F.

Příloha č. 1: Technické listy

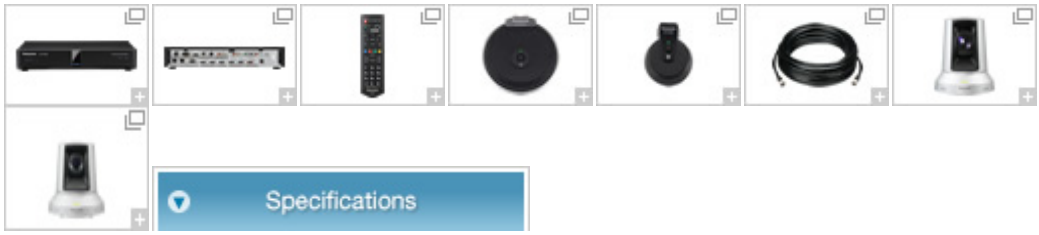
Pro místnost 112:

Pro místnost 105 a 115:

KX-VC1600
Product Information

* Available models differ depending on the country.

KX-VC1600



Specifications

Main Unit		KX-VC1600
Communication Method		SIP, H.323
Video Compression Method		H.261 (mainstream only), H.263, H263+, H.263++ (reception only), H.264 High Profile, H.264 Baseline Profile
Audio Compression Method		G.711 μ-law, A-law (3.4 kHz@64 kbps) G.722 (7.0 kHz@64 kbps) G.722.1 (7.0 kHz@32 kbps) G.722.1 Annex C (14.0 kHz@48 kbps/24 kbps) MPEG-4 AAC-LD Mono (7.0 kHz@32 kbps, 14.0 kHz@64 kbps, 22.0 kHz@96 kbps) MPEG-4 AAC-LD Stereo (14.0 kHz@64 kbps, 22.0 kHz@96 kbps)
Dual Stream	No. of Channels	G.711/G.722/G.722.1/G.722.1 Annex C: 1 MPEG-4 AAC-LD Mono: 1/ MPEG-4 AAC-LD Stereo: 2
Remote Camera Control Method		H.224, H.281 (Zoom/Pan/Tilt/Preset) H.239 (H.323), BFCP (SIP)
Dual Stream	Multi-Monitor	3 displays
Dual Stream	No. of Applicable Resolution Frames	Main: Max. 1080p 30 frames/second, Sub: Max. 1080p 30 frames/second
Encryption		SRTP (AES 128 bit), H.235 (AES 128 bit)

Other		H.460
Communication Bandwidth		256 kbps to 18 Mbps
Video	**Compatible Resolutions*[1]**	176 x 144p, 352 x 240p, 352 x 288p, 512 x 288p, 640 x 480p, 704 x 480p, 704 x 576p, 768 x 432p, 800 x 600p, 1024 x 768p, 1280 x 720p, 1280 x 768p, 1280 x 800p, 1920 x 1080p
	No. of Frames	Max. 60 frames/second (for H.264 1080p)
	Screen Display	Full-screen, Picture in Picture, Picture with Picture, Side by Side
	Audio	Echo canceller, Auto gain control, Stationary noise reduction, Lip synch, Equalizer, Mic mute
I/O Terminals	**Video Input** **Camera*[2]**	HDMI main x 1, HDMI sub x 1 Input resolution: 1280 x 720p, 1920 x 1080i, 1920 x 1080p
	Video Input **PC**	RGB x 1(Mini D-sub 15pin), HDMI x 1*[2] Input resolution: VGA, SVGA, XGA, HD, WXGA, SXGA, FWXGA, WXGA+, WXGA++, UXGA, WSXGA+, Full-HD
	Video Output	HDMI x 2, HDMI x 1 (For own site/recording video), RCA x 1 (Component) Supported output resolutions: 1920 x 1080i, 1920 x 1080p
	Audio Input	Digital Boundary Microphone x 1 (KX-VCA001) Max. 4, Analogue Boundary Microphone x 1 (KX-VCA002) Max. 1, HDMI, Stereo mini-plug*[3] x 1 (ø3.5 mm), RCA (Stereo) x 1
	Audio Output	HDMI*[4], Stereo mini-plug*[3] x 1 (ø3.5 mm), RCA x 1 (Stereo)
	Network	RJ45 x 2 (100BASE-TX Full Duplex)
	External Control	RS-232C x 1 (Also used for maintenance)
	Others	USB 2.0 x 1, Camera Control Terminal x 1 (Not used)
No. of Simultaneous Connection Sites		6 (Expandable up to 10*[5])
Content Sharing		PC (RGB/HDMI), Sub-camera (HDMI sub)
USB Memory		Updating Software Import: Contact List / Profile / Configuration Data / Encryption Data / Start-up Screen / Delivery Tree List Export: Contact List / Profile / Configuration Data / Encryption Data / Delivery Tree List
Network Protocol		TCP/IPv4, TCP/IPv6*[6], UDP/IPv4, UDP/IPv6*[6], DHCP, DNS, HTTP, HTTPS, TELNET, NTP
Network Functions		Packet resending (ARQ), Forward Error Correction (FEC), Adaptive Rate Control (ARC), Reorder, Packet Shaping, Arbitrary Port Setting, NAT Compatibility, Encryption, IP Precedence/DiffServ Support
External Control		Via Web Browser, Control by HTTP CGI, TELNET, RS-

	232C
Connection Modes	IP mode, NAT Traversal Service mode, IP / NAT Traversal Service mode
Dimensions (width x depth x height)	Approx. 320 mm x approx. 230 mm x approx. 61 mm (Excluding projecting parts)
Weight	Approx. 2.0 kg
Power Input	AC 100-240 V, -1.4 A, 50/60 Hz
Power Consumption	Maximum: approx. 45 W, Standby: 0.6 W
DC Power Input	DC 24 V, 2.5 A
Operating Temperature	0 °C to 40 °C
Operating Humidity	10 % to 90 % (non-condensing)

Boundary Microphone (sold separately)	**KX-VCA001**	**KX-VCA002**
Maximum Pickup Range	Approx. 4 m (radius)	Approx. 2 m (radius)
Pickup Method	Stereo / Monaural *[7]	Stereo / Monaural *[8]
Microphone Unit	Unidirectional ECM microphone parts x 4	Unidirectional ECM microphone parts x 2
Number of Connections	Maximum 4 microphones	Maximum 1 microphone
Maximum Input Sound Pressure	110 dBspl	
Number of Terminals for Microphone Connection	2	1
Dimensions	Approx. 120 mm (diameter) x 25 mm	Approx. 75 mm (diameter) x 32 mm
Cable Length	Approx. 8.5 m	Approx. 7 m
Power Input	Supplied from main unit via proprietary cable	
Weight	Approx. 280 g	Approx. 80 g
Operating Temperature	0 °C to 40 °C	
Operating Humidity	10 % to 90 % (non-condensing)	

HD Communication Camera (sold separately)	**GP-VD151**	**GP-VD131**
Effective Pixels	1920 x 1080i, 1920 x 1080p	
Pan / Tilt	Pan: ±100°, Tilt: ±30°	Pan: ±100°, Tilt: ±20°
Zoom (optical/digital)	12x / 10x	3x / 4x
Angle of view (optical zoom)	Horizontal angle of view 56.3 º (Wide end) - 5.1º (Tele end) Vertical angle of view 32.5 º (Wide end) - 2.8º (Tele end) F1.6 (Wide end) - F2.0 (Tele end)	Horizontal angle of view 85º (Wide end) - 30º (Tele end) Vertical angle of view 68.4º (Wide end) - 23.8º (Tele end) F1.2 (Wide end) - F2.0 (Tele end)
Presets	9 positions	
Connection Cable	HDMI	
Dimensions (width x depth x height)	Approx. 150 mm x approx. 148 mm x approx. 177 mm	Approx. 133 mm x approx. 127 mm x approx. 139 mm
Weight	Approx. 1.2 kg	Approx. 0.8 kg
Power Consumption	Power supply voltage:	Power supply voltage:

	12 VDC±10% (with AC adaptor attached) Consumption current: 1.0 A	16 VDC±10% (with AC adaptor attached) Consumption current: 0.6 A
Operating Temperature	0 °C to 40 °C	
Operating Humidity	10 % to 90 % (non-condensing)	

Extension Cable for the Digital Boundary Microphone (sold separately)	**KX-VCAEX01**
Dimensions (diameter x length)	7 mm(cable outer diameter) x 20 m
Weight	1.28 kg
Operating Temperature	0 °C to 40 °C
Operating Humidity	10 % to 90 % (non-condensing)

* When connected to a different brand's device or MCU (Multi-point Control Unit), connection conditions vary depending on the specifications of their devices or MCUs.

*1 Varies due to the settings of the HDVC System and the network condition.
*2 HDCP (High-bandwidth Digital Content Protection system) is not supported.
*3 Dedicated 3-pole stereo mini-plug.
*4 Audio cannot be output simultaneously to HDMI1/HDMI2.
*5 An activation key must be purchased.
*6 Some functions are not supported by IPv6.
*7 If either of the following conditions is met, the output sent to the other party will be stereo; otherwise, monaural:
- The bandwidth is higher than approximately 1.8 Mbps in a 2-party videoconference call with the HDVC Unit using SIP.
- The MIC position is set manually to "Center stereo", or the MIC position is set automatically with the KX-VCA001 connected to the unit without the KX-VCA002 connected.

*8 If either of the following conditions is met, the output sent to the other party will be stereo; otherwise, monaural:
- The bandwidth is higher than approximately 1.8 Mbps in a 2-party videoconference call with the HDVC Unit using SIP.
- KX-VCA001 and KX-VCA002 are not being used together.
- Specification is subject to change without notice.
- Dimensions and weights are approximate.

Preliminary

Panasonic BUSINESS

HD Visual Communications System
KX-VC2000/ KX-VC1600/ KX-VC1300/ KX-VC1000
New Product Introduction

Flexible Videoconferences That Meet Your Needs

Quick decision making and extensive information sharing are essential for today's business. Panasonic HD Visual Communication (HDVC*) System supports them with efficient communication in distance.

* HD Visual Communications System is abbreviated as HDVC hereafter.

HDVC Main Unit

HD Communication Camera, Boundary Microphone, HDMI cable sold separately.

Max. 24 sites

KX-VC2000 NEW

(To be released 4th quarter CY2016)

- Full HD 1080p image quality
- Expandable up to 24 sites connection with optional licence

Max. 10 sites

KX-VC1600

- Full HD 1080p image quality
- Expandable up to 10 sites connection with optional licence

Built-in 4 sites

KX-VC1300

- Full HD 1080p image quality

Point to Point

KX-VC1000 NEW

(To be released 3rd quarter CY2016)

- Full HD 1080p image quality
- Expandable up to 4 sites connection with optional licence (Point to point model)

HDVC Mobile (HDVC Application)

(Windows/iOS/Android™)
*iPhone and iPad supported

Optional Accessories*

*Sold separately

HD Communication Cameras

GP-VD151

GP-VD131

Boundary Microphones

KX-VCA001

KX-VCA002

(Due to product development, details are subject to change without notice.)

Up to 24 sites Multi-Point Connection

New HDVC have a Line-up covering point to point connection and up to 24 sites connection. It can be available for flexible system configuration to meet customers' needs.

Dual Network Connection for company internal and external network

HDVC is ready for connecting both internal and external network. No expensive equipment is required to connect external companies. (Dual Network is available on KX-VC2000/ KX-VC1600.)

Multi-Device stress-free conference

HDVC supports Multi-Device of Windows/iOS/Android™. The generation of packet losses for the HDVC System and HDVC Mobile is prevented by the rate control (AV-QoS), and lost packets are restored by the combined use of the forward error correction and automatic repeat request control.

Multi Monitor Capability

HDVC supports multi-monitors to show PC contents, and other party camera image. The KX-VC2000/ KX-VC1600 supports Triple Monitors that enables even third monitor to show own site image. The KX-VC1300/ KX-VC1000* support Dual Monitors only. * Option must be purchased.

Interoperability with other manufacturers' videoconference units

HDVC supports conventional protocol of H.261/H.263/H.264 as well as H.239 dual stream of PC contents and camera image simultaneous display. This provides existing videoconference user step by step less expensive migration.

Connecting with operating rooms

Real-time videoconferences can be held while viewing images of an ongoing operation on a monitor outside the operating room. This makes it possible to provide advanced treatment methods with some of the participating doctor in location other than the operating room.

3MOS 4K Ultra HD Camera
GP-UH532

Specifications

Main Unit			KX-VC2000 NEW	KX-VC1600	KX-VC1300	KX-VC1000 NEW
Communication Method			SIP, H.323			
Video Compression Method			H.261 (mainstream only), H.263, H263+, H.263++ (reception only), H.264 High Profile, H.264 Baseline Profile			
Audio Compression Method			G.711 μ-law, A-law (3.4 kHz@64 kbps) G.722 (7.0 kHz@64 kbps) G.722.1 (7.0 kHz@32 kbps) G.722.1 Annex C (14.0 kHz@48 kbps/24 kbps) MPEG-4 AAC-LD Mono (7.0 kHz@32 kbps, 14.0 kHz@64 kbps, 22.0 kHz@96 kbps) MPEG-4 AAC-LD Stereo (14.0 kHz@64 kbps, 22.0 kHz@96 kbps)			
	No. of Channels		G.711/G.722/G.722.1/G.722.1 Annex C: 1 MPEG-4 AAC-LD Mono: 1/ MPEG-4 AAC-LD Stereo: 2			
Remote Camera Control			H.224, H.281 (Zoom/Pan/Tilt/Preset)			
Dual Stream	Method		H.239 (H.323), BFCP (SIP)			
	Multi-Monitor		3 displays		2 displays*1	
	No. of Applicable Resolution Frames		Main: Max. 1080p 30 frames/second, Sub: Max. 1080p 30 frames/second			
Encryption			SRTP (AES 128 bit), H.235 (AES 128 bit)			
Other			H.460			
Communication Bandwidth			256 kbps to 18 Mbps			
Video	Compatible Resolutions*2		176 x 144p, 352 x 240p, 352 x 288p, 512 x 288p, 640 x 480p, 704 x 480p, 704 x 576p, 768 x 432p, 800 x 600p, 1024 x 768p, 1280 x 720p, 1280 x 768p, 1280 x 800p, 1920 x 1080p			
	No. of Frames		Max. 60 frames/second (When using H.264 1080p)			
	Screen Display		Full-screen, Picture in Picture, Picture with Picture, Side by Side			
Audio			Echo canceller, Auto gain control, Stationary noise reduction, Lip synch, Equalizer, Mic mute			
I/O Terminals	Video Input	Camera*3	HDMI main x 1, HDMI sub x 1 Input resolution: 1280 x 720p, 1920 x 1080i, 1920 x 1080p			
		PC	RGB x 1 (Mini D-sub 15pin), HDMI x 1*3 Input compatible resolution: VGA, SVGA, XGA, HD, WXGA, SXGA, FWXGA, WXGA+, WXGA++, UXGA, WSXGA+, Full-HD			
	Video Output		HDMI x 2, HDMI x 1 (For own site/recording video) RCA x 1 (Component) Supported output resolutions: 1920 x 1080i, 1920 x 1080p		HDMI x 2*4 Supported output resolutions: 1920 x 1080i, 1920 x 1080p	
	Audio Input		Digital Boundary Microphone x 1 (KX-VCA001) Max. 4, Analogue Boundary Microphone x 1 (KX-VCA002) Max. 1, HDMI, Stereo mini-plug*5 x 1 (ø3.5 mm) RCA, (Stereo) x 1			Analogue Boundary Microphone x 1 (KX-VCA002) Max. 1, HDMI, Stereo mini-plug*5 x 1 (ø3.5 mm), RCA (Stereo) x 1
	Audio Output		HDMI*6, Stereo mini-plug*5 x 1 (ø3.5 mm), RCA x 1 (Stereo)			
	Network		RJ45 x 2 (100BASE-TX Full Duplex)		RJ45 x 1 (100BASE-TX Full Duplex)	
	External Control		RS-232C x 1 (Also used for maintenance)			
	Others		USB 2.0 x 1, Camera Control Terminal x 1 (Not used)			
No. of Simultaneous Connection Sites			24 (Max.) /16 (Default)	10 (Max.) /6 (Default)	4 (Default)	Point to point (Up-gradable to 4)
Content Sharing			PC (RGB/HDMI), Sub video camera (HDMI sub)			
USB Memory			Updating Software Import: Setting Address Book / Profile / Structural Data / Encryption Data / Start-up Screen / Delivery Tree List Export: Address Book / Profiles / Structural Data / Encryption Data / Delivery Tree List			
Network Protocol			TCP/IPv4, TCP/IPv6*7, UDP/IPv4, UDP/IPv6*7, DHCP, DNS, HTTP, HTTPS, TELNET, NTP			
Network Functions			Packet resending (ARQ), Forward Error Correction (FEC), Adaptive Rate Control (ARC), Reorder, Packet Shaping, Arbitrary Port Setting, NAT Compatibility, Encryption, IP Precedence/DiffServ Support			
External Control			Control via web browser/HTTP CGI, TELNET, RS-232C			
Connection Modes			IP mode, NAT Traversal Service, IP/NAT Traversal Service			
Dimensions(width x depth x height) (Unit: mm) *Excluding projecting parts			T.B.D.	Approx. 320 x 230 x 61		
Weight			T.B.D.	Approx. 2.0 kg		
Power Input			T.B.D.	AC 100-240 V,-1.4A, 50/60 Hz		
Power Consumption			T.B.D.	Max.: approx. 45 W, Standby: 0.6 W	Max.: approx. 43 W, Standby: 0.6 W	Max.: approx. 37 W, Standby: 0.6 W
DC Power Input			T.B.D.	DC 24 V, 2.5 A		
Operating Temperature			T.B.D.	0 °C to 40 °C		
Operating Humidity			T.B.D.	10 % to 90 % (non-condensing)		

* When connected to an other brand device or other brand MCU (Multi-point Control Unit), connection conditions vary depending on the specifications of the other brand device or other brand MCU.

*1 KX-VC1000 is necessary an optional license to use.*2 Varies due to the settings of the HDVC System and the network condition. *3 HDCP is not supported. *4 KX-VC1000 is necessary an optional license to use HDMI2. *5 Dedicated 3-pole stereo mini-plug. *6 Audio cannot be output simultaneously to HDMI1/HDMI2. *7 Some functions are not supported by IPv6.

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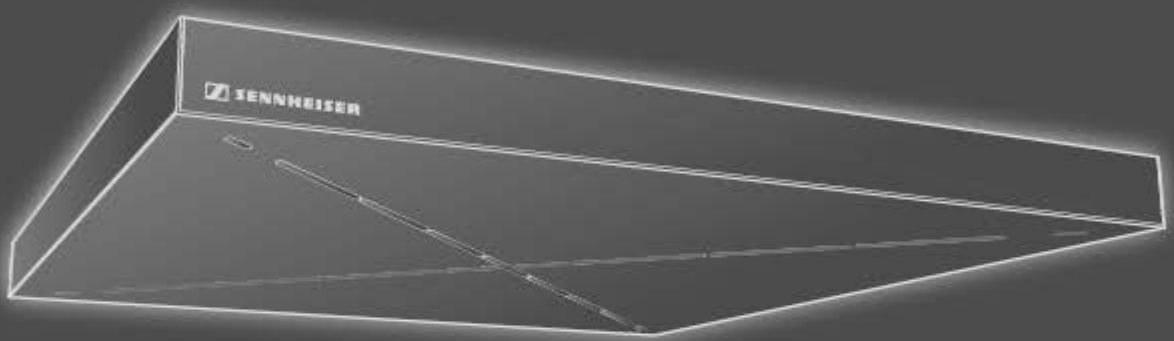
Panasonic

HD Visual Communications System:
http://panasonic.net/psn/products/hdvc/

MG-HDCL028EN

SL Ceiling Mic

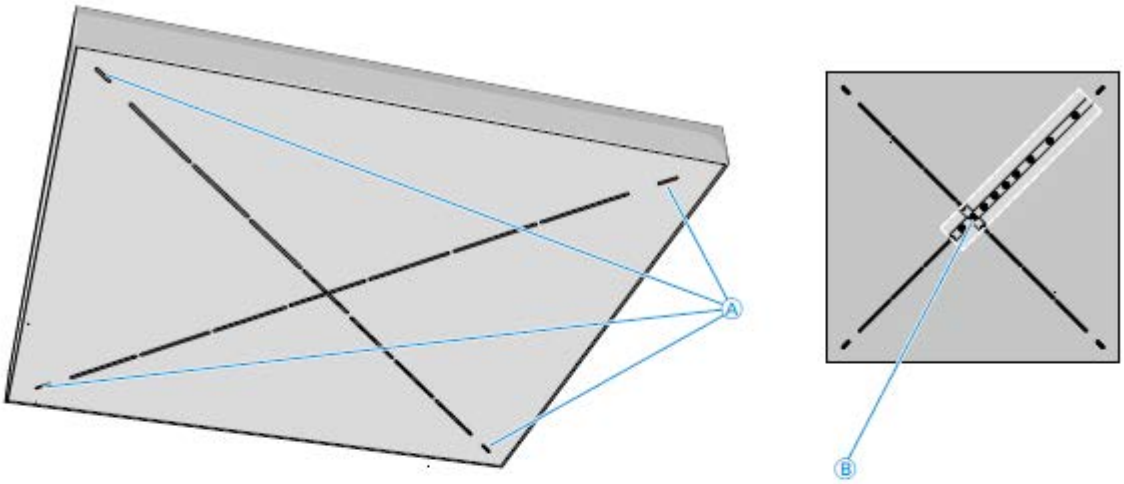


Mounting instructions

SENNHEISER

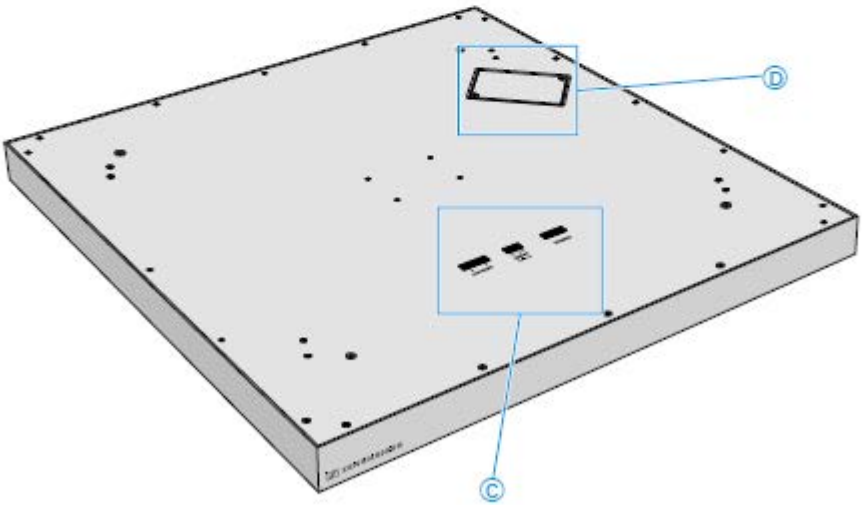
Product overview

Bottom side



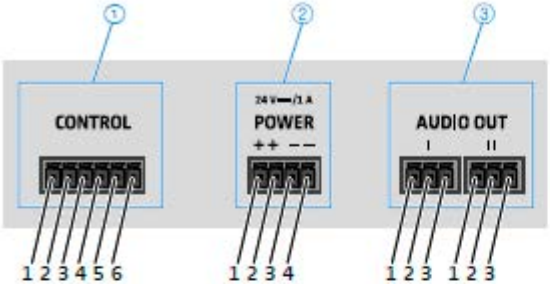
Ⓐ Status LEDs	red	microphone is muted
	blue	microphone is active
	green	analog telephone call is active
Ⓑ Microphone capsules	29x KE 10-237	

Top side



Ⓒ Connecting terminals	for details see next page
Ⓓ Service hatch	for details see next page

Ⓒ Connecting terminals

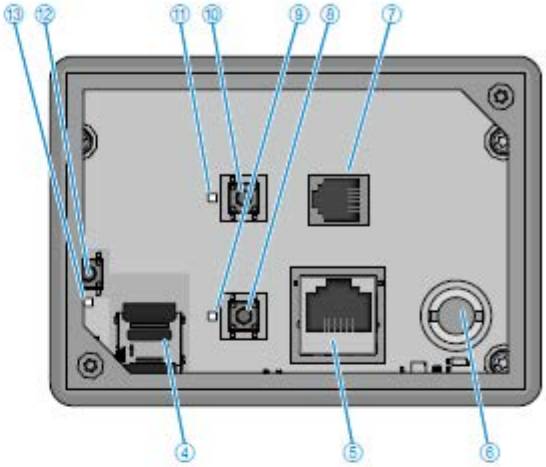


① CONTROL terminal	Logic port for connecting the SL TeamConnect CB1 or a media control system. Pin allocation: 1 +24 V 2 COM 3 On status 4 Hook status 5 Mute status 6 Ground Controls the LED status indication (On/Hook/Status)
② POWER terminal	Power supply 24 V DC Pin allocation: 1 +24 V 2 +24 V 3 Ground 4 Ground
③ AUDIO I and AUDIO II terminals	Parallel audio outputs of the microphone signal Pin allocation: 1 Audio + 2 Audio - 3 Ground

Ⓓ Service hatch

Remove the service hatch by removing the two screws with a Torx screwdriver.

The service hatch must remain closed during operation.



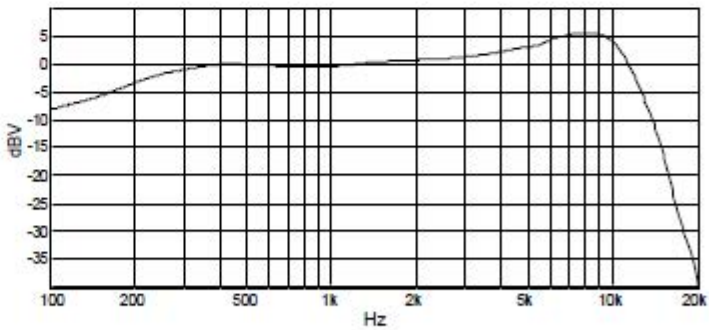
④ SD card slot	⚠ Only for authorized Sennheiser service partner.
⑤ RJ-45 network socket	For connecting a computer for configuring the SL Ceiling Mic.
⑥ BNC socket	⚠ Only for authorized Sennheiser service partner.
⑦ Service socket	⚠ Only for authorized Sennheiser service partner.
⑧ SET button	⚠ Only for authorized Sennheiser service partner.
⑨ SET LED	Flashes when the SL Ceiling Mic is ready for operation.
⑩ IP button	Switches between static IP (192.168.1.10) and integrated DHCP server. The SL Ceiling Mic starts with the static IP.
⑪ IP LED	Lights up for static IP and flashes for DHCP.
⑫ Reset button	Performs a restart of the SL Ceiling Mic.
⑬ Reset LED	Lights up when mains voltage is present.

Specifications

SL Ceiling Mic

Dimensions (L x W x H)	590 x 590 x 43 mm (23.2" x 23.2" x 1.7")
Weight	6 kg (13.2 lbs)
AUDIO I and AUDIO II sockets	2 x 3-pin terminals (fits Phoenix Contact MCVW 1.5-3-ST-3.81)
POWER socket	4-pin terminal (fits Phoenix Contact MCVW 1.5-4-ST-3.81)
CONTROL socket	6-pin terminal (fits Phoenix Contact MCVW 1.5-6-ST-3.81)
Supply voltage	20 – 28 V DC
Power consumption	20 W
Environmental conditions	
Temperature	Operation: 0 – 40 °C (32 – 104 °F) Storage: -10 – 60 °C (14 – 140 °F)
Relative humidity	20 – 95 % non-condensing
Acoustics	
Microphone type	pre-polarized condenser microphone
Sensitivity	-1 dBV/Pa (930 mV/Pa)
Equivalent noise level	20 dB(A)
Number of KE 10-237 microphone capsules	29
Pick-up pattern	Beam pattern
Max. sound pressure level	119 dB SPL
Dynamic range	99 dB(A)

Free field frequency response

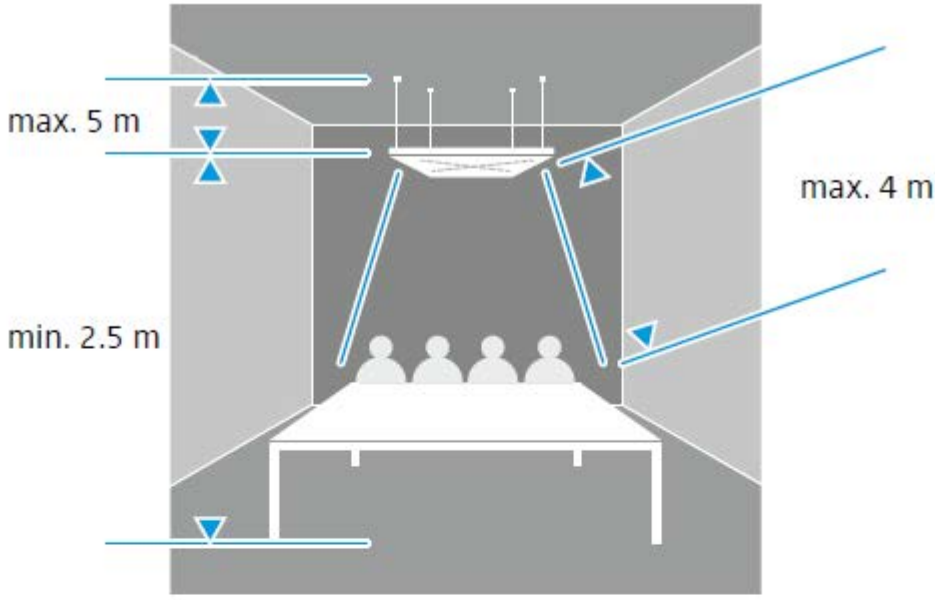


Power supply unit

Output voltage	+24 V DC
Output current	max. 2.2 A
Input voltage	100 – 240 V AC
Input frequency	50/60 Hz
Temperature	Operation: 0 – 40 °C (32 – 104 °F) Storage: -10 – 60 °C (14 – 140 °F)
Relative humidity	20 – 95 % non-condensing

Adjusting the installation height

Observe the recommended height requirements during installation of the SL Ceiling Mic.



The recommended distance between the person speaking and the SL Ceiling Mic should not exceed 4 m. The distance can be adjusted using the steel cables (max. 5 m from the ceiling).

The minimum distance of the SL Ceiling Mic to the floor must be 2.50 m.

Manufacturer declarations

Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product.

For the current warranty conditions, please visit our website at www.sennheiser.com or contact your Sennheiser partner.

In compliance with the following requirements

EU	CE	EN 55022 EN 55024
USA	FC	EMC: FCC Part 15b Safety: UL 60065 UL 2043 Plenum Rated
Canada		CAN ICES-3 (B)/NMB-3(B)

CE Declaration of Conformity

SL Ceiling Mic

- EMC directive (2014/30/EU)
- RoHS directive (2011/65/EU)

Power Supply FW7405M/24

- EMV directive (2014/30/EU)
- RoHS directive (2011/65/EU)
- Low voltage directive (2014/35/EU)
- ErP directive (2009/125/EC)

The declarations are available on the product page at www.sennheiser.com.

Statements regarding FCC and Industry Canada

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3 (B)/NMB-3(B):
This Class B digital apparatus complies with the Canadian ICES-003.

Changes or modifications not expressly approved by Sennheiser electronic Corp. could void the user's authority to operate the equipment.

Trademarks

Sennheiser is a registered trademark of Sennheiser electronic GmbH & Co. KG.

Other company, product, or service names mentioned in this instruction manual may be the trademarks, service marks, or registered trademarks of their respective owners.

Panasonic

LFE8 Series

65-inch class TH-65LFE8
55-inch class TH-55LFE8
48-inch class TH-48LFE8
43-inch class TH-43LFE8

Stylish LFE8 Professional Displays Hit the Cost-to-Performance Sweet Spot

Slim & Stylish

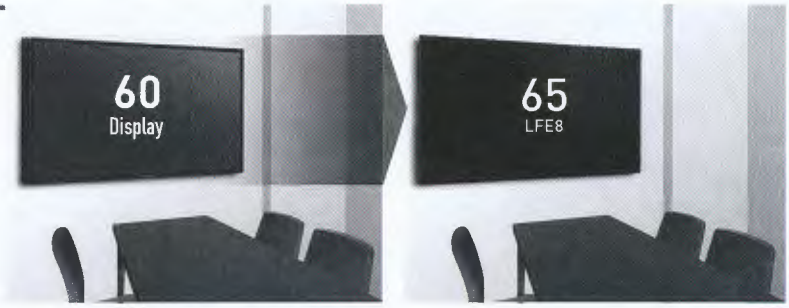
Slim Design Offers Excellent Visibility

Installs in Just About Any Space

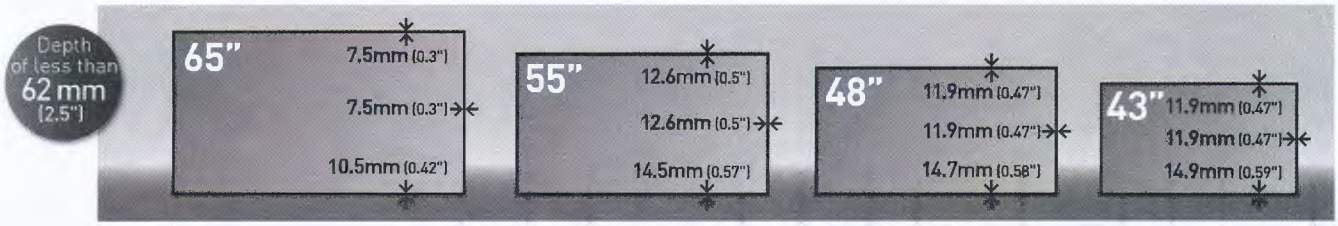
This slim design allows effective space utilization in stores, showrooms and conference rooms. With a depth of less than 62 mm, it is also not oppressive when mounted on a wall. Available in four sizes: 65, 55, 48, and 43 inches.

The Slim Bezel Enhances Viewing and Replacement

The bezel is about the same width all around the perimeter. On the 65-inch model, the bezel is only 7.5 mm (0.3") wide on the top and both sides, and 10.5 mm (0.41") on the bottom. This slim bezel design helps viewers concentrate on the screen image. In addition, when replacing, for example, a 60-inch PDP TV, a larger, 65-inch model can fit into almost the same space.



* Compared with the previous 60-inch model.



	TH-65LFE8	TH-55LFE8	TH-48LFE8	TH-43LFE8
Screen Size	65-inch	55-inch	48-inch	43-inch
Panel Type	VA Panel/E-LED	IPS Panel/D-LED	VA Panel/D-LED	
Power Consumption	160 W	170 W	150 W	135 W
Dimensions (W x H x D)	1451 x 829 x 62 mm (57.2" x 32.7" x 2.5")	1239 x 712 x 62 mm (48.8"x 28.0"x 2.5")	1082 x 624 x 62 mm (42.6"x 24.6"x 2.5")	969 x 560 x 61 mm (38.2" x 22.1" x 2.4")
Orientation	Landscape/Portrait			

Flexible Operation

Simple Signage Operation with No Set-top Box

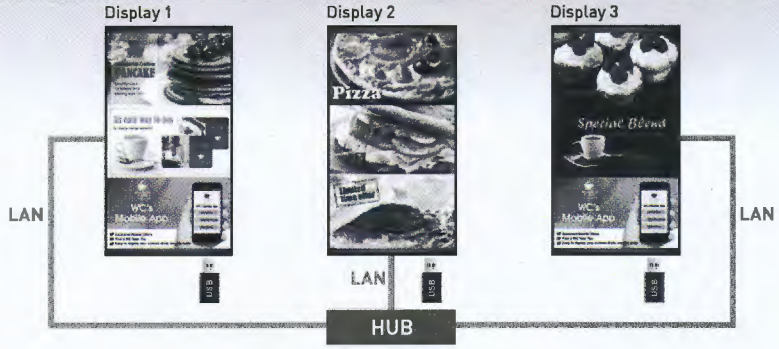
The LFE8 Series features a USB media player. Signage operation is possible by simply inputting the desired content via USB, eliminating the need for a set-top box. Both videos and still images can be displayed, so a wide variety of original signage content can be used.

[Notes]
- The maximum size of file is 2 GB.
- You cannot play the files which are protected by Digital Rights Management (DRM).
- Both an image and the sound choose support form.
- Don't support reproduction of only an audio file.

[Applicable device]
- Devices with security feature are not supported.
- Devices not formatted with FAT16 or FAT32 cannot be used.
- The maximum memory size of USB is 32 GB.

Single Media Player

Multi Media Player



Connecting more than one unit with LAN cable reproduces files in USB memory simultaneously.

Convenient Cloning for Same-size, Multi-display Operation

Menu settings and adjusted values set on a single display can be cloned to other, same-size displays using a USB memory device. This is highly useful for adding and installing a number of displays.

Choose the Installation to Match Your Application

The LFE8 Series is often used vertically for menu boards and town guide displays, and can be mounted in landscape, portrait, or multi-screen configuration. This provides information that is easy to see even in relatively high places inside the store, and increases mounting possibilities.

Portrait

*Tilt 0-20 degrees forward with landscape setting.

Depending on the type of a USB memory device, it may come in contact with the periphery such as a back cover, and cannot be attached. Use a commercially sold extension cable, or use a small type of a USB memory device connectable to this unit

Signage Use

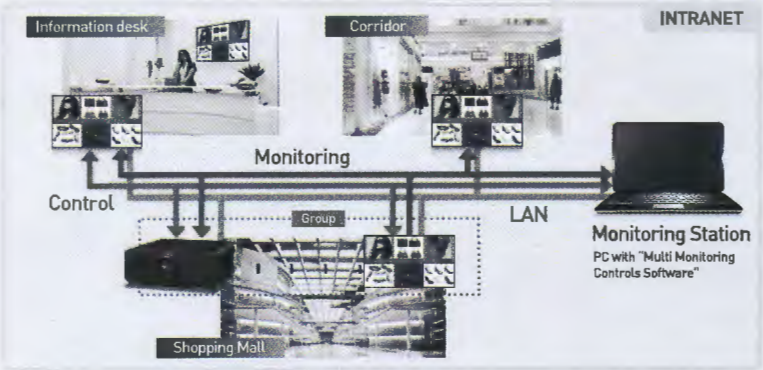
Convenient Functions for Digital Signage Use

In addition to enabling a wide variety of mounting configurations, such as portrait, landscape, and tilting,* the LFE8 Series is equipped with terminals that allow remote operation and control.
This series meets a diversity of needs, from single-unit use in stores to system use in large-scale facilities.

* 0-20 degrees forward with landscape setting.

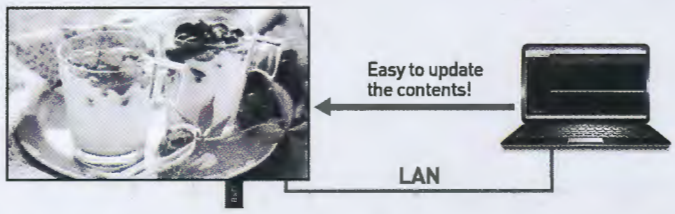
Multi Monitoring & Control Software Compatible

This free Panasonic original software enables you to monitor and control up to 2,048 devices over a LAN network from a single PC. As a monitoring function, the status of multiple devices can be listed in groups, and then detailed information on each devices can be separately displayed. Even more detailed information can be obtained by adding Early Warning Software (paid).As a control function, control commands such as power ON/OFF, input switching and command inputs can be executed, and a schedule function can be used.



Standalone Operation Saves Labor by Making Content Changes Over a Network

Multi Monitoring & Control Software makes it possible to change the content in the USB memory via LAN after installation. Content can be easily changed even when the display is installed in a high place or suspended from the ceiling. This enables smooth, easy operation.



* Depending on the production period, some products doesn't support this function. Please check Multi Monitoring & Control Software page for more information.
http://panasonic.net/prodisplays/download/software/multi/index.html

A LAN Control function for Internet-based control

This function is highly convenient for operating signage for multiple displays. Control is performed from a PC over a LAN network. General-purpose LAN cabling is used, and the PC allows troubleshooting if an error should occur, for immediate response.

Download Software from Global Website : http://panasonic.net/prodisplays/download/software/index.html

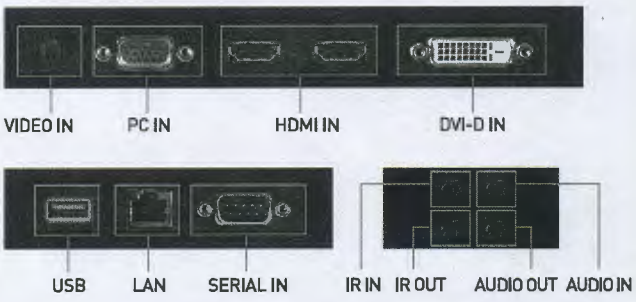
Conference Use

Convenient Functions for Conference Display Use

LFE8 Series models are available in 4 sizes to match the installation space.
They also feature built-in speakers for convenience in videoconferencing.
The narrow bezels help viewers concentrate on the screen image.

Various input terminals meet the needs for professional use

Input terminals (HDMI x 2, DVI-D, VIDEO, PC, USB), Control terminals(SERIAL, LAN, IR) and Audio out are provided to meet a variety of needs for professional use. Versatile input signal compatibility also enables use as a conference monitor.



Increased Signal Support for a Wide Variety of Content

Compared to the LFE7 Series, the number of signals supported by the LFE8 Series has been increased by 25 to provide a total of 59. This lets you display the content of various formats. It also saves labor, not only for signage use, but also for reproducing materials in meeting rooms by eliminating the need to convert materials in advance.

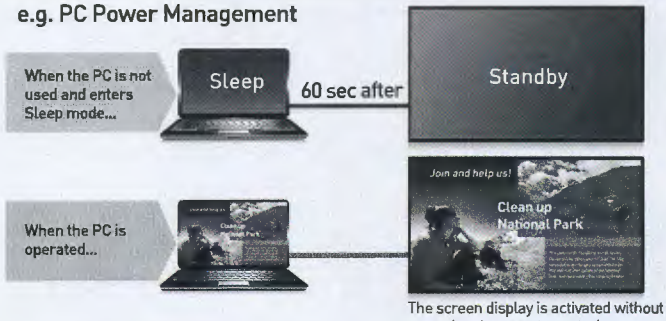
Applicable input signals

Component/Video	PC
18 signals	59 signals
+2 signals	+25 signals

*Compared to the LFE7 Series.

Improving Convenience and Saving Energy with Power Management

The LFE8 Series features HDMI/DVI-D/PC Power Management functions. Once set, the power is automatically turned off if an image (sync signal) is not detected for 60 seconds during a meeting or other application. As soon as the PC is operated again, the power is automatically turned on, so there is no need to switch with the remote control.



The screen display is activated without operating the remote control.

Specifications

Model	TH-65LFE8	TH-55LFE8	TH-48LFE8	TH-43LFE8
Display				
Screen size (diagonal)	65-inch (1638 mm)	55-inch (1387 mm)	48-inch (1209 mm)	43-inch (1079 mm)
Aspect ratio	16:9			
Panel type	VA Panel/E-LED	IPS Panel/D-LED	VA Panel/D-LED	
Effective display area (W x H)	1428 x 803 mm (56.2˝ x 31.6˝)	1209 x 680 mm (47.6˝ x 26.7˝)	1054 x 592 mm (41.4˝ x 23.3˝)	940 x 529 mm (37.0˝ x 20.8˝)
Number of pixels (H x V)	1920 x 1080 pixels			
Brightness (typ.)	350 cd/m²			
Contrast ratio	5000 : 1	1200 : 1	4000 : 1	3000 : 1
Response time	6.5 ms (G to G)	9 ms (G to G)	8 ms (G to G)	6.5 ms (G to G)
Viewing angle (Horizontal/Vertical)	176°/176°(CR≧20)	178°/178°(CR≧20)	178°/178°(CR≧20)	178°/178°(CR≧10)
Connection terminal*1				
VIDEO In	4-pole mini jack (M3) x 1			
HDMI In	HDMI TYPE-A connector x 2 *VIERA LINK is not supported.			
DVI-D In/Audio In (L/R)	DVI-D 24-pin x 1/ stereo mini jack (M3) x 1 (shared with PC In)			
PC In/Audio In (L/R)	Mini D-sub 15-pin x 1/ stereo mini jack (M3) x 1 (shared with DVI-D In)			
USB	USB connector (TYPE A) x 1, DC 5V/1A *USB 3.0 is not supported.			
Control				
Serial	D-sub 9-pin x 1, RS-232C compatible			
LAN	RJ45 x 1, 10 BASE-T/100BASE-TX, compatible with PJLink™			
IR In/Out	Mini jack (M3) x 1 / x 1			
Audio				
Audio Out	Stereo mini jack (M3) x 1			
Built-in speaker	20 W [10 W + 10 W] (10 % THD)			
Electrical				
Power requirements	110–127/220–240 V AC, 50/60 Hz			
Power consumption	160 W	170 W	150 W	135 W
On mode average power consumption*2	115 W	130 W	105 W	95 W
Power off condition	Approx. 0.3 W	Approx. 0.3 W	Approx. 0.3 W	Approx. 0.3 W
Standby condition	Approx. 0.5 W	Approx. 0.5 W	Approx. 0.5 W	Approx. 0.5 W
Mechanical				
Dimensions (W x H x D)	1451 x 829 x 62 mm (57.2˝ x 32.7˝ x 2.5˝)	1239 x 712 x 62 mm (48.8˝ x 28.0˝ x 2.5˝)	1082 x 624 x 62 mm (42.6˝ x 24.6˝ x 2.5˝)	969 x 560 x 61 mm (38.2˝ x 22.1˝ x 2.4˝)
Bezel width	7.5 mm (0.3˝) (L/R/T), 10.5 mm (0.42˝) (B)	12.6 mm (0.5˝) (L/R/T), 14.5 mm (0.57˝) (B)	11.9 mm (0.47˝) (L/R/T), 14.7 mm (0.58˝) (B)	11.9 mm (0.47˝) (L/R/T), 14.9 mm (0.59˝) (B)
Weight	Approx. 36.2 kg (79.9 lbs.)	Approx. 16.0 kg (35.3 lbs.)	Approx. 11.5 kg (25.4 lbs.)	Approx. 8.7 kg (19.2 lbs.)
Wall-hanging pitch	VESA compliant 400 x 400 mm (15.8˝ x 15.8˝)		VESA compliant 200 x 200 mm (7.9˝ x 7.9˝)	
Orientation	Landscape/Portrait			
Tilting angle	0-20 degrees forward with landscape setting*3			
Environment				
Operating environment	Temperature: 0 °C to 40 °C (32 °F to 104 °F)*4 / Humidity: 20–80 % (no condensation)*5			

*1 Due to the terminal block construction, some connection cables and USB memory devices cannot be used. Be sure to check the "CONNECTION TERMINAL" information in the product specification sheet. For more information about product specifications, please visit: http://panasonic.net/prodisplays/download/specsheets02.html

*2 Based on IEC 62087 Ed.2 measurement method. *3 Please contact your sales representative with regard to the tilt angle before installation.

*4 Environmental temperature to use this unit at high altitudes (1400 m (4593 ft) and higher and below 2800 m (9186 ft) above sea level): 0 °C to 35 °C (32 °F to 95 °F)

*5 Depending on the temperature or humidity conditions, uneven brightness may be observed. This is not a malfunction. • This unevenness will disappear while applying current continuously. If not, consult the distributor

Optional Accessories

Pedestal
TY-ST43PE8
(for 43/48/55-inch models)
TY-ST65PE8 (for 65-inch model)

Early Warning Software
ET-SWA100

Other Features

Digital ZOOM
Power on screen delay
Bezel adjustment
1:1 pixel mode
Auto setup
Data Cloning
PC Power management
DVI-D Power management
HDMI Power management
Early Warning Software compatible
Screensaver
Input search
Input lock
Multi Monitoring & Control Software compatible

Panasonic

For the latest information about Panasonic Professional Display, please visit:

Professional Display Global Website: **panasonic.net/prodisplays**
YouTube: **www.youtube.com/PanasonicProDisplay**

All information included here is valid as of April 2016.

CT16-G01PF-LFE
Printed in Japan.

Panasonic

55-inch Class FULL HD LCD Display

TH-55LFE8E

Product specification (design and specification subject to change without notice)

■ DISPLAY PANEL

Screen Size (Diagonal)	55-inch (1387 mm)
Panel type	IPS / Direct-LED
Aspect ratio	16:9
Effective Display Area (W x H)	1209 x 680 mm
Number of pixels (H x V)	1920 x 1080 pixels
Brightness	350 cd/m² (Typ)
Contrast Ratio	1200:1
Response Time	9 ms (G to G)
Viewing Angle (Horizontal / Vertical)	178° / 178° (CR ≧ 20)
Panel Life Time*1	approx. 50000 hours (typ)

*1 When the panel lifetime is at 50% of the brightness under the condition of 25 degrees Celsius (+/- 2 degrees celsius).

■ CONNECTION TERMINAL

VIDEO IN	4-Pole Mini Jack (M3) x 1	1.0 V [p-p] (75 Ω) 0.5 V [rms]
HDMI IN	HDMI Type A Connector x 2 (VIERA LINK is not supported)	Linear PCM (Sampling frequency : 48 kHz/44.1 kHz/32 kHz)
DVI-D IN	DVI-D 24-pin x 1	Compliance with DVI Revision 1.0 Compatible with HDCP 1.1
PC IN	Mini D-Sub 15-pin x 1 (Female)	Y/G : with sync 1.0 V [p-p] (75 Ω) : without sync 0.7 V [p-p] (75 Ω) $P_B/C_B/B$: 0.7 V [p-p] (75 Ω) $P_R/C_R/R$: 0.7 V [p-p] (75 Ω) HD/VD : 1.0 - 5.0 V [p-p] (high impedance)
SERIAL IN	D-sub 9pin x 1, RS-232C Compatible	
LAN	RJ45 x 1 10BASE-T/100BASE-TX, Compatible with PJLink	
IR TRANSMITTER IN / OUT	Mini Jack (M3) x 1 / x 1	
AUDIO IN	Stereo Mini Jack (M3) x 1 (Shared with DVI-D IN and PC IN)	0.5 V [rms]
AUDIO OUT	Stereo Mini Jack (M3) x 1 Variable (- ∞ - 0 dB) (1 kHz 0 dB Input,10 kΩ Load)	0.5 V [rms]
USB	USB 2.0 Type A connector x 1 DC 5 V/1A (USB 3.0 is not supported.)	

*Due to the construction of terminal, some types of connecting cable or USB memory device cannot be used.
Be sure to make confirmation with reference to the detailed drawing of terminal in page 4.

■ AUDIO

Built in Speaker	20 W [10 W +10 W]

■ ELECTRICAL

Power Requirements	220 - 240 V AC 50 Hz/60 Hz
Power Consumption	170 W
On Mode Average Power Consumption*	130 W
Power Off Condition	approx. 0.3 W
Stand-by Condition	approx. 0.5 W
Apparent power	170 (VA)

*Based on IEC 62087 Ed.2 measurement method

■ MECHANICAL

Dimemsions (W x H x D)	1239 x 712 x 62 mm
Weight	approx. 16.0 kg
Bezel Color	Black
Bezel Width	T/R/L:12.6 mm, B:14.5 mm
Carton Dimensions (W x H x D)	1365 x 864 x 185 mm
Gross Weight	approx. 24.0 kg
Cabinet Material / Color	Plastic/Black
Pitch for Wall-Hanging	VESA Compliant 400 x 400 mm (Installed by: M6 screws /Screw hole depth 16 mm)

■ INSTALLATION

Orientation	Landscape / Portrait
Tilting Angle	0 - 20 degrees with landscape setting

*Please contact your sales representative with regard to the tilt angle before installation.

■ ENVIRONMENTAL

Operating Environment	Temperature	: 0℃ to 40℃ *1 : 0℃ to 35℃ *2
	Humidity	: 20% to 80% (No condensation)
	Altitude	: 0 to 2800 m
Storage Enviroment	Temperature	: -20℃ to 60℃
	Humidity	: 20% to 80% (No condensation)

*1 : for up to 1400 m altitude *2 : for between 1400 m and 2800 m altitude

Depending on the temperature or humidity conditions, uneven brightness may be observed. This is not a malfunction.

• This unevenness will disappear while applying current continuously. If not, consult the distributor.

MAIN FEATURE

Digital Zoom	Yes
Multi Display	Yes
Power ON Screen Delay	Yes
1:1 Pixel mode	Yes
Auto setup	Yes
Screen Saver	Yes
PC Power Management	Yes
DVI-D Power Management	Yes
HDMI Power Management	Yes
Input Lock	Yes
Button Lock	Yes
Remote-control User Level	Yes
Input Search	Yes
USB Media Player	Yes
Data Cloning	Yes
Early Warning Software compatible	Yes
Multi Monitoring & Control Software compatible	Yes
Operating Time*	16 h/day

*In case of running for a long time, the moving image is recommended to be displayed. If you display a still picture for an extended period, the image retention might remain on the screen. However, image retention can gradually disappear by displaying movie images.

OPTIONAL ACCESSORIES

Pedestal Stand	TY-ST43PE8

STANDARD (CERTIFICATIONS)

SAFETY REGULATIONS	IEC60950-1
RADIATION REGULATIONS	EN55022:2010 Class A, EN55024:2010,EN61000-3-2 :2006+A1:2009+A2:2009 class D, EN61000-3-3:2013

REMOTE CONTROL TRANSMITTER

Power Requirements	DC 3 V (2 x AAA Size batteries)
Operating distance	approx. 7 m*
Weight	approx. 63 g including batteries
Dimemsions (W x H x D)	44 x 105 x 20.5 mm

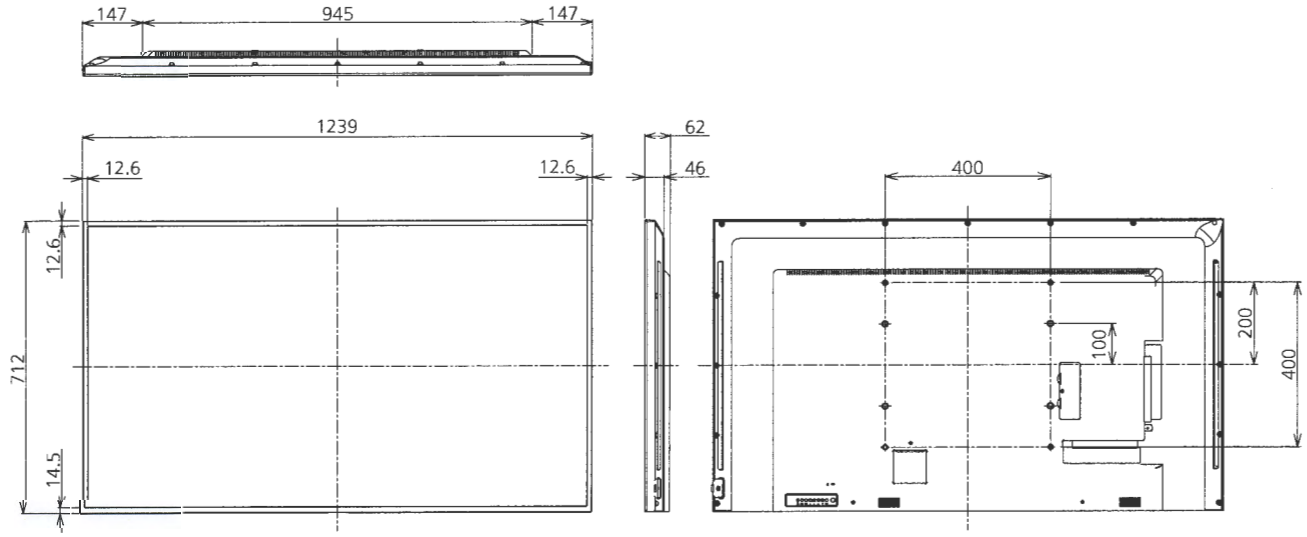
*When operated directly in front of receptor.

INCLUDED ACCESSORIES

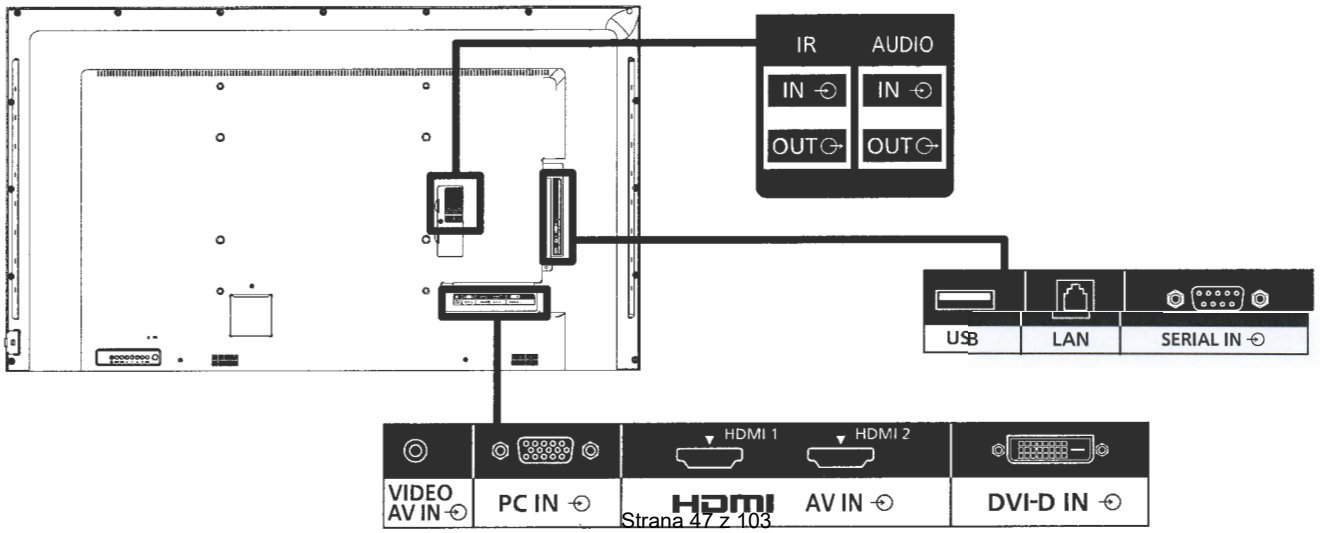
- AC cord (1.8 m) - Remote Control - Batteries (AAA size) x 2
- Clamper x 3 - CD-ROM / User Manual - Operating instruction book

DIMENSIONS

Cautions: This drawing is not a scale
Units : mm



CONNECTION TERMINAL



List of correspondence signals

V : VIDEO D : DVI-D
R : D-sub RGB H : HDMI
Y : YCbCr/YPbPr

The picture signal which can indicate a this machine is as it is the following table.

■ Picture signal form

Correspondence signal	Resolution (dot)	Scan rate		Dot clock rate (MHz)	Input format
		Horizontal (kHz)	Vertical (Hz)		
NTSC/NTSC4.43 / PAL-M/PAL60	720 x 480i	15.73	59.94	-	V
PAL/PAL-N/SECAM	720 x 576i	15.63	50.00	-	V
525i (480i)	720 x 480i	15.73	59.94	13.50	R/Y
625i (576i)	720 x 576i	15.63	50.00	13.50	R/Y
525i (480i)	720 (1440) x 480i*2	15.73	59.94	27.00	D/H
625i (576i)	720 (1440) x 576i*2	15.63	50.00	27.00	D/H
525p (480p)	720 x 480	31.47	59.94	27.00	R/Y/D/H
625p (576p)	720 x 576	31.25	50.00	27.00	R/Y/D/H
750 (720) /60p	1280 x 720	45.00	60.00	74.25	R/Y/D/H
750 (720) /50p	1280 x 720	37.50	50.00	74.25	R/Y/D/H
1125(1080)/60i*1	1920 x 1080i	33.75	60.00	74.25	R/Y/D/H
1125 (1080) /50i	1920 x 1080i	28.13	50.00	74.25	R/Y/D/H
1125 (1080) /24p	1920 x 1080	27.00	24.00	74.25	R/Y/D/H
1125 (1080) /24PsF	1920 x 1080i	27.00	48.00	74.25	R/Y
1125 (1080) /25p	1920 x 1080	28.13	25.00	74.25	R/Y/D/H
1125 (1080) /30p	1920 x 1080	33.75	30.00	74.25	R/Y/D/H
1125 (1080) /60p	1920 x 1080	67.50	60.00	148.50	R/Y/D/H
1125 (1080) /50p	1920 x 1080	56.25	50.00	148.50	R/Y/D/H

■ PC signal form

Correspondence signal	Resolution (dot)	Scan rate		Dot clock rate (MHz)	Input format
		Horizontal (kHz)	Vertical (Hz)		
VESA400	640 x 400	31.47	70.09	25.18	R/Y/D/H
		31.50	85.08	31.50	R/Y/D/H
VGA	640 x 480	31.47	59.94	25.18	R/Y/D/H
		35.00	66.67	30.24	R/Y/D/H
		37.86	72.81	31.50	R/Y/D/H
		37.50	75.00	31.50	R/Y/D/H
		43.27	85.01	36.00	R/Y/D/H
SVGA	800 x 600	35.16	56.25	36.00	R/Y/D/H
		37.88	60.32	40.00	R/Y/D/H
		48.08	72.19	50.00	R/Y/D/H
		46.88	75.00	49.50	R/Y/D/H
		53.67	85.06	56.25	R/Y/D/H
MAC16	832 x 624	49.72	74.55	57.28	R/Y/D/H
852 x 480	852 x 480	31.47	59.94	34.24	D/H
XGA	1024 x 768	39.55	50.00	51.89	D/H
		48.36	60.00	65.00	R/Y/D/H
		56.48	70.07	75.00	R/Y/D/H
		60.02	75.03	78.75	R/Y/D/H
		65.55	81.63	86.00	R/Y/D/H
		68.68	85.00	94.50	R/Y/D/H
WSVGA	1066 x 600	37.64	59.94	53.00	D/H
MXGA	1152 x 864	53.70	60.00	81.62	D/H
		63.99	70.02	94.20	R/Y/D/H
		67.50	75.00	108.00	R/Y/D/H
		77.09	85.00	119.65	R/Y/D/H
MAC21	1152 x 870	68.68	75.06	100.00	R/Y/D/H
1280 x 720	1280 x 720	44.76	60.00	74.48	R/Y/D/H
1280 x 768	1280 x 768	39.55	49.94	65.18	R/Y/D/H
		47.70	60.00	80.14	R/Y/D/H
		47.78	59.87	79.50	R/Y/D/H
1280 x 800	1280 x 800	41.20	50.00	68.56	R/Y/D/H
		49.31	59.91	71.00	R/Y/D/H
		49.70	59.81	83.50	R/Y/D/H
MSXGA	1280 x 960	60.00	60.00	108.00	R/Y/D/H
		85.94	85.00	148.50	R/Y
SXGA	1280 x 1024	63.98	60.02	108.00	R/Y/D/H
		79.98	75.02	135.00	R/Y/D/H
		91.15	85.02	157.50	R/Y/D/H
1360 x 768	1360 x 768	47.71	60.02	85.50	D/H
		47.70	60.00	84.72	D/H
		47.72	59.80	84.75	D/H
1366 x 768	1366 x 768	39.55	50.00	69.92	D/H
		48.39	60.03	86.71	R/Y/D/H
		48.00	60.00	72.00	R/Y/D/H
		39.56	49.89	69.00	R/Y/D/H
		47.71	59.79	85.50	R/Y/D/H
SXGA+	1400 x 1050	65.22	60.00	122.61	D/H
		82.20	75.00	155.85	R/Y/D/H
WXGA+	1440 x 900	55.47	59.90	88.75	R/Y/D/H
		55.92	60.00	106.47	R/Y/D/H
1600 x 900	1600 X 900	46.30	50.00	97.05	D/H
		60.00	60.00	108.00	D/H
		55.99	59.95	118.25	D/H
		55.92	60.00	119.00	D/H
WSXGA+	1680 x 1050	65.29	59.95	146.25	R/Y/D/H
UXGA	1600 x 1200*3	75.00	60.00	162.00	R/Y/D/H
1920 x 1080	1920 x 1080*4	66.59	59.93	138.50	R/Y/D/H
	1920 x 1080	67.50	60.00	148.50	R/Y/D/H
WUXGA	1920 x 1200*3	74.04	59.95	154.00	R/Y/D/H

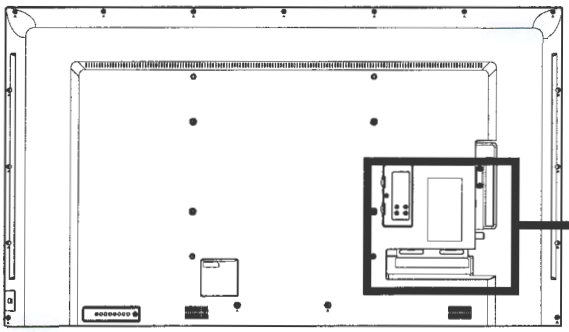
● The signal format distinguished automatically will be sometimes indication different from an actual input signal.

*1: When 1125 (1035) /60i signal is input, it is displayed as 1125 (1080) /60i signal.

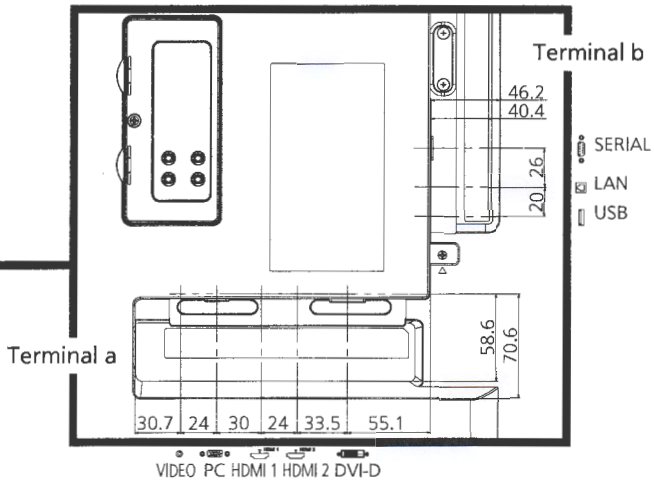
*2: Pixel-Repetition signal (dot clock frequency 27.0 MHz) only

Drawing of terminals

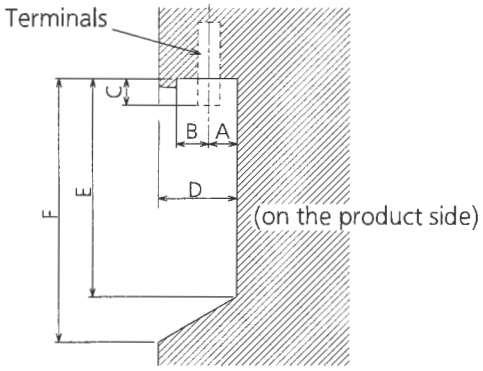
View from back



Magnified figure of terminal



Sectional view of terminal a
(VIDEO/PC/HDMI/DVI)

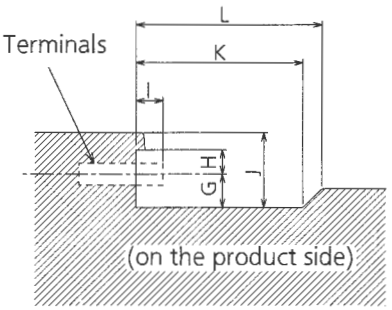


55LFE8E

mm

	VIDEO	PC	HDMI	DVI
A	9.6	9.7	7.6	9.1
B	6.2	6.0	8.3	6.8
C	1.7	5.3	-0.8	5.6
D	19.6			
E	58.6			
F	70.6			

Sectional view of terminal b
(USB/LAN/SERIAL)



55LFE8E

mm

	USB	LAN	SERIAL
G	8.8	11.5	11.0
H	7.7	6.7	5.5
I	-0.8	-0.2	5.3
J	18.8		
K	40.4		
L	46.2		

*Due to the construction of terminal, some types of connecting cable or USB memory device cannot be used.
Be sure to use connecting cable or USB memory device after confirmation in this drawing.

Panasonic
BUSINESS

PT-VZ580 Series

LCD Projectors

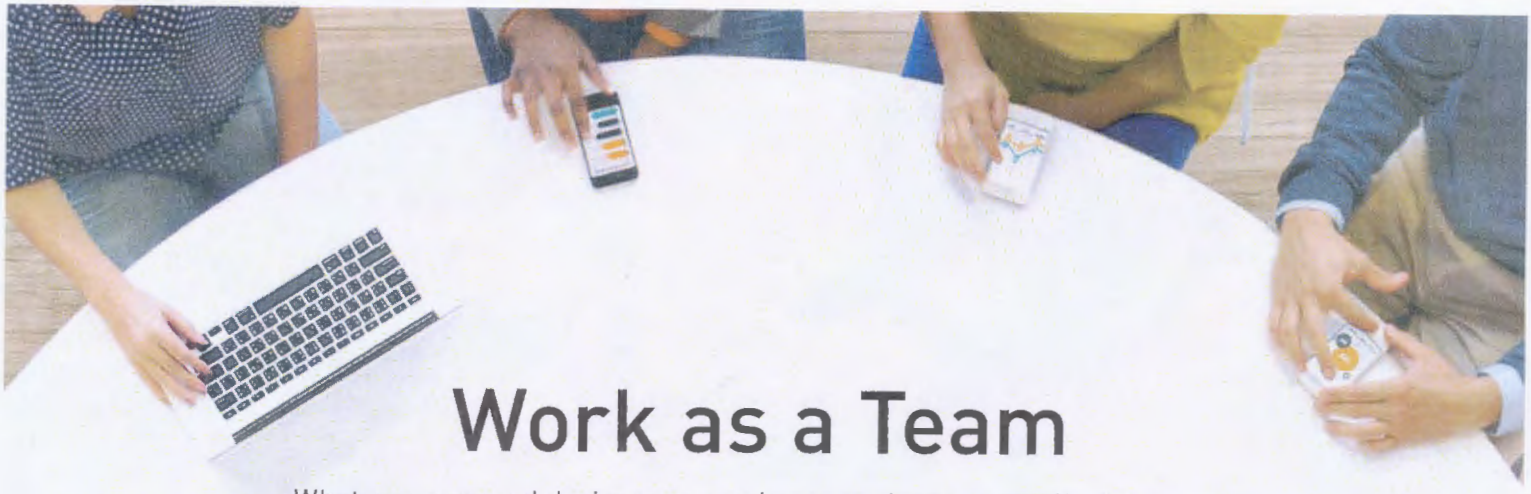
PT-**VZ585**N / PT-**VZ580**
PT-**VW545**N / PT-**VW540**
PT-**VX615**N / PT-**VX610**

PT-**VZ470**

BRIGHT IDEAS MAKE TEAMWORK EASY

Worldwide Olympic Partner

Worldwide Paralympic Partner



Work as a Team

Whatever personal devices you use in spaces large or small, sharing on the big screen is now easier than ever. With wireless and single-cable solutions, Miracast, plug-and-share playback, and apps for smartphone and PC, collaborative presentations are tailored to you.

Note: Features mentioned in this section are supported only with PT-VZ585N/VW545N/VX615N.

Choose Your Connection

The high-powered PT-VZ585N/VW545N/VX615N works comfortably in permanent or portable applications. We include our long-reach DIGITAL LINK single-cable solution and dual-band Wi-Fi for easy content transmission from any device.

Multi-Platform Support

Wireless casting is available for most smart devices, from Mac and Windows® laptops to iOS and Android™ devices. Solutions include free apps and PC software, support for media dongles, plug-and-share application that enables wireless projection with USB memory device pairing with the projector, and more.

Advanced Miracast

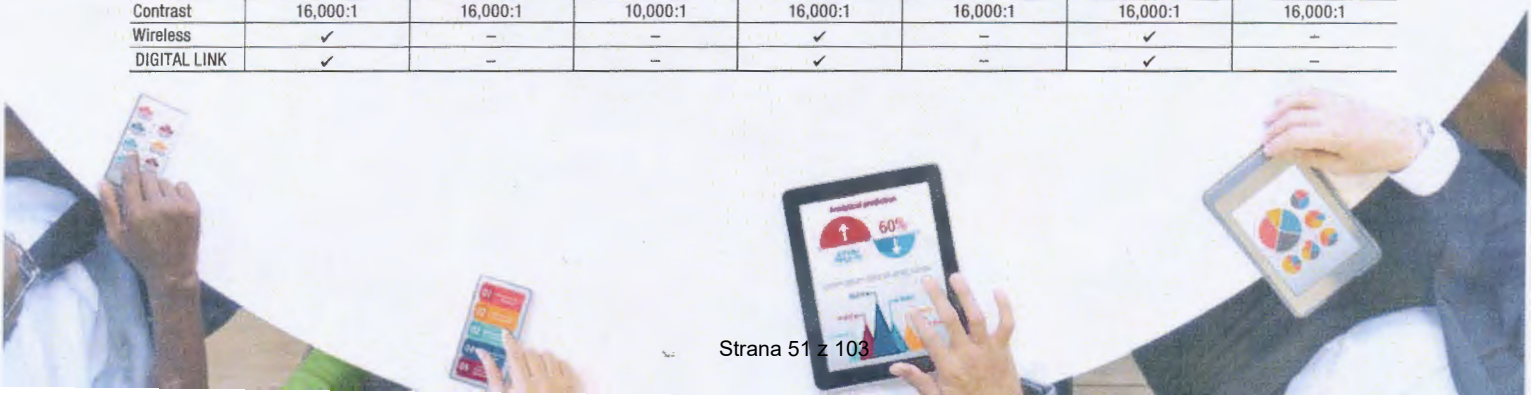
WI-FI CERTIFIED™ Miracast works for both PC and Android, and has cut connection time by a third. Transmit audio, video, still images, and web media at full size. PIN protection and exclusive moderator modes enhance security.

Memory Viewer

What could be simpler than loading your images and video onto a USB memory stick and plugging it in? Do it with the PT-VZ585N/VW545N/VX615N. Wide format support and easy operation assure a professional presentation.

PT-**VZ580** Series LCD Projectors

	PT-VZ585N	PT-VZ580	PT-VZ470	PT-VW545N	PT-VW540	PT-VX615N	PT-VX610
Resolution	WUXGA	WUXGA	WUXGA	WXGA	WXGA	XGA	XGA
Brightness	5,000 lm	5,000 lm	4,400 lm	5,500 lm	5,500 lm	5,500 lm	5,500 lm
Contrast	16,000:1	16,000:1	10,000:1	16,000:1	16,000:1	16,000:1	16,000:1
Wireless	✓	–	–	✓	–	✓	–
DIGITAL LINK	✓	–	–	✓	–	✓	–



Supreme Imaging Power

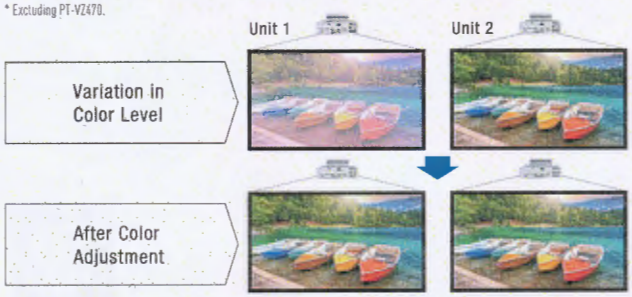
Brilliant High-Quality Pictures

WUXGA (1920 x 1200 pixel) resolution native to the PT-VZ585N/VZ580/VZ470 brings crisp Full HD to meeting spaces and classrooms for immersive viewing. With high brightness of up to 5,500 lm*1, and an increased 16,000:1 contrast ratio*2, your audience is treated to vivid colors, inky blacks, pure highlights, and clearly legible text reproduction.

6-Colors Adjustment and Color Correction Functions*

For the first time in a Panasonic portable, users can correct for slight color variations in the reproduction range of individual units set up for multi-projection. This is particularly useful for side-by-side configurations. Very large images can be seamlessly presented in auditoriums and boardrooms.

* Excluding PT-VZ470.



Efficient Low-Maintenance Design

PT-VZ580 Series projectors are extremely efficient to run. Air filter replacement cycle is a class-leading 7,000 hours, and the unit can be washed and reused twice*3 to minimize waste. Lamp life is also extended to 7,000 hours in ECO2 mode*4, meaning part refreshment can be performed together with filter maintenance to reduce downtime.

Daylight View Basic

Proprietary technology delivers sharp, comfortably viewed images by enhancing fine details, particularly in dark areas of the image, which are normally difficult to see in brightly lit rooms. A built-in sensor measures ambient light while Daylight View Basic adjusts halftone color and brightness to suit ambient illumination.

* With Daylight View Basic set to AUTO mode.

Conventional Projector | Daylight View Basic

Quiet Operation

Technologies combine to keep noise levels down to just 29 dB*5, so the sound of the cooling fan is hardly noticeable. This helps to keep attention focused on the presentation and quiet video scenes.

Flexible Wireless Collaboration

VZ585N | VW545N | VX615N

A Choice of Convenient Wireless Technologies

PT-VZ580 Series models with "N" designation include network capabilities to facilitate casting from iOS and Android™ devices, as well as from Windows® and Mac computers, with fast 3-step connection and wide media support.

Wi-Fi CERTIFIED™ Miracast

(PT-VZ585N/VW545N/VX615N Only)

Windows® | Android™

Supported on Windows® PCs and Android™ devices, Miracast is a convenient low-latency protocol that provides high-bandwidth mirroring of video, stills, and web content with fast connection and a range of exclusive security features.

Full-screen Wireless Playback

Miracast supports stutter-free audio and Full HD video transmission from device to projector screen at 1:1.

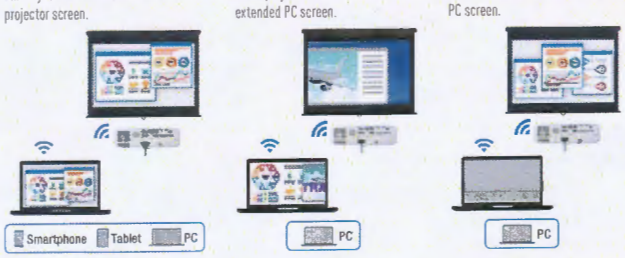
Supports Multiple Display Modes

Easily control how content on your device is displayed on the big screen by selecting the appropriate mode.

Duplicate Mode
Mirror your device's screen on the projector screen.

Extend Mode
Use a projection surface as an extended PC screen.

Second Screen Only
Make the projector screen your PC screen.



Failsafe Transmission

To ensure confidential information isn't mistakenly transmitted to another display, users can enter a PIN code before casting media via Miracast.

Performance Improvements

Compared to Miracast on legacy PT-VZ570 Series projectors, connection time has been cut by about a third, and connectivity ratio increased by almost half.

Selectable Channels

Selectable 5 GHz/2.4 GHz channels are offered to provide a stable connection in rooms with network congestion or radio interference.

Moderator Mode and Cut-In Function

(PT-VZ585N/VW545N/VX615N Only)

Windows® | Android™

Three modes allow the meeting chair to choose which participants' devices may display content or present content uninterrupted over Miracast. Interactive mode enables open chairing.

EXCLUSIVE
One device connected to prevent interruptions to solo presentations.

INTERACTIVE
Up to 10 users can project at any time for open collaboration.

MODERATED
Chairperson controls media display permission for up to 10 participants.

*1 For PT-VW545N/VW540/VX615N/VX615, PT-VZ585N/VZ580 features 5,000 lm and PT-VZ470 features 4,400 lm of brightness. *2 Excluding PT-VZ470. PT-VZ470 features 10,000:1 contrast ratio. *3 Filter replacement cycle is calculated based on time when projector's built-in sensor detects clogging and powers projector down. Please follow the procedures listed in the operating instructions when washing the filter with water. Replacement is recommended after filter has been washed and reused twice, or if filter is not sufficiently clean after washing. Filter replacement cycle is a guideline and may be reduced depending on environmental conditions. PT-VZ470's filter cannot be washed with water. *4 Maximum value with Lamp Mode set to ECO2. 5,000 hours in Normal Mode and 6,000 hours in ECO1 Mode. Lamp replacement cycle is a guideline and may be reduced depending on environmental conditions. *5 With Lamp Mode set to ECO2. 37 dB in Normal Mode and 35 dB in ECO1 Mode.

Universal Device Support with Panasonic Apps (PT-VZ585N/VW545N/VX615N Only)

Panasonic offers free applications for smartphone, tablet, and personal computer that enable fast 3-step connection to get your media on the big screen without fuss. Further, a new plug-and-share feature allows your to cast from PC without software or driver installation.

Plug and Share

Windows® Mac OS

Insert a USB memory device into the projector port. In less than a minute, configuration setting files and an application are copied. Plug the USB memory device into your PC, click the player icon, and transmit video and stills wirelessly to the projector—no software or network setup required.

Wireless Manager ME 6.4

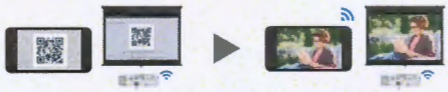
Windows® Mac OS

Included Panasonic Wireless Manager software for Mac and Windows® PC lets you cast media from the screen of your computer via wireless LAN with a host of display options right at your fingertips.

Wireless Projector Apps

Android™ iOS

Dedicated apps for iOS and Android™ devices feature simple 3-step initial connection and support a variety of media and business document transmission. These apps also allow SSID and key information to be easily obtained via a projected QR Code, again saving on setup time.



Multi-Projector Mode*

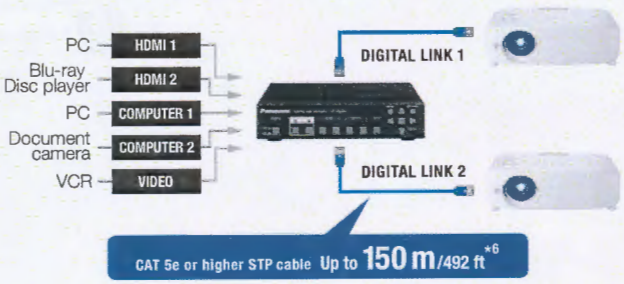
Windows® Mac OS

Applications for PC, iOS, Android, and the optional Easy Wireless Stick*8 dongle support Multi-Projector Mode. This function enables media display from up to 16 different devices in split-screen configuration. You can also transmit content from one PC to up to eight projectors or displays.

* The number of windows that can be projected simultaneously varies depending on application used. Please refer to operating instructions for the application.

Single-Cable DIGITAL LINK Connection (PT-VZ585N/VW545N/VX615N Only)

DIGITAL LINK transmits uncompressed video, audio, and control commands through a single CAT 5e or higher STP cable for distances of up to 150 m (492 ft)*6 in Long Reach Mode. Optional DIGITAL LINK Switcher or Digital Interface Box reduces cabling and associated costs by connecting multiple source devices and transmitting signals to the projector via a single cable.



Memory Viewer (PT-VZ585N/VW545N/VX615N Only)

You don't need a computer to start presenting—just insert a USB memory device containing media and start projecting straight away. This includes Full HD video as well as still images. A simple Graphical User Interface (GUI) assures a smooth and stress-free presentation.

Supports IEEE802.1X Protocol (PT-VZ585N/VW545N/VX615N Only)

Only authenticated users can connect to the IEEE802.1X network (EAP*7 over LAN), preventing access by unauthorized users. PT-VZ580 Series projectors are compatible with IEEE802.1X protocol over wired or wireless LAN.

Easy Wireless Stick*8 (PT-VZ585N/VW545N/VX615N Only)

Windows® Mac OS

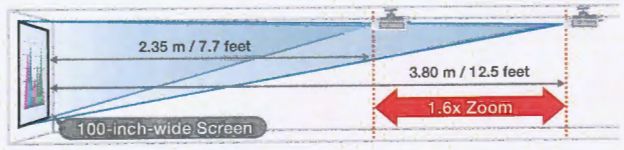
ET-UW100 (Option)

Supporting a full suite of features and eliminating the need for software installation, the Easy Wireless Stick dongle lets you plug and project from PC instantly. After one-time initial setup, projection is automatic, and the device will display images from up to 16 computers at once, and is compatible with Windows® 10.

Stress-free Installation

1.6x Zoom Lens and Lens Shift Function

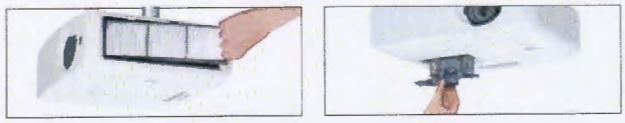
Zoom lens allows you to project from wide range of distances from tabletops or ceiling. Use vertical lens shift to quickly adjust image position without distortion.



* 40 % for PT-VX615N/VX610.
Note: Diagram for PT-VZ585N/VZ580 shown.

Quick Lamp and Filter Replacement

To reduce hassle, the filter can be replaced via the side and the lamp from the top of the projector. There's no need to remove the unit from its ceiling mount for periodic maintenance.



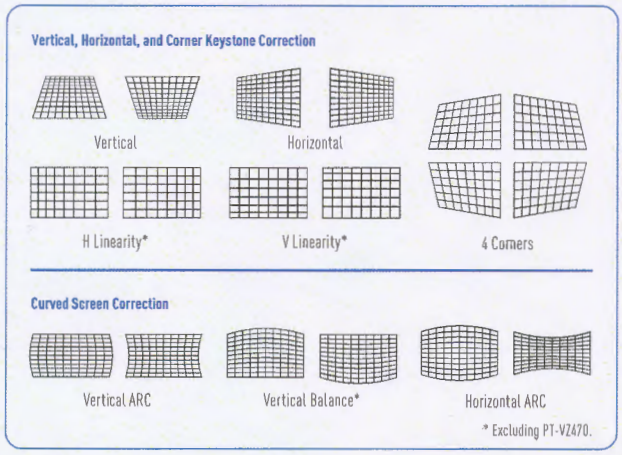
Auto Screen Image Rotation

Images are automatically*9 rotated depending on installation orientation—upside down on the ceiling or set on a table—using a built-in angle sensor.

*6 150 m (492 ft) transmission available only with ET-YFB200G DIGITAL LINK Switcher in Long Reach Mode for signals up to 1080p. *7 EAP: Extensible Authentication Protocol. *8 Availability of the ET-UW100 Easy Wireless Stick varies depending on country. *9 Manual setting also available via setup menu.

Horizontal, Vertical, and Corner Keystone Correction

Horizontal, vertical, and corner keystone correction adjusts the image shape for clear visibility when projecting off-axis or from an unusual angle.



Images can be projected onto curved surfaces.

USB Display Function (PT-VZ585N/VW545N/VX615N Only)

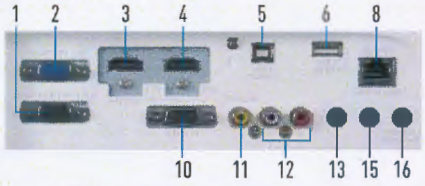
Install Wireless Manager software on your PC, connect computer and projector with a USB cable*10, and Wireless Manager will automatically start up and output media (including audio) to the projector.

Additional Features

- DC OUT Terminal (PT-VZ580/VW540/VX610 Only)
- Direct Power Off
- Built-in 10 W Speaker
- ECO Management Function
- Whiteboard and Blackboard Mode
- Emulation Mode
- Crestron Connected™, AMX DD, and PJLink™ Compatible
- Easy Monitoring and Control Over LAN
- Auto Input Signal Search
- Early Warning Software Compatible (Option)
- Startup Logo Function
- Presentation Support Function
- Audio Standby Mode
- Digital Zoom Function
- Anti-theft Features
- Closed Captioning (NTSC)

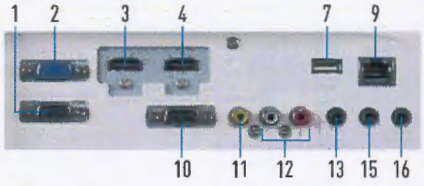
Terminals

PT-VZ585N/VW545N/VX615N



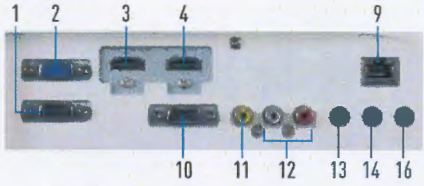
1. COMPUTER 2 IN / 1 OUT terminal
2. COMPUTER 1 IN terminal
3. HDMI 1 IN terminal
4. HDMI 2 IN terminal
5. USB B (DISPLAY) terminal (VZ585N/VW545N/VX615N only)
6. USB A (Viewer) terminal (VZ585N/VW545N/VX615N only)
7. DC OUT (5V 2A) terminal (VZ580/VW540/VX610 only)
8. DIGITAL LINK/LAN terminal (VZ585N/VW545N/VX615N only)

PT-VZ580/VW540/VX610



9. LAN terminal (VZ580/VW540/VX610/VZ470 only)
10. SERIAL IN terminal
11. VIDEO IN terminal
12. AUDIO IN 3 terminal

PT-VZ470



13. AUDIO IN 1 terminal
14. AUDIO IN 2 (MIC IN) terminal (PT-VZ470 only)
15. AUDIO IN 2 terminal (PT-VZ585N/VW545N/VX615N/VZ580/VW540/VX610 only)
16. VARIABLE AUDIO OUT terminal

Projection distance (Unit: meters (feet))

PT-VZ585N / VZ580 / VZ470
(16:10 aspect ratio; throw ratio 1.09–1.77:1, UD ratio 17:1)

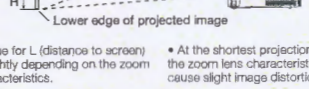
Projection image size	Projection distance (L)				Height from the edge of screen to center of lens (H)	
Diagonal (inch)	min. (wide)		max. (tele)			
30"	0.68	[2.24]	1.12	[3.66]	0.02 – 0.20	[0.07 – 0.66]
40"	0.93	[3.04]	1.51	[4.95]	0.03 – 0.27	[0.10 – 0.89]
50"	1.16	[3.81]	1.89	[6.19]	0.04 – 0.34	[0.12 – 1.10]
60"	1.39	[4.58]	2.26	[7.43]	0.04 – 0.40	[0.15 – 1.32]
70"	1.64	[5.38]	2.66	[8.72]	0.05 – 0.47	[0.17 – 1.55]
80"	1.87	[6.14]	3.03	[9.95]	0.06 – 0.54	[0.20 – 1.76]
90"	2.12	[6.94]	3.43	[11.24]	0.07 – 0.61	[0.22 – 1.99]
100"	2.35	[7.71]	3.80	[12.48]	0.07 – 0.67	[0.25 – 2.21]
120"	2.83	[9.28]	4.57	[15.01]	0.09 – 0.81	[0.29 – 2.65]
150"	3.54	[11.62]	5.72	[18.77]	0.11 – 1.01	[0.37 – 3.31]
200"	4.73	[15.52]	7.64	[25.07]	0.15 – 1.35	[0.49 – 4.42]
250"	5.92	[19.43]	9.56	[31.36]	0.19 – 1.68	[0.61 – 5.52]
300"	7.11	[23.33]	11.48	[37.65]	0.22 – 2.02	[0.74 – 6.63]

PT-VW545N / VW540
(16:10 aspect ratio; throw ratio 1.08–1.76:1, UD ratio 17:1)

Projection image size	Projection distance (L)				Height from the edge of screen to center of lens (H)	
Diagonal (inch)	min. (wide)		max. (tele)			
30"	0.68	[2.22]	1.12	[3.66]	0.02 – 0.20	[0.07 – 0.66]
40"	0.92	[3.01]	1.51	[4.94]	0.03 – 0.27	[0.10 – 0.89]
50"	1.15	[3.77]	1.88	[6.18]	0.04 – 0.34	[0.12 – 1.10]
60"	1.38	[4.53]	2.26	[7.41]	0.04 – 0.40	[0.15 – 1.32]
70"	1.62	[5.33]	2.65	[8.69]	0.05 – 0.47	[0.17 – 1.55]
80"	1.86	[6.09]	3.03	[9.93]	0.06 – 0.54	[0.20 – 1.76]
90"	2.10	[6.88]	3.42	[11.21]	0.07 – 0.61	[0.22 – 1.99]
100"	2.33	[7.64]	3.79	[12.44]	0.07 – 0.67	[0.25 – 2.21]
120"	2.80	[9.20]	4.56	[14.96]	0.09 – 0.81	[0.29 – 2.65]
150"	3.51	[11.51]	5.70	[18.71]	0.11 – 1.01	[0.37 – 3.31]
200"	4.69	[15.38]	7.61	[24.98]	0.15 – 1.35	[0.49 – 4.42]
250"	5.87	[19.25]	9.52	[31.25]	0.19 – 1.68	[0.61 – 5.52]
300"	7.05	[23.12]	11.43	[37.51]	0.22 – 2.02	[0.74 – 6.63]

PT-VX615N / VX610
(4:3 aspect ratio; throw ratio 1.17–1.90:1, UD ratio 9:1)

Projection image size	Projection distance (L)				Height from the edge of screen to center of lens (H)	
Diagonal (inch)	min. (wide)		max. (tele)			
30"	0.69	[2.26]	1.14	[3.73]	0.05 – 0.23	[0.15 – 0.75]
40"	0.94	[3.07]	1.54	[5.04]	0.06 – 0.31	[0.20 – 1.00]
50"	1.17	[3.85]	1.92	[6.30]	0.08 – 0.38	[0.25 – 1.25]
60"	1.41	[4.62]	2.30	[7.55]	0.09 – 0.46	[0.30 – 1.50]
70"	1.65	[5.43]	2.70	[8.86]	0.11 – 0.53	[0.35 – 1.75]
80"	1.89	[6.20]	3.08	[10.12]	0.12 – 0.61	[0.40 – 2.00]
90"	2.14	[7.01]	3.48	[11.42]	0.14 – 0.69	[0.45 – 2.25]
100"	2.37	[7.79]	3.87	[12.68]	0.15 – 0.76	[0.50 – 2.50]
120"	2.86	[9.37]	4.65	[15.24]	0.18 – 0.92	[0.60 – 3.00]
150"	3.58	[11.73]	5.81	[19.07]	0.23 – 1.14	[0.75 – 3.75]
200"	4.78	[15.67]	7.76	[25.45]	0.30 – 1.52	[1.00 – 5.00]
250"	5.98	[19.61]	9.70	[31.84]	0.38 – 1.91	[1.25 – 6.25]
300"	7.18	[23.56]	11.65	[38.22]	0.46 – 2.29	[1.50 – 7.50]



- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics.
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

Optional accessories

ET-PKL100H
Ceiling Mount Bracket for High Ceilings

ET-PKL100S
Ceiling Mount Bracket for Low Ceilings

ET-LAV400
Replacement Lamp Unit

ET-UW100*8
Easy Wireless Stick

ET-PKV400B
Projector Mount Bracket

ET-RFV410
Replacement Filter Unit
(For PT-VZ585N/VZ580/VW545N/VW540/VX615N/VX610)

ET-RFV400
Replacement Filter Unit
(For PT-VZ470)

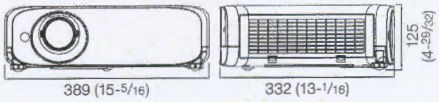
ET-SWA100 Series
Early Warning Software

ET-YFB200G
DIGITAL LINK Switcher

ET-YFB100G
Digital Interface Box

Dimensions

Unit: mm (inches)



*10 One-time USB driver installation is required upon initial USB cable connection. Supports Windows® PC only. Function is not available on Windows® 10.

Specifications

Model		PT-VZ585N	PT-VZ580	PT-VZ470*1	PT-VW545N	PT-VW540	PT-VX615N	PT-VX610
Power supply		AC 120 V, 50/60 Hz (North America), AC 110 V, 60 Hz (Taiwan), AC 100–240 V, 50/60 Hz (other countries)						
Power consumption		400 W (North America), 410 W (other countries)		372 W (North America), 378 W (other countries)	385 W (North America), 400 W (other countries)			
Standby power consumption	Standby Mode (Eco)*2	0.3 W (North America, Taiwan), 0.5 W (other countries)		0.2 W (North America), 0.4 W (other countries)	0.3 W (North America, Taiwan), 0.5 W (other countries)			
	Standby Mode (Normal)	14 W	8 W	8 W	14 W	8 W	14 W	8 W
LCD panel	Panel size	0.64 inches (1.63 cm) (16:10 aspect ratio)					0.63 inches (1.60 cm) (4:3 aspect ratio)	
	Display method	Transparent LCD panel (×3, R/G/B)						
	Pixels	2,304,000 (1920 × 1200) × 3, total of 6,912,000 pixels			1,024,000 (1280 × 800) × 3, total of 3,072,000 pixels		786,432 (1024 × 768) × 3, total of 2,359,296 pixels	
Lens		1.6x manual zoom (throw ratio: 1.09–1.77:1), manual focus F 1.60–2.12, f 15.30–24.64 mm			1.6x manual zoom (throw ratio: 1.08–1.76:1), manual focus F 1.60–1.90, f 15.31–24.64 mm		1.6x manual zoom (throw ratio: 1.17–1.90:1), manual focus F 1.60–1.90, f 15.31–24.64 mm	
Lamp		280 W UHM lamp × 1		270 W UHM lamp × 1	280 W UHM lamp × 1			
Screen size (diagonal)		30–300 inches						
Brightness*3		5,000 lm (input signal: PC, lamp power: Normal, picture mode: Dynamic, Daylight View: OFF, Auto Power Save: OFF)		4,400 lm (input signal: PC, lamp power: Normal, picture mode: Dynamic, Daylight View: OFF, Auto Power Save: OFF)	5,500 lm (input signal: PC, lamp power: Normal, picture mode: Dynamic, Daylight View: OFF, Auto Power Save: OFF)			
Center-to-corner uniformity*3		85 %						
Contrast*3		16,000:1 (all white/all black) (input signal: PC, lamp power: Normal, picture mode: Dynamic, Iris: On, Daylight View: OFF, Auto Power Save: OFF)		10,000:1 (full on/off) (input signal: PC, lamp power: Normal, picture mode: Dynamic, Iris: On, Daylight View: OFF, Auto Power Save: OFF)	16,000:1 (all white/all black) (input signal: PC, lamp power: Normal, picture mode: Dynamic, Iris: On, Daylight View: OFF, Auto Power Save: OFF)			
Resolution		1920 × 1200 pixels			1280 × 800 pixels (Input signals that exceed this resolution will be converted to 1280 × 800 pixels.)		1024 × 768 pixels (Input signals that exceed this resolution will be converted to 1024 × 768 pixels.)	
Scanning frequency	HDMI	480/60i*4, 576/50i*4, 480/60p, 576/50p, 720/60p, 720/50p, 1080/24p, 1080/24sF, 1080/25p, 1080/30p, 1080/60p, 1080/50p, 1080/60i, 1080/50i, Displayable resolution: 640 x 400 to 1920 x 1200 (non-interlace), Dot clock frequency: 25 MHz to 162 MHz						
	RGB (analog)	Displayable resolution: 640 x 400 to 1920 x 1200 (non-interlace), fH: 15 kHz–91 kHz, fV: 24 Hz–100 Hz, dot clock: 162 MHz or lower						
	YPBPR (YCBCR)	fH: 15.73 kHz, fV: 59.94 Hz (480/60i), fH: 15.63 kHz, fV: 50 Hz (576/50i), fH: 31.47 kHz, fV: 59.94 Hz (480/60p), fH: 31.25 kHz, fV: 50 Hz (576/50p), fH: 45.00 kHz, fV: 60 Hz (720/60p), fH: 37.50 kHz, fV: 50 Hz (720/50p), fH: 27.00 kHz, fV: 24 Hz (1080/24p), fH: 27.00 kHz, fV: 48 Hz (1080/24sF), fH: 28.13 kHz, fV: 25 Hz (1080/25p), fH: 33.75 kHz, fV: 30 Hz (1080/30p), fH: 67.50 kHz, fV: 60 Hz (1080/60p), fH: 56.25 kHz, fV: 50 Hz (1080/50p), fH: 33.75 kHz, fV: 60 Hz (1080/60i), fH: 28.13 kHz, fV: 50 Hz (1080/50i)*, HD/SYNC and VD terminals do not support 3 value SYNC.						
	Video	fH: 15.73 kHz/15.63 kHz, fV: 59.94 Hz/50 Hz (NTSC/NTSC4.43/PAL/PAL60/PAL-N/PAL-M/SECAM)						
Optical axis shift		Vertical 0 to +44 % from center of screen (manual), U/D ratio on top end: 17:1					Vertical 0 to +40 % from center of screen (manual), U/D ratio on top end: 9:1	
Keystone correction range		Vertical: maximum ±25 ° (auto/manual, input: WUXGA), Horizontal: maximum ±30 ° (manual, input: WUXGA)			Vertical: maximum ±35 ° (auto/manual, input: WXGA), Horizontal: maximum ±35 ° (manual, input: WXGA), Up to a total of ±55 ° during simultaneous horizontal and vertical correction.		Vertical: maximum ±35 ° (auto/manual, input: XGA), Horizontal: maximum ±35 ° (manual, input: XGA), Up to a total of ±55 ° during simultaneous horizontal and vertical correction.	
Installation		Front ceiling/Front desk/Rear ceiling/Rear desk						
Terminals	HDMI IN	HDMI 19-pin × 2 (Deep Color, compatible with HDCP), audio signal: Linear PCM (sampling frequency: 48 kHz/44.1 kHz/32 kHz)						
	COMPUTER IN 1	D-sub 15-pin (female) x 1 (RGB/Y • PB (CB) • PR (CR))						
	COMPUTER IN 2/MONITOR OUT	D-sub 15-pin (female) x 1 (RGB/Y • PB (CB) • PR (CR) (input/output switching))						
	VIDEO IN	Pin jack x 1						
	AUDIO IN 1	M3 stereo mini jack x 1						
	AUDIO IN 2	M3 stereo mini jack x 1		M3 stereo mini jack x 1, compatible with MIC input	M3 stereo mini jack x 1			
	AUDIO IN 3	Pin jack (L/R) x 1						
	AUDIO OUT	M3 stereo mini jack x 1 (monitor out: variable)						
	SERIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)						
	USB A	Type A Memory Viewer/ Pairing function x 1	Type A for DC output x 1 (for power supply, DC 5 V, max. 2 A)*5	—	Type A Memory Viewer/ Pairing function x 1	Type A for DC output x 1 (for power supply, DC 5 V, max. 2 A)*5	Type A Memory Viewer/ Pairing function x 1	Type A for DC output x 1 (for power supply, DC 5 V, max. 2 A)*5
	USB B	Type B for USB Display x 1	—	—	Type B for USB Display x 1	—	Type B for USB Display x 1	—
	LAN/DIGITAL LINK	RJ-45 × 1 for network connection, DIGITAL LINK, 100Base-TX, compatible with PJLink™, HDCP compatible, Deep Color compatible	—		RJ-45 × 1 for network connection, DIGITAL LINK, 100Base-TX, compatible with PJLink™, HDCP compatible, Deep Color compatible	—	RJ-45 × 1 for network connection, DIGITAL LINK, 100Base-TX, compatible with PJLink™, HDCP compatible, Deep Color compatible	—
	LAN	—	RJ-45 × 1 for network connection, 10Base-T/100Base-TX, compatible with PJLink™		—	RJ-45 × 1 for network connection, 10Base-T/100Base-TX, compatible with PJLink™	—	RJ-45 × 1 for network connection, 10Base-T/100Base-TX, compatible with PJLink™
Built-in speaker		4.0 cm (1 1/16") round shape × 1, output power: 10 W (monaural)						
Operating noise*3		37 dB (lamp power: Normal), 35 dB (lamp power: ECO1), 29 dB (lamp power: ECO2)		37 dB (lamp power: Normal), 29 dB (lamp power: ECO)	37 dB (lamp power: Normal), 35 dB (lamp power: ECO1), 29 dB (lamp power: ECO2)			
Cabinet materials		Molded plastic						
Dimensions (W × H × D)		389 × 125*7 × 332 mm (15-5/16" × 4-29/32"*7 × 13-1/16")						
Weight*6		Approximately 4.9 kg (10.8 lbs)	Approximately 4.8 kg (10.6 lbs)		Approximately 4.9 kg (10.8 lbs)	Approximately 4.8 kg (10.6 lbs)	Approximately 4.9 kg (10.8 lbs)	Approximately 4.8 kg (10.6 lbs)
Operating environment		Operating temperature: 0–40 °C (32–104 °F)*8 (altitude: less than 1,200 m (3,937 ft)), 0–30 °C (32–86 °F) (altitude: 1,200–2,700 m (3,937 ft–8,858 ft)), Operating humidity: 20–80 % (no condensation)						
Supplied accessories		Wireless remote control unit × 1, Power cord with power cord holder x 1 (x 2 for UK and Asia), Software CD-ROM × 1 (Operating instructions, Multi Monitoring and Control Software, Logo Transfer Software, Wireless Manager ME software (PT-VZ585N/VW545N/VX615N only)), Batteries (AAA type × 2), RGB cable x 1, Lens cap x 1						

*1 PT-VZ470 is not available in Taiwan. *2 When the Standby Mode is set to ECO, network functions such as Power On via LAN will not operate. Also, only certain commands can be received for external control using the serial terminal. *3 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. *4 Pixel-repetition signal (dot clock frequency: 27.0 MHz) only. *5 No output when projector is on standby. *6 Average value. May differ depending on the actual unit. *7 With legs at shortest position. *8 When operating temperature is between 35 °C (95 °F) and 40 °C (104 °F) , lamp power automatically switches to ECO in order to protect the projector.

Built-in wireless LAN (PT-VZ585N/VW545N/VX615N)	Standard: 2.4 GHz: IEEE802.11b/g/n, 5.0 GHz: IEEE802.11a/n Infrastructure Mode: WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES), 128-bit/64-bit WEP, WPA-EAP/WPA2-EAP (PEAP (MS-CHAPv2/GTC)/EAP-FAST (MS-CHAPv2/GTC)/EAP-TTLS (MD5/MS-CHAPv2), 128-bit/64-bit), Miracast

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YouTube – **www.youtube.com/user/PanasonicProjector**

All information included here is valid as of June 2017.

PT-VZ580series_G1 Printed in Japan.

Panasonic

SPEC FILE

Product Number : PT-VZ580

Product Name : LCD Projectors

As of May 2017. Specifications and appearance are subject to change without notice.

SFL17M057

LCD Projectors

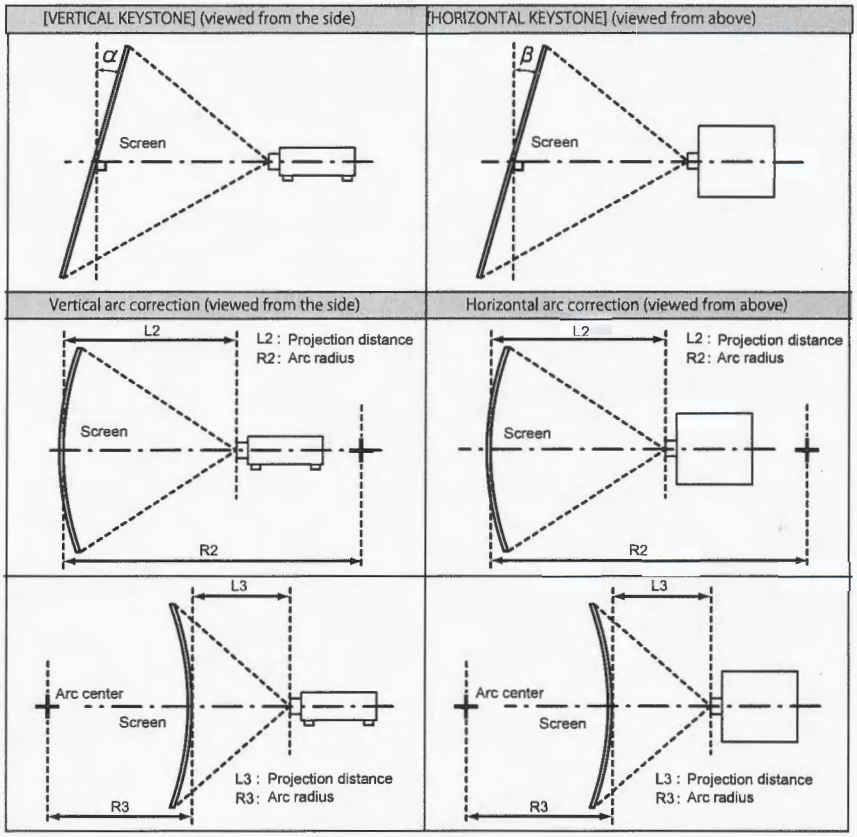
PT-VZ580

Specifications

Main unit		
Power supply		AC 100-240 V, 50/60 Hz
Power consumption*1		400 W (North America), 410 W (other countries) When [STANDBY MODE] is set to [ECO] : approx. 0.3 W (North America, Taiwan), approx. 0.5 W (Other countries) When [STANDBY MODE] is set to [NORMAL] and [IN STANDBY MODE] of [AUDIO SETTING] is set to [OFF]: approx. 12 W
BTU value		1,365 BTU (North America), 1,399 BTU (Other countries)
LCD panel	Panel size	16.3 mm (0.64 inches) diagonal (16:10 aspect ratio)
	Display method	Transparent LCD panel (× 3, R/G/B)
	Drive method	Active matrix method
	Pixels	2,304,000 (1920 × 1200) × 3, total of 6,912,000 pixels
Lens		Manual zoom (1.6×),manual focus, F 1.6–2.12, f 15.30–24.64 mm
	Throw ratio	1.09–1.77:1
Lamp		280 W UHM lamp
Projection size		0.76–7.62 m (30–300 inches) diagonally, 16:10 aspect ratio
Colors		Full color (16,777,216 colors)
Light output*2		5,000 lumens (Lamp power: Normal, Dynamic mode, Iris off, Daylight View:off, Auto Power Save:off)
Center-to-corner uniformity		85%
Contrast ratio*2		16,000:1(all white/all black, Image mode:Dynamic, Lamp power: Normal, Iris: On)
Resolution		1920 × 1200 pixels (Input signals that exceed this resolution will be converted to 1920 × 1200 pixels.)
Lamp replacement cycle		Normal: 5,000 hours, Eco1: 6,000 hours, Eco2: 7,000 hours
Filter replacement cycle		7,000 hours (Period varies depending on usage environment. It can be washed and reused up to 2 times.)
Scanning frequency	HDMI	•Moving image signal resolution: 480i (525i)*3, 576i (625i)*3, 480p (525p), 576p (625p), 720 (750)/60p, 720 (750)/50p, 1080 (1125)/60i, 1080 (1125)/50i, 1080 (1125)/25p, 1080 (1125)/24p, 1080 (1125)/24sF, 1080 (1125)/30p, 1080 (1125)/60p, 1080 (1125)/50p Still image signal resolution: 640 x 400 to 1920 x 1200 (non-interlace) • Dot clock frequency: 25 MHz to 162 MHz
	RGB	fH: 15- 91kHz, fV: 24 - 100Hz, dot clock: 162 MHz or less
	$Y P_B P_R$ ($Y C_B C_R$)	480i (525i): f_H 15.73 kHz; fv 59.94 Hz, 576i (625i): f_H 15.63 kHz; fv 50 Hz, 480p (525p): f_H 31.47 kHz; fv 59.94 Hz, 576p (625p): f_H 31.25 kHz; fv 50 Hz, 720 (750)/60p: f_H 45.00 kHz; fv 60 Hz, 720 (750)/50p: f_H 37.50 kHz; fv 50 Hz, 1080 (1125)/60i: f_H 33.75 kHz; fv 60 Hz, 1080 (1125)/50i: f_H 28.13 kHz; fv 50 Hz, 1080 (1125)/25p: f_H 28.13 kHz; fv 25 Hz, 1080 (1125)/24p: f_H 27.00 kHz; fv 24 Hz, 1080 (1125)/24sF: f_H 27.00 kHz; fv 48 Hz, 1080 (1125)/30p: f_H 33.75 kHz; fv 30 Hz, 1080 (1125)/60p: f_H 67.50 kHz; fv 60 Hz, 1080 (1125)/50p: f_H 56.25 kHz; fv 50 Hz
	Video	fH: 15.73 kHz / 15.63 kHz fV: 59.94 Hz / 50 Hz [NTSC/NTSC4.43/PAL/PAL60/PAL-N/PAL-M/SECAM]
Installation		CEILING/DESK/AUTO, FRONT/REAR
Speaker		4.0 cm round-type x 1
Maximum usable volume output		10 W (monaural)

Keystone correction range

Only [KEYSTONE] used		[KEYSTONE] and [CURVED] used together				Only [CURVED] used	
Vertical keystone correction angle α (°)	Horizontal keystone correction angle β (°)	Vertical keystone correction angle α (°)	Horizontal keystone correction angle β (°)	Min. value of R2/L2	Min. value of R3/L3	Min. value of R2/L2	Min. value of R3/L3
±25	±30	±12	±15	1.4	2.9	0.7	1.6



Optical axis shift		Vertical 0 – +44% from center of screen (manual) U/D ratio 17:1 (when on top end)
Terminals	COMPUTER 1 IN	high-density D-Sub 15 p (female) [RGB signal] R: 0.7 Vp-p ,75 ohms, G: 0.7 Vp-p (G: 1.0 Vp-p for sync on G) , 75 ohms, B: 0.7 Vp-p ,75 ohms HD, VD/SYNC: TTL, high impedance, positive/negative automatic [YPBPR signal] Y: 1.0 Vp-p (including sync signal), PB/PR (CB/CR): 0.7 Vp-p, 75 ohms
	COMPUTER 2 IN / 1 OUT	high-density D-Sub 15 p (female) [RGB signal] R: 0.7 Vp-p ,75 ohms, G: 0.7 Vp-p (G: 1.0 Vp-p for sync on G) , 75 ohms, B: 0.7 Vp-p ,75 ohms HD, VD/SYNC: TTL, high impedance, positive/negative automatic [YPBPR signal] Y: 1.0 Vp-p (including sync signal), PB/PR (CB/CR): 0.7 Vp-p, 75 ohms
	VIDEO IN	Pin jack 1.0 Vp-p, 75 ohms
	HDMI 1 IN	HDMI 19 pin, HDCP and Deep color compatible Audio signals : Linear PCM (Sample frequency : 48 kHz/44.1 kHz/32 kHz)
	HDMI 2 IN	HDMI 19 pin, HDCP and Deep color compatible Audio signals : Linear PCM (Sample frequency : 48 kHz/44.1 kHz/32 kHz)
	AUDIO IN 1	M3 stereo mini jack, 0.5 V[rms], input imedance 22 k ohms and more
	AUDIO IN 2	M3 stereo mini jack, 0.5 V[rms], input imedance 22 k ohms and more
	AUDIO IN 3	Pin jack x 2(L-R), 0.5 V[rms], input imedance 22 k ohms and more
	VARIABLE AUDIO OUT	M3 stereo mini jack, 0 V[rms] to 2.0 V[rms] variable, output imedance 2.2 k ohms and less
	USB A (DC OUT)	USB connector (type A)
	SERIAL IN	D-sub 9 pin, RS-232C compliant, for computer control use
	LAN	RJ-45, for network, PJLink™ compatible, 100Base-TX

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Power cord length		3.0 m(9 ft 10 in)(India), 2.0 m(6 ft 7 in)(Other countries)
Cabinet materials		Molded plastic
Dimensions (W × H × D		389 ×125*4×332mm (15-5/16 ×4-29/32*4×13-1/16inches)
Weight*5		Approx. 4.9 kg (10.8 lbs)
Noise level*2		37dB (LAMP POWER: NORMAL/ECO1), 29dB (LAMP POWER: ECO2)
Operating environment	Temperature*6	0° C (32° F) to 40° C (104° F) (Elevation: below 1,200 m (3,937') 0° C (32° F) to 30° C (86° F) (Elevation: 1,200 m (3,937') - 2,700m (8,858'))
	Humidity	20% to 80% (no condensation)

Remote cont rol unit	
Power supply	DC 3 V (AAA/R03/LR03 battery × 2)
Operation range	Approx. 7 m (23 ft) when operated from directly in front of the signal receptor
Dimensions (W × H ×D)	44 x 105 x 20.5 mm (1-23/32" x 4-1/8" x 13/16")
Weight	Approx. 63g (2.22 ozs.) (including batteries)
Other Applications	Monitoring and Control Software <Bundle> Logo Transfer Software <Bundle>
Supplied accessories	Power code : Europe and Asia model (x 2), Other countries (x 1) Batteries for remote control unit (× 2) (R03/LR03/AAA type) Lens cap (× 1) String for lens cap (× 1) Application Guide (× 1) Software CD-ROM (× 1) (Operating instructions, Multi Projector Monitoring and Control Software, Logo Transfer Software)

Optional accessories

Ceiling Mount Bracket	for High ceilings	ET-PKL100H
Ceiling Mount Bracket	for Low ceilings	ET-PKL100S
Ceiling Mount Bracket	Projector Mount Bracket	ET-PKV400B
Replacement Lamp Unit		ET-LAV400
Replacement Filter Unit		ET-RFV410
Early Warning Software		ET-SWA100 serie s

Weights and dimensions shown are approximate. **Specifications** subject to change without notice.

*1 When the Standby mode is set to Eco, network functions such as power on over the LAN network will not operate. Also, only certain commands can be received for external control using the serial terminal.
*2 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.
*3 Only compatible with dot clock frequency of 27 MHz (pixel repetition signal) for 480i(525i) and 576i(625i)
*4 When adjustable feet shortened.
*5 Average value. May differ depending on models.
*6 If [LAMP POWER] set to [NORMAL], [LAMP MODE] will be switched to [ECO1] automatically when the operating environment temperature is 35° C (95° F) to 40° C (104° F).

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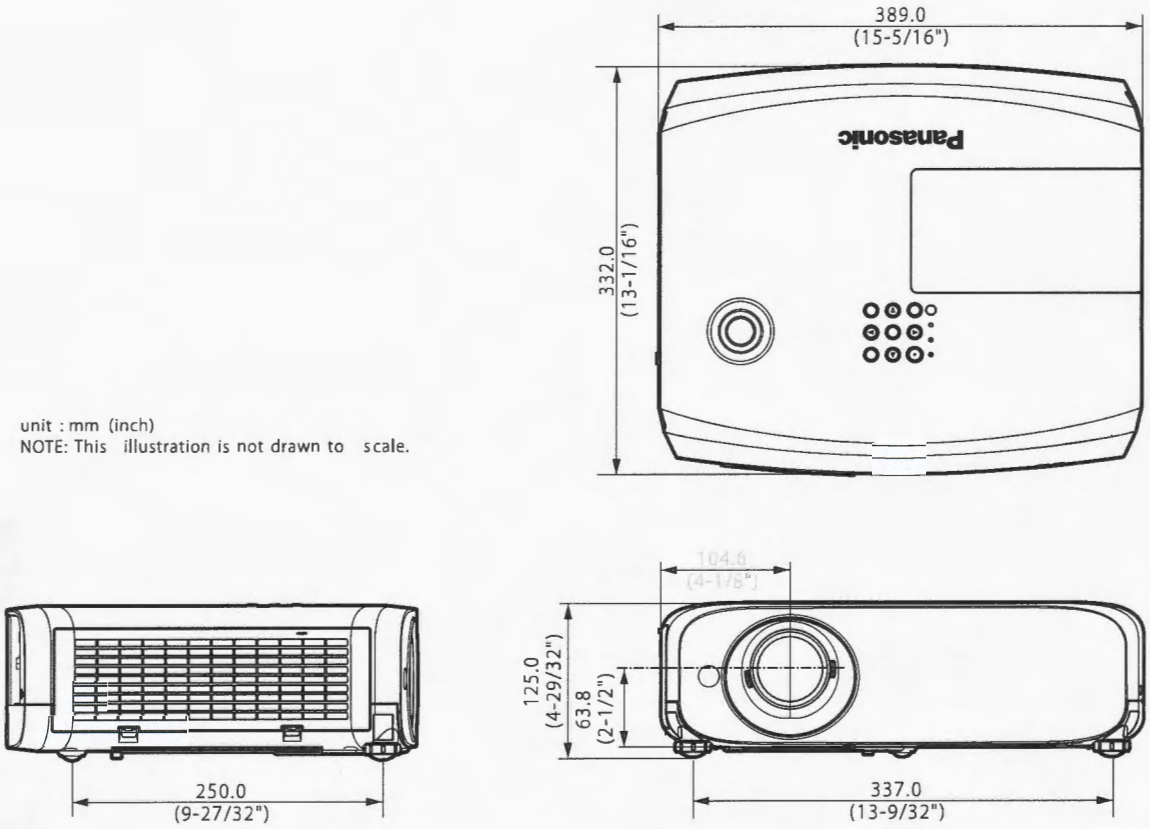
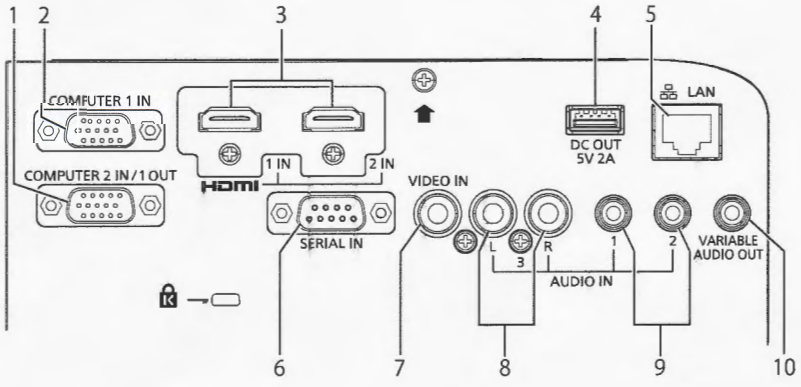
Dimensions



Terminals



1 Computer 2 input / computer 1 output
2 Computer 1 input
3 HDMI input 1 / HDMI input 2
4 USB connector (DC OUT)
5 LAN connector
6 Serial input
7 Video input
8 Audio input 3
9 Audio input 1 / Audio input2
10 Audio output

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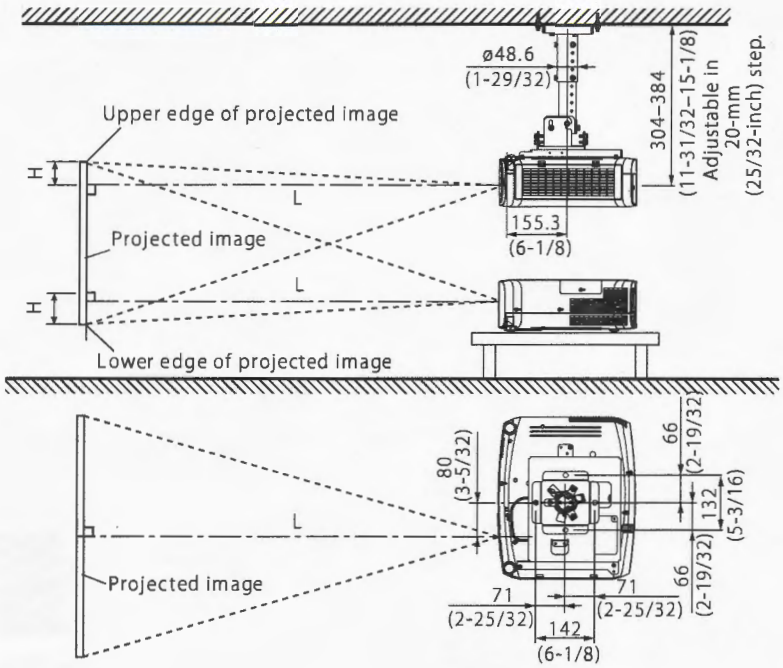
Standa rd setting-up positio n



NOTE :

Illustrations show the projector installed using optional ceiling mount bracket ET-PKL100H and projector mount bracket ET-PKV400B.

This illustration is not drawn to scale .

unit : mm (inch)

Caution :

- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket. To prevent the projector from dropping, attach the wire that is included with the projector between the mounting bracket and the ceiling.

Projection distance for 16:10 aspect ratio sc reen

unit: meters (feet)

Projection siz [diagonal]	Projection distance [L] Min [wide]	Max [telephoto	Height from the edge of screen to center of lens [H]
0.76 m / 30″	0.68 (2.23)	1.12 (3.67)	0.022 – 0.201 (0.072 – 0.659)
1.02 m / 40″	0.93 (3.05)	1.51 (4.95)	0.030 – 0.270 (0.098 – 0.886)
1.27 m / 50″	1.16 (3.81)	1.89 (6.20)	0.037 – 0.337 (0.121 – 1.106)
1.52 m / 60″	1.39 (4.56)	2.26 (7.41)	0.045 – 0.403 (0.148 – 1.322)
1.78 m / 70″	1.64 (5.38)	2.66 (8.73)	0.052 – 0.472 (0.171 – 1.549)
2.03 m / 80″	1.87 (6.14)	3.03 (9.94)	0.060 – 0.538 (0.197 – 1.765)
2.29 m / 90″	2.12 (6.96)	3.43 (11.25)	0.067 – 0.607 (0.220 – 1.991)
2.54 m / 100″	2.35 (7.71)	3.80 (12.47)	0.075 – 0.673 (0.246 – 2.208)
3.05 m / 120″	2.83 (9.28)	4.57 (14.99)	0.090 – 0.808 (0.295 – 2.651)
3.81 m / 150″	3.54 (11.61)	5.72 (18.77)	0.112 – 1.010 (0.367 – 3.314)
5.08 m / 200″	4.73 (15.52)	7.64 (25.07)	0.150 – 1.346 (0.492 – 4.416)
6.35 m / 250″	5.92 (19.42)	9.56 (31.36)	0.187 – 1.683 (0.614 – 5.522)
7.62 m / 300″	7.11 (23.33)	11.48 (37.66)	0.224 – 2.019 (0.735 – 6.624)

NOTE :

- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics .
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

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Projection distance for 16:9 aspect ratio screen

unit: meters (feet)

Projection size [diagonal]	Projection distance [L] Min [wide]		Max [telephoto]		Height from the edge of screen to center of lens [H]	
0.76 m / 30″	0.70	(2.30)	1.15	(3.77)	0.002 – 0.186	(0.007 – 0.610)
1.02 m / 40″	0.95	(3.12)	1.55	(5.09)	0.003 – 0.250	(0.010 – 0.820)
1.27 m / 50″	1.19	(3.90)	1.94	(6.36)	0.004 – 0.311	(0.013 – 1.020)
1.52 m / 60″	1.43	(4.69)	2.33	(7.64)	0.005 – 0.372	(0.016 – 1.220)
1.78 m / 70″	1.69	(5.54)	2.73	(8.96)	0.005 – 0.436	(0.016 – 1.430)
2.03 m / 80″	1.93	(6.33)	3.12	(10.24)	0.006 – 0.497	(0.020 – 1.631)
2.29 m / 90″	2.18	(7.15)	3.52	(11.55)	0.007 – 0.561	(0.023 – 1.841)
2.54 m / 100″	2.42	(7.94)	3.91	(12.83)	0.008 – 0.622	(0.026 – 2.041)
3.05 m / 120″	2.91	(9.55)	4.70	(15.42)	0.009 – 0.747	(0.030 – 2.451)
3.81 m / 150″	3.64	(11.94)	5.88	(19.29)	0.012 – 0.933	(0.039 – 3.061)
5.08 m / 200″	4.86	(15.94)	7.85	(25.75)	0.015 – 1.245	(0.049 – 4.085)
6.35 m / 250″	6.09	(19.98)	9.83	(32.25)	0.019 – 1.556	(0.062 – 5.105)
7.62 m / 300″	7.31	(23.98)	11.80	(38.71)	0.023 – 1.867	(0.075 – 6.125)

NOTE:

- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics .
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

Projection distance for 4:3 aspect ratio screen

unit: meters (feet)

Projection size [diagonal]	Projection distance [L] Min [wide]		Max [telephoto]		Height from the edge of screen to center of lens [H]	
0.76 m / 30″	0.78	(2.56)	1.27	(4.17)	0.025 – 0.228	(0.082 – 0.748)
1.02 m / 40″	1.05	(3.44)	1.71	(5.61)	0.034 – 0.306	(0.112 – 1.004)
1.27 m / 50″	1.32	(4.33)	2.14	(7.02)	0.042 – 0.381	(0.138 – 1.250)
1.52 m / 60″	1.58	(5.18)	2.57	(8.43)	0.051 – 0.456	(0.167 – 1.496)
1.78 m / 70″	1.86	(6.10)	3.01	(9.88)	0.059 – 0.534	(0.194 – 1.752)
2.03 m / 80″	2.12	(6.96)	3.44	(11.29)	0.068 – 0.609	(0.223 – 1.998)
2.29 m / 90″	2.40	(7.87)	3.88	(12.73)	0.076 – 0.687	(0.249 – 2.254)
2.54 m / 100″	2.67	(8.76)	4.31	(14.14)	0.085 – 0.762	(0.279 – 2.500)
3.05 m / 120″	3.21	(10.53)	5.18	(16.99)	0.102 – 0.915	(0.335 – 3.002)
3.81 m / 150″	4.01	(13.16)	6.48	(21.26)	0.127 – 1.143	(0.417 – 3.750)
5.08 m / 200″	5.36	(17.59)	8.65	(28.38)	0.169 – 1.524	(0.554 – 5.000)
6.35 m / 250″	6.71	(22.01)	10.83	(35.53)	0.212 – 1.905	(0.696 – 6.250)
7.62 m / 300″	8.05	(26.41)	13.00	(42.65)	0.254 – 2.286	(0.833 – 7.500)

NOTE:

- The value for L (distance to screen) varies slightly depending on the zoom lens characteristics .
- At the shortest projection distance, the zoom lens characteristics may cause slight image distortion.

Calculation of the projection distance

For a screen size different from the above, use the equation below to calculate the projection distance.

Aspect ratio 16:10
minimum L (m) = (diagonal screen size in inches) × 0.0238 – 0.0294
maximum L (m) = (diagonal screen size in inches) × 0.0384 – 0.0319

Aspect ratio 16:9
minimum L (m) = (diagonal screen size in inches) × 0.0245 – 0.0294
maximum L (m) = (diagonal screen size in inches) × 0.0394 – 0.0319

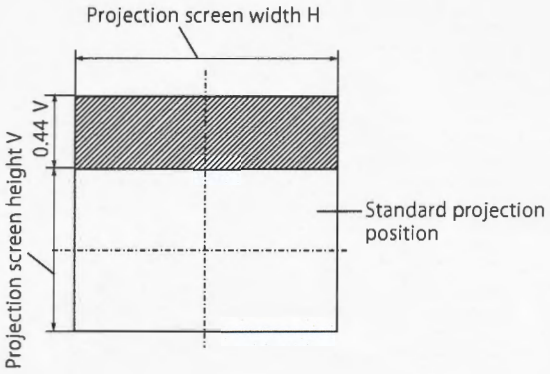
Aspect ratio 4:3
minimum L (m) = (diagonal screen size in inches) × 0.0269 – 0.0294
maximum L (m) = (diagonal screen size in inches) × 0.0434 – 0.0319

NOTE:
Distances calculated with the above equations will include a slight error.

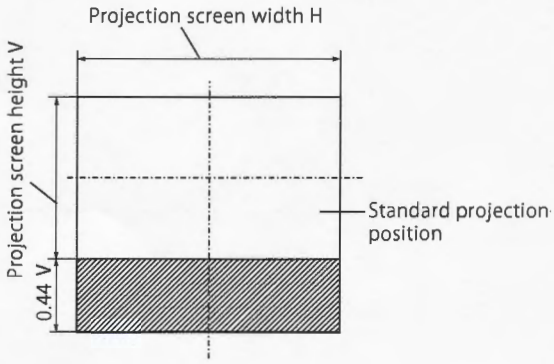
Shift rang e

Optical axis shift function allows to shift the position of a projected image as shown below.

• Floor mount



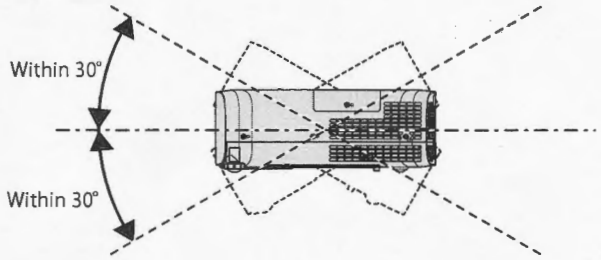
• Ceiling moun t



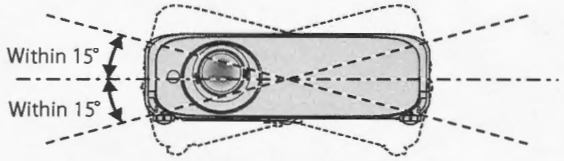
Installable angl e

Install the projector at an angle within the range shown below.

• Vertical direction
The projector may be installed at a vertical angle of 30°.



• Horizontal direction
The projector may be installed at a horizontal angle of 15°.



List of compatible signals

The following table specifies the video signals compatible with the projector.
This projector supports the signal with I in the compatible signal column.

- Symbols that indic ate formats are as follows .
  - —V: VIDEO
  - —R: RGB
  - —Y: YC BCR/YPBPR
  - —H: HDMI
- I nput corresponding to each item in the plug and play column is as follows.
  - —COMPUTER: COMPUTER1 / COMPUTER2 input
  - —HDMI/DL: HDMI1 / HDMI2 input

Compatible signal	Re solution (Dots)	Sc anning freq. H (KHz)	Sc anning freq. V (Hz)	Dot clock freq. (MHz)	Format	Plug and Play*1 COMPUTER	Plug and Play*1 HDMI/DL
NTSC/NTSC4.43/PAL-M/PAL60	720 x 480 i	15.7	59.9	—	V/S	—	—
PAL/PAL-N/SECAM	720 x 576 i	15.6	50.0	—	V/S	—	—
480/60i	720 x 480 i	15.7	59.9	13.5	R/Y	—	—
576/50i	720 x 576 i	15.6	50.0	13.5	R/Y	—	—
480/60i	720(1440)x 480i*2	15.7	59.9	27.0	H	—	—
576/50i	720(1440)x 576i*2	15.6	50.0	27.0	H	—	—
480/60p	720 x 480	31.5	59.9	27.0	R/Y/H	—	✓
576/50p	720 x 576	31.3	50.0	27.0	R/Y/H	—	✓
720/60p	1280 x 720	45.0	60.0	74.3	R/Y/H	—	✓
720/50p	1280 x 720	37.5	50.0	74.3	R/Y/H	—	✓
1080/60i	1920 x 1080i	33.8	60.0	74.3	R/Y/H	—	✓
1080/50i	1920 x 1080i	28.1	50.0	74.3	R/Y/H	—	✓
1080/24p	1920 x 1080	27.0	24.0	74.3	R/Y/H	—	✓
1080/24sF	1920 x 1080i	27.0	48.0	74.3	R/Y/H	—	—
1080/25p	1920 x 1080	28.1	25.0	74.3	R/Y/H	—	—
1080/30p	1920 x 1080	33.8	30.0	74.3	R/Y/H	—	—
1080/60p	1920 x 1080	67.5	60.0	148.5	R/Y/H	—	✓
1080/50p	1920 x 1080	56.3	50.0	148.5	R/Y/H	—	✓
640 x 400/70	640 x 400	31.5	70.1	25.2	R/H	—	—
640 x 400/85	640 x 400	37.9	85.1	31.5	R/H	—	—
640 x 480/60	640 x 480	31.5	59.9	25.2	R/H	✓	✓
640 x 480/67	640 x 480	35.0	66.7	30.2	R/H	—	—
640 x 480/73	640 x 480	37.9	72.8	31.5	R/H	✓	✓
640 x 480/75	640 x 480	37.5	75.0	31.5	R/H	✓	✓
640 x 480/85	640 x 480	43.3	85.0	36.0	R/H	—	—
800 x 600/56	800 x 600	35.2	56.3	36.0	R/H	✓	✓
800 x 600/60	800 x 600	37.9	60.3	40.0	R/H	✓	✓
800 x 600/72	800 x 600	48.1	72.2	50.0	R/H	✓	✓
800 x 600/75	800 x 600	46.9	75.0	49.5	R/H	✓	✓
800 x 600/85	800 x 600	53.7	85.1	56.3	R/H	—	—
832 x 624/75	832 x 624	49.7	74.6	57.3	R/H	✓	✓
1024 x 768/50	1024 x 768	39.6	50.0	51.9	R/H	—	—
1024 x 768/60	1024 x 768	48.4	60.0	65.0	R/H	✓	✓
1024 x 768/70	1024 x 768	56.5	70.1	75.0	R/H	✓	✓
1024 x 768/75	1024 x 768	60.0	75.0	78.8	R/H	✓	✓
1024 x 768/82	1024 x 768	65.5	81.6	86.0	R/H	—	—
1024 x 768/85	1024 x 768	68.7	85.0	94.5	R/H	—	—
1024 x 768/100	1024 x 768	81.4	100.0	113.3	R/H	—	—
1152 x 864/60	1152 x 864	53.7	60.0	81.6	R/H	—	—
1152 x 864/75	1152 x 864	67.5	75.0	108.0	R/H	—	—
1152 x 864/85	1152 x 864	77.1	85.0	119.7	R/H	—	—
1152 x 870/75	1152 x 870	68.7	75.1	100.0	R/H	✓	✓
1280 x 720/50	1280 x 720	37.1	49.8	60.5	R/H	—	—
1280 x 720/60	1280 x 720	44.8	59.9	74.5	R/H	—	—

LCD Projectors

PT-VZ580

Compatible signal	Resolution (Dots)	Scanning freq. H (KHz)	Scanning freq. V (Hz)	Dot clock freq. (MHz)	Format	Plug and Play*1 COMPUTER	Plug and Play*1 HDMI/DL
1280 x 768/60*3	1280 x 768	47.7	60.0	80.1	R/H	—	—
1280 x 768/60	1280 x 768	47.8	59.9	79.5	R/H	—	—
1280 x 768/75	1280 x 768	60.3	74.9	102.3	R/H	—	—
1280 x 768/85	1280 x 768	68.6	84.8	117.5	R/H	—	—
1280 x 800/50	1280 x 800	41.3	50.0	68.0	R/H	—	—
1280 x 800/60	1280 x 800	49.7	59.8	83.5	R/H	—	—
1280 x 800/75	1280 x 800	62.8	74.9	106.5	R/H	—	—
1280 x 800/85	1280 x 800	71.6	84.9	122.5	R/H	—	—
1280 x 960/60	1280 x 960	60.0	60.0	108.0	R/H	—	—
1280 x 1024/60	1280 x 1024	64.0	60.0	108.0	R/H	—	—
1280 x 1024/75	1280 x 1024	80.0	75.0	135.0	R/H	✓	✓
1280 x 1024/85	1280 x 1024	91.1	85.0	157.5	R/H	—	—
1366 x 768/50	1366 x 768	39.6	49.9	69.0	R/H	—	—
1366 x 768/60*3	1366 x 768	47.7	60.0	84.7	R/H	—	—
1366 x 768/60	1366 x 768	47.7	59.8	85.5	R/H	—	—
1400 x 1050/60*3	1400 x 1050	65.2	60.0	122.6	R/H	—	—
1400 x 1050/60	1400 x 1050	65.3	60.0	121.8	R/H	—	—
1400 x 1050/75	1400 x 1050	82.2	75.0	155.9	R/H	—	—
1440 x 900/50*3	1440 x 900	46.3	50.0	87.4	R/H	—	—
1440 x 900/60*3	1440 x 900	55.9	60.0	106.5	R/H	—	—
1440 x 900/60	1440 x 900	55.9	59.9	106.5	R/H	—	—
1600 x 900/50*3	1600 x 900	46.3	50.0	97.0	R/H	—	—
1600 x 900/60*3	1600 x 900	55.9	60.0	119.0	R/H	—	—
1600 x 1200/60	1600 x 1200	75.0	60.0	162.0	R/H	✓	✓
1680 x 1050/50	1680 x 1050	54.1	50.0	119.5	R/H	—	—
1680 x 1050/60*3	1680 x 1050	65.2	60.0	147.1	R/H	—	—
1680 x 1050/60	1680 x 1050	65.3	60.0	146.3	R/H	—	—
1920 x 1080/50	1920 x 1080	55.6	49.9	141.5	R/H	—	—
1920 x 1080/60*4	1920 x 1080	66.6	59.9	138.5	R/H	—	—
1920 x 1080/60*5	1920 x 1080	67.2	60.0	173.0	C	—	—
1920 x 1200/50	1920 x 1200	61.8	49.9	158.3	R/H	—	—
1920 x 1200/60*4	1920 x 1200	74.0	60.0	154.0	R/H	✓	✓
1920 x 1200/60*5	1920 x 1200	74.6	59.9	193.3	C	—	—

*1 **Signal with I in the plug and play column is a signal described in the EDID (extended display identification data) of the** projector. The signal that does not have I in the plug and play column can also be input if it is described in the format column. The resolution may not be selected in the computer even if the projector is compatible with the signal that does not have I in the plug and play column .

*2 Pixel-Repetition signal (dot clock frequency 27.0 MHz) only

*3 If pertinent analog signal is input, it can be displayed when the setting suitable for the signal is made on [PICTURE] men u → [RGB SYSTEM]. It is no need to setting when input the digital signal.

*4 VESA CVT-RB (Reduced Blanking)-compliant

*5 Samples the pixels in the image processing circuit and displays the image.

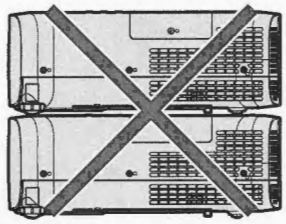
NOTE:

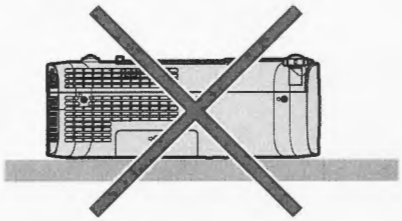
- A signal with a different resolution is converted to the number of display dots. The number of display dots is as follows. 1920 x 1200
- The "i" at the end of the resolution indicates an interlaced signal.
- When interlaced signals are connected, flickering may occur on the projected image.
- Even the above signals exist, some image signals recorded in special method may not be displayed.

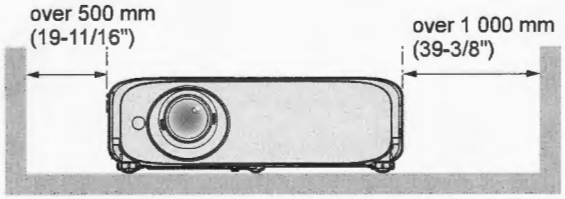
Notes on projector placement and operation

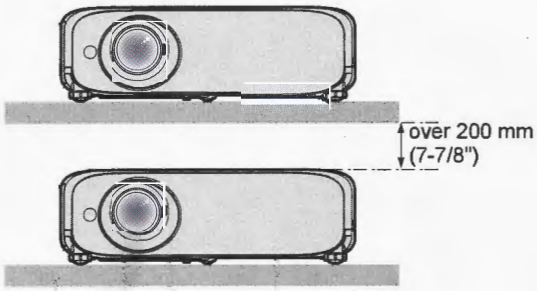
The projector uses a high-wattage lamp that becomes very hot during operation. Please observe the following precautions.

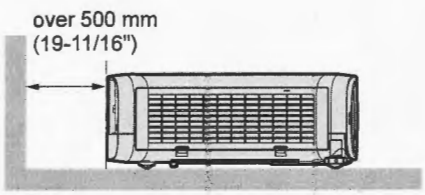
1. Never place objects on top of the projector while it is operating.
2. Make sure there is the unobstructed space as shown below or more around the projector's exhaust openings. In addition to this space, also ensure that there is a sufficient work space for removing and installing the lamp, filter and other parts.
3. Make sure that nothing blocks the projector's air intake and exhaust openings. Also, install the projector so that cool or hot air from other air conditioning equipment does not flow directly toward the projector's air intake or exhaust openings.
4. Do not install the projector in an enclosed space. If it is necessary to install it in an enclosed space, add a separate ventilation system. If ventilation is insufficient, hot air will accumulate at the intake opening. This may cause the projector's protective circuit to interrupt projector operation.



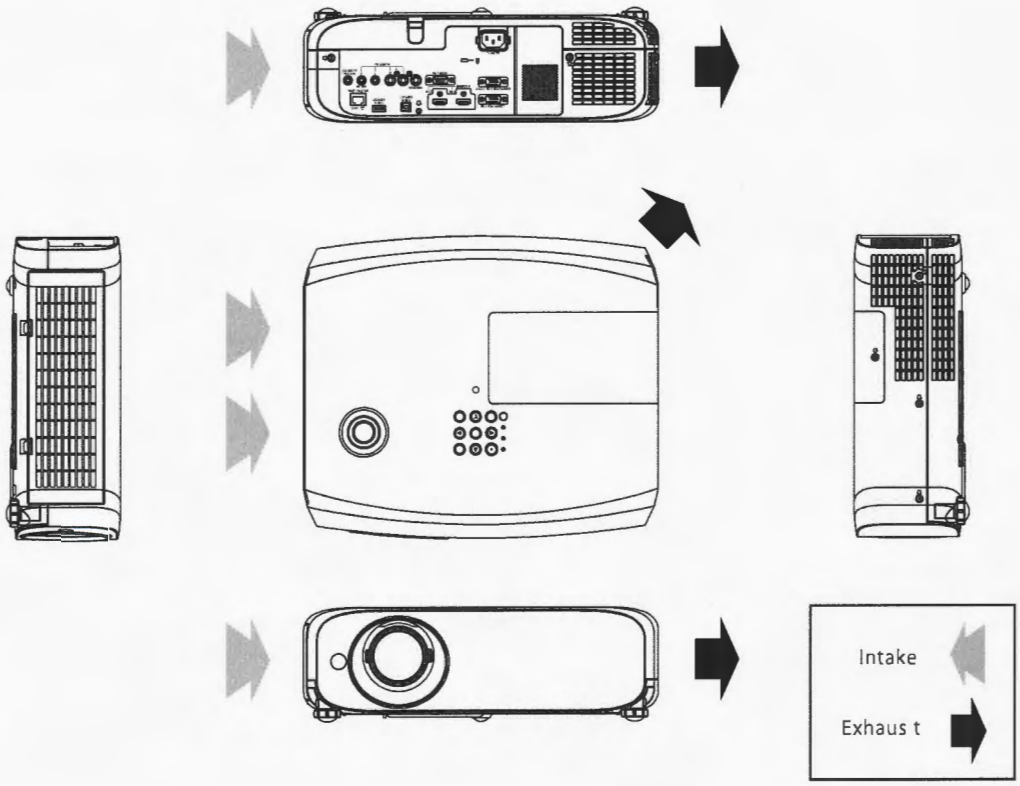








Direction of air intake and exhaust



Operating the projector continuously

1. If the projector is to be operated continuously 12 hours or more, lamp replacement cycle duration becomes shorter.
2. The lamp replacement cycle duration becomes shorter if the projector is operated repeatedly for short periods (one hour or less).

Mixážní pult YAMAHA MG10

Odkaz: www.yamahaproaudio.com/europe/en_gb/products/mixers/mg_standard/lineup.jsp

Home > Products > Mixers > MG Series (Standard Model)

- Specifications

MG10

10-Channel Mixing Console: Max. 4 Mic / 10 Line Inputs (4 mono + 3 stereo) / 1 Stereo Bus / 1 AUX

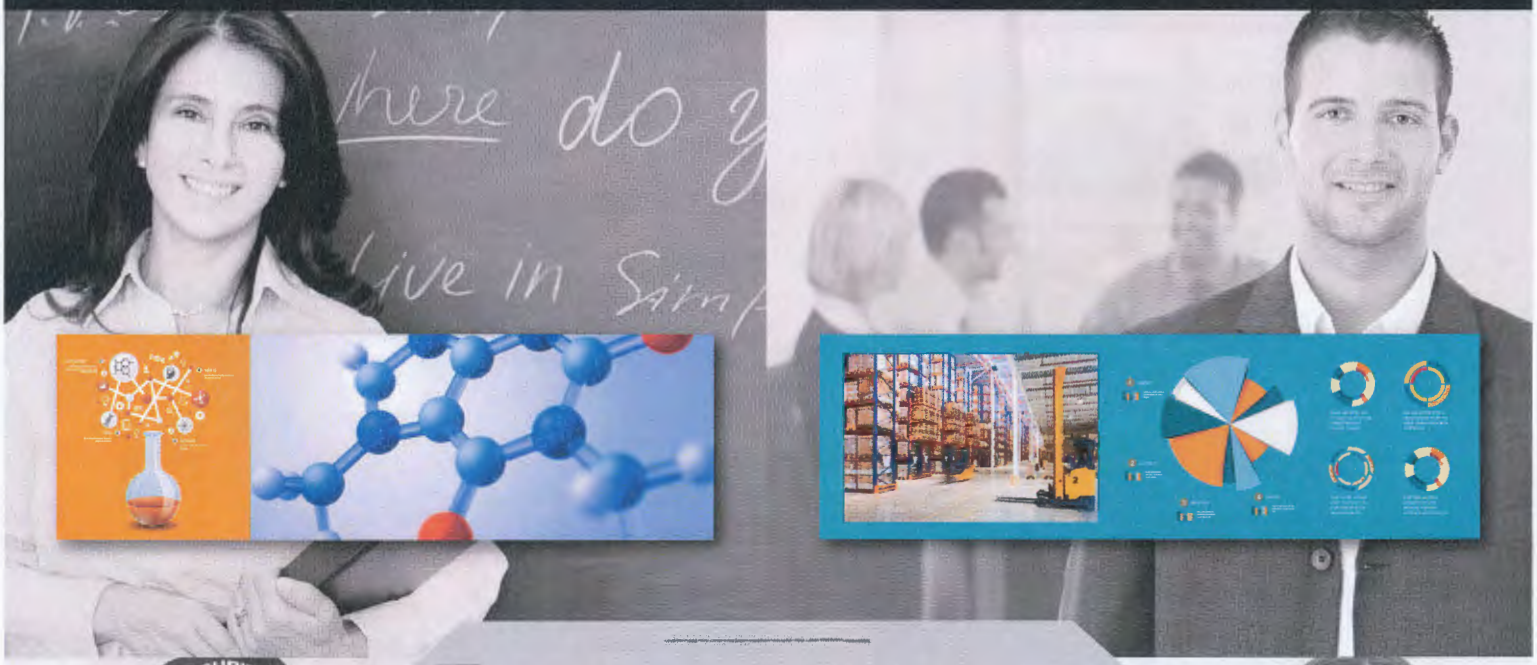
- 10-Channel Mixing Console
- Max. 4 Mic / 10 Line Inputs (4 mono + 3 stereo)
- 1 Stereo Bus
- 1 AUX
- “D-PRE” mic preamps with an inverted Darlington circuit
- 1-Knob compressors
- PAD switch on mono inputs
- +48V phantom power
- XLR balanced outputs
- Metal chassis
- Dimensions(W×H×D): 244 mm x 71 mm x 294 mm (9.6"x 2.8"x 11.6")
- Net Weight: 1.9 kg (4.19 lbs.)

Panasonic
BUSINESS

PT-**RZ570** Series
1-Chip DLP™ Projectors

PT-**RZ570**
PT-**RZ575**

Proven Endurance Delivers Better Results at Lower Cost



PT-RZ570W

Worldwide Olympic Partner

Worldwide Paralympic Partner

SOLID SHINE LASER

PICTURE BY DLP A TEXAS INSTRUMENTS TECHNOLOGY

1-Chip DLP™ Projector

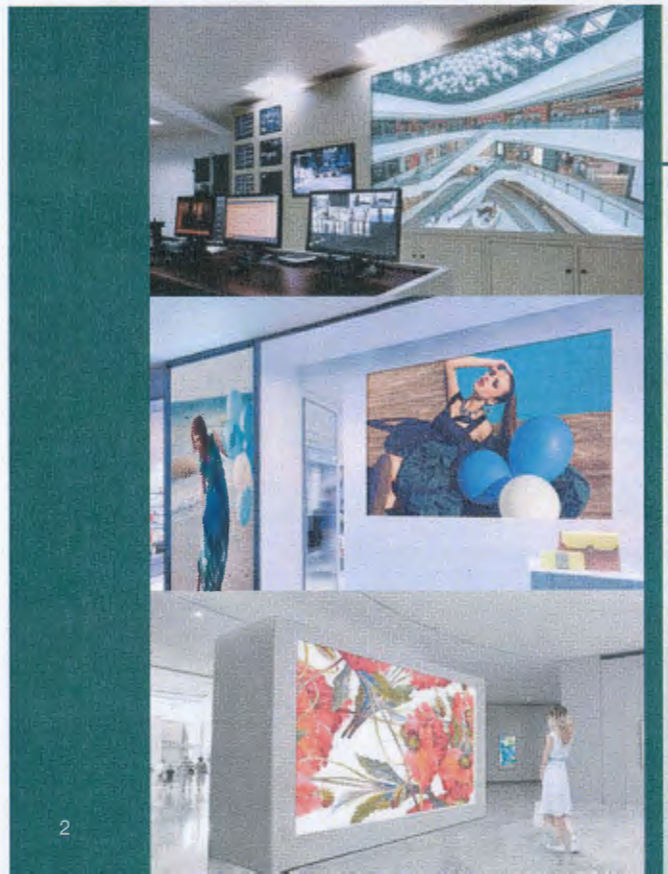
PT-**RZ570**

Set a New Standard for Picture Quality and Low-Maintenance Endurance in Versatile Applications with Acclaimed SOLID SHINE Laser Technology

PT-**RZ570W**

PT-**RZ570B**

5,400 lm (Center)	5,200 lm	WUXGA	20,000 : 1



1-Chip DLP™ Projector

PT-**RZ575**

Engineered for Unfailing Set-and-Forget Rear-Projection Reliability in Surveillance, Signage, and Exhibition Roles

PT-**RZ575**

5,200 lm (Center)	5,000 lm	WUXGA	20,000 : 1

SOLID SHINE Laser: Engineered for Professionals, by Professionals

Bright, rich, high-contrast images don't fade away fast with SOLID SHINE Laser. In fact, image quality and endurance outstrips that of competitive lamp projectors with almost no maintenance required. A deep set of practical features makes configuring these projectors for reliable 24/7 operation quick and simple in both permanent and temporary installations. Whether you choose the PT-RZ570 for its brilliant pictures in classrooms, boardrooms, or office meeting spaces, or the PT-RZ575 for its out-of-the-box rear-projection setup intended for surveillance centers, museums, and exhibitions, expect big savings and less stress with superior all-round imaging performance.

What do I want in a projector?

Excellent Picture Quality

Bright Pictures in WUXGA

SOLID SHINE Laser is paired with the latest 1-Chip DLP™ technology to guarantee bright and detailed pictures. Powerful solid-state light source and four-segment color wheel boosts color performance without sacrificing brightness.

Image Quality Maintained

Anti-Dust Protection

These projectors are virtually dustproof thanks to sealed optics. Forget downtime: with no lamp or filter replacement, and the image-degrading effect of dust minimized, you can expect about 20,000 hours* of maintenance-free projection with consistently brilliant picture quality.

* Panasonic recommends cleaning or checkup at point of purchase after 20,000 hours (approximately). Light source lifetime may be reduced depending on environmental conditions. Dustproof tests are conducted to confirm operational effectiveness under conditions with 0.15 mg/m³ of particulate matter (based on tests by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), and the Japanese Building Maintenance Association). Measurements are made using acceleration tests.

Low Running Costs

Low Total Cost of Ownership

SOLID SHINE Laser projectors are cheaper to run, end of story. They require almost no maintenance, and with a variety of ECO features, use much less energy to operate continuously.

Instant Projection

Quick Start* and Quick Off

Because the PT-RZ570 Series is powered by SOLID SHINE Laser, you can turn the projector on and off any time you like. With Quick Startup Mode, projection begins in about one second*. No warm up period, no wait.

* When ECO MANAGEMENT > QUICK STARTUP is set to ON. Quick Start is unavailable after Available Period setting has expired. When QUICK STARTUP is set to ON, the projector continues to warm up, increasing power consumption.

Free Installation

360-degree Projection

SOLID SHINE Laser projectors can be mounted vertically or horizontally through 360 degrees. This flexibility enables projection from virtually any angle.

Reduced Operational Noise

Quiet Running

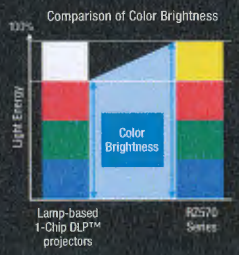
A variety of technologies work together to reduce operational noise to just 28 dB* in Silent Mode, minimizing distracting noise and keeping audiences focused on the presentation.

* In Silent Mode. 33 dB in Normal/Eco Mode.

Achieving High Brightness and Accurate Colors with SOLID SHINE Laser and DLP™ Imaging Technology

SOLID SHINE Laser Enhanced with the Latest DLP™ Technology

Together with the latest DLP™ module for detailed WUXGA resolution and new-generation solid-state laser diodes for high brightness, PT-RZ570 Series' outstanding performance stems from a Quartet Color Harmonizer wheel mechanism that reduces light energy loss while combining four segments to produce purer white. A heat-resistant phosphor wheel and optimized laser drive, meanwhile, boost perceived brightness and improve color accuracy.



Natural White Balance

Quartet Color Harmonizer is able to capture a wider section of the color gamut than comparable projectors, which in turn allows the mechanism to reproduce white more realistically on screen. In conventional projectors, if an ideal white balance isn't achieved, images can appear with a distracting greenish tint.

Laser Module Maintains Picture Quality for Longer

Thanks to the long-lasting laser light-source module, there are no lamps to replace. Color and brightness degrades more gradually and in a linear rather than exponential fashion. As well as reducing maintenance hassle, picture quality is maintained for longer.

Rich Color Enhancer

Rich Color Enhancer offers a Dynamic Mode setting to increase image brightness, or Graphic Mode/Standard Mode, which adjusts color-wheel timing to produce deeper, richer colors in rooms where maximum brightness is unnecessary.

Dynamic Mode - for Brighter Images

Standard / Graphic Mode - for Colorful Images

Convenient Features Make Life Easy

Silent 28 dB*1 Operation

Efficient cooling, color-wheel speed control, and light output efficiency helps keep operational noise down to a nearly inaudible 28 dB*1 to let the audience immerse more deeply in presented content.

Auto Screen Image Rotation

Images are automatically*2 rotated depending on installation orientation—upside down on the ceiling or set on a table—using a built-in angle sensor.

Free 360-degree Rotation

Projection is possible in any direction vertically and horizontally, and the unit can be rotated 360 degrees for installation at any angle.

Quick Start*3 and Quick Off

The laser light source does not require any warm-up time, so images appear almost instantly (about one second*3) with PT-RZ570 Series projectors. There's also no cooling time required when turning the power off. Users can turn the projector on and off whenever necessary.

*1 In Silent Mode. 33 dB in Normal/Eco Mode. *2 Manual setting also available via setup menu. *3 When ECO MANAGEMENT > QUICK STARTUP is set to ON. Quick Start is unavailable after Available Period setting has expired. When QUICK STARTUP is set to ON, the projector continues to warm up, increasing power consumption.

Outstanding Brightness and Picture Quality

Dynamic Contrast Function

The PT-RZ570 Series features technology that directly modulates laser power output, enabling high contrast while reducing power consumption. Digitally controlled frame-by-frame scene-linking modulation precisely adjusts light output, achieving accurate 20,000:1*4 contrast even when bright and dark scenes suddenly or frequently interchange.

Bright Image

Dark Image

Daylight View Basic Produces Crisp Images in Bright Rooms

Panasonic's Daylight View Basic technology achieves sharp, comfortably viewed images by enhancing detail, particularly in dark areas of the image that are normally difficult to see in brightly lit rooms. A built-in sensor measures ambient light while Daylight View Basic adjusts halftone color and brightness according to the surrounding level of illumination.

Conventional Projector

Daylight View Basic

Detail Clarity Processor 3 Sharpens Fine Details

This unique Panasonic circuit optimizes the sharpness of each image based on the super high, high, medium, and low frequency components of the extracted image information. The resulting images are expressed with natural realism.

Conventional Projector

Detail Clarity Processor 3

DICOM Simulation Mode*5

This imaging mode is similar to the DICOM Part 14 medical imaging standard. It lends a film-like resolution to X-ray images, making the PT-RZ570 Series ideal for medical presentations and training.

Normal Mode

DICOM Simulation Mode

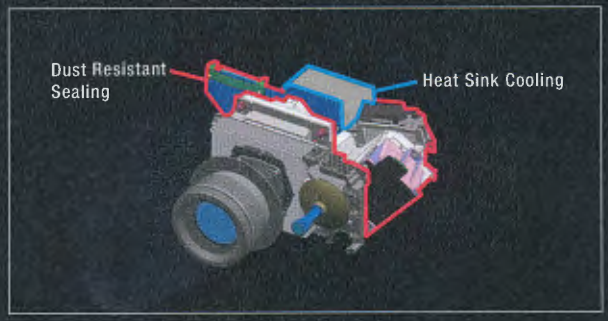
Long-lasting Reliability and Low Maintenance

Dust-Resistant Airtight Optical Block

PT-RZ570 Series' optical block—the heart of these projectors—is airtight. The design has passed stringent testing to assure reliable operation in dusty environments with 0.15 mg of particulate matter per cubic meter (based on American Society of Heating, Refrigerating, and Air-Conditioning Engineers [ASHRAE] and Japanese Building Maintenance Association guidelines). The structure prevents brightness degradation from dust intrusion. PT-RZ570 Series ensures consistent and long-lasting image quality for up to 20,000 hours*6 without maintenance.

Efficient Cooling System

Heat-pipe cooling for the laser light source and a heavy-duty heat sink for the DLP™ chip keep images crisp and bright while reducing fan speed, lowering noise levels and preventing distractions in quiet environments.



*4 With Dynamic Mode and Dynamic Contrast set to ON. *5 This product is not a medical instrument. Do not use for actual medical diagnosis. *6 Panasonic recommends cleaning or checkup at point of purchase after 20,000 hours (approximately). Light source lifetime may be reduced depending on environmental conditions. Dustproof tests are conducted to confirm operational effectiveness under conditions with 0.15 mg/m³ of particulate matter (based on tests by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers [ASHRAE], and the Japanese Building Maintenance Association). Measurements are made using acceleration tests.

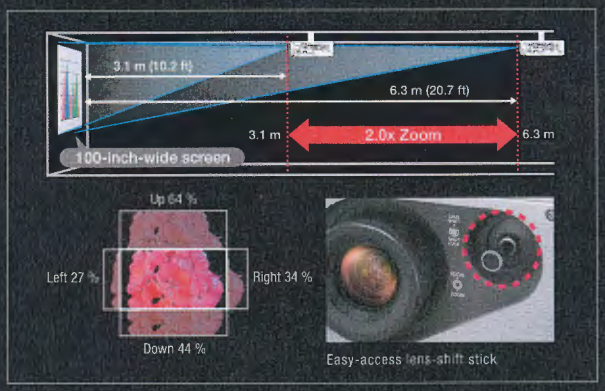
Flexible Installation in Any Venue

Versatile Wide-range 2.0x Zoom with Lens Shift

PT-RZ570

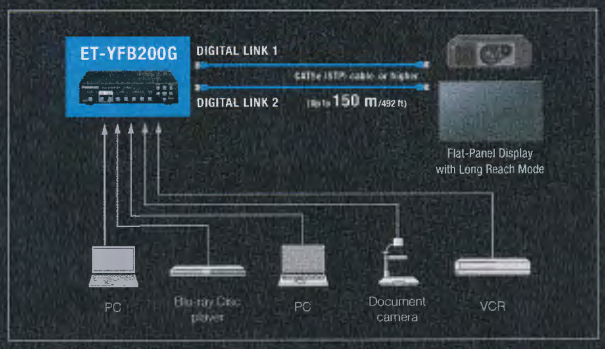
The general-purpose PT-RZ570 features a versatile 2.0x zoom and handy joystick-operated wide-range lens shift. This grants flexibility for installation in different rooms and for projection onto different screens. To produce a 100-inch-diagonal wide-screen image, projection distance extends from approximately 3.1 m (10.2 ft) to approximately 6.3 m (20.7 ft).

Note: The PT-RZ575 features a fixed-focus lens with powered lens shift.



Single-Cable DIGITAL LINK Audio-Video and Control Connection

DIGITAL LINK supports transmission of uncompressed Full HD video, audio, and control commands through a single CAT 5e or higher STP cable for distances of up to 150 m (492 ft)*1. Add an optional DIGITAL LINK Switcher or Digital Interface Box to further simplify installation in large venues while reducing cost and improving reliability at the same time.



Art-Net DMX Compatible

PT-RZ570 Series is compatible with Art-Net DMX protocol for lighting management. Art-Net compatibility allows the projector to be connected to a lighting console with easy control of functions.

Fade In and Fade Out

Digital laser output power modulation technology also enables a handy Fade In/Fade Out function for a smoother presentation.

Ready for Custom Rear-Projection Applications with Fixed Short-Throw Lens

PT-RZ575

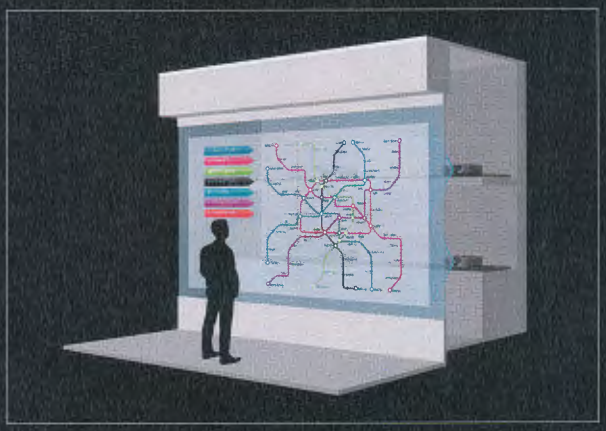
The PT-RZ575 incorporates short-throw lens intended for rear projection. The projectors combine SOLID SHINE Laser's high picture quality, reliability, and very low maintenance in a configuration that's adapted to rear-projection box-projection applications in control rooms, surveillance centers, and for roles in digital retail signage and museum or event exhibition. The projectors are ready for quick and easy multi-screen setup with Panasonic's optional and custom-fabricated Multi-Vision Box with Multi Window Processor (ET-MWP100G).

Built-in Short-Throw Lens with Powered Lens Shift

PT-RZ575

With the included lens, required projection distance is about 1.2 m (3.9 ft) to produce a 70-inch-diagonal image. For convenience in box installations, powered focus and horizontal/vertical lens-shift* adjustment is easily performed with the remote controller.

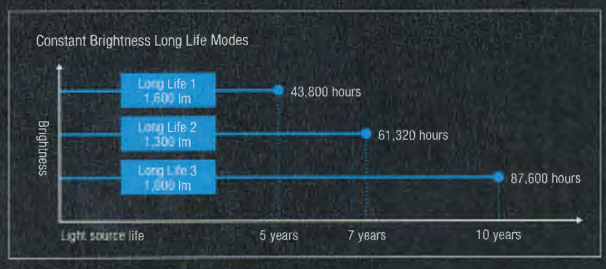
*Lens shift function is for minor adjustment in multi-screen installations. Lens shift range differs from the PT-RZ570. Please refer to specifications for further details.



Up to 10 Years*2 Operation with Constant Brightness Modes

PT-RZ575

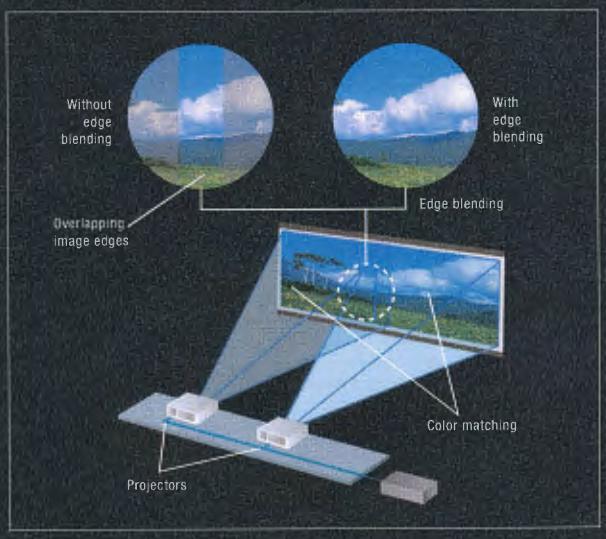
In environments where full brightness is not necessary, such as surveillance, control, and simulation rooms, constant operation modes extend light-source replacement to up to 87,600 hours*2 in Long Life 3 Mode—about 10 years of 24/7 projection—with consistent brightness and color.



*1 150 m (492 ft) transmission available only with ET-YFB200G DIGITAL LINK Switcher for signals up to 1080/60p (dot-clock frequency 148.5 MHz). *2 With Operating Mode set to Long Life 3. Long Life Mode is tested in a rear-box projection environment, which is not compliant with ASHRAE. 24 hours/day x 365 days/year x 10 years = 87,600 hours. Replacement of parts other than the light source may be required in a shorter period.

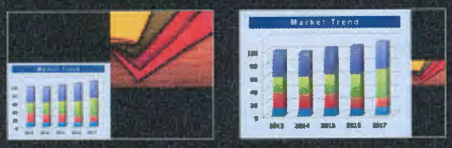
Edge Blending and Color Matching

Adjoining edges in a multi-screen system can be blended to create a smooth and seamless image. Slight variations in the color reproduction of individual projectors can be corrected in multi-screen applications.



Picture-in-Picture Capability

Two different image sources can be simultaneously displayed on a single screen: for example video via HDMI1 can be projected together with content from Computer 2 or DIGITAL LINK.



Multi-image display in Picture-in-Picture Mode

Screen Adjustment for Specially Shaped Screens

Horizontal, vertical, and corner keystone correction adjusts the image shape for clear visibility when projecting off-axis or from an unusual angle. Curved Screen Correction allows for the projection of natural, distortion-free images onto curved or cylindrical surfaces.

Images can be projected onto curved surfaces.

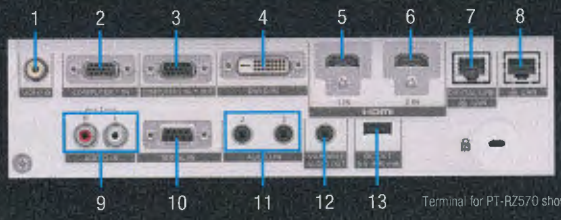
Vertical, Horizontal, and Corner Keystone Correction

Curved Screen Correction

ECO Management System

Push the ECO button on the remote control to set up Eco Management functions, including automatic brightness reduction in dim ambient conditions, and power consumption reduction when no input signal is detected.

Terminals



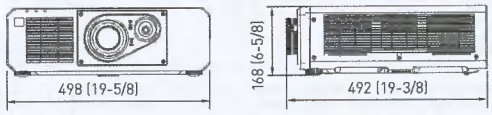
Terminal for PT-RZ570 shown.

1. VIDEO IN terminal
2. COMPUTER 1 IN terminal
3. COMPUTER 2 IN/1 OUT terminal
4. DVI-D IN terminal
5. HDMI 1 IN terminal
6. HDMI 2 IN terminal
7. LAN/DIGITAL LINK terminal
8. LAN terminal
9. AUDIO IN 1 terminal
10. SERIAL IN terminal
11. AUDIO IN 2/3 terminal
12. AUDIO OUT terminal (Variable)
13. USB terminal (Power supply only)

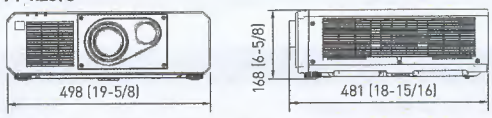
Dimensions

Unit: mm (inches)

PT-RZ570



PT-RZ575



Optional Accessories

ET-PKD120H*
Ceiling Mount Bracket (for High Ceiling)

ET-PKD120S*
Ceiling Mount Bracket (for Low Ceiling)

ET-YFB200G
DIGITAL LINK Switcher

ET-PKD130B*
Projector Mount Bracket

ET-YFB100G
Digital Interface Box

ET-MWP100G
Multi Window Processor

ET-SWA100 Series
Early Warning Software
Note: Part number suffix may differ depending on the license type.

ET-ADSV
D-sub/S-VIDEO Conversion Cable

For more information, please visit our global website: https://panasonic.net/cns/projector/

* Use ET-PKD120H Ceiling Mount Bracket (for high ceiling) and ET-PKD120S Ceiling Mount Bracket (for low ceiling) in combination with ET-PKD130B Projector Mount Bracket.

Specifications

Model		PT-RZ570	PT-RZ575
Power supply		AC 100–240 V, 50/60 Hz	
Power consumption		500 W (520 VA, 100 V AC), Normal: 375 W, Eco: 350 W, Silent: 350 W, Shutter: 40 W. [Operating temperature: 25 °C (77 °F), altitude: 700 m (2,297 ft), IEC62087: 2008 Broadcast Content, Picture Mode: Standard, Dynamic Contrast: ON], 0.5 W with STANDBY MODE set to ECO*1, 10 W with STANDBY MODE set to Normal (22 W with STANDBY MODE in AUDIO SETTING set to ON and QUICK STARTUP function disabled, 50 W with QUICK STARTUP function enabled).	
DLP™ chip	Panel size	17.0 mm (0.67 inches) diagonal (16:10 aspect ratio)	
	Display method	DLP™ chip × 1, DLP™ projection system	
	Pixels	2,304,000 (1920 × 1200) × 1	
Lens		Manual zoom (x2) / manual focus (1.46–2.94:1), F 2.0–3.4, f 21.5–43.0 mm	Fixed zoom lens (throw ratio 0.8:1), powered focus F 1.75, f 11.9 mm
Light source		Laser diode (Laser class: Class 1) (Class 3R for North America) Luminance life: 20,000 hours at half luminance (Normal Mode, Temperature: 35 °C [95 °F], altitude: 700 m [2,297 ft], Dust: 0.15 mg/m³)	
Screen size (diagonal)		1.02–7.62 m (40–300 inches)	
Brightness		5,400 lm (Center)*3 / 5,200 lm*2*3	5,200 lm (Center)*3 / 5,000 lm*2*3
Center-to-corner uniformity*2		90 %	
Contrast*2		20,000:1 (Full On/Full Off, Dynamic Mode and Dynamic Contrast: ON)	
Resolution		1920 x 1200 pixels	
Scanning frequency	HDMI/DVI-D/DIGITAL LINK	fH: 27–100 kHz, fV: 24–120 Hz, dot clock: 25–162 MHz, 525i (480i)*4, 625i (576i)*4, 525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1125 (1080)/60i, 1125 (1080)/50i, 1125 (1080)/24p, 1125 (1080)/24sF, 1125 (1080)/30p, 1125 (1080)/60p, 1125 (1080)/50p, VGA (640 x 400)–WUXGA*5 (1920 x 1200), compatible with non-interlaced signals only	
	RGB	fH: 15–100 kHz, fV: 24–120 Hz, dot clock: 20–162 MHz	
	YPBPR (YCBCR)	fH: 15.73 kHz, fV: 59.94 Hz [525i (480i)], fH: 15.63 kHz, fV: 50 Hz [625i (576i)], fH: 31.50 kHz, fV: 60 Hz [525p (480p)], fH: 31.25 kHz, fV: 50 Hz [625p (576p)], fH: 45.00 kHz, fV: 60 Hz [750 (720)/60p], fH: 37.50 kHz, fV: 50 Hz [750 (720)/50p], fH: 33.75 kHz, fV: 60 Hz [1125 (1080)/60i], fH: 28.13 kHz, fV: 50 Hz [1125 (1080)/50i], fH: 28.13 kHz, fV: 25 Hz [1125 (1080)/25p], fH: 27.00 kHz, fV: 24 Hz [1125 (1080)/24p], fH: 27.00 kHz, fV: 48 Hz [1125 (1080)/24sF], fH: 33.75 kHz, fV: 30 Hz [1125 (1080)/30p], fH: 67.50 kHz, fV: 60 Hz [1125 (1080)/60p], fH: 56.25 kHz, fV: 50 Hz [1125 (1080)/50p]	
	Video	fH: 15.73 kHz, fV: 59.94 Hz (NTSC/NTSC4.43/PAL-M/PAL60), fH: 15.63 kHz, fV: 50 Hz (PAL/PAL-N/SECAM)	
Optical axis shift*6	Vertical (from center of screen)	+64 %, -44 % (manual)	±4.4 % (powered)
	Horizontal (from center of screen)	+34 %, -27 % (manual)	±2.1 % (powered)
Keystone correction range		Vertical: ±40 °, Horizontal: ±20 ° (Up to a total of ±60 ° during simultaneous horizontal and vertical correction)	Vertical: ±25 °, Horizontal: ±20 ° (Up to a total of ±45 ° during simultaneous horizontal and vertical correction)
Installation		Ceiling/floor, front/rear, free 360 ° installation	
Terminals	HDMI IN	HDMI 19-pin × 2 (Deep Color, compatible with HDCP), Audio signal: Linear PCM (Sampling frequency: 48 kHz/44.1 kHz/32 kHz)	
	DVI-D IN	DVI-D 24-pin × 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only)	
	COMPUTER 1 IN	D-sub HD 15-pin (female) x 1 (RGB/YPBPR/YCBCR/YC)	
	COMPUTER 2 IN/1 OUT	D-sub HD 15-pin (female) x 1 (RGB/YPBPR/YCBCR)	
	VIDEO IN	Pin jack x 1 (composite video)	
	AUDIO IN 1	Pin jack x 2 (L, R)	
	AUDIO IN 2/3	M3 x 1/ M3 x 1	
	AUDIO OUT	M3 x 1 (variable)	
	SERIAL IN	D-sub 9-pin (female) × 1 for external control (RS-232C compliant)	
	LAN	RJ-45 x 1 for network connection, 10Base-T/100Base-TX, compatible with Art-Net, compliant with PJLink™(Class 1)	
	DIGITAL LINK	RJ-45 x 1 for network/DIGITAL LINK connection (video/audio/network/serial control), 100BASE-TX, compatible with Art-Net, Deep Color, HDCP, compliant with PJLink™ (Class 1)	
	USB	Type A x 1: DC output for power supply (DC 5 V, max. 900 mA)	
Cabinet materials		Molded plastic	
Dimensions (W × H × D)		498 x 168*8 x 492 mm (19 5/8" x 6 5/8"*8 x 19 3/8")	498 x 168*8 x 481 mm (19 5/8" x 6 5/8"*8 x 18 15/16")
Weight*7		Approximately 16.3 kg (35.9 lbs)	Approximately 16.6 kg (36.6 lbs)
Operation noise*2		28 dB (Silent Mode), 33 dB (Normal/Eco Mode)	
Operating environment		Operating temperature: 0–45 °C (32–113 °F)*9, operating humidity: 10–80 % (no condensation)	
Supplied accessories		Power cord with secure lock x 1 (x 2 for EU models), wireless remote control unit × 1, batteries for remote control (R03/AAA or LR03/AAA type × 2), software CD-ROM (Logo Transfer Software, Multi Monitoring & Control Software × 1)	

*1 When Standby Mode is set to Eco, network functions such as power on over LAN will not operate. *2 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2012 international standards *3 With operation mode set to Normal. *4 Only compatible with dot clock frequency of 27 MHz (pixel repetition signal). *5 WUXGA resolution supports CVT-RB signals (WUXGA60RB) and CVT (WUXGA60/WUXGA50) signals. *6 When installed on the floor, upper side and right side facing toward the screen are "+". When installed on the ceiling, bottom side and left side are "+". *7 Average value. May differ depending on the actual unit. *8 With legs at shortest position. *9 The operating environment temperature should be between 0 °C (32 °F) and 40 °C (104 °F) when the projector is used at altitudes between 1,400 m (4,593 ft) and 4,200 m (13,780 ft) above sea level. When [PROJECTOR SETUP] menu > [ECO MANAGEMENT] > [OPERATING MODE] is set to [ECO] or [SILENT], the projector cannot be used at an altitude of 2,700 m (8,858 ft) or higher above sea level. When using the projector at an altitude lower than 2,700 m (8,858 ft) above sea level and the operating environment temperature is 35 °C (95 °F) or higher, light output may be reduced to protect the projector. When using the projector at altitudes between 2,700 m (8,858 ft) and 4,200 m (13,780 ft) and the operating environment temperature is 25 °C (77 °F) or higher, light output may be reduced to protect the projector.

Projection distance

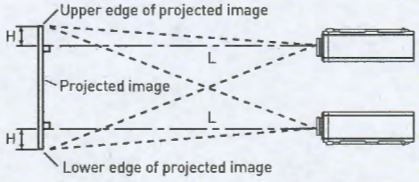
Unit: meters [feet]

PT-RZ570 (16:10 aspect ratio)

Projection image size	Projection distance (L)				Height from the edge of screen to center of lens (H)	
Diagonal (inch)	min.		max.			
1.02 (40")	1.22	[4.02]	2.51	[8.24]	-0.08 – 0.51	[-0.26 – 1.67]
1.27 (50")	1.54	[5.07]	3.15	[10.33]	-0.09 – 0.63	[-0.30 – 2.07]
1.52 (60")	1.86	[6.12]	3.78	[12.43]	-0.11 – 0.76	[-0.36 – 2.49]
1.78 (70")	2.18	[7.17]	4.42	[14.52]	-0.13 – 0.89	[-0.43 – 2.92]
2.03 (80")	2.50	[8.22]	5.06	[16.61]	-0.15 – 1.01	[-0.49 – 3.31]
2.29 (90")	2.82	[9.27]	5.70	[18.71]	-0.17 – 1.14	[-0.56 – 3.74]
2.54 (100")	3.14	[10.32]	6.34	[20.80]	-0.19 – 1.27	[-0.62 – 4.17]
3.05 (120")	3.78	[12.42]	7.61	[24.98]	-0.23 – 1.52	[-0.75 – 4.99]
3.81 (150")	4.74	[15.57]	9.53	[31.26]	-0.28 – 1.90	[-0.92 – 6.23]
5.08 (200")	6.34	[20.82]	12.72	[41.73]	-0.38 – 2.53	[-1.25 – 8.30]
6.35 (250")	7.94	[26.07]	15.91	[52.20]	-0.47 – 3.16	[-1.54 – 10.37]
7.62 (300")	9.54	[31.32]	19.10	[62.66]	-0.57 – 3.80	[-1.87 – 12.47]

PT-RZ575 (16:10 aspect ratio)

Projection image size	Projection distance (L)		Height from the edge of screen to center of lens (H)	
Diagonal (inch)	min.			
1.02 (40")	0.65	[2.14]	0.26 – 0.28	[0.85 – 0.92]
1.27 (50")	0.83	[2.71]	0.32 – 0.35	[1.05 – 1.15]
1.52 (60")	1.00	[3.29]	0.39 – 0.42	[1.28 – 1.38]
1.78 (70")	1.18	[3.86]	0.45 – 0.49	[1.48 – 1.61]
2.03 (80")	1.35	[4.43]	0.51 – 0.56	[1.67 – 1.84]
2.29 (90")	1.53	[5.01]	0.58 – 0.63	[1.90 – 2.07]
2.54 (100")	1.70	[5.58]	0.64 – 0.70	[2.10 – 2.30]
3.05 (120")	2.05	[6.73]	0.77 – 0.84	[2.53 – 2.76]
3.81 (150")	2.58	[8.45]	0.97 – 1.05	[3.18 – 3.44]
5.08 (200")	3.45	[11.33]	1.29 – 1.41	[4.23 – 4.63]
6.35 (250")	4.33	[14.20]	1.61 – 1.76	[5.28 – 5.77]
7.62 (300")	5.20	[17.07]	1.93 – 2.11	[6.33 – 6.92]



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For more information about Panasonic projectors, please visit:
Projector Global Website – **panasonic.net/cns/projector**
Facebook – **www.facebook.com/panasonicprojector**
YouTube – **www.youtube.com/user/PanasonicProjector**

All information included here is valid as of April 2017.

PT-RZ570series_G2 Printed in Japan.

Panasonic

SPEC FILE

Product Number : PT-**RZ570**

Product Name : 1-Chip DLP™ Projectors

As of March 2016. Specifications and appearance are subject to change without notice.

SFD16M033

Specifications

Main unit

Power supply		AC100 - 240V 5.9 - 2.3A 50Hz/60Hz (Taiwan: AC110V 5.2A 60Hz)
Power consumption		500W (530VA at 240V AC) (Taiwan: 520VA at 110V AC) NORMAL: 375W ECO: 350W SILENT: 350W SHUTTER 40W LONG LIFE 3: 407W *Operating Temperature: 25 °C (77 °F), Altitude: 700m (2297 ft), ICE627087: 2008 Broadcast contents, Picture mode: Standard, Dynamic contrast [ON]
	Standby Mode (Eco)*1	0.3W, 0.2W (Taiwan)
	Standby Mode (Normal)	3W
BTU value		Max 1,706 BTU (Without light 1,638 BTU)
DLP™ chip	Panel size	17.0 mm (0.67 in) diagonal (16:10 aspect ratio)
	Display method	DLP™ chip × 1, DLP™ system
	Pixels	2,304,000 (1,920 × 1,200) × 1, total of 2,304,000 pixels
Lens		Manual zoom/focus lenses (1.46–2.94:1), F 2.0–3.4, f 21.5–43.0 mm
Light Source		Laser Diode Luminance life for set: 20,000 hours at half luminance (NORMAL/SILENT)/ 24,000 hours at half luminance (Eco) * Temperature: 35°C (95°F), Altitude 700m (2297ft), Dust: 0.15mg/m³
Screen size		1.02–7.62 m (40–300 inches) (16:10 aspect ratio)
Brightness*2		5,400 lumens (center) /5,200 lumens
Center-to-corner uniformity*2		90%
Contrast*2		20,000:1(full on/full off, dynamic contrast ON)
Resolution		1,920 × 1,200 pixels
Scanning frequency	HDMI/DVI-D	fH: 15- 100kHz, fV: 24 - 120Hz, dot clock: 25 - 162 MHz 525i (480i)*3, 625i (576i)*3, 525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1125 (1080)/60i, 1125 (1080)/50i, 1125 (1080)/25p, 1125 (1080)/24p, 1125 (1080)/24sF, 1125 (1080)/30p, 1125 (1080)/60p, 1125 (1080)/50p, VGA (640 x 480) - WUXGA*4 (1920 x 1200) compatible with non-interlaced signals only
	RGB	fH: 15- 100kHz, fV: 24 - 120Hz, dot clock: 20 - 162 MHz
	YPBPR (YCBCR)	525i (480i): fH 15.75 kHz; fv 59.94 Hz, 625i (576i): fH 15.63 kHz; fv 50 Hz, 525p (480p): fH 31.50 kHz; fv 60 Hz, 625p (576p): fH 31.25 kHz; fv 50 Hz, 750 (720)/60p: fH 45.00 kHz; fv 60 Hz, 750 (720)/50p: fH 37.50 kHz; fv 50 Hz, 1125 (1035)/60i: fH 33.75 kHz; fv 60 Hz, 1125 (1080)/60i: fH 33.75 kHz; fv 60 Hz, 1125 (1080)/50i: fH 28.13 kHz; fv 50 Hz, 1125 (1080)/25p: fH 28.13 kHz; fv 25 Hz, 1125 (1080)/24p: fH 27.00 kHz; fv 24 Hz, 1125 (1080)/24sF: fH 27.00 kHz; fv 48 Hz, 1125 (1080)/30p: fH 33.75 kHz; fv 30 Hz, 1125 (1080)/60p: fH 67.50 kHz; fv 60 Hz, 1125 (1080)/50p: fH 56.25 kHz; fv 50 Hz
	Video/S-Video	fH: 15.75 kHz, fv: 59.94 Hz [NTSC/NTSC4.43/PAL-M/PAL60] fH: 15.63 kHz, fv: 50 Hz [PAL/PAL-N/SECAM]

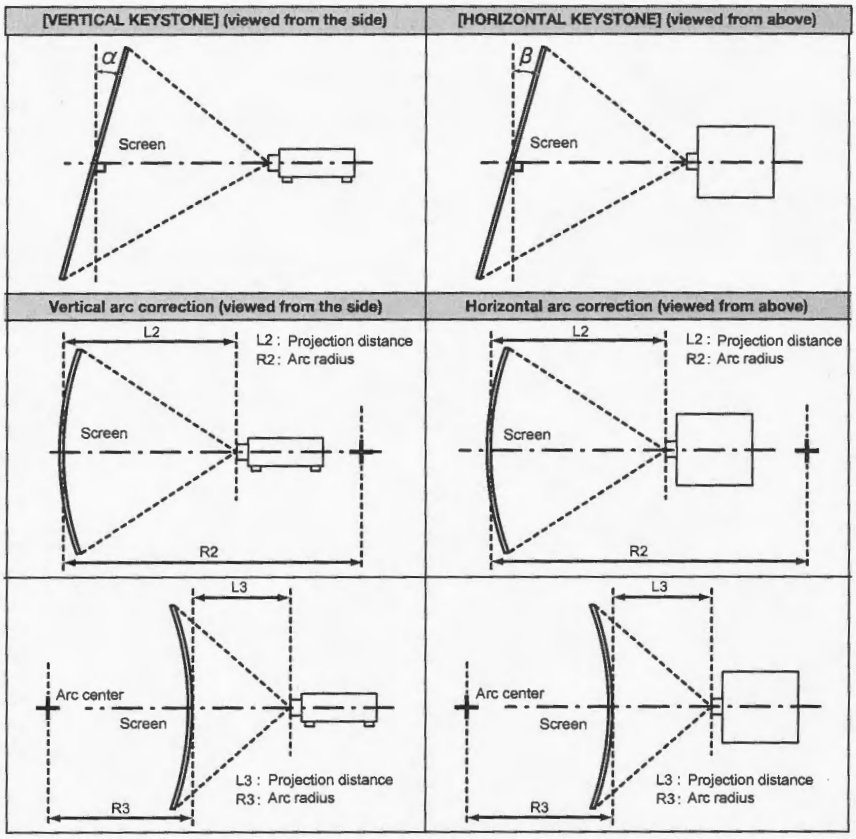
Keystone correction range

Only [KEYSTONE] used		[KEYSTONE] and [CURVED] used together				Only [CURVED] used	
Vertical keystone correction angle α (°)	Horizontal keystone correction angle β (°)	Vertical keystone correction angle α (°)	Horizontal keystone correction angle β (°)	Min. value of R2/L2	Min. value of R3/L3	Min. value of R2/L2	Min. value of R3/L3
±40	±20	±0	±15	0.9	1.7	0.5	1.0

1-Chip DLP™ Projector

PT-RZ570

Keystone correction range



Optical axis shift		Vertical: -44%, +64(manual) Horizontal: -27%, +34%(manual)
Installation		Ceiling/floor, front/rear, 360 degree free installation
Terminals	COMPUTER 1 IN	D-sub HD 15-pin (female) × 1 R,G,B: 0.7 Vp-p, 75 ohms, (G: 1.0 Vp-p, 75 ohms for sync on G) HD/VD, SYNC: TTL, high impedance, positive/negative automatic Y, PB, PR Y: 1.0 Vp-p (including sync signal), PB/PR(CB/CR): 0.7 Vp-p, 75 ohms Y/C Y: 1.0 Vp-p (including sync signal), C: 0.286 Vp-p, 75 ohms
	COMPUTER 2 IN/1 OUT	D-sub HD 15-pin (female) × 1 R,G,B: 0.7 Vp-p, 75 ohms, (G: 1.0 Vp-p, 75 ohms for sync on G) HD/VD, SYNC: TTL, high impedance, positive/negative automatic Y, PB, PR Y: 1.0 Vp-p (including sync signal), PB/PR(CB/CR): 0.7 Vp-p, 75 ohms
	DVI-D IN	DVI-D 24-pin x 1, DVI 1.0 compliant, compatible with HDCP, for single link only
	HDMI IN 1/HDMI IN 2	HDMI 19-pin ×2, Deep Color, compatible with HDCP, Audio signal: linear PCM (sampling frequencies: 48 kHz, 44.1 kHz, 32 kHz)
	VIDEO IN	Pin jack × 1, 1.0 Vp-p, 75 ohms
	AUDIO IN 1	Pin jack × 2(L-R) 0.5 Vrms, input impedance: 22 kilohms or more
	AUDIO IN 2/AUDIO IN 3	M3 (L, R) × 1, 0.5 Vrms, input impedance: 22 kilohms or more
	VARIABLE AUDIO OUT	M3 × 1 (monitor out, stereo) 0-1.80 Vrms, variable, output impedance: 2.2 kilohms or less
	SERIAL IN	D-Sub 9 p × 1, for external control (RS-232C compliant)
	DIGITAL LINK/LAN	RJ-45 x 1, for network, DIGITAL LINK connection (HDBaseT™ compatible), 100Base-TX,compatible with Art-Net, PJLink™ (class 1), Deep Color, HDCP2.2
	LAN	RJ-45 x 1 for network connection 10Base-T/100Base-TX, compatible with Art-Net, PJLink™
	DC OUT	USB Type A × 1, for power supply (DC5 V, max 900 mA)

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Power cord length	3.0 m (9 ft 10 in)
Cabinet materials	Molded plastic
Dimensions (W x H x D)	498 x 168*5 x 492mm (19-19/32 x 6-5/8*5 x 19-3/8in) with supplied lens
Weight	Approx. 16.3kg (51.1lbs)
Operation noise	28 dB (Silent), 33 dB (Normal/Eco)
Operating temperature	0–45 °C (32–113 °F)*7
Operating humidity	10%–80% (no condensation) at less than 4,200 m (13,780 ft.) above sea level
Storage temperature	-20°C–60°C (-4–140 °F)
Storage humidity	10%–80%

Remote control unit

Power supply	3 V DC (R03/AAA type battery x 2)
Operation range	Approx. 30 m (98 ft 5 in) when operated from directly in front of the signal receptor
Dimensions (W x H x D)	48 x 145 x 27 mm (1-57/64 x 5-45/64 x 1-3/64 in)
Weight*6	Approx. 102 g (3.6 oz) including batteries

Supplied accessories

Power cord with secure lock (x 1) (x 2 for EU models)
Wireless/wired remote control unit (x 1)
Batteries for remote control (R03/AAA type x 2)
Software CD-ROM (Logo Transfer Software, Multi Projector Monitoring & Control Software) (x 1)

Optional accessories

Ceiling mount bracket	ET-PKD120H (for high ceilings) ET-PKD120S (for low ceilings)
High-ceiling mount bracket (6-axis adjustment mechanism)	ET-PKD130H
Attachment for ceiling mount bracket	ET-PKD130B
Digital Switcher	ET-YFB200G
Digital interface box	ET-YFB100G
Early Warning Software	ET-SWA100

***1 When the STANDBY MODE is set to Eco, network functions such as power on over the LAN will not operate**
***2 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards**
***3 Only compatible with dot clock frequency of 27 MHz (pixel repetition signal)**
***4 WUXGA resolution supports CVT-RB signals (WUXGA60RB) and CVT (WUXGA60/WUXGA50) signals**
***5 with legs at shortest position**
***6 Average value. May differ depending on models**
***7 Limits the luminance when used in locations from 0m to 2700m (0ft to 8858ft) above sea level at ambient temperatures of 35°C (95°F) or higher, or from 2700m to 4200m (8858ft to 13780ft) above sea level at ambient temperatures of 25°C (77°F) or higher.**

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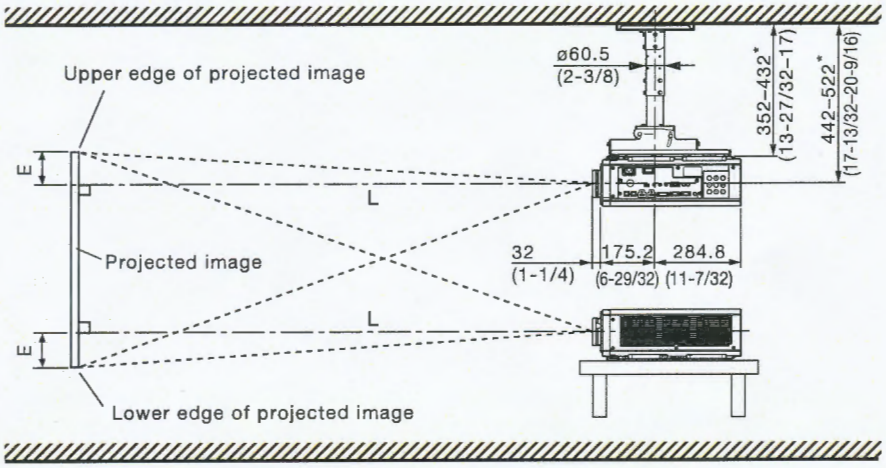
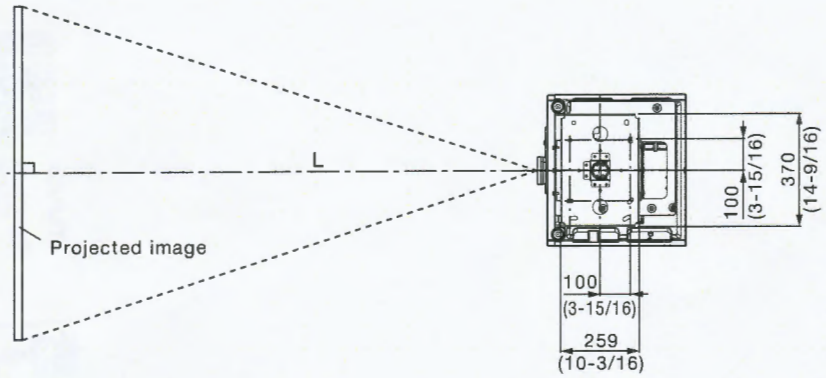
Standard setting-up position



Illustrations show the projector installed using optional ceiling mount bracket ET-PKD120H, optional bracket assembly ET-PKD130B.

*** Adjustable in 40 mm (1-9/16 in) steps.**

unit : mm (inch)



NOTE:

Illustrations show the projector installed using optional ceiling mount bracket ET-PKD120H, optional bracket assembly ET-PKD130B.

This illustration is not drawn to scale.

Caution:

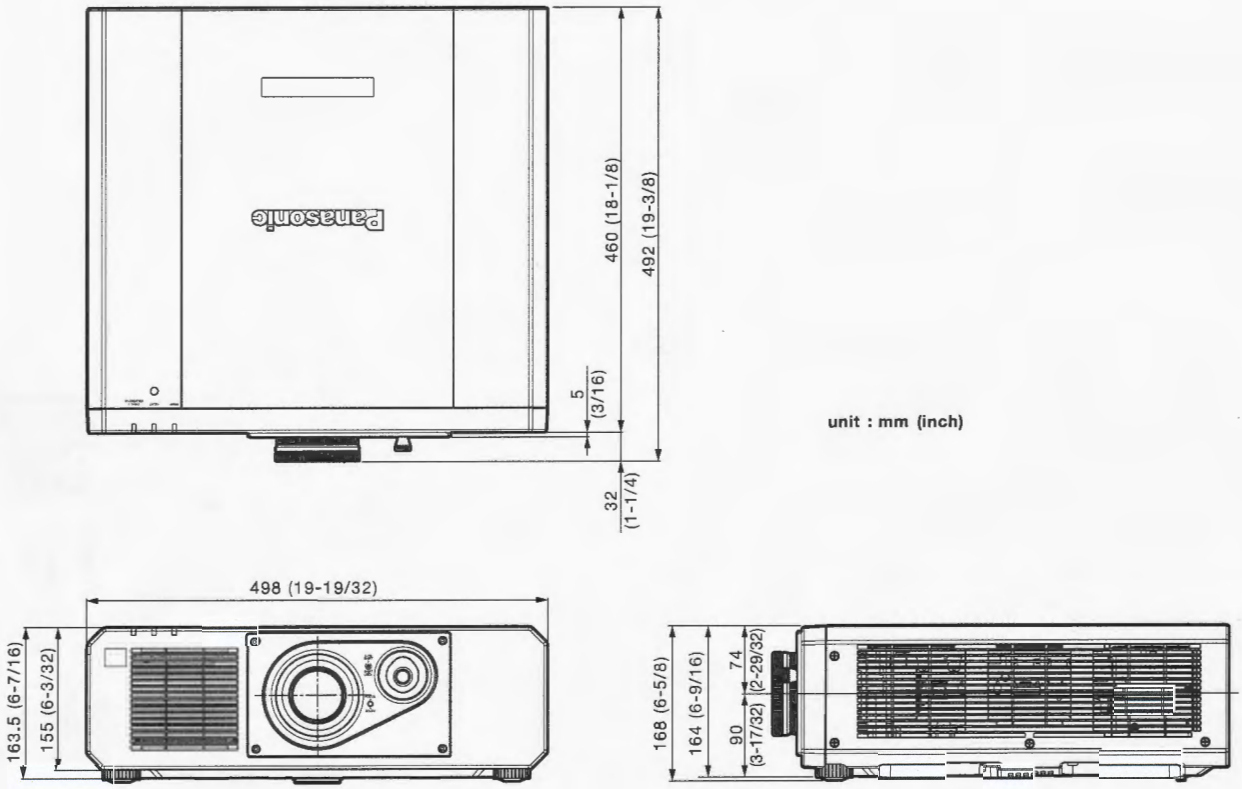
- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket. Furthermore, in order to prevent it from falling down from the ceiling, use the supplied wire on the mounting bracket.

Projection distance for 16:10 aspect ratio screen

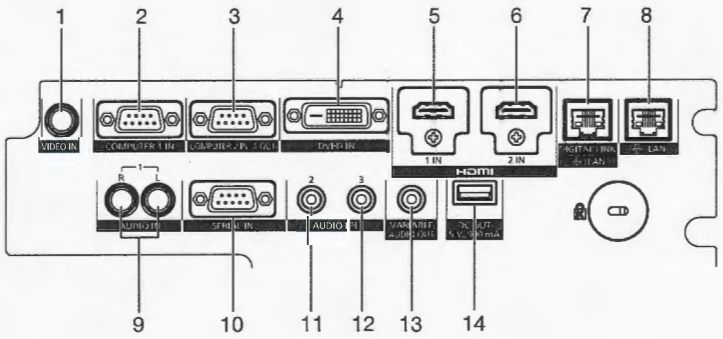
unit: meters (feet)

Projection size [diagonal]	Projection distance [L] Min	Max	Height from the edge of screen to center of lens [H]
1.02 m / 40″	1.2 (4.0)	2.5 (8.2)	-0.08 (-0.3) – 0.51 (1.7)
1.27 m / 50″	1.5 (5.1)	3.2 (10.3)	-0.09 (-0.3) – 0.63 (2.1)
1.52 m / 60″	1.9 (6.1)	3.8 (12.4)	-0.11 (-0.4) – 0.76 (2.5)
1.78 m / 70″	2.2 (7.2)	4.4 (14.5)	-0.13 (-0.4) – 0.89 (2.9)
2.03 m / 80″	2.5 (8.2)	5.1 (16.6)	-0.15 (-0.5) – 1.01 (3.3)
2.29 m / 90″	2.8 (9.3)	5.7 (18.7)	-0.17 (-0.6) – 1.14 (3.7)
2.54 m / 100″	3.1 (10.3)	6.3 (20.8)	-0.19 (-0.6) – 1.27 (4.2)
3.05 m / 120″	3.8 (12.4)	7.6 (25.0)	-0.23 (-0.8) – 1.52 (5.0)
3.81 m / 150″	4.7 (15.6)	9.5 (31.3)	-0.28 (-0.9) – 1.90 (6.2)
5.08 m / 200″	6.3 (20.8)	12.7 (41.7)	-0.38 (-1.2) – 2.53 (8.3)
6.35 m / 250″	7.9 (26.1)	15.9 (52.2)	-0.47 (-1.5) – 3.16 (10.4)
7.62 m / 300″	9.5 (31.3)	19.1 (62.7)	-0.57 (-1.9) – 3.80 (12.5)

Dimensions



Terminals



1 Video input
2 Computer 1 input
3 Computer 2 input/output
4 DVI-D input
5 HDMI 1 output
6 HDMI 2 input
7 DIGITAL LINK connector
8 LAN connector
9 Audio 1 input
10 Serial input
11 Audio 2 input
12 Audio 3 input
13 Audio output
14 USB connector

Projection distance for 16:9 aspect ratio screen

unit: meters (feet)

Projection size [diagonal]	Projection distance [L] Min	Projection distance [L] Max	Height from the edge of screen to center of lens [H]
1.02 m / 40″	1.3 (4.1)	2.6 (8.5)	-0.07 (-0.2) – 0.47 (1.5)
1.27 m / 50″	1.6 (5.2)	3.2 (10.6)	-0.09 (-0.3) – 0.59 (1.9)
1.52 m / 60″	1.9 (6.3)	3.9 (12.8)	-0.10 (-0.3) – 0.70 (2.3)
1.78 m / 70″	2.2 (7.4)	4.6 (14.9)	-0.12 (-0.4) – 0.82 (2.7)
2.03 m / 80″	2.6 (8.5)	5.2 (17.1)	-0.14 (-0.5) – 0.94 (3.1)
2.29 m / 90″	2.9 (9.5)	5.9 (19.2)	-0.16 (-0.5) – 1.06 (3.5)
2.54 m / 100″	3.2 (10.6)	6.5 (21.4)	-0.17 (-0.6) – 1.17 (3.8)
3.05 m / 120″	3.9 (12.8)	7.8 (25.7)	-0.21 (-0.7) – 1.41 (4.6)
3.81 m / 150″	4.9 (16.0)	9.8 (32.1)	-0.26 (-0.9) – 1.76 (5.8)
5.08 m / 200″	6.5 (21.4)	13.1 (42.9)	-0.35 (-1.1) – 2.34 (7.7)
6.35 m / 250″	8.2 (26.8)	16.4 (53.7)	-0.44 (-1.4) – 2.93 (9.6)
7.62 m / 300″	9.8 (32.2)	19.6 (64.4)	-0.52 (-1.7) – 3.51 (11.5)

Projection distance for 4:3 aspect ratio screen

unit: meters (feet)

Projection size [diagonal]	Projection distance [L] Min	Projection distance [L] Max	Height from the edge of screen to center of lens [H]
1.02 m / 40″	1.4 (4.6)	2.9 (9.4)	-0.09 (-0.3) – 0.58 (1.9)
1.27 m / 50″	1.8 (5.8)	3.6 (11.7)	-0.11 (-0.4) – 0.72 (2.4)
1.52 m / 60″	2.1 (7.0)	4.3 (14.1)	-0.13 (-0.4) – 0.86 (2.8)
1.78 m / 70″	2.5 (8.1)	5.0 (16.5)	-0.15 (-0.5) – 1.00 (3.3)
2.03 m / 80″	2.8 (9.3)	5.7 (18.8)	-0.17 (-0.6) – 1.14 (3.7)
2.29 m / 90″	3.2 (10.5)	6.5 (21.2)	-0.19 (-0.6) – 1.29 (4.2)
2.54 m / 100″	3.6 (11.7)	7.2 (23.6)	-0.21 (-0.7) – 1.43 (4.7)
3.05 m / 120″	4.3 (14.1)	8.6 (28.3)	-0.26 (-0.9) – 1.72 (5.6)
3.81 m / 150″	5.4 (17.7)	10.8 (35.4)	-0.32 (-1.0) – 2.15 (7.1)
5.08 m / 200″	7.2 (23.6)	14.4 (47.3)	-0.43 (-1.4) – 2.87 (9.4)
6.35 m / 250″	9.0 (29.5)	18.0 (59.1)	-0.53 (-1.7) – 3.58 (11.7)
7.62 m / 300″	10.8 (35.5)	21.6 (71.0)	-0.64 (-2.1) – 4.30 (14.1)

- **The value for L (distance to screen) varies slightly within ±5% depending on the zoom lens characteristics.**
- **The zoom lens characteristics may cause slight image distortion.**
- **When vertical keystone correction is used, the image is corrected in the direction that reduces its projected size.**
- **The brightness varies depending on the zoom setting.**

Calculation of the projection distance

For a screen size different from the above, use the equation below to calculate the projection distance.

Aspect ratio 16:10

minimum L (m) = (diagonal screen size in inches) × 0.0320 - 0.0526
maximum L (m) = (diagonal screen size in inches) × 0.0638 - 0.0390

Aspect ratio 16:9

minimum L (m) = (diagonal screen size in inches) × 0.0329 - 0.0526
maximum L (m) = (diagonal screen size in inches) × 0.0656 - 0.0390

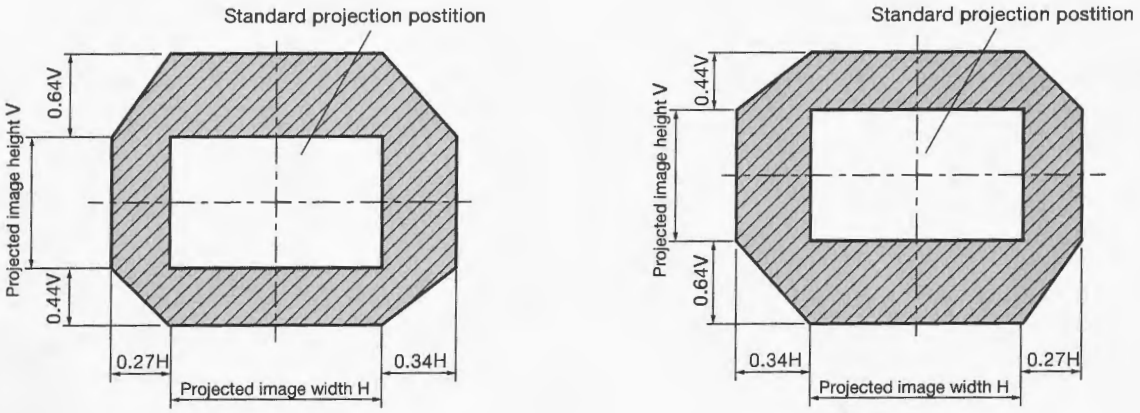
Aspect ratio 4:3

minimum L (m) = (diagonal screen size in inches) × 0.0362 - 0.0526
maximum L (m) = (diagonal screen size in inches) × 0.0722 - 0.0390

- **Distances calculated with the above equations will include a slight error.**

Shift range

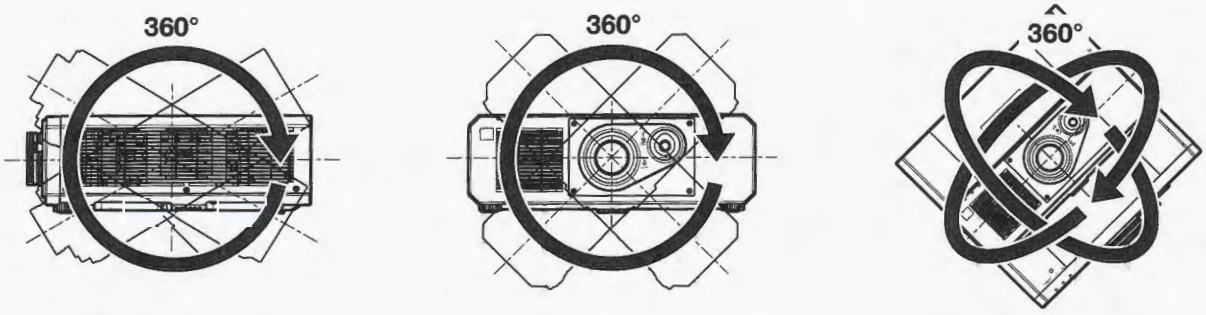
Optical axis shift function allows to shift the position of a projected image as shown below.



Installable angle

Install the projector at an angle within the range shown below.

FULL 360-degree projection



Vertical 360-deg. **Horizontal 360-deg.** **Tilting 360-deg. (V&H combination)**

List of compatible signals

The following table specifies the video signals compatible with the projector.
This projector supports the signal with ✓ in the compatible signal column.

NOTE: The native resolution of this projector is 1,920× 1,200pixels. If the display resolution of the input signal is different from the native resolution, image compression or expansion will be used to convert the input signal to a level within the native resolution.

2D compatible signal	Resolution (Dots)	Scanning freq. H (KHz)	Scanning freq. V (Hz)	Dot clock freq. (MHz)	Input terminal VIDEO	Input terminal Y/C (COMPUTER1)	Input terminal COMPUTER 1 /2	Input terminal DVI-D	Input terminal HDMI1/2 DIGITAL LINK
"NTSC/NTSC4.43/ PAL-M/PAL60"	720 x 480i	15.7	59.9	-	✓	✓	-	-	-
PAL/PAL-N/SECAM	720 x 576i	15.6	50.0	-	✓	✓	-	-	-
480i	712x483i	15.7	59.9	13.5	-	-	✓	-	-
576i	702x575i	15.6	50.0	13.5	-	-	✓	-	-
480i	720(1440) x 480i*1	15.7	59.9	27.0	-	-	-	✓	✓
576i	720(1440) x 576i*1	15.6	50.0	27.0	-	-	-	✓	✓
480p	720 x 483	31.5	59.9	27.0	-	-	✓	✓	✓
576p	720 x 576	31.3	50.0	27.0	-	-	✓	✓	✓
720/60p	1280 x 720	45.0	60.0	74.3	-	-	✓	✓	✓
720/50p	1280 x 720	37.5	50.0	74.3	-	-	✓	✓	✓
1080/60i *2	1920 x 1080i	33.8	60.0	74.3	-	-	✓	✓	✓
1080/50i	1920 x 1080i	28.1	50.0	74.3	-	-	✓	✓	✓
1080/24p	1920 x 1080	27.0	24.0	74.3	-	-	✓	✓	✓
1080/24sF	1920 x 1080i	27.0	48.0	74.3	-	-	✓	✓	✓
1080/25p	1920 x 1080	28.1	25.0	74.3	-	-	✓	✓	✓
1080/30p	1920 x 1080	33.8	30.0	74.3	-	-	✓	✓	✓
1080/60p	1920 x 1080	67.5	60.0	148.5	-	-	✓	✓	✓
1080/50p	1920 x 1080	56.3	50.0	148.5	-	-	✓	✓	✓
640 x 400/70	640 x 400	31.5	70.1	25.2	-	-	✓	✓	✓
640 x 400/85	640 x 400	37.9	85.1	31.5	-	-	✓	✓	✓
640 x 480/60	640 x 480	31.5	59.9	25.2	-	-	✓	✓	✓
640 x 480/67	640 x 480	35.0	66.7	30.2	-	-	✓	✓	✓
640 x 480/73	640 x 480	37.9	72.8	31.5	-	-	✓	✓	✓
640 x 480/75	640 x 480	37.5	75.0	31.5	-	-	✓	✓	✓
640 x 480/85	640 x 480	43.3	85.0	36.0	-	-	✓	✓	✓
800 x 600/56	800 x 600	35.2	56.3	36.0	-	-	✓	✓	✓
800 x 600/60	800 x 600	37.9	60.3	40.0	-	-	✓	✓	✓
800 x 600/72	800 x 600	48.1	72.2	50.0	-	-	✓	✓	✓
800 x 600/75	800 x 600	46.9	75.0	49.5	-	-	✓	✓	✓
800 x 600/85	800 x 600	53.7	85.1	56.3	-	-	✓	✓	✓
832 x 624/75	832 x 624	49.7	74.6	57.3	-	-	✓	✓	✓
1024 x 768/50	1024 x 768	39.6	50.0	51.9	-	-	✓	✓	✓
1024 x 768/60	1024 x 768	48.4	60.0	65.0	-	-	✓	✓	✓
1024 x 768/70	1024 x 768	56.5	70.1	75.0	-	-	✓	✓	✓
1024 x 768/75	1024 x 768	60.0	75.0	78.8	-	-	✓	✓	✓
1024 x 768/82	1024 x 768	65.5	81.6	86.0	-	-	✓	✓	✓
1024 x 768/85	1024 x 768	68.7	85.0	94.5	-	-	✓	✓	✓
1024 x 768/100	1024 x 768	81.4	100.0	113.3	-	-	✓	✓	✓
1024 x 768/120	1024 x 768	98.8	120.0	139.1	-	-	✓	✓	✓
1152 x 864/60	1152 x 864	53.7	60.0	81.6	-	-	✓	✓	✓
1152 x 864/70	1152 x 864	64.0	70.0	94.2	-	-	✓	✓	✓
1152 x 864/75	1152 x 864	67.5	74.9	108.0	-	-	✓	✓	✓
1152 x 864/85	1152 x 864	77.1	85.0	119.7	-	-	✓	✓	✓
1152 x 870/75	1152 x 870	68.7	75.1	100.0	-	-	✓	✓	✓
1280 x 720/50	1280 x 720	37.1	49.8	60.5	-	-	✓	✓	✓
1280 x 720/60	1280 x 720	44.8	59.9	74.5	-	-	✓	✓	✓
1280 x 720/100	1280 x 720	76.3	100.0	131.8	-	-	✓	✓	✓
1280 x 720/120	1280 x 720	92.6	120.0	161.6	-	-	✓	✓	✓

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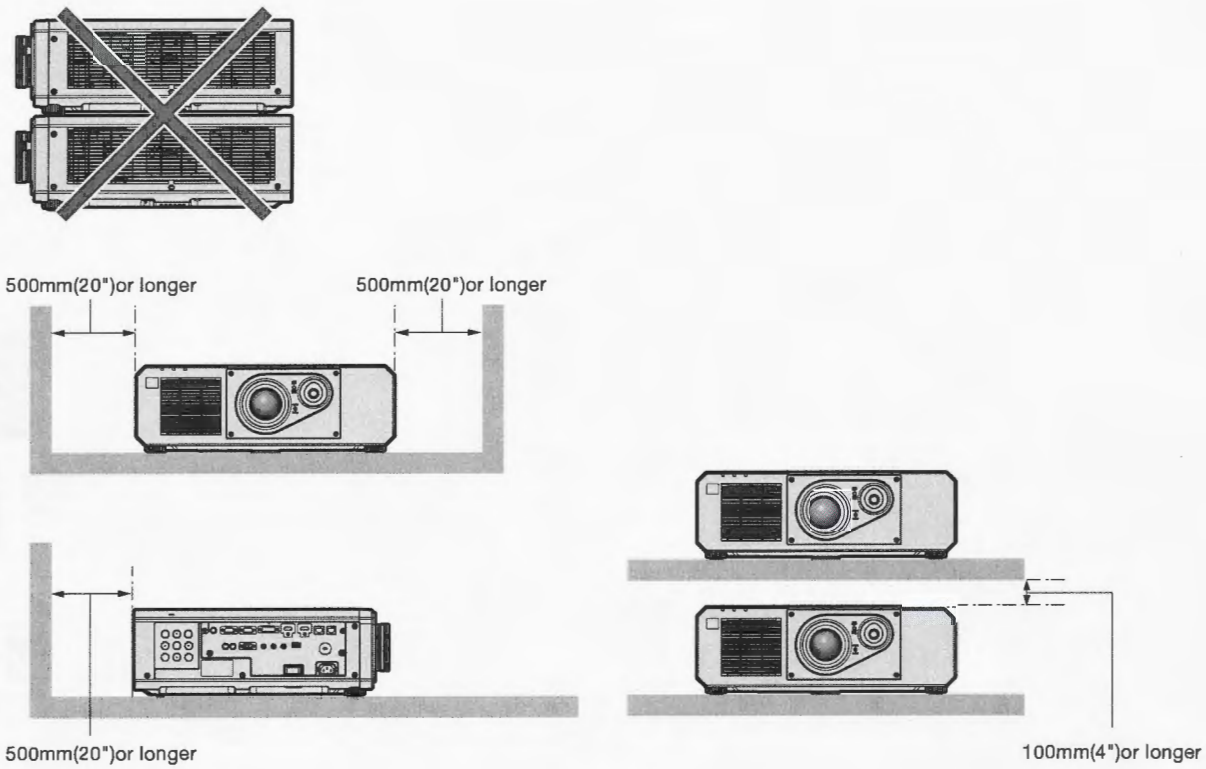
2D compatible signal	Resolution (Dots)	Scanning freq. H (KHz)	Scanning freq. V (Hz)	Dot clock freq. (MHz)	Input terminal VIDEO	Input terminal Y/C (COMPUTER1)	Input terminal COMPUTER 1/2	Input terminal DVI-D	Input terminal HDMI1/2 DIGITAL LINK
1280 x 768/50	1280 x 768	39.6	49.9	65.3	-	-	✓	✓	✓
1280 x 768/60	1280 x 768	47.8	59.9	79.5	-	-	✓	✓	✓
	1280 x 768※3	47.4	60.0	68.3	-	-	✓	✓	✓
1280 x 768/75	1280 x 768	60.3	74.9	102.3	-	-	✓	✓	✓
1280 x 768/85	1280 x 768	68.6	84.8	117.5	-	-	✓	✓	✓
1280 x 800/50	1280 x 800	41.3	50.0	68.0	-	-	✓	✓	✓
1280 x 800/60	1280 x 800	49.7	59.8	83.5	-	-	✓	✓	✓
	1280 x 800※3	49.3	59.9	71.0	-	-	✓	✓	✓
1280 x 800/75	1280 x 800	62.8	74.9	106.5	-	-	✓	✓	✓
1280 x 800/85	1280 x 800	71.6	84.9	122.5	-	-	✓	✓	✓
1280 x 960/60	1280 x 960	60.0	60.0	108.0	-	-	✓	✓	✓
1280 x 1024/50	1280 x 1024	52.4	50.0	88.0	-	-	✓	✓	✓
1280 x 1024/60	1280 x 1024	64.0	60.0	108.0	-	-	✓	✓	✓
1280 x 1024/66	1280 x 1024	72.3	66.3	125.0	-	-	✓	✓	✓
1280 x 1024/72	1280 x 1024	78.2	72.0	135.1	-	-	✓	✓	✓
1280 x 1024/75	1280 x 1024	80.0	75.0	135.0	-	-	✓	✓	✓
1280 x 1024/85	1280 x 1024	91.1	85.0	157.5	-	-	✓	✓	✓
1366 x 768/60	1366 x 768	47.7	59.8	85.5	-	-	✓	✓	✓
1366 x 768/50	1366 x 768	39.6	49.9	69.0	-	-	✓	✓	✓
1400 x 1050/50	1400 x 1050	54.1	50.0	99.9	-	-	✓	✓	✓
1400 x 1050/60	1400 x 1050	64.0	60.0	108.0	-	-	✓	✓	✓
	1400 x 1050	65.2	60.0	122.6	-	-	✓	✓	✓
	1400 x 1050	65.3	60.0	121.8	-	-	✓	✓	✓
1400 x 1050/72	1400 x 1050	78.8	72.0	149.3	-	-	✓	✓	✓
1400 x 1050/75	1400 x 1050	82.2	75.0	155.9	-	-	✓	✓	✓
1440 x 900/60	1440 x 900	55.9	59.9	106.5	-	-	✓	✓	✓
1440 x 900/50	1440 x 900	46.3	49.9	86.8	-	-	✓	✓	✓
1600 x 900/50	1600 x 900	46.4	49.9	96.5	-	-	✓	✓	✓
1600 x 900/60	1600 x 900	55.9	60.0	119.0	-	-	✓	✓	✓
1600 x 1200/50	1600 x 1200	61.8	49.9	131.5	-	-	✓	✓	✓
1600 x 1200/60	1600 x 1200	75.0	60.0	162.0	-	-	✓	✓	✓
1680 x 1050/60	1680 x 1050	65.3	60.0	146.3	-	-	✓	✓	✓
1680 x 1050/50	1680 x 1050	54.1	50.0	119.5	-	-	✓	✓	✓
1920 x 1080/50	1920 x 1080	55.6	49.9	141.5	-	-	✓	✓	✓
1920 x 1080/60	1920 x 1080※3	66.6	59.9	138.5	-	-	✓	✓	✓
	1920 x 1080※4	67.2	60.0	173.0	-	-	✓	-	-
1920 x 1200/50	1920 x 1200	61.8	49.9	158.3	-	-	✓	✓	✓
1920 x 1200/60RB	1920 x 1200※3	74.0	60.0	154.0	-	-	✓	✓	✓
1920 x 1200/60	1920 x 1200※4	74.6	59.9	193.3	-	-	✓	-	-

***1 Only compatible with dot clock frequency of 27 MHz (pixel repetition signal)**
***2 When 1125(1035)/60i signal input, it displays as 1125(1080)/60i signals.**
***3 Compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).**
***4 Image resolution is reduced by the image processing circuit before projection.**

Notes on projector placement and operation

- Prevent hot and cool air from the air conditioning system to blow directly to the ventilation ports (intake and exhaust) of the projector.
- Do not stack projectors on top of each other.
- Do not block the ventilation ports (intake and exhaust) of the projector.



- Do not install the projector in a confined space.
  When installing the projector in a confined space, provide air conditioning or ventilation separately. Exhaust heat may accumulate when the ventilation is not enough, triggering the protection circuit of the projector.

MANUAL

SDQ5Pir

Features

The APart SDQ5Pir powered loudspeaker set is a versatile and very compact, easy to use, plug and play sound system. It consists of an amplified loudspeaker with a 5.25” woofer, a high frequency unit and a second linkable passive loudspeaker, powered by the second amplifier built into the active speaker. The speakers are magnetically shielded.

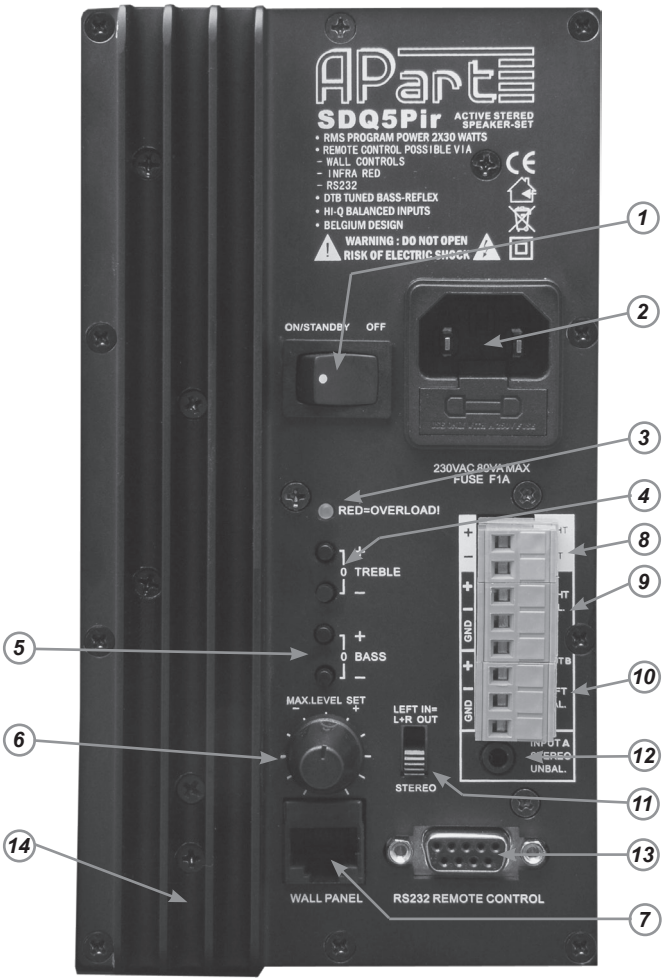
The speakers can be remote controlled via the included infrared remote control, RS232 serial port or an optional wall control panel with or without local input. The auto power off function switches off the power amplifier when no audio signal is present for a certain time. This time window can be adjusted using RS232 commands.
Further benefits are: adjustable maximum level, dual inputs: unbalanced on mini-jack and balanced on euroblock + additional input via optional wall control unit. All inputs can be gain adjusted, used individually or mixed together (except optional wall control panel local input source : this input can not be mixed with the A or B or A+B inputs).
The automatic power on function will power up the speaker automatically, only when the autopower function (AUTOPW) is active, the speaker is not in standby and the incoming audio signal is higher than the threshold. The threshold (AUPTRG) can be adjusted via RS232 control to suit your needs.

- Active 2 way bass-reflex speaker system
- Ideal for monitor, Audio-Video applications, multimedia applications
- Powerfull HiFi 5.25” woofer and 1” tweeter
- Mounting brackets, IR remote control and power cord included
- 2 x 30 watts RMS output power, 200 Watts PMPO dynamic
- Enhanced bass response by DTB reflex tuning
- Multifunction led indicator: standby (orange), on (green), overload (red), off (led not lit)
- Hi-Q balanced inputs
- Stereo inputs on standard 3.2 mm mini stereo jack, compatible with headphone outputs and line inputs (Computer, MP3 players)
- Input sources A, B or via optional wall panel
- Inputs A and B can be mixed together or selected individually by infrared remote control or RS232
- Magnetically shielded
- Stylish design, suited for placement in corners
- Very high efficiency, high output
- Standby mode for low power consumption
- Controllable via infrared remote (included), RS232, wall panels (optional)
- RS232 control for increased integration in automated audio systems using standard 9 pin serial cable.
- RJ45 remote wall panel connector (not compatible with computer networks or other types of remote control cabling)

These speakers have been carefully packed at the factory. Open the carton box and remove the speakers from the packing. Do not use sharp objects. Place the speakers on a flat surface. The mounting brackets, infrared remote control unit, power cord and speaker interconnection wire are included in the packing, When the product shows signs of damage caused by transportation, contact your dealer immediately. Damage due to transport and rough handling is not covered by the manufacturers warranty.

The SDQ5Pir complies with CE regulations.

Rear panel



1. Power switch: turn mains power on and off.
2. Power cord inlet: attach the power cord supplied to this socket. The inlet also contains the mains fuse.
3. Multifunction led: this led is orange in standby mode, green when the speaker is active and red when an overload or clipping occurs.
4. Treble control: push the + or - button once to increase or decrease the treble tone control in steps of 2 dB. Push both + and - buttons simultaneously to reset the tone control to neutral position.
5. Bass control: push the + or - button once to increase or decrease the bass tone control in steps of 2 dB. Push both + and - buttons simultaneously to reset the tone control to neutral position.
6. Master volume control: this volume control sets the level of the SDQ5Pir speaker.
7. Wall panel connector: standard RJ45 connector for connection of an optional wall control panel. This connection is NOT COMPATIBLE with other networks, such as computer networks etc. Do not attempt to connect anything else but the optional SDQ5Pir wall control panels.

8. Right speaker output: output to the passive slave loudspeaker (right channel) on euroblock. Connect the Right LS out to the euroblock connector of the slave unit (passive speaker).
9. Balanced input: input B right channel balanced input on euroblock.
10. Balanced input: input B left channel balanced input on euroblock.
11. Mono / stereo selector: switch to stereo for normal operation. For mono operation, switch to upper position. In this case, the left input signal only is used on both channels.
12. Input A minijack: standard 3.2 mm stereo minijack connector for input A.
13. RS232 connector: standard SUB D9 connector for serial control.
14. Heatsink.

RS232 communication

Communication with SDQ5Pir via RS232 is done with simple ASCII Commands and Replies. The port settings are 19200 Baudrate, 8 databits, no parity and 1 stop bit. The physical connection is as described below:
Standard 9 pin serial cable, wired straight through (no null modem cable !!!). Maximum wire length depends on cable quality and influence from external interference.
Pin 2: TX data: data transmission output
Pin 3: RX data: data reception input
Pin 5: GND: ground
Other pins are not used.

NOTE: when the unit is in standby mode, it may not respond to the first command sent to the unit, unless you send the command “SET STANDBY OFF”. If you want to send any other command while the unit is in standby mode, it will wake up from standby and reply “STANDBY OFF”. After that, resend the command and it will be executed.

An instruction has at least a command and an attribute. In many cases, there are extra values needed, like a source name/character or a value. From here we assume that you are familiar with RS232 communication protocols and connections. If not, please read the user manual of your control device first. Instructions always have to be ended with <CR>, carriage return. Line feed <LF> characters will always be omitted, however SDQ5Pir can use (and echo) <LF> after a <CR>. Instructions are not case sensitive!
The 4 possible commands are: SET, GET, INC and DEC. With the INC and DEC command, a “step value” can be specified. See the table below for details (in the value column).

Operating Settings:
SDQLVL is the volume level of the speaker system. Possible values are: OFF (mute) or any value between -63 (lowest) and 0 (highest volume level). E.g. you want to set the volume to -20: SET SDQLVL -20 <CR>
The unit will reply: SDQLVL -20
MAXLVL is the maximum allowed volume level. E.g. if you don’t want anyone to set the SDQ level higher than -10, set the MAXLVL parameter to -10. All volume related commands will ALWAYS be related to the MAXLVL setting. E.g. if the MAXLVL is -10 and you enter the command SET SDQLVL -20, the SDQ5Pir will set the level relative to the MAXLVL, which was -10.
Please note that the absolute maximum number of volume steps is limited to 64 steps. 1 volume step corresponds to 1.25 dB.
The MAXLVL parameter is therefore considered as the master volume. If you want to mute the speaker, you can set the MAXLVL parameter to OFF.
BALANCE sets the balance between left and right channel. Possible values vary between -31 and 31.

Equalizer:
EQBASS sets the level of the bass.
EQTREB sets the level of the treble.
The value must be between -14 and 14 in steps of 2. If a different value is used (e.g. “5”), it will be changed to the closest match.

Configuration Settings:
SELECT is input source selection, a possible command could look like this: “Set select AB<CR>”. In this case, both inputs A and B will be mixed together by the SDQ5Pir unit. Possible values are A, B, AB or WI. WI is the local input of the optional wall control
IPGAIN is input gain. Each source input has its own gain setting so the source (A, B or WI) needs to be specified. The value can be between 0 and 3 in steps of 1. If an invalid value is used or no source is specified, “ERROR: Value Invalid!<CR>” will be replied. Otherwise, the reply will be “Command Executed!<CR>”
A command to set the input gain of source A to 1 looks like this: SET IPGAIN A 1<CR>
AUPTRG: auto power trigger level. Range from 0 to 30. Higher values will increase the trigger level.

RS-232 Settings:
All RS-232 settings are binary values, they can be ON or OFF.
If ECHO is on, all received characters are echoed back. This can be handy when programs like hyperterminal are used.
LF is Line Feed. Line Feed is an ASCII character (0x0A) which is sometimes used to let the cursor jump to the next line. SDQ5Pir always omits the line feed character. However, when LF is on, there will be put <LF> character behind each <CR> character. This is both the case for echoing as for messages sent by SDQ5Pir. Please take a look to following example: in both cases, the user sends the following string: “get sdqlvl<CR>”.
With ECHO on and LF off, this will be returned by SDQ5Pir :
“get sdqlvl<CR>” (command)
“SDQLVL -16<CR>” (reply)
In case both ECHO and LF are on, it will be like this:
“get sdqlvl<CR><LF>”
“SDQLVL -16<CR><LF>”
BS is Back Space. This is also an ASCII character. In case BS and ECHO is on, SDQ5Pir will reply <BS><SP><BS> each time when a <BS> is received. <SP> is the space character. This setting is only intended to have a “nice” text when used with programs like Hyperterminal.
VALFB means value feedback. Possible values are on or off. When value feedback in on, the SDQ5Pir will reply its setting after a value has been changed, such as SDQLVL.

Version information:
HWVRSN will return the hardware version number: GET HWVRSN<CR>
SWVRSN will return the hardware version number: GET SWVRSN<CR>

Control settings:
BACKCT: set the controls at the back of the unit on or off. NOTE: when set to off, you can NOT operate the unit from the back panel controls !!!
WALLCT: set the control of the optional wall control panel on or off.
IRRMCT: set the control by infrared remote on or off.
AUTOPW: set the time for the sleep function. When no audio signals are detected, the speaker will go to sleep mode after the AUTOPW time has elapsed. When set to 0, the AUTOPW function in not active. Values between 0 and 30 can be specified. 0 = inactive, 1 = auto power off after 1 minute etc...Default value is 15 minutes.

Restore Factory Settings:
The factory defaults are shown in the RS232 commands table. In order to restore the factory default settings, enter the following command: SET RESTORE ON<CR>
This function can also be executed without using RS232 commands. In that case, power off the speaker. While pushing BASS + and - buttons on the rear panel simultaneously, power up the speaker with the power switch. The multifunction led will be orange. Release the BASS + and - buttons one second after powering up. All factory defaults will be restored.

Standby:

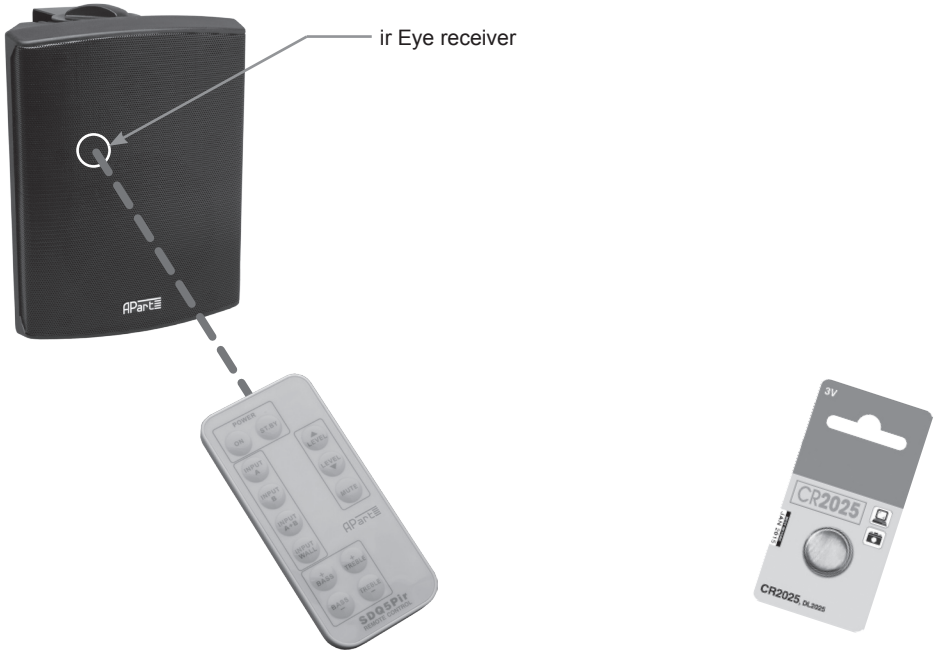
The SDQ5Pir can be switched to Standby mode with the IR remote control or with the “SET STANDBY ON<CR>” instruction. Leaving Standby mode can also be done with IR remote controller or the “SET STANDBY OFF<CR>” instruction. If an RS232 instruction is sent when the amplifier is in Standby mode or during power on, and the amplifier is not ready, it will answer “STANDBY ON”. Please wait until the speaker is operational (green led at the back is lit) and resend the instruction.
When the SDQ5Pir is in standby mode, the AUPTRG function will not be able to wake up the speaker. In standby mode, the SDQ5Pir can only be activated by a SET STANDBY OFF command.

RS232 COMMANDS

Attribute	Description	Commands	Value	Factory default
SDQLVL	Volume level	GET, SET, INC, DEC	OFF (-64) -63 to 0	0
MAXLVL	Maximum allowed level	GET, SET	BACK, OFF (-64) -63 to 0	BACK
BALANCE	Left - right balance	GET, SET	-31 to 31	0
SELECT	Source selection	GET, SET	A, B, AB, or WI	AB
EQBASS	Equalizer bass	GET, SET	-14 to 14	0
EQTREB	Equalizer treble	GET, SET	-14 to 14	0
STANDBY	Standby state	GET, SET	ON or OFF	OFF
IPGAIN	Input gain	GET, SET	0 to 3	A,B,WI at 0 AB at 2
ECHO	RS232 echo	GET, SET	ON or OFF	OFF
LF	RS232 line feed	GET, SET	ON or OFF	OFF
BS	RS232 backspace	GET, SET	ON or OFF	ON
VALFB	RS232 value feedback	GET, SET	ON or OFF	ON
BACKCT	Back panel control	GET, SET	ON or OFF	ON
WALLCT	Wall panel control	GET, SET	ON or OFF	ON
IRRMCT	Infrared remote control	GET, SET	ON or OFF	ON
AUTOPW	Auto power off	GET, SET	0 to 30	0 (OFF)
AUPTRG	Auto power trigger level	GET, SET	0 to 9	1
INFO	settings information	GET	NA	NA
HWVRSN	Hardware version	GET	NA	NA
SWVRSN	Software version	GET	NA	NA
RESTORE	Restore factory defaults	SET	ON	NA

ir Remote Control

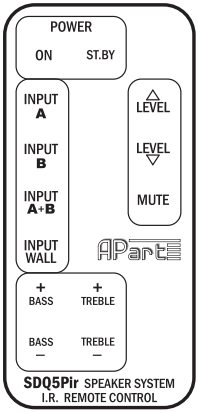
The included infrared remote control unit is powered by a standard CR2025 3V lithium battery.
Before first use, carefully remove the transparent battery saver.
When the battery is empty, replace with the same type only. Slide out the battery holder from the remote control unit, remove the empty battery and put a fresh one in place. The battery holder has a “+” mark on it. Make sure you insert the battery and holder in the right way !

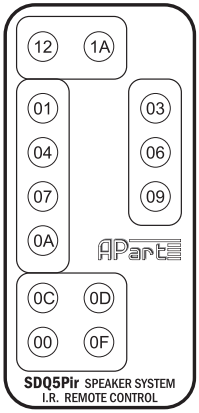


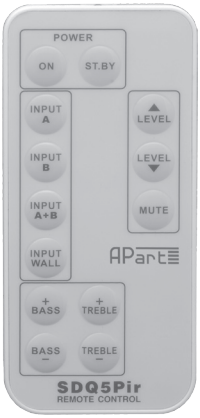
If you don’t use the remote for an extended period of time, remove the battery and store it in a safe location. This will avoid possible damage or corrosion from battery leakage.

Warning:
Do not attempt to recharge, disassemble, or incinerate this type of battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by applicable laws.

ir Commands







Function	ir COMMAND
Power ON	12
Power STANDBY	1A
Input A	01
Input B	04
Input A + B	07
Input WALL	0A
Level UP	03
Level Down	06
MUTE	09
Bass UP	0C
Bass DOWN	00
Treble UP	0D
Treble Down	0F

SDQ5Pir device code is “807F”
Infrared commands have been coded according to the NEC® protocol

Technical specifications

Speaker type	2 way bass reflex, active
Input impedance minijack input A	5 k ohm
Input sensitivity minijack input A	175 mV (-15dBV)
Input impedance balanced input B	22 k ohm
Input sensitivity balanced input B	175 mV (-15dBV)
Tone control bass	+- 14 dB @ 100 Hz in 2 dB steps
Tone control treble	+- 14 dB @ 10 kHz in 2 dB steps
Balance control	+- 31 steps ; 1.25 dB per step
Input gain adjustment	0 to 3 ; + 3.75 dB per step
Output power	2 x 30 watts RMS
Frequency range	45 - 20000 Hz
THD	<0.07%
S/N ratio	>90 dB
Power supply	230 VAC / 80 VA max
Fuse rating	1 AT/250V
Dimensions h x w x d (mm)	252 x 182 x 170
Net weight	2.85 kg (active) ; 1.75 kg (slave)
shipping weight	6.2 kg (1 set)
shipping dimensions	270 x 210 x 440
accessories supplied	Power cord, bracket, manual, infrared remote control unit, connection wire
Remote control unit battery type	lithium CR2025 3v
operating temperature	-10 to +40° C
relative humidity	10 to 90% non condensing

Important safety instructions

- Please check the carton box for any kind of damage on reception of the goods. In case of a damaged carton, please contact your dealer before opening the carton.
- Read all documentation before operating your equipment.
- Keep all documentation for future reference.
- Save the carton and packing material even if the equipment has arrived in good condition.
- Should you ever need to ship the unit, use only the original factory packing.
- Do not spill water or other liquids into or on the unit.
- Make sure power outlets conform to the power requirements listed on the back of the unit.
- Do not use the unit if the electrical power cord is frayed or broken.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Have gain controls on amplifiers turned down during power-up to prevent speaker damage if there are high signal levels at the inputs.
- Do not connect the inputs / outputs of amplifiers or consoles to any other voltage source, such as a battery, mains source, or power supply, regardless of whether the amplifier or console is turned on or off.
- Power down & disconnect units from mains voltage before making connections.
- Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
- Do not remove the cover. Removing the cover will expose you to potentially dangerous voltages.
- Do not drive the inputs with a signal level higher than that required to drive equipment to full output.
- In case of mal-function this device should be serviced by qualified service personnel only.

G.

Příloha č. 2: Oceněný položkový rozpočet

	Ks	jedn. cena	cena celkem v Kč bez DPH	Kč DPH	cena celkem v Kč vč. DPH	Konkrétní značky a typ výrobku
+I. Místnost 112						
Řídicí systém videokonference	1	325 000,00	325 000,00	68 250,00	393 250,00	PANASONICS KX-VC1600+akt. Klíč VCS351W + Konektivita s Microsoft Skype for Bussines + konfigurace, nastavení, oživení + servis-záruka 3 roky vč. zapůjčení náhrad. zařízení
Kamera 12x optický zoom	2	52 000,00	104 000,00	21 840	125 840,00	Panasonic GP-VD151
Instalační sada pro montáž kamery	2	5 000,00	10 000,00	2 100,00	12 100,00	Sada Panasonic
Mikrofon	1	32 000,00	32 000,00	6 720,00	38 720,00	Panasonic KX-VCA001X
Kabeláž	1	20 000,00	20 000,00	4 200,00	24 200,00	Speciál stíněná Panasonic
Snímání hlasu přednášejícího, pohybujícího se po místnosti nebo různě rozmístěných řečníků pomocí aktivního stropního mikrofonu	1	170 000,00	170 000,00	35 700,00	205 700,00	SENHEISSER TC-CEILING + mont. set TC- CEILING FB
Zobrazovací jednotka monitor 55“	1	40 000,00	40 000,00	8 400,00	48 400,00	PANASONICS TH 55LFE8 55“
Pojízdný stojan pro uchycení zobraz. jednotky	1	23 000,00	23 000,00	4 830,00	27 830,00	VOGELS PFT 2520
Uzamykatelná skříňka ke stojanu	1	7 000,00	7 000,00	1 470,00	8 470,00	VOGELS PFA 9052
Držák na videokonferenční kameru ke stojanu	1	2 800,00	2 800,00	588,00	3 388,00	VOGELS PVA 5050
Projektor Full HD pro místn. 112	1	40 000,00	40 000,00	8 400,00	48 400,00	PANASONIC PT-VZ580
Mixážní pult	1	4 200,00	4 200,00	882,00	5 082,00	YAMAHA YA M10
Skříň na audiotechniku	1	12 000,00	12 000,00	2 520,00	14 520,00	RACK 19“ vč. poliček
CENA CELKEM za místnost 112:			**790 000,00**	**165 900,00**	**955 900,00**	
II. Místnosti 105 a 115						
Projektor Full HD s laser zdrojem vč. adaptéru	2	124 000,00	248 000,00	52 080,00	300 080,00	PANASONIC PT-RZ570
Aktivní reproduktory	2	5 900,00	11 800,00	2 478,00	14 278,00	APART SDQ5PIR-BL
Kabeláž, rozbočovače, přípojná místa a spotřební materiál (soubor)	1	45 000,00	45 000,00	9 450,00	54 450,00	Kabely LAN, HDMI,VGA, stíněné audio, rozbočovače ATEN, přípojná místa VALUT, LEGRAND, spojky, koncovky, lišty, spoj. materiál
CENA CELKEM za místnosti 105 a 115:			**304 800,00**	**64 008,00**	**368 808,00**	
CENA CELKEM ZA DODÁVKU:			**1 094 800,00**	**229 908,00**	**1 324 708,00**	

*Pozn**. Další požadavky na předmět plnění veřejné zakázky dle bodu 6.3 zadávací dokumentace budou zahrnuty v každé položce položkového rozpočtu, tj. nebudou naceňovány samostatnou položkou.***

H.
Příloha č. 3: Seznam poddodavatelů

Seznam poddodavatelů / Čestné prohlášení

1. Název veřejné zakázky
Videokonferenční technika

2. Účastník zadávacího řízení	
Obchodní firma / Název:	**Jaroslav Smetana – JSME**
Sídlo / místo podnikání:	**Rychtářská 2005/6, 160 00 Praha 6**
IČO:	**16099664**

Čestně prohlašujeme, že nemáme v úmyslu zadat určitou část výše uvedené VZ jiné osobě, tj. poddodavateli.

Datum a podpis: 10.6.2018

Jaroslav Smetana
jednatel