



User Guide

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Overview

daliDongle is a USB-to-DALI converter, designed to work in conjunction with the free Artistic Licence software application, DMX-Workshop. Together, daliDongle and DMX-Workshop provide a powerful analysis and configuration tool for DALI networks.

daliDongle is aimed at product developers while also enabling advanced troubleshooting of DALI systems.

The product can transmit and receive DALI, and also indicates the presence of DALI bus power. daliDongle is powered by the USB connection.

DALI background

DALI was primarily designed for commercial lighting to respond to the growing demands of energy efficient lighting systems. It was developed to provide two-way communication between controller and ballasts.

The most common DALI device is a fluorescent ballast. Compared to DMX512, speed has been sacrificed in favour of flexibility and ease of use.

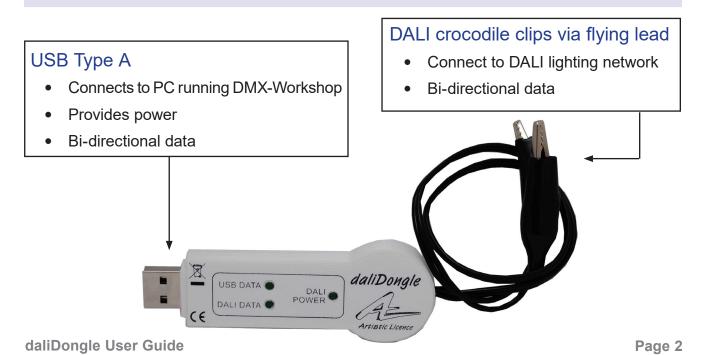
Each DALI circuit must have a DALI Bus PSU to provide the voltage on the line. An example is the Artistic Licence Rail-PSU-D4. There can be no more than 64 ballasts on a single bus (this corresponds to one circuit). Ballasts being used for the first time require commissioning to give them a unique short address. A tool such as the Artistic Licence Dali-Scope can be used for this.

The DALI data packet comprises three parts: Address (ballast(s) being signalled), Command (what type of message is being sent) and Data (the value associated with the command). On any given circuit, DALI ballast intensity can be controlled in four ways: Broadcast, Individual Channel, Groups (up to 16) and Scenes (up to 16 per ballast).

For more information about DALI, please refer to www.DALI-ag.org or the free Artistic Licence publication:

http://tinyurl.com/the-dali-guide

Connections



LED Indication

The daliDongle LED indicators have the following functions:

USB Data:

OFF = No USB data received

Green (flashing) = USB data received

DALI Data:

OFF = No DALI data

Green (flashing) = DALI data

DALI Power:

OFF = No DALI bus power

Green (solid) = DALI bus power

Green (flashing) = DALI data flowing

Operation

daliDongle is designed to add a range of DALI functionality to DMX-Workshop. This includes:

- Transmit DALI messages
- Transmit Channel / Group / Broadcast ARC messages using sliders
- Sniff and decode DALI messages
- Emulate multiple Type 0 DALI ballasts

Resources / Downloads

- DMX-Workshop download: http://tinyurl.com/dmxartpage
- DALI Application Notes: http://tinyurl.com/AL-app-notes
 - 0310 DALI Using the DALI transmit and sniffer functions of DMX-Workshop
 - 0311 DALI Using the DALI translate function of DMX-Workshop

NOTE

daliDongle is entirely unrelated to the Tridonic DALI-USB product also sold by Artistic Licence. daliDongle is NOT compatible with Tridonic software.



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