Panasonic

PT-**TW343R** Series

Short Throw LCD Projectors

PT-**TW343R**
PT-**TW342**
PT-**TX402**
PT-**TX312**

Short-Throw Convenience Meets Wireless Projection Capability

Short-Throw, Wireless* Projection Makes Your Space for Presentations Comfortable

With its compact, lightweight body, the PT-TW343R Series enables large-screen projection even in limited spaces.** Ideal for small meeting rooms and school classrooms. An optional wireless projection* capability also offers hassle-free presentations without the need to connect PCs using cables. And interactive functions*** make lectures more effective, while giving presentations greater impact.

* The optional ET-WML100 Wireless Module is required.
** PT-TX402/TX312: 80-inch projection from a 75-cm distance; PT-TW343R/TW342: 80-inch projection from a 80-cm distance.
*** Featured on the PT-TW343R only.

Meeting Rooms

Classrooms

Ease of Installation

Corner Keystone Correction Enables Angled Projection
All you need to do is designate four points as the corners of the projected image, and this function easily carries out horizontal and vertical keystone correction.

Curved Screen Correction
Barrel and pincushion distortion is easily corrected when projecting onto a curved screen.

Multiple Unit Monitoring Capability
Multi Projector Monitoring and Control Software is available for monitoring and controlling multiple Panasonic projectors from a single PC.

Quiet 28 dB*8 Design Helps to Hold Viewers' Attention
The noise level is as low as 28 dB.*8 This helps your audience to keep their attention on the discussion or on the screen images during quiet scenes.

Easy Lamp and Filter Replacement
For easier maintenance, you can replace the lamp from the top and the air filter from the side, even after the projector is installed on the ceiling. This eliminates the need to detach the projector from its mounting bracket in ceiling-mounted applications.

Multiple Useful Features

Easy Wireless Projection by Optional Module
Simply inserting the optional ET-WML100 Wireless Module into the USB port on the projector enables easy wireless projection from Windows PCs, iOS devices, or Android devices on which the proper freeware is installed.

Presenter Light Ver.1.0 for Windows® PCs
• Pictures, videos, and any documents including PDF files/Power Point files, whatever are displayed on the PC screen can be projected.
• The images from up to four PCs can be projected simultaneously.

4-Window Multi Style

VueMagic™ Pro*9 for iOS/Android Devices
• Pictures, some documents including PDF files can be projected.
• Live camera mode / Annotate mode can be used.
• The images from up to four devices can be projected simultaneously.

Memory Viewer Function
Just insert a USB memory device into the projector and start projection straight away. There is no need for a PC.

USB Display Function for Easy Projection Using a USB Cable
USB Display outputs images and sounds from the computer by connecting to the USB port with a single USB cable.

Equipped with an HDMI Input Terminal and Abundant Interfaces
Supports a wide range of system architectures. include an HDMI input terminal, two sets of computer input terminals, a monitor output terminals.

PT-TW343R   PT-TW342/TX402/TX312

Other Useful Features
• Built-in closed caption decoder   • Start up logo
• PJLink™ compatibility PJLink   • Built-in 10 W speaker
• Projector identification system for up to 6 projectors
• Blackboard mode   • Equipped with a security bar for theft prevention

Eco-friendly
• Ecology-conscious design
• No halogenated flame retardants are used in the cabinet.
• Lead-free glass is used for the lens.
• Coating-free cabinet for easy recycling.
• Switchable lamp mode

Projection distance
unit: feet [meters]

PT-TW343R/TW342
(16:10 aspect ratio; throw ratio 0.46:1)

Diagonal image size	Projection distance (L)	Height from the edge of screen to center of lens (H)
50˝ [1.27]	1.57 [0.48]	0.36 [0.11]
60˝ [1.52]	1.94 [0.59]	0.43 [0.13]
70˝ [1.78]	2.26 [0.69]	0.49 [0.15]
80˝ [2.03]	2.62 [0.80]	0.56 [0.17]
90˝ [2.29]	2.95 [0.90]	0.62 [0.19]
100˝ [2.54]	3.28 [1.00]	0.72 [0.22]

PT-TX402/TX312
(4:3 aspect ratio; throw ratio 0.46:1)

Diagonal image size	Projection distance (L)	Height from the edge of screen to center of lens (H)
50˝ [1.27]	1.51 [0.46]	0.13 [0.04]
60˝ [1.52]	1.80 [0.55]	0.15 [0.05]
70˝ [1.78]	2.13 [0.65]	0.18 [0.05]
80˝ [2.03]	2.46 [0.75]	0.20 [0.06]
90˝ [2.29]	2.79 [0.85]	0.23 [0.07]
100˝ [2.54]	3.08 [0.94]	0.25 [0.08]

Upper edge of projected image
Screen
Lower edge of projected image

*1 Interactive pointer available as an option. *2 Available for Windows® only. For a Mac OS, driver installation from the CD-ROM is necessary. *3 Available for Windows® operating system. *4 Supported by Windows®7, Windows®8. Please note that some functions that can be used on professional displays cannot be used on projectors. *5 Projection distance of 80 cm for the PT-TW343R/ TW342, and the PT-TX402 only. 3,300 lm for the PT-TW343R and PT-TW342, and 3,200 lm for the PT-TX312. *7 The usage environment affects. *8 When lamp mode is set to Eco 2. *9 VueMagic™ Pro is a product of Pixelworks, Inc. For detailed information, refer to the following website. http://vuemagic.pixelworks.com

PT-**TW343R** WXGA 3,300 lm   PT-**TX402** XGA 3,800 lm
PT-**TW342** WXGA 3,300 lm   PT-**TX312** XGA 3,200 lm

Note: A built-in camera is featured on the PT-TW343R only.

Built-in camera
Photo shows the PT-TW343R.

Photo shows the PT-TW342.
The PT-TW342/TX402/TX312 does not have a built-in camera.

Spectacular Performance

Interactive Functions Let You Write on a Projected Image (PT-TW343R Only)
You can write or draw figures on the projected image with the Interactive Pen/Pointer.*1 In addition, two users can write simultaneously, to make classes and presentations more effective. It is also easy to store the words and figures in a computer for information sharing.

Let's answer the planet name of A-D
Earth   Jupiter
Mars

USB cable   Computer cable
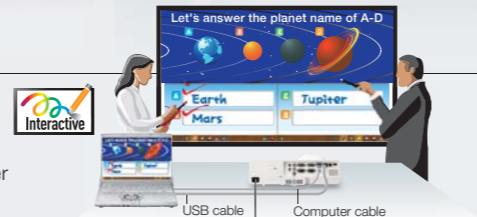
Interactive

Convenient Interactive Features by LightPen3 Software
• Auto driver installation
No need to install a special driver from a CD-ROM.*2
• Auto calibration
Auto calibration helps to reduce setting time. Manual calibration is also available by touching four points with the Interactive Pen/Pointer.*1
• Functionality improved
The faster frame rate ensures smooth, comfortable writing.

• Dual pen support*3
Selecting the dual pen mode (Half Screen mode/Full Screen mode) allows two users to write simultaneously, making your classes and presentations more efficient.

Half Screen mode
The drawing screen is divided into two sections. Individually select the color and line width for each screen.

Full Screen mode
Write on the full screen. The color and line width of the two pens are the same.
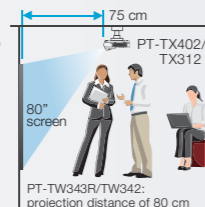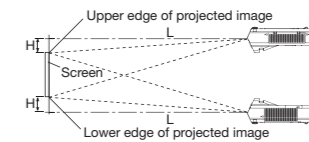
Two Interactive Pens provided
Lightly touch the screen with the pen to write.

WhiteBoard Software*4 Extends Your Capabilities
In addition to LightPen3 Software, you can use Panasonic's dedicated WhiteBoard Software for Windows.*4 WhiteBoard Software*4 is compatible with Panasonic's interactive-ready projectors and professional displays, and lets you use the interactive function.

Wide 80-inch Screen Images with a Short Projection Distance of 75 cm*5
Close range projection reduces not only the shadows of the presenter but also the glare of the projection light, making lectures and meetings more comfortable.

75 cm
PT-TX402/TX312
80˝ screen

PT-TW343R/TW342: projection distance of 80 cm

Replacement Cycle of Lamp and Air Filter Became Longer

Lamp Mode	Replacement Cycle of Lamp*7	Replacement Cycle of Air Filter*7
Eco 2	10,000 hours	10,000 hours
Eco 1	6,000 hours	6,000 hours
Normal	5,000 hours	5,000 hours

High brightness up to 3,800 lm of Brightness*6 and 12,000:1 Contrast Ratio
A remarkable 3,800 lm*6 of brightness and 12,000:1 contrast have been achieved in a compact, easy-to-carry body. Bright, clear images enhance the variety of viewing situations and applications.

Daylight View Lite
The Daylight View Lite function can be activated from the remote control for easy and comfortable viewing during presentations and lectures in a bright room.

Without Daylight View Lite   With Daylight View Lite

Model		PT-**TW343R**	PT-**TW342**	PT-**TX402**	PT-**TX312**
Power supply		AC100–240 V 50 Hz/60 Hz			
Power consumption		300 W (6 W with Standby mode set to Normal, 0.5 W with Standby mode set to Eco*[1])			
LCD panel	Display method	Transparent LCD panel (× 3, R/G/B)			
	Drive method	Active matrix method			
	Panel size	15.0 mm (0.59 inches) diagonal (16:10 aspect ratio)		16.0 mm (0.63 inches) diagonal (4:3 aspect ratio)	
	Pixels	1,024,000 (1,280 × 800)		786,432 (1,024 × 768)	
Lens		Fixed zoom, Manual focus lens, F = 1.8, f = 6.08 mm, Throw Ratio: 0.46:1			
Screen size		1.27–2.54 m (50–100 inches) diagonally, 16:10 aspect ratio		1.27–2.54 m (50–100 inches) diagonally, 4:3 aspect ratio	
Resolution		1,280 × 800 pixels (Input signals that exceed this resolution will be converted to 1,280 × 800 pixels.)		1,024 × 768 pixels (Input signals that exceed this resolution will be converted to 1,024 × 768 pixels.)	
Brightness* (Lamp power: Normal)		3,300 lm		3,800 lm	3,200 lm
Lamp		230 W × 1 lamp			
	Lamp replacement cycle*[2]	Normal: 5000 h/Eco1: 6000 h/Eco2: 10,000 h			
Center-to-corner uniformity*		80 %			
Contrast*		12,000:1 (all white/all black, Iris: On) (Image mode: Dynamic, Lamp control: Normal)			
Scanning frequency	HDMI IN	525i(480i)*[3], 625i(576i)*[3], 525p(480p), 625p(576p), 750(720)/60p, 750(720)/50p, 1125(1080)/60i, 1125(1080)/50i, 1125(1080)/60p, 1125(1080)/50p, 1125(1080)/24p, 1125(1080)/25p, 1125(1080)/24sF, 1125(1080)/30p, VGA size (640 dots × 480 dots)–WUXGA (1,920 dots × 1,200 dots), dot clock: 25-162 MHz			
	RGB	f_H: 15–91 kHz, f_V: 24–85 Hz, dot clock: 162 MHz or lower			
	$Y_{PB}P_R$ (YC_BC_R)	f_H: 15.73 kHz, f_V: 59.94 Hz [525i (480i)], f_H: 45.00 kHz, f_V: 60 Hz [750 (720)/60p], f_H: 28.13 kHz, f_V: 25 Hz [1125 (1080)/25p], f_H: 67.50 kHz, f_V: 60 Hz [1125 (1080)/60p],	f_H: 15.63 kHz, f_V: 50 Hz [625i (576i)], f_H: 37.50 kHz, f_V: 50 Hz [750 (720)/50p], f_H: 27.00 kHz, f_V: 24 Hz [1125 (1080)/24p], f_H: 56.25 kHz, f_V: 50 Hz [1125 (1080)/50p]	f_H: 31.47 kHz, f_V: 59.94 Hz [525p (480p)], f_H: 33.75 kHz, f_V: 60 Hz [1125 (1080)/60i], f_H: 27.00 kHz, f_V: 48 Hz [1125 (1080)/24sF],	f_H: 31.25 kHz, f_V: 50 Hz [625p (576p)], f_H: 28.13 kHz, f_V: 50 Hz [1125 (1080)/50i], f_H: 33.75 kHz, f_V: 30 Hz [1125 (1080)/30p],
	Video/S-Video	f_H: 15.73 kHz, f_V: 59.94 Hz [NTSC/NTSC4.43/PAL-M/PAL60], f_H: 15.63 kHz, f_V: 50 Hz [PAL/SECAM/PAL-N]			
Keystone correction range	Vertical	±15° (Auto, Manual)			
	Horizontal	±15° (Manual)			
Installation		Ceiling/floor, front/rear			
Terminals	HDMI IN	HDMI 19-pin × 1 HDCP compatible, Deep Color compatible, Audio signal: linear PCM (sampling frequencies: 48 kHz, 44.1 kHz, 32 kHz)			
	COMPUTER 1 IN	D-sub HD 15-pin (female) × 1 [RGB/S-Video/Y·P_B(C_B)·P_R(C_R)]			
	COMPUTER 2 IN	D-sub HD 15-pin (female) × 1 [RGB]			
	MONITOR OUT	D-sub HD 15-pin (female) × 1 [RGB/Monitor output]			
	VIDEO IN	Pin jack × 1			
	AUDIO IN 1	M3 (L,R) × 1			
	AUDIO IN 2	Pin jack × 2 (L,R)			
	AUDIO OUT	M3 (L,R) × 1 (variable)			
	LAN	RJ-45 (× 1), for network connections, 10Base-T/100Base-TX, PJLink™ (class 1) compatible			
	SERIAL IN	D-Sub 9-pin (female) × 1, for external control (RS-232C compatible)			
	USB-Type A	1 (Memory Viewer/Wireless Module, DC 5 V, max. 500 mA)			
	USB-Type B	1 (USB Display)			
	Mini USB	1 (for Interactive function)	—		
Built-in speaker		10 W (monaural)			
Operation noise*		Normal: 37 dB, Eco1: 33 dB, Eco2: 28 dB			
Cabinet materials		Molded plastic (PC)			
Dimensions (W × H × D)		335 mm × 134.1 mm (with legs at shortest position) × 329 mm			
Weight		Approx. 3.9 kg			
Operating environment		Operating environment temperature: Normal use: 5 °C (41 °F) to 40 °C (104 °F) (Elevation: below 1,400 m (4,593'); [High land]: [Off]) 5 °C (41 °F) to 35 °C (95 °F) (Elevation: 1,400 m (4,593')–2,700 m (8,858'); [High land]: [On 1]) 5 °C (41 °F) to 30 °C (86 °F) (Elevation: 2,700 m (8,858')–3,000 m (9,843'); [High land]: [On 2]) Operating environment humidity: 20–80 % (no condensation)			
Supplied accessories		• Wireless remote control unit × 1 • Power cord × 1 (× 2 for A model only) • Instruction manual (Basic guide) • Batteries for remote control (R03/LR03/AAA type × 2)) • Computer cable (1.5 m) × 1			
		• Interactive Light pen (× 2) • Batteries for pen (R03/LR03/AAA type (× 4)) • USB cable (4.5 m) • CD-ROM (× 1) ⋯ Instruction manual, Multi Projector Monitoring & Control Software, LightPen3 Software, SP6 Driver (for Mac OS)	• CD-ROM (× 1) ⋯ Instruction manual, Multi Projector Monitoring & Control Software		
Optional accessories	Ceiling Mount Bracket	Projector Mount Bracket: ET-PKL430B, Ceiling Mount Bracket (for high ceilings): ET-PKL100H, Ceiling Mount Bracket (for low ceilings): ET-PKL100S			
	Replacement Lamp Unit	ET-LAL500			
	Replacement Filter Unit	ET-RFL300			
	Interactive Light pen	ET-PEN100	—		
	Interactive Pointer	ET-PNT100	—		
	Conversion Cable	D-SUB/S-Video conversion cable: ET-ADSV			
	Wireless Module	ET-WML100 (U,E)			

Optional accessories

Ceiling Mount Bracket for high ceilings*[4]
ET-**PKL100H**

Ceiling Mount Bracket for low ceilings*[4]
ET-**PKL100S**

Projector Mount Bracket
ET-**PKL430B**

Replacement Filter
ET-**RFL300**

* The filter cover shown in the photo is not included.

Replacement Lamp Unit
ET-**LAL500**

Interactive Light pen*[5]
ET-**PEN100**
*Exclusively for PT-TW343R

Interactive Pointer
ET-**PNT100**
*Exclusively for PT-TW343R

Wireless Module
ET-**WML100 (U,E)**

Photo shows the ET-WML100E.

Dimensions

unit: mm (inches)

335 (13-3/16)

329 (12-15/16)

134.1 (5-9/32)
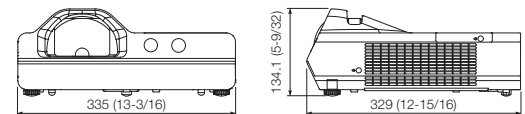
* Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.
*1 When the Standby mode is set to Eco, network functions such as power on over the LAN network will not operate. Also, only certain commands can be received for external control using the serial terminal. *2 The value for the recommended lamp replacement cycle is the maximum value, at which luminance will become 50 %. The usage environment affects the lamp replacement cycle. *3 Pixel-Repetition signal (dot clock frequency 27.0 MHz) only. *4 This product is used together with an optional bracket attachment (sold separately). *5 The Interactive Pen is the same as those which are supplied with PT-TW343R.

Caution

Do not install the projector in locations that are subject to excessive water, humidity, steam or oily smoke. Doing so may result in fire, malfunction or electric shock.

NOTES ON USE

1. The projector uses a high-voltage mercury lamp under high internal pressure. This lamp may break, emitting a popping sound, or fail to illuminate, due to impact or extended use.
2. The lamp becomes very hot during operation. Please observe the following precautions:
   • Never place objects on top of the projector while it is in operation.
   • Make sure there is an unobstructed space of 1000 mm(3 ft 3 in) or more around the projector's exhaust openings.
   • If stacking projector units, care must be taken to provide the recommended space between units. These space requirements also apply to installation where only one projector unit is operating at one time and the other unit is used as a backup.

• If the projector is placed in a box or enclosure, the temperature of the air surrounding the projector must match the operating temperature listed in the specifications table during use. Also, make sure the projector's intake and exhaust openings are not blocked. Ensure there is sufficient ventilation to prevent hot air from the exhaust openings being recirculated into the intake opening.
3. The lamp replacement cycle duration becomes shorter if the projector is operated repeatedly for short periods.
   • The lamp replacement cycle varies greatly depending on individual lamp characteristics and usage conditions.
   • The brightness of the lamp will gradually decrease with use.
4. Due to natural characteristics of lamps, screen brightness may fluctuate. This is not an indication of faulty lamp performance.

Panasonic®