YAMAHA

Home Cinema Projector

LPX-500

LCD projector designed exclusively for home cinema use featuring 16:9 widescreen
display capability, high contrast film-like picture quality, Yamaha "Natural Black," "Silent" projector design,
easy operation, and convenient placement even when space is limited.

DCDi
by FAROUDJA

We recommend using the LPX-500 with high quality
Yamaha Digital Home Theater components.

Enjoy Movies with Superb Film-Like
Picture Quality on a Large Screen
Right in Your Own Home.

Utilizing Yamaha "Natural Black," Linear Color Balance and other advanced features, this LCD projector delivers beautiful picture quality with high contrast.

- High contrast film-like picture quality with "Natural Black"

- 720p HDTV format compatibility, 16:9 widescreen display

- Linear Color Balance

- Faroudja DCDi* processing for smooth and natural images

- Low-noise operation

- 1080p compatibility (RGB input)

- On-screen display with convenient menus for detailed adjustments

High Contrast Film-Like Picture Quality with "Natural Black"

When you watch a movie, shadows should stand out from the background, black levels should be solid even in dark scenes, and blacks should maintain their depth when the scene becomes brighter. Which is exactly what happens with Yamaha "Natural Black." Because even though it's usually the bright colors that you notice, how a video system reproduces gradations of black is extremely important. This is what determines contrast, and is very often the difference between an image that

Simulated image for descriptive purposes.

Yamaha Natural Black makes subtle degrees of black in textures, shadows and so on stand out more clearly.

With other projectors, black contrast may be soft and fuzzy rather than sharp and clear.

LPX-500 DCDi by FAROUDJA
Home Cinema Projector

is merely good, and one that is sharp and rich at every level of brightness. Yamaha put a great deal of effort into improving black reproduction, and with "Natural Black," we've achieved levels of black that are about 18% "blacker" than those of conventional projectors.

720p HDTV Format Compatibility, 16:9 Widescreen Display
The LPX-500 is able to handle high resolution 720p HDTV signals. Other formats will also provide excellent quality. 16:9 aspect ratio compatibility means that widescreen movies can be viewed in their entirety, with the correct perspective.

Linear Color Balance
The LPX-500 uses three LCD panels (R, G, B) to create the image. Ideally, all three signals should have the same linearity, but due to various factors, their linearity continuously varies. The Linear Color Balance function helps maintain the proper balance between them, for improved color reproduction.

DCDi Processing
Faroudja, one of the world's leading video technology companies, developed the DCDi processing used in this projector. It ensures smooth and natural images without staircasing or jaggies.

* DCDi is not applicable to image from film sources.

Light Leakage Prevention
Most projectors suffer from light leakage, which is visible around the projector and also around the screen. This is especially visible if the wall in back of the screen is a light color, and is distracting when watching movies in a dark room. As the LPX-500 is intended primarily for home theater use, it is carefully designed to prevent light leakage.

Low-Noise Design
The LPX-500 features ultra-low-noise operation (30dB) due to the quiet operation of its two fans, particularly the powerful Sirocco fan in the rear. Both fans are positioned to the side of the body openings rather than right in front of them, reducing the amount of noise audible outside the body.

Linear Color Balance (Right) and No Linear Color Balance

Liquid Crystal Display (LCD)
A liquid crystal is an organic fluid whose chain-like molecules are rearranged to form crystals when external voltage is applied to it. A liquid crystal display is a display device that controls the molecular arrangement of liquid crystals by this voltage to alter the degree of polarization of transmitted light, and combined with polarizing plates, to vary the transmission rate of the light.

Because the liquid crystals use polarization to adjust the quantity of light transmitted instead of emitting the light, it is necessary for there to be a light source behind them and polarization panels in front of and behind them. Red/green/blue filters are used to color the light transmitted through the liquid crystals to display color.

Liquid Crystal Projector
Many liquid crystal projectors are constructed using liquid crystal panels specialized for red, green and blue. Light from a single flood lamp is divided into three routes by a half-mirror, these pass through R/G/B liquid crystal panels, then the three colors of light that have passed through the liquid crystal panels are recombined by a combining prism and finally passed through the projector's lens.

On-Screen Display with Convenient Menus for Detailed Adjustments

The on-screen display, selectable via the remote control unit, offers a wide range of parameters that can be adjusted to provide the highest possible image quality in all situations. There are Setup and Info menus, and for detailed adjustments, Image and Signal menus. This extremely detailed assortment of choices ensures that you can achieve the best looking picture for all input formats, sources and room conditions. You can even vary the position of the menu on the screen!

The Image menu offers 11
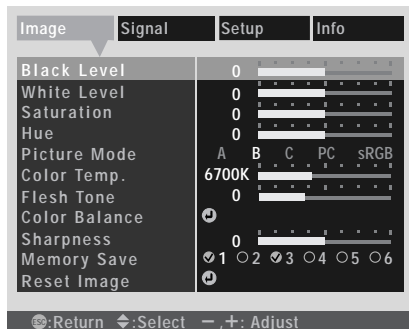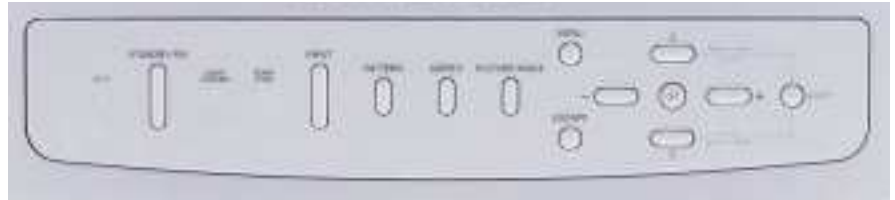
LPX-500 Control Panel

On-Screen Display

different modes for detailed image adjustment. You can select three Picture Modes, vary black and white levels, adjust flesh tones, sharpness, color balance and more. There is also a Memory Save mode that lets you store six patterns for each of six inputs.
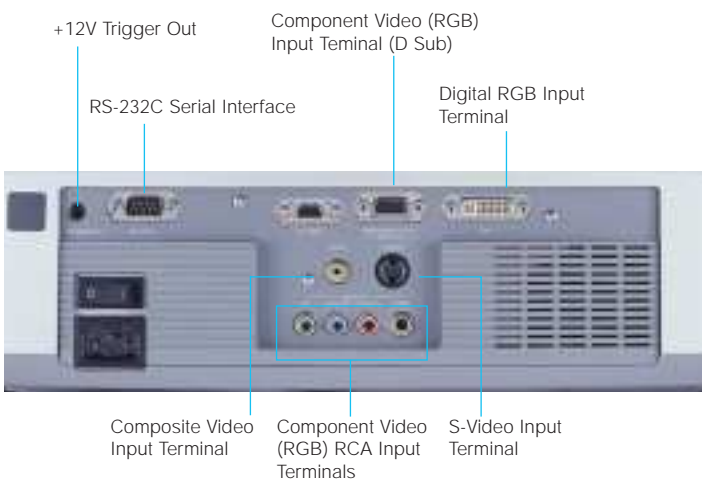
Numerous Inputs for Full Compatibility and Custom Installation

A full complement of professional grade inputs are provided for a variety of sources, including component video with BNC terminals for maximum connection integrity, analog RGB and DVI (Digital Visual Interface), composite video and S-video. An RS-232C serial interface
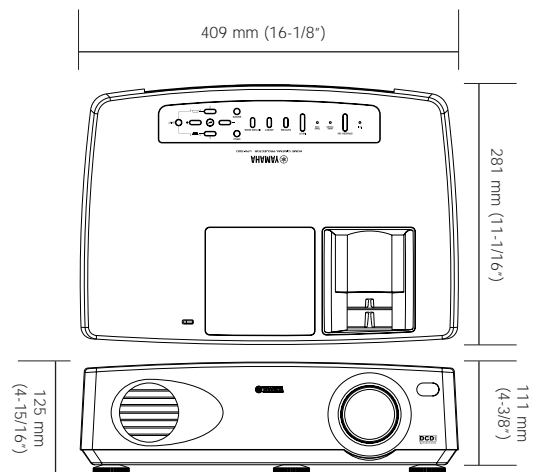
and a +12V trigger out jack output signals to activate other components when the projector is powered on, facilitating custom installation.

The LPX-500 is compatible with a wide range of formats, from digital satellite broadcasting with high image quality at 1080i, 720p, 480p and 480i, to ordinary media such as DVD, LD and VCR. It can also accept 1080p signals via an RGB input; this progressive scanning format has 1080 scanning lines for extremely high resolution. If the RGB output from a personal computer is input directly through the D-Sub 15-pin terminal, native solution and expanded XGA images are possible, as well as compatibility with compressed SXGA images.

Extensive Connection Panel

+12V Trigger Out

Component Video (RGB) Input Teminal (D Sub)

RS-232C Serial Interface

Digital RGB Input Terminal

Composite Video Input Terminal

Component Video (RGB) RCA Input Terminals

S-Video Input Terminal

Dimensions

409 mm (16-1/8")

281 mm (11-1/16")

125 mm (4-15/16")

111 mm (4-3/8")

Short Focus Lens with High Power Zoom

We gave the LPX-500 a short focus lens so it can be used closer to the screen. This provides numerous benefits: more flexible placement, positioning the projector "up front" out of the middle of the seating area, and use in relatively small rooms. With a 100″ screen, the projector requires only 3.15 (Wide mode) to 4.30 meters (Tele mode) of distance. A Zoom mode expands the image 1.35 times to let you get closer to the action.

Digital Keystone Correction

When there is a difference in the relative heights of the screen and the projector, a trapezoidal bending effect can occur which causes image distortion. Digital Keystone

Keystone
Correction Off

Keystone
Correction On

Correction, accessed in the Setup menu, compensates for this effect.

## A Remote You'll Enjoy Using

The remote control is styled for comfortable one-hand operation. It controls a wide range of functions, including Still (freezes the image), Hide (turns off the image), Aspect (selects display aspects) and of course all the menu selections. You can also use it to access the Digital Keystone Correction function in the Setup menu, which compensates for trapezoidal distortion when screen and projector are at different heights. You can select two types of correction, Normal and Full Height. A light switch lights up the buttons for 10 seconds.

LPX-500 Specifications

• Panel: 0.9-inch p-Si TFT LCD x 3
• Resolution: 1,280 x 720 pixels
• Brightness: 800 ANSI lumens
• Contrast Ratio: 800:1 (full on/off)
• Projection Lens: 1:1.35 manual zoom, manual focus
• Light Resource: 150 W UHP lamp
• Projection Distance: 2.97′– 42.67′ (0.91 wide – 13.01 m) for 16:9 picture
• Picture Size: 30″ – 300″ for 16:9 picture
• Video Standard: NTSC, PAL, SECAM, NTSC4.43, PAL60, PAL-M and PAL-N
• Input Accepted: 4SDTV (480i, 576i), HDTV (480p, 720p, 1080i), SXGA (compression), XGA, SVGA and VGA
• Horizontal Sync Range: 15 – 92 kHz (analog); 24 – 91 kHz (digital)
• Vertical Sync Range: 50 – 85 Hz (analog); 56 – 85 Hz (digital)
• Power Consumption: 240 W
• Dimensions (W x H x D): 409 x 125 x 281 mm; 16-1/8″ x 4-15/16″ x 11-1/16″
• *Weight: 4.8 kg; 10.6 lbs.*

Distance to Screen (16:9)

Diagonal Image Size	Size	Wide		Tele	
		m	feet	m	feet
	30″	0.91	2.97	1.25	4.1
	40″	1.23	4.02	1.69	5.53
	60″	1.87	6.13	2.56	8.39
	80″	2.51	8.23	3.43	11.25
	100″	3.15	10.33	4.3	14.1
	120″	3.79	12.44	5.17	16.96
	200″	6.36	20.85	8.65	28.39
	300″	9.56	31.37	13.01	42.67

Offset Height of Lens Center and Screen Bottom

Diagonal Image Size	Size	Wide		Tele	
		cm	inches	cm	inches
	30″	5.1	2	5.1	2.0
	40″	6.8	2.7	6.9	2.7
	60″	10.2	4.0	10.3	4.1
	80″	13.6	5.4	13.7	5.4
	100″	17.0	6.7	17.2	6.8
	120″	20.4	8.0	20.6	8.1
	200″	34.0	13.4	34.3	13.5
	300″	51.0	20.1	51.5	20.3

Screen
Distance To Screen
Offset
LPX-500
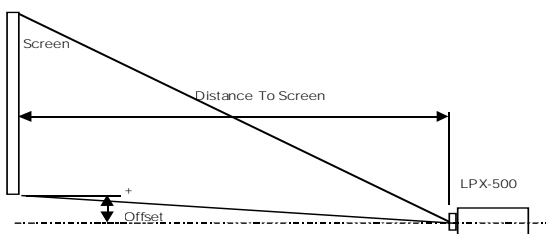
LPX-500 Options (Noto available in some areas)

PJL-5015
Optional Lamp Cartridge

PMT-L21
Optional Installation Brackets for Low Ceiling

PMT-H25
Optional Installation Brackets for High Ceiling

LPX-500 Features

High Picture Quality

- "Natural Black" and advanced optical circuit for high contrast
- 16:9 widescreen display
- 720p HDTV format compatibility
- 800:1 contrast ratio
- Linear Color Balance
- 3-2 pull-down progressive circuit
- Faroudja DCDi* processing
  * DCDi is not applicable to image from film sources.
- Light leakage prevention
- 1080p compatibility (RGB input)

Easy, Convenient Operation

- Zoom function (1.35x)
- 3 Picture Modes for easy selection of optimum image quality
- Fine adjustment of black level, white level, color temperature, flesh tone
- PC mode and sRGB mode (standardized mode) for optimum quality when used with a PC
- 36-Pattern Input Mode Memory (6 terminals x 6 patterns)
- On-screen display with convenient menus for detailed adjustments
- Remote control unit allows comfortable one-hand operation and has backlighting for easy use in the dark
- All terminals on the back panel

Installation Flexibility

- Short focus lens allows use in limited space
- Compact design for tabletop use
- Digital Keystone Correction (±15°)
- Custom installation capability with RS-232C interface and +12V trigger out
- Easy and safe lamp replacement for overhead installation

Low Noise Design

- Ultra-low-noise operation (30dB) for maximum movie enjoyment

Numerous Inputs for Full Compatibility

- Versatile digital inputs
- HDTV-compatible inputs
- Custom installation compatibility
  - RS-232C interface
  - +12V trigger out

Sophisticated Cosmetic Design

- Slim, elegant styling similar to Yamaha's acclaimed flagship projector
- Attractive addition to any contemporary interior
- Designed for home cinema use with all inputs and outputs conveniently located in the rear and air duct in the front

For details please contact:

Visit us at our website:
http://www.yamaha-audio.co.uk

YAMAHA

CREATING 'KANDO' TOGETHER