

SDR picture settings for

LG OLED55B7V (B7) UHD OLED TV

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This is a list of settings that I have obtained after performing a complete SDR gaming calibration on LG 55-inch OLED55B7V UHD OLED TV. Calibration was done for HDMI limited range YPrPb (component) 4:4:4 signal, white-point target D65, Rec.709 color space, gamma 2.2, peak luminance (18% window) 227 nits.

Application examples: PS3, Xbox, PS4 Pro SDR gaming (having the console's Video Output Settings all set to Automatic).

Measured input lag @1080p60 = **21.3 ms in Game picture mode** (around 88.0 ms in other modes)

Calibration done on unit with software version: 03.60.09, webOS 3.6.0-207 (dreadlocks2-dorrigio)

Settings applicable to other variants and screen sizes of LG's 2017 OLED TVs (B7, C7, E7, G7 and W7 series, 55", 65" and 77" variants) since on all of them same WRGB OLED panel and same picture processing is used.

Picture Mode Settings:

Picture Mode: **Game (will become Game (User) after adjustment)**

OLED LIGHT: **80** (for brighter picture increase, for dimmer decrease; adjusting this setting does not affect the rest of settings)

Contrast: **90** (white-level control, affects amount of details in highlight and luminance)

Brightness: **50** (black-level control, affects amount of details in dark areas)

Sharpness: **0** (or higher if you want TV to artificially make image sharper)

Colour: **60** (overall colorfulness of colors)

Tint: **0** (controls balance between colors)

Colour Temperature: **W50**

Advanced Controls:

Dynamic Contrast: **Off**

Dynamic Colour: **Off**

Preferred Colour:

Skin Colour: **0**

Grass Colour: **0**

Sky Colour: **0**

Edge Enhancer: **Off**

Colu Gamut: **Auto** (possibly that this setting will be greyed out and set at Wide – unfortunately, this will lead to oversaturated colours – check with new software updates if will be changed)

Gamma: **Medium** (for bright-room watching good option is Low)

Picture Options:

Noise Reduction: **Off** (enable if you want to reduce noise in picture)

MPEG Noise Reduction: **Off**

Black Level: **Low** (set to High if out device is sending full range 0-255 signal)

Real Cinema: **Off** (probably will be greyed out)

Motion Eye Care: **Off**

TruMotion: **Off** (probably will be greyed out)

Apply to all inputs (this will copy part of the options to other inputs (not including Expert Controls))

Reset (resets picture settings to the default values)

Aspect Ratio Settings: **16:9 or Original** with **Just Scan** engaged (to avoid overscan)

Energy Saving: **Off** (important to be disabled as it is active by default and greatly reduced screen luminance)

Eye Comfort Mode: **Off**

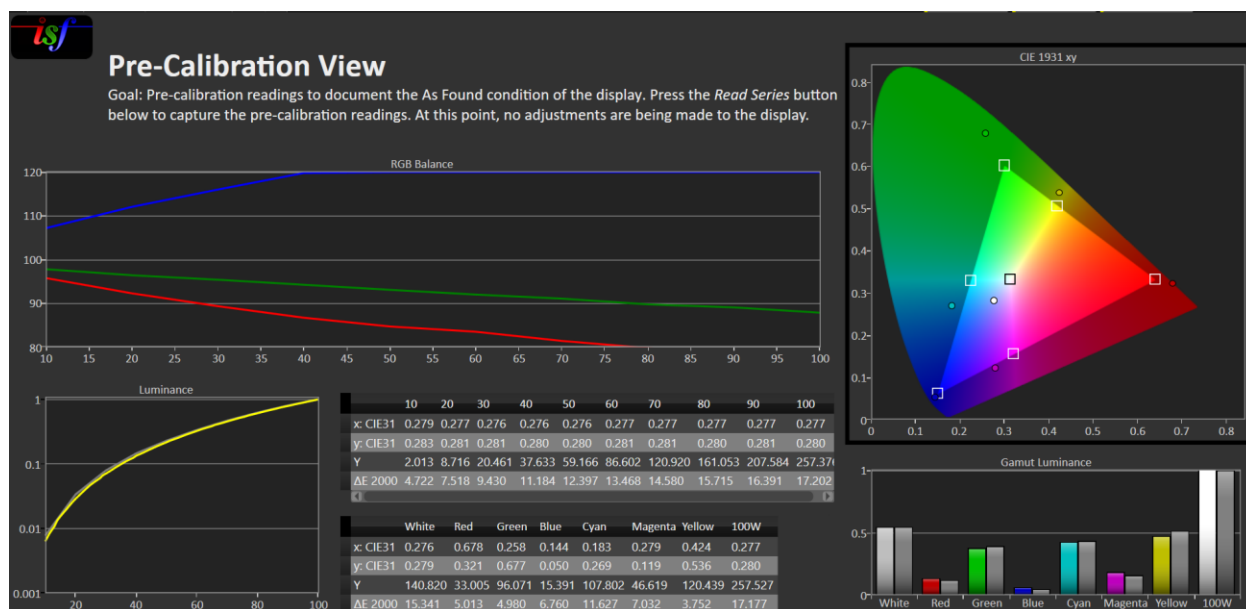
Picture Test (displays test image to verify if the display is working properly)

OLED Panel Settings

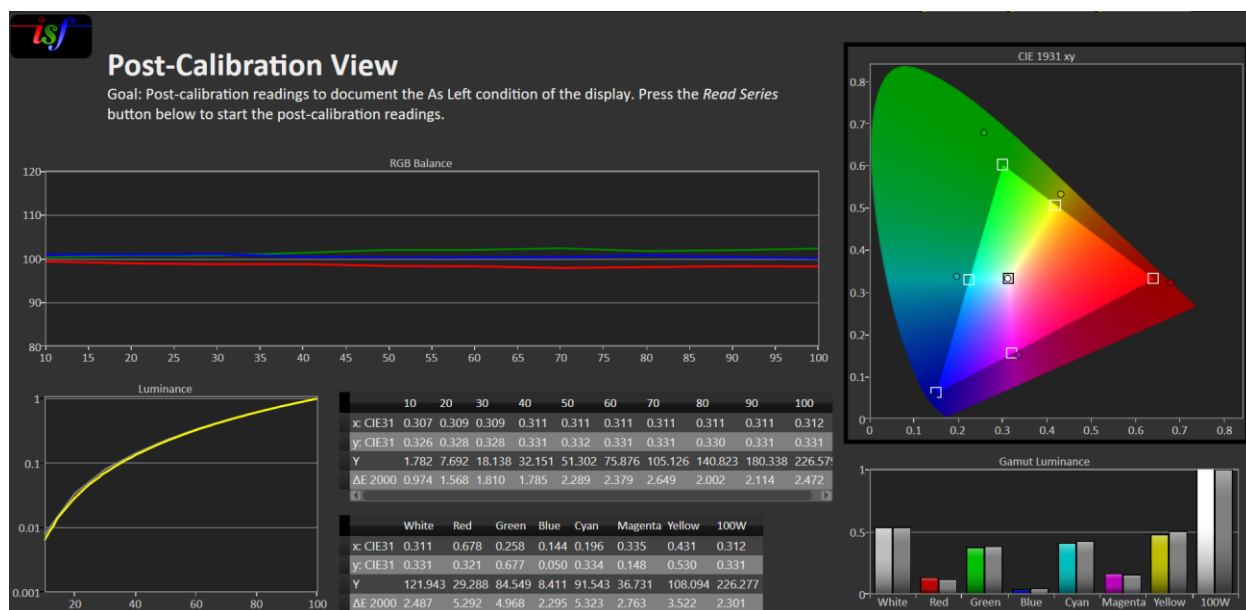
Pixel Refresher (1-hour long process that reduces image retention on the display – recommended to use if the TV will often display static images; can be performed when the TV is turned off)

Screen Shift: **enabled** (picture slightly shifts from time to time to prevent image retention)

Game before calibration:



Game after calibration:



Notes:

Most people never adjust picture on their TVs. They keep all settings at default values set by the manufacturer. In 99% of cases that kind of picture is very inaccurate when compared to industry standards and original video sources available to consumers (DVDs, Blu-rays, streaming, etc.).

Because of this, people are used to picture that has too many colors, that is very blue and with often very aggressive dynamics because of active Dynamic Contrast control and poorly set gamma. After calibration or even after they switch to more accurate picture presets like Cinema, Movie, Expert or Professional, many will complain how picture is too warm, yellow or red and simply not as impressive as before. Many will not like it at first and would prefer the old one.

To clear misunderstandings here is a video that explains this topic and anyone wanting to understand what makes better picture “better” should watch it:

<https://www.youtube.com/watch?v=-JEFu2M2tt8>

Disclaimer:

Settings are for reference only.

There is no guarantee that they will give you the best picture which is inline with industry standards and suitable for your viewing environment, especially regarding 2/20 point White Balance and Colour Management System controls. If you want guaranteed calibrated picture, hire professional TV calibrator (for example with ISF certificate, more info at <http://www.imagingsscience.com>).

For new calibration videos, tips and reviews, please visit my YouTube channel:

<https://www.youtube.com/c/tvcalibrationwithdarko>