Super High-definition 4K Projection (3,840 x 2,160 pixels)

In addition to a full HD D-ILA device, the DLA-X90R and X70R feature a newly developed optical engine incorporating the new e-shift technology to realise super high-definition projection of 4K-resolution (3,840 x 2,160 pixels). Resolution in the vertical and horizontal directions is virtually doubled thanks to e-shift technology, which shifts one pixel for every 0.5 pixels to realise 4K projection.

Unlike a resolution-upscaling technology for full HD projectors, the use of a device that is capable of displaying 4K-resolution (3,840 x 2,160 pixels) drastically improves picture quality to ensure exceptional precision and full presence.

The Power of 4K Image Display — Super High-Definition Picture that Surpasses Full HD.

Unprecedented visual sensations can now be realised with 4K-resolution realism as if one is actually immersed into the picture. JVC’s professional projector business nurtured by its high-definition expertise has been integrated with e-shift technology to enhance the potential of home theatre projectors. The incredible picture resolution of 4K projection surpasses that of full high-definition to ensure a masterful reproduction of details as well as clear, realistic representations of texture. Now everyone can enjoy a remarkable viewing experience like that never before seen in a home cinema environment.

JVC’s Original Advanced Image-processing Technologies

JVC’s advanced image-processing technologies ensure high definition through the use of precise detection and restoration algorithms. The former analyzes pixel information within different areas of the frame; the latter restores the high-frequency components that are missing in a low-resolution image. Further quality enhancement is achieved via contrast correction and jaggies reduction. The overall result is a picture that looks real down to the smallest detail.
D-ILA 3D Projection Leaps Forward in Quality.

Fully equipped with an array of beneficial 3D functions such as 2D-3D conversion and 3D picture adjustment, JVC’s D-ILA projectors take a significant leap forward in picture quality by delivering a more realistic 3D video experience packed with presence.

Frame Addressing — the D-ILA Method

Thanks to JVC’s original D-ILA driving method, Frame Addressing reproduces more colourful and vivid 3D video content with reduced crosstalk (image overlapping). What’s more, this technology incorporates newly developed driving circuitry that helps to dramatically improve image brightness. This means that with JVC’s D-ILA projectors, anyone can enjoy breathtaking and impressive 3D video content just like that seen at cinemas, right in the comfort of their living rooms.

An alternative driving method known as “line addressing” utilizes a fast-shutter approach. However, when the shutters are switched between the left and right eyes, crosstalk can be generated where the left and right images overlap. This is because the shutter on 3D glasses is opened for a shorter amount of time compared to the D-ILA method, causing the picture to darken and lose brightness. However, JVC’s Frame Addressing driving method enables images in a single frame at one time to enable the shutter on the 3D glasses for one eye to remain open for an extended period to realise a brighter 3D picture with less crosstalk.

Crosstalk Cancelling

The innovative Crosstalk Cancelling function drastically reduces crosstalk from intensity levels that are likely to generate this phenomenon by first analysing the video signal for the left and right eyes and then correcting the levels via an original algorithm. This ensures the reproduction of more natural and clear pictures that are easier on the eyes to heighten the viewing enjoyment of more realistic 3D video content.

Disparity Adjustment

To adjust for the parallax difference between each eye, this function finely controls image disparity between the left eye and right eye to ensure more natural stereoscopic reproduction with less distortion.

2D-3D conversion

The real-time 2D/3D converter featured on JVC’s IF-2D3D1 Professional 3D Image Processor, which has earned an excellent reputation in film and 3D video production/editing studios, has been modified for home projector use and is now featured on the DLA-X1000R/X900R/3D projectors. This means that 2D videos recorded on camcorders and from TV broadcasts can be converted into 3D video instantaneously for home stereoscopic viewing enjoyment.

Depth Adjustment:

Depth adjustment: 3D effects, especially depth characteristics, can be adjusted to match the content source or viewer preferences.

Subtitle Adjustment:

Subtitle distortion generated during 2D/3D conversion can be rectified.

Options to Enjoy 3D Viewing

PK-A01 Battery-operated 3D Glasses
- Battery operation
- Weight only 55g with battery
- Continuous operation approx. 75 h

PK-A03 Rechargeable 3D Glasses
- Rechargeable
- Lightweight only 43g
- Continuous operation approx. 4h

PK-EM1 3D Synchro Emitter
- Supplied with 3m connection cable
- Weight 160g
- Emitter dimensions: 90 x 55 x 30mm (including the stand)

Subtitle Adjustment OFF Subtitle Adjustment ON
Crosstalk Cancelling OFF Crosstalk Cancelling ON Disparity adjustment LOW Disparity adjustment HIGH

Notes about viewing 3D video content

• The optional 3D Synchro Emitter and 3D glasses are required for any 3D content such as 3D movies, TV programs, 3D images software 3D media in output of 3D broadcasts and in 3D virtual reality (VR) and other images.
• Perception of 3D images will vary with individual viewers.
• Keep moving 3D images constantly away from objects such as headboards, dishes, eye makeup, etc. (concentration on the 3D images by children is the age of 5 is not recommended.)
• Before viewing 3D pictures in the User Manual carefully before viewing any 3D source.
Cinema-like Quality Realised by D-ILA

Native Contrast Ratio
A high native contrast ratio is achieved by an enhanced optical engine featuring JVC’s original D-ILA device and a wire grid. The D-ILA method features a wide video Dynamic range to display peak whites and deep blacks on the same field of a picture, helping to realise remarkable presence with smoother grayscale and increased depth.

JVC’s Unique Real Colour Imaging Technology (DLA-X90R/X70R)
Real Colour Imaging Technology accurately detects film colour specifications to optimise colour replication and heighten picture quality to reproduce colours that are as faithful to the original source as possible.

Exclusive Colour Profile
JVC has created an exclusive colour profile from original film prints by precisely analysing colour information. Thanks to this innovative technology, the DLA-X90R/X70R projectors are capable of reproducing images faithful to what the original filmmaker envisioned.

Wide Colour Space
Real Colour Imaging Technology features a colour space wider than that of Adobe RGB to vividly reproduce a fuller spectrum of colours such as the green of trees, the blue of oceans, etc., which was difficult to reproduce accurately up until now.

Xenon-lamp Colour Temperature Setting
Real Colour Imaging Technology also incorporates a Xenon-mode colour temperature setting equivalent to that of a Xenon lamp, a popular light source used in cinemas. This setting allows for the authentic reproduction of colours similar to those of film in cinemas, while using highly efficient and economical ultra-high pressure mercury lamps.

Colour Management System with 7-axis Matrix (DLA-X90R/X70R)
A 7-axis matrix of red, green, blue, cyan, magenta, yellow, and orange ensures the precise adjustment of hue, saturation, and intensity. The last axis of orange helps in enhancing the selection of the colour spectrum for skin tones. And for improved operability, only the color being adjusted will be shown on the screen while the others are displayed in black and white.

Screen Adjustment Modes
Colour imbalance resulting from specific screen characteristics can be adjusted. The DLA-X90R offers three modes, whereas the DLA-X90R and X70R allow users to choose from a maximum of 255 modes to ensure outstanding image reproduction with natural colour balance.

JVC’s Original Picture Tone Function (DLA-X90R/X70R)
The Picture Tone function works to balance gamma, contrast, and brightness settings without affecting the grey scaling of the original source to enable brightness adjustment that better matches the surrounding environment.

An Array of Convenient Functions

Lens Memory Function
This function records up to three separate lens adjustments for zoom, shift and focus that can be easily recalled when needed. Focus, zoom size and shift (display position) characteristics can be recorded for video content in different aspect ratios such as when using a CinemaScope screen size (2.35:1) or standard 16:9 screen and readily switched between each setup via the remote controller.

Unique Automatic Lens Cover (DLA-X90R/X70R)
A unique automatic lens cover opens and closes upon power On/Off to prevent against dust or damage to ensure users of easy, trouble-free operation via the remote controller, even if the projector is installed on the ceiling.

Flexible Installation Guaranteed
The flexible installation is made possible thanks to the ±80% vertical and ±34% horizontal lens-shift function. The projector also features a High-performance 2X zoom lens with microstepped focus that can project images upon a large 100-inch screen at distances of between 3.8 and 6.1 metres. With the high-performance motor, the once tedious tasks of setting zoom ratio and focus adjustments are now made simple and effortless.

Pizza Adj. Function
The Pixel Adjust function allows users to precisely correct colour deviation in 1/16-pixel increments*, and it is also capable of segmenting the entire screen into 121 points and adjust them individually to realise clearer video without colour deviation.

A Wide Range of Inputs and Outputs
In addition to 3D compatible HDMI inputs, the projector features an array of other connections, such as an RJ45 socket for projector control, firmware and configuration updates, and a trigger socket for an anamorphic lens or motorised screen.

Industry Certified Projectors (DLA-X90R/X70R)
THX 3D Display Certification*1
The DLA-X90R and X70R are accredited with THX 3D Certification, which is established to ensure the precise reproduction of picture quality in home environments for both 2D and 3D content just as the original filmmaker envisioned. Encouraging more than 400 laboratory tests to evaluate a projector’s colour accuracy, cross-talk, viewing angles and video processing, this certification helps to guarantee high-definition quality.

*1 Ideal 3D screen-size performance is 90 inches diagonal (16:9).

Certified by ISF Imaging Science Foundation
The DLA-X90R and X70R are certified with the ISF C3 (Certified Calibration Controls) mode, enabling trained dealers to professionally calibrate the projector to display surfaces, lighting environments and video sources, and then accurately store these precise settings into the projector. This not only helps to ensure the reproduction of film or video content accurate to the source but also results in excellent picture quality optimised for specific environments.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

**Wide Colour Space**
Real Colour Imaging Technology features a colour space wider than that of Adobe RGB to vividly reproduce a fuller spectrum of colours such as the green of trees, the blue of oceans, etc., which was difficult to reproduce accurately up until now.
**4K Projection**

In addition to a HD D-ILA device, the newly developed optical engine features new e-shift technology to realise a super high-definition 4K display performance drastically improves picture quality to ensure exceptional precision and full presence.

**Auto-calibration Function**

Colour balance gaps that can occur when the projector is being used for extended periods of time are calibrated with a click using an optical sensor to ensure superlative image reproduction at all times.

**Distinguished PREMIUM D-ILA Projector**

The name D-ILA itself speaks of high-quality home cinema projectors, but the DLA-X90R represents a step above the rest in terms of exquisite image reproduction. Incorporating a select choice of premier components and technologies, the DLA-X90R offers remarkable levels of picture quality with its 4K resolution and a native contrast ratio of 120,000:1.

**Viewing Setting to Match the Environment**

The DLA-X90R’s premium picture quality can be further enjoyed by creating an original viewing setting using JVC exclusive software and a commercially available optical sensor. For example, when the interior environment of a white reel or indirect lighting affects the quality of the projected picture, application of the software and an optical sensor on the DLA-X90R can easily create an optimum viewing setting by eliminating undesirable effects, allowing everyone to enjoy a premium level of outstanding picture reproduction.

**Exceptionally High Native Contrast Ratio of 120,000:1**

Viewing Setting to Match the Environment

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**Auto-calibration Function**

Colour balance gaps that can occur when the projector is being used for extended periods of time are calibrated with a click using an optical sensor to ensure superlative image reproduction at all times.

**Picture Data In / Out**

Customised picture data can be transferred from the projector and stored onto a PC; picture data can also be uploaded from a PC to the projector via a LAN terminal.

**Exclusive Software / Commercially Available Optical Sensor**

Exclusive JVC software installed on a PC connected to the DLA-X90R via a LAN connection and an optical sensor are required to set viewing configurations and auto calibration.

- **Software compatible OS:** Microsoft® Windows® XP 32-bit (SP2 or later), Windows® Vista 32-bit, Windows® 7 32-bit/64-bit.
- **Software:** Download for free from our corporate website.
- **Optical sensor:** Spyder3Pro™ or Spyder3Elite™ by Datacolor. For details on the Spyder3Pro and Spyder3Elite, please refer to the product brochures or website.

* Spyder3Pro, Spyder3Elite are trademarks of Datacolor in the U.S. and other countries.

*Operates only in 2D mode.

**4K-resolution D-ILA Projector with 3D Viewing**

**DLA-X90R**

- 3D compatibility
- Variety of 3D functions: 2D/3D conversion, crosstalk canceling, depth adjustment, etc.
- Adobe RGB colour space
- Xenon-lamp colour temperature
- Clear Motion Drive
- 7-axis Colour Management
- Screen Adjustment modes (Max. 255 modes)

**Picture Data In / Out**

Commercially Available Optical Sensor Customised picture data can be transferred from the projector and stored onto a PC; picture data can also be uploaded from a PC to the projector via a LAN terminal.

**Distinguished PREMIUM D-ILA Projector**

Equipped with special features only available on the Premium line-up, the DLA-X90R is an opportunity to experience the full potential of limited-edition specifications.

**Exceptionally High Native Contrast Ratio of 120,000:1**

As a top-of-the-line D-ILA projector, the DLA-X90R delivers ultimate performance in all aspects of image reproduction, including the industry’s highest native contrast ratio of 120,000:1. The extraordinary figure is realised by reducing unnecessary light leakage from the optical engine, which is comprised of an original D-ILA device, wire grid, and other innovatively assembled components/devices.
4K-resolution D-ILA Projector with 3D Viewing

**DLA-X70R**

- 4K (3,840 x 2,160 pixels) D-ILA projector
- High native contrast ratio of 80,000:1
- Minimised crosstalk for brighter, more realistic 3D picture
- 2D/3D conversion creates dynamic 3D video content from 2D video sources
- JVC original Real Colour Imaging Technology
- Various picture adjustment functions ensure a high-quality picture
- Lens Memory function automatically adjusts aspect ratio to match content
- Pixel Shift function corrects colour distortion in 1/16-pixel increments
- Motorised lens cover automatically opens or closes the lens

**4K-projection**

**Native contrast ratio**

**THX Certified**

**ISF**

**Clear Motion Drive**

**Screen Adjustment modes (3 modes)**

**Xenon mode temperature setting**

**Brightness** 1,300 lm

**Native contrast ratio**

**2D-3D conversion**

**Pixel Shift (1/16-pixel increment)**

**Lens Memory**

Remarkable Picture Quality Even in a Well-lit Room.

1,300-lumen Brightness Level and a Native Contrast Ratio of 50,000:1.

**DLA-X30**

- 1,300-lumen brightness level and 80,000:1 native contrast ratio
- Bright, high-definition 3D picture without crosstalk made possible by D-ILA
- 2D/3D conversion creates dynamic 3D video content from 2D video sources
- Convenient lens memory function (3 stages)
- 16-step aperture function adjusts brightness
- Pixel Adjust function corrects colour distortion in 1-pixel increments
- 2x motorised zoom lens for flexible installation
- Screen Adjustment modes (3 modes)
- Clear Motion Drive ensures smoother picture reproduction

**4K**

**Native contrast ratio**

**THX Certified**

**Screen Adjustment modes (3 modes)**

**Screen Alignment (3 modes)**

**Final Shift (1.5mm increment)**

**Lens Memory**
Main Features

- Projection Distance Chart
- Connectivity
- Optional Equipment
- Specifications
- Connectors
- External Dimensions (unit: mm)

The projector is equipped with an ultra-high pressure mercury lamp, which may break, emitting a loud noise, when it is subjected to shock or after it has been used for some length of time. Please note that, depending on how the projector is used, there can be considerable differences between individual lamps regarding how many hours they will operate before requiring replacement. An additional payment is required for installation of a new lamp, if necessary. The projector lamp requires periodic replacement and is not covered by warranty. Please be aware that, because the D-ILA device is manufactured using highly advanced technologies, 0.01% or fewer of the pixels may be non-performing (always on or off).

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