# WAVFR User Manual

What is WAVFR

WAVFR allows mechanical switches and logic levels to add additional control of a Rako Wired system.

This includes inputs from Alarm sensors, PIR modules, Thermo sensors, Light detectors. In fact anything that can provide an electrical contact or a DC logic output.
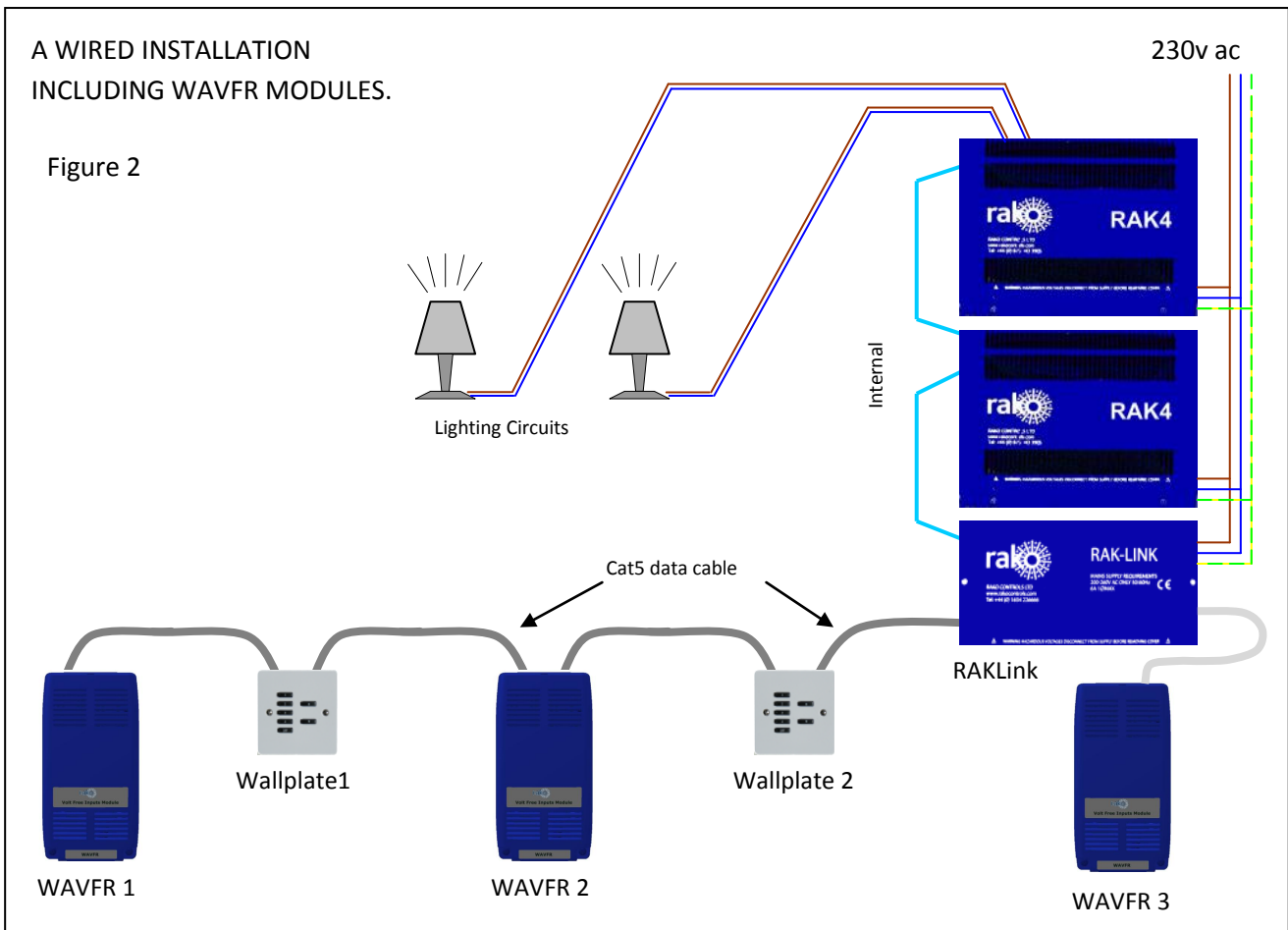

Figure 1

Send Commands to Rako Wired system

Up to Ten Volt free switches or Logic Level Inputs
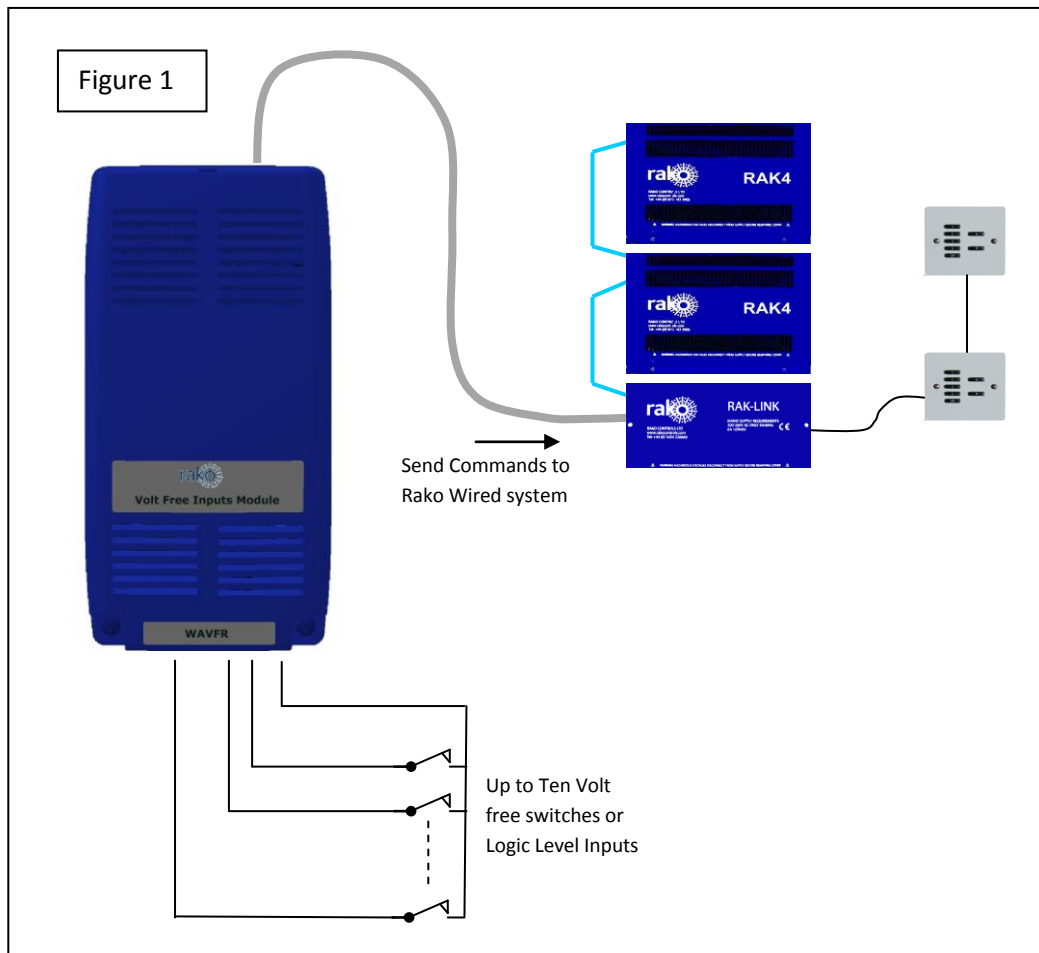
Getting started with WAVFR

Connect WAVFR to system

WAVFR must be connected to A RAKO Wired System. The simplest method is by connecting the RJ11 patch lead from the WAVFR to one of the RJ11 sockets on a system RAK-Link or RAK-Star. The RJ11 patch lead may also be plugged into a WA-Con access point.

If the WAVFR cannot be mounted near to a RAK-Link etc then the connection may be made by CAT5 cable to the Punch Down Daughterboard. The normal rules apply for terminations when connecting the CAT5 cable in this way, as on a Wired Wallplate.

A WIRED INSTALLATION
INCLUDING WAVFR MODULES.

Figure 2

230v ac

Internal

Lighting Circuits

RAK4

RAK4

RAK-LINK

RAKLink

Cat5 data cable

Wallplate1

Wallplate 2

WAVFR 1

WAVFR 2

WAVFR 3

In Figure 2 above:

WAVFR 1 is connected using Punch Down Daughterboard. It is at the end of the CAT5 cable so the Term Jumper is set on its daughterboard.

WAVFR 2 is connected using Punch Down Daughterboard. It is in middle of the CAT5 cable so No jumpers are set on its daughterboard.

WAVFR 3 is connected directly to a RAK-Link using RJ11 Patch Lead. The Daughterboard is unused and No jumpers should be set on that daughterboard.
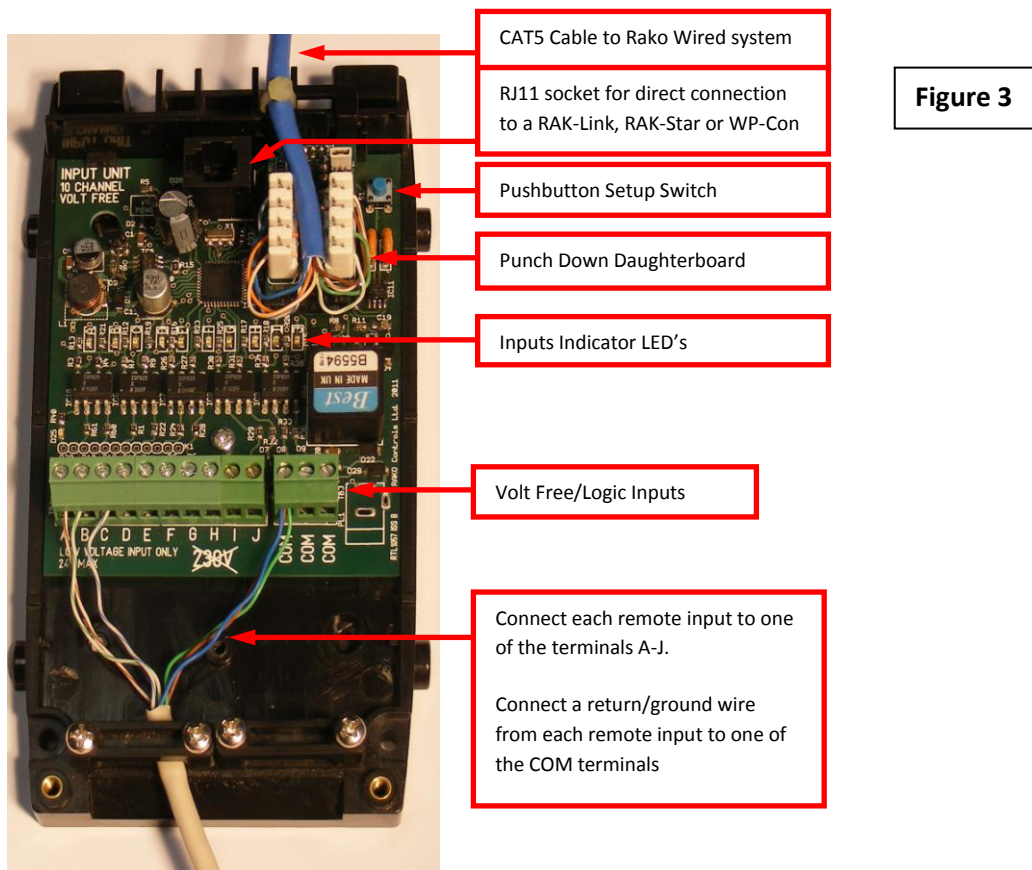
Figure 3

Labels pointing to the circuit board:
- CAT5 Cable to Rako Wired system
- RJ11 socket for direct connection to a RAK-Link, RAK-Star or WP-Con
- Pushbutton Setup Switch
- Punch Down Daughterboard
- Inputs Indicator LED's
- Volt Free/Logic Inputs
- Connect each remote input to one of the terminals A-J.

  Connect a return/ground wire from each remote input to one of the COM terminals

Apply Power to the system

The WAVFR takes its power from the RAKO wireless network. No other power supply is required. Connect WAVFR by CAT5, or RJ11 to the wired system and power up.

Two LEDs will light on the WAVFR circuit board. The "Power" LED next to the RJ11 indicates that correct volts are being received from the system. The LED "D25" near the terminal blocks shows that the WAVFR on-board supplies are healthy.

Configure the WAVFR using RASOFT

For WAVFR to operate correctly with a RAKO system some initial setup must be performed. This is done using a PC running RASOFT software and communicating with the Wired System via a RAKO Bridge Product (WRE-Bridge, WA-Bridge of WTC-Bridge).

Open the Project File for the installed Rako system. Make sure that Rasoft is talking to the system through a Bridge – Do not try to use RAUSB, RAH-Smart, RAV232 to make the connection. (Refer to the Bridge User Instructions or the *Wired System Programming Guide* for assistance).

Press and Hold the WAVFR Setup Switch. After a few seconds the WAVFR will enter Setup Mode and LED's A,B,C,D,E on the WAVFR will start to blink.
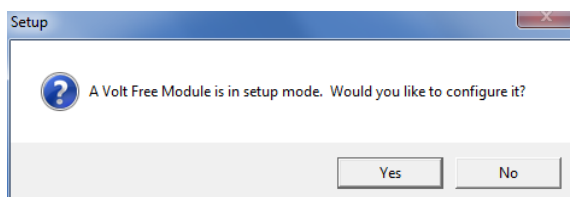

A Message will pop up in Rasoft to acknowledge that the WAVFR is in Setup Mode.
Press the *Yes* button to continue.
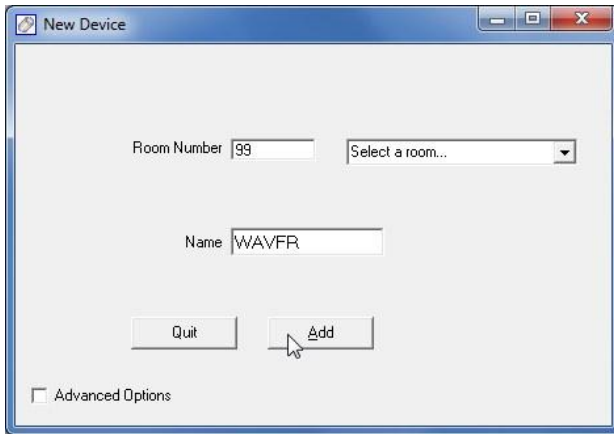
Add the WAVFR to the system. Give the WAVFR a room number and name. Then press *Add* button followed by *Quit*

The room number itself is not too important. Much more important is that the WAVFR has its own unique identity. It must not exist with the same *Device Number* as a different device (WallPlate, RakLink etc) that is in the same logical room. The Advanced Options check box will allow manual setting of Device Number if this is proving to be a problem

Wired Volt Free Setup screen will be shown:
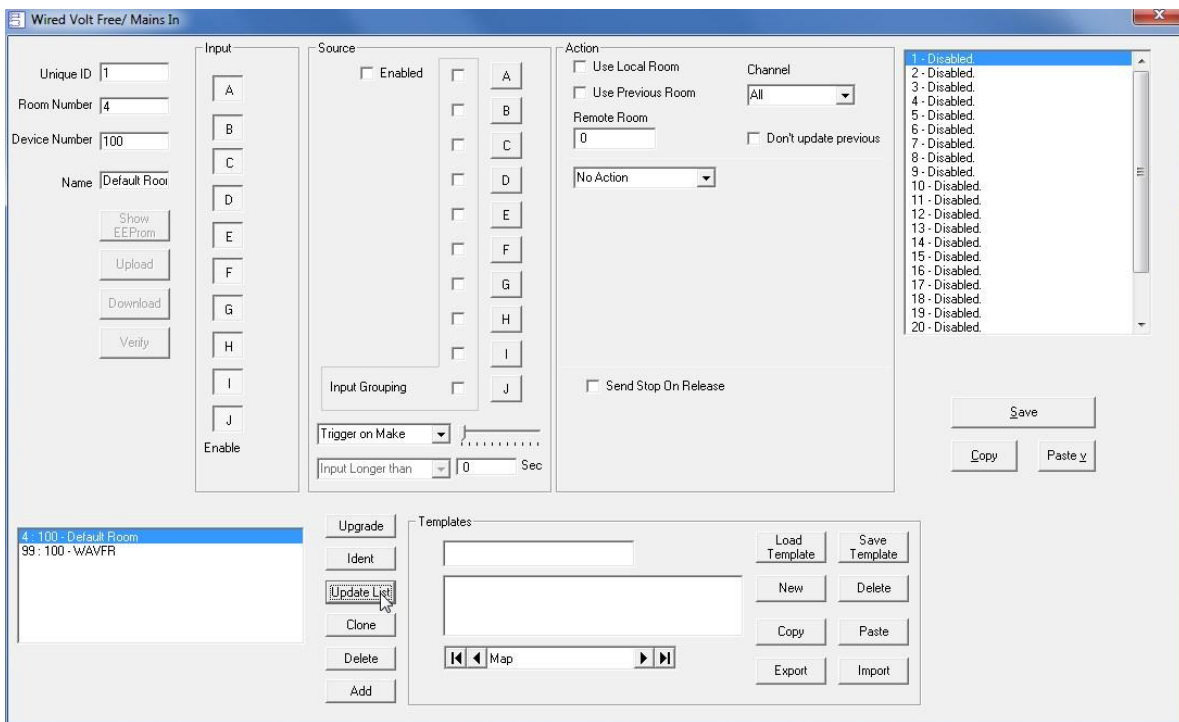
Press *Update List* Button to make the new WAVFR appear on list at bottom LH Corner. (The Default WAVFR can be deleted from the list).

The new WAVFR should now appear as On-line. If it does not, try Updating the List again, or even closing & reopening this setup screen (Under *Controls-Wired-WAVFR* tab)

Program the WAVFR functions

The WAVFR is programmed in a similar way to a Rako Wired Wallplate.

Input Enable Buttons

The current Map being Edited
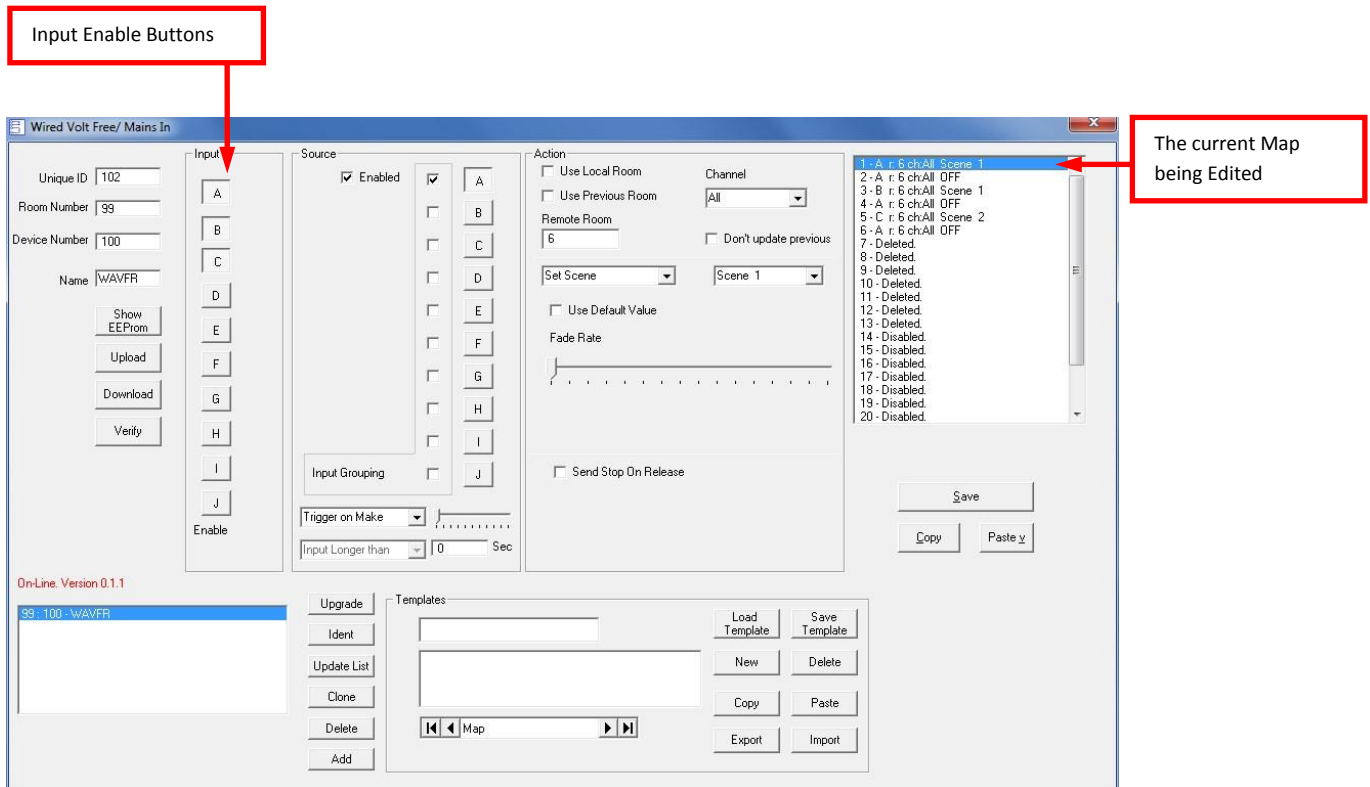
The edit screen includes *Input Enable buttons*. Press in the buttons that correspond to WAVFR inputs that have switches or logic inputs connected. Leave the buttons for any unused inputs unpressed. Compare the Input Enable buttons on this screen with figure 3. In each case only inputs A,B,C are in use.

Each Map has a Source and Action.
In this example the Source is that Input A is Made (Logic Low) for any time greater than zero seconds. Each of the Source Buttons has a check box. This is used to set which inputs are used to determine when this particular Map get triggered.
The Action for this map is that a Room 6, Scene 1 command is sent.

Other Maps will have different (or the same) source and will send appropriate commands.

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Technical Support

For more information contact Rako Controls Ltd 01634 226666 www.rakocontrols.com