Preset Input Signals

Signal name	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Composite/Component Video TY-42TM6Y	Component Video TY-42TM6A/Z	PC Input TY-42TM6P	RGB Active Through TY-42TM6G	Composite Video TY-42TM6B/V	BNC Dual Video TY-FB9BD	DVI-D (for PF series) TY-FB9FDD	DVI-D (for PH/PS series) TY-42TM6D	SDI TY-FB7SD	HD-SDI TY-FB9HD	HDMI TY-FB8HM	PC IN (D-Sub 15-pin) Fixed Terminal
Composite														
NTSC	15.73	59.94	Y				Y	Y						
PAL	15.63	50.00	Y				Y	Y						
PAL60	15.73	59.94	Y				Y	Y						
SECAM	15.63	50.00	Y				Y	Y						
Modified NTSC	15.73	59.94	Y				Y	Y						
Component/RGB														
525 (480)/60i	15.73	59.94	Y	Y	Y	Y					Y	Y		Y
525 (480)/60p	31.47	59.94	Y	Y	Y	Y			Y	Y			Y	Y
625 (575)/50i	15.63	50.00	Y	Y	Y	Y					Y	Y		Y
625 (575)/50p	31.25	50.00	Y	Y	Y	Y				Y				Y
625 (576)/50p	31.25	50.00							Y				Y	
750 (720)/60p	45.00	60.00	Y	Y	Y	Y			Y	Y			Y	Y
750 (720)/50p	37.50	50.00	Y	Y	Y	Y			Y	Y		Y	Y	Y
1125 (1080)/60i	33.75	60.00	Y	Y	Y	Y			Y	Y		Y	Y	Y
1125 (1080)/60p	67.50	60.00	Y*1	Y*1	Y*1	Y*1			Y					Y*1
1125 (1080)/50i	28.13	50.00	Y	Y	Y	Y			Y	Y		Y	Y	Y
1125 (1080)/50p	56.25	50.00	Y*1	Y*1	Y*1	Y*1			Y					Y*1
1125 (1080)/30p	33.75	30.00	Y	Y	Y	Y							Y	Y
1125 (1080)/25p	28.13	25.00	Y	Y	Y	Y							Y	Y
1125 (1080)/24p	27.00	24.00	Y	Y	Y	Y							Y	Y
1125 (1080)/24sF	27.00	48.00	Y	Y	Y	Y							Y	Y
1250 (1080)/50i	31.25	50.00	Y	Y	Y	Y								Y
RGB														
640 x 400 @70Hz	31.46	70.07	Y	Y	Y	Y								Y
640 x 480 @60Hz	31.47	59.94	Y	Y	Y	Y			Y	Y			Y	Y
640 x 480 @72Hz	37.86	72.81	Y	Y	Y	Y								Y
640 x 480 @75Hz	37.50	75.00	Y	Y	Y	Y								Y
640 x 480 @85Hz	43.27	85.01	Y	Y	Y	Y								Y
852 x 480 @60Hz	31.47	59.94	Y	Y	Y	Y			Y	Y				Y
800 x 600 @56Hz	35.16	56.25	Y	Y	Y	Y								Y
800 x 600 @60Hz	37.88	60.32	Y	Y	Y	Y			Y	Y				Y
800 x 600 @72Hz	48.08	72.19	Y	Y	Y	Y								Y
800 x 600 @75Hz	46.88	75.00	Y	Y	Y	Y								Y
800 x 600 @85Hz	53.67	85.06	Y	Y	Y	Y								Y
1066 x 600 @60Hz	37.88	60.32	Y	Y	Y	Y			Y	Y				Y
1024 x 768 @50Hz	39.55	50.00								Y				
1024 x 768 @60Hz	48.36	60.00	Y	Y	Y	Y			Y	Y				Y
1024 x 768 @70Hz	56.48	70.07	Y	Y	Y	Y								Y
1024 x 768 @75Hz	60.02	75.03	Y	Y	Y	Y								Y
1024 x 768 @85Hz	68.68	85.00	Y	Y	Y	Y								Y
1366 x 768 @50Hz	39.55	50.00								Y				
1366 x 768 @60Hz	48.36	60.00	Y	Y	Y	Y			Y	Y				Y
1152 x 864 @60Hz	53.70	60.00								Y				
1152 x 864 @75Hz	67.50	75.00	Y	Y	Y	Y								Y
1280 x 960 @60Hz	60.00	60.00	Y	Y	Y	Y								Y
1280 x 960 @85Hz	85.94	85.00	Y	Y	Y	Y								Y
1280 x 1024 @60Hz	63.98	60.02	Y	Y	Y	Y			Y					Y
1280 x 1024 @75Hz	79.98	75.03	Y	Y	Y	Y								Y
1280 x 1024 @85Hz	91.15	85.02	Y	Y	Y	Y								Y
1400 x 1050 @60Hz	65.22	60.00								Y				
1600 x 1200 @60Hz	75.00	60.00	Y	Y	Y	Y			Y					Y
1600 x 1200 @65Hz	81.25	65.00	Y	Y	Y	Y								Y
1920 x 1200 @60Hz	74.04	59.95								Y				
Mac 13 (640 x 480)	35.00	66.67	Y	Y	Y	Y								Y
Mac 16 (832 x 624)	49.72	74.54	Y	Y	Y	Y								Y
Mac 21 (1152 x 870)	68.68	75.06	Y	Y	Y	Y								Y

*1: The PH/PS series does not accept these signals.

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 for PF series)   (Female for PH/PS series)

Pin Assignment and Signal Name

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	Short Circuit
8	CTS	
9	RI	NC

Communinacation Parameters

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

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

Signal Name

Pin No.	Signal name	Pin No.	Signal name
1	R (PR/CR)	9	NC (Not connected)
2	G (Y)	10	GND (Ground)
3	B (PB/CB)	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)		

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

Panasonic
ideas for life

9-Series Professional Plasma Displays

Presenting a New Standard in Plasma Performance

The Beauty of 1080p HD Images.

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

Smooth Motion and Superb Image Rendering.

Welcome to the Next Generation
Introducing Panasonic's 1080p HD Plasma Displays

Panasonic's new series of plasma displays for professionals is highlighted by our long-awaited 103-inch 1080p 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 color 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 1080p 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.

103

65

50

50

42

37

42

TH-103PF9UK   TH-65PF9UK   TH-50PF9UK   TH-50PH9UK   TH-42PH9UK   TH-37PH9UK   TH-42PS9UK

1080p HD   HD   SD

Ultimate 1080p HD Plasma Displays:
Unleashing the Full Capability of 1080p HD

Panasonic introduces three professional 1080p 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 1080p resolution and outstanding depth perception. The new models also provide smooth, sharp motion images, true-to-life color and the equivalent of 4,096 gradation steps. With their superior imaging performance, Panasonic's new plasma display panels unleash the full capability of 1080p HD.

* As of September 15, 2006

TH-65PF9UK
65-inch (165 cm) diagonal 1080p High Definition Plasma Display

TH-103PF9UK
103-inch (260 cm) diagonal 1080p High Definition Plasma Display

TH-50PF9UK
50-inch (127 cm) diagonal 1080p High Definition Plasma Display

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Advanced Technologies Deliver Superb 1080p HD Image Quality

True 1080p High-Definition Images

A Huge Screen — and Twice as Much Image Information
Our new 1080p 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.

Conventional

1080 HD Plasma Panel
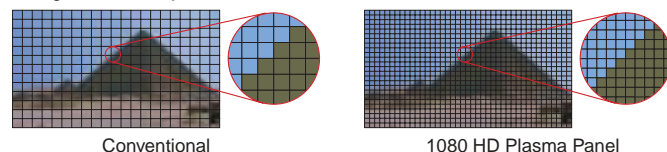
Superior Moving Image Resolution
To deliver the full beauty of HD images, the display needs to render moving images in clear detail. Plasma display panels use a self-illuminating system to boost resolution in images with fast motion. Panasonic brings out all the beauty inherent in 1080p HD, reproducing crisp, sharp images that move smoothly even when viewed on the 103-inch screen.

Perceived moving image resolution

(%)
PDP
100
75 LCD
50
25
PDP
LCD

When the action speeds up, the image resolution suddenly drops.

Relative comparison (perceived image resolution)

16sec 8sec 4sec 2sec
static   rapid speed
Speed on the screen
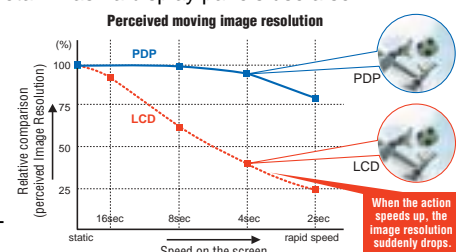
Superior Color Reproduction

Reproducing the Entire HDTV Color Range
HD sources are based on the HDTV standard rather than the conventional NTSC standard. In our new 1080p HD models, the panel phosphor characteristics closely match the HDTV-standard color gamut. This lets our plasmas reproduce the entire color range specified in the HDTV standard (ITU-R. BT709), so images are natural-looking and faithful to the original HD source.

Reproduces the full range of colors specified in HDTV broadcast standards

v'
0.6
0.5
0.4
0.3
0.2
0.1
0
0.1 0.2 0.3 0.4 0.5 0.6
u'

HDTV standard (ITU-R.BT709)
1080p HD plasmas
NTSC standard
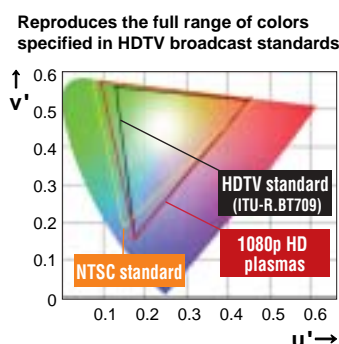
Digital Color Reality for Accurate Reproduction of the Ambience in Movies
In Super Cinema mode, Digital Color Reality boosts precision in the digital control of color and brightness video data by a factor of four (white chromaticity fluctuation of less than 0.003). By continuously adjusting the white 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.

Faithfully expresses subtle color differences in bright and shaded areas.

Expresses the natural warmth of sunlight, and conveys subtle color differences in bright and shaded areas.

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 1080p HD plasma display can offer.

4,096 equivalent steps of gradation

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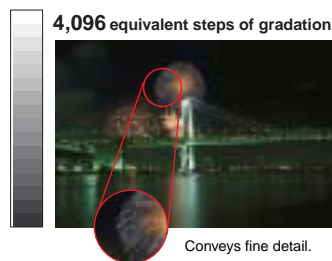
Deep, Crisp Blacks and the Industry's Highest Contrast
Our New Real Black Creation technology achieves up to 5000:1 contrast — tops in the industry. This combines our New Deep Black Filter and New AR Coating technologies, which help maintain crisp blacks even in bright image surroundings, to give images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

New Deep Black Filter with AR Coating

Deep Black Filter

Ambient light

Front glass   AR Coating
Front protection glass
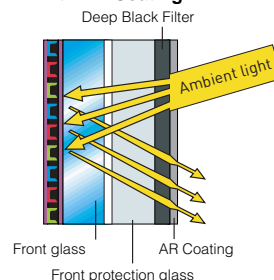
Explore a Wider World of Video Applications

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 color accuracy.
- Able to display highly detailed documents and medical images with exceptional clarity and sharpness, Panasonic 1080p 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 Color Accuracy

TV/VIDEO PRODUCTION
- Digital Color Reality reproduces colors the way movie makers and colorists meant them to be seen.
- The new PDPs reproduce colors across the entire HDTV-standard range, so colors from HD sources are faithful and natural-looking.
- Now supporting 10-bit input signals, the new TY-FB9HD HD-SDI terminal board achieves precise color reproduction and rich gradation.
- The 1080p HD plasmas provide full-digital processing from signal input to display, making them suitable for use as HD studio monitors.

MUSEUMS/EXHIBITS
- Digital Color Reality technology provides detailed, true-to-life reproduction of colors in all kinds of images, from fine paintings to HD video programs. Panasonic's 1080p 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 1080p 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-THEATERS
- Panasonic's 1080p HD models provide outstanding motion image resolution, so movies are clear and sharp. The 103-inch screen is suitable for mini-theater applications.
- Digital Color 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 theaters.
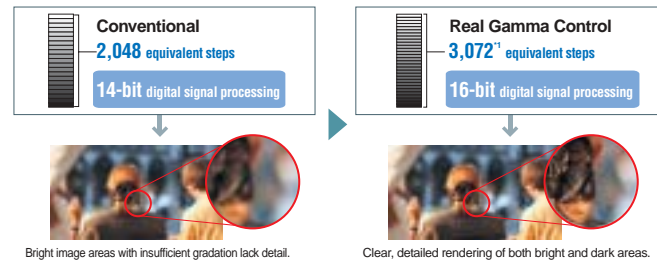
4

5

Industry's Best Picture Quality

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.

Conventional	Real Gamma Control
2,048 equivalent steps	**3,072**¹ equivalent steps
14-bit digital signal processing	**16-bit** digital signal processing

Bright image areas with insufficient gradation lack detail. | Clear, detailed rendering of both bright and dark areas.

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.

Contrast: 3,000 :1　Strong pre-discharge emission × 1
Contrast: Max. 10,000 :1⁻² Weak pre-discharge emission × 1

Conventional | New Real Black Creation
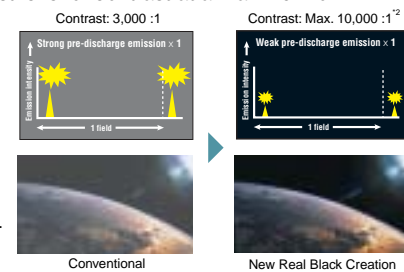
Excellent Brightness Even in Bright Rooms

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.

New Deep Black Filter
Front Glass
Transparent Electrode
Black Stripe
Dielectric Layer
Scanning Electrode
Protective Coat
Fluorescent Material
Data Electrode
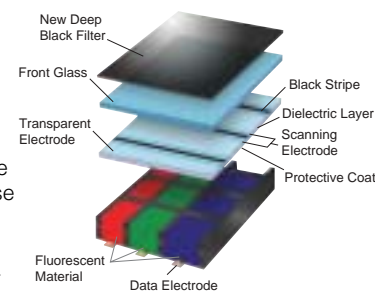
Industry's Best*4 Bright-Area Contrast

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

Conventional | New Deep Black Filter
Deep Black Filter
Ambient light
Front glass
Front protection glass
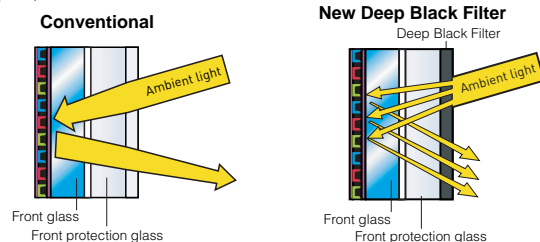
Superior Expressive Detail

Contrast Management System

Original Panasonic technology optimizes 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.

Conventional | Contrast Management System

Enhancing dark areas washes out the highlights. | Brightens the subject without changing the background.
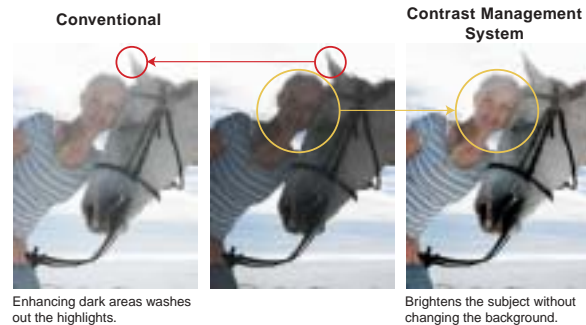
Rich, Vibrant Colors

Advanced 3D Color Management

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

Clear Blue
Vivid Red
Fresh Green
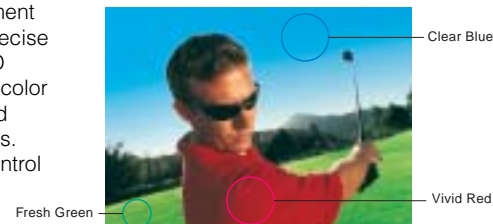
Smooth Diagonal Lines and Sharp, Clear Images

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 colors are processed together, this advanced system processes each color separately for crisper, more natural-looking images. Theoretically, this results in a 30% improvement in horizontal resolution compared with conventional systems.

No correction | Correction
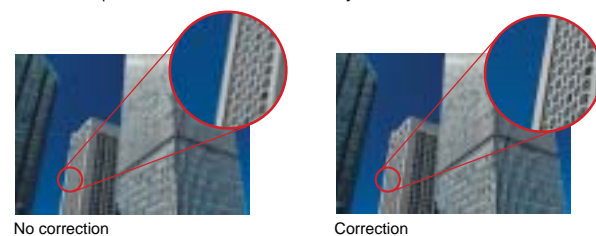
Even Scenes with Lots of Motion are Clear

Motion Pattern Noise Reduction

The Motion Pattern Noise Reduction circuit detects motion patterns that tend to generate noise, and makes adjustments to maximize 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.
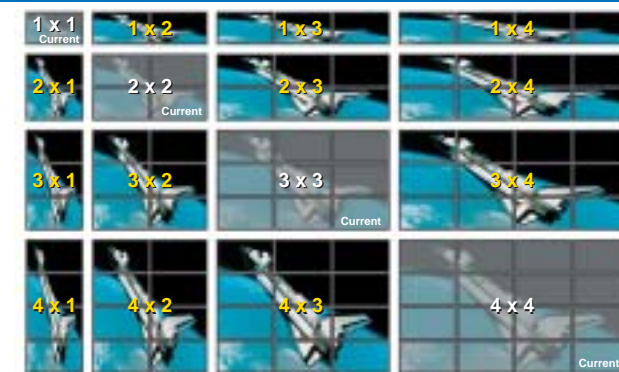
No correction | Correction
Part with slight motion
Part with large motion
Part with no motion
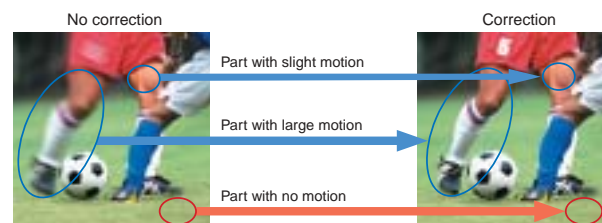
Panasonic plasma finely divides each scene into numerous parts, then detects the motion in each part and applies noise reduction where required.

Advanced Usability

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.

1 x 1 Current | 1 x 2 | 1 x 3 | 1 x 4
2 x 1 | 2 x 2 Current | 2 x 3 | 2 x 4
3 x 1 | 3 x 2 | 3 x 3 Current | 3 x 4
4 x 1 | 4 x 2 | 4 x 3 | 4 x 4 Current

TULIP | TULIP

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-42PS9UK 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 (0.1″) to 1.8 mm (0.07″). 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 1080p 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.

1:1 Pixel Mode ON — 100% of the original content is displayed.
1:1 Pixel Mode OFF — 97% of the original is displayed.
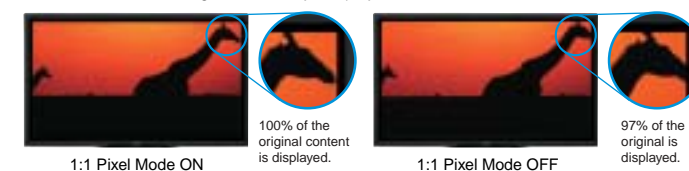
Advanced Dual Picture Mode

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.

Advanced Dual Picture Mode

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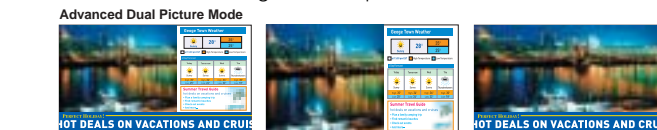
Note: Dual Picture Mode cannot handle the following combinations of two analog signals: Component - Component, Component - PC (RGB), PC (RGB) - Component, PC (RGB) - PC (RGB). The Advanced Dual Picture Mode may not work properly with some video signals.

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-50PF9UK or TH-37PH9UK 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 analog 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 minimize 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-103PF9UK.

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.
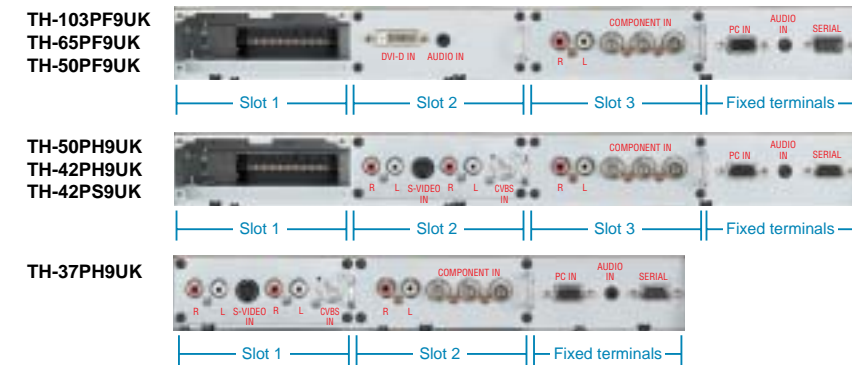
Industry's Best Expandability

Multi-Function Slots

In addition to the fixed input interface, the Panasonic plasma display has three*[1] interchangeable slots that let you add different combinations of optional terminal boards. This gives you the flexibility to add digital or analog capabilities, as necessary, and to customize your system for specific needs.

*1: 37-inch model comes with two interchangeable slots and fixed terminals.

Standard-Equipped Terminals

You can mount optional terminal board in a vacant slot. Or, you can remove the standard terminal boards and mount optional boards.

TH-103PF9UK
TH-65PF9UK
TH-50PF9UK

Slot 1 — Slot 2 — Slot 3 — Fixed terminals

TH-50PH9UK
TH-42PH9UK
TH-42PS9UK

Slot 1 — Slot 2 — Slot 3 — Fixed terminals

TH-37PH9UK

Slot 1 — Slot 2 — Fixed terminals

Optional Terminal Boards

RGB Active Through Terminal Board (mounts in slots 1 & 2)
TY-42TM6G

• Sends the signal that's input via the PC IN terminal to a second display connected to the PC OUT terminal. This connectability adds convenience when configuring a multi-screen system.

The characters in red are added for explanation.

DVI-D Terminal Board (mounts in slot 1 or 2)
TY-FB9FDD (for PF series)
TY-42TM6D (for PH/PS series)

• Lets you connect a PC or other compatible digital equipment that outputs digital RGB signals (DVI-D compliant).
• Supports HDCP.
• TY-FB9FDD is compatible with UXGA/WXGA signals (compressed display).

HDMI Terminal Board (mounts in slot 1 or 2)
TY-FB8HM   **HDMI**

• Enables fully digital connection of signals from HDMI-compatible DVD players and other digital equipment for blur-free images with no color bleeding.

Specifications

Standards compliance	HDMI ver.1.1
Compatible video format	525/60p, 625/50p, 750/60p, 750/50p, 1125/60i, 1125/50i, VGA60

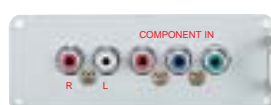* High-Definition Multimedia Interface and HDMI are trademarks of HDMI Licensing, LLC.

BNC Dual Video Terminal Board (mounts in slot 1 or 2)
TY-FB9BD

BNC Component Video Terminal Board (mounts in any slot)
TY-42TM6A

BNC Composite Video Terminal Board (mounts in slot 1 or 2)
TY-42TM6B

Composite/Component Video Terminal Board (mounts in slots 1 & 2, or slots 2 & 3)
TY-42TM6Y

RCA Component Video Terminal Board (mounts in any slot)
TY-42TM6Z

RCA Composite Video Terminal Board (mounts in slot 1 or 2)
TY-42TM6V

Ir Through Terminal Board (mounts in any slot)
TY-FB9RT

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

PC Input Terminal Board (mounts in any slot)
TY-42TM6P

• Lets you display images from two or more PCs.
* Does not support the DPMS function.

SDI/HD-SDI Terminal Board (mounts in slot 1 or 2)
SDI Terminal Board TY-FB7SD
HD-SDI Terminal Board TY-FB9HD

• Supports the serial digital interface (SDI) used in broadcasting.
• Provides fully digital transmission for clear, clean image displays.
• The TY-FB9HD supports HDTV.

Specifications

	TY-FB7SD	TY-FB9HD
Standards compliance	SMPTE259M-C	SMPTE292M, SMPTE259M-C
Compatible video format	525/59.94i 625/50i	525/59.94i, 625/50i, 750/60p: 59.94p, 750/50p, 1125/30p, 1125/24p, 1125/25p, 1125/60i: 59.94i, 1125/50i, 1125/24sF: 23.98sF

Peripherals

Note: Specifications of peripherals on this page are subject to change without notice.

Twisted-Pair-Cable Transmission System Products

Twisted-Pair-Cable Receiver Board
KE0101CR-BW (Mounts in any slot*)

*Should be mounted in slot 1 to send the display control signal. Display control signal transmission is one-way.

• Makes it possible, using a single CAT5e cable, to simultaneously send video signal (RGB, component, or composite), audio signal and the display control signal.
* To send a composite video signal, the Composite Video Terminal Board (TY-FB9BD, 42TM6Y, 42TM6B or 42TM6V) must be mounted in the slot of the Plasma.
• This reduces both costs and setup time compared with a conventional BNC cable connection.
• XGA signals (1024 x 768 pixels) can be sent up to 500 ft.

For the latest information on the Twisted-Pair-Cable Receiver Board, please visit the following website:
http://www.kowa.co.jp/i-master/cat5-eng

XGA signals can be sent up to 500 ft.

Twisted-Pair-Cable Receiver Board

Mounted in slot of the display's rear panel.

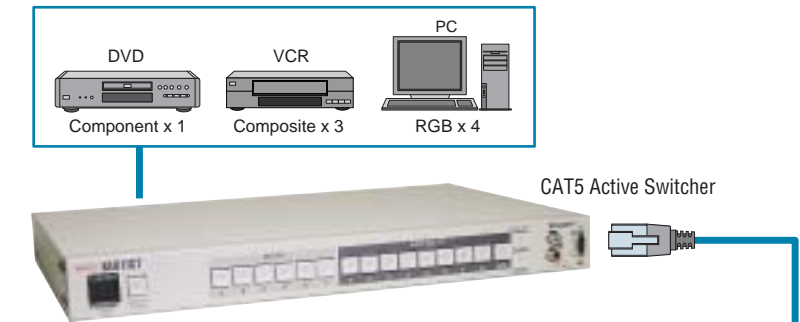### Twisted-Pair-Cable Transmitter/Active Switcher
KE811CT

* Makes it possible to simultaneously transmit video, audio and control signals over a single CAT5e cable to external equipment.
* Allows plasma display control (Power On/Off, Video Switching, Mute, Volume Up/Down, etc.) via RS-232C.
* Enables combined use with the KE0108CH-DW Distributor.

Twisted-Pair-Cable Transmitter
KE0202CT2
Sends video, audio and control signals over a CAT5e cable.

Twisted-Pair-Cable Distributor
KE0108CH-DW
Distributes one input to eight output channels.

PDP Controller (for 103˝, 65˝, 50˝ and 42˝ models)

PLUG-VC251 series (Mounts in slots 1, 2 & 3)

• Plug-in PC to facilitate turnkey solutions.
• Clear images made possible by digital connection using the function slot of the plasma display.
• Customized to maximize the performance of Panasonic plasma displays.
• Realistic display images achieved by a 1:1 pixel correspondence with Panasonic plasma displays.
• Can also be used in vertical display applications.
• Models with a pre-installed, digital signage system are also available.
• Easy to install, it requires only a network and power connection.

Terminals

MIC connector | LINE OUT connector | LINE IN connector | 100BASE-TX/10BASE-T connector | Serial port (RS232C) connector | USB 2.0 connector

Specifications

Applicable displays	Panasonic 103˝, 65˝, 50˝ & 42˝ Plasma Displays
CPU	Celeron M 373 (1GHz)
Main storage memory	Standard 256MB DDR SO-DIMM
Internal HDD	2.5" HDD 40GB x 1
Network	100BASE-TX/10BASE-T x 1, Wake On LAN supported
Interfaces	Serial x 2*[1], USB 2.0/1.1 x 2*[2], Line In x 1, Line Out x 1, MIC x 1
Dimensions (W x H x D)	12.4˝ x 1.6˝ x 8.3˝ (315 x 40 x 211 mm) (including cooling fan)
Weight	2.6 lbs. (1.2 kg)
Power supply	Supplied from the plasma display
Power consumption	20 W max.
Standard	FCC Class A

*1: One serial interface is connected internally.
*2: USB 1 is for HID (human interface devices) only. Maximum power supply for the two ports is 3.5 W.

Plasma System Solutions

HD-SDI System for Broadcast Use

Using the HD-SDI Terminal Board

The 1080p 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 1080p 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) color range, Panasonic 1080p HD panels deliver faithful, natural-looking colors 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 color 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.

Studio

Control room

103″ plasma for monitoring wall

50″ plasmas for master monitor

DVI-D   HD-SDI   HD-SDI

Multi Display Processor
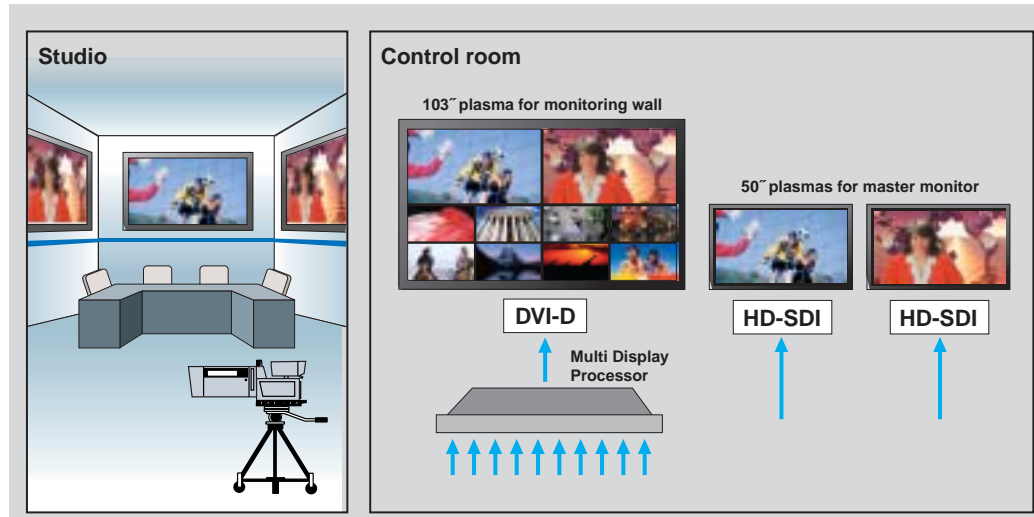
Display Systems for Large Lecture Halls

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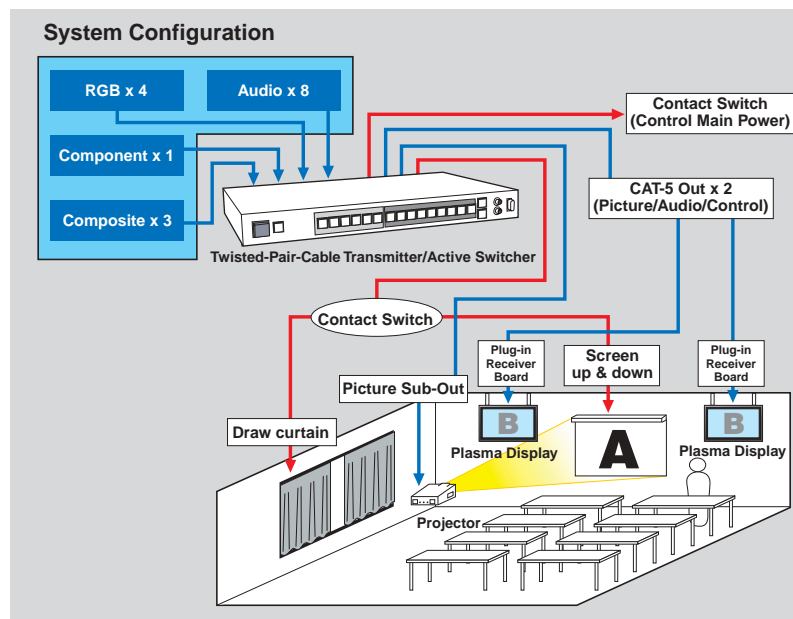
Via CAT5e cable, send the display control signal and video/audio signals from a Twisted-Pair-Cable Transmitter/Active Switcher with 8 input and 2 output terminals, and you can display high-resolution video content at a distant location. This kind of system can be used in large lecture halls, public spaces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

• Long-Distance Transmission of High-Quality Video Signals
High-resolution XGA images, sound and RS232C control signal are transmitted approximately 500-ft 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.

System Configuration

RGB x 4   Audio x 8
Component x 1
Composite x 3

Twisted-Pair-Cable Transmitter/Active Switcher

Contact Switch (Control Main Power)

CAT-5 Out x 2 (Picture/Audio/Control)

Contact Switch
Picture Sub-Out

Plug-in Receiver Board   Screen up & down   Plug-in Receiver Board

Draw curtain

B   A   B

Plasma Display   Plasma Display

Projector

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 1080p 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*[1]. Monitoring commands also let you check the display status from a remote location.
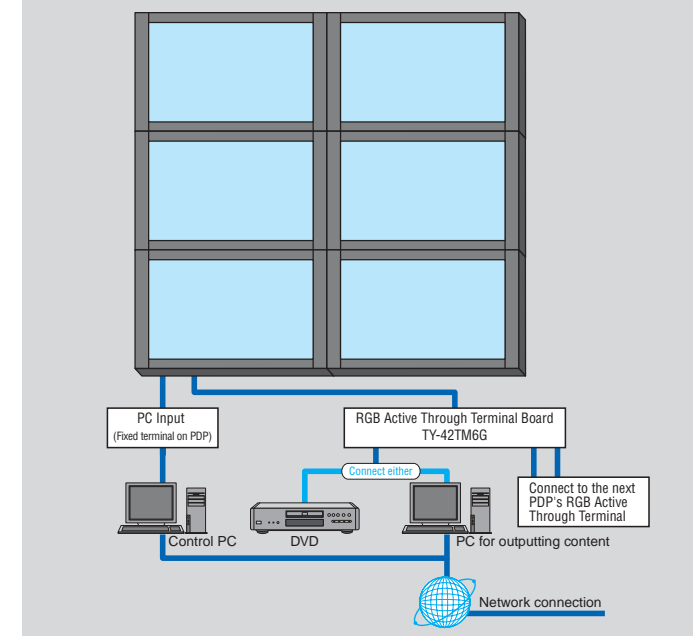
*[1]: You will need to procure control software.
Note: The advanced image-enlarging function for N x M multi-screen system is not offered on the TH-42PS9UK.

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)

PC Input (Fixed terminal on PDP)

RGB Active Through Terminal Board TY-42TM6G

Connect either

Connect to the next PDP's RGB Active Through Terminal

Control PC   DVD   PC for outputting content

Network connection

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.
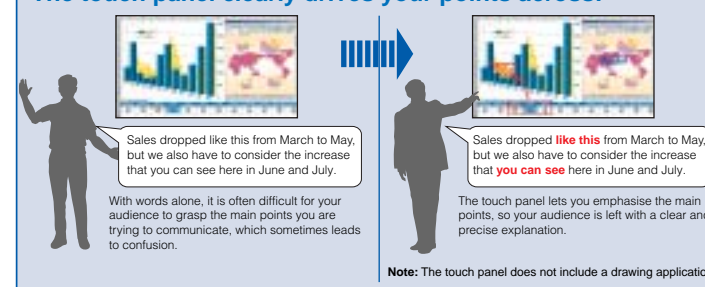
• Keeps the Room Neat and Attractive
The video devices can be connected to the Ir Through Terminal Board and placed out of the way in racks. Each device can then be operated via the remote control sensor on the display. You can even close the rack doors to keep the room interior neat and uncluttered 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.
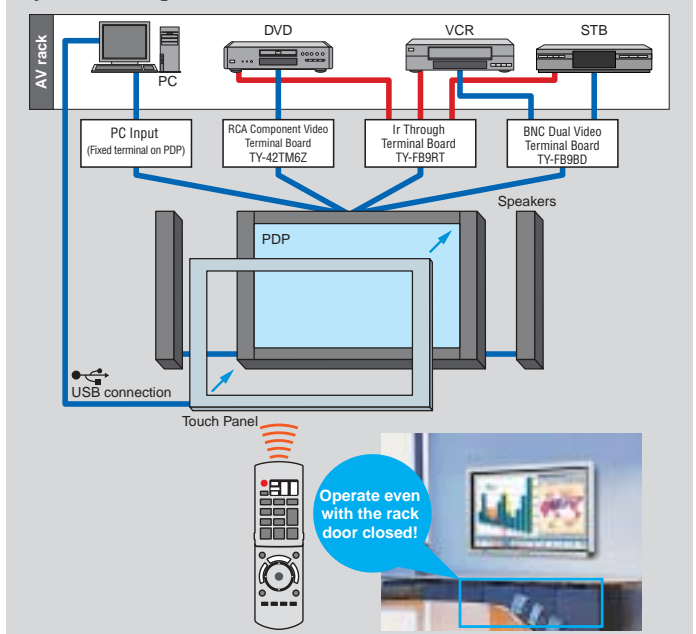
System configuration

AV rack

DVD   VCR   STB

PC

PC Input (Fixed terminal on PDP)

RCA Component Video Terminal Board TY-42TM6Z

Ir Through Terminal Board TY-FB9RT

BNC Dual Video Terminal Board TY-FB9BD

Speakers

PDP

USB connection

Touch Panel

Operate even with the rack door closed!

The touch panel clearly drives your points across!

Sales dropped like this from March to May, but we also have to consider the increase that you can see here in June and July.

Sales dropped like this from March to May, but we also have to consider the increase that you can see here in June and July.

With words alone, it is often difficult for your audience to grasp the main points you are trying to communicate, which sometimes leads to confusion.

The touch panel lets you emphasise the main points, so your audience is left with a clear and precise explanation.

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

Shopping Mall, Budapest, Hungary

MEDICAL CARE

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

Bowling Alley, Nagoya, Japan

EDUCATION

School, Addis Ababa, Ethiopia

Waseda University, Shinjuku, Japan

CONTROL ROOM

Vatican Museum

Line Up

1080p HD Models

TH-103PF9UK
103-inch (260 cm) diagonal
1080p High Definition Plasma Display

TH-65PF9UK
65-inch (165 cm) diagonal
1080p High Definition Plasma Display

TH-50PF9UK
50-inch (127 cm) diagonal
1080p High Definition Plasma Display

HD Models

TH-50PH9UK
50-inch (127 cm) diagonal
High Definition Plasma Display

TH-42PH9UK
42-inch (106 cm) diagonal
High Definition Plasma Display

TH-37PH9UK
37-inch (94 cm) diagonal
High Definition Plasma Display

SD Model

TH-42PS9UK
42-inch (106 cm) diagonal
Progressive Wide Plasma Display

Specifications

	TH-103PF9UK	TH-65PF9UK	TH-50PF9UK
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; Analog 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, Analog RGB/Component), Audio In (L/R) (RCA pin jack x 2)		
ELECTRICAL			
Power Requirements	240 V AC, 50 Hz/60 Hz	120 V AC, 50 Hz/60 Hz	120 V AC, 50 Hz/60 Hz
Power Consumption	1550 W	790 W	650 W
Power off condition	0.1 W	0.1 W	0.1 W
Stand-by condition	Save Off: 1.5 W, Save On: 1.3 W	Save Off: 1.0 W, Save On: 0.8 W	Save Off: 1.0 W, Save On: 0.8 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])	95.0" x 55.9" x 5.1" (2,414 x 1,421 x 129 mm)	61.2" x 36.4" x 3.9" (1,554 x 925 x 99 mm)	47.6" x 28.5" x 3.7" (1,210 x 724 x 95 mm)
Weight (approx.)	485 lbs. (220 kg)	163.1 lbs. (74 kg)	93 lbs. (42 kg)
OPERATING ENVIRONMENT			
Temperature	32°F — 104°F (0°C — 40°C)		
Humidity	20% — 80% (Non condensation)		
Altitude	0 — 7,800 feet (0 — 2,400 m)	0 — 9,100 feet (0 — 2,800 m)	0 — 9,100 feet (0 — 2,800 m)
EMI REGULATIONS			
	FCC Part 15 Class-B, ICES-003		
SAFETY STANDARDS			
	UL6500 Ver. 2		

[*1]: Measured at 100 lux.
[*2]: Exclusive of protruding portion

	TH-50PH9UK	TH-42PH9UK	TH-37PH9UK	TH-42PS9UK
DISPLAY				
Screen Size (Diagonal)	50-inch	42-inch	37-inch	42-inch
Aspect Ratio	16:9	16:9	16:9	16:9
Effective Display Area (W x H)	43.5" x 24.5" (1,106 x 622 mm)	36.2" x 20.4" (920 x 518 mm)	32.2" x 18.1" (818 x 461 mm)	36.2" x 20.4" (920 x 518 mm)
Resolution (H x V)	1,366 x 768 pixels	1,024 x 768 pixels	1,024 x 720 pixels	852 x 480 pixels
Pixel Pitch (H x V)	0.810 x 0.810 mm	0.900 x 0.675 mm	0.800 x 0.635 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, SVGA	VGA
	SXGA, UXGA... (Compressed)	SXGA, UXGA... (Compressed)	XGA, 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; Analog 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	CVBS In (BNC x 1, Composite), Audio In (RCA pin jack x 2); S-Video In (S-Video x 1), Audio In (L/R) (RCA pic jack x 2)	Vacant
Slot2	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)		Component In (BNC x 3, Analog RGB/Component), Audio In (L/R) (RCA pin jack x 2)	CVBS In (BNC x 1, Composite), Audio In (RCA pin jack x 2); S-Video In (S-Video x 1), Audio In (L/R) (RCA pic jack x 2)
Slot3	Component In (BNC x 3, Analog RGB/Component), Audio In (L/R) (RCA pin jack x 2)		—	Component In (BNC x 3, Analog RGB/Component), Audio In (L/R) (RCA pin jack x 2)
ELECTRICAL				
Power Requirements	120 V AC, 50 Hz/60 Hz	120 V AC, 50 Hz/60 Hz	120 V AC, 50 Hz/60 Hz	120 V AC, 50 Hz/60 Hz
Power Consumption	460 W	345 W	300 W	290 W
Power off condition	0.1 W	0.1 W	0.1 W	0.1 W
Stand-by condition	Save Off: 0.5 W, Save On: 0.3 W	Save Off: 0.6 W, Save On: 0.4 W	Save Off: 0.6 W, Save On: 0.4 W	Save Off: 0.6 W, Save On: 0.4 W
SOUND				
Audio Output	16 W [8 W + 8 W] (10 % THD)			
MECHANICAL				
Dimensions (W x H x D[*2])	47.6" x 28.5" x 3.7" (1,210 x 724 x 95 mm)	40.2" x 24.0" x 3.5" (1,020 x 610 x 89 mm)	36.2" x 21.7" x 3.5" (920 x 550 x 89 mm)	40.2" x 24.0" x 3.5" (1,020 x 610 x 89 mm)
Weight (approx.)	81.6 lbs. (37.0 kg)	59.5 lbs. (27.0 kg)	50.6 lbs. (23.0 kg)	57.3 lbs. (26.0 kg)
OPERATING ENVIRONMENT				
Temperature	32°F — 104°F (0°C — 40°C)			
Humidity	20% — 80% (Non condensation)			
Altitude	0 — 9,100 feet (0 — 2,800 m)			0 — 9,800 feet (0 — 3,000 m)
EMI REGULATIONS				
	FCC Part 15 Class-B, ICES-003			
SAFETY STANDARDS				
	UL6500 Ver. 2			

[*1]: Measured at 100 lux.
[*2]: Exclusive of protruding portion

Hospitality Plasma Models Also Available

TH-42PR9U
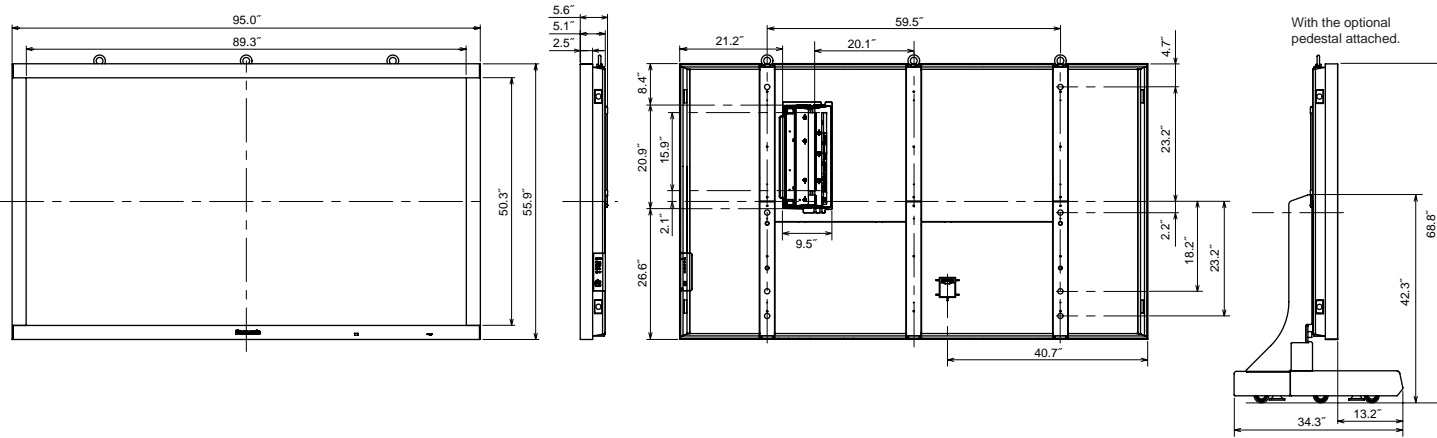42-inch HD model

TH-42PG9U
42-inch SD model

TH-37PR9U
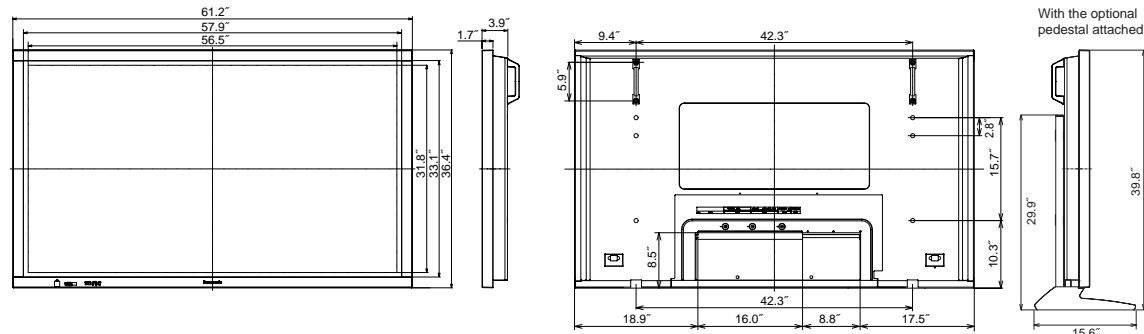37-inch HD model
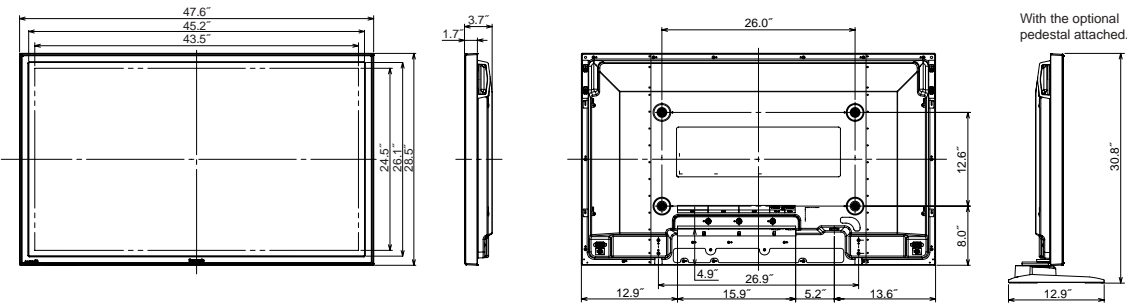
TH-37PG9U
37-inch SD model

Dimensions

(Unit: inch)

TH-103PF9UK

With the optional pedestal attached.
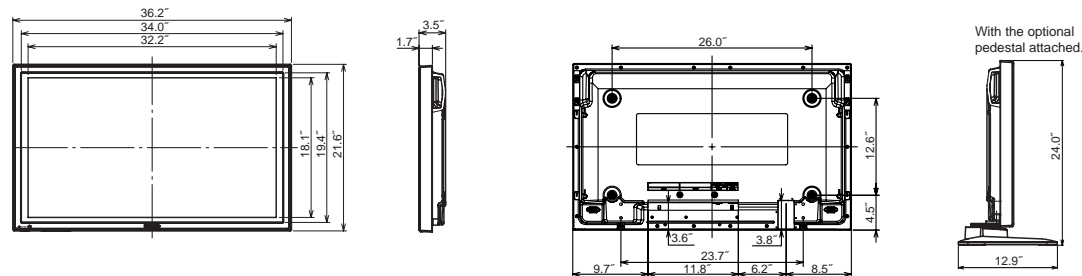
TH-65PF9UK

With the optional pedestal attached.

TH-50PF9UK
TH-50PH9UK

With the optional pedestal attached.

TH-42PH9UK
TH-42PS9UK

With the optional pedestal attached.

TH-37PH9UK

With the optional pedestal attached.
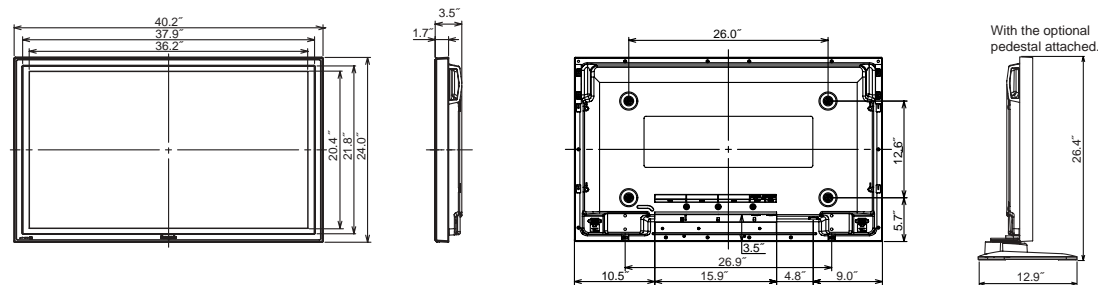
Options

Touch Panel

TY-TP65P8-S (for TH-65PF9UK)
TY-TP50P8-S (for TH-50PF9UK/50PH9UK)
TY-TP42P8-S (for TH-42PH9UK/42PS9UK)

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)	57.3" x 32.0" (1455 x 812 mm)	44.4" x 25.4" (1129 x 645 mm)	37.2" x 20.9" (945 x 531 mm)
Detection range (W x H)	56.7" x 32.0" (1440 x 812 mm)	43.5" x 24.4" (1104 x 620 mm)	36.2" x 20.2" (920 x 513 mm)
Effective detection range	Above detection range + 0.04" (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	0.08" x 0.08" (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	0.16" x 0.16" (4.0 x 4.0 mm)		
Minimum stylus	0.24" x 0.24" (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	62.9" x 37.4" x 2.8" (1598 x 951 x 72 mm)	49.5" x 30.4" x 2.7" (1257 x 773 x 69 mm)	42.2" x 25.9" x 2.7" (1073 x 659 x 69 mm)
Weight (Except bracket)	11.0 lbs. (5.0 kg)	12.8 lbs. (5.8 kg)	11.0 lbs. (5.0 kg)
Escutcheon (frame)	Aluminum	Aluminum, ABS rosin	
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-65PF9UK)
TY-AR50P9W (for TH-50PF9UK/50PH9UK)
TY-AR42P9W (for TH-42PH9UK/42PS9UK)

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

Detachable Stereo Speakers

TY-SP65P7W-K (for TH-65PF9UK)
Configuration: 2-way, 3-speaker
Dimensions (W x H x D): 3.9˝ x 36.4˝ x 3.5˝ (100 x 925 x 90 mm)
Weight: 4.9 lbs. (2.2 kg)/each

TY-SP42P8W-K (for TH-42PH9UK/42PS9UK)
Configuration: 2-way, 3-speaker
Dimensions (W x H x D): 4.2˝ x 24.0˝ x 3.5˝ (107 x 610 x 88 mm)
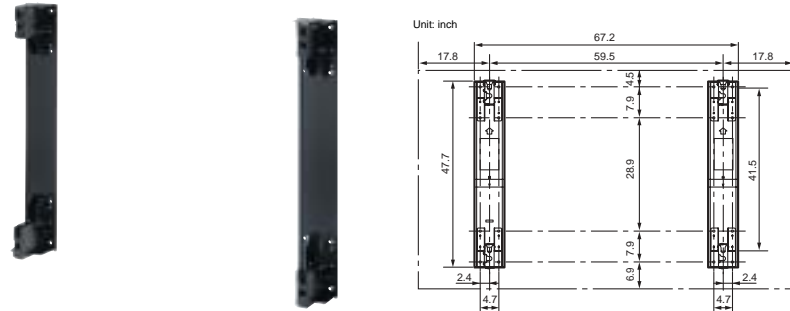Weight: 4.4 lbs. (2.0 kg)/each

TY-SP50P8W-K (for TH-50PF9UK/50PH9UK)
Configuration: 2-way, 3-speaker
Dimensions (W x H x D): 4.2˝ x 28.5˝ x 3.5˝ (107 x 724 x 88 mm)
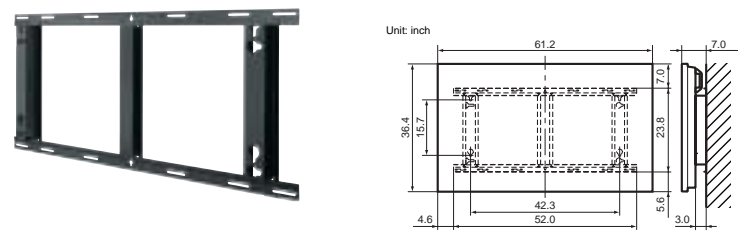Weight: 4.4 lbs. (2.0 kg)/each

TY-SP37P8W-K (for TH-37PH9UK)
Configuration: 2-way, 3-speaker
Dimensions (W x H x D): 4.2˝ x 21.7˝ x 3.5˝ (107 x 550 x 88 mm)
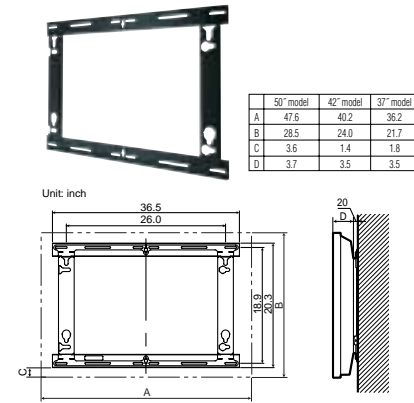Weight: 4.4 lbs. (2.0 kg)/each
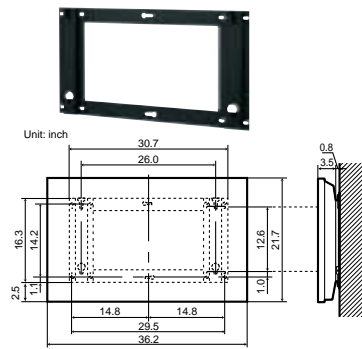
Wall-hanging bracket
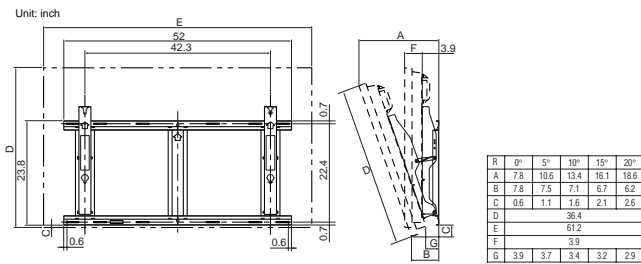
TY-WK103PV9

TY-WK42PV7

Unit: inch

	50″ model	42″ model	37″ model
A	47.6	40.2	36.2
B	28.5	24.0	21.7
C	3.6	1.4	1.8
D	3.7	3.5	3.5

Unit: inch
67.2
17.8 59.5 17.8
47.7 28.9 41.5
2.4 4.7 4.7 2.4
7.9 4.5 7.9 6.9

Unit: inch
36.5
26.0
18.9 20.3
20

TY-WK65PV7

TY-WK37PV3

Unit: inch
61.2 7.0
36.4 15.7 7.0 23.8
4.6 42.3 5.6 3.0
52.0

Unit: inch
30.7
26.0
16.3 14.2 12.6 21.7
14.8 14.8
29.5
36.2
0.8 3.5
1.0

Wall-hanging bracket (angled)

TY-WK65PR8

TY-WK42PR7

TY-WK65PR8 50″ model

R	0°	5°	10°	15°	20°
A	6.1	7.9	9.6	11.2	12.8
B	6.1	5.4	4.7	3.9	3.1
C	6.1	5.4	5.7	6.0	6.1
D			28.5		
E			47.6		
F			3.7		
G	2.4	2.2	1.7	1.0	0.4

42″ model

R	0°	5°	10°	15°	20°
A	5.5	7.4	8.9	10.4	11.8
B	5.5	5.3	4.8	4.2	3.6
C	2.9	3.1	3.5	3.7	4.0
D			24.0		
E			40.2		
F			3.5		
G	2.4	2.0	1.6	1.1	0.7

37″ model

R	0°	5°	10°	15°	20°
A	7.8	10.6	13.4	16.1	18.6
B	7.8	7.5	7.1	6.7	6.2
C	0.6	1.1	1.6	2.1	2.6
D			21.7		
E			36.2		
F			3.9		
G	3.9	3.7	3.4	3.2	2.9

Unit: inch
52
42.3
23.8 22.4
0.6 0.6 0.7

TY-WK42PR7 50″ model

R	0°	5°	10°	15°	20°
A	7.8	10.6	13.4	16.1	18.6
B	5.9	5.4	5.0	4.5	4.0
C	1.7	2.0	2.1	2.2	2.4
D			21.7		
E			36.2		
F			3.5		
G	2.4	2.1	1.8	1.5	1.1

Unit: inch
30.5
26.0
19.3 17.7 0.7
0.6 0.6

Wall-hanging bracket (drawer type)

TY-WK42DR1

Unit: inch
46.8
39.3
36.6
19.3 17.7 12.6
26
0.8

	50″ model	42″ model
A	47.6	40.2
B	28.5	24.0
C	4.4	2.2
D	3.7	3.5

Pedestal

TY-ST103PF9

Unit: inch
16.0
34.3
89.4
59.5
21.0 42.3
17.6

TY-ST65-K

Unit: inch
42.3 2.4 1.4
13.0
13.8 3.2
29.9
46.1 15.5

TY-ST07-K

Unit: inch
27.1 2.7
23.7 12.6
26.9
7.3 2.5
31.7

TY-ST08-K

Unit: inch
14.2 2.8 2.5
12.9
27.7
26.9 (for 50″ & 42″)
23.7 (for 37″)
22.8 2.2
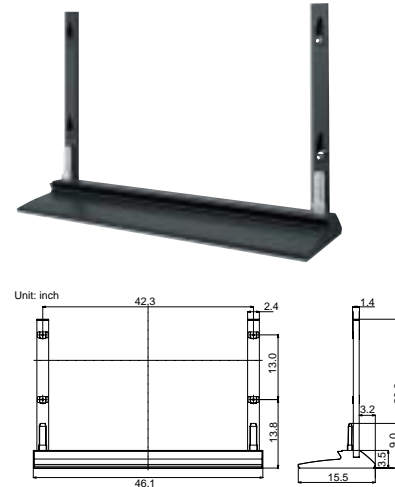
Ceiling-hanging bracket
TY-CE42PS7
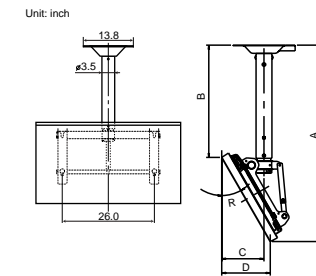
Unit: inch
13.8
ø3.5
26.0

50″ model

	0°			15°			30°		
A	46.7	50.7	54.6	58.6	47.3	51.2	55.2	59.1	46.5	50.4	54.4	58.3
B	18.3	22.3	26.2	30.1	19.9	23.9	27.8	31.7	22.0	25.9	29.8	33.8
C		7.8				9.8				11.3		
D		0				7.3				14.2		

42″ model

	0°			15°			30°		
A	44.5	48.4	52.4	56.3	45.1	49.0	52.9	56.9	44.4	48.4	52.3	56.2
B	20.6	24.5	28.4	32.4	22.1	26.0	29.9	33.9	23.8	27.7	31.7	35.6
C		7.6				9.6				9.9		
D		0				6.2				11.9		

37″ model

	0°			15°			30°		
A	43.3	47.3	51.2	55.1	43.9	47.9	51.8	55.7	43.4	47.4	51.3	55.2
B	21.8	25.7	29.6	33.6	23.2	27.1	31.0	35.0	24.8	28.8	32.7	36.6
C		7.6				8.7				9.3		
D		0				5.6				10.7		

Mobile stand
TY-ST42PF3

Unit: inch
32.3 40.4
13.8 18.7 15.7
40.6 25.6
15°
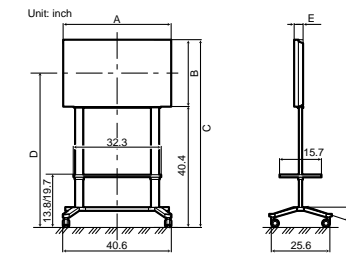
	50″ model	42″ model
A	47.6	40.2
B	28.5	24.0
C	68.9	64.4
D	54.7	52.4
E	3.7	3.5

Compatible Models at a Glance

●: Compatible; —: Not compatible

	TY-ST103PF9	TY-ST65-K	TY-ST07-K	TY-ST08-K	TY-WK103PV9	TY-WK65PV7	TY-WK42PV7	TY-WK37PV3	TY-WK65PR8	TY-WK42PR7	TY-WK42DR1	TY-ST42PF3	TY-CE42PS7
TH-103PF9UK	●	—	—	—	●	—	—	—	—	—	—	—	—
TH-65PF9UK	—	●	—	—	—	●	—	—	●	—	—	—	—
TH-50PF9UK/50PH9UK	—	—	●	●	—	—	●	—	—	●	●	●	●
TH-42PH9UK/42PS9UK	—	—	●	●	—	—	●	—	—	●	●	●	●
TH-37PH9UK	—	—	●	●	—	—	●	●	—	●	—	—	●