



# Instruction Manual

# WSR-DMX

Wired DMX Controller



2024  
Version 2.0.0



For programming system programming information: [Wired system setup guide.](#)

For a general overview: [Wired RAK application sheet.](#)

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## 1 What is the WSR-DMX?

The WSR-DMX is a 15-Channel DMX controller used on a Rako Wired network and can interface with DMX controllable devices such as RGBW lights and Fibre Optics.

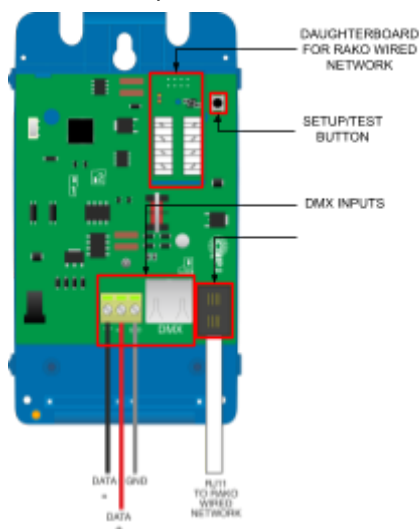
## 2 Inputs

The WSR-DMX has two input options for the DMX input connection, either an RJ45 cable can be used, or a suitable 2-core and shield cable.

The Rako Wired network also has two connection options, either the RJ11 socket can be used with the supplied RJ11 cable, or a CAT5/CAT6 cable can be used on the daughterboard.

## NB

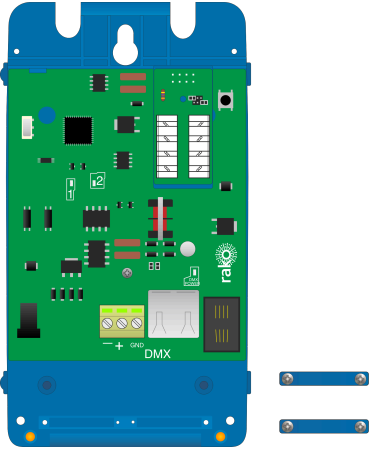
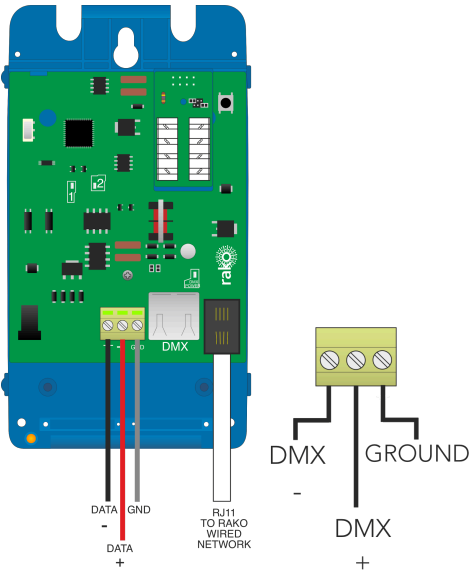
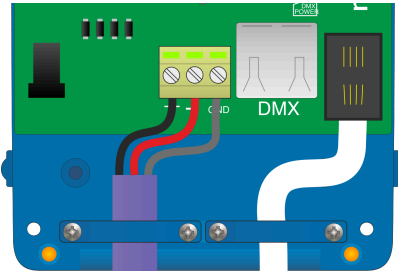
It is essential to set the correct termination on the daughterboard if it is used, for more information, see [Terminations](#).




### 3 Installation

#### **⚠ WARNING**

Installation should only be carried out by a competent electrician.

STEP 1		<p>Remove the cover by removing the two screws at the bottom of the unit, pulling the bottom of the cover away from the bottom, and lifting it.</p> <p>Set the two cable clamps aside.</p>
STEP 2		<p>Connect the DMX Output.</p> <p>Make a connection to the Rako Wired network via the RJ11 port using the supplied RJ11 cable, or by CAT5/CAT6 on the daughterboard on the top section of the WSR-DMX.</p> <p><b>NB</b> It is essential to set the correct termination on the daughterboard if it is used, for more information, see <a href="#">Terminations</a>.</p>
STEP 3		<p>Fit the supplied cable clamps and ensure the cable is unable to move.</p>

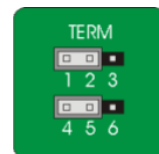
STEP 4		Replace the cover and replace the screws.
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## 4 Terminations

It is important to terminate WSR-DMX correctly otherwise the wired system will not function. The termination that is required depends on the nature of the installation and the position of the RAK-LINK within the system.

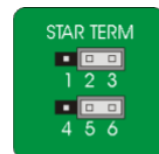
### No Term - Both Jumpers removed

Used when the WSR-DMX is not at the end of line. This is usually identifiable by two cables being punched down to the WSR-DMX.



### Term - Jumper fitted across 1+2 & 4+5

Used when the WSR-DMX is "end of line" in a daisy chain configuration.



### Star Term - Jumper fitted across 2+3 & 5+6

Used when the WSR-DMX is "end of line" in a STAR wire configuration.

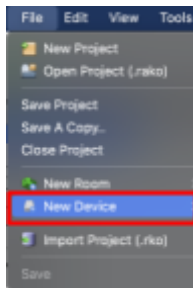
## 5 Programming the WSR-DMX

The following steps assume:

- A Project File has been created
- Rooms have been added
- Channels have been added
- A HUB or a RAMPI has been set up as a communications device

If any of the above are still required, see the [Wired system setup guide](#).

- In Rasoft Pro, go to File > New Device



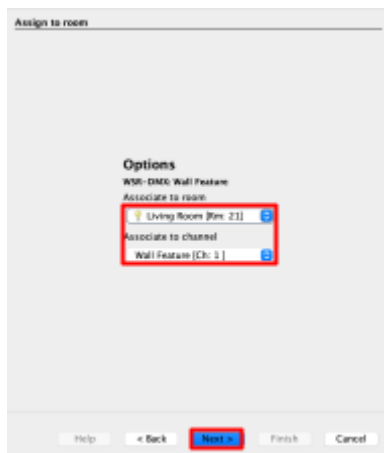
- A Device menu will pop up, select the WSR-DMX and select 'Next'



- Give the WSR-DMX device a name and select 'Next'



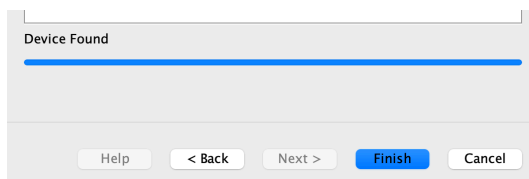
- Assign a Room and Channel and select 'Next'



### **NB**

For more than one Channel, select the first Channel, subsequent Channels will automatically be assigned.

- To put the device into setup mode, press and hold the button on the top right of the WSR-DMX, and the LED will begin to flash. Release the button; the LED should continue to flash, and the setup wizard will show 'Device Found'



- Select 'Finish', the device is now paired and in the project file.

## 5 Setting DMX Driver Addresses

DMX drivers require an address in order to be controlled by the WSR-DMX, the number which is set on the DMX driver will relate to the starting address in the Room the WSR-DMX is programmed in, for example:

DMX Driver Address	Rako Channel Number
001	1
002	2
003	2
004	3
005	4

### NB

Although the addressing structure above is the most common, DMX drivers vary in their configuration, read the manufacturer's instruction manual for specific instructions.

## 6 Colour Wheel

If the WSR-DMX is used for colour control, the outputs on the WSR-DMX can be controlled using a colour wheel in the Rako App, where selecting a colour will automatically mix the Channels without needing to do it individually.

The colour wheel is not enabled by default, for a colour wheel to show in the Rako App, the Channels need to be labelled as below:

### Example:

A colour wheel in the App called "Feature" would have the following channel names:

0%	Red Feature
0%	Blue Feature
0%	Green Feature

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Thank you for choosing Rako Controls; we hope that you are pleased with your system. Should you require further assistance, please contact us via our website, [www.rakocontrols.com](http://www.rakocontrols.com), or by calling our customer support helpline on 01634 226666.

