-033	LC-ST: 50/125 MMD Fibre 15m Orange

Model:	Description:
FB-011	LC-SC: 50/125 MMD Fibre 1m Orange
FB-012	LC-SC: 50/125 MMD Fibre 2m Orange
FB-013	LC-SC: 50/125 MMD Fibre 3m Orange
FB-014	LC-SC: 50/125 MMD Fibre 5m Orange
FB-015	LC-SC: 50/125 MMD Fibre 10m Orange
FB-032	LC-SC: 50/125 MMD Fibre 15m Orange

Model:	Description:
FB-016	ST-ST: 50/125 MMD Fibre 1m Orange
FB-017	ST-ST: 50/125 MMD Fibre 2m Orange
FB-018	ST-ST: 50/125 MMD Fibre 3m Orange
FB-019	ST-ST: 50/125 MMD Fibre 5m Orange
FB-020	ST-ST: 50/125 MMD Fibre 10m Orange

Model:	Description:
FB-021	ST-SC: 50/125 MMD Fibre 1m Orange
FB-022	ST-SC: 50/125 MMD Fibre 2m Orange
FB-023	ST-SC: 50/125 MMD Fibre 3m Orange
FB-024	ST-SC: 50/125 MMD Fibre 5m Orange
FB-025	ST-SC: 50/125 MMD Fibre 10m Orange

Model:	Description:
FB-026	SC-SC: 50/125 MMD Fibre 1m Orange
FB-027	SC-SC: 50/125 MMD Fibre 2m Orange
FB-028	SC-SC: 50/125 MMD Fibre 3m Orange
FB-029	SC-SC: 50/125 MMD Fibre 5m Orange
FB-030	SC-SC: 50/125 MMD Fibre 10m Orange

Model:	Description:
OM3-001	LC-LC: 50/125 MMD Fibre 1m Orange
OM3-002	LC-LC: 50/125 MMD Fibre 2m Orange
OM3-003	LC-LC: 50/125 MMD Fibre 3m Orange
OM3-005	LC-LC: 50/125 MMD Fibre 5m Orange

Model:	Description:
OM3-006	LC-ST: 50/125 MMD Fibre 1m Orange
OM3-007	LC-ST: 50/125 MMD Fibre 2m Orange
OM3-008	LC-ST: 50/125 MMD Fibre 3m Orange
OM3-009	LC-ST: 50/125 MMD Fibre 5m Orange

Model:	Description:
OM3-011	LC-SC: 50/125 MMD Fibre 1m Orange
OM3-012	LC-SC: 50/125 MMD Fibre 2m Orange
OM3-013	LC-SC: 50/125 MMD Fibre 3m Orange
OM3-015	LC-SC: 50/125 MMD Fibre 5m Orange
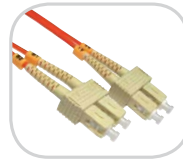
● Fibre Optic Cables (contd.)

Model:	Description;
FB-101	ST-ST: 62.5/125 MMD Fibre 1m Grey
FB-102	ST-ST: 62.5/125 MMD Fibre 2m Grey
FB-103	ST-ST: 62.5/125 MMD Fibre 3m Grey
FB-105	ST-ST: 62.5/125 MMD Fibre 5m Grey

Model:	Description;
FB-201	ST-SC: 62.5/125 MMD Fibre 1m Grey
FB-202	ST-SC: 62.5/125 MMD Fibre 2m Grey
FB-203	ST-SC: 62.5/125 MMD Fibre 3m Grey
FB-205	ST-SC: 62.5/125 MMD Fibre 5m Grey
FB-210	ST-SC: 62.5/125 MMD Fibre 10m Grey

Model:	Description;
FB-301	SC-SC: 62.5/125 MMD Fibre 1m Grey
FB-302	SC-SC: 62.5/125 MMD Fibre 2m Grey
FB-303	SC-SC: 62.5/125 MMD Fibre 3m Grey
FB-305	SC-SC: 62.5/125 MMD Fibre 5m Grey
FB-310	SC-SC: 62.5/125 MMD Fibre 10m Grey

Model:	Description;
FB-400	LC-LC: 62.5/125 MMD Fibre 0.5m Grey
FB-401	LC-LC: 62.5/125 MMD Fibre 1m Grey
FB-402	LC-LC: 62.5/125 MMD Fibre 2m Grey
FB-403	LC-LC: 62.5/125 MMD Fibre 3m Grey
FB-405	LC-LC: 62.5/125 MMD Fibre 5m Grey
FB-410	LC-LC: 62.5/125 MMD Fibre 10m Grey
FB-415	LC-LC: 62.5/125 MMD Fibre 15m Grey
FB-420	LC-LC: 62.5/125 MMD Fibre 20m Grey

Model:	Description;
FB-500	LC-SC: 62.5/125 MMD Fibre 0.5m Grey
FB-501	LC-SC: 62.5/125 MMD Fibre 1m Grey
FB-502	LC-SC: 62.5/125 MMD Fibre 2m Grey
FB-503	LC-SC: 62.5/125 MMD Fibre 3m Grey
FB-505	LC-SC: 62.5/125 MMD Fibre 5m Grey
FB-510	LC-SC: 62.5/125 MMD Fibre 10m Grey
FB-515	LC-SC: 62.5/125 MMD Fibre 15m Grey

Model:	Description;
FB-600	LC-ST: 62/5/125 MMD Fibre 0.5m Grey
FB-601	LC-ST: 62.5/125 MMD Fibre 1m Grey
FB-602	LC-ST: 62.5/125 MMD Fibre 2m Grey
FB-603	LC-ST: 62.5/125 MMD Fibre 3m Grey
FB-605	LC-ST: 62.5/125 MMD Fibre 5m Grey
FB-610	LC-ST: 62.5/125 MMD Fibre 10m Grey
FB-615	LC-ST: 62.5/125 MMD Fibre 15m Grey

Model:	Description;
FB-701	MJ-SC: 62.5/125 MMD Fibre 1m Grey
FB-702	MJ-SC: 62.5/125 MMD Fibre 2m Grey
FB-703	MJ-SC: 62.5/125 MMD Fibre 3m Grey
FB-705	MJ-SC: 62.5/125 MMD Fibre 5m Grey

Model:	Description;
FB-801	MJ-ST: 62.5/125 MMD Fibre 1m Grey
FB-802	MJ-ST: 62.5/125 MMD Fibre 2m Grey
FB-805	MJ-ST: 62.5/125 MMD Fibre 5m Grey

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Clever Little Box.

- **Premier Toslink Cables**

  Features:
  - Toslink Male/Toslink Male
  - Gold plated Chromium shell
  - OD 7.0Mm/PVC yellow color
  - Braided Oversheath

  Models:

Model:	Description
STA-F001 1M	Premier Toslink Male-to-Male Cables-1 metre
STA-F001 3M	Premier Toslink Male-to-Male Cables-3metres
STA-F001 5M	Premier Toslink Male-to-Male Cables-5 metres
STA-F001 10M	Premier Toslink Male-to-Male Cables-10 metres

- **STA-TSPL0102:** 1-to-2 Toslink Splitter Mutual Function

  Optical digital Splitter, 1 In/2 Out.

- **STA-TSL001:** Toslink to 3.5mm Adaptor

  Toslink to 3.5mm jack Adaptor.

Scart Leads

A range of high grade, 21 pin fully-wired scart leads for connection of AV equipment to TVs and display screens:

Models:

Model:	Description
2SSP-01	1.5m 21 pin black Scart cable, M-M, Gold on coax cable
2SSP-03	3m 21 pin black Scart cable, M-M, Gold on coax cable
2SSP-05	5m 21 pin black Scart cable, M-M, Gold on coax cable
2SSP-10	10m 21 pin black Scart cable, M-M, Gold on coax cable
1SS-01	1.5m Scart, M-M, Black nickel cable
1SS-03	3m Scart, M-M, Black nickel cable
1SS-05	5m Scart, M-M, Black nickel cable
1SS-10	10m Scart, M-M, Black nickel cable
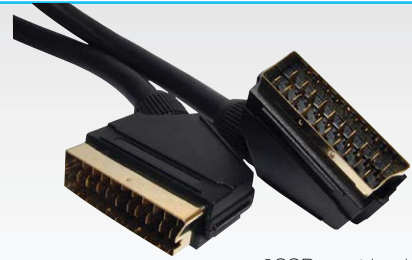
2SSP scart lead

1SS scart lead

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Clever Little Box.

• RCA (Phono) Pre-Made Cables

A range of RCA cables ideal for use in most AV installations and particularly suitable for use with the our range of faceplates shown on pages 346 ~ 351.

The range includes plug-to-plug cables in 1, 2 and 3 way versions, as well as plug-to-free end cables, ready to be terminated on the rear of a faceplate.

RCA Plug-to-RCA Plug Cables Models:

Model:	Description	
2XRCA-2XRCA0.75M	2 x RCA to 2 x RCA, Red/White	0.75 metres
2XRCAREDBLK15M	2 x RCA to 2 x RCA, Red/Black	15 metres
3XRCA-3XRCA1.5M	3 x RCA plugs to 3 x RCA plugs, Gold, Red, Yellow, Black	1.5 metres
3XRCA-3XRCA3.0M	3 x RCA plugs to 3 x RCA plugs, Gold, Red, Yellow, Black	3 metres
3XRCA-3XRCA5.0M	3 x RCA plugs to 3 x RCA plugs, Gold, Red, Yellow, Black	5 metres
3XRCA-3XRCA10M	3 x RCA plugs to 3 x RCA plugs, Gold, Red, Yellow, Black	10 metres
3XRCA-3XRCA15M	3 x RCA plugs to 3 x RCA plugs, Gold, Red, Yellow, Black	15 metres
3XRCA-RYW0.75M	3 x RCA plugs to 3 x RCA plugs, Red , Yellow, White	0.75 metres
3XRCA-RYW1.5M	3 x RCA plugs to 3 x RCA plugs, Red, Yellow, White	1.5 metres
3XRCA-RYW2.0M	3 x RCA plugs to 3 x RCA plugs, Red, Yellow, White	2 metres
3XRCALEAD10MRYW	3 x RCA plugs to 3 x RCA plugs, Red, Yellow, White	10 metres
3XRCALEAD15MRYW	3 x RCA plugs to 3 x RCA plugs, Red, Yellow, White	15 metres

Plug-to-Free End RCA Cables Models:

Model:	Description	
2XRCA-FE10MRDWH	2 x RCA (1 red, 1 white) to Free End	10 metres
2XRCA-FE15MRDWH	2 x RCA (1 red, 1 white) to Free End	15 metres
RCAYELW-FREE10M	1 x RCA (yellow) to Free End	10 metres
RCAYELW-FREE15M	1 x RCA (yellow) to Free End	15 metres

• 3.5mm Pre-Made Cables

A range of 3.5mm plug cables, ideal for use with most AV installations and particularly suitable with our range of quality faceplates.

Normally used to carry PC/MP3 audio, the range includes plug-to-plug ends, plug-to-ferrule ends and plug-to-free end cables, ready to be terminated on the rear of a faceplate.

Models:

Model:	Description
3.5mm Stereo Plug-to-plug Lead	
3.5STRLEAD0.75M	0.75 metres
3.5STRLEAD3.0M	3 metres
3.5STRLEAD5.0M	5 metres
3.5STRLEAD10M	10 metres
3.5STRLEAD15M	15 metres
3.5mm Stereo Plug-to-bootlace Ferrule Lead	
3.5STRLD-FRL10M	10 metres
3.5STRLD-FRL15M	15 metres

• 35HR07884X: 3.5mm Stereo to free end Lead

High quality 3.5mm Stereo Plug-to-Free End 2 metre Lead

• 35HR07235X: 3.5mm Stereo Plug to Plug Lead

High quality 3.5mm Stereo Plug-to-Plug 1.8 metre Lead

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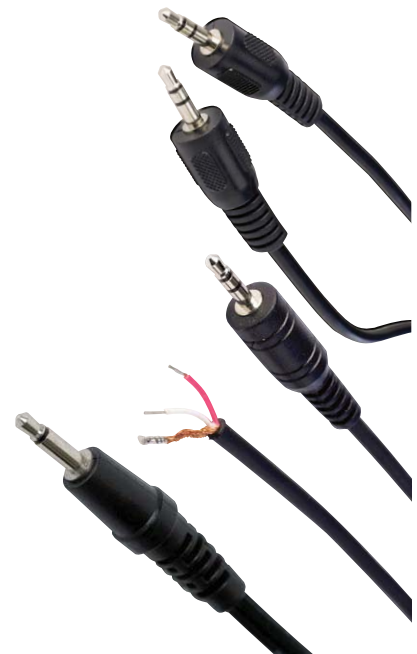
Premier USB 3.0 Cables

Marked USB 3.0, Connector USB 3.0 A Type Male, Gold plated, 15µ contacts, Shell nickel plated, Moulded blue PVC.

Models:

Model:	Description
PREM-USB3.0AM-AM1.0M	1 metre USB Male-to-Male
PREM-USB3.0AM-AM3.0M	3 metres USB Male-to-Male
PREM-USB3.0AM-AM5.0M	5 metres USB Male-to-Male

Premier USB 3.0 Cables

Marked USB 3.0, Connector USB 3.0 A Type Male + USB 3.0 B Type Female, Solder type, Blue insulation, Gold plated, 15µ contacts, Shell nickel plated, Moulded blue PVC.

Models:

Model:	Description
PREM-USB3.0AM-AF1.0M	1 metre USB Male-to-Female
PREM-USB3.0AM-AF3.0M	3 metres USB Male-to-Female
PREM-USB3.0AM-AF5.0M	5 metres USB Male-to-Female

Premier USB 3.0 Cables

Marked USB 3.0 A Type Male Blue insulation, Gold plated, 15µ contacts, Shell nickel plated + USB 3.0 B Type Male, solder type, blue insulation Gold plated, 15µ contacts, shell nickel plated, Blue PVC.

Models:

Model:	Description
PREM-USB3.0AF-BF1.0M	1 metre USB Female-to-Female
PREM-USB3.0AF-BF3.0M	3 metres USB Female-to-Female
PREM-USB3.0AF-BF5.0M	5 metres USB Female-to-Female

Premier USB 3.0 Cables

Marked USB 3.0, Connector USB 3.0 A Type Male + B Type Male, Solder type, Blue insulation, Gold plated, 15µ contacts, Shell nickel plated, Moulded blue PVC.

Models:

Model:	Description
PREM-USB3.0AM-BM1.0M	1 metre USB A Male-to-B Male
PREM-USB3.0AM-BM3.0M	3 metres USB A Male-to-B Male
PREM-USB3.0AM-BM5.0M	5 metres USB A Male-to-B Male

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Clever Little Box.

- **USBEXKIT:** USB Extender Kit

  Used to simply but effectively extend a USB 1.1 signal beyond the normal 5 metre limit.

  Supplied as a transmitter and receiver kit, the two devices are linked via user supplied Cat5e cable up to a maximum of 30 metres.

- **USB-BML-BFMPN3M:**
  Interactive Whiteboard USB Cable

  USB B panel-mount Male to USB B cable Female, 3 metre cable.

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- **STA-USB3A001:** USB 3.0 A Male to A Male Adaptor

  Converts a USB A female-ended cable to USB A Male gender.

- **STA-USB3A002:** USB 3.0 A Male to B Male Adaptor

  Converts a USB A female-ended cable to USB B Male (or vice versa).

- **STA-USB3A003:** USB 3.0 A Male to A Female Adaptor

  USB A cable coupler.

- **STA-USB3A003B:** USB 3.0 A Female to B Male Adaptor

  Converts a USB A male-ended cable to USB B male gender.

Need help choosing the right product?
Call our technical support team now on:
Tel. +44(0)115 977 0075

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WEST PENN WIRE

• Installation Cable Reels

We stock a wide range of installation cables ideal for use in professional AV and PA installations, including the high quality WEST PENN WIRE range from the USA, as well as a variety of other cables commonly used in AV installation.

Part Numbers:

Model:	Description	
RG59	RG59/U Co-axial Cable, black sheath	100m reel
URM70	URM 70 75W Co-axial Cable, black sheath	100m reel
5XRG179LSFGrey	5 Core RG179 Co-axial Cable: low smoke fume, Grey sheath	100m reel
16-2-2C	16/0.2mm 2 Core screened to DEF-STAN 61~12, black sheath	100m reel
3182Y	2 Core cable, 0.75mm² (24/0.2mm) 6A rated, black sheath	100m reel
3183Y	3 Core cable, 0.75mm² (24/0.2mm) 6A rated, black sheath	100m reel
224-1000*	West Penn Twin Twisted Speaker Cable (approx 0.9mm²)	305m box
225-1000*	West Penn Twin Twisted Speaker Cable (approx 1.25mm²)	305m box
226-1000*	West Penn Twin Twisted Speaker Cable (approx 2.0mm²)	305m box
291-1000*	West Penn Twisted Pair Shielded Microphone Cable (approx 0.5mm²)	305m box
293-1000*	West Penn Twisted Pair Shielded Microphone Cable (approx 1mm²)	305m box
357-1000*	West Penn 2 x Twisted Pair Mic Cable (approx 0.35mm²)	305m box
7987R	Belden Cat-X Low Skew Cable (ideal for use with Databay and CYP product range)	305m box

RG59   URM70   5XRG179LSFGrey

16–2–2C   3182Y   3183Y

7987R

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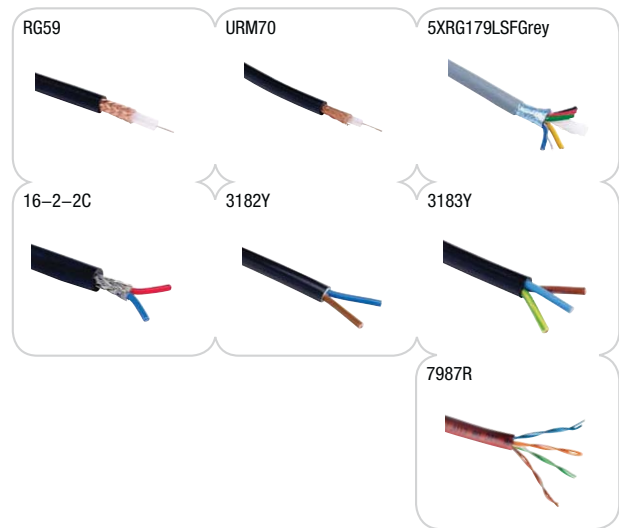
SpaceGAIN Cat5e UTP Angled Cables

SpaceGAIN CAT5e UTP Angled Cables with Moulded Boots. CAT5e UTP 90° angled cables perfect for tight places like cabinets.

Features:

- Patch cables with 90° angled connectors
- 24AWG, straight-pinned T568B moulded boots
- Different colours for link identification at a glance
- Choose from down, up, left or right angled versions
- Meets or exceeds CAT5e specifications
- Avoids excessive bends and reduces stress on the cable
- Cables extend straight up, down or sideways
- Tab faces up, down, left or right, depending on the cable

• **SpaceGAIN** 90° ~ 90° Down:

Part Number	Description	Cable Length	Colour
EVNSL21E-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Blue
EVNSL21E-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Blue
EVNSL21E-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Blue
EVNSL21E-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Blue
EVNSL21E-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Blue
EVNSL21ES-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Blue
EVNSL21ES-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Blue
EVNSL21ES-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Blue
EVNSL21ES-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Blue
EVNSL21ES-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Blue
EVNSL22ES-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Green
EVNSL22ES-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Green
EVNSL22ES-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Green
EVNSL22ES-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Green
EVNSL22ES-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Green
EVNSL23E-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Red
EVNSL23E-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Red
EVNSL23E-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Red
EVNSL23E-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Red
EVNSL23E-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Red
EVNSL23ES-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Red
EVNSL23ES-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Red
EVNSL23ES-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Red
EVNSL23ES-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Red
EVNSL23ES-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Red
EVNSL24E-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Yellow
EVNSL24E-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Yellow
EVNSL24E-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Yellow
EVNSL24E-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Yellow
EVNSL24E-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Yellow
EVNSL24ES-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Yellow
EVNSL24ES-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Yellow
EVNSL24ES-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Yellow
EVNSL24ES-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Yellow
EVNSL24ES-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Yellow
EVNSL27E-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Black
EVNSL27E-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Black
EVNSL27E-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Black
EVNSL27E-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Black
EVNSL27E-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Black
EVNSL27ES-0001-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.3m	Black
EVNSL27ES-0003-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	0.9m	Black
EVNSL27ES-0006-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	1.8m	Black
EVNSL27ES-0010-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	3.0m	Black
EVNSL27ES-0015-90DD	Cat5e Angled Cable: 90° Down ~ 90° Down	4.5m	Black

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• SpaceGAIN 90° ~ 90° Up:

Part Number	Description	Cable Length	Colour
EVNSL21E-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Blue
EVNSL21E-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Blue
EVNSL21E-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Blue
EVNSL21E-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Blue
EVNSL21E-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Blue
EVNSL21ES-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Blue
EVNSL21ES-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Blue
EVNSL21ES-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Blue
EVNSL21ES-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Blue
EVNSL21ES-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Blue
EVNSL22ES-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Green
EVNSL22ES-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Green
EVNSL22ES-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Green
EVNSL22ES-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Green
EVNSL22ES-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Green
EVNSL23E-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Red
EVNSL23E-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Red
EVNSL23E-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Red
EVNSL23E-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Red
EVNSL23E-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Red
EVNSL23ES-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Red
EVNSL23ES-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Red
EVNSL23ES-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Red
EVNSL23ES-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Red
EVNSL23ES-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Red
EVNSL24E-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Yellow
EVNSL24E-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Yellow
EVNSL24E-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Yellow
EVNSL24E-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Yellow
EVNSL24E-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Yellow
EVNSL24ES-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Yellow
EVNSL24ES-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Yellow
EVNSL24ES-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Yellow
EVNSL24ES-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Yellow
EVNSL24ES-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Yellow
EVNSL27E-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Black
EVNSL27E-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Black
EVNSL27E-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Black
EVNSL27E-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Black
EVNSL27E-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Black
EVNSL27ES-0001-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.3m	Black
EVNSL27ES-0003-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	0.9m	Black
EVNSL27ES-0006-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	1.8m	Black
EVNSL27ES-0010-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	3.0m	Black
EVNSL27ES-0015-90DU	Cat5e Angled Cable: 90° Down ~ 90° Up	4.5m	Black

• SpaceGAIN 90° Right ~ 180° Straight:

Part Number	Description	Cable Length	Colour
EVNSL21E-0003-90RS	Cat5e Angled Cable: 90° Right ~ 180° Straight	0.9m	Blue
EVNSL21E-0006-90RS	Cat5e Angled Cable: 90° Right ~ 180° Straight	1.8m	Blue
EVNSL21E-0010-90RS	Cat5e Angled Cable: 90° Right ~ 180° Straight	3.0m	Blue
EVNSL27E-0003-90RS	Cat5e Angled Cable: 90° Right ~ 180° Straight	0.9m	Black
EVNSL27E-0006-90RS	Cat5e Angled Cable: 90° Right ~ 180° Straight	1.8m	Black
EVNSL27E-0010-90RS	Cat5e Angled Cable: 90° Right ~ 180° Straight	3.0m	Black

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• SpaceGAIN 90° Down ~ 180° Straight:

Part Number	Description	Cable Length	Colour
EVNSL21E-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Blue
EVNSL21E-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Blue
EVNSL21E-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Blue
EVNSL21E-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Blue
EVNSL21E-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Blue
EVNSL21ES-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Blue
EVNSL21ES-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Blue
EVNSL21ES-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Blue
EVNSL21ES-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Blue
EVNSL21ES-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Blue
EVNSL22ES-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Green
EVNSL22ES-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Green
EVNSL22ES-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Green
EVNSL22ES-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Green
EVNSL22ES-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Green
EVNSL23E-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Red
EVNSL23E-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Red
EVNSL23E-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Red
EVNSL23E-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Red
EVNSL23E-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Red
EVNSL23ES-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Red
EVNSL23ES-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Red
EVNSL23ES-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Red
EVNSL23ES-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Red
EVNSL23ES-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Red
EVNSL24E-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Yellow
EVNSL24E-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Yellow
EVNSL24E-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Yellow
EVNSL24E-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Yellow
EVNSL24E-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Yellow
EVNSL24ES-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Yellow
EVNSL24ES-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Yellow
EVNSL24ES-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Yellow
EVNSL24ES-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Yellow
EVNSL24ES-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Yellow
EVNSL27E-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Black
EVNSL27E-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Black
EVNSL27E-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Black
EVNSL27E-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Black
EVNSL27E-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Black
EVNSL27ES-0001-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.3m	Black
EVNSL27ES-0003-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	0.9m	Black
EVNSL27ES-0006-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	1.8m	Black
EVNSL27ES-0010-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	3.0m	Black
EVNSL27ES-0015-90DS	Cat5e Angled Cable: 90° Down ~ 180° Straight	4.5m	Black

• SpaceGAIN 90°Left ~ 180° Straight:

Part Number	Description	Cable Length	Colour
EVNSL21E-0003-90LS	Cat5e Angled Cable: 90° Left ~ 180° Straight	0.9m	Blue
EVNSL21E-0006-90LS	Cat5e Angled Cable: 90° Left ~ 180° Straight	1.8m	Blue
EVNSL21E-0010-90LS	Cat5e Angled Cable: 90° Left ~ 180° Straight	3.0m	Blue
EVNSL27E-0003-90LS	Cat5e Angled Cable: 90° Left ~ 180° Straight	0.9m	Black
EVNSL27E-0006-90LS	Cat5e Angled Cable: 90° Left ~ 180° Straight	1.8m	Black
EVNSL27E-0010-90LS	Cat5e Angled Cable: 90° Left ~ 180° Straight	3.0m	Black

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• 301013:
Cat5e Type 1 10/100 Cable Economiser

• 301014:
Cat5e Type 2 10 Base-T Cable Economiser

Cable economisers enable an additional signal to be transmitted down the unused pairs of Cat5e twisted-pair cable. This enables the instant expansion of an existing system without disrupting the network infrastructure.

(Note: Type 1 sold individually but must be used in pairs).

• In-Line Adaptors

Models:

Model:	Description
301001	In-Line RJ45 Straight Wired Cat5e
301002	In-Line RJ45 Roll-Over Cat5e
301003	In-Line RJ45 UTP Cat5e
301004	In-Line RJ45 Half Shielded Cat5e
25247	In-Line RJ45 Fully Shielded Cat5e
301012	In-Line RJ45 UYP Cat5e
1280	In-Line RJ45 Straight Wired Voice

• Cat-X Punchdown Couplers

Models:

Model:	Description
301021	Cat5e UTP Punchdown Coupler
301022	Cat5e STP Punchdown Coupler
301023	Cat6 UTP Punchdown Coupler
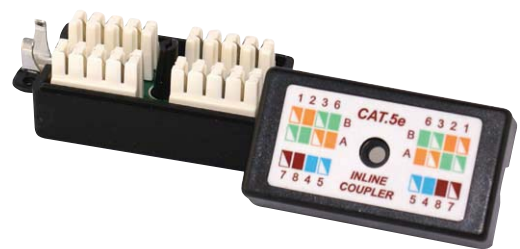
- **1288:** RJ12 T-Piece Adaptor

  1 x Male to 2 x Female RJ12 T Piece Adaptor.

- **1289:** RJ45 T-Piece Adaptor

  1 x Male to 2 x Female RJ45 T Piece Adaptor.

- **1179:** RJ45 T-Piece Adaptor

  1 x Female to 2 x Female RJ45 T Piece Adaptor.

- **1504:** BT Plug ~ RJ45 Socket

- **H51052:** ADSL Microfilter

- **775311:** RJ11 ~ BT Socket (PABX)

• Modular RJ Plugs

Models:

Model:	Description	Positions	Cable Type	Max Performance
701004	RJ45 UTP Round Entry	8P/8C	Stranded	Cat5e
25243	RJ45 UTP Round Entry	8P/8C	Solid	Cat5e
1271	RJ45 UTP Flat Entry	8P/8C	Stranded	Cat5e
701004-AMP	RJ45 UTP Round Entry Amp	8P/8C	Stranded/Solid	Cat5e
11869	RJ45 STP Round Entry	8P/8C	Stranded	Cat5e
701017	RJ45 UTP Round Entry 2 Piece Sentinel	8P/8C	Stranded/Solid	Cat6
701021	RJ45 STP Round Entry 2 Piece Sentinel	8P/8C	Stranded/Solid	Cat6/Cat6A
701001	RJ22 Flat Entry	4P/4C	Stranded	Voice
701002	RJ11 Round Entry	6P/4C	Stranded	Voice
701003	RJ12 Round Entry	6P/6C	Stranded	Voice
701005	RJ48 Round Entry	10P/10C	Stranded	E1
31104	BT Crimp 631A	6P/4C	Stranded	Voice

• RJ45 Strain Relief Boots

Models:

Model:	Description
3596-LG	Light Grey / Beige
3596-BL	Blue
3596-GN	Green
3596-BK	Black
3596-YE	Yellow
3596-RD	Red
3596-PK	Pink
3596-OR	Orange
3596-MV	Purple
3596-WH	White
3596-DG	Dark Grey

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- **CCC600:** UK Wall Plug to IEC Female Mains Lead - 1.9m
- **CCC280:** UK Wall Plug to IEC Female Mains Lead - 5m

  UK Wall Plug (5A fused) to IEC Female Mains Leads-available in 1.9m and 5m length options.

- **CCC001:** IEC Male to Female Mains Lead - 2m

  IEC Extension Lead-Male to Female (0.75mm²).

- **CCC253:** UK Wall Plug to Cloverleaf Female - 2m

  UK Wall Plug (5A fused) to Coverleaf female Mains Lead (0.75mm).

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- **CABO71:**
  C14 Straight IEC Male Rewireable Connector (Black)
- **CABO71W:**
  C14 Straight IEC Male Rewireable Connector (White)

- **CABO71A:**
  C13 Straight IEC Female Rewireable Connector (Black)
- **CABO71WF:**
  C13 Straight IEC Female Rewireable Connector (White)

- **CABO69:**
  Right Angle C14 IEC Male Rewireable Connector (Black)
- **CABO69-WM:**
  Right Angle C14 IEC Male Rewireable Connector (White)

- **CABO69A:**
  Right Angle C13 IEC Female Rewireable Connector (Black)
- **CABO69-W:**
  Right Angle C13 IEC Female Rewireable Connector (White)

- **CABO65:**
  C19 IEC Female Rewireable Connector (Black)
- **CABO65-W:**
  C19 IEC Female Rewireable Connector (White)

- **CWA001:**
  C20 IEC Male Rewireable Connector (Black)
- **CWA001-W:**
  C20 IEC Male Rewireable Connector (White)

- **UK-PLUG:**   CUK Plug BS1363 (Black)
- **UK-PLUG-WHT:** CUK Plug BS1363 (White)

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![Clever Little Box logo]

PVC Flexible Conduit

Features:

- Flexible PVC thin wall conduit construction with reinforced nylon spiral
- Temperature rating: -10°C ~ +75°C intermittent to 85°C
- IP55 Rated

Models:

Model:	Description
CT1110	20(Ø) mm PVC Flexible Conduit Reel Size: 30 metres
CT1111	25(Ø) mm PVC Flexible Conduit Reel Size: 30 metres
CT1112	20(Ø) mm PVC Flexible Conduit Gland & Locknut
CT1113	25(Ø) mm PVC Flexible Conduit Gland & Locknut

Galvanised Flexible Conduit

Features:

- Galvanised single clutch steel construction conduit
- Temperature rating: 0°C ~ +300°C
- IP40 Rated

Models:

Model:	Description
CT1114	20(Ø) mm Galvanised Flexible Conduit Reel Size: 30 metres
CT1115	25(Ø) mm Galvanised Flexible Conduit Reel Size: 30 metres
CT1116	20(Ø) mm Galvanised Flexible Conduit Gland & Locknut
CT1117	25(Ø) mm Galvanised Flexible Conduit Gland & Locknut

Polypropolene Flexible Conduit

Features:

- Construction: Corrugated conduit manufactured from formulated Polypropolene
- Temperature rating: -5°C ~ +60°C intermittent to 70°C
- Flammability: 'Halogen Free' UL 94 V0, Oxygen Index 29%
- IP55 Rated

Models:

Model:	Description
CT1118	20(Ø) mm Polypropolene Flexible Conduit Reel Size: 100 metres
CT1119	25(Ø) mm Polypropolene Flexible Conduit Reel Size: 30 metres
CT1112	20(Ø) mm Polypropolene Flexible Conduit Gland & Locknut
CT1113	25(Ø) mm Polypropolene Flexible Conduit Gland & Locknut

Polypropolene Slit Conduit

Features:

- Corrugated conduit manufactured from formulated Polypropolene
- Temperature rating: -5°C ~ +60°C intermittent to 70°C
- Flammability: 'Halogen Free' UL 94 V0, Oxygen Index 29%
- IP55 Rated

Models:

Model:	Description
CT1120	20(Ø) mm Polypropolene Slit Conduit Reel Size: 50 metres
CT1121	25(Ø) mm Polypropolene Slit Conduit Reel Size: 50 metres

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TO1019: RJ11/12 Crimp Tool

TO1020: RJ45 Crimp Tool

TO1021: Universal RJ Crimp Tool
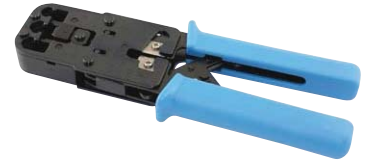
TO1022: BT Crimp Tool
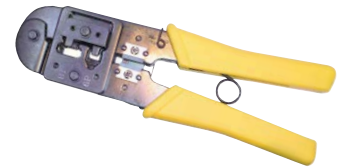
TO1024: Krone Punchdown Tool

TO1025: 110 Punchdown Tool

TO1026: Cyclops UTP Cable Stripper

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• HPC Series Cable-Mount Faston Connectors

HPC Series cable-mount connectors are available as straight, right angle, or in-line.

Models:

Model:	Description
HPCC4F	HPC Loudspeaker, Cable Mount Connector, straight cord plug
HPCC4FPKG	HPC Loudspeaker, Cable Mount Connector, straight cord plug, bulk pack
HPCC4RAF	HPC Loudspeaker, Right Angle Cable Mount Connector, right angle cord plug
HPCC4RAS	HPC Loudspeaker, Right Angle Cable Mount Connector
HPCC4S	HPC Loudspeaker, Cable Mount Connector
HPCI4F	HPC Loudspeaker, In-line Cable Mount Connector, in-line cord plug

HPCI4F

HPCC4F

HPCC4RAF

• HPCR Series Panel Faston Connectors

HPC Series round panel-mount connectors.

Models:

Model:	Description
HPCPR410F	HPC Panel Mount Receptacle, Round, 0.093" Diameter Mounting Holes, 0.100" Flange Depth, 0.250" Faston Terminals
HPCPR41F1	HPC Panel Mount Receptacle, Round, 0.152" Diameter Countersunk Mounting Holes, 0.100" Flange Depth, 0.187" Faston Terminals
HPCPR42F	HPC Panel Mount Receptacle, Round, 0.152" Diameter Countersunk Mounting Holes, 0.200" Flange Depth, 0.250" Faston Terminals

Switchcraft®

● TA Series Tini-QG Mini XLR-female

TA Series Tini-QG (Mini XLR) female cable-mount connectors.

Models:

Model:	Description
TA3FX	Tini-QG "Mini XLR" 3 Pin Female Cable-Mount, Silver Pins, Nickel
TA4FX	Tini-QG "Mini XLR" 4 Pin Female Cable-Mount, Silver Pins, Nickel
TA5FX	Tini-QG "Mini XLR" 5 Pin Female Cable-Mount, Silver Pins, Nickel

● TA Series Tini-QG Mini XLR-male

TA Series Tini-QG (Mini XLR) male cable-mount connectors.

Models:

Model:	Description
TA3MX	Tini-QG "Mini XLR" 3 Pin Male Cable-Mount, Silver Pins, Nickel
TA4MX	Tini-QG "Mini XLR" 4 Pin Male Cable-Mount, Silver Pins, Nickel
TA5MX	Tini-QG "Mini XLR" 5 Pin Male Cable-Mount, Silver Pins, Nickel

● TB Series Tini-QG Mini XLR-Panel Mount

TB Series male Tini-QG (Mini XLR) panel-mount connectors.

Models:

Model:	Description
TB3M	Tini-QG "Mini XLR", 3 Pin Male, circular Panel-Mount: Nickel Housing
TB4M	Tini-QG "Mini XLR", 4 Pin Male, circular Panel-Mount: Nickel Housing
TB5M	Tini-QG "Mini XLR", 5 Pin Male, circular Panel-Mount: Nickel Housing
TB6M	Tini-QG "Mini XLR", 6 Pin Male, circular Panel-Mount: Nickel Housing

● TB Series Shielded Mini XLR Connectors

Shielded Tini-QG (Mini XLR) connectors provide the same great quality as the rest of the Tini-QG series with the added benefit of shielding from EMI and RF interference.

Models:

Model:	Description
TA3FSHF	Shielded Mini XLR, 3 contacts, Female, Silver Plated contacts, with Flex Relief
TA3MSHF	Shielded Mini XLR, 3 contacts, Male, Silver Plated contacts, with Flex Relief
TA4FSHF	Shielded Mini XLR, 4 contacts, Female, Silver Plated contacts, with Flex Relief
TA4FMSHF	Shielded Mini XLR, 4 contacts, Male, Silver Plated contacts, with Flex Relief

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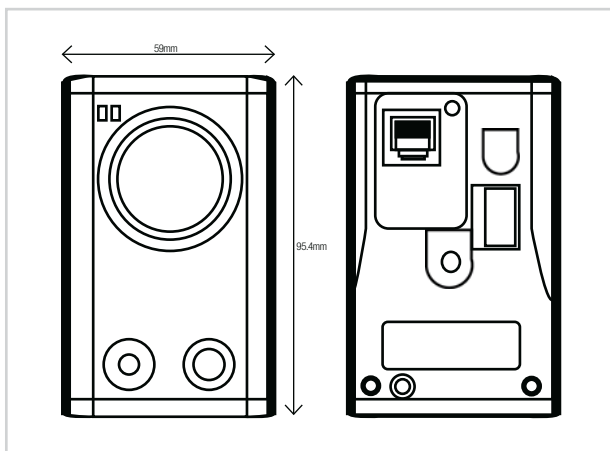AV Signal Distribution

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● AAA Series 'QuickTwist' XLR Connectors

XLR connectors with two-piece assembly for quick termination and unequalled performance.

Models:

Model:	Description
AAA3F	AAA Series 3 Pin XLR Female Cable Mount, Silver Pins, Nickel Metal
AAA3M	AAA Series 3 Pin XLR Male Cable Mount, Silver Pins, Nickel Metal
AAA3FP	AAA Series 3 Pin XLR Female Cable Mount, Silver Pins, Plastic Body (Silver Head)
AAA3MP	AAA Series 3 Pin XLR Male Cable Mount, Silver Pins, Plastic Body (Silver Head)
AAA4F	AAA Series 4 Pin XLR Female Cable Mount, Silver Pins, Nickel Metal
AAA4FP	AAA Series 4 Pin XLR Female Cable Mount, Silver Pins, Plastic Body (Silver Head)
AAA4M	AAA Series 4 Pin XLR Male Cable Mount, Silver Pins, Nickel Metal
AAA4MP	AAA Series 4 Pin XLR Male Cable Mount, Silver Pins, Plastic Body (Silver Head)
AAA5F	AAA Series 5 Pin XLR Female Cable Mount, Silver Pins, Nickel Metal
AAA5M	AAA Series 5 Pin XLR Male Cable Mount, Silver Pins, Nickel Metal
AAA7F	AAA Series 7 Pin XLR Female Cable Mount, Silver Pins, Nickel Metal
AAA7M	AAA Series 7 Pin XLR Male Cable Mount, Silver Pins, Nickel Metal

● R Series Right-Angle Cable Mount XLR Connectors

Right-angle versions of AAA Series XLR Connectors.

Models:

Model:	Description
R3F	AAA Series 3 Pin Female Right Angle Cable Mount XLR, Silver Pins, Nickel Body
R3M	AAA Series 3 Pin Male Right Angle Cable Mount XLR, Silver Pins, Nickel Body

● E Series Panel-Mount XLR Connectors

The E Series offers a panel mount with quick release inserts. A small screwdriver can be used to remove the inserts, allowing for easy gender changes.

The male and female E Series fit into the same panel cut-outs.

Models:

Model:	Description
E3F	E Series 3 Pin XLR Female Quick Disconnect (No Latch), Conical Spring Contacts, Silver Pins, Nickel Finish
E3M	E Series 3 Pin XLR Male Quick Disconnect (No Latch), Conical Spring Contacts, Silver Pins, Nickel Finish

Switchcraft

• DMX Adaptors

Switchcraft introduces their new series of DMX adaptors. The DMX adaptors were developed for use in the theatre lighting industry.

The adaptors allow the end user to use standard 3 pin XLR cable assemblies in connecting DMX equipment.

The adaptors are available in 3 pin male to 5 pin female and 5 pin male to 3 pin female. All are wired "straight through".

Models:

Model:	Description
S3F5M	3 pin female to 5 pin male
S5F3M	5 pin female to 3 pin male

Features:

- Nickel-plated die-cast housing increases durability
- Pre-wired for immediate use
- Available in two configurations

Applications:

- Theatre lighting
- Any DMX application

Specifications:

Model:	DMX Adaptors
Shell	Die-cast zinc, satin nickel finish
Insert Insulation	Moulded thermoplastic
Socket Contacts	Silver-plated copper alloy, tarnish resistant
Pin Contacts	Silver-plated copper alloy, tarnish resistant

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• EH Series: AV Panel Mount Connectors

1. Choose any combination of EH Series connectors.

The EH Series by Switchcraft is a complete line of audio, video and data connectors built into standard panel-mount XLR housings.

Custom combinations of EH Series connectors can be quickly loaded into any of our Q-G Series panels. Once mounted, connecting your equipment to the back of an EH Series connector is fast and easy.

Most connectors are feedthru, which means standard cabling is simply plugged into the back of your gear, then plugged into the back of the EH Series connector. For those EH Series connectors that are not feedthru, solder lugs are clearly marked for simple, secure solder connections.

All EH Series connectors are available individually bagged with mounting screws.

2. Choose a blank Q-G Series panel.

Q-G Series panels come standard as 1U (1x16), 1.5U (1x16), or 2U (2x16). 1U and 1.5U versions allow for any combination of up to 16 EH Series connectors to be loaded into the panel. The 2U version can accommodate up to 32 EH Series connectors. Every Q-G Series panel includes quick change designation strips for easy connector identification.

3. Populate EH Series connectors into Q-G Series panel to create custom I/O solution for all of your audio, video and data connections.

Switchcraft's EH Series is the fastest and most versatile way to create a custom panel or wall plate perfectly suited to meet the needs of any studio, broadcast facility, or systems integrator. Customise your studio, make it easy to access your I/O's, and increase the lifespan of expensive pieces of equipment using EH Series connectors and Q-G Series Panels from Switchcraft.

QGPK1B440

Models:

Part Number	EH Series	Termination	Housing	Connector
EH35MMMSC	3.5MM (1/8") Mono	Solder	EH	35MMMSC
EH35MMSSC	3.5MM (1/8") Stereo	Solder	EH	35MMSSC
EHSVHS2	SVHS (S-Video)	Feedthru	EH	SVHS2
EH6MD2	PS/2	Feedthru	EH	6MD2
EHFW2	Firewire 400 (IEEE1394) Straight-wired	Feedthru	EH	FW2
EHFWX2	Firewire 400 (IEEE1394) Cross-wired	Feedthru	EH	FWX2
EHFW8002	Firewire 800 (IEEE1394B) Straight-wired	Feedthru	EH	FW8002
EHFW800X2	Firewire 800 (IEEE1394B) Cross-wired	Feedthru	EH	FW800X2
EHRCA2	RCA	Feedthru	EH	RCA2
EHBNC2	BNC	Feedthru	EH	BNC2
EHBNC2R	BNC (Recessed Front)	Feedthru	EH	BNC2R
EHBNCSC	BNC	Solder	EH	BNCSC
EHBNCRCA	BNC to RCA	Feedthru	EH	BNCRCA
EHRCABNC	RCA to BNC	Feedthru	EH	RCABNC
EHUSBAB	USB A to B	Feedthru	EH	USBAB
EHUSBBA	USB B to A	Feedthru	EH	USBBA
EHDB9MM	9-Pin DSUB Male to Male	Feedthru	EH	DB9MM
EHDB9MF	9-Pin DSUB Male to Female	Feedthru	EH	DB9MF
EHDB9FF	9-Pin DSUB Female to Female	Feedthru	EH	DB9FF
EHHD15MM	15-Pin HD DSUB Male to Male	Feedthru	EH	HD15MM
EHHD15MF	15-Pin HD DSUB Male to Female	Feedthru	EH	HD15MF
EHHD15FF	15-Pin HD DSUB Female to Female	Feedthru	EH	HD15FF
EHFF	F to F (Coaxial)	Feedthru	EH	FF
EHLC2	LC Fiber Optic (single-mode)	Feedthru	EH	LC2
EHLC2M	LC Fiber Optic (multi-mode)	Feedthru	EH	LC2M
EHSC2	SC Fiber Optic (single-mode)	Feedthru	EH	SC2
EHSC2M	SC Fiber Optic (multi-mode)	Feedthru	EH	SC2M
EHST2	ST Fiber Optic (single-mode)	Feedthru	EH	ST2
EHST2M	ST Fiber Optic (multi-mode)	Feedthru	EH	ST2M
EHTL2	TOSLINK	Feedthru	EH	TL2
EHRJ45 P5ES	Cat 5e Sheilded	Feedthru	EH	RJ45 P5ES
EHRJ45 P5E	Cat 5e Unsheilded	Feedthru	EH	RJ45 P5E
EHRJ45 P6S	Cat 6 Sheilded	Feedthru	EH	RJ45 P6S
EHRJ45 P6	Cat 6 Unsheilded	Feedthru	EH	RJ45 P6

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• EH Series: AV Panel-Mount Connectors

| E3MSCB | E3FSC | E4MSC | E4FSC | E5MSCB | E5FSC |

| E112BL | EH35MMMSC | EHUSBBAB | EHUSBAB | EHFWX2B | EHFW800X2 |

| EH6MD2 | EHSVHS2B | EHRCA2 | EHDB9MF | EHDB9FFB | EHHD15MF |

| EHHD15FFB | EHFFB | EHBNC2B | EHLC2 | EHLC2M | EHSC2 |

| EHSC2M | EHST2 | EHST2MB | EHTL2 |

| ECPPKG | ECP2PKG | ECP4PKG |

ECP8PKG

• Q-G® Panel Options

Part Numbers	Rack Height	Number of Knockouts	Tapped 4–40 Holes
QGPK1B	1U	1 x 16	No
QGPK1B440	1U	1 x 16	Yes
QGPK2B	1.5U	1 x 16	No
QGPK2B440	1.5U	1 x 16	Yes
QGPK3B	2U	2 x 16	No
QGPK3B440	2U	2 x 16	Yes

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Switchcraft

• **Switchcraft Patchbays:** MMVP Series Micro Video Patchbays

The MMVP Series provides the highest level of density for SMPTE 424M video and AES/EBU digital audio patching… 48 channels (96 patch-points) in a 1U 19" rack space.

Based on the patented, proven design of Switchcraft's MVJ MidSize video jack, the all metal, screw-in jack provides complete stability and durability in even the most extreme applications, including mobile production. The MMVP jack is rated at 3GHz and meets SMPTE 424M specifications. Industry standard DIN 1.0/2.3 rear termination makes installation easy and eliminates the need for proprietary connectors or special tooling.

Each patchbay jack can be colour-coded using our new colour chips. Each chip snaps into the front panel, providing instant channel identification. Additionally, snap-in posts on either side of the designation strips secure designation labeling.

The MMVP Series is available in 1U and 2U heights for greater flexibility. 2U versions are available with two rows of jacks (4 x 48 density). All versions are available normalled, non-normalled, 75Ω terminated or non-terminated.

Features:
• Based on the proven, reliable, patented technology of our MVJ Series of HD video jacks
• Screw in, all metal jack design withstands vibration in mobile applications
• Rated at 3GHz: meets SMPTE 424M specifications for HD patching

• **MMVP48K175T:**

• 1U/96 Patch-points
• Fully Normalled
• 75Ω Terminated
• Designation strip height: 0.380"

• **MMVP48K1NTAES:**

• 1U/96 Patch-points
• Designed for AES/EBU Digital Audio
• Designation strip height: 0.380"

• **MMVP96K375T:**

• 2U/192 Patch-points
• Fully Normalled
• 75Ω Terminated
• Designation strip height: 0.500"
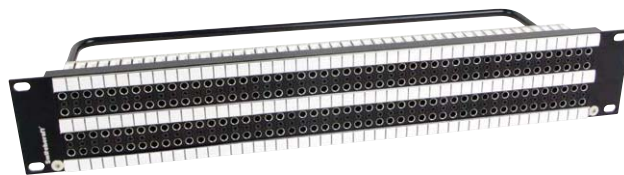
Patchbay Models:

Model:	Description
MMVP48K175T	1U, 2 x 48, Normalled, Terminated
MMVP48K1NT	1U, 2 x 48, Normalled, Non-Terminated
MMVP48K1N75T	1U, 2 x 48, Non-Normalled, Terminated
MMVP48K1NNT	1U, 2 x 48, Non-Normalled, Non-Terminated
MMVP48K375T	2U, 2 x 48, Normalled, Terminated
MMVP48K3NT	2U, 2 x 48, Normalled, Non-Terminated
MMVP48K3N75T	2U, 2 x 48, Non-Normalled, Terminated
MMVP48K3NNT	2U, 2 x 48, Non-Normalled, Non-Terminated
MMVP96K375T	2U, 4 x 48, Normalled, Terminated
MMVP96K3NT	2U, 4 x 48, Normalled, Non-Terminated
MMVP96K3N75T	2U, 4 x 48, Non-Normalled, Terminated
MMVP96K3NNT	2U, 4 x 48, Non-Normalled, Non-Terminated

Now available with channel marking colour chips - sold separately

Colour Chip Models:

Model:	Description
K600	Bag of 60 MMVP Colour Chips, 10 of each colour
K6002D	Bag of 50 MMVP Colour Chips, Red
K6003B	Bag of 50 MMVP Colour Chips, Orange
K6004B	Bag of 50 MMVP Colour Chips, Yellow
K6005N	Bag of 50 MMVP Colour Chips, Green
K6006L	Bag of 50 MMVP Colour Chips, Blue
K6009B	Bag of 50 MMVP Colour Chips, White

Switchcraft

• Pass-Through I/O Panels

PT Series Audio Pass-Through I/O Panels are a perfect solution for anyone requiring front-of-rack access to their I/O's in any permanent or mobile studio environment.

All versions are hard-wired to two DB25 back panel connectors utilising the TASCAM DTRS standard pin-out.

Models:

Model:	Description
PT16FX2DB25	(16 Female XLRs)
PT16MX2DB25	(16 Male XLRs)
PT8FX8MX2DB25	(8 Female & 8 Male XLRs)
PTAESEBU2DB25	(8 Female & 8 Male XLRs in groups of four)
PT16TRS2DB25	(16 1/4" TRS Jacks)
*DB25 Breakout Cable	(DB25M10XLRMXLRF)

PT8FX8MX2DB25

Features:

- Front-of-rack access to the back of your rack
- Input/Output module for any piece of equipment utilizing DB25, 1/4" TS/TRS, or Male/Female XLR connections (i.e. audio consoles, mic-pre's, channel strips, outboard gear, etc.)
- Increase the lifespan of expensive pieces of equipment by preserving their input/output connectors insertion/withdrawal cycle limitations
- Hard-wired using 110Ω AES/EBU digital audio cable... ideal for analog or AES/EBU digital audio
- DB25 connectors are wired to the TASCAM DTRS pin-out
- All Switchcraft® Audio Pass-through Panels come with removable custom marking strips.

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EDAC

Series 516: Rack & Panel Connectors (Commercial Grade Rectangular)

- Industry standard rack & panel connectors with highreliability contacts
- Hermaphroditic contacts provide extremely reliable connection
- Gold over nickel contact plating in thru-hole PCB, wirewrap, crimp or wire hole styles
- Crimp contacts can be ordered separately in bulk or on reel for automated insertion (1800 per reel)
- Contacts may be ordered separately for pre-wired or select position assembly
- From 20 ~ 120 pins, with actuator, polarizing and locknut options
- Plastic and metal hoods available with cable clamps for strain relief

Features:

- UL Recognized
- 0.150 (3.81) Contact Spacing x 0.130 (3.30) or 0.150 (3.81) Row Spacing with Staggered Grid
- Plug and Receptacle available with 20, 38, 56, 90 or 120 contact sizes
- Edacon hermaphroditic contact mating design
- Contact termination options include: Crimp, P.C. Tail, Wire Hole, Wire Wrap, & Taper Tail
- Mating and unmating simplified with actuating screws
- Optional covers with side or top entry cable clamp in plastic or metal material available for all connector sizes
- Versatile metal cover design permits assembly or disassembly after cabling is complete plus cable entry style flexability
- Actuating screws, locknuts, polarizing hardware, covers and contacts suitable for either plug or receptacle
- Polarizing hardware adjustable for 288 mating combinations
- Tools available for contact installation, removal, and crimping and polarizing changes

Specifications:

Model:	516 Series
Insulator Material	Diallyl Phythalate or Thermoplastic Polyester, UL 94V-0, Colour: Green, or Polycarbonate, Colour: Grey
Contact Material	Phosphor Bronze Alloy CA-510
Contact Plating	Gold over nickel for entire contact
Cover Material	Polycarbonate, Colour: Green, or Die-Cast Zinc, finished with grey enamel paint
Current Rating	8.5 A
Contact Resistance	10mΩ maximum
Dielectric Withstanding Voltage	2000v AC RMS at sea level
Insulation Resistance	5000MΩ minimum
Operating Temperature	-65 ~ +125°C
Insertion and Withdrawal Force	2 ~ 16oz (0.56 ~ 4.45N) per contact position

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AVTECH

• **AVN80X:** IVS 1.3 Megapixel Network Camera

This innovative and compact new network camera will provide an immediate remote notification to your iPhone, iPad Smartphone using AV Tech's mobile surveillance software - 'Eagle Eyes'.

Fast and simple to set-up on your network and link with your mobile device, the AVN80X features SD card support for video self-storage, as well as remote event notification from external triggers (such as PIRs or NO/NC switches on doors, windows etc), sending an immediate video of the incident; event to your iPhone/Android device.

Features:

- Easy network setup with your iPhone, iPad, Smartphone
- 1.3 Megapixel live MOS sensor with HDTV 720p quality, allowing users to notice minor details more easily
- SD card support for video storage
- Push Video support to send an event notification to your iPhone and Android phones immediately once the specified event type is triggered, and play video recording once you confirm the receipt
- White LED built-in to illuminate the scene manually, scheduled by a timer, or triggered by a motion, an alarm, or an audio event
- External alarm I/O device connection
- Microphone & speaker built-in for two-way audio transmission
- Remote Surveillance
  - Fully compatible with iPhone & iPad, Internet Explorer® and Windows® operating systems
  - Also accessible via web browsers (Mozilla Firefox®, Safari®, Google Chrome™ and Opera) on Windows® and Mac® operating systems and mobile devices (Blackberry®, Symbian™, Windows® Mobile & Android™) from the web browser or our self-developed mobile program, EagleEyes (see page 426)

59mm

95.4mm

Camera Specifications:

Model:	AVN80X
Image Sensor	1/3" Live MOS image sensor
Video Resolution	SXGA, SXVGA, 720P, VGA, QVGA
Min Illumination	0.1 Lux / F1.5, 0 Lux (LED ON)
Shutter Speed	1/60 (1/50) to 1/100,000 sec.
S/N Ratio	More than 48dB (AGC off)
Lens	f3.8mm / F1.5
Viewing Angle	80.4° (Diagonal)
White LED	Yes (1W, 10m)
White Balance	ATW
AGC	Auto
IRIS Mode	AES
PIR Sensor	Detection Range 76° wide angle with up to 6m long distance at 2m height (under 30°C)
Micro SD Card Slot	Yes
External Alarm I/O	Yes
Microphone	Yes
Speaker	Yes
Power Source (±10%)	5v/2A
Operating Temperature	-0° ~ 40°C

Network Specifications:

Model:	AVN80X
Network Compression	H.264, MPEG4, MJPEG
Multiple Video Streaming (Encode Modes, IPS, Resolution)	3 (H.264, MJPEG, MPEG4)
LAN Port / Speed	Yes, 10/100 Based-T Ethernet
Supported Protocols	DDNS, PPPoE, DHCP, NTP, SNTP, TCP/IP, ICMP, SMTP, FTP, HTTP, RTP, RTSP, UPnP
Frame Rate	PAL:25
Number of Online Users	10
Security	Multiple user access levels with password
Web Management	1. Web browsers, such as Internet Explorer, Mozilla Firefox, Google Chrome, Safari & Opera for single device access, or 2. Free CMS software, Video Viewer, for up to 16 network camera control simultaneously

Other Specifications:

Model:	AVN80X
Mobile Surveillance	iPad, iPhone, Android mobile device
Push Video	Yes
Audio Detection	Yes
RTC (real-time clock)	Yes
Motion Detection	Yes
Digital Pan / Tilt / Zoom	Yes
Event Notification	FTP, Email, Push Video
Minimum Web Browsing Requirements	Pentium 4 CPU 1.3 GHz or higher, or equivalent AMD 256MB RAM, AGP graphics card, Direct Draw, 32MB RAM, Windows 7, Vista & XP, DirectX 9.0 or later, Internet Explorer 7.x or later

AVTECH

● **AVC482:** Vari-focal Internal Dome Camera

1/3" Internal Colour Dome Camera.

Features:
- 1/3" colour CCD sensor with SONY Effio DSP
- High resolution
- Low light sensitivity of 0.05 Lux at F1.4
- F1.4 large aperture
- f4.0 ~ f9.0 mm vari-focal lens
- Easy to install, easy to use

Specifications:

Model:	AVC482
Pick up Element	1/3" HR color CCD
Number of Pixel	771(H) x 492(V) <NTSC>, 753(H) x 582(V) <PAL>
Resolution	Super high resolution
Min. Illumination	0.05 Lux, F1.4
S/N Ratio	More than 48dB (AGC off)
Electronic Shutter	1/60 (1/50) to 1/100,000 sec.
Lens	f3.8 ~ f9.5 mm, F1.4
Lens Angle	34.6° ~ 93.9°
Iris Mode	Yes
Smart zoom	AES
White Balance	ATW
Video Output	1.0Vp-p composite, 75Ω
Power Source (±10%)	12v DC
Power Consumption (±10%)	70mA
Dimensions	140(Ø) × 90(H) mm

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AVTECH

● **KPC133E:** 1/3" H.R Colour CCD IR Internal
Camera

The KPC133E is a 520TVL Internal IR Dome, featuring 21 LEDs (with
a range of up to 15 metres) and a 92.6° viewing angle.

Features:

- High sensitivity in the dark environment, 0.1Lux, F2.0, 0Lux (IR ON)
- Day and night features for 24 hour surveillance
- Excellent image quality (500 TVL High Resolution)
- 21 IR LEDs effective range reaches up to 15 metres

Specifications:

Model:	KPC133E
Pick up Element	1/3" H.R. color CCD image sensor
Number of Pixel	771(H) x 492(V) <NTSC>, 753(H) x 582(V) <PAL>
Resolution	500TV lines
Min. Illumination	0.1 Lux / F2.0, 0Lux (IR LED ON)
Effective Range	>15m
IR LED	21 units
S/N Ratio	More than 48dB (AGC off)
Electronic Shutter	1/60(1/50) to 1/100,000 sec
Lens	f3.6mm, F2.0
Lens Angle	92.6°
IRIS Mode	AES
White Balance	ATW
Video Output	1.0 Vp-p composite, 75Ω
Power Source	12v DC, ±10%
Current Consumption	90mA (IR OFF), 280mA (IR ON)±10%
Dimensions	94(Ø) x 70(H) mm

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AVTECH

- **AVK016ZP:** Vari-Focal Internal Colour Dome Camera

This vari-focal dome camera is designed for the mid to high end market and features excellent performance under low Lux.

Equipped with F1.4 large aperture, this camera will be the best solution for a gloomy environment. Its f4.0 ~ f9.0mm vari-focal lens (Auto Iris) and its vandal-proof design makes this product versatile.

Features:
- 1/3" HR Color CCD
- F1.4 Large Aperture
- f4.0 ~ f9.0 mm Vari-focal Lens (Auto Iris)
- Supports 0.15 Lux at F1.4
- Vandal-proof housing design

Specifications:

Model:	AVK016ZP
Pick up Element	1/3" HR color CCD
Number of Pixel	771(H) x 492(V) <NTSC>, 753(H) x 582(V) <PAL>
Resolution	520 TVL
Min. Illumination	0.15 Lux, F1.4
S/N Ratio	More than 48dB (AGC off)
Electronic Shutter	1/60 (1/50) to 1/100,000 sec
Vari-focal Auto Iris Lens	f4.0 ~ f9.0mm
Lens Angle	75° ~ 36°
Iris Mode	Auto Iris
White Balance	ATW
Vandal-Proof Rating	IPxx7
Video Output	1.0 Vp-p composite, 75Ω
Power Source (±10%)	12v DC
Current Consumption (±10%)	85mA
Dimensions	124.3(Ø) x 92(H) mm
Weight	0.46kg

EverFocus

● **ED610T:** 1/3" Vandal-proof Outdoor Dome Camera

8.5mm (1/3") vandel-proof outdoor day/night dome camera with WDR, automatic IR cut filter.

Features:

- Vandal-proof IP66 outdoor housing
- Super-high resolution technology (560TV lines)
- Built-in 3D noise reduction
- Day/night function with automatically swiveling IR cut filter
- Super HAD II sensor with 5 x better native light sensitivity
- On-screen programming
- 8 adjustable privacy zones
- Motion detecting with 4 adjustable zones
- Digital Wide Dynamic Range for properly exposed images
- Up to 32 x digital zoom
- 3-axis positioning for wall or ceiling mounting with flexible viewing angle
- Optional wall bracket (see below)

Specifications:

Model:	ED610T
Sensor	8.5mm (1/3") SONY Super HAD II CCD
Picture element	752(H) x 582(V)
Horizontal resolution	560TV lines
Sensitivity	0.002 lux (sens-up x256), 0.05 lux / F = 1.2
S/N ratio	52dB (AGC off)
Gamma correction	0.45
OSD	Yes, with multiple functions
Day/night control	Automatically swiveling IR cut filter and enhanced b/w sensitivity
IR cut filter control	Auto / colour / b/w / EXT (external light sensor)
Lens	2,8 ~ 10 mm direct drive (DC), IR-corrected, ED glass, auto IR cut filter
Electronic Shutter	1/50 ~ 1/100.000
Back light compensation	OFF, BLC, HS BLC
White balance	ATW, AWB, AWC, manual, indoor, outdoor
AGC	Off, low, middle, high
3D DNR (Dynamic Noise Reduction)	ON/OFF, adjustable level
Digital WDR (Wide Dynamic Range)	Outdoor/Indoor
Digital Slow Shutter	Off, auto: x 2 ~ x 256 selectable
Mirror	Off, mirror, V-flip, rotate
Digital zoom	ON/OFF, up to 32x
Motion detection	ON/OFF, 4 adjustable zones
Privacy zones	ON/OFF, 8 adjustable zones
Video output	BNC, 1,0 Vp-p, 75Ω; test video output 1,0 Vp-p, 75Ω
Sync. mode	internal / line lock
Weatherproof rating	IP66
Power source	12v DC / 24v AC
Power consumption	3W max. at 12v DC, 3 W max. at 24v AC
Ambiente temperature	10° ~ +50°C
Dimensions	123(Ø) x 107.8(H) mm
Weight	0.74kg
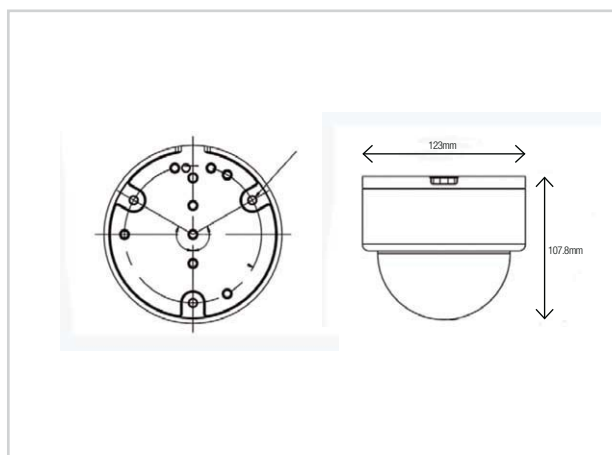
● **ED WMA:** Wall Mount Bracket

For use with ED610T Dome Camera.

Specifications:

Model:	ED WMA
Material	Aluminium
Application	with ED 610 T, EDN 850 H and EDN 800 T
Dimensions	150(W) x 110(H) x 170(D) mm
Max. load	4 kg
Weight	0.6kg

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- ## EHD525EX: 1/3" Rugged Dome Camera

8.5mm (1/3") day/night rugged dome camera, high resolution, automatic IR cut filter.

Features:
- Vandal-proof outdoor housing
- High resolution technology (520 TV lines)
- Sony Exview CCD sensor
- Day/night function with automatically swiveling IR cut filter
- Integrated tamper contact (micro switch)
- Integrated DC varifocal lens (f = 3,6 ~ 9 mm)
- Integrated heater
- Optional wall bracket

Specifications:

Model:	EHD525EX
Sensor	8.5mm (1/3") SONY Exview CCD
Picture element	752(H) x 582(V)
Horizontal resolution	520TV lines
Sensitivity	0.5 lux / F = 1.2 colour / 0.1 lux / F = 1.2 B/W
S/N ratio	>48dB
Gamma correction	0.45
Day/night control	automatically swiveling IR cut filter
Video output	1 Vp-p composite PAL
Synchronisation	internal/line-lock (only 24v AC)
Line-lock (24v AC)	ON/OFF
Back light compensation	ON/OFF
Auto white balance	Yes
AGC	ON/OFF
Electronic shutter	1:50 ~ 1:100.000
Tamper contact	micro switch
Lens	DC varifocal lens, f = 3,6 ~ 9 mm
Heater	thermostat controlled
Heater activating temperature	+10°C
Casing	zink diecasted, dome polycarbonate, clear
Weatherproof rating	IP66
Power source	12v DC ± 10%, 24v AC ± 10%
Power consumption	5W max. (15 W with activated heater)
Ambient temperature	-40° ~ +50°C
Dimensions	130(W) x 130(H) x 99(D) mm
Weight	1.7kg

130mm

130mm   99mm
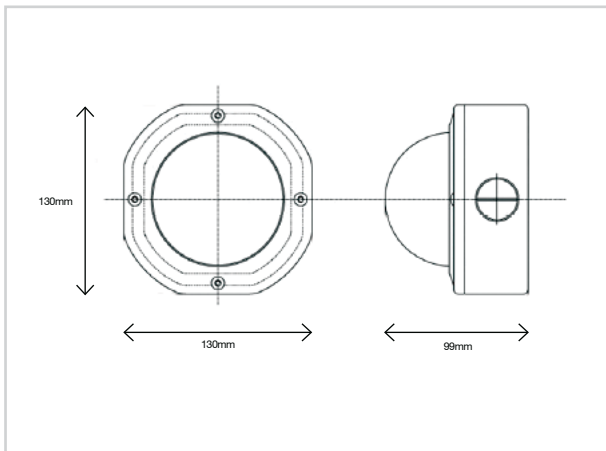
- ## EHDWMA: Wall Mount Bracket

For use with EHD525EX Dome Camera.

Specifications:

Model:	EHDWMA
Material	Aluminium
Application	with EHD camera series
Dimensions	150(W) x 110(H) x 170(D) mm
Max. load	4kg
Weight	0.6kg

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EverFocus

- **EBD330A/W:** 1/3" Day/Night Camera with IR LED-White
- **EBD330A/B:** 1/3" Day/Night Camera with IR LED-Grey
- **AP12A122EO:** Power Supply 230v AC/12v DC

8.5mm (1/3") day/night outdoor IR camera, 480TV lines, IP66, 3.6mm lens, 12v DC, colour:

Features:

- High resolution technology (480TV lines)
- 20 powerful IR LED, controlled by internal twilight switch
- Splitted front glass for low internal IR reflection
- IP66 weatherproof outdoor housing
- Anthracite or white casing available
- IR distance up to 20 metres
- 3-axis adjustment of camera module

* The IR illumination range depends on the location, particularly with regard to the reflection of the installation's surroundings. Locating the device near to highly absorbent surfaces can result in a significantly reduced range.
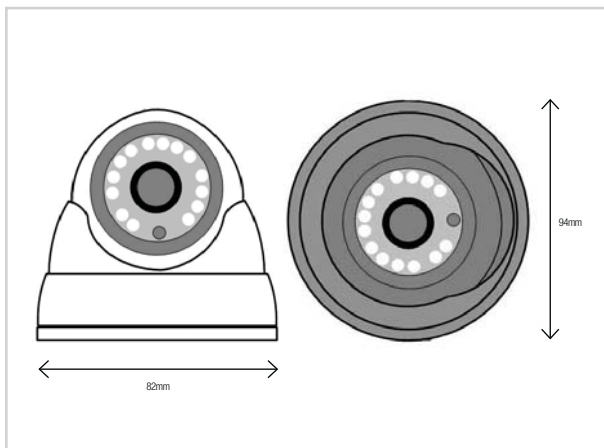
Specifications:

Model:	EBD330A
Sensor	8.5mm (1/3") SONY CCD
Picture element	752 x 582 (PAL)
Horizontal resolution	480TV lines
Sensitivity	0.5 lux / F = 1.2 (IR LED off)
IR LED	20 x, controlled by internal twilight switch, splitted front glass for low internal IR reflection
IR LED lifetime	up to 50.000h
IR range	5 ~ 20 m (depending on reflections in scenery)
Video output	1 Vp-p composite PAL
S/N ratio	over 48dB
Gamma correction	0.45
Back light compensation	Yes
Auto white balance	Yes
AGC	Yes
Synchronisation	Internal
Electronic shutter	1:50 ~1:100.000
Lens	3.6 mm / F2, M12 x P0,5
Mounting	Ceiling or wall mounting, 3-axis adjustment of camera module
Casing	Aluminium, colour white or anthracite
Weatherproof rating	IP 66
Power source	12v DC ± 10%
Power consumption	6W max
Ambient temperature	-10°C ~ +50°C
Dimensions	94(Ø) x 82(H) mm
Weight	0.45kg

94mm

82mm

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KPC138E: 1/3" H.R Colour CCD IR Bullet Camera

The KPC138E is a high resolution IR Bullet Camera, 21LEDs 15 metre range 92.6° VA. For indoor and outdoor applications.

Features:

- 1/3" H.R. colour CCD image sensor
- High resolution for clearer and sharper images of 500TVL
- Low light sensitivity of 0.6 Lux at F2.0
- Day and night features for 24-hour surveillance
- Excellent image quality
- Auto Electronic Shutter built-in
- Signal-to-noise ration of 48dB
- IP68 standard approved outdoor housing
- IR LED effective range reaches up to 15 metres

Specifications:

Model:	KPC138E
Pick up Element	1/3" H.R. color CCD image sensor
Number of Pixel	771(H) x 492(V) <NTSC>, 753(H) x 582(V) <PAL>
Resolution	500TV lines
Min. Illumination	0.6Lux / F2.0, 0Lux (IR ON)
IR LED	21 units
Effective Range	Up to 15m
S/N Ratio	More than 48dB (AGC off)
Electronic Shutter	1/60 (1/50) to 1/100,000 sec.
Lens Mount	f3.6mm / F2.0
Lens Angle	92.6°
IRIS Mode	AES
White Balance	ATW
IP Rating	IP68
Video Output	1.0 Vp-p composite, 75 ohms
Power Source	12v DC ± 10%
Current Consumption(±10%)	90mA (IR OFF), 280mA (IR ON)
Dimensions	55(W) x 79(H) x 140(L) mm

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EverFocus

- **ECZ330E/P:** 8.5 mm (1/3") Day/Night Camera with IR LED, High Res

- **ECZ230E/P:** 8.5 mm (1/3") Day/Night Camera with IR LED, Standard High Res

- **AP121A122E0:**
  Power Supply, 230v AC/12v DC

Features:

- 14 powerful IR LED, video signal controlled variable LED power
- Splitted front glass for low internal IR reflection
- IR range 5 ~ 20 metres
- IP66 weatherproof outdoor housing
- Integrated wall bracket
- Mounting hole at lower and upper side for camera bracket

* The IR illumination range depends on the location, particularly with regard to the reflection of the installation's surroundings. Locating the device near to highly absorbent surfaces can result in a significantly reduced range.

Specifications:

Model:	ECZ330E
Sensor	8.5mm (1/3") SONY IT CCD
Picture element	752 x 582 (PAL)
Horizontal resolution	520TV lines
Sensitivity	0.5 lux / F = 1.2 (IR LED off)
IR LED	14x, video signal controlled variable LED power, splitted front glass for low internal IR reflection
IR LED lifetime	up to 50.000 h
IR range	5 ~ 20 m*
Video output	1 Vp-p composite PAL
S/N ratio over	48dB
Gamma correction	0.45
Synchronisation	Internal
Back light compensation	Yes
Auto white balance	Yes
AGC	Yes
Electronic shutter	Auto 1:50 ~ 1:100.000
Lens	4.3mm / F2, M12 x P0,5
Mounting	6.35mm (1/4") mounting hole at lower and upper side for camera bracket (incl.)
Casing	Aluminium
Weatherproof rating	IP66
Power source	12v DC ± 10%
Power consumption	6W max
Ambient temperature	-10°C ~ +50°C
Dimensions without sunshield	55(Ø) x 72(D) mm
Dimensions with sunshield	62(W) x 58(H) x 82(D) mm
Weight	0.25 kg

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AVTECH

● **KPC131E:** High Resolution Colour Body Internal Camera

Features:
- 1/3" HR Colour CCD
- Low light sensitivity of 0.1 Lux at F2.0
- Built-in microphone

Color CCD Camera

Specifications:

Model:	KPC131E
Pick up Element	1/3" HR colour CCD image sensor
Number of Pixel	771(H) x 492(V) <NTSC>, 753(H) x 582(V) <PAL>
Resolution	500TV lines
Min. Illumination	0.1 Lux / F2.0
S/N Ratio	More than 48dB
Electronic Shutter	1/60 (1/50) to 1/100,000 sec.
Lens Mount	CS Mount
IRIS Mode	AES, VD, DD
BLC	ON/OFF
Gain Control	AGC, MAX
Flickerless	ON/OFF
Video Output	1.0 Vp-p composite, 75 ohms
Microphone	Built-in
Power Source	12v DC ±10%
Current Consumption	80mA ±10%
Dimensions	60(W) x 50(H) x 117(L) mm

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- **AVK522ZP:** IVS Zoom Lens Internal Dome Colour Camera

Controllable Dome Camera, allowing users to manually adjust and set camera parameters from a DVR without additionally connecting RS485 control wires.

It can be used with the AV Tech DCCS DVR series for direct control, or with other brand DVRs controlled via the optional DCCS control box, AVK-T1.

Features:

- Supports DVR/Camera Communication System (DCCS) Technology
- No need to additionally connect RS485 control wires for camera control because the control signals can be transferred by coaxial cables directly
- Camera installation is highly simplified to lower labor cost and working hours

Smart Zoom:

- Zooms in on the object which triggers motion or alarm recording automatically, excellent for evidence collecting

Specifications:

Model:	AVK522ZP
Pick up Element	1/3" HR colour CCD
Number of Pixel	771(H) x 492(V) <NTSC>, 753(H) x 582(V) <PAL>
Resolution	520TVL
Min. Illumination	0.15 Lux / F1.4
S/N Ratio	More than 48dB (AGC off)
Electronic Shutter	1/60 (1/50) to 1/100,000 sec
Lens	f4.0mm ~ f9.0mm
Lens Angle	75° ~ 36°
Iris Mode	AES(Default) / AI
Smart zoom	Yes
White Balance	ATW
Video Output	1.0 Vp-p composite, 75Ω
Power Source (±10%)	12v DC, 2.9WΩ
Power Consumption (±10%)	240mA
Dimensions	124.3(Ø) x 102(H) mm

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AVTECH

- **AVK544ZP/22X:** 22x Speed Dome Internal PTZ Camera

Features:

- Supports DVR/Camera Communication System (DCCS) Technology
- No need to additionally connect RS485 control wires for camera control as the control signals can be transferred by coaxial cables directly where DVR supports DCCS technology
- Advanced Auto Tracking accuracy
- Rigid & High-Speed Pan/Tilt Mechanism with Two-Million Rotation Test Passed - for longer operating lifetime
- Pelco-D & Pelco-P Support - for fully compatibility
- Flexible Colour/Shutter Parameter Adjustment - adapts to light conditions
- Hot Point
- Graphical On-Screen Display
- Easy operation via Keyboard Controller
- Up to 256 preset points & eight preset groups + Auto Scan
- IP66

Specifications:

Model:	AVK544ZP/22X
Signal System	NTSC or PAL
Pick-up Element	1/4" Sony Color Super HAD CCD image sensor
Number of Pixels	768(H)* x 494(V) <NTSC>, 752(H)* x 582(V) <PAL>
Resolution	High Resolution
Min. Illumination	0.6 Lux, F1.6
S/N Ratio	More than 48dB (AGC off)
Video Output	1.0 Vp-p. 75Ω
BLC	ON/OFF
Gain Control	Low, Medium & High/Off
Sharpness	Auto, Low, Medium, High
White Balance	Auto, Indoor 1, Indoor 2, Sun, Cloudy * Indoor1 = 9000K; Indoor2 = 3000K; Sun = 5500K; Cloudy = 7000K
Camera Title	10 characters or symbols
Preset Points and Sequence	Total 8 groups, 256 programmable preset points * The sequence of all the preset points will follow the order of the minimal panning route.
Auto Tracking	Yes
Baud Rate	9600
LENS: Focal Length	f3.9 ~ 85.9mm
LENS: F-number	F1.6(Wide) ~ 3.7(Tele)
LENS: Viewing Angle	4° ~ 60°
LENS: Auto Electronic Shutter	1/60 (1/50) to 1/100,000 sec
LENS: Auto Focus	Always, PTZ, Z Only, P Only
MECHANISM: Pan Range	360°
MECHANISM: Pan Speed	360°/1 sec * The pan speed can be adjusted according to the different pan speed mode.
MECHANISM: Tilt Range	90°
MECHANISM: Tilt Speed	0° ~ 90° under 1 sec
MECHANISM: Zoom Ratio	22 x optical zoom
MECHANISM: Zoom Speed	Approx. 7s (Tele ~ Wide)
IP Rating	IP66
Operating Temperature	-20° ~ 40°C
Storage Temperature	0° ~ 70°C
Power Source (±10%)	12v DC
Current Consumption	1.5A
Dimensions	323(W) x 339(H) mm (Bracket included)
Weight	1.2kg

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AVTECH

● **AVK584:** 22x Speed Dome External PTZ Camera

Features:

- Supports DVR/Camera Communication System (DCCS) Technology
- No need to additionally connect RS485 control wires for camera control as the control signals can be transferred by coaxial cables directly where DVR supports DCCS technology.
- Advanced Auto Tracking accuracy
- Rigid & High-Speed Pan/Tilt Mechanism with Two-Million Rotation Test Passed - for longer operating lifetime
- Pelco-D & Pelco-P Support - for fully compatibility
- Flexible Colour/Shutter Parameter Adjustment - adapts light conditions
- Excellent outdoor ID design with cable management
- Graphical On-Screen Display
- Easy Operation via Keyboard Controller
- Up to 256 preset points & eight preset groups plus Auto Scan
- IP66

Specifications:

Model:	AVK584
Signal System	NTSC or PAL
Pick-up Element	1/4" Sony Color Super HAD CCD image sensor
Number of Pixels	768(H)* x 494(V) <NTSC>, 752(H)* x 582(V) <PAL>
Resolution	High Resolution
Min. Illumination	0.6 Lux, F1.6
S/N Ratio	>48dB (AGC off)
Video Output	1.0 Vp-p. 75 ohm
BLC	ON/OFF
Gain Control	Low, Medium & High / Off
Sharpness	Auto, Low, Medium, High
White Balance	Auto, Indoor 1, Indoor 2, Sun, Cloudy * Indoor1 = 9000K; Indoor2 = 3000K; Sun = 5500K; Cloudy = 7000K
Camera Title	10 characters or symbols
Preset Points and Sequence	Total 8 groups, 256 programmable preset points * The sequence of all the preset points will follow the order of the minimal panning route.
Auto Tracking	Yes
Baud Rate	9600
LENS: Focal Length	f3.9 ~ 85.9 mm
LENS: F-number	F1.6 (Wide) ~ 3.7 (Tele)
LENS: Viewing Angle	4° ~ 60°
LENS: Auto Electronic Shutter	1/60 (1/50) to 1/100,000 sec
LENS: Auto Focus	Always, PTZ, Z Only, P Only
MECHANISM: Pan Range	360°
MECHANISM: Pan Speed	360°/ 1 sec * The pan speed can be adjusted according to the different pan speed mode.
MECHANISM: Tilt Range	90°
MECHANISM: Tilt Speed	0° ~ 90° under 1 sec
MECHANISM: Zoom Ratio	22 x optical zoom
MECHANISM: Zoom Speed	Approx. 7s (Tele ~ Wide)
IP Rating	IP66
Ambient Operating Temperature	-20° ~ 50°C (-4° ~ 122 °F)
Fan	40°C on, 30°C off
Heater	5°C on, 15°C off
Power Source (±10%)	12v DC
Current Consumption	3A (max)
Dimensions	323(W) x 339(H) mm (Bracket included)

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F **EverFocus**

- **EPTZ-2700:** 1/4" 27x Day/Night Outdoor Speed Dome Camera
- **EPTZ-2700 I:** 1/4" 27x Day/Night Indoor Speed Dome Camera

Features:

- 27 x optical zoom (+10 x digital zoom)
- High resolution technology (480TV lines)
- Integrated DSS digital slow shutter
- Flickerless function
- IP66 outdoor model and indoor model available
- Several built-in protocols
- 192 programmable preset positions
- 4 programmable patterns
- 4 alarm inputs, 2 alarm outputs with tour/position auto triggering

Functions:

Model:	EPTZ–2700 / EPTZ–2700 I
Communication	RS-485
Built-in protocols	Pelco-P / Pelco-D / EverFocus / Samsung (El.) / Panasonic
Communication speed	1200 / 2400 / 4800 / 9600 bps
Address editable through DIP switch	Yes
Speed dome address range	1 ~ 255
Horizontal rotation speed	0.1° / sec. ~ 360° / sec.
Horizontal rotation range	360° unlimited rotation
Tilt rotation range	180° tilt motion with electronic auto flip
Day / night switching	Manual, automatic, by external contact (via alarm in)
Auto zoom speed control	Auto-adjustment of PT control speed acc. to zoom position
Autopan, 2 points scanning	Adjustable speeds, adjustable end stops
Autopan speed	1 ~ 255 steps
Dwell time (2 points)	1 ~ 99 sec
Preset positions	192
Running to position speed	>360°/sec
Pattern	4 x, 1 minute max. each
Auto resume	After inactivity 0,5 ~ 60 min. or after power-up
Auto resume actions	Home position, tour 1, pattern 1, autopan, previous mode
Manual pan speed	0,1° ~ 120°/sec
Manual tilt speed	0,1° ~ 60°/sec
Dwell time at preset position	1 ~ 60 sec
Tours	16
Presets per tour	16 preset positions
Position accuracy	± 0,1°
Alarm	4 inputs, 2 outputs, with tour/position auto triggering
Proportional pan speed	Yes
Built-in menu for functions	Yes, multiline OSD

Specifications:

Model:	EPTZ–2700	EPTZ–2700 I
Sensor	6.35 mm (1/4") CCD SONY Exview HAD	
Effective pixels	440.000	
Horizontal resolution	480TV lines	
Sensitivity	1lux (F 1.6, 50 IRE - colour) / 0,1 lux (F 1.6, 50 IRE - B/W)	
Video output	1 Vp-p (sync. negative), BNC	
S/N ratio	Over 50dB	
Sync. system	Internal	
Electronic shutter	1/50 ~ 1:10.000 sec., 7 steps	
DSS digital slow shutter	ON/OFF, 32 x max.	
White balance	Auto, indoor, outdoor	
Back light compensation	ON/OFF	
Gain	Auto	
Flicker cancel	ON/OFF	
Zoom ratio	27 x optical zoom (+10x digital zoom, max. 270x)	
Focus length	f = 3,25 (wide) ~ 88 (tele) mm	
Aperture	F 1.5 (wide) ~ 3.6 (tele) mm	
Viewing angle	58° (wide end) to 2,3° (tele end)	
Minimum object distance	100mm (wide end) to 1000mm (tele end)	
Focusing method	Auto, one-push AF, manual	
Weatherproof rating	IP 66	IP 30
Power source	24v AC	
Power consumption	14W max	
Fan	thermostat controlled	
Ambient temperature	-40°C ~ +40°C	0°C ~ +40°C
Humidity	~ 90%	
Dimensions	210(Ø) x 250(H) mm (incl. sunshield)	160(Ø) x 220(H) mm
Weight	5.2kg (incl. sunshield)	3.0kg

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EverFocus

- **EPTZ3650:** 1/4" 36x Day/Night Outdoor Speed Dome with Auto tracking
- **EPTZ3650I:** 1/4" 36x Day/Night Indoor Speed Dome with Auto-tracking

Features:

- 36 x optical zoom (+12 x digital zoom)
- High resolution technology (up to 570TV lines - B/W mode)
- Smart auto tracking functions
- Automatic exposure control
- Integrated DSS digital slow shutter
- Integrated Wide Dynamic Range
- Flickerless function
- IP66 outdoor model and indoor model available
- Several built-in protocols
- 192 programmable preset positions
- 4 programmable patterns
- 8 freely adjustable privacy zones
- 4 alarm inputs, 2 alarm outputs with tour/position auto triggering

Functions:

Model:	EPTZ3650 / EPTZ3650 I
Communication	RS-485
Built-in protocols	Pelco-P, Pelco-D, EverFocus, Samsung (El.), Panasonic
Communication speed	1200, 2400, 4800, 9600 bps
Address editable through DIP switch	Yes
Speed dome address range	1 ~ 255
Auto tracking tracking	Mask, pan/tilt limits, manual tracking
Horizontal rotation speed	0.1° / sec. ~ 360° / sec.
Horizontal rotation range	360° unlimited rotation
Tilt rotation range	180° tilt motion with electronic auto flip
Day / night switching	Manual / automatic / by external contact (via alarm in)
Auto zoom speed control	Auto-adjustment of PT control speed acc. to zoom position
Autopan, 2 points scanning	Adjustable speeds, adjustable end stops
Autopan speed	1 ~ 255 steps
Dwell time (2 points)	1 ~ 99 sec.
Preset positions	192
Running to position speed	up to 360° / sec.
Pattern	4 x, 1 minute max. each
Auto resume	After inactivity 0,5 ~ 60 min. or after power-up
Auto resume actions	Home position, tour 1, pattern 1, autopan, previous mode
Manual pan speed	0.1° ~ 120° / sec.
Manual tilt speed	0.1° ~ 60° / sec.
Dwell time at preset position	1 ~ 60 sec.
Tours	16
Presets per tour	16 preset positions
Position accuracy	+/- 0,1°
Alarm	4 inputs, 2 outputs, with tour/position auto triggering
Proportional pan speed	Yes
Privacy zones	8, freely adjustable, 10 colours / mosaic
Built-in menu for functions	Yes, multiline OSD

Specifications:

Model:	EPTZ3650	EPTZ3650I
Sensor	6.35 mm (1/4") CCD SONY Exview HAD	
Effective pixels	440.000	
Horizontal resolution	530TV lines (colour) / 570 TV lines (B/W)	
Sensitivity	1.4 lux (F 1.6, 50 IRE - colour) / 0.1 lux (F 1.6, 50 IRE - B/W)	
Video output	1 Vp-p (sync. negative), BNC	
S/N ratio	Over 50dB	
Sync. system	Internal	
Electronic shutter	1/50 ~ 1:10.000 sec., 7 steps	
DSS digital slow shutter	ON/OFF, 50 x max.	
White balance	Auto / indoor / outdoor / one-push / manual	
Back light compensation	ON/OFF	
Gain	Auto	
Exposure control	Automatic	
Flicker cancel	ON/OFF	
WDR Wide Dynamic Range	ON/OFF	
Zoom ratio	36x optical zoom (+12x digital zoom, max. 432x)	
Focus length	f = 3,4 (wide) ~ 122,4 (tele) mm	
Aperture	F 1.6 (wide) ~ F 4.5 (tele)	
Viewing angle	57.8° (wide end) to 1.7° (tele end)	
Minimum object distance	320mm (wide end) to 1500mm (tele end)	
Focusing method	Auto, one-push AF, manual	
Weatherproof rating	IP 66	IP 30
Power source	24v AC	
Power consumption	14W max.	
Fan	Thermostat controlled	
Ambient temperature	-40°C ~ +40°C	0°C ~ +40°C
Humidity	~ 90%	
Dimensions	210(Ø) x 250(H) mm (incl. sunshield)	160(Ø) x 220(H) mm
Weight	5.2 kg (incl. sunshield)	3.0kg

EverFocus

- **EPTZPBOX:** Connector Box with Power Supply For Speed Dome
- **EPTZ-PB-A:** Mounting Adaptor for EPTZ PLM or EPTZ CNM
- **EPTZ-PB-P12:** Converter 230v AC to 12v DC/500 mA

Features:

- Vandal-proof metal housing
- Dual power input 100 ~ 120v AC / 220 ~ 240v AC
- Designed for direct speed dome mount (EPTZ series with wall mount bracket)
- Separate installation possible (blind cover for cable hole in package)
- Universal mounting adaptor for additional equipment (video server, twisted pair transmitter, fiber optic transmitter)
- Optional 110/230v AC to 12v DC converter for additional equipment
- Mounting option (optional adaptor) to pole mount and corner mount adaptor

EPTZ PBOX with speed dome EPTZ 3650

EPTZ PBOX inside view

Specifications:

Model:	EPTZ–PBOX
Power source	100 ~ 120v AC, 60Hz or 220 ~ 240v AC, 50Hz (set by internal switch), 120 VA max.
Power output	24v AC, 3.5 A max.
Connectors	Power in: 3x screwless terminal Power out: 5,5mm power plug Molex connector for 12v DC converter RS-485, alarm: 2 x 10-pin screwless terminal, looped
Ambient temperature	-20°C ~ +40°C
Dimensions	270(W) x 245(H) x 80.5(D) mm (with cable gland / hinge / flanges)
Dimensions universal mounting plate	120 x 77 mm
Weight	4.1kg

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EverFocus

- **ESD200E:** 1/3" Colour Smoke Detector Camera
- **AP12A122E0:** Power supply, 230v AC/12v DC, 600 mA

8.5mm (1/3") colour smoke detector camera, incl lens f = 4.3mm, 12v DC

Features:
- Compact size
- Discreet surveillance through covert smoke detector casing
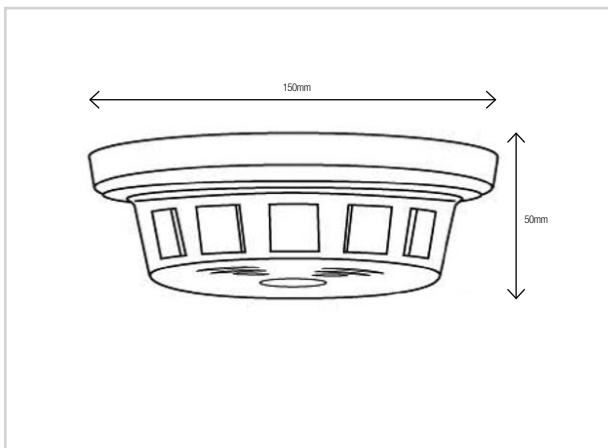
Specifications:

Model:	ESD200E
Sensor	8.5mm (1/3") SONY CCD
Picture element	500 x 582 (PAL)
Horizontal resolution	340TV lines
Sensitivity	0.3 lux / F = 1.2
Video output	1 Vp-p composite PAL, BNC
S/N ratio	Over 48 dB
Gamma correction	>0.45
Synchronisation	Internal
Back light compensation	Yes
Auto white balance	Yes
AGC	Yes
Electronic shutter	1:50 ~ 1:100.000
Number of cameras	1
Lens	f = 4,3mm
Lens mount	M12 x P 0.5
Power source	12v DC ± 10%, 200 mA
Ambient temperature	0°C ~ +50°C
Dimensions	150(Ø) x 50(H) mm
Weight	0.14 kg

150mm

50mm

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• EM200E: 1/3" Colour Metal Case Camera

Features:
- Compact size for discreet surveillance
- Exchangeable board lens included (EM 200 E also 3.7mm pinhole lens)

Models:

Model:	Description
EM200E/P-3	8.5 mm (1/3") colour metal case camera, incl. lens f = 3,6 mm, 12v DC
EM200E/P-3P	8.5 mm (1/3") colour metal case camera, incl. pinhole lens f = 3,7 mm, 12v DC
EM200E/P-00	8.5 mm (1/3") colour metal case camera, without lens, 12v DC
AP12A122E0	Power supply, 230v AC/12v DC, 600 mA
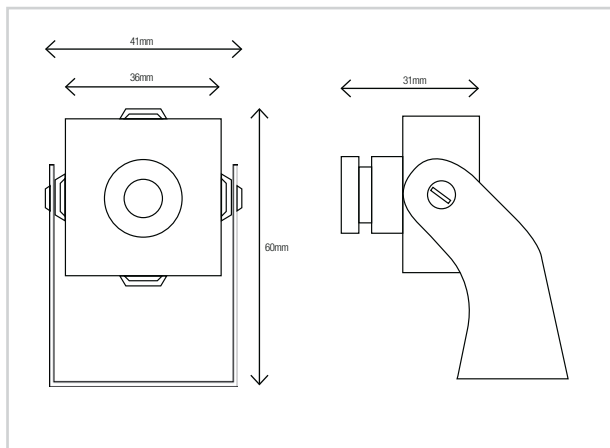
Specifications:

Model:	EM200E
Sensor	8.5 mm (1/3") SONY CCD
Picture element	500 x 582 (PAL)
Horizontal resolution	340TV lines
Sensitivity	0.3 lux, F = 1.2
S/N ratio	over 48 dB
Gamma correction	>0.45
Video output	1 Vp-p composite PAL, BNC
Synchronisation	Internal
Back light compensation	Yes
Auto white balance	Yes
AGC	Yes
Electronic shutter	1:50 ~ 1:100.000
Lens	f = 3.6mm Pinhole lens f = 3.7mm
Lens mount	M12 x P 0,5
Power source	12v DC ± 10%, 200 mA
Ambient temperature	0°C ~ +50°C
Dimensions (WxHxD)	41(W) x 60(H) x 31(D) mm
Weight	0.18 kg

41mm

36mm

31mm

60mm

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AVTECH

• AVD744D:
4 Channel H.264 IVS 1TB HDD DVR

AV Tech's 'IVS' (Intelligent Video Surveillance) Series are the world's first DVRs to fully integrate PC, mobile phone/PDA and CCTV technology.

These intelligent DVRs realise active call-out notifications to smart phones for instant remote surveillance, supporting all popular smart phone platforms such as iPhone, BlackBerry, Nokia Symbian, Android and Windows Mobile.

An incredibly high specification DVR at a surprisingly low cost!

Features:

• **Remote Surveillance**

- Mobile surveillance via our self-developed, free software application 'Eagle Eyes' is supported on all popular mobile platforms such as iPhone, BlackBerry, Nokia Symbian, Android and Windows Mobile.

- Network/remote surveillance via the licensed software 'Video Viewer', Internet Explorer, Mozilla Firefox or Google Chrome web browsers; QuickTime player supported for up to 10 user logins simultaneously.

• **iPhone Push Notification**

- Supports pending Push Notification to iPhones for instant event notification of human detection

• **Intelligent Surveillance**

- Virtual Fence; an intruder virtual detection line can be set to detect intruders crossing a specified line

- Flow Counting; a virtual detection line can be set to detect the direction of pedestrians for flow counting

- Individual Channel Motion Recording; only channels detecting activity will record, effectively saving significant amounts of hard disk space and ensuring maximum recording time.

- Supports pre-alarm recording

• **USB Mouse Control with GUI OSD**

• **DVR~Camera Communication System (DCCS)**

- For PTZ and zoom lens controllable cameras, both video signal and control signal are transmitted down one coaxial cable, removing the need for an additional RS485 control cable

- Camera installation is significantly simplified, reducing labour costs and working hours

• **Remote Independent Operation**

- Allowing remote users to view/monitor live/playback images independently and privately from the local site view

• **H.264 Video Compression Technology**

- Significantly improved image quality for live, recorded and network video broadcast

- Recording file size is minimized for maximum recording times and reduced hard disk space use

- Lower bit rate for faster image transfer over network

• **Multiplex**

- Allows live display, record, playback, backup and network operation at the same time

• **Backup Function**

- Supports DVD writer, USB flash drive and network backup

• **Audio / Video Support**

- 4 audio In, 1 Audio out

- Built-in VGA interface

Specifications:

Model:	AVD744D
Video System	NTSC, PAL (auto detection)
Video Compression Format	H.264
Video Input	8 Channels (Composite Video Signal 1 Vp-p 750 BNC)
Video Output (BNC)	Main Monitor: For stable display Call Monitor: For sequence display
Video Output (VGA)	Built-in VGA output for LCD monitor
Audio Input / Output	4 audio inputs, 1 audio output (Mono)
Multiplex Operating	Supports live display, recording, playback, backup, and network simultaneously
Maximum Recording Rate	**Frame:** 704 × 480 pixels with 30IPS <NTSC>, 704 × 576 pixels with 25IPS <PAL>, **Field:** 704 x 240 pixels with 60IPS <NTSC>, 4 × 288 pixels with 50IPS <PAL>, **CIF:** 352 × 240 pixels with 120IPS <NTSC>, 352 × 288 pixels with 100IPS <PAL>
DCCS Support	Yes (All channels)
IVS Support	Yes (4 channels)
Recording Mode	Manual, Timer, Motion, Alarm, Remote
Recording Quality Options	Best, High, Normal and Basic
Pre-alarm Recording	Yes (8MB)
HDD Type	SATA
HDD Storage	With DVD Writer Model: Accommodates 1 SATA HDD (1HDD capacity up to 2TB)
Quick Search	Time, Motion, Alarm search mode
Backup Device	DVD writer (optional), USB flash drive, network
Compression Format	H.264
Network Live Audio	Yes
Ethernet	10, 100 Base-T
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS (Dynamic IP)
Network Surveillance Interface	Licensed software "Video Viewer", Internet Explorer, Mozilla Firefox or Google Chrome web browser, QuickTime player Network Surveillance Interface (10 users access simultaneously)
Remote Independent Operation	Yes
Event Notification	By FTP, e-mail
R.E.T.R. (Remote Event Trigger Recording)	Yes
IR Remote Control	Yes
Mobile Surveillance	Yes
Motion Detection Area	16 × 12 grids per channel
Motion Detection Sensitivity	4 adjustable parameters for accurate detection
PTZ Control	Yes
External Alarm	4 inputs, 1 output
Picture Zoom	2 x digital zoom
User Level	Administrator & Operator
Video Loss Detection	Yes
Camera Title	Supports up to 6 letters
Video Adjustable	Hue, Color, Contrast, Brightness
Power Source (±10%)	19v DC
Power Consumption (±10%)	<42W
Operating Temperature	10 ~ 40°C (50 ~ 104°F)
System Recovery	System auto recovery after power failure
Dimensions	375(W) × 61(H) × 281(D) mm

Racks & Cabinets

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AVTECH

AVD746D:
8 Channel H.264 IVS,1TB HDD DVR

AV Tech's 'IVS' (Intelligent Video Surveillance) Series are the world's first DVRs to fully integrate PC, mobile phone/PDA and CCTV technology.

These intelligent DVRs realise active call-out notifications to smart phones for instant remote surveillance, supporting all popular smart phone platforms such as iPhone, BlackBerry, Nokia Symbian, Android and Windows Mobile.

An incredibly high specification DVR at a surprisingly low cost!

Features:

- **Remote Surveillance**
- Mobile surveillance via our self-developed, free software application 'Eagle Eyes' is supported on all popular mobile platforms such as iPhone, BlackBerry, Nokia Symbian, Android and Windows Mobile.
- Network/remote surveillance via the licensed software 'Video Viewer', Internet Explorer, Mozilla Firefox or Google Chrome web browsers; QuickTime player supported for up to 10 user logins simultaneously.

- **iPhone Push Notification**
- Supports pending Push Notification to iPhones for instant event notification of human detection

- **Intelligent Surveillance**
- Virtual Fence; an intruder virtual detection line can be set to detect intruders crossing a specified line
- Flow Counting; a virtual detection line can be set to detect the direction of pedestrians for flow counting
- Individual Channel Motion Recording; only channels detecting activity will record, effectively saving significant amounts of hard disk space and ensuring maximum recording time.
- Supports pre-alarm recording

- **USB Mouse Control with GUI OSD**

- **DVR~Camera Communication System (DCCS)**
- For PTZ and zoom lens controllable cameras, both video signal and control signal are transmitted down one coaxial cable, removing the need for an additional RS485 control cable
- Camera installation is significantly simplified, reducing labour costs and working hours

- **Remote Independent Operation**
- Allowing remote users to view/monitor live/playback images independently and privately from the local site view

- **H.264 Video Compression Technology**
- Significantly improved image quality for live, recorded and network video broadcast
- Recording file size is minimized for maximum recording times and reduced hard disk space use
- Lower bit rate for faster image transfer over network

- **Multiplex**
- Allows live display, record, playback, backup and network operation at the same time

- **Backup Function**
- Supports DVD writer, USB flash drive and network backup

- **Audio / Video Support**
- 4 audio In, 2 Audio out
- Built-in VGA interface

Specifications:

Model:	AVD746D
Video System	NTSC, PAL (auto detection)
Video Compression Format	H.264
Video Input	8 Channels (Composite video signal 1 Vp-p 75Ω BNC)
Video Loop Input	8 Channels (Composite video signal 1 Vp-p 75Ω BNC)
Video Output (BNC)	Main Monitor: For stable display, Call Monitor: For sequence display
Video Output (VGA)	Built-in VGA output for LCD monitor
Audio Input / Output	4 audio inputs, 2 audio output (Mono)
Multiplex Operating simultaneously	Supports live display, recording, playback, backup, and network
Maximum Recording Rate	**Frame:** 704 × 480 pixels with 60IPS <NTSC>, 704 × 576 pixels with 50IPS <PAL>, **Field:** 704x240 pixels with 120IPS <NTSC>, 704 × 288 pixels with 100IPS <PAL>, **CIF:** 352 × 240 pixels with 240IPS <NTSC>, 352 × 288 pixels with 200IPS <PAL>
DCCS Support	Yes (All channels)
IVS Support	Yes (4 channels)
Recording Mode	Manual, Timer, Motion, Alarm, Remote
Recording Quality Options	Best, High, Normal and Basic
Pre-alarm Recording	Yes (8MB)
HDD Type	SATA
HDD Storage	With DVD Writer Model: Accommodates 2 SATA HDDs (1HDD capacity up to 2TB)
Quick Search	Time, Motion, Alarm search mode
Backup Device	DVD writer (optional), USB flash drive, network
Compression Format	H.264
Network Live Audio	Yes
Ethernet	10, 100 Base-T
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS (Dynamic IP)
Network Surveillance Interface	Licensed software "Video Viewer", Internet Explorer, Mozilla Firefox or Google Chrome web browser, QuickTime player Network Surveillance Interface (10 users access simultaneously)
Remote Independent Operation	Yes
Event Notification	By FTP, e-mail
R.E.T.R. (Remote Event Trigger Recording)	Yes
IR Remote Control	Yes
Mobile Surveillance	Yes
Motion Detection Area	16 × 12 grids per channel
Motion Detection Sensitivity	4 adjustable parameters for accurate detection
PTZ Control	Yes
External Alarm	8 inputs, 1 output
Picture Zoom	2 x digital zoom
User Level	Administrator & Operator
Video Loss Detection	Yes
Camera Title	Supports up to 6 letters
Video Adjustable	Hue, Color, Contrast, Brightness
Power Source (±10%)	19v DC
Power Consumption (±10%)	<64W
Operating Temperature	10 ~ 40°C (50 ~ 104°F)
System Recovery	System auto recovery after power failure
Dimensions	432(W) × 90(H) × 326(D) mm

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AVTECH

• AVD748D:
16 Channel H.264 IVS, 1TB HDD DVR

AV Tech's 'IVS' (Intelligent Video Surveillance) Series are the world's first DVRs to fully integrate PC, mobile phone/PDA and CCTV technology.

These intelligent DVRs realise active call-out notifications to smart phones for instant remote surveillance, supporting all popular smart phone platforms such as iPhone, BlackBerry, Nokia Symbian, Android and Windows Mobile.

An incredibly high specification DVR at a surprisingly low cost!

Features:

• **Remote Surveillance**
- Mobile surveillance via our self-developed, free software application 'Eagle Eyes' is supported on all popular mobile platforms such as iPhone, BlackBerry, Nokia Symbian, Android and Windows Mobile.
- Network/remote surveillance via the licensed software 'Video Viewer', Internet Explorer, Mozilla Firefox or Google Chrome web browsers; QuickTime player supported for up to 10 user logins simultaneously.

• **iPhone Push Notification**
- Supports pending Push Notification to iPhones for instant event notification of human detection

• **Intelligent Surveillance**
- Virtual Fence; an intruder virtual detection line can be set to detect intruders crossing a specified line
- Flow Counting; a virtual detection line can be set to detect the direction of pedestrians for flow counting
- Individual Channel Motion Recording; only channels detecting activity will record, effectively saving significant amounts of hard disk space and ensuring maximum recording time.
- Supports pre-alarm recording

• **USB Mouse Control with GUI OSD**

• **DVR~Camera Communication System (DCCS)**
- For PTZ and zoom lens controllable cameras, both video signal and control signal are transmitted down one coaxial cable, removing the need for an additional RS485 control cable
- Camera installation is significantly simplified, reducing labour costs and working hours

• **Remote Independent Operation**
- Allowing remote users to view/monitor live/playback images independently and privately from the local site view

• **H.264 Video Compression Technology**
- Significantly improved image quality for live, recorded and network video broadcast
- Recording file size is minimized for maximum recording times and reduced hard disk space use
- Lower bit rate for faster image transfer over network

• **Multiplex**
- Allows live display, record, playback, backup and network operation at the same time

• **Backup Function**
- Supports DVD writer, USB flash drive and network backup

• **Audio / Video Support**
- 4 audio In, 2 Audio out
- Built-in VGA interface

Specifications:

Model:	AVD748D
Video System	NTSC, PAL (auto detection)
Video Compression Format	H.264
Video Input	16 Channels (Composite video signal 1 Vp-p 75Ω BNC)
Video Loop Input	16 Channels (Composite video signal 1 Vp-p 75Ω BNC)
Video Output (BNC)	Main Monitor: For stable display, Call Monitor: For sequence display
Video Output (VGA)	Built-in VGA output for LCD monitor
Audio Input / Output	4 audio inputs, 2 audio output (Mono)
Multiplex Operating	Supports live display, recording, playback, backup, and network simultaneously
Maximum Recording Rate	**Frame:** 704 × 480 pixels with 120IPS <NTSC>, 704 × 576 pixels with 100IPS <PAL>, **Field:** 704 x 240 pixels with 240IPS <NTSC>, 704 × 288 pixels with 200IPS <PAL>, **CIF:** 352 × 240 pixels with 480IPS <NTSC>, 352 × 288 pixels with 400IPS <PAL>
DCCS Support	Yes (All channels)
IVS Support	Yes (4 channels)
Recording Mode	Manual, Timer, Motion, Alarm, Remote
Recording Quality Options	Best, High, Normal and Basic
Pre-alarm Recording	Yes (8MB)
HDD Type	SATA
HDD Storage	With DVD Writer Model: Accommodates 1 SATA HDD (1 HDD capacity up to 2TB)
Quick Search	Time, Motion, Alarm search mode
Backup Device	DVD writer (optional), USB flash drive, network
Compression Format	H.264
Network Live Audio	Yes
Ethernet	10, 100 Base-T
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS (Dynamic IP)
Network Surveillance Interface	Licensed software "Video Viewer", Internet Explorer, Mozilla Firefox or Google Chrome web browser, QuickTime player Network Surveillance Interface (10 users access simultaneously)
Remote Independent Operation	Yes
Event Notification	By FTP / E-Mail
R.E.T.R. (Remote Event Trigger Recording)	Yes
IR Remote Control	Yes
Mobile Surveillance	Yes
Motion Detection Area	16 × 12 grids per channel
Motion Detection Sensitivity	4 adjustable parameters for accurate detection
PTZ Control	Yes
External Alarm	16 inputs, 1 output
Picture Zoom	2 x digital zoom
User Level	Administrator & Operator
Video Loss Detection	Yes
Camera Title	Supports up to 6 letters
Video Adjustable	Hue / Color / Contrast / Brightness
Power Source (±10%)	19v DC
Power Consumption (±10%)	<64W
Operating Temperature	10 ~ 40°C (50 ~ 104°F)
System Recovery	System auto recovery after power failure
Dimensions	432(W) × 90(H) × 326(D) mm

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Cameras

EverFocus

● ECOR 264x1-4: 4-channel Pentaplex H.264 DVR

The new compact Everfocus ECOR264 DVR series offers H.264 compression for efficient disk storage and network bandwidth conversion.

Ideal for small to medium instalation applications the ECOR range include high specification features normally found on more expensive recorders including mobile viewing allowing you to check your home and business while on the go.

All ECOR DVRs are equipped with a simple graphical user interface for quick and easy configuration.

Features:

- User-friendly graphic user interface (GUI) with easy mouse or front panel operation
- Multi-language menu operation
- Express setup for quick installation in standard applications
- Audio recording capability*
- Latest H.264 compression technology
- Real time recording and playback rate for all cameras
- Individual recording settings for each channel
- Pentaplex operation for simultaneous recording, playback, archiving, live view and network access
- Snapshot search function
- Data archiving via USB 2.0 port or built in DVD-RW drive*
- Programmable motion detection area (22 x 18) for each channel
- Local (through USB mouse) and network PTZ control
- Fast network video transmission with dual stream for mobile phone streaming (3GPP)
- Network operation independent from local operation
- Event notification incl. e-mail alarm and network alarm with optional PowerCon 4.x software
- Watchdog function with notification options
- Optional RS-485 remote control (EKB 500)
- Free EverFocus DDNS service: DDNS account registration directly from DVR setup

    * feature, function depending on DVR model

Delivery includes IR remote control... and mouse

Specifications:

Model:	ECOR 264 x 1–4
Video format	PAL, CCIR
Display format main monitor	1, 4 x multiscreen, PiP
Display format call monitor	1, 4 x multiscreen, sequence
Video input	4 inputs 1 Vp-p composite PAL, BNC, autom. 75Ω termination
Video output	4 loop-through outputs, 1 Vp-p at 75Ω, 1 main monitor output, 1 Vp-p at 75Ω, 1 main monitor output VGA 800 x 600, 15-pin Sub-D, 1 multiplex call monitor output,1 Vp-p at 75Ω, BNC
Video compression	H.264
Display resolution VGA output	800 x 600
Harddisk storage	up to 2 x internal 8,9 cm (3,5") SATA harddisks OR up to 1x removable 8,9 cm (3,5") SATA harddisk*
Recording resolution	704 x 576, 704 x 288, 352 x 288
Recording rate	1 ~ 100 IPS for all resolutions
	1 ~ 25 IPS individual setup per channel for normal and event recording (remaining rate to be distributed among remaining channels)
Recording modes	continuous, schedule or event recording
Playback search	via date/time or event, smart search incl. snapshot search function
Video pause	Yes
Video loss detection	Yes
Motion detection	yes, with configurable detection area (22 x 18) and sensitivity
Event log	Yes
Alarm	4 alarm inputs, 4 alarm outputs
Audio	4 line inputs, 1 line output*
Setup	On-screen display with graphic user interface (GUI)
Control	USB mouse control, front panel control, IR remote control, optional: network, RS-485 keyboard EKB 500
Timer	Built-in real time clock
Title	16-characters title generator for each camera
Archive	USB 2.0 interface, internal DVD-RW drive*
Ethernet	RJ45 network connector
Interfaces	1 x RS-232 (9-pin Sub-D), 1 x RS-485 screw terminal connector
Password protection	3 levels with individual user rights assignment
Watchdog function	For cooler fan, HDD status, HDD temperature, recording and HDD fault
Power source	12v DC, via external power supply 100 ~ 240v AC
Power consumption	40W max
Ambient temperature	0 ~ +40°C
Dimensions	355(W) x 71(H) x 353(D) mm
Weight	4kg (w/o HDD)

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Cameras

EverFocus

- **ECOR 264x1-9:** 9-channel Pentaplex H.264 DVR

The new compact Everfocus ECOR264 DVR series offers H.264 compression for efficient disk storage and network bandwidth conversion.

Ideal for small to medium instalation applications the ECOR range include high specification features normally found on more expensive recorders including mobile viewing allowing you to check your home and business while on the go.

All ECOR DVRs are equipped with a simple graphical user interface for quick and easy configuration.

Delivery includes IR remote control... and mouse

Features:

- User-friendly graphic user interface (GUI) with easy mouse or front panel operation
- Multi-language menu operation
- Express setup for quick installation in standard applications
- Audio recording capability*
- Latest H.264 compression technology
- Real time recording and playback rate for all cameras
- Individual recording settings for each channel
- Pentaplex operation for simultaneous recording, playback, archiving, live view and network access
- Snapshot search function
- Data archiving via USB 2.0 port or built in DVD-RW drive*
- Programmable motion detection area (22 x 18) for each channel
- Local (through USB mouse) and network PTZ control
- Fast network video transmission with dual stream for mobile phone streaming (3GPP)
- Network operation independent from local operation
- Event notification incl. e-mail alarm and network alarm with optional PowerCon 4.x software
- Watchdog function with notification options
- Optional RS-485 remote control (EKB 500)
- Free EverFocus DDNS service: DDNS account registration directly from DVR setup

    * feature, function depending on DVR model

Specifications:

Model:	ECOR 264 x 1–4
Video format	PAL, CCIR
Display format main monitor	1, 4, 6, 8, 9 x multiscreen, PiP
Display format call monitor	1, 4, 9 x multiscreen, sequence
Video input	9 inputs 1 Vp-p composite PAL, BNC, autom. 75Ω termination
Video output	9 loop-through outputs, 1 Vp-p at 75Ω, 1 main monitor output, 1 Vp-p at 75Ω, 1 main monitor output VGA 800 x 600, 15-pin Sub-D, 1 multiplex call monitor output, 1 Vp-p at 75Ω, BNC
Video compression	H.264
Display resolution VGA output	800 x 600
Harddisk storage	up to 2 x internal 8,9 cm (3,5") SATA harddisks OR up to 1x removable 8,9 cm (3,5") SATA harddisk*
Recording resolution	704 x 576, 704 x 288, 352 x 288
Recording rate	1 ~ 225 IPS (352 x 288) 1 ~ 200 IPS (704 x 288) 1 ~ 100 IPS (704 x 576)
	1 ~ 25 IPS individual setup per channel for normal and event recording (remaining rate to be distributed among remaining channels)
Recording modes	continuous, schedule or event recording
Playback search	via date/time or event, smart search incl. snapshot search function
Video pause	Yes
Video loss detection	Yes
Motion detection	yes, with configurable detection area (22 x 18) and sensitivity
Event log	Yes
Alarm	9 alarm inputs, 4 alarm outputs
Audio	4 line inputs, 1 line output*
Setup	On-screen display with graphic user interface (GUI)
Control	USB mouse control, front panel control, IR remote control, optional: network, RS-485 keyboard EKB 500
Timer	Built-in real time clock
Title	16-characters title generator for each camera
Archive	USB 2.0 interface, internal DVD-RW drive*
Ethernet	RJ45 network connector
Interfaces	1 x RS-232 (9-pin Sub-D), 1 x RS-485 screw terminal connector
Password protection	3 levels with individual user rights assignment
Watchdog function	For cooler fan, HDD status, HDD temperature, recording and HDD fault
Power source	12v DC, via external power supply 100 ~ 240v AC
Power consumption	40W max
Ambient temperature	0 ~ +40°C
Dimensions	355(W) x 71(H) x 353(D) mm
Weight	4kg (w/o HDD)

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Cameras

EverFocus

● **ECOR 264x1-16:** 16-channel Pentaplex H.264 DVR

The new compact Everfocus ECOR264 DVR series offers H.264 compression for efficient disk storage and network bandwidth conversion.

Ideal for small to medium instalation applications the ECOR range include high specification features normally found on more expensive recorders including mobile viewing allowing you to check your home and business while on the go.

All ECOR DVRs are equipped with a simple graphical user interface for quick and easy configuration.

Features:

- User-friendly graphic user interface (GUI) with easy mouse or front panel operation
- Multi-language menu operation
- Express setup for quick installation in standard applications
- Audio recording capability*
- Latest H.264 compression technology
- Real time recording and playback rate for all cameras
- Individual recording settings for each channel
- Pentaplex operation for simultaneous recording, playback, archiving, live view and network access
- Snapshot search function
- Data archiving via USB 2.0 port or built in DVD-RW drive*
- Programmable motion detection area (22 x 18) for each channel
- Local (through USB mouse) and network PTZ control
- Fast network video transmission with dual stream for mobile phone streaming (3GPP)
- Network operation independent from local operation
- Event notification incl. e-mail alarm and network alarm with optional PowerCon 4.x software
- Watchdog function with notification options
- Optional RS-485 remote control (EKB 500)
- Free EverFocus DDNS service: DDNS account registration directly from DVR setup

     * feature, function depending on DVR model

Delivery includes IR remote control...   and mouse

Specifications:

Model:	ECOR 264 x 1–4
Video format	PAL, CCIR
Display format main monitor	1, 4, 6, 8, 9, 10, 13, 16 x multiscreen, PiP
Display format call monitor	1, 4, 9, 16 x multiscreen, sequence
Video input	16 inputs 1 Vp-p composite PAL BNC, autom. 75Ω termination
Video output	16 loop-through outputs, 1 Vp-p at 75Ω, 1 main monitor output, 1 Vp-p at 75Ω, 1 main monitor output VGA 800 x 600, 15-pin Sub-D, 1 multiplex call monitor output, 1 Vp-p at 75Ω, BNC
Video compression	H.264
Display resolution VGA output	800 x 600
Harddisk storage	up to 2 x internal 8,9 cm (3,5") SATA harddisks OR up to 1x removable 8,9 cm (3,5") SATA harddisk*
Recording resolution	704 x 576, 704 x 288, 352 x 288
Recording rate	1 ~ 400 IPS (352 x 288) 1 ~ 200 IPS (704 x 288) 1 ~ 100 IPS (704 x 576)
	1 ~ 25 IPS individual setup per channel for normal and event recording (remaining rate to be distributed among remaining channels)
Recording modes	continuous, schedule or event recording
Playback search	via date/time or event, smart search incl. snapshot search function
Video pause	Yes
Video loss detection	Yes
Motion detection	yes, with configurable detection area (22 x 18) and sensitivity
Event log	Yes
Alarm	16 alarm inputs, 4 alarm outputs
Audio	4 inputs, 1 line output
Setup	On-screen display with graphic user interface (GUI)
Control	USB mouse control, front panel control, IR remote control, optional: network, RS-485 keyboard EKB 500
Timer	Built-in real time clock
Title	16-characters title generator for each camera
Archive	USB 2.0 interface, internal DVD-RW drive*
Ethernet	RJ45 network connector
Interfaces	1 x RS-232 (9-pin Sub-D), 1 x RS-485 screw terminal connector
Password protection	3 levels with individual user rights assignment
Watchdog function	For cooler fan, HDD status, HDD temperature, recording and HDD fault
Power source	12v DC, via external power supply 100 ~ 240v AC
Power consumption	40W max
Ambient temperature	0 ~ +40°C
Dimensions	355(W) x 71(H) x 353(D) mm
Weight	4kg (w/o HDD)

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DVRs

EverFocus

• Paragon 264x4-16: 16-channel D1 Real-Time H.264 Digital Video Recorder

The latest EverFocus Paragon H.264 full size digital video recorder is based on H.264 compression technology resulting in enhanced recording capacity and improved network image transmission speed. The main monitor output offers a true 1080i HDMI digital output to deliver stunning images from any resolution which enhances motion reproduction.

Comprehensive features and extended record settings allow universal application of this DVR series. Easy express configuration using a graphical user interface for setup, archive, search and playback. Available as a 16 channel unit with DVD burner and optimal internal or hot swap HDDs.

Includes IR Remote Control.

Features:

- D1 real-time recording and playback for all cameras
- HDMI video output with full HD resolution (1080p)
- Latest H.264 compression technology
- User-friendly graphic user interface (GUI) with easy mouse or front panel operation
- Multi-language menu operation
- Express setup for quick installation in standard applications
- Audio recording for all 16 channels
- Separately configured HDMI 1080p and VGA/BNC main monitor outputs and additional call monitor
- Individual recording settings for each channel incl. holiday calendar, express schedule and pre-alarm
- Pentaplex operation for simultaneous recording, playback, archiving, live view and network access
- Snapshot search function
- Data archiving via USB 2.0 port, network or built in DVD-RW drive*
- Programmable motion detection area (22 x 16) for each channel
- Local (through USB mouse) and network PTZ control
- Fast network video transmission with dual stream for mobile phone streaming (3GPP)

Specifications:

Model:	Paragon 264 x 4–16
Video format	PAL, CCIR
Display format main monitor	VGA / BNC: 1, 4, 9, 10, 13, 16 x multiscreen, PiP // HDMI: 1, 4, 6, 8, 9, 12, 16 x multiscreen
Display format call monitor	full screen, 4 x multiscreen, sequence (live)
Display format HD monitor	1920 x 1080 (full HD 1080p)
Display format VGA monitor	1024 x 768
Main/call monitor assignment monitor HDMI	Option 1: main monitor VGA and BNC (simultaneous view) and call Option 2: main monitor HDMI and call monitor VGA and BNC (simultaneous view)
Video input	16 inputs 1 Vp-p composite PAL, BNC, autom. 75Ω termination
Video output	16 loop-through outputs, 1 Vp-p at 75Ω, BNC 1 main monitor output, 1 Vp-p at 75Ω, BNC 1 main monitor output VGA 1024x768, 15-pin Sub-D 1 call monitor output, 1 Vp-p at 75Ω, BNC 1 HDMI output 1920 x 1080 (1080p)
Video compression	H.264
Harddisk storage	Up to 4 x internal 8.9cm (3.5") SATA harddisks OR up to 2 x removable 8.9cm (3.5") SATA harddisks*
Recording resolution	704 x 576, 704 x 288, 352 x 288
Recording rate	1 ~ 400 IPS for all resolutions individual setup per channel for normal and event recording (remaining rate to be distributed among remaining channels)
Recording modes	Continuous, schedule (with holiday calendar) or event recording
Playback search	Via date/time or event, smart search incl. snapshot search function
Video pause	Yes
Video loss detection	Yes
Motion detection	Yes, with configurable detection area (22x16) and sensitivity
Event log	Yes
Pre-alarm	Yes
Alarm	16 alarm inputs, 4 relay outputs
Audio	16 line inputs, 1 line output
Setup	On-screen display
Control	USB mouse control, front panel control with jog/shuttle, IR remote control, network; optional: RS-485 keyboard EKB 500
Timer	Built-in real time clock with automatic time synchronisation via global NTP server through Internet
Title	12-characters title generator for each camera
Archive	USB 2.0 interface, internal DVD-RW drive*
Ethernet	RJ45 network connector
Interfaces	1 x RS-232 (9-pin Sub-D), 1 x RS-485 screw terminal connector
Password protection	3 levels
Watchdog function	for cooler fan, HDD status, HDD temperature, recording and HDD fault
Power source	100 ~ 240v AC
Power consumption	60W max
Ambient temperature	0 ~ +40°C
Dimensions	430(W) x 95(H) x 410(D) mm
Weight	6.8kg (w/o HDD)

CCTV
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AVTECH

- **AVP101:** Multi-Function Keyboard Controller

Full–function keyboard controller for use with the AVTech range of DVRs, PTZs and Speed Domes.

Features:

- Controls up to 64 devices through one keyboard controller
  (Devices such as the PTZs, Speed Domes and DVRs)
- User-friendly button placement & LCD touch panel (128 x 64 pixels)
  for easy operation
- Network upgrade available for future scalability
- Supports multi-protocols
- Password protection to prevent unauthorized intruder
- Built-in microphone for broadcast function

Specifications:

Model:	AVP101
Device Control	PTZ camera & DVR…etc.
Remote Control	RS-485
Multi-Protocols:	Yes
Baud Rate	2400 ~ 115200
LCD Display	128*64
Ethernet Port	10, 100 Base-T
External I/O Port	9 Pin, D-Sub
Input Voltage	12v DC
Power Consumption	<2W
Operating Temperature	0° ~ +40°C
Operating Humidity	<95%
Dimensions	380(W) x 180(H) x 95(D) mm

F *EverFocus*

- **EKB-500:** Multi-function Keyboard Controller

Full–function keyboard controller for use with the complete EverFocus product range and other leading brand Pelco D/Pelco P compatible PTZs and Speed Domes.

Features:

- Use of EEPbus for simultaneous control of DVRs and speed domes on one single RS-485 bus
- Capable of controlling speed dome cameras and DVRs
- 3D joystick control of PTZ function
- Jog/shuttle DVR control
- Matrix control (EverFocus DVR series' products)
- LCD display (20 x 2 lines), illuminated
- Multi-protocol support (EverFocus, Pelco-P/D, Samsung (EI), EQ 2700 S, Panasonic)
- Password protection
- Ergonomic buttons placement with sound indication for easy usage
- OSD access to connected devices
- Two independent RS-485 communication ports with selectable baud rate
- Camera / monitor mapping for easy reorganization
- Housing allows countersunk installation

Specifications:

Model:	EKB–500
Keys	48
Joystick	3D PTZ function control
Jog/shuttle	DVR control
Display	LCD 2 lines with 20 characters each
Baud rate	1.200 ~ 38.400
Serial interfaces	RS-232 (service) / 2 x RS-485
Protocols	Pelco-P / Pelco-D / EverFocus / Samsung (EI.) / EQ 2700 S / Panasonic
Devices	Control of speed dome and DVR
Cascading	Up to 8 keyboards addressable
Wiring box	Yes
Supported DVR models	Paragon 16, Paragon 264x4 ECOR 8, 4, ECOR 264 x 1~16, -9, -4 EDR 1640 / 1610 / 920 / 910 EDR 810 H / 810 M / 410 H / 410 M EDSR 1600 / 900 / 600 / 400 H / 400 M / 100 H / 100 M
Power source	12v DC, via included power supply 230v AC
Power consumption	10W max
Ambient temperature	0° ~ +40°C
Dimensions	360(W) x 110(H) x 200(D) mm
Weight	1.5kg

AVTECH

- **AVK-T1:** DCCS Keyboard (Individual Camera) Control Box

Features:

- Current non-DCCS surveillance system upgrade to control and configure DCCS devices
- Simple keypad design for intuitive menu operation
- Alarm output & RS485 control support
- OSD available for easy operation
- Compact unit

Specifications:

Model:	AVK–T1
Power	7.5v ~ 12v DC
Video Input	DCCS Camera
Video Output	1.0 Vp-p Composite, 75Ω
Alarm Output	1 Alarm Output
Remote Control I/O	RS-485
OSD	Yes
Dimensions	380(W) x 180(H) x 95(D) mm

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'EagleEyes' Mobile Surveillance Software   426

AVTECH

• **'Eagle Eyes'** Remote Surveillance Application

Making full use AV Tech's integrated IVS Range funtionality, 'Eagle Eyes' software provides fast, powerful control and monitoring of your CCTV/ surveillance system in the palm of your hand, directly from your smart phone!

5-Sec Active Push Notification

When an event happens and is detected by our human detection camera, this DCCS DVR will immediately send a push notification to your iPhone which will then activate our mobile surveillance software, EagleEyes, automatically for remote access within 5 seconds.

Event Search and Playback

Remote event search and playback are available from your Smartphone, allowing you to check all important events at any time, from anywhere.
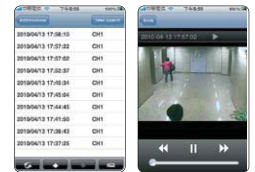
Flow Counting

In "Address Book": select the item which you want to activate the flow counting function and touch the second button from the bottom right side to enter the month mode.

In the month mode: Place the Smartphone horizontally to display the bar chart. To enter the day mode, touch one of the dates; to enter the time mode, touch one of the time ranges.

Touch Control & Icon Use

Touch Control & Icon Use: Intuitive touch control with easy icon use to manage and control all power functions on IVS products remotely via EagleEyes

Slight Zoom-in | Slight Zoom-out | Auto Tracking
Smart Zoom 10 | IR LED Mode | Preset Point

AVTECH 'Eagle Eyes' Remote Surveillance Application; avaliable free at iTunes and Android Market.

Specifications:

EagleEyes	Lite	Plus
Comparison of Features/Versions		
Address Book	1	10
Download playback	N	Y
Auto playback after an event alarm is triggered	Y	Y
Time Search	N	Y
People Counting	Y	Y
Smart Zoom Control	Y	Y
IR On/Off Control	Y	Y
PTZ Auto Tracking Control	Y	Y
PTZ Preset Point Setting	Y	Y
Real Time Video Streaming	Y	Y
Real Time Audio Streaming	Y	Y
Video Quality Control	Y	Y
Auto Re-login	Y	Y
Push Notification	Y	Y
PTZ Hot Point Control	Y	Y
Touch to zoom in/out in PTZ mode	Y	Y
Double-Click to zoom max in PTZ mode	Y	Y

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Ag neovo

- **TS-17R:** 17" Touch Screen Display

A stylish 17" touch screen display with superb touch panel sensitivity and long-term durability built to last in demanding point-of-sale environments.

The TS-17R provides durable touch screen functionality and features highly accurate 5-wire resistive touch technology. The TS-17R's slim design demands less space than competing touch screen displays, and the VESA compliant design makes for easy mounting in a variety of environments.

The TS-17R is expressly designed for use in point-of-sale systems, information kiosks, museum displays and other high-traffic public environments.

Features:

- 17" scratch resistant touch panel
- 5-wire resistive touch technology
- SXGA 1280 x 1024 resolution
- Slim bezel design
- Sharp 800:1 contrast ratio
- High 300 cd/m^2 brightness
- Lifetime 35 million finger-touch hits
- 100,000 characters input stability
- Dual serial touch interface
- Auto-adjustment for optimal settings
- User-friendly OSD with lockable key function
- Kensington® security socket
- VESA compliant for wall/arm mounting

VESA compliant design provides for an unlimited array of mounting options

Scratch resistant touch panel with 5-wire Resistive touch technology

TS-17R provides dual serial touch interface for RS-232 and USB

Specifications:

Model:	TS–17R
Panel -	
Panel Type	TFT LCD
Panel Size	17.0" (432mm)
Max. Resolution	SXGA 1280 x 1024
Pixel Pitch	0.264mm
Brightness	300 cd/m2 (Typical)
Contrast Ratio	800:1 (Typical)
Surface Treatments	Hard Coating (3H), Anti-glare Treatment
Viewing Angle	160°(H) x 160°(v) (Typical)
Display Colour	16.2M
Response Time	4 ms (GTG)
Panel Life Time	50,000 hrs (Minimum)
Frequency (H/V)	H: 30 ~ 80kHz
	V: 56 ~ 75Hz
Max. Pixel Clock	140MHz
Input -	
Touch Interface	8-Pin, Mini Dim
Analogue	15-Pin, D-Sub
Digital	24-Pin, DVI-D
Power -	
AC-DC Adaptor	External
Power	100 - 240v AC, 50 - 60 Hz
Consumption	<42W (On)
	<2W (Stand-by)
	<1W (Off)
Touch Screen -	
Technology	5-wire Resistive
Optical Transmission	>80%
Positional Accuracy	<1% Deviation Error
Panel Resolution	1024 x 1024
Active Force	<300g
Panel Interface	Dual RS-232/USB interface
Glass Thickness	2.1 mm
Life Performance	35 million hits (finger)
Plug & Play - VESA	DCC 2B ; DCC/CI
Operating Conditions -	
Temperature	0° ~ 40°C
Humidity	10% ~ 90%
Mounting - VESA FPMPMI	Yes (100 mm)
Tilt	5° ~ 25° (+5° when bracket hooked)
Dimensions	436(W) x 427(H) x 200(D) mm
Weight	7.5kg

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SC-17: 17" Surveillance Display Screen

A cost-effective 17" surveillance display with the quality, connectivity and performance essential for any security environment.

With the AG Neovo SC-17, security centres can keep an eye on budgets without losing sight of performance.

Digital and analogue video inputs, including looping BNC I/O, minimise installation cost. Auto NTSC/PAL detection, settings key lock and auto settings adjustment reduce maintenance hassle. Quick signal-switching and rapid response time improve surveillance efficiency, while built-in speakers provide an additional level of security.

All this and more make the SC-17 the perfect value display choice for any security environment.

Features:

- High 1280 × 1024 SXGA resolution
- Anti-Burn-in™ technology
- Video inputs (BNC in x 1, BNC out x 1)
- Looping video inputs for multiple connections
- Quick signal-switching time (≤ 0.8 sec)
- NTSC/PAL auto-detection
- Selectable signal source
- PC compatible
- Built-in speakers
- Key lock function
- Auto-adjustment for optimal setting
- Security socket
- VESA standard wall mount

Built-in speakers enable more rigorous security monitoring

Looping video inputs allow multiple display connections

Video versatility, including VGA, DVI, S-Video and BNC In/Out

Specifications:

Model:	SC–17
Panel -	
Panel Type	TFT LCD
Panel Size	17.0" (433mm)
Max. Resolution	SXGA 1280 x 1024
Pixel Pitch	0.264mm
Brightness	250 cd/m2 (Typical)
Contrast Ratio	1000:1 (Typical)
Viewing Angle	170°(H) x 160°(v) (Typical)
Display Colour	16.7M
Response Time	3ms (GTG)
Frequency (H/V)	H: 31 ~ 80kHz
	V: 50 ~ 75Hz
Max. Pixel Clock	140MHz
Input -	
Analogue	15-Pin, D-Sub
Digital	24-Pin, DVI-D
CVBS	BNC x 1
S-Video	4-Pin mini DIN
Out - CVBS	BNC x 1 (Loop through)
Audio -	
Audio In	3.5mm Audio Line-in
Audio Out	3.5 mm Audio Line-in
Speaker	1W x 2
Power -	
AC-DC Adaptor	External
Power	100 ~ 240v AC, 50 ~ 60Hz
Consumption	<26 W(On)
	<1.5 W(Off)
Plug & Play - VESA	DCC 2B
Operating Conditions -	
Temperature	0° ~ 40°C
Humidity	10% ~ 85%
Mounting - VESA FPMPMI	Yes (100mm)
Tilt	-5° ~ +15°
Dimensions	372(W) x 360(H) x 164(D) mm
Weight	3.6kg

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• **SC-19:** 19" Surveillance Display Screen

A value 19" surveillance display with rapid response time, quick signal-switching and robust video support for security and control centre environments.

For a cost-effective surveillance display solution, look no further than the AG Neovo SC-19. A bright, high resolution full colour screen with quick signal-switching and 3ms response time ensures sharp, smooth video playback. Looping BNC video inputs and NTSC/PAL support maximise flexibility for system integration.

And with built-in speakers, stylishly slim profile and VESA mountability, the SC-19 will look just as attractive as its amazingly affordable price.

Features:

- High 1280 × 1024 SXGA resolution
- Anti-Burn-in™ technology
- Video inputs (BNC in x 1, BNC out x 1)
- Looping video inputs for multiple connections
- Quick signal-switching time (≤ 0.8 sec.)
- NTSC/PAL auto-detection
- Selectable signal source
- PC compatible
- Built-in speakers
- Key lock function
- Auto-adjustment for optimal setting
- Security socket
- VESA standard wall mount

Built-in speakers enable more rigorous security monitoring

Looping video inputs allow multiple display connections

Video versatility, including VGA, DVI, S-Video and BNC In/Out

Specifications:

Model:	SC–19
Panel -	
Panel Type	TFT LCD
Panel Size	19.0" (483 mm)
Max. Resolution	SXGA 1280 x 1024
Pixel Pitch	0.294mm
Brightness	250 cd/m² (Typical)
Contrast Ratio	1000:1 (Typical)
Viewing Angle (H/V)	170°/160° (Typical)
Display Colour	16.7M
Response Time	3 ms (GTG)
Frequency (H/V)	H: 31 ~ 80kHz / V: 50 ~ 75Hz
Max. Pixel Clock	140MHz
Input -	
Analogue	15-Pin, D-Sub
Digital	24-Pin, DVI-D
CVBS	BNC x 1
S-Video	4-Pin mini DIN
Out - CVBS	BNC x 1 (Loop through)
Audio -	
Audio In	3.5mm Audio Line-in
Audio Out	3.5 mm Audio Line-in
Speaker	1W x 2
Power -	
AC-DC Adaptor	External
Power	100 ~ 240v AC, 50 ~ 60Hz
Consumption	< 26 W (On) / < 1.5 W (Off)
Plug & Play - VESA	DCC 2B
Operating Conditions -	
Temperature	0°C ~ 40°C
Humidity	10% ~ 85%
Mounting - VESA FPMPMI	Yes (100 mm)
Tilt	-5° ~ +15°
Dimensions	420(W) x 406(H) x 190(D) mm
Weight	5.5kg

neovo

- ## RX-W32: 32" Widescreen Full HD Display Screen

A large-format, featured-packed 32" widescreen display protected by NeoV™ Optical Glass and a durable metal frame for serious 24/7 security environments.

Introducing the RX-W32, a large-format hard glass display designed for the serious surveillance centre. A high resolution 32" screen, image-enhancing 3D Comb Filter / 3D Deinterlace technology, and versatile Picture-in-Picture (PIP) options provide sharp images and features security professionals need.

All this, plus protective NeoV™ Optical Glass and sturdy metal casing, makes the RX-W32 the most robust and advanced display choice for maximum surveillance performance.

Features:

- 1920 x 1080 Full HD resolution
- 5000:1 contrast ratio
- NeoV™ Optical Glass
- Anti-Burn-in™ technology
- Horizontal resolution up to 600TVL (NTSC), 620TVL (PAL)
- Smart Omni Viewer: PIP, PBP and VOV functions
- Built-in Image Enhancer: 3D Comb Filter / Deinterlace / Noise Reduction
- Multiple video inputs (BNC in x 2, BNC out x 2)
- RS-232 for individual and multi-display control
- Built-in HDCP allows HD-format video
- Power DC-out design to power connected peripherals
- Selectable aspect ratio for ultimate image: Native, Overscan, Underscan
- NTSC/PAL/SECAM video system support
- Quick signal-switching time (≤0.8 sec)
- IR remote control
- Durable metal housing
- VESA standard wall mount
- Rigorous screening of the components for mission-critical 24/7 applications

NeoV™ Optical Glass protects against scratches, impacts and other physical damage

Viewing versatility with Picture-in-Picture (PIP), Picture-by-Picture (PBP) and Video-on-Video (VOV)

Anti-Burn-in™ technology prevents image sticking

Multiple video inputs (VGA, DVI, dual BNC, S-Video and Component) allow for effortless system integration

Durable metal casing for enhanced strength and secure mounting

Specifications:

Model:	RX–W32
Panel -	
Panel Type	TFT LCD
Panel Size	31.6" (801 mm)
Max. Resolution	FHD 1920 x1080
Pixel Pitch	0.36375mm
Brightness	450 cd/m² (Typical)
Contrast Ratio	5000:1 (Typical)
Viewing Angle (H/V)	178°/178° (Typical)
Display Colour	16.7M
Response Time	6.5ms (GTG)
Horizontal resolution - TV Lines	600TVL (NTSC), 620TVL (PAL)
Frequency (H/V)	H: 24 ~ 82kHz, V: 50 ~ 85Hz
Input -	
VGA	15-Pin, D-Sub
DVI	24-Pin, DVI-D
CVBS	BNC x 2
S-Video	4-Pin mini DIN
Component(Y PbPr)	RCA x 2
Output -	
CVBS	BNC x 2
S-Video	4-Pin mini DIN
External Control -	
RS-232 in/out	9-Pin, D-Sub
Audio -	
Audio In	1 x stereo audio in for PC (3.5Ø), 1 x stereo audio in for CVBS (RCA), 1 x stereo audio in for S-Video (RCA), 2 x stereo audio in for YPbPr (RCA)
Audio Out	1 x stereo audio out for CVBS (RCA)
Speaker	2W x 2
Power -	
DC Output	12v, 350mA, DC jack 2.5Ø
Power	100 - 240v, 50 - 60Hz
Consumption	<120 W (On), <10 W (Off)
NeoV™ Optical Glass -	
Thickness	3.0mm (0.12")
Reflection Rate	< 1%
Transmission Rate	> 96%
Coating Hardness	> 9H
Operating Conditions -	
Temperature	0° ~ 40°C
Humidity	10% ~ 85%
Mounting - VESA FPMPMI	Yes (400 x 200 mm)
Dimensions -	
w/o base	788(W) x 478(H) x 101(D) mm
w/ base	788(W) x 541(H) x 170(D) mm
Weight -	
w/o base	16.8kg
w/ base	18.3kg

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• RX-W42: 42" Widescreen Full HD Display Screen

A full HD, full-featured 42" display protected by NeoV™ Optical Glass and Anti-Burn-in™ technology designed for the best run professional 24/7 security environments.

With a feature list as big as its 42" screen, the RX-W42 brings the ideal combination of size and specs to the professional security environment. Review highly-detailed, smooth and accurate images on a bright Full HD display with AG Neovo's Advanced Image Platform™. Save costs and time by taking advantage of multiple video inputs and convenient Picture-in-Picture (PIP) options.

And thanks to protective NeoV™ Optical Glass, Anti-Burn-in™ technology, long-life screen and a durable metal frame, these best-run security environments will also be some of the longest running.

Features:

- 1920 x 1080 Full HD resolution
- 4000:1 contrast ratio
- NeoV™ Optical Glass
- Anti-Burn-in™ technology
- Smart Omni Viewer: PIP, PBP & VOV functions
- Built-in Image enhancer: 3D Comb Filter/Deinterlace/Noise Reduction
- Multiple video inputs (BNC in x 2, BNC out x 2)
- RS-232 for individual and multi-display control
- Horizontal resolution up to 630TVL (NTSC), 650TVL (PAL)
- Built-in HDCP allows HD-format video
- Power DC-out design to power connected peripherals
- Selectable aspect ratio for ultimate image: Native, Overscan, Underscan
- NTSC/PAL/SECAM video system support
- Quick signal-switching time (≤0.8 sec)
- IR remote control
- Durable metal housing
- VESA standard wall mount
- Rigorous screening of the components for mission-critical 24/7 applications

Specifications:

Model:	RX–W42
Panel -	
Panel Type	TFT LCD
Panel Size	42.0" (1067mm)
Max. Resolution	FHD 1920 x 1080
Pixel Pitch	0.48455mm
Brightness	450 cd/m² (Typical)
Contrast Ratio	4000:1 (Typical)
Viewing Angle (H/V)	178°(H), 178°(v) (Typical)
Display Colour	16.7M
Response Time	6.5ms (GTG)
Horizontal resolution - TV Lines	630TVL (NTSC), 650TVL (PAL)
Frequency (H/V)	H: 24 ~ 82kHz, V: 50 ~ 85Hz
Input -	
VGA	15-Pin, D-Sub
DVI	24-Pin, DVI-D
CVBS	BNC x 2
S-Video	4-Pin mini DIN
Component(Y PbPr)	RCA x 2
Output -	
CVBS	BNC x 2
S-Video	4-Pin mini DIN
Audio -	
Audio In	1 x stereo audio in for PC (3.5Ø), 1 x stereo audio in for CVBS (RCA), 1 x stereo audio in for S-Video (RCA), 2 x stereo audio in for YPbPr (RCA)
Audio Out	1 x stereo audio out for CVBS (RCA)
Speaker	2W x 2
Power -	
DC Output	12v, 350 mA, DC jack 2.5Ø
Power	100 ~ 240v, 50 ~ 60Hz
Consumption	< (165) W (On), < (10) W (Off)
NeoV™ Optical Glass -	
Thickness	3.0mm (0.12")
Reflection Rate	<1%
Transmission Rate	>96%
Coating Hardness	>9H
Operating Conditions -	
Temperature	0°C ~ 40°C
Humidity	10% ~ 85%
Mounting - VESA FPMPMI	Yes (600 x 400 mm, 400 x 200 mm)
Dimensions -	
w/o base	1011(W) x 604(H) x 106(D) mm
w/ base	1011(W) x 667(H) x 190(D) mm
Weight -	
w/o base	27kg
w/ base	28.4kg

NeoV™ Optical Glass protects against scratches, impacts and other physical damage

Viewing versatility with Picture-in-Picture (PIP), Picture-by-Picture (PBP) and Video-on-Video (VOV)

Anti-Burn-in™ technology prevents image sticking

Durable metal casing for enhanced strength and secure mounting

Multiple video inputs (VGA, DVI, dual BNC, S-Video and Component) allow for effortless system integration

CYP ///

- **DS-42A22:** 2 x 2 Multi-Screen Video Wall System
- **DS-42A33:** 3 x 3 Multi-Screen Video Wall System
- **DS-42A44:** 4 x 4 Multi-Screen Video Wall System
- **DS-42A55:** 5 x 5 Multi-Screen Video Wall System
- **DS-MSC:** Multi-Screen Controller

Flexibility is the key to the CYP Digital Signage Solutions. There are three standard packages which provide a complete system solution for many commercial applications. The packages include a Single 42" screen option, 2x2, 3x3, 4x4 and a 5X5 complete digital signage system.

All CYP screen packages include built-in control modules and use the latest LED technology with screens operating at full HD resolutions of 1920 x 1080P, with bi-directional RS-232 control functionality enabled.

All package solutions are supplied with a full mounting system to enable the installer to secure the system to any wall or display area.

Features:

- Supports 4-Screen (2 x 2), 9-Screen (3 x 3), or 16-Screen (4 x 4), or 25-screen (5 x 5) video wall panel combinations
- Supports Full HD 1920 x 1080 resolution LCD panels
- Full two-way RS-232 Control
- Horizontal or Vertical Screen Orientation (both Mounting Kits available)
- Single Image or Independent Split Screen Images
- Independent Controller available for integration with third-party Screens
- 10mm Bezel
- ALSO AVAILABLE IN 47" 6mm Bezel option: Contact for details

Specifications:

DS–MSC (Multi–Screen Controller)	DS–42A22	DS–42A33	DS–42A44	DS–42A55
For use with third party screens to emulate a video wall. This controller will control the digital signage content for each screen on a video wall system using up to 16 screens. One controller is required per screen. If the user has only one HDMI or VGA source, then an appropriate Distribution Amplifier will be required to split the source signal to each of the Muilt-Screen Controllers.	2 x 2 Video Wall System 4 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 4 x Wallmount Kit 1 x 4-way splitter 1 x IR remote and cable	3 x 3 Video Wall System 9 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 9 x Wallmount Kit 1 x 10-way splitter 1 x IR remote and cable	4 x 4 Video Wall System 16 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 16 x Wallmount Kit 1 x 16-way splitter 1 x IR remote and cable	5 x 5 Video Wall System 25 x 42" 1080P LCD Screens (with HDMI & VGA Connections) 25 x Wallmount Kit 2 x 16-way splitter 1 x IR remote and cable

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EverFocus

- **EN 220:** TFT LCD Monitor with Service Kit

Field Service Kit for viewing camera images (focus, driection, etc) during installation.

High quality LCD screen with charger, battery and PSU supplied in padded zip case.

Specifications:

Model:	EN 220
Screen size	87 x 116 mm (5,6")
Effective display area	83.52 x 111.36 mm
Dot matrix	320 x 240
Pixel distance	0.116 x 0.348
Brightness	270 cd / m²
Video input	1Vp-p FBAS
Audio input	50mV (min.), stereo
Audio output	Built-in 4cm, 200mW speaker, stereo earphone
Control	Brightness, contrast, colour, volume
Power source	9 ~ 20v DC, via included power supply 230v AC
Power consumption	8W max. at 12v DC
Ambient temperature	0° ~ +50°C
Colour casing	Black
Delivery scope service kit	Bag, accumulator, charger, mains supply, cables
Dimensions	162(W) x 131(H) x 54(D) mm
Weight	2.95kg (incl. service kit)

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• Volt Stick 230Y: Instant Voltage Tester (230v)

The original and still the best, Volt Stick is an instant tester for safely checking the presence of an AC voltage, without making any disconnections in cables, wall sockets, fuses, circuit breakers, junction boxes, etc. No current flow is needed for correct operation.

The red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable.

All Volt Stick models are fully approved to IEC 61010-1, CAT111 1000v AC and CE.

Features:
- Locates breaks in cables
- Detects blown fuses inside plugs or fuse holders
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs
- Optimised for 230v AC

Specifications:

Model:	Volt Stick 230Y
Voltage range	220 ~ 230v AC
Sensitivity	Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 220v
Response Time	Immediate
Intrinsically Safe	No
Power Requirements	2 x Standard AAA alkaline batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III, 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.035kg (including batteries)

• Volt Stick SOUND: Instant Voltage Tester with Sounder (230v)

The Volt Stick SOUND features a detection buzzer for even greater clarification. Also ideal for 'detection round corners', in bright daylight and in awkward out of sight areas. High visibility green tube for ease of identification if dropped or hidden in the toolbox.

Features:
- Added Sounder feature
- Locates breaks in cables
- Detects blown fuses inside plugs or fuse holders
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs

Specifications:

Model:	Volt Stick SOUND
Voltage range	220 ~ 230v AC
Sensitivity	Functions @ 4mm distance from 2.5mm² conductor carrying 220v AC
Response Time	Immediate
Intrinsically Safe	No
Power Requirements	2 x Standard AAA alkaline batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III, 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.04kg (including batteries)

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● **Volt Stick PRO230:** Instant Voltage Tester
with Shielded Fork Tip (230v)

The PRO230 features a unique 'shielded' fork tip for highly selective
and accurate testing for presence of AC voltage in specific cables or
wires. Ideal for professional, close proximity testing and installation
work.

Features:

- Unique forked tip gives unsurpassed selectivity and
  reduces the risk of spurious indications
- Live cables can easily be detected in equipment cabinets, fuse boxes, etc
- Cables and connections can easily be checked in low voltage
  equipment too
- Extremely safe when measuring in junction boxes
- With the supplied field strength amplifier, anti-tamper, earthed outlets
  can be checked.
- Powerful red light in the tip to indicate voltage
- Fully insulated for safe use

Sensitivity without adaptor

Sensitivity with adaptor
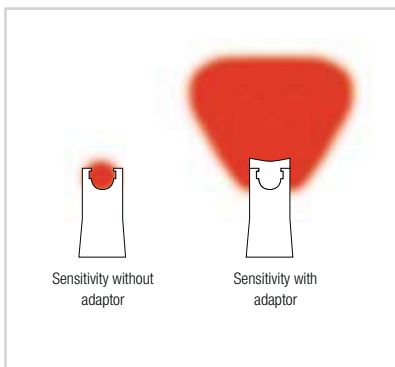
Specifications:

Model:	Volt Stick PRO230
Voltage range	230v AC
Sensitivity	Functions upon contact with cable carrying 220v AC
Response Time	Immediate
Intrinsically Safe	No
Power Requirements	2 x AAA (LR03) batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-10° ~ +50°C
Overvoltage	CAT III, 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.04kg (including batteries)

● **Volt Stick PRO12:** Instant Voltage Tester
with Sheilded Fork Tip (12 ~ 600v)

The PRO12 features a unique 'shielded' fork tip for highly selective and
accurate testing for presence of AC voltage in specific cables or wires.
Ideal for professional, close proximity testing and installation work.

Features:

- Unique forked tip (patented for) gives unsurpassed selectivity and reduces
  the risk of spurious indications
- Live cables can easily be detected in equipment cabinets, fuse boxes, etc
- Cables and connections can easily be checked in low voltage
  equipment too
- Extremely safe when measuring in junction boxes
- With the supplied field strength amplifier, anti-tamper, earthed outlets
  can be checked.
- Powerful red light in the tip to indicate voltage
- Fully insulated for safe use

Sensitivity without adaptor

Sensitivity with adaptor
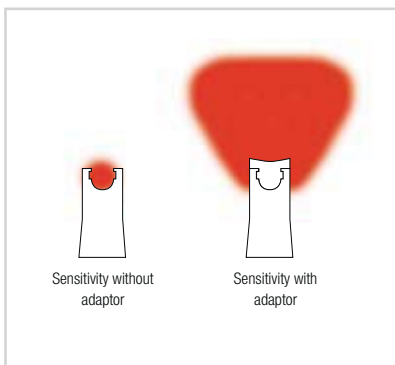
Specifications:

Model:	Volt Stick PRO12
Voltage range	12 ~ 600v AC
Sensitivity	Functions upon contact with cable carrying 220v AC
Response Time	Immediate
Intrinsically Safe	No
Power Requirements	2 x AAA (LR03) batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III, 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.04kg (including batteries)

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• Volt Stick 110: Instant Voltage Tester (110v)

This high sensitivity version of the Volt Stick provides instant, non contact checking for the presence of AC voltage down to 110v, without making any disconnections in cables, wall sockets, fuses, circuit breakers, junction boxes etc.

This 110v version is ideal for construction site temporary supplies and, of course, for use in mains testing in the USA.

The red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable.

Features:

- Locates breaks in cables
- Detects blown fuses inside plugs or fuse holders
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs
- Special flat tip for use on US-style sockets
- Optimised for 110v AC

Specifications:

Model:	Volt Stick 110
Voltage range	90 ~ 400v AC
Sensitivity	Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 110v
Response Time	Immediate
Intrinsically Safe	No
Power Requirements	2 x Standard AAA alkaline batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III, 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.035kg (including batteries)

• VSPU1: Volt Stick Proving Unit

This newly-developed Proving Unit has been specifically designed to test the functionality of the Volt Stick 230v range and LV50. The instrument internally generates a 220 ~ 240v source when the tip of a Volt Stick is inserted into the test portal of the Proving Unit.

Always test the operation of the Volt Stick with the Proving Unit prior to use and immediately following use to ensure the Volt Stick is operating correctly.

Suitable for use on Volt Sticks with a 4mm diameter tip that works on 220 ~ 240v, 50/60Hz AC supplies.

Features:

- Immediate functionality proving of Volt Stick 230v product range
- Simple, effective and lightweight unit
- Sealed, battery-powered unit
- Provides easy storage for a single Volt Stick unit

(Not suitable for PRO12, PRO 230 and 110v models)

Specifications:

Model:	VSPU1
Compatible with	Volt Stick 230Y, 230B, SOUND, LV50
Electrical Field Output	220 ~ 240v
Response Time	Immediate
Power Requirements	Battery powered, sealed unit
Dimensions	185(L) x 41(W) x 41(H) mm
Weight	0.2kg

SAGAB

- **Volt Stick EX110:** Instant Voltage Tester (110v) - Intrinsically Safe ⬡
- **Volt Stick EX230:** Instant Voltage Tester (230v) - Intrinsically Safe ⬡

These intrinsically-safe EX110 & EX230 versions are ATEX approved for use in hazardous areas such as chemical plants, oil refineries and off-shore rigs.

Features:
- Locates breaks in cables
- Detects blown fuses inside plugs or fuse holders
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs
- Intrinsically safe

Specifications:

Model:	Volt Stick EX110	Volt Stick EX230
Voltage range	110 ~ 230v AC	220 ~ 230v AC
Sensitivity	Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 110v	Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 240v
Response Time	Immediate	Immediate
Intrinsically Safe	Yes	Yes
Power Requirements	2 x Standard AAA alkaline batteries (supplied)	2 x Standard AAA alkaline batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C	-20 ~ +50°C
Overvoltage	CAT III 1000v AC	CAT III 1000v AC
Dimensions	145(L) x 18(Ø) mm	145(L) x 18(Ø) mm
Weight	0.035kg (including batteries)	0.035 kg (including batteries)

- **Volt Stick LV50:** Instant Voltage Tester (50v) - Intrinsically Safe ⬡

This product could save your life! This high sensitivity version (testing down to 50v) is also intrinsically safe, making it an essential 'life-saver' testing tool for utilities engineers as well as for use in hazardous areas such as chemical plants, oil refineries and off shore rigs.

Used as a safety device to make sure metallic surfaces, pipework and cables are safe from potentially lethal voltages.

Approvals:
EEx IB IICT4
Nemko 03ATEX 1456
Nemko 0470

Features:
- EEx approved voltage indicator for use in explosive environments
- Voltage indicator with safety handguard to avoid unintentional contact with live conductors
- Voltage range 50 ~ 1000v AC
- Fully insulated for safe use
- Intrinsically safe

Specifications:

Model:	Volt Stick LV50
Voltage range	50 ~ 1000v
Sensitivity	Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 50v
Response Time	Immediate
Intrinsically Safe	Yes
Power Requirements	2 x Standard AAA alkaline batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.035kg (including batteries)

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● **Magnet Stick:** Instant Magnetic Field Tester

The Magnet Stick provides safe and simple checking for the presence of magnetism.

Upon testing and without metallic contact, the lamp lights immediately where there is a magnetic field (e.g. an activated coil in a solenoid valve). Equipment can be tested without having to switch it off and magnetic coils can often be tested through their protective cover, saving hours of dismantling time.

The Magnet Stick responds to all kinds of magnetic fields from alternating or direct current, to permanent magnets.

Features:
- Powerful red light in the tip to indicate presence of a magnetic field
- Easy to use
- Solenoid valves in pneumatic and hydraulic control equipment can easily be tested
- Test relays with coils and electrically controlled solenoid valves in all types of vehicles and machines
- Test solenoid valves when servicing oil burners

Applications:
- Testing operating solenoid valves in pneumatic and hydraulic control equipment
- Testing relays with coils and electrically-controlled solenoid valves in all types of vehicles and machines
- Testing solenoid valves when servicing oil burners

Specifications:

Model:	Magnet Stick
Sensitivity	300 Gauss, (0,3 mT)V
Response Time	Immediate
Intrinsically Safe	No
Power Requirements	2 x AAA (LR03) batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III, 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.035kg (including batteries)

● **Magnet Stick EX:** Instant Magnetic Field Tester - Intrinsically Safe ⚠

The ATEX-Approved version of the Magnet Stick for use in hazardous areas such as chemical plants, oil refineries, offshore rigs and explosive enviroments.

Features:
- Powerful red light in the tip to indicate presence of a magnetic field
- Easy to use
- Solenoid valves in pneumatic and hydraulic control equipment can easily be tested
- Test relays with coils and electrically controlled solenoid valves in all types of vehicles and machines
- Test solenoid valves when servicing oil burners
- Intrinsically safe

Applications:
- Testing operating solenoid valves in pneumatic and hydraulic control equipment
- Testing relays with coils and electrically-controlled solenoid valves in all types of vehicles and machines
- Testing solenoid valves when servicing oil burners

Specifications:

Model:	Magnet Stick EX
Sensitivity	300 Gauss, (0,3 mT)V
Response Time	Immediate
Intrinsically Safe	Yes
Power Requirements	2 x AAA (LR03) batteries (supplied)
Relative Humidity	80% @ 30°C, 50% @ 40°C
Operating Temperature	-20 ~ +50°C
Overvoltage	CAT III 1000v AC
Dimensions	145(L) x 18(Ø) mm
Weight	0.035kg (including batteries)

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- **DMM902:** Pocket-Size Multimeter
- **DMM903:** Pocket-Size Multimeter
- **DMM904:** Pocket-Size Multimeter

A handy, pocket-sized everyday range of meters for every engineer, with the added benefit of a built-in Volt Stick and torch.

Despite their small size, these instruments have a very high safety approval (CAT IV 600v, CAT III 1000v). They are protected against overloading by an electronic fuse. When not in use, the test probes can be parked at the rear of the instrument body.

All DMM models are autoranging and have diode test, continuity buzzer, auto power off and ion battery indicator.

Features:

- LCD display with backlight
- Built-in non-contact AC voltage detector plus flashlight
- Measures voltage, resistance, diode function & continuity
- Double-moulded case
- CAT III 1000v, CAT IV 600
- Auto-ranging with auto power off
- Silicone test leads
- Protective holster

Extremely compact meters

Specifications:

Model:	DMM902	DMM903	DMM904
Display	2000-count	2000-count	4000-count
DC Voltage Ranges	0.1mv ~ 600v		
AC Voltage Ranges	1mv ~ 600v		
AC/DC Current	-	0.1μA ~ 200mA	0.1μA ~ 200mA
Resistance	0.1Ω ~ 20mΩ	0.1Ω ~ 20mΩ	0.1Ω ~ 40mΩ
Capacitance	-	-	1pF ~ 200μF
Frequency	-	-	0.001Hz ~ 10kHz
Measuring Rate	2 per second		
Dimension	54(W) x 104(H) x 36(D) mm		
Weight	0.14kg		
Power Supply	2 x AAA 1.5v batteries (inc)		
Approvals	CAT III 1000v, CAT IV 600v		
Safety Standards	EN 61010-1, CE, Pollution Degree II		

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- **SMM202:** Smart Multimeter
- **SMM203:** Smart Multimeter
- **SMM204:** Smart Multimeter

Smart Multimeters that automatically know what to measure.

If there is a voltage, the multimeter measures the voltage; if there is resistance, it measures resistance; Quite simply SMART.

SMM-202 and SMM-203 have smart measurement functionality, while SMM-204 also has an option for manual measurement selection. Functions such as diode testing, continuity buzzer and capacitance measurement can be selected at the touch of a button.

All instruments feature automatic shut-off to conserve battery life.

Instruments are supplied with batteries and thin, flexible silicone-insulated leads.

Features:

- Voltage AC/DC 0 ~ 600v (SMM 202, 203 & 204)
- Current AC/DC 0 ~ 4A (SMM 203 & 204)
- Resistance 0 ~ 40m Ohm (SMM 202, 203 & 204)
- Buzzer (<100 Ohm) (SMM 204 only)
- Capacitance 0.01nF ~ 4000 uF (SMM 204 only)
- Hold and Min-Max functions (SMM 204 only)

Specifications:

Model:	SMM202	SMM203	SMM204
Display	3 3/4 Digits, 4000 Counts, Updates 3sec		
AC/DC Voltage Ranges	0 ~ 500v		
AC/DC Current	-	0 ~ 4A	0 ~ 4A
Ohm	$0\Omega \sim 40m\Omega$		
Diode Test	-	-	Yes, approx 2.8v
Buzzer	-	-	Yes < approx 100Ω
Capacitance	-	-	0 ~ 4000μF
Max Voltage	Between any terminal and earth ground 600v RMS		
Overload Indication	'OL' displayed in top right of the LCD		
Dimension	84(W) 161(H) x x 30(D) mm		
Weight	0.21kg	0.21kg	0.21kg
Power Supply	2 x 1.5v AA alkaline (included)		
Safety Standards	Standards of IEC61010 Pollution Degree 2		

TENMARS

TM-1016: HVAC Auto-ranging Clamp Meter

Features:
- Jaw size 30mm
- Supplied with TP-03 Beaded temperature probe
- Data Hold
- Auto Range
- Backlit Display

Specifications:

Model:	TM–1016
Max Measuring Current	400A
Display Counts	4000 Count Backlit LCD
Max. Conductor Size	30mm
AC Current	0.1 ~ 4000uA, 0.01A~400A ±(2.0%+10)
DC Current	0.1 ~ 4000uA, ±(1.0%+2)
AC Voltage	1mv ~ 600v, ±(1.0%+3)
DC Voltage	mv ~ 600v, ±(0.8%+2)
Resistance	0.1 ~ 40MΩ, ±(0.8%+2)
Continuity Buzzer	Yes
Bargraph	Yes
Autorange	Yes
Auto Power OFF	Yes
Data Hold	Yes
Dimension	64(W) x 39(H) x 205(L) mm
Weight	0.28kg (including battery)
Power	2 batteries 1.5v AAA type

TM-27E: 600A AC/DC True RMS Digital Clamp Meter

Features:
- Jaw size 35mm
- Data Hold
- Auto Range
- Backlit Display

Specifications:

Model:	TM–27E
Max Measuring Current	600A
Display Counts	4000
Max Conductor Size	35mm
AC Current	0.1A ~ 600A, ±(2.0%+5)
DC Current	0.1A ~ 600A, ±(1.5%+5)
AC Voltage	0.1mv ~ 600v, ±(1.2%+7)
DC Voltage	0.1mv ~ 600v, ±(0.5%+3)
Resistance	0.1 ~ 40MΩ
Continuity Buzzer	Yes
Frequency	1Hz ~ 400kHz
Backlit	Yes
Autorange	Yes
Auto Power OFF	Yes
Data Hold	Yes
MAX/MIN	Yes
REL(ZERO)	Yes
Size	218(W) x 75(H) x 43(D) mm
Weight	0.38kg

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● **YF-8030A:** 1200A AC/DC Clamp Meter

Features:
- Jaw size 50mm
- 3¾ digit LCD with maximum reading 4000
- Low battery indicaton
- Max/Min hold key

Specifications:

Model:	YF–8030A
Max measuring current	1200A
Display counts	4000
Max conductor size	52mm
AC Current	0.1A ~ 1200A, ±(2.0% + 5)
DC Current	0.1A ~ 1200A, ±(1.5% + 5)
AC Voltage	1mv ~ 750v, ±(1.2% + 3)
DC Voltage	0.1mv ~ 1000v (Auto), ±(1.5% + 5)
Resistance	100mΩ ~ 40MΩ
Continuity buzzer	Yes
Diode	Test Volt, 3v
Frequency	0.01Hz ~ 500kHz
AC/DC WATT	------
Autorange	Yes
Bargraph	Yes
Auto power OFF	Yes
Peak hold	------
Data hold	------
MAX/MIN	Yes
REL(ZERO)	Yes
Size	221(W) x 62(H) x 35(D) mm
Weight	0.5kg

● **YF-20:** Analogue Sound Level Meter

Features:
- Analogue display with quick and accurate measurement
- Compressed scales minimize range switching
- Unique selecting switch for easy operation by one-hand
- Special integrated circuit for long stability
- Battery test function

Specifications:

Model:	YF–20
Ranges	LO (40 ~ 80dB), HI (80 ~ 120dB)
Microphone	Capacitance microphone
Current	5mA (when operating)
Consumption	14mA (BATT test)
Size	65(W) x 38(H) x 160(L) mm
Weight	0.16kg

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● **TM-100:** Sound Level Calibrator

Features:
- Setting standard sound level at 94dB and 114dB
- According Standard: ANSI S1.4-1984 and IEC 942 1988 Class 2
- Low battery indicator

Specifications:

Model:	TM–100
Size	48(Ø) x125(H) mm
Weight	0.29kg

Output Frequency	Test Condition	Accuracy
1kHz ±4%	a. Environment Temp: 20ºC b. Relative humidity: 65% c. Atmospheric pressure: 1013 mbar	±0.5dB

● **TM-101:** Professional Digital Sound Level Meter

Features:
- Fast/Slow sampling - with hold feature
- Analogue AC/DC output
- Alarm feature
- DC power input (PSU not supplied)
- Approved to IEC-651 Type2 and ANSI S1.4 Type2
- 1/4" UNC tripod mount fitting
- Supplied in carry case
- Supplied with batteries

Specifications:

Model:	TM–101
Test ranges	30 ~ 130dB, LO: 30~80dB, MED: 50 ~ 100dB, HI: 80 ~ 130dB
Accuracy	±1.5dB (ref 94dB @ 1kHz)
Resolution	0.1dB
Microphone	1/2 " Electret condenser microphone
Frequency Weighting	AC
Time Weighting	Fast/Slow
Dynamic Range	50dB
Frequency Range	31.5Hz ~ 8kHz
Size	80(W) x 280(H) x 32(D) mm
Weight (including battery)	0.3kg

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● **TM-102:** Digital Sound Level Meter

Features:

- Fast/Slow sampling - with hold feature
- Analogue AC/DC output
- Alarm feature
- DC power input (PSU not supplied)
- Approved to IEC-651 Type2 and ANSI S1.4 Type2
- 1/4" UNC tripod mount fitting
- Supplied in carry case
- Supplied with batteries

Specifications:

Model:	TM–102
Test ranges	30 ~ 130dB, LO: 30 ~ 80dB, MED: 50 ~ 100dB, HI: 80 ~ 130dB
Accuracy	±1.5dB (ref 94dB @ 1kHz)
Resolution	0.1dB
Microphone	1/2" Electret condenser microphone
Frequency Weighting	AC
Time Weighting	Fast/Slow
Dynamic Range	50dB
Frequency Range	30Hz ~ 8kHz
Size	55(W) x 200(H) x 38(D) mm
Weight (including battery)	0.29kg

● **TM-103:** Autoranging Sound Level Meter with Datalogger

Features:

- 3½ digit LCD display with maximum reading of 2000
- Test range: 30 ~ 130dB
- Backlit LCD
- USB interface software for data download to Windows® compatible pc
- USB interface, 14000 records data logger
- According standard: EN61672 type 2

Specifications:

Model:	TM–103
Test ranges	30 ~ 130dB, LO: 30 ~ 80dB, MED: 50 ~ 100dB, HI: 80 ~ 130dB
Accuracy	±1.5dB (ref 94dB @ 1kHz)
Resolution	0.1dB
Microphone	1/2" Electret condenser microphone
Frequency Weighting	AC
Time Weighting	Fast/Slow
Datalogger	14,000 records
Dynamic Range	50dB
Frequency Range	30Hz ~ 8kHz
Size	55(W) x 200(H) x 38(D) mm
Weight (including battery)	0.29kg

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● **TM-201:** Digital Light Level Meter

Features:
- Range ~ 200,000 Lux, 20 ~ 20,000 footcandles
- Data Hold, Max Hold & Zero adjustment features
- 1.5m flexible sensor cable
- 3½ digit LCD dislay with maximum reading 2000
- Overload indication
- Low battery indication

Specifications:

Model:	TM–201
Data hold	Yes
Max hold	Yes
Zero adjustment	Yes
Sensor	Silicon photodiode and filter
Measuring range	200, 2000, 20000, 200000 Lux 20,200, 2000, 20000 Foot-candle
Accuracy	±3% (Calibrated to standard incandescent lamp 2856° K) ±8% (other visible light source)
Angle deviation from cosine characteristics	30°　　±2% 60°　　±6% 80°　　±25%

● **TM-203:** Autoranging Datalogging Light Meter

Features:
- 3½ digit LCD with maximum reading 2000
- Overload indication
- Low battery indication
- According to JISC1609:1993 and CNS 5119 general A class specifications
- Spectral response close to CIE luminous spectral efficiency
- Measuring intensities of illumination in unit of Lux or Foot-candle
- Measuring lights source include all visible range
- Cosine angular corrected
- Autorange
- Datalogger: RS-232 interface,7000 Records

Specifications:

Model:	TM–203
Data hold	Yes
Max/ Min /AVG hold	Yes
Zero adjustment	Yes
Auto ranging	Yes
Auto power off	Yes
Datalogger	Yes
Sensor	Silicon photodiode and filter
Measuring range	20, 200, 2000, 20000, 200000 Lux 20,200, 2000, 20000 Foot-candle
Accuracy	±3% (Calibrated to standard incandescent lamp 2856° K) ±6% (other visible light source)
Angle deviation from cosine characteristics	30°　　±2% 60°　　±6% 80°　　±25%

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• **TM-206:** Solar Power Meter

Features:
- 3½ digit LCD display with maximum reading 2000
- End-mount sensor
- Select either Power or Transmission, Select either W/m² or BTU/FT2xh
- Data Hold/Min/Max functions

Specifications:

Model:	TM–206
Display	LCD, 3-1/2 digit, 2000 readings
Ranges	2000 W/m², 634 BTU/ft2xh
Accuracy	Typically within ±10W/m2 [±3BTU/(ft2xh)] or ±5% whichever is greater in sunlight; Additional temperature error included ±0.38 W/m2/°C [±0.12BTU/(ft2xh)/°C] from 25°C
Angular Accuracy	Cosine corrected <5% for angles <60°
Drift	<±2% per year
Input Overload	"OL" displayed
Sampling Rate	0.25/sec
Operating Temperature	0°C to 50°C
Relative Humidity	below 80%
Dimensions	55(W) x 130(L) x 39(D) mm
Weight	150g approx

• **TM-208:** Datalogging 3-in-1 UVA Light Meter

Features:
- 3¾ digit LCD with backlit with maximum reading 3999
- 3 in 1 light sensor design, you can select either one (UV Power, Solar or Illumination) for measurment
- Max/Min/Avg and data hold
- Auto power off with disable function
- Low battery indication
- USB interface, Datalogging capacity: 45,000 records
- Backlit function
- Real time clock with calendar
- Rel (relative) function / Zero Adjustment

UVA Features:
- Highly reliable direct reading Instrument designed expressly for measuring light intensity at the wafer plane of mask aligners
- UV curing light sources, and any other UV light source

Solar Power Features:
- The accuracy is +/-3% at 1,000 Watts/m2
- Solar power research
- Physics and optical laboratories
- Just point the calibrated PV cell at the sun and read the irradiance in Watts/m2 or Btu/ft2.h.
- It's great for those who test PV modules or arrays in the field

Illumination Features:
- According to JISC1609: 1993 and CNS 5119 general A class spec
- Spectral response close to CIE luminous spectral efficiency
- Measuring intensities of illumination in unit of Lux or Foot-candle
- Silicon photodiode and filter. Cosine angular corrected

Specifications:

Model:	TM–208: UVA	TM–208: Illumination	TM–208: Solar
Measuring range	40uW, 400uW, 4,000uW, 20mW	40, 400, 4,000, 40,000, 400,000 Lux, 40, 400, 4,000, 40,000 Foot-candle	40, 400, 1000 W/m2, 13, 127, 634 Btu/ft2.h
Resolution	0.01uW, 0.1uW, 1uW, 0.01mW	0.01, 0.1, 1, 10, 100 Lux 0.01, 0.1, 1, 10 Foot-candle	0.01, 0.1, 1 W/m2 .01, 0.1, 1 Btu/ft2.h
Accuracy	±3%	±3% (Calibrated to standard incandescent lamp 2856º K) ±6%(other visible light source)	±5%
Wavelength	320 ~ 390nm	400 ~ 1100nm	400 ~ 1100nm
Datalogging capacity	4500 records		
Sample Time	Approx. 0.4 sec		
Data Output	USB PC serial interface		
Power Supply	9v battery(NEDA 1604 IEC 6F 22 JIS 006P)		
Battery life	Approx. 100hr		
Weight	Approx. 160g		
Accessories	Instruction manual, 9v battery(NEDA 1604 IEC 6F 22 JIS 006P), Carrying case		
	UVA sensor probe	SOLAR sensor probe	Illumination sensor probe
Main instrument	55(W) x 38(H) x 130(L) mm		
Sensor probe	49(Ø) x 28(H) mm	55(W) x 25(H) x 80(L) mm	55(W) x 25(H) x 80(L) mm

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Audio Installation Advice

The basic principles of effective surface-mount ceiling loudspeaker installation

The first priority of a high quality sound reproduction system is that of providing listeners with an acoustic level higher than that of any possible background noise. The system must simultaneously ensure a wide frequency range and maximum intelligibility. It should also guarantee a flat frequency response and uniform sound pressure level to give optimum listening pleasure and clarity. To meet these criteria, the hypothetical ideal solution would be to place each sound source at an equal distance from all required listening points.

Ceiling-mounted Loudspeakers

In environments offering suitable ceiling height, this 'hypothetical' ideal standard can be approximated by using loudspeakers with very wide frequency response and dispersion angles which remain consistent at different frequencies, arranged in a ceiling or 'shower'-type configuration.

This provides the following acoustic benefits:

• Maximum sound distribution uniformity

• Maximum speech intelligibility

• Constant quality of music reproduction

• Reduced reverberation in the environment

• Sound source remains at a constant distance from the listening position

Once the required loudspeaker type has been chosen and the characteristic parameters considered (eg. dispersion angle, room shape and size), the number of loudspeaker units needed to obtain constant and uniform sound dispersion can easily be calculated. The required speaker quantity is calculated by dividing the floor area in square metres by the area of coverage of each loudspeaker on the listening plane.

[Figure 1 illustrates this concept]

Figure 1

Figure 2

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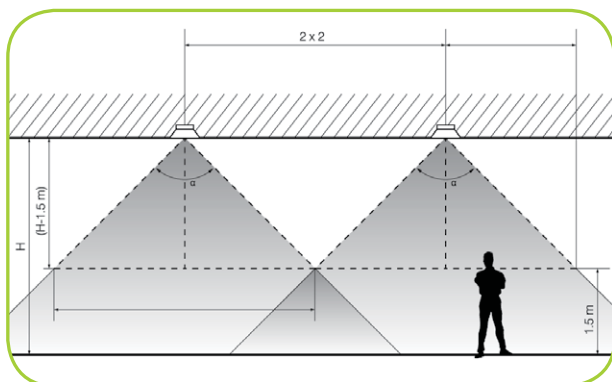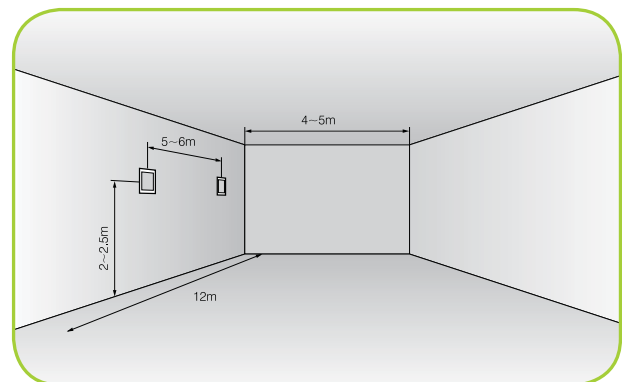
Wall-mounted Loudspeakers

If the architectural features of the room are not compatible with ceiling-mounted loudspeakers or if a wall-mounted solution is preferred, it is essential to observe a few basic rules to obtain the most effective sound distribution. In order to maintain the most efficient listening point inside the direct signal area, both in-wall and surface mounted loudspeakers with power from 6 to 20W should be installed at a height between 2 and 2.5metres.

The maximum distance between adjacent loudspeakers must be no more than 5~6 metres along the length of the room, where the room is no wider than 4~5 metres.

For wider rooms (eg, 8~10 metres), it is recommended to install loudspeakers in an alternate pattern along both opposite walls, to provide adequate coverage and maintain sound pressure at the best possible constant level throughout the area for coverage.
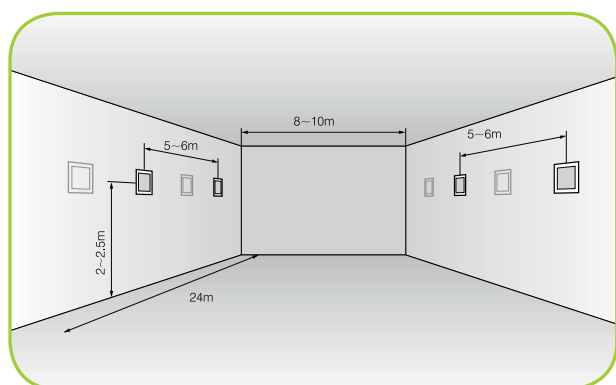
[see Figures 2 and 3]

Corridor/Tunnel: Area Coverage

For effective sound distribution in corridors, tunnels or passenger platforms in railway/underground stations, horn speakers (A) are normally specified for increased voice clarity in these high ambient noise conditions. For higher quality sound reproduction, 'sound projectors' can be used as an alternative.

In all cases, these loudspeakers must be installed at a maximum distance of 15 metres from one another, mounted all in the same direction and in observance with the phase of each loudspeaker. Alternatively, bi-directional versions (B) of these loudspeakers can be considered, positioned at a maximum of 30 metres apart (again observing phasing).

[see Figure 4]
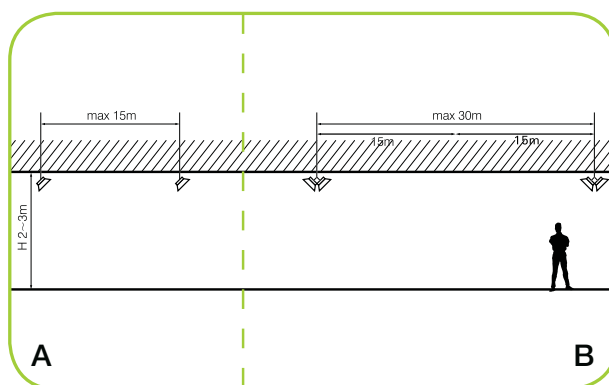
Figure 3

Figure 4

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CCTV Accessories

Degrees of protection (I.P. rating)

The characteristics of a product in terms of its resistance to the penetration of solid objects and liquids is indicated by the letters IP (Ingress Protection) followed by two numbers in accordance with EN standards 60529-CEI 70-1.

IP degree of protection

- The first number identifies the level of protection against the ingress of solid objects. Number from 0 to 6.
- The second number identifies the level of protection against penetration of liquids. Number from 0 to 8.

Speakers, Decibels, SPL:

Distance from speaker:	1m	2m	3m
Lose 6dB each time distance is doubled from speaker	Add 3dB when power is doubled		
SPL(dB)@1W	95	89	83
SPL(dB)@2W	98	92	86
SPL(dB)@4W	101	95	89
SPL(dB)@8W	104	98	92

Quantity of Ceiling Speakers per Sq/metre for background music:

Floor Area:	Quantity of Speakers:	Floor Area:
Ceiling Height = 2.5m	Speaker Spacing = 5m	Coverage = 25Sq.m
100 Sq.m	4 x Speakers	Quiet 55dB Tap @1W
250 Sq.m	10 x Speakers	Normal 60dB Tap @2W
1000 Sq.m	40 x Speakers	Noisy 65dB Tap @3W

First IP number:

0 Not protected

1 Protected against the ingress of solid objects larger than 50mm diameter

2 Protected against the ingress of solid objects larger than 12mm diameter

3 Protected against the ingress of solid objects larger than 2.5mm diameter

4 Protected against the ingress of solid objects larger than 1mm diameter

5 Protected against dust penetration

6 Totally dust-proof

Second IP number:

0 Not protected

1 Protected against vertically dripping water

2 Protected against water dripping at an angle (up to 15° from the vertical)

3 Protected against rain

4 Protected against water spray

5 Protected against water jets

6 Protected against waves

7 Protected against the effects of temporary immersion

8 Protected against the effects of permanent immersion

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A few basic rules must always be observed

1. When the load is on 'constant impedance'; it must be connected to the relative socket.

For example, a load of 4W must be connected to a socket marked 4W, and so on. The power that the load can withstand must always be greater than the amplifier's rated power.

For example in the case of a load of 100W, the amplifier must have a power equal to or less than 100W.

2. When the load is at 'constant voltage'; it must be connected to the sockets indicating output at constant voltage - 50, 70 or 100v; the power that the load can withstand must always be less than or equal to the amplifier rated power. For example, with a load of 100W, the amplifier must have a power equal to or greater than 100W.

To calculate the required value of a 100v line amplifier power, simply add together the power of each loudspeaker. (See Figure 5).

However, on a constant impedance system, the load must have an equivalent impedance (series/parallel) equal to or greater than the minimum value indicated on the amplifier output (See Figure 6).

The loudspeaker power supply lines, with no connected attenuator, must be with 2 sheathed wires; cables with 3 sheathed wires are required in the case of lines using attenuators which can be disabled if an emergency is activated. Adequate wire sections are required:

1.5mm² for lines up to 500W power, 2.5mm² for lines with power over 500W. The following general standards must also be observed:

- Never use a single cable (lead) for loudspeaker connections: this would cause disturbance producing a loud 'HUM'

- Never use shielded cables for the loudspeaker connections: this would cause serious damage to the power units.
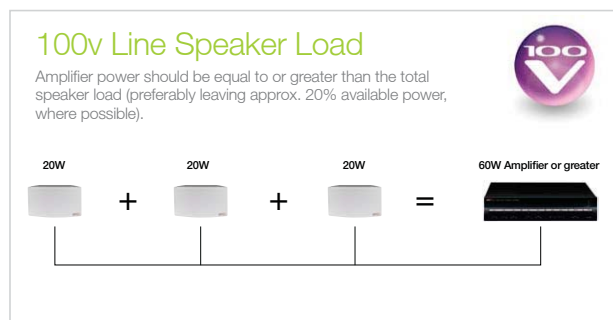
Low Impedance and 100v Line Systems

Constant impedance lines (low impedance) are used normally in the case of a low number of loudspeakers, placed at a minimum distance from the amplifier <20m.

The constant voltage connection system (e.g. 100V line) offers a host of advantages making it ideal for sound systems of all sizes, above all in the case of long distance speaker runs. This connection system requires each loudspeaker to be equipped with its own line transformer, which adapts the impedance of the loudspeaker (usually very low) to the much higher level of the line itself. In proportion to power transmitted, the current circulating on a line at 100V is considerably lower than that circulating on wires of a constant impedance system and, consequently, drops along the line are less frequent; therefore the cable gauge can be lower.

The function of the amplifier device is **to raise the signal of a sound source**, such as a microphone, CD player, MP3 player or an AM/FM tuner **to a sufficient level to pilot the transducer LOUDSPEAKER**. The amplifier has several inputs, to which the various sound sources are connected.

The sound sources have to be mixed (mixer) and acoustically modified with tone control and equalisers to optimise listening in relation to the environment's characteristics. A terminal board is also fitted to the power units.

100v Line Speaker Load

Amplifier power should be equal to or greater than the total speaker load (preferably leaving approx. 20% available power, where possible).

20W + 20W + 20W = 60W Amplifier or greater

Figure 5

Low Impedance Speaker Load

Parallel

8Ω + 8Ω + 8Ω = 4Ω Load

8Ω + 8Ω = 16Ω Load

Series/Parallel

8Ω + 8Ω + 8Ω + (16Ω) + (16Ω) = 8Ω Load

8Ω + 8Ω

Figure 6

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AV Signal Distribution Installation Advice

Our DataBay and CYP ranges of AV signal distribution equipment are capable of high quality results. This guide is intended to help achieve optimum performance from the equipment by following simple guidelines and good installation practice.

Cable:

These products range distribute AV signals via various cable types. As with any installation, the type and quality of cable can have a dramatic effect on the resultant performance.
For example, a CCTV system may be installed with all manner of RG59 cable, but the resultant differences in image quality from best to worst can be huge.

Where an AV system is extended via Cat5e / Cat6 cable, we strongly recommend the use of a Low Skew cable. Skew is a measurement (normally in nanoseconds) that measures the time delay between the first and last signal arrival in different twisted pairs. If the time difference is too large, image quality can be affected, possibly manifesting itself in bright vertical lines, ghosting, colour smudging or worst case, no image at all. Low Skew in video terms is cable with Skew rates lower than 15nS per 100m.

The following Cat-X cables should all perform well:

**Belden 7987R
Belden 1700A
Canford 31-953
Mohawk M58813**
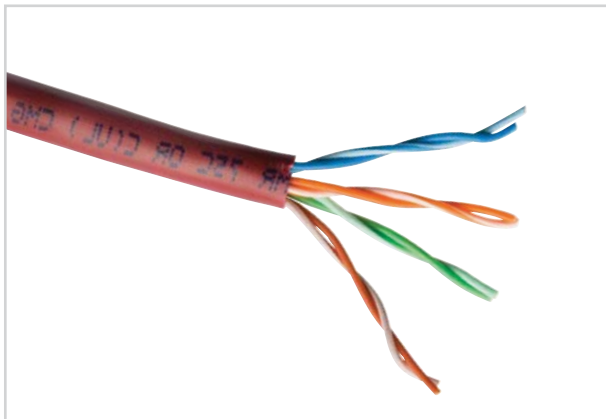
Environmental issues:

The area surrounding an installation can also have an impact on its performance. In particular electrical noise from mains cables, fluorescent lighting or electric motors / installations, etc, could result in interference being induced into the AV cabling system and affecting its performance.

The same applies to airborne radio frequency interference.

Common sense and good installation practice should minimise these effects through careful cable routing, avoiding mains cables or other areas of potential interference. In areas of high susceptibility, it would be sensible to use low skew screened cables.

Display resolutions and refresh rates:

Higher display resolutions and video refresh rates all require higher bandwidths and data rates.
The result of the greater demands on the cable is, consequently, reduced achievable distances.

For example:

A display running a resolution of 480p may happily work across a 100m link; the same infrastructure running a display @ 1080p may only achieve 30m.

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FAQs:

Q. What is Low Skew Cat-X cable?

A. Skew is a measurement (normally in nanoseconds) which measures signal delays between different twisted pairs in a cable. Low Skew in video terms is cable with Skew rates lower than 15nS per 100m.

Q. Can I extend the distances further than specified?

A. This could be possible by:
- Reducing the display resolutions
- Using better quality Cat-X cable (low skew, shielded)
- Using better quality video cables (e.g. Cat2 HDMI cable)

Q. I'm only using a 5 metre Cat-X link cable between the transmitter and receiver, but I cannot get a picture...

A. This can occur when using short cables of maybe 5 or 10 metres with receivers that are optimised to function over much longer distances e.g. 300m. In this case either use a slightly longer Cat-X cable or use a different receiver.

Q. I'm using a short range HDMI non-powered receiver (p/n HDMI-HR), but cannot see an image; why?

A. Some flat panel monitors use a slightly non-standard input which requires power at the HDMI input socket to function correctly. Some Samsung and Goodmans monitors are known to suffer from this issue (there may be others). However, the problem can be easily overcome by using our p/n ET-HC0101-Z in place of the non-powered HDMI-HR.

Q. If I 'mix' transmitters and receivers of different distance capabilities (e.g. AVE-301T 300m and the receiver from the AVE-M180TR 180m), what is the maximum distance achievable?

A. In all such cases you are limited to the distance of the shortest device (in this case 180m).

Q. How many levels of cascading can be achieved on HDMI?

A. Normally two is recommended, although at lower resolutions and with good quality cables further cascading may be perfectly possible.

Q. Can I use stranded Cat-X patch cord?

A. Stranded Cat-X cable is not recommended – use solid installation Cat-X cable for best results.

Q. How should I wire the Cat-X cable?

A. The cable should be terminated to EIA 568B specifications.
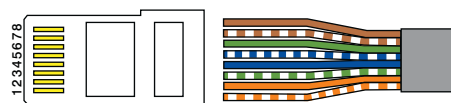
EIA 568B specifications:
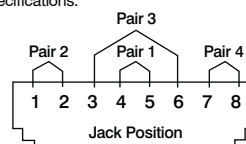
The EIA/TIA definition of 568B in the pin assignment is (1) orange white, (2) orange, (3) green white, (4) blue, (5) blue white, (6) green, (7) brown white, and (8) brown

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Hints and Tips

When commissioning a professional AV system the following tips could help speed up the process and ensure a trouble-free installation:

Pre-Installation:

Undertake a full site survey. In addition to standard practice, take particular note of accurate cable lengths required, makes/models of the monitors to be connected and take into account any potential environmental factors that could cause interference. It is also preferential to have all devices powered from the same electrical phase and with common grounding.

Wherever possible, bench test your proposed system set-up at your facility before proceeding to site. Use interconnecting cables as they will be used on site, i.e. the same cable types and lengths.

During Installation:

Follow the user manuals to assist the installation process.

Firstly, if the first transmitter in the link has a local monitor output, then connect up a monitor to this port to confirm that the transmitter is receiving a valid signal. Use the EQ control (if available) on the transmitter to obtain the optimum picture quality. You can then proceed to setting up the receiver end.

Set-up the system by starting with the lowest video resolution outputs from the video source and establishing a working link. You can then increase the display resolutions in stages to ensure full system compatibility. Ensure the monitor is capable of displaying at the desired resolutions and refresh rates.

Most devices should function correctly with the EQ set to AUTO. However, if this does not give satisfactory results, then the EQ can be set manually. Please note that in manual mode the changes may not be instantaneous and may lag by a second or two. Therefore, adjust the EQ in small stages at a time and check the result on screen.

If a monitor does not appear to be displaying video, check the obvious things like power(!) correct source mode selected (e.g. HDMI, VGA, S-Video) and for correctly engaged connectors. If this fails, completely power down the monitor (not just standby) and then re-apply the power.

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