

Formovie Theater Set-up

System Components

Projector



Formovie

L206FGN

Theater Laser Projector

Mains Input IEC C5 Clover Leaf (Rounded), Power 350W, Standby 0.5W, Noise 28dBA
 LAN 100Mbps, WiFi 802.11abgnac, BT 5.0
 SPDIF Optical, 3.5mm Line Out, 2x USB 2.0 Type A, 3 x HDMI 2.1 (HDMI 3 eARC)
 DLP, Native 4k (3840 x 2160) @ 60Hz, 2800lm, Dolby Vision, HDR10+, HDR10, HLG
 0.233 to 1 Throw, 80 to 150 inch Picture, 8-Point Keystone, 16:9 Aspect Ratio
 Contrast 3000:1, ALDP 4.0, 107% of BT.2020, ALLM (1080p/240Hz : 34ms), MEMC
 B&W Sound, 15W x2, Speakers: Full Range x 2, Tweeters x2
 Dolby Atmos, Dolby Audio, DTS-X, DTS-HD
 Android TV 11.0, Google Play, Chromecast, Google Assistant, Far-field Voice Control
 ARM Cortex-A55 (MT9629) CPU, 2GB RAM, 32GB EMMC Storage

Screen

VividStorm

VMSLUST120H

Pro S

Drop-down Electric Slimline Tensioned Screen for UST 4K & 8K Laser Projectors
 120" Grey ALR (CLR from above), Gain 0.6, Viewing Angle 170°, for Projectors of ≥1,800lm

Sound

AVR

Denon

AVC-X3800H

9.4 180W per channel Receiver

7.1.2

Surround

Bowers & Wilkins

M-1 (x7)

Mini Theatre

7.1.2

Sub

Bowers & Wilkins

PV1D

Subwoofer

7.1.2

Atmos

Monitor Audio

C180 (x2)

In-Ceiling Speakers

Media Players

nvidia

P2897

Shield TV Pro (2019)

Amazon

Fire TV Stick 4k Max

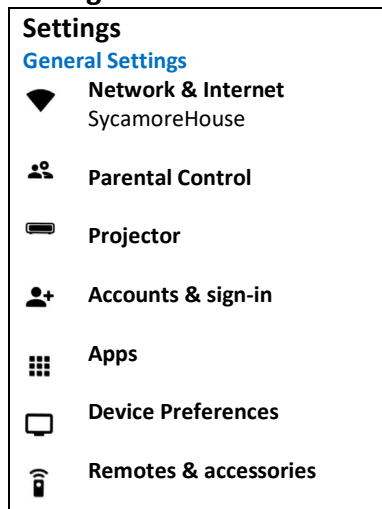
HTPC

Custom Build HTPC

Tips

- The mains lead is a C5 Clover Leaf, but the **rounded** kind rather than squared – the squared will not fit in the projector mains socket.
- **Long-press the projector remote power button to power off the projector and trigger the USB dongle to close the screen** (with the supplied free gift USB dongle plugged into the projector USB port).
- **A Japanese coffee table works well as a low-height projector stand**; Amazon has many reasonably priced examples.
- **It's worth calibrating the projector**, for accurate colour map and greyscale.


Settings Menu




To access the settings menu, click the remote gear button.
 If using a HDMI input, then scroll along to 'Settings'.

Settings > Network & Internet


Network and Internet


Wi-Fi 


Available networks

 **SycamoreHouse**
Connected

Other Options

Scanning always available 
Let Google's location service and other apps scan for networks, even when Wi-Fi is off

WoW 
Wake on wireless network

WoL 
Wake on LAN

Ethernet

Not connected

Proxy settings

IP settings

There is a 100Mbps ethernet port and WiFi 6ac onboard
WiFi will therefore be the much faster connection

Enter the WiFi details to connect to the WiFi network.

DHCP Use the Router to allocate a static IP address to this MAC if desired.

Basic Settings and System Update Check


Before doing more set-up, it's worth setting the date, time, language and installing any system update that is available – just in case a factory reset is required after a system update.

Settings > Accounts & sign-in

Enter Google account details.


Settings > Device Preferences > Date and time

Automatic Date and time
Use network-provided time

Use 24-hour format 

Set now to avoid returning to this menu if factory reset is not required

Settings > Device Preferences > Language

 **English (United Kingdom)**

Settings > Device Preferences > About

System Update

Check for a software update; install any available

Settings > Apps







Install Kodi, Prime Video and VLC media player.

Use the Media Players for all other apps as they have more UK content (e.g. TV channels) and performance.

Once the system software is the latest available, continue with the rest of the projector set-up.

Settings > Projector

Projector

-  Keystone Correction
-  Focus
-  Projection Method
-  Brightness Mode
-  Infrared Body Sensor
-  DolbyVision

Keystone Correction

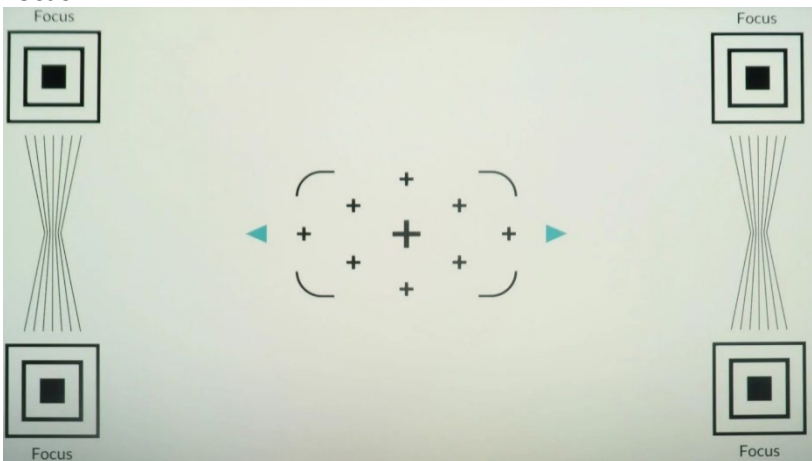
Keystone Correction can degrade the image resolution, so ideally, physically adjust the projector itself to align with the screen. In practice some degree of Keystone Correction may be required.

Ensure the physical set-up is the best it can be:

- Ensure that the screen is parallel, flat and level on the wall
- Place the projector, on the stand that it will be on, square and plum in front of the screen
- Set Infrared Body Sensor to Off, so the laser stays on during projector alignment
- Adjust projector & stand position so the bottom of the image is straight and parallel with the screen bottom edge; then pull in or out to match the image width to the screen width. Ignore the image sides and top at this stage.
- Then adjust the front left and right projector feet to tilt the projector until the image is square and matches the screen. If necessary, twist the projector a little and/or move it slightly in or out to get the image perfectly aligned.

Now check that the Keystone Correction image circles are indeed circular and that the horizontal lines are straight and level. If necessary, only after the above, tweak the image using the Keystone Correction adjustments.

Focus



- **Let the projector warm up for 15 to 30 minutes**
- Note that it can be difficult to get very crisp focus in the top left corner with this projector
- Press and hold the remote left and right buttons while looking at the word **Focus** in the upper corners of the image
- Look within the word **Focus**, in the black area; whilst pressing the remote left or right button, you will see some colour bleed into the black area
- Closer to optimal sharpness, shows the blackest and the least colour bleed, along with the sharpest edges of the word **Focus**.

Then press and release the remote left and right buttons to fine tune the focus at this point.

Projection Method

- Front Projection - Desktop
- Rear Projection - Desktop
- Front Projection - Ceiling Mount
- Rear Projection – Ceiling Mount

Select according to projector mounting position.

Brightness Mode

- Office Mode
- Viewing Mode
- Night Mode

Use this for displaying HDR and Dolby Vision to get the brightest image possible.

5% less bright than the office mode.

Can still work for HDR but may be more suited for SDR viewing, e.g. broadcast TV.

35% less bright than the office mode and 30% less bright than the viewing mode. Perhaps use in a light-controlled room projecting onto a standard white screen.

Infrared Body Sensor

- On
- Off

So that the laser dims to avoid eye damage when anyone gets near the projector.

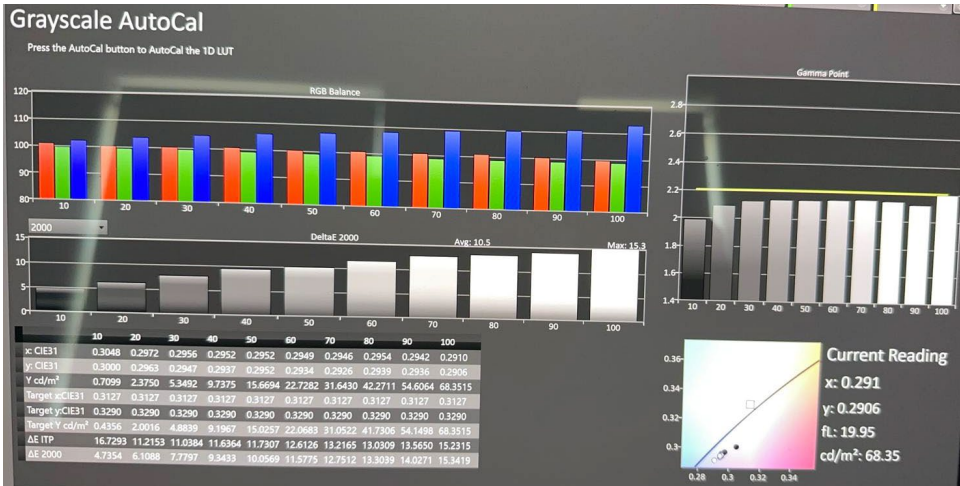
DolbyVision

Screen Size	120
Screen Gain	0.6

VividStorm ALR screen is 120"

VividStorm ALR Screen Gain is 0.6

Uncalibrated Performance

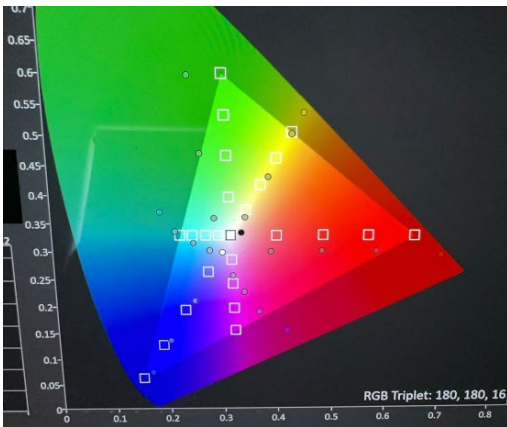


Out of the box Greyscale

The RGB Balance should be flat – equal Red, Green, Blue levels.

The Gamma should also be flat.

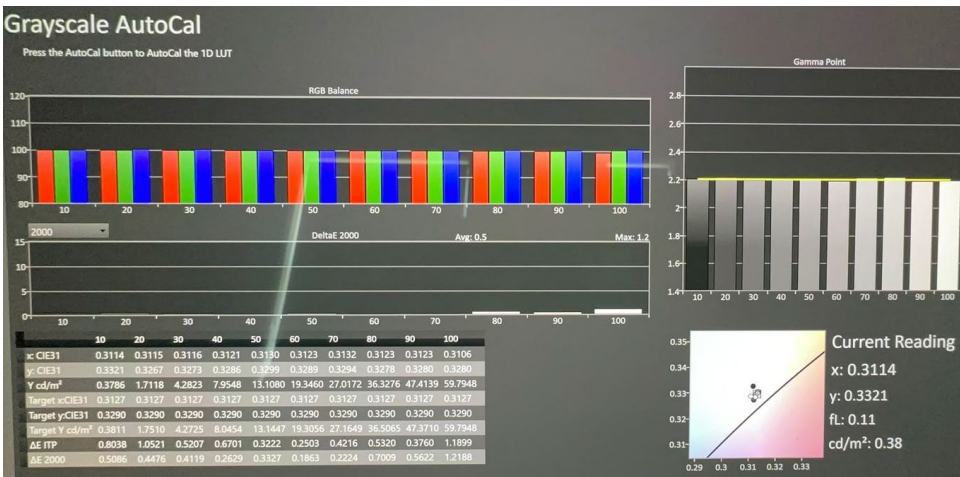
The picture, whilst not terrible, was over-saturated and showed too much blue in particular.



Out of the box Colour Tracking

The dots should be inside the squares...

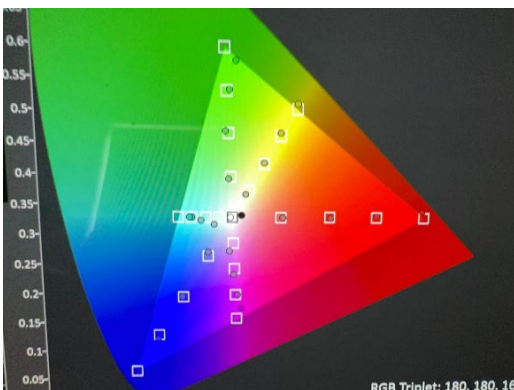
Calibrated Performance



Calibrated Greyscale

The RGB Balance is now flat.

The Gamma is now flat.



Calibrated Colour Tracking

The dots are mostly inside the squares.

All the following settings are the calibrated settings.

Device Preferences

About

System update

Device name

Projector

Name on ethernet network

Factory reset

Status

Serial Number can be found here

Date and time

Automatic Date and time

Use network-provided time

Set time zone

GMT+01:00 British Summer Time

Use 24-hour format



Timer

Language

Keyboard

Gboard

Inputs



English (United Kingdom)

Connected Inputs

HDMI 3

AVR

AVR to HDMI 3 as this one is eARC so projector controls AVR via HDMI

HDMI 2

HTPC

HDMI 1

Shield

HDMI commands are routed to the AVR

Consumer Electronic Control (CEC)

HDMI control

Allow the TV to control HDMI devices



Device auto power off

Power off all HDMI devices with the TV



TV auto power on

Power on the TV with HDMI device



[Fire TV Max in AVR HDMI port]

HDMI EDID version

Auto EDID

CEC device list

CEC device list

HDMI3: Fire TV Stick

HDMI3: AVC-X3800H

HDMI1: SHIELD

Power

Sleep timer

off

Switch off timer

off

No signal auto power off

Off

Auto sleep

8 hours

Picture

This is where most of the calibration settings are entered (see later).

Sound by Bowers & Wilkins

System sounds



Speakers

On

Leave On, even when using Bypass

Speaker Delay

0

eARC

Auto

Digital output

Bypass

Using AVR and external speakers

Digital output delay

0

DTS DRC



Using AVR for any adjustment desired

Sound Optimizer

AC4 Dialogue enhancer

Off

Leave any processing to the AVR

Reset to default

Storage

27GB total internal storage

Home screen

Set desired App order

Google Assistant

Chromecast built-in

Screen saver

'Backdrop' after 1 hour of inactivity

Energy saver

Turn off display after 24 hours

Location

Use WiFi to estimate location

Usage & diagnostics

Off

Accessibility

Restart

Device Preferences > Picture

The picture menu and some sub-menus change depending on if a SDR or HDR video signal is being displayed, and the settings may differ.

SDR		DVR
Picture Picture mode User Dolby vision notification <input checked="" type="checkbox"/> Brightness 50 Contrast 50 Saturation 82 HUE 0 Sharpness 10 Gamma Dark Colour temperature Display mode Automatic Advanced settings Colour tuner 11 point white balance correction Reset to default	Only for HDMI 1-3	Picture Picture mode User (HDR10) Dolby vision notification <input checked="" type="checkbox"/> Brightness 50 Contrast 50 Saturation 50 HUE 0 Sharpness 10 Gamma Middle Colour temperature Display mode Automatic HDR On Advanced settings Colour tuner 11 point white balance correction Reset to default
		Only for HDMI 1-3 Not for DV

Note that the HDMI inputs do not carry over the picture settings from one port to the next and must be manually copied for each.

Picture Mode

There are sixteen picture modes, seven are used for both SDR and HDR.

User

The preferred mode as it offers the most options and image adjustment.

Standard

Essentially the same as the user mode for colour temperature and grayscale and colour gamut. Very slightly brighter than user mode.

Vivid

Similar brightness in all laser power modes as the previous two, user and standard and slightly higher by about the same percentage. Boosts contrast to 60 and saturation to 70 which causes its vivid oversaturated appearance, hence the name.

Sport

Sport mode has the same brightness as vivid mode but the contrast is only boosted to 55 and saturation to 60.

The main differences between all these different modes are the advanced features that are activated by default when you select them.

Movie

This mode changes contrast and saturation to emulate more of a film look while also changing different default special features under the advanced menu which all appear to go disabled which allows for that dimmer more cinematic look, mainly aimed at dark rooms. Contrast and saturation are dropped to 40. Laser brightness drops by 300 to 400 lumens.

Game

The same laser brightness as movie mode but the contrast and saturation drop back to their normal values of 50. Disables as much processing as possible to reduce lag time when gaming. Activates the game mode under 'Advanced settings' and allows ALLM (Auto Low Latency Mode) to be set, whilst PC mode and De-counter and MEMC are greyed out.

Child

Boosts brightness even higher than the other brightest mode, Vivid, by about 60 lumens.

Drops the contrast from 50 to 45 and is the only mode that starts out with dark gamma setting and a colour temperature as standard instead of warm. Other advanced video options are also changed and Game mode and PC mode are greyed out.

Finally, two Dolby Vision modes, available and affecting the image only when the projector is receiving a Dolby Vision signal.

Dolby Vision Bright

Dolby Vision Dark

Many features are disabled in Dolby Vision mode but some things can be changed and any differences are shown in this document.

Dolby Vision Dark changes the curve used for its HDR rendering. When showing a Dolby Vision signal, the lumens drop from 2950 peak measured to 1,500 to 1,600 in the brightest Office mode.

All of the picture modes can be configured in the same manner.

Brightness

- Brightness raises the black floor of the image, from the bottom up and doesn't affect the peak whites as the name might imply.
- Use it to bring up details in the shadows, to be seen the way the content creator intended.
- Set using a PLUGE pattern which has a 0% black background with three black patches, one below, one at 0%, and one usually about 2% above the black level (found online for free). Set the brightness so that the 2% brighter than black patch can just barely be seen. Should be close to the default of 50, not more than 10 up or down if that. An extreme level suggests something else is wrong.

Contrast

- Contrast adjusts the peak white level. It basically pulls everything up from the peak whites while the black level is the baseline. The black level and contrast can sometimes affect each other, so go back-and-forth between them to get both just right.
- Use it on initial setup to set peak white level for optimal picture quality without over blowing the highlights.
- Set using test patterns with a peak white background with two patches, one just below peak white and one just above it. Set the contrast at the peak white of the video signal and at the parameters that it calls for in that particular video mode. SDR is usually set to a peak of 100 nits; HDR is usually set to clip peak white at 1000 nits as the most common format, but may also be set it to clip at levels like 4000 nits or higher, based on what the display is calibrated to and the mastered level of the HDR source.

Saturation

- Saturation adjusts the intensity or amplitude of the primary and secondary colours all together at the same time.
- Use it to set the right colour level for each video standard during initial setup.
- Set using various test patterns, sometimes along with a blue filter or turning the monitor to blue only mode if it has it.

Hue

- Adjusts the hue or tint of all the colours combined. As hue is adjusted things like faces go from normal looking to red going one way or normal looking to green going the other way. Adjust it while looking at a field of green grass and notice it go from extremely saturated and heading towards a cyan or blue colour or the grass appear more yellow going the opposite way.
- Use it to set the right colour phase/hue/tint for each video standard during initial setup using various test patterns and a blue filter such as with a split colour bar signal. Hue and saturation are usually set at the same time since the test pattern and blue filter are needed for both and sometimes, they can interact with one another just as brightness and contrast can.

Sharpness

- Sharpness is supposed to increase the crispness of the entire image, but what really happens is it just gives false outlines on edges of objects to make the image appear sharper. Setting this too high will result in a white outline around objects.
- Use judiciously. Sometimes it can help with older, lower resolution images to help them appear sharper with more depth and detail, but be sure not to use too much because then the image will take on a very digital, over enhanced looking appearance and it can actually increase the appearance of noise and natural film grain, looking very unnatural.
- Set sharpness using a test pattern with a solid grey background at around 50% grey along with some black horizontal and vertical geometry lines and circles. As sharpness is adjusted start to see the white edge outlining the black lines. Set sharpness to where there is a clean transition from the black line to the grey background with no white ghosting or outlining in between the edges of the black line and the grey background.

SDR

Gamma

- Dark
- Middle
- Bright

HDR

Gamma

- Dark
- Middle
- Bright

- Gamma changes the luminance tone of the image based the brightness and contrast settings. Those are the endpoints and baseline that stay the same when adjusting gamma but everything in between can change. Going down in power law gamma numbers the image gets brighter; going up the image gets darker. The gamma used for video is usually 2.2 or 2.4 for SDR video and an absolute gamma is used for HDR based on the ST.2084 standard.
- Gamma on displays and projectors is an electro optical transfer function or EOTF and is the inverse of what a camera does which is an optical electro transfer function or OETF. In the camera a physical and visible image of reflected light and colours goes through the lens, is captured by the imager chip and converted into an electrical signal. Then it is stored or sent through wires or RF to a display at the end of what could be a very long signal chain. The display converts the electrical signal back into visible light and colours based on the technology being used. Due to how the technology was used on original display devices, which used CRTs, this nonlinear Gamma was created to replicate the image on screen as close as possible to that seen by the camera.
- Some form of gamma is always required to recreate the image on the screen. Which is used depends on the standard of the video playing. Since the PQ absolute gamma curve of HDR doesn't change based on the brightness of the display, tone mapping is used which remaps the colours and brightness from absolute values in the HDR video down to the values that the display can render. For a SDR video signal, this is not an absolute Gamma, so as the display and how much brightness it has changes, the power law gamma is not absolute, so it can be scalable to match the brightness that is available.
- Usually in bright rooms use a lower gamma value of 2.2, 2.0, or even 1.8. In darker and more light controlled rooms use higher values such as 2.4 and in the case of true DCI use 2.6.

SDR

Colour temperature

- User
- Cool
- Standard
- Warm

Greyed out

Colour temperature

Colour temperature

User

Red Gain	0
Green Gain	0
Blue Gain	0

HDR

Colour temperature

- User
- Cool
- Standard
- Warm

Greyed out

Colour temperature

Colour temperature

User

Red Gain	0
Green Gain	0
Blue Gain	0

- Colour temperature adjusts the mixture of the three primary colours, red, green and blue, to present the image's temperature or what appears to be the overall hue of the image on the screen. A cooler colour temperature mixes bluer and it makes whites appear much whiter and starts to wash out the image if it is set too high. A warmer colour temperature appears redder. The colour temperature reference for video is standardized as 6500K or D6500. Warmer temperatures go below that such as 5000K and cooler temperatures are ones that are above at values like 9300K.
- Use on initial set up to make the image appear as natural as possible without making things like faces too red or making skies and clouds whiter than they are intended to be.
- Colour temperature will be different for every environment and system. So where exactly to set it will be slightly different for the particular environment (e.g. wall colour, brighter or darker) and equipment (e.g. screen material). Set it using a test pattern generator or other test pattern source along with calibration software, e.g. Portrait Displays CalMAN, paired with a decent colorimeter or spectrophotometer.

SDR

Display mode

- Automatic
- Full
- Super Zoom
- Unscaled
- 4:3
- Movie expand 14:9
- Movie expand 16:9

HDR

Display mode

- Automatic
- Full
- Super Zoom
- Unscaled
- 4:3
- Movie expand 14:9
- Movie expand 16:9

This menu is only present when the video signal is via one of the HDMI ports.

Most of the “Advanced settings” can be set differently for SDR and HDR (and separately again for Dolby Vision HDR) and also for each HDMI input.

SDR	HDR
<p>Advanced settings</p> <p>DNR Off</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input checked="" type="radio"/> Off <input type="radio"/> Low <input type="radio"/> Middle <input type="radio"/> Strong <input type="radio"/> Auto </div>	<p>Off</p> <ul style="list-style-type: none"> • Digital Noise Reduction, designed to reduce digital noise image artifacts, e.g., caused by compression and transmission. • Use to reduce “snowflake-like noise”. • Off for mastered digital content such as disc or streaming movies. If any noise is noticed in the image when watching video such as cable or broadcast TV, try Low or Middle or see what the Auto setting does.
<p>MPEG NR Off</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input checked="" type="radio"/> Off <input type="radio"/> Low <input type="radio"/> Middle <input type="radio"/> Strong </div>	<p>Off</p> <ul style="list-style-type: none"> • MPEG (Moving Pictures Expert Group) Noise Reduction reduces the noise created when the original, higher quality video signal is sent through equipment which compresses the signal down to a smaller size for various broadcast, transmission or storage needs. • Use to where text edges have a blocky appearance, especially when the video is in motion. • Off for mastered digital content such as disc or streaming movies. If any MPEG noise is noticed in the image on text or object edges, try setting it to the Low or Middle options to see what these settings do to fix the noise. Use sparingly; a high setting will make the image appear flat and smeared.
<p>Max Vivid Off</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input checked="" type="radio"/> Off <input type="radio"/> On </div>	<p>Max Vivid Off</p> <ul style="list-style-type: none"> • Adjusts the dynamic contrast to the maximum to make the brighter parts of the image brighter and the darker parts darker. This setting also increases some colour saturation. • Use to increase perceived contrast and for richer colours to give a more dynamic look. Side effects can include clipping white highlights or crushing some of the black shadow details which are close to 0% video black. • Off unless wanting a more contrasted image with over saturated colours even if this makes the image appear more unnatural. Greyed out for HDR.
<p>Adaptive luma control Off</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input checked="" type="radio"/> Off <input type="radio"/> Low <input type="radio"/> Middle <input type="radio"/> Strong </div>	<p>Off</p> <ul style="list-style-type: none"> • Automatic, per scene luminance adjustment feature, adjusting each scene’s luminance, aka overall brightness, based on the scene content. • Use to increase the appearance of perceived contrast on a scene-by-scene basis, to make the image have a more contrasted, dynamic appearance. This can also cause some black crush and peak white clipping artifacts. • Off unless wanting to have more perceived image contrast. Some scenes may not be affected.
<p>Local contrast control Off</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input checked="" type="radio"/> Off <input type="radio"/> Low <input type="radio"/> Middle <input type="radio"/> High </div>	<p>Off</p> <ul style="list-style-type: none"> • Changes contrast in specific areas of a scene, making objects adjacent to each other appear to have more contrast between them, giving a more 3D picture. • Off to avoid other image artifacts caused by this processing.
<p>Flesh tone Off</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input checked="" type="radio"/> Off <input type="radio"/> Low <input type="radio"/> Middle <input type="radio"/> High </div>	<p>Off</p> <ul style="list-style-type: none"> • Brightens colours in the range of human skin tones to make them appear more natural when these are too saturated and have a reddish tint to them. • Use if viewing SDR video with Colour Space set to Auto or OFF, which over saturates colours, this will brighten them making them appear less saturated. • Off and rely instead on correct calibration.
<p>DI film mode Auto</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <input type="radio"/> Off <input checked="" type="radio"/> Auto </div>	<p>Auto</p> <ul style="list-style-type: none"> • Takes a 50i or 60i video and recreates the original 24, 25 or 30p signal. • Use for broadcast TV, where the signal sent is 50 or 60 frames per second, to bring back the original 24 frames per second film cadence. • AUTO to detect a 50Hz or 60Hz signal and apply “3:2 Pull-down”.
<p>Blue Stretch</p> <div style="text-align: center;"> <input type="checkbox"/> </div>	<ul style="list-style-type: none"> • Increases blue in all the associated colour mixtures, giving the image a cooler tone with deeper looking blues. • Use if looking to have a more pleasing tone to the eye, even if not correct. Perhaps a good effect for SDR video, especially outdoor scenes. • Off for the most accurate rendering of video.

Game mode ●

ALLM

PC mode ●

De-counter
Off Off

Off
 Low
 Middle
 High

MEMC

MEMC

Effect
Low

Demo Partition

All

Demo

Effect

 Off
 Low
 Middle
 High

HDMI RGB range
Auto Auto

Auto
 Full
 Limit

Low blue light
Off Off

Off
 Low
 Middle
 High

Colour space
On Colour space
Auto

Auto
 Off
 On

DV
Off

- Defeats as much internal video processing as possible for the lowest lag and the most responsive gaming.
- Use when playing a video game for the fastest response between performing an action with the game controller and that action showing on the screen.
- Off unless playing a video game. Auto selected in GAME Picture mode.
- Greyed-out in modes that aren't able to defeat their process enough to present the image mode the way it is intended to be presented.
- Not greyed out for HDMI 1-3.
- **Auto Low Latency Mode** enables the best latency setting to be automatically set for a smooth, lag-free viewing experience. ALLM allows a gaming console or PC signal to the projector to causes it to automatically switch to its low-latency and low-lag Game mode for playing video games.
- Visible only when video is via HDMI 1-3.
- Bypasses normal picture features used for video content such as colour, dynamic contrast, sharpness and other functions and the original signal from the PC is displayed for the best graphic and font reproduction possible without any decrease in the image fidelity.
- Use when connected to a PC or laptop.
- Off unless connected to a PC.
- Greyed-out when the input signal is not RGB or YUV 4:4:4.
- Not greyed out for HDMI 1-3.
- Dithers to smooth the transition between colours (colour banding).
- Use if playing an 8-bit video source and seeing banding artifacts, e.g., in sky scenes with large areas of blue in varying saturation, shades and hues.
- Off unless seeing banding or "ribbons" in the image.
- **Motion Estimation, Motion Compensation** helps smooth out the motion seen on screen, namely from 24Hz frame rate movie sources which can have a stutter or judder to their motion, mostly horizontal during pans, etc.
- Use any time the motion in video content exhibits judder.
- Off for the original frame rate and look when watching 24p movies. Otherwise start with the lowest setting and work up until satisfied. An aggressive MEMC leads to "Soap Opera Effect" (SOE), like watching a soap opera on TV instead of the more cinematic 24p seen in theatrical movies.
- Auto, Full (0-255 for 8 bit) or Limited (16-235 for 8 bit) video ranges, depending on the source video.
- AUTO so that it automatically switches between the proper format depending on what is being sent, e.g. a PC signal or a video signal.
- Not greyed out for HDMI 1-3.
- Reduces image blue light for a less cool light and colour temperature.
- Use it to make the image appear closer to reference white balance, grayscale and white point of D65.
- Off and rely instead on correct calibration.
- Changes the Colour Space / Colour Gamut depending on the video format, selecting between the colour standards assigned to different video formats such as SDR, HDR and Dolby Vision.
- On for SDR so the colour gamut points fall closest to their reference gamut points with SDR video input. In this setting, the Rec709 Colour Sweeps can now be calibrated throughout the gamut range.
- Greyed out for HDR signal.

Color tuner

Enable



HUE

Saturation

Brightness

Offset

Gain

- The Formovie Theater colour management system, or CMS. It corrects colour errors and allows setting to their respective reference points on each standard's colour gamut chart. Essentially a colour saturation, hue/tint and brightness control for each primary and secondary colour, unlike the main menu controls which control these colours as a group.
- Use on initial set-up to make the screen image colours appear natural or to the creator's intent.
- Use a colour meter and software and ensure the projector is in the same colour space mode standard as the video source, such as BT.709, DCI-P3 or BT.2020 (set in "Colour Space").

SDR**HUE**

Red	45
Green	52
Blue	50
Cyan	56
Magenta	42
Yellow	50
Flesh Tone	50

Saturation

Red	53
Green	44
Blue	34
Cyan	50
Magenta	50
Yellow	31
Flesh Tone	45

Brightness

Red	50
Green	50
Blue	50
Cyan	50
Magenta	50
Yellow	50
Flesh Tone	50

Offset

Red	50
Green	50
Blue	50

Gain

Red	50
Green	50
Blue	50

HDR**HUE**

Red	50
Green	50
Blue	50
Cyan	50
Magenta	50
Yellow	50
Flesh Tone	50

Saturation

Red	50
Green	50
Blue	50
Cyan	50
Magenta	50
Yellow	50
Flesh Tone	50

Brightness

Red	50
Green	50
Blue	50
Cyan	50
Magenta	50
Yellow	50
Flesh Tone	50

Offset

Red	50
Green	50
Blue	50

Gain

Red	50
Green	50
Blue	50

11 Point White Balance Correction

- Corrects each white level value at 11 points along the grayscale setting the grayscale flat. It also corrects gamma.
- Use it to correct any colour temperature/white balance issues at any point along the range which aren't falling into their respective reference points after setting the initial basic 2-point white balance or Colour Temperature. This will also correct the gamma curve based on the value being used such as 2.0, 2.2, 2.4, etc.
- These settings are global across every picture mode, signal format and HDMI input.

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	5%
Red	50
Green	50
Blue	50

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	10%
Red	28
Green	38
Blue	35

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	20%
Red	54
Green	53
Blue	53

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	30%
Red	61
Green	60
Blue	59

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	40%
Red	61
Green	61
Blue	61

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	50%
Red	60
Green	58
Blue	57

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	60%
Red	64
Green	63
Blue	63

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	70%
Red	56
Green	55
Blue	53

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	80%
Red	52
Green	51
Blue	53

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	90%
Red	51
Green	51
Blue	52

11 point white balance correction	
Enable	<input checked="" type="checkbox"/>
Gain	100%
Red	50
Green	50
Blue	40