

# DARK MAGIC & STUDIO MODE

The ultimate tool for low brightness conditions

**Dark Magic** and **Studio Mode** improve the quality of the image or video showing on LED panels when they are operating at less than maximum brightness.

## DARK MAGIC

LED panels are usually designed to be set at maximum brightness for outdoor use. When they are used indoors and 'on-camera' at lower brightness, it can result in an unavoidable reduction in effective bit depth, leading to visible artefacts like banding and loss of detail, especially in dark areas of the image.

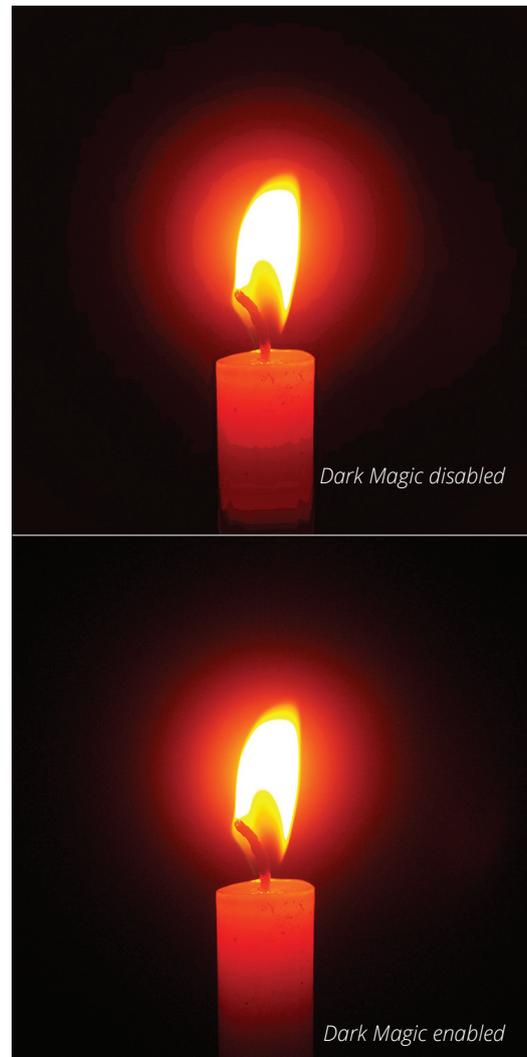
## UP TO 26 BITS PER COLOUR PROCESSING

**Dark Magic** helps to alleviate these issues by processing the video signal at up to 26 bits per channel (78 bits per pixel) within the **Tessera R2** receiver card.

The effective bit depth of the output can then be increased, resulting in a clearer, smoother image with enhanced detail in darker areas, even when the panels are at very low brightness.

## USING DARK MAGIC

Compare the two photographs of identical LED panels displaying a low-brightness image. One is without **Dark Magic**, where banding is clearly visible around the flame. The second is with **Dark Magic** enabled - the gradients are smoother, and there is increased detail in the darker areas.



## STUDIO MODE

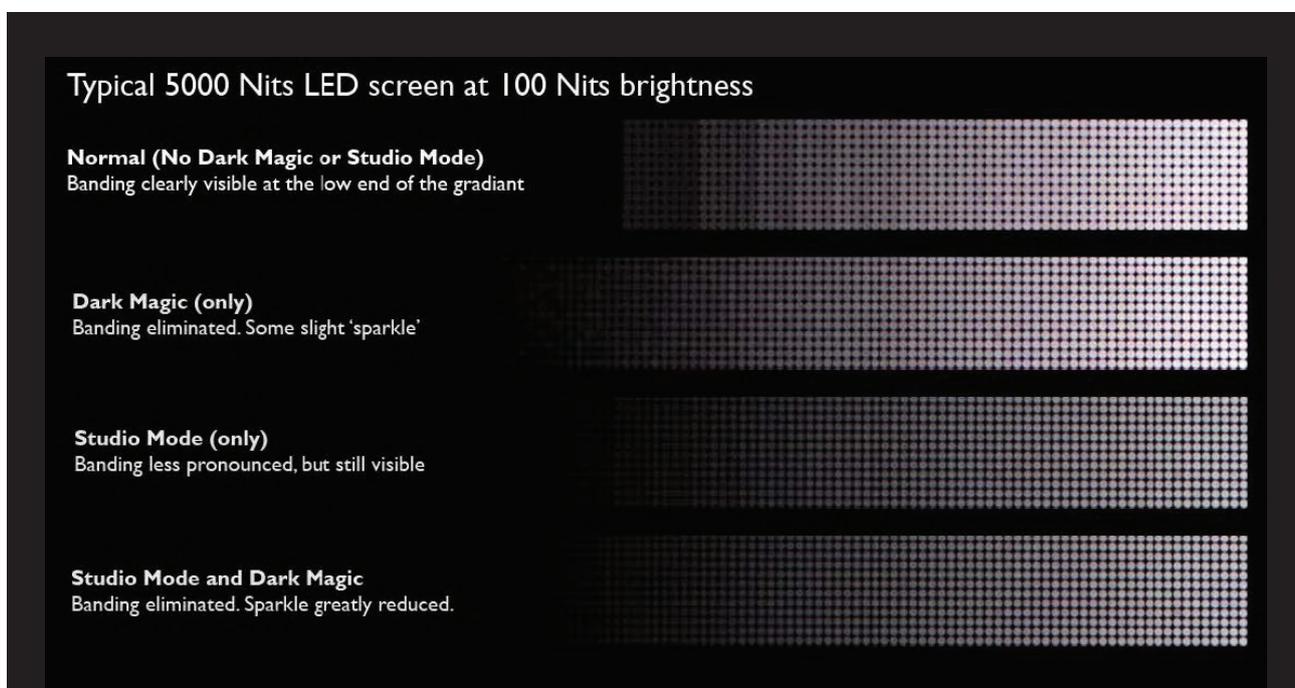
**Studio Mode** allows LED panels to be run at a lower maximum brightness without a loss of bit-depth. It achieves this without using PWM by reducing the current being sent to the panels' LEDs, effectively reducing their maximum brightness while preserving their bit-depth.

Compared to simply reducing the panels' brightness by other means, **Studio Mode** visibly improves the image quality at low brightness levels with significantly reduced banding. The resulting image quality is closely comparable to that achieved when running the panels at their rated maximum brightness.

The availability of **Studio Mode**, as well as the rated brightness level it can operate at, are dependent on the LED panels being used.

## USING STUDIO MODE & DARK MAGIC TOGETHER

**Dark Magic** and **Studio Mode** can be combined to achieve the best possible low-brightness performance, provided your LED panels are compatible. Together **Dark Magic** and **Studio Mode** offer a high image quality with smooth gradients and colour transitions while operating at low brightness levels.



*Established in 2012, Brompton Technology is part of the Carallon group of companies based in West London. It operates in the rapidly expanding LED Video display sector, and product designs come from years of industry and engineering experience, and an acute understanding of the current marketplace. This has resulted in it fast becoming a globally known and respected brand within this sector. More information can be found at [www.bromptontech.com](http://www.bromptontech.com).*