

For Immediate Release:

London, 29 October 2007

***The Industry Highest<sup>\*1</sup> 30,000:1 Native Contrast Ratio Further Improves True Black Level Reproduction***

## **D-ILA Super True Black Home Theater Projector**

### **DLA-HD100**



JVC, a leading innovator in the field of audiovisual technology, is proud to launch the new premium model DLA-HD100, a Full High-definition D-ILA Home Theater Projector that achieves an incredible native contrast ratio of 30,000:1 at the same time in the same picture, the industry's highest<sup>1</sup> avoiding any artificial means of contrast enhancement, such as an iris.<sup>\*1</sup> As of 26 September 2007. Achieved native contrast ratio 30,000:1 as home theater projector. (JVC Internal survey)

With the DLA-HD100, JVC expands its line up of True Black ILA projectors with a new premium model. The DLA-HD1, introduced in January 2007, also broke fresh new ground with the then industry highest<sup>2</sup> native contrast ratio of 15,000:1 without an iris mechanism, and earned a well-deserved reputation in the front projection community for top performance.

Based on this excellent product, the new high end DLA-HD100 features enhanced 0.7-in. full HD D-ILA devices and wire grid optical engine to enable it to further improve contrast to twice the ratio of the best conventional projectors and attain a native contrast ratio of 30,000:1 for super-smooth images exhibiting deep, true black level without a trace of gray.

The DLA-HD100 is also compatible with the latest HDMI ver. 1.3 (Deep Color) specifications, which allow it to go from millions of colors to billions of colors and reproduce subtler shades of grayscale. Amazing picture detail, thanks to 1080p resolution, and a phenomenal native contrast ratio ensure exceptional vividness and accuracy of color, enabling the viewer to enjoy velvety images that promise a near-cinematic experience in the comfort of one's living room.

<sup>2</sup> As of November 2006. Native contrast ratio of 15,000:1 for home theater projector class (JVC internal survey).

## Main Features

### 1. Deep, true black level with the industry's highest<sup>1</sup> native contrast ratio of 30,000:1

The new DLA-HD100 features improved 0.7-inch full HD D-ILA devices and optical engine, allowing the projector to achieve the industry's highest<sup>1</sup> native contrast ratio of 30,000:1.

#### (a) 0.7-in (16:9) full HD D-ILA device x 3

The device exhibits a significant reduction in stray light caused by phenomena such as the dispersion and diffraction of reflected light. JVC succeeded in decreasing orientation irregularities by reducing the gaps between pixels, adopting improved liquid crystals and other innovative technologies, enabling the device itself to achieve a contrast ratio of 40,000 to 1.

#### (b) Optical engine with wire grid polarizers

The enhanced wire grid optical engine dramatically improves the precision of light polarization, helping to prevent light leakage into the projection lens and allowing for true black level reproduction.

### 2. Newly designed Color Filters reproduce outstandingly vivid colors

JVC uses newly designed color filters to extract red, blue, and green colors with extremely high purity. This suppresses excessive light frequency bands that prevent color purity, broadening the red color space. Thanks to the outstanding color rendition range, which exceeds approximately 170% of the SMPTE HDTV standards, the color reproduction of minute differences in red colors seen in plants or nature such as in sunsets or roses combines with expression of colors closer to the real colors to create truly superb images.

#### Color depth comparison

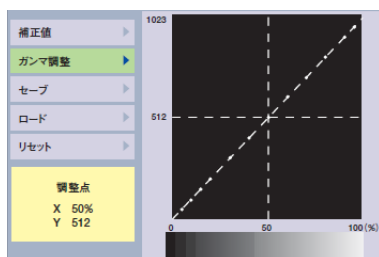


Conventional

DLA-HD100

### 3. Customized Gamma Control reproduces subtle gray scale

By finely adjusting the gray scale manually to reproduce a more realistic image and by adjusting the levels while observing the changes in the on-screen gamma curve graph, dark areas can be raised and loss of detail suppressed in bright white areas. The color reproduction can be adjusted perfectly to suit personal tastes via the on-screen display, as primary RGB colors can be adjusted individually.



Gamma Control Menu (Japan Model)



Conventional



Customized Gamma Control

#### 4. High-performance 2x motorized zoom lens enables flexible setup

The high-performance 2x zoom lens found on DLA-HD100 is made by Fujinon Corporation and features a large-diameter, all-glass lens assembly with 16 elements in 13 groups. This lens significantly reduces chromatic aberration and provides a high-resolution picture by ensuring that individual pixels remain perfectly focused on the screen. Motorized focus also allows users to enjoy razor-sharp image reproduction in all situations even in smaller rooms where recommended viewing distances to the screen are not possible. Setting up the DLA-HD100 is easy too as  $\pm 80\%$  vertical and  $\pm 34\%$  horizontal lens shift function allows the projected picture to be moved horizontally or vertically without having to physically reposition the projector.



#### 5. Compatibility with HDMI ver. 1.3 (Deep Color) specifications

The DLA-HD100 incorporates two HDMI inputs compatible with version 1.3 specifications, allowing users to take full advantage of the higher bandwidth of 225 MHz, increased color depth from millions of colors to billions of colors (Deep Color) as well as enhanced resolution and frame rates (for more details, please refer to the HDMI ver. 1.3 specifications at <http://www.hdmi.org/>).



#### 6. V-Stretch Wide Screen

Also new to the DLA-HD100 is the V-Stretch function for the most efficient projection of extra wide screen anamorphic movies. For example, 2.35:1 ratio images from these films images are normally viewed with "letterbox" black bands at the top and bottom of the screen. With V-Stretch, the image is expanded vertically so that every part of the DILA device is utilized to create the image, increasing brightness and sharpness. A third party anamorphic lens is used to stretch the image to its full extra wide 2.35:1 image ratio, just as seen in the theater.



## Development Concept

In January 2007 JVC launched the DLA-HD1 as a full HD projection system that delivers remarkably true black reproduction with impressive picture contrast and brightness, and it enjoys a well-deserved reputation in the front projection community for top performance.

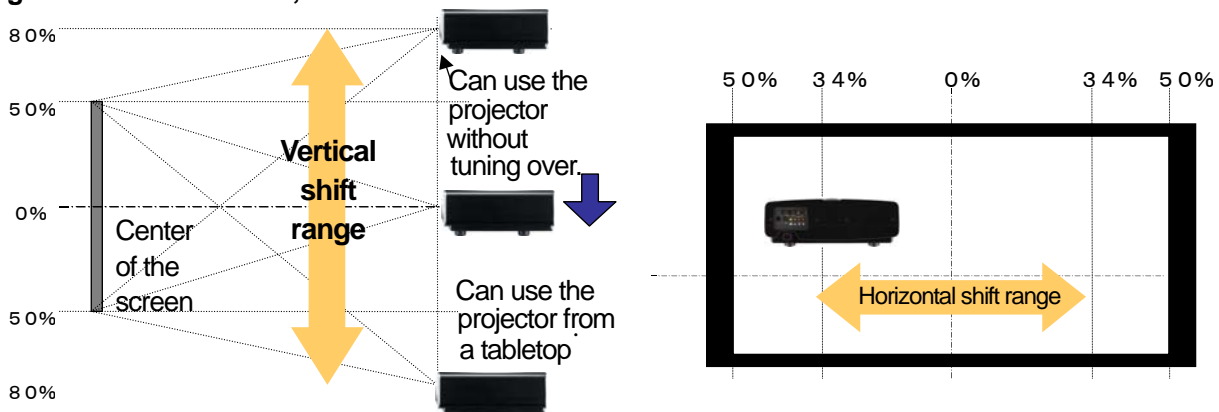
The new premium model DLA-HD100 goes a big step further and is designed to exceed the most discerning user's expectations by faithfully reproducing the presence and colors found in HD movies and digital broadcasts.

By enhancing both the 0.7-in. full HD D-ILA device and wire grid optical engine, JVC has succeeded in doubling the already impressive native contrast ratio of 15,000:1 to 30,000:1 — a notable achievement that clearly ranks as the industry's highest<sup>1</sup>. Further improvements were made to guarantee vivid and natural color reproduction, leading to broader color spacing and HDMI ver. 1.3 compatibility. Additional benefits include customized adjustment of gamma control, and a high-performance motorized 2x zoom lens.

## Additional Features:

- $\pm 80\%$  vertical and  $\pm 34\%$  horizontal lens shift function as seen in figure 1.
- The Cooling air fan opening is on the front of the projector so the installation position is almost entirely unrestricted. Freedom of positioning is greatly increased thanks to the simple design with connection terminals only on the back side. Even if the projector cannot be suspended from the ceiling, it can be placed freely next to walls and so forth. Additionally, lamps can be replaced swiftly and easily through the side of the projector, irrespective of whether it is suspended from the ceiling or placed on a table or the floor.
- A video processor by Gennum Corporation is featured at the core of the video projection system. The video processor ensures the faithful reproduction of high-quality images thanks to a high-precision scaling function and four VXP™ technologies that are detailed in figure 2.
- Increasing the efficiency of the cooling configuration reduced fan noise to a mere 24dB. Even if placed in a really quiet room, fan noise does not disturb the viewer's concentration on the movie or other content.

**Figure 1.  $\pm 80\%$  vertical,  $\pm 34\%$  horizontal lens shift function**



\*The vertical and horizontal lens shifts cannot be set to maximum values at the same time.

**Figure 2. Four VXP™ Technologies**

**FineEdge™**

Edge correction technology that gets rid of the jaggy artifacts so common to diagonal lines, creating instead smooth outlines.

**FidelityEngine™**

Imaging technology that improves detail while reducing noise. This technology ensures a clear, detailed playback picture even for video sources with lower resolutions.

**TruMotionHD™**

De-interlacing technology that supports HD signals (1080i), converting them to high-quality 1080p signals for playback.

**RealityExpansion™**

10-bit image processing technology. This technology can upsample 4:2:2 (Y:Cb:Cr) video signals to 4:4:4 format, and delivers outstanding image processing at a level comparable to that of broadcast masters.



**Specifications: DLA-HD100 D-ILA Home Theater**

**Front Projector**

Display device	Full HD D-ILA device
Panel size	0.7 inch x 3 (16:9)
Resolution	1,920 x 1,080 pixels
Lens	X2 motorized zoom/focus lens, f=21.3-42.6mm, F=3.2-4.3
Lens shift function	±80% vertical and ±34% horizontal
Screen Size	60 to 200 inches
Light source lamp	200-watt ultra-high pressure mercury lamp
Brightness	600 lumens
Contrast ratio	Native 30,000:1
Video input terminals	HDMI x 2 (ver. 1.3)
	Component x 1 (3RCA), can also be used as a RGB terminal
	S Video terminal (mini DIN4 pin) x 1
	Composite x 1 (1RCA terminal)
Control Terminals	RS-232C (D-sub 9 pin)
Input signals	Video
	PC
	480i/p, 576i/p, 720p60/50, 1080i60/50, 1080p60/50/24, NTSC/NTSC4.43/PAL/PAL-M/PAL-N/SECAM
	SXGA,XGA,SVGA,VGA (via HDMI)
Noise Level	24 dB (Normal Mode)
Power Consumption	280W (Standby 2.7W)
Dimensions (W x H x D)	455 x 172.5 x 418.5mm (without extrusions)
Weight	11.6 kg

\* PC input is via HDMI digital inputs only. Analog PC input is not possible.

### Projection Distance Chart

Display size <16 : 9>			Projection distance	
inch	W (mm)	H (mm)	Wide (m)	Tele (m)
60	1,328	747	1.78	3.63
70	1,549	872	2.09	4.24
80	1,771	996	2.40	4.86
90	1,992	1,121	2.71	5.47
100	2,214	1,245	3.01	6.08
110	2,435	1,370	3.32	6.70
120	2,656	1,494	3.63	7.31
130	2,878	1,619	3.93	7.93

Display size <16 : 9>			Projection distance	
inch	W (mm)	H (mm)	Wide (m)	Tele (m)
130	2,878	1,619	3.93	7.93
140	3,099	1,743	4.24	8.54
150	3,320	1,868	4.55	9.16
160	3,542	1,992	4.86	9.77
170	3,763	2,117	5.16	10.38
180	3,984	2,241	5.47	11.00
190	4,206	2,366	5.78	11.61
200	4,427	2,490	6.08	12.23

\*Projection distances are design specifications, so there is a  $\pm 5\%$  variation.

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