Head Unit Section

AUI (Auditory User Interface)
Details on page 5.

Auto EQ
Details on page 5.

Bass Boost
Bass Boost
Details on page 8.

BBE DIGITAL
BBE® adds a longer delay time to the lower frequencies and slightly "boosts" the high range which tends to become attenuated, so that it recovers its natural articulation. The result: greater live presence with the brilliance and clarity of the original sound.

BUILT-IN DSP
Digital Signal Processor
DSP uses digital technology to correct a vehicle's interior acoustics. The system also offers various sound fields to recreate different listening environments in your car (Studio, Jazz, Club, etc.).

CD CONTROL
This indicates head units with Multi-CD control or with AUX input.

CD-R/RW Compatibility
All Pioneer CD head units can play back CD-R/RW discs, allowing the user to enjoy favorite compilations in-car.

CD TEXT
Recorded music CDs compatible with CD Text can include various information to be read from the CD as text during playback.

CD TEXT READY
The title of a track that is currently playing can be displayed in the head unit's display window.

Detachable Face Security™ (DFS)
A theft-deterrent system invented by Pioneer which revolutionized head unit security. With DFS, you simply lift off the front panel (face) of the unit, slip it into a protective case and take it with you. The unit's sensitive electronics remain protected in the dash; all that remains visible from the dash is a black panel that won't attract thieves.

DIGITAL-SFC
Digital SFC (Sound Field Control)
There's no need for the user to adjust anything to recreate the acoustics of a concert venue. Digital Sound Field Control (SFC) applies varying degrees of reverberation and echo to enhance the ambience of music with four field settings: e.g. Studio, Club.

EEQ
Easy Equalizer
Details on page 11.

EQ-EX
EQ-EX (Equalizer Expansion) gives a boost to the current preset equalizer settings. By pressing the EQ-EX button each EEQ curve is acoustically tuned for optimum effect, giving a more dramatic effect and a new edge to music.

Full-color OEL (Organic EL) Display
Details on page 4.

HI-VOLTAGE PREOUT
Pioneer's High-Voltage Preout maximizes signal strength to your amp. The benefits are superior dynamics, crisper highs, more full-bodied bass, and a higher signal-to-noise ratio for minimal noise interference attributable to connections.

iPod® Adapter Ready
Details on page 7.

MOSFET 50 W × 4
Details on page 10.

MP3
Popular compression format that allows large amounts of audio files to be stored onto one CD-R/RW disc. Pioneer players come equipped with buffering capabilities, so they are all able to handle data rates from 16 kbps and VBR (Variable Bit Rate) recording.

OEL (Organic EL) Display
Pioneer OEL (Organic EL) display delivers high-contrast, moving 3-D images, even in sunlight. Its smart functionality lets the user control and confirm play source operating information and provides plenty of space for text, for lists of tracks, discs or other data from MDs or CDs. Pioneer's latest OEL display is also larger, using a total of 256 × 80 pixels to offer even more entertainment features.

PC-LINK READY
PC-Link (OEL Screensaver Studio) Ready
Details on page 5.

Pure Blue OEL (Organic EL) Display
Details on page 6.

RCA
RCA selectable
RCA Output or RCA Preout
The standard connection system to carry sound from a head unit to an amplifier or equalizer. RCA preouts provide easy output for connection to an outboard amplifier.

SUPERTUNER IIID
SUPERTUNER III
SUPERTUNER
Pioneer's original Supertuner® and Supertuner® III™ ensure exceptional sensitivity, handling of multi-path interference, and resistance to Three Signal Intermodulation (TSI). Supertuner® IIID has advanced analog and digital blocks for excellent sound and sensitivity, smoother broadcasting reception and expanded signal reception.

SUPERTUNER IIID+
This refinement of Supertuner® technology features FM Multi-path Canceller with an adaptive digital filter to minimize multi-path noise and improve stereo reception and separation; AM Noise Canceller with Hi-Speed Gate control to reduce interference of undesirable noises from wipers, engine, ignition, etc.; and Automatic Reception Control to reinforce noise reduction in weak signal areas.

WMA (Windows Media™ Audio)
WMA is a music compression format developed by Microsoft Corporation. It uses the latest coding technologies to compress an original audio track, minimizing file sizes while maintaining good audio quality, even at rates as low as 64 kbps.

Amplifier Section

Bass Boost
Details on page 18.

Class-FD ICEpower Amplifiers
Details on page 16.

HPF
High Pass Filter
Low-range sound is filtered off according to user-set cut-off frequency. Mid- and high-range sounds are transferred to the speaker.

LPF
Low Pass Filter
Mid- and high-range sounds are filtered off according to user-set cut-off frequency. Low-range sound is transferred to the woofer.

RCA INPUT
RCA input can be connected with head unit featuring RCA output for preamp signal.

RCA INPUT/OUTPUT
RCA input can be connected with a head unit featuring RCA output for preamp signal. RCA output can be connected with additional amplifiers for a multi-amp system configuration.

SPEAKER INPUT
This allows a Pioneer amplifier to be connected to an OEM radio without requiring costly add-on adapters. The added flexibility allows your Pioneer amplifier to be a part of your system as it grows.

Subwoofer & Speaker Section

IMPP (Injection-Molded Polypropylene) Composite Cone
Pioneer uses a special injection molding process rather than "pressing" polypropylene speaker cones. This process ensures uniform cone thickness for superior linearity and clarity. What's more, Pioneer's "Composite" technology guarantees the perfect mix of polypropylene and carbon fiber, graphite and other materials to optimize the speaker cone for its specific application (woofers, midranges, tweeters, etc.).

KEVLAR® Brand Fiber
Characterized by lightness, strength, and low resonance to powerful input, KEVLAR® Brand Fiber is excellent for speaker diaphragms, helping to produce more detailed, accurate sound.

VCCS
VCCS (Voice Coil Cooling System)
Typically, the longer and louder you play your subwoofer, the hotter it gets. This changes its electrical and mechanical characteristics and adversely affects sound quality. Pioneer's Voice Coil Cooling System (VCCS) draws heat away from the inside of the subwoofer, reducing temperatures by up to 30˚C. In the simplest terms, it keeps your sound crisp and your subwoofer from losing its cool.

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Pioneer Environmental Mark
Symbol of environmental preservation activities

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EC00J0310
EC98J1147

U K A S
ENVIRONMENTAL MANAGEMENT
051

Pioneer Corporation Meguro Headquarters and the Kawagoe Plant have acquired ISO 14001 certification.

You already know that Pioneer is committed to improving the quality of car audio environments. But Pioneer is also making a commitment to the quality of the earth's environment. For one thing, the brochure you're holding is printed on recycled paper. In addition, Pioneer Corporation has begun to pack its car audio products in **Environmentally Friendly Pulp Mold Packaging**—

a new material made from paper pulp and recycled paper, newspapers and magazines. This is in direct response to increasing evidence that styrofoam packaging harms the environment. The switch signals a worldwide move away from styrofoam by the Pioneer Corporation and underscores Pioneer's commitment to help safeguard our planet.

For more information, call or write to:

Pioneer sound.vision.soul

CAR ENTERTAINMENT 2006
AUDIO

RIDE THE EDGE. DRIVE YOUR PASSION

Pioneer
sound. vision. soul

The Road Ahead: The World Beyond

When you rule the road, anything is possible. So go to the edge of sensation with Pioneer. Driving the power of technology into the upper stratosphere. Extending audio media deeper into the digital frontier. Turbocharging your experience of entertainment beyond convention. Take to the street, and all points beyond. There are no limits to how far your senses can go. Your threshold of pleasure is about to rise. Are you ready?

Play Your Heart Out

Pioneer's new **WMA/MP3 and Single-CD players** provide enough incomparable performance and flexibility for you to experience sound that is pristine and powerful as you like. These players are equipped with **EEQ (Easy Equalizer)** for accurate adjustment of sound according to taste. The EEQ for the **DEH-P6850MP, DEH-P4850MPH** and **DEH-3850MPH** models even include **Bass Boost** for greater depth and impact. Pioneer's **50 W** × **4-channel high-power MOSFET amplifiers** virtually eliminate distortion within high-frequency ranges, with minimal loss of sound's integrity throughout signal processing.

Turn Toward Total Command

Access to vast volumes of AAC, MP3 and WMA files is speedy and simple with the **Rotary Commander**, featuring a button which turns and tilts to perform various functions, operating as effortlessly as a joystick. Now, it makes **equalizer adjustment** and setting intuitive, as well.

Put More Dazzle on Display

No other head unit's visual dimension has ever looked this dynamic. At the head of the class, Pioneer presents the **full-color dot-matrix OEL (Organic EL) display** for the **DEH-P8850MP** head unit. It's great for viewing **movies, visualizers and BGPs (Background Pictures)** in a dazzling array of colors that you would miss if you were watching on a less capable display.

Also, new **Pure Blue OEL displays** for the **DEH-P6850MP** and **DEH-P5850MPH** take blue OEL display technology to the height of cool style and distinctive performance.

MP3 (DEH-P8850MP)

Surf & Snow (DEH-P6850MP)

Modernize Your Media Mix

As the universe of digital music expands, Pioneer makes sure to put more of it within easy reach by giving listeners capability to enjoy more digital media formats. Collectively, Pioneer head units are compatible for playback of all the leading digital audio file types: **iTunes AAC (Advanced Audio Coding), WMA (Windows Media™ Audio), MP3 and WAV**. To hook up with even more of today's music on the move, Pioneer's **iPod® adapter CD-IB100 II** connects the latest Pioneer head units to popularly acclaimed iPod® portable music players. That adds up to about 15,000 songs to your car entertainment library!*

*iPod® capacity depends on iPod® model and compression format.

Get Your Sound into Perfect Shape

To ensure pure quality and flexibility in audio reproduction, **advanced DSP** (Digital Signal Processing) for the **DEH-P8850MP** and **DEH-P80RS** integrates several Pioneer innovations, including: new **16-band Graphic EQ** with an expanded frequency range for fine-tuning the sound curve with extra precision; **Auto EQ** functionality; and **Burr Brown D/A Converter*** for superior signal resolution for sound that remains true to the original source over an extraordinarily wide dynamic range; and **3-way Network mode/Standard mode** for extra **Auto Time Alignment****.

*DEH-P80RS: Burr Brown advanced segment-type 24-bit D/A Converter
**DEH-P80RS only

Feel More Soul in the Digital Domain

As proof of Pioneer's ongoing commitment to satisfy the demands of the most discerning car audiophiles, this year's lineup of **ODR (Optical Digital Reference) and Pure Component systems** includes a growing number of **head units**, new **Class-FD ICEpower Series amplifiers**, and **PRS component speaker systems**.

Put More Connections into Play

To make car entertainment systems even more all-inclusive, most Pioneer CD receivers feature a **built-in AUX input** for easy connection to digital audio players and other external devices.

Gain the Edge in Bass Power

Victory is sweet, but dominance is sweeter, as Pioneer proved with its new **TS-W5102SPL** component competition-level subwoofer overwhelming the competition at the **2005 dB Drag Racing World Final**, **USACi** (United States Autosound Competition International), as well as **IASCA & IDBL** events. The ultimate value of these wins becomes apparent in your car, where the impact of this bass-pumping powerhouse rocks harder and steadier to root the music ever deeper into your soul.

Head to a Higher Class

The powerful control, elegant simplicity and brilliant design you crave in your car come to a head. Now, Pioneer's head unit lineup includes a full-color OEL display with an eye-popping spectrum of colors, as well as Pure Blue OEL displays for a cool entertaining touch. The latest advances in Digital Signal Processing (DSP) modify sound output to match car cabin acoustics with unerring precision. The Rotary Commander makes every command easy, at the touch of a finger.

DEH-P8850MP 4-Channel High-Power WMA/MP3/AAC/CD Receiver NEW

With an unprecedented full-color OEL display, multi-format digital file playback and versatile DSP, the leading face among Pioneer head units has a kaleidoscopic array of entertaining capabilities.

MP3 Plays Windows Media™ CD-R CD-RW

CD CONTROL	SUPERTUNER IIID
3 RCA	HI-VOLTAGE PREOUT
BUILT-IN DSP	EEQ
PC-LINK READY	BBE DIGITAL
CD TEXT	DIN-D

MOSFET 50W×4 DETACHABLE FACE SECURITY.

• Full-color dot-matrix OEL (Organic EL) display
• iTunes® AAC playback
• WAV file playback
• iPod® adapter ready
• Burr Brown D/A Converter
• Built-in DSP
  —EEQ
  —5-mode preset equalizer
  —2-mode custom preset equalizer
  —Auto EQ
  —BBE® digital sound processing*
  —Digital listening position selector
  —Auto time alignment
  —BMX (Bitmetric Equalizer)
  —L/R common 16-band digital graphic equalizer
  —2-way crossover: HPF/LPF
  —ASL (Auto Sound Levelizer)
• Auto-slide face
• Rotary Commander
• 3 RCA preouts (front + rear + subwoofer)
• Level indicator
• Spectrum analyzer
• Multi-language display (English/Spanish/Portuguese)

*BBE: Licensed by BBE Sound, Inc. under USP4638258 and 4482866. BBE and BBE symbol are registered trademarks of BBE Sound Inc.

Full-Color OEL (Organic EL) Display

DEH-P8850MP

Pioneering the First Receiver with 65,536-Color OEL Display
Pioneer presents the DEH-P8850MP with full-color (65,536-color*) OEL display capable of displaying motion and 3D animated graphics in multiple colors. Featuring OEL technology that is arguably the greatest advance in car entertainment displays since the detachable face was introduced, this innovation complements Pioneer's renowned audio quality with a dash of uniquely brilliant visual impact.

*Up to 256 colors can be displayed simultaneously in animated images.

Customizable Displays
Now, Pioneer makes it easy to personalize the graphics on your OEL display. From a Pioneer website, download the software that you need to create and edit BMP, JPEG or PNG images. You can add animation, special effects, titles and more. Once the data is complete, burn it onto a CD-R. Then, insert the disc into a DEH-P8850MP head unit to upload the customized images and put them on view.

Choose among four types of gauges to view **battery voltage**, **tachometer** and **sound level** information.

Analog

Graphic

Digital 1

Digital 2

Other Images

CD jacket search

Movie "Space Elevator"

Advanced DSP (Digital Signal Processor)

DEH-P8850MP   DEH-P80RS

DSP With many of the most technologically advanced digital signal processing system refinements built in, Pioneer's DEH-P8850MP and DEH-P80RS head units achieve the ultimate in-car sound quality, setup, and control, featuring:
• **Digital 16-band graphic equalizer** for the extra-precise adjustment of sound quality and balance that you need to customize sound exactly as you like.
• **Auto EQ** monitoring cabin characteristics for precise sound correction and acoustic balance.
• **Emperor Volume** control for more gradual, consistent volume shifts.
• **Burr Brown advanced segment-type DAC** (Digital-to-Analog Converter)

offering **24-bit resolution** for outstanding dynamic performance. (DEH-P80RS only)
• **Burr Brown 1-bit DAC** offering **24-bit resolution** throughout a wide dynamic range and excellent signal-to-noise ratio for purer fidelity. (DEH-P8850MP only)
• **Advanced Auto Time Alignment** for more convenient sound field customization. (DEH-P80RS only)
• **3-Way Network Mode/Standard Mode*** plus **internal amplifier-off mode**** for easy connection, control and activation of additional amplifiers.
  *DEH-P80RS and FH-P9200MP only
  **DEH-P80RS only

Auto Time Alignment

DEH-P8850MP   DEH-P80RS   FH-P9200MP

Pioneer's innovative Auto Time Alignment automatically shifts the soundstage in front of listeners, and brings out vocals in the process.
First, a microphone at the listening point measures the time that the sound from each speaker takes to reach the listener (rather than listener-to-speaker distance), accurately accounting for sound reflection and absorption. Then, output timing is automatically adjusted for more expansive effect.
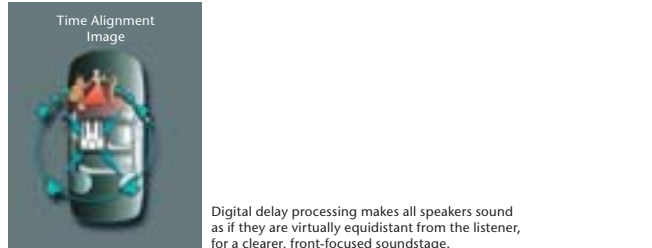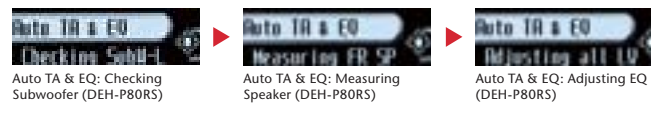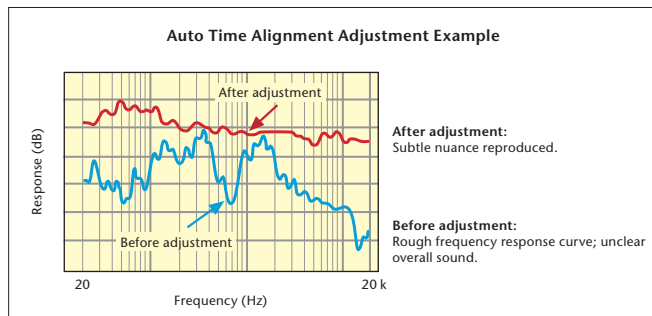
The Five Phases of Auto Time Alignment
Phase 1: Checks number of speakers, and measures each speaker's basic capability.
Phase 2: Measures time it takes for the sound from each speaker to reach listening position and calibrates phasing accordingly.
Phase 3: Temporarily adjusts each speaker's frequency response and sound pressure level characteristics.
Phase 4: Adjusts each speaker's sound pressure level equally.
Phase 5: Exclusive parametric equalizer fine-tunes each speaker's sound characteristics.

Auto TA & EQ: Checking Subwoofer (DEH-P80RS)

Auto TA & EQ: Measuring Speaker (DEH-P80RS)

Auto TA & EQ: Adjusting EQ (DEH-P80RS)

Auto Time Alignment Adjustment Example

After adjustment

Response (dB)

Before adjustment

20   Frequency (Hz)   20 k

After adjustment: Subtle nuance reproduced.

Before adjustment: Rough frequency response curve; unclear overall sound.

Time Alignment Image

Digital delay processing makes all speakers sound as if they are virtually equidistant from the listener, for a clearer, front-focused soundstage.

Auto EQ

DEH-P8850MP   DEH-P80RS   FH-P9200MP

Finding the 'sweet spot' or optimal listening position is complicated by sound's reflection and damping, as well as variable speaker positioning in the irregularly shaped confines of a car. Such conditions tend to degrade frequency characteristics.
Auto EQ helps you enjoy the best sound quality you can get in a car, using a microphone to monitor acoustic conditions, then automatically setting frequency response curve equalization. It's like having a sound engineer customize your in-car sound system.

Auto EQ Adjustment Example

After adjustment

Response (dB)

Before adjustment

20   Frequency (Hz)   20 k

For smoother low- to high-range sound.

Microphone for Auto EQ frequency band fine-tuning
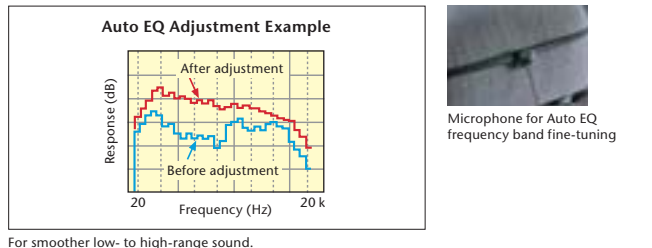
AUI (Auditory User Interface)

DEH-P8850MP

There's no need to glance at the display to confirm system status. The DEH-P8850MP's AUI can emit a distinctive sound for each of these functions: **ON**, **Function**, and **Select**. This makes it easy to know what the system is doing while you safely keep your eyes on the road.

AUditory User Interface

PC-Link (OEL Screensaver Studio) Ready

DEH-P8850MP

PC-Link ready Personalizing animation for your head unit is easy. Download exclusive PC-Link software from the website* for PC-Link users, then collect your favorite digital camera images (BMP, JPEG or PNG formats) or digital video clips (AVI format) on your computer. Use the software to edit the images and movies; add special effects and text; and adjust frame size, timing and sequence. Save your new design on a CD-R. Then load the disc into the DEH-P8850MP head unit, and the files upload automatically.

*DEH-P8850MP: http://www.pioneer.co.jp/car/pclink4/index-e.html
 Available from late April 2006. Ask your nearest dealer about details.

Movies

Still pictures

CD-R

DEH-P8850MP

WMA/MP3 Players

Single-CD Player

2-DIN Players

Multi-CD Players

Cassette Players

CDR & Pure Component Systems

Power Amplifiers

Subwoofers

Speakers

Specifications & Comparison

DEH-P6850MP   4-Channel High-Power WMA/MP3/AAC/CD Receiver   NEW

Masterful performance, outstanding interconnectivity plus a touch of dynamic visual style are at your complete command to complement every experience of mobile entertainment.

MP3   Plays Windows Media™   CD-R   CD-RW

CD CONTROL	SUPERTUNER IIID
3 RCA	HI-VOLTAGE PREOUT
EEQ	CD TEXT
DIN-D	

MOSFET 50W×4   DETACHABLE FACE SECURITY™   **Bass Boost**

• Pure blue dot-matrix OEL (Organic EL) display
• iTunes® AAC playback
• WAV file playback
• iPod® adapter ready
• BMX (Bitmetric Equalizer)
• EEQ
 —5-mode preset equalizer
 —2-mode custom preset equalizer
 —7-band digital graphic equalizer
 —Bass Boost
 —2-way crossover: HPF/LPF
 —3-mode selectable loudness

• Auto-slide face
• Rotary Commander
• Direct Sub Drive
• 3 RCA preouts (front + rear + subwoofer)
• Level indicator
• Spectrum analyzer
• Multi-language display
 (English/Spanish/Portuguese)

Pure Blue OEL (Organic EL) Display

DEH-P6850MP   DEH-P5850MPH

Pioneer again sets the trend in putting a fresh, brilliant look on display. The Pure Blue OEL display offers a cool, youthful perspective on car entertainment, with eye-catching contrast and brightness, choice of 3D animation images and a wide viewing angle range for clear, trouble-free viewing from virtually any position, even in sunlight. Tabbed menus speed up and simplify monitoring of functions. Display graphics match head unit buttons for smart, easy operation. BGV (Background Visual) function offers various backdrops designed to add interest to source information onscreen.

Battery (DEH-P6850MP)   Surf & Snow (DEH-P6850MP)

Surf & Snow (DEH-P6850MP)   Speed & Technology (DEH-P6850MP)

Rotary Commander

DEH-P8850MP   DEH-P6850MP   DEH-P80RS

The innovative Rotary Commander's rotary button turns smoothly at the touch of a finger, for quick, easy access among even huge volumes of files stored in AAC, MP3 or WMA format. File or command access and activation can also involve tilting that button left, right, up and down, or pressing its center.

The Rotary Commander also offers precise control of graphic equalizer functions. Simply select and adjust an equalizer curve (Super Bass/Powerful/Natural/Vocal/Custom1/Custom2/Flat) as you like.

Quick and Easy Folder, File and Track Search

Turn to display folder lists

Folder Lists
① Tilt up/down or turn to search folder.

Next Folder Lists
① Tilt up/down or turn to search folder.

File Lists
① Tilt up/down or turn to search file.

② Tilt right to display contents of selected folder.

② Tilt right to display contents of selected folder.

Push center for playback.

Equalizer Access

Tilt up to increase or down to decrease equalizer curve level.

Tilt left or right to select an equalizer curve.

6

DEH-P5850MPH   4-Channel High-Power WMA/MP3/CD Receiver   NEW

Pure Blue OEL puts dazzling performance on display—Dual RCA connectors open the road to more complete systems.

Level Meter   Speed & Technology   Dolphin's View

MP3   Plays Windows Media™   CD-R   CD-RW

CD CONTROL	SUPERTUNER IIID
2 RCA selectable	EEQ
CD TEXT	DIN-D

MOSFET 50W×4   DETACHABLE FACE SECURITY™

• Pure blue dot-matrix OEL (Organic EL) display
• WAV file playback
• iPod® adapter ready
• BMX (Bitmetric Equalizer)
• EEQ
 —5-mode preset equalizer
 —1-mode custom preset equalizer
 —3-band parametric equalizer
 —EQ-EX
 —2-way crossover: HPF/LPF
 —3-mode selectable loudness

• Rotary volume
• Direct Sub Drive
• 2 RCA preouts: selectable (front + subwoofer/ front + non-fading)
• Level indicator

Enhanced Media Compatibility

Expand every horizon. Pioneer now lets you play more of the digital media formats that are revolutionizing the world of mobile entertainment.

iPod® Adapter Ready

DEH-P8850MP   DEH-P6850MP   DEH-P5850MPH   DEH-P4850MPH   DEH-P80RS   DEX-P90RS   FH-P9200MP   FH-P5000MP   FH-P4200MP   KEH-P4025   KEH-P2035

Apple iPod® portable digital music players are opening up new worlds of digital music for listeners on the move. The new Pioneer CD-IB100 II iPod® adapter for in-car use takes that capability even further. Connect the adapter linked with iPod® to a new Pioneer head unit, and start playing back compressed digital audio files. The adapter simplifies various search functions (playlist/genre/artist/album), and displays text for album, artist, track and time.

NOTES: iPod is for legal or rightholder-authorized copying only. Don't steal music. iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. Depending on the Pioneer head unit installed, some functions may be limited using iPod® adapter.
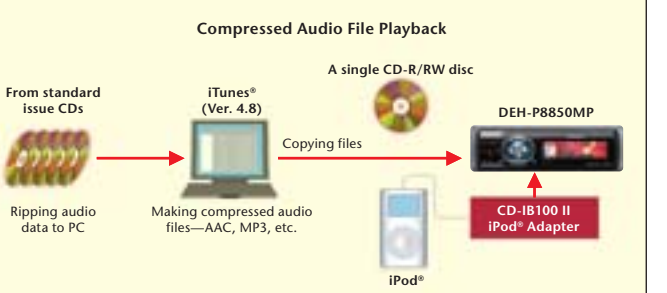
Made for iPod
New CD-IB100 II [iPod® Adapter]

iTunes® AAC (Advanced Audio Coding) Playback

DEH-P8850MP   DEH-P6850MP   DEH-P80RS   FH-P4200MP

Pioneer's DEH-P8850MP, DEH-P6850MP, FH-P4200MP and DEH-P80RS play music file formats of AAC (Advanced Audio Coding) using Apple iTunes® software. With Apple iTunes®, transferring your favorite songs and albums from CDs is quick and easy. Just pop a disc into your Mac or PC, and click the Import button to record to your library of tunes in MP3, AAC, or other formats at the quality level you choose.

NOTES: iTunes is a trademark of Apple Computers Inc., registered in the U.S. and other countries. AAC players can decode only those AAC files ripped and encoded using iTunes®.

Compressed Audio File Playback

From standard issue CDs

iTunes® (Ver. 4.8)

A single CD-R/RW disc

DEH-P8850MP

Copying files

Ripping audio data to PC

Making compressed audio files—AAC, MP3, etc.

CD-IB100 II iPod® Adapter

iPod®

WMA (Windows Media™ Audio) Playback with WMA Tag and MP3 Playback with ID3 Tag

DEH-P8850MP   DEH-P6850MP   DEH-P5850MPH   DEH-P4850MPH   DEH-3850MPH   DEH-2850MP   DEH-P80RS   FH-P9200MP   FH-P5000MP   FH-P4200MP

For easy access to a wide range of tunes that you can edit digitally onto CD-R/RW discs, Pioneer's single-CD players can play back WMA (Windows Media™ Audio) and MP3 audio files. Pioneer's WMA/MP3 players can display WMA Tag and ID3 Tag information, indicating track name, artist name and album title.

NOTE: Windows Media and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

	WMA/MP3 Players
CD-ROM Format	ISO9660 Level 1/2 Extension format (Romeo/Joliet)
Playable Files[1]	WMA[2], MP3[3], WAV[4]
Playable Folders	99 folders
Playable Number of Files	65,535 files (in a disc)
Available Characters	Maximum 64[5] or 32[6] characters
ID3 Tag[7]	Version 1/1.1/2.0 Version 2.2/2.3/2.4
Bit Rate	WMA: 48 kbps–384 kbps MP3: 8 kbps–320 kbps
Multi-Session	Available

1) FH-P9200MP: WMA and MP3 files
2) Version 7/7.1/8/9 (2-ch. Audio)/10/Variable Bit Rate
3) Includes RIFFWAVE and RIFFMP3 format
4) Linear PCM, MS ADPCM
5) ID3 Tag Version 2: DEH-P8850MP/DEH-P6850MP/DEH-P5850MPH/DEH-P4850MPH/DEH-3850MPH/ DEH-2850MP/DEH-P80RS/FH-P5000MP/FH-P4200MP
6) ID3 Tag Version 1: FH-P9200MP
7) Character information only

WAV File Playback

DEH-P8850MP   DEH-P6850MP   DEH-P5850MPH   DEH-P4850MPH   DEH-3850MPH   DEH-2850MP   DEH-P80RS   FH-P5000MP   FH-P4200MP

Pioneer's MP3/WMA players can also play WAV files—a standard Windows audio format which is recorded using PCM (pulse code modulation) and MS ADPCM (Microsoft adaptive differential pulse code modulation) technology. This gives you even greater range to enjoy your own edits of CD-R/RW discs recorded using a PC.

7

WMA/MP3 Players

Single-CD Player

2-DIN Players

Multi-CD Players

Cassette Players

ODR & Pure Component Systems

Power Amplifiers

Subwoofers

Speakers

Specifications & Comparison

DEH-P4850MPH 4-Channel High-Power WMA/MP3/CD Receiver

NEW

An iPod® connection adopts a growing range of sound choices for new generations of music on the move.

MP3 Plays Windows Media™ CD-R CD-RW

MOSFET 50W×4 DETACHABLE FACE SECURITY.

| CD CONTROL | SUPERTUNER IIID |
| 1 RCA selectable | EEQ |

Bass Boost | CD TEXT | DIN-D |

• WAV file playback
• iPod® adapter ready
• BMX (Bitmetric Equalizer)
• EEQ
  —5-mode preset equalizer
  —1-mode custom preset equalizer
  —3-band parametric equalizer
  —Bass Boost
  —2-way crossover: HPF/LPF

—3-mode selectable loudness
—Selectable FIE (Front Image Enhancer)
• Rotary volume
• Direct Sub Drive
• 1 RCA preout: selectable
  (rear/subwoofer)

CD-IB100 II iPod® Adapter

NEW

Play as long as you like. Pioneer's iPod® adapter CD-IB100 II makes it easy to access any of up to 15,000 tracks* stored in various digital compression formats on an iPod® portable music player connected to Pioneer's latest head units**.

*iPod® capacity depends on iPod® model and compression format.
**DEH-P8850MP/DEH-P6850MP/DEH-P5850MPH/DEH-P4850MPH/DEH-P80RS/DEX-P90RS/FH-P9200MP/FH-P5000MP/
FH-P4200MP/KEH-P4025/KEH-P2035

NOTES: iPod is for legal or rightholder-authorized copying only. Don't steal music. iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. Depending on the Pioneer head unit installed, some functions may be limited using iPod® adapter.

Made for iPod

Bass Boost

DEH-P6850MP DEH-P4850MPH DEH-3850MPH

Bass Boost Bass Boost offers a choice between 0- to 12-dB level settings that can be adjusted in 2-dB steps, letting you set the optimal bass level for each speaker and subwoofer connected to a system, according to preference and music style. The result is more precise control over the balance of sounds to enhance the overall impact of the music you listen to.

Bass Boost (fc = 100 Hz)

Gain [dB] vs Frequency [Hz]
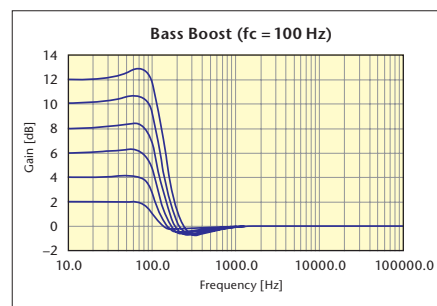
Direct Sub Drive

DEH-P6850MP DEH-P5850MPH DEH-P4850MPH DEH-3850MPH

Combine the MOSFET 50 W × 4 power amp and EEQ technology to get Direct Sub Drive, another unique Pioneer technology. It enables you to amplify your front speakers by 50 W × 2 and add a 70 W amplified

filtered subwoofer (in 2 ohm mode) in the rear to enjoy outstanding full-power bass without an extra amplifier. It's an easy solution for lovers of booming bass.

BMX (Bitmetric Equalizer)

DEH-P8850MP DEH-P6850MP DEH-P5850MPH DEH-P4850MPH DEH-3850MPH
DEH-2850MP DEH-P80RS FH-P5000MP FH-P4200MP

Audio compression formats such as MP3 and WMA tend to lose high-frequency sound levels, especially in passages when recorded signal input is weak.
Pioneer's BMX (Bitmetric Equalizer) compensates for this by boosting playback of upper frequency sound, to the benefit of overall musical balance.

• **BMX1:** Recommended for enhancing brightness and depth of sound and sense of ambient space.
• **BMX2:** Recommended for even richer sound (more volume in the low and middle range) than BMX1 offers.

DEH-3850MPH 4-Channel High-Power WMA/MP3/CD Receiver

NEW

EEQ makes frequency band equalization extra easy to put all your favorite sounds into proper shape.
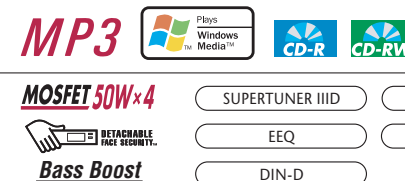
MP3 Plays Windows Media™ CD-R CD-RW

MOSFET 50W×4 DETACHABLE FACE SECURITY.

| SUPERTUNER IIID | 1 RCA selectable |
| EEQ | CD TEXT |

Bass Boost | DIN-D |

• WAV file playback
• BMX (Bitmetric Equalizer)
• EEQ
  —5-mode preset equalizer
  —1-mode custom preset equalizer
  —3-band parametric equalizer
  —Bass Boost
  —2-way crossover: HPF/LPF
  —3-mode selectable loudness
  —Selectable FIE (Front Image Enhancer)

• Rotary volume
• Direct Sub Drive
• 1 RCA preout: selectable (rear/subwoofer)

DEH-2850MP 4-Channel High-Power WMA/MP3/CD Receiver

NEW

Play the latest digital audio formats—Easy Equalizer shapes the sound of your journey with the greatest of ease.
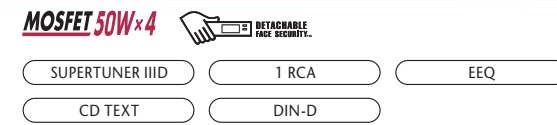
MP3 Plays Windows Media™

CD-R CD-RW

MOSFET 50W×4 DETACHABLE FACE SECURITY.

| SUPERTUNER IIID | 1 RCA | EEQ |
| CD TEXT | DIN-D |

• WAV file playback
• BMX (Bitmetric Equalizer)
• EEQ
  —5-mode preset equalizer
  —1-mode custom preset equalizer
  —2-mode selectable loudness
• 1 RCA preout (rear)

Single-CD Player

DEH-1850 4-Channel High-Power CD Receiver

NEW

A well-crafted head unit delivers a solid introduction to the world of Pioneer CD play and performance.

CD-R CD-RW

MOSFET 50W×4 DETACHABLE FACE SECURITY.

| SUPERTUNER IIID | 1 RCA | EEQ | DIN-D |

• EEQ
  —5-mode preset equalizer
  —1-mode custom preset equalizer
  —2-mode selectable loudness
• 1 RCA preout (rear)

FH-P9200MP
4-Channel High-Power WMA/MP3/CD/MD Receiver

MP3 • Plays Windows Media™
CD-R CD-RW

OEL
MOSFET 50W×4

CD CONTROL	SUPERTUNER IIID	3 RCA	BUILT-IN DSP
EEQ	DIGITAL-SFC	BBE DIGITAL	CD TEXT
2-DIN	MINI DISC	MDLP	

Microphone for Auto EQ

- Dot-matrix OEL (Organic EL) display
- iPod® adapter ready
- Built-in DSP
  —EEQ
  —5-mode preset equalizer
  —2-mode custom preset equalizer
  —Auto EQ
  —4-mode digital SFC
  —BBE® digital sound processing
  —Digital listening position selector
  —Auto time alignment
  —Digital 13-band graphic equalizer
  —2-way crossover: HPF/LPF
  —3-way digital network
  —ASL (Auto Sound Levelizer)
- MDLP with ATRAC 3
- Auto-slide face
- Pop-up rotary volume
- 3 RCA preouts (front + rear + subwoofer)
- Level indicator
- Spectrum analyzer

FH-P5000MP
4-Channel High-Power WMA/MP3/CD/Cassette Receiver

MP3 • Plays Windows Media™
CD-R CD-RW

MOSFET 50W×4

CD CONTROL	DOLBY B NR	SUPERTUNER IIID	2 RCA selectable
BUILT-IN DSP	EEQ	BBE DIGITAL	CD TEXT
2-DIN			

- WAV file playback
- iPod® adapter ready
- BMX (Bitmetric Equalizer)
- Burr Brown D/A Converter
- Built-in DSP
  —EEQ
  —5-mode preset equalizer
  —2-mode custom preset equalizer
  —BBE® digital sound processing
  —Digital listening position selector
  —Time alignment
  —Digital 13-band graphic equalizer
  —2-way crossover: HPF/LPF
- Auto-slide face
- Dolby B NR
- Color changeable illuminated bar (10 colors, plus Rainbow and Mirage modes)
- Rotary volume
- 2 RCA preouts: selectable (front + rear/front + subwoofer)
- Level indicator
- 7-band spectrum analyzer

FH-P4200MP
4-Channel High-Power WMA/MP3/AAC/CD/Cassette Receiver

MP3 • Plays Windows Media™
CD-R CD-RW

MOSFET 50W×4

CD CONTROL	DOLBY B NR	SUPERTUNER IIID	1 RCA selectable
BUILT-IN DSP	EEQ	DIGITAL-SFC	BBE DIGITAL
CD TEXT	2-DIN		

- iTunes® AAC playback
- WAV file playback
- iPod® adapter ready
- BMX (Bitmetric Equalizer)
- Digital direct
- Built-in DSP
  —EEQ
  —5-mode preset equalizer
  —2-mode custom preset equalizer
  —3-mode digital SFC
  —BBE® digital sound processing
  —Digital listening position selector
  —Digital 9-band graphic equalizer
  —2-way crossover: HPF/LPF
- Dolby B NR
- Rotary volume
- 1 RCA preout: selectable (subwoofer/non-fading)
- 5-band spectrum analyzer
- Level indicator

3-Way Network Mode/Standard Mode

| DEH-P80RS | FH-P9200MP |

Systems linking a DEH-P80RS or FH-P9200MP head unit with external amplifiers gain the versatility to operate in either of two modes: **Standard mode**, with preouts driving front, rear and subwoofer channels, and 2- or 3-way speakers typically at front and rear; or **Network mode**, using low-, mid- and high-frequency (rather than front, rear and subwoofer) channels. Cut-off frequency, filter slope, level and phase is adjustable for each channel, so output from component woofers and tweeters can be tailored to particular acoustic staging and overall sound performance. Network mode's integration of Auto Time Alignment for the DEH-P80RS particularly adds to the flexibility of tuning and other operating controls.

Built-in 50 W × 4-Channel High-Power MOSFET Amplifier

DEH-P8850MP	DEH-P6850MP	DEH-P5850MPH	DEH-P4850MPH	DEH-3850MPH
DEH-2850MP	DEH-1850	DEH-P80RS	FH-P9200MP	FH-P5000MP
FH-P4200MP	KEH-P4025			

MOSFET 50W×4 To minimize voltage loss in its head unit amplifiers, Pioneer built in high-performance Power MOSFET integrated circuitry that processes signals efficiently at 50 W × 4 maximum total output.

High-speed MOSFET switching reduces distortion to virtually nothing at high frequency ranges, thanks to superior characteristics of linearity that smooth the signal transmission path from input to output. Pioneer's independent routing of input and output current is essential to obliterating distortion.

High power of 50 W per channel and characteristics of the bonding wire ensure excellent sound quality. The 99.99% pure OFC (oxygen-free copper) bonding wire has low electrical resistance, so minimal electric power is lost as heat in the IC chip, enhancing power handling efficiency as well as sound quality.

Power MOSFET high-power IC chip

10

CDX-P1280
IP-Bus 12-Disc Multi-CD Player

CDX-P680
IP-Bus 6-Disc Multi-CD Player

CD-R CD-RW

CDX-P1280

| CD TEXT READY |

- CD-R/RW playback with skip play
- ADPS (Automatic Disc Program Selection)
- Disc title memory: 100 titles
- ITS (Instant Track Selection)

CDX-FM1287
FM-Modulated 12-Disc Multi-CD Player

CDX-FM687
FM-Modulated 6-Disc Multi-CD Player

CD-R CD-RW   CDX-FM1287   Display with control key

| CD TEXT READY |

- CD-R/RW playback with skip play
- Built-in FM modulator
- Display with control key
- Wireless card remote controller (included)
- ADPS (Automatic Disc Program Selection)
- Disc title memory: 100 titles
- ITS (Instant Track Selection)
- IP-Bus output for direct head unit connection

KEH-P4025
4-Channel High-Power Cassette Receiver

MOSFET 50W×4
DETACHABLE FACE SECURITY

| CD CONTROL | SUPERTUNER | 1 RCA |
| EEQ | DIN-D | |

- iPod® adapter ready
- EEQ
  —5-mode preset equalizer
  —1-mode custom preset equalizer
  —3-mode selectable loudness
  —Selectable FIE (Front Image Enhancer)
- Full-logic mechanism
- 1 RCA preout (rear)
- Multi-CD control
- Optional remote controller available

CD-R30-02
(Optional remote controller)

KEH-P2035
4-Channel High-Power Cassette Receiver

DETACHABLE FACE SECURITY

| 45 W × 4 MAX. | CD CONTROL | SUPERTUNER |
| 1 RCA | DIN-D | |

- iPod® adapter ready
- BTB (Bass/Treble Booster)
- 2-mode selectable loudness
- 1 RCA preout (rear)
- Radio intercept
- Multi-CD control (pause and repeat)

EEQ (Easy Equalizer)

EEQ Sound shaping is at your command. You can adjust the sound according to in-car acoustic characteristics and the music you listen to.

5-Mode Preset Equalizer

DEH-P8850MP	DEH-P6850MP	DEH-P5850MPH	DEH-P4850MPH	DEH-3850MPH
DEH-2850MP	DEH-1850	DEH-P80RS	DEQ-P90	FH-P9200MP
FH-P5000MP	FH-P4200MP	KEH-P4025		

You can switch among five preset equalization curves* (Super Bass/Powerful/Natural/Vocal/Flat) simply by pushing an EQ button. Each of these settings boosts bass and high-frequency ranges in ways that suit the music best.

*Dynamic/Powerful/Natural/Vocal/Flat in the DEH-2850MP and DEH-1850.

2-Mode Custom Preset Equalizer

| DEH-P8850MP | DEH-P6850MP | DEH-P80RS | FH-P9200MP | FH-P5000MP |
| FH-P4200MP | | | | |

Create and memorize your favorite equalization curves from an amazing variety of sound-shaping dimensions and combinations, just as you like. Custom-1 mode can memorize adjusted preset curves using 7-band* digital equalizer settings for each source (Source EQ memory). Custom-2 mode can register your favorite custom curve (based on Flat mode** curve) for all sources using the 7-band* digital equalizer.

*L/R common 16-band for DEH-P8850MP and L/R independent 16-band for DEH-P80RS.
**Flat mode also remains after customizing equalization curve.

1-Mode Custom Preset Equalizer

| DEH-P5850MPH | DEH-P4850MPH | DEH-3850MPH | DEH-2850MP | DEH-1850 |
| KEH-P4025 | | | | |

Pioneer's head units feature a 1-mode custom preset equalizer for creating your favorite sound curve from an amazing variety of sound-shaping

dimensions/combinations exactly as you like. This mode can memorize adjusted preset curves by 3-band parametric equalizer* settings for each source.

*Bass/mid/treble equalizer for DEH-2850MP and DEH-1850.

2-Way Crossover (HPF/LPF)

| DEH-P8850MP | DEH-P6850MP | DEH-P5850MPH | DEH-P4850MPH | DEH-3850MPH |
| DEH-P80RS | FH-P9200MP | FH-P5000MP | FH-P4200MP | |

Our most feature-loaded models allow extra EEQ flexibility with selectable HPF (High Pass Filter) and LPF (Low Pass Filter). Head units of these systems can perform as amplifiers or separate crossover units for easier system control, particularly of low-frequency signals.

3-Mode Selectable Loudness

| DEH-P6850MP | DEH-P5850MPH | DEH-P4850MPH | DEH-3850MPH | KEH-P4025 |

Select among three levels (high/mid/low) to instantly boost volume when driving noise overpowers in-car sound.

2-Mode Selectable Loudness

| DEH-2850MP | DEH-1850 | KEH-P2035 |

Select high or low volume boost level when extraneous noise drowns out your sound system.

Selectable FIE (Front Image Enhancer)

| DEH-P4850MPH | DEH-3850MPH | KEH-P4025 |

Enhance front sound imaging without sacrificing rear speaker bass. You can choose among three effect settings.

11

MAKING DIGITAL SOUND MORE NATURAL

Optical Digital Reference (ODR) and Pure Component systems add refinement to linear power handling throughout the entire signal processing and transfer process, from the original source, to a car's CD player/receiver, and out through the speakers. The result: more natural integrity in pure digital sound quality. Pioneer's exclusive ODR components are connected by an optical digital link, ensuring precise, consistent signal processing.

ODR (Optical Digital Reference) and RS Speaker Systems

RS-D7R Component CD Receiver

Limited distribution

Copper-plated chassis
Display off mode

High-grade condenser

CD-R CD-RW

OEL

DETACHABLE FACE SECURITY.

| CD CONTROL | SUPERTUNER III |
| CD TEXT | DIN-D |

- White dot-matrix OEL (Organic EL) display
- High-quality CD drive
- Hi-bit conversion
- Digital direct
- Frequency change: 96 kHz–44.1 kHz
- Rotary volume
- Auto-slide face

- IP-Bus input/output
- Digital optical input/output
- External unit control via IP-Bus (2 units)
- AUX-In (with optional CD-RB20)
- Source DVD control
- OFC power/ground cable included
- Display off mode
- High-speed master clock

RS-A9 Digital Integrated Power Amplifier

Limited distribution
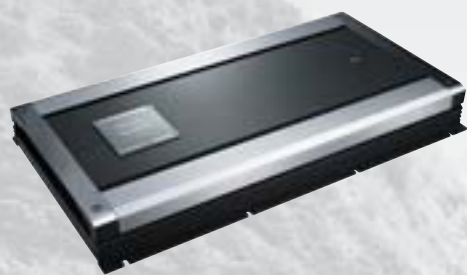
- 50 W × 4 (4 Ω)/75 W × 4 (2 Ω)/150 W × 2 (4 Ω) (continuous power)
- 100 W × 4 (4 Ω)/300 W × 2 (4 Ω) (max. power)
- Bridgeable 2/3/4-channel capability
- High-performance 32-bit floating binary point type DSP
- Current feedback amplifier
- Full balanced system (bridgeable connection)
- Built-in DSP (Digital Signal Processor) (FIR)
  —31-band L/R independent digital graphic equalizer (±12 dB/0.5 dB steps)
  —3-band L/R independent digital parametric equalizer (±12 dB/0.5 dB steps)
  —5-mode preset memory
  —Time alignment
  —Digital listening position selector
  —Parametric bass/treble controls
  —Digital compression
  —4-way L/R independent digital crossover network (high/mid/low/subwoofer)

—Crossover frequency: 20–20,000 Hz (variable)
—Crossover slope: 0 dB to –72 dB
- Multi 24-bit Burr Brown D/A converters
- 1 optical digital input
- 3 optical digital outputs (mid/low/subwoofer)
- IP-Bus input/output
- Gold-plated screw-type speaker terminals
- Gold-plated large screw-type power/ground terminals
- Low load impedance capability (2–8 ohm)
- Copper-plated chassis
- L/R independent power supply
- Sound master clock
- DAC volume

SHARC® DSP chip

| 600 W MAX. | BUILT-IN DSP |

RS-A7 Digital Power Amplifier

Limited distribution

- 50 W × 4 (4 Ω)/75 W × 4 (2 Ω)/150 W × 2 (4 Ω) (continuous power)
- 100 W × 4 (4 Ω)/300 W × 2 (4 Ω) (max. power)
- Bridgeable 2/3/4-channel capability
- Current feedback amplifier
- Full balanced system (bridgeable connection)
- Multi 24-bit Burr Brown D/A converters
- 2 optical digital inputs

- IP-Bus input/output
- Gold-plated screw-type speaker terminals
- Gold-plated large screw-type power/ground terminals
- Low load impedance capability (2–8 ohm)
- Copper-plated chassis
- L/R independent power supply
- Sound master clock
- DAC volume

| 600 W MAX. |

TS-W01RS
25-cm (10") Component Subwoofer

| 300 W MAX. |

- 25-cm cone woofer with integrated dust cap
- Space-saving small-enclosure-type design (recommended enclosure: 14–28 l/0.49–0.99 cu.ft.)
- Biased thickness type butyl rubber surround
- Large-sized ø140-mm voice coil with multiple neodymium magnets
- Shallow mounting aluminum die-cast basket
- Gold-plated large screw-type terminals
- 150 watts nominal power handling
- 20–3,000 Hz, 86 dB, ø276 × 94 mm

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

TS-S01RS
7.7-cm Component Midrange Speaker

| 50 W*/60 W** MAX. |

*With speaker unit only
**With back chamber

TS-S01RS with back chamber

- 7.7-cm cellulose cone midrange speaker
- DLC (Diamond Like Carbon) coated titanium dust cap
- Zinc die-cast back basket
- Glass cloth voice coil bobbin
- Heat-resistant ribbon voice coil with neodymium magnet
- Gold-plated large screw-type terminals
- 15 watts nominal power handling
- 70 Hz–24,000 Hz (With speaker unit only.)/160 Hz–24,000 Hz (With back chamber.), ø90 × 42.5 mm (With speaker unit only.)/ø90 × 67 mm (With back chamber.)

Large ø140-mm Voice Coil

TS-W01RS

The TS-W01RS's magnetic circuit structure uses a voice coil with large ø140-mm diameter to drive the center part of the entire speaker cone to improve transient.

Multiple neodymium magnets creating powerful magnetic flux help drive the cone with exceptional strength and accuracy.

The large vent in the center of the speaker back is maximized for fine control to reduce air resistance. The result: more accurate bass reproduction.

Compact Enclosure
We design our subwoofer cones for compact (14–28 liters) speaker enclosures.

Shallow mounting aluminum die-cast basket and large ø140-mm voice coil

Dual Arc Ring Tweeter Diaphragm*

TS-T01RS

The TS-T01RS's Dual Arc Ring Diaphragm, based on Pioneer's Super Wide Range Tune innovation, reliably reproduces clear sound audible up to super-high 48 kHz frequency.

The inside and outside of the center drive-type ring diaphragm are shaped differently from each other, and vibrate to varying degrees for various frequencies. But these frequencies are mixed in such a way as to achieve smooth characteristics (which is good in terms of sound

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TS-M01RS
17-cm Component Mid-Bass Speaker

| 120 W MAX. |

- 17-cm cone mid-bass speaker
- Corrugation surround
- Copper ribbon short voice coil with neodymium magnet
- Bottom hold design zinc die-cast one-piece chassis
- Tungsten damper holder* with anti-resonance structure
- Gold-plated large screw-type terminals
- Use with UD-N01RS 2-Way Passive Crossover Network
- 50 watts nominal power handling
- 35–11,000 Hz, ø174 × 75 mm

*Patent pending

TS-T01RS
3.5-cm Component Tweeter

| 120 W MAX. |

- 3.5-cm tweeter with dual arc ring diaphragm*
- Lightweight aluminum voice coil with neodymium magnet
- Ion-plated titanium diaphragm
- Zinc die-cast frame
- Tungsten cone holder* with anti-resonance structure
- Aluminum die-cast mounting bracket included
- Gold-plated large screw-type terminals
- Use with UD-N01RS 2-Way Passive Crossover Network
- 50 watts nominal power handling
- 1,200–48,000 Hz, ø68 × 64 mm

*Patent pending

UD-N01RS
2-Way Passive Crossover Network

- Use with TS-M01RS and TS-T01RS

High-Quality Mid-Bass Pulp Cone

TS-M01RS

We carefully choose the pulp fiber mix of our speaker cone material to ensure the proper characteristics for optimal quality and linear reproduction of sound throughout a wide frequency range.

Dust cap uses high-inner-loss-type pulp exclusively developed for superior smooth frequency response. Dust cap has a concave shape, and suppresses resonance inside the magnetic circuits.

Its corrugation surround effectively absorbs unwanted vibration, achieves excellent linearity and reduces interference of cone and surround.

Corrugation surround
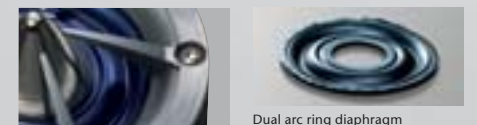
reproduction). The diaphragm, made of light, rigid titanium is ion-plated on its surface, helping to minimize distortion. 35 mm in diameter, it offers to extend low-frequency reproduction and precise, accurate sound staging.

*Patent pending

Dual arc ring diaphragm

WMA/MP3 Players
Single-CD Player
2-DIN Players
Multi-CD Players
Cassette Players
ODR & Pure Component Systems
Power Amplifiers
Subwoofers
Speakers
Specifications & Comparison

HQ Active Component Systems

DEX-P90RS — Component CD Receiver

OEL DETACHABLE FACE SECRET.

CD CONTROL | SUPERTUNER III | 3 RCA | HI-VOLTAGE PREOUT
CD TEXT | DIN-D
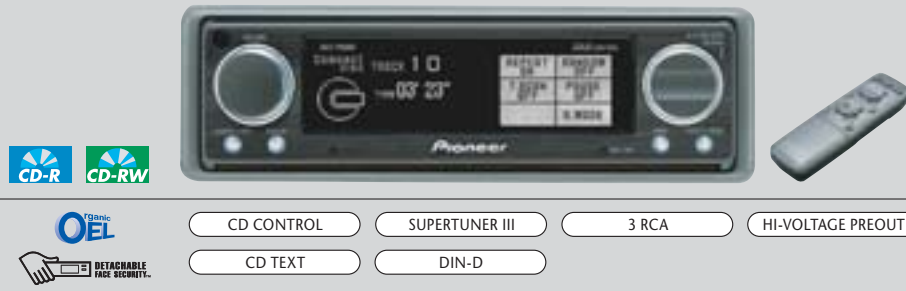
- White dot-matrix OEL (Organic EL) display
- Source DVD control
- Multi 24-bit D/A Converters with 8x oversampling digital filter
- Rotary volume
- Auto-slide face
- 3 gold-plated RCA preouts (front + rear + non-fading)
- Optical input/output
- External unit control via IP-Bus (2 units)
- AUX-In (with optional CD-RB20)
- High-quality hairline aluminum front panel
- Display off mode

DEQ-P90 — Component Digital Signal Processor

BUILT-IN DSP
4 RCA
HI-VOLTAGE PREOUT

- Built-in DSP
  —Multi 24-bit Burr Brown D/A Converters
  —5-mode preset equalizer
  —Digital listening position selector
  —Time alignment
  —Parametric bass/treble controls
  —31-band L/R independent equalizer (±12 dB/0.5 dB steps)
- Built-in crossover network (L/R)
  —Crossover frequency: 20–20,000 Hz (variable)
  —Crossover slope: 0 dB to –36 dB
  —Crossover presets: 5
- 4-way independent L/R crossover network (high/mid/low/subwoofer)
- Optical input (with DEX-P90RS)
- Gold-plated 8-channel RCA output (high/mid/low/subwoofer)
- Gold-plated screw-type power/ground terminals

TS-W12PRS
30-cm (12") Component PRS Subwoofer

1200 W MAX.
VCCS DuPont KEVLAR

- 30-cm (12") enclosure use subwoofer
- KEVLAR® Brand Fiber/pulp composite cone with integrated VCCS (Voice Coil Cooling System)
- Dual-layer rolled urethane surround
- Dual Voice Coil (DVC) design (2 × 4 Ω)
- 4-spoke aluminum die-cast basket
- Gold-plated binding posts
- Small enclosure capability
- Spoke grille compatible (UD-G306)
- 300 watts nominal power handling
- 15–2,000 Hz, 92 dB, 1.0 l (28.3 cu. ft.), ø322 × 152 mm

TS-M171PRS
17-cm Component PRS Mid-Bass Speaker

NEW
200 W MAX.

- 3-layer aramid fiber with IMPP composite cone
- Heat-resistant ribbon voice coil
- High density micro fiber surround for smoother response
- Aluminum die-cast basket
- Gold-plated screw-type terminals
- Spoke grille included
- 50 watts nominal power handling
- 25–9,000 Hz, 88 dB, ø156 × 78 mm

TS-S101PRS
10-cm Component PRS Midrange Speaker

NEW
60 W MAX.

- Dual layer cone with aramid and pulp
- High density micro fiber surround for smoother response
- Heat-resistant ribbon voice coil with neodymium magnet
- Glass cloth voice coil bobbin
- Aluminum die-cast basket
- Gold-plated screw-type terminals
- Spoke grille included (removable magnet cover for flexible mounting)
- 15 watts nominal power handling
- 60–30,000 Hz, 86 dB, ø110 × 52 mm

TS-T031PRS
28-mm Component PRS Soft-Dome Tweeter

NEW
200 W MAX.

- 28-mm polyester soft-dome tweeter with dual neodymium magnet
- Heat-resistant voice coil
- Aluminum die-cast cabinet
- Gold-plated screw-type terminals
- Surface, flush or invisible tweeter mounting kit
- 50 watts nominal power handling
- 1,200–32,000 Hz, 90 dB, ø55 × 27.1 mm

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

The Ultimate in Audio Tech

Pioneer's new Pure Component Systems and ODR (Optical Digital Reference) Systems optimize the quality of sound and control in every detail for the in-car audio experience of a lifetime.

For Component Single-CD Player

RS-D7R DEX-P90RS

Hi-Bit Conversion
The RS-D7R and DEX-P90RS upgrade the original CD audio signals from 16-bit to 24-bit, and increase CD data resolution by a factor of 256. The result: lower quantization noise, expanded dynamic range, minimal processing error, and superior linearity, delivering sound as it was meant to be reproduced and heard.

For RS and PRS Power Amplifiers

Current Feedback Type Power Amplifier Circuitry*
For high-resolution sound amplification, this circuitry uses MOSFET** in the final output stage for extremely high slew rate that results in quicker input signal response, wide range characteristics and low distortion.
*RS-A9/RS-A7/PRS-A700/PRS-A500
**PRS-D5000SPL/PRS-D3000SPL/PRS-A700/PRS-A500

L/R Independent Power Supply*
This new circuit design's L/R independent symmetric layout improves channel separation. Independently mounted large DC-DC converter power supply directs electric current more effectively, with superior stability.
*RS-A9/RS-A7/PRS-A700/PRS-A500

For Digital Signal Processor

RS-A9 DEQ-P90

4-Way L/R Independent Digital Crossover Network
Optimize the balance of speaker output by adjusting sound pressure level or left and right channels independently, according to listener position and system configuration.

Time Alignment

Time Alignment Image

Signal output of each speaker can be calibrated in 1/20,000-second* increments, for optimal phasing of sound from the system, according to listener position. Precise equalization and suppression of frequency response disturbance makes for a clearer, more focused soundstage.
*RS-A9: 1/40,000-second

Digital delay processing makes all speakers sound as if they are virtually equidistant from the listener, for a clearer, front-focused soundstage.

31-Band L/R Independent Digital Equalizer
This finely tunes equalization of the sound curve and independently adjusts for slight differences between left and right channel frequency response for truer, clearer sound.

PRS-D5000SPL
Class-D Mono Amplifier

3000 W MAX.
LPF
RCA INPUT

Bass Boost

Large block-type power/ground terminals | Gold-plated RCA sync control input and output terminals

- 750 W × 1 (4 Ω)/1,500 W × 1 (2 Ω) (continuous power)
- 1,500 W × 1 (4 Ω)/3,000 W × 1 (2 Ω) (max. power)
- Variable LPF (40–240 Hz, –18/–24 dB/oct.)
- High-voltage input level control (200 mV–6.5 V)
- Input level/gain control
- Low load impedance capability (2–8 ohm)
- Gold-plated RCA input terminals
- Large block-type speaker terminals (8-gauge)
- Large block-type power/ground terminals (0-gauge)
- Variable Bass Boost Remote (40–120 Hz, 0 to +12 dB)
- Subsonic filter (20 Hz, –18 dB/oct.)
- SYNC control
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- High-efficiency MOSFET output section
- MASS (Multiple Amplifier Synchronization System)
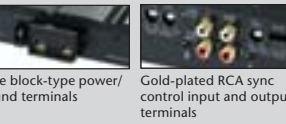
PRS-D3000SPL
Class-D Mono Amplifier

2000 W MAX.
LPF
RCA INPUT

Bass Boost

Gold-plated RCA sync control input and output terminals

- 500 W × 1 (4 Ω)/1,000 W × 1 (2 Ω) (continuous power)
- 1,000 W × 1 (4 Ω)/2,000 W × 1 (2 Ω) (max. power)
- Variable LPF (40–240 Hz, –24 dB/oct.)
- High-voltage input level control (200 mV–6.5 V)
- Input level/gain control
- Low load impedance capability (2–8 ohm)
- Gold-plated RCA input terminals
- Large block-type power/ground terminals (4-gauge)
- Large screw-type speaker terminals
- Variable Bass Boost Remote (40–120 Hz, 0 to +12 dB)
- Subsonic filter (20 Hz, –18 dB/oct.)
- SYNC control
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- High-efficiency MOSFET output section
- MASS (Multiple Amplifier Synchronization System)

MASS (Multiple Amplifier Synchronization System) Connection Examples

PRS-D5000SPL PRS-D3000SPL PRS-D1000M

Single-Amplifier Configuration*: 1,500 W RMS

SYNC OUTPUT
Mode select switch must be in MASTER position.
SYNC INPUT
2 Ω minimum 1,500 W
Signal source

Two-Amplifier Bridged Configuration: 3,000 W RMS**

Mode select switch must be in MASTER position.
Mode select switch must be in SYNCINV position.
4 Ω minimum 3,000 W
Signal source

━━ Wiring for speaker must be 10 AWG minimum.
▧ Load may be any combination of speakers but impedance must be 2 Ω or larger.
▧ Load may be any combination of speakers but impedance must be 4 Ω or larger.

With the PRS-D5000SPL, PRS-D3000SPL and PRS-D1000M's SYNC connection, adjustment of the master amplifier also adjusts all other amplifiers in the cascade. This makes control simpler and more convenient.

*These are only a few examples of connection configurations for the PRS-D5000SPL. Ask your nearest car stereo installer or dealer about power/ground wiring and installation details for the PRS-D5000SPL, PRS-D3000SPL and PRS-D1000M.

Two-Amplifier Configuration*: 3,000 W RMS

Mode select switch must be in MASTER position.
2 Ω minimum 1,500 W
Signal source
Mode select switch must be in SYNC position.
2 Ω minimum 1,500 W
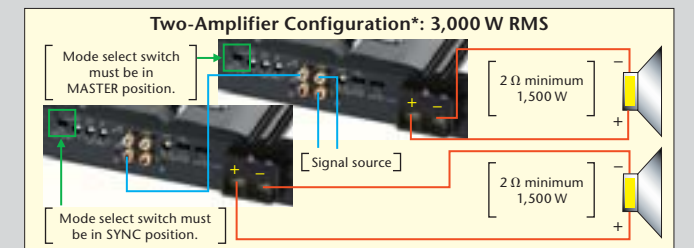
*2 Ω minimum speaker impedance for this configuration or damage will occur.
**4 Ω minimum speaker impedance for this configuration or damage will occur.

Caution: Having more than four amps in a sync configuration is not recommended.
Sine waves can put excessive stress on an audio system, so if a sine wave source is used at high output level, damage can occur.

PRS-A700
4-Channel Bridgeable Power Amplifier
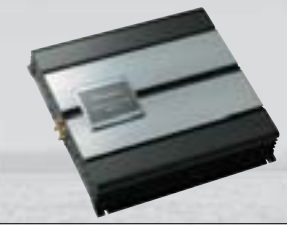
600 W MAX.
LPF
HPF
RCA INPUT

- 50 W × 4 (4 Ω)/150 W × 2 (4 Ω)/75 W × 4 (2 Ω) (continuous power)
- 100 W × 4 (4 Ω)/300 W × 2 (4 Ω) (max. power)
- Bridgeable 2/3/4-channel capability
- Current feedback amplifier
- L/R independent power supply
- Variable LPF/HPF (40–120 Hz, –12 dB/oct.) for A and B channels
- High-voltage input level control (200 mV–6.5 V)
- Input level/gain control (L/R independent)
- Low load impedance capability (2–8 ohm)
- Carved gold-plated RCA input terminals
- Gold-plated screw-type speaker terminals
- Gold-plated large screw-type power/ground terminals
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- High-efficiency MOSFET output section

PRS-A500
2-Channel Bridgeable Power Amplifier

600 W MAX.
LPF
HPF
RCA INPUT

- 100 W × 2 (4 Ω)/300 W × 1 (4 Ω)/150 W × 2 (2 Ω) (continuous power)
- 200 W × 2 (4 Ω)/600 W × 1 (4 Ω) (max. power)
- Bridgeable 1/2/3-channel capability
- Current feedback amplifier
- L/R independent power supply
- Variable LPF/HPF (40–120 Hz, –12 dB/oct.)
- High-voltage input level control (200 mV–6.5 V)
- Input level/gain control (L/R independent)
- Low load impedance capability (2–8 ohm)
- Carved gold-plated RCA input terminals
- Gold-plated screw-type speaker terminals
- Gold-plated large screw-type power/ground terminals
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- High-efficiency MOSFET output section

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

WMA/MP3 Players
Single-CD Player
2-DIN Players
Multi-CD Players
Cassette Players
ODR & Pure Component Systems
Power Amplifiers
Subwoofers
Speakers
Specifications & Comparison

Reference Sound Systems

DEH-P80RS — Component CD Player/Receiver
NEW

MP3
Plays Windows Media™
CD-R CD-RW

OEL
MOSFET 50W×4
DETACHABLE FACE SECRETS.

CD CONTROL	SUPERTUNER IIID+	3 RCA
HI-VOLTAGE PREOUT	BUILT-IN DSP	EEQ
BBE DIGITAL	CD TEXT	DIN-D

• White dot-matrix OEL (Organic EL) display
• Aluminum-plated face panel
• iTunes® AAC playback
• WAV file playback
• iPod® adapter ready
• Burr Brown advanced segment-type D/A Converter
• Built-in DSP
  —EEQ
  —5-mode preset equalizer
  —2-mode custom preset equalizer
  —Auto EQ
  —Auto EQ for 3-way network
  —BBE® digital sound processing
  —Digital listening position selector

—Auto time alignment
—BMX (Bitmetric Equalizer)
—L/R independent 16-band digital graphic equalizer
—L/R independent 2-way crossover: HPF/LPF
—L/R independent 3-way crossover: high/mid/low
—ASL (Auto Sound Levelizer)
• Auto-slide face
• Rotary Commander
• 3 gold-plated RCA preouts (front + rear + subwoofer)
• Level indicator
• Spectrum analyzer
• Multi-language display (English/Spanish/Portuguese)

PRS-D4000F — Class-FD 4-/2-Channel Bridgeable Amplifier
NEW

1200 W MAX.
LPF
HPF
RCA INPUT/OUTPUT
SPEAKER INPUT
Class FD ice^power

• 75 W × 4 (4 Ω)/300 W × 2 (4 Ω)/ 150 W × 4 (2 Ω) (continuous power)
• 150 W × 4 (4 Ω)/600 W × 2 (4 Ω) (max. power)
• Bridgeable 2/3/4-channel capability
• Variable LPF/HPF (40–120 Hz, −12 dB/oct., 4 ch)
• High-voltage input level control (400 mV–6.5 V)
• Load impedance capability (2–8 ohm)
• Gold-plated RCA input and output terminals
• Gold-plated screw-type speaker terminals

• All terminals placed on one side
• Removable terminal/settings cover
• Speaker level input (1.6 V–26 V)
• Speaker line input turn-on sensor
• High-efficiency MOSFET output section
• High-performance balanced isolator input circuit
• Aluminum die-cast heatsink

PRS-D2000T — Class-FD 2-Channel Bridgeable Amplifier
NEW

1200 W MAX.
LPF
HPF
RCA INPUT/OUTPUT
SPEAKER INPUT
Class FD ice^power **Bass Boost**

• 150 W × 2 (4 Ω)/600 W × 1 (4 Ω)/ 300 W × 2 (2 Ω) (continuous power)
• 300 W × 2 (4 Ω)/1,200 W × 1 (4 Ω) (max. power)
• Bridgeable 1/2-channel capability
• Variable LPF/HPF (40–120 Hz, −12 dB/oct., 2 ch)
• High-voltage input level control (400 mV–6.5 V)
• Load impedance capability (2–8 ohm)
• Gold-plated RCA input and output terminals
• Gold-plated screw-type speaker terminals

• All terminals placed on one side
• Removable terminal/settings cover
• Speaker level input (1.6 V–26 V)
• Speaker line input turn-on sensor
• Bass Boost Remote (50 Hz, 0/+6/+9/+12 dB)
• High-efficiency MOSFET output section
• High-performance balanced isolator input circuit
• Aluminum die-cast heatsink

PRS-D1000M — Class-D Mono Amplifier
NEW

1200 W MAX.
LPF
RCA INPUT
SPEAKER INPUT
Bass Boost

• Normal mode: 400 W × 1 (4 Ω)/ 600 W × 1 (2 Ω) (continuous power)
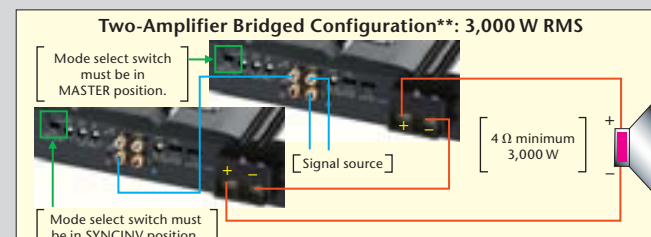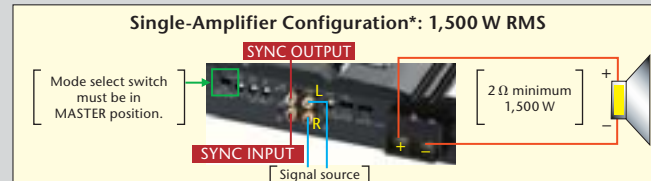• Hi-current mode: 150 W × 1 (4 Ω)/ 300 W × 1 (2 Ω)/600 W × 1 (1 Ω) (continuous power)
• 800 W × 1 (4 Ω)/1,200 W × 1 (1 Ω, 2 Ω) (max. power)
• Variable LPF (40–240 Hz, −18 dB/oct.)
• High-voltage input level control (400 mV–6.5 V)
• Load impedance capability (1–8 ohm)
• Gold-plated RCA input terminals
• Gold-plated screw-type speaker terminals

• All terminals placed on one side
• Removable terminal/settings cover
• Speaker level input (1.6 V–26 V)
• Speaker line input turn-on sensor
• Bass Boost Remote (50 Hz, 0/+6/+9/+12 dB)
• Subsonic filter (20 Hz, −18 dB/oct.)
• SYNC control
• High-efficiency MOSFET output section
• High-performance balanced isolator input circuit
• MASS (Multiple Amplifier Synchronization System)
• Aluminum die-cast heatsink

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Class-FD ICEpower Amplifiers

PRS-D4000F PRS-D2000T

Class FD ice^power

Pioneer brings together its cutting-edge Class-D circuitry and ICEpower digital amplifier technology to create Class-FD (Full Range Class-D) ICEpower amplifiers that deliver superior performance and sound quality in car entertainment. Combining the unsurpassed efficiency of Class-D amps with the ultra-clean sound of Class-AB amplifiers, **COM (Controlled Oscillation Modulation)** technology not only eliminates unnecessary sensitivity to imperfect power supplies ①—it compares the amplified **PWM (Pulse Width Modulation) signal** with the original input signal ②, compensating for any variance and lowering distortion in the process. **MECC (Multivariable Enhanced Cascade Control)** compensating for

load-dependent frequency response, improving this response as this system receives analog signals from the output filter ③. The result is truer fidelity featuring tight bass with minimal lag effect; crisp, airy mids and highs; and unsurpassed specifications contributing to qualities that outperform those of other premium-quality amplifiers.

Input signal — PWM signal — Amplified PWM signal — Output signal
① ② ③

Audio Quality / Efficiency
○ Class-A
○ Class-AB
● Class-FD ICEpower Double loop compensation
○ Class-D Single loop compensation
○ Class-D No compensation

TS-C171PRS
NEW
17-cm Packaged Component Speaker System

Rear view

200 W MAX. INJECTION MOLDED CONE™

• 17-cm woofer
• Shallow mount adapters included
• 50 watts nominal power handling
• 25–32,000 Hz, 88 dB, ø156 × 78 mm

TS-C131PRS
NEW
13-cm Packaged Component Speaker System

Rear view

150 W MAX. INJECTION MOLDED CONE™

• 13-cm woofer
• 30 watts nominal power handling
• 35–32,000 Hz, 88 dB, ø129 × 67 mm

Common Features
• 3-layer aramid fiber with IMPP composite cone
• High density micro fiber surround for smoother response
• Short voice coil & wide magnetic field design for symmetric & linear cone motion
• Dual OFC short ring for reduced distortion
• Aluminum die-cast bottom hold one-piece rigid chassis
• Aluminum die-cast center plug
• 28-mm lightweight soft-dome tweeter

• Cancel magnet design for extremely high density magnetic field
• Rear chamber for lower crossover frequency
• Aluminum die-cast tweeter chassis
• Surface (angled), flush or invisible tweeter mounting kit
• Audiophile-grade outboard crossover network included with −12 dB/oct. LPF/HPF
• Protection circuit and 3-step tweeter level adjustment
• Gold-plated screw-type terminals

TS-C171PRS/TS-C131PRS Tweeter Specifications
• Dimensions (W × H × D): ø55 × 27.1 mm (surface mount)
• Mounting depth: 12.2 mm
• Cut-out dimensions: ø47 mm
See page 35 for woofer dimensions.

PRS Speakers

TS-C171PRS TS-C131PRS TS-M171PRS TS-S101PRS TS-T031PRS

Pioneer advances the proud heritage of its IASCA (International Auto Sound Challenge Association) award-winning Premier Reference Series. These speakers' superior response, linearity and sound directivity improve low- and mid-frequency reproduction, while making highs and lows sound smoother and more open.

PRS Speaker (Tweeter) Cross Section
Absorbent · Protector · Soft-dome diaphragm · Cancel magnet · Aluminum flange and back cabinet · OFC short ring · Back chamber · Main magnet
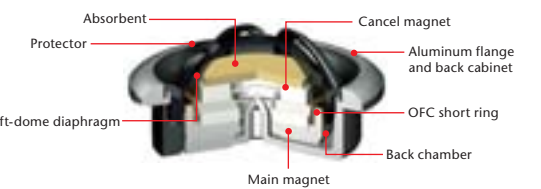
PRS Speaker (Woofer) Cross Section
3-layer aramid fiber with IMPP composite cone · Micro fiber surround · Dual OFC short ring · Aluminum die-cast bottom hold one-piece rigid chassis · Overhung thick plate · Aluminum die-cast center plug · Ø1-7/8" (48-mm) large-diameter voice coil · Voice coil with short winding length
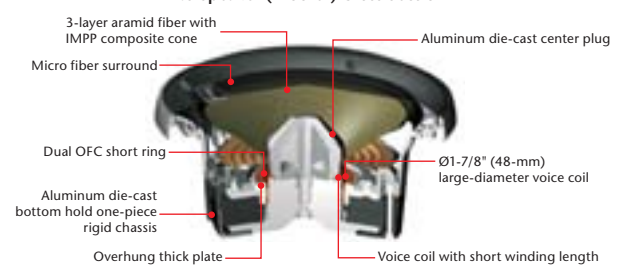
TS-S101PRS Cross Section
Aluminum die-cast protector · Micro fiber surround · 2-layer aramid fiber with IMPP cone · Aluminum center plug · Dual OFC short ring · Aluminum die-cast basket · Overhung thick plate · Voice coil with short winding length
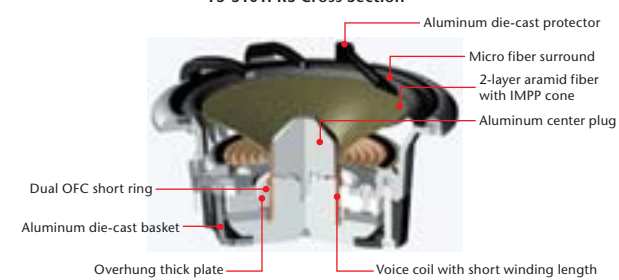
Micro Fiber Surround: Maximum Musical Response
The strong, high-density **micro fiber** material surrounding the woofer of a PRS speaker is very light and low in resistance and internal loss characteristics. This enhances linearity of the short winding length of the voice coil, thereby optimizing efficiency. Moreover, **micro fiber** doesn't stretch so it does a better job than other materials to control vibration and enables higher power input. The result is faster response and more accurate bass reproduction that allows all music to be heard to greatest advantage.

Polyester fiber (polyurethane resin)

Magnified cross section view

Internal loss vs. Specific gravity chart: Better sound · Rubber · Micro fiber · Cloth · Urethane
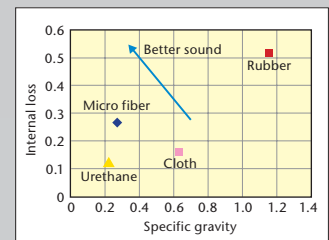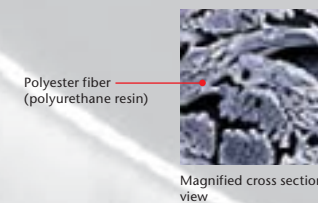
2nd-Generation Multilayer Cone: First-Class Sound Reproduction
For the new PRS speakers, Pioneer also developed a **multilayer woofer cone** in an even better formulation, sandwiching **composite foamed IMPP using interlaced aramid fiber** between a **woven carbon-blended aramid fiber layer** and a **glass fiber layer**. This rigid cone structure provides impeccable midrange frequency reproduction and overall sound quality. The cone material is also supremely light and uniform in its physical properties because it is made without adhesives using an advanced injection molding process.

Aramid fiber layer · Composite foamed IMPP using interlaced aramid fiber · Glass fiber layer

Magnified cross section view

Physical properties of cone materials

Rigidity ratio vs. Internal loss chart: Better sound · New PRS speakers · 1st-generation · Conventional design
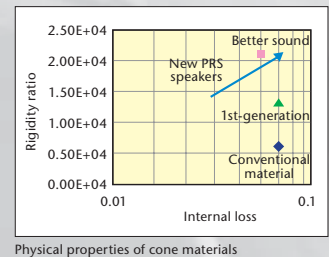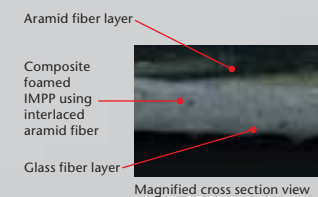
Power up your passion for music. Pioneer's four-, two- or mono-channel amplifiers offer all the range you need to drive your speakers and subwoofer to peaks of performance. Bass Boost enhances deep, rock-solid presence at the low end of the frequency range. All circuitry is engineered for optimal efficiency to maintain smooth signal path and pure sound integrity.

GM-5200T
2-Channel Bridgeable Power Amplifier — NEW

- 760 W MAX.
- LPF
- RCA INPUT
- SPEAKER INPUT

Bass Boost

- 125 W × 2 (4 Ω)/380 W × 1 (4 Ω)/ 190 W × 2 (2 Ω) (continuous power)
- 250 W × 2 (4 Ω)/760 W × 1 (4 Ω) (max. power)
- Bridgeable 1/2/3-channel capability
- LPF (80 Hz, –12 dB/oct.)
- High-voltage input level control (400 mV–6.5 V)
- Input level/gain control
- Low load impedance capability (2–8 ohm)

- RCA input terminals
- Screw-type speaker terminals
- Large screw-type power/ground terminals
- Speaker level input (1.6 V–26 V)
- Bass Boost (50 Hz, 0/+6/+12 dB)
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- Black heatsink

GM-3200T
2-Channel Bridgeable Power Amplifier — NEW

- 300 W MAX.
- LPF
- RCA INPUT
- SPEAKER INPUT

- 60 W × 2 (4 Ω)/150 W × 1 (4 Ω)/ 75 W × 2 (2 Ω) (continuous power)
- 120 W × 2 (4 Ω)/300 W × 1 (4 Ω) (max. power)
- Bridgeable 1/2/3-channel capability
- LPF (80 Hz, –12 dB/oct.)
- High-voltage input level control (400 mV–6.5 V)
- Input level/gain control
- Low load impedance capability (2–8 ohm)

- RCA input terminals
- Screw-type speaker terminals
- Large screw-type power/ground terminals
- Speaker level input (1.6 V–26 V)
- High-performance balanced isolator circuit
- Black heatsink

2-Channel Amplifier Connection Examples

Bridged Mono — GM-3200T — Subwoofer — Bridged mono — TS-W306C

Stereo — L R — 2 Ω parallel — 2 Ω / 2 Ω — Stereo — GM-5200T — TS-W3004SPL

Bridged Mono 4 Ω — 8 Ω series — Subwoofer — Bridged mono — 4 Ω — GM-5200T — TS-W3004SPL

4-Channel Amplifier Connection Examples

Bridged Stereo — L R — TS-W306C — Bridged connection — Stereo — GM-6200F — Bridged connection — TS-W306C

3-Channel Mode Bridged — L R — Subwoofer — Stereo — Full-range speakers — GM-6200F — Bridged connection — TS-W306C

Multi-Channel System — 2-preout head unit — Front A-ch. — Rear Non-fading B-ch. — RCA input / RCA output — GM-6200F — Full-range speakers — 6" × 9" speakers — Bridged connection — GM-5200T — LPF — TS-W306C

GM-D510M Class-D Mono Amplifier

- 1000 W MAX.
- LPF
- RCA INPUT

- 300 W × 1 (4 Ω)/500 W × 1 (2 Ω) (continuous power)
- 600 W × 1 (4 Ω)/1,000 W × 1 (2 Ω) (max. power)
- Variable LPF (40–240 Hz, –24 dB/oct.)
- High-voltage input level control (125 mV–6.5 V)
- Bass level control (–22 to +12 dB)

- Low load impedance capability (2–8 ohm)
- RCA input terminals
- Large screw-type power/ground terminals
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- High-efficiency MOSFET output section
- Aluminum die-cast heatsink

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.
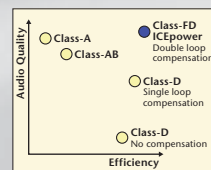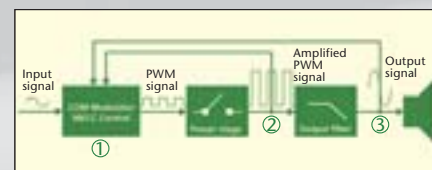
GM-7200M — NEW
Mono Amplifier

- 800 W MAX.
- LPF
- RCA INPUT
- SPEAKER INPUT

Bass Boost

- 250 W × 1 (4 Ω)/360 W × 1 (2 Ω) (continuous power)
- 500 W × 1 (4 Ω)/800 W × 1 (2 Ω) (max. power)
- Variable LPF (40–240 Hz, –12 dB/oct.)
- High-voltage input level control (400 mV–6.5 V)
- Input level/gain control
- Low load impedance capability (2–8 ohm)
- RCA input terminals
- Screw-type speaker terminals
- Large screw-type power/ground terminals
- Speaker level input (1.6 V–26 V)
- Bass Boost (50 Hz, 0/+6/+12 dB)
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- Black heatsink

GM-6200F — NEW
4-Channel Bridgeable Power Amplifier

- 600 W MAX.
- LPF
- HPF
- RCA INPUT/OUTPUT
- SPEAKER INPUT

- 60 W × 4 (4 Ω)/150 W × 2 (4 Ω)/75 W × 4 (2 Ω) (continuous power)
- 120 W × 4 (4 Ω)/300 W × 2 (4 Ω) (max. power)
- Bridgeable 2/3/4-channel capability
- LPF/HPF (80 Hz, –12 dB/oct.) for A and B channels
- High-voltage input level control (400 mV–6.5 V)
- Input level/gain control
- Low load impedance capability (2–8 ohm)
- RCA input and output terminals*
- Screw-type speaker terminals
- Large screw-type power/ground terminals
- Speaker level input (1.6 V–26 V)
- PWM regulated power supply with MOSFET switching
- High-performance balanced isolator circuit
- Black heatsink

Output for A-channel

RCA inputs and outputs (GM-6200F) | Oversized power ground terminals (GM-6200F)

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Bass Boost

PRS-D5000SPL | PRS-D3000SPL | PRS-D2000T | PRS-D1000M | GM-7200M | GM-5200T

Power is just one defining characteristic of outstanding amplification. Precision and balance are also crucial to get the sound you want. By letting you set the optimal bass level for each speaker and subwoofer connected to a system, Bass Boost gives you more precise control over how your music sounds overall. Select between 0- to 12-dB level settings that can be adjusted in 2-dB steps, according to preference and music style.

Class-D Amplifiers

PRS-D1000M | GM-D510M | PRS-D5000SPL | PRS-D3000SPL

Class-D amplifiers overcome the inefficiencies of traditional Class-A or AB amplifiers. Pioneer's Class-D amps transform very little power into heat while a very high percentage of the power supply (67%) is transformed into the load. This results in a very compact amp which needs little input power to produce very high output power.
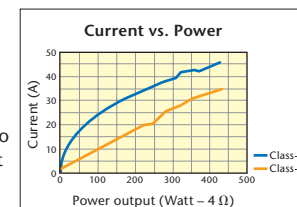
The Class-D amplifier's PWM (Pulse Width Modulator) modulates the original audio input signal with another signal which has a much higher fixed frequency. The result is a digital signal which contains the input signal and a band of frequency components around the modulation frequency. A LPF (Low Pass Filter) will then filter out the 350 kHz frequency pulses and the resulting amplified output signal is then sent to the subwoofer and/or speakers.

The advantage of this amplification is that the power output FETs operate like a switch that is 'on' or 'off': when 'on', the FET acts like a closed switch, no voltage runs through its terminals, and no wasted power is transformed into heat.

This is why Pioneer's Class-D amp's heatsink can be kept very small, and a stable load can be pumped into your subs and speakers to create a maximum of undistorted, clear sound.

Current vs. Power
(Current (A) vs. Power output (Watt – 4 Ω))
— Class-AB
— Class-D

High current — BTT — Analog Amps — Front or rear speaker — Subwoofer
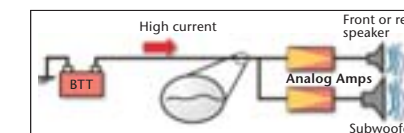
The high amplifier power required to drive a subwoofer causes unstable current and voltage, which not only goes to the subwoofer but also to the front and rear speakers. As a result, the sound quality is affected and distorted.

Low current — BTT — Class-D Amps — Front or rear speaker — Subwoofer
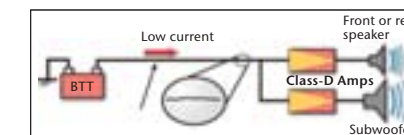
A Class-D amplifier needs only 2/3 of the current of a conventional amplifier, so the power supply to both subwoofer and front and rear speakers is more stable. As a result, the sound quality will not be affected, so you can enjoy a very clean sound output without distortion.

Pulse Width Modulator Method
Input signal — +V / 0 / –V — Pulse Width Modulation Circuit — Output signal — Signal amplitude transfer to Pulse Width — A LPF (Low Pass Filter) cuts off the high frequency
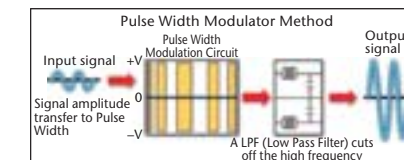
Great sound needs a solid anchor to extend the low-frequency end of the sonic spectrum. Pioneer goes to the greatest extremes for all its subwoofers to share the winning characteristics of smooth response, minimal distortion, maximum output and absolute fidelity. The result is bass that reliably rocks you to your core.

dB Drag Racing
EXTREME SPL

• 2005 World Record in Extreme 2
• 2005 1st Place in Extreme 5+

USACi
Autosound Competition International

• 2005 Legal World Record (180.5 dB)
• 2005 Outlaw SPL Champion
• 2005 Bass Olympics Champion
• 2005 dB 5 Champion

IASCA & IDBL

• 2005 World Record in Ultimate4 (180.3 dB)*
* First 180+ Reading in Competition History
• 2005 World Record in Ultimate1

TS-W8102SPL

TS-W5102SPL

TS-W8102SPL [NEW]
38-cm (15") Component Competition-Level SPL Subwoofer

8000 W MAX.

• Massive triple-stack magnet assembly
  (11 kg: 3,700 g × 3/390 oz.: 8 lbs. 20 oz. × 3)
• 3,000 watts nominal power handling
• 15–1,500 Hz, 91 dB, 70.8 l (2.5 cu. ft.), ø400 × 359.5 mm

TS-W5102SPL [NEW]
30-cm (12") Component Competition-Level SPL Subwoofer

6000 W MAX.

• Massive triple-stack magnet assembly
  (9 kg: 3,000 g × 3/320 oz.: 6 lbs. 10 oz. × 3)
• 2,500 watts nominal power handling
• 18–2,000 Hz, 88 dB, 42.5 l (1.5 cu. ft.), ø327 × 304 mm

Common Features
• Composite IMPP cone using interlaced carbon fiber*
• Carbon cloth/foamed acrylic polymer/glass cloth 3-layer rigid dust cap
• Wide-roll, woven aramid fiber radial rubber surround*
• Overhung surround design*
• High-power handling ceramic-coated voice coil wire*

• Dual 76-mm (3"), high inductance, 6-layer, long voice coils (DVC) (2 × 2Ω)
• Titanium voice coil bobbin
• Dual aramid damper with woven tinsel wire and damper ring
• Precision dual aramid dampers
• Huge back plate and extended pole yoke with vented pole

• Huge 30-mm (1.2") thick top plate
• ADMG (Aero-Dynamic Magnetic Gap) design
• Aluminum die-cast one-piece rigid basket with bottom hold design
• 8-gauge wire terminal
*Patent pending

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

New SPL (Sound Pressure Level) Subwoofer

[TS-W8102SPL] [TS-W5102SPL]

To generate resounding bass, the TS-W8102SPL and TS-W5102SPL subwoofers handle high-power input and extreme sound pressure levels with absolute assurance, thanks to design and construction durable enough to deliver consistently true, rock-steady performance, even at extra-high volume throughout marathon listening sessions.
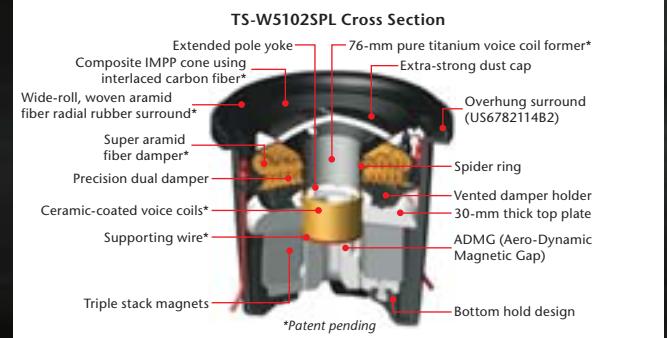
wire which effectively doubles a subwoofer's capacity to handle input power and helps prevent short-circuiting caused by overheating. When pushed toward the limit, the new TS-W5102SPL—containing ceramic-coated voice coil coolly pumped out earth-shaking decibel levels without fail to outperform the competition at dB Drag Racing showcases in 2005 and 2006.
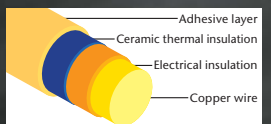
Extra-Strong Dust Cap with Foamed Acrylic Polymer
The TS-W8102SPL and TS-W5102SPL subwoofers' dust caps are far stronger than and practically as light as conventional ones, thanks to foamed acrylic polymer sandwiched between layers of carbon-fiber and glass cloth. This foamed acrylic polymer core is extremely durable and heat-resistant, with up to about 36 times as much compressive strength as carbon-fiber blended paper, among more conventional foam materials. Pioneer puts this material to maximum advantage in this subwoofer to accommodate higher sound pressure levels for greater stability and power in bass reproduction.

TS-W5102SPL Cross Section

Extended pole yoke
Composite IMPP cone using interlaced carbon fiber*
76-mm pure titanium voice coil former*
Extra-strong dust cap
Wide-roll, woven aramid fiber radial rubber surround*
Overhung surround (US6782114B2)
Super aramid fiber damper*
Spider ring
Precision dual damper
Vented damper holder
Ceramic-coated voice coils*
30-mm thick top plate
Supporting wire*
ADMG (Aero-Dynamic Magnetic Gap)
Triple stack magnets
Bottom hold design
*Patent pending

Adhesive layer
Ceramic thermal insulation
Electrical insulation
Copper wire

Carbon cloth
Foamed acrylic polymer
Glass cloth

Dual Ceramic-Coated Voice Coils
For all their high-power circuitry, high-performance subwoofers can run hot, but too much heat generation can compromise electrical-handling performance. Pioneer's proprietary solution is ceramic-coated voice coil

TS-W3004SPL
30-cm (12") Component Subwoofer

3000 W MAX.

• ø65-mm (2-9/16") large titanium voice coil bobbin
• Double-stack magnet assembly (3.11 kg/110 oz.)
• Spoke grille compatible (UD-G306)
• 750 watts nominal power handling
• 18–700 Hz, 89 dB, 24.1–49.5 l (0.85–1.75 cu. ft.), ø329 × 205 mm

TS-W2504SPL
25-cm (10") Component Subwoofer

2500 W MAX.

• ø55-mm (2-1/4") large titanium voice coil bobbin
• Double-stack magnet assembly (2.3 kg/81 oz.)
• Spoke grille compatible (UD-G256)
• 600 watts nominal power handling
• 18–1,000 Hz, 87 dB, 18.4–35.4 l (0.65–1.25 cu. ft.), ø282 × 185 mm

Common Features
• Interlaced carbon fiber/glass fiber reinforced IMPP cone
• Wide-roll 3-layer fiber woven radial surround with honeycomb cloth
• Dual 4-layer, ceramic coat round wire long voice coils (DVC) (2 × 4 Ω)
• Dual aramid damper with woven tinsel wire and damper ring
• Extended and vented pole yoke
• Thick 23-mm (7/8") top plate
• Aluminum die-cast one-piece rigid basket with bottom hold design
• Aluminum heatsink cooling system
• Silver binding posts
• 1-piece rubber gasket

TS-W2504SPL

TS-W3004SPL

TS-W3004SPL Cross Section

Interlaced carbon fiber/glass fiber reinforced IMPP cone
Aluminum die-cast one-piece rigid basket with bottom hold design
Fiber woven reinforced radial surround
Aluminum heatsink cooling system
Thick 23-mm top plate
Cradle support (bottom hold design)
Double-stack magnet assembly

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Carbon Fiber IMPP Cone

[TS-W8102SPL] [TS-W5102SPL] [TS-W3004SPL] [TS-W2504SPL]
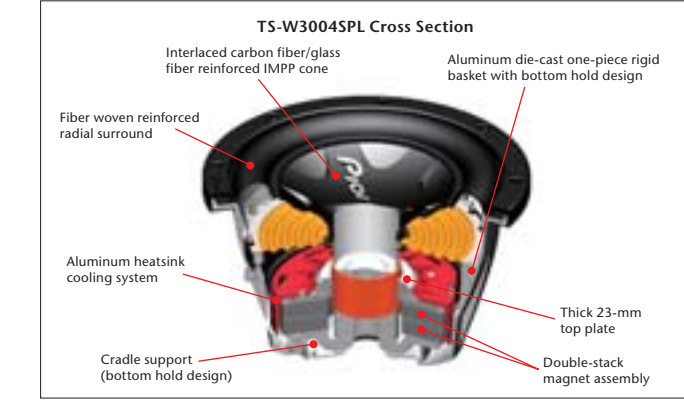
Preventing cone failure at high pressure levels requires an extremely rigid yet lightweight cone. So Pioneer developed a new patent-pending IMPP cone using a proprietary composite blend of long carbon fibers and injection molded polypropylene. These materials were chosen for their extraordinary strength and lightweight characteristics. The long carbon fibers interlace together to form an incredibly resilient fiber weave, providing strength and rigidity for powerful bass.

Microscopic Cross Section View

Regular IMPP cone
Long carbon fiber reinforced IMPP cone

Woven Aramid Fiber Radial Surround

[TS-W8102SPL] [TS-W5102SPL] [TS-W3004SPL] [TS-W2504SPL]

The TS-W8102SPL, TS-W5102SPL, TS-W3004SPL and TS-W2504SPL incorporate a patent-pending Woven Aramid Fiber Radial Surround which improves power handling and reduces distortion. Similar to a radial tire, the surround is constructed of three layers—two consisting of rubber and one of interwoven aramid fiber. The aramid fiber layer is designed

with a "honeycomb" weave, which evenly distributes strength throughout the surround material, eliminating any weak points of surround and improving high-power capability. The result is an extremely durable and resilient surround that resists "puckering" (distortion often produced under extreme power conditions).

Benefits of Woven Aramid Fiber Radial Surround
• Improved power handling capability • Reduced distortion (anti-puckering design)
• Improved linear excursion • Louder, more accurate bass

The three layers are formed under a high-pressure, high-temperature process. The result: an extremely durable and high-performance surround.

Bottom Hold Design Aluminum Die-Cast One-Piece Chassis

[TS-C171PRS] [TS-C131PRS] [TS-W8102SPL] [TS-W5102SPL]
[TS-W3004SPL] [TS-W2504SPL]

Although aluminum die-cast baskets have been around for many years, not all are created equal. Whereas other manufacturers purchase off-the-shelf designs, Pioneer's baskets were designed in-house, from scratch. Die-cast baskets also provide excellent damping characteristics, to attenuate vibration quickly and prevent distortion.

Unlike other manufacturers' designs, Pioneer's basket cradles the bottom plate and motor assembly. During high SPL levels there is a tremendous amount of pressure placed on the motor assembly. By supporting (cradling) the motor assembly any unwanted flexing or vibrations which can lead to energy loss are prevented.

Vibration Attenuation (Damping) Comparison
Impulse response   20 Avg   0% Ovlp   Hann
Real
40.0
Aluminum die-cast basket
Steel basket
–40.0
Fxd XY   Sec.   200 m

Improved Chassis Rigidness
Reduced backward motion
dB
–40
–50
–60
–70
–80
–90
20   70   120   170   Hz
Conventional basket
Bottom hold basket
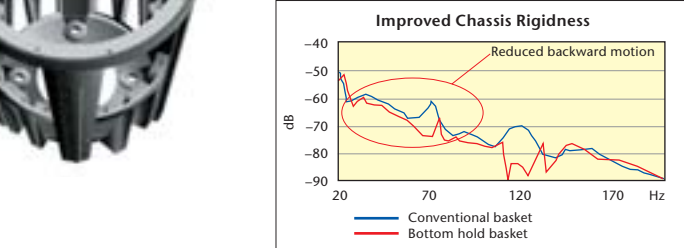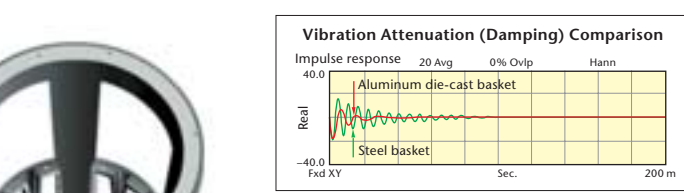
Shallow-Type Subwoofers

TS-SW1241D   30-cm (12") Component Subwoofer

NEW

1400 W MAX.

- Double-cone structure with air-suspension control system
- Reinforced cone using C-shaped nodes structure
- Composite IMPP double cone woofer using interlaced carbon and ultra long glass fiber
- 3-layer fiber woven radial surround with M-shape cross-section
- 4-layer, long voice coil
- Glass cloth voice coil bobbin

- High-energy strontium magnet
- Aluminum dust cap
- T-pole yoke design
- Extended and vented pole yoke
- Rubber gasket
- Cast aluminum basket with fin-shaped design
- 350 watts nominal power handling
- 18–1,000 Hz, 88 dB, 14.2–28.3 l (0.50–1.0 cu. ft.), ø329.0 × 97.9 mm

TS-SW1041D   25-cm (10") Component Subwoofer

NEW

1000 W MAX.

- Double-cone structure with air-suspension control system
- Reinforced cone using C-shaped nodes structure
- Composite IMPP double cone woofer using interlaced carbon and ultra long glass fiber
- 3-layer fiber woven radial surround with M-shape cross-section
- 4-layer, long voice coil
- Glass cloth voice coil bobbin

- High-energy strontium magnet
- Aluminum dust cap
- T-pole yoke design
- Extended and vented pole yoke
- Rubber gasket
- Cast aluminum basket with fin-shaped design
- 250 watts nominal power handling
- 20–1,000 Hz, 87 dB, 9.9–19.8 l (0.35–0.7 cu. ft.), ø282.0 × 89.6 mm

TS-SW841D   20-cm (8") Component Subwoofer

NEW

500 W MAX.

- Double-cone structure with air-suspension control system
- Reinforced cone using C-shaped nodes structure
- Composite IMPP double cone woofer using interlaced carbon and ultra long glass fiber
- 3-layer fiber woven radial surround with M-shape cross-section
- 4-layer, long voice coil
- Glass cloth voice coil bobbin

- High-energy strontium magnet
- Aluminum dust cap
- T-pole yoke design
- Extended and vented pole yoke
- Rubber gasket
- Cast aluminum basket with fin-shaped design
- 120 watts nominal power handling
- 30–1,500 Hz, 85 dB, 4.2–14.2 l (0.15–0.5 cu. ft.), ø218.4 × 75.2 mm

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Shallow-Type Subwoofers

TS-SW1241D   TS-SW1041D   TS-SW841D

With enhanced maximum power and handling shallow dimensions, TS-SW subwoofers are more versatile than ever. The Full (30 cm) and Regular (25 cm) sizes can be installed behind and under seats, and the Compact (20 cm) size can even be mounted on rear sidewalls and trays of smaller cars.

of this air varies as the cones move back and forth, resulting in smoother, more precise linearity. The trapped air behaves like a spring, eliminating the need for a conventional spider structure, so the unit can be made shallow enough to fit in a tight space. Inside the enclosure, a drive cone deflects air pressure and a fin-shaped basket smoothly directs air sideways. This makes bass output remarkably stable, despite these units' compact size. The system also enhances durability, as the subwoofers are subjected to smaller frequency changes (and less wear and tear) than conventional subwoofers.

Full-size	30 cm (12")		Full-size pickup trucks etc
Regular	25 cm (10")		Standard-size pickup trucks etc
Compact	20 cm (8")		SUV Sedan Compact vehicles

Behind seats   Under seats
Rear sidewall   Rear tray

Air-Suspension Control System

Thanks to Pioneer's unique Air-Suspension Control System, TS-SW subwoofers offer deep, rich bass in a shallow, compact form. Air is trapped within the composite IMPP™ double cone, between the main cone and the drive cone behind it. The pressure

Frequency Changes Before and After Reliability Test

Subwoofer with Air-Suspension Control System — 33 Hz / 30 Hz / 28 Hz / 24 Hz

Conventional subwoofers Before test — 30 Hz / After test

TS-SW1241D Cross Section

- Composite IMPP double cone using interlaced carbon and ultra long glass fiber
- Aluminum dust cap
- 4-layer long voice coil
- C-shaped nodes*
- Surround with M-shape cross-section*
- Air-suspension control system*
- Cast aluminum basket with fin-shaped design
- T-pole yoke design*
- Spring compression wire terminals
- High-energy strontium magnet

*Patent pending

Sealed Enclosure Type Subwoofers

Sealed Enclosure Type (C-type) subwoofers are designed to deliver maximum bass performance when used in a speaker cabinet of appropriate internal volume.

TS-W306C
30-cm (12") Component Subwoofer (Sealed Enclosure Type)

TS-W306DVC
30-cm (12") Component Subwoofer (Dual Voice Coil Type)

1000 W MAX.

- Composite IMPP cone using interlaced aramid fiber
- 3-layer, fiber woven radial surround
- Single conex damper with damper ring
- 4-layer, long voice coil (TS-W306C)
- Dual 4-layer, long voice coils (DVC) (2 × 4 Ω) (TS-W306DVC)
- 12-slit, 55-mm (2-3/16") aluminum voice coil bobbin

- Dual mass high-power magnet (2.4 kg, 83 oz.)
- Extended and vented pole yoke
- Silver binding posts
- Spoke grille compatible (UD-G306)
- 400 watts nominal power handling
- 18–500 Hz, 89 dB, 24.1–49.5 l (0.85–1.75 cu. ft.), ø327 × 177 mm

TS-W306C

TS-W306C Subwoofer with optional UD-G306 Spoke Grille

TS-W256C
25-cm (10") Component Subwoofer (Sealed Enclosure Type)

TS-W256DVC
25-cm (10") Component Subwoofer (Dual Voice Coil Type)

800 W MAX.

- Composite IMPP cone using interlaced aramid fiber
- 3-layer, fiber woven radial surround
- Single conex damper with damper ring
- 4-layer, long voice coil (TS-W256C)
- Dual 4-layer, long voice coils (DVC) (2 × 4 Ω) (TS-W256DVC)
- 12-slit, 48-mm (2") aluminum voice coil bobbin

- Dual mass high-power magnet (2.1 kg, 74 oz.)
- Extended and vented pole yoke
- Silver binding posts
- Spoke grille compatible (UD-G256)
- 350 watts nominal power handling
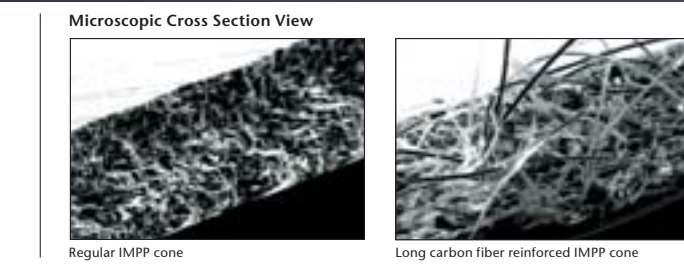- 18–600 Hz, 87 dB, 18.4–35.4 l (0.65–1.25 cu. ft.), ø277 × 162 mm

TS-W256C

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Subwoofer Enclosures

To have tighter control of bass power, an enclosure system is the perfect solution. Enclosure subwoofers are designed for use in a custom-designed sealed, vented or bandpass enclosure, the size of which is determined by specialized software. The bass response is tight, accurate, controlled and consistent, since it's not affected by the volume of objects in the car boot. You can put together high-performance systems featuring superb low-frequency reproduction.

SEALED ENCLOSURES

From a purely musical standpoint, the sealed enclosure type is as popular as ever. This box type is capable of handling large amounts of power and, in turn, fairly high SPL levels "in car". Size always plays a key role in application and the sealed enclosure variety is excellent for small box applications.

Power, however, is required to achieve above average SPL levels. From a purely engineering standpoint, the sealed box lends a "simpler is better" approach to subwoofer application.

Larger / Recommended / Smaller
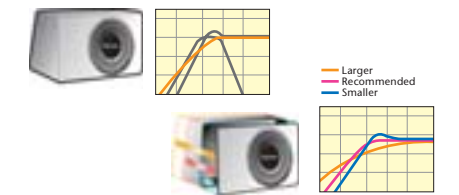
VENTED ENCLOSURES (BASS REFLEX)

The vented enclosure variant is a balance between several factors. Most notable about vented boxes is the increase in box volume over the sealed variation. Because the vent is considered to be a secondary "output source", the deeper bass frequencies can be extended. While the distortion level above the tuning frequency is quite low, things can get pretty dirty if the enclosure is forced to play below this area.

Efficiency and easily obtained lower frequencies would be the biggest benefits of this design. From a purely engineering standpoint, three key elements have to be in "sync" in order for the enclosure to work at its targeted area—box + speaker + vent. While more complex than the sealed variation, the vented enclosure has been a very popular approach to car audio low-frequency reproduction.

Port

Larger / Recommended / Smaller
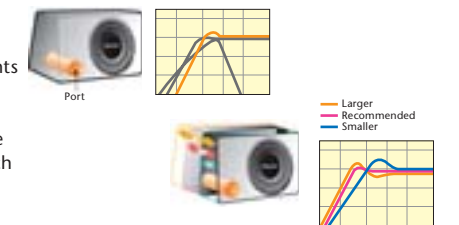
4TH-ORDER BAND PASS ENCLOSURES

The 4th-order band pass enclosure is basically a sealed enclosure with the addition of a ported enclosure in front of the driver, which acts as an acoustical filter. The resulting system radiates sound in a limited bandwidth. Band pass enclosures usually demonstrate a higher sensitivity compared to sealed enclosures. The disadvantage, however, is that it uses more trunk space. 4th-order band pass systems are a bit more flexible in design than sealed or bass reflex

enclosures, due to the ability to change many parts of the enclosure as front and back volume, as well as the port length. The benefit of this is that the frequency response as well as the sensitivity of the system can be defined more freely compared to sealed or bass reflex enclosures. Nevertheless, a very decent bass reproduction can be achieved with a well-tuned system.

Sealed chamber   Ported chamber

Port

Larger / Recommended / Smaller

WMA/MP3 Players

Single-CD Player

2-DIN Players

Multi-CD Players

Cassette Players

ODR & Pure Component Systems

Power Amplifiers

Subwoofers

Speakers

Specifications & Comparison
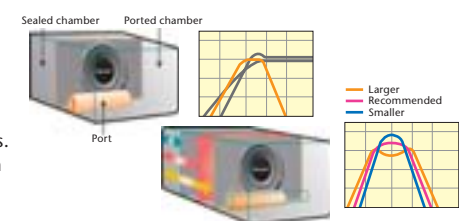
TS-W301R 30-cm (12") Component Subwoofer

NEW

800 W MAX.

INJECTION MOLDED CONE™

- Blue IMPP composite cone
- 4-layer, long voice coil
- Single nomex damper
- Extended excursion design
- Extended and vented pole yoke
- Best tuned parameters
- Spoke grille compatible (UD-G306)
- 150 watts nominal power handling
- 20–4,000 Hz, 91 dB, 28.3–56.6 l (1.0–2.0 cu. ft.), ø327 × 164 mm

TS-W251R 25-cm (10") Component Subwoofer

NEW

600 W MAX.

INJECTION MOLDED CONE™

- Blue IMPP composite cone
- 4-layer, long voice coil
- Single nomex damper
- Extended excursion design
- Extended and vented pole yoke
- Best tuned parameters
- Spoke grille compatible (UD-G256)
- 120 watts nominal power handling
- 20–4,500 Hz, 90 dB, 19.8–36.8 l (0.7–1.3 cu. ft.), ø277 × 154 mm

Free-Air Type Subwoofers

Free-Air Type (F-type) subwoofers reproduce rich bass and high Sound Pressure Level (SPL) using the entire trunk space as an enclosure.
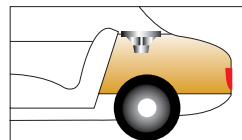
Free-Air Type (F-type)

TS-W305F
30-cm (12") Component Subwoofer (Free-Air Type)

800 W MAX.

INJECTION MOLDED CONE™

- Large magnet and high-power motor assembly
- Tall surround and large cone surface
- Composite IMPP cone using interlaced aramid fiber
- Extended excursion design
- Long voice coil design
- Extended and vented pole yoke
- Best tuned parameters
- Spoke grille compatible (UD-G306)
- 300 watts nominal power handling
- 20–2,000 Hz, 94 dB, 150 l (5.3 cu. ft.), ø327 × 165 mm

TS-W255F
25-cm (10") Component Subwoofer (Free-Air Type)

650 W MAX.

INJECTION MOLDED CONE™

- Large magnet and high-power motor assembly
- Tall surround and large cone surface
- Composite IMPP cone using interlaced aramid fiber
- Extended excursion design
- Long voice coil design
- Extended and vented pole yoke
- Best tuned parameters
- Spoke grille compatible (UD-G256)
- 250 watts nominal power handling
- 20–2,500 Hz, 92 dB, 150 l (5.3 cu. ft.), ø277 × 150 mm

TS-W305F

TS-W305F Back

TS-W305F Subwoofer
with optional UD-G306 Spoke Grille

UD-G306/UD-G256 Optional Spoke Grille

Pioneer optional spoke grilles protect cone surface and enhance appearance of the subwoofers.

- Spoke grille for the TS-W12PRS, TS-W3004SPL, TS-W2504SPL, TS-W306C, TS-W306DVC, TS-W256C, TS-W256DVC, TS-W301R, TS-W251R, TS-W305F and TS-W255F

UD-G306

UD-G256 with TS-W256C

Component Enclosed & Linear Power Subwoofers

TS-WX11A 13 × 21 cm Sealed Active Subwoofer

NEW

150 W MAX.*
*Output Power

- Built-in MOSFET 150 W max. monaural amplifier
- 13 × 21 cm aluminum and IMPP composite cone woofer with strontium magnet
- Wired remote control (input level, crossover frequency, phase)
- Speaker and RCA level inputs
- Built-in variable LPF (50–125 Hz, –12 dB/oct.)
- Aluminum die-cast heatsink
- 50 watts nominal power handling
- 54–200 Hz, 101 dB/1 W (In-car), 280 × 80 × 200 mm

TS-WX22A 20-cm Sealed Active Subwoofer

150 W MAX.*
*Output Power

INJECTION MOLDED CONE™

- Built-in MOSFET 150 W max. monaural amplifier
- 20-cm IMPP composite cone woofer with strontium magnet
- Wired remote control (input level, crossover frequency, phase)
- Speaker and RCA level inputs
- Built-in variable LPF (50–125 Hz, –12 dB/oct.)
- Aluminum die-cast heatsink
- 60 watts nominal power handling
- 40–200 Hz, 101 dB (In-car), 250 × 265 × 110 mm

Rear terminals

Can be installed at rear luggage room, under seat, etc.

TS-WX206A 20-cm Bandpass Active Subwoofer

150 W MAX.*
*Output Power

INJECTION MOLDED CONE™

- Built-in MOSFET 150 W max. monaural amplifier
- 20-cm IMPP composite cone woofer with strontium magnet
- Large dual port bandpass design for rich and powerful bass
- Speaker and RCA level inputs
- Input level control/phase switch
- Built-in variable LPF (50–125 Hz, –12 dB/oct.)
- Aluminum die-cast heatsink
- 60 watts nominal power handling
- 35–200 Hz, 107 dB (In-car), 274 × 316 × 412 mm

Sound quality adjustment knobs

TS-WX20LPA 20-cm Bass-Reflex Active Subwoofer

Limited distribution

200 W MAX.*
*Output Power

INJECTION MOLDED CONE™

- Built-in 200 W max. monaural amplifier
- 20-cm foamed IMPP composite cone woofer
- Pioneer Exclusive Linear Power Response Technology
- 2-layer dual long voice coil
- Built-in variable LPF (50–125 Hz, –12 dB/oct.)
- Speaker and RCA level inputs
- Input level control
- Phase switch
- 100 watts nominal power handling
- 25–200 Hz, 104 dB (In-car), 431 × 291 × 282 mm

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.
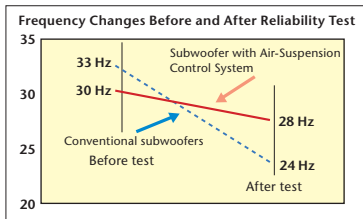
TS-D Series Speakers

We spare no effort to make TS-D full-range speakers the very best, with the finest technologies and materials coming together in style worthy of a Pioneer. The stunning sound realizes a car audio enthusiast's liveliest fantasies with detail, dynamism, and balance that put them above the rest of high-specification speaker elite.

TS-D691S 6" × 9" 2-Way Speaker

350 W MAX. DuPont™ KEVLAR®

- 6" × 9" (16 × 24 cm) woofer/28-mm dome tweeter
- Dual-layer KEVLAR® Brand Fiber* with Rigilite™ IMPP composite cone woofer
- Single conex damper
- Copper ring
- Extended pole yoke design
- Butyl rubber surround for smoother response
- Glass-imide voice coil bobbin
- Lightweight balanced dome tweeter with neodymium magnet
- Wave guides for dispersion control
- Rear chamber for lower crossover frequency

- Built-in crossover network: LPF; –12 dB/oct. (for woofer)/HPF; –12 dB/oct. (for tweeter)
- Newly-designed full-depth basket boasting much higher compressive strength and better damping
- Full-depth basket for rich bass response
- Top/bottom mount
- 80 watts nominal power handling
- 22–32,000 Hz, 91 dB, 264 × 184 × 118 mm

*DuPont and/or DU PONT-TORAY CO., LTD. produce KEVLAR® brand fiber. DuPont™ and KEVLAR® are trademarks and registered trademarks of DuPont or its affiliates and are used under license by Pioneer.

TS-D161S 16-cm 2-Way Speaker

- 16-cm woofer/28-mm dome tweeter
- Dual-layer KEVLAR® Brand Fiber with Rigilite™ IMPP composite cone woofer
- Single conex damper
- Copper ring
- Extended pole yoke design
- Butyl rubber surround for smoother response
- Glass-imide voice coil bobbin
- Lightweight balanced dome tweeter with neodymium magnet
- Wave guides for dispersion control
- Rear chamber for lower crossover frequency
- Built-in crossover network: LPF; –12 dB/oct. (for woofer)/HPF; –12 dB/oct. (for tweeter)
- Newly-designed full-depth basket boasting much higher compressive strength and better damping
- Full-depth basket for rich bass response
- 60 watts nominal power handling
- 27–32,000 Hz, 90 dB, ø171 × 83 mm

260 W MAX. DuPont™ KEVLAR®

TS-E Series Speakers

Originally created to suit Europe's listening preferences, versatile TS-E speakers beautifully reproduce a world of music for a world of listeners to enjoy. Their hybrid composite cones are specially designed to deliver tone neutral enough to complement subtle detail without excessively coloring the original sound.

TS-E6996 6" × 9" 3-Way Speaker

360 W MAX. DuPont™ KEVLAR®

- 6" × 9" (16 × 24 cm) woofer/43-mm midrange/12-mm tweeter
- KEVLAR® Brand Fiber/pulp composite cone woofer
- Butyl rubber surround for smoother response
- Heat-resistant long voice coil
- Pure magnesium balanced dome midrange with neodymium magnet
- Dome tweeter
- Full-depth basket for longer excursion and richer bass
- 80 watts nominal power handling
- 25–32,000 Hz, 91 dB, 270 × 185 × 119.5 mm

TS-E2096 20-cm 3-Way Speaker

360 W MAX. DuPont™ KEVLAR®

- 20-cm woofer/43-mm midrange/12-mm tweeter
- 90 watts nominal power handling
- 25–32,000 Hz, 91 dB, ø244 × 128 mm

TS-E2096

TS-E1796 17-cm 3-Way Speaker

220 W MAX. DuPont™ KEVLAR®

- 17-cm woofer/30-mm midrange/10-mm tweeter
- 60 watts nominal power handling
- 28–32,000 Hz, 91 dB, ø179 × 89.5 mm

TS-E1396 13-cm 3-Way Speaker

160 W MAX. DuPont™ KEVLAR®

- 13-cm woofer/25-mm midrange/10-mm tweeter
- 35 watts nominal power handling
- 40–32,000 Hz, 90 dB, ø155 × 78.3 mm

Common Features
- KEVLAR® Brand Fiber/pulp composite cone woofer
- Butyl rubber surround for smoother response
- Heat-resistant long voice coil
- Pure magnesium balanced dome midrange with neodymium magnet
- Dome tweeter
- Full-depth basket for longer excursion and richer bass

TS-E1076 10-cm 2-Way Speaker

110 W MAX. DuPont™ KEVLAR®

- 10-cm woofer/25-mm tweeter
- KEVLAR® Brand Fiber/pulp composite cone woofer
- Butyl rubber surround for smoother response
- Heat-resistant long voice coil
- Pure magnesium balanced dome tweeter with neodymium magnet
- Round/Square compatible frame
- 25 watts nominal power handling
- 45–30,000 Hz, 90 dB, ø131 × 65 mm

TS-E1695 16-cm 3-Way Speaker

220 W MAX.

- 16-cm woofer/30-mm dome midrange/10-mm dome tweeter
- 3D magnesium hybrid cone woofer
- Pure titanium dome midrange with ultra-slim neodymium magnet and magnetic fluid
- Triangular butyl rubber surround for smoother response
- GM tabs for 16-cm/17-cm compatibility
- 60 watts nominal power handling
- 30–32,000 Hz, 91 dB, ø167 × 84 mm

TS-A Series Speakers

With high power handling and cone composition designed to handle powerful bass beautifully, TS-A speakers are excellent for delivering music with full dynamism intact. They are also supremely competent at performing up to the demands of all the latest music, with an assertive sonic signature that perfectly complements the qualities of Pioneer high-power decks and amplifiers. TS-A speakers keep getting better, with cones, magnets, surrounds, voice coil wire, basket and other components upgrading performance with next-generation technology and power handling.

TS-A6991S 6" × 9" 5-Way Speaker

TS-A6991S

460 W MAX. INJECTION MOLDED CONE

- 6" × 9" (16 × 24 cm) woofer/57-mm dome midrange/37-mm cone tweeter/18-mm dome supertweeter/12-mm dome supertweeter
- Silver PET film cone tweeter with neodymium magnet
- Silver PET film ceramic dome supertweeter
- 25–35,000 Hz, 93 dB, 264 × 184 × 122 mm

TS-A6981S 6" × 9" 4-Way Speaker

420 W MAX. INJECTION MOLDED CONE

- 6" × 9" (16 × 24 cm) woofer/57-mm dome midrange/37-mm cone tweeter/18-mm dome supertweeter
- Silver PET film cone tweeter
- 25–33,000 Hz, 93 dB, 264 × 184 × 121 mm

TS-A6981S

Common Features
- Composite IMPP cone woofer using interlaced aramid fiber
- Butyl rubber surround for smoother response
- Glass-imide voice coil bobbin for higher power handling capabilities
- Long voice coil design
- Single conex damper
- Extended pole yoke design
- Lightweight balanced dome midrange with magnetic fluid
- Silver PET film dome supertweeter
- Full-depth basket for longer excursion and richer bass
- IMD (In-Mold Decorating) designed subgrille for cosmetic appeal
- 80 watts nominal power handling

TS-A6971E 6" × 9" 3-Way Speaker

350 W MAX. | INJECTION MOLDED CONE

• Butyl rubber surround for smoother response
• PET cone midrange with magnetic fluid and urethane surround
• Full-depth basket for longer excursion and richer bass
• 80 watts nominal power handling
• 25–30,000 Hz, 93 dB, 264 × 184 × 119 mm

TS-A6961E

TS-A6971E

TS-A6961E 6" × 9" 3-Way Speaker

260 W MAX. | INJECTION MOLDED CONE

• PET cone midrange with magnetic fluid
• Shallow-depth basket for increased installation versatility
• 40 watts nominal power handling
• 28–28,000 Hz, 93 dB, 264 × 184 × 105 mm

Common Features
• 6" × 9" (16 × 24 cm) woofer/57-mm cone midrange/18-mm dome tweeter
• Composite IMPP cone woofer using interlaced aramid fiber
• Glass-imide voice coil bobbin for higher power handling capabilities
• Single conex damper with damper ring
• PET film dome tweeter

TS-A2511 25-cm 3-Way Speaker

400 W MAX. | INJECTION MOLDED CONE

• 25-cm woofer/66-mm cone midrange/18-mm dome tweeter
• 100 watts nominal power handling
• 25–30,000 Hz, 93 dB, ø285 × 153 mm

TS-A2011

TS-A2511

TS-A2011 20-cm 3-Way Speaker

350 W MAX. | INJECTION MOLDED CONE

• 20-cm woofer/66-mm cone midrange/18-mm dome tweeter
• 90 watts nominal power handling
• 25–30,000 Hz, 93 dB, ø244 × 132 mm

Common Features
• Composite IMPP cone woofer using interlaced aramid fiber
• Butyl rubber surround for smoother response
• Glass-imide voice coil bobbin for higher power handling capabilities
• PET film cone midrange with magnetic fluid
• PET film dome tweeter

TS-A1681S 16-cm 4-Way Speaker

260 W MAX. | INJECTION MOLDED CONE

• 16-cm woofer/40-mm dome midrange/16-mm dome tweeter/10-mm dome supertweeter
• Glass-imide voice coil bobbin for higher power handling capabilities
• Long voice coil design
• Single conex damper
• Extended pole yoke design
• Silver PET film dome supertweeter
• Full-depth basket for longer excursion and richer bass
• IMD (In-Mold Decorating) designed subgrille for cosmetic appeal
• 50 watts nominal power handling
• 30–33,000 Hz, 91 dB, ø171 × 84 mm

TS-A1681S

TS-A1671S

TS-A1671S 16-cm 3-Way Speaker

220 W MAX. | INJECTION MOLDED CONE

• 16-cm woofer/40-mm dome midrange/10-mm dome tweeter
• Glass-imide voice coil bobbin
• Polyester-imide resin coat voice coil
• Shallow-depth basket for installation versatility
• IMD (In-Mold Decorating) designed subgrille
• 35 watts nominal power handling
• 30–33,000 Hz, 90 dB, ø171 × 68 mm

Common Features
• Composite IMPP cone woofer using interlaced aramid fiber
• Butyl rubber surround for smoother response
• Lightweight balanced dome midrange with neodymium magnet and magnetic fluid
• Silver PET film dome tweeter

TS-A4670R 4" × 6" 3-Way Speaker

120 W MAX. | INJECTION MOLDED CONE

• 4" × 6" (10 × 16 cm) composite IMPP cone woofer using interlaced aramid fiber
• High-energy strontium magnet (woofer)
• Glass-imide voice coil bobbin
• Conex damper
• 27 mm foamed PPC (Pearl Poly-Carbon) balanced dome midrange with magnetic fluid and neodymium magnet
• 10 mm film dome tweeter
• Custom-fit US/European compatible basket design
• 20 watts nominal power handling
• 45–30,000 Hz, 90 dB, 157 × 99 × 53 mm

Composite IMPP Cone with Interlaced Aramid Fiber

TS-W8102SPL	TS-W5102SPL	TS-W306C	TS-W306DVC	TS-W256C
TS-W256DVC	TS-W305F	TS-W255F	TS-A6991S	TS-A6981S
TS-A6971E	TS-A6961E	TS-A2511	TS-A2011	TS-A1681S
TS-A1671S	TS-A4670R			
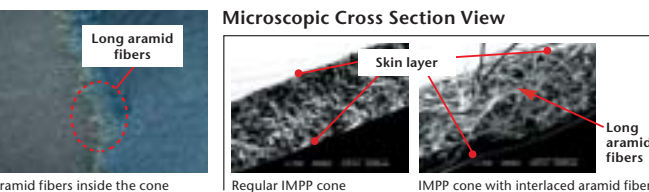
With long aramid fibers interlacing together inside, this IMPP cone design provides the strength and rigidity that powerful bass sound requires. High-density compressed internal architecture is resilient, stacks up against high power well and transfers sound quickly. The result is full-bodied, rich sound character with midrange depth that conventional IMPP cones cannot match.

Microscopic Cross Section View

Long aramid fibers

Skin layer

Long aramid fibers

Aramid fibers inside the cone

Regular IMPP cone

IMPP cone with interlaced aramid fiber

Composite IMPP cone with interlaced aramid fiber

High-Power Series Speaker

TS-6975 6" × 9" 3-Way High-Power Speaker

300 W MAX.

HIGH•POWER

• 6" × 9" (16 × 24 cm) rigid oven cone woofer
• 57-mm PI cone midrange
• 32-mm PEI (poly-ether imide) balanced dome tweeter with magnetic fluid
• 80 watts nominal power handling
• 28–32,000 Hz, 93 dB, 250 × 175 × 123.2 mm

Cross-Axial Speaker

TS-2150 20-cm Cross-Axial 3-Way Speaker

200 W MAX.

CROSS-AXIAL | INJECTION MOLDED CONE

• 20-cm IMPP composite cone woofer/25-mm titanium dome midrange/20-mm ceramic up-dome tweeter
• Cross-Axial engineering for excellent sound quality
• 50 watts nominal power handling
• 28–28,000 Hz, 91 dB, 238 × 238 × 176 mm

TS-G Series Speakers

Designed to deliver exceptional value, TS-G speakers combine superior power handling with cone design that is both attractive and tuned for performance. The great sound of these speakers is worthy of their innovative IMPP cone technology. Designed for shallow mounting, these universal speakers can suit most installation situations.

TS-G1641R 16-cm 2-Way Speaker NEW

160 W MAX. | INJECTION MOLDED CONE

• 30-mm PEI (poly-ether imide) balanced dome tweeter
• 35–22,000 Hz, 91dB, ø158 × 54 mm

TS-G1641R

TS-G1611R 16-cm Dual-Cone Speaker NEW

160 W MAX. | INJECTION MOLDED CONE

• 35–20,000 Hz, 91dB, ø158 × 55 mm

Common Features
• 16-cm metallic silver IMPP composite cone woofer
• Shallow basket design for installation versatility
• Increased installation versatility with extra tabs (16-cm/GM 17-cm compatibility)
• 30 watts nominal power handling

TS-G1341R 13-cm 2-Way Speaker NEW

130 W MAX. | INJECTION MOLDED CONE

• 30-mm PEI (poly-ether imide) balanced dome tweeter
• 60–22,000 Hz, 91dB, ø129 × 57 mm

TS-G1341R

TS-G1311R 13-cm Dual-Cone Speaker NEW

130 W MAX. | INJECTION MOLDED CONE

• 60–20,000 Hz, 91dB, ø129 × 57 mm

Common Features
• 13-cm metallic silver IMPP composite cone woofer
• Shallow basket design for installation versatility
• Renault/DIN compatible basket
• 25 watts nominal power handling

TS-G1041R 10-cm 2-Way Speaker NEW

110 W MAX. | INJECTION MOLDED CONE

• 30-mm PEI (poly-ether imide) balanced dome tweeter
• 80–22,000 Hz, 91dB, ø102 × 51 mm

TS-G1011R 10-cm Dual-Cone Speaker NEW

110 W MAX. | INJECTION MOLDED CONE

• 80–20,000 Hz, 91dB, ø102 × 51 mm

TS-G1041R

Common Features
• 10-cm metallic silver IMPP composite cone woofer
• 4-/2-hole compatibility (removable screw holes)
• 20 watts nominal power handling

TS-G4641R 4" × 6" 2-Way Speaker NEW

100 W MAX.

INJECTION MOLDED CONE

• 4" × 6" (10 × 16 cm) metallic silver IMPP composite cone woofer
• 30-mm PEI (poly-ether imide) balanced dome tweeter
• New custom-fit US/European compatible basket design
• 20 watts nominal power handling
• 45–22,000 Hz, 91dB, 158 × 102 × 51 mm

Packaged Component PRS Speaker Systems

TS-C171PRS NEW
17-cm Packaged Component Speaker System

See page 17 for details about this product.

Rear view

TS-C131PRS NEW
13-cm Packaged Component Speaker System

See page 17 for details about this products.

Rear view

Packaged Component Speaker Systems

TS-C160R
16-cm Packaged Component Speaker System

250 W MAX. | VCCS | DuPont™ KEVLAR®

- 16-cm woofer/25-mm soft-dome tweeter
- CCAW heat-resistant long voice coil
- Die-cast aluminum full-depth basket for rich bass response with removable GM tabs
- 60 watts nominal power handling
- 25–32,000 Hz, 90 dB, ø171 × 83.5 mm

TS-C160R

TS-C130R
13-cm Packaged Component Speaker System

180 W MAX. | VCCS | DuPont™ KEVLAR®

- 13-cm woofer/25-mm soft-dome tweeter
- Heat-resistant long voice coil
- Die-cast aluminum basket
- 40 watts nominal power handling
- 35–32,000 Hz, 90 dB, ø155 × 77.3 mm

Common Features
- KEVLAR® Brand Fiber/pulp composite cone woofer
- Projected pole yoke design
- Butyl rubber surround for smoother response
- Glass-imide voice coil bobbin with copper film
- Aluminum dust cap
- VCCS (Voice Coil Cooling System)
- Large-diameter conex damper
- Laminated polyester fiber soft-dome tweeter with neodymium magnet and magnetic fluid
- Flush swivel mounting cup
- Slant spacer
- Outboard screw-type crossover (LPF; –12 dB/oct., HPF; –12 dB/oct.)
- Tweeter level control (0 dB, –3 dB)
- Heat-reactive poly-switch for tweeter protection
- Acoustically inert die-cast aluminum frame
- Gold-plated binding post

TS-C160R/TS-C130R Tweeter Specifications
- Dimensions (W × H × D): 42 × 38 × 41 mm (surface mount)
- Mounting depth: 19.6 mm   • Cut-out dimensions: ø41 mm   *See page 35 for woofer dimensions.

TS-C1653
16-cm Packaged Component Speaker System

150 W MAX. | INJECTION MOLDED CONE

- 16-cm woofer/23-mm tweeter
- 16-cm/GM 17-cm compatible frame
- 50 watts nominal power handling
- 30–32,000 Hz, 90 dB, ø171 × 86 mm

TS-C1353
13-cm Packaged Component Speaker System

150 W MAX. | INJECTION MOLDED CONE

- 13-cm woofer/23-mm tweeter
- Large-sized DIN frame
- 50 watts nominal power handling
- 40–32,000 Hz, 90 dB, ø171 × 77.8 mm

TS-C1653

Common Features
- Foamed IMPP composite cone woofer
- Aromatic polyamide fiber soft-dome tweeter
- Glass-imide voice coil bobbin
- CCAW long voice coil
- Butyl rubber surround
- High-performance neodymium magnet (tweeter)
- Flush swivel mounting cup
- Slant spacer
- Outboard screw-type crossover (LPF: –6 dB/oct., HPF: –18 dB/oct.)
- Aluminum electrolytic capacitor
- Ferrite core choke coil
- Heat-reactive poly-switch for tweeter protection

TS-C1653/TS-C1353 Tweeter Specifications
- Mounting depth: 18.6 mm   • Cut-out dimensions: ø39 mm   *See page 35 for woofer dimensions.

TS-C1625 16-cm High-Grade Packaged Component Speaker System

220 W MAX.

- 16-cm woofer/27-mm tweeter
- 16-cm/GM 17-cm compatible frame
- 3D magnesium hybrid cone woofer with slitted bullet shape equalizer
- Pure titanium dome tweeter
- Triangular butyl rubber surround
- High-performance neodymium magnet (tweeter)
- Flush swivel mounting cup and slant spacer
- Outboard screw-type crossover (LPF/HPF: –12 dB/oct.)
- Tweeter level control (0 dB, –3 dB)
- 60 watts nominal power handling
- 30–32,000 Hz, 91 dB, ø167 × 84 mm

TS-C1625 Tweeter Specifications
- Dimensions (W × H × D): 42 × 38 × 41 mm (surface mount)   • Mounting depth: 20 mm
- Cut-out dimensions: ø41 mm   *See page 35 for woofer dimensions.

TS-C1602
16-cm Packaged Component Speaker System

150 W MAX. | HR

- 16-cm woofer/13-mm tweeter
- 2-way surface mounting capabilities (tweeter)
- 50 watts nominal power handling
- 30–25,000 Hz, 90 dB, ø165 × 83 mm

TS-C1002
10-cm Packaged Component Speaker System

150 W MAX. | HR

- 10-cm midrange/13-mm tweeter
- 50 watts nominal power handling
- 60–25,000 Hz, 90 dB, ø130 × 59 mm

TS-C1602

TS-C1602/TS-C1002 Tweeter Specifications
- Dimensions (W × H × D): ø49 × 21 mm
- Cut-out dimensions: ø37 mm
    *See page 35 for woofer dimensions.

Common Features
- HR™ (Hydro-Resistant) cone woofer/midrange
- PEI (poly-ether imide) dome tweeter with magnetic fluid
- In-line passive crossover included (HPF, –12 dB/oct.)
- Aluminum short ring
- Flush and surface mounting capabilities (tweeter)

Component Tweeters

TS-S250 40-mm High-Power Tune-Up Tweeter

250 W MAX.

- 40-mm ceramic horn tweeter design
- High-power handling of 250 W max.
- High sensitivity: 97 dB/W
- Built-in –6 dB/oct. capacitor
- Large Pioneer logo on side surface
- 50 watts nominal power handling
- 6,000–40,000 Hz, 97 dB, ø44 × 24 mm

TS-S20 20-mm Component Hard-Dome Tweeter

200 W MAX.

- 20-mm amorphous-titanium-coated PPS (polyphenylene sulfide)-dome tweeter
- High-performance strontium magnet
- Built-in LC network: attached at end of speaker cable
- 50 watts nominal power handling
- 3,000 (with network)/1,200 (without network)–26,000 Hz, 92 dB, 85.5 × 73.5 × 32.8 mm

TS-T110 22-mm Component Hard-Dome Tweeter

120 W MAX.

- 22-mm PPTA balanced dome tweeter
- High-performance strontium magnet
- Flush and surface mounting capabilities
- Plastic mounting cup for flush mounting
- Heat-resistant voice coil with magnetic fluid
- In-line 6 dB/oct. capacitor for tweeter protection
- 40 watts nominal power handling
- 2,500–30,000 Hz, 90 dB, ø47.1 × 20.5 mm

TS-T15 20-mm Component Soft-Dome Tweeter

120 W MAX.

- 20-mm soft-dome tweeter
- Styrene rubber coated polyester soft-dome diaphragm for extremely smooth sound quality
- High-performance ultra-slim neodymium magnet
- 2-way surface mounting capabilities
- Slant spacer for surface mounting
- Twist-type mounting plate
- Heat-resistant voice coil with magnetic fluid
- 40 watts nominal power handling
- 2,500–30,000 Hz, 90 dB, ø37.5 × 18.9 mm

A/V Center Speaker

TS-CX7 A/V Center Speaker

60 W MAX. | DuPont™ KEVLAR®

- 5.7-cm KEVLAR® Brand Fiber composite cone full-range speaker
- Center speaker for 5.1-ch. multi sound reproduction
- Butyl rubber surround
- Compact aerodynamic cabinet design
- Double neodymium magnet assembly with magnetically shielded circuit design
- 20 watts nominal power handling
- 140–30,000 Hz, 83 dB, 120 × 92 × 41 mm

Satellite Speaker

TS-STX99 Satellite Speaker

80 W MAX. | DuPont™ KEVLAR®

- 5.7-cm KEVLAR® Brand Fiber composite cone full-range speaker
- Butyl rubber surround for smoother response
- Large-diameter voice coil with neodymium magnet
- 20 watts nominal power handling
- 90–30,000 Hz, 83 dB, 83 × 82 × 114 mm

Marine Speakers

TS-MR2040 20-cm 2-Way Marine Speaker

200 W MAX. | INJECTION MOLDED CONE

- 20-cm water-resistant IMPP cone woofer
- Waterproof elastomer surround
- Conex damper with elastomer water guard
- Gold-plated tinsel wire and terminals
- 20-cm glass fiber reinforced plastic deep basket
- High-quality UV and corrosion-resistant design
- Stainless steel mounting hardware
- 40 watts nominal power handling
- 25–30,000 Hz, 92 dB, ø230 × 115 mm

TS-MR1640 16-cm 2-Way Marine Speaker

160 W MAX. | INJECTION MOLDED CONE

- 16-cm water-resistant IMPP cone woofer
- Waterproof elastomer surround
- Conex damper with elastomer water guard
- Gold-plated tinsel wire and terminals
- 16-cm glass fiber reinforced plastic deep basket
- High-quality UV and corrosion-resistant design
- Stainless steel mounting hardware
- 30 watts nominal power handling
- 30–30,000 Hz, 91 dB, ø175 × 84.5 mm

Head Units Feature Comparison

Features — Models: DEH-P8850MP, DEH-P6850MP, DEH-PS850MPH, DEH-P4850MPH, DEH-3850MPH, DEH-2850MP, DEH-1850, FH-P9200MP, FH-P5000MP, FH-P4200MP, CDX-P1280, CDX-P680, CDX-FM1287, CDX-FM687, KEH-P4025, KEH-P2035, RS-D7R, DEX-P90RS, DEQ-P90, DEH-P80RS

MULTI-CD CONTROL: Scan (disc/track); CD pause; Repeat <D = Disc, T = Track, I = ITS>; Random play <M = Magazine, D = Disc, I = ITS>; Disc title memory <number of titles> (100); CD Text[1]; List search <D = Disc, T = Track>; Digital compression[2]; Dynamic bass emphasis[2]; ADPS (Automatic Disc Program Selection): 100 discs; ITS (Instant Track Selection) <M = Max. 99 tracks × 100 discs>

CD PLAYER: CD-R/RW playback <S = With skip play>; WMA (Windows Media™ Audio) playback with WMA Tag[3]; MP3 playback with ID3 Tag[3]; iTunes® AAC playback[3]; WAV file playback[3]; Folder/file list search (CD-ROM) <F = Folder search only>; D/A Converters with 8× oversampling digital filter <24 = Multi 24-bit, B = Burr Brown, 1 = 1-bit>; Digital direct <C = CD-DA only>; Track scan; CD pause; Track/manual search; Disc exist search; Repeat (CD-DA: disc/track, CD-ROM: file/folder) <C = CD-DA only, M = Magazine/disc/track>; Random play <M = Magazine, D = Disc>; Disc title memory (48 titles); CD error code transmission capabilities; One-day memory backup; Last position memory; CD Text; List search <F = Folder search only>; Digital compression; BMX (Bitmetric Equalizer)

MD PLAYER: • 20-bit D/A Converter • ATRAC (Adoptive Transform Acoustic Coding) 3 • MDLP (MiniDisc Long Play, up to 320 min.) • Track scan • Repeat (track/disc)/Pause/Random play (disc) • Track manual search • Title display • Title scroll

CASSETTE PLAYER: Full-logic mechanism; Dual-groove SHC head; Music search/Blank skip/Repeat; Dolby B NR; Automatic tape selector for Metal/Chrome; Radio intercept; Time tape counter

TUNER: Supertuner® IIID+; Supertuner® IIID; Supertuner® III™; Supertuner®; BSM (Best Stations Memory); Local seek tuning; 24-station (18 FM/6 AM) presets; 9 k/10 kHz AM channel spacing switch <9 = 9 kHz only>

AUDIO: Hi-bit conversion; High-power output — MOSFET 50 W × 4 (max.), 45 W × 4 (max.); Gold-plated 8-channel RCA output (high/mid/low/subwoofer); 3 RCA preouts — Front + Rear + Non-fading <G = Gold-plated>, Front + Rear + Subwoofer <G = Gold-plated>; 2 RCA preouts — Front + Rear/Front + Subwoofer (selectable), Front + Subwoofer/Front + Non-fading (selectable); RCA preout — Subwoofer/Non-fading (selectable), Rear/Subwoofer (selectable), Rear; High-voltage preout (V); IP-Bus input/output; Optical input/output; Optical input (with DEX-P90RS); Frequency response: 96 kHz–44.1 kHz; DSP/EEQ — Built-in DSP (Digital Signal Processor), EEQ (Easy Equalizer), Multi 24-bit Burr Brown D/A Converters

(1) Requires use of CD text-ready Multi-CD player. (2) Requires use of digital compression and dynamic bass emphasis-ready Multi-CD player. (3) With CD-ROM and CD-R/RW discs.

AUDIO (continued): DSP/EEQ (continued) — Burr Brown D/A Converter; Burr Brown advanced segment-type 24-bit D/A Converter; High-performance 8× oversampling digital filter; 5-mode preset equalizer; Custom preset equalizer <2 = 2-mode, 1 = 1-mode>; Auto EQ; Auto EQ for 3-way network; Digital SFC (Sound Field Control) <4 = 4-mode, 3 = 3-mode>; BBE® digital sound processing; Digital listening position selector; Time alignment <A = Auto>; BMX (Bitmetric Equalizer); 16-band digital graphic equalizer <C = L/R common, I = L/R independent>; Digital graphic equalizer <13 = 13-band, 9 = 9-band, 7 = 7-band>; 31-band L/R independent equalizer; 3-band parametric equalizer; EQ-EX; L/R independent 3-way crossover: high/mid/low; 2-way crossover: HPF/LPF <LR = L/R independent>; 3-way digital network; Parametric bass/treble controls; Bass Boost; Selectable loudness <3 = 3-mode, 2 = 2-mode>; Selectable FIE (Front Image Enhancer); ASL (Auto Sound Levelizer) (5-mode); 4-way independent L/R crossover network (high/mid/low/subwoofer); Direct Sub Drive; Subwoofer control; Loudness <2 = 2-mode selectable>; BTB (Bass/Treble Booster); Fader; Electronic volume/balance controls; Electronic bass/treble controls; Tone control <B = Bass, M = Mid, T = Treble>; SLA (Source level adjuster); Spectrum analyzer <2 = 2-mode>; Level indicator <2 = 2-mode>; Cellular mute

GENERAL: Rotary Commander; Rotary volume <P = Pop-up>; Wireless remote controller <10 = 10-key direct access remote, C = Card, O = Optional>; Steering remote controller; Face type <A = Auto-slide, F = Flap-type, P = Pop-up>; High-quality hairline aluminum front panel; Detachable Face Security™; Clock <E = Entertainment>; Dot-matrix OEL (Organic EL) display <FC = Full-color, PB = Pure Blue, B = Blue, W = White>; LCD display <BW = Bluish-white, W = White, MC = Multi-color>; Color changeable illuminated bar (10 colors); Brightness adjustment; Contrast adjustment; Auto antenna relay control terminal; System control terminal; Multi-language display (English/Spanish/Portuguese); Source CD control <E = External unit control>; Source TV control (analog tuner control); Source DVD control <E = External unit control>; iPod® adapter ready <E = External unit control>; Direct unit control via IP-Bus; IP-Bus Bluetooth® adapter ready <E = External unit control>; AUX-In (with optional CD-RB10 and CD-RB20) <20 = CD-RB20 only>; Direct AUX-in; Display off; Gold-plated screw-type power/ground terminals; Copper-plated chassis; OFC power/ground cable included; Battery voltage meter; • Versatile horizontal/vertical mounting: 0°–90° (5 steps switchable) • IP-Bus output for direct head unit connection • Entire chassis anti-vibration system • Voice recognition with CD-VC60; 6-m IP-Bus cable included; • Display with control key • Built-in FM modulator (usable frequency: 87.9/88.1/88.3/88.5/88.7/88.9/89.1/89.3/89.5/89.7/89.9/90.1 MHz) • Selectable modulation level • Selectable pre-emphasis level • Free space design display; Uses 12-disc magazine JD-1212S (one included); Uses 6-disc magazine JD-612V (one included)

Head Units Specifications

		WMA/MP3 Players						Single-CD Players	Component Single-CD Players			Component Add-on DSP Unit
		DEH-P8850MP	DEH-P6850MP	DEH-PS850MPH	DEH-P4850MPH	DEH-3850MPH	DEH-2850MP	DEH-1850	RS-D7R	DEX-P90RS	DEH-P80RS	DEQ-P90
CD PLAYER												
Frequency response [±1 dB]	Hz	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	—
S/N ratio [1 kHz, IEC-A Network]	dB	100	94	94	94	94	94	94	—	107	105	—
Dynamic range [1 kHz]	dB	95	92	92	92	92	92	92	—	98	100	—
TUNER												
Frequency range FM	MHz	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	87.5–108.0	—
AM [10 kHz]	kHz	530–1,640	530–1,640	530–1,640	530–1,640	530–1,640	530–1,640	530–1,640	530–1,640		530–1,640	—
[9 kHz]	kHz	531–1,602	531–1,602	531–1,602	531–1,602	531–1,602	531–1,602	531–1,602	531–1,602	531–1,602	531–1,602	—
FM usable sensitivity [75 Ω, mono, S/N: 30 dB]	dBf	8 [0.7 µV]	8 [0.7 µV]	8 [0.7 µV]	8 [0.7 µV]	8 [0.7 µV]	8 [0.7 µV]	8 [0.7 µV]	9 [0.8 µV]	9 [0.8 µV]	8 [0.7 µV]	—
FM stereo separation [65 dBf, 1 kHz]	dB	45	45	45	45	45	45	45	40	40	45	—
AM usable sensitivity [S/N: 20 dB]	µV	18	18	18	18	18	18	18	18	18	18	—
COMPONENT ADD-ON DSP UNIT												
Equalization frequency	Hz	—	—	—	—	—	—	—	—	—	—	20–20,000
Equalization range	dB	—	—	—	—	—	—	—	—	—	—	±12
Distortion [1 kHz, 500 mV, 20 KLPF]	%	—	—	—	—	—	—	—	—	—	—	0.005
Frequency response [−1 dB]	Hz	—	—	—	—	—	—	—	—	—	—	10–20,000
S/N ratio [IEC-A network]	dB	—	—	—	—	—	—	—	—	—	—	109
Output impedance	Ω	—	—	—	—	—	—	—	—	—	—	1 k
Max. output level		—	—	—	—	—	—	—	—	—	—	4.0 V/1 kHz, 1% dist.
AUDIO												
Max. power output		50 W × 4	50 W × 4	50 W × 4	50 W × 4	50 W × 4	50 W × 4	50 W × 4	—	—	50 W × 4	—
GENERAL												
Dimensions [W × H × D] DIN—Chassis	mm	178 × 50 × 161	178 × 50 × 159	178 × 50 × 157	178 × 50 × 157	178 × 50 × 157	178 × 50 × 157	178 × 50 × 157	178 × 50 × 160	178 × 50 × 160	178 × 50 × 159	191 × 49 × 220
Nose	mm	188 × 58 × 23	188 × 58 × 28	188 × 58 × 19	188 × 58 × 20	188 × 58 × 19	188 × 58 × 20	188 × 58 × 20	188 × 58 × 20	188 × 58 × 20	188 × 58 × 30	—
D—Chassis	mm	178 × 50 × 166	178 × 50 × 164	178 × 50 × 162	178 × 50 × 162	178 × 50 × 162	178 × 50 × 162	178 × 50 × 165	178 × 50 × 165	178 × 50 × 164	—
Nose	mm	170 × 45 × 18	170 × 46 × 23	170 × 46 × 14	170 × 46 × 15	170 × 48 × 14	170 × 48 × 15	170 × 45 × 15	170 × 45 × 15	170 × 45 × 25	—

Head Units Specifications

		2-DIN Players			Multi-CD Players				Cassette Players	
		FH-P9200MP	FH-P5000MP	FH-P4200MP	CDX-P1280	CDX-P680	CDX-FM1287	CDX-FM687	KEH-P4025	KEH-P2035
CD PLAYER										
Frequency response [±1 dB]	Hz	5–20,000	5–20,000	5–20,000	5–20,000	5–20,000	—	—	—	—
S/N ratio [1 kHz, IEC-A network]	dB	94	94	94	92	92	—	—	—	—
Dynamic range [1 kHz]	dB	92	92	92	90	90	—	—	—	—
MD PLAYER										
Frequency response [±1 dB]	Hz	20–20,000	—	—	—	—	—	—	—	—
S/N ratio [1 kHz, IEC-A network]	dB	90	—	—	—	—	—	—	—	—
Dynamic range [1 kHz]	dB	90	—	—	—	—	—	—	—	—
CASSETTE PLAYER										
Wow & flutter [WRMS]	%	—	0.09	0.09	—	—	—	—	0.09	0.13
Tape frequency response [±3 dB]	Hz	—	30–19,000	30–19,000	—	—	—	—	30–16,000	30–16,000
Tape S/N ratio [IEC-A network]	dB	—	61 (67 w/ Dolby B)	61 (67 w/ Dolby B)	—	—	—	—	61	52
TUNER										
Frequency range FM	MHz	87.5–108.0	87.5–108.0	87.5–108.0	—	—	—	—	87.5–108.0	87.5–108.0
AM [10 kHz]	kHz	530–1,640	530–1,640	530–1,640	—	—	—	—	530–1,640	530–1,640
[9 kHz]	kHz	531–1,602	531–1,602	531–1,602	—	—	—	—	531–1,602	531–1,602
FM usable sensitivity [75 Ω, mono, S/N: 30 dB]	dBf	8 [0.7 µV]	8 [0.7 µV]	10 [1.0 µV]	—	—	—	—	9 [0.8 µV]	11 [1.1 µV]
FM stereo separation [65 dBf, 1 kHz]	dB	45	45	45	—	—	—	—	40	24
AM usable sensitivity [S/N: 20 dB]	µV	18	18	18	—	—	—	—	18	20
AUDIO										
Max. power output		50 W × 4	50 W × 4	50 W × 4	—	—	—	—	50 W × 4	45 W × 4
GENERAL										
Dimensions [W × H × D] DIN—Chassis	mm	—	—	—	257 × 94 × 170*	248 × 66 × 168*	257 × 94 × 170*	248 × 66 × 168*	178 × 50 × 157	178 × 50 × 155
Nose	mm	—	—	—	—	—	—	—	188 × 58 × 20	188 × 58 × 20
D—Chassis	mm	178 × 100 × 160	178 × 100 × 161	178 × 100 × 161	—	—	—	—	178 × 50 × 162	178 × 50 × 160
Nose	mm	169 × 94 × 17	169 × 94 × 28	170 × 94 × 25	—	—	—	—	170 × 48 × 15	170 × 48 × 15

*Chassis dimensions only

Power Amplifier Features

Features

Features	GM-7200M	GM-6200F	GM-5200T	GM-3200T	GM-D510M	RS-A9	RS-A7	PRS-D4000F	PRS-D2000T	PRS-D1000M	PRS-D5000SPL	PRS-D3000SPL	PRS-A700	PRS-A500
Bridgeable 2/3/4-channel capability <F = Class-FD>		●				●	●	F						
Bridgeable 1/2/3-channel capability <F = Class-FD>			●	●					F(1)			D	D	●
Mono amplifier <D = Class-D>					●					D	D	D		
Current feedback amplifier						●	●						●	●
L/R independent power supply						●	●						●	●
Full balanced system (bridgeable connection)						●	●							
High-performance 32-bit floating binary point type DSP						●								
Built-in DSP (Digital Signal Processor) (FIR)						●								
Multi 24-bit Burr Brown D/A Converters						●	●							
Variable LPF/HPF (40–120 Hz, –12 dB/oct., 4ch)								●	●(2)				●(2)	
Variable LPF/HPF (40–120 Hz, –18/–24 dB/oct.)														●
Variable LPF (40–240 Hz, –18/–24 dB/oct.)										●(3)	●			
Variable LPF (40–240 Hz, –24 dB/oct.)				●								●		
Variable LPF (40 Hz, –12 dB/oct.)	●													
LPF/HPF (80 Hz, –12 dB/oct.) for A and B channels		●												
LPF (80 Hz, –12 dB/oct.)			●	●	●									
High-voltage input level control (400 mV–6.5 V)	●	●	●	●				●	●	●				
High-voltage input level control (200 mV–6.5 V)											●	●	●	●
High-voltage input level control (125 mV–6.5 V)				●										
Input level/gain control	●	●	●					●	●	●			●(4)	●(4)
Bass level control (–22 to +12 dB)				●										
Low load impedance capability (4 ohm, 2–8 ohm allowable)	●	●	●	●				●	●	●	●	●	●	●
Low load impedance capability (1–8 ohm)												●		
Optical digital input						1	2							
3 optical digital outputs (mid/low/subwoofer)						●								
IP-Bus input/output						●	●							
RCA input and output terminals		●						G	G					
RCA input terminals	●	●	●	6*	6*	G	G	G	G	G			G(5)	G(5)
Screw-type speaker terminals	●	●	●	●	●	G	G	G	G	G		●(6)	G	G
Large block-type speaker terminals												●(7)		
Large screw-type power/ground terminals	●	●	●	●	●	G	G						G	G
Large block-type power/ground terminals												●(8)	●(9)	
Speaker level input (1.6 V–26 V)	●	●	●					●	●	●				
Speaker line input turn-on sensor								●	●	●				
Variable Bass Boost (40–120 Hz, 0 to +12 dB) <R = Remote>													●	●
Bass Boost (50 Hz, 0/+6/+9/+12 dB) <R = Remote>	●(10)		●(10)					R	R					
Subsonic filter (20 Hz, –18 dB/oct.)								●	●	●	●	●		
SYNC control											●	●		
PWM regulated power supply with MOSFET switching	●	●	●	●	●			●	●	●	●	●	●	●
High-performance balanced isolator circuit	●	●	●					●	●	●	●	●	●	●
High-efficiency MOSFET output section					●					●	●	●	●	●
MASS (Multiple Amplifier Synchronization System)											●	●		
Sound master clock						●	●							
DAC volume						●	●							
All terminals placed on one side											●	●	●	●
Removable terminal/settings cover											●	●	●	●
Copper-plated chassis								●	●	●				
Black heatsink	●	●	●											
Aluminum die-cast heatsink					●			●	●	●	●	●	●	●

(1) Channel capability: 1/2-channel only   (2) For 2ch only   (3) Crossover slope: –18 dB/oct. only   (4) L/R independent   (5) Carved gold-plated   (6) Large-screw type   (7) 8-gauge   (8) 0-gauge   (9) 4-gauge   (10) Bass Boost level: 0/+6/+12 dB only   G = Gold-plated

Power Amplifier Specifications

		GM-7200M	GM-6200F	GM-5200T	GM-3200T	GM-D510M	RS-A9	RS-A7	PRS-D4000F	PRS-D2000T	PRS-D1000M	PRS-D5000SPL	PRS-D3000SPL	PRS-A700	PRS-A500
Max. power output [14.4 V]	4-channel mode	—	120 W × 4 (4Ω)	—	—	—	100 W × 4 (4Ω)	100 W × 4 (4Ω)	150 W × 4 (4Ω)	—	—	—	—	100 W × 4 (4Ω)	—
	2-channel mode	—	300 W × 2 (4Ω)	250 W × 2 (4Ω)	120 W × 2 (4Ω)	—	300 W × 2 (4Ω)	300 W × 2 (4Ω)	600 W × 2 (4Ω)	300 W × 2 (4Ω)	—	—	—	300 W × 2 (4Ω)	200 W × 2 (4Ω)
	1-channel mode	500 W × 1 (4Ω) 800 W × 1 (2Ω)	—	760 W × 1 (4Ω)	300 W × 1 (4Ω)	600 W × 1 (4Ω) 1,000 W × 1 (2Ω)	—	—	1,200 W × 1 (4Ω)	800 W × 1 (4Ω) 1,200 W × 1 (2Ω) 1,200 W × 1 (1Ω)	1,500 W × 1 (4Ω) 3,000 W × 1 (2Ω)	1,000 W × 1 (4Ω) 2,000 W × 1 (2Ω)	—	600 W × 1 (4Ω)
Continuous power output [14.4 V]	4-channel mode	—	60 W × 4 (4Ω) 75 W × 4 (2Ω)	—	—	—	50 W × 4 (4Ω) 75 W × 4 (2Ω)	50 W × 4 (4Ω) 75 W × 4 (2Ω)	75 W × 4 (4Ω) 150 W × 4 (2Ω)	—	—	—	—	50 W × 4 (4Ω) 75 W × 4 (2Ω)	—
	2-channel mode	—	150 W × 2 (4Ω)	125 W × 2 (4Ω) 190 W × 2 (2Ω)	60 W × 2 (4Ω) 75 W × 2 (2Ω)	—	150 W × 2 (4Ω)	150 W × 2 (4Ω)	300 W × 2 (4Ω)	150 W × 2 (4Ω) 300 W × 2 (2Ω)	—	—	—	150 W × 2 (4Ω)	100 W × 2 (4Ω) 150 W × 2 (2Ω)
	1-channel mode	250 W × 1 (4Ω) 360 W × 1 (2Ω)	—	380 W × 1 (4Ω)	150 W × 1 (4Ω)	300 W × 1 (4Ω) 500 W × 1 (2Ω)	—	—	600 W × 1 (4Ω)	400 W × 1 (4Ω) 750 W × 1 (4Ω) 150 W × 1 (4Ω)* 300 W × 1 (2Ω)* 600 W × 1 (1Ω)*	500 W × 1 (4Ω) 1,500 W × 1 (2Ω)	1,000 W × 1 (2Ω)	—	300 W × 1 (4Ω)
Frequency response	+0dB, –1dB Hz	—	10–50,000	10–50,000	10–50,000	—	10–100,000	10–100,000	—	—	—	10–240	10–240	10–80,000	10–80,000
	+0dB, –3dB Hz	10–240	—	—	—	—	—	—	10–40,000	10–40,000	10–240	—	—	—	—
	+0.5dB, –3dB Hz	—	—	—	—	5–240 (mono)	—	—	—	—	—	—	—	—	—
Total harmonic distortion %		0.03	0.01	0.015	0.008	0.03	0.002	0.002	0.005	0.005	0.5	0.05	0.05	0.003	0.003
S/N ratio [IEC-A network] dB		100	95	95	100	95	105	105	100	100	92	90	90	108	107
Dimensions (W × H × D) mm		300 × 61 × 336	300 × 61 × 336	300 × 61 × 336	300 × 61 × 195	268 × 52 × 250	585 × 330 × 71	585 × 330 × 71	304 × 56 × 202	304 × 56 × 202	304 × 56 × 202	300 × 64 × 330	300 × 64 × 279	300 × 63 × 330	300 × 63 × 330

*Hi-current mode

Accessories

CD-IB100 II — iPod Adapter
CD-HF1 — Hands-Free Kit *Not available for CDMA system
CD-IP150 — Optional IP-Bus Extension Cable
CD-P75FM — Universal Add-on FM Modulated Controller with Wireless Remote Controller
CD-R310 — Optional Remote Controller for DEH Series Head Units
CD-R30-02 — Optional Remote Controller for KEH-P402S

CD-RB10 — RCA Bus Interconnector
CD-RB20 — RCA Bus Interconnector
JD-1212S — Multi-Disc Magazine for CDX-P1280 and CDX-FM1287
JD-612V — Multi-Disc Magazine for CDX-P680 and CDX-FM687
RD-221 — Power Supply Wiring Kit
RD-223 — Optional Wiring Kit

RD-983 — Alternator Noise Suppressor
RD-984 — Alternator Noise Suppressor
RD-985 — In-Line RCA Noise Suppressor
RD-SR510 — Standard Power Speaker Output to RCA Adapter
RD-SR520 — High-Power Speaker Output to RCA Adapter

Subwoofers & Speakers Specifications

	Size	Max. Input	Nominal Input	Frequency Response	Sensitivity	Impedance	Dimensions (W × H × D)	Mounting Depth	Cut-Out Dimensions
TS-W01RS	25 cm	300 W	150 W	20 Hz–3,000 Hz	86 dB	4Ω	ø276 × 94 mm	75 mm	ø238 mm
TS-M01RS	17 cm	120 W	50 W	35 Hz–11,000 Hz	89 dB	4Ω	ø174 × 75 mm	69 mm	ø151 mm
TS-S01RS	7.7 cm	50 W(1) 60 W(2)	15 W	70 Hz–24,000 Hz(1) 160 Hz–24,000 Hz(2)	86 dB	4Ω	ø90 × 42.5 mm(1) ø90 × 67 mm(2)	37.5 mm(1) 60 mm(2)	ø72.5 mm(1) ø77 mm(2)
TS-T01RS	3.5 cm	120 W	50 W	1,200 Hz–48,000 Hz	95 dB	4Ω	ø68 × 64 mm	46 mm	ø68 mm
TS-W12PRS	30 cm	1,200 W	300 W	15 Hz–2,000 Hz	92 dB	2Ω or 8Ω	ø322 × 152 mm	133 mm	ø278 mm
TS-M171PRS	17 cm	200 W	50 W	25 Hz–9,000 Hz	88 dB	4Ω	ø156 × 78 mm	67 mm	ø158 mm
TS-S101PRS	10 cm	60 W	15 W	60 Hz–30,000 Hz	86 dB	4Ω	ø110 × 52 mm	46 mm	ø90 mm
TS-T031PRS	28 mm	200 W	50 W	1,200 Hz–32,000 Hz	90 dB	4Ω	ø55 × 27.1 mm	12.2 mm	ø47 mm
TS-C171PRS	17 cm	200 W	50 W	25 Hz–32,000 Hz	88 dB	4Ω	ø156 × 78 mm	67 mm	ø140 mm
TS-C131PRS	13 cm	150 W	30 W	35 Hz–32,000 Hz	88 dB	4Ω	ø129 × 67 mm	57.3 mm	ø121 mm
TS-W8102SPL	38 cm	8,000 W	3,000 W	15 Hz–1,500 Hz	91dB	1Ω or 4Ω	ø400 × 359.5 mm	312 mm	ø352 mm
TS-W5102SPL	30 cm	6,000 W	2,500 W	18 Hz–2,000 Hz	88 dB	1Ω or 4Ω	ø327 × 304 mm	266 mm	ø278 mm
TS-W3004SPL	30 cm	3,000 W	750 W	18 Hz–700 Hz	89 dB	2Ω or 8Ω	ø329 × 205 mm	185 mm	ø278 mm
TS-W2504SPL	25 cm	2,500 W	600 W	18 Hz–1,000 Hz	87 dB	2Ω or 8Ω	ø282 × 185 mm	165 mm	ø238 mm
TS-W301R	30 cm	800 W	150 W	20 Hz–4,000 Hz	84 dB	4Ω	ø327 × 164 mm	145 mm	ø278 mm
TS-W251R	25 cm	600 W	120 W	20 Hz–4,500 Hz	83.5 dB	4Ω	ø277 × 154 mm	135 mm	ø238 mm
TS-SW1241D	30 cm	1,400 W	350 W	18 Hz–1,000 Hz	88 dB	4Ω	ø329.0 × 97.9 mm	82.9 mm	ø278 mm
TS-SW1041D	25 cm	1,000 W	250 W	20 Hz–1,000 Hz	87 dB	4Ω	ø282.0 × 89.6 mm	75.6 mm	ø238 mm
TS-SW841D	20 cm	500 W	120 W	30 Hz–1,500 Hz	85 dB	4Ω	ø218.4 × 75.2 mm	63.5 mm	ø186 mm
TS-W306C/DVC	30 cm	1,000 W	400 W	18 Hz–500 Hz	89 dB	4Ω	ø327 × 177 mm	157 mm	ø278 mm
TS-W256C/DVC	25 cm	800 W	350 W	18 Hz–600 Hz	87 dB	4Ω	ø277 × 162 mm	143 mm	ø238 mm
TS-W305F	30 cm	800 W	300 W	20 Hz–2,000 Hz	94 dB	4Ω	ø327 × 165 mm	146 mm	ø278 mm
TS-W255F	25 cm	650 W	250 W	20 Hz–2,500 Hz	92 dB	4Ω	ø277 × 150 mm	131 mm	ø238 mm
TS-WX11A	13 × 21 cm	150 W(3)	50 W(4)	54 Hz–200 Hz	101 dB(5)	—	280 × 80 × 200 mm	—	—
TS-WX22A	20 cm	150 W(3)	60 W(4)	40 Hz–200 Hz	101 dB	—	250 × 265 × 110 mm	—	—
TS-WX206A	20 cm	150 W(3)	50 W(4)	35 Hz–200 Hz	107 dB(5)	—	274 × 316 × 412 mm	—	—
TS-WX20LPA	20 cm	200 W(3)	100 W(4)	25 Hz–200 Hz	104 dB(6)	—	431 × 291 × 282 mm	—	—
TS-D691S	6" × 9"	350 W	80 W	22 Hz–32,000 Hz	91 dB	4Ω	264 × 184 × 118 mm	89 mm	153 × 225 mm
TS-D161S	16 cm	260 W	60 W	27 Hz–32,000 Hz	90 dB	4Ω	ø171 × 83 mm	59 mm	ø128 mm
TS-E6996	6" × 9"	360 W	80 W	25 Hz–32,000 Hz	91 dB	4Ω	270 × 185 × 119.5 mm	88.8 mm	222 × 150 mm
TS-E2096	20 cm	360 W	90 W	25 Hz–32,000 Hz	91 dB	4Ω	ø244 × 128 mm	96 mm	ø186 mm
TS-E1796	17 cm	220 W	60 W	28 Hz–32,000 Hz	91 dB	4Ω	ø179 × 89.5 mm	66 mm	ø147 mm
TS-E1396	13 cm	160 W	35 W	40 Hz–32,000 Hz	90 dB	4Ω	ø155 × 78.3 mm	57.3 mm	ø121 mm
TS-E1076	10 cm	110 W	25 W	45 Hz–30,000 Hz	90 dB	4Ω	ø131 × 65 mm	46.3 mm	ø117 mm
TS-E1695	16 cm	220 W	60 W	30 Hz–32,000 Hz	91 dB	4Ω	ø167 × 84 mm	60.5 mm	ø128 mm
TS-A6991S	6" × 9"	460 W	80 W	25 Hz–35,000 Hz	93 dB	4Ω	264 × 184 × 122 mm	87 mm	153 × 225 mm
TS-A6981S	6" × 9"	420 W	80 W	25 Hz–32,000 Hz	93 dB	4Ω	264 × 184 × 121 mm	86 mm	153 × 225 mm
TS-A6971E	6" × 9"	350 W	80 W	25 Hz–30,000 Hz	93 dB	4Ω	264 × 184 × 119 mm	85 mm	153 × 225 mm
TS-A6961E	6" × 9"	260 W	40 W	28 Hz–28,000 Hz	93 dB	4Ω	264 × 184 × 105 mm	71 mm	153 × 225 mm
TS-A2511	25 cm	400 W	100 W	25 Hz–32,000 Hz	93 dB	4Ω	ø285 × 153 mm	116 mm	ø232 mm
TS-A2011	20 cm	350 W	90 W	25 Hz–30,000 Hz	93 dB	4Ω	ø244 × 132 mm	97 mm	ø186 mm
TS-A1681S	16 cm	260 W	50 W	30 Hz–33,000 Hz	91 dB	4Ω	ø171 × 84 mm	57 mm	ø128 mm
TS-A1671S	16 cm	220 W	35 W	30 Hz–33,000 Hz	90 dB	4Ω	ø171 × 68 mm	44 mm	ø128 mm
TS-A4670R	4" × 6"	120 W	20 W	45 Hz–30,000 Hz	90 dB	4Ω	157 × 99 × 53 mm	45 mm	95 × 153 mm
TS-6975	6" × 9"	300 W	80 W	28 Hz–32,000 Hz	93 dB	4Ω	250 × 175 × 123.2 mm	90.5 mm	153 × 225 mm
TS-2150	20 cm	200 W	50 W	28 Hz–28,000 Hz	91 dB	4Ω	238 × 238 × 176 mm	88 mm	ø186 mm
TS-G1641R	16 cm	160 W	30 W	35 Hz–22,000 Hz	91 dB	4Ω	ø158 × 54 mm	42 mm	ø128 mm
TS-G1611R	16 cm	160 W	30 W	35 Hz–20,000 Hz	91 dB	4Ω	ø158 × 55 mm	44 mm	ø128 mm
TS-G1341R	13 cm	130 W	25 W	60 Hz–22,000 Hz	91 dB	4Ω	ø129 × 57 mm	46 mm	ø121 mm
TS-G1311R	13 cm	130 W	25 W	60 Hz–20,000 Hz	91 dB	4Ω	ø129 × 57 mm	46 mm	ø121 mm
TS-G1041R	10 cm	110 W	20 W	80 Hz–22,000 Hz	91 dB	4Ω	ø102 × 51 mm	43 mm	ø106 mm
TS-G1011R	10 cm	110 W	20 W	80 Hz–20,000 Hz	91 dB	4Ω	ø102 × 51 mm	43 mm	ø106 mm
TS-G4641R	4" × 6"	100 W	20 W	45 Hz–22,000 Hz	91 dB	4Ω	158 × 102 × 51 mm	45 mm	95 × 153 mm
TS-C160R	16 cm	250 W	60 W	25 Hz–32,000 Hz	90 dB	4Ω	ø171 × 83.5 mm(7)	60.5 mm(7)	ø128 mm(7)
TS-C130R	13 cm	180 W	40 W	35 Hz–32,000 Hz	90 dB	4Ω	ø155 × 77.3 mm(7)	56.5 mm(7)	ø121 mm(7)
TS-C1653	16 cm	150 W	50 W	30 Hz–32,000 Hz	90 dB	4Ω	ø171 × 86 mm	60.5 mm(7)	ø128 mm(7)
TS-C1353	13 cm	150 W	50 W	40 Hz–32,000 Hz	90 dB	4Ω	ø171 × 77.8 mm	55.3 mm(7)	ø121 mm(7)
TS-C162S	16 cm	220 W	60 W	30 Hz–32,000 Hz	91 dB	4Ω	ø167 × 84 mm(7)	60.5 mm(7)	ø128 mm(7)
TS-C1602	16 cm	150 W	50 W	30 Hz–25,000 Hz	90 dB	4Ω	ø165 × 83 mm(7)	59 mm	ø158 mm(7)
TS-C1002	10 cm	150 W	50 W	60 Hz–25,000 Hz	90 dB	4Ω	ø130 × 59 mm(7)	43 mm	ø102 mm(7)
TS-S250	40 mm	250 W	50 W	6,000 Hz–40,000 Hz	97 dB	8Ω	ø44 × 24 mm	—	—
TS-S20	20 mm	200 W	50 W	3,000(8)/ 1,200 Hz(9)–26,000 Hz	92 dB	8Ω	85.5 × 73.5 × 32.8 mm	—	—
TS-T110	22 mm	120 W	40 W	2,500 Hz–30,000 Hz	90 dB	4Ω	ø47.1 × 20.5 mm	—	—
TS-T15	20 mm	120 W	40 W	2,500 Hz–30,000 Hz	90 dB	4Ω	ø37.5 × 18.9 mm	—	—
TS-CX7	5.7 cm	60 W	20 W	140 Hz–30,000 Hz	83 dB	4Ω	120 × 92 × 41 mm	—	—
TS-STX99	5.7 cm	80 W	20 W	90 Hz–30,000 Hz	83 dB	4Ω	83 × 82 × 114 mm	—	—
TS-MR2040	20 cm	200 W	40 W	25 Hz–30,000 Hz	92 dB	4Ω	ø230 × 115 mm	75 mm	ø186 mm
TS-MR1640	16 cm	160 W	30 W	30 Hz–30,000 Hz	91 dB	4Ω	ø175 × 84.5 mm	56 mm	ø130 mm

(1) With speaker unit only.   (2) With back chamber.   (3) Maximum output power   (4) Nominal output power   (5) In-car, at 65 Hz   (6) In-car, at 60 Hz   (7) See page 30 or 31 for tweeter dimensions.   (8) With network   (9) Without network

Subwoofer Thiele-Small Parameters*

		TS-W01RS**	TS-W12PRS***	TS-W8102SPL	TS-W5102SPL	TS-W3004SPL	TS-W2504SPL	TS-W301R	TS-W251R	TS-SW1241D	TS-SW1041D	TS-SW841D	TS-W306C	TS-W306DVC	TS-W256C	TS-W256DVC	TS-W305F	TS-W255F
Recommended enclosure	cu. ft.	0.49–0.99	1.0	2.5	1.5	0.85–1.75	0.65–1.25	1.0–2.0	0.7–1.3	0.50–1.0	0.35–0.7	0.15–0.5	0.85–1.75	0.85–1.75	0.65–1.25	0.65–1.25	5.3	5.3
	liters	14–28	28.3	70.8	42.5	24.1–49.5	18.4–35.4	28.3–56.6	19.8–36.8	9.9–19.8	4.2–14.2	4.2–14.2	24.1–49.5	24.1–49.5	18.4–35.4	18.4–35.4	150	150
Revc	Ω	3.0	1.8/7.2	3.0	3.0	6.0	6.0	3.0	3.0	3.3	3.3	3.3	3.0	6.0	3.0	6.0	3.0	3.0
Levc	mH	0.669	0.4/1.61	5.560	5.090	5.340	4.900	1.380	1.370	2.410	1.810	0.996	1.980	3.320	2.010	3.250	0.841	0.658
Fs	Hz	26	24	23.2	29.0	26.2	35.6	28.0	28.9	33.1	43.5	67.5	32.6	32.9	35.6	35.4	26.2	35.8
Zmax	Ω	64.2	43.8/175	58.56	70.62	240.54	142.99	35.78	47.38	59.26	42.67	25.21	77.76	139.20	81.94	132.57	29.64	29.18
Qms		7.03	9	5.720	7.600	12.190	11.090	8.120	9.130	11.733	11.248	11.159	10.820	10.800	11.940	10.460	5.785	7.120
Qes		0.35	0.41	0.330	0.360	0.330	0.510	0.790	0.730	0.781	1.035	1.923	0.430	0.500	0.460	0.520	0.705	0.886
Qts		0.33	0.39	0.310	0.340	0.320	0.480	0.720	0.680	0.732	0.948	1.641	0.420	0.480	0.440	0.500	0.630	0.790
Vas	cu. ft.	2.4	3.3	2.479	0.944	1.323	0.517	3.679	2.045	0.689	0.291	0.067	1.963	1.828	0.888	0.954	4.572	1.778
	liters	68	93	70.14	26.72	37.46	14.63	104.12	57.86	19.51	8.25	1.89	55.58	51.76	25.15	27.02	129.46	50.35
Rms	Ns/m	2.27	2.3	20.367	13.470	3.369	3.679	2.293	1.686	4.985	4.773	4.063	2.592	2.589	2.295	2.453	2.858	2.150
Mms	g	96	135	800.11	550.50	249.88	182.29	110.82	84.73	280.15	196.99	106.67	146.11	135.27	122.43	115.49	101.2	68.0
Cms	m/N	3.78 × 10⁻⁴	3.15 × 10⁻⁴	6.00 × 10⁻⁵	5.350 × 10⁻⁵	1.500 × 10⁻⁴	1.100 × 10⁻⁴	3.100 × 10⁻⁴	3.600 × 10⁻⁴	8.264 × 10⁻⁵	6.806 × 10⁻⁵	5.207 × 10⁻⁵	1.900 × 10⁻⁴	1.700 × 10⁻⁴	1.600 × 10⁻⁴	1.800 × 10⁻⁴	3.7 × 10⁻⁴	2.9 × 10⁻⁴
BL	T·m	11.8	9.73/19.45	33.640	30.180	28.110	22.450	8.670	8.650	16.650	13.690	9.349	13.920	18.570	13.460	17.620	8.69	7.47
Sd	sq. ft.	0.383	0.041	0.988	0.630	0.455	0.331	0.528	0.364	0.514	0.371	0.222	0.495	0.495	0.338	0.338	0.534	0.377
	sq. m	3.56E-02	0.0456	9.18E-02	5.85E-02	4.23E-02	3.07E-02	4.91E-02	3.38E-02	4.77E-02	3.45E-02	2.06E-02	4.60E-02	4.60E-02	3.14E-02	3.14E-02	4.96E-02	3.50E-02
Hvc	inch	0.93	1.56	2.392	2.087	1.772	1.535	0.799	0.799	1.071	0.870	0.594	1.079	1.134	1.213	1.295	1.260	1.020
	mm	23.6	39.50	61	53	45	39	20.3	20.3	27	22	15	27	29	31	33	32	26
Hag	inch	0.236	0.47	1.181	1.181	0.906	0.906	0.236	0.236	0.394	0.394	0.315	0.394	0.394	0.394	0.394	0.394	0.394
	mm	9	12	30	30	23	23	6	6	10	10	8	10	10	10	10	10	10
Xmax	inch	0.347	0.067	0.61	0.45	0.44	0.32	0.35	0.31	0.26	0.24	0.14	0.34	0.37	0.41	0.45	0.43	0.31
	mm	7.3	1.89	15.4	11.5	11.2	8.1	8.8	7.8	6.5	6.0	3.5	8.7	9.4	10.4	11.5	11.0	7.9

*Parameter values for reference.   **See page 13 for product details.   ***See page 14 for product details.

Dimensions

Subwoofer
Enclosed Subwoofer
Speakers

Right margin tabs: WMA/MP3 Players | Single-CD Player | 2-DIN Players | Multi-CD Players | Cassette Players | ODR & Pure Component Systems | Power Amplifiers | Subwoofers | Speakers | Specifications & Comparison