

Panasonic

ideas for life

PT-AR100
Full High-Definition Home Cinema Projector



More Excitement with 2,800 lm of Brightness



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Bring the Action Home

The PT-AR100 lets friends and family enjoy Full-HD large-screen entertainment—from movies and sports to video games. Panasonic's advanced technologies bring crisp images even in daytime brightness, and improve color reproduction accuracy in movies, to deliver images with a refined Hollywood tuning technology. Whether it is used for a house party filled with friends or for family movie night, the PT-AR100 will keep you and your guests engaged in the story and action through its stunning image quality.



Large-Screen Entertainment for the Group

2,800-lm Brightness from Newly Developed 280-W Red-Rich Lamp

The PT-AR100 projector produces bright, sharp images by employing a new, high-power 280-W Red-Rich Lamp and optical unit that combine to generate 2,800 lm of brightness for comfortable viewing in various lighting conditions.



Light Harmonizer 3 Produces Quality Pictures in Various Lightings

Together with 2,800 lm of brightness, Panasonic's Light Harmonizer 3 technology assists the versatile use of the projector by automatically adjusting the picture quality of the image to match the living room or theater room conditions. This is made possible by utilizing built-in ambient light and color sensors that adjust the white balance, gamma curve, and sharpness settings to maintain bright, crisp pictures that match the viewing environment.

Picture Modes for Different Occasions

The PT-AR100 features seven picture modes for various viewing situations, including modes that are ideal for sports, games and movies: Normal, Dynamic, Game, Sports, Rec. 709, Cinema 1 and Vivid Cinema.

- **Cinema 1 Mode Offers Hollywood Picture Quality**

Movies can be enjoyed in Cinema 1 mode that has been tuned carefully to faithfully express the director's artistic intent. Panasonic has continued to work side by side with Hollywood experts to deliver this ideal image reproduction for viewing movies.

- **Game Mode for Stress-Free Playing**

This mode improves signal processing for better response, allowing you to play games with minimal stress. It also reveals gradation in saturated areas to show details that are otherwise lost in very dark areas.



- **Sports Mode with Motion Effect for Sharp Action Scenes**

In Sports mode, together with the Motion Effect feature, the PT-AR100 detects and extenuates detail on moving objects, resulting in intensified action with clearer, more highlighted players.

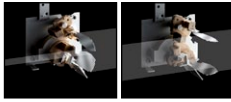


Light Harmonizer 3 automatically optimizes picture quality so that the images match the viewing environment.

Superb Picture Quality

Dynamic Iris Pro Delivers High 50,000:1 Contrast Ratio for Deep Blacks

This intelligent iris system works by analyzing the brightness level of each image using a histogram, then adjusting the lamp power, iris and gamma curve*¹ accordingly to create the ideal image. The adjustments are made virtually frame by frame. This achieves an astounding contrast ratio of 50,000:1, providing a wide dynamic range with swift smoothness for added beauty in both dark and bright scenes.



Pure Color Filter Pro for Rich, Vibrant Colors

The optical filter optimizes the light spectrum from the UHM projector lamp, helping to produce deeper blacks while improving purity levels in the three primary colors (red, green and blue). This advanced filter system improves color purity to cover a range that extends from the HDTV standard (Rec. 709 mode)*² to the color gamut used in digital cinema.*³ This gives images the deep, rich coloring that distinguishes movie images.



The sub iris cuts light leakage.

Detail Clarity Processor 3 Gives Natural Clarity to Even the Finest Details

This digital image processing circuit brings greater clarity and sharpness to details, by reproducing fine nuances that were lost due to image compression. After a two dimensional analysis of the video signal's frequency in each scene, the new circuit optimizes the sharpness of each image portion based on the extracted information. The resulting images have a more natural, lifelike expression than those of previous image-processing methods. The detection of super-high-frequency image components also enables



Conventional sharpness control: Sharpness is applied uniformly, which can cause a halo or ring effect.



Detail Clarity Processor 3: Signal frequency is extracted realtime and necessary sharpness is applied at varying degrees for natural, lifelike images.

more faithful reproduction of highly detailed information, such as the film grain in movies. The effect can be adjusted in eight steps from 0 to +7.

Motion Effect Adds Smoothness and Sharpness to Fast-Moving Scenes

This digital image processing circuit brings greater clarity and sharpness to details, even in fast-moving scenes. The resulting images have a more natural, lifelike expression.

Waveform Monitor for Precise Calibration

When the output level of the source device fluctuates due to the performance of the device or its cable connections, the original black and white levels of the image content cannot be reproduced. With the PT-AR100, you can view the waveforms on the screen and adjust the settings either automatically or manually as you prefer.



The PT-AR100 gives home consumers a projector with the kind of waveform monitor used in equipment for professionals.

Split Adjust Mode for Easy Picture Adjustment

You can freeze any scene you wish, and then make adjustments while easily comparing the original image and the adjusted image side-by-side.

Advanced Gamma Adjustment Function

The gamma curve can be flexibly controlled, allowing precise calibration according to the signal source and environment. Brightness (Y), R, G and B can each be adjusted at any of nine points. Adjustment point positions can be shifted both horizontally and vertically to bring out the desired gradation level.

Cinema Color Management Premium Enables Flexible Color Control

This color correction system enables free color control in two different modes. The Point Color Correction mode lets you pick a point in the image and adjust that color without affecting the neighboring colors. The Six Color Correction mode enables independent adjustment of red, green, blue, cyan, magenta and yellow.

Installation Flexibility and Ease of Use

2x Optical Zoom Lens and Wide Lens Shift Range

The 2x optical zoom lens provides a wide throw range, and the image can be shifted $\pm 65\%$ vertically and $\pm 26\%$ horizontally. This outstanding level of setup flexibility lets you enjoy large-screen viewing in different-sized rooms. Position it on a table in front of you, suspend it from the ceiling, or place it on a bookshelf behind you.



Abundant Connection Terminals

• HDMI™ with x.v.Color™ and Deep Color

The PT-AR100 has two HDMI input terminals for digital transmission without image degradation. The HDMI input terminals also support Deep Color and the x.v.Color color space of the 1.3 standard. Deep Color provides 10-bit (over 1.07 billion) and 12-bit (over 68.7 billion) color depths for smooth gradation between colors, while x.v.Color compliance reproduces natural, lifelike images.*⁴

• Programmable 12V Trigger for Automated Theater Setup

Two 12V triggers are provided. Since the input and output can be set independently (menu selectable), they can link flexibly with powered screens, room lights and powered curtains.



VIERA Link for Easy Operation

The PT-AR100 supports VIERA Link. If your home theater system contains VIERA Link-ready equipment, projection can be started by using only the remote control unit of the PT-AR100, regardless of whether the source is a Blu-ray Disc or a TV program stored on an HD recorder. This eliminates the need for hassling with several remote controls.*⁵

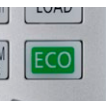


Function Button for Instant Recall

A frequently used function can be assigned to the Function button located on the remote for instant recall.

Eco Management Functions

A number of functions are provided to reduce power consumption. They adjust the brightness according to ambient light conditions, and reduce the lamp power when there is no signal input or the projector is in AV Mute mode. You can easily set the Eco Management functions according to operating conditions by using the ECO button on the remote control.



Under bright conditions.

Under dark conditions.

*1 Parameters for adjusting the output brightness gradation level according to the input signal.

*2 A setting that supports the 6,500K color temperature recommended in the HDTV standard (ITU-R BT.709)

*3 Specifications put forth by the Society of Motion Picture and Television Engineers

(SMPTE) DC28 Digital Cinema committees.

*4 Effective in Cinema 1 image mode.

*5 Cannot be used simultaneously with a TV that supports VIERA Link. Some operations may not be available depending on the equipment. In this case, use its own remote control to operate the equipment.

Energy-Saving Intelligent Lamp Power Control

Advanced Panasonic digital circuitry intelligently determines the necessary power output of the lamp depending on the content being displayed by analyzing more than 3 billion different image patterns. This advanced analysis process reduces the main power consumption by as much as 10 percent when the Dynamic Iris Pro function is operating, thus saving energy.

Up to 3,000-Hour Lamp Replacement Cycle*6 and Simple Maintenance

Panasonic's proprietary lamp drive system helps maintain lamp performance, resulting in a up to 3,000-hour lamp replacement cycle. For easy maintenance, you can replace the dust filter from the side and the lamp from the top of the projector. The filter and lamp are easily replaced even after the PT-AR100 is installed on the ceiling.



Other Features

- 16-bit (full 12-bit) gamma correction for natural gradation.
- Scene-adaptive MPEG noise reduction effectively blocks regular noise and minimizes mosquito noise.
- Scene-adaptive resizing LSI improves quality when resizing 480p images or those from other sources with resolution lower than the PT-AR100's native resolution.
- 24p compatible.
- Progressive cinema scan (3/2 pulldown) and HD IP.
- Up to sixteen sets of PICTURE adjustment settings can be stored in memory with custom names that make them easy to remember.
- User equalizing function lets you adjust the high, mid and low gamma levels.
- Screen Area Memory.
- User-friendly ergonomic remote control.
- Built-in test pattern.
- On-screen input guidance.
- Auto input search.
- Quiet operation: 29 dB (lamp power: Eco).
- Normal/Eco lamp power selection.



Ecology-Conscious Design

Panasonic works from every angle to minimize environmental impact in the product design, production and delivery processes, and in the performance of the product during its life cycle. The PT-AR100 reflects the following ecological considerations.

- No halogenated flame retardants are used in the cabinet.
- Non-coated cabinet for easy recycling.
- Lead-free glass for the lens.
- Standby power consumption of only 0.08 W.
- ECO button on the remote control.
- A sleep-timer that reduces wasteful power consumption.
- RoHS compliant.



Each Panasonic projector is produced by a vertically integrated production process, which extends from R&D to manufacturing, at the Panasonic factory in Japan, under strict quality control. This ensures stable, top-quality performance in every product.

Specifications

Power supply	100-240 V AC, 50/60 Hz
Power consumption	350 W (0.08 W in standby mode)
LCD*7 panel	Panel size: 18.7 mm (0.74 in) diagonal (16:9 aspect ratio) Display method: Transparent LCD panel (x 3, R/G/B) Drive method: Active matrix Pixels: 2,073,600 (1,920 x 1,080) x 3, total of 6,220,800 pixels
Lamp*8	280 W UHM lamp
Lens	Manual zoom (1.33-2.69:1), manual focus lenses, F 2.0-3.4, f 21.5-43.0 mm
Projection size (diagonal)	1.02-7.62 m (40-300 inches)
Brightness*9	2,800 lm*10
Center-to-corner uniformity ratio*9	85%
Contrast ratio*9	50,000:1*11 (full on/full off)
Resolution	1,920 x 1,080 pixels
Scanning frequency RGB	fh: 15 kHz-74 kHz, fv: 24 Hz-85 Hz, dot clock: 154 MHz or lower
YPBPR (YCBCR)	525i (480i), 625i (576i), 525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1125 (1080)/60i, 1125 (1080)/50i, 1125 (1080)/24p, 1125 (1080)/60p, 1125 (1080)/50p
Video/S-Video	fh: 15.75 kHz, fv: 60 Hz [NTSC/NTSC4.43/PAL-M/PAL60] fh: 15.63 kHz, fv: 50 Hz [PAL/PAL-N/SECAM] Vertical: ±65%, horizontal: ±26% Vertical: approx. ±30°
Optical axis shift*12	
Keystone correction range	Vertical: approx. ±30°
Terminals	
HDMI IN	HDMI connector x 2, HDMI [Deep Color, x.v.Color*13, CEC*14], HDCP compliant, supports HDAVI Control Version 5
COMPUTER (RGB) IN	D-sub HD 15-pin (female) x 1 (RGB/YPBPR/YCBCR x 1)
COMPONENT IN	RCA pin x 3 (YPBPR/YCBCR)
TRIGGER IN/OUT	M3 x 2, 12 V, max. 100 mA (input/output selectable using on-screen menu)
VIDEO IN	RCA pin x 1
S-VIDEO IN	Mini DIN 4-pin x 1
SERIAL IN	D-sub 9-pin x 1 for external control (RS-232C compliant)
Dimensions (W x H x D)	470 mm x 151 mm x 380 mm*15 (18-17/32" x 5-15/16" x 14-31/32")*15
Weight*16	Approx. 8.6 kg (19.0 lbs)
Operation noise*9	29 dB (lamp power: ECO)
Operating temperature	0°-40°C (32°-104°F)*17
Operating humidity	20%-80% (no condensation)
Supplied accessories	Power cord (x 1) (x 2 for PT-AR100EA) Wireless remote control unit (x 1) Batteries for remote control (AA/R6 type x 2) Lens cover (x 1)

Optional accessories



ET-PKA110S
Ceiling mount bracket for low ceilings

Projection distance

Aspect ratio 16:9

Projection size	Projection distance	
	Diagonal	Min (Wide) Max (Telephoto)
1.02 m / 40"	1.11 m / 3'8"	2.29 m / 7'6"
1.52 m / 60"	1.70 m / 5'7"	3.46 m / 11'4"
2.03 m / 80"	2.28 m / 7'6"	4.62 m / 15'2"
2.54 m / 100"	2.87 m / 9'5"	5.79 m / 19'0"
3.05 m / 120"	3.45 m / 11'4"	6.96 m / 22'10"
3.81 m / 150"	4.33 m / 14'2"	8.70 m / 28'7"
5.08 m / 200"	5.79 m / 19'0"	11.62 m / 38'1"
6.35 m / 250"	7.25 m / 23'9"	14.53 m / 47'8"
7.62 m / 300"	8.71 m / 28'7"	17.45 m / 57'3"

*6 When lamp power is set to Eco. The lamp replacement cycle is up to 2,000 hours when the lamp power is set to Normal. The values above are maximum values when they are used in cycles of being turned on for 2 hours and off for 0.25 hour. When the lamps are turned on and off more frequently, the lamp replacement cycle is shortened. The usage environment affects the lamp replacement cycle. *7 The projector uses a type of liquid crystal panel that typically consists of millions of pixels. This panel is built with very high-precision technology to provide the finest possible image. Occasionally, a few pixels may remain turned on (bright) or turned off (dark). Please note that this is an intrinsic characteristic of the manufacturing technology that affects all products using LCD technology. *8 The projector uses a high-voltage mercury lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use. The length of time that it takes for the lamp to break or fail to illuminate varies greatly depending on individual lamp characteristics and usage conditions. *9 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. *10 In Dynamic mode, with dynamic iris on. *11 In Cinema 1 mode, with dynamic iris on. *12 Shift range is limited during simultaneous horizontal and vertical shifting. *13 Effective in Rec. 709 picture mode. *14 CEC is an abbreviation for Consumer Electronics Control. Operation may not be possible with some connected equipment or settings. *15 With legs at shortest position. *16 Average value. May differ depending on models. *17 When [HIGH ALTITUDE MODE] is set to [ON]: 0°C - 35°C (32°F-95°F)
NOTE: A PC is required to read the detailed operating instructions (a PDF file on a CD).

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Factories of Business Solutions Business Group have received ISO 14001:2004—the Environmental Management System certification (except for third parties' peripherals).

All information included here is valid as of October 2011.

PT-AR100G1 Printed in Japan.