Panasonic
ideas for life

PT-AE8000
Full HD 3D Home Cinema Projector

Dive into the World of Full HD 3D
3D Home Cinema Experience Just Got Better than Ever

Advanced 3D dual-core processing engine enables high-quality 3D and 2D projection.
A Full HD 3D Experience that Will Blow You Away!

Hollywood continues to produce and release 3D movies that give us an entirely new level of dynamic realism. The PT-AE8000 Full HD 3D Home Cinema Projector was developed according to the Panasonic philosophy of providing images that mirror the director’s artistic vision and intention—right in your own home. The PT-AE8000 is designed from the ground up to achieve higher basic 2D performance, and packed with unique 3D features to deliver the level of quality demanded by Hollywood professionals. The key 3D projection technologies were developed in collaboration with Panasonic Hollywood Laboratory (PHL) engineers, who have taken key roles in establishing the industry standards for 3D. This allows the PT-AE8000 to deliver both stunning 2D images and a comfortable and immersive 3D viewing experience at home.

Excellent Picture Quality

High 2,400 lm of Brightness with the Advanced Red-Rich Lamp

The new 220 W Red-Rich Lamp increases the luminous efficiency of the projector to achieve brighter images, even in 3D viewing, with excellent color purity. Able to produce a stunning brightness of 2,400 lm, the PT-AE8000 unleashes the beauty of 2D/3D full-HD expression for viewing on various screen sizes. Cooling efficiency for example around the polarization filters has been increased to realize the higher luminosities. Color purity is further increased by applying a special coating to the red and green condenser lenses in order to trim the impurities from the light after it is separated into the three primary colors.

Full-HD Optimized Optical System

To assure maximum clarity and sharpness in full-HD images, this advanced optical system employs a full-HD-optimized lens unit comprising of 16 lens elements in 12 groups, including two large-diameter aspherical lenses and two high-performance ED (extra-low dispersion) lenses. Each lens is carefully aligned to assure a uniform focusing balance from the center to the edges of the screen. As a result, the PT-AE8000 produces stunningly clear and beautiful images.

Up to 480 Hz Compatible LCD Panels

The PT-AE8000’s full-HD LCD panels provide bright images with high aperture ratio. The panels are also designed for 480 Hz processing capability for bright 3D image. These high-precision panels use vertically aligned liquid crystal molecules with inorganic alignment layers. When no voltage is applied, the molecules are aligned perpendicularly to the glass substrate, so there is minimal light leakage, providing higher contrast.

Pure Contrast Plates Deliver High 500,000:1 Contrast Ratio

The Pure Contrast Plates in the PT-AE8000 use a high-precision crystalline material that is carefully matched to the characteristics of the LCD panels to effectively correct the passage of light exiting the panels. This enables the projector to block unwanted light leakage and successfully increases the dynamic range. It works together with the Pure Color Filter Pro and Dynamic Iris Pro to achieve an astounding contrast ratio of 500,000:1.

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)\(^1\) to the color gamut used in digital cinema\(^2\). This gives images the deep, rich coloring that distinguishes movie images.

Dynamic Iris Pro Adds Beauty to Both Dark and Bright Scenes

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\(^3\) accordingly to create the ideal image. The adjustments are made virtually frame by frame. This helps the projector achieve a wide dynamic range with swift smoothness for added beauty in both dark and bright scenes.

Smooth Screen Technology Creates Film-Like Texture

While many LCD projectors suffer from a “chicken wire” effect, Panasonic’s pursuit of the highest possible image quality has successfully overcome this device limitation through the incorporation of Smooth Screen technology. This uses the double refraction property of crystals to arrange pixels on a screen with no gaps between them.

Seven Picture Modes

For each 2D and 3D viewing, seven different picture modes (normal, dynamic, Rec. 709, D-cinema, cinema 1, cinema 2 and game mode for reduced frame delay) are provided.
A Whole New Level of 3D Viewing

LCD Panels Driven at 480Hz and Original Overdrive Technology for Bright 3D Image

The PT-AE8000 features 480Hz-driven LCD panels, which lengthen the time that the shutter is open about 1.5 times the duration of a 240-Hz drive system. Together with Panasonic's original high-precision overdrive technology, this improves the brightness of the images viewed through 3D Eyewear, while at the same time minimizing crosstalk, or double image seen as a result of the left image entering the right eye and vice versa.

3D Motion Remaster Delivers Correct, Natural 3D Movement

This new technology solves the problem caused by a phenomenon called the Mach-Dvorak effect, which occurs in many systems during 3D viewing. The active shutter 3D system displays left-eye and right-eye images alternately. This means that left-eye and right-eye images that were captured at the same instant are shown with a time lag. During this time lag, especially when watching a scene in which an object moves quickly and horizontally across the screen, the viewer's brain automatically speculates and forms an image at a position that differs from the actual shown image. This results in incorrect depth perception and makes the horizontal movement appear unnatural. 3D Motion Remaster technology achieves smoothly moving 3D images by creating properly positioned images to compensate for the time lag.

Dual Core Processing Engine

High-quality 2D image processing, including Frame Creation and Detail Clarity Processor, can be enjoyed in 3D as well, with the incorporation of the high-performance dual core processing engine.

Frame Creation 2 for Motion Blur Reduction in 3D/2D Viewing

A double-speed frame interpolation display for both 2D and 3D viewing, even during 2D-3D conversion, greatly improves the clarity of motion images, reproducing sharp and clear images for fast moving scenes in sports and action movies. For 24p input signal, four frames are calculated and interpolated for each existing frame, to enable 5x speed (120-Hz) display.

Frame Creation 2:

- Frame Creation 2 Off
- Frame Creation 2 On

2D-3D Conversion

2D to 3D image conversion is possible, with five 3D effect modes to select from.

Customization and Installation Flexibility

Lens Memory for 2D/3D Viewing

Up to six settings, in 2D or 3D viewing, can be stored in the Lens Memory, including zoom and focus positions for projecting in the normal 2.35:1 and 4:3 image ratio, and wide cinema projection settings. These memories can be recalled manually for 2D or 3D, or can be set for automatic switching in 2D. The projector is able to detect 2.35:1 and 16:9 sources and retrieve the stored setting automatically. The Lens Memory function lets you easily enjoy images with different image ratios on a wide 2.35:1 screen for an immersive theater-like experience.

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 fifteen points. Adjustment point positions can be shifted both horizontally and vertically to bring out the desired gradation level. Adjustment is easy because the small menu screen does not block the image.

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.

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. Adjustment is possible for either 2D or 3D viewing.

Abundant Connection Terminals

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

The PT-AE8000 has three HDMI input terminals for digital transmission without image degradation. The HDMI input terminals also sup-
The amount of parallax is optimized according to the projection size, lamp from the top of the projector. The dust filter and lamp are easily performed, resulting in a up to 5,000-hour lamp replacement cycle. For program stored on an HD recorder. This eliminates the need for has can be started by using only the remote control unit of the. The PT-AE8000 supports VIERA Link. If your home theater program stored in memory for instant recall. Precisely Tuned 3D Projection with Optional Panasonic 3D Eyewear The PT-AE8000 uses frame sequential technology for 3D image projection. When viewing 3D content, signals in the PT-AE8000’s built-in infrared transmitter precisely control the left and right shutters of the active 3D Eyewear. The built-in transmitter offers maximum transmission distance of six meters (about 20 feet). For more range up to ten meters (about 33 feet), an optional infrared transmitter, ET-TRM110 is available for greater installation flexibility.

Advanced 3D Adjustment Functions A variety of 3D viewing adjustments also provide a more comfortable viewing experience at home. These include 3D Lens Memory, 3D zoom and focus, 3D color management, and 3Dkeystone correction.

3D Viewing Monitor for Adjustment of Depth-of-Field The projection size for viewing 3D images can be selected from among 9 different sizes, ranging from 40 inches to 200 inches diagonally.

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

Detail Clarity Processor 4: Signal frequency is extracted realtime and necessary sharpness is applied at varying degrees for natural, lifelike images.

Port Deep Color and the x.v.Color color space. 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.

• 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 light and powered curtains. When combined with the Lens Memory, they let you create a truly classy home theater.

VIERA Link for Easy Operation The PT-AE8000 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-AE8000, regardless of whether the source is a Blu-ray Disc or a TV program stored on an HD recorder. This eliminates the need for hand with several remote controls.

Up to 5,000-Hour Lamp Replacement Cycle and Simple Maintenance Panasonic’s proprietary lamp drive system helps maintain lamp performance, resulting in a up to 5,000-hour lamp replacement cycle. For easy maintenance, you can replace the filter from the side and the lamp from the top of the projector. The dust filter and lamp are easily replaced even after the PT-AE8000 is installed on the ceiling.

so comfortable, easy-to-view 3D images can be enjoyed at any size. Either of three monitor styles can be selected.

3D Picture Balance with Waveform Monitor The projector is able to show the right and left image side by side to check if the two sides have the same colors. The difference may occur due to poor content quality. With the Waveform Monitor displayed, you can adjust the contrast, brightness, color and tint as desired, and up to three adjustment settings can be stored in memory for instant recall.

Finest Details Detail Clarity Processor 4 gives natural clarity to even the smallest details, reproducing natural, lifelike images. 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.

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-AE8000 reflects the following ecological considerations:

- No halogenated flame retardants are used in the cabinet.
- Lead-free glass for the lens.
- Standby power consumption of only 0.08 W has been achieved.
- A sleep-timer that reduces wasteful power consumption.
- RoHS compliant.

- A setting that supports the 6,500K color temperature recommended in the HDTV standard (ITU-R BT.709).
- Two specifications put forth by the Society of Motion Picture and Television Engineers (SMPTE) PR431-2-3 Parameters for adjusting the output brightness gradation level according to the input signal.
- Projection size for 2D images covers from 40 inches to 300 inches diagonally.
- The indicated distance between the projector and screen is valid when the conditions described below are satisfied. Also, note that the transmission distance can differ largely due to strong light, such as sunlight and fluorescent lamps, at the installation location or due to the screen type or material.
- Condition 1: The distance between the screen and the 3D Eyewear (viewing position) is 5 meters to the front of the screen. Condition 2: The screen is 100 inches, measured diagonally, and has a screen gain of 1. Condition 3: The projector is set up in front of the screen, and the lens shift function is not used. Condition 4: The [3D IR TRANSMITTER] setting in the main unit is set to STRONG. E. Effective in Rec. 709 image mode. F. The trigger terminals also operate as the 3D shutter outputs to connect the optional 3D IR transmitter ET-TRM110. G. Cannot be used simultaneously with TV that supports VIERA Link. H. Some operations may not be available depending on the equipment. I. In this case, use its own remote control to operate the equipment. J. When a lamp power is set to ECO. The lamp replacement cycle is up to 4,000 hours when the lamp mode 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 hours. When the lamps are turned on and off more frequently, the lamp replacement cycle is shortened. The usage environment affects the lamp replacement cycle.
Other Features
- 16-bit (full 12-bit) gamma correction for natural gradations.
- 3D noise reduction for high-precision noise detection and reduction.
- Scene-adaptive MPEG noise reduction effectively blocks regular noise and minimizes mosquito noise.
- Scene adaptive resizing LSU improves quality when resizing 480p images or those from other sources with resolution lower than the PT-AE8000's native resolution.
- 24p compatible.
- Progressive cinema scan (3/2 pulldown) and HD IP.
- Auto 3D input format select for frame packing, side by side, and top and bottom. Manual selection is also possible.
- Selectable frame rate response.
- Independent horizontal/vertical sharpness adjustment.
- Up to sixteen sets of PICTURE adjustment settings can be stored in memory with custom names that make them easy to remember (PICTURE MEMORY).
- Masking function to match the desired projection area to the screen.
- User-friendly ergonomic remote control.
- Built-in test pattern including color bar and gray scale.
- On-screen input guidance.
- Auto input search.
- Quiet operation: 22 dB (lamp power: ECO).
- NORMAL/ECO lamp power selection.

Optional accessories

Optional projection distances

<table>
<thead>
<tr>
<th>Aspect ratio 1:3.25</th>
<th>Projection distance</th>
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</thead>
<tbody>
<tr>
<td>Projection size (16:9)</td>
<td>Max (Telephoto)</td>
</tr>
<tr>
<td>102.5 m / 40'</td>
<td>3.07 m / 12&quot;</td>
</tr>
<tr>
<td>150.0 m / 59.1'</td>
<td>2.20 m / 8.7&quot;</td>
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<tr>
<td>200.0 m / 65'</td>
<td>1.56 m / 6.1&quot;</td>
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<table>
<thead>
<tr>
<th>Aspect ratio 2.35:1</th>
<th>Projection distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projection size (16:9)</td>
<td>Max (Telephoto)</td>
</tr>
<tr>
<td>102.5 m / 40'</td>
<td>2.85 m / 11&quot;</td>
</tr>
<tr>
<td>150.0 m / 59.1'</td>
<td>2.09 m / 8.2&quot;</td>
</tr>
<tr>
<td>200.0 m / 65'</td>
<td>1.50 m / 5.9&quot;</td>
</tr>
</tbody>
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NOTE: The 3D Eyewear models shown above are current models as of September 2012. For information on other available models with verified interoperability and the newest models, please visit our Projector Global Web Site. http://panasonic.net/avc/projector

Specifications

- Power supply: 100-240 V AC, 50/60 Hz
- Power consumption: 310 W (1.08 W in standby mode)
- LCD** panel: Display method pixels 1.87 mm (0.074 in) diagonal (16:7 aspect ratio)
- Transparent LCD panel (+3, R/0/B)
- Active matrix
- 2,370,601 (1,920 × 1,080) pixels)
- Lamp (H). Lamp replacement cycle is up to 4,000 hours (lamp power: NORMAL) / 5,000 hours (lamp power: ECO)**
- Lens
- Power zoom/focus lenses (13.5–1.70:1), F 1.9–3.2, 12.4–44.8 mm
- Projection size (diagonal)
- 3D projection: 102.5 m / 40', 150.0 m / 59.1', 200.0 m / 65'.
- Brightness**
- Center-to-corner uniformity ratio**
- Contrast ratio**
- Resolution
- Scanning frequency: HDMI
- 480i/576i, 720p/576p, 1080i/576i, 1080p, 1080i/50i, 1080i/50p
- RGB
- 15 kHz–74 kHz, 24 Hz–85 Hz, dot clock: 156 MHz or lower
- YPbPr (YCbCr)
- 326 (480i), 442 (576i), 422 (576p), 750 (720p), 750 (720p), 1125 (1080i), 1125 (1080i), 1080p, 1125 (1080p), 1125 (1080p)
- Video/5-Video
- 15.7 kHz, 59.9 Hz [NTSC/N/SC/1080/50]
- Optical axis shift**
- Vertical: ±100%, horizontal: ±26% 220 W UHM lamp (The lamp replacement cycle is up to
- Keystone correction range
- Vertical: approx. ±30°
- HDMI IN
- HDMI connector + 3, HDMI (Deep Color, x.v.Color**, CEC**)
- HDCP compliant, supports HDCP Control Version 5
- 3D SHUTTER OUT
- 3D Eyewear: NECVECS, NECVECS, NECVECS, NECVECS
- COMPONENT IN
- TRIGGER IN / TRIGGER OUT / 3D SHUTTER OUT
- CEC: 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- Power cord (1)
- Remote control unit (1)
- Batteries for remote control (AA LR6 type x 2)
- Lens cover (1)

Supplied accessories

1 If you do not have a Panasonic 3D TV that supports 3D video, use a charger that has a USB2.0 port for charging your Eyewear. The recommended charger is Apple USB Power Adapter for iPhone. The cords that follows KBC-L2 will differ depending on the country of purchase. The code at the end of the model number of 3D Eyewear may differ depending on the country of purchase.
2 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 produce 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.
3 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 to fail to illuminate varies greatly depending on individual lamp characteristics and usage conditions.
4 The values above are maximum values when they are used in cycles of being turned on for 2 hours and off for 0.25 hours. When the lamps are turned on and off more frequently, the lamp replacement cycle will be shorter. Please refer to the lamps replacement cycle. Please refer to the lamps replacement cycle in the manuals and safety standards when the projector is in safety standards.
5 In dynamic mode, with dynamic iris on. 6 In cinema mode, with dynamic iris on. 7 In cinema mode, with dynamic iris on. 8 Shift range is limited during simultaneous horizontal and vertical shifting. 9 Effective in Rec. 709 image mode. 10 CEC is an abbreviation for Consumer Electronics Control. Operation may not be possible with some connected equipment or settings.
11 With legs at shortest position.
12 Average value. May differ depending on models.
13 When [HIGH ALTITUDE MODE] is set to [ON] 0°C ~ +4°C [32°F ~ 40°F].

NOTE: A PC is required to read the detailed operating instructions (a PDF file on a CD).

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

PT-AE8000G1 Printed in Japan.

All information included here is valid as of August 2012.

Weights and dimensions shown are approximate. Specifications and appearance are subject to change without notice. Product availability differs depending on region and country. This product may be subject to export control regulations. The projection distances and throw ratios given in this brochure are for use only as guidelines. For more detailed information, please consult the dealer from whom you are purchasing the product. The PJLink is a trademark application in Japan, the United States, and other countries or regions or registered trademark. All other trademarks are the property of their respective trademark owners. Projection images simulated.

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