Feature Spotlight

PURETONE

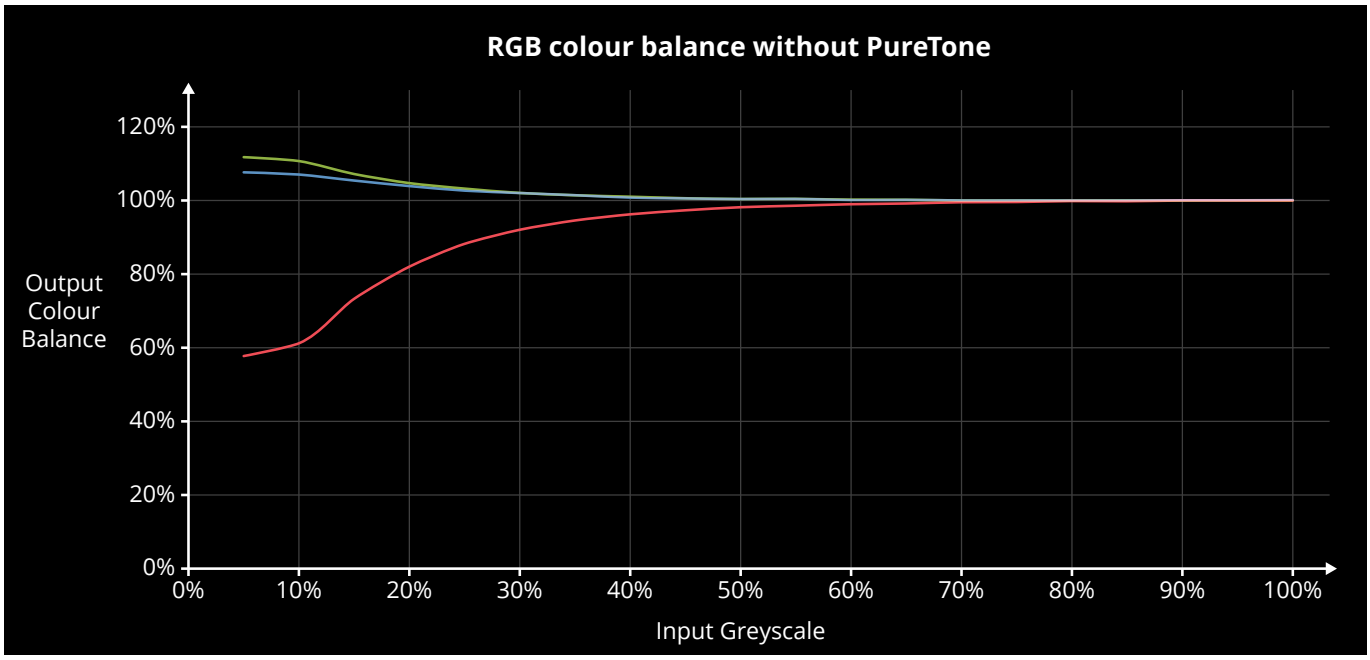
See your content, not your panels.

PureTone eliminates unsightly colour casts in your greyscale for balanced, neutral output.

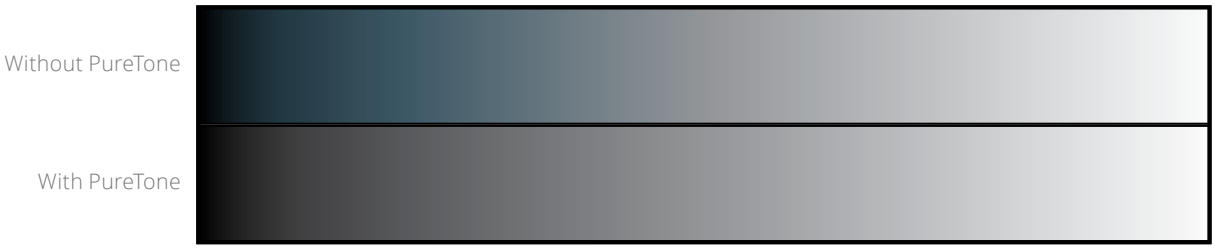
LEDs and their driver chips are not perfectly linear – meaning that when asked to output a particular brightness they may not accurately achieve it.

It is common for the red, green and blue LEDs to have different behaviour, meaning that many panel types show a colour cast in darker greys or when using the panels at low brightness levels.

✓ Most content has dark and light areas, PureTone enables accurate colours and true neutral greys.



Sample RGB colour balance for a panel running at 500 Nits without PureTone. Low brightness greys have insufficient red and too much green and blue



Illustrative greyscale gradients: Uncorrected (top) and corrected by PureTone (bottom)

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True Neutrals

Most content has dark as well as light areas – so this non-linearity is a real problem that means you may not be getting accurate colours and true neutral greys.

It is also a common reason why different types of panels that appear to be matched when displaying full brightness test patterns are obviously unmatched when displaying real content with darker areas.

It has previously been difficult or even impossible to correct for this non-linear behaviour – but no longer!

Simulated LED screen appearance with inherent cyan colour cast (left) which is corrected by PureTone (right) for accurate colours.

Accuracy At All Brightnesses

PureTone builds on Brompton's new Dynamic Calibration technology to enable each panel type to be profiled to measure the panel's behaviour across a range of brightnesses. It can then compensate for the non-linearities ensuring true, clean, accurate colours and neutral greys at all brightnesses.

This is particularly important for film and broadcast work, where screens are often run at much lower brightness to match camera exposures, and maintaining neutral colour output is critical to looking good on camera.

✓ PureTone is exclusive to Brompton receiver card based panels that have been calibrated with Dynamic Calibration.

Make That Batch Match

Rental companies know all too well about the problems of matching different batches of LED panels. Despite being the same type and being calibrated to the same brightness and colour temperature, all too often a new batch of LED panels will be noticeably different when displaying real world content.

This is often because of the linearity issues that PureTone is designed to correct – and we now support different PureTone corrections for each individual batch, which will go a long way to making this frustrating problem a thing of the past.

Profiling Service

Brompton Technology offers a profiling service for receiver card based panels using Dynamic Calibration, with a technician going on site to calculate the panel's ThermaCal and PureTone profiles in a single visit.

It is also possible to purchase the Brompton Technology's LED measurement technology, the PureTone Profiling Kit. To do so contact info@bromptontech.com

Once profiling is completed, the profile data will be incorporated into the fixture library supplied with the Tessera software.

Brompton Technology is the market leader in LED video processing for the most demanding applications across live events, virtual production, broadcast/XR, simulation/VR, fine-pitch installations and esports. The company has won multiple awards and become a globally respected brand, known for the quality and reliability of its products and exceptional technical support. For more information, visit www.bromptontech.com.

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