

**SONY**

make.believe

Rob McDonough

*Senior Applications Engineer*

Home Division

Sony Electronics Inc.

# Sony ES

*Elevated Standard*



# ES Eco System

**Blu-Ray Players /  
Mega Changers**



**Front Projectors**



**A/V Receivers**



# Sony ES – Programs and Support



Gold Winner  
Dealer Programs / Incentives

1. One manufacturer for a variety of high end products
2. Limited specialty and install distribution (no online sales)
3. Minimum Advertised Pricing policy
4. 3 year warranty on ES front projectors
5. 90 Day Advanced Exchange program (Hot Swap)
6. Web-based fulfillment with real time availability
7. Excellent product evaluation programs (Demo Pricing)
8. CEDIA trained customer and technical support
9. Dedicated specialty & install sales and support team
10. Fantastic partnership with all major control companies

# Sony New Home Cinema Projectors

VPL-HW30ES

VPL-VW95ES

VPL-VW1000ES



2010

2011

VW200

\$14999

May/E  
EOL

VPL-VW1000ES

Dec  
\$TBD

VW90ES

\$9999

1920 x 1080  
Full HD 3D

Sept  
EOL

VW85

\$6999

VPL-VW95ES

Sept  
\$TBD

1920 x 1080  
Full HD 3D

Feb/E  
\$4999

Aug/E  
EOL

VW70

Jun/B  
EOL

VPL-HW30AES

July  
\$3999

1920 x 1080  
Full HD 3D

VWPRO1

\$3499

Jun/E  
EOL

VPL-HW30ES

July  
\$3699

1920 x 1080  
Full HD 3D

READY

HW15

\$2499

Apr/B  
\$1999

Jun/E  
EOL

BW7

Jun/E  
EOL

## Application

## Video

## 3D

## Installation

### VPL-VW1000ES



- Best for ultimate home theater
- Large screens

- 2000 ANSI lm brightness
- 1,000,000:1 Dynamic Contrast
- 4K resolution
- 4096x2160 resolution (More than 4 x 1080p.)
- 2K to 4K Super Resolution up-scaling

- 30% more powerful integrated IR transmitter
- Simultaneous 3D & 2.35:1 Anamorphic

- 2 Triggers
- Control over IP
- 2.1x motorized zoom
- 80(v)/30 (h) shift
- 1.27-2.73 throw distance
- Control4 Device Discovery

### VPL-VW95ES



- Best for dedicated home theater
- High quality 2D w/ 3D capability

- 150,000:1 Dynamic Contrast
- 1000 ANSI lm brightness
- 2D Anamorphic 2.35:1
- Picture position for lens-less anamorphic

- Integrated IR transmitter

- Selectable Trigger
- Motorized lens cover
- Motorized shift & zoom
- 144 zone panel alignment
- 20db fan noise

### VPL-HW30AES



- Can be used in non-theater installs with some ambient light.
- Entry level 2D / 3D

- 1300 ANSI lm brightness
- 70,000:1 Dynamic Contrast
- Independent 2D and 3D presets and video calibration

- Dynamic Lamp Control from brighter 3D
- 240 Hz Panel drive to minimize crosstalk
- 2D to 3D up conversion
- Ability to adjust 3D effect
- Supports ESPN 3D
- 3D button on remote

- Control4 Certified
- AMX Device Discovery
- Two way serial control, IR input
- 1.6x zoom
- 65(v)/25(h) shift
- Shift panel alignment
- 22dB fan noise
- 3 Year Warranty



# Features Common to all 3 Models



Not Just 3D....  
*Amazing 3D!*



# All 3 Models: 3D Glasses and Transmitter

## 3D Accessories

### New 3D Glasses (TDG-PJ1)

Integrated filter into lens

- 24% Lighter weight
- Improved ghosting
- Rechargeable via USB
- Optimized for front projection
- TV glasses (TDG-BR250) not compatible
- Quick Charge: 3 min charge = 3 hours

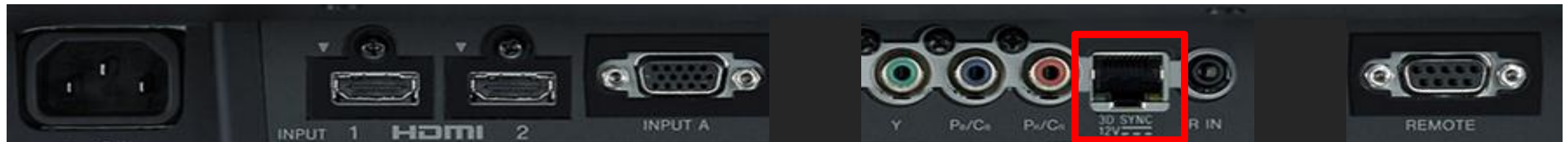


### New Wired Transmitter (TMR-PJ1)

- Connects to the projector via Cat5e

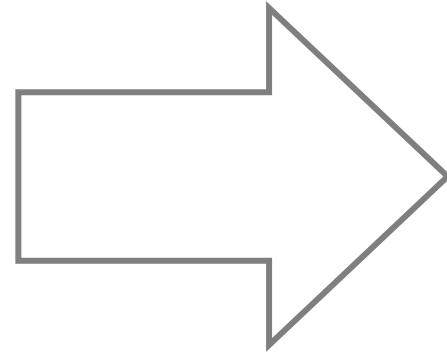


Required for HW30 ONLY  
Optional for VW95 & VW1000ES

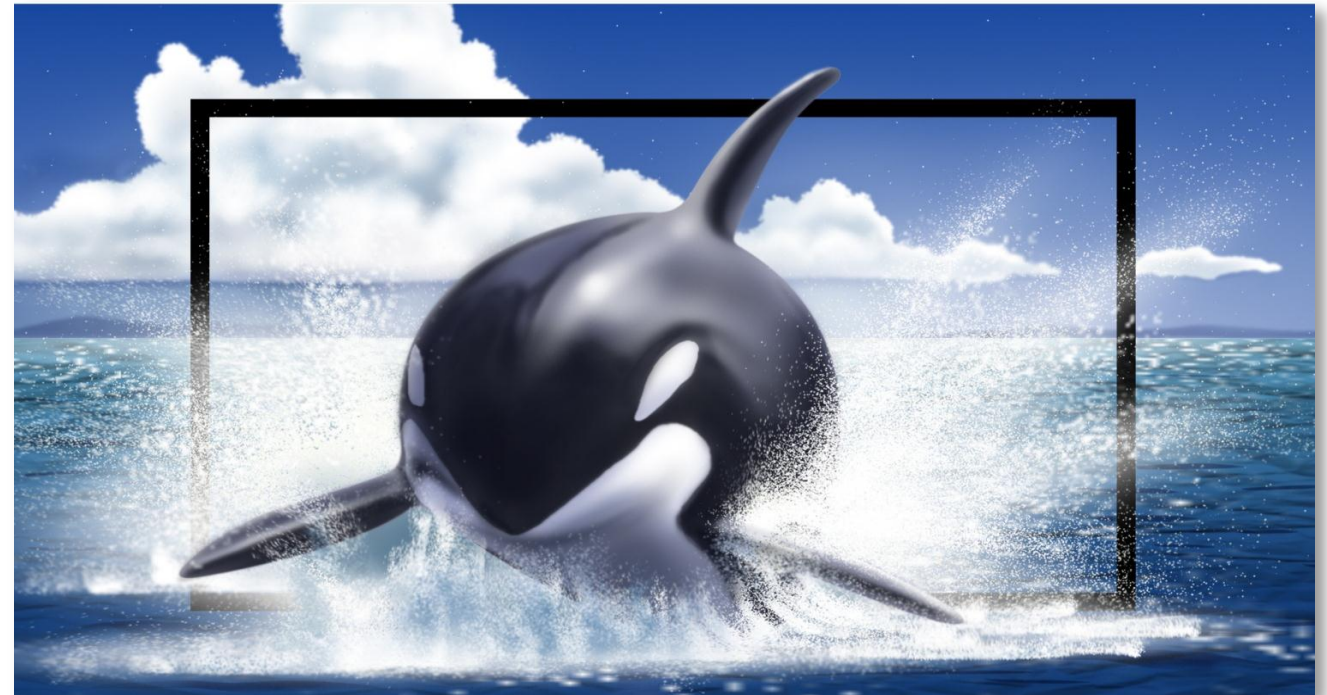


# All 3 Models: 2D to 3D Up-Conversion

2D Source



3D Output Viewing



HD Broadcast




Still picture



BD Player

\*Simulated 3D only available with HD signal through HDMI connection.

# All 3 Models: 3D Compatible Signals Formats

Standards	HDMI 1.4a	Extra
Signal and Format Compatibility	<p>1080/24p FP, O/U Blu Ray</p> <p>1080/60p, 50p SBS, O/U</p> <p>1080/60i, 50i SBS (Broadcast)</p> <p>720/60p, 50p FP (Gaming), O/U</p>	<p>720/60p SBS</p> 

**FP: Frame Packing**

**SBS: Side by Side**

**O/U: Over-Under**

# All 3 Models: New Remote Commander

RM-PJ20 (HW30ES)

RM-PJ21 (VW95ES)

RM-PJ22 (VW1000ES)

Direct buttons for often-used picture adjustment

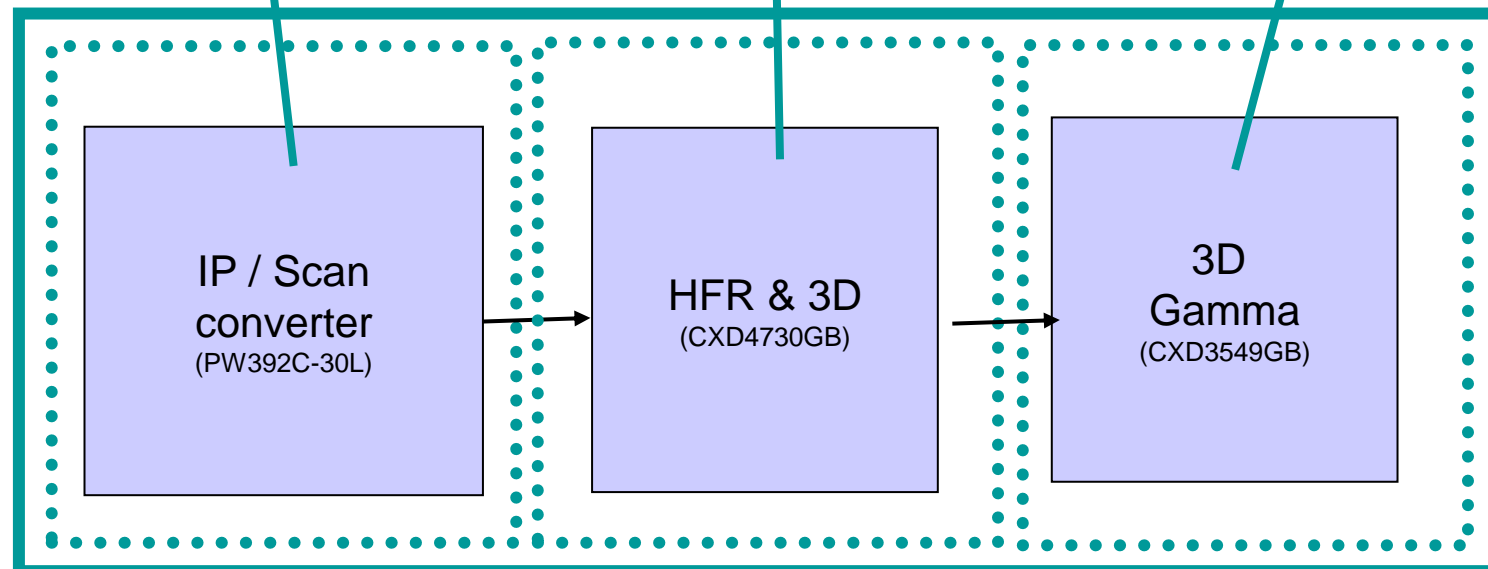
Back-lit buttons

Wider, easy-grip and larger buttons

3D button for easy selection



# Sony Video Technology



# Video Technology (All 3 Models): Motionflow



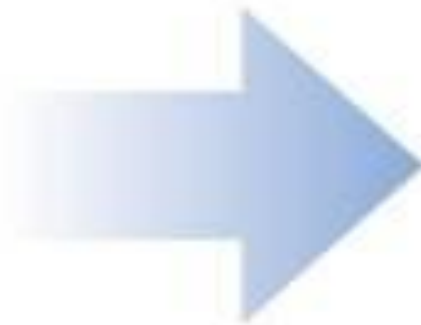
Sony unique algorithm

Displays twice as many images per second

Creates completely new images based on the incoming signal, and inserts them between the original frames

Reproduces smoother, sharper motion and reduces motion blur & judder

*Without Motionflow with DFI*



*With Motionflow with DFI*

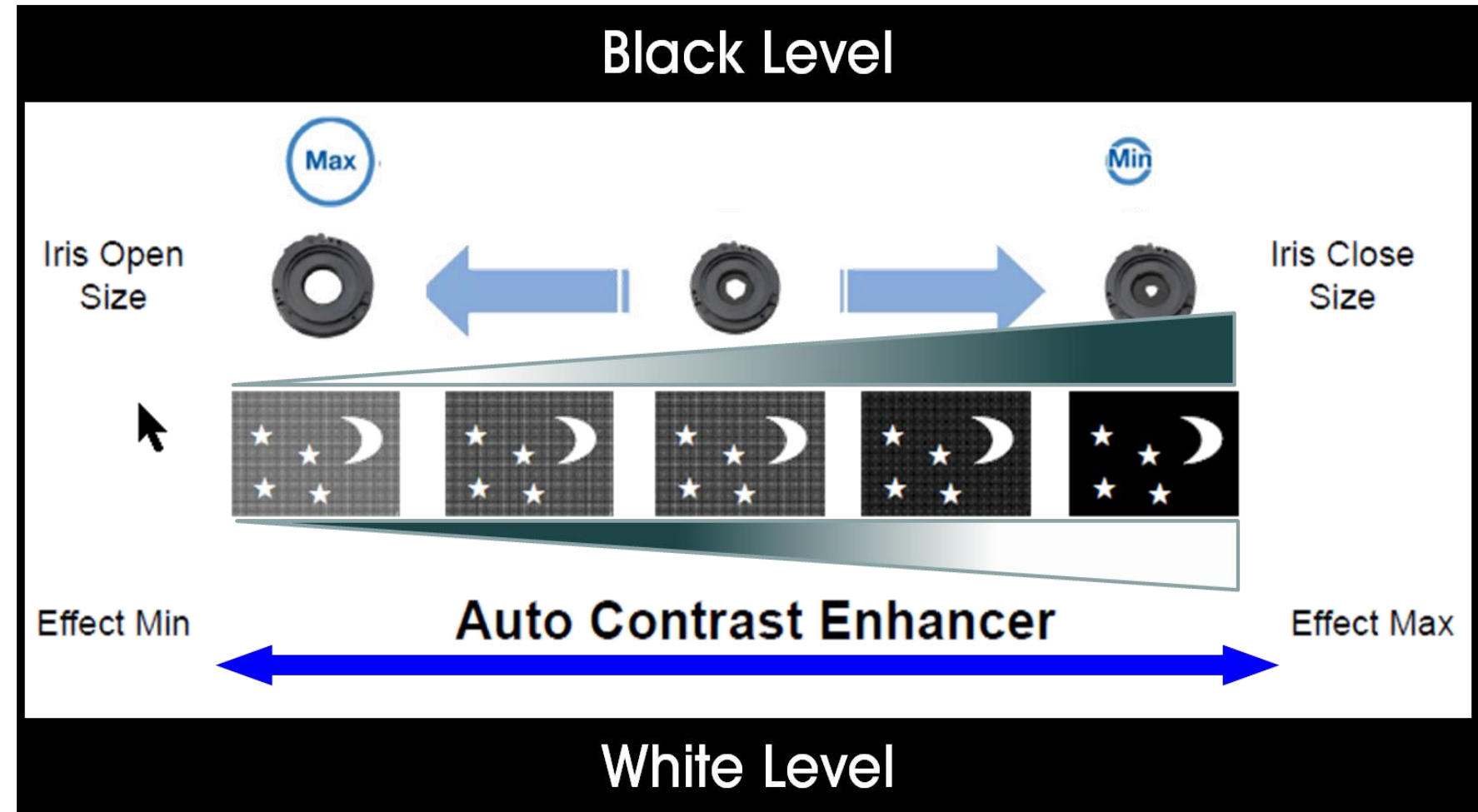




# Video Technology (All 3 Models): Advanced Auto Iris 3

Optimizes contrast ratio per scene to **improve black level** while **maintaining peak brightness**.

Provides ultimate contrast, & expanded dynamic range.



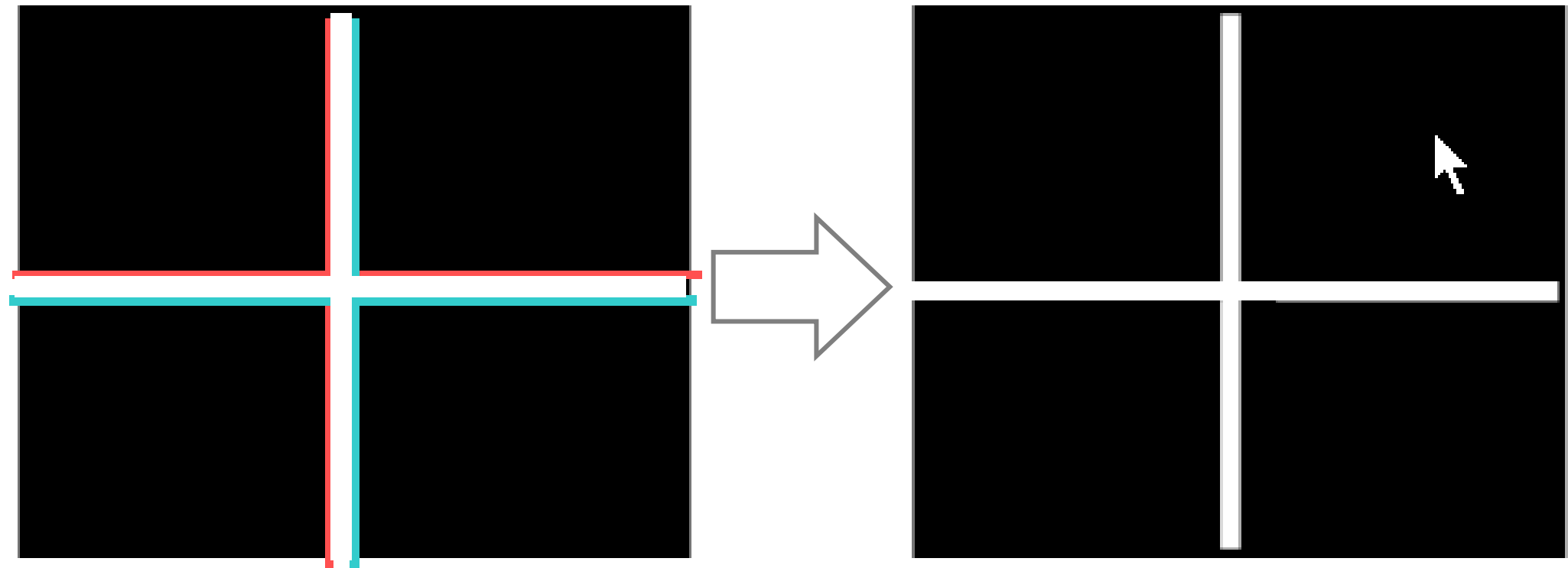
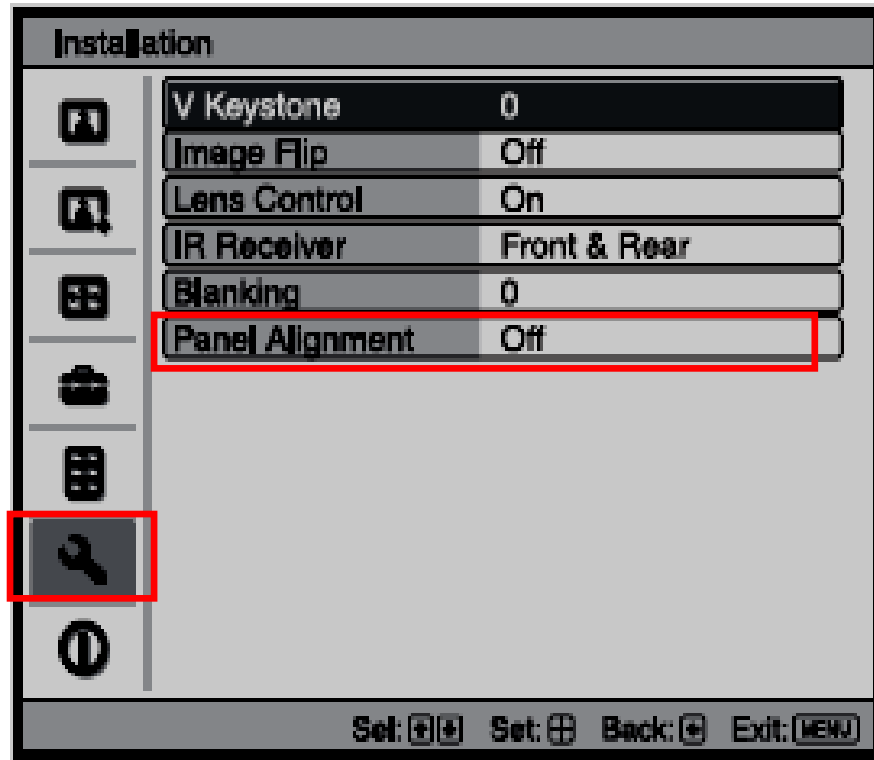
*“In our experience, nobody does dynamic irises better than Sony.”*

*Thomas J. Norton* Reviewer: [HomeTheater.com](http://HomeTheater.com), May 2011

# All 3 Models: Professional Calibration

## Fine Panel Alignment Function

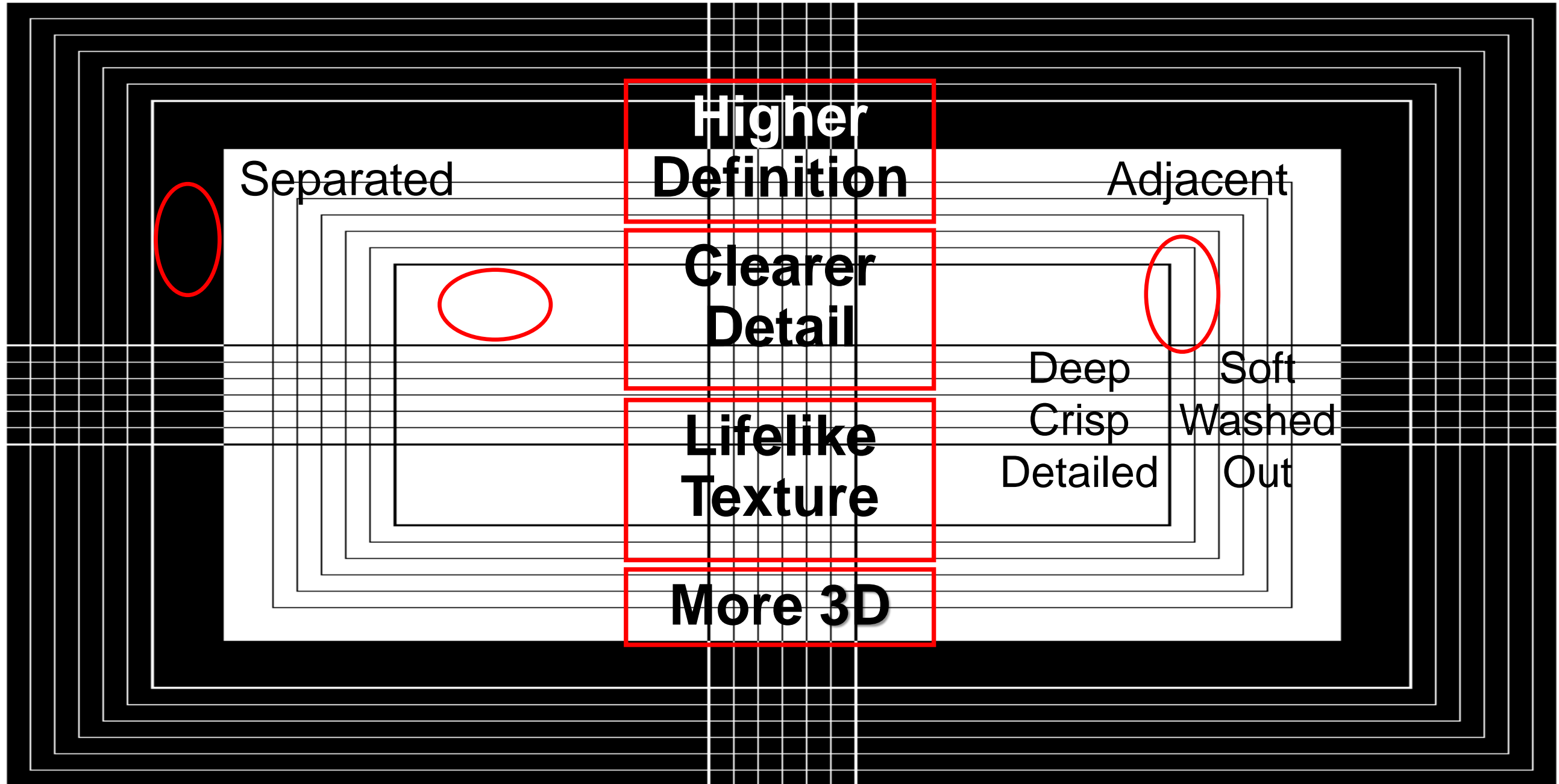
Sony exclusive **1/10<sup>th</sup> Pixel** increments  
Red and Blue Pixel Shift in steps of 0.1 pixel



Reduce RGB Ghosting (kills focus, edge detail, texture)

# Video Technology (All 3 Models): Advanced Auto Iris 3

## Adjacent Area Contrast





VPL-HW30ES  
VPL-HW30AES

# 3D Ready and 3D Bundle Models

**VPL-HW30ES**  
(3D Ready)

**\$3,699**



**VPL-HW30AES**  
(3D Bundle)

**\$3,999**

**Projector plus:**



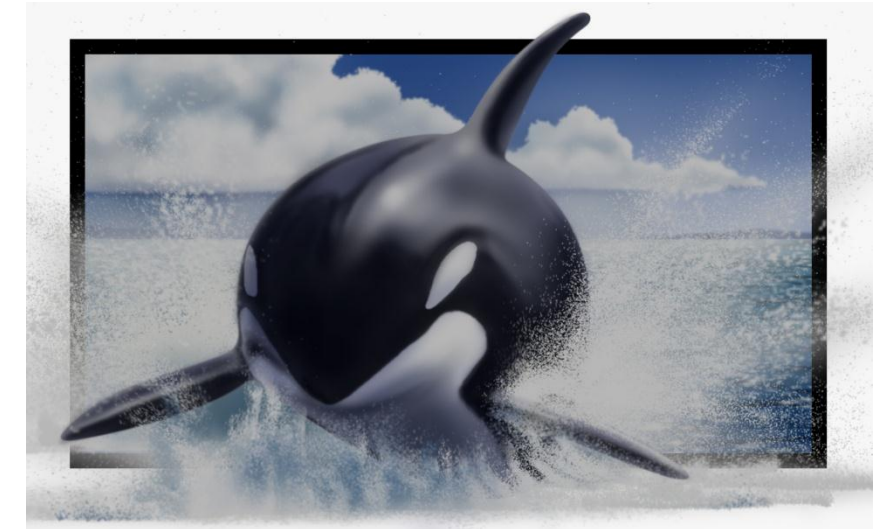
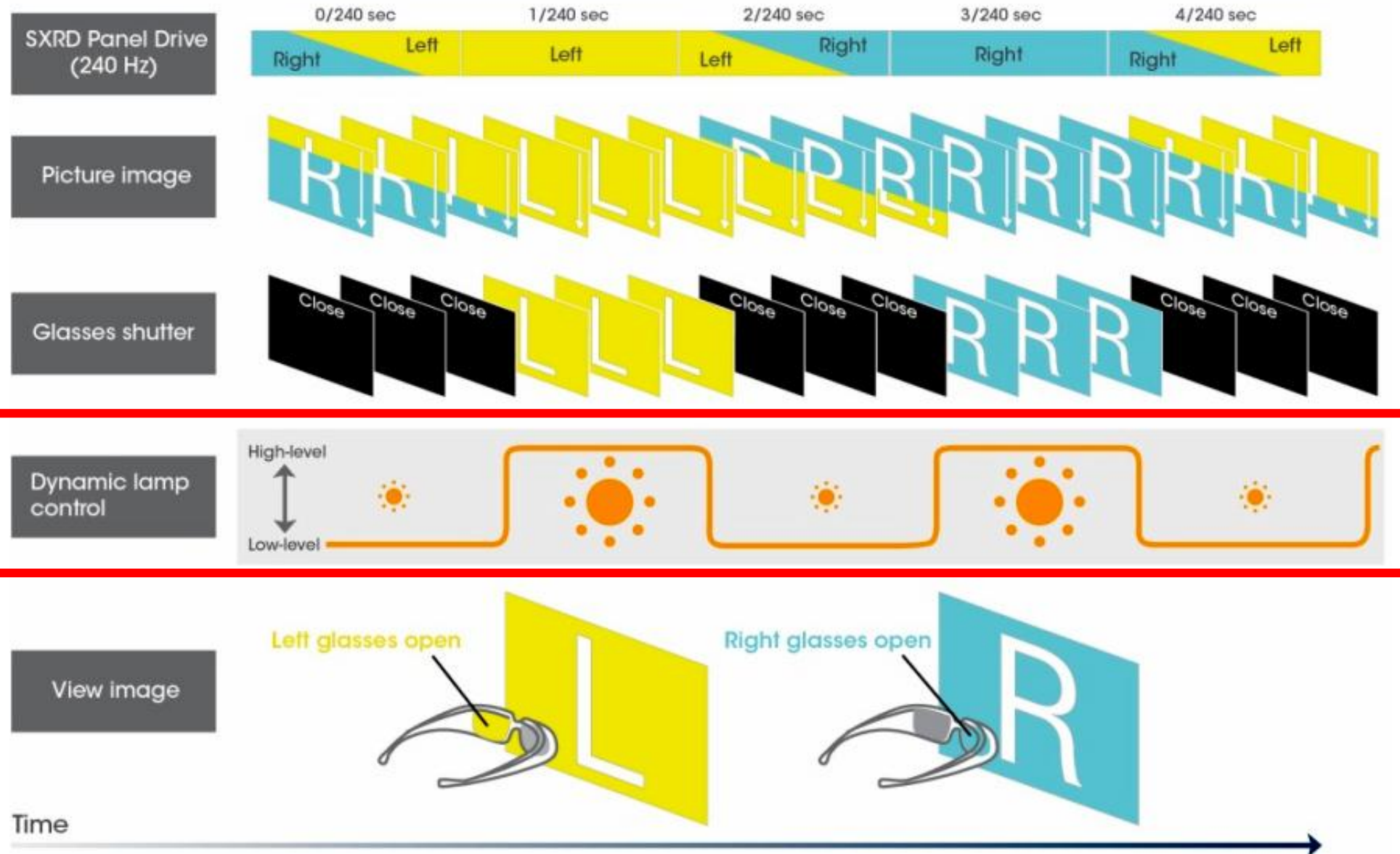
# Common Features



**VPL-HW30AES  
& VPL-VW95ES**

# VPLVW95ES & VPLHW30AES: 3D Brightness

## Dynamic Lamp Control



2 x brighter in 3D  
than VPL-VW90ES



# VPLVW95ES & VPLHW30AES: 3D Viewing Adjustments

## Brightness

Adjusts the Duty Cycle of 3D glasses, therefore brightness

Note: “Max” setting may make crosstalk more visible depending on content

3D glasses Brightness				
Min	1	2	3	Max

## 3D Depth Adjustment

Vary the Depth of the 3D effect

Note: Depending on contents, crosstalk may be more visible at “-2”.  
For demo purposes, “0” level is recommended

Depth	-2	-1	0	+1	+2
	Front		Normal		Back



# VPLVW95ES & VPLHW30AES: New SXRD Panel

**SXRD = Silicon X-tal Reflective Display**  
3rd Generation Panels

High contrast ratio, high Brightness

High resolution: Full HD 1920x1080

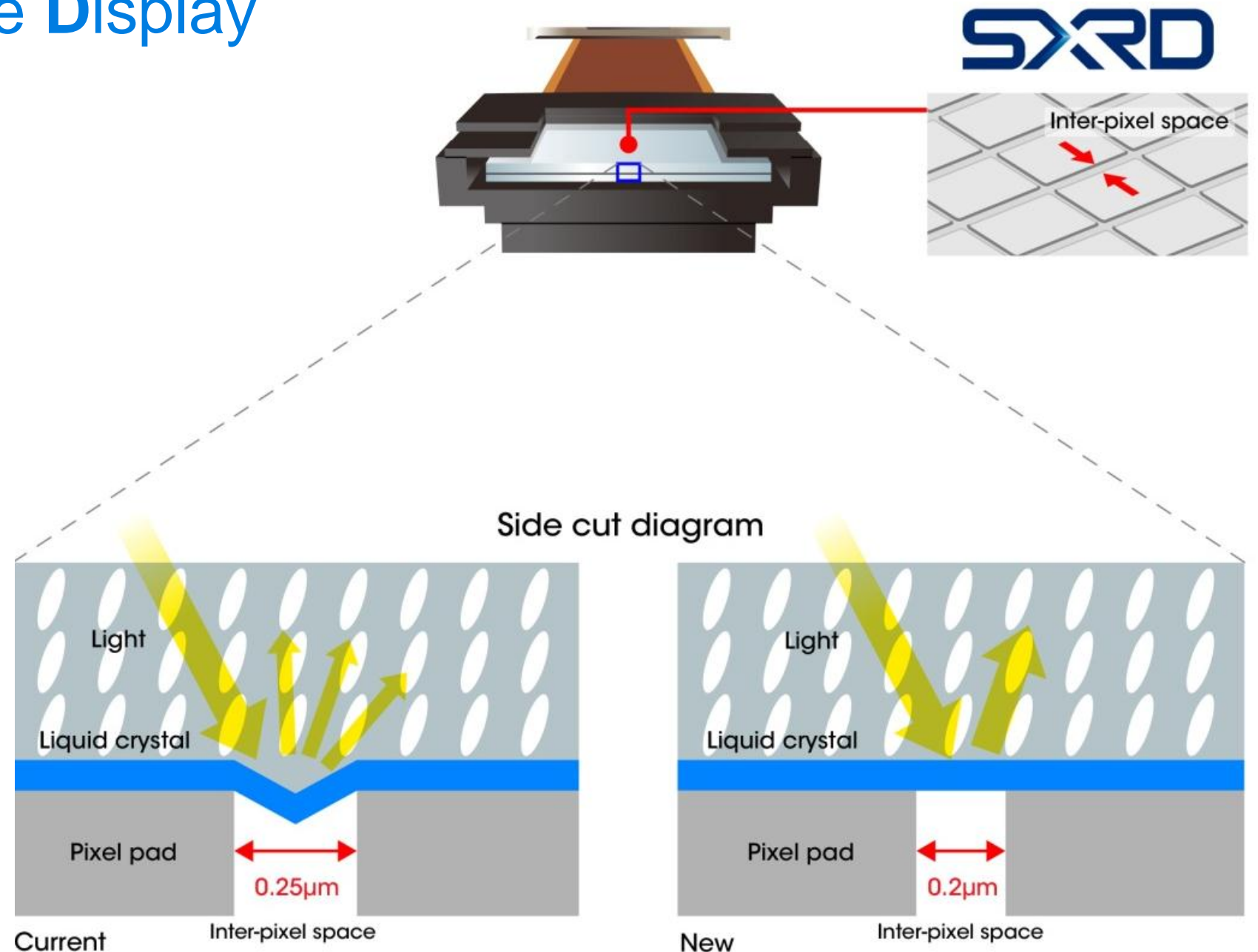
High fill factor

0.2 $\mu$ m pixel spacing

Smooth dot-less picture

Fast response speed: 2.0ms

240Hz Panel Drive for  
less crosstalk

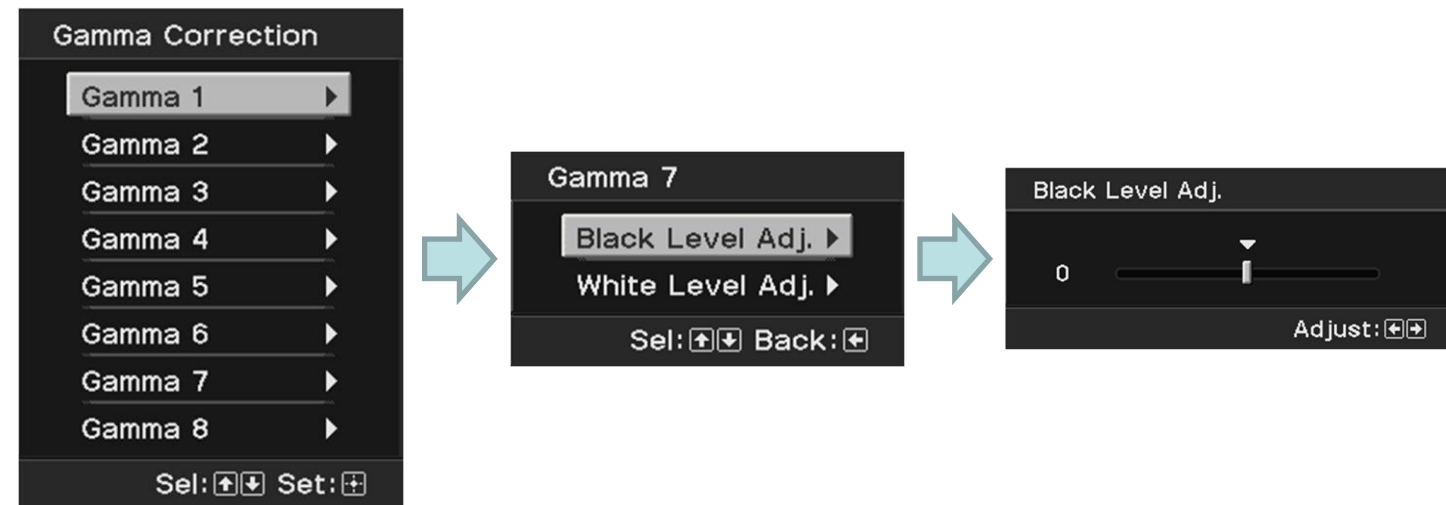
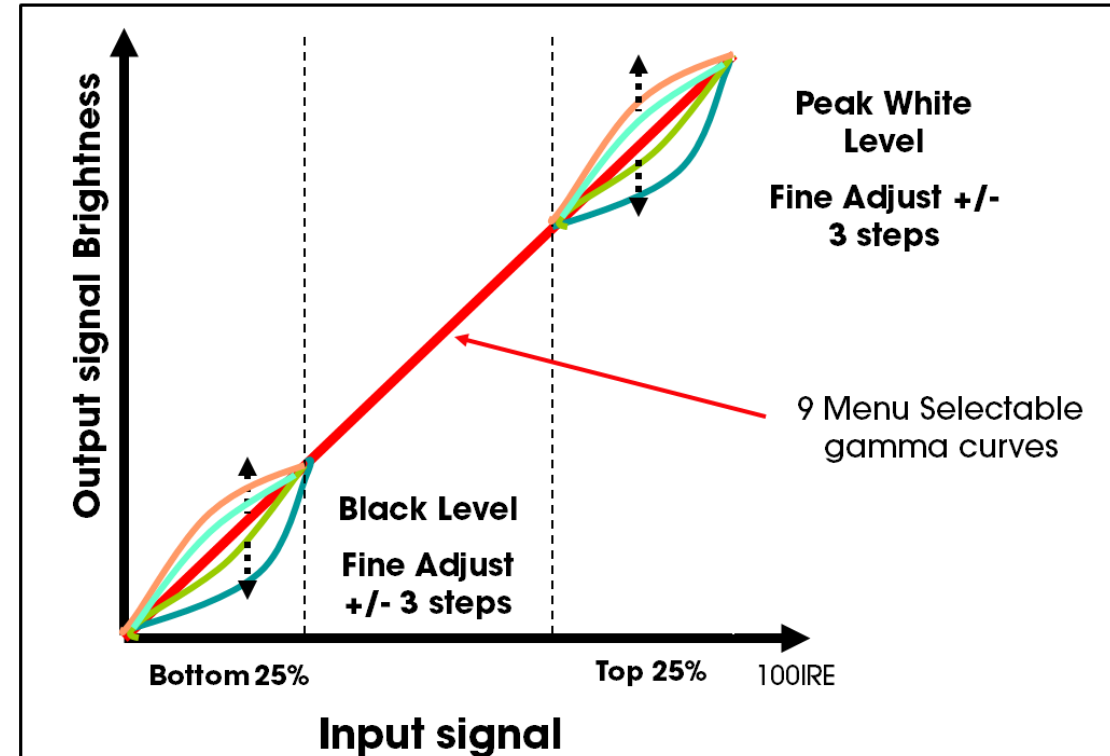


The flatness level of surface is improved thanks to the narrower inter-pixel space.

# VPLVW95ES & VPLHW30AES: Professional Calibration

## Gamma Control

- Gamma 1: 1.8, Brighter picture
- Gamma 2: 2.0, Less bright
- Gamma 3: 2.1, Darker picture
- Gamma 4: 2.35, expands gradation in dark areas
- Gamma 5: Produces darker picture overall
- Gamma 6: Contrast slightly emphasized
- Gamma 7: Contrast more emphasized
- Gamma 8: Simulates Gamma curve of film
- Gamma 9: Film gamma with expanded black detail
- Gamma 10: 2.3, Photo
- Off 2.2



# VPLVW95ES & VPLHW30AES: Pre-Calibrated Picture Modes

## Calibrated by Sony Engineers...

Each with special Gamma, Color Space, & Color Temp presets

- Cinema 1           Preset for Film Sources
- Cinema 2           Preset for Digital Cinema Sources
- Cinema 3           Preset like Sony Professional Monitors
- Photo (new!)       Preset for Digital Camera
- Game (new!)       Preset for PlayStation
- User 1 & 2         Customizable

## Independent 2D/3D Presets and Memories

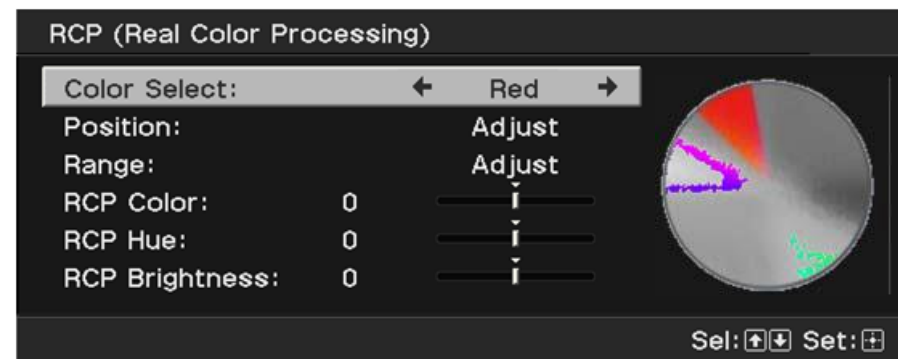
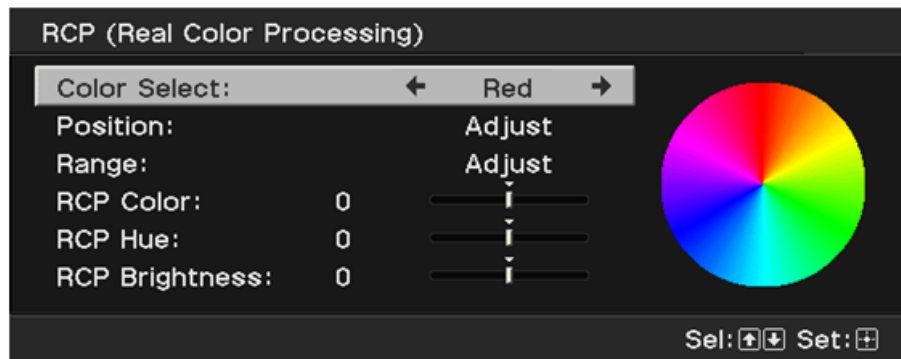
Each picture mode is separately pre-calibrated & stored for 2D / 3D content

# VPLVW95ES & VPLHW30AES: Professional Calibration RCP2 (Real Color Processing 2nd Gen) with Full xyY

Select the target color, hue or blend of hues

See only the color you have selected

Adjust RCP Color (Saturation), Hue and (New) Luminance of target color



# Common Features



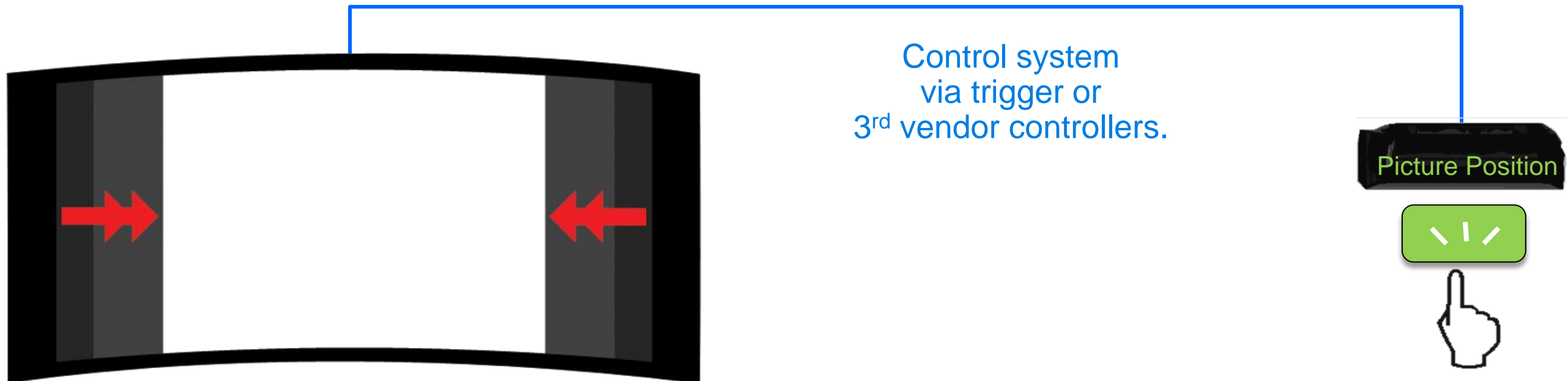
VPL-VW95ES &  
VPL-VW1000ES

# VPLVW95ES & VPLVW1000ES: Picture Position Electronic Masking

Currently there are 2 methods to increase the image size, & eliminate the black bars:

1. Use an anamorphic lens (Expensive)
2. Adjust lens zoom and shift manually (Tedious)

NOW you can store and recall the ideal lens settings, with 5 different position memories, including: 1.78:1, 1.85:1, 2.35:1, and 2 additional customizable options



# VPLVW95ES & VPLVW1000ES: Picture Position Electronic Masking



# VPLVW95ES & VPLVW1000ES: Picture Position Electronic Masking





# VPLVW95ES & VPLVW1000ES: Picture Position Electronic Masking



# VPLVW95ES & VPLVW1000ES: Picture Position Applications

5 addressable memories for specific formats/memorized lens positions

Change lens zoom and shift between different formats easily

- Zoom to eliminate most black bars
- Zoom to anamorphic (without extra lens) on 2.35:1 screen
- Zoom from 16:9 to 1.85:1 and back
- Zoom from native 4K (4096 x 2160) to scaled 4K (3840 x 2160)
- Shift memory to keep image vertically centered on screen
- Shift memory to allow for certain closed captions or text
- Vertical Center & Size add flexibility for caption & aspect precision

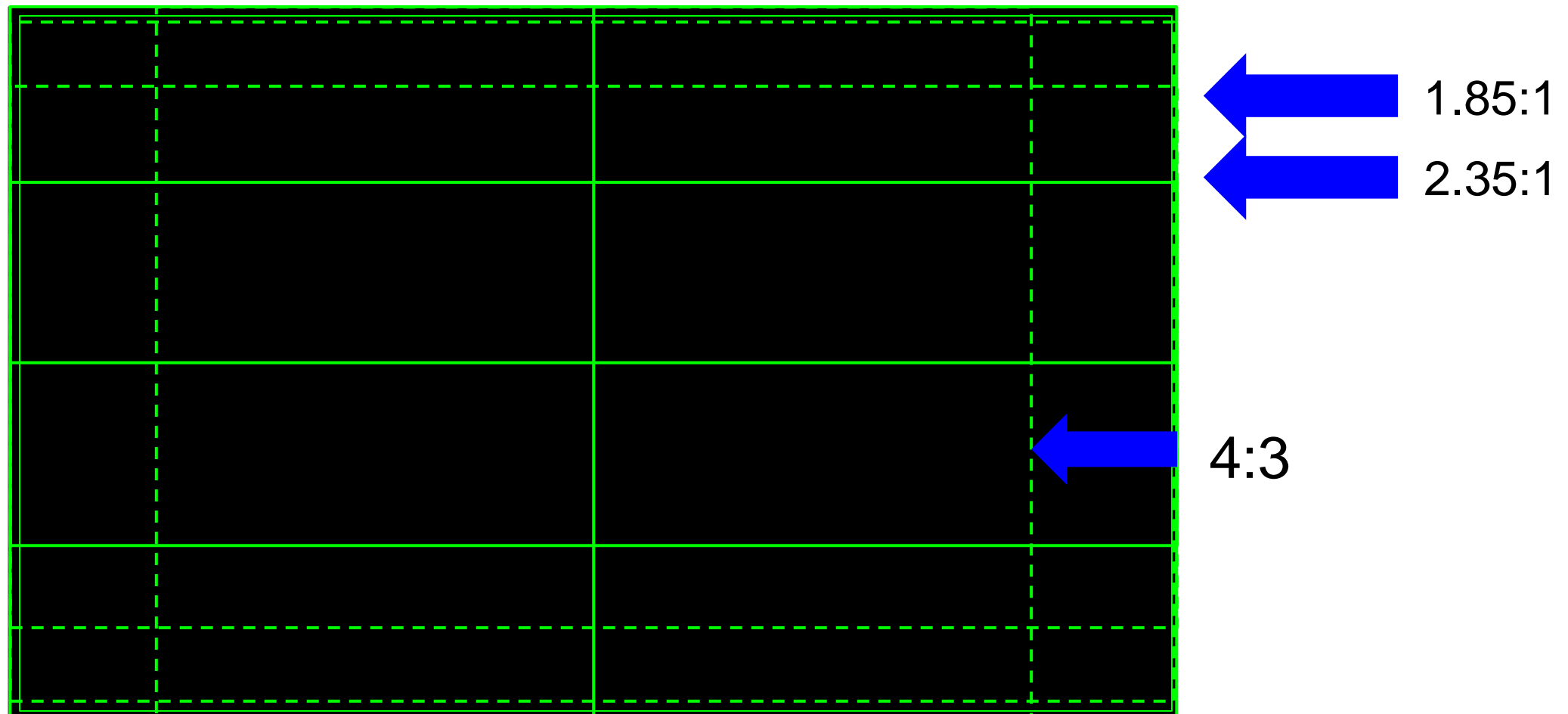
*(Note: Dependent on throw distance and Zoom/Shift range available)*

# VPLVW95ES & VPLVW1000ES: Picture Position

## New Test Pattern

Lens pattern modified to support Picture Position

The dashed lines indicate 2.35:1, 1.85:1, 4:3 as below



# VPLVW95ES & VPLVW1000ES: Integrated IR Transmitter

## Built-In-Transmitter

For installs with:

- Less than 15' distance from screen
- Less than 120" screen size



## Optional Wired Transmitter

Model name: TMR-PJ1

For use in larger theaters

Connects via CAT5



# 4K Comes Home!



VPL-VW1000ES

The Industry's 1<sup>st</sup> 4K resolution  
Home Cinema Projector

# VPLVW1000ES: Flagship Performance

30% stronger 3D Internal sync emitter (vs. VW90 & 95ES)

50% stronger 3D external sync from optional emitter (vs. 2010 emitter)

50% higher panel contrast (Higher native contrast)

80% screen height Lens shift (double previous top-of-screen offset)

100% Wider Zoom range up from 1.39-2.1 to 1.27-2.73 (vs. 2010 models)

Greater than 4 times the resolution of 1080P

Super Resolution scaling combined with Sony's best FPJ processor ever

Special High resolution 4K optimized precision lens

Picture Position Lens Zoom/Shift Memory

# VPLVW1000ES: Ultimate Immersion Experience

Brighter, more vivid images (up to 2000 Lumens)

Larger, more life-sized Images (up to 200" Screens)

Closer, more intimate Viewing (as close as 1.5 picture heights)

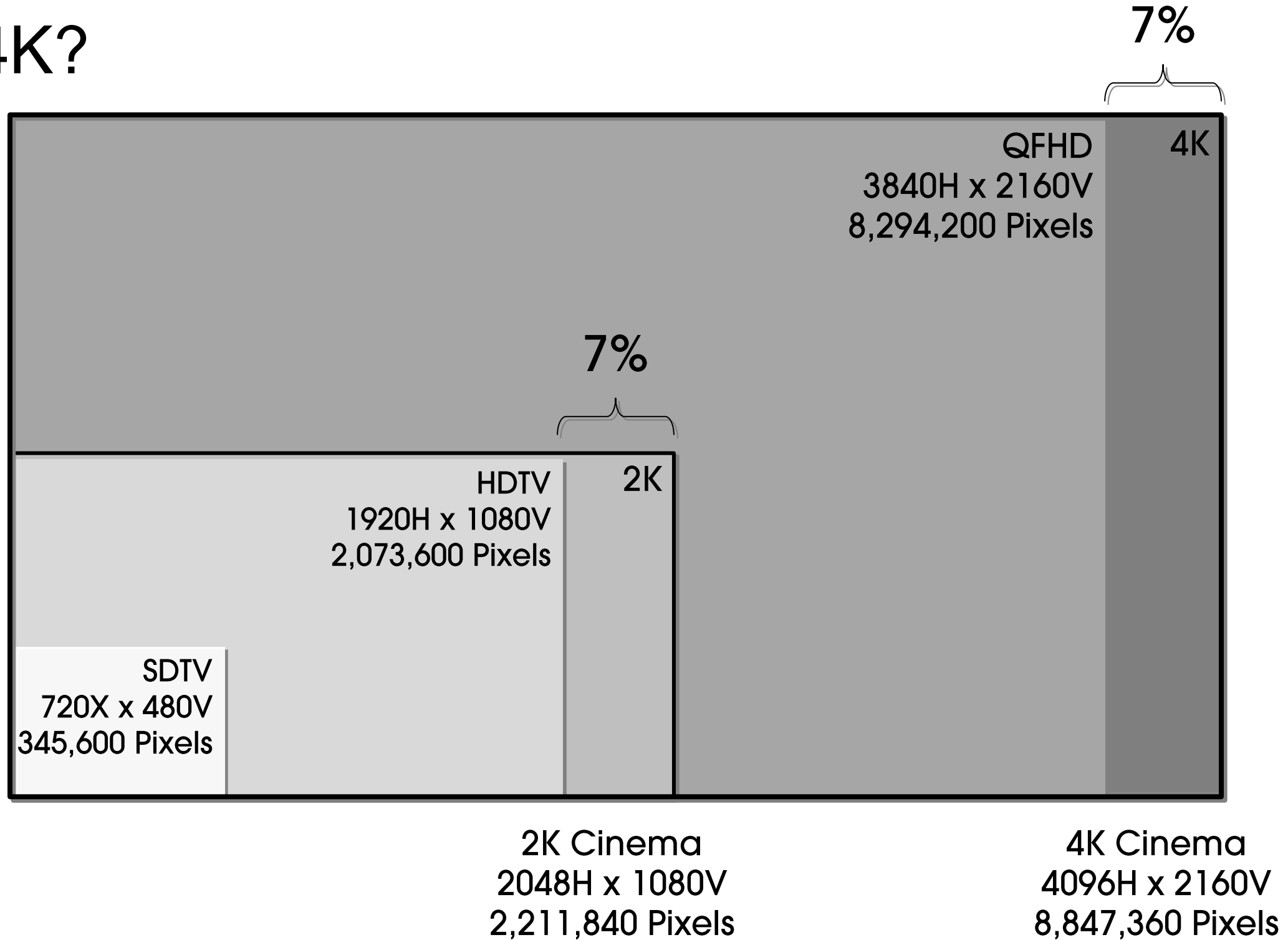
Smaller, more transparent "Micro" Pixels (down to 1/4 size of 1080P)

Deeper, near-bottomless Blacks (up to xxx,xxx:1 Dynamic Contrast)

Eye engaging, wider screen anamorphic viewing (up to 15' wide)

And, finally...the enveloping combination of simultaneous anamorphic 3D

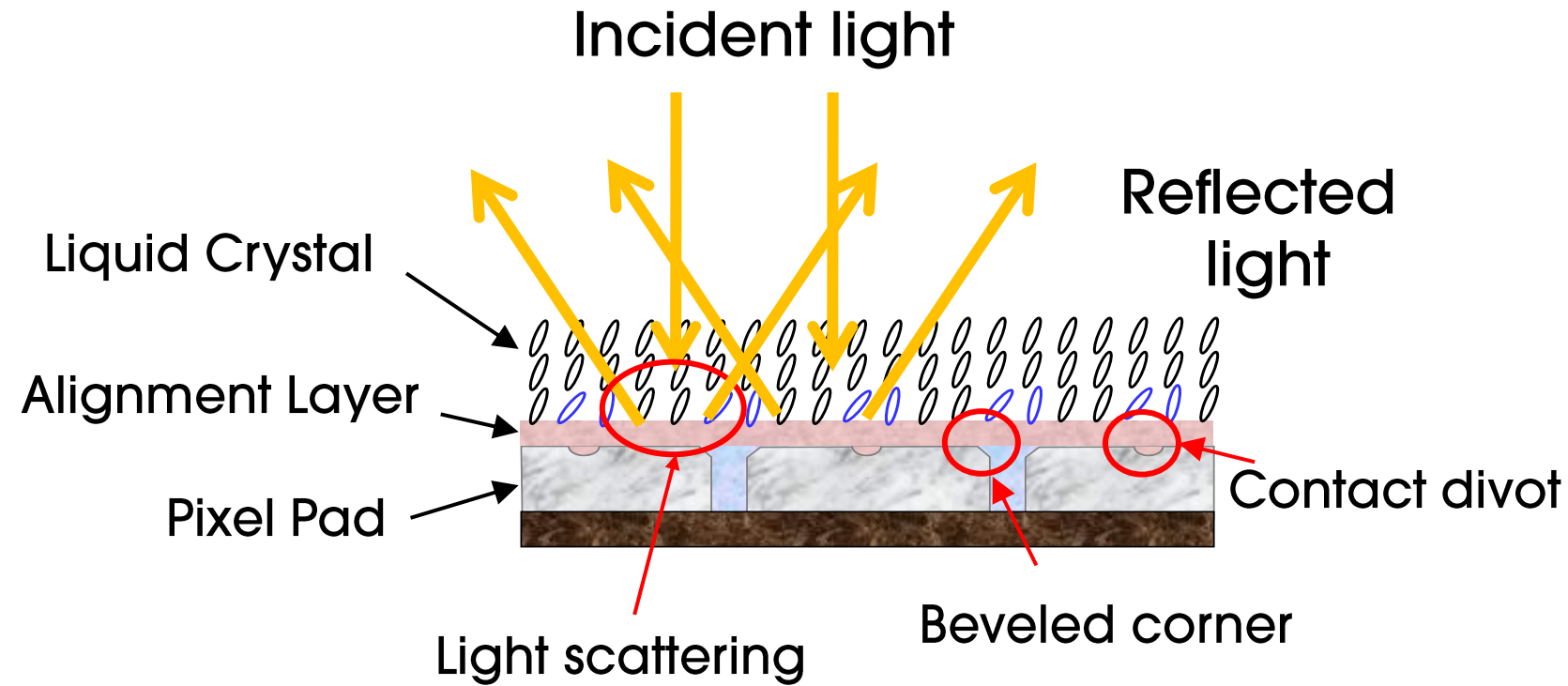
# What is 4K?





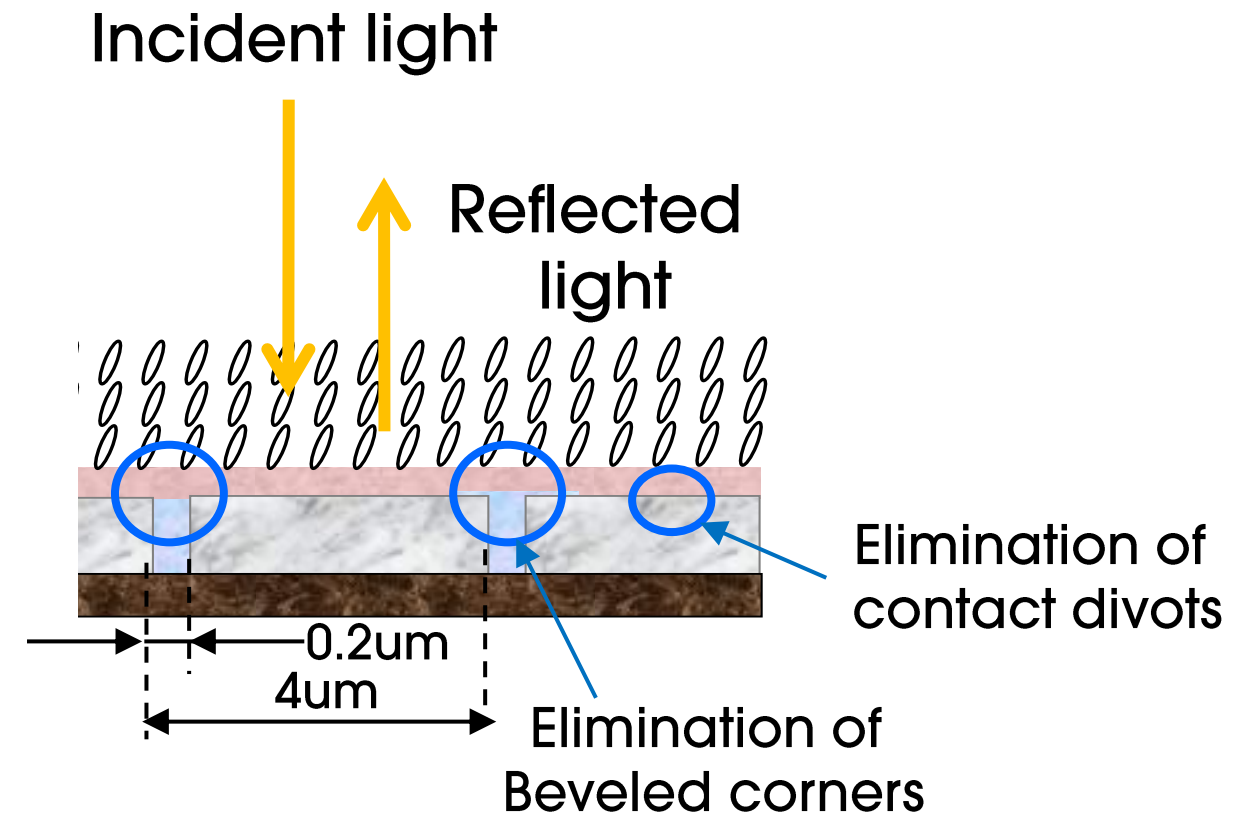
# SXRD Panel Improvement

## Current HD panel



Contrast ratio is diminished by light scattering and liquid crystal molecular miss alignment.

## New 4k panel



High contrast and high reflectivity with 4um pixel pitch

# 4K – The Ultimate Immersion Advantage

Full HD



In order to minimize visible pixels, jagged outlines and screen door effect, ideal viewing is greater than 3PH distance

3.0H



**4K**



4K changes all that!

1.5H

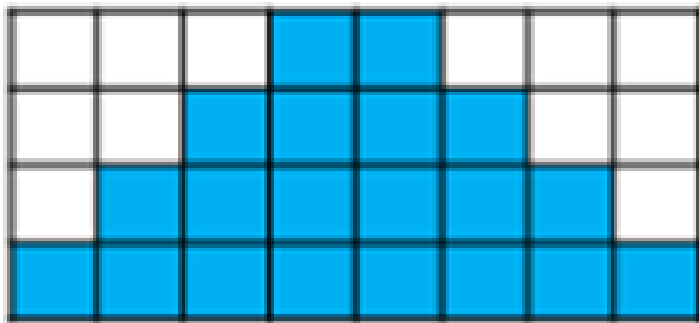


Prime theater seating

4K enables a closer and more immersive viewing experience

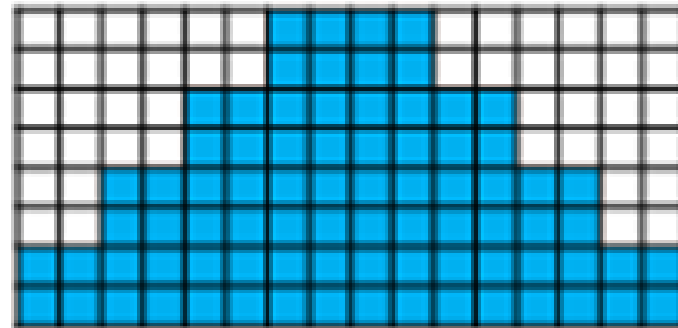
# 4K Super Resolution Scaling

2K projector



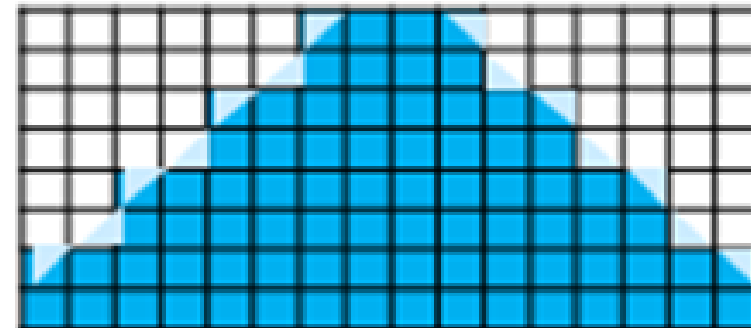
Jaggies and  
screen door

2K signal on a  
4K projector



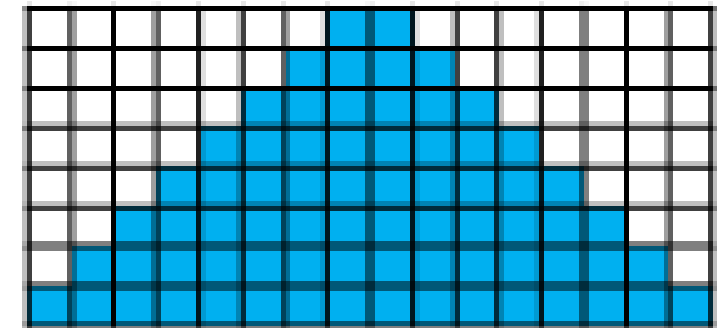
Still has jaggies, but less  
screen door

2K signal on 1000ES  
with Sony's  
"Super resolution"  
technology



Less jaggies and  
less screen door

Native 4K Signal



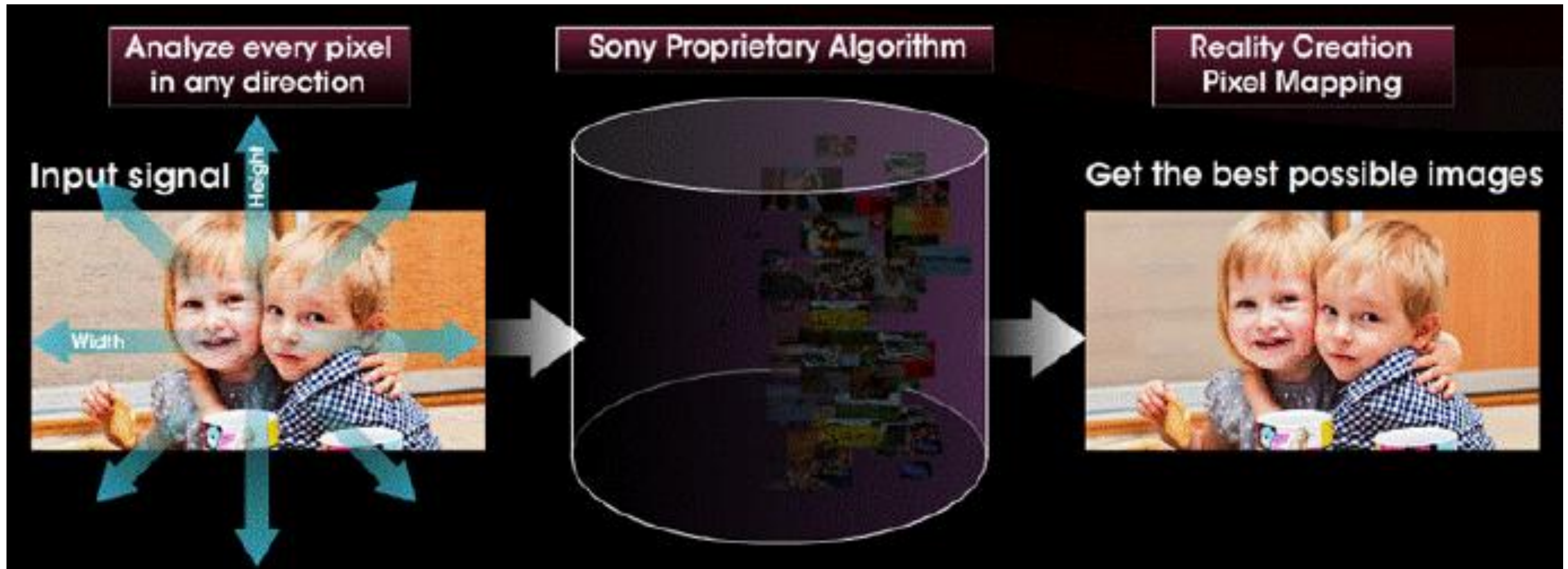
Optimal image

Quality of Image



# 4K Reality Creation Algorithm

Analyzes each pixel and uses sophisticated pattern matching for optimal picture



# Flexible Use

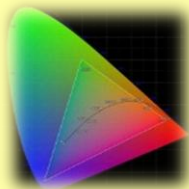
Can be used in rooms with ambient light or darkened home theater

## Bright Mode

*For ambient light viewing*

“sRGB”

Max. lumen &  
Standard  
color gamut



Sports



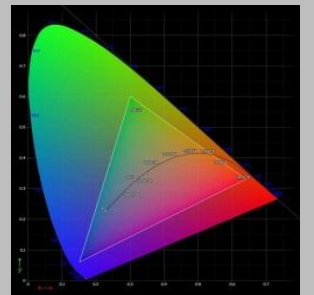
Games

## Cinema Mode

*For dark room viewing*

“DCI”

Dimming &  
Wide color  
gamut

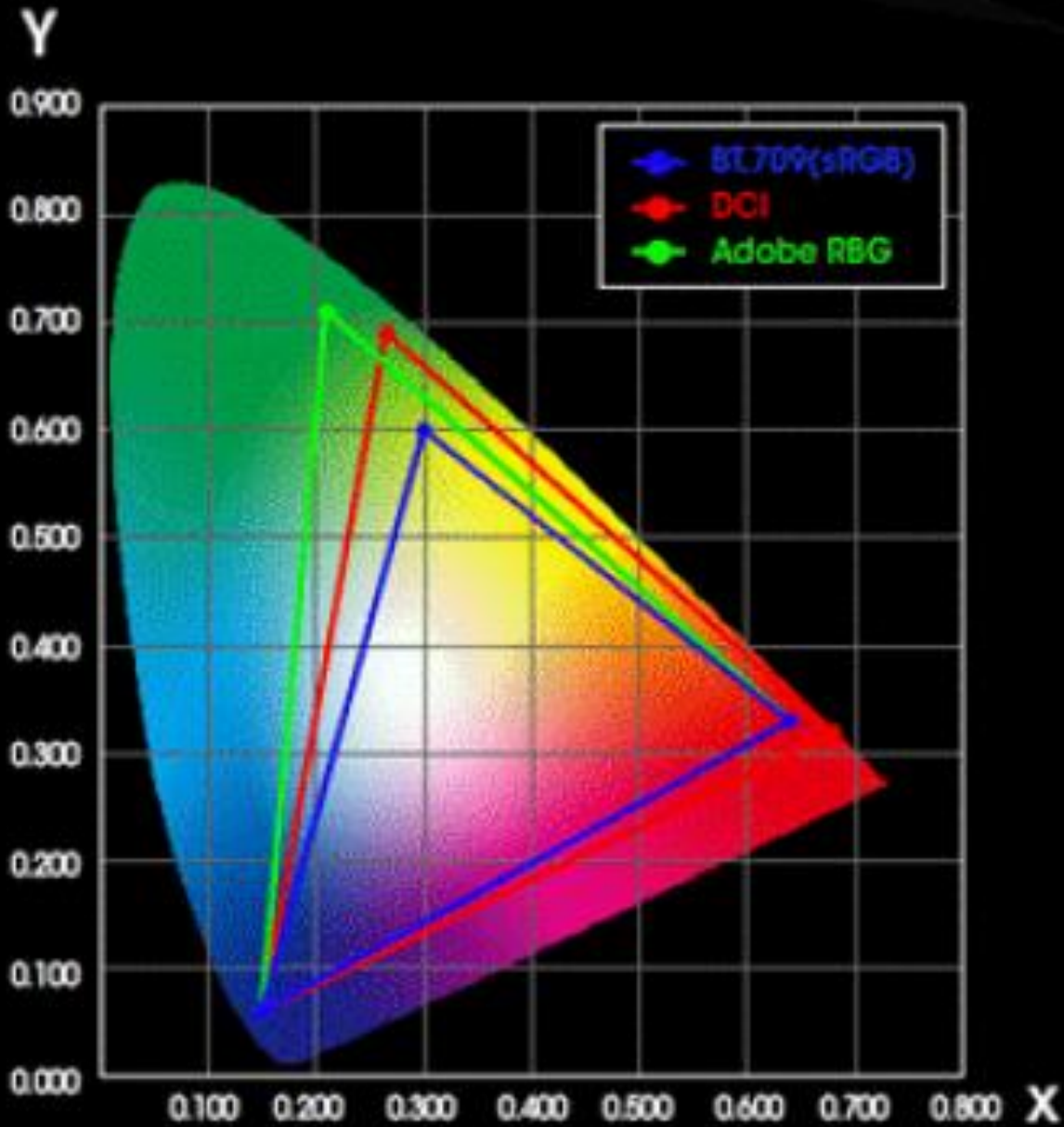


Cinema



Photos / Art

# Wide Color Space



For cinema



BT.709(sRGB)



DCI

For photos

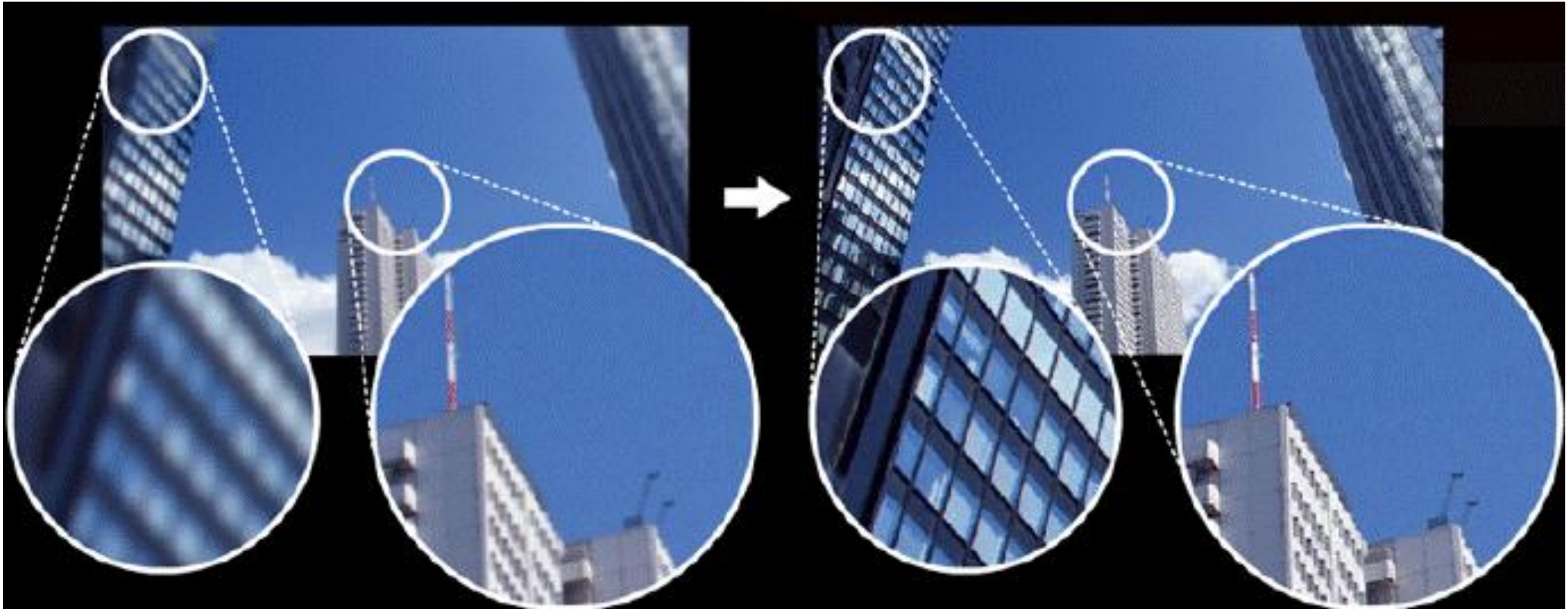


BT.709(sRGB)



Adobe RGB

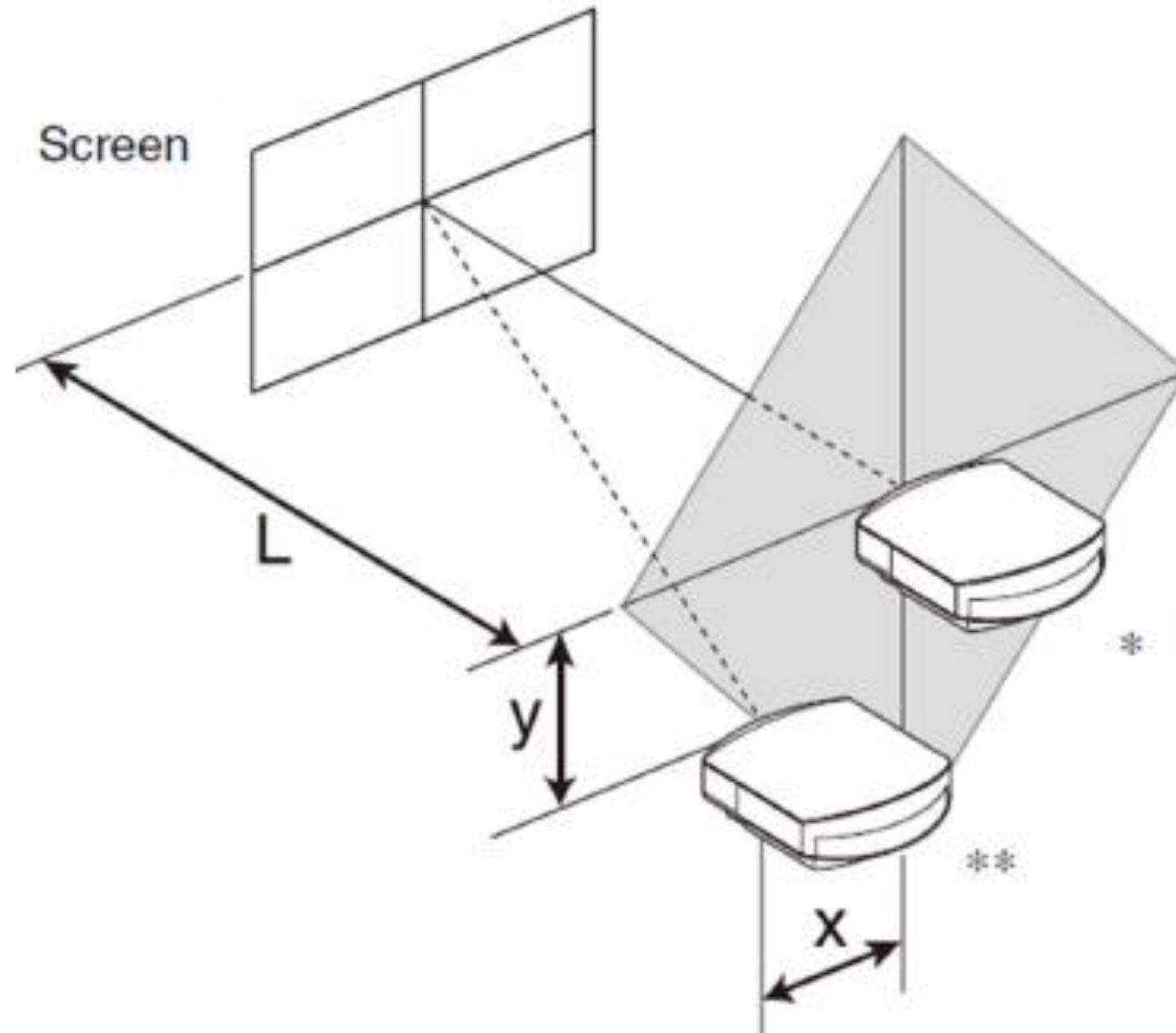
# New lens to support 4K



Un-optimized Lens

All Range Crisp Focus  
(ARC-F) Lens for 4K

# Installation & Integration






# All 3 Models: Integration Partners




All models support bi-directional RS232 & have IR inputs  
*VPLVW1000ES also supports Control over IP*

# Android Installation App – “Projection Simulator”



VPL-HW30ES



Full HD

Select How to Use

**Input Basic Data**

Projection Distance

Shift Range Simulation

Simulation Result

Print Out

**Input Basic Data**

Projector

Video Projector | VPL-HW30ES

Screen size

Aspect ratio: 16:9

Screen size: 150 inch Diagonal

Projection image size

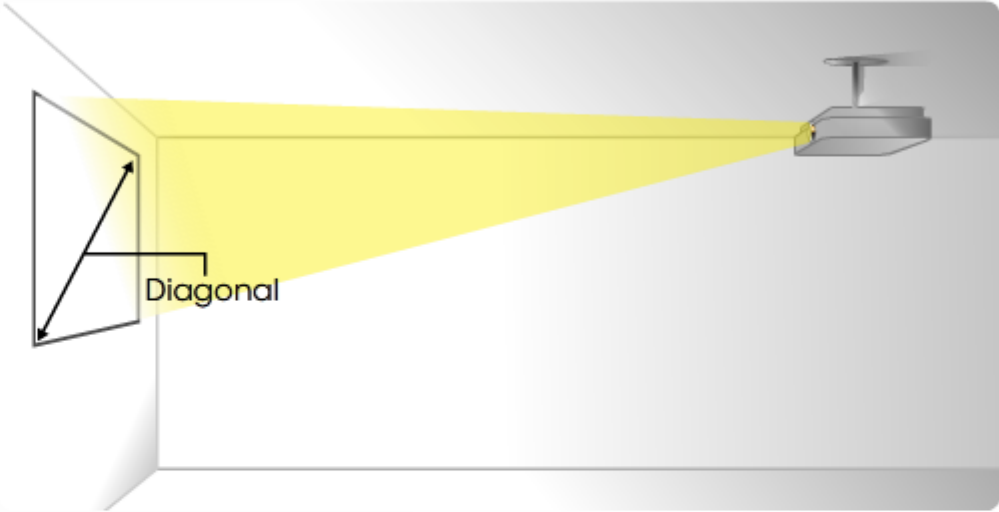
Aspect ratio: 16:9

Type: Type1: Screen and image are same size

Dimensions


	Screen size			Projection image size		
Diagonal	150 inch	3.81 m	12.5 feet	150 inch	3.81 m	12.5 feet
Width	131 inch	3.32 m	10.9 feet	131 inch	3.32 m	10.9 feet
Height	74 inch	1.87 m	6.1 feet	74 inch	1.87 m	6.1 feet

\*There might be a tolerance in the simulation result.




Example


Type1: Screen and image are same size



Type2: Screen and image are same width



Type3: Screen and image are same height

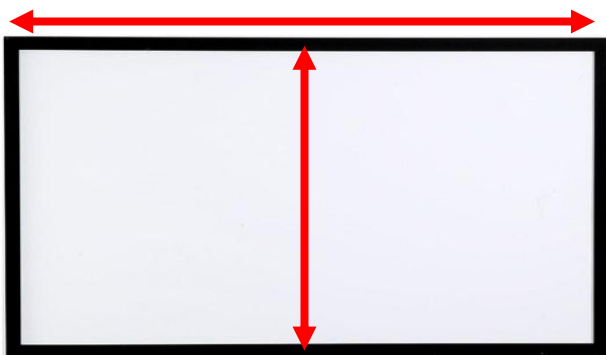


BACK | NEXT

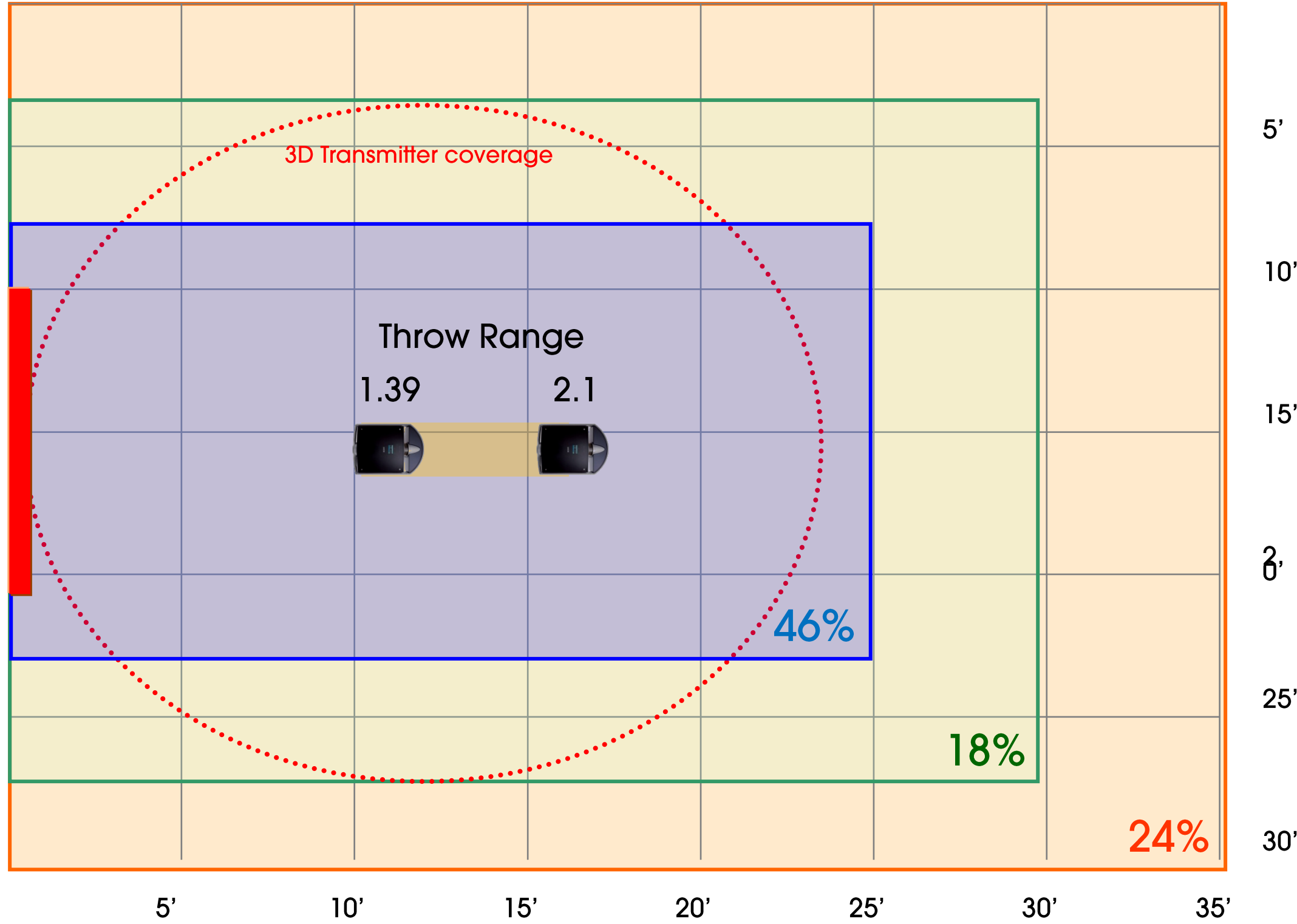
# VPLHW30ES & VPLVW95ES: Throw Distance

**16:9 / 100"**

**W: 7.3'**



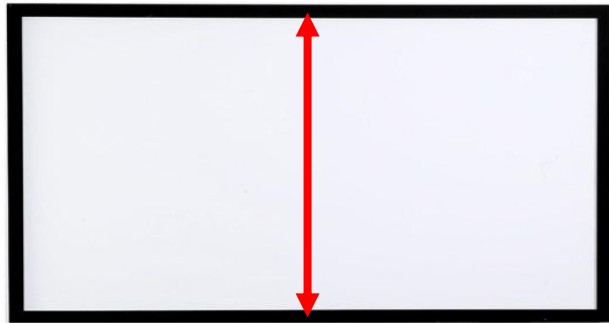
**H: 4.1'**



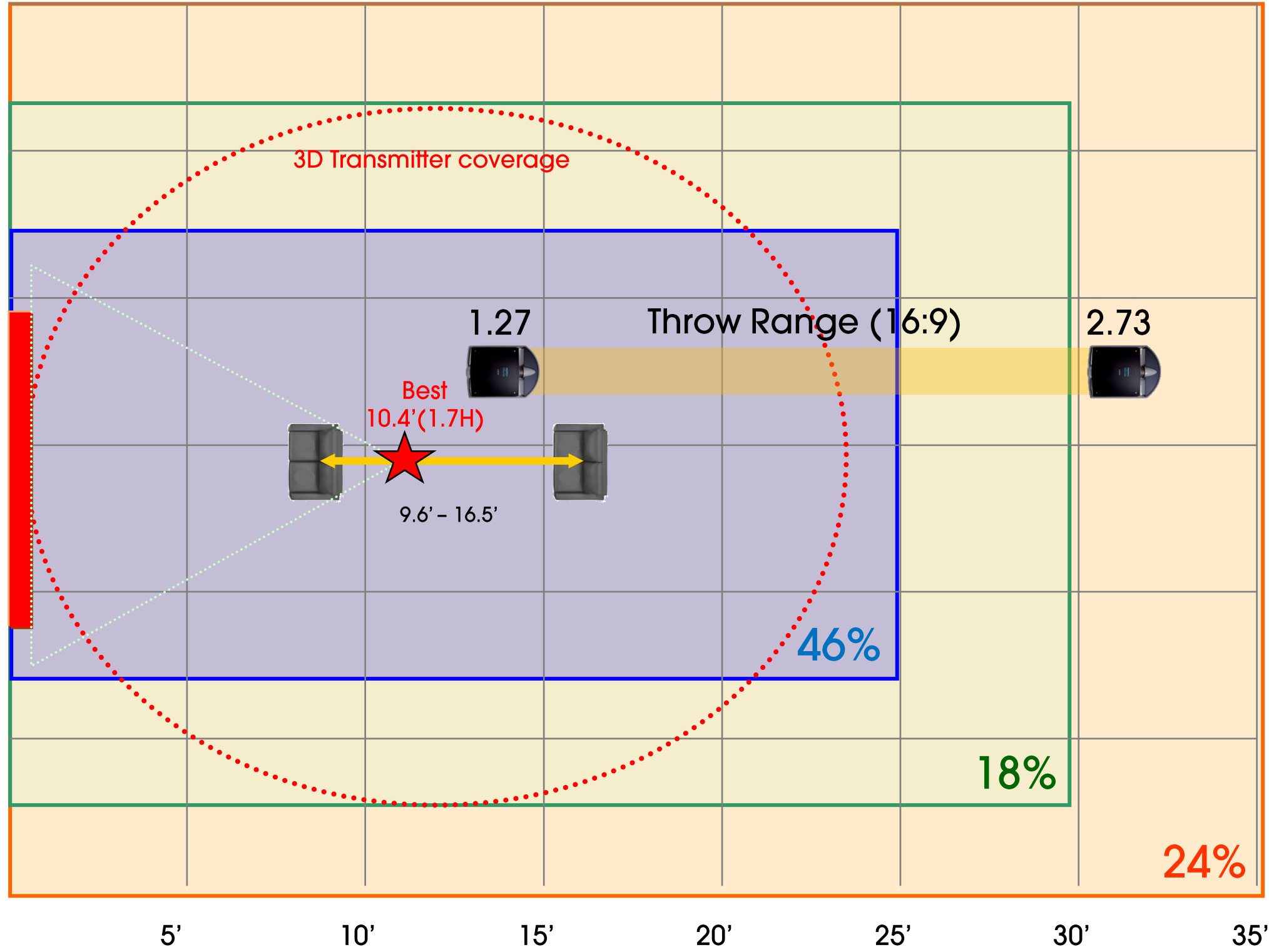
# VPLVW1000ES: Throw Distance

**16:9 / 150"**

W: 10.9'



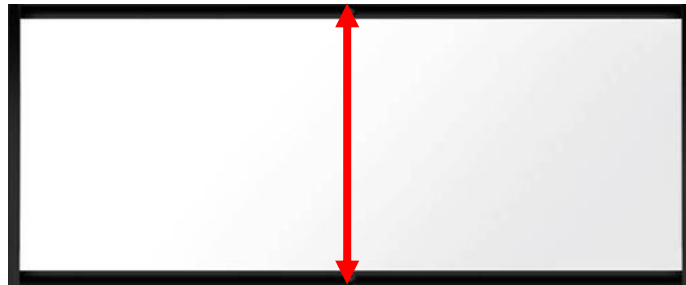
H: 6.1'



# VPLVW1000ES: Throw Distance

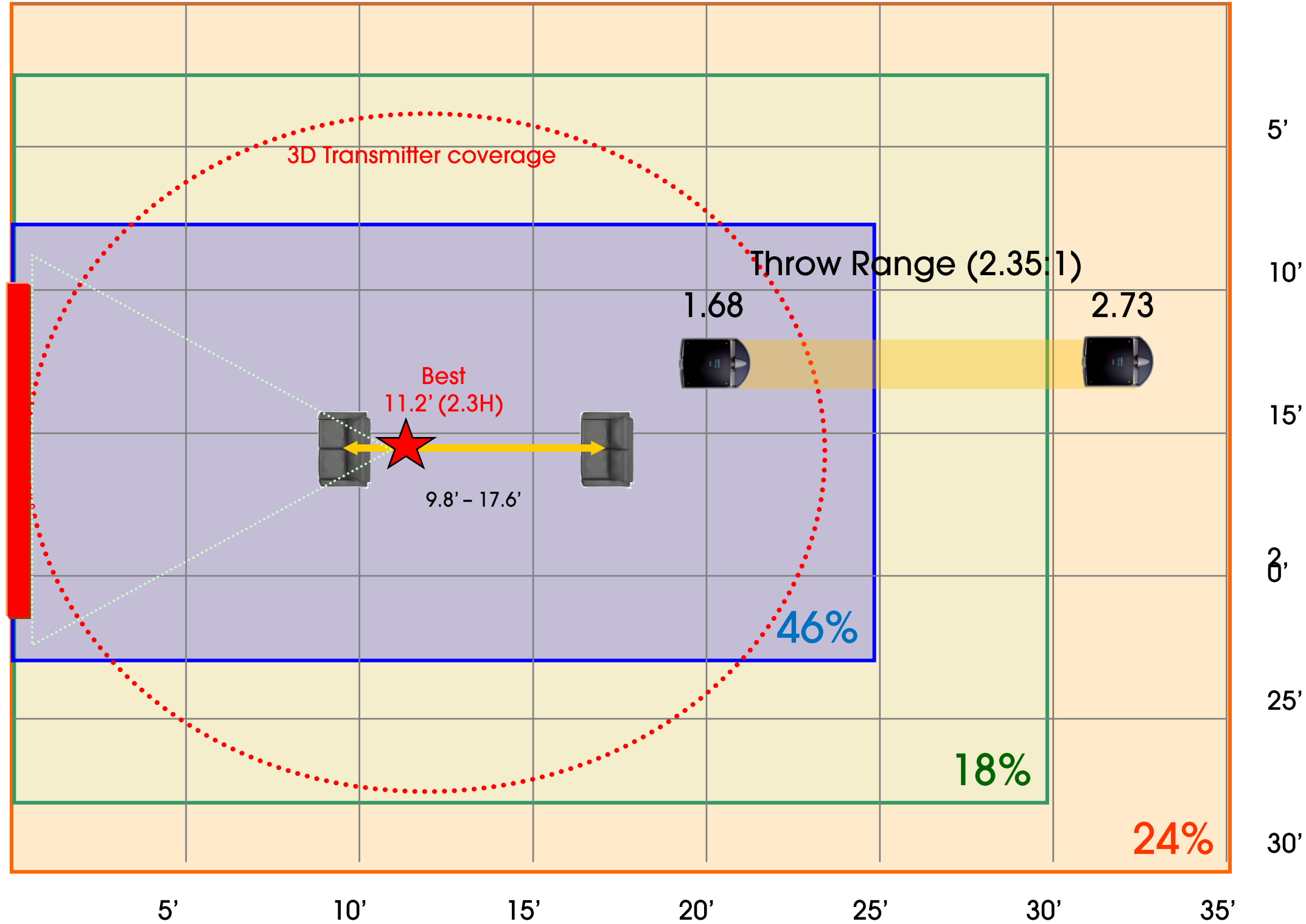
**2.35:1 / 150"**

W: 11.6'



H: 4.9'

For Picture  
Position zoomed  
anamorphic

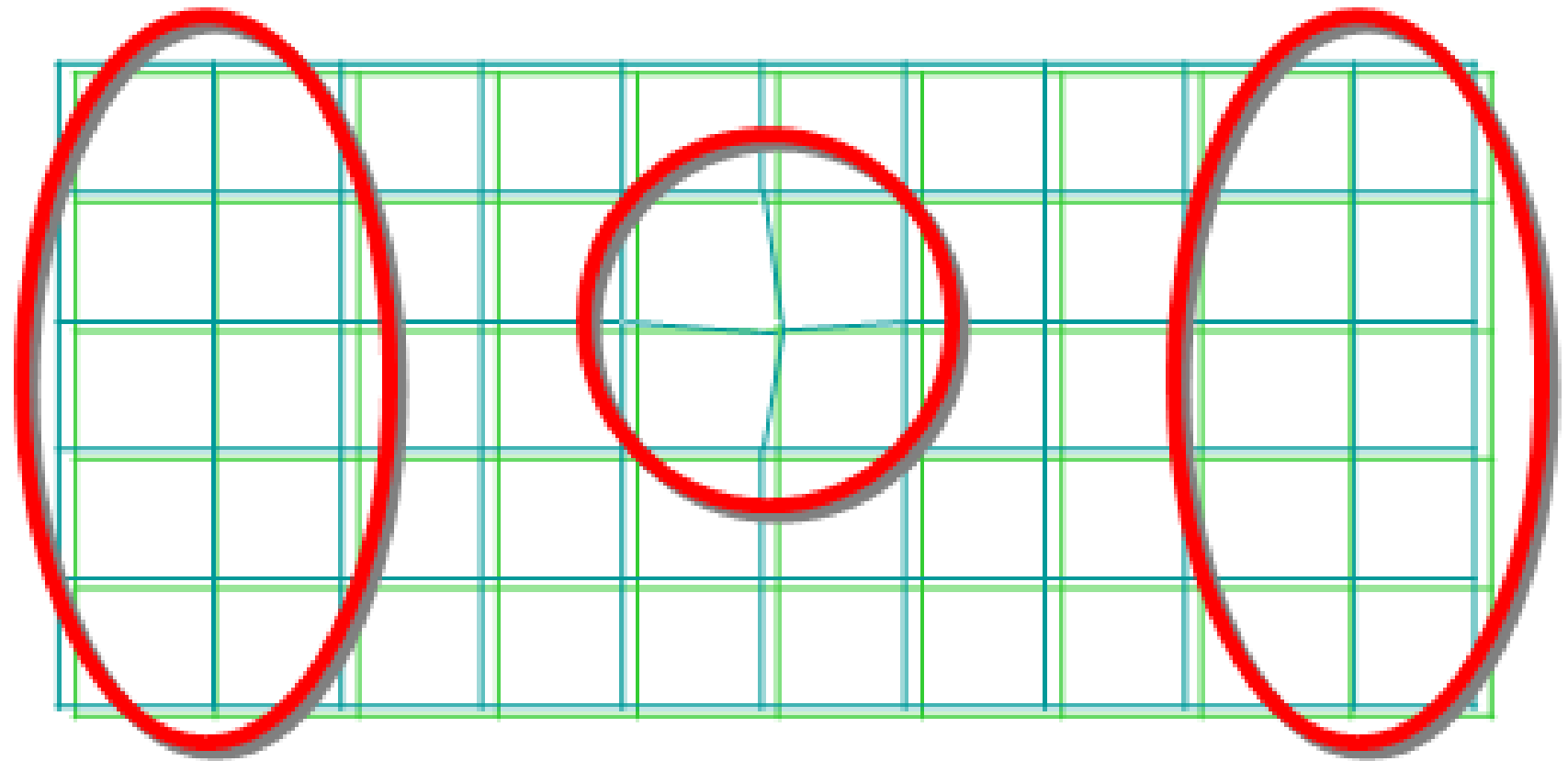


# VPLVW95ES & VPLVW1000ES: Zone Picture Alignment

## 144 Zone (95ES) and 153 Zone (1000ES) Convergence

Adjustable range of Panel Alignment function

This feature allows you to sharpen edges by alignment of Red & Blue pixels to Green



Zone Panel Alignment

144/153 zone adjustments

20 (95ES) / 30 (1000ES) steps of 1/10 pixel

# Sony ES *Support*



# ES Market Training Specialists

marketstar  
Proven & Award-Winning  
Created by D.R. 50011

Seattle  
San Francisco  
Los Angeles  
San Diego  
Salt Lake City  
Denver  
Chicago  
Dallas  
San Antonio  
Houston  
Atlanta  
Tampa  
Orlando  
Miami  
New York  
DC

Chris Brunhaver  
Seattle

Matt Griesert  
Bay Area

Jayson Savage  
LA/San Diego

Andrew Turner  
Dallas

Ben Cano  
Chicago

Mike Miller  
Atlanta

Carlos Giraldo  
Florida

Jorge Ocampo  
New York

Simon Beaumont  
Washington DC



# ES Market Training Specialists



Product Experts

Located in San Diego, CA

CEDIA trained

Control4 & AMX Certified Installers

Full lab of equipment for testing & troubleshooting

**[installsupport@am.sony.com](mailto:installsupport@am.sony.com)**

**1-866-924-7669**

**SONY**

make.believe