Panasonic
ideas for life

The Theatre of Your Dreams

PT-AE4000E
Full High-Definition Home Cinema Projector

Theatre of Your Dreams

VIECA Link
FULL HD
HOLLYWOOD TUNING
Panasonic seeks the highest performance in optical systems and signal processing circuits to achieve cinema-level colours, contrast, texture and details for an uncompromised home theatre experience. Panasonic’s extensive knowledge of digital filmmaking and media such as Blu-ray Discs and HD broadcasting are clearly seen in the high picture quality of the PT-AE4000E, which embodies advanced technologies that optimise the reproduction of digital content.

Its exceptional performance—details with amazing reality and clarity—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.

The PT-AE4000E integrates seamlessly with your home theatre environment. It lets you create a dream theatre with the dynamic power of a full-scale movie theatre in the comfort of your own home. Professional-level adjustments enable precise calibrations to suit the specific home theatre conditions in your house.
New Red-Rich Lamp
The incorporation of the new Red-Rich Lamp increases the luminance efficiency of the projector, to achieve 150% brighter Cinema Picture modes compared to its predecessor, the PT-AE3000E. Prior to the development of the Red-Rich Lamp, much brightness was lost to attain the desired colour purity/balance for the rich colour reproduction of Cinema Picture modes due to the lack of red luminance. The newly engineered lamp successfully adds red luminance, and enables the projector to produce brighter images with excellent colours. With the ability to produce a stunning brightness of 1,600 lumens, the PT-AE4000E unleashes the beauty of full-HD expression for viewing on various screen sizes.

Full-HD Optimised Optical System
To assure maximum clarity and sharpness in full-HD images, this advanced optical system employs a full-HD-optimised 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 centre to the edges of the screen. As a result, the PT-AE4000E produces stunningly clear and beautiful images.

New Pure Contrast Plates Deliver High 100,000:1 Contrast Ratio
The Pure Contrast Plates in the PT-AE4000E use a newly engineered 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 dynamic iris to achieve an astounding contrast ratio of 100,000:1.

Pure Colour Filter Pro for Rich, Vibrant Colours
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.

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. Smooth Screen technology is designed to give you the kind of smooth, vivid, and three-dimensional-like images you see in movie theatres.

Dynamic Iris Adds Beauty to Both Dark and Bright Scenes
The fifth generation intelligent iris system works by analysing 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.

Full-HD LCD Panels Enhance Motion Response
The PT-AE4000E’s 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 minimal light leakage and the substrate remains black (called “normally black” operation), providing higher contrast.

*1 A setting that supports the ITU-R BT.709 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 gradient according to the input signal.
Clarity to Even the Finest Details

This digital image processing 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 optimises 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 more faithful reproduction of highly detailed information, such as the film grain in movies. The effect can be adjusted in nine steps from 0 to +7.

Frame Creation 2 Featuring Motion Blur Reduction

A double-speed display (120 Hz or 100 Hz) greatly improves the clarity of motion images. Frame Creation interpolates one new frame for each existing frame by analysing the characteristics of the 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. There are four modes (mode 1, mode 2, mode 3, and off) to choose from. The effect is more pronounced as you ascend through the modes, to provide crisp, clear images to your liking.

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 nine points. Adjustment point positions can be shifted both horizontally and vertically to bring out the desired gradation level.

New Cinema Colour Management Premium Enables Flexible Colour Control

This colour correction system enables free colour control in two different modes. The Point Colour Correction mode lets you pick a point in the image and adjust that colour without affecting the neighbouring colours, so it is easy to get just the right colour equalisation in hue, luminance and saturation. The Six Colour Correction mode enables independent adjustment of red, green, blue, cyan, magenta and yellow.

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.

Intelligent Detect Up to 16x Memory for Projector

This lets you view the scene at up to 16x slower speed, so you can easily review images and movies, or check film grain or the film’s original image and the adjusted image side-by-side.

Crisp, Clear Details and Professional-Level Tuning

The remarkable advancement of the PT-AE4000E 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.
Flexible Installation and Smart, Easy Operation

The Lens Memory, programmable 12V trigger and setup flexibility ensure that you will always enjoy comfortable large-screen viewing matched to your theatre room. PT-AE4000E’s rich features accommodate simple to fully customized theatres. An eco-conscious design is another trait that lifts the PT-AE4000E to an even higher level of quality.

Intelligent Lens Memory with Auto Detection
Up to six settings can be stored in the Lens Memory, including zoom and focus positions for projecting in the normal 16:9 or 4:3 image ratio, and wide cinema projection settings. These memories can be recalled manually or can be set for automatic switching. The projector is able to detect 2:35:1 and 16:9 source and retrieve the stored setting automatically. 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.

VIERA Link for Easy Operation
The PT-AE4000E supports VIERA Link. If your home theatre system contains VIERA Link-ready equipment, projection can be started by using only the remote control unit of the PT-AE4000E, 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.*4

Programmable 12V Trigger for Automated Theatre 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 Intelligent Lens Memory, they let you create a truly classy home theatre.

Simple 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-AE4000E 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-AE4000E realises an extremely low standby power consumption of 0.08 W*6, the lowest in its class. In addition, the PT-AE4000E’s main power consumption is reduced by as much as 10% when the dynamic iris function is operating because it is operated by detecting the aspect ratio.

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.
- Lead-free glass for the lens.

*4 Cannot be used simultaneously with 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.
*5 Effective in Colour 1 image mode.
*6 Up to 220 V.
*7 For 720p/1080p full high definition home cinema projector, as of June, 2009.
Other Features

- Seven picture mode includes Cinema 1, Cinema 2, Cinema 3, Normal, Dynamic, Colour 1 and Colour 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.
- Frequent updates and frequent fixes.
- 24p compatible.
- Progressive cinematic scan (2/3 pulldown) and HD IP.
- Selectable frame response.
- Featuring a wide range of aspect modes, including ones for anamorphic lenses.
- [USTA-1/4/6/16/14/2/2160M/2160M2/ M/110/5-FT] file. The selection 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.
- 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 (in Economy lamp mode).
- Normal/Eco lamp power selection.
- Lens-centred design.

Specifications

- Power supply: 100–240 V AC, 50/60 Hz
- Power consumption: 240 W [Approx. 0.08 W in standby mode with fan stopped]
- Panel size: 0.67” [17.79 mm] diagonally
- Aspect ratio: 16:9 aspect ratio
- Display method: Transparent LCD panel [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: Projected zoom (2x) / powered focus, F 1.9–3.2, f 22.4 mm–44.8 mm
- Lamp: ET-LAE4000 [110 W UHM lamp]
- Brightness*: 1,000 lumens [Typical]
- Contrast*: 1000:1, [Full on/full off]
- Input interface: HDMI (852i, 720p/50i, 720p/60i, 1,080i, 1,080p, 1,080i/50p, 1,080i/60p, 1,080i/50i, 1,080i/60i), 480i (525i), 480p (525p), 576i (625i), 576p (625p), 720p (750i), 720p (750p), 720p (750i), 720p (750p), 1,080i (1,125i), 1,080i (1,125p), 1,080i (1,125i), 1,080i (1,125p)
- Optical axis shift*: Horizontal: ±45% and vertical: ±100%
- Terminals: HDMI IN, DVI-D HD 15-pin (female) x 1
- Dimensions*: 460 x 130 x 300 mm (18-1/8˝ x 5-1/8˝ x 11-25/32˝)
- Power supply: 220 V AC, 50/60 Hz
- Power consumption: 200 W [Approx. 0.06 W in standby mode with fan stopped]
- Panel size: 0.67” [17.79 mm] diagonally
- Aspect ratio: 16:9 aspect ratio
- Display method: Transparent LCD panel [3, R,G,B]
- Drive method: Active matrix
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- Dimensions*: 460 x 130 x 300 mm (18-1/8˝ x 5-1/8˝ x 11-25/32˝)
- Operating environment: 5°C–35°C (41°F–95°F), 20%–80% (no condensation)
- Power supply: 220 V AC, 50/60 Hz
- Power consumption: 200 W [Approx. 0.06 W in standby mode with fan stopped]
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For detailed explanation of features please visit our Projector Global Web Site
http://panasonic.net/avc/projector

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