



Ultra-high resolution dimming with sunDial quad

sunDial quad, the PLASA Gold award-winning mains LED dimmer from Artistic Licence, has won praise for its ability to provide exceptionally smooth LED dimming with DMX512. Following a firmware upgrade, the product just got even better, with a huge improvement in dimming resolution now achievable with many theatrical controllers.

The latest firmware is available free-of-charge and can be uploaded using [DMX-Workshop](#).

How does it work?

DMX512 can control up to 512 channels and has an 8-bit native resolution. This means each channel can be set to a level between 0 and 255 and is encoded as an 8-bit number (256 levels). sunDial quad has a much higher native dimming resolution of 14-bit, so in normal operation a dimmer curve translation is used - in effect, sunDial picks 'sweet spots' on the response curve to achieve a nice fade.

However, some professional lighting consoles allow two DMX512 channels to be combined to provide up to 16-bit resolution (65,536 different levels). In this scenario, no curve translation is necessary. Following sunDial's latest firmware upgrade, the console can access all the subtle levels available in sunDial's high native dimming resolution - thus ensuring ultimate dimming performance for applications that demand the most subtle effects.

What are the benefits?

sunDial quad is often used for house lights in theatre, and can be easily integrated with the stage lighting consoles. As many of the favourite theatrical controllers feature 16-bit channel resolution, sunDial quad represents an ideal dimming partner.

sunDial quad also has the major advantage that its firmware can be upgraded (at zero cost) in the field. Customers can achieve this using the Artistic Licence [DMX-Workshop](#) free software package.

Further reading

For more information on high-resolution dimming, please see Wayne Howell's Help Desk column '[Bits, bytes and curves](#)' in the September 2020 issue of LSi magazine.



Buy sunDial from £395



Introducing sunDial quad

[sunDial quad](#) is unlike any trailing edge mains dimmer currently found on the market. Our product offers a professional DMX512/RDM (or optionally Xicato wireless) controlled solution, with advanced safety features. There are four channels each providing 250W (or up to 500W per pair) - more than ample for LED, but also suitable for crossover markets that might have legacy incandescent technology.

The product works 'out of the box' with any dimmable replacement LED bulb (or dimmable incandescent or CFL source), but performance can be further optimized by the selection (via RDM) of one of four dimming curves on a per-channel basis.

Changing perceptions

sunDial quad will trigger a conceptual shift in the perceived suitability of dimmable LED replacement bulbs for the professional market. Previously, the lack of a credible dimmer for this type of fixture represented a barrier to their widespread adoption. Now, the industry can be confident that switching over to this convenient and eco-friendly form of illumination will not compromise the ability to dim smoothly to low light levels – essential for control over theatre and cinema house lights, bars and restaurants etc.

Finely tuned dimming

The quality of dimming achievable with sunDial quad is one of its major selling points. The product's ultra-high resolution internal dimming allows the small window of useable LED lamp dimming response to be spread out over the entire DMX512 level range. Pre-defined dimming curves can be selected via RDM on a per channel basis; there are currently four profiles that should suit most generic fixture

types. Artistic Licence has also built a free database of lamp-specific dimmer curve files that are automatically generated by our in-house photometric analyser.

For even better results, customers can edit dimming curves and upload files (using [DMX-Workshop](#), our free software management tool) to perfectly match chosen lamps. The ability to upload custom dimming curves on each of the outputs makes sunDial a true 'multi-tasker', removing the need for multiple dimmers.

When used with 16-bit channel controllers (a feature of many theatrical consoles), sunDial can be operated in a mode that allows direct access to its native 14-bit dimming levels - thus ensuring ultimate dimming performance for applications that demand the most subtle effects.

Advanced safety features

sunDial quad has been designed to be extremely resilient, with intelligent features that reduce ongoing maintenance needs. Active derating ensures that the product scales back if it approaches its maximum operating temperature. When the internal temperature sensors detect that it has cooled sufficiently, full operation is resumed. Self-healing outputs shut down in response to over-current, short-circuit and over-temperature situations. Normal operation resumes without user intervention when the fault has passed.

Wired or wireless control

The standard product, sunDial quad dmx 1k, is controlled via DMX512/RDM. We will also soon offer a product variant, sunDial quad xgc 1k, which incorporates Xicato GalaXi technology. This allows wireless control, which is particularly suitable for heritage buildings and retrofit applications where the installation of new data cabling would be problematic. The xgc product merges radio and DMX data on an HTP basis.

Features

- Trailing edge mains dimmer
- DMX512/RDM controlled
- Scene playback
- Programmable data loss mode
- Xicato GalaXi wireless control optional
- Compatible with dimmable LED replacement bulbs – perfect for 'dim-to-warm' fixtures
- Also suitable for dimmable CFL and incandescent sources
- 4 outputs, 250W per circuit
- Bridge mode provides 500W per pair of outputs
- 8-bit or 14-bit control
- Choice of 4 editable dimming curves, uploadable on a per output basis via DMX-Workshop
- LED indication for DMX/RDM/playback, power, identify, outputs and fault conditions
- Convection cooled with active derating
- RDM sensors for temperature, frequency and power
- Automatic heat and current management

- CAT III rated for installation directly into distribution boards
- Generator tolerant design – stable operation in marine applications
- DIN Rail or surface mount

ABOUT US

Established in 1988, Artistic Licence specialises in lighting control, with a broad range of products that are all designed and manufactured in the UK. We also develop OEM technology for clients worldwide.

For project work, our expertise enables us to offer custom-build solutions where no off-the-shelf product would be suitable. We routinely work with all the open lighting protocols, including Art-Net (which we invented), sACN, DMX512-A, RDM, RDMnet and DALI. From stadium rock to sculptural art, and municipal works to designer hotels, we offer an eclectic and international outlook.

Artistic Licence
The Mould Making Workshop
Soby Mews
Bovey Tracey
TQ13 9JG, UK



www.ArtisticLicence.com
sales@artisticlicence.com
+44 (0)20 8863 4515

© 2020 Artistic Licence