

## Calibration Notes for 2017 LG OLED TVs

- When calibrating SDR, LG recommends using a test pattern generator set to output 18% area (or smaller) greyscale patterns with a black background
- When calibrating HDR, LG recommends using a test pattern generator set to output 10% area (or smaller) greyscale patterns with a black background
- During HDR calibration, disable 'Active HDR\*' (self generated dynamic tone mapping) by setting the 'Dynamic Contrast' setting in the Expert Picture Mode Settings to 'Off'
- After calibration, for best results, re-enable 'Active HDR\*' by setting the 'Dynamic Contrast' setting in the Expert Picture Mode Settings to 'Low'
- For Dolby Vision calibration, CalMan 2017 must be used, along with a test pattern generator compatible with Dolby Vision test patterns (e.g. Murideo Six-G)
- The 'Edge Enhancer' setting in the Expert Picture Mode Settings does not increase sharpness; the default 'On' setting is a bypass function, and is therefore recommended
- 20 HDR Calibration adjustment points have been provided for 540nit content, 1,000nit content, and 4,000nit content, shown in the table below. A test pattern generator should be set to output a grey patch at the appropriated Code Value for each adjustment point. If using CalMan, launch Levels Editor, and create a new set of levels using the percentages in the table below, then select this range for the greyscale adjustment in the settings tab of the HDR workflow.

# HDR Adjustment Points

Adjustment Point	540nit			1,000nit			4,000nit		
	FR CV	LR CV	%	FR CV	LR CV	%	FR CV	LR CV	%
1	0	64	0.0%	0	64	0.0%	0	64	0.0%
2	240	269	23.5%	277	301	27.1%	299	320	29.2%
3	314	332	30.7%	345	359	33.7%	372	382	36.4%
4	388	396	37.9%	412	416	40.3%	443	443	43.3%
5	419	422	41.0%	446	445	43.6%	480	475	46.9%
6	453	451	44.3%	480	475	46.9%	512	502	50.0%
7	468	464	45.7%	498	490	48.7%	528	516	51.6%
8	481	475	47.0%	513	503	50.1%	545	530	53.3%
9	498	490	48.7%	530	517	51.8%	562	545	54.9%
10	515	504	50.3%	544	529	53.2%	576	557	56.3%
11	529	516	51.7%	561	544	54.8%	594	572	58.1%
12	545	530	53.3%	574	555	56.1%	608	584	59.4%
13	561	544	54.8%	589	568	57.6%	625	599	61.1%
14	575	556	56.2%	604	581	59.0%	640	612	62.6%
15	591	570	57.8%	617	592	60.3%	658	627	64.3%
16	608	584	59.4%	632	605	61.8%	673	640	65.8%
17	623	597	60.9%	647	618	63.2%	690	654	67.4%
18	637	609	62.3%	663	631	64.8%	704	666	68.8%
19	653	623	63.8%	678	644	66.3%	718	678	70.2%
20	669	636	65.4%	693	657	67.7%	749	705	73.2%
21	1023	940	100.0%	1023	940	100.0%	1023	940	100.0%

\*LG's 'Active HDR' function analyses content on a frame by frame basis in real time, to determine metadata for the scene. This information is then used to adjust the HDR tone-curve to match the content, on a frame by frame basis.

Control of the 'Active HDR' feature is found in the 'Dynamic Contrast' setting in the Expert Picture Settings menu. In HDR mode, the Dynamic Contrast settings are defined as follows:

- Off - Active HDR Disabled / Contrast Enhancement Disabled
- Low - Active HDR Enabled / Contrast Enhancement Disabled
- Medium - Active HDR Enabled / Contrast Enhancement Low
- High - Active HDR Enabled / Contrast Enhancement High

The default setting of 'Low' is recommended for accurate content reproduction.