Instruction Manual

WAVMI

Wired Mains Switching Interface

2024
Version 2.1.0

UK CA

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 WAVMI?

The WAVMI is a mains switching interface used in a Rako Wired network, it has five mains switching inputs. The purpose of the WAVMI is to interface with 3rd party switching controllers such as a PIR, Fire Alarm or Gate Control, once a switching input is made or broken, the WAVMI can be programmed to send Rako Wired commands.

2 Inputs

There are two ways of connecting the WAVMI to the Rako Wired network, via the RJ11 port into a WK-CONNECT or a RAK-LINK, or via the punch-down daughterboard (termination required.

3 Installing the WAVMI

⚠WARNING

Installation should only be carried out by a competent electrician.

Step 1		Remove the front cover and set the cable clamps aside.
Step 2		Connect the Input mains supply.
Step 3		Connect up to five mains switching devices such as PIRs, alarms and gate controls.

Step 4		Install the cable clamps, and ensure that the installed cables are secure.
Step 5		Using the two screws provided, replace the front cover for the WAVMI to complete the installation. NB Two LEDs will light on the WAVMI circuit board. The "Power" LED in the top left of the board indicates that there is power on the Rako Wired Network. The LED "D25" near the terminal blocks shows that the WAVMI onboard mains supply is active (power to the terminal blocks).

4 Terminating the WAVMI

It is important to terminate WAVMI 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 WAVMI is not at the end of line. This is usually identifiable by two cables being punched down to the WAVMI.

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

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

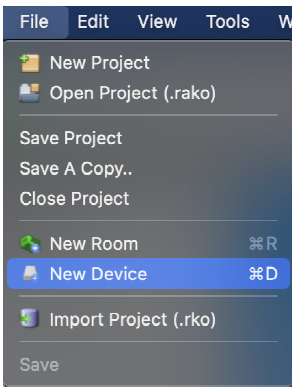
5 Programming the WAVMI

The WAVMI needs to be configured in Rasoft Pro to operate.

The following instructions assume:

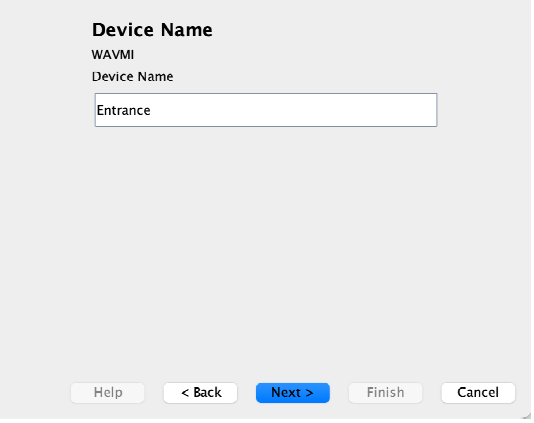
- A Project File has been created
- Rooms have been added to the project file
- The WK-HUB has been configured
- The Wired Network is showing no errors on the switches and RAK-LINK

- In Rasoft Pro, go to File > New Device



- Select the WAVMI in the Device List, select “Next”

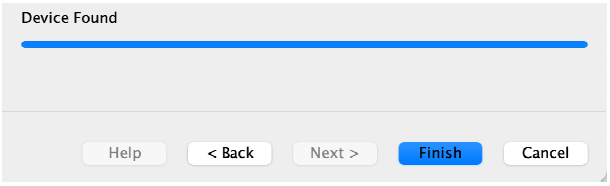
- Give the WAVMI a suitable name, select “Next”



- Assign the WAVMI to a Room, select “Next”

- Put the WAVMI into Setup Mode by pressing and holding the setup button until the LEDs on the unit begin to flash.

- The Setup Wizard will detect the WAVMI device, select “Finish”



The WAVMI is accessible via the Device List in Rasoft Pro where it can be configured.

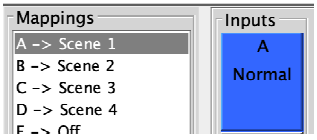
6 Configuring the WAVMI

A WAVMI has a maximum of 24 maps that can be set. Each is programmable by selecting it in the mappings list and then editing the three sections: “Inputs”, “Mapping Options” and “Output Action”.

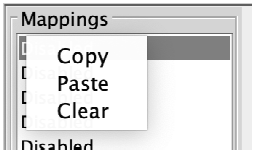
6.1 The Mapping section

All inputs for the Device must first have a mapping. The purpose of a mapping is to program an input to perform a specific command. Each input has its own letter to represent its input; the WAVMI has up to 5 inputs.

New mappings can be created by selecting a disabled field and selecting the corresponding input letter in the next column.



Active mappings can be copied or pasted into disabled mappings; this is typically used when re-using similar functions of an existing mapping to save time such as a toggle function.



Mapping right-click options

6.2 Mapping Options

The inputs for the mappings are selected in the Keypad layout section, as well as additional input options:

Function	Description
Send Stop On Release	When the made contact is released, a 'Stop' command will be triggered.
Trigger on press	Trigger the output command when the momentary switching makes contact between its input and common.
Trigger on release	Trigger the output command when the momentary switch breaks contact between its input and common

6.3 Output Action

The output actions of the inputs are set up in the button action section. The following options are available:

Function	Description
Room	The Room number of the output command.
Channel	The Channel number of the output command can be All Channels or a single Channel.
Disable map	When enabled, the input will have no output command.
Scene	If a Scene is being triggered, select a Scene between 1-16.
Fade-Up/Fade-Down	Commonly used to manually dim lighting up and down, as well as the Opening/Closing of Blinds. NB 'Send Stop on Release' should also be checked when using this option.

Motor Stop	Used to stop 3rd party motors that are configured within the HUB.
Ident	This option is not recommended, as the command will make a load flash momentarily and provides no practical function for daily use.
Toggle	The Toggle function will alternate between two commands, either a Level command and Off, or a Scene command and Off. NB Do not map more than one Toggle to a single input on the inputs; this will result in sporadic switching due to toggles getting out of sync.
Level	Sets the lighting Level to a percentage of brightness between 0-100%.
Tunable White	Set the temperature output.

Appendix 1 - Wiring Example

The example below shows a single PIR connected to an input on the WAVMI, there can be up to five inputs from different sources eg: PIR in input A and gate control in input B.

Each input can be configured to a different Room or Channel should it be required.