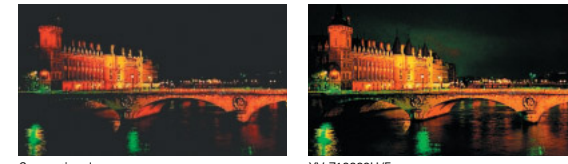


Dynamic Range of 2600:1 High Contrast and High Level of Colour Purity — Highly Advanced Digital Technology Reproduces Optical Performance in the Most Efficient Way

2600:1 High Contrast and Black Reproduction

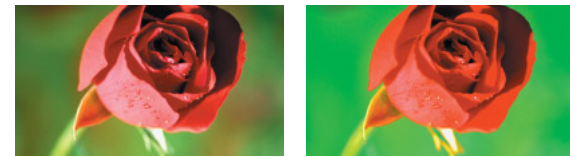
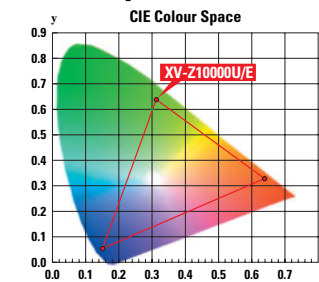
DMD™ is a reflective device which can prevent light from coming through by controlling mirror angles. Making good use of this DMD™ feature plus employing a thoroughly developed optical engine, the XV-Z10000U/E provides sharper blacks in black parts and a higher contrast ratio of 2600:1. Real blacks and clearly reproduced subtle colours provide impressively beautiful pictures.



Conventional XV-Z10000U/E

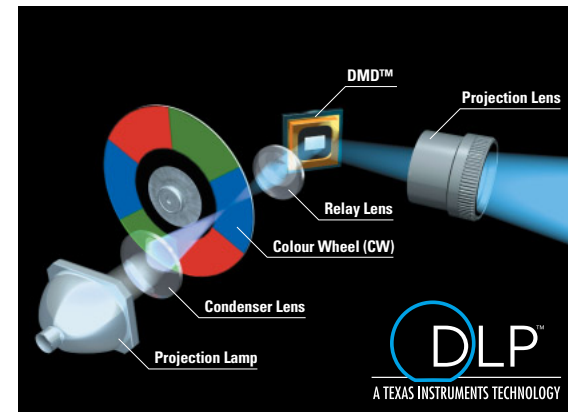
Natural Colour Reproductivity

With the development of an advanced optical engine including Primary Colour Wheels, the XV-Z10000U/E provides high-grade colour reproduction.



Conventional XV-Z10000U/E

Cutting-Edge Optical Technology Achieves High Quality Images Nearly Equivalent to Movie Film



Optimization of the Optical Engine

From the onset of XV-Z10000U/E development, all optical parts have been thoroughly analyzed and experimented on in order to search for higher contrast ratio. This brings anti-reflective coating for every optical part, optimization of light insertion into DMD™ pixels, and a shutter in front of the projection lens. As a result, backlight from diffused reflection in the optical engine and light leaking from light reflection from objects other than DMD™ mirrors have been dramatically reduced to achieve higher contrast ratio.

270W SHP Lamp System

The 270W SHP lamp affords rich light quantity and adjusts spectral characteristics, resulting in high luminance and high colour reproduction, especially for reds, which remains a task very difficult for conventional models.

Three Primary Colour Wheel (CW)

Current DLP™ projectors employ a 4-colour (RGB and white) colour wheel in order to increase white luminance and picture brightness. However, this causes a debasement of colour balance

by enhancing other colours to reach a bright white level and a deterioration of black level because of white light straying onto DMD™ chips. The XV-Z10000U/E uses a 3-Colour CW with only red, green and blue primary colours, achieving high reproduction of pure colours and high-contrast pictures.

	Current	XV-Z10000U/E
Colour Wheel		
Structure	RGBW	RGB Only
Brightness	Brighter	Normal
Colour Reproduction	Poor	Excellent
Black Level	Low (obscured)	High (real black)

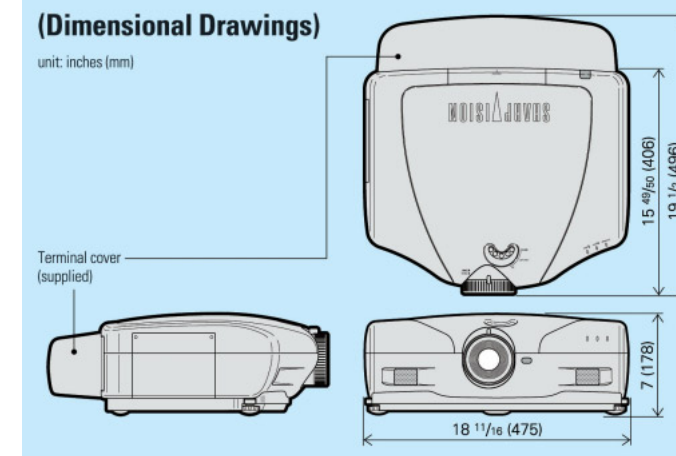
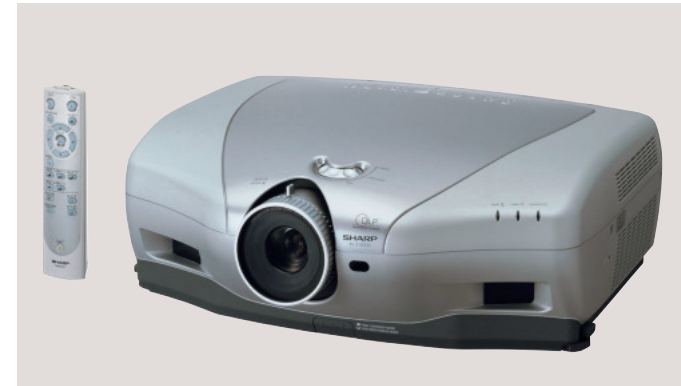
World's First 6x* Speed Engine

Single DLP™ projectors employ a time sequential CW system in which RGB images projected on the screen sequentially are mixed and recognized as one image from the afterimage effects on human eyes. But this causes a phenomenon called "Colour Breaking". And since projection time for each colour is relatively long with the 1x and 2x engine, remaining afterimages appear on the image for some time like a RGB rainbow. For a theatre projector, this is a major weak point because mainly moving images are projected. With the world's first use of a 6x* Speed Colour Wheel in front DLP™ projectors, the XV-Z10000U/E achieves a projection time 1/6 that of a 1x engine and improves colour breaking up to a degree virtually invisible.

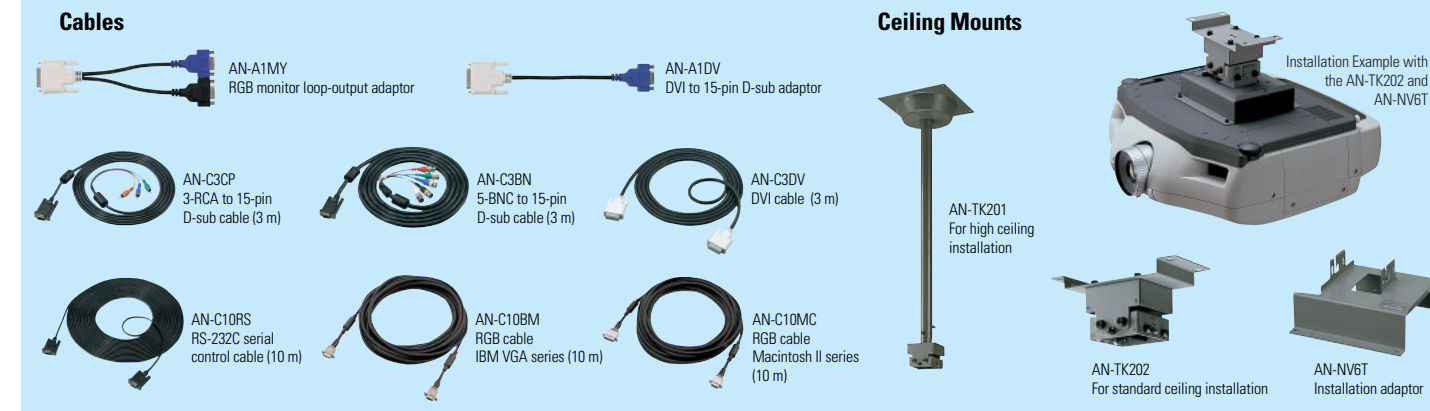
(* 5x speed with NTSC system)

	Conventional	Current	XV-Z10000U/E
Colour Wheel			
Structure	3 Segments (1x RGB)	3 Segments (1x RGB)	6 Segments (2x RGB)
Rotation	60 r.p.s. (1x)	120 r.p.s. (2x)	180 r.p.s. (3x)
System Speed	(1x)→1x	(1x)→2x	(2x)→6x
Projection Time per Colour			

XV-Z10000U/E



Optional Accessories



Specifications

Model	XV-Z10000U	XV-Z10000E
DMD™ chip	0.8" (2.0cm) 1280 x 720 dots DDR 12° Digital Micromirror Device™ (DMD™) x 1 by Texas Instruments	
Number of pixels	921,600 pixels	
Resolution	520 TV lines, 960 dots x 720 lines (computer data)	
HDTV compatibility*1	1080i (in advanced intelligent compression), 720p, 480i/p	
Computer RGB input signals	SXGA, XGA, Mac 21", 19" (in advanced intelligent compression), SVGA, VGA, VESA, Mac 16"/13" 15-91 kHz (horizontal), 43-85 Hz (vertical), 12-135 MHz (pixel clock) (plug & play VESA; DDC 1/2B)	
Video colour systems	NTSC/NTSC 4.43/PAL/PAL (60Hz)/PAL-M/PAL-N/SECAM	
Lens	1:1.35 manual zoom and focus	
Lens shift	Manual optical lens shift	
Projection size	25" - 300"	
Projection distance	40" (102cm): 5'3" - 7'1" (1.6 - 2.2m), 100" (252cm): 13'2" - 17'9" (4.0 - 5.5m), 200" (504cm): 26'7" - 36" (8.1 - 11.0m)	
Luminance	800 ANSI Lumen in High Brightness Mode (500 ANSI Lumen in High Contrast Mode)	
Contrast ratio	2600:1 (High Contrast Mode) / 1900:1 (High Brightness Mode)	
Input terminals	Component / RGB x 2 (5RCA), video x 1 (RCA), S-video x 1, DVI-I / HDCP (component and digital / analogue RGB) x 1, wired remote control x 1	
Output terminals	DC 12V x 1	
Control terminals	Wired remote control x 1, RS232C x 1	
Power source	100-240V AC, 50/60Hz (Multi-Voltage)	
Power consumption	365W (0.2W standby power)	
Projection lamp	270W SHP	
Lamp life	2000 hours	
Dimensions (W x H x D)	18.7" x 7" x 16" (475 x 178 x 406mm) (including an adjuster leg) 18.7" x 6.8" x 15.6" (475 x 172.5 x 396.5mm) (main body only)	
Weight	20.7 lbs. (9.4kg)	
Supplied accessories	Remote control, two AA-size batteries, terminal cover, lens cap, CD-ROM (SharpVision Manager), projector operation manual, SharpVision Manager operation manual Power cord Power cord (for Europe/UK/Hong Kong and Singapore), computer RGB cable, 21-pin RCA conversion adaptor, AV cable	

Design and specifications are current as of January 2003, but are subject to change without prior notice.

*1 High Definition Television (HDTV) Monitor: Defined by CEA (Consumer Electronics Association, USA) to designate a 16:9 aspect ratio monitor or display with active vertical scanning lines of 720 progressive (720p) and higher.

* Digital Light Processing, DLP, Digital Micromirror Device and DMD are trademarks of Texas Instruments.

SHARP
SHARP CORPORATION OSAKA, JAPAN
URL <http://www.sharp-world.com/>

SHARP

XV-Z10000U/E
High-Resolution
HDTV Compatible
Video/Data Projector

2.100000



Blacker Blacks —
The Key to Unbeatable Colour Quality in Home Theatre

SHARP VISION

Dramatically Renovated Black Reproduction Achieves Far Deeper Expressiveness — The Excitement of the Movie Theatre is Transformed into Your Room



Natural Image Creation and Full Colour Scale Expression for the Rich Details of Movie Film

Sharp's Original High Image Quality System Realizes Beautiful Images



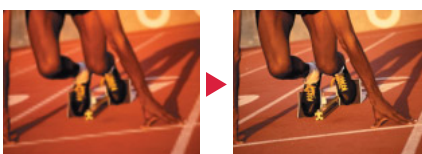
The XV-Z10000U/E is equipped with Sharp's proprietary multi-functional, digital image LSI, which incorporates various image processing algorithms for high-quality display of wide-ranging video sources for use in liquid crystal, DLP™, plasma and other stationary pixel display devices. With intensive development of optimization from Sharp in this unique combined use of IC and DLP™, the XV-Z10000U/E achieves the high-quality natural and detailed expression of movie film ambience.

Pattern Matching I/P Conversion

Sharp's original High Image Quality System employs motion-adaptive I/P conversion by using motion pixel detection, examining every pixel to ascertain whether a motion pixel or not by comparing four-field information. It then selects intra-field I/P conversion for a pixel detected as a motion pixel, and inter-field I/P conversion for a still pixel. This motion adaptive I/P conversion drastically improves jagged edges and blur level, which have been major problems for conventional I/P conversion. Also, edge detection and motion quantity smoothing contribute to minimize malfunction of motion pixel detection. In addition, Pattern Matching Technology is employed to elevate the level of high-quality I/P Conversion. This function depicts pattern information in a period from visual data, finds the vertically matching patterns (which was until now impossible) and creates a new pattern in the midpoint of these patterns by their mutual relation. Thus it smoothes out jaggies of somewhat slanted, almost horizontal lines and edges, providing higher quality images.

Enhanced Up-Scaling

Conventional projectors need to convert the resolution values of normal video signals in order to project normal PAL or NTSC video pictures through high resolution panels. This sometimes results in unclear or jagged pictures. The Enhanced Up-Scaling employs a much more advanced smoothing technology, producing a crisp and even picture.



Conventional XV-Z10000U/E

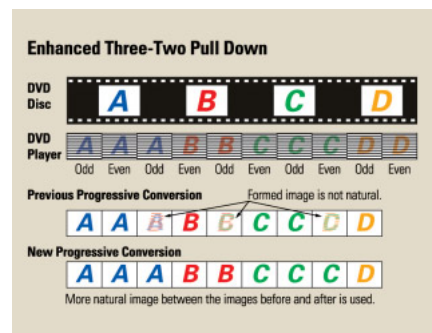
Superior 16:9 Image

Conventional projectors extend a picture evenly from the 4:3 original to fit into a 16:9 screen, resulting in pictures stretched horizontally, i.e., wide and short. With the XV-Z10000U/E, pictures can be projected in a thinner ratio in the middle part and only extended at the sides. This maintains natural and proportional pictures close to the 4:3 original.



Enhanced Three-Two Pull Down for NTSC and Two-Two Pull Down for PAL

Using the Film Mode, the XV-Z10000U/E can beautifully reproduce movie film recorded in 24Hz progressive format.



High-End DLP Technology — DMD™ HD2 Chip



The XV-Z10000U/E employs a digital control system called DLP™ for the display device. This controls the DMD™ (Digital Micromirror Device) chip, which has many thousands of micromirrors on the silicon chip, reflecting light to display images. Plus, the XV-Z10000U/E employs a DMD™ HD2 chip with a $\pm 12^\circ$ DMD mirror angle developed from the DMD™ HD1 of $\pm 10^\circ$. The Theatre-Oriented Optical System Design provides a high contrast ratio of 2600:1, which achieves deep expressiveness in colour gradations with wide dynamic range.

16:9 HD DLP™ High-Definition Picture

The XV-Z10000U/E employs the HD DMD™ Chip with 1280 x 720 pixel high resolution — A world's first in front projectors. A 16:9 image, for example, contains more than 1.56 times the image information capacity than XGA and 2.56 times that of SVGA, providing high-precision picture projection. For 720P HD signals in particular, an original high-resolution picture can be projected without deterioration caused by pixel conversion.

Enjoy the Effects and Performances of a Variety of Video Material with the Picture Quality You Prefer

A Variety of Picture Adjustment Functions

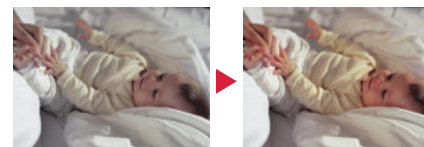
Newly Designed Back-lit Remote Control and Pull-Down GUI (Graphical User Interface) Menu

Icon-based design on both the back-lit remote and GUI menu allows even first-time Sharp projector users simple intuitive operation.



Colour Temperature Adjustment

Colour Temperature Adjustment, with 61 position settings, reproduces the subtle tones especially needed to display intermediate hue variations and is adjustable with a wide range of tones in 100K increments from 5,500K to 11,500K.



High Colour Temperature (bluish tone) Low Colour Temperature (reddish tone)

Colour Management System

The Colour Management System enables adjustment of only a specified colour by just pointing out the colour or the object on the screen without influencing other colours on the same screen. With convenient one-colour adjustment there's no need for troublesome whole-screen control.

Gamma Correction

Gamma Correction, with 6 position settings, provides the ideal picture reproduction for any picture source from videos to sports programmes. Reducing resolution loss, this function allows dark, low-iridescent scenes to be reproduced with clarity. Plus, the XV-Z10000U/E uses simple remote control-operated functions for adjusting gamma, gain and offset of each RGB, enabling

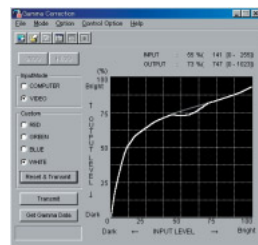


Without Gamma Correction With Gamma Correction

higher quality, smooth and detailed picture reproduction.

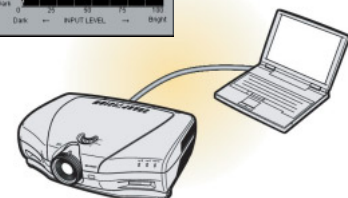
SHARPVISION Manager Version 2.0

By using the supplied Gamma Control Software, SharpVision Manager, gamma curves, which were until now set automatically and out of user control, can be precisely adjusted from users' PCs.



Custom Settings

Users can adjust the gamma curve on their PC.



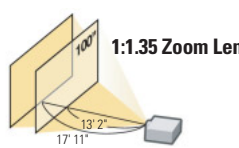
Other Outstanding Features

Whisper Quiet Operation — Low Fan Noise: 32 dB

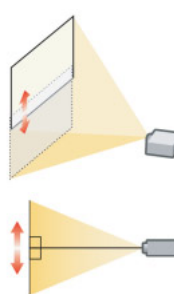
The XV-Z10000U/E employs a Sirocco Fan with less air disturbance for noise reduction while enhancing cooling. The projector also uses a Dome Duct with a long air duct system and expanded silencer, dramatically reducing fan noise for movie viewing. This leads to a super quiet 32dB operation during Normal Theatre Mode projection.



projection heights up and down for one screen from the same projection distance. Projection adjustments of even greater precision become possible.



Lens Shift Function



Throw Ratio: 1.8-2.2:1

Screen Size (16:9)	Projection Distance (L)	
	Diagonal	Maximum Minimum
300"	54' 1" (16.5m)	39' 11" (12.2m)
250"	45' 1" (13.7m)	33' 3" (10.1m)
200"	36' (11.0m)	26' 7" (8.1m)
150"	26' 12" (8.2m)	19' 11" (6.1m)
133"	23' 11" (7.3m)	17' 7" (5.4m)
106"	18' 11" (5.8m)	13' 11" (4.3m)
100"	17' 11" (5.5m)	13' 2" (4.0m)
92"	16' 5" (5.0m)	12' 1" (3.7m)
84"	15' (4.6m)	11' 1" (3.4m)
72"	12' 10" (3.9m)	9' 6" (2.9m)
60"	10' 8" (3.3m)	7' 10" (2.4m)
40"	7' 1" (2.2m)	5' 2" (1.6m)

1:1.35 Zoom Lens & Lens Shift Function from Unique Optics Technology

With a 1.35x zoom lens, the XV-Z10000U/E delivers clear pictures from a variety of heights and angles. In addition, with unique optics technology the projector not only makes possible natural angle projection, a weak point for current single-chip DLP projection, but also employs a lens shift function. This provides adjustable



Multiple Input Terminals

• 2 Component Inputs, S-video, Composite and DVI-I/HDPC Input

Use of the DVI terminal delivers all-digital projection from input straight through to the projected pictures without any picture loss usually occurring from A/D and D/A conversion.

Convenient Features

• Switchable Screen with 4:3 and 16:9 aspect ratios

• GUI (Graphical User Interface)

• High-Quality Video Circuits (3D Digital Noise Reduction, 3D Y/C Separation, 3-Line Digital Comb Filter)

• Multi-System Video Compatibility (NTSC/NTSC4.43/PAL/PAL-60Hz/PAL-M/PAL-N/SECAM)

• 11-Language On-Screen Display (English, German, Spanish, Dutch, French, Italian, Swedish, Portuguese, Chinese, Korean, Japanese)

• Active Digital Keystone Correction