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		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. Set the two cable clamps aside.
STEP 2		Connect the DMX Output. 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. NB It is essential to set the correct termination on the daughterboard if it is used, for more information, see Terminations.
STEP 3		Fit the supplied cable clamps and ensure the cable is unable to move.

STEP 4		Replace the cover and replace the screws.

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

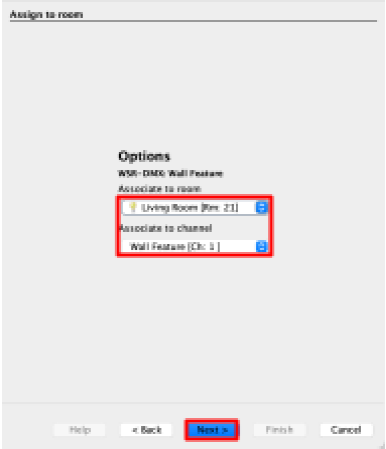
If any of the above are still required, see the Wired system setup guide.

- 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:

