WSR-DLI User Manual

For programming information: Wired system Programming Guide
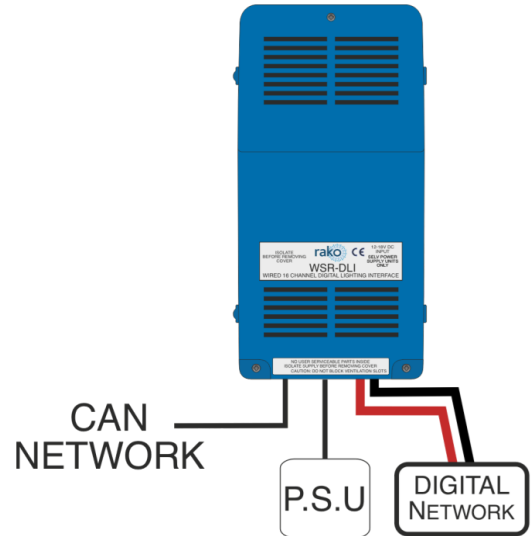
For further installation information: Wired RAK Application Sheet

What is the WSR-DLI?

The WSR-DLI allows the integration of an addressable DLI network into a Rako wired system. Up to 64 DLI ballasts can be assigned to 15 different channels in a single Rako room.

Fully supports DLI 2 meaning ballasts can be configured to allow for colour temperature control, fade rates, Min/Max dim levels etc.
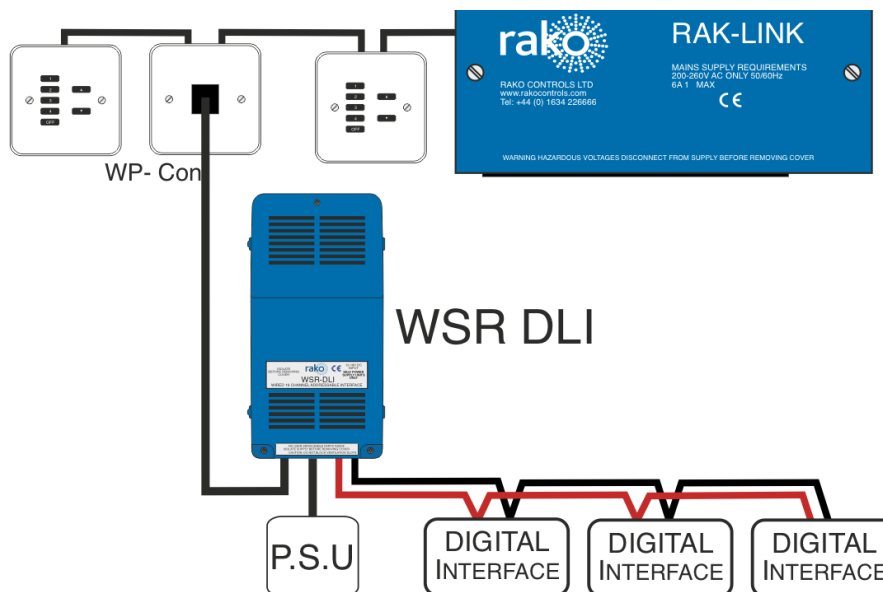

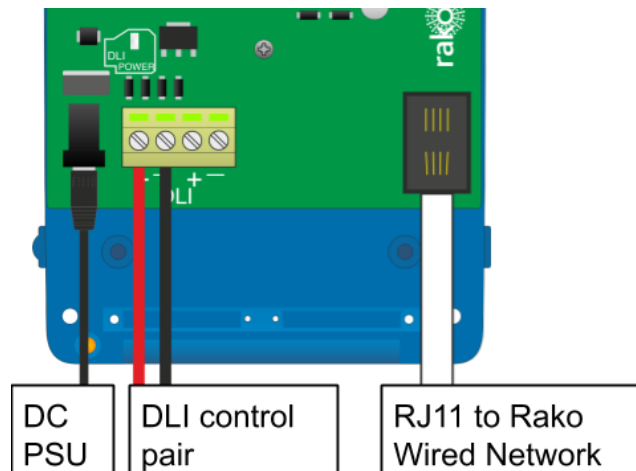## Connecting WSR-DLI to Rako Wired Network

The WSR-DLI can be connected to the Rako Wired Network in several ways. It has the option of either a RJ11 cable connection or a 8 way Krone connector via the "Can connect" daughterboard provided with the WSR-DLI.

RJ11 Cable connection options - RAK-LINK, RAK-STAR, WP-CONC, WP-CON.

The example below shows the WSR-DLI connected to the wired network via a WP-CON in a radial configuration

Installing the WSR-DLI

The WSR-DLI must be connected to the Rako wired system by the RJ11 port either plugged directly to RAK-LINK or RAK-STAR or punched down to the CAT5 cable via a WP-CONC.   The WSR-DLI requires 18V DC, a suitable power supply attached to a 13A plug is provided with the product. When successful powered up LED 2: the "Power LED" will illuminate.
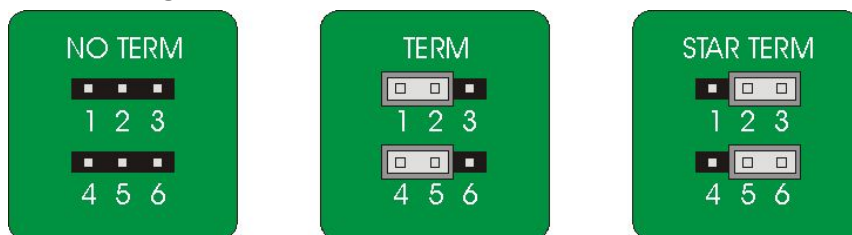
NB - *This power supply is to power the circuit board and DLI output of the WSR-DLI only. The power for the fittings themselves is provided directly to the ballast, the output from the WSR-DLI is a control signal only.*

Terminating the WSR-DLI

TERMINATION ON THE WSR-DLI ITSELF IS ONLY REQUIRED WHEN USING THE 8 WAY KRONE CONNECTOR "CAN CONNECT" DAUGHTERBOARD.

The final step in the installation process is to terminate the WSR-DLI. The termination that is required depends on the nature of the installation and the position of the WSR-DLI within the system.

Termination Jumper settings:

No Term - Both Jumpers removed
Used when the WSR-DLI is not at the end of line. This is usually identifiable by two cables being punched down to the WSR-DLI.

Term - Jumper fitted across 1+2 & 4+5
Used when the WSR-DLI is end of line in a daisy chain configuration.

Star Term - Jumper fitted across 2+3 & 5+6
Used when the WSR-DLI is end of line in a STAR wire configuration.

Adding the WSR-DLI as a device

For the WSR-DLI to operate correctly with a RAKO system some initial setup must be performed. This is done using a PC running RASOFT Pro (WSR-DLI is not supported by RASOFT classic) and communicating with a RAKO Bridge or HUB connected to the same wired system as the WSR-DLI .
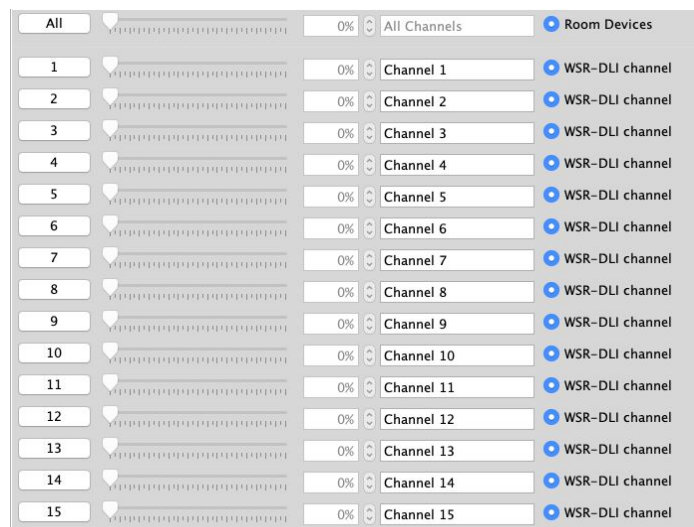

Open the Project File for the installed Rako system and make sure that Rasoft is connected to a communication device.

NB

The communication window at the bottom right should indicate whether a HUB/Bridge is connected or not. For instructions on how to connect to a HUB/Bridge see Rasoft Pro programming guides and applicable instruction manuals.

- Select "File" - "New device" to bring up the "New device Wizard" and choose "WSR-DLI" from the list.

- Choose a suitable device name (if you have multiple WSR-DLIs make sure it is identifiable from this description). Leave "Device ID" blank with the "Automatic ID" box checked.

- Associate the WSR-DLI to a room from the drop down menu. The room selected here will set the "Local Room" for this device, leave "Associate to channel" blank.

- Once this screen appears press and hold the blue button on the WSR-DLI. After a few seconds it will enter Setup Mode and the status LED will start to blink. Release the button and "Waiting for device to enter setup" should change to "Device Found".

- Click the "Finish" button to complete setup rako

The WSR-DLI is a multi-channel device and will occupy the entire room. By default Short Address 0 will be addressed to Channel 1 in the Rako Room, DLI Short Address 1 to Channel 2 and so on for all 15 Channels.

Assigning the DLI short addresses

At this stage the WSR-DLI has been addressed and the Rako channels are associated to DLI short addresses. However the ballasts themselves do not have DLI short addresses assigned to them. To address the DLI ballasts open the "DLI Setup" tab in the WSR-DLI device editor (select the RSR-DLI in the device list to open the device editor).

Force Readdress:

This will delete all current short addresses and replace them with an entirely new set. It is advisable to use this button when initially addressing the DLI ballasts in a new system.

Automatically Readdress:

This button will assign DLI short addresses to any Ballast that is unaddressed. If additional ballasts are added this will assign addresses to the new ballasts while leaving the previous addresses unaffected.

Managing the WSR-DLI channels

To use the Circuits mapping page "Use group mapping" must be selected. When in "Use Direct mapping" mode Rako channels will always be set as DLI short addresses -1 (DLI short address 0 = Rako channel 1, DLI short address 1 = Rako channel 2 etc.) regardless of how the mapping page appears.

Sometimes it may not be desirable to have the DLI channels arranged in the order they have been auto-assigned using "Automatically Readdress" or "Force Readdress". This is achieved using the Circuits (Mapping) tab in "Use Grouped Mapping".

When "Use Grouped Mapping" is selected the Rako channels become mapped to DLI groups. This means that any number of DLI short addresses can be mapped to a single Rako channel and in any order. This is useful if more than 15 DLI short addresses need to be assigned to a single WSR-DLI or if the ballast(s) are not set to the desired Rako channel.

DLI Short Address	Test (Double Click)	DLI Status	Rako Channel	DLI Group #
0	Test		Channel 1 [Ch: 1]	0
1	Test		Channel 2 [Ch: 2]	1
2	Test		Channel 3 [Ch: 3]	2
3	Test		Channel 4 [Ch: 4]	3
4	Test		Channel 5 [Ch: 5]	4
5	Test		Channel 6 [Ch: 6]	5
6	Test		Channel 7 [Ch: 7]	6
7	Test		Channel 8 [Ch: 8]	7
8	Test		Channel 9 [Ch: 9]	8
9	Test		Channel 10 [Ch: 10]	9
10	Test		Channel 11 [Ch: 11]	10
11	Test		Channel 12 [Ch: 12]	11
12	Test		Channel 13 [Ch: 13]	12
13	Test		Channel 14 [Ch: 14]	13
14	Test		Channel 15 [Ch: 15]	14
15	Test Unknown			
16	Test Unknown			
17	Test Unknown			
18	Test Unknown			
19	Test Unknown			
20	Test Unknown			
21	Test Unknown			

It is possible to test which ballast is associated to which short address by using the test column on the mappings page. Double click on "test" to send and "on" to this ballast, double clicking again will send an "off." When an "on" is successfully sent the row will appear as below.

DLI Short Address	Test (Double Click)	DLI Status	Rako Channel	DLI Group #
0	Send On		Channel 1 [Ch: 1]	0

Shortcut commands exist for testing individual DLI short addresses, select the column of the short address to be tested first

> **The <, key** = Send on

> **The >. key** = Send off

> **The ?/ key** = Toggle on/off

Auto Heal Data

When programming is complete press this button to store DLI network information. Failure to do so will mean in the event of lamp failure the entire DLI network will need to re-programmed.

This button will store the current state of the DLI network within the WSR-DLI. This means that if a single ballast is removed and replaced the new ballast will have the same short address automatically uploaded to it. If more than one DLI ballast needs to be replaced the entire network must be re-addressed using the "Force Readdress" button.

Advanced features of WSR-DLI

Swap Channels

The Swap Channels tile in the DLI setup tab allows for custom readdressing of the DLI short addresses themselves. Individual short addresses can be moved on to or swapped with each other by using this interface.

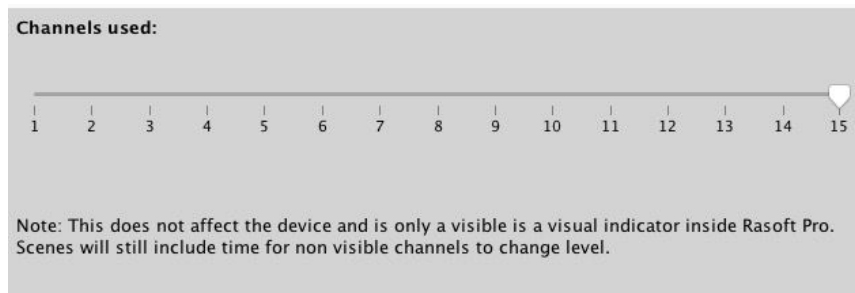This will readdress the DLI ballast to the short address as set in each box, "Perform Swap" will directly switch the position of the two ballast. "Perform Move" will result in both ballasts having a the short address of "DLI Short Address 2".

Visible Channels

Sometimes not all 15 channels in the room will be required by the WSR-DLI (less than 15 separately controllable sets of DLI ballasts required). When this is the case then the "Visible Channels" tab can be used to reduce the number of channels the WSR-DLI occupies in the software.

Slide the "channels used" slider to match the number of Channels required by the WSR-DLI and the remaining channels are freed up to be used by other devices.