

LG 55B8 (OLEDB8SLC) OLED Review

LG's affordable OLED for 2018 looks like the perfect bargain

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The Rundown

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What is the LG B8?

The B8 is the entry-level OLED TV from LG for 2018 and boasts most of the features of the higher specified models, including Dynamic Tone Mapping for use with static metadata HDR, and WebOS smart TV. It's a 4K Ultra HD TV with Wide Colour Gamut and HDR compatibility and smart features.

The picture processing uses the A7 processor, which is based on the processor from the B7 of 2017 but gains the Technicolor HDR standard which is added to the existing support for Dolby Vision, HLG and HDR10. This has been combined with the ThinQ AI system which enables voice control integration with Google, Siri and Alexa, allowing the 55B8 to become part of a network of voice-controlled, interconnected items.

In physical terms, the 55B8S is the least featured of the 2018 sets but the look is still far from unattractive. The 'Blade Slim' design makes for a very slimline and elegant set and even this affordable model boasts onboard support for Dolby Atmos. The model we are reviewing here is the 55B8S which has a differing stand to the B8V model, but everything else remains the same between the two.

This review sample is a brand new, sealed retail unit provided by UK retailer Crampton and Moore. This review wouldn't have been possible without their help in loaning us this TV. If you are thinking about buying a new TV and want to support our reviews, you can give them a call on 01302 365760 or email richard.jones@cramptonandmoore.co.uk - mention AVForums and ask for Richard to receive excellent pricing and service.

So, are you missing out on any major features by purchasing the B8 instead of the C8? Does the difference in price mean that the entry model is this year's must-have bargain? Let's find out.

Design



The LG B8 looks almost identical, in terms of panel design, to the LG C8. The main difference with this review sample is the fact that it comes with a different stand to the B8V version, which has a shorter scooped design like the C8. The B8S we are reviewing is supplied with a horseshoe style, chrome finished stand that fixes to the back of the panel. The OLED logo is printed on the right-hand leg of this stand.

The panel is at its thinnest at the top edge and, as you move down, it widens out near the bottom rear to house the connections, electronics, and speakers. This is where the stand also attaches to the

rear of the panel. There is only basic cable management on the LG B8, but the connections are easy to get to and far enough away from the edge of the panel to avoid cables sticking out the side.

To the front, there is no physical bezel to the screen and the image almost fills the entire area, with just a 9mm black border around the screen edge. The panel edge is covered by a 1mm metal strip all the way around. To the bottom centre of the panel are a small remote receiver and standby light.

The rear panel has the same type of finish as the C8 and the build quality and materials used are of a high standard and what you would expect from a TV at this price point. If you don't like the horseshoe design to the stand, then the B8V has the shorter grey scoop design, which is better for smaller TV units.

Connectivity

All the connections are on the left side of the rear panel as you look at the TV. There is a mix of sideways and rearwards facing slots which may be an issue if wall mounting the B8.

To the side, we have four HDMI 2.0b inputs that support 4K/60p, 4:4:4, with Wide Colour Gamut (WCG), HDCP 2.2 copy protection and High Dynamic Range – HDR10, Hybrid Log-Gamma (HLG), Technicolor and Dolby Vision. There is no support for HDR10+ on the B8. Three of the HDMI inputs face sideways, one of which supports ARC (Audio Return Channel), and there is one on the rearwards facing panel.

The three USB 2.0 ports are also split between the rearwards and sideways with one side and two rear facing. There is also a side facing CI (Common Interface) slot. There are rearwards facing terrestrial and satellite tuners, an Ethernet port, an optical digital output and an analogue line out which also acts as a headphone jack. There is also built-in WiFi and Bluetooth.

The power socket is hardwired to the rear of the panel on the right-hand side. It is possible to add a longer run of cable if required, but it will entail some work unscrewing and disconnecting the factory supplied run.

Control



The supplied remote control is exactly the same as the C8 model with the same button locations and types. It is an LG Magic Remote, which means that a pointer appears on the screen and follows your movements with the remote, making it easier to point and highlight options onscreen. Some may find this approach unusual to begin with, but I found it incredibly intuitive to use and makes chores, like password and username entry, far easier than directional key pushes. This allows easy use of

some apps, but be aware that the pointer doesn't always work within some of these, like the BBC iPlayer or Netflix.

The layout of the remote is simple and intuitive with the main keys within an easy thumb reach and the magic pointer makes most tasks a doddle. There are also direct keys for Netflix and Amazon apps and the home key brings up the excellent WebOS browser bar for even easier access to apps, connections, settings and more.

If using a remote control is not for you, then the LG TV Plus app can allow direct control of all your TV's settings via your smartphone or tablet. It is available free of charge for Android and iOS devices and is easy to pair with the TV and you'll be up and running in no time.

Functionality



Picture quality is certainly a major concern for us here at AVForums, but we shouldn't forget that a TV has to function as an easy to use and intuitive device that the whole family can operate. Some operating systems can be slow and clunky and this can take the enjoyment out of using them. LG launched WebOS four years ago and it is still by far the best Smart TV UI on the market, in my opinion. The simple to follow layout of tiles along the bottom of the screen and the way that everything is treated as an app makes it so easy to understand.

WebOS is also efficient and even with the A7 processor, it flies along quickly with no delay in response to commands. Switching between apps is excellent and fast with no crashing or hanging. Even with side-by-side testing next to the C8, we found both TVs to be just as fast as each other with no visible difference, even though the C8 uses the more powerful A9 processor.

WebOS also features all the major video on demand services with direct access keys on the remote for Netflix and Amazon Prime Video. You can also use ThinQ, which is the Google voice assistant on the B8, and after a quick set up, you can ask it to switch TV channel, find the weather forecast and even ask it to play a TV series on Amazon or Netflix. Bonus points are also handed out for the fact that it understands a Scottish accent, which is always a plus.

Other clever AI features include personalised recommendations that the B8 will give you – after it learns about your viewing habits from using the TV for some time. There is an art gallery feature should you wish to have the TV show you art while doing something else and, of course, voice requests via Google Assistant work with any content type.

There are options to set up a PVR function; you have full Freeview Play services including Explore that brings up a menu page of the catch-up VOD services and a selection of shows you may have missed. It really is the easiest and most intuitive Smart system available on any TV at this moment in time.

Features



While WebOS functionality is the star of the show, the content side is also one of the most comprehensive, with all the major catch up VOD players under the Freeview Play banner. There are also the 4K HDR (including Dolby Vision, HDR10 and HLG) services from Amazon, YouTube, and Netflix along with other major apps from the likes of Now TV and BBC iPlayer. The B8 also displays exactly what type of HDR signal it is receiving and shows this in the top right of the screen, so you have no doubts over what the TV is showing you. I really like this small but important feature.

The B8 is amongst the most feature-packed of all the available OLED TVs out there when it comes to playing back every flavour of HDR, except the Samsung and Panasonic backed HDR10+ dynamic metadata system. With no real content available for HDR10+ and Dolby really taking off in style recently, LG will feel they backed the right horse, yet again. As well as Dolby Vision, the B8 also boasts full Dolby Atmos support as well.

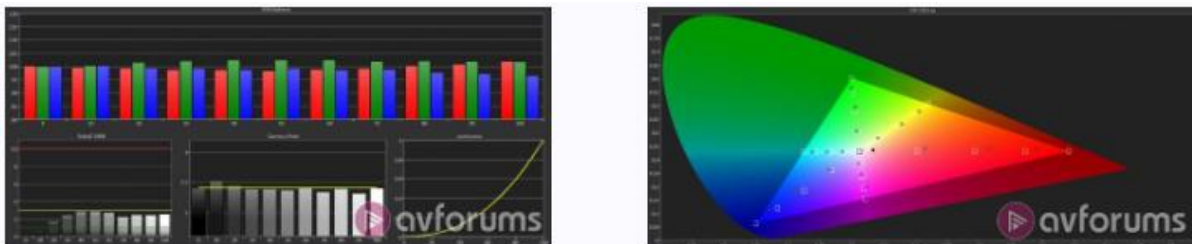
Under TrueMotion, we also get a custom setting and can activate the Black Frame Insertion (BFI) feature, which is called Motion Pro. Although we have, for many years, championed the use of BFI to improve motion, the latest additions of the technology to OLED TVs haven't really been that successful and again, with the B8, we find the flicker to be too noticeable and distracting with high contrast images.

A pleasant surprise, considering the B8 uses the A7 processor, is the inclusion of the Dynamic Tone Mapping feature for use with HDR10 static metadata content. This feature does not strictly adhere to the HDR10 standard, in that it assesses the content and applies dynamic tone mapping to areas it assesses need it. This is very clever in use and I really like it, as it doesn't make overly aggressive changes to the image, rather it compliments the scenes in a way that is acceptable, even to a purist like me. Until we have rock solid standards being applied to HDR content, like it is with Dolby Vision, there will be differences in the application of HDR tone mapping and this system is very subtle and effective. It can, of course, be switched off.

Where the A7 equipped B8 does differ from its C8 stablemate is in the use of colour LUTs where it doesn't have the more advanced LUTs available. This does mean that colour accuracy via the use of LUTs is not quite on the same fine accuracy level, but in reality, we doubt many users would actually notice this in any way.

The B8 is also not able to playback HFR material and HDR at the same time. Given that none of the LG sets can do this via HDMI as they are not 2.1 compatible and the actual lack of any such content within apps available on the TVs, we feel this is not an issue users need to worry about. It's going to be a while before any decent HFR material exists and 2018 TVs and older will never be able to take advantage of it via HDMI sources.

The B8 might have the lower numbered Alpha processor but that doesn't mean it is missing out when it comes to the most useful features and image quality.



Looking at the greyscale tracking (top left) we can see that, while it is not dead flat in the graph with some movement at the brightest end of the scale, our DeltaE errors are all under the visible threshold of 3, which means that most people will not see any colour cast in the greyscale. Indeed, we didn't see any issues at all and the result is very impressive for a consumer display. There will be some panel variances as they are mass produced products, but the level of accuracy is very good.

Moving to the top right Rec.709 HD colour standard saturation tracking, and again we get an impressive result. There are some slight issues with red oversaturation where the most eagle-eyed expert viewers might see some extra rosy cheeks in skin tone, but the other slight oversaturation in green, along with some slight off hues look worse on the graph than they do with actual viewing material, in fact, we doubt anyone would notice these errors without a reference image next to it for comparison. For an out of the box preset, the results are very good and accurate enough for the vast majority of users who will decide to use the ISF dark room mode for their movie and TV viewing.

For those who want the absolute best-looking charts and the knowledge their TV is super accurate, we can calibrate it thanks to the inclusion of White Balance and CMS controls. In terms of those who suggest that manufacturers send out golden, hand-picked TVs for reviews, this sealed brand new retail TV has similar results to what we would see with a sample from a manufacturer, so we once again don't think there is an issue with hand-picked items for review. We will, however, keep purchasing long-term test models and get brand new, sealed TVs from retailers to make sure this remains the case.

Calibrated Measurements

The LG B8 has an extensive range of calibration controls available, however, we have seen some issues with overuse of the Colour Management System (CMS), that have been present on LG TVs for quite a number of years. Sadly, this is still the case and it requires considered inputs to make changes without adding in posterisation artefacts. We suspect this will improve in the future now that LG are upping the use of sophisticated LUTs in their higher end 2018 sets. The B8 still uses the older (17 x 17 x 17) LUT, so care is needed in making adjustments.

Using the 2 and 20-point white balance controls, we were able to produce the fantastic looking graph above (top left). Now the greyscale is ruler flat with excellent gamma tracking at BT1886 for a dark room and DeltaE errors are all well under 1. This is a fantastic result, which is made possible by the controls and precision of the B8 OLED. However, when compared to the out of the box results viewing actual film and TV images, almost all viewers would be hard pressed to actually see the difference here, yes the graph looks nice, but with the common human visible threshold at 3 or more, our out of the box results were very good to start with.

Moving to the Rec.709 SDR colour gamut saturation tracking and we do have some issues with the use of the CMS and the results seen within the graph. The main issue we have is that if we try to make too many adjustments to hue, saturation, and brightness we introduce posterisation artefacts as the processing starts to struggle with the demands put on it. This is a common feature with previous LG sets where careful use is required of the CMS.

It has improved somewhat with the new A9 processor on the C8. With the B8 we wanted to get rid of issues we could actually see within onscreen images and do so without adding in posterisation artefacts. Our main concern was the oversaturation of red at all points and through the process of just correcting the white point, we managed to get rid of this issue and that of green and yellow. We couldn't really do much with the hue errors, especially in magenta, but again these were not visible with actual viewing material on screen. As such, while the graph doesn't look that pretty, the onscreen results are very good and we are happy with the image accuracy that is actually visible. Even with a reference image next to it, we feel most viewers would struggle to tell the subtle differences in hue or saturation.

HDR Results

Moving to the HDR performance of the LG B8, we have a few interesting findings that point to excellent out of the box HDR images in the Cinema preset. We again used our Murideo Fresco Six-G to send both 1000 and 4000nit HDR signals at 3840 x 2160 resolution with 10bit depth and HDCP 2.2 in the same manner of signal you would get from an Ultra HD Blu-ray. We used the patterns to check picture clipping and tone mapping performance, as well as measuring the LG B8 to get the actual performance results out of the box.

In the graph above left for the PQ EOTF tracking at 1000nits we can see that the B8 does an excellent job of following the standard until it has to roll off. The same is true of the 4000nit mapping (not shown) where it has a more gentle roll-off that preserves shadow and highlight detail without clipping unnecessarily. The only errors in our greyscale tracking are also at the brightest end of the scale where the set rolls off, otherwise the out of the box white point in the HDR cinema preset is excellent.

Moving to DCI-P3 saturation tracking within Rec.2020 (top right) we can see that the LG B8 does a decent job of trying to track the main saturation points of 75% and below and we think, as an out of the box result, this is excellent. Certainly, with viewing actual HDR content we didn't have any issues at all with everything looking nicely saturated but realistic and accurate.

We measured the peak brightness of the LG B8 in HDR mode to be 642nits on a 10% window pattern in the most accurate cinema mode, which is closest to D65 for white. Obviously, we could put it in vivid mode and blast the hell out of it to get higher peak brightness, like some tests out there, but that completely misses the point of HDR and HDR performance characteristics.

Where OLED excels for HDR is in the lower reaches of the image, which LCD technology struggles with due to using a backlight and local dimming. The human eye is designed to pick out more detail in dark areas of an image than in the brightest whites, therefore the dynamic range offered by an OLED is far superior for an HDR experience than a light cannon of an LED LCD TV. Controversial? Not really, when you are honest about the technologies and their strengths and weaknesses. While LCD can get double or triple the brightness for peak highlights, it can give an HDR image some pop, but very few films and TV shows are mastered to show anything over 1000nits, and usually the peak brightness of a film mastered within a 4000nit envelope could still be well under 1000nits through the entire length of the movie. Headroom is important but, as we are less sensitive to brightness changes at the brightest point, OLED scores with its infinite dynamic range and superior shadow details.

There are so many misconceptions out there that getting the correct information and awarding excellent HDR performance is lost in the peak brightness noise. Each technology has strengths and weaknesses and here the LG B8 (and OLEDs in general) do an excellent job. We also didn't find the ABL to be very aggressive, which allowed for consistent image brightness, even in mixed scenes.

LG B8 General Performance

Panel Uniformity, Viewing Angles and Image Retention

Being an OLED TV the viewing angles are excellent, with almost full off-axis viewing resulting in minimal contrast drop off. This means that the LG B8 is perfectly suited to living rooms where the seating positions are off-axis to the TV screen. This is a weak point for similarly sized LED LCD TVs where contrast and colour accuracy drops off from around 30 degrees onwards - on average. With the B8 you can get almost 90 degrees to the panel before there is any visible change at all to the contrast or colour performance.

Panel uniformity has been an issue for some early OLED TVs where there were instances of dark edges, vignetting and dirty screen effect (DSE) and it was also possible in the past to clearly see panel bands with low brightness test patterns or just above black images. I'm happy to report that the uniformity of the LG B8 is superb with no signs of any of the previous issues and only very fine panel bands at 2% and 5% IRE levels when you go looking for it in a pitch black room. In most other cases, with normal viewing material and in normal circumstances, this banding is not visible. It certainly never made itself known in the three weeks of testing the B8 with all content we watched, and all viewing conditions. Football viewing also didn't present any issues with banding or any other artefact caused by the panel uniformity. We found all Greyscale stages with full-screen test patterns to be extremely clean.

Image retention is a hot topic when it comes to OLED TVs and this is due to some panels in the past retaining logos from TV channels or static HUDs in games, for example. If you run static images on any modern OLED TV for hours at a time and in bright picture modes you do run the risk of the panel retaining these static images for a period of time. They will disappear over time and all recent OLEDs have different levels of protection built-in to mitigate any issues of retention. It is all about using the TV with some common sense and I have never had any issues with OLED TVs I have tested here, including our long-term test models. The AVForums team all own LG OLED TVs and gaming is a big part of use for Mark Botwright, who reports no issues at all with his B7 when it comes to retention.

As long as you are aware of the risk of excessive use of static images in bright picture modes and you use some common sense and the technology included to mitigate any issues, you shouldn't have any problems gaming or watching static content with the B8. In terms of actual burn-in and damage to the screen, I have personally only ever seen it once and that was with an early panel used at a trade show, displaying the same static company logo for 24hrs a day during the event. I have never seen it with a domestic TV used normally in a home, so we can conclude it is very unlikely to ever happen in normal circumstances with a TV like the LG B8.

Black Levels and Contrast Performance

Being an OLED TV, the LG B8 has outstanding black levels, shadow detailing and contrast. Dynamic range is stunning and as it can do complete black at the pixel level, the contrast measurements for on/off and ANSI are infinity. The LG B8 can easily hit 120nits for calibrated SDR content and, for HDR, content peak highlights measured 642nits on a 10% window in the most accurate picture mode.

However, with HDR there is more to the image than just the peak highlights and mega brightness as we stated above. The dynamic range of the LG B8 is astonishingly good, with superb just above black shadow detail retrieval, which adds to the stunning image quality on show with HDR content. Add to this the excellent colour accuracy and vibrancy and you get a stunning contrast and dynamic performance. With SDR and HDR we simply found the combined dynamic range, contrast, and superb black levels gave us an image that had amazing detail, depth, and pop.

Motion Handling and Video Processing

This has been an area where LG has traditionally struggled a little, with issues of repeated frames and frame skipping with 50Hz material in the past. Motion blur and slight judder have also been issues previous LG TVs have had problems displaying completely right. The TruMotion system does work well at smoothing out images without adding too many obvious artefacts in the lower settings, but it also adds in Soap Opera Effect (SOE) at the same time, something film lovers don't want to see at all. Thankfully the B8 is an improvement on the previous model year when it comes to motion, but there are still some very slight issues.

Looking at film sources and we found that the LG B8 did an excellent job with 24fps material with no induced judder from the TV or any excessive motion stutter or blur with TruMotion switched off, and Real Cinema set to on. There is natural motion blur in 24fps captured material and that should never be mistaken for an issue with the B8, it is supposed to be there with that content. Film fans should be satisfied with the motion from their favourite movie content.

There is a Black Frame Insertion (BFI) mode available within the TruMotion menu called Motion Pro, the same as on the LG C8. This introduces black frames into the content in a bid to reduce the perceived blur and make motion crisper. It is a very successful technology that works very well with some LCD TVs, but we have found with every implementation on OLED TVs, that the flicker is too much for long periods of viewing. This is due to the higher dynamic range and higher contrast of OLED and, with bright areas of the image, the flicker is exaggerated making it more noticeable to most viewers watching. It is a shame that there is an issue adding this technology successfully to OLED screens.

We have mentioned TruMotion a few times here and it is, of course, LG's motion interpolation technology. In the lower settings we found that, while it added SOE to all content, it was more acceptable with video-based programming like fast moving sports, news and documentary style presentations. With sport, the smoothing certainly helps with motion and football does benefit,

when set correctly. There are some instances where you can have the ball completely disappear in the higher settings on occasions. Artefacts also get more visible the higher you set the controls, so be aware of this. When it comes to motion interpolation, it really shouldn't be used for film and drama based content shot at low frames rates such as 24fps, but for all other video-based items it will be a case of experimentation and personal preference.

With all our normal video processing tests, the LG B8 managed to turn in a superb performance with no issues with scaling artefacts, ringing or other issues seen with the various test discs used, and de-interlacing was also spot on. Upscaled HD content was sharp and detailed with no issues and even SD content could look good – depending on the source, entirely.

Input Lag

LG really have been making an effort with their TV's gaming performance, with both SDR and HDR content introducing better tone mapping for the 4K HDR games, where previous models would darken the image too much. The new Dynamic Tone Mapping feature can also be activated in the Games Mode and doesn't impact in any significant way the lag time.

Measured input lag on the LG B8 in both HDR and SDR was an excellent 22ms that shouldn't present any issues for all gamers of all abilities.

Sound Quality

The version of B8S we are testing here varies from the B8V in terms of the stand used and with our review sample, the crescent stand lifts the TV above the mounting surface you place the set on. The speakers are downwards firing and this distance helps with the sound bouncing from the surface and to the listener. This is slightly different to the B8V stand which is a shorter styled version of the C8 stand, which appears to point the sound from the speakers towards the listening position. Not having the two different versions to test next to each other we are not in a position to say if there is any difference in sound quality between the two approaches. If you decide to wall mount the B8 then the sound will be firing towards the floor.

For the majority of our testing period, I was very happy with the audio quality for everyday TV viewing. The dialogue was crisp, intelligible and placed around the screen where you expect to hear it. Music and effects had a decent soundstage to either side of the 55-inch screen and, at normal comfortable listening volumes, the B8 managed to produce a nice, full audio experience that was along the lines of what we would expect at this price point and with this type of screen design. It is not as impressive as the Sony Acoustic Surface and the C8 is a noticeable step up with its stand directing the sound towards the listening position. However, at the price point and within the design of the panel, we didn't feel the audio was terrible; in fact, it was above average for a flat panel and perfectly serviceable for most living rooms and viewing content. If you want more and to take advantage of the Dolby Atmos capabilities, there are stand-alone audio options you can purchase to enhance the B8 further.

LG B8 Picture Performance

Out of the Box Performance – SDR

Eco Mode: This is the picture preset that the B8 ships with and it really isn't suitable for accurate viewing. Colours look massively oversaturated and whites are very blue, with noticeable clipping. Blacks are slightly elevated and lose that pop seen in the more accurate modes. TruMotion is also

turned up to 11 leaving motion full of SOE. The TV also ships with the Energy Saving mode switched on, so make sure you disable this as quickly as possible, otherwise, you'll find the image dimming and changing depending on the light levels of your room, messing with the gamma completely.

Vivid Mode: It still amazes me that people use this picture preset, with its rancid colours, blown out details and incredibly blue whites. Skin tones are terrible and detail is missing which makes faces look like everyone takes Botox. SOE also dominates with the motion of images and edge enhancement can be seen on all straight edges within the image. Do yourself a favour and avoid this picture mode at all costs.

Standard: You may think that standard mode is the natural choice as, well, it's standard. You might assume that it is a middle of the road compromise between Vivid and the more accurate modes, and when flicking between all the picture modes it looks to your eye to be the best middle of the road choice. But don't let your eye fool you with its brighter looking image. There is still blue in the whites and skin tones are not quite right, with colours still looking a little overcooked and gamma causing some crush and clipping. Detail is a bit better than the first two options above but sharpness is also killing some finer detail, along with noise reduction switched on high and SOE still present thanks to the TruMotion interpolation. Yes, it is brighter than the most accurate mode in a quick flick between them, but you will get a far better image by just giving ISF dark room a chance for more than 10 minutes.

ISF (Dark Room): This is the most accurate picture mode to the industry standards which replicates how the films and TV shows you watch were mastered. Yes, it is on first viewing, slightly darker than all the other picture presets, but don't assume you are missing out because of this. It is duller because it is the most balanced and accurate mode, keeping all the available detail and doing so without clipping whites or crushing the just above black details. It is the most dynamic of all the image presets because it is not overdoing the brightness, it is mimicking the display used to master the content. Colours are vivid, but natural and lifelike, not neon or overblown like all the other modes. Skin tones are also perfect with a natural warm complexion and all the pores and lines on the faces can be seen with shadows under the eyes providing a realism and depth that is almost three-dimensional. This really is the best of the best when it comes to image fidelity and after watching for a few hours, or days, you'll soon realise that the brightness trick played on us by our eyes and evolution, was robbing you from seeing the full picture.

You can, of course, add in more brightness using the OLED light if your viewing environment or room is not quite dim enough. It'll remain fairly accurate and you won't cause too many issues with colours or contrast. Blacks are inky deep and by the pixel, giving mixed contrast scenes stunning dynamic range and punch. Colours also pop, yet remain realistic and detail within those shadows give the image a silky smooth texture, it really is incredibly good. Out of the box, the LG B8 impresses time and time again with its accuracy and dynamic range at the price point.

As most readers and consumers buying this TV will use it in the out of the box modes, we hope our advice is taken when it comes to the picture mode selection. The images on offer are excellent and a huge leap in quality from just a few years ago. SDR images are stunningly cinematic with superb 24fps motion with movies and very few image artefacts to worry about. Gradations are handled very well with no obvious signs of posterisation with more complex scenes, everything stands up to close scrutiny and there are no motion artefacts or glitches to report. For SDR there are no LCD screens, at this price point or slightly higher, that can compete with the B8 for overall image quality.

Out of the Box Performance – HDR

HDR out of the box in the Cinema mode is also excellent. Peak brightness in the numbers might not seem like much, especially when LCD TVs are boasting much higher figures, but as we keep pointing out, it is not all about the brightness. Where OLED truly shines when it comes to HDR is in the blacks and shadow details, just above black. This is where our eyes pick out more detail and depth, and with HDR there are far more details to be seen within the darker parts of the image.

Peak highlights are also at the pixel level with OLED and that means no blooming or haloing from backlights or clouding. Because it is self-emissive and per pixel, the blend of black and white, shadow and peak highlight can be right next to each other on screen, and incredibly dynamic to watch. Yes, the drawback is that to get this performance you need to be watching in dimmer surroundings and not while the midday sun is streaming through the living room window, but for most movie fans, the lights are always dimmed, suiting the OLED way of doing things.

Not everything is perfect though, as there is no such thing as the perfect TV and where OLED is not quite as advanced as LED LCD is with colour volume and brightness. This means that while vivid and well saturated, colours are not quite as bright on an OLED, with less volume available due to how the panel makes light in comparison to a quantum dot LCD for example. The C8 and above do have the latest LUTs with far higher levels of gradational steps available, but the B8 is still rocking last year's tech in this area and with HDR content, it can be seen in subtle differences.

The new 'Vegas' scenes in Blade Runner 2049 are an orangey yellow mist that has the hazy sun as the main light source. The LG B8 handles this tough scene incredibly well with no posterisation artefacts present, but the slight hue changes and gradational jumps are a little more obvious on the B8 than the same scenes on the C8, which is where the greater colour handling pays off. But to be honest you really need to be watching these two side-by-side with the same feed to notice it. Other examples were also present, but we really are nitpicking between two superb OLED images that the majority of readers would be drooling over.

The new Dynamic Tone Mapping is also a curious feature on all the 2018 LG sets (it was also present last year, but not easily found in the menu system). This is an algorithm based tone mapping feature that studies the static metadata and then the actual scene to work out how best to display this with the PQ EOTF curve and the mastered content, to give you a brighter and more dynamic HDR look. Normally, we would be against using such picture processing, preferring the more accurate approach. However with no standard dynamic system in place to match 1000 & 4000nit content to current TVs, the way the LG system works is really quite intriguing and, in almost all cases, seems to give a perceived improvement to HDR images over the standard static metadata approach. Certainly, I have found myself using it for all HDR10 material I watch. It doesn't work with Dolby Vision content, as that is a true dynamic metadata system of HDR.

Finally, gaming is also a treat in HDR on the LG B8 and, again, you can use the Dynamic Tone Mapping feature to enhance it even further. We didn't spot any issues with aggressive ABL settings or the tone mapping crushing shadows or getting too dark, as has been reported with previous LG models. Instead, images are bright and vivid with excellent shadow details and depth to the images. With an excellent input lag, I also found it a responsive way to die many times trying to play video games clearly not suited to my limited skills. I couldn't find any major issues or faults to report here, instead, you'll have a blast gaming on the super responsive B8. Just don't do it in the brightest picture mode with static images on screen 24 hours a day, but that is not likely going to happen.

Calibrated Performance

I could continue extolling the virtues of the image quality from the B8 for a few more pages yet, but really when it comes to calibrated performance, we really are seeking out just the last drop of image accuracy and vibrancy, with some changes not visible to the eye, in all honesty, over the out of the box results. Obviously, every panel will be different and at the end of the day, we are talking about a consumer TV costing around £1500 and not a professional studio grade monitor of a considerably smaller screen size and a £30K price tag. As such, you should still consider a professional calibration if you are a movie fan wanting to know you are getting every last drop of accurate image performance from your TV. For everyone else, the ISF Dark Room preset will most likely get you 90% of the way there, out of the box.

Given the price point and features available on the LG B8, the actual image quality on offer is really the icing on the cake here. We can't think of any LCD TV at £1500 (or even £2000) that gets anywhere close to the dynamic range, black levels and sheer image quality that the B8 offers. Only in brighter rooms where you can't darken or dim the viewing environment enough, would the B8 struggle to provide an image where the key attributes of the technology can't be taken advantage of. In those cases, you would fall back on an LCD model, but for film fans who want the best, you can't get a better SDR presentation from any other technology as things stand today.

And even with HDR, we think the whole brightness obsession over peak numbers is diverting attention away from the one technology available right now that can provide genuine dynamic range at the pixel level. It can't do everything and colour brightness and volume are where the B8 and OLED, in general, does fall slightly short of LCD with HDR, but as an all round movie display, you will struggle to find anything other than another OLED model that can compete with the B8.

Conclusion

There is no such thing as the perfect TV and not everyone has the same wants and needs from their display. Viewing environments and habits are the biggest factors in deciding on the TV technology you should go for, and what will suit your needs within a given budget. Compromises will have to be made in every single use case to find the solution that perfectly fits with what you need. There is no one size fits all, and don't believe anyone who tells you otherwise.

There are, at this moment in time, two very distinct technologies available to you, OLED and LCD. You just have to decide what it is you are looking for and the compromises you are prepared to make to get your TV of choice. We're not going to go over each of them here, but you should use our reviews and do your own research, including demos, before making any purchase decision.

If you want a 2018 model OLED TV with superb image quality for SDR and HDR, excellent functionality, intuitive user interface and a state of the art smart system, all for under £1500, then the LG B8 is that very TV. It has an excellent design and build quality along with a choice of stands between the B8V and B8S versions. It also has an excellent feature set that includes every version of HDR currently available, except HDR10+, but that is not important as things stand right now.

It offers superb image quality with stunning black levels, superb shadow detail retrieval and pixel accurate peak highlights in HDR. For movie fans, you get everything you need right now for critical film viewing as the director intended, with stunning SDR and cinematic HDR images on tap. That's a lot of positives for the £1500 asking price and we are really struggling to come up with a decisive conclusion as the cat really is amongst the pigeons here.


You could go out right now and buy last year's LG B7 which has a similar processor on board, (the B8 has a tweaked version), it has very similar features including the HLG, HDR10 and Dolby Vision HDR

versions, similar black levels and image quality all for £1100 if you shop around. You also have the B8 we are reviewing and all that we have discussed here, and then for around £500 extra you have the LG C8 that has all the features on the B8, with slightly more accurate SDR and HDR image quality thanks to new LUTs and a little more picture processing power. Tough choice.

Finally, you have other OLED TVs from the likes of Sony with their new AF9 that now has many of the features the LG models have, including class-leading video processing and motion, as well as the Panasonic FZ802/952 models which might not be Dolby Vision ready, but offer superb cinematic images that pip even the LG's for ultimate movie watching quality, but without the functionality and class-leading smart TV. As you can see, there are no easy choices to be made.

But what we can say is the LG B8 is a stunning OLED TV that has all the plus points of the previous B7 model from 2017 and adds some picture refinements like Dynamic Tone Mapping with HDR movies and games, along with excellent panel uniformity and image quality that gets close to what the C8 offers. Plus, with an RRP of £1499 at the time of this review (October 2018), it all adds up to being a Best Buy!

We really don't envy anyone trying to make the decision between all the available OLED models at this moment in time and we should rejoice that consumers really do have an excellent choice of high-quality TVs to choose from.



OUT OF 10

The Good

- Excellent black levels and shadow detail
- Stunning contrast performance with SDR content
- Very good HDR performance
- Dolby Vision and Atmos support
- HLG, HDR10 and Technicolour support
- WebOS smart system
- Dynamic Tone Mapping feature
- Excellent image accuracy before and after calibration in ISF mode

The Bad

- Some visible gradation issues when compared to A9 powered C8
- Not much else at this price point!