Digital Cinema Projector

DPX-1000

If you've decided the time has come to start enjoying widescreen movies at home with the highest possible film-like quality, the first component to choose is the DPX-1000. Designed exclusively for home theater use, this high performance projector combines the highest level of DLP™ quality with a superior optical system and other technologies for superb contrast and color quality. Sit back and enjoy!

We recommend using the DPX-1000 with high quality Yamaha Digital Home Theater components.

Ultra high performance DLP™ Digital Cinema Projector with superior new technologies and optics.

You've Never Seen Movies Look This Good up Close —— 2,700:1 Contrast Ratio with Spectacular Color and Clarity for Total Viewing Enjoyment.

- Yamaha Natural Black concept
- Ultra high quality, high performance optical system with motorized optical iris
- Yamaha Picture Management System including full 10-bit component signal processing
- New high performance DLP engine with 5x color wheel
- Complete color balance
- Silent operation
- Custom installation solutions

The DPX-1000 Digital Cinema Projector will be the centerpiece of a home theater system that puts the emphasis clearly on "theater." It uses Yamaha's Natural Black concept to achieve an incredible 2,700:1 contrast ratio and overall quality for stunningly clear image quality. Its design features a high performance optical engine with a large f2.4 projection lens and a Picture Management System that uses 10-bit component signal processing from input to output. The new 16:9 widescreen DLP™ chip offers HD-compatible resolution of 1280 x 720 and a 5x color wheel ensures superb color reproduction. There are also numerous features for enhanced performance and convenience, including complete Color Balance Control, motorized optics for installation flexibility, a "Silent" projector design and custom installation solutions. You'll know how good life can be when you relax with family and friends and watch your favorite movies unfold on a super-wide screen in exquisite color and clarity.

Yamaha Natural Black Concept

How a video system reproduces black and all its gradations is what determines contrast, and generally makes the difference between an image that is merely good and one that is sharp and richly detailed at every level of brightness. In quest of superior contrast performance, Yamaha developed the Natural Black concept, whereby various technologies, parts and functions combine to achieve truer, deeper levels of black than those of conventional home theater projectors.

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.

Black reproduction by DPX-1000 and conventional projectors.

A DPX-1000: Deep blacks are clearly defined, all dark gradations are sharply and cleanly rendered.

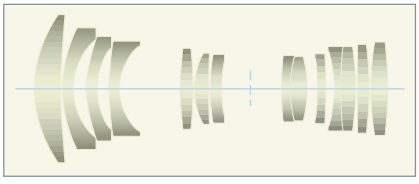
Black Level White Level

B Conventional projectors: Due to "floating black" effect, rendering of deep blacks is very difficult.

Black Level White Level

An Optical Engine Far Superior to Conventional Types

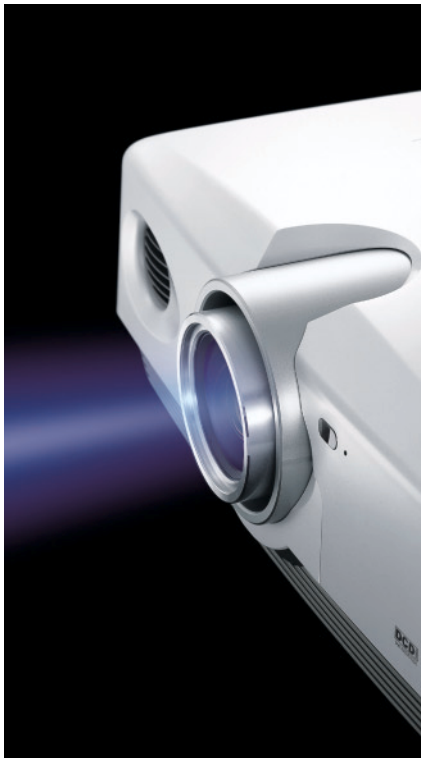
The DPX-1000 utilizes a superior optical engine with an extremely high quality projection lens, based on the concept that if lens performance is low, it is impossible to take full advantage of the high image quality resulting from the projector's advanced processing. This large diameter lens, with 12 groups and 14 elements and a wide f value of 2.4, incorporates design expertise used to create high-end single lens reflex and TV camera lenses. The lens is made of expensive anomalous dispersion glass with an aspherical shape and special coating for projector use. It ensures the highest possible resolution and contrast. In all performance aspects — color reproduction, color balance, contrast, resolution, and above all, film-like rich texture — the performance of this lens is outstanding.



12-Group, 14-Lens Configuration

Motorized Iris Control for Higher Contrast

The DPX-1000 is equipped with a motorized Optical Iris that synchronizes control of the projection system and illumination system. Optimizing the shape of the iris achieves an extremely high contrast ratio of 2,700:1 in the Cinema mode, as well as increasing depth of field and enhancing black level. The prism shape and lens arrangement are also optimized, and a low-reflection coating restricts the reflection of unnecessary light that reduces contrast. With this system, contrast is so good that small details that would ordinarily be masked by black areas
are visible.



DPX-1000

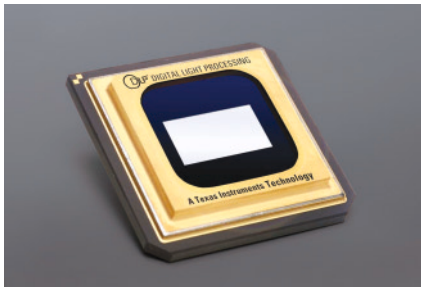
Digital Cinema Projector

NATURAL BLACK

PICTURE BY DLP

DCDi by FAROUDJA

DLP™ Cinema Projector: High-Performance Projector Designed Specifically to Deliver the Highest Quality Movie Images.



1,280 x 720 Pixel DMD™ Device

New High Performance DLP™ Chip

The DLP chip used in the DPX-1000 is Texas Instruments' latest 16:9 widescreen version, which offers native resolution of 1280 x 720 and HD compatibility for extreme image accuracy. The key DMD™ (Digital Micromirror Device™) component is the dark metal type for even deeper blacks, and uses a mirror angle of 12°. Light leakage to the screen when the micromirrors are off (when light is not reflected on the screen from the lamp) is reduced from previous levels.

Yamaha Signal Management System

The DPX-1000 features full 10-bit component signal processing from input to output. Most projectors use 8-bit processing for 256 levels of gradation, but 10-bit processing provides four times as many, or 1024.

DCDi Off DCDi On

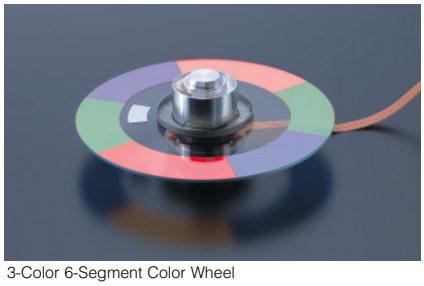
Yamaha's Area Adaptive Scaling enables native 720p display. Faroudja's DCDi processing, used in the 10-bit mode for 480i signals such as DVD, effectively reduces "jaggies" with standard definition sources.

Area Adaptive Scaling

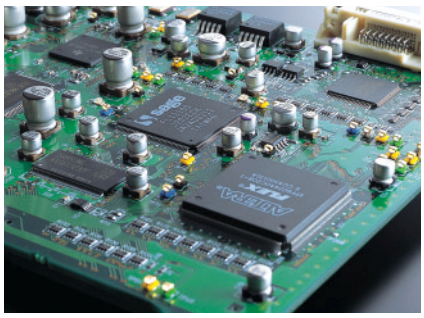
Almost all input signals are, after being made progressive, scaled according to the number of pixels of the projection screen, a factor which also can affect picture quality. The DPX-1000 uses Yamaha's original Area Adaptive Scaling based on precisely determined algorithms. Performing scaling matched to multi-sided expansion filters by analyzing the image edge of the object range creates images with extremely high resolution.

5x Color Wheel

The DPX-1000 uses a 5x color wheel to reduce distortion and ensure superb color accuracy. This monolithic color wheel is made of a single piece of glass for lower noise and has a dichroic coating to enhance color performance. It is driven by a coreless air bearing motor with low noise and excellent durability.



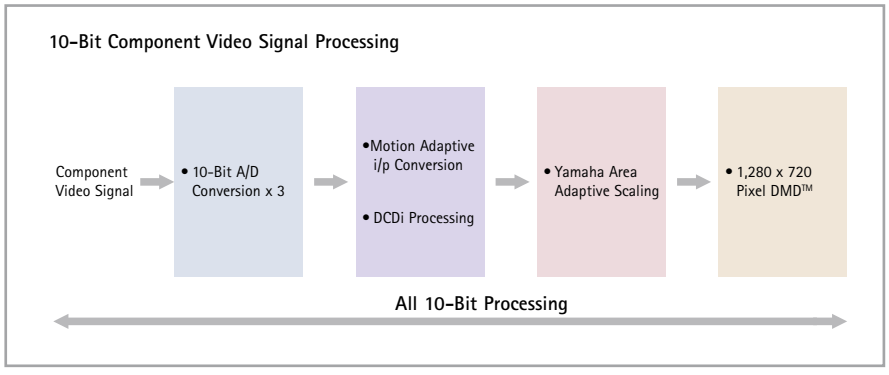
3-Color 6-Segment Color Wheel



High Picture Quality Signal Processing Board

Silent Operation

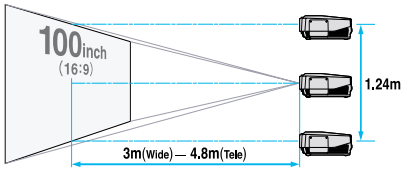
Naturally, a home theater projector should be extremely quiet, and the DPX-1000 is unmatched here also. It's Tri-Silencer system uses separate lamp, DMD™ and power supply ducts equipped with chambers paneled with sound absorbent materials, and cooling fan operation is minimized by continually adjusting it according to internal temperature. The result is noise levels of only 28dB in the Economy mode and 30dB in the Standard mode.



Control Panel

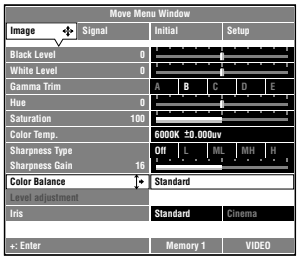
Largest Zoom Lens in Its Class for Large Screen Reproduction, Flexible Installation

The DPX-1000 projection lens not only reproduces sharp images, it has two functions that increase installation flexibility so you can achieve large screen sizes. With the largest zoom ratio in its class (1.6x), it can project a wide 100 inch 16:9 image from only 3m (short focal length) to 4.8m (long focal length) projection distances. It can also be installed within a vertical range of 0 to 1.24m thanks to a lens shift function that is adjustable over a wide range. Because these adjustments are electrically powered and can be performed with a remote control, they can be done after positioning the projector or installing it on the ceiling. You can create the optimum viewing environment for enjoying large screen images anywhere, even in small rooms.



Complete Color Balance Control

An extensive range of adjustable parameters, selectable from the on-screen menus, provide professional-level color balance control. You can memorize six patterns of parameters for each input terminal, a total of 36 patterns.



You can also return to the default settings at any time.

- **Black Level**

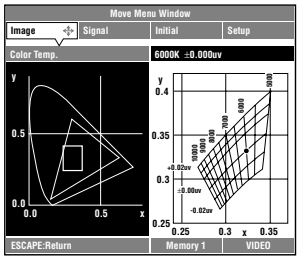
Adjusting the black level, an extremely important parameter for obtaining movie quality images, optimizes the reproduction of black gradations and can correct black level abnormalities.

- **Color Temperature**

The color temperature control allows adjustment of the white point on the chromaticity coordinates (from 5,000 to 10,000 chromaticity), and provides full access to the other chromaticity coordinates (red, green, blue, cyan, magenta, yellow) for fine tuning of the entire color range.

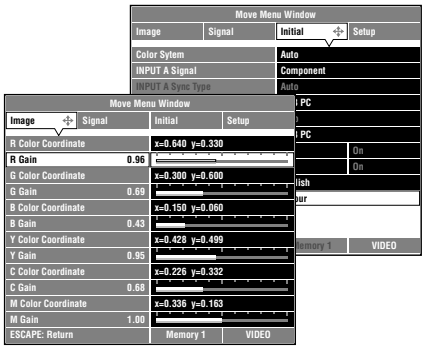
- **Gamma Correction**

14-bit digital gamma correction is performed during final signal input to the DMD™ using a carefully tuned gamma curve to reproduce finely calibrated gradations. 10 patterns can be selected, depending on the type of input.



On-Screen Display with Extensive Menus

The on-screen display, selectable via the remote control, offers a wide range of parameters that can be adjusted to provide the highest possible image quality in all situations. There are Setup and Initial (default) menus, and for more detailed adjustments, Image and Signal menus. The extremely large selection of choices ensures that you can achieve the sharpest, most natural-looking pictures for all input formats, sources and room conditions. You can even vary the position of the menu on the screen.



Custom Installation Solutions

The DPX-1000 is sure to be a popular choice among customers wanting custom installation. It is therefore equipped with an RS-232C serial interface, extended IR codes, IR I/O ports and power status trigger DC12V. The complete set of inputs includes composite video, S video, component video/BNC, RGB with V/H sync, D-Sub 15 and a DVI terminal compatible with a wide range of signals as well as HDCP (High Definition Copy Protection).

Other Convenient Features

- Automatic input signal detection and selection.
- Automatic aspect ratio detection and selection.
- Economy mode and low standby power consumption (0.1W).

Accessories

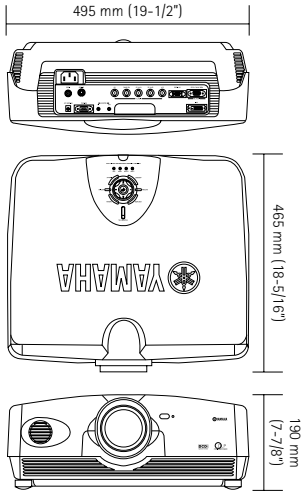
PMT-H35: Optional installation brackets for high ceiling

PMT-L31: Optional installation brackets for low ceiling

PJL-327: Optional lamp cartridge

Full-Function Remote Control

All settings, adjustments and lens operations can be performed by remote control. The unit is equipped with backlighting that turns on for 10 seconds each time you touch a button. It is comfortable to hold and operate, with often used buttons the most accessible.



DPX-1000 connection panel offers INPUT A (G/Y, B/P_B/C_R, HD/SYNC and VD), INPUT B (RGB/YP_BP_R/YC_BC_R), DVI, S-video input and composite video input terminals, remote control IR Code input/output, RS-232C serial interface, and +12V trigger output terminal.

DPX-1000 Specifications

[Optical]
- Projection mode: DLP™ ((Digital Light Processing) Images of 1,280 x 720 pixels (0.8 inch)
- Lens: f=24.4 to 39 mm, F=2.4 to 3.1 electronic zoom (x 1.6), electronic focus
- Brightness: 800/500 ANSI Lumens (Standard mode/Cinema mode)
- Contrast Ratio: 1,500:1/2,700:1 (Standard mode/Cinema mode)
- Lamp: 270 W SHP lamp
- Image size: 60 to 200 inches
- Projection distance: 1.8 to 6.05 m (70-7/8" to 236-1/5") (wide image,16:9 screen)

[Electrical]
- Color mode: NTSC, PAL, SECAM, NTSC4.43, PAL-M, PAL-N, PAL60
- Scanning frequency: H:15 to 80 kHz; V;50 to 85 Hz

[Input]
- VIDEO Composite signal: 1 Vp-p/75 ohms (negative sync.)
- S-VIDEO (S video signal): Y=1 Vp-p/75 ohms (negative sync.); C=0.286 or 0.3 Vp-p/75 ohms
- D4 VIDEO (component signal): Y with sync.=1V p-p/ 75 ohms (negative sync., 480i, 576i, 480p, 576p); Y with sync.=1 Vp-p/75 ohms (3 values sync., 1035i, 1080i, 720p); PB/PR=0.7 Vp-p/75 ohms
- INPUT A/INPUT B (component signal): Y with sync.= 1 Vp-p/75 ohms (negative sync., 480i, 576i, 480p, 576p); Y with sync.=1 Vp-p/75 ohms (3 values sync., 1035i, 1080i, 720p); PB/PR=0.7 Vp-p/75 ohms
- RGB signal: G with sync.=1 Vp-p/75 ohms (negative sync.), 480i, 576i, 480p, 576p); G with sync.=1 Vp-p/75 ohms (3 values sync., 1035i, 1080i, 720p); G=0.7 Vp-p/75 ohms (when using HD/VD or SYNC); B/R=0.7Vp-p/75 ohms; HD/VD=1.5 Vp-p/2.2 k-ohms (positive and negative sync.); SYNC=2 Vp-p/2.2 k-ohms (negative sync., 480i, 576i); SYNC=1 to 5 Vp-p/2.2 k-ohms (positive and negative sync.)
- DVI: Digital RGB signal

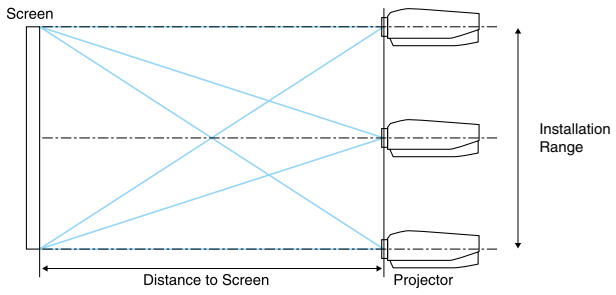
[General]
- Noise Level: 30 dB/28 dB (Standard mode / Economy mode)
- Power consumption: 365 W
- Standby power consumption : 0.1 W
- Dimension (W x H x D): 495 x 190 x 465 mm; 19-1/2" x 7-1/2" x 18-5/16"
- Weight: 13.8 kg; 30.4 lbs.

Distance to Screen 16:9

	Size (16:9)	Wide		Tele	
		m	feet	m	feet
Diagonal Image Size	30" (26" x 15")	0.86	2.81	1.41	4.62
	40" (35" x 20")	1.16	3.81	1.90	6.23
	60" (52" x 29")	1.78	5.83	2.88	9.44
	80" (70" x 39")	2.39	7.84	3.86	12.66
	100" (87" x 49")	3.00	9.86	4.84	15.87
	200" (174" x 98")	6.07	19.93	9.74	31.95
	300" (262" x 147")	9.14	30.00	14.64	48.02

Distance to Screen 4:3

	Size (4:3)	Wide		Tele	
		m	feet	m	feet
Diagonal Image Size	30" (24" x 18")	0.78	2.58	1.29	4.24
	40" (32" x 24")	1.07	3.50	1.74	5.71
	60" (48" x 36")	1.63	5.35	2.64	8.67
	80" (64" x 48")	2.19	7.20	3.54	11.62
	100" (80" x 60")	2.74	9.05	4.44	14.57
	200" (160" x 120")	5.58	18.29	8.94	29.32
	300" (240" x 180")	8.39	27.54	13.44	44.08



For details please contact:

- Digital Light Processing, DLP, Digital Micromirror Device and DMD are trademarks of Texas Instruments, Inc.
- "DCDi" is a trademark of Faroudja, a division of Sage Inc.
- Product designs and specifications are subject to change without notice.

Visit us at our website:
http://www.yamaha.co.jp/

YAMAHA

CREATING 'KANDO' TOGETHER

YAMAHA CORPORATION
P.O. Box 1, Hamamatsu, Japan

ATB646U-DPX1000@221