



HOME THEATRE PROJECTOR

# HC7800D

*Changes for the Better*

Bringing  
New Dimensions of  
Beauty to 3D Imagery

## Specifications

Model	HC7800D	
Projection system	DLP™ system	
Panel specs	Panel size	0.65 DMD, Aspect ratio 16:9
	Number of pixels	1920x1080
	Drive system	DMD reflection system
Optical specs	Array	Stripe pattern
	Lens	Zoom / focus operation <sup>1</sup> 1.5x manual zoom / manual operation
	f (mm) <sup>1</sup>	20.6-30.1
Optical system	Light source lamp	240W (at standard mode), 190W (at low mode)
	Optical system	Time-division colour separation / composition system
Colour wheel	6 segment (RGB RGB), 4x	
Projection screen size (inches)	50-300	
Images	Brightness (lm) <sup>1,2</sup>	1500 (maximum)
	Contrast ratio <sup>1</sup>	100,000:1 (when the Iris is closed)
	Resolution	PC input VGA 640x480 - LXGA1600x1200, 1920x1080
	Scan frequency	Horizontal (kHz) Vertical (Hz)
Input signal system	Video	Video input: 480i/p, 576i/p, 1080i 60/50, 1080p 60/50/24, 720p 60/50
	PC	PC/AT compatibles, Mac, PC98
Input	Image	Analog RGB Mini D-sub 15pin Digital RGB HDMI terminal Components RCA terminal
	Serial	Serial terminal LAN LAN terminal (RJ45)
	LAN	LAN terminal (RJ45)
	Picture mode	3 patterns + 3 AV memories
	Digital keystone (Vertical)	±15 steps
	Power source voltage	AC100-240V 50/60Hz
Power consumption (W)	370 (0.5W in standby)	
Weight (kg)	5.6kgs	
Main unit dimensions (W x H x D)	396 x 142 x 328 mm (Not including protrusion)	
Other	Supplied accessories Power source cord (1.8m), Remote control, AA batteries (x2), 3D Emitter, Emitter cable (1.8m), RGB signal cable, Lens cap, Lamp replacement attachment	

<sup>1</sup>Varies depending on conditions. <sup>2</sup>Compliant with ISO1118-2005 <sup>3</sup>All the brand names and product names are trademarks, registered trademarks or trade names of their respective holders.  
 •The Trident Logo is a trademark or registered trademark of Trident Microsystems (Far East) Ltd. or its affiliates in the U.S. and other countries.

## 3D Viewing Precautions

- Each person perceives 3D images differently. There may be times when viewing causes a person to feel uneasy.
- If a person begins to feel tired or uncomfortable when viewing 3D images, they should stop watching immediately.
- When watching 3D programs, be sure to take occasional breaks and do not watch continuously for long periods of time.
- The viewing of 3D images is not recommended for children under the age of 5-6.
- The proper viewing form for 3D images is to wear 3D Glasses and have both eyes horizontal to the screen as much as possible.
- 3D Glasses are fragile and may break if the frames are twisted or if handled recklessly. Do not watch 3D programs if the 3D Glasses are defective or there is a problem with them.
- When viewing 3D images, it is recommended to sit at a viewing distance equal to at least three times the effective screen size.

**MITSUBISHI ELECTRIC AUSTRALIA PTY LTD**

348 Victoria Rd Rydalmere, NSW 2116 Phone: (02) 9684 7777 Fax: (02) 9684 7208

To find out more about HC7800D and our projectors, visit us at  
[www.MitsubishiElectric.com.au](http://www.MitsubishiElectric.com.au)

Specifications are subject to change without notice.



# True Cinema Pleasure Delivered in the Privacy of Your Home



There is nothing more pleasing and relaxing than being in the comfort of your own home, sitting in your favourite seat and watching movies and other programs reproduced in cinema-level detail. For people seeking out this high level of enjoyment, Mitsubishi Electric introduces the HC7800D. Incorporating our latest original image-processing technologies, the quality of projected images has never been more beautiful. Especially notable are advancements in resolving annoying 3D phenomena such as crosstalk, judder and loss of brightness to achieve brighter, sharper and clearer 3D performance. For complete home cinema satisfaction, the HC7800D is the perfect projector choice.

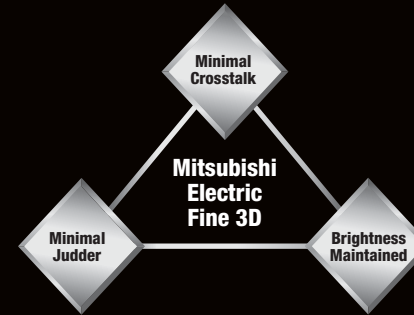
HC7800D



# DLP™ System and 3D Glasses with a high-speed liquid-crystal shutter for Overwhelming 3D Performance

## 3D Glasses with a high-speed liquid-crystal shutter Amazing picture quality during 3D viewing

Mitsubishi Electric has developed original 3D Glasses with a high-speed liquid-crystal shutter that best match the high-speed response of elements in the DLP™ system. Brightness is maintained and judder is suppressed to a minimum. Additionally, an ultra high-speed response feature is incorporated for unprecedented 3D image quality. The HC7800D allows you to truly relax and fully enjoy 3D content with overwhelming sharpness (**minimal crosstalk**), high definition (**minimum judder**) and luminance (**brightness maintained**).



### Minimal Crosstalk

DLP™ elements and the high-speed shutter of our newly developed 3D glasses work together to produce sharp images by minimising image crosstalk between the right and left eyes.



Image with crosstalk

### Minimal Judder

Combined with a 3D-compatible frame rate converter (FRC), high-definition images with nominal image lag are achieved.



Image with judder

### Brightness Maintained

The high-speed opening/closing operation of the shutters in the newly developed 3D glasses results in remarkable brightness by suppressing the loss of luminance.

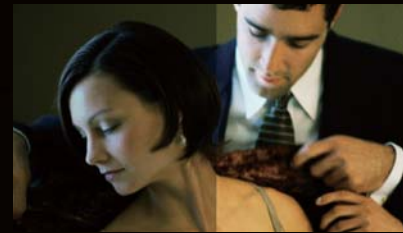
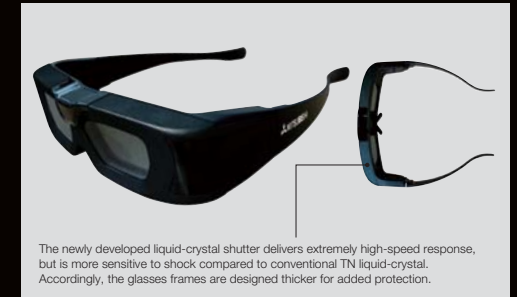


Image with reduced luminance (left half of screen)

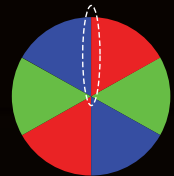
## 3D Glasses with a high-speed liquid-crystal shutter (optional)

The high-speed shutter of the newly developed 3D glasses shortens the blanking (black signal) when switching images between right and left eyes, resulting in flicker-free images.



The newly developed liquid-crystal shutter delivers extremely high-speed response, but is more sensitive to shock compared to conventional TN liquid-crystal. Accordingly, the glasses frames are designed thicker for added protection.

Portion where the colour wheel is joined is used for blanking.



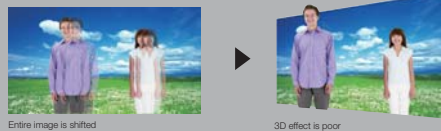
High-speed switching over 10 times faster than TN liquid-crystal shutter glasses, resulting in less eye fatigue with 3D operation.



## Enjoy Favourite Movies of the Past in 3D - Built-in high-precision conversion feature

Thanks to motion-vector analysis technology, the position of a person can be distinguished from the background and a moderate parallax added to produce the sensation of depth used in 3D images. Unlike simple 2D-to-3D conversion where the entire screen is shifted, 3D images with a natural sensation of depth are reproduced, making it possible to bring even classic films back to life in vivid 3D.

### Common conversion format



### HC7800D conversion format



# Integrating Imaging Technologies Cultivated and Evolved Over the Years

## Newly developed Variable Iris provides high 100,000:1 contrast

An optimal iris shape for the DLP™ element and a linear motor are incorporated, achieving high-speed, precise automatic control. Even in continuously changing bright and dark scenes, blacks are traced and adjusted instantaneously. This ensures that high-definition images from sources such as television broadcasting and Blu-ray players are reproduced with their original beauty.

### New Variable Iris (HC7800D)



## High 1,500lm luminance with clear, high-definition images

In addition to the Variable Iris, a high-power lamp has been adopted, providing both enhanced image brightness and contrast. The high 1,500-lumen brightness ensures that in both 2D and 3D, high-resolution images are clearer, sharper and more vivid than ever.

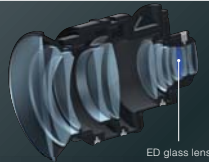
## 3D images reproduced in full high-definition with fine gradation

- Equipped with two full 10-bit panel drivers (DDP3021)
- PNX 5130 chip of Trident Microsystems, Inc. for FRC installed.



## High-performance extra-low-dispersion lens for full high-definition resolution (with V-lens shift)

Compared to commonly used glass lenses, the HC7800D is equipped with a high-performance extra-low-dispersion (ED) lens system comprised of a total of 13 lenses in 4 groups. Chromatic aberration is minimised to the fullest and image resolution is improved across the entire screen.

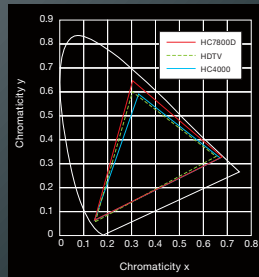


ED glass lens

## High-quality Colour Reproduction

The HC7800D incorporates the colour reproduction performance of the HC9000D, vastly expanding the colour range. Colours such as the greens of trees and cyan shades of oceans that were previously hard to produce are now included, enabling the reproduction of images with deeper, more vivid hues.

\* Images compared are for reference only



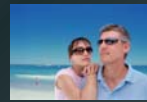
Existing Mitsubishi Electric model



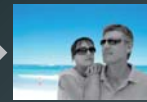
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## Colour management function for easy fine-tuning of colours

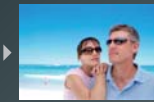
The projector is equipped with a new colour management function for independent "Hue," "Saturation" and "Brightness" adjustment of R (red), G (green), B (blue), C (cyan), M (magenta) and Y (yellow) colours. It is also possible to adjust a specific colour; when a colour is selected only the objects of that colour are shown in colour (others are in monoton), making it possible to tune colours to your preference more easily.



Before adjustment



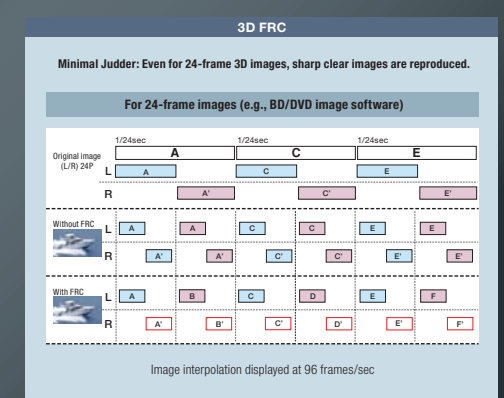
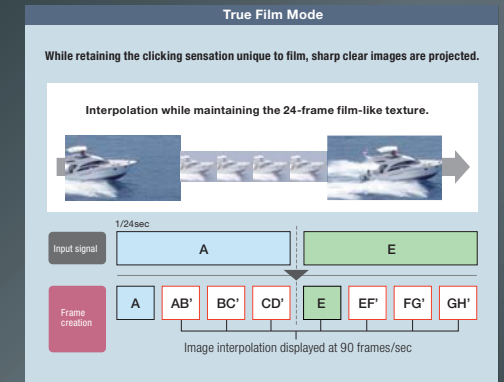
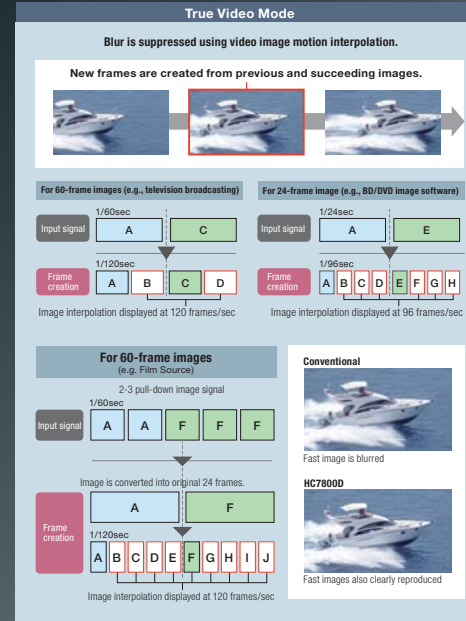
Cyan adjustment specified



After cyan adjustment

## FRC installed – Reproduce content supplemented with the optimal frame number

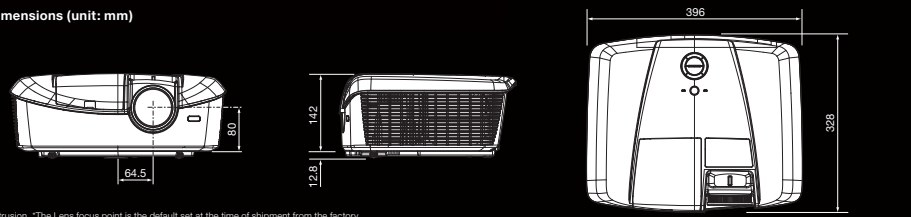
Applying motion-vector analysis technology, data from the previous and succeeding images are used to produce highly accurate image frames. The optimal number of frames is supplemented to match the contents and the final image is reproduced. As a result, motion blur in the vertical, horizontal and diagonal directions is suppressed.



Terminals



## External Dimensions (unit: mm)



\*Not including protrusion. \*The lens focus point is the default set at the time of shipment from the factory.

## Screen Size and Projection Distances

Screen size	Distance from Screen		Movable V position from default position								
	Diagonal size (cm)	Width (cm)	Height (cm)	Down (-Hd) (cm)	Up (+Hd) (cm)	Down (-G) (cm)	Up (+G) (cm)				
50	111	62	1.5	2.3	21	12	-21	29	-9	0	8
60	133	75	1.8	2.7	25	14	-25	34	-11	0	9
70	155	87	2.1	3.2	29	17	-29	40	-12	0	11
80	177	100	2.4	3.6	34	19	-34	46	-14	0	12
90	199	112	2.7	4.1	38	22	-38	52	-16	0	14
100	221	125	3.1	4.6	42	24	-42	57	-18	0	16
110	244	137	3.4	5.0	46	26	-46	63	-20	0	17
120	266	149	3.7	5.5	50	29	-50	69	-21	0	19
150	332	187	4.6	6.9	63	36	-63	86	-27	0	23
200	443	249	6.2	9.2	84	48	-84	115	-36	0	31
250	553	311	7.7	-	105	60	-105	144	-45	0	39
300	664	374	9.3	-	126	72	-126	172	-54	0	47

## Options

\*3D Glasses (Optional parts) are necessary for viewing 3D pictures.

### 3D Glasses



EY-3DGS-78U

### Replacement lamp



VLT-HC7800LP

