Artistic Licence

Dali-Scope

User Guide

Please read these instructions before using the product.

WARNING: Please ensure batteries are inserted with correct polarity - failure to do so can result in product damage

Download the user guide by scanning the following QR code:

User Interface

Horizontal cursors are used to select consecutive channles, groups or scenes

'Read' displays DALI information that is on the circuit. Three receive options are available

'Test' is used to transmit levels to ballasts. Includes channel and group preset

'Config' is used to change ballast properties and Dali-Scope configuration parameters

Dali-Scope

DALI Rigger's Remote & Programmer

Yes   No

Read   Address
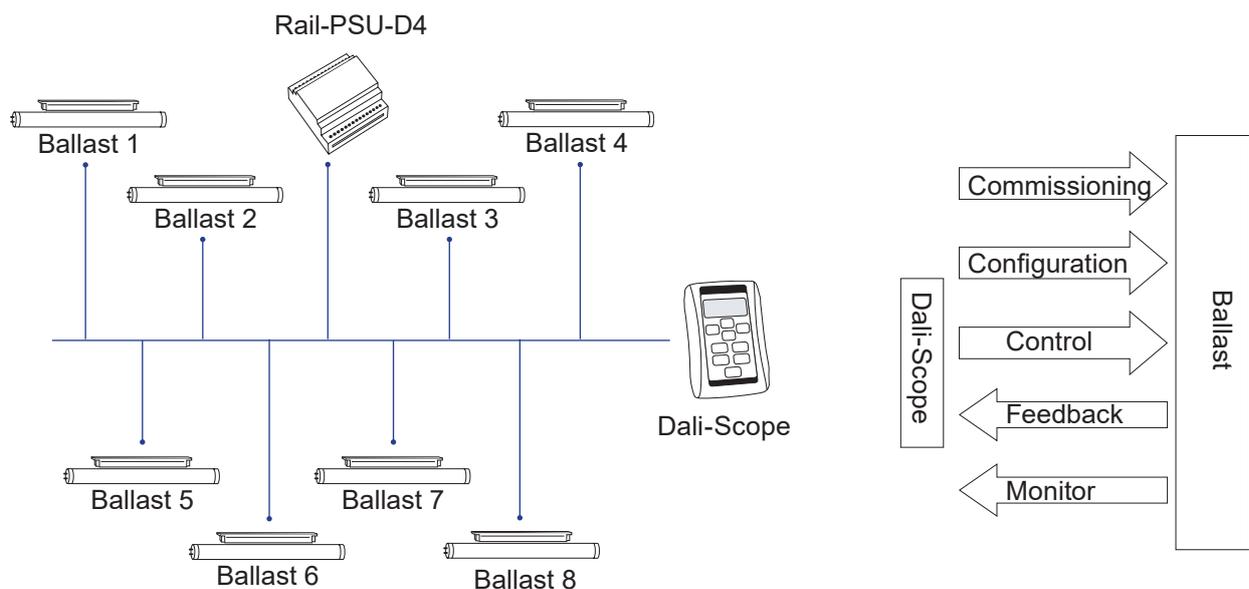
Test   Status

Config

Artistic Licence
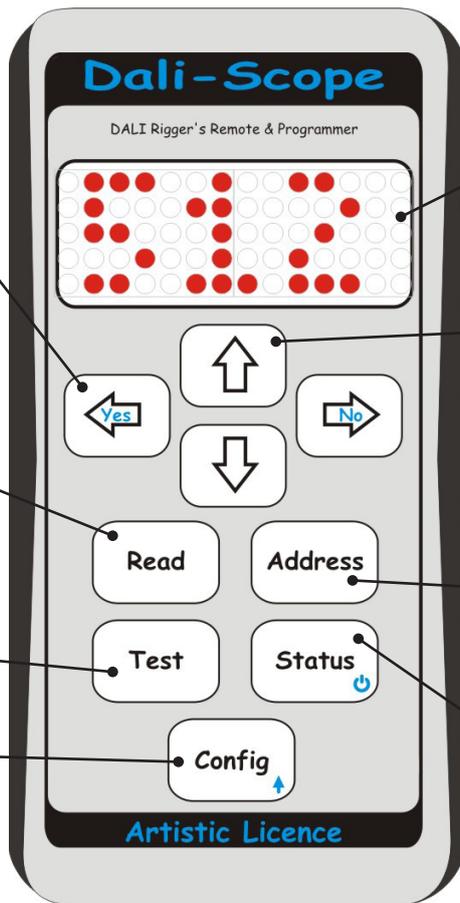
The text display automatically scrolls to show more information

The vertical cursors are used to set levels and parameter values

'Address' is used to configure the ballast with channel and group assignments

'Status' reports ballast properties such as Lamp Status, Reset State & Short Address

Application Diagram

Rail-PSU-D4

Ballast 1
Ballast 2
Ballast 3
Ballast 4

Ballast 5
Ballast 6
Ballast 7
Ballast 8

Dali-Scope

Dali-Scope

Commissioning
Configuration
Control
Feedback
Monitor

Ballast

Product Overview

Dali-Scope is a hand-held, easy-to-use DALI commissioning tool. It is capable of performing auto-discovery, commissioning, programming, channel, group and scene assignments, test and analysis functions.

DALI Background

DALI was created to provide central control over fixtures, enabling commercial lighting to become more efficient. While the initial development focused on fluorescent ballasts, applications now encompass a range of devices such as LED drivers, HID and low-voltage halogen. In the future, the scope will include rotaries, light sensors and more.

DALI stands for Digital Addressable Lighting Interface. It is technically managed under IEC 62386.

System

There are four main components required for a DALI subnet or circuit.

1. A DALI controller (may be a gateway, hub or router)

2. A DALI Bus Power Supply (e.g. the Artistic Licence Rail-PSU-D4)

3. Some kind of DALI device

4. Cabling

The system pictured opposite can be considered one subnet of DALI.

- A DALI subnet can have up to 64 DALI devices/ballasts

- A DALI Bus PSU must always be present on each DALI subnet

- Each device has a short address (0 to 63)

- There should be no duplicate short addresses

- Each device can be assigned to any of the 16 groups

- Each device can have 16 scenes programmed into its memory

DALI Controller

DALI

DALI Bus PSU

DALI

Device
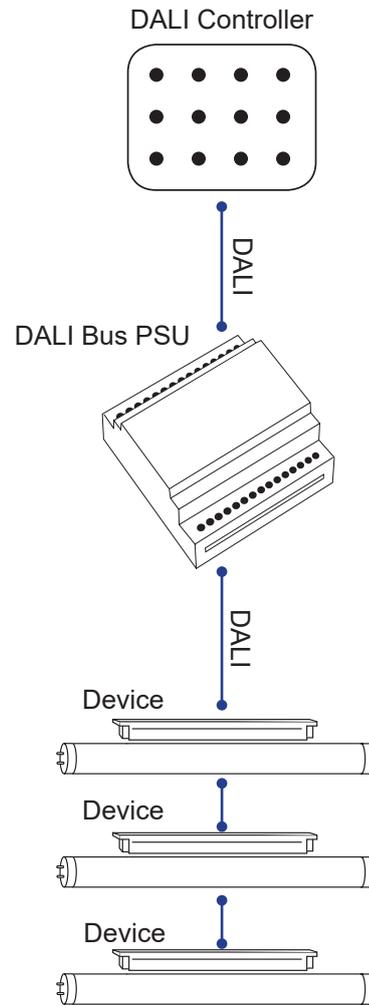
Device

Device

Commissioning

All DALI devices need to be commissioned for the first time before they will work correctly. This requires specialised equipment, such as the Artistic Licence Dali-Scope.

Commissioning involves giving every DALI device a unique short address. This is to allow two-way communication between the controller and devices.

DALI devices contain a random number generator that enables them to be individually discovered during commissioning. After the commissioning tool performs the discovery stage, it sequentially assigns individual short addresses to each device on the DALI subnet. At the end of the process, the devices' short-addresses can be reprogrammed if required to achieve a more logical order. (The commissioning tool will normally identify the ballast to be reprogrammed by switching it on or off).

If new devices are added to an existing network, short addresses already in use will be avoided.

The commissioning process is separate to the configuration of the devices and only needs to be done once.

Dali-Scope Operation

Dali-Scope has six menu options:

- READ - Read incoming DALI commands
- TEST - Transmit DALI levels
- STATUS - Displays properties of a fixture
- ADDRESS- Shows & configures current channel/group assignment
- CONFIG - Changes configurable properties of a fixture
- ADVANCED CONFIG   - Dali-Scope setup options

Power

Power is provided by two AA batteries. Approximate battery life is 12 hours continuous and 6 months on standby. Dali-Scope can be powered using rechargeable batteries.

Dali-Scope features an automatic power off timer to conserve battery life. This may be configured in the ADVANCED CONFIG menu.

Switch on by pressing the ⏻ key. To switch off, hold the ⏻ key for 5 seconds.

During power on, Dali-Scope automatically searches for DALI devices. This search will only include devices that have been given a channel number / short address. To find devices that are unconfigured, please refer to the ADDRESS section.

Important: Dali-Scope will not provide power onto the Data Bus. Please ensure a DALI Bus PSU is present such as a Rail-PSU-D4.

Note: Only one controller should be present on the DALI circuit at any time. When using the READ menu options, Dali-Scope does not transmit data messages so can be added to the DALI circuit at the same time as a DALI controller.

READ

There are 3 options available:

- CURRENT VALUE: Displays the value of the command or level that is transmitted by the controller. This value will then be held until the READ button is pressed again.
- LATEST VALUE: Displays the latest values that are transmitted on the circuit. The screen will refresh each time a new value is received.

(The two options above display all the information received. This will include control commands).

- DISPLAY STATS: Displays the number of commands being sent (Tx) and received (Rx) on a DALI circuit.

(Note: The counter resets to 0 when it reaches 256).

TEST

Use the TEST button to scroll through the different sub menus below:

- RIG: [CHANNEL / GROUP / SCENE] – Sends a single value
  - UP or DOWN used to control the value (0-100%)
  - LEFT or RIGHT used to select the channel / group / scene index
  - LEFT (hold) then RIGHT used to select between channel / group / scene
- WALK: [CHANNEL / GROUP / SCENE] – Walks between start and end index
  - UP or DOWN used to select start index
  - LEFT or RIGHT used to select end index
  - LEFT (hold) then RIGHT used to select between channel / group / scene
- ALL: [BROADCAST] – All devices at a specific level
  - UP or DOWN used to select level (0 – 100%)

- PRESET: [CHANNEL / GROUP] – Preset memory for either channel or group

  - UP or DOWN used to select value (0-100%)

  - LEFT or RIGHT used to select index

  - LEFT (hold) then RIGHT used to select between channel or group

    Note: These presets are held in memory.

STATUS

Use the STATUS button to scroll through the different sub menus below:

- DALI BUS POWER: [OK/DALI PSU PRESENT/NO PSU PRESENT]

- BALLAST STATUS: [OK/ERR/NOT PRESENT]

- LAMP STATUS: [OK/FAILURE/NOT PRESENT]

- LAMP POWER: [ON/OFF/NOT PRESENT]

- RESET STATE: [YES/NO/NOT PRESENT]

- LIMIT ERROR: [YES/NO/NOT PRESENT]

- VERSION NUMBER: [VERSION/ UNKNOWN/NOT PRESENT]

- SHORT ADDRESS: [ADDRESS/ MISSING/NOT PRESENT]

ADDRESS

- CHANNEL ASSIGN: Used to change the channel assignment of a ballast

  - LEFT or RIGHT to select ballast to program

  - UP or DOWN to select the new channel index

  - YES (and hold) to program ballast

  - NO to cancel new channel index (before programming occurs)

- GROUP ASSIGN: Used to assign a ballast to a group

  - LEFT or RIGHT to select ballast to program

  - UP or DOWN to select the new group

- YES (and hold) to confirm action

- NO to cancel action (before programming occurs)

- GROUP REMOVE: Remove a group assignment from a ballast

  - LEFT or RIGHT to select ballast to program

  - UP or DOWN to select the group assignment that is to be removed

  - YES (and hold) to confirm action

  - NO to cancel action (before programming occurs)

- SCENE ASSIGN: Store a value for a scene within the ballast memory

  - LEFT or RIGHT to select ballast to program

  - UP or DOWN to change the scene level

  - LEFT & RIGHT to select scene index

  - YES (and hold) to confirm action

  - NO to cancel action (before programming occurs)

- SCENE REMOVE: Remove a scene value from the ballast memory

  - LEFT or RIGHT to select ballast

  - UP or DOWN to change the scene that is to be removed

  - YES (and hold) to confirm action

  - NO to cancel action (before programming occurs)

- AUTO CHANNEL ASSIGNMENT: Assign short addresses to new ballasts

  - YES (and hold) to confirm action

Note: This function is for programming new ballasts that have not been assigned a channel number. It will reset ALL ballasts on the DALI circuit and give them new channel numbers. If you need to program a new ballast on a circuit without affecting other ballasts, please isolate the new ballast.

Config

- CURRENT LEVEL: Displays the current level of the ballast
  - LEFT or RIGHT to select ballast

- MAX LEVEL: The maximum level of the ballast
  - LEFT or RIGHT to select ballast
  - UP or DOWN to select the maximum value
  - YES (and hold) to confirm change
  - NO to cancel request

- MIN LEVEL: The minimum level of the ballast
  - LEFT or RIGHT to select ballast
  - UP or DOWN to select minimum value
  - YES (and hold) to confirm change
  - NO to cancel request

- ON LEVEL: The ballast on level (turn on level)
  - LEFT or RIGHT to select ballast
  - UP or DOWN to select value
  - YES (and hold) to confirm change
  - NO to cancel request

- FAILURE LEVEL: The level the ballast uses in case of DALI failure
  - LEFT or RIGHT to select ballast

(Note: Dali-Scope does not allow this value to be changed)

- FADE RATE: The ballast fade rate (as set in the DALI specification)
  - LEFT or RIGHT to select ballast
  - UP or DOWN to select value
  - YES (and hold) to confirm change
  - NO to cancel request

- FADE TIME: The time of the fade
  - LEFT or RIGHT to select ballast
  - UP or DOWN to select value
  - YES (and hold) to confirm change
  - NO to cancel request

- RESET: Reset the Ballast Properties
  - UP or DOWN to select ballast
  - YES (and hold) to confirm change
  - NO to cancel request

(Note: This will reset the ballast properties, except channel address)

Advanced Config

This menu is activated by holding the CONFIG key for 2 seconds. Use the CONFIG button to select between the different sub-menus. The options are:

- POWER OFF TIMER: [Always On] [3 Min] [10 Min] - Use UP & DOWN to adjust

- SCROLL SPEED: (Variable) - Use UP & DOWN to adjust

- BRIGHTNESS: [Normal] [Bright] - Use UP & DOWN to adjust

- MAN TEST: (Display and keyboard test used in manufacture) - All keys are used for testing

To leave ADVANCED CONFIG press and hold the CONFIG button for 2 seconds.

Dali-Scope Specification

Mechanical
Housing: Hand-held case
Material: ABS 94HB Plastic, UL94MB Fire-rated
Overall Dimensions: 95mm (H) x 65mm (W) x 28mm (D)
Weight: 0.1kg
Country of Manufacturer: UK
Electrical
Input Voltage: 2 x AA Battery
Duty Cycle: 80% @ 25°C
Environmental
Operating Temperature: 0°C to 40°C
Storage Temperature: -10°C to +50°C
Operating Relative Humidity (max): 80% Non-Condensing
IP Rating: IP20 Indoor Use Only
Certification: CE FCC, WEEE, RoHS
Warranty: 2 Year (Return to Base)

User Interface / Indication
Connections:
- RCA Jack (phono) DALI connection (1 no.)
- AA Battery compartment (1 no.)
Configuration: Set-up menu option
User Interface: 9-button control panel
Indication: Dot Matrix display
Control
Control over 1 DALI circuit
Output Protocols: DALI
Isolation / Protection
Isolation: Opto-Isolation on all DALI lines
Package Contents
Dali-Scope
User Guide
Phono to Clip Lead
2x AA Batteries
Ordering Info
Product Code: Dali-Scope
Accessories (not included)
- Replacement Dali-Scope Lead

WARNING: Please ensure batteries are inserted with correct polarity - failure to do so can result in product damage

Warranty

All products are covered from date of purchase by a two-year return to base warranty.

By return to base, we mean that the customer is responsible for all costs of transport to and from Artistic Licence.

Returns will not be accepted without prior authorisation. In order to discuss a request to return goods, please email:

Sales@ArtisticLicence.com

Compliance

All Products manufactured or sold by Artistic Licence Engineering Ltd are fully compliant with the appropriate CE, FCC, and RoHS regulations. Product specific information is available on request.

Waste Electrical & Electronic Equipment (WEEE)

Artistic Licence is a member of a WEEE compliance scheme and will happily recycle any of our products that you, at your expense, return to us.

Artistic Licence
The Mould Making Workshop
Soby Mews
Bovey Tracey
TQ13 9JG
United Kingdom

Telephone   +44 (0) 20 8863 4515

Email: Sales@ArtisticLicence.com
Web: www.ArtisticLicence.com

Support@ArtisticLicence.com

Due to our policy of continuing product improvement specifications are subject to change without notice