

Panasonic
ideas for life

PT-AE3000E
Full High-Definition Home Cinema Projector



Expanding the Full-HD Experience



**FULL
HD**
1920x1080p

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Details with Astounding Reality and Clarity

The new PT-AE3000E maximises the image quality of the full-HD content in Blu-ray Discs and HD broadcasts for large-screen viewing, and adds a newly designed optical system that achieves a 60,000:1 contrast ratio and 1,600 lumens of brightness. A variety of advanced signal-processing technologies, beginning with Detail Clarity Processor 2 and Frame Creation interpolation, push the performance level of the LCD projector to an entirely new level of picture quality, and provide viewers with the true beauty of full-HD images. Experience on-screen reality, complete with crisp, detailed images and lifelike depth, in the new PT-AE3000E. Its exceptional performance is further boosted by Panasonic's collaboration with leading Hollywood filmmakers to ensure that it produces images that mirror the director's artistic vision and intent.



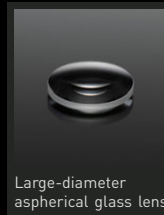
A New Level of Perfection from an Advanced Optical System



A vast accumulation of Panasonic projector technology is further strengthened by the development of a cutting-edge, high-precision optical system in the PT-AE3000E, virtually redefining the concept of high image quality.

A High-Precision, Top-Quality Lens maximises Full-HD Performance

To assure maximum clarity and sharpness in full-HD images, this advanced system employs a full-HD-optimised lens unit comprising 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 centre to the edges of the screen. As a result, the PT-AE3000E's stunningly beautiful images are clear and free of distortion and Colour bleeding.



Large-diameter aspherical glass lens



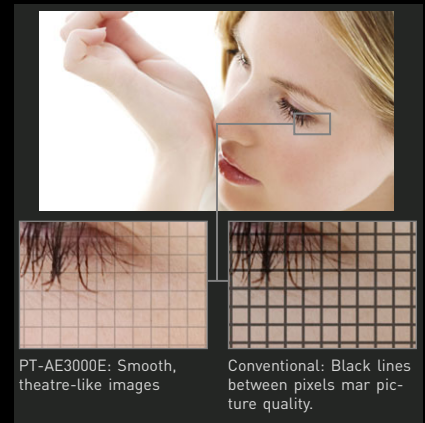
Each lens is carefully aligned by highly skilled technicians.

High, 60,000:1 Contrast Ratio with New Pure Contrast Plates

The Pure Contrast Plates of the PT-AE3000E use a crystalline material that is carefully matched to the characteristics of the LCD panels to effectively block unwanted light leakage, forming an advanced type of optical compensator. This dramatically increases the dynamic range and, together with the dynamic iris, provides an outstanding contrast ratio of 60,000:1. The new optical system of the PT-AE3000E also produces a stunning brightness of 1,600 lumens to unleash the beauty of full-HD expression for viewing on various screen sizes.

Smooth Screen Technology

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, which uses the double refraction property of crystals to arrange pixels on a screen with no gaps between them. Smooth Screen technology is designed specifically to match the characteristics of the PT-AE3000E's optical system, giving you the kind of smooth, vivid, and three-dimensional-like images you see in a movie theatre.



PT-AE3000E: Smooth, theatre-like images

Conventional: Black lines between pixels mar picture quality.

Pure Colour Filter Pro

The optical filter optimises the light spectrum from the UHM projector lamp, helping to produce deeper blacks while improving purity levels in the three primary colours (red, green and blue). This advanced filter system improves Colour purity to cover a range that extends from the HDTV standard (Colour 1 mode)*¹ to the Colour gamut used in digital cinema*². This gives images the deep, rich colouring that distinguishes movie images.



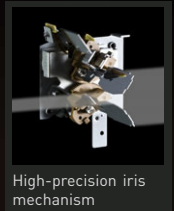
Pure Colour Filter Pro

New Full-HD LCD Panels

The PT-AE3000E's new full-HD LCD panels have a double-speed drive capability that improves the projection clarity of moving images. These high-precision panels use vertically aligned liquid crystal molecules with inorganic alignment layers. When no voltage is applied, the molecules are aligned perpendicular to the glass substrate, so there is virtually no light leakage and the substrate remains black (called "normally black" operation), providing higher contrast.

Dynamic Iris Designed for Full-HD

The fifth generation intelligent iris system works by analysing histograms to determine the brightness level of each image, 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.



High-precision iris mechanism

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

*2 Specifications put forth by the Society of Motion Picture and Television Engineers (SMPTE) DC28 Digital Cinema committees.

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

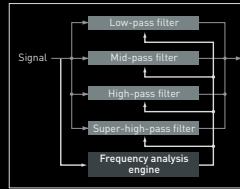
A Powerful, Digital Processing Engine Brings Crisp Clarity to Details



The remarkable advancement of the PT-AE3000E also reflects in its uncompromising signal processing system. Carefully matched to its new optical system, this advanced signal processing brings incredible, full-HD clarity to image details.

Detail Clarity Processor 2

A newly evolved digital image processing circuit, called the Detail Clarity Processor 2, debuts in the PT-AE3000E. After analysing the frequency of the video signal in each scene and extracting information on the distribution of the super-high-, high-, medium-, and low-frequency image components, the new circuit optimises the sharpness of each image portion based on the extracted information. This brings greater clarity and sharpness to details, by reproducing fine nuances that were lost due to image compression. 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 more faithful reproduction of highly detailed information, such as the film grain in movies.



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



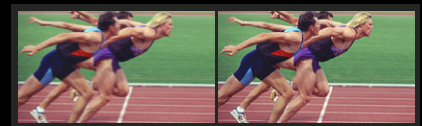
Detail Clarity Processor 2: Signal frequency is extracted realtime and necessary sharpness is applied at varying degrees for natural, life-like images.

Max. 16-Bit Digital Processing

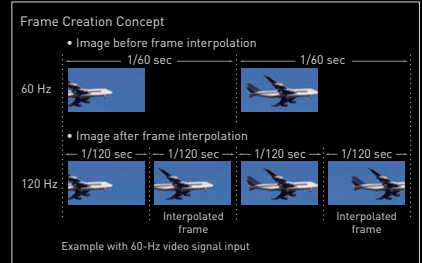
The PT-AE3000E handles up to 16-bit (full 12-bit) digital image processing. It faithfully reproduces even subtle hues and brightness variations.

Crisp, Clear Details in Motion Images

A double-speed display (120 Hz or 100 Hz) greatly improves the clarity of motion image display. Frame Creation interpolates one new frame for each existing frame by analysing the characteristics of the two adjacent frames to reproduce sharp and clear images for fast moving scenes in sports and action movies. For 24p signal input, three frames are calculated and interpolated for each existing frame, to enable 4x speed (96-Hz) display.*4

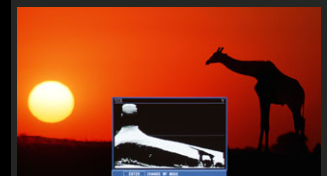


Motion is crisp and clear even for fast-moving images and panning scenes.



Waveform Monitor

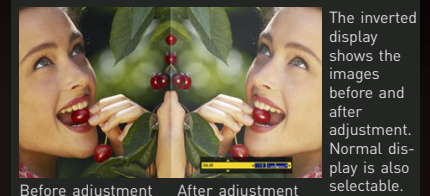
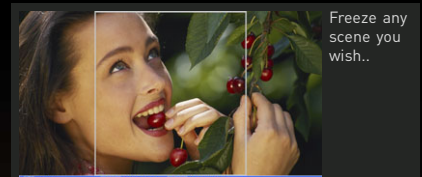
When the output level of the source device fluctuates due to the performance of the device or its cable connection, the original black and white levels of the image content cannot be reproduced. With the PT-AE3000E you can view the waveforms on the screen and adjust the settings both automatically and manually as you prefer.



The PT-AE3000E gives home consumers a projector with the kind of waveform monitor used in equipment for professionals.

Split Adjust Mode

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 Colour Management (CCM)

This is an innovative Colour correction system that enables free Colour control. You can adjust one Colour without affecting the neighbouring colours, so it is easier to get just the right Colour equalisation in hue, luminance and saturation.

*4 Selectable from mode 1, mode 2 and off.

Flexible Installation, Easy Operation

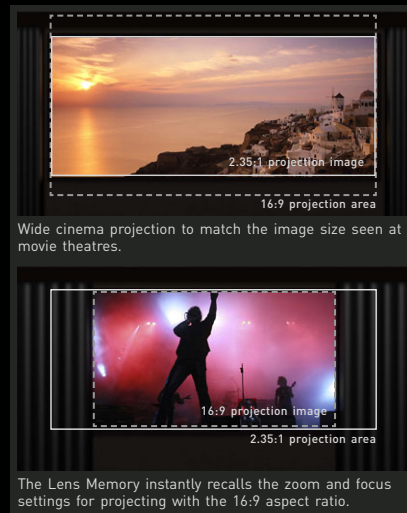


The Lens Memory and setting flexibility ensure that you will always enjoy comfortable large-screen viewing matched to your theatre room.

An ecology-conscious design is another trait that lifts the PT-AE3000E to an even higher level of quality.

Enhanced Projection Versatility with Lens Memory

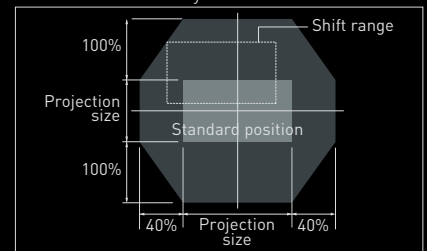
The zoom and focus settings for projecting in the normal 16:9 or 4:3 image ratio, and for wide cinema projection, can be stored in the Lens Memory for simple, one-touch switching with the remote control.*⁵ This Lens Memory function lets you easily enjoy images with different image ratios on a wide 2.35:1 screen for an immersive movie theatre-like experience.



2x Optical Power Zoom/Focus and Wide Lens Shift Range

A 2x optical power zoom/focus lens and a lens shift function together make it possible to project a 120-inch picture from as close as 11'10" (3.6 m) to the screen or as far as 23'7" (7.2 m) away. In addition, the image can be shifted $\pm 100\%$ vertical-

ly, and $\pm 40\%$ horizontally. This gives you outstanding setup flexibility. If you choose to ceiling-mount the projector, you can zoom and focus by remote control.



Versatile Input Interfaces

The PT-AE3000E has three HDMI input terminals for digital transmission without image degradation, and two component input terminals. The HDMI input terminals also support Deep Colour and the x.v.Colour™ Colour space of the HDMI 1.3a standard. Deep Colour provides 10-bit (over 1.07 billion) and 12-bit (over 68.7 billion) Colour depths for smooth gradation between colours, while x.v.Color™ compliance reproduces natural, lifelike images.*⁶



Easy Maintenance

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-AE3000E is installed on the ceiling.

Ecology-Conscious Engineering and Design

Panasonic works from every angle to minimise environmental impact in the product design, production and delivery processes, and in the performance of the product itself over its life cycle.

Intelligent Power Management System for Eco-Friendly Power Consumption

The PT-AE3000E realises an extremely low standby power consumption of 0.08 W*⁷, lowest in its class.*⁸ In addition, the PT-AE3000E's main power consumption is reduced by as much as 10% when the dynamic iris function is operating because it intelligently determines the necessary power output of the projector by analysing over 3 billion different image patterns, to optimise and eliminate excessive power consumption. LSI chip integration further lowers the

PT-AE3000E's main power consumption, making it an eco-friendly projector.

Reduced Environmental Impact

The inner volume of the PT-AE3000E carton box has been reduced by approximately 10%. While lessening the amount of packaging materials used, this also raises transportation efficiency, which saves fuel and lowers the impact on the environment.

Other Ecological Considerations

- An off-timer that reduces wasteful power consumption.
- RoHS compliance.
- Lead-free solder for mounting components to printed circuit boards.
- No vinyl chloride in interior wiring.
- No halogenated flame retardants in the cabinet.
- No styrofoam in packing materials.
- Lead-free glass for the lens.

*⁵ When "Lens Memory Load" is assigned to the Function button on the remote control. *⁶ Effective in Colour 1 image mode. *⁷ Up to 220 V. *⁸ For 1080p full high definition home cinema projector, as of August 20, 2008.

Other Features

- Seven picture mode includes Cinema 1/2/3, Normal, Dynamic, Colour 1/2.
- 3D noise reduction for high-precision noise detection and reduction
- Scene-adaptive MPEG noise reduction effectively blocks regular noise and minimises mosquito noise.
- Scene adaptive resizing LSI improves quality when resizing 480p images or those from other sources with resolution lower than the PT-AE3000E's native resolution.
- 24p compatible
- Progressive cinema scan (3/2 pulldown) and HD IP
- Selectable frame response
- Featuring a wide range of aspect modes, including ones for anamorphic lenses. (JUST/4.3/16.9/S16.9/14.9/ZOOM1/ZOOM2/H-FIT/V-FIT)

NOTE: The selectable modes vary depending on the input signal.

- Up to sixteen sets of adjustment settings can be stored in memory with custom names that make them easy to remember
- User-friendly ergonomic remote control
- Built-in test pattern
- On-screen input guidance



Supplied remote control with back-lit buttons

- Auto input search
- Quiet operation: 22 dB (in Economy lamp mode)
- Normal/economy lamp power selection
- Lens-centred design

Made in Japan

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	240 W (Approx. 0.08 W*1 in standby mode with fan stopped)
LCD panel*2	
Panel size	0.74" (17.78 mm) diagonally
Aspect ratio	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
Lens	Powered zoom [2x]/powered focus, F 1.9 - 3.2, f 22.4 mm–44.8 mm
Lamp*3	165 W UHM lamp
Brightness*4	1,600 lumens*5
Contrast*4	60,000:1*5 (full on/full off)
YPbPr signal compatibility	480i [525i], 480p [525p], 576i [625i], 576p [625p], 720 [750]/50p, 720 [750]/60p, 1,080 [1,125]/24p, 1,080 [1,125]/50i, 1,080 [1,125]/50p, 1,080 [1,125]/60i, 1,080 [1,125]/60p
Colour system	PAL, PAL-M, PAL-N, PAL 60, SECAM, NTSC, NTSC 4.43,
Optical axis shift*6	Horizontal ±40% and vertical ±100%
Keystone correction range	Vertical: approx. ±30°
Terminals	
HDMI IN	HDMI connector x 3, HDMI™ [V.1.3 with Deep Color, x.v.Color™*7], HDCP compliant
COMPUTER IN	D-sub HD 15-pin (female) x 1
COMPONENT IN	RCA pin [Y, Pb/Cb, Pr/Cr] x 2
S-VIDEO IN	Mini DIN 4-pin x 1
VIDEO IN	RCA pin x 1
SERIAL	D-sub 9-pin x 1 [RS-232C based]
Dimensions*8 (W x H x D)	460 x 130 x 300 mm [18-1/8" x 5-1/8" x 11-25/32"]
Weight*9	Approx. 7.3 kg [16.1 lbs.]
Operating environment	Temperature: 0°–40°C [32°–104°F], Humidity: 20%–80% (no condensation)
Supplied accessories	Power cord, Wireless remote control unit, Batteries for remote control [AA type x 2]
Optional accessories	
ET-LAE1000	Replacement lamp unit
ET-PKE2000	Ceiling mount bracket for high ceilings
ET-PKE1000S	Ceiling mount bracket for low ceilings
ET-PCE2000	Cable cover

*1 Up to 220 V.

*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 designed to provide one of the finest possible images. 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 fail to illuminate varies greatly depending on individual lamp characteristics and usage conditions.

*4 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.

*5 In dynamic mode, with dynamic iris on.

*6 Shift range is limited during simultaneous horizontal and vertical shifting.

*7 Effective in Colour 1 image mode.

*8 Protruding parts are not included.

*9 Average value. May differ depending on models.

Image size/projection distance

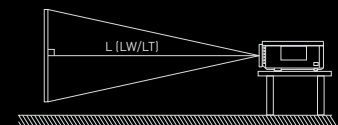
Aspect ratio 16:9

Projection size (16:9)	Projection distance (L)	
	Diagonal length	Min (Wide) Max (Telephoto)
1.01 m / 40"	1.2 m / 3'10"	2.3 m / 7'9"
1.52 m / 60"	1.8 m / 5'10"	3.5 m / 11'9"
2.03 m / 80"	2.4 m / 7'10"	4.7 m / 15'8"
2.54 m / 100"	3.0 m / 9'9"	6.0 m / 19'8"
3.05 m / 120"	3.6 m / 11'9"	7.2 m / 23'7"
3.81 m / 150"	4.5 m / 14'9"	9.0 m / 29'7"
5.08 m / 200"	6.0 m / 19'8"	12.0 m / 39'6"

Aspect ratio 2.35:1

(When projecting both 2.35:1 and 16:9 images onto a 2.35:1 screen using the Lens Memory function.)

Projection size (2.35:1)	Projection distance (L)	
	Diagonal length	Min (Wide) Max (Telephoto)
1.01 m / 40"	1.3 m / 4'11"	1.8 m / 6'2"
1.52 m / 60"	2.5 m / 6'2"	2.8 m / 9'4"
2.03 m / 80"	2.6 m / 8'3"	3.8 m / 12'6"
2.54 m / 100"	3.2 m / 10'4"	4.7 m / 15'8"
3.05 m / 120"	3.8 m / 12'5"	5.7 m / 18'10"
3.81 m / 150"	4.8 m / 15'7"	7.1 m / 23'7"
5.08 m / 200"	6.4 m / 21'10"	9.6 m / 31'6"



For detailed explanation of features please visit our Projector Global Web Site
<http://panasonic.net/avc/projector>

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Please contact Panasonic or your dealer for a demonstration.



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All information included here is valid as of October 2008.