

Panasonic

ideas for life

Professional Displays

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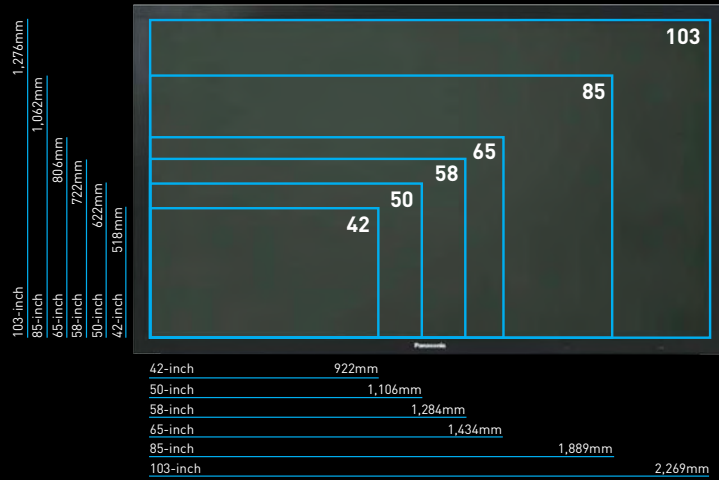
Professional Displays

Professional Displays

2009

Professional Plasma Displays

Screen Comparison



Panasonic ideas for life



Control 4

panasonic.net/proplasma

Simulated pictures on screen.
Specifications are subject to change without notice. Printed in Japan
CT09-R01



NeoPDP Technical Evolution Starts Here —

Powerful New Possibilities for Professional Displays

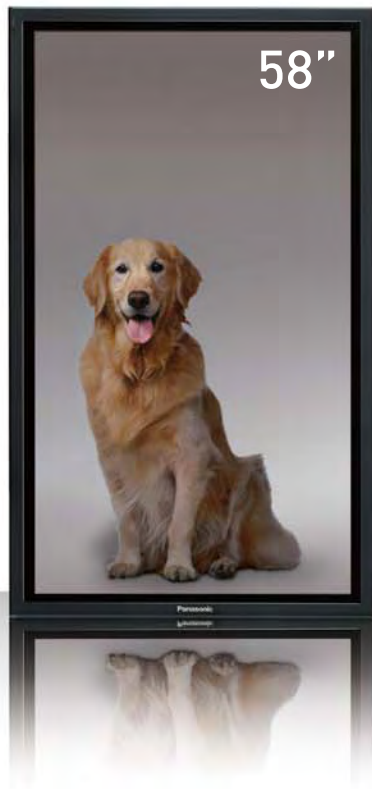
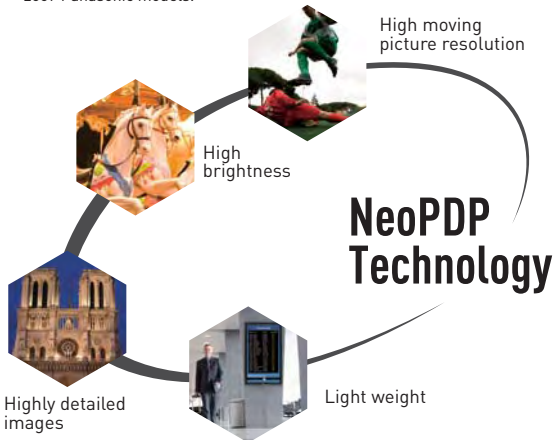
High-quality plasma displays, made possible by NeoPDP technology, are the perfect choice for business applications demanding clear and precise image quality. Panasonic's stunning high definition professional plasmas are perfect for a wide-range of applications — whether it's in a boardroom, classroom, hotel, restaurant, or a digital signage environment — while providing full integration in an automated environment.

Select from the versatile lineup, now further expanded to include the new 85-inch model.

NeoPDP Technology — The Key to Cutting-Edge Plasma Displays

NeoPDP technology doubles*1 the luminous efficiency of previous models. What's behind the remarkable advances in image quality, compact profile, and energy savings is Panasonic's new NeoPDP technology — a new energy-efficient, double-luminance technology. With higher luminance performance, Panasonic's NeoPDP not only delivers brighter images with deeper, richer blacks, it does so by using about half the energy. The resulting improvement in luminous efficiency also allowed us to downsize various components while increasing the scale of circuit integration which led to both higher image quality and lighter displays.

*1 Comparing full-HD models in existing sizes with same-size 2007 Panasonic models.

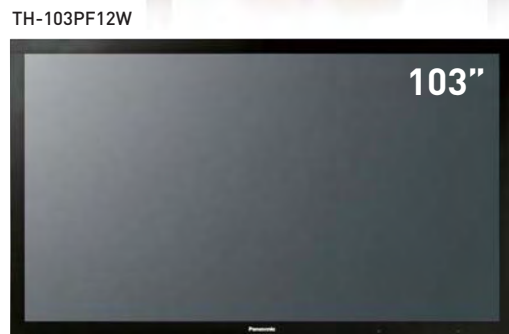


PF Series

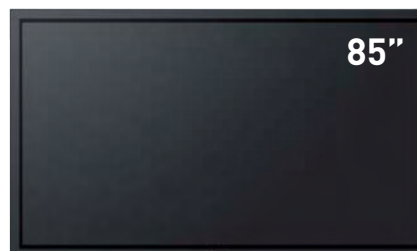


1080p Full-HD Plasma Displays

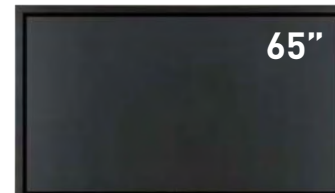
These high-grade full-HD professional models have a wide variety of display functions and utilities to produce brilliant and highly-detailed images.



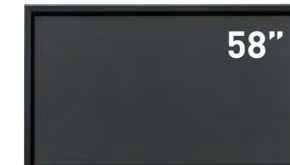
TH-85PF12W



TH-65PF12RK



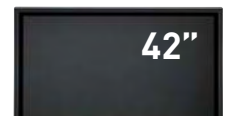
TH-58PF12RK



TH-50PF11RK



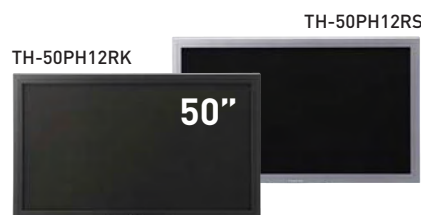
TH-42PF11RK



PH Series

High Definition Plasma Displays

Models with function slots for versatile system customizing.

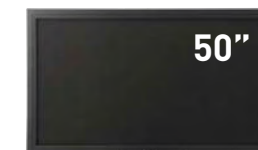


PD Series

High Definition Plasma Display

Fixed terminals make this model ideal for basic use in presentation or signage applications.

TH-50PD12R



TH-42PD12R



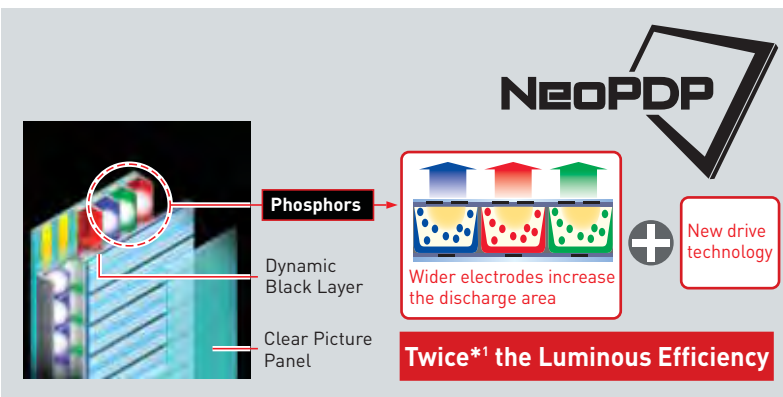
* PLink: Unified standards for a telecommunications protocol for operating and managing multiple projectors.

NeoPDP Technology Produces Large-Screen, True-to-Life Images with Outstanding Quality and Detail

NeoPDP Technology — Twice*¹ the Luminous Efficiency

Panasonic's new NeoPDP technology achieves twice the luminous efficiency as all previous models, thanks to new materials and a new plasma display panel structure together with a complete revamping of circuitry and drive technology. NeoPDP boosts brightness and contrast while improving moving picture performance. From brilliant whites to robust deeper blacks, it has richer gradation and displays fast movements, such as in sports, with enhanced detail. NeoPDP even reduces the overall panel weight through these new technological advances.

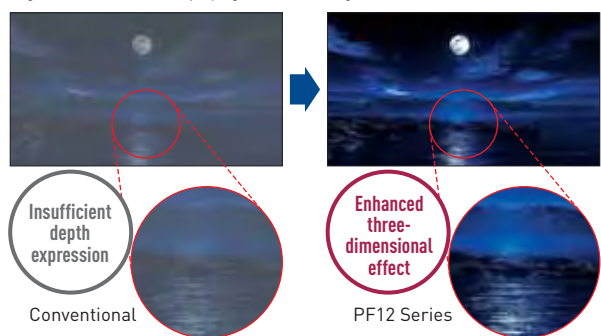
*1: Comparing full-HD models in existing sizes with same-size 2007 Panasonic models.
* The PF11 Series is not equipped with the NeoPDP technology.



World's Highest*² Contrast Ratio of 40,000:1*³

Original Panasonic image processing technologies, including the Dynamic Black Layer, have achieved the world's highest*² contrast of 40,000:1*³ (dynamic contrast of 2,000,000:1*⁴), to reproduce images with enhanced depth that seems to pull the viewer in.

*2: For plasma displays as of June 17, 2009 (according to a Panasonic survey).
*3: Dark-area contrast that can be displayed simultaneously on the same screen.
*4: The ratio of the brightness of a screen displaying an all-white signal to the brightness of a screen displaying an all-black signal.



World's Highest Level*² of 6,144*⁵ Equivalent Steps of Gradation

The Panasonic PF12 Series achieves rich shading with an incredibly accurate 6,144 equivalent steps*⁵ of gradation in all scenes. These displays deliver richer gradation from brilliant whites to robust blacks, and faithfully reproduce the textural quality of the original video source.

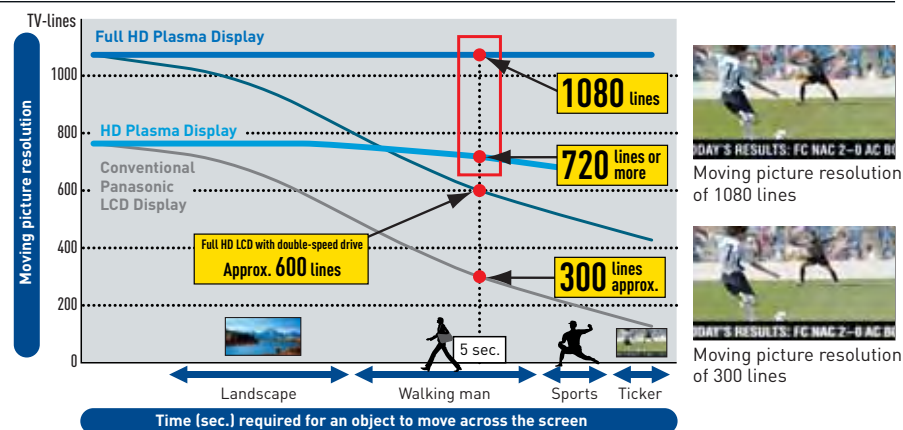
*5: The PF11 Series has 5,120 equivalent steps of gradation.



Moving Picture Resolution of 1,080 Lines*⁶ for Sharp and Clear Display of Fast-motion Images

The superb moving picture resolution of the plasma display panel ensures that even fast-moving action is displayed clearly, with full detail and with fewer after-images. Panasonic Professional Plasma Displays deliver beautiful, high-resolution images from Full HD sources.

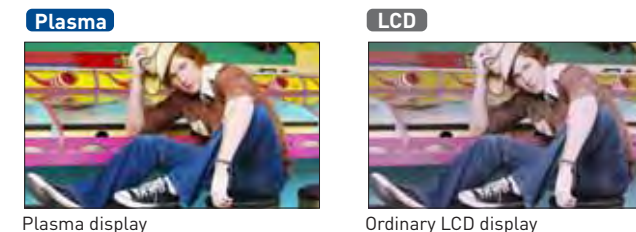
*6: The PF11 Series have 900 lines.
* Moving picture resolution is a quantitative measurement of detail in displayed motion pictures discernible by the human eye. Using a measurement method developed and applied by the APDC (Advanced PDP Development Center Corporation).



Approx. 110%*⁷ of the Colour Gamut of the HDTV Standard

High-definition broadcasts are based on the HDTV standard, rather than the conventional PAL standard. Panasonic plasma displays reproduce a wide colour gamut exceeding the entire colour range specified in the HDTV standard (ITU-R, BT.709). This results in a natural and faithful colour reproduction on a large screen. Digital Colour Reality technology also assures images with immaculate details.

*7: Comparison based on colour gamut



Tough Body with Impact-Resistant Front Glass Panel

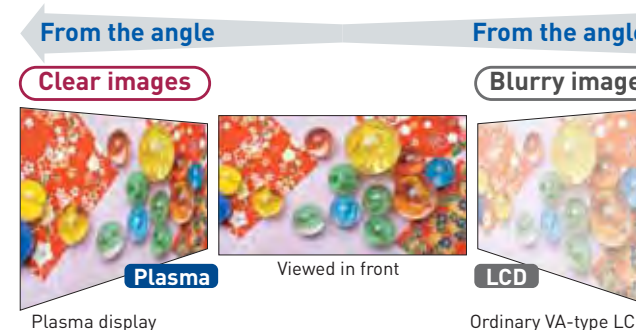
The front of the plasma display is covered by a hard glass panel that provides strong resistance to impact and breakage, thereby providing extra assurance against damage when used in busy public spaces. It virtually eliminates any need for additional protective covering.



Minimal Maintenance
Cleaning is simple, as dust and dirt can easily be wiped away with a soft cloth. Panasonic plasma displays provide stunning pictures, have a long service life, and require minimal maintenance.

Dynamic Images Viewed from Any Angle

Panasonic pro plasma display panels use self-illuminating pixels to provide more vivid color and sharper images that never appear faded, even when viewed at an angle. Panasonic plasma displays deliver high-resolution images without losing the quality of the original video source.



Long Life of approx. 100,000 Hours*⁸

The Panasonic Professional Plasma Display panel offers a long life of approximately 100,000 hours*⁸, under normal operating conditions — providing gorgeous HD images for many years with minimum maintenance.

Long Life for Vertical Installations Too
Panasonic plasma displays can also be set up in a vertical format, allowing for more efficient use of limited space configurations. The long life of approximately 100,000 hours*⁸ and superb image quality are completely unaffected by vertical installation. When the portrait mode is selected in the initial display settings, the on-screen display rotates 90-degrees for easy reading. The cooling fan control also changes automatically for portrait mode.

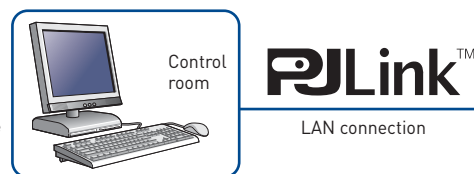
*8: Guideline operating hours before the panel brightness is reduced to half when the panel is used to display motion pictures in the Standard mode. Afterimages (burned-in images) and malfunctions are not taken into consideration.

Numerous Image Display Functions and Utilities Enhance the Power of the Large-Screen Display

PJLink™*1-Compatible Network Function for Remote Control

This network function lets you operate displays by remote control and monitor their status through a LAN connection. Since it supports the "PJLink™*1 Class 1" industry standard, existing infrastructure can be used for effective plasma display operation. The network function also uses the same protocol as Panasonic projectors, so other video devices can be combined to upgrade the system.

- *1: Unified standards for a telecommunications protocol for operating and managing multiple projectors.
- The PF11 Series is not equipped with the network function.
- When using the network function, be sure to set "Control I/F Select" in "Network Setup" to "LAN."



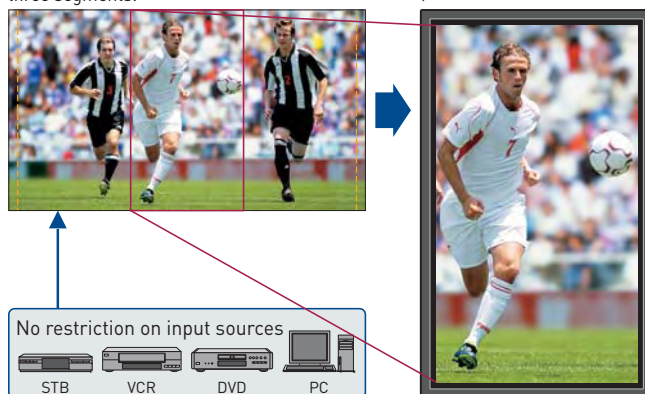
Portrait Zoom Function Enlarges Horizontal Images for Vertical Display

By dividing horizontal content into three vertical segments, the Portrait Zoom function can dynamically display selected segments. Then, by grouping three 103-inch or 85-inch plasma displays together in portrait mode, a dynamic multi-screen system can be configured to display life-size people with almost the same field of view as the original content.

* Some degradation occurs when images are enlarged.

Horizontal content is divided into three segments.

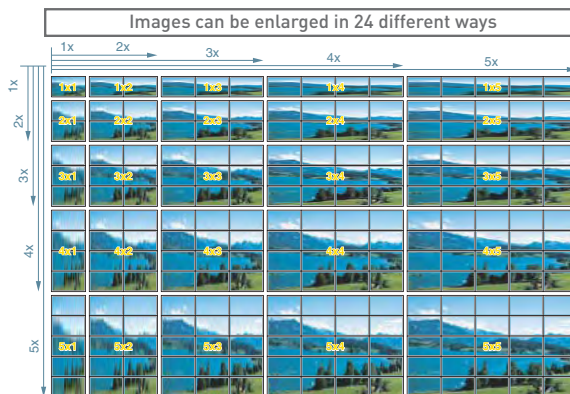
Desired segments are displayed full-screen in portrait mode.



Multi-Screen System Dynamically Displays Images in Large Spaces

The Multi-Display function enlarges images up to five times their original size, both vertically and horizontally. It enlarges images by the same zoom ratio in both vertical and horizontal directions, such as 2x2, 3x3, 4x4 and 5x5, or by different ratios in order to effectively use vertically or horizontally elongated spaces. Plasma display versatility can be further enhanced by freely selecting the zoom ratio to match the installation space.

- Some degradation occurs when images are enlarged.
- Provide an appropriate air-conditioned environment because the ambient temperature varies depending on the installation condition and location.



Effective Functions Used with Portrait Zoom or Multi Display

Multi AI Control Function

By applying AI control to the brightness signal of the entire input signal using the same video processing as for a single-screen image, this function achieves a uniform brightness level over the entire image.

Display ID Control

To prevent remote control errors that can occur when multiple displays are installed in close proximity, each display in a multi-screen system must have a unique ID. Assigning a display ID assures reliable remote control operation.

* The optional ID Remote Control Unit (EUR7636070R) is required for the TH-65PF12/58PF12.

Power-On Delay Function

This function automatically shifts the power-on time slightly for each display unit in the system, so there's less load on the power supply.

Seam Hides Video Off Mode

This mode displays a full-screen image, including edges (the entire width of the frame) of the display panel. This is especially suitable for displaying text information, since no words are hidden by the frame.



Image Display Functions and Utilities for Effective Signage and Presentation

Blend Dual Picture Function

The Blend Dual Picture function overlays text information produced with a PC onto base motion images. This function makes it easy to produce subtitles without requiring expensive editing equipment. And because the text data is displayed in full-HD image quality, corporate or brand images can be effectively presented in high resolution.

- Please note that using this function to process images without the permission of the copyright holder for commercial display or for public viewing may infringe upon the rights of the copyright holder.
- Combinations of two analogue signals cannot be displayed.



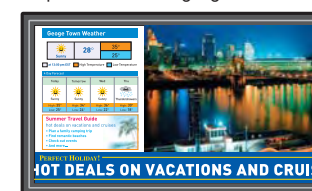
Dual Picture Mode

You can simultaneously display images from any two different AV sources connected. And you can select the audio output from either source. Playing back the audio from the sub-source can be useful in teleconferencing.

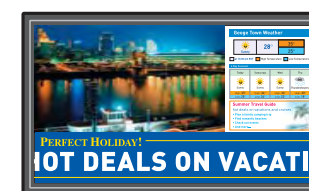
- Portrait Zoom, Multi Display or Digital Zoom function does not work in Dual Picture mode.
- Combinations of two analogue signals cannot be displayed.

Advanced Dual Picture Mode

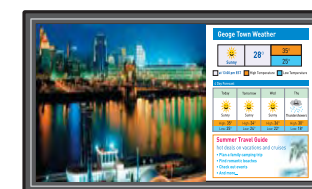
This mode lets you overlay a video image onto a full-screen PC image. You are now able to combine a video clip with any text information from a PC, giving you a more effective way to present important messaging.



Motion images, text messages and tickers can be displayed.



Motion images in the 16:9 aspect ratio, text informations and tickers.



Motion images and text messages are arranged next to each other.



Motion images and tickers are combined.

4x Digital Zoom

This function lets you enlarge a portion of an image up to four times its normal size and display it on the full screen. This function can help give presentations greater impact.

- Digital Zoom does not work in Dual Picture mode.
- Some degradation occurs when images are enlarged.

Picture Profiles

The picture adjustment values set using the Picture menu and advanced settings can be stored in the display's memory as profiles. Up to eight combinations can be stored, and the preferred profile can be selected to match the video source being used.

1:1 Pixel Mode

The 1:1 Pixel mode maps the 1920 x 1080 video content to Full HD panel pixels to display 100% of the original content. By skipping the scaling process, this mode is able to produce high-definition images in their original, 1:1 pixel form.

* Compatible signal format: 1,125/50i, 60i, 24p, 25p, 30p, 50p, 60p, 1,250/50i

Monitor Mode

This mode displays images without changing the brightness within the same signal level range, even if the average picture level (APL) of the screen varies. Since this mode maintains white balance regardless of the size of bright areas in the image, it is suitable for use in broadcast stations and image production studios in which precise colour reproduction is required.

Display Size Setting displays video signals so that the top, bottom, right and left screen edges that are usually cut off become visible.

Studio W/B Mode lets you set the colour temperature to best match the applications in broadcast stations and studios.

Studio Gain Mode increases the contrast to eliminate whiteout.

New Screen Saver NANODRIFT SAVER

The new NANODRIFT SAVER reduces image retention five times*2 more effectively than previous systems. By using smooth, fine image movement it minimizes the possibility of image retention, without blocking the view.

- *2: Compared to our "wobbling" screen saver.
- The PF11 Series is not equipped with this function.
- NANODRIFT is a trademark of Panasonic Corporation.

Screen Saver Functions

A variety of screen saver functions help lower the risk of uneven phosphor aging. The timer can also be used to set the screen saver operating time.

NANODRIFT SAVER*3	Moves the image smoothly by 1/16 of a dot at a time.
OVERLAY SCROLLING BAR	The image brightness will be decreased and a white bar will scroll over it.
SCROLLING BAR ONLY	A white bar will scroll from left to right. The image will not be displayed.
NEGATIVE IMAGE	A negative image will be displayed on the screen.
SIDE PANEL ADJUSTMENT	Brightens the black bands on the sides of the screen while displaying images in a 4:3 format.
WOBBLING*4	Shifts the image's position by several pixels at fixed time intervals or according to the detected screen condition.
PEAK LIMIT MODE	Lowens the peak brightness level (image contrast).
WHITE SCREEN:	White will be displayed on the full screen.

*3: Only PF12 Series. *4: Only PF11 Series.

Other Functions (See page 11 for details.)

- Weekly Command Timer** makes it easy to automate display operation.
- Remote System Monitoring** lets you monitor images from a distant location.
- Auto Power Off Function** automatically turns off the display power when the screen saver operation ends.
- Extended Life Settings** group all items that prevent image retention into a single menu.

- Energy-Saving Functions** minimise energy consumption.
- Tamper-Resistant Settings** let you restrict operations for display and remote control.
- Automatic Picture Positioning** automatically corrects horizontal and vertical picture position, when an analogue RGB signal is selected as input.
- Anti-Glare Function** reduces reflections from ambient light.

List of Compatible Functions

Model	Network Function	Portrait Zoom	Multi Display	Blend Dual Picture	Dual Picture	Advanced Dual Picture	Digital Zoom	Picture Profiles	1:1 Pixel Mode	Monitor Mode	Display Size Setting	Studio W/B	Studio Gain	NANODRIFT SAVER	Screen Savers	Weekly Command Timer	Remote System Monitoring	Auto Power Off	Extended Life Setting	Energy-Saving Functions	Tamper-Resistant Settings	Automatic Picture Positioning
TH-103PF12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-85PF12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-65PF12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-58PF12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-50PF11	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-42PF11	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

●: Compatible *5: Not equipped with Wobbling. *6: Not equipped with auto adjustment of H/V-SIZE, or AUTO SET UP button. *7: Not equipped with auto adjustment of H/V-SIZE, AUTO SET UP button or Auto Mode.

A Wide Viewing Angle, Deep Blacks, Rich Gradation and Superb Colours Grab the Viewer's Attention

Exceptionally Durable

• Impact-Resistant Front Glass Panel

The front of the plasma display is covered by a hard glass panel that provides strong resistance to impact and breakage, thereby providing extra assurance against damage when used in busy public spaces. It virtually eliminates any need for an additional protective cover.

• Panel Lifetime*¹ of Approximately 100,000 Hours

Panasonic professional plasma panels offers a long life*¹ of approximately 100,000 hours, whether mounted horizontally or vertically. Because there are fewer consumables*² to be replaced periodically, running costs are also lowered. And cleaning is easy too, as dust and dirt can be wiped off with a soft cloth when necessary. Panasonic plasma displays provide stunning pictures with a long life, and minimum maintenance required.

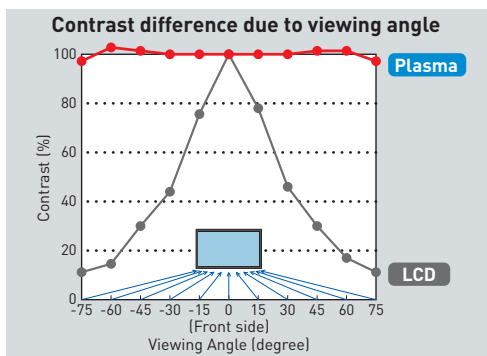
*1: Guideline operating hours before the panel brightness is reduced to half when the panel is used to display motion pictures in the Standard mode. Afterimages (burned-in images) and malfunctions are not taken into consideration.

*2: The heat radiating fan is a consumable part.

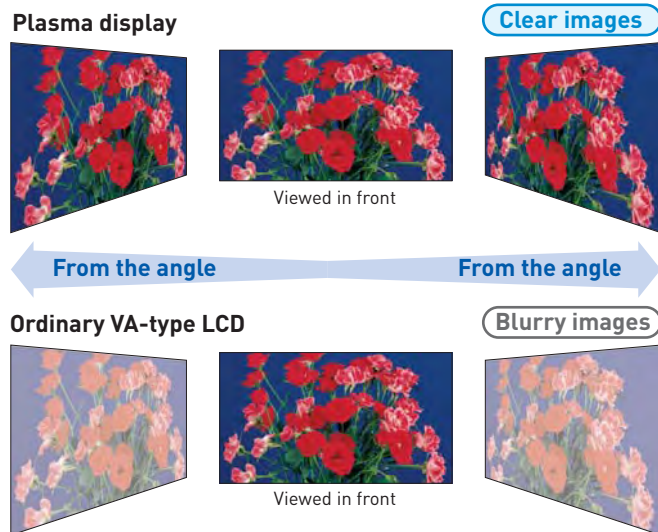


Dynamic Images Seen from Any Angle

Panasonic pro plasma display panels use self-illuminating pixels to provide more vivid colour and sharper images that never appear faded, even when viewed from an angle. Panasonic plasma displays deliver high-resolution images without losing the quality of the original video source.



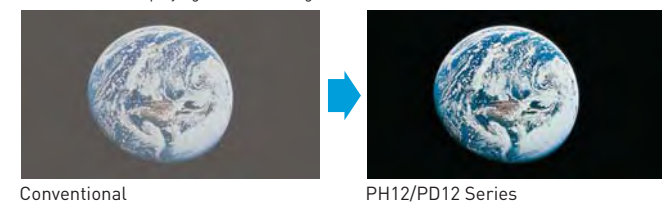
* Measurements obtained by Panasonic



Crisp Images with a High Contrast Ratio of 30,000:1*³

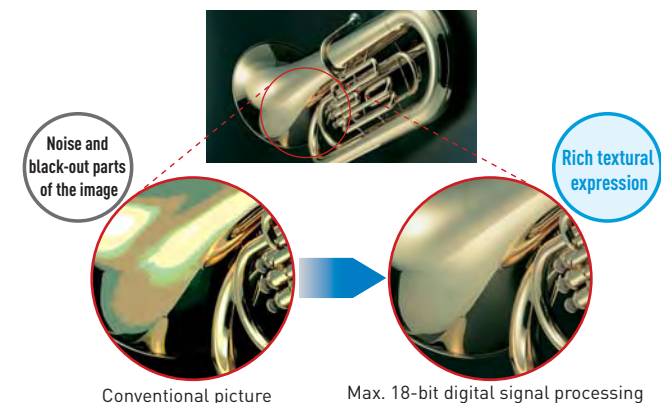
Original image-processing technologies have enabled a high contrast ratio of 30,000:1*³ (dynamic contrast of 1,000,000:1*⁴). This produces robust blacks and gives images greater realism and depth.

*3: Dark-area contrast that can be displayed simultaneously on the same screen.
*4: The ratio of the brightness of a screen displaying an all-white signal to the brightness of a screen displaying an all-black signal.



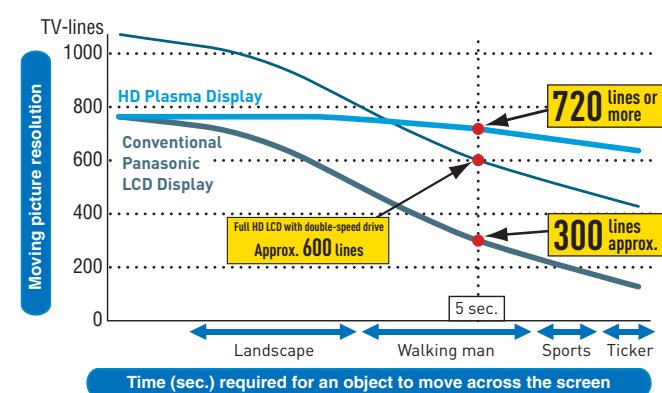
Rich, Expressive Gradation with 5,120 Equivalent Steps

Maximum 18-bit digital signal processing renders images with the equivalent of 5,120 steps of gradation, while suppressing noise and minimising blocked shadows.



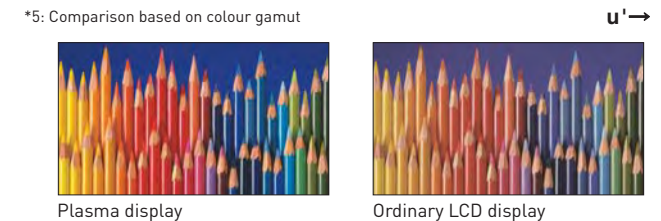
Sharp and Clear Fast-Motion Images

Panasonic pro plasmas handle fast-motion video in real time without motion blur or lag. The superior moving image picture resolution ensures that even fast-moving action is displayed clearly with full detail.



Approx. 110%*⁵ of the Colour Gamut of the HDTV Standard

High-definition broadcasts are based on the HDTV standard, rather than the conventional PAL standard. Panasonic plasma displays reproduce a wide colour gamut exceeding the entire colour range specified in the HDTV standard (ITU-R, BT.709). This results in a natural and faithful colour reproduction on a large screen. Digital Colour Reality technology also assures images with immaculate details.



*5: Comparison based on colour gamut

Versatile Image Display Functions and a Wealth of Utilities Create Effective Digital Signage

Multi-Screen System Dynamically Displays Images in Large Spaces

The Multi-Display function enlarges images up to five times their original size, both vertically and horizontally. It enlarges images by the same zoom ratio in both vertical and horizontal directions, such as 2x2, 3x3, 4x4 and 5x5, or by different ratios in order to effectively use vertically or horizontally elongated spaces. Plasma display versatility can be further enhanced by freely selecting the zoom ratio to match the installation space.

- Some degradation occurs when images are enlarged.
- Provide an appropriate air-conditioned environment because the ambient temperature varies depending on the installation condition and location.

• Power-On Delay Function

This function automatically shifts the power-on time slightly for each display unit in the system, so there's less load on the power supply.

• Multi AI Control Function

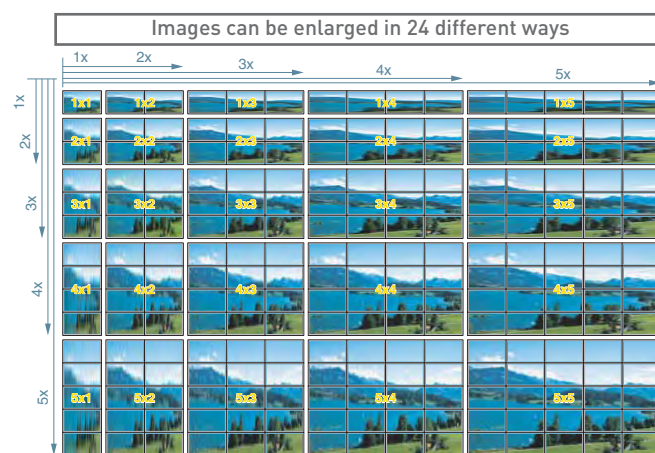
By applying AI control to the brightness signal of the entire input signal using the same video processing as for a single-screen image, this function achieves a uniform brightness level over the entire image.

- This function is not provided on the PD12 Series.
- This function is effective during Multi Display function.

• Display ID Control

To prevent remote control errors that can occur when multiple displays are installed in close proximity, each display in a multi-screen system must have a unique ID. Assigning a display ID assures reliable remote control operation.

- The optional ID Remote Control Unit (EUR7636070R) is required.



• Seam Hides Video Off Mode

This mode displays a full-screen image, including edges (the entire width of the frame) of the display panel. This is especially suitable for displaying text information, since no words are hidden by the frame.

- This function is effective during Multi Display function.



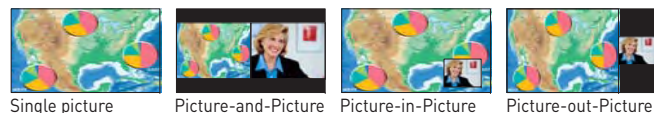
Dual Picture Mode for Eye – Catching Digital Posters with Motion Images and Text Data

You can simultaneously display images from any two different kinds of AV sources connected. This function allows you to take full advantage of the plasma's large screen. You can switch the display mode and swap the main screen and subscreen at the touch of a button.

- Multi Display or Digital Zoom function does not work in Dual Picture mode.
- Combinations of two analogue signals cannot be displayed.
- The PH12 Series cannot simultaneously display Input A and Input B from the same terminal board.

• Dual Picture Display Mode

The display mode can be switched by pressing the Multi PIP button.



- In the Picture-in-Picture mode, the sub-screen picture can be displayed at a location where it has minimum effect on the main-screen image.

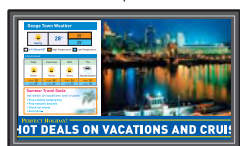
• Audio Playback from the Sub-Source

When displaying two separate images, you can select the audio output from either source. Playing back the audio from the sub-source can be useful in teleconferencing, for example.

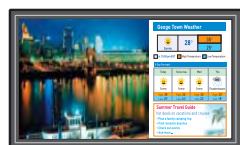
• Advanced Dual Picture Mode

This mode lets you overlay a video image onto a full-screen PC image. For example, you can combine a video clip with text information from a PC, giving you a more effective way to present information.

- This function is not provided on the PD12 Series.



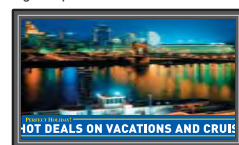
Motion images, text messages and tickers can be displayed to provide large amounts of information at the same time.



Motion images and text messages are arranged next to each other. Thanks to the simple and neat layout, motion images accentuate the entire screen.



This mode allows images in the 16:9 aspect ratio, such as those from HD sources, to be displayed without distorting the original picture format.

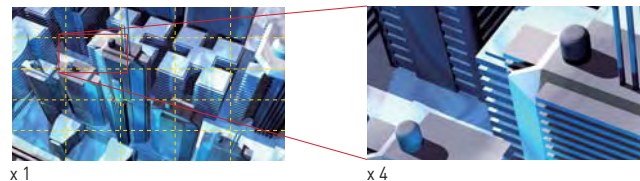


Motion images and tickers are combined. Since both the top and bottom content contains motion, they draw attention for more effective advertising.

4x Digital Zoom – Enlarges the Display of Selected Image Sections

This function lets you enlarge a portion of an image up to four times its normal size and display it on the full screen. This function can help give presentations greater impact.

- Digital Zoom does not work in Multi Display or Dual Picture mode.
- Some degradation occurs when images are enlarged.



Advanced Functions for Effective Digital Signage

• Weekly Command Timer

This function makes it easy to automate display operation so there's no need for an external scheduler. You can set a variety of operations — power on/off, image source selection, screen saver functions and more — to activate at specific times on specific days of the week.

- This function is not provided on the PD12 Series.



• Remote System Monitoring

Panasonic pro plasma displays feature a monitor command that lets you check the signal from a distant location. In conventional systems, you had to install a monitoring camera to check the images displayed on an advertising display panel or digital signage system. This monitor command, on the other hand, lets you monitor images by simply connecting a PC via a serial cable.

• Tamper-Resistant Settings — Suitable for Digital Signage Use

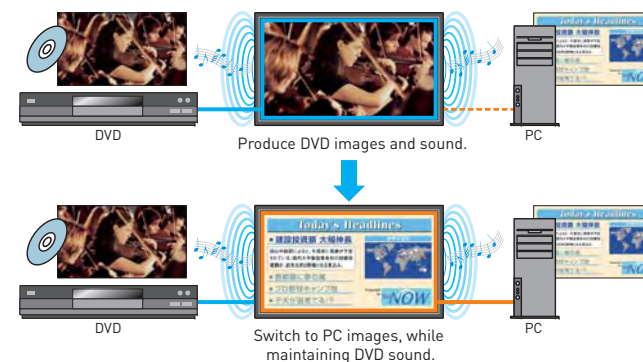
You can prevent operating errors in public places by making tamper-resistant settings in advance.

- **Maximum volume level:** Sets the maximum sound volume.
- **Button lock:** Restricts the button operations for the display.
- **Remote user level:** Restricts the key operations for the remote control.

• Audio Input Select

The video and audio input can each be independently selected. This makes it possible to achieve flexible combinations of images and sounds.

- This function is not provided on the PH12 Series.



• Automatic Picture Positioning

Simply press the Auto Setup key on the remote control to position the picture. This function automatically corrects horizontal and vertical picture positions, clock phase, and dot clock when an analogue RGB signal is selected as input. The adjustment results in optimal standard values for horizontal and vertical picture sizes.

- If the dot clock frequency is 108 MHz or higher, DOT CLOCK and CLOCK PHASE cannot be made.
- When digital RGB signal input, DOT CLOCK and CLOCK PHASE cannot be made.



• Screen Saver Functions

A variety of screen saver functions help lower the risk of uneven phosphor aging. The timer can also be used to set the screen saver operating time.

- The timer setting function is not provided on the PD12 Series.

OVERLAY SCROLLING BAR	The image brightness will be decreased and a white bar will scroll over it.
SCROLLING BAR ONLY	A white bar will scroll from left to right. The image will not be displayed.
NEGATIVE IMAGE	A negative image will be displayed on the screen.
SIDE PANEL ADJUSTMENT	Brightens the black bands on the sides of the screen while displaying images in a 4:3 format.
WOBBLING	Shifts the image's position by several pixels at fixed time intervals or according to the detected screen condition.
PEAK LIMIT MODE	Lowers the peak brightness level (image contrast).
WHITE SCREEN:	White will be displayed on the full screen.

• Auto Power Off

The Auto Power Off function automatically turns off the display power when the screen saver operation ends.

• Extended Life Settings

It's easy to make settings that extend the display life because all items that prevent image retention are grouped into a single menu. There's also a menu that allows you to set the recommended values with a single operation.

• Energy-Saving Functions

- **DPMS (Display Power Management Signaling):** Power is automatically turned on or off in response to a sync signal from the PC connected to the built-in PC input terminal.
- **Auto Power Off:** When you're using a device connected to the multi-function slots, the display panel goes into standby mode after about 10 minutes if no sync signal is received.
- **Power Save Mode:** Reduces the display's brightness.
- **Standby Power Save Mode:** Reduces power consumption when on standby.

Other Functions

• Minimal Reflections from Ambient Light

The AR (Anti-Reflection) coating on the plasma display's front glass panel minimises the reflection of ambient and fluorescent lighting, without affecting the beauty of the displayed images.

• Display Size Setting

This function displays video signals so that the top, bottom, right and left screen edges that are usually cut off become visible.

• Studio W/B Mode

This lets you set the colour temperature to best match the applications in broadcast stations and studios.

• Studio Gain Mode

This mode increases the contrast to eliminate whiteout.

List of Compatible Functions

	Multi Display	Power-On Delay	Multi AI Control	Display ID Control	Dual Picture	Advanced Dual Picture	Digital Zoom	Weekly Command Timer	Remote System Monitoring	Tamper-Resistant Settings	Audio Input Select	Automatic Picture Positioning	Screen Savers	Energy-Saving Functions	Display Size Setting	Studio W/B	Studio Gain
TH-50PH12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-42PH12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-50PD12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-42PD12	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

●: Compatible

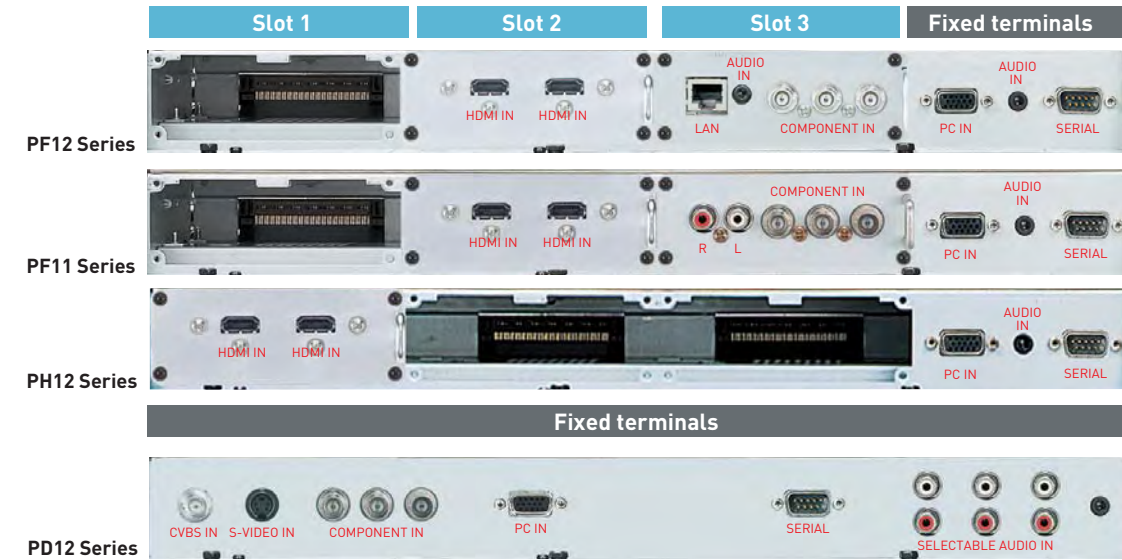
Multi-Function Slots Offer Outstanding Flexibility

In addition to the fixed input interface, these Panasonic pro plasma displays have three interchangeable slots that permit you to add different combinations of optional terminal boards. This gives you the flexibility to add digital or analogue capabilities and customize your system.

* See the list of compatible terminal boards on page 13 for applicable terminal boards.



Standard-Equipped Terminals



Optional Terminal Boards

BNC Component Video TY-42TM6A

- RGB/component video (BNC)
- Audio L/R (RCA)
- Slot 1, 2 or 3

RCA Component Video TY-42TM6Z

- RGB/component video (RCA)
- Audio L/R (RCA-cinch)
- Slot 1, 2 or 3

BNC Composite Video TY-42TM6B

- S-Video or Composite in/out (BNC)
- Audio L/R (RCA)
- Slot 1 or 2

RCA Composite Video TY-42TM6V

- S-Video or Composite in/out (RCA)
- Audio L/R (RCA)
- Slot 1 or 2

BNC Dual Video TY-FB9BD

- S-Video and Composite (BNC)
- 2 x Audio L/R (RCA)
- Slot 1 or 2

PC Input TY-42TM6P

- RGB (HV)/component video (D-Sub 15-pin)
- Audio L/R (3.5 mm mini-jack)
- Slot 1, 2 or 3

* Does not support the DPMS function.

DVI-D TY-FB11DD

- DVI-D with HDCP (24 + 1-pin)
- Audio L/R (3.5 mm mini-jack)
- Slot 1 or 2

HDMI TY-FB8HM

- HDMI with HDCP (19-pin)
- Slot 1 or 2

Dual HDMI TY-FB10HMD

- 2 x HDMI with HDCP (19-pin)
- Slot 1 or 2

SDI TY-FB7SD

- SD-SDI input and output (BNC)
- Slot 1 or 2

HD-SDI TY-FB9HD

- HD-SDI input and output (BNC)
- Slot 1 or 2

HD-SDI with Audio TY-FB10HD

- HD-SDI video/audio input and output (BNC)
- Slot 1 or 2

SCART TY-FB8SC

- RGB/S-Video/Composite (SCART 21-pin)
- Audio L/R (SCART 21-pin)
- Slot 1 or 2

Ir Through TY-FB9RT

- 3 x IR-signal OUT (3.5 mm mini-jack)
- Slot 1, 2 or 3

* Only one terminal board can be used per display. Also, it can be used to control only Panasonic AV equipments.



Composite/Component Video TY-42TM6Y

- RGB (HV)/component video (BNC)
- S-Video or Composite in/out (BNC)
- 2 x Audio L/R (RCA)
- Slot 1 & 2 or slot 2 & 3



RGB Active Through TY-42TM6G

- RGB (HV)/component video (D-Sub HD 15-pin)
- RS-232C (D-Sub 9-pin)
- Slot 1 & 2



TV Tuner Board TY-FB9TE

- Including remote control
- Receiver systems PAL, SECAM, NTSC (via AV socket)
- Coax antenna socket (VHF/UHF)
- Videotext integrated
- Slot 2 & 3

Dual Link HD-SDI Board (mounts in slot 1 or 2)

TY-FB11DHD



- Supports the high-resolution, high-quality Dual Link HD-SDI (in compliance with SMPTE372M) and the HD-SDI (in compliance with SMPTE292M) used in broadcasting.
- Allows direct input of 2K digital cinema signals* in compliance with DCI (Digital Cinema Initiatives) without using a converter.
- Compatible with RGB 4:4:4/YPaPr 4:2:2@60p, 50p/2K digital cinema signals in compliance with DCI.
- Provides simultaneous video and embedded audio (max. 16 channels)* signal transmission using a single cable.
- * Only when signals are multiplexed in Dual Link HD-SDI Link A.

Max Transimission Distance/Recommended Cable
100 m*/75-ohm coaxial cable 5C-FB
* When using a cable with less than 20dB/100m. (750 MHz)

Specifications

	TY-FB11DHD
Standards	Video: SMPTE372M, SMPTE292M; Audio: SMPTE299M, SMPTE272M
Applicable displays	PF11/PF12 Series

Compatible Video Signal

Signal format	Sampling structure/Number of pixel bits	SDI name
750 (720)/60p: 59.94p	YCbCr (4:2:2)/10-bit	HD-SDI
750 (720)/50p		
1,125 (1,080)/60i: 59.94i		
1,125 (1,080)/50i		
1,125 (1,080)/30p: 29.97p		
1,125 (1,080)/25p		
1,125 (1,080)/24p: 23.985p	YCbCr (4:4:4), YCbCr + A (4:4:4:4) ¹ /10-bit YCbCr (4:4:4), YCbCr + A (4:4:4:4) ¹ /10-bit RGB (4:4:4), YCbCr (4:2:2), YCbCr (4:4:4)/12-bit ²	Dual-Link HD-SDI
1,125 (1,080)/24sF: 23.985sF		
1,125 (1,080)/60i: 59.94i		
1,125 (1,080)/50i		
1,125 (1,080)/30p: 29.97p		
1,125 (1,080)/25p		
1,125 (1,080)/24sF: 23.985sF	YCbCr (4:2:2)/10-bit	Dual-Link HD-SDI
1,125 (1,080)/60p		
1,125 (1,080)/50p		
2,048 x 1,080/24p: 23.985p	RGB (4:4:4), X'Y'Z' (4:4:4)/12-bit ²	

*1: A (Alpha channel) is not supported. This data cannot be output.
*2: A 12-bit signal can be received, but it will be converted to a 10-bit signal for the display of images.

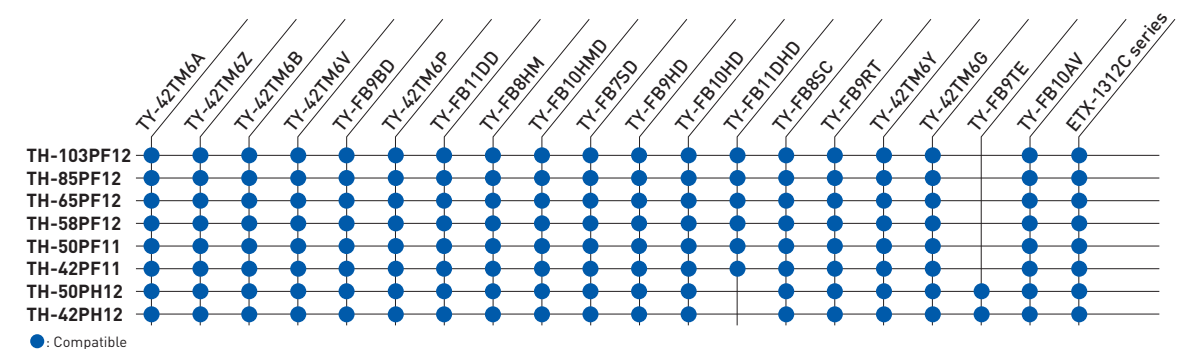
AV Terminal Box

TY-TB10AV



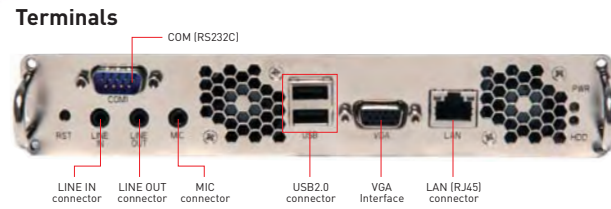
- Ideal for hotel guest rooms. Two input terminals (VIDEO/RGB) allow guests to easily connect and use their own notebook PC, portable DVD player, or other device.
- The TY-TB10AV can also be built into a desk or a bed sideboard.

List of Compatible Terminal Boards



PDP Controller

ETX-1312C series (Mounts in slots 1 & 2, or slots 2 & 3)



These high-performance internal PCs can be easily installed in the displays and offer the advantage of an all-in-one solution.

- Compact 2-slot width plug-in PC to facilitate turn-key solutions.
- Invisible installation, power supply through the display.
- Supports Compact Flash Cards.
- Supports VGA output for additional display.

*The PDP Controller cannot be combined for use with other terminal boards.

Specifications

Model number	ETX-1312C1000	ETX-1312C600	ETX-1312C1000-XPE	ETX-1312C600-XPE
Slot compatibility	requires slots 1 & 2 or slots 2 & 3			
Processor	ULV Pentium Celeron 1 GHz	ULV Pentium Celeron 600 MHz	ULV Pentium Celeron 1 GHz	ULV Pentium Celeron 600 MHz
Memory	512 MB RAM (DDR SO-DIMM)			
Internal HDD	40 GB HDD (2.5" HD)			
Interfaces	1 x LAN, 2 x USB 2.0, 1 x Serial, 1 x Line In/Out, 1 x Mic In, 1 x VGA Out			
Pre-installed OS	Windows XP embedded			
Power supply	Supplied from the plasma display			
Standards	FCC, CE, RoHS			

Digital Signage/Narrowcasting System

Easy, interactive content distribution system for retail chains and public spaces such as shopping malls, office buildings and hotels.

Constructing a Multi-Language Environment

In contrast with conventional methods, in which several information panels are prepared in different languages, this digital system allows visitors to simply touch the panel itself to switch to the language they want. It is a highly effective and efficient way to offer people the content that they want to see.

Flexible Content Control

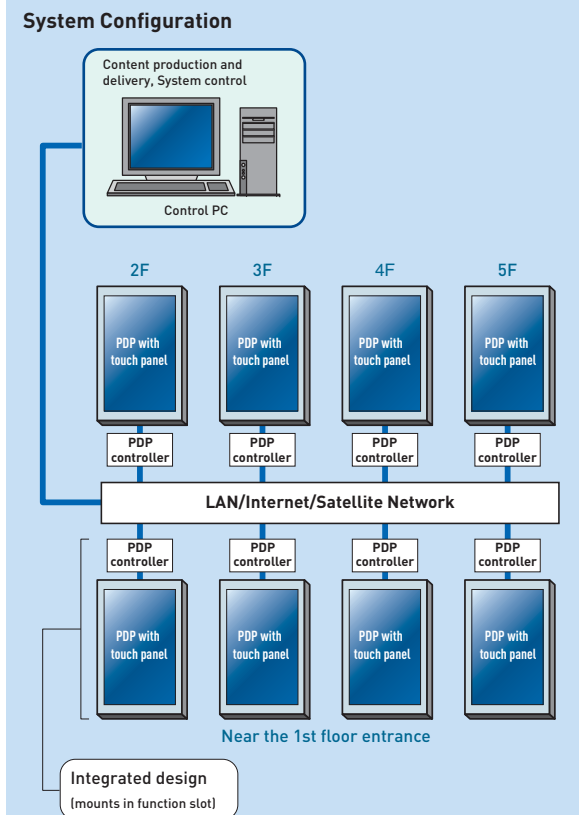
Each PC connected to the Plasma has a unique IP address, allowing content to be streamed to the Plasma on any LAN, modem, Internet or Satellite network. It speeds up the process of updating information, and any combination of Plasmas can be controlled locally or from a central location.

Space-Saving and Easy to install

We have slimmed down the display system by incorporating the optional PDP Controller right inside the plasma display. It requires only two connections, power and network.

Universal System Design

Since the entire system can be configured in a Windows environment, it requires no special software for content production or operation.



*You can configure 50-inch displays and control system by simply combining Panasonic 50-inch Plasma Display and the Touch Panel, then mounting the PDP Controller in the function slot of the plasma display.

*Content is distributed by a centralized control PC in an office and stored in the hard disk of each PDP controller, ready to be displayed by touch panel operation.

Touch Panel



Touch Panel (CMOS Camera Detection System)

- TY-TP65P10S** (for 65-inch model)
- TY-TP58P10S** (for 58-inch model)
- TY-TP50P10S** (for 50-inch model)
- TY-TP42P10S** (for 42-inch model)

- Two infrared image sensors detect coordinates based on a triangulation method.
- High resolution and smooth operation.
- Dividable frame system for compact packaging.

Note: The touch panel does not include a drawing application. You cannot mount both a TY-TP65P10S or TP58P10S Touch Panel and an Anti-Glare Filter at the same time. Do not use the touch panel near windows or other locations where external light is directly reflected, or operating errors may result.

Examples of Touch-Panel Solutions



Discussion Display Panel
Information can be handwritten directly onto the sharp, clear images of the plasma display. This lets you visually summarise people's opinions and comments right on the screen for more efficient meetings.



Information Display Panel
A display system can be configured that lets the user flexibly retrieve information. An intuitive interface enables easy operation by simply touching the screen, making the system ideal for use in public facilities and commercial complexes.

Specifications

Model Number	TY-TP42P10S	TY-TP50P10S	TY-TP58P10S	TY-TP65P10S
Power source	+ 5 V DC ± 10%			
Electric current	Max. 450 mA			
Supply system	From USB bus			
Detection system	Infrared retroreflective detection			
Panel window [W x H]	938 x 535 mm	1,128 x 648 mm	1,305 x 747.5 mm	1,449 x 819 mm
Detection range [W x H]	920 x 518 mm	1,106 x 622 mm	1,287 x 723.5 mm	1,434 x 807 mm
Effective detection range	Same as above	Same as above	Same as above	Same as above
Resolution	Approx. 32,000 [W] x 18,000 [H] points ^{*1}			
Output system	Coordinate output			
Optic elements	Infrared LED x 4, CMOS image sensor x 2			
Minimum detection size	7 mm	8 mm	9 mm	10 mm
Response rate	100 points/sec			
Interface	USB 2.0 full speed device			
	Signals: +DATA, -DATA, VCC, GND			
	Connector: Type B			
Resistance to external light	Lateral light: 2,000 lx + 20% [20° angle of incidence] Frontal light: 10,000 lx + 20% [90° angle of incidence]			
External dimensions [W x H x D]	1,016.4 x 686 x 47.9 mm	1,206.4 x 798.6 x 47.9 mm	1,395.4 x 923.1 x 47.9 mm	1,550.8 x 1,008.2 x 47.9 mm
Mass	Approx. 4.1 kg	Approx. 4.6 kg	Approx. 5.8 kg	Approx. 6.7 kg
Escutcheon material	Aluminum			
Applicable OS	Microsoft® Windows® 2000, Windows® XP, Windows® Vista [32 bit]			

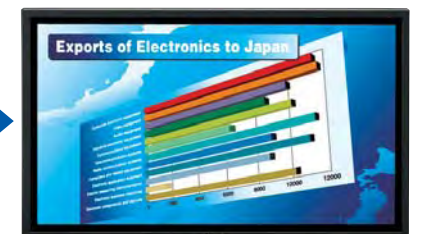
*1: Resolution obtained by using a dedicated Driver software.

Anti-Glare Filter

- TY-AR65P9W** (for 65-inch model)
- TY-AR58P10W** (for 58-inch model)
- TY-AR50P9W** (for PF11 series 50-inch model)
- TY-AR42P9W** (for PF11 series 42-inch model)
- TY-AR50P12W** (for PD12/PH12 series 50-inch model)
- TY-AR42P12W** (for PD12/PH12 series 42-inch model)



Without Anti-Glare Filter



With Anti-Glare Filter

- Mounting this filter to the front of the plasma display reduces glare from external light sources and reflections from fluorescent lighting.
- Anti-glare filter suppresses the transmission of visible light rays and improves contrast, to provide sharp, crisp images.
- This filter also has excellent physical characteristics, for preventing static electricity and resisting surface abrasion (with a surface hardness of 2H).

EDUCATION

National University of Singapore
Singapore
2 x 103"

The previous projector system in the lecture room was replaced by these plasma displays. By solving problems such as the instructor's shadow covering the screen thereby making it difficult to see the images projected, and not being able to see images clearly unless shown in a dark room, these new displays offer excellent clarity and flexibility, even in brightly lit rooms.



PASSENGER INFORMATION

Shanghai Metro People's Square Station
Shanghai, China
10 x 103"

Ten plasma displays for use as digital signage were installed at a subway transfer station, which is used by over 500,000 people a day. Compared to conventional illuminated signboards, these displays give advertising a much greater visual effect due to their greater ability to display fast-moving images. This allows the digital signage to attract more attention and therefore better communicate the advertising content.



AMUSMENT

MEDIAPRO
Barcelona, Spain
9 x 103"

MEDIAPRO's newly built Production Center in Barcelona is the proud owner of the world's largest plasma display video wall. Nine Panasonic 103-inch full-HD displays have been installed in a 3 x 3 matrix in the reception area of their new offices. Visitors are captivated by dynamic moving images promoting the company's activities. The video wall can be seen from the street, and instantly draws attention to MEDIAPRO's new arrival in the area. It also emphasizes their dominance in Spain's media industry.



LEISURE & GAMING

Cinépolis
Latin America

With Panasonic, Cinépolis — the largest movie theater company in Latin America — found a business partner capable of delivering solutions tailored to their specific needs. In addition to the endurance and robustness of all Panasonic plasma displays, these plasma panels also offer quality images and a wide variety of functions for ease of operation. During their five-year partnership Cinépolis and Panasonic has installed more than 3,000 plasma displays at Cinépolis' theaters, averaging 15 screens at each complex.



DIGITAL SIGNAGE

Flora Shopping Centre
Prague, Czech
3 x 103"



MEDICAL CARE

Ehime University Hospital
Ehime, Japan
12 x 50", 3 x 37"

Plasma displays with superb colour reproduction, uniform colouring, and high-speed image response were installed in their operating rooms. The 50-inch displays are currently being used as observation monitors for medical students to view important surgical procedures.



Nagoya Daini Red Cross Hospital
Nagoya, Japan

This hospital recently changed its system of calling patients for examinations by their individual names. Instead, the hospital now uses patient numbers and an audio system aided by video animation that's shown on a plasma display. This better protects the privacy of the patients, and the high contrast and wide viewing angle makes the displayed images clearly visible from any location within the waiting room.

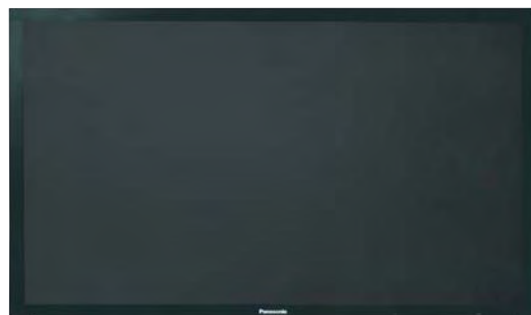


TV PRODUCTION

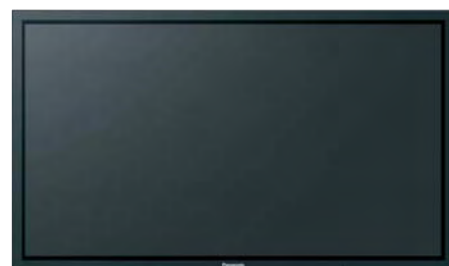
KHOU TV
Houston, USA
3 x 50", 9 x 42", 3 x 58", 2 x 37"

Panasonic plasma displays reproduce colours across the entire HDTV-standard range, so colours are faithful and natural-looking. Superior motion-image resolution reproduces fast-action images with stunning clarity. The slim design allows considerable installation flexibility for creating a neat, attractive studio design.

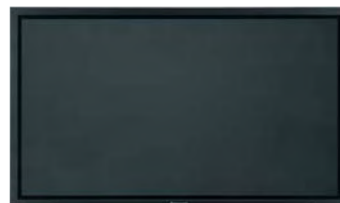




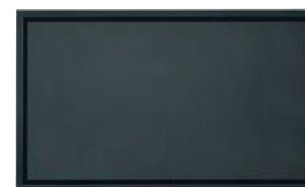
TH-103PF12W (Anti-Glare, Low-Reflection model)
103-inch (260 cm) diagonal
Full High Definition Plasma Display



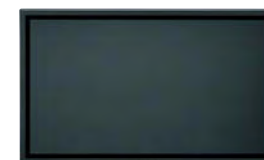
TH-85PF12W (Anti-Glare, Low-Reflection model)
85-inch (217 cm) diagonal
Full High Definition Plasma Display



TH-65PF12RK
65-inch (165 cm) diagonal
Full High Definition Plasma Display



TH-58PF12RK
58-inch (148 cm) diagonal
Full High Definition Plasma Display



TH-50PF11RK
50-inch (127 cm) diagonal
Full High Definition Plasma Display



TH-42PF11RK
42-inch (106 cm) diagonal
Full High Definition Plasma Display

Specifications

	TH-103PF12W	TH-85PF12W	TH-65PF12RK	
DISPLAY	Screen Size (Diagonal)	103-inch	85-inch	65-inch
	Aspect Ratio	16:9	16:9	16:9
	Effective Display Area (W x H)	2,269 x 1,276 mm	1,889 x 1,062 mm	1,434 x 806 mm
	Resolution (H x V)	1,920 x 1,080 pixels	1,920 x 1,080 pixels	1,920 x 1,080 pixels
	Pixel Pitch (H x V)	1.182 x 1.182 mm	0.984 x 0.984 mm	0.747 x 0.747 mm
	Contrast Ratio	40,000:1	40,000:1	40,000:1
	Gradation	6,144 steps (equivalent)	6,144 steps (equivalent)	6,144 steps (equivalent)
SIGNAL COMPATIBILITY	Moving Picture Resolution	1,080 lines	1,080 lines	1,080 lines
	Scanning Frequency	Horizontal : 15 - 110 kHz / Vertical : 48 - 120 Hz		
INPUT	PC Signal Compatibility	VGA, SVGA, XGA, WXGA, SXGA, UXGA (Over SXGA resolution: compressed)		
	Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 625 (576)/50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p, 60p, 50p; 1250 (1080)/50i		
CONTROL	COMPONENT IN	BNC x 3 (on Function Board)		
	AUDIO IN (for COMPONENT)	M3 x 1 set (on Function Board)		
	HDMI IN	Type A connector x 2 (on Function Board)		
	PC IN	Mini D-sub 15-pin x 1		
SOUND	AUDIO IN (for PC)	M3 x 1		
	RS-232C	D-sub 9-pin x 1		
ELECTRICAL	LAN	RJ45: 10BASE-T/100BASE-TX, PLink™ compatible (on Function Board)		
	Audio Output	RCA (L/R) x 1 set, Output level: variable [-∞ to 0 dB at 10 kilohms]		20 W [10 W + 10 W] [10 % THD]
	Power Requirements	200 - 220 V AC, 50 Hz/60 Hz	200 - 220 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz
	Power Consumption	1,400 W	1,200 W	695 W
MECHANICAL	Power off Condition	0.4 W	0.4 W	0.4 W
	Stand-by Condition	Save Off: 1.2 W, Save On: 0.7 W	Save Off: 1.2 W, Save On: 0.7 W	Save Off: 1.2 W, Save On: 0.7 W
	Dimensions (W x H x D)	2,412 x 1,419 x 129*1 mm	2,015 x 1,195 x 99 mm	1,554 x 925 x 99 mm
	Weight (approx.)	201.0 kg	117.0 kg	59.0 kg
OPERATION	Function Slot (Vacant)	3 (1)	3 (1)	3 (1)
	Temperature	0°C - 40°C		
	Humidity	20% - 80% (Non condensation)		
	Altitude	0 - 2,400 m	0 - 2,400 m	0 - 2,800 m
Radiation Regulations		CISPR 22 Class-B		CISPR 22 Class-B
Safety Standards		GOST12.2.006-87, IEC60065		GOST12.2.006-87, IEC60065

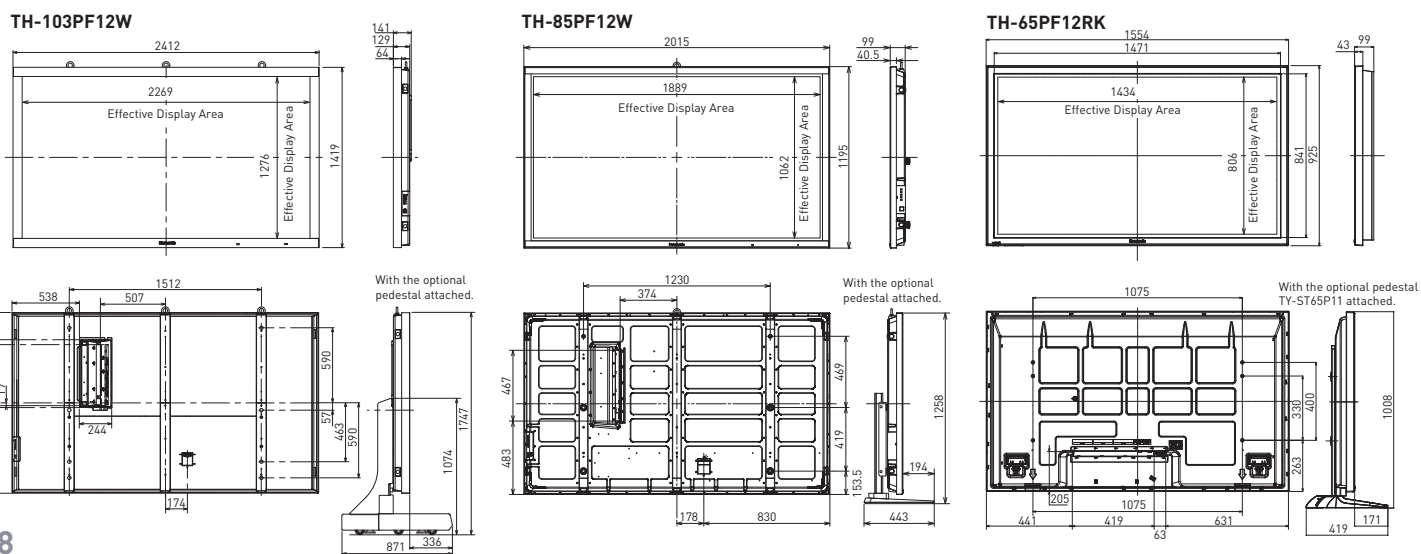
*2: Exclusive of protruding portion (141 mm when including the protruding portion of the slot)

Specifications

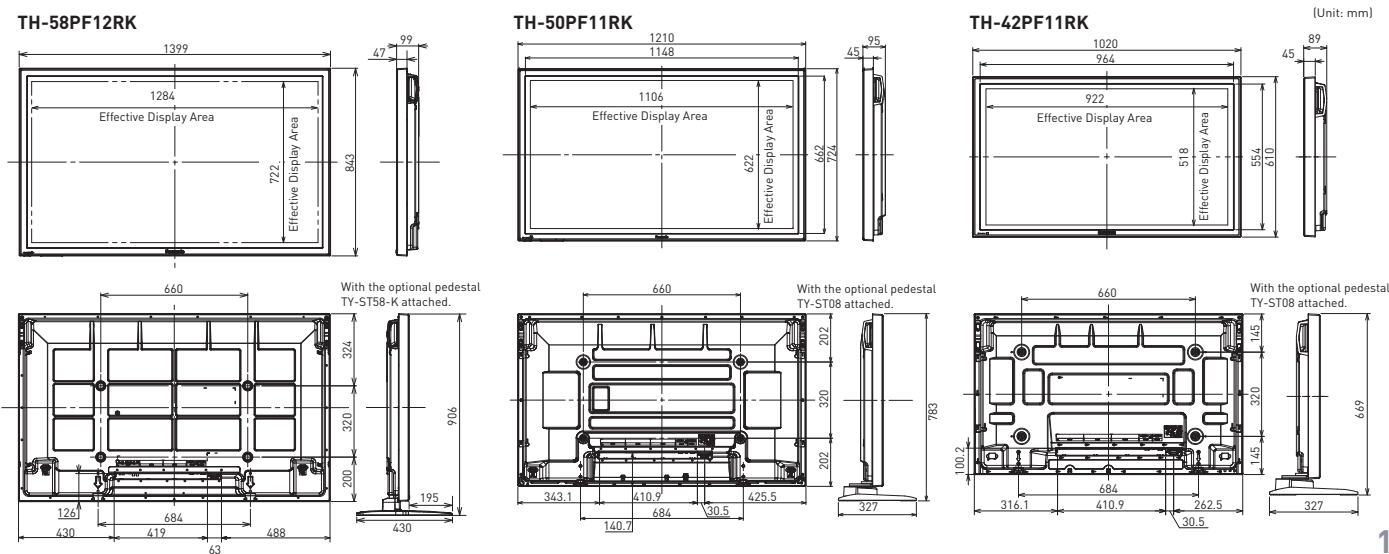
	TH-58PF12RK	TH-50PF11RK	TH-42PF11RK	
DISPLAY	Screen Size (Diagonal)	58-inch	50-inch	42-inch
	Aspect Ratio	16:9	16:9	16:9
	Effective Display Area (W x H)	1,284 x 722 mm	1,106 x 622 mm	922 x 518 mm
	Resolution (H x V)	1,920 x 1,080 pixels	1,920 x 1,080 pixels	1,920 x 1,080 pixels
	Pixel Pitch (H x V)	0.669 x 0.669 mm	0.576 x 0.576 mm	0.480 x 0.480 mm
	Contrast Ratio	40,000:1	30,000:1	30,000:1
	Gradation	6,144 steps (equivalent)	5,120 steps (equivalent)	5,120 steps (equivalent)
SIGNAL COMPATIBILITY	Moving Picture Resolution	1,080 lines	900 lines	900 lines
	Scanning Frequency	Horizontal : 15 - 110 kHz / Vertical : 48 - 120 Hz		
INPUT	PC Signal Compatibility	VGA, SVGA, XGA, WXGA, SXGA, UXGA (Over SXGA resolution: compressed)		
	Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 625 (576)/50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p, 60p, 50p; 1250 (1080)/50i		
CONTROL	COMPONENT IN	BNC x 3 (on Function Board)		
	AUDIO IN (for COMPONENT)	M3 x 1 set (on Function Board)	RCA (L/R) x 1 set (on Function Board)	
	HDMI IN	Type A connector x 2 (on Function Board)		
	PC IN	Mini D-sub 15-pin x 1		
SOUND	AUDIO IN (for PC)	M3 x 1		
	RS-232C	D-sub 9-pin x 1		
ELECTRICAL	LAN	RJ45: 10BASE-T/100BASE-TX, PLink™ compatible (on Function Board)		N/A
	Audio Output	16 W [8 W + 8 W] [10 % THD]	16 W [8 W + 8 W] [10 % THD]	16 W [8 W + 8 W] [10 % THD]
	Power Requirements	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz
	Power Consumption	660 W	555 W	485 W
MECHANICAL	Power off Condition	0.4 W	0.4 W	0.4 W
	Stand-by Condition	Save Off: 1.2 W, Save On: 0.7 W	Save Off: 1.2 W, Save On: 0.7 W	Save Off: 1.2 W, Save On: 0.7 W
	Dimensions (W x H x D)	1,399 x 843 x 99 mm	1,210 x 724 x 95 mm	1,020 x 610 x 89*2 mm
	Weight (approx.)	48.0 kg	36.0 kg	29.0 kg
OPERATION	Function Slot (Vacant)	3 (1)	3 (1)	3 (1)
	Temperature	0°C - 40°C		
	Humidity	20% - 80% (Non condensation)		
	Altitude	0 - 2,800 m		
Radiation Regulations		CISPR 22 Class-B		CISPR 22 Class-B
Safety Standards		GOST12.2.006-87, IEC60065		GOST12.2.006-87, IEC60065

*2: Exclusive of protruding portion (99 mm when including the protruding portion of the slot)

Dimensions



Dimensions





TH-50PH12RK/RS
TH-50PD12R
50-inch (127 cm) diagonal
High Definition Plasma Display



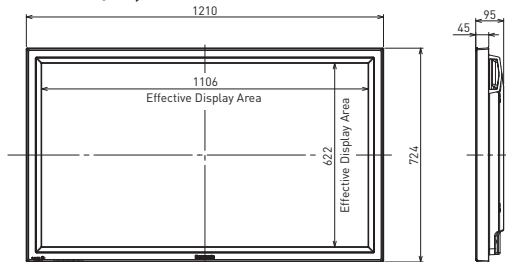
TH-42PH12RK/RS
TH-42PD12R
42-inch (106 cm) diagonal
High Definition Plasma Display

Specifications

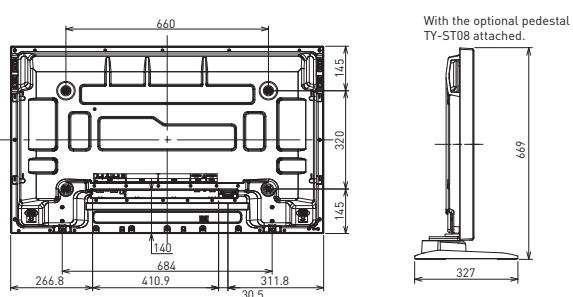
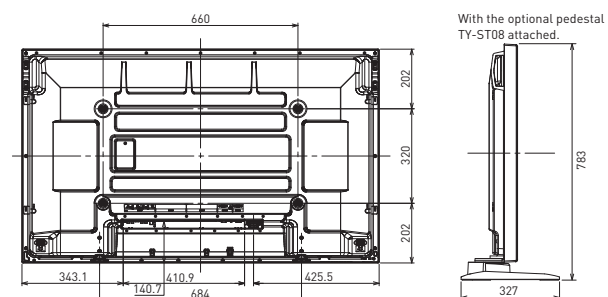
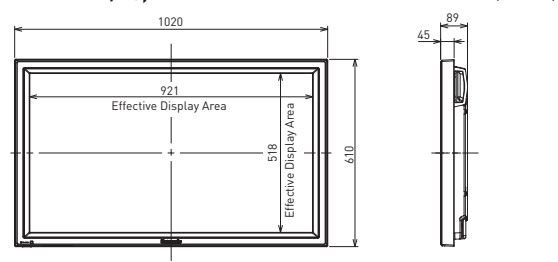
	TH-50PD12R	TH-42PD12R	TH-50PH12RK	TH-50PH12RS	TH-42PH12RK	TH-42PH12RS	
DISPLAY	Screen Size (Diagonal)	50-inch	42-inch	50-inch	50-inch	42-inch	
	Aspect Ratio	16:9	16:9	16:9	16:9	16:9	
	Effective Display Area (W x H)	1,106 x 622 mm	921 x 518 mm	1,106 x 622 mm	921 x 518 mm	921 x 518 mm	1,024 x 768 pixels
	Resolution (H x V)	1,366 x 768 pixels	1,024 x 768 pixels	1,366 x 768 pixels	1,024 x 768 pixels	1,024 x 768 pixels	1,024 x 768 pixels
	Pixel Pitch (H x V)	0.810 x 0.810 mm	0.900 x 0.675 mm	0.810 x 0.810 mm	0.900 x 0.675 mm	0.900 x 0.675 mm	0.900 x 0.675 mm
	Contrast Ratio	30,000:1	30,000:1	30,000:1	30,000:1	30,000:1	30,000:1
SIGNAL COMPATIBILITY	Gradation	5,120 steps (equivalent)	5,120 steps (equivalent)	5,120 steps (equivalent)	5,120 steps (equivalent)	5,120 steps (equivalent)	
	Moving Picture Resolution	720 lines	720 lines	720 lines	720 lines	720 lines	
	Scanning Frequency	Horizontal : 15 — 110 kHz / Vertical : 48 — 120 Hz		Horizontal : 15 — 110 kHz / Vertical : 48 — 120 Hz		Horizontal : 15 — 110 kHz / Vertical : 48 — 120 Hz	
	Colour System	NTSC, PAL, PAL60, SECAM, Modified NTSC		N/A		N/A	
INPUT	PC Signal Compatibility	VGA, SVGA, XGA, WXGA, SXGA, UXGA [Over WXGA resolution : compressed]	VGA, SVGA, XGA, WXGA, SXGA, UXGA [Over XGA resolution : compressed]	VGA, SVGA, XGA, WXGA, SXGA, UXGA [Over WXGA resolution : compressed]	VGA, SVGA, XGA, WXGA, SXGA, UXGA [Over XGA resolution : compressed]	VGA, SVGA, XGA, WXGA, SXGA, UXGA [Over XGA resolution : compressed]	
	Video Signal Compatibility	525 (480i/60i, 60p; 625 (575i/50i, 50p; 750 (720i/60p, 50p; 1125 (1080i/60i, 60p, 50i, 50p, 24p, 25p, 30p, 24sF; 1250 (1080i/50i	525 (480i/60i, 60p; 625 (575i/50i, 50p; 750 (720i/60p, 50p; 1125 (1080i/60i, 60p, 50i, 50p, 24p, 25p, 30p, 24sF; 1250 (1080i/50i	525 (480i/60i, 60p; 625 (575i/50i, 50p; 750 (720i/60p, 50p; 1125 (1080i/60i, 60p, 50i, 50p, 24p, 25p, 30p, 24sF; 1250 (1080i/50i	525 (480i/60i, 60p; 625 (575i/50i, 50p; 750 (720i/60p, 50p; 1125 (1080i/60i, 60p, 50i, 50p, 24p, 25p, 30p, 24sF; 1250 (1080i/50i	525 (480i/60i, 60p; 625 (575i/50i, 50p; 750 (720i/60p, 50p; 1125 (1080i/60i, 60p, 50i, 50p, 24p, 25p, 30p, 24sF; 1250 (1080i/50i	
CONTROL	VIDEO IN	BNC x 1, S-Video x 1	N/A	N/A	N/A	N/A	
	COMPONENT IN	BNC x 3	N/A	N/A	N/A	N/A	
	AUDIO IN	RCA (L/R) x 3 sets	N/A	N/A	N/A	N/A	
ELECTRICAL	HDMI IN	N/A	Type A connector x 2 (on Function Board)	Type A connector x 2 (on Function Board)	Type A connector x 2 (on Function Board)	Type A connector x 2 (on Function Board)	
	PC IN	Mini D-sub 15pin x 1	Mini D-sub 15pin x 1	Mini D-sub 15pin x 1	Mini D-sub 15pin x 1	Mini D-sub 15pin x 1	
MECHANICAL	AUDIO IN (for PC)	M3 x 1	M3 x 1	M3 x 1	M3 x 1	M3 x 1	
	RS-232C	D-sub 9-pin x 1	D-sub 9-pin x 1	D-sub 9-pin x 1	D-sub 9-pin x 1	D-sub 9-pin x 1	
OPERATION	Audio Output	16 W [8 W + 8 W] [10 % THD]	16 W [8 W + 8 W] [10 % THD]	16 W [8 W + 8 W] [10 % THD]	16 W [8 W + 8 W] [10 % THD]	16 W [8 W + 8 W] [10 % THD]	
	Power Requirements	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz	
ELECTRICAL	Power Consumption	345 W	240 W	435 W	355 W	355 W	
	Power off Condition	0.4 W	0.4 W	0.4 W	0.4 W	0.4 W	
MECHANICAL	Stand-by Condition	Save Off: 1.0 W, Save On: 0.6 W	Save Off: 1.0 W, Save On: 0.6 W	Save Off: 1.5 W, Save On: 0.7 W	Save Off: 1.4 W, Save On: 0.6 W	Save Off: 1.4 W, Save On: 0.6 W	
	Dimensions (W x H x D)	1,210 x 724 x 95 mm	1,020 x 610 x 89 mm	1,210 x 724 x 95 mm	1,020 x 610 x 89 mm	1,020 x 610 x 89 mm	
MECHANICAL	Weight (approx.)	32.0 kg	23.0 kg	34.0 kg	25.0 kg	25.0 kg	
	Function Slot (Vacant)	N/A	N/A	3 [2]	3 [2]	3 [2]	
OPERATION	Cabinet Colour	Black	Black	Black	Silver	Black	
	Temperature	0°C — 40°C		0°C — 40°C		0°C — 40°C	
OPERATION	Humidity	20% — 80% (Non condensation)		20% — 80% (Non condensation)		20% — 80% (Non condensation)	
	Altitude	0 — 2,800 m		0 — 2,800 m		0 — 2,800 m	
OPERATION	Radiation Regulations	CISPR 22 Class-B		CISPR 22 Class-B		CISPR 22 Class-B	
	Safety Standards	GOST12.2.006-87, IEC60065		GOST12.2.006-87, IEC60065		GOST12.2.006-87, IEC60065	

Dimensions

TH-50PH12RK/RS, TH-50PD12R



TH-42PH12RK/RS, TH-42PD12R



Pedestal

TY-ST103PF9

Weight: 122.0 kg



TY-ST85P12

Weight: 58.0 kg



TY-ST65P11-K

Weight: 17.0 kg



TY-ST58-K

Weight: 3.4 kg



TY-ST08-K/S

Weight: 10.0 kg



Wall-hanging bracket * Also usable for vertical mounting.

TY-WK103PV9

Weight: 25.0 kg



TY-WK85PV12

Weight: 18.0 kg



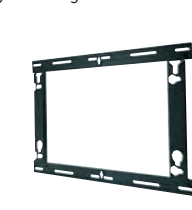
TY-WK65PV7

Weight: 8.3 kg



TY-WK42PV7

Weight: 3.0 kg



Wall-hanging bracket (angled)

TY-WK65PR8

Weight: 12.0 kg



TY-WK42PR7

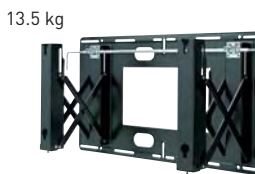
Weight: 5.2 kg



Wall-hanging bracket (drawer type)

TY-WK42DR1

Weight: 13.5 kg



Ceiling-hanging bracket

TY-CE103PS10 Adjustable angle: 0° — 20°

Weight:
Vertical type: 15.0 kg
Inclined type: 37.0 kg



The photo shows the bracket at 20° incline.

TY-CE85PS12 Adjustable angle: 0° — 20°

Weight: 35.0 kg



The photo shows the bracket at 20° incline.

TY-CE42PS7

Weight: 16.5 kg



Floor stand

TY-ST85PF12

Weight: 82.0 kg



Mobile stand

TY-ST58PF10

Weight: 32.0 kg



Detachable stereo speakers

TY-SP65P11WK (for 65-inch)

Weight: 2.2 kg/each

TY-SP58P10WK (for 58-inch)

Weight: 2.5 kg/each

TY-SP50P8W-K (for 50-inch black)

Weight: 2.0 kg/each

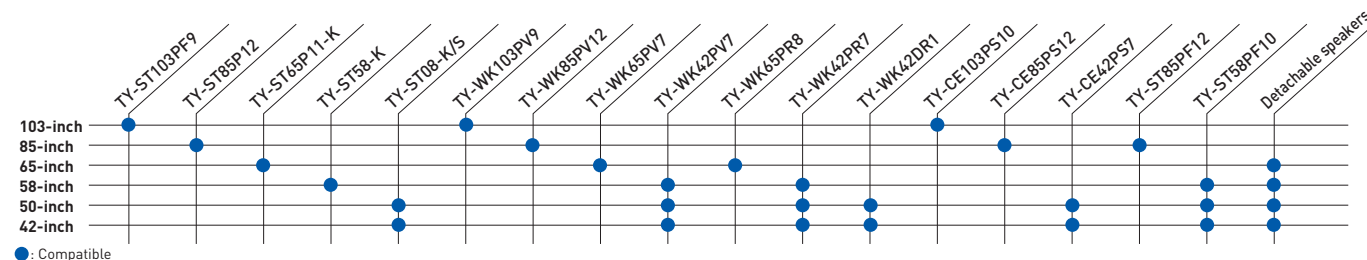
TY-SP50P8W-S (for 50-inch silver)

Weight: 2.0 kg/each

TY-SP42P8W-K (for 42-inch black)

Weight: 2.0 kg/each

TY-SP42P8W-S (for 42-inch silver)



Preset Input Signals

Signal name	Horizontal Frequency	Vertical Frequency	Optional Terminal Board															Dot Clock [MHz]																	
			Composite/Component Video	Component Video	PC Input	RGB Active Through	Component Video	BNC Dual Video	DVI-D	50i	TY-FB75D	HD-SDI	TY-FB9HD	HD-SDI with Audio	TY-FB10HD	Dual Link HD-SDI	TY-FB11DHD	HDMI	TY-FB8HM	Dual HDMI	TY-FB10HMD	SCART	TY-FBFB8SC	PC IN (D-Sub 15-pin)	FXed Terminal	Component RGB In/PC In	DVI-D In								
NTSC	15.73	59.94	Y																																

*1: When selected the RGB format and 525p signal, it is recognized as VGA 60 Hz signal. *2: Based on SMPTE 274M standard. *3: Based on SMPTE RP211 standard.
 *4: Based on SMPTE 295M standard. *5: When inputted VGA 60 Hz format signal, it is recognized as 525p signal. *6: Recognized as 1,125 (1,080)/60p signal.
Note: When a signal having a resolution that exceeds the panel resolution is input, a simplified display will be produced.

Serial RS232C: D-Sub 9-Pin (Male)

Pin No.	Signal name	Descriptions
1	CD	NC
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Not used
5	GND	Ground
6	DSR	Not used
7	RTS	Shorted in the set
8	CTS	Shorted in the set
9	RI	NC

Communication Parameters

Signal Level	RS232C Compliant
Synchronization Method	Asynchronous
Baud Rate	9600 bps
Parity	None
Character Length	8 bits
Stop Bit	1 bit
Flow Control	-

* The Serial terminal is used when the Plasma Display is controlled by computer.

PC Input: D-Sub 15-Pin (Female)

Pin No.	Signal name	Pin No.	Signal name
1	R (Pw/Cs)	9	+5V DC
2	G (Y)	10	GND (Ground)
3	B (Pr/Cs)	11	NC (Not connected)
4	NC (Not connected)	12	SDA
5	GND (Ground)	13	HD/SYNC
6	GND (Ground)	14	VD
7	GND (Ground)	15	SCL
8	GND (Ground)		

Included Remote Control Unit

TH-65PF12,
TH-58PF12,
TH-50PH12,
TH-42PH12,
TH-50PD12,
TH-42PD12



N2QAYB000432

A compact remote control unit with Auto Set Up function is included.

TH-103PF12,
TH-85PF12,
TH-50PF11,
TH-42PF11



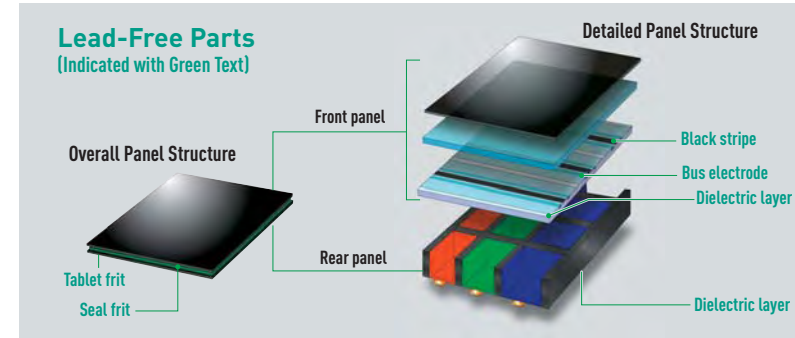
EUR7636090R

A 10-key remote control unit supports Display ID Control.

Panasonic Plasma Displays — The World's Most Preferred and Trusted Brand

The World's First*8 Lead-Free Plasma Display Panels — Gentle to the Environment

Panasonic was the first in the world to develop and mass produce lead-free plasma display panels. Panasonic proclaimed a "lead-free" design in all plasma display models from 2006 onward, thus reducing the possibility of pollution caused by environmentally hazardous substances in disposed products. It also eliminated the use of polyvinyl chloride in internal wiring, all as a part of its active promotion of environmentally friendly manufacturing.



*8: Announced on November 2, 2006. Achieved lead-free designs in all 140 models for worldwide markets.

The Amagasaki Plant, which manufactures all Panasonic plasma display panels, uses a variety of environment-friendly systems and technologies, such as a photocatalytic coating on building exteriors, the "Kaze-Kamome" (Wind-Seagull) hybrid wind and solar power tower system, and sprinklers that use rainwater.



Artist's rendering of completed Amagasaki Plant No. 5



Exterior wall with photocatalytic coating



"Kaze-Kamome"

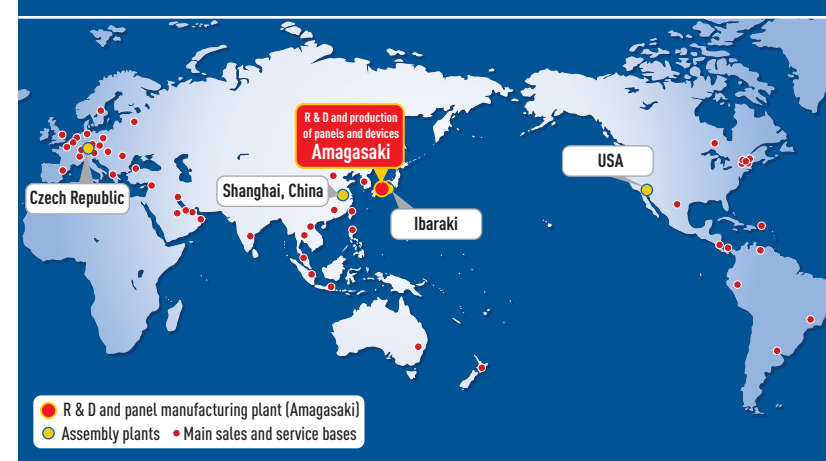


Sprinkler using rainwater

In-House Development and Production of Everything from Devices to Finished Products

Panasonic conducts all activities related to its plasma displays in-house (at its Amagasaki Plant), such as its research and development of the panels and devices that form the key components of the plasma display, the development of circuits and drive systems, and the assembly of finished products. In order to quickly reflect feedback from customers worldwide into production, Panasonic operates assembly plants at four. In addition Panasonic has established sales and service bases at 65 locations around the world to meet the requirements and service requests demanded by users, and particularly those of professional users. Panasonic's global network is designed to achieve optimum production efficiency in each stage of manufacturing, and responds to growing worldwide demand for plasma display panels.

Panasonic's Global Network



New lineup of 12 models in six sizes ranging from 42 inches to 103 inches

Panasonic Professional Displays

- 50-inch TH-50PH12RK
- 50-inch TH-50PH12RS
- 50-inch TH-50PD12R
- 42-inch TH-42PH12RK
- 42-inch TH-42PH12RS
- 42-inch TH-42PD12R



- Full HD Plasma Displays
- NEW (103-inch) TH-103PF12W
- NEW (85-inch) TH-85PF12W
- NEW (65-inch) TH-65PF12RK
- NEW (58-inch) TH-58PF12RK
- (50-inch) TH-50PF11RK
- (42-inch) TH-42PF11RK