VIDEO XTREME™ PORTFOLIO

VX-2i, VX-2c, VX-2dc

HOME THEATER AND
HOME CINEMA PROJECTORS

RUNCO

THE WORLD'S FINEST
HOME THEATER PRODUCTS™

REFLECTION™ VX-2 SERIES

The Video Xtreme™ Portfolio of VX-2 Series DLP™ projectors bring Runco's innovations in 3-chip projector engineering to a wide range of applications and performance requirements. These models have been designed for outstanding picture quality while offering a comprehensive array of features.

VX-2dc

With Runco's three-chip implementation of DLP, each chip is dedicated to a specific color- red, green and blue, for superb color spectrum purity. These systems also offer the industry's best black level and contrast performance. Three models are offered with configuration options creating nine distinct versions, for a broad and versatile lineup that will easily meet the needs of almost any installation requirement.

The VX-2 Series projectors feature a native resolution of 1280 x 720, utilizing advanced 16:9 SuperOnyx™ DMD™ technology. When combined with Runco's award winning Vivix II™ video processing, the resulting images are breathtaking — even standard NTSC program material is elevated to near high definition quality. In addition, Runco's VirtualWide™ aspect ratio allows older 4:3 video sources to fill a 16:9 screen without significant loss of picture quality.

VX-2c

The VX-2i and VX-2c offer premium CinOptx™ *Proteus* lenses with six different throw distance ranges available, while the VX-2dc includes world class *Telesto* lenses — the type usually associated with the most expensive professional screening applications. *Telesto* lenses are available in five different throw distance ranges to accommodate a wide variety of implementations.

Runco has engineered ISF™ calibration standards into every model for the purest video performance and has incorporated AxiShift™ technology with a motorized horizontal and vertical lens shift system to resolve even the most difficult projector placement issues.

For the ultimate in viewing flexibility and enjoyment, Runco's exclusive, award winning CineWide™ and CineWide with AutoScope™ technology is available. This ground breaking option can transform all of these superb *home theater* systems into a true *home cinema* experience, reproducing 2:35 CinemaScope™ movies with breathtaking accuracy and full vertical screen image height, eliminating useless black bars for the first time.

VX-2i

O-Path™ Technology and CinOptx™ Premium Grade Lens Systems are featured on various Video Extreme Portfolio projectors. O-Path efficiently collimates the light energy from the lamp though the optical path to maximize light output and eliminate stray light that can reduce brightness and compromise contrast ratio performance. The broad variety of lenses in the CinOptx family are designed to bring images faithfully to the screen without the geometric and color spectrum aberrations common among "production" lenses.

Runco International has carefully developed a full set of specification standards for our video projectors that is founded upon more realistic and easier to understand criteria for expressing the light output or brightness capability of a display device, as well as its contrast ratio. The Cinema Standards Measurement System™ was developed based on the actual experience one has in a movie theater, providing the consumer with an objective reference point to compare specifications.

Runco's exclusive CineWide™ and CineWide with AutoScope™ technology ensures uncompromised widescreen reproduction of movies originally filmed in the CinemaScope 2.35:1 format. Through a combination of software, electronics and anamorphic optics, each projector is able to use the full pixel array on its DMD chips, thereby producing a 2.35 image with enhanced resolution and increased brightness. No resolution is lost to annoying black bars.

The LiveLink™ DVI cabling system is Runco's exclusive solution for reliable, pure digital video signal transfer. This is the first DVI cabling system capable of truly supporting longer runs while preserving all essential high-resolution video signal quality. LiveLink is nothing short of a revolution for home theater design.

The new Video Xtreme Portfolio products incorporate the Imaging Science Foundation's "ISF 3c™" (Certified Calibration Configuration) setup and calibration standards in projector GUI menus to facilitate picture quality conforming to the highest standards in the industry.

CINEWIDE™ AND CINEWIDE WITH AUTOSCOPE™

TRANSFORMING HOME THEATER INTO TRUE HOME CINEMA

Runco's award winning development of CineWide™ and CineWide with AutoScope™ technology has created a revolution in faithful movie reproduction, for the first time transforming *home theater* into *home cinema*.

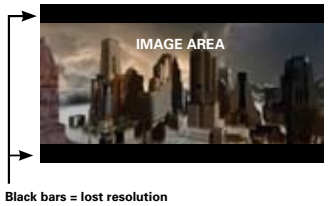
This technology provides uncompromised widescreen reproduction of movies originally filmed in the CinemaScope™ 2.35:1 format. It maintains constant vertical height on the screen just as in a movie theater. When a viewer transitions from 1.78:1 (16:9) program material to superwide 2.35:1, the image simply gets wider while full screen height is maintained, eliminating black bars.

This is done through an ingenious combination of software, electronics and precision anamorphic optics. With the AutoScope option, the anamorphic lens is motorized and remote controlled.

With CineWide the projection system is able to use the full pixel array on its SuperOnyx™ DMD™ chips, thereby producing a 2.35:1 image with enhanced resolution and increased brightness. No resolution or image area is lost to useless black bars on the top and bottom of the screen that contain no picture information.

Conventional Method

A conventional 2.35:1 image displayed on a 1.78:1 (16:9) screen.



Black bars = lost resolution

CineWide™ Technology

Constant vertical height and full resolution are maintained. 100% of pixels are used. Black Bars are eliminated.

2:35:1 image area

How it works:

The video processor anamorphically "stretches" the 2.35:1 image vertically to completely fill the display's imaging chips. This allows all pixels to be used.

2.35:1 Picture on a 16:9 imaging chip

VERTICAL STRETCH REMOVES BLACK BARS

16:9 Image Area

SQUEEZED APPEARANCE

The anamorphic lens then "stretches" the image width to 2.35:1. Correct geometry is restored, while 100% of the pixels are now used to maintain full resolution and eliminate black bars.

STRETCH

CineWide requires the use of a 2.35:1 or similar aspect ratio superwide format screen.

CineWide and AutoScope technology is the talk of the industry.
These are among the awards and acknowledgements we have already received.

2005 Overall Most Creative New Product

Best Video Product 2005

Manufacturer's Excellence Award Best New Product 2005

Electronic House Product of the Year 2005

Best New Product 2005

DHD CONTROLLER

The Video Xtreme VX-2c and VX-2dc projection systems include the DHD controller/processor. The DHD is engineered with advanced, Vivix II™ digital video processing to produce stunning video imagery, even elevating standard NTSC material to near high definition levels. Superb scaling capabilities output all signals at the native display resolution of the projectors.

The DHD provides for a pure digital signal path from input to output and resides outboard of the projector chassis. This simplifies installation by placing the DHD and its associated input connections in the equipment rack. Only one digital signal cable is then required to the projector. These projection systems can also take full advantage of Runco's exclusive LiveLink™ digital cable solution to preserve HD signal quality and bandwidth over much longer runs than conventional digital signal cables.

The VX-2i has been engineered with Runco's renowned Vivix II video processing integrated into the projector chassis.

DHD CONTROLLER SPECIFICATIONS

Aspect Ratios:	Anamorphic, Letterbox, VirtualWide™ Cinema, 2.35 Cinema
Input Standards:	NTSC/PAL
Output Resolution:	720P
Outputs:	(1) HD - R (Pr), G (Y), B (Pb), H, V; (1) DVI w/HDCP
Inputs:	(1) Composite; (2) S-Video; (1) Component; (2) HD - R (Pr), G (Y), B (Pb), H, V; (2) DVI w/HDCP
Communication Control Ports:	(1) RS-232 (via DB9 connector), (1) RJ-11 output (for display only), IR (with discreet commands), Front panel controls

Screen Trigger/ Masking Outputs:	(3) 12V DC, 1/8A
Bandwidth:	150 Mega Samples/Second (MSPS)
Power Requirements:	100–240V AC (auto sensing) 50/60 Hz, 160W
Operating Environments:	41°–95° F, (5°–35° C), 0%–90% Humidity (non-condensing)

Dimensions: (w/out feet)	Width: 17 1/2 in. (444.50 mm), Depth: 11 3/16 in. (284.10 mm), Height: 3 3/4 in. (95.25 mm), Weight: 13 lbs. (5.9 kg)
Included Accessories:	Rack mounting brackets
Regulatory Approvals:	Complies with FCC, CE, C-Tick
Limited Warranty:	(2) Two years parts and labor from the date of delivery to the end user

Specifications	VX-2i	VX-2c	VX-2dc
Projector Type:	Digital Light Processing™ (DLP™), 3-chip, 16:9 SuperOnyx™ DMD™	Digital Light Processing™ (DLP™), 3-chip, 16:9 SuperOnyx™ DMD™	Digital Light Processing™ (DLP™), 3-chip, 16:9 SuperOnyx™ DMD™
Native Resolution:	1280 x 720	1280 x 720	1280 x 720
Aspect Ratios:	Anamorphic, Letterbox, VirtualWide™ Cinema, 2.35 Cinema	Determined by supplied processor	Determined by supplied processor
Video Standards:	NTSC, PAL	NTSC, PAL	NTSC, PAL
DTV Compatibility:	480p, 720p, 1080i	480p, 720p, 1080i	480p, 720p, 1080i
Picture Size (16:9 screens):	Recommended Width: 72–120 in. Maximum Width: 250 in.	Recommended Width: 72–120 in. Maximum Width: 250 in.	Recommended Width: 72–120 in. Maximum Width: 250 in.
Throw Distance Factor x Screen Width:	**Proteus Lens Options:** **A:**Fixed 0.64 (for rear-screen applications) **B:**Zoom 1.22–1.44 **C:**Zoom 1.45–1.76 **D:**Zoom 1.82–2.39 (with CineWide 1.38–1.80) **E:**Zoom 2.42–3.57 (with CineWide 1.84–2.70) **F:** Zoom 3.63–5.72 (with CineWide 2.75–4.33) *(Proteus A, B or C options not available with CineWide or CineWide w/AutoScope)*	**Proteus Lens Options:** **A:**Fixed 0.64 (for rear-screen applications) **B:**Zoom 1.22–1.44 **C:**Zoom 1.45–1.76 **D:**Zoom 1.82–2.39 (with CineWide 1.38–1.80) **E:**Zoom 2.42–3.57 (with CineWide 1.84–2.70) **F:** Zoom 3.63–5.72 (with CineWide 2.75–4.33) *(Proteus A, B or C options not available with CineWide or CineWide w/AutoScope)*	**Telesto Lens Options:** **A:**Fixed 0.80 (for rear-screen applications) **B:**Zoom 1.64–1.97 **C:**Zoom 2.02–2.70 (with CineWide 1.53–2.04) **D:**Zoom 2.84–4.80 (with CineWide 2.15–3.63) **E:**Zoom 4.92–7.90 (with CineWide 3.73–5.98) *(Telesto A, or B options not available with CineWide or CineWide w/AutoScope)*
Horizontal and Vertical Offset Without CineWide Option: **(Note: With CineWide option offsets vary per lens. Please contact Runco Technical Support for more information.)**	Vertical: Up to 80% down (ceiling) from center of screen, 0% up Horizontal: 10% left or right of screen center *(Short throw fixed lenses have no offset capabilities)*	Vertical: Up to 80% down (ceiling) from center of screen, 0% up Horizontal: 10% left or right of screen center *(Short throw fixed lenses have no offset capabilities)*	Vertical: Up to 110% from center of screen depending on lens Horizontal: 18% left or right of screen center *(Short throw fixed lenses have no offset capabilities)*
Light Output:	CSMS** Specifications: Home Theater Calibration: 1227 ANSI Lumens; 52.1 Foot-Lamberts (fL); 2500 ANSI Lumens*	CSMS** Specifications: Home Theater Calibration: 1227 ANSI Lumens; 52.1 Foot-Lamberts (fL); 2500 ANSI Lumens*	CSMS** Specifications: Home Theater Calibration: 1389 ANSI Lumens; 57.6 Foot-Lamberts (fL); 2800 ANSI Lumens*
Contrast Ratio:	CSMS** Contrast Ratio: 271:1; 3100:1 ANSI	CSMS** Contrast Ratio: 271:1; 3100:1 ANSI	CSMS** Contrast Ratio: 304:1; 3500:1 ANSI
Lamp:	275W UHP	275W UHP	275W UHP
Lamp Life:	2000 hours	2000 hours	2000 hours
Inputs:	(1) Composite, (2) S-Video, (1) SD Component, (2) RGB/Component (HD), (2) DVI w/HDCP	(1) DVI Connector	(1) DVI Connector
12V Output:	(3) 12V DC, 1/8A triggers	See Controller for Specifications	See Controller for Specifications
Power Requirements:	100–240V AC, 50/60 Hz, 510W	100–240V AC, 50/60 Hz, 510W	100–240V AC, 50/60 Hz, 510W
Operating Environments:	40°–95° F, (5°–35° C), 0%–90% Humidity (non-condensing)	40°–95° F, (5°–35° C), 0%–90% Humidity (non-condensing)	40°–95° F, (5°–35° C), 0%–90% Humidity (non-condensing)
Dimensions (w/o feet):	Width: 21 1/4 in. (539.75 mm), Depth: 24 1/2 in. (622.30 mm), Height: 11 1/2 in. (292.10 mm), Weight: 84 lbs. (38.10 kg) (without lens)	Width: 19 3/16 in. (487.20 mm), Depth: 26 7/16 in. (672.00 mm), Height: 8 1/8 in. (206.40 mm), with feet 9 3/4 in. (247.70 mm) Weight: 81 lbs. (36.8 kg) (without lens)	Width: 19 1/4 in. (488.95 mm), Depth: 28 1/4 in. (717.55 mm), Height: 9 3/4 in. (247.65 mm), Weight: 83 lbs. (37.65 kg) (without lens)
Regulatory Approvals:	Complies with FCC Class B, CE, C-Tick	Complies with FCC Class B, CE, C-Tick	Complies with FCC Class B, CE, C-Tick
Limited Warranty:	Projector: (2) Two years parts and labor from the date of delivery to the end user Lamp Warranty: 1000 hours or (6) six months, which ever comes first.	Projector: (2) Two years parts and labor from the date of delivery to the end user Lamp Warranty: 1000 hours or (6) six months, which ever comes first.	Projector: (2) Two years parts and labor from the date of delivery to the end user Lamp Warranty: 1000 hours or (6) six months, which ever comes first.

***ANSI Lumen specification:**
This is the typical projector luminosity (brightness) specification found in most sales literature. This measurement is included in RUNCO literature to allow for direct comparison with other manufacturer's projectors. These measurements can be taken at 9,000 to 13,000° Kelvin to get expected performance data when the projector is used in professional, commercial, and industrial displays.

****CSMS Home Theater Calibration ANSI Lumen Specification:**
These measurements are taken from the projector as set up in a home theater environment. The projector is calibrated to ISF specifications including setting the color temperature to 6500° Kelvin, the standard for reproducing video.

****CSMS Home Theater Calibration foot-Lambert (fL) Specification:**
This is the unit of measurement used in commercial movie theaters to express image brightness. The Society of Motion Picture and Television Engineers (SMPTE) specifies 16 fL as the target image brightness for film-based projectors using an open gate (without film in the projector). More importantly, today SMPTE specifies 12 fL as the target image brightness in Digital Cinema
theaters using DLP™ technology. The foot-Lambert is dependant on screen size, screen gain, and projector light output.

All measurements are made at RUNCO to ANSI/NAPM IT7.228-1997 specifications using the Photo Research PR-650 SpectraColorimeter and Minolta LS-100 Luminance Meter, Video Essentials test DVD, and a Stewart Filmscreen StudioTech 130, 1.3 gain 72-inch wide screen. The projector is calibrated to a color temperature of 6500° Kelvin and has a minimum of 150 hours of usage.

Engineered for ISF® calibration.

Installer Dependent

Specifications are subject to change without notice. Optional ceiling bracket available.

Theater installation photo courtesy of Electronics Design Group, Inc., Piscataway, NJ

RUNCO
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