

Panasonic

ideas for life

PT-AE3000U
Full High-Definition Home Cinema Projector



Expanding the Full-HD Experience



Full HD

HOLLYWOOD TUNING

Details with Amazing Reality and Clarity

The new PT-AE3000U maximizes 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-AE3000U. 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.



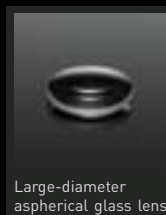
A New Level of Perfection from an Advanced Optical System



A vast accumulation of Panasonic projector technology is further strengthened by the development of a cutting-edge, high-precision optical system in the PT-AE3000U, virtually redefining the concept of high image quality.

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

To assure maximum clarity and sharpness in full-HD images, this advanced system employs a full-HD-optimized 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 center to the edges of the screen. As a result, the PT-AE3000U's stunningly beautiful images are clear and free of distortion and color bleeding.



Large-diameter aspherical glass lens



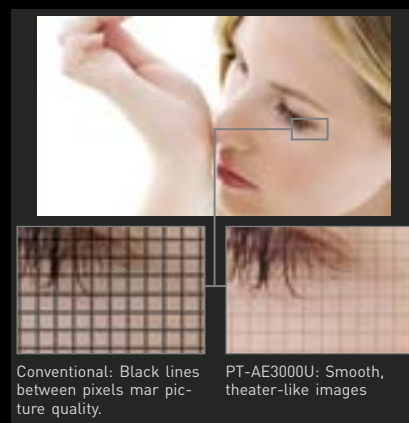
Each lens is carefully aligned by highly skilled technicians.

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

The Pure Contrast Plates of the PT-AE3000U 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-AE3000U 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 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, 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-AE3000U's optical system, giving you the kind of smooth, vivid, and three-dimensional-like images you see in a movie theater.



Conventional: Black lines between pixels mar picture quality.

PT-AE3000U: Smooth, theater-like images

Pure Color Filter Pro for Rich 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 (Color 1 mode)*¹ to the color gamut used in digital cinema*². This gives images the deep, rich coloring that distinguishes movie images.



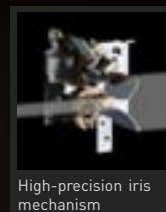
Pure Color Filter Pro

New Full-HD LCD Panels Enhance Motion Response

The PT-AE3000U'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 Adds Beauty to Both Dark and Bright Scenes

The fifth generation intelligent iris system works by analyzing 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 color 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.

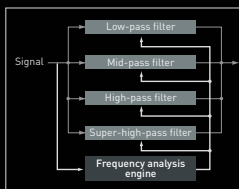
A Powerful, Digital Processing Engine Brings Crisp Clarity to Details



The remarkable advancement of the PT-AE3000U 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 Brings Depth and Clarity to Details

A newly evolved digital image processing circuit, called the Detail Clarity Processor 2, debuts in the PT-AE3000U. After analyzing 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 optimizes 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.



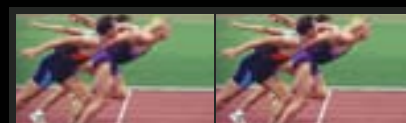
Detail Clarity Processor 2: Signal frequency is extracted realtime and necessary sharpness is applied at varying degrees for natural, life-like images.

16-Bit Digital Processing for Natural Gradations

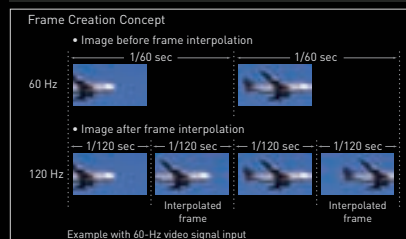
The PT-AE3000U handles up to 16-bit (full 12-bit) digital image processing. It faithfully reproduces even subtle hues and brightness variations.

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 analyzing 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 calcu-



Frame Creation Off Frame Creation On
Motion is crisp and clear even for fast-moving images and panning scenes.



lated and interpolated for each existing frame, to enable 4x speed (96-Hz) display.*⁴

Waveform Monitor for Precise Calibration

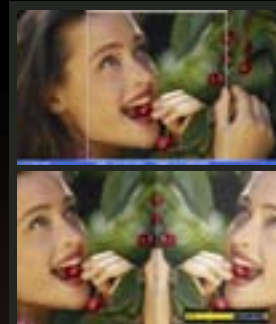
When the output level of the source device fluctuates due to the performance of the device or its cable connections, the original black and white levels of the image content cannot be reproduced. With the PT-AE3000U you can view the waveforms on the screen and adjust the settings both automatically and manually as you prefer.



The PT-AE3000U 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.



Freeze any scene you wish.

The inverted display shows the images before and after adjustment. Normal display is also selectable.

Before adjustment After adjustment

Cinema Color Management (CCM) Enables Flexible Color Control

This is an innovative color correction system that enables free color control. You can adjust one color without affecting the neighboring colors, so it is easier to get just the right color equalization in hue, luminance and saturation.

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

Flexible Installation, Easy Operation

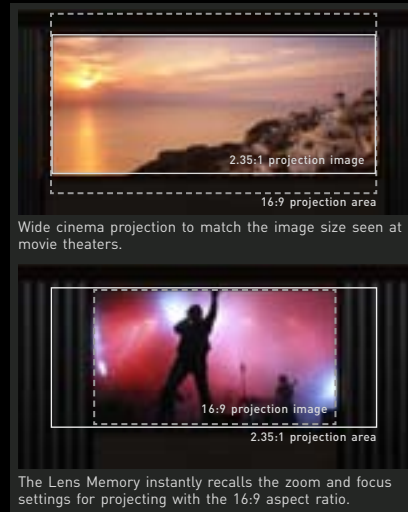


The Lens Memory and setting flexibility ensure that you will always enjoy comfortable large-screen viewing matched to your theater room.

An ecology-conscious design is another trait that lifts the PT-AE3000U to an even higher level of quality.

Lens Memory Enhances Projection Versatility

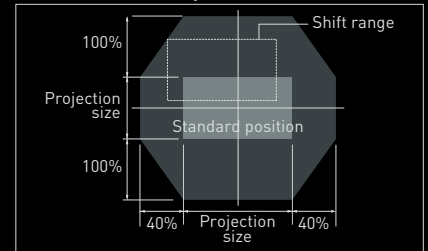
The zoom and focus settings for projecting in the normal 16:9 or 4:3 image ratio, and for wide cinema projection, can be stored in the Lens Memory for simple access through the remote control. This Lens Memory function lets you easily enjoy images with different image ratios on a wide 2.35:1 screen for an immersive movie theater-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-AE3000U has three HDMI input terminals for digital transmission without image degradation, and two component input terminals. The HDMI input terminals also support Deep Color and the x.v.Color™ color space of the HDMI 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.*5



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-AE3000U is installed on the ceiling.

Ecology-Conscious Engineering and 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 itself over its life cycle.

Intelligent Power Management System for Eco-Friendly Power Consumption

The PT-AE3000U realizes an extremely low standby power consumption of 0.08 W*6, lowest in its class.*7 In addition, the PT-AE3000U'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 analyzing over 3 billion different image patterns, to optimize and eliminate excessive power consumption. LSI chip integration further lowers the

PT-AE3000U's main power consumption, making it an eco-friendly projector.

Reduced Environmental Impact

The inner volume of the PT-AE3000U 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 Effective in Color 1 image mode.

*6 Up to 220 V.

*7 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, Color 1/2.
- 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 LSI improves quality when resizing 480p images or those from other sources with resolution lower than the PT-AE3000U'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-centered 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
Color 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™ (V1.3 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 Color 1 image mode.

*8 Protruding parts are not included.

*9 Average value. May differ depending on models.

Image size/projection distance

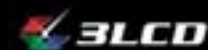
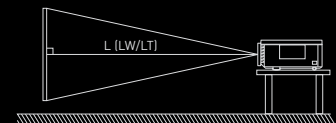
Aspect ratio 16:9

Projection size (16:9)	Projection distance (L)	
	Min (Wide)	Max (Telephoto)
Diagonal length		
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)	
	Min (Wide)	Max (Telephoto)
Diagonal length		
1.01 m / 40"	1.3 m / 4'1"	1.8 m / 6'2"
1.52 m / 60"	2.5 m / 8'2"	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.