

Wired System Setup Guide

Scene 1	Scene 3
Scene 2	Scene 4
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2024 Version 2.0.1



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1 Requirements

This guide is for programming a system using the Rasoft Pro software which is available for download at <u>http://www.rakocontrols.com/support/software</u>.



Programming the system will require a WK-HUB and a Windows or Mac computer. It may also be useful to have a full list of the Rooms and circuits that will be included in the project so these can be entered when using the new project wizard.

2 Create a new Rasoft Pro Project File

All projects in Rasoft Pro require a file to be created, to create a new project file:

- Open Rasoft Pro
- Select "File" > "New Project" to bring up the new project wizard.

2.1 Project name and House numbers

- Choose a suitable project name, typically the name of the property.
- Choose a House Number, typically the House Number of the property, and select "Next".



IMPORTANT

Every Rako system must be assigned a House number. Rasoft Pro will suggest a House number based on previous projects by default; a custom House number can be selected if preferable. Do not use House 1.

2.2 Save Locations

Select the Save Location for the project file. It is best to use the default save location (C:/Users/[user]/Rako) for Windows or (Macintosh HD/Users/[user]/Rako) for MacOS.

Files saved at this location will appear in recent projects on the Rasoft Pro home screen when re-opened.



2.3 Adding Rooms

The next step of the Setup Wizard requires adding the Rooms, additional Rooms can be added later if required, this step can also be skipped entirely if the Room names are not yet known.

- Using the text field, give the Room a name.
- Select the "Room Type".
- Select "Add".
- Repeat the previous steps for each Room required.

• • •	New Project Wizard	
Steps 1. Project Name 2. Save Location 3. Add Rooms 4. Add Channels	Add Rooms (3. from 4) Room Note: More	IS IN Project can be added later
	1. Room Name: 2. Room Types: 2. Lighting Blinds Curtains 3. Add	Entrance - Lights Kitchen - Lights Draing Room - Lights Drawing Room - Lights Lounge - Lights Library - Lights Office - Lights Stairs - Lights
		Delete Selected
	Help < Back	Next > Finish Cancel

Once a Room has been added, it will appear under the Room List heading with an automatically assigned Room number. Continue adding until the box on the right-hand side is populated with all the Rooms in the property. Rooms can be deleted anytime by highlighting them and clicking "Delete Selected."

<u>NB</u>

If Wireless modules are addressed to a Room with a changed number, they will all have to be re-addressed as if they were new.

2.4 Adding Channels

In the "Add Channels" screen, all the added Rooms will appear along the top. Each column below the Room name lists the Channels within that Room.

- Enter the name of each circuit for the corresponding Rooms, each column has 15 cells which represent Channel 1 through to Channel 15.

	N	lew Project	Wizard			
Steps	Add Chann	els (4. from	4)			
 Project Name Save Location Add Rooms Add Channels 	Channels for Rooms Note: Can be added and modified later					
		Entrance	Kitchen	Dining Roon	Drawing R	Lounge
	Channel 1	Pendants	Island Pen	Chandelier	Chandelier	Downlights
	Channel 2	Downlights	Downlights	Lamps	Wall Lights	Lamps
	Channel 3	Floor Was	Feature Li			
	Channel 4	Wall Lights	Uplights			
	Channel 5					
	Channel 6					
	Channel 7					
	Channel 8					
	Channel 9					
	Channel 10					
	Channel 11					
	Channel 12					
	Channel 13					
	Channel 14					
	Channel 15					
)	
	Help	< Bac	k Ne	xt >	Finish	Cancel

<u>NB</u>

A Rako Room can have a maximum of 15 Channels.

2.5 Connecting to a WK-HUB

Before Devices can be added to the Project File, the WK-HUB needs to be set up as a communication Device, this allows the Wired system to be programmed between Rasoft Pro and the Windows or Mac computer. Once the project file is set up and Devices are added, the WK-HUB is uploaded with the Room, Channel, and Scene data to enable the use of the Rako App.

Before continuing, read the <u>WK-HUB Instruction Manual</u> up to section 4, as the Device must first be configured before programming the system.

- In the Communication Devices window at the bottom right side of Rasoft Pro, select "Refresh", the WK-HUB should appear with a red stop sign.
- Right-click the WK-HUB and select "Connect/Disconnect"
- The stop sign will change to a green tick, the Wired system is ready to be configured.



3 Addressing the RAK-LINK

The RAK-LINK is an essential component of a Wired system, it serves as a power supply for Rako Wired Devices and communicates between the Rako Wired system and connected RAKs.

3.1 Adding the RAK-LINK as a Device

- Press and hold the setup button on the top circuit board and a solid blue light will illuminate on LED 1, once the blue light is flashing release the button.



- A pop-up box will appear in Rasoft Pro, give the RAK-LINK a name and select "Next", and then select "Next" again.



- Select "Finish"

• • •	New Device Wizard					
Steps	Link Device					
 Select Device Name Device Assign to room 	Device Setup Mode					
4. Link Device	Setup complete.					
	Device Found					
	Help Help Help Cancel					

3.2 Device Status

Devices that are connected to the CAN network will have a Device status at the top right of the Device editor, when a Device is selected, the status will appear in the Device Status section.

Online: Indicates that the WK-HUB is communicating with the Device, along with its version number.



Virtual Device: This Device has not been addressed, although the programming menus are still accessible, this occurs if setup has not been completed successfully or if a Device has been added off-site to be added to the project file later.

Device Status:	Not Found
Device Status.	Not Found

Not Found: The Device is assigned in Rasoft, but it was not discovered.

Device Status: No Comms to check

No Comms to check: Rasoft cannot talk to the CAN network at all. Usually means that the HUB is not connected to the computer correctly or there is an error connecting to the IP network.

3.3 RAK-LINK Diagnostic LEDs

LED No.	Colour	Indicator	Uses/example
1	Blue	Device activity	Device in setupNetwork looping poll
2	Blue	Power/CAN bus activity	 Solid Power detected Flashing CAN Bus Rx/Tx
3	Red	CAN Diagnostics	CAN warningCAN error

The RAK-LINK has three LEDs which can provide useful information about the Wired system:

4 Adding circuits to the RAK-LINK

Once the RAK-LINK has been added as a Device, the connected RAKs and their outputs need to be configured.

4.1 Adding RAKs to the RAK-LINK

- Select the RAK-LINK in the Devices section



- Set the box numbers on the RAK8, there can be no more than four RAK8s on a single RAK-LINK.

Box No.	Dip switches	Description
Box 0		All dip switches down
Box 1		Dip switch 1 up

Box 2	Dip switch 2 up
Box 3	Dip switch 1+2 up

- On the RAK-LINK Device editor, select "Auto Discover". The RAK8s will populate in the window above sorted by their assigned box number.

Вох Туре				Box Number
RAK8-MB		\bigcirc	1 🗘	
RAK8 Info	Extras			1 2 3 4
Product: RAK8-M	B Version:	1.4.9		

<u>NB</u>

Auto Discover is intended for RAK8s only, if the older RAKs are used then they need to be added manually, to do this, select "Specify extra RAK" at the bottom of the RAK-LINK configuration page.

The RAK type will need to be set for each RAK4 to display the correct programming menus.

4.2 Identifying RAK output circuits

Before the mapping of the RAKs can be done, each output needs to be identified, if the circuit outputs are unknown, the RAK8's test buttons can be used.

Each press of the test button will toggle the respective circuit on/off.

Ensure that the connected loads are made safe before testing. Do not touch <u>any</u> part of the circuit board other than the test buttons when energised.



4.4 Mapping the RAK-LINK

Once the circuits have been identified and the RAKs have been added to the RAK-LINK, the circuits can be mapped to their respective Rooms and Channels.

- On the RAK-LINK Device Editor, select "Mappings"
- Select the Room and Channel for each row, which corresponds to the Box and Circuit output number of the RAK.

Start Page \tag	Room Editor	Device Editor	Transfer History Reports	8		
RAK-	RAK-LINK Description: <auto th="" ti<=""><th colspan="2">Title> Device Status:</th><th>Searching</th></auto>		Title> Device Status:		Searching	
		RAKs* RA	K8 (Cincuits (Mapping)*	Diagnostics Extras	Data Transfer	
Box	Cir	cuit	Room	Room#	Channel	Channel#
1	1		Kitchen [Rm: 9] (😒	9	Island Pendants [Ch: 2]	2
1	2		Kitchen [Rm: 9]	9	Downlights [Ch: 3]	3
1	3		Lounge [Rm: 13]	13	Downlights [Ch: 4]	4
1	4		Lounge [Rm: 13]	13	Chandelier [Ch: 5]	5
1	5		Dining Room [Rm: 17]	17	Downlights [Ch: 2]	2
1	6		Dining Room [Rm: 17]	17	Wall Lights [Ch: 3]	3
1	7		Living Room [Rm: 21]	21	Downlights [Ch: 4]	4
1	8		Living Room [Rm: 21]	21	Wall Feature [Ch: 1]	1

Once the mappings section has been completed, select "Save & Upload" for the changes to take effect.

To confirm that the circuits have been mapped successfully, select a Room from the Room List and the Channels will have an output assigned to them, as below.

Name:	ID:	Type:
Kitchen	9 🗘	Lights
	Channel Controls	Diagnostics
	0% 🗘 All Channels	Room Devices
1	0% 🗘 Downlights	O WDA-600
2	0% 🕞 Island Pendants	O WMT-400

<u>NB</u>

If a Room is selected but the channel box is left blank then this circuit Will remain unmapped. This means it will not respond to commands even from the assigned Room number.

4.3 RAK8-MB extra features

Additional information can be found on the RAK8-MB by selecting "RAK8 Info" on the RAK-LINK Device Editor.

When selected, the RAK8-MB will be scanned and the feedback will appear with the following information

- Card types and version
- Cards current level
- RAK8-MB version

Device Box Type		
RAK8-MB		٥
RAK8 Info	Extras	
Reading Circuit 8	8/8	

If a card is not found, or there is no card inserted into the RAK8-MB slot "Not Found" will be shown.



RAK8 Info window in Rasoft Pro, the interface will vary depending on the RAK.

Commands can be sent from the interface above by selecting "Other" and then the Scene required, this can be useful when identifying circuit outputs.

5 Wired Switch Setup

5.1 WCM

The WCM is a wall controller for use within a Rako Wired system, it is designed to fit in a standard UK back box for wall mounting.

Depending on the WCM requirement, many button configurations are possible, ranging from Lighting, Blind and Audio control.

Through Rasoft Pro, commands can be assigned to the buttons to perform actions, such as switching a Scene for a Room or closing Blinds.



5.1.1 Addressing the WCM

To add a WCM to the Wired network, first ensure that the previous steps in the guide have been followed.

- In Rasoft Pro go to File > New Device



- Select WCM (Wired Plate) in the Device List, select "Next"

	Please choose de	vice type	
Any	O Wired	Wireless	
RAK-LINK			
rak box			
RxLink			
WADMX			
WMR-IPC			
NA-NEX			
WAPIR			
WAVFR			
VAVMI			
NCM-AK			
WCM-D			
WICUB			
WK-EOS			
WK-MOD			
NK-PIR			
WLED/S/ISOCVI			
NLED30CV4			
WLED45CC1			
WED DU			
NCM (Mired Plate)			_
Other			

- Give the WCM a name and select "Next"



- Associate the WCM to a Room and select "Next"



- Press and hold the buttons G and I until the LED's begin to pulse



- The blue status bar should each 100% and "Device found" will show in the setup, select "Next"

Device Found	
Help < Back Next >	Finish Cancel

- Select a suitable template, and check the layout number on the box to find the correct template, for example, if the box label is WCM-070, use the WCM-070 template.

Once the WCM has been added to Rasoft Pro, it will appear in the Device List and it is ready to be configured:

Scan Wired Network for d				
Devices				
📳 In Project				
📑 HUB/Bridge RAKO HUB				
🛃 WK-PIR ID:257300				
RAK-LINK R:900 C:100				
📑 WCM (Wired Plate) Hallw				
📑 WCM (Wired Plate) Kitche				

5.1.2 Configuring the WCM

Once the WCM has been added to Rasoft Pro, it can be configured further if additional programming is required which are not part of the default template.

- Select the WCM in the Device List which requires configuring

Mappings 1	Keypad Led's	l layout Required	2	Led's	Output Action 3
C -> Scene 3	On	A	F	Off	Local Room
D -> Scene 4	Off	в	G	Off	All Channels
G -> Fade Up+Stop	Off	C	н	Off	Action:
I -> Fade Down+Stop	Off	D	-	Off	Scene
Disabled I	Off	E	L	Off	
Disabled	Mappir	g Option	ns		
Disabled	Ena	abled			
Disabled	Ser	nd stop o	n releas	e	
Disabled	Trig	er on Pr	ess	0	
Disabled	Inpu	t longer	than:	Ø	1
Disabled		e ronger		_	Scene Scene 1
Disabled	1.111	111111	122122	11 I I	

<u>Mappings (1)</u>

A mapping is an input on a button identified by a letter, the WCM has 10 inputs labelled A -J, it is possible to have multiple mappings for the same letter although it is not recommended. When more than one command is being sent from a single button, it is recommended to use the WK-HUB macros.

Mappings
A -> Scene 1
B -> Scene 2
C -> Scene 3
D -> Scene 4
E -> Off
G -> Fade Up+Stop
I -> Fade Down+Stop

New mappings can be created by selecting a "disabled" mapping and then selecting the input options and output action, there can be up to 32 mappings on a WCM.

<u>NB</u>

Existing mappings can be duplicated by right-clicking the mapping and selecting "Copy", then right-clicking a "disabled" mapping and selecting "Paste", this is common when programming another input with a similar output action and can speed up programming time.

<u>Keypad layout (2)</u>

The Keypad layout is used to configure the mapped input logic and when to trigger an output action.

Function	Description
LEDs	When the LEDs option is set to "On" it will illuminate the LED on the button when it is pressed, in contrast, the other buttons which are not pressed will turn off which can be seen in the example.
Enabled	The enabled checkbox must be ticked in order for the button to function.
Send Stop On Release	When the button is released, a "Stop" command will be triggered.
Trigger on press	Trigger the output command when the button is pressed.

Trigger on release	Trigger the output command when the button is released.

Output Action (3)

The output actions of the buttons 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 button 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.
	<u>NB</u> "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.
Level	Sets the lighting Level to a percentage of brightness between 0-100%.
Tunable White	Set the colour temperature output.

Macro	Trigger an internal Macro on the Device; this is not the same as triggering a Macro
	on a WK-HUB.

<u>5.2 WK-EOS</u>

The WK-EOS is a 6-button Wired Keypad used in a Rako Wired Network.

Through Rasoft Pro, commands can be assigned to the buttons to perform actions, such as switching a Scene for a Room or closing Blinds.

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5.2.1 Addressing the WK-EOS

To add a WK-EOS to the Wired network, ensure that the previous steps in the guide have been followed to create a project file and connect to the WK-HUB.

- In Rasoft Pro go to File > New Device



- Select WK-EOS in the Device List, select "Next"

Please choose device type			
O Wired O Wireless			

- Give the WK-EOS a name and select "Next"

<u>Name Devic</u>	ce	
	Device Name WK-EOS Device Name	
	Automatic Name	
	Help < Back Next > Finish	Cancel

- Associate the WK-EOS to a Room and select "Next"

Assign to room	
	Options WK-EOS: Lounge Entrance Associate to room
	💡 Lounge [Rm: 13] 📀
	Associate to channel
	Associate to new channel
Help	< Back Next > Finish Cancel

- Press and hold the raise and lower buttons until the LEDs begin to pulse



- The blue status bar should each 100% and "Device found" will show in the setup, select "Next"

	Device Found				
Halm Cancel Next Cancel	liala	c Pack	Next	Finish	Cancal

- Select a template and select "Finish"

5.2.2 Configuring the WK-EOS

Once the WK-EOS has been added to Rasoft Pro, it can be configured further if additional programming is required which are not part of the default template.

- Mappings 2 Output Action 3 1 Keypad layout A -> Scene Room: Led's Led's B -> Scene 2 II Local Room C -> Scene 3 Off D IChannel: D -> Fade Up+Stop I. Off Off All Channels R F E -> Fade Down+Stop I. Action: F-> Off Off C Off Т Disabled Scene Mapping Options 11 Disabled L. Disabled Enabled н 11 Disabled ц Send stop on release L, Disabled ц Trigger on Press Disabled L, н Disabled ч. Input longer than: 0 н Disabled 4 п Disabled L, Disabled п 0 🗘 Seconds Scene Scene 1 ۰. Disabled li. Disabled ۰, н Fade Rate Don't update previous Disabled 1 room & channel н 🔽 Use Default Value 1 Disabled п Disabled Track local & house
- Select the WK-EOS in the Device Editor

Mappings (1)

A mapping is an input on a button identified by a letter, the WK-EOS has 6 inputs labelled A - F, it is possible to have multiple mappings for the same letter although it is not recommended. When more than one command is being sent from a single button, it is recommended to use the WK-HUB macros.

Mappings	1
A -> Scene 1	
B -> Scene 2	
C -> Scene 3	
D -> Fade Up+Stop	
E -> Fade Down+Stop	
F -> Off	

New mappings can be created by selecting a "disabled" mapping and then selecting the input options and output action, there can be up to 32 mappings on a WK-EOS.

<u>NB</u>

Existing mappings can be duplicated by right-clicking the mapping and selecting "Copy", then right-clicking a "disabled" mapping and selecting "Paste", this is common when programming another input with a similar output action and can speed up programming time.

<u>Keypad layout (2)</u>

The Keypad layout is used to configure the mapped input logic and when to trigger an output action.

Keypad layout						
Led's Required Buttons Led's						
On	A	D	Off			
Off	В	E	Off			
Off	С	F	Off			
Mappir	ig Optior ibled id stop o ger on Pro t longer t	n releas ess than: ' ' ' conds	e			

Function	Description
LEDs	When the LEDs option is set to "On" it will illuminate the LED on the button when it is pressed, in contrast, the other buttons which are not pressed will turn off which can be seen in the example.
Enabled	The enabled checkbox must be ticked in order for the button to function.
Send Stop On Release	When the button is released, a "Stop" command will be triggered.
Trigger on press	Trigger the output command when the button is pressed.
Trigger on release	Trigger the output command when the button is released.

Output Action (3)

The output actions of the buttons 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 button 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.
Level	Sets the lighting Level to a percentage of brightness between 0-100%.
Tunable White	Set the colour temperature output.
Macro	Trigger an internal Macro on the Device; this is not the same as triggering a Macro on a WK-HUB.

5.3 WK-MOD

The WK-MOD is a modular Keypad used in a Rako Wired network, it is available in a wide variety of button configurations, as well as fully customisable button positioning and sizes should it be required.

Through Rasoft Pro, commands can be assigned to the buttons to perform actions, such as switching a Scene for a Room or closing Blinds.

Scene 1 Scene 3 Scene 2 Scene 4 Off A V

5.3.1 Addressing the WK-MOD

To add a WK-MOD to the Wired network, ensure that the previous steps in the guide have been followed.

- In Rasoft Pro go to File > New Device



- Select WK-MOD (Wired Plate) in the Device List, select "Next"



- Give the WK-MOD a name and select "Next"

VK-MOD			
Device Na	me		
Entrance			

- Associate the WK-MOD to a Room and select "Next"



- Press and hold any button, and press any other button three times.



- The blue status bar should each 100% and "Device found" will show in the setup, select "Next"

Device Found		A	dd (Send device	poll)	
He	elp	< Back	Next >	Finish	Cancel

- Select a template, the button configuration will be printed on the box, if it is a custom button layout, this can be configured within the WK-MOD menu after the setup wizard has completed.

Select Template	
Choose Template Type	
Please choose template type for this device	
WK-MOD-020 - 2 Button - 1 Scene and Off WK-MOD-030 - 3 Button - Open, Stop and Close WK-MOD-040 - 4 Button - 1 Scene and Off with master raise and lower WK-MOD-041 - 4 Button - 1 Scene and Off with secondary 1 Scene and WK-MOD-060 - 6 Button - Dual Open, Stop and Close	Off
WK-MOD-070 - 7 Button - 4 Scenes and Off with master raise and lowe WK-MOD-072 - 7 Button - 4 Scenes and Off with secondary Scene 1 an WK-MOD-101 - 10 Button - 4 Scenes, Off, master raise and lower, Oper WK-MOD-103 - 10 Button - Dual 4 Scenes and Off WK-MOD-110 - 11 Button - 8 Scenes, Off with master raise and lower WK-MOD-111 - 11 Button - 8 Channel Open and Close	r d Off 1, Stop

- Once a suitable template has been selected, select "Next"

lmp	ort existing co	onfiguration			
	Help	< Back	Next >	Finish	Cancel

- The WK-MOD will appear in the Device list once successfully set up.

HUB/Bridge RAKO HUB WK-PIR ID:257300 RAK-LINK R:900 C:100 WCM (Wired Plate) Hallway WK-MOD Kitchen Entrance

5.3.2 Configuring the WK-MOD

Once the WK-MOD has been assigned in Rasoft Pro, it can be configured further in the Device editor.

- Select the WK-MOD in the Device editor

Mappings A -> Scene 1 C -> Scene 2	Keypad layout 2 Led's Required Buttons Led's	Output Action 3 Room:
E -> Off G -> Scene 3 L -> Scene 4	On A: Scene 1 G: Scene 3 Off	Channel: All Channels
K -> Fade Up+Stop+LedOff L -> Fade Down+Stop+LedOff	Off C: Scene 2 I: Scene 4 Off	Action: Scene
Disabled Disabled Disabled	Off E Off L: ▼ Off	
Disabled Disabled Disabled	Mapping Options	
Disabled Disabled	Send stop on release Trigger on Press	
Disabled II Disabled	Input longer than:	Scene Scene 1
Disabled Disabled	0 🗘 Seconds	Use Default Value

Mappings (1)

All programmed inputs for the Device must first have a mapping. The purpose of a mapping is to program a button to perform a specific command. Each input has its own letter to represent its input, there are up to 12 inputs on the WK-MOD.



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

<u>NB</u>

Ensure only a single letter is used for each mapping, otherwise, the mapping will not function unless all inputs are pressed at the same time.

Keypad layout (2)

The Keypad layout is used to configure the mapped input logic and when to trigger an output action.

Keypad	layout				
Led's	Required Buttons Led's				
On	A: Scene 1	G: Scene 3	IGNORE		
IGNORE	C: Scene 2	I: Scene 4	IGNORE		
	F: Off	K: ▲	IGNORE		
IGNORE	EUT	L: 🔻	IGNORE		

Function	Description
LEDs	When the LEDs option is set to "On" it will illuminate the LED on the button when it is pressed, in contrast, the other buttons LEDs will be ignored, which can be seen in the example above.
Enabled	The enabled checkbox must be ticked in order for the button to function.
Send Stop On Release	When the button is released, a "Stop" command will be triggered.
Trigger on press	Trigger the output command when the button is pressed.
Trigger on release	Trigger the output command when the button is released.

Output Action (3)

The output actions of the buttons 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 button 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. <u>NB</u> Do not map more than one Toggle to a single button 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 colour temperature output.
Macro	Trigger an internal Macro on the Device; this is not the same as triggering a Macro on a HUB.
	Macros can be created on the "Macro" tab above the button configuration.

Keypad Layout Editor

The WK-MOD has fully customisable button layouts, which can be configured in the WK-MOD Device menu.

The Keypad Layout Editor is found by selecting the tab above the mappings window:

Room:	Kitchen [Rm: 9]				
Button Config	(Mapping)*	Keypad layout editor	Diagnostics	Extras	Data Transfer

- Existing templates can be loaded into the mapping page which will change the button layout.
- Highlight the desired layout name and choose "Select Layout"

Asigned?	Layout same		Key	pad	layout		
	WK-MOD-020 WK-MOD-030		Le	n.	Required	Satters	Led's
	WK-MOD-040		HON.	OME	A: Scelet 1	C Scene 1	IGNORE.
	WK-MOD-041 WK-MOD-060		100	345	8: Scene 2	It: Scene 2	IGNORE
	WK-MOD-070		10M	046	C: Soree 3	1 Scene 3	IGNORE
	WK-MOD-072		10M	380	D: Scene 4	J: Scene 4	ICNOME.
	WK-MOD-101 WK-MOD-110		ion	ore	E Off	K Off	IONORE
		_					

- The layout will now be loaded on the "Button Config (Mapping)" page.

- Keypad	layout		
Led's	Required	Buttons	Led's
IGNORE	A: Scene 1	G: Scene 1	IGNORE
IGNORE	B: Scene 2	H: Scene 2	IGNORE
IGNORE	C: Scene 3	I: Scene 3	IGNORE
IGNORE	D: Scene 4	J: Scene 4	IGNORE
IGNORE	E: Off	K: Off	IGNORE

5.4 WCM-D

The WCM-D allows custom and third-party switch plates to be used in place of a Rako Wired Keypad (WCM/WK-EOS/WK-MOD etc.)

The WCM-D will fit inside a single gang UK back box. Up to eight switch inputs can be taken per WCM-D. The switch plate can be formed of latching or momentary action switches connected by short wires to terminals on the WCM-D.

5.4.1 Addressing the WCM-D

To add a WCM to the Wired network, ensure that the previous steps in the guide have been followed to create a project file and connect to the WK-HUB.

- In Rasoft Pro go to File > New Device



- Select "WCM-D" and "Next"



Give the WCM-D a name and select "Next"

Device Name	
Device Name	
Lounge Entrance	

- Associate the WCM-D to a Room and select "Next"



- Connect the Common and Setup terminals together until the LED on the WCM-D flashes, then remove the link.



<u>NB</u>

Older models of the WCM-D have a different method of setup, see the <u>WCM-D</u> <u>Instruction Manual</u> for more information

- The blue status bar should each 100% and "Device found" will show in the setup, select "Next"

Device Found				
Help	< Back	Next >	Finish	Cancel

5.4.2 Configuring the WCM-D

Once the WCM-D has been added as a Device, it needs to be configured according to the 3rd party switch inputs.

- Select the WCM-D in the Device Editor



Mappings (1)

All programmed inputs for the Device must first have a mapping. The purpose of a mapping is to program a button to perform a specific command. Each input has its own letter to represent its input, there are up to 8 inputs on the WCM-D.

Mappings	Keypad layout
A -> Scene 1 Disabled	Led's Required Buttons Led's
Disabled	On A: Scene 1 C: Scene 3 IGNORE
Disabled	
Disabled	IGNORE C: Scene 2 I: Scene 4 IGNORE
Disabled	K' A IGNORE
Disabled Disabled	IGNORE E: Off L: ▼ IGNORE
Disubicu	

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

<u>NB</u>

Ensure only a single letter is used for each mapping, otherwise, the mapping will not function unless all inputs are pressed at the same time.

Inputs (2)

The inputs for the mappings are configured in the Inputs section.

When an input is highlighted blue, it will set the corresponding input letter active in the mapping, selecting the input multiple times will cycle through the input options which are "Normal", "Ignore" and "Invert", an example can be seen below:



"A - Normal" creates a mapping for input A, ensuring that only one input is highlighted blue for each mapping.

If A is set as "Invert", the "On Make" and "On Break" commands will reverse.

Mapping Options
🗹 Enabled
Send Stop On Release
Trigger on Make 😒
Input longer than:
Υ΄Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι'Ι
0 🗘 Seconds
Don't Update Previous Room

Option	Description	
Trigger on Make	When the switch input makes contact, trigger the output command.	
Trigger on Break On Break	When a switch breaks its contact, trigger the output command.	
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	
Don't update previous Room	If this box is ticked this map will not update the "last used" flag for both Room and Channel. When a "last used" is sent from this Device the most recent Room and Channel sent which doesn't have "don't update previous Room" selected will be sent.	

Output Action (3)

Option	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 button 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.
	<u>NB</u> "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.
Level	Sets the lighting Level to a percentage of brightness between 0-100%.

6 Setting scenes

A Scene can be any percentage between 0-100%, once a Scene is saved, it can be recalled using a "Scene" command.

In Rasoft Pro, click on the Room to bring up the Room editor tab and select the Room which requires a scene change.

Start Page 🛞	Room Editor	Device Editor	Transfer History	Reports	
Name:		-	ID:		
Entrance				1 🗘	
			Channel Co	ntrols)	ø D
All	1.			•	Rear

Select a Scene (the selected Scene button will outline blue)

All		100% 🗘 All Channels	Room Devices	Scene 1	Scene 1
1		100% C Pendant	O RMT500	Scene 2	Scene 2
2	INTERNATION OF	100% 🗘 Downlights	RMT500	from 3	from 3
3		100% 🗘 Linear	O RMTS00	SCENE 3	SCORE 2
4		100% 🗘 Wall Lights	RMT500	Scene 4	Scene 4
5		100% 🗘 Lamps	O RMT500		0#

All	 100% 😳 All Channels	Room Devices
1	 70% 🗘 Pendant	RMT500
2	 0% 🗘 Downlights	RMT500
3	 60% 🗘 Linear	RMT500
4	 40% 🗘 Wall Lights	RMT500
5	 70% 🗘 Lamps	RMT500

Move the slider for each Channel to the desired light Level

Press "Store Scene"

Entrance		1 🗘 Lights	Θ	Store Scene
	(🗄 Crassal Co	A Diagnostics		
All	 100% 🗘 All Channels	Room Devices	Scene 1	Scene 1
1	 70% 🗘 Pendant	O RMT500	Scene 2	Scene 2
2	 0% 🗘 Downlights	RMTS00	Econo 1	from 1
3	 60% 🗘 Linear	RMT500	scene 3	scene 3
4	 406 C Wall Lights	RMT500	Scene 4	Scene 4
5	 70% 🗘 Lamps	RMT500		off

Scenes can be renamed by editing the text fields.

Scene 1	Morning		
Scene 2	Noon		
Scene 3	Dusk		
Scene 4 Night			
Off			

To add additional Scenes to set, select "Add Scene"

Scene 1	Scene 1		
Scene 2	Scene 2		
Scene 3	Scene 3		
Scene 4	Scene 4		
Off			
Add Scene			

6.2 Advanced Scene Setting Features:

To access additional Scene setting features, right-click on the "Store Scene" button to make a drop-down menu appear:

Send Store Command

Transmit all sliders

Write Scene '1' Level Data Write All Scenes Level Data

Extra options allow Rooms to be transmitted without the need to individually reset every slider for every Channel.

Send Store Command:

Performs the same function as pressing the "Store Scene" button normally (left clicking).

Transmit all sliders:

Re-transmits all the current slider Levels for the selected Room.

Write Scene "1" Level Data:

Uploads all Levels and stores the currently selected Room (in this case Room 1)

Write All Scenes Level Data:

Re-uploads all Room information for the Room to all dimmers addressed to it.

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, <u>www.rakocontrols.com</u>, or by calling our customer support helpline on 01634 226666.



Appendix 1 Setting up a WK-HUB

A1.2.1 Connections

- Connect the HUB to an accessible network via the supplied Ethernet cable.
- Connect the power supply.
- Allow 2-3 minutes for the HUB to start up; there will be a blue light on the top when the HUB has finished starting up.
- Select "Refresh" on the communications Devices
- Right-click the HUB in communication Devices and select "Connect/Disconnect"
- A green tick will verify that the connection has been successful.

<u>NB</u>

The House number for the project file and the House number on the HUB <u>must</u> be the same, if there is a mismatch, there will be a warning in Rasoft Pro when connecting to the HUB.

•		Update House?		
	rako	Warning: House number(12) does not match project file (22). Update project file?		
		Cancel No Yes		

A1.2.2 Configuration

- Right-click the HUB in the communication Devices
- Select "Open in Browser"



- A web browser will open the HUB web pages.
- If this is the first time opening the HUB, the Setup Wizard will begin, Select "Next"



- Choose a password and select "Next".



- Choose a name for the HUB, as well as the House address matching the Project in Rasoft Pro. Select "Next".

setup	wizard	
Please enter a name for this device and wireless house number. If this is a new project pick a number between 1-255.		
Hub Na	me	
Rako	Hub	
Wireless	s house address	
Hous	e number	
	at match other devices and the Decolt Cla	

- Select "Finish"

rako					
Finish Your Hub doesn't contain any Rooms and Channels yet. They must be uplaoded with Rasoft Pro.					
Almost there!					
÷	Previous	Finish	3 29		

The HUB basic setup is complete, if there are any Wireless Devices they can now be configured.

As a final check, it is advisable to disconnect and reconnect to the HUB:



If no pop-up box appears, then the HUB House number and Project file House number are the same.

WARNING

If a pop-up box appears with a warning about the House number, click "Cancel." Do not continue programming this means there is a conflict between the Project File House number and the House number on the HUB.

A1.2.3 Adding the HUB as a Device in Rasoft Pro

Once the HUB has been configured in the web pages, it needs to be added as a Device to Rasoft Pro to upload the Room and Room information for App control.

- Connect to the HUB by double-clicking it in the communication Devices; a green tick will show to verify the connection has been successful.



- Go to "File > New Device"



- Select "HUB/Bridge" and "Next"



- The IP address of the HUB will appear in the next window; highlight it and select "Finish"



- The HUB has now been added as a Device in Rasoft Pro.

Once the HUB has been added as a Device, it will require further setup for App control, see <u>A5 Uploading to a HUB/Bridge and App setup</u> for further information.

Appendix 2 Power-Up Mode

The Power-Up mode determines the Level or Scene a Device will output when it is initially switched on at the supply.

<u>NB</u>

The default Power-Up mode is 100%

A2.1 Setting A Global Power-Up Mode

It is possible to set the Power-Up Modes "globally" for the entire System. To access this menu:

- Select "Tools" > "Global Power Up".



- Select the Power-Up Mode required.



- For systems which are left empty for long periods of time, "Off" is a recommended Power-Up Mode.
- Systems that are constantly in use, "Last Scene" is a recommended Power-Up Mode.

Appendix 3 Fade rates

Using Rasoft Pro, it is possible to edit the rate at which Rako modules Fade between Lighting Levels.

A3.1 Change the Fade Rate for a Room

- Open the Room editor, right-click Room Devices and select "Fade Rates".

lame:	ID:		Type:		
Intrance		1 0	Lights	8	Store Scene
		🔄 Channel Controls 🗋 🚜 Dia	gnostics		
All 9	06	O All Channels	Room De	vices Scen	1 Morning
1	01	0 Pendant	k Ignore Power L	Options Scene	2 Noon
2	0%	Downlights	Profile		1 Dunk
1 Yessen and the second seco	0%	Unear	K Other		C Dank
4 Variation and a second se	0%	Wall Lights	0 RMT500	Scene	e 4 Night
5 You and the second	08	Lamps	RMT500		Off

<u>NB</u>

This will set Fade Rates for every Device in the Room. To set Fade Rates for a specific Device, select it in the Device List and click on the Fade Rates tab in the Device editor.

The Fade Rate menu will be displayed as below.



Two types of Fade Rates can be adjusted:

Scene controls

The rate at which Circuits move between Rooms (including Off).

Fader controls

Will change the rate at which Circuits dim up or down when the Fade buttons (raise/lower) are used.

<u>NB</u>

Setting all of the fader controls to max speed will make it almost impossible to dim the lights from the Fade Up/Fade Down buttons.

A3.2 Change the Fade Rate for a Channel

When a specific Room requires a change in Fade Rate, it can be adjusted in the Room Editor.

- Go to the Room Editor, and right click the assigned Device, select "Go to (Device)"

Downlights	New Device
Linear	
	Delete Device 🕨
Wall Lights	
Lamps O R	MT500

- Select the "Fade Rate" tab

RMT500			De	escription: <auto th="" titles<=""><th>></th><th></th></auto>	>	
Room:	Entrance [Rm: 1]		ି ସ	hannel: Pendant [C	h:1]	
	1.0	Face Rates genore Options	Rates per se	cene Power Up Pr	rofile 👘 Data Tr	ansfer
		Scene Control Rate Decay	FAST Fade Sta	er Controls art Rate Acceleration	Max Rate	
		12 12		11 11	1	

Appendix 4 Uploading to a HUB and App setup

After a system has had all Rooms, Channels and Devices added, the information needs to be uploaded to the HUB in order to control the System via the App and the web pages.

- Select the HUB in the Device List



- Select "Smartphone/Web Data"



- Select "Save & Upload Room Data to HUB/Bridge"

The Room, Channel and Scene information is now uploaded to the HUB, and can be accessed via the Rako App or via the HUB webpages.

A4.1 Room Mode

The App will display a 4 Scenes + Off arrangement by default, there are additional options depending on the control panels used and the number of Scenes required in the App.

To change the Room Mode:

- In the Smartphone/Web Data section, select the "Mode" drop down menu for the relevant Room.

4 Scenes + On	
✓ 4 Scenes + Off	
7 Scenes + Off	
16 Scenes + Off	
EOS 3 Scenes + Off	
MOD 1 Scene + Off	
MOD 4 Scenes + Off	
MOD 8 Scenes + Off	
Named Scenes	

- Select the required option for each Room.



- Select "Save & Upload Room Data to HUB/Bridge"



A4.2 Room Type

If a Room is not for dimmable lighting, the Type can be changed.

- In the "Smartphone / Web Data" menu, select the "Type" drop-down menu for each Room to specify its Type.



- Once the Room Types have been set, select "Save & Upload Room Data to HUB.

Save & Upload Room Data to HUB/Bridge

A4.3 Channel Type

Similar to Room Type, individual Channels can be set to different circuit types, the most common use is setting a non-dimmable circuit to "Switch" which will remove dimming options on the App and instead give an "On/Off" option.

To set a Channel Type:

- In the Smartphone/Web Data section, select the Room to highlight it and select the "Type" drop-down menu for the relevant Channel.

POURS. POURS 1 9 13 17	Enabled	Title Entrance Witcher Longe Dining Room	Type Oghos Byhos Ughos Ughos	Mode 4 Scenes + Off 16 Scenes + Off Named Scenes 4 Scenes + Off
Channels: ID Enab 1 2 3 4 5	ed Title Pendant Downights Linear Walt Lights Lamps	Type Sider Sider Slider Blinds Smitch Scenes Fades Tuneable White RCB	Scenes: 10 1 2 3 4	Enabled Title Morning C Noon C Dusk V Night

- Once the Type has been selected for all of the relevant Channels, select "Save & Upload Room Data to HUB/Bridge"



A4.4 Smartphone / Web Data Options

<u>Enable</u>

When the box is ticked, the Room will appear in the App, Rooms which are not intended for direct control via the App should be unticked.

<u>Title</u>

The names of the Rooms on the left side menu will be displayed here, and the names in the list will appear in the App.

<u>Туре</u>

Changes the options available for the Channel in the App, for example, if a circuit is changed to a "Switch", in the App an "On/Off" layout will be shown rather than a Slider.

<u>Mode</u>

Depending on the requirements of the Room on the App, the Mode can be set to show different button configurations, the correct configuration will depend on the individual requirements as well as the Keypads used.

Room Order

The order of the rooms can be adjusted by selecting the header to sort numerically or alphabetically, and by dragging the rooms up/down to create a customisable order.