

Panasonic

ideas for life

9-Series Professional Plasma Displays



Panasonic

Panasonic

Presenting a New Standard in Plasma Performance

The Beauty of Full HD Images.

The Power of the World's Largest 103-inch Display.

Smooth Motion and Superb Image Rendering.

Simulated pictures on screen.
Specifications are subject to change without notice.

Welcome to the Next Generation

Introducing Panasonic's Full HD Plasma Displays

Panasonic's new series of plasma displays for professionals is highlighted by our long-awaited 103-inch Full HD plasma display model, the largest* of its type in the industry.

Our new series offers the best in plasma displays in four ways: (1) Superb motion pictures, with the powerful viewing impact of smooth, high-resolution moving images on a large screen. (2) Outstanding expressivity across the entire colour range specified in HDTV standards. (3) Superior tonal expression that produces crisper, richer blacks for true-to-life images. And (4) a full lineup of models to choose from, including a 103-inch Full HD model that debuts as biggest in the industry.

Panasonic plasma displays also give you a host of versatile functions, easy expandability, and the advanced specifications needed in the most demanding applications.

With our new plasma displays, Panasonic has high-performance solutions for all your professional needs.

*As of September 15, 2006, according to a Panasonic survey.

The image displays a range of Panasonic plasma monitors against a savanna background with cheetahs. The monitors are grouped by resolution:

- Full HD:**
 - 103-inch: TH-103PF9EK
 - 65-inch: TH-65PF9EK, TH-65PF9BK
 - 50-inch: TH-50PF9EK
- HD:**
 - 50-inch: TH-50PH9EK, TH-50PH9BK
 - 42-inch: TH-42PH9EK, TH-42PH9BK
- SD:**
 - 42-inch: TH-42PS9EK, TH-42PS9BK

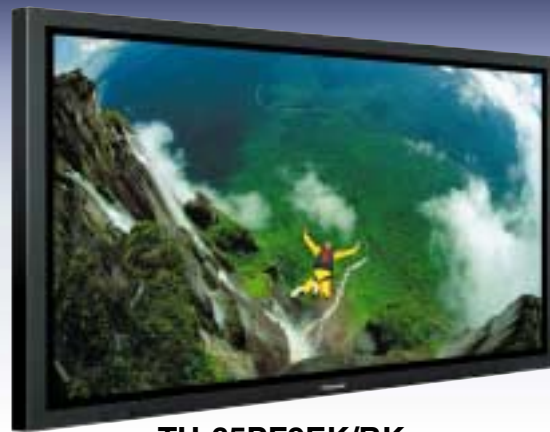
Additional model numbers shown above the HD and SD displays include TH-50PH9ES, TH-50PH9BS, TH-42PH9ES, TH-42PH9BS, TH-42PS9ES, and TH-42PS9BS.



Ultimate Full HD Plasma Displays: Unleashing All the Beauty of Full HD

Panasonic introduces three professional Full HD plasma displays including the world's largest* plasma panel at 103 inches. Simply, the larger your screen size, the more detail you need your display device to deliver. Our new plasma panels incorporate a host of leading-edge technologies to reproduce clear, brilliant images with exceptional detail, true Full HD resolution and outstanding depth perception. The new models also provide smooth, sharp motion images, true-to-life colour and the equivalent of 4,096 gradation steps. With their superior imaging performance, Panasonic's new plasma display panels unleash all the beauty of Full HD.

* As of September 15, 2006



TH-65PF9EK/BK
65-inch (165 cm) diagonal Full High Definition Plasma Display



TH-103PF9EK
103-inch (260 cm) diagonal Full High Definition Plasma Display



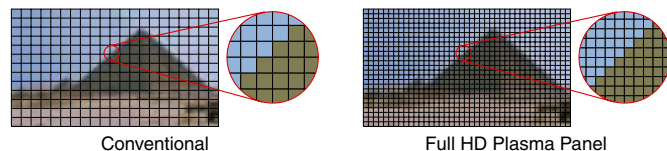
TH-50PF9EK
50-inch (127 cm) diagonal Full High Definition Plasma Display

Advanced Technologies Deliver Superb Full HD Image Quality

True Full HD Images

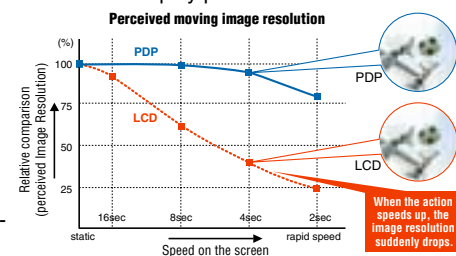
A Huge Screen — and Twice as Much Image Information

Our new Full HD plasma models feature about 2 million pixels (1920 horizontal x 1080 vertical) — about twice as many as our conventional HD models. Images are uniformly clear, sharp and super-detailed across the entire screen surface. With our industry-leading 103-inch panel — about four times the size of a 50-inch panel — the viewing impact is nothing less than spectacular.



Superior Moving Image Resolution

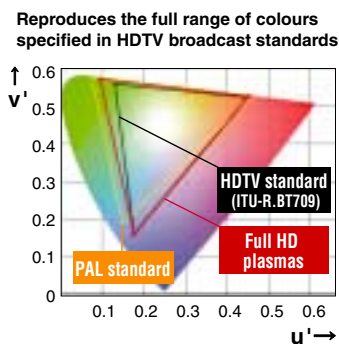
To deliver the full beauty of HD images, the display needs to render moving images in clear detail. Plasma display panels use a self-illuminating system to boost resolution in images with fast motion. Panasonic brings out all the beauty inherent in Full HD, reproducing crisp, sharp images that move smoothly even when viewed on the 103-inch screen.



Superior Colour Reproduction

Reproducing the Entire HDTV Colour Range

HD sources are based on the HDTV standard rather than the conventional PAL standard. In our new Full HD models, the panel phosphor characteristics closely match the HDTV-standard colour gamut. This lets our plasmas reproduce the entire colour range specified in the HDTV standard (ITU-R. BT709), so images are natural-looking and faithful to the original HD source.



Digital Colour Reality for Accurate Reproduction of the Ambience in Movies

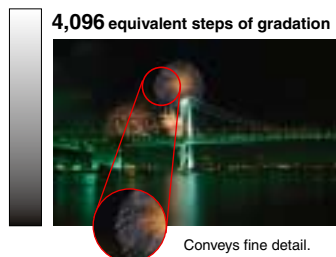
In Super Cinema mode, Digital Colour Reality boosts precision in the digital control of colour and brightness video data by a factor of four (white chromaticity fluctuation of less than 0.003). By continuously adjusting the white balance and performing gamma correction as scenes change, this technology accurately expresses the warmth of light, and reproduces delicate shading. With movie scenes especially, the new plasma displays create the kind of faithful ambience that were difficult for previous systems to deliver.



4,096 Equivalent Steps of Gradation

4,096 Gradation Steps — Tops in the Industry

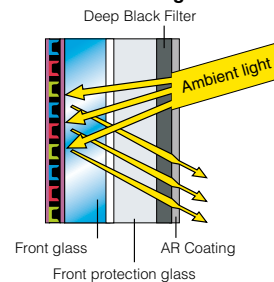
Thanks to Panasonic's advanced 16-bit digital image processing, our new plasma models reproduce crisp, clear motion picture images with the equivalent of 4,096 gradation steps. This industry-leading gradation level not only creates richer, deeper blacks, it also enhances image depth, conveys fine detail, and recreates ambience with the kind of accuracy only a Full HD plasma display can offer.



Deep, Crisp Blacks and the Industry's Highest Contrast

Our New Real Black Creation technology achieves up to 5000:1 contrast — tops in the industry. This combines with our New Deep Black Filter and New AR Coating technologies, which help maintain crisp blacks even in bright image surroundings, to give images superb depth and textural quality.

New Deep Black Filter with AR Coating



Explore a Wider World of Video Applications

For Applications Demanding Extremely Clear, High-Resolution Still and Motion Images

PRESENTATIONS

- All models incorporate a new TY-FB9FDD DVI-D terminal board that supports UXGA and WUXGA signals (simplified display mode). When connected to a PC, Panasonic plasmas provide a big-screen display of data such as CAD images with outstanding clarity, detail and colour accuracy.
- Able to display highly detailed documents and medical images with exceptional clarity and sharpness, Panasonic Full HD models are suitable for use in conferences and presentations with large audiences.



MONITORING

- Our 103-inch model is perfect for control rooms where crystal-clear display of detailed information is essential. The super-size screen makes it easy for everyone to see the information.
- In image quality, Panasonic's extra-large-screen, high-resolution plasma models easily outperform projection displays. They can also be installed in places where bulky conventional direct-viewing displays could not.



For Applications Demanding the Highest Colour Accuracy

TV/VIDEO PRODUCTION

- Digital Colour Reality reproduces colours the way movie makers and colourists meant them to be seen.
- The new PDPs reproduce colours across the entire HDTV-standard range, so colours from HD sources are faithful and natural-looking.
- Now supporting 10-bit input signals, the new TY-FB9HD HD-SDI terminal board achieves precise colour reproduction and rich gradation.
- The Full HD plasmas provide full-digital processing from signal input to display, making them suitable for use as HD studio monitors.



MUSEUMS/EXHIBITS

- Digital Colour Reality technology provides detailed, true-to-life reproduction of colours in all kinds of images, from fine paintings to HD video programmes. Panasonic's Full HD models render artistic images with stunning beauty.
- Biggest in the industry, our 103-inch model is easily visible even in large spaces, so you can deliver more information to a greater number of people.



For Applications Demanding Visible Image Textures

DIGITAL SIGNAGE

- With an industry-leading 4,096 gradation steps, Panasonic's Full HD plasma models realistically convey the texture and surface quality of objects.
- Optional plug-in PC board and CAT5e system with software applications let you schedule and deliver rich, multimedia content to your targeted audience at any time.
- With the 103-inch model in portrait orientation, images of people can be shown in actual life-size to draw attention.



MINI-THEATRES

- Panasonic's Full HD models provide outstanding motion image resolution, so movies are clear and sharp. The 103-inch screen is suitable for mini-theatre applications.
- Digital Colour Reality technology delivers accurate gradation from light to dark.
- The picture is clear and beautiful even when viewed from up close. The viewing angle is 45 degrees at a distance of twice the screen height, providing the kind of dynamism and presence enjoyed in movie theatres.

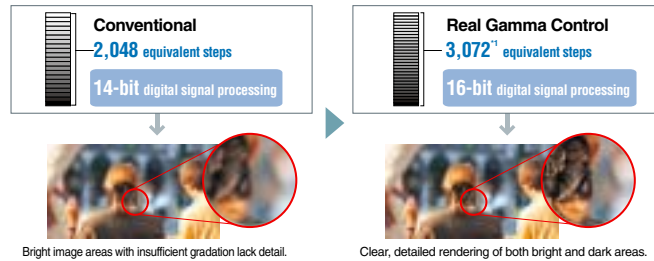


3,072*1 Equivalent Steps of Gradation for Finely Nuanced Images

Real Gamma Control

Instead of using first-stage, basic processing like other brands, Panasonic plasma displays use maximum 16-bit processing, the highest level in the industry, to process video signals all the way up to the gamma correction stage. While other brands use the number of signal bits for calculation, Real Gamma Control reproduces the actual image that appears on the screen at the world's highest level of 3,072*1 equivalent steps of gradation.

*1: For PH/PS series. 4,096 equivalent steps for PF series.



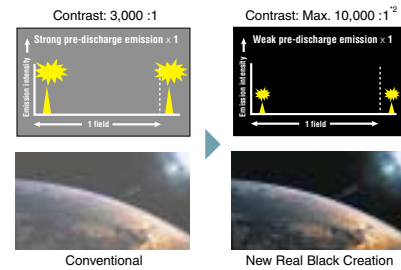
Max. 10,000:1*2 Contrast Provides Superb Depth

New Real Black Creation

Panasonic's original New Real Black Creation technology helps achieve the industry's highest level of contrast at a maximum of 10,000:1*2 in dark image areas to reproduce exceptionally deep, rich blacks. This system suppresses unwanted graying by reducing the electrical pre-discharge to about 30% of the level of conventional plasma displays.

*2: For PH/PS series.

Max. 5,000:1 for PF series.

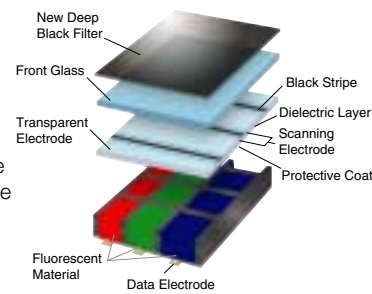


Excellent Brightness Even in Bright Rooms

Advanced Plasma Display Panel

Use of improved panel materials and enhanced rib and electrode shapes have boosted the efficiency of our plasma display panels. We've also attained a stable, high-speed discharge to cope with the light intensity in the finely-controlled discharge. These features combine to increase screen brightness by 20%*3 compared with previous models.

*3: For PH series. 5% for PS series.

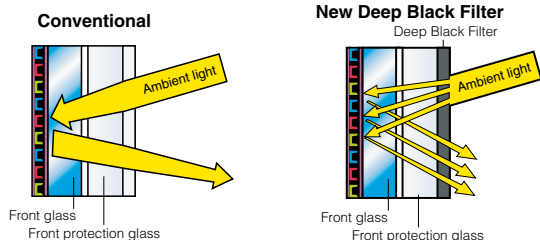


Industry's Best*4 Bright-Area Contrast

New Deep Black Filter

The New Deep Black Filter suppresses light transmittance and slashes the amount of external light reflected. This technology helps these displays achieve the industry's highest contrast ratio of 400:1 when viewed in bright surroundings. Reflection is minimal, so images are clean and distraction-free.

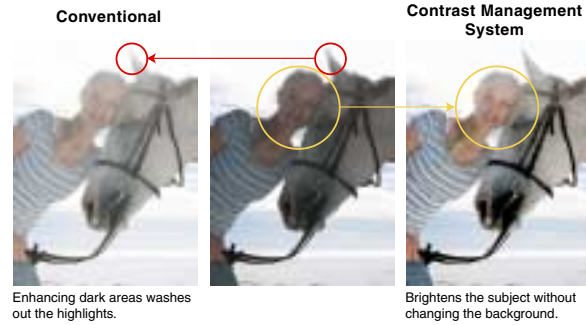
*4: As of April 1, 2006



Superior Expressive Detail

Contrast Management System

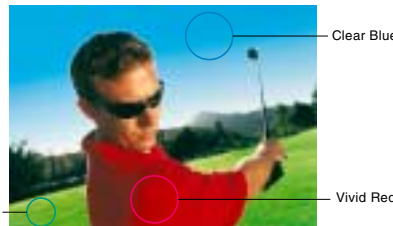
Original Panasonic technology optimises the contrast by matching it to the images in each scene. Instead of losing gradation by making part of the image too bright or too dark, this new technology applies just the right amount of contrast correction for each part of the scene. The result brings natural beauty to all parts of the scene.



Rich, Vibrant Colours

Advanced 3D Colour Management

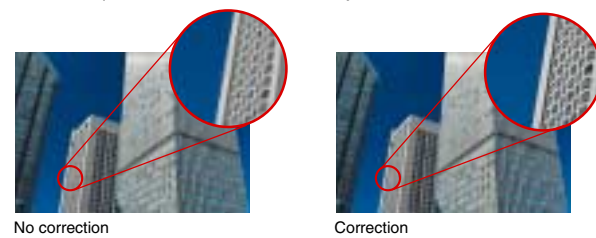
The Colour Management System achieves precise control based on 3D management in the colour difference plane and brightness directions. This finer level of control produces more expressive images.



Smooth Diagonal Lines and Sharp, Clear Images

Sub-Pixel Controller

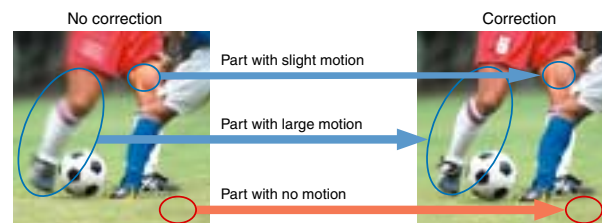
The Sub-Pixel Controller eliminates jagged or blurred diagonal lines and produces smoother edges. Unlike conventional systems in which the three RGB colours are processed together, this advanced system processes each colour separately for crisper, more natural-looking images. Theoretically, this results in a 30% improvement in horizontal resolution compared with conventional systems.



Even Scenes with Lots of Motion are Clear

Motion Pattern Noise Reduction

The Motion Pattern Noise Reduction circuit detects motion patterns that tend to generate noise, and makes adjustments to maximise image quality. It helps produce clean, sharp images with outstanding gradation, even in scenes with considerable motion. The result is a noticeable improvement in moving picture quality.



Panasonic plasma finely divides each scene into numerous parts, then detects the motion in each part and applies noise reduction where required.

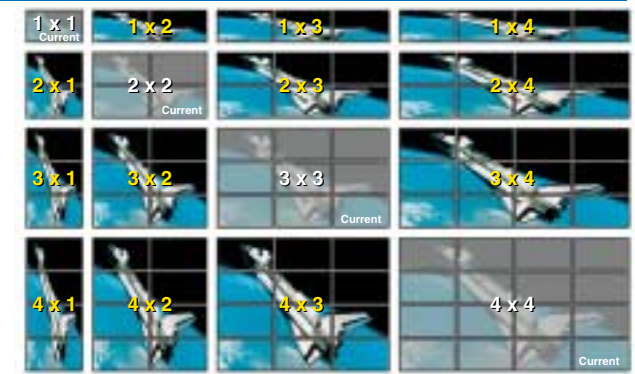
Powerful Multi-Screen Display Systems

Advanced Image-Enlarging Function

This built-in image-enlarging function makes it easier to set up multi-screen systems with as many as 16 displays (4x4 configuration). A new function lets you enlarge the image up to 4x vertically and horizontally independently, making it easy to set up a multi-screen system with up to four displays arranged either vertically or horizontally. For example, expand the image horizontally to 4x and leave it unchanged vertically, and you can create a system with four units side-by-side. This is ideal in bank lobbies, airports and other places where you want a large display system that can be read from a distance. Thanks to the ID control function, you can use the standard remote control unit to control multiple panels individually. There is also a mode that displays a full-screen image, including the edges (the width of the frame) of the display panel. This is especially suitable for displaying text information, since no words are hidden by the frame.



Note: Image-enlarging function does not work in Dual Picture mode. Images of SXGA resolution or higher from a PC or RGB source may not enlarge correctly. Some degradation occurs when images are enlarged. The image-enlarging function of the TH-42PS9 series is not the advanced image-enlarging function. The ambient temperature varies depending on the installation location. Provide sufficient air conditioning for surrounding conditions.



Ultra-Lightweight Cabinet

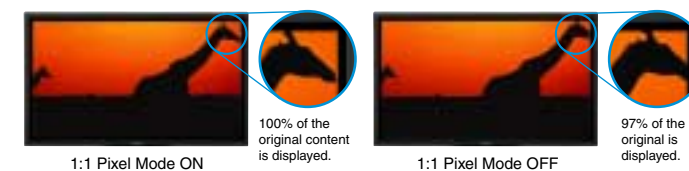
Panasonic's advanced PDP production technology made it possible to reduce the plasma panel glass thickness from 2.8 mm to 1.8 mm. This reduces overall weight by up to 15%*5 compared with previous models, making installation easier than ever. Using less glass benefits the environment, too.

*5: 42-inch HD model.

1:1 Pixel Mode (PF series only)

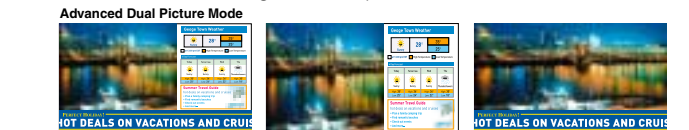
The 1:1 Pixel mode maps the 1920 x 1080 video content to Full HD panel pixels to display 100% of the original content. By skipping the scaling process, this mode is able to produce high-definition images in their original, 1:1 pixel form. When the 1:1 Pixel mode is switched off, the picture source is scaled for over-scanning and 97% of the original is displayed.

Note: 1920 x 1080 PC signals are always displayed in 1:1 mode.



Advanced Dual Picture Mode

Panasonic plasma displays feature the Advanced Dual Picture Mode in addition to the conventional Dual Picture Mode. This mode lets you overlay a video image onto a full-screen PC image. For example, you can superimpose text information from a PC over a video clip, giving you a more effective way to present information. 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.



Note: Dual Picture Mode cannot handle the following combinations of two analog signals: Component - Component, Component - PC (RGB), PC (RGB) - Component, PC (RGB) - PC (RGB). The Advanced Dual Picture Mode may not work properly with some video signals.

Remote System Monitoring

In addition to the conventional display control command and power supply/input selection check command, Panasonic 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.

Long Service Life of 60,000 Hours

The inner panel improvements give Panasonic plasma panels a long service life of approximately 60,000 hours* even with their increased brightness.

* The time until panel brightness is reduced to half its initial level, when displaying moving images at standard mode. Excludes afterimages and malfunctions.

Vertical Mounting

Panasonic professional plasma displays can be positioned vertically to display portrait images, allowing them to serve as effective storefront signboards. There's no need to install an optional fan kit.

Note: When using the display vertically, set it so the power button is on top. The TH-50PF9EK cannot be positioned vertically.



Automatic Picture Positioning (PF series only)

This function automatically corrects the horizontal and vertical picture positions, clock phase, and dot clock when an analogue RGB signal is input. The adjustment results in optimal standard values for the horizontal and vertical picture sizes.

Enhanced Screen Saver Functions

A variety of screen saver functions help lower the risk of uneven phosphor aging to the same level as CRT displays. You can also use the timer to set the screen saver operating cycles, operating time, and start and stop times. This lets you make settings that match your application.

- **White Bar Scroll:** White bars move across the screen from left to right at regular intervals. Good for ordinary still-image displays.
- **Screen Reversal:** Displays images with the black and white reversed. Good for text displays.
- **Side Panel Adjustment:** Brightens the black bands on the sides of the screen when displaying images in the 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) by 30%.

Energy-Saving Functions

A broad range of environment-friendly functions help minimise energy consumption.

- **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. (Start-up may take a few moments once the display is in this mode.)

Sound Menu

The Sound Menu gives you a choice of three sound settings (Standard/Dynamic/Clear) to best match the kind of input source.

Note: The Sound Menu is not offered on the TH-103PF9EK.

Super Quiet Operation

Our "silence engineering" has eliminated the need for a fan on PS series and dramatically suppressed the fan noise on PF/PH series, to give you the kind of quiet operation that makes for a more pleasant viewing experience.

Plasma System Solutions

HD-SDI System for Broadcast Use

Using the HD-SDI Terminal Board

The Full HD plasma model adapts easily to systems that use HD-SDI, the digital interfaces used in broadcasting and video production. Simply plug the HD-SDI terminal board into the function slot, and you get crisp, clear Full HD images for the studio or control room.

• Suitable as an HD Master Monitor

With outstanding reproducibility across the entire HDTV-standard (ITU-R, BT709) colour range, Panasonic Full HD panels deliver faithful, natural-looking colours from HD sources. And because they provide full-digital signal processing from input to display, these models are suitable for use as HD master monitors.

• Adapts Easily to HD-SDI Systems

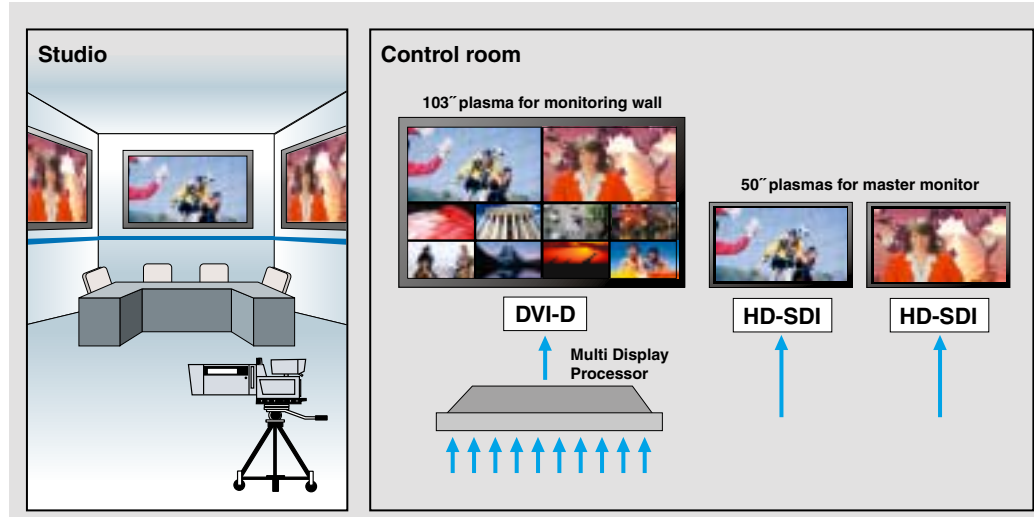
The TY-FB9HD HD-SDI terminal board supports 10-bit input signals, for greater colour reproduction precision and richer gradation.

• Monitor Multiple Sources on a Single 103-inch Screen

Connect the 103-inch model to a multi-display processor, and the screen can be divided into sub-screens for monitoring multiple sources. This gives you an efficient way to view different images at once.

• Ideal as a Studio Monitor

The 103-inch model makes an ideal display monitor in a large studio. The large screen and wide viewing angle provide big, clear, easy-to-see images for performers and production crew.



Display Systems for Large Lecture Halls

Using Twisted-Pair-Cable Receiver and Twisted-Pair-Cable Transmitter/Active Switcher

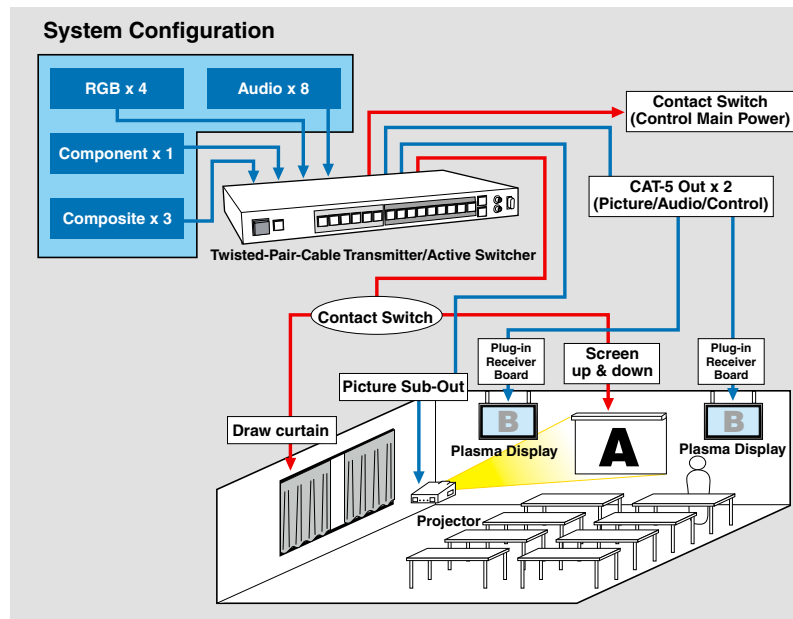
Via CAT5e cable, send the display control signal and video/audio signals from a Twisted-Pair-Cable Transmitter/Active Switcher with 8 input and 2 output terminals, and you can display high-resolution video content at a distant location. This kind of system can be used in large lecture halls, public spaces and medium-size stores.

• Long-Distance Transmission of High-Quality Video Signals

High-resolution XGA images, sound and RS232C control signal are transmitted approximately 150 m over a single cable. Plasma control signals can also be sent over the same cable to allow remote operation of power ON/OFF and other functions.

• Higher Signal Quality, Lower Costs, and Easier Installation

Thin, lightweight CAT5e twisted-pair cables do a better job of preventing signal degradation than coaxial cables. They also reduce costs and shorten the time needed for installation.



Simple Multi-Screen System

Using the RGB Active Through Terminal Board

You can easily configure a multi-screen system by using the RGB Active Through Terminal Board with the display's advanced image-enlarging function. This lets you disseminate information in a timely manner by updating the content over a network. You can also connect to a Blu Ray player for Full HD playback. This system is ideal for places where many people gather, such as business complexes and event venues.

• Image Displays with Eye-Catching Impact

The advanced image-enlarging function, with its variable horizontal and vertical display capability, creates displays that are effective on stages, near entranceways, and virtually anywhere.

• Simple System Configuration

Multi-screen systems generally require matrix switchers, image enlargers and other equipment, together with complicated wiring. With the RGB Active Through Terminal, you simply connect each display with a cable to build a large-screen multi-display system. Combined with the light weight of the displays, this makes it super easy to configure a highly effective system.

• Remote Control Over a Network

Because the content can be updated by using an existing network, the information being displayed can be quickly and easily updated*. Monitoring commands also let you check the display status from a remote location.

*1: You will need to procure control software.

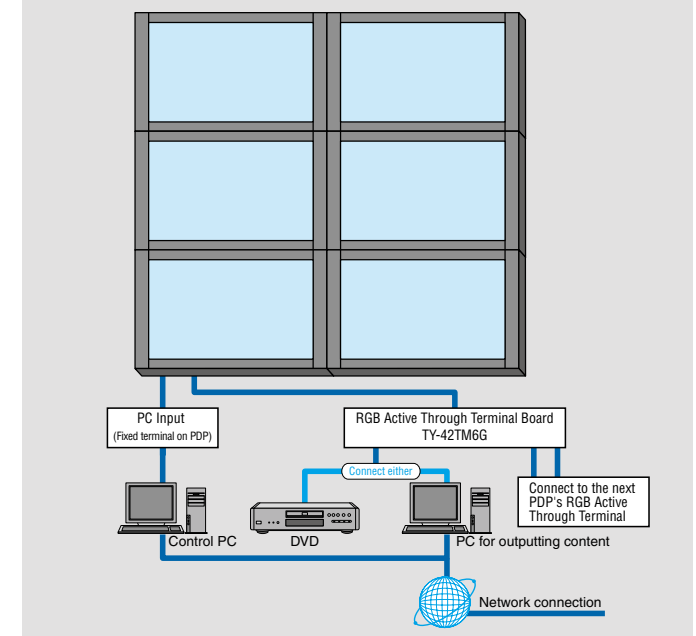
Note: The advanced image-enlarging function for N x M multi-screen system is not offered on the TH-42PS9 series.



Total Display Control with a Single Remote

The remote control that comes with the display is equipped with a "Display ID Control" function that allows you to control up to nine displays with the one remote.

System configuration (N x M image-enlarging)



Effective Interactive System

Using the Ir Through Terminal Board, BNC Dual Video Terminal Board, and Touch Panel

Function slots make it possible to combine various types of video equipment into an interactive system capable of reproducing a wide range of visual materials. Using the Ir Through Terminal Board, the video equipment can be operated by remote control while it is stored in racks to keep the room neat and tidy. The touch panel adds to the persuasive power of presentations and explanations. This system is ideal for seminar rooms, meeting rooms, or small lecture halls.

• Supports a Wide Variety of Video Sources

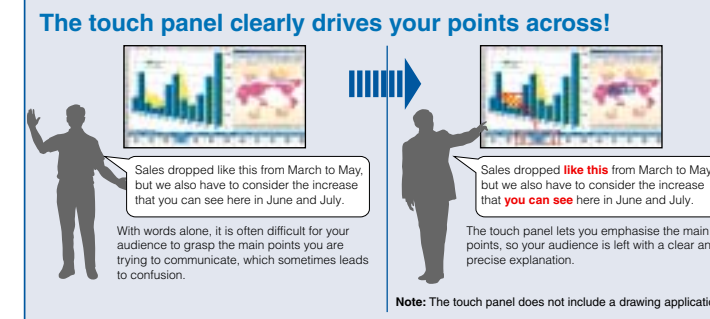
The BNC Dual Video Terminal Board and Component Video Terminal Board enable connection to various video devices. You can display images from VCRs, S-VHS VCRs, DVD players, and more.

• Keeps the Room Neat and Attractive

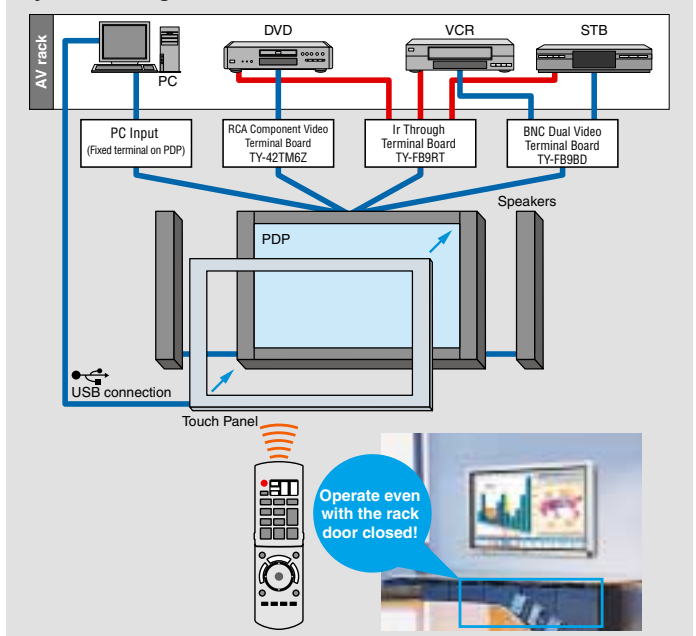
The video devices can be connected to the Ir Through Terminal Board and placed out of the way in racks. Each device can then be operated via the remote control sensor on the display. You can even close the rack doors to keep the room interior neat and uncluttered for more comfortable discussions.

• Clear Visual Communications

With the touch panel, you can write comments directly onto the screen. Make your meetings more precise by clearly notating the materials displayed on-screen.



System configuration



Operate even with the rack door closed!

Note: The touch panel does not include a drawing application.

Un Endless Array of Applications

DIGITAL SIGNAGE



Joe's Best Burger, Queens, New York, USA



Rams Head® Live!, Baltimore, USA

MEDICAL CARE



Shopping Mall, Budapest, Hungary



Ehime University Hospital, Toon, Japan

TV PRODUCTION



Asahi Broadcasting Corporation, Osaka, Japan



103" plasmas in NBC's "Football Night in America" studio, New York, USA

AMUSEMENT



HD Aquarium, Coconut Grove, USA



Admiral Sport-Betting Shop, Austria

EDUCATION



School, Addis Ababa, Ethiopia



Waseda University, Shinjuku, Japan

CONTROL ROOM



Vatican Museum

Full HD Models



TH-103PF9EK
103-inch (260 cm) diagonal
Full High Definition Plasma Display

TH-65PF9EK/BK
65-inch (165 cm) diagonal
Full High Definition Plasma Display

TH-50PF9EK
50-inch (127 cm) diagonal
Full High Definition Plasma Display

HD Models



TH-50PH9E/B
50-inch (127 cm) diagonal
High Definition Plasma Display

TH-42PH9E/B
42-inch (106 cm) diagonal
High Definition Plasma Display

TH-42PS9E/B
42-inch (106 cm) diagonal
Progressive Wide Plasma Display

SD Models



TH-42PS9E/B
42-inch (106 cm) diagonal
Progressive Wide Plasma Display

Specifications

Commodity Name	103" HD Plasma Display	65" HD Plasma Display	50" HD Plasma Display
Continental Model	TH-103PF9EK	TH-65PF9EK	TH-50PF9EK
UK Model	TH-103PF9EK	TH-65PF9BK	TH-50PF9EK
Cabinet Colour	Black	Black	Black
DISPLAY			
Screen Size (Diagonal)	103-inch	65-inch	50-inch
Aspect Ratio	16:9	16:9	16:9
Effective Display Area (W x H)	89.3" x 50.3" (2,269 x 1,277 mm)	56.5" x 31.8" (1,434 x 807 mm)	43.5" x 24.5" (1,106 x 622 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	0.747 x 0.747 mm	0.576 x 0.576 mm
Contrast Ratio (Bright-area*1)		Max. 5,000:1 (400:1)	
Gradation		4,096 steps (equivalent)	
SIGNAL COMPATIBILITY			
Scan Rate	Horizontal frequency: 15 — 110 kHz; Vertical frequency: 48 — 120 Hz		
PC Signal Compatibility	VGA, SVGA, WVGA, WSVGA, XGA, SXGA, XGA+, SXGA+, WXGA UXGA, WXGA... (Compressed)		
Supported Video Standards	NTSC, PAL, PAL 60, SECAM, Modified NTSC		
Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p, 60p, 50p; 1250 (1080)/50i		
INPUT/OUTPUT			
Fixed Terminals			
PC IN	Mini D-sub 15pin x 1; Analogue RGB/Component; Plug & Play (VESA DDC 1/2B)		
AUDIO IN	M3 jack x 1		
SERIAL	D-sub 9-pin x 1, External control, RS-232C compatible		
Interchangeable Terminals			
Slot1	Vacant	Vacant	Vacant
Slot2	DVI-D In (DVI 24-pin x 1), Audio In (M3 jack x 1; L/R: 0.5 Vrms)		
Slot3	Component In (BNC x 3, Analogue RGB/Component), Audio In (L/R) (RCA pin jack x 2)		
ELECTRICAL			
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	1500 W	725 W	595 W
Power off condition	0.5 W	0.3 W	0.3 W
Stand-by condition	Save Off: 1.5 W, Save On: 1.3 W	Save Off: 1.2 W, Save On: 1.0 W	Save Off: 1.2 W, Save On: 1.0 W
SOUND			
Audio Output	Line Out (L/R)	20 W [10 W + 10 W] (10 % THD)	16 W [8 W + 8 W] (10 % THD)
MECHANICAL			
Dimensions (W x H x D*2)	2,414 x 1,421 x 129 mm	1,554 x 925 x 99 mm	1,210 x 724 x 95 mm
Weight (approx.)	220 kg	74 kg	42 kg
OPERATING ENVIRONMENT			
Temperature	0°C — 40°C		
Humidity	20% — 80% (Non condensation)		
Altitude	0 — 2,400 m	0 — 2,800 m	0 — 2,800 m
RADIATION REGULATIONS			
EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3			
SAFETY STANDARDS			
EN60065 Ver. 7			

*1: Measured at 100 lux.

*2: Exclusive of protruding portion

Commodity Name	50" HD Plasma Display	42" HD Plasma Display	42" SD Plasma Display
Continental Model	TH-50PH9EK	TH-50PH9ES	TH-42PS9EK
UK Model	TH-50PH9BK	TH-50PH9BS	TH-42PS9BK
Cabinet Colour	Black	Silver	Black
DISPLAY			
Screen Size (Diagonal)	50-inch	42-inch	42-inch
Aspect Ratio	16:9	16:9	16:9
Effective Display Area (W x H)	1,106 x 622 mm	920 x 518 mm	920 x 518 mm
Resolution (H x V)	1,366 x 768 pixels	1,024 x 768 pixels	852 x 480 pixels
Pixel Pitch (H x V)	0.810 x 0.810 mm	0.900 x 0.675 mm	1.080 x 1.080 mm
Contrast Ratio (Bright-area*1)		Max. 10,000:1 (400:1)	
Gradation		3,072 steps (equivalent)	
SIGNAL COMPATIBILITY			
Scan Rate	Horizontal frequency: 15 — 110 kHz; Vertical frequency: 48 — 120 Hz		
PC Signal Compatibility	VGA, SVGA, XGA	VGA, SVGA, XGA	VGA
	SXGA, UXGA... (Compressed)	SXGA, UXGA... (Compressed)	SVGA, XGA, SXGA, UXGA... (Compressed)
Supported Video Standards	NTSC, PAL, PAL 60, SECAM, Modified NTSC		
Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p... SMPTE274M, 1250 (1080)/50i		
INPUT/OUTPUT			
Fixed Terminals			
PC IN	Mini D-sub 15pin x 1; Analogue RGB/Component; Plug & Play (VESA DDC 1/2B)		
AUDIO IN	M3 jack x 1		
SERIAL	D-sub 9-pin x 1, External control, RS-232C compatible		
Interchangeable Terminals			
Slot1	CVBS In (BNC x 1, Composite), Audio In (L/R) (RCA pin jack x 2); S-Video In (S-Video x 1), Audio In (L/R) (RCA pic jack x 2)		
Slot2	Vacant	Vacant	Vacant
Slot3	Vacant	Vacant	Vacant
ELECTRICAL			
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	440 W	330 W	280 W
Power off condition	0.3 W	0.2 W	0.2 W
Stand-by condition	Save Off: 0.7 W, Save On: 0.5 W	Save Off: 0.8 W, Save On: 0.6 W	Save Off: 0.8 W, Save On: 0.6 W
SOUND			
Audio Output	16 W [8 W + 8 W] (10 % THD)		
MECHANICAL			
Dimensions (W x H x D*2)	1,210 x 724 x 95 mm	1,020 x 610 x 89 mm	1,020 x 610 x 89 mm
Weight (approx.)	37.0 kg	27.0 kg	26.0 kg
OPERATING ENVIRONMENT			
Temperature	0°C — 40°C		
Humidity	20% — 80% (Non condensation)		
Altitude	0 — 2,800 m		0 — 3,000 m
RADIATION REGULATIONS			
EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3			
SAFETY STANDARDS			
EN60065 Ver. 7			

*1: Measured at 100 lux.

*2: Exclusive of protruding portion

Supplied Remote Control

(Comes with every Panasonic Plasma Display model.)



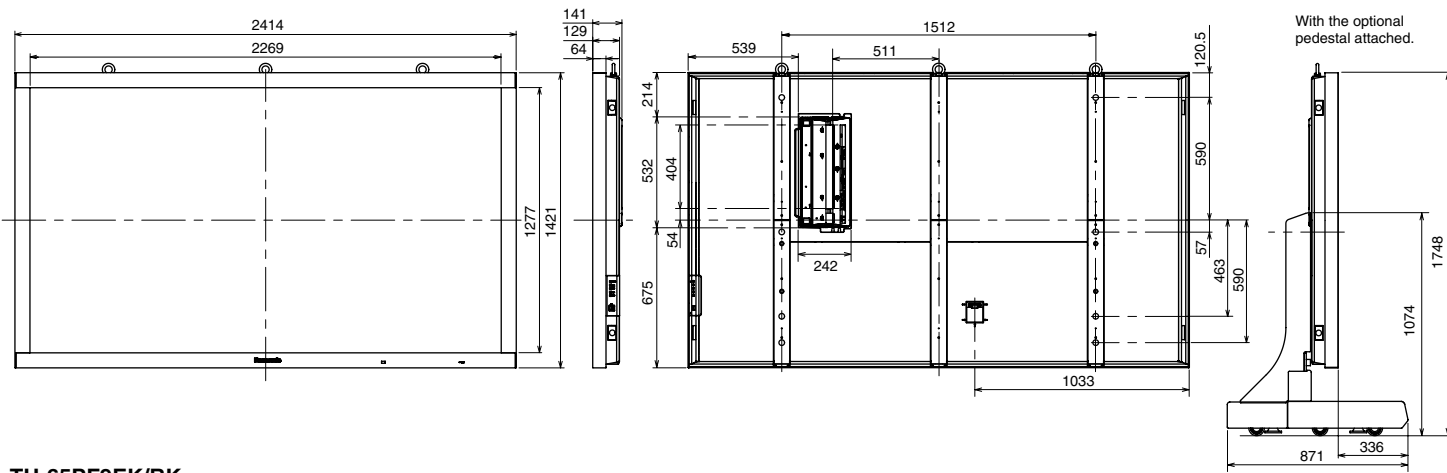
Remote Control Functions

- Power On
- Power Off
- Direct Input Selection (1/2/3/PC)
- Input Selection
- Status
- Surround On/Off
- Sound Mute On/Off
- Volume Up/Down
- Normalization (N)
- Exit (R)
- Position/Action
- Digital Zoom
- Dual Picture (MULTI PIP/SWAP/SELECT/MOVE)
- Picture
- Sound
- Set Up
- Picture Position/Size
- Aspect
- PC Mode Selection
- Off Timer
- Normal/ID Remote Selection
- ID Number Set
- ID All

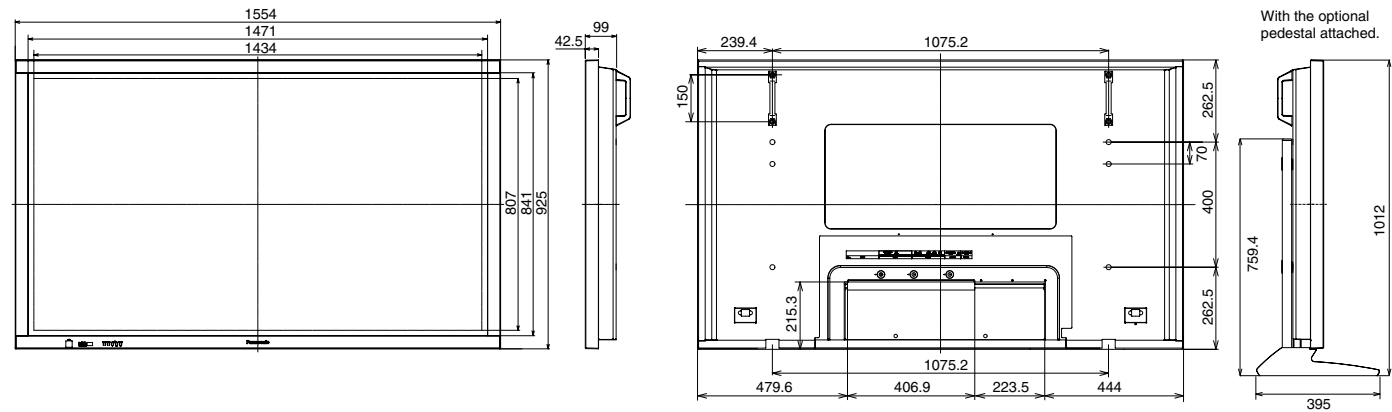
Dimensions

(Unit: mm)

TH-103PF9EK

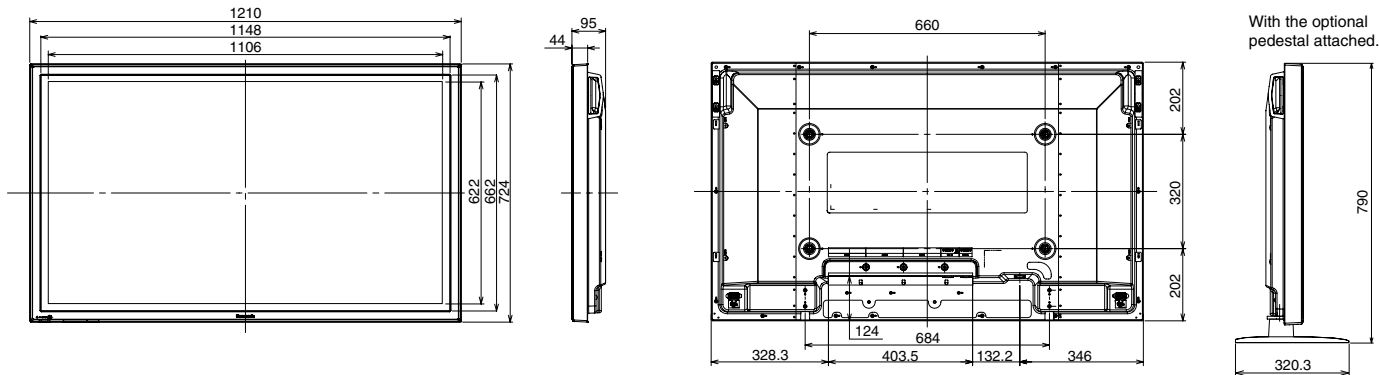


TH-65PF9EK/BK



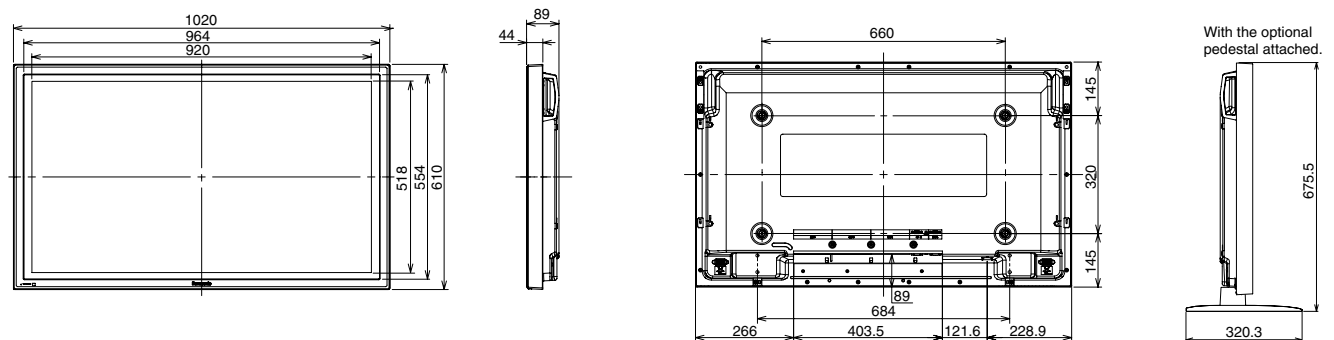
TH-50PF9EK

TH-50PH9EK/ES/BK/BS



TH-42PH9EK/ES/BK/BS

TH-42PS9EK/ES/BK/BS



Options

Touch Panel



- TY-TP65P8-S** (for TH-65PF9EK/BK)
- TY-TP50P8-S** (for TH-50PF9EK, TH-50PH9 series)
- TY-TP42P8-S** (for TH-42PH9 series, TH-42PS9 series)

This add-on touch panel lets you write directly onto the screen with a light touch. Ideal for adding written comments during a presentation or meeting.

- Highly reliable optical sensor system
- Outstanding resolution, easy operation
- Thin design makes a precise fit with display screen
- Lets you use display as a "whiteboard"

Note: The touch panel does not include a drawing application.

* The photo above shows the TY-TP65P8-S and may differ slightly from the actual final product appearance of TY-TP50P8-S and TY-TP42P8-S.



TY-TPEN6 Touch Pen
also available.

	TY-TP65P8-S	TY-TP50P8-S	TY-TP42P8-S
Applicable display devices	Panasonic 65" plasma display	Panasonic 50" plasma display	Panasonic 42" plasma display
Detection system	Infrared ray interruption		
Panel aperture (W x H)	1455 x 812 mm	1129 x 645 mm	945 x 531 mm
Detection range (W x H)	1440 x 812 mm	1104 x 620 mm	920 x 513 mm
Effective detection range	Above detection range +1.0 mm top, bottom, right, and left		
Operating modes	Input point, Continuous, End point detection ^{*1}		
Resolution	2881 (H) x 1625 (V) ^{*1}	2209 (H) x 1241 (V) ^{*1}	1841 (H) x 1033 (V) ^{*1}
Detection pitch	2.0 x 2.0 mm		
Output system	Coordinate output		
Optical elements	361 (H) x 204 (V)	277 (H) x 156 (V)	231 (H) x 130 (V)
Optical element pitch	4.0 x 4.0 mm		
Minimum stylus	6.0 x 6.0 mm		
Scan speed	First touch: 45 msec/frame max. Moving: 10 msec/frame max.	First touch: 30 msec/frame max. Moving: 8 msec/frame max.	
Interface	USB1.1 compliant; Signal: +DATA, -DATA, VCC, GND; I/F connector: TYPE B		
Panel shape	Flat panel		
Dimensions (W x H x D) ^{*2}	1598 x 951 x 72 mm	1257 x 773 x 69 mm	1073 x 659 x 69 mm
Weight (Except bracket)	5.0 kg	5.8 kg	5.0 kg
Escutcheon (frame)	Aluminum	Aluminum, ABS resin	
Power supply (voltage)	DC + 5 V ±10% (Supplied from USB bus power)		
Electric current	DC + 5 V max. 400 mA		

*1: When using the specific driver software.
*2: Except bracket, inclusive of protruding portion.

Anti-Glare Filter

- TY-AR65P9W** (for TH-65PF9EK/BK)
- TY-AR50P9W** (for TH-50PF9EK, TH-50PH9 series)
- TY-AR42P9W** (for TH-42PH9 series, TH-42PS9 series)

Note: You cannot mount both a Touch Panel and an Anti-Glare Filter at the same time.

Detachable Stereo Speakers



Photo shows TY-SP42P8W-K. Photo shows TY-SP42P8W-S.

- TY-SP65P7W-K** (for TH-65PF9EK/BK)
- Configuration: 2-way, 3-speaker
- Dimensions (W x H x D): 100 x 925 x 90 mm
- Weight: 2.2 kg/each

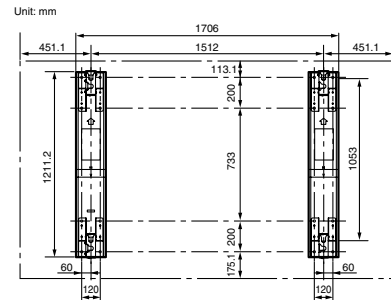
- TY-SP50P8W-K** (for TH-50PF9EK, TH-50PH9EK/BK)

- TY-SP50P8W-S** (for TH-50PH9ES/BS)
- Configuration: 2-way, 3-speaker
- Dimensions (W x H x D): 107 x 724 x 88 mm
- Weight: 2.0 kg/each

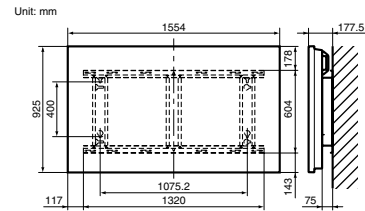
- TY-SP42P8W-K** (for TH-42PH9EK/BK, 42PS9EK/BK)
- TY-SP42P8W-S** (for TH-42PH9ES/BS, 42PS9ES/BS)
- Configuration: 2-way, 3-speaker
- Dimensions (W x H x D): 107 x 610 x 88 mm
- Weight: 2.0 kg/each

Wall-hanging bracket

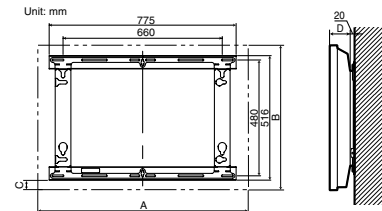
TY-WK103PV9



TY-WK65PV7



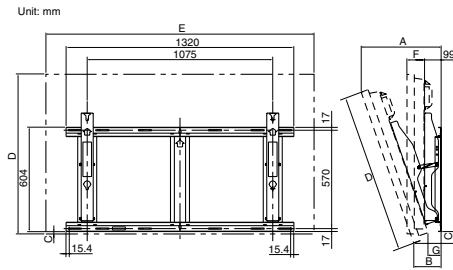
TY-WK42PV7



	50" model	42" model
A	1210	1020
B	724	610
C	91.5	34.5
D	95	89

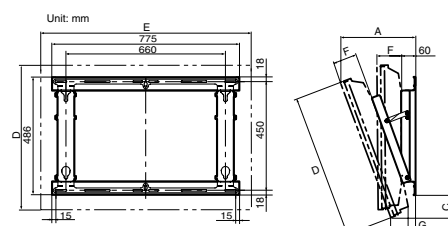
Wall-hanging bracket (angled)

TY-WK65PR8



R	0°	5°	10°	15°	20°
A	188	210	240	265	295
B	188	190	180	169	158
C	14	28	41	54	66
D		825			
E		1554			
F		99			
G	99	93	87	81	74

TY-WK42PR7

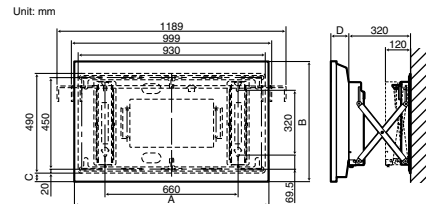


R	0°	5°	10°	15°	20°
A	155	200	243	285	325
B	155	137	119	99	80
C	130	137	145	152	156
D		724			
E		1210			
F		95			
G	60	57	42	26	11

R	0°	5°	10°	15°	20°
A	143	188	226	264	299
B	149	135	121	107	92
C	73	80	89	95	101
D		610			
E		1020			
F		89			
G	60	50	40	29	19

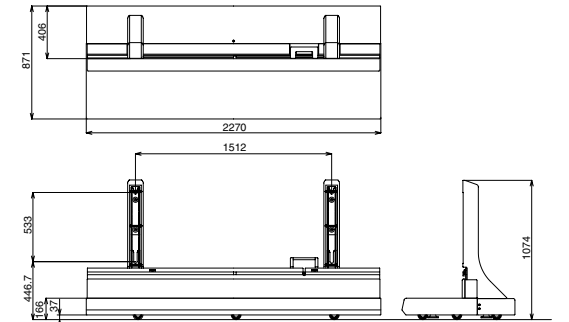
Wall-hanging bracket (drawer type)

TY-WK42DR1

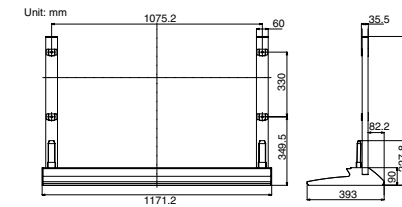


	50" model	42" model
A	1210	1020
B	724	610
C	112.5	55.5
D	95	89

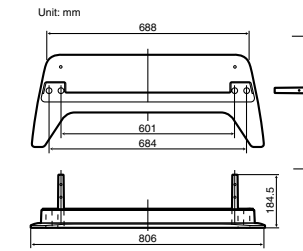
Pedestal TY-ST103PF9



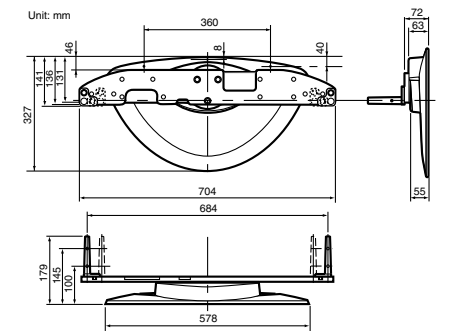
TY-ST65-K



TY-ST07-K/S



TY-ST08-K/S

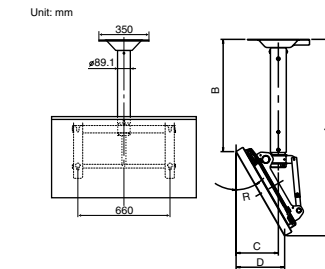


Wall-hanging bracket (angled)

TY-WK65PR8

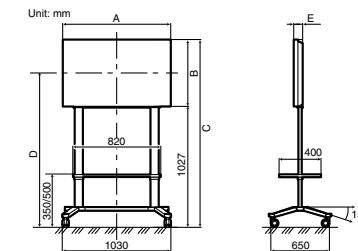
TY-WK42PR7

Ceiling-hanging bracket TY-CE42PS7



R	50" model					42" model				
	0°	5°	10°	15°	20°	0°	5°	10°	15°	20°
A	1187	1307	1407	1507	1607	1181	1281	1381	1481	1581
B	466	566	666	766	866	460	560	660	760	860
C	199	209	219	229	239	193	203	213	223	233
D	0	0	186	0	0	0	0	186	0	0

Mobile stand TY-ST42PF3



	50" model	42" model
A	1210	1020
B	724	610
C	1751	1637
D	1389	1332
E	95	89

Compatible Models at a Glance

	TY-ST103PF9	TY-ST65-K	TY-ST07-K/S	TY-ST08-K/S	TY-WK103PV9	TY-WK65PV7	TY-WK42PV7	TY-WK65PR8	TY-WK42PR7	TY-WK42DR1	TY-ST42PF3	TY-CE42PS7
TH-103PF9EK	●	—	—	—	●	—	—	—	—	—	—	—
TH-65PF9EK/BK	—	●	—	—	—	●	—	●	—	—	—	—
TH-50PF9EK, TH-50PH9 series	—	—	●	●	—	—	●	—	●	—	—	—
TH-42PH9 series, TH-42PS9 series	—	—	●	●	—	—	●	—	●	●	●	●

●: Compatible; —: Not compatible