

RSR-DLI User Manual



For an overview of the wireless systems: [Wireless Module Application Sheet](#) / [Wireless RAK Application Sheet](#)

For programming a wireless system: [Wireless Module Programming Guide](#) / [Wireless RAK Programming guide](#)

What is the RSR-DLI?

The RSR-DLI allows the integration of an addressable DLI network into a Rako system. Up to 64 DLI ballasts can be assigned to 15 different channels in a single room either by DLI short addresses or by DLI groups. Auto-heal functionality for easy replacement of faulty ballasts is also available.

What is DLI?

DLI is a protocol by which a network of compatible ballasts can communicate with each via bi-directional data exchange. Ballasts are assigned a unique address between 0 and 63 (called a Short Address) so they are identifiable to the DLI controller (RSR-DLI).

Three different types of commands can be sent across the DLI network.

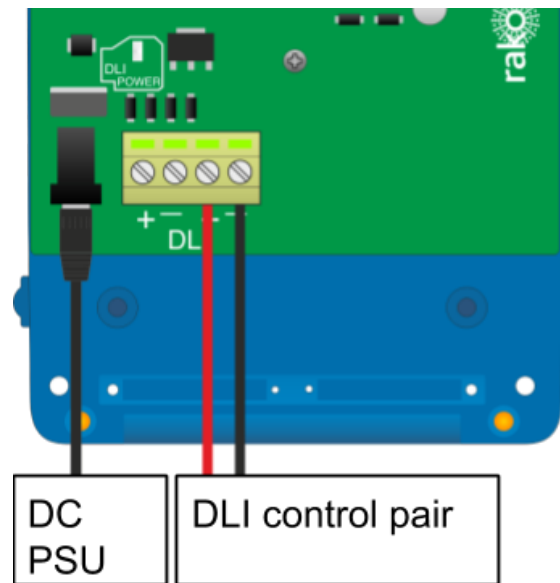
Direct – A command sent to a single ballast (short address).

Group – Ballast can be associated to one another within a network by using DLI groups. A group command will be sent to all Ballasts within the DLI group.

Broadcast – A command sent to every ballast on the DLI network.



Installing the RSR-DLI



The RSR-DLI works off a 12V DC, a suitable power supply attached to a 13A plug is provided with the product. When successfully powered up LED 2: the “Power LED” will illuminate.

Note that this power supply is to power the circuit board and DLI output of the RSR-DLI only. The power for the fittings themselves is provided directly to the ballast, the output from the RSR-DLI is a control signal only.

Adding the RSR-DLI as a device

For the RSR-DLI to operate correctly with a Rako system some initial setup must be performed. This is done using a PC running Rasoft Pro (RSR-DLI is not supported by RASOFT classic) and communicating via a RAKO Bridge/HUB or RAMPI programming device.

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 device is connected or not. In this case a RAMPI is connected. For instructions on how to connect to a communication device see Rasoft Pro programming guides and applicable instruction manuals.

- Select “File” - “New device” to bring up the “New device Wizard” and choose “RSR-DLI” from the list.
- Choose a suitable device name (if you have multiple RSR-DLIs make sure it is identifiable from this description). Leave “Device ID” blank with the “Automatic ID” box checked.
- Associate the RSR-DLI to a room from the drop down menu. The room selected here will set the “Local Room” for this device.

- Once this screen appears press and hold the blue button on the RSR-DLI. After a few seconds it will enter Setup Mode and the status LED will start to blink. Release the button and the status LED should continue to cycle.
- Press “Device is in setup” and then “Finish” to send the addressing signal to the device. The LEDs should stop cycling and flash on if the addressing signal is successfully received.

Channel	Status	Percentage	Channel Name	Device Type
All		0%	All Channels	Room Devices
1		0%	Channel 1	RSR-DLI channel
2		0%	Channel 2	RSR-DLI channel
3		0%	Channel 3	RSR-DLI channel
4		0%	Channel 4	RSR-DLI channel
5		0%	Channel 5	RSR-DLI channel
6		0%	Channel 6	RSR-DLI channel
7		0%	Channel 7	RSR-DLI channel
8		0%	Channel 8	RSR-DLI channel
9		0%	Channel 9	RSR-DLI channel
10		0%	Channel 10	RSR-DLI channel
11		0%	Channel 11	RSR-DLI channel
12		0%	Channel 12	RSR-DLI channel
13		0%	Channel 13	RSR-DLI channel
14		0%	Channel 14	RSR-DLI channel
15		0%	Channel 15	RSR-DLI channel

The RSR-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.

[Addressing the DLI Ballasts](#)

At this stage the RSR-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 RSR-DLI device editor (select the RSR-DLI in the device list to open the device editor).

Note: This panel directly adjusts the DLI controllers directly. Uploading is not required.
Channel 0 is used for DLI commands sent over wireless (Racom)

Re-addressing

To Use DLI features "Wireless Rate Mode" must be un-ticked on the bridge. (Web pages -> Configuration)

Assign DLI controllers that aren't addressed with new short addresses. (Use if adding new ballasts)

Clear all existing addresses and assign new ones
(Use if ballasts are all un-addressed)

Press after commissioning is complete to store all DLI data (Grouping, scene settings, fade rates etc) .
When a single DLI ballast is removed and replaced it will re-upload the data.

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.

Mapping the DLI ballasts

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”.

Re-Upload Group Settings		DLI Groups When in Grouped Mapping.			
Background State:	Processing Short Address: 14	DLI Short Address	Test (Double Click)	DLI Status	Rako Channel
Grouping Options					DLI Group #
☐ Use Direct Mapping		0	Test	Test	Channel 1 [Ch: 1] 0
DLI short address +1 will be mapped to Rako Channels		1	Test		Channel 2 [Ch: 2] 1
☒ Use Grouped Mapping		2	Test		Channel 3 [Ch: 3] 2
DLI groups +1 will be mapped to Rako Channels. Use "Rako Channel" column. (Recommended)		3	Test		Channel 4 [Ch: 4] 3
Only grouping options use "Save & Upload". Other options on this panel communicate directly with DLI drivers.		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		

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 RSR-DLI or if the ballast(s) are not set to the desired Rako channel.

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 RSR-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.

Extra features of RSR-DLI

Swap Channels

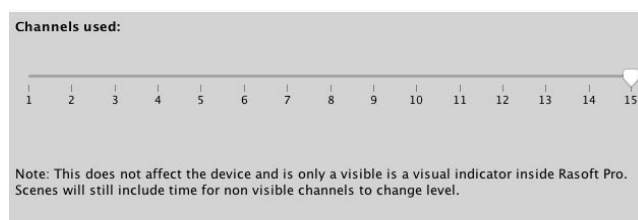
The Swap Channels tile in the DLI setup tab allows for custom readdressing of the DLI short addresses themselves. Individual short addresses can be moved on to or swapped with each other by using this interface.



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 the short address of “DLI Short Address 2”.

Visible Channels

Sometimes not all 15 channels in the room will be required by the RSR-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 RSR-DLI occupies in the software.



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

Rako thanks you for having purchased a Rako product and hopes that you are pleased with your system. Should for any reason you need to contact us please contact us via our website www.rakocontrols.com or by phoning our customer help line on 01634 226666.

