Wireless RAK setup guide



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1 What you need to get started

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



Classic Rasoft



Rasoft Pro

It is strongly advised to download and use the new software as some new features are not supported by Rasoft classic.

Programming the system will require a communication device to be connected: either a RAUSB/RAMPI or Bridge Module to a laptop or mac. 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

Open the Rasoft Pro programming software and click "File" - "New Project" to bring up the new project wizard. Each step of the process of creating the file is prompted in the software but further detail is provided here.

2.1 Project name and House numbers

Choose a suitable project name, typically the name of the property, a description for the project can also be added.

teps	Project Name (1. from 6)
L. Project Name 2. Save Location 3. Add Rooms 4. Add Channels 5. Add Devices	New Project Project Name
i. Level	My Example project
	Project Description
	Project House Number এক
	A new house number has been picked based on recent projects
	Connected Bridge's House: 4
12	

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.

NB

Rako products have a factory default House number of 1 so it is strongly recommend that this is not used. This will avoid interference with other systems also left on the default house address.

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). Files saved at this address will appear in recent projects on the Rasoft Pro home screen when it is reopened.

iteps	Save Location (2. from 6)	
Project Name Save Location Add Rooms Add Channels Add Drannels Add Devices Level	Look In: W Pr Construction Recent Items Desktop My Documents	ects • È 📸 🖽 •
	My Computer Folder n Network Files of	ne: C:\Users\Freddie\Rako\Projects pe: All Files

2.3 Adding rooms

	New Project wizard
iteps	Add Rooms (3. from 6)
 Project Name Save Location Add Rooms Add Channels Add Devices 	Rooms In Project Note: More can be added later
. Level	1. Room Name: Living Room - Lights Kitchen - Lights Hall - Lights Study - Lights
	2. Room Types:
	🗹 Lighting
	Blinds
	Curtains
	3.
	Add Delete Selected
	Help < Back Next > Finish Cance

To add rooms to the project, type in the room name, select the room type (lights, blinds or switched) and click add.

Setting the correct room type is important at this stage as it will determine how certain pages of the software and App are displayed.

NB

Rako rooms do not necessarily directly relate to physical rooms. For example a physical room with lighting and blind control should be set as two Rako rooms. This is because the mode of control of lighting and blinds are quite different and for ease of programming not normally linked.

Once a room is 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 at any time by highlighting them and clicking "delete selected".

00	New Project Wizard	
Steps	Add Rooms (3. from 6)	
 Project Name Save Location Add Rooms Add Channels Add Devices 	Rooms In Project Note: More can be added later	
5. Level	1. Room Name: Living Room - Lights Kitchen - Lights Hall - Lights	
	Study - Lights Master Bedroom - Lights Master Bedroom - Blinds Lighting Blinds Curtains	
	3.	
	Add Delete Selected	
	Help < Back Next > Finish Car	ncel

Adding rooms for group features:

Although in most cases the automatically assigned Room numbers are adequate sometimes it may be preferable to manually select Room numbers. This will mainly be necessary when "Group" features are being used (see Appendix 3).

Do not use room 255 as this is occupied by the RXLink.

There are two methods of setting a custom Room number. For a new Room in an existing project select "File" – "New Room" to bring up this menu:

Steps	Name Room (1. from 3)
 Name Room Enter Channels Options 	Room Number: 49
	✓ Skip Channels

Un-check the "Auto-Room" box and enter the desired Room number.

Alternatively an existing Room number can be changed from the "Room Editor" tab. Select ID and change the value:

Start Page 🛛 Room Editor	Device Editor 🛛 🔂 Web Browser 🛛			
Name:	ID:	Туре:		
Study	33	Lights -	Store Sce	ne
Channel Controls 🕅 Diagnostic	s	-N2		
	All Channels	Room Devices	Scene 1	Scene 1
1	0% Downlights	No Device Assigned	Scene 2	Scene 2
2	0% - 5A Lamps	No Device Assigned	Scene 3	Scene 3
	Add Channel		Scene 4	Scene 4
				Add Scene
				Off

It is best to do this before any devices are assigned to this Room. If circuits are already mapped to the RXLink you will be prompted in the software:

Save Changes	Move Devices?
There may be unsaved changes in Room Editor. Do you want to save? Yes No Cancel	Do you want to move the devices? Note: Most devices will become virtual. Yes No

Select "Yes" to both options. These will change the room numbers in the mappings page for the RXLink to the new room numbers. The mappings will have to be uploaded again once these changes have been made.

NB

If wireless modules are addressed to a room with a changed number they will all have to be re-addressed as it from new.

2.4 Adding channels

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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.

NB

A channel is usually the same as a circuit of lights although it may sometimes be desirable to have two or more circuits as one channel if they are always to dim together.

Type the name of the circuits into the column associated with each room to populate the channels. Like Rooms, new Channels can be added, altered or deleted later.

 Project Name Save Location Add Rommes Add Devices Level Control Name Coffer LED Kitcheart Level Kitcheart Level Kitcheart Level Coffer Level Kitcheart Level Kitcheart Level Coffer Level Kitcheart Level		
5. Level	Rooms modified later	
Downlights Downlights Chadeleir Downlights Wall lights Under Cabinet Wall lights 5A lamps Coffer LED Kickboard LED Image: Coffer Led to the second	Master Be	Master Be
Wall lights Under Cabinet Wall lights 5A lamps Coffer LED Kickboard LED	Downlights	Left Blind
Coffer LED Kickboard LED Image:	Pendant	Right Blind
	Bedside 5A I	2
	Bedside 5A I	

2.5 Adding devices

The devices to be programmed are added using this page, for a wireless RAK system this will usually just be RXLinks. Select the number of RXLinks in the system and click add. Adding devices using this page will create them as "virtual devices" in the Device Editor once the project has been generated.

It is not essential to add the RXLinks at this stage. They can be added one by one later if this is prefered. If this is the case then just leave this screen blank and press "next".

• New Project Wizard	2
Steps	Add Devices (5. from 6)
 Project Name Save Location Add Rooms Add Channels Add Devices Level 	Devices in System Device Please choose first device type (You can skip this stage and add devices later) 1. Any Wired Wireless 2. RAB 100 RSR-DALI RSR-DALI RSR-DMK
	4. Add Note: RAK4s are added via Rx/RakLinks Later Bridge (Qty: 1)
	Remove Selected
	< Back Next > Finish Cancel Help

If a Bridge is being used to programme the system add it in the same way. If an RAMPI/RAUSB is being used it does not need to be added as a device.

2.6 Selecting a level

There are three user levels available in Rasoft Pro. In general the intermediate level should be used, this will give full access to all menus while still providing help options if required.

The beginner mode excludes a small number of menus such as: fade rates per scene, profile editor and the change type function.

The expert mode allows access to all debug menus which are only required when programming a wired system.

2.7 Connecting to a communication device

Before starting to assign circuits to channels the computer must be connected to a communication device this can be either a Bridge or RAMPI. When a communication device can be found by Rasoft Pro it will appear in the communications window in the bottom right of the screen. For information on how to connect to a communication device see Appendix 1.

3 Addressing the RXLink

Now that the file has been generated using the new project wizard and a suitable communication device has been connected the system is ready to be programmed.

3.1 Setup if the RXLink is already in the device list

Room List	Start Page 🕫 Room Editor Device Editor 🔂 Web Browser 🕫 🖉 Web Browser 🕫	Living Room	[Rm: 9 🕷 🖃
Example project (House:4)	Name ID: Turas	Properties	
Eine V Living Room [Rm: 9]		Room Number	9
😟 🦞 Kitchen [Rm: 17]	Living Room 9 🗢 Lights 👻 Store Scene	Title	Living Room
Hall [Rm: 25]	Channel Controls	Туре	Lights 👻
Study [Rm: 33]		Hidden on rem	ote:
Master Bed [Rm: 41]	All Organization of All Channels Room Devices Scene 1 Scene 1 Scene 1	Note	
	1 Ors Downlights No Device Assigned		
	2 Wall Lights O No Device Assigned Scene 3		
	3 Coffer LED © No Device Assigned		
Show Group Masters	Add Channel Add Scene		
Scan Wired Network for devi	Off	Living Room	[Rm: 9]
Devices In Project Reiden EREDERIDGE			
BY ink New Device		Communicat	tions
RXLink New Device		Communic	ation Devices
RXLink New Device		Bridge	RAKOBRIDGE
🗄 🌧 Discovered (Not In Project)		Sridge	≥ BENBRIDGE2 > FREDBRIDGE
		Refresh	Manual Add

If devices and rooms have been added the page will look like this:

Notice the orange icon next to the RXLinks in the device list, this means this device is virtual and still requires programming. The Bridge has already been assigned as a device , for how to program the Bridge see Appendix 1.

To program the RXLink select it in the device list in the bottom left corner of the screen. This will bring up a message in centre of the screen stating that the RXLink is still a virtual device. Select "Update Now" to continue.

	Virtual Device	
The Device is virtua physical device. Press Update Now	il, this means you have not linked it to the Start Setup.	
	Update Now	

This will bring up the "New Device Wizard" for the RXLink:

Steps 1. Select Device 2. Name Device 3. Assign to room	Link Device Device Setup Mode RXLink
4. LINK DEVICE	Press clear button on case and wait for blue light to flash then press finish
	Add as Virtual Device Device is in setup Waiting for device to enter setup

Put the RXLink into setup mode and then click "Device is in setup". This will send the Ident signal to the RXLink. The RXLink is put into setup mode as follows:



Press and hold the button on the module until the internal LED begins to flash periodically. When the button is released it should continue to flash. While it is flashing press "device is in setup" to send the Ident addressing signal. If the addressing signal has been successfully received the RXLink will stop flashing.

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3.2 Setup if RXLink is not in the device list:

If the RXLink is not already in the device list then new ones can be added by selecting "file" - "new device".



This will bring up the new device setup wizard, select RXLink from either the "All" or "Wireless" lists. On the next screen give the RXLink a suitable name.

Steps	Name Device
 Select Device Name Device Assign to room Link Device 	Device Name _{RXLink}
	Device Name RXLink garage
He	lp < Back Next > Finish Cancel

Click next on the "assign to room screen": the software will automatically assign a suitable room number.

This will bring up the "Link device" screen:

Steps	Link Device
 Select Device Name Device Assign to room 	Device Setup Mode RXLink
. Link Device	Press clear button on case and wait for blue light to flash then press finish
	Add as Virtual Device Device is in setup Waiting for device to enter setup
Н	elp < Back Next > Finish Cancel

Put the RXLink into setup mode and then click "Device is in setup". This will send the Ident signal to the RXLink. The RXLink is put into setup mode as follows:



Press and hold the button on the module until the internal LED begins to flash periodically. When the button is released it should continue to flash. While it is flashing press "device is in setup" to send the Ident addressing signal. If the addressing signal has been successfully received the RXLink will stop flashing.

3.3 Multiple RX-Links and extra information

If you have multiple RXLinks repeat the process until all units have been addressed and are appearing in the device list as assigned devices (blue icon and green text).

Once this is the case it is worth double checking that all the RXLinks have been addressed successfully.



As there is no feedback for wireless devices it is possible for the software to show the device as programmed when it is not.

If after programming and mapping the RXLink it is not responding it may mean it has never been successfully addressed. Try putting the device in setup mode again then right click on the device and select "Ident Device" to resend the addressing signal. Any mappings previously sent to the RXLink will also have to be re-uploaded.

When this "ident device" command is sent the backlit button on the unit should come on solidly for around 2-3s to indicated this is the unit that has been programmed (*only products sold after Jan 2017*).

4 Adding the lighting circuits to the RXLink(s)

Once the RXLink is added as a device into the software the next stage is to assign each of the lighting circuits to the relevant RAK channel. Two varieties of RAKs exist: RAK4s and RAK8 the process for programming each is essentially the same although a few extra features are available on the RAK8s.

4.1 Adding RAKs (RAK4 and RAK8) to the RXLink

Select the RXLink to be programmed in the Device List to open it in the Device Editor.



The "RAK4s" tab should open and appear as below. In the software the RAKs are considered part of the RXLink so need to be added using this tab.

Virtual	SAKE	RAK8	Circuits (Mappir	g) Extras	Data Transfer
	10.010	10 110	Linearts (mappin	g, Entrus	Data manofer
			Add RAK Boxes h	ere	
			Add TO IT DOXES IN		

Click "Specify extra RAK" until the number of RAKs connected to the RXLink are displayed.

Add	RAK Boxes here
Box Type	Box Number
RAK (Unknown Type)	
Extras	
Device	
Вох Туре	Box Number
RAK (Unknown Type)	
Extras	
Device	
Вох Туре	Box Number
RAK (Unknown Type)	20
Extras	

The type of each RAK (8MB, 4T, 4F, 4R etc.) also needs to be set using this screen if the RAK is added in this way. It is important to set these as the settings available in the software vary between different types of RAKs.

4.2 Setting the DIP-Switches

Each RAKLink can be used to control up to 16 circuits. This can be made up of any combination of RAK4s and RAK8s. For example: one RAK8s and two RAK4s or two RAK8s.

Set the box numbers of each stack of RAKs as prompted by the software. It is essential that box numbers are not duplicated as two RAKs with the same box number will not be able to be separately programmed.

The box numbers are set by the dip-switches 1-4 on each RAK. These switches are easily seen near the top edge of each RAK card. The software provides the dip-switch settings required for each box number.

NB

The Box number of the RAKs can be set in any order. The RAK connected directly to the RAK-LINK does not need to be 0.

4.3 Identifying circuits connected to the RAKs

Before mapping the RXLink it is important to know what each of the RAK channels is feeding. Usually this information should be available but sometimes it is necessary to manually identify each circuit after it has been wired.

It is possible to identify circuits using the dip-switches (RAK4s) or toggle buttons (RAK8s).

Identifying circuits on a RAK4



Switches 5,6,7 and 8 can be used to toggle the RAK4 outputs on and off.

Switch 5 equates to circuit one of the RAK, 6 to circuit two etc. Moving the dip-switch up will turn on the corresponding circuit moving it down will turn it off.

Identifying circuits on a RAK8

Along the top of the RAK8 motherboard is a row of button switches. These can be used to toggle individual circuits on and off in the same way as the RAK4's dip switches.

CAUTION! To perform this test the RAKs need to be powered up, do not touch any part of the circuit board including heatsinks. If in any doubt ask the installing electrician to do this.

4.4 Mapping the RAKLink

Having addressed the RXLinks and assigned all the RAKs box numbers it is now possible to to map the RXLink. Mappings correspond the Rooms and Channels created in the software to the physical RAK Circuits by assigning them different Box and Circuit numbers.

To access the mappings screen select the RXLink in the Device List and select "Circuits (Mapping)" from the Device Editor tabs at the top of the middle panel of the screen.

Box	Circuit	Room	Room#	Channel	Channel#
	D	1 Hall [Rm: 9]	9	Pendant [Ch: 2]	2
	D	2 Kitchen [Rm: 17]	17		
	D	3			
	0 .	1		Downlights [Ch: 1]	
	1	1		Under Cabinet [Ch: 2]	·
	1 :	2		Kickboard LED [Ch: 3]	
	1	3		Assign to new channel	
	1 .	1			
	2	1			
	2	2			
	2	3			
	2	4			

The Box and Circuit numbers will already have been filled in to match the RAKs added previously. Starting with Box 0 Circuit 1 click on the empty box under the "room" heading to bring up the drop down menu. Select the Room and Channel that is supplied by this RAK Circuit. If all the rooms and channels have been added into the project already repeat the process for the channels and continue until all maps have been added.

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NB

If a room does not appear on the mapping screen then it needs to be added into the project by selecting "File"-"New room" to bring up the new room wizard.

If a channel does not appear on the mapping screen it can be added directly from the mappings page. Open the channel drop down menu and select "Assign to new Channel". Enter the name of the new channel, it will automatically be assigned to the next unnamed channel in that room.

Box	Circuit	Room	Room#	Channel	Channel#
0) :	1 Hall [Rm: 9]	S	Pendant [Ch: 2]	2
0) 2	2 Kitchen [Rm: 17]	17	Under Cabinet [Ch: 2]	2
0) 3	Living Room [Rm: 25]	25	Wall lights [Ch: 1]	1
0	2 4	Living Room [Rm: 25]	25	Pendant [Ch: 2]	2
		1 Study [Rm: 41]	41		•
1	1 3	2			
1	1 3	3		Downlights [Ch: 1]	
1	1 4	4		5A Lamps [Ch: 2]	
2	2 1	1		Assign to new channel	
2	2 2	2		2	
2	2 3	3			
2	2 4	4			

Continue mapping circuits in this way until all used circuits associated with the RAKLink are mapped to channels. Click "Save For Upload" at the bottom of the mapping page to upload the mappings to the RXLink.

NB

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.

Once all the mappings are filled in it is a good idea to check for any "multiple device" errors. This is a good way of discovering any circuits that have been entered twice by accident.

All	<u>d</u>	0% 📩 All Channels	Room Devices		Scene 1	Scene 1
1]	0% Wall lights	Multiple Devices!		Scene 2	Scene 2
				Goto	Rak Circui	t
2	0	0% Pendant	Rak Circuit	Goto	Rak Circui	t Laterie S
<u> </u>				New	Device	ene 4
		Add Channel				J

Check through all of the rooms, any channels which have been mapped to more than one circuit will display as above. Check the mappings to find where the channel has been duplicated or right click on the multiple devices warning to be linked directly to the RXLink page.

4.5 The RAK8 Tab

To access the RAK8 tab click the "RAK8 Info" button in the "RAKs" tab of an RXLink.

When used with an RXLink the RAK8 tab provides a record

of which daughterboards are used with a particular

	RA	К8				Box 0	
Not Found							
Ident							
Unkn 📀	Unkn 🜍	Unkn 🜍	Unkn ᅌ	Unkn 💿	Unkn 🜍	Unkn 🜍	Unkn ᅌ

Device

Box Type

RAK8-MB

RAK8 Info

The RAK8 tab with no daughterboards defined

To define which daughterboard is connected to each slot click on the drop down menu of the relevant slot and select the type of module connected.

Repeat this for all used slots leaving unused slots as "unknown"

NB

The information provided in the RAK8 tab is not necessary for successful addressing of the system. It is only required when access to extra features such as setting the output state of a WDA-600 or for diagnostic purposes such as testing the relays on a WMR-CUB. Extras





	RA	K8				Box O	0
WMT-400	WML-300	WMT-400	WMS-600	WMR-CUB	WDA-600	WMT-400	WMT-400
			Relay	Relay A Relay B			
					0		
0 0	0 0	0			DSI 0-10 DALI Relay	0 0	0 0
Output	Output	Output	Output		Output	Output	Output
Other	Other	Other	Other	Other	Other	Other	Other

The RAK8 tab with daughterboards defined

Once the type of daughterboard has been set and the channel has been mapped in the "circuits mapping" tab this page can be used to control the RAK8 channels directly.

Upgrading the RAK8 cards:

Jpgrade via NFC (RAMPI)	Copy via NFC (RAMPI)
-------------------------	----------------------

These buttons can also be used to upgrade the firmware of, or copy information from, the RAK8-MB via the RAMPI.

Upgrading the RAK8s with this method is not routinely necessary and should only be done if advised to a member of Rako technical support staff.

It is also possible using the "Copy via NFC (RAMPI)" to transfer all information from one RAK8-MB to another.

5 Setup for wall-plates with dip switches (RCM)

Once all the modules have been addressed via the software the wall-plates need to be paired to the desired room. On the reverse of the wall-plate are two sets of dip-switches one each for the room and house address, Examples below:



If the modules looks like an RCM but there are no dip-switches fitted then this module is an RNC module and cannot be addressed manually. See section 6 "setting up programmable wallplates (RNCs)" for details.

The dip-switches work using a binary number system, if unfamiliar with binary the switch settings can be read from the software. Right click on the room of the keypad to be programmed and select "dip-switches".





This will bring up a menu indicating how the dip switches need to be set for this room.

Set the wall-plates dip switches as indicated for all switches used in this room. Repeat this process for all the different rooms in the system.

6 Setting up a programmable wallplate (RNC)

The RNC wallplate allows custom commands to any room or channel to programmed on to individual buttons of a wireless wallplate. This gives functionality comparable to the wired keypads rather than the single room control offered by the RCM.

6.1 Addressing the RNC

Unlike the RCM the RNC type keypads must be programmed using the software, a RAMPI is required to do this. First ensure that the RAMPI is connected to Rasoft Pro in the communication window see Appendix A1.1.

- To begin the setup process place on the RAMPI device on the RNC as indicated
- When the device is correctly positioned a green LED will flash in the RAMPI and a window will pop-up in Rasoft Pro.
- Give the device a suitable name so that it is identifiable in the software.



- Select the local room for the device. After the initial setup the RNC will behave like an RCM with dip switches set to this room.
- NB

It is important to set the room at this stage. If "Assign later" is selected then the RNC will not be programmed and will be added as a virtual device

- Select finish on the next page to complete setup. The RAMPI will need to upload to the RNC at this stage.



6.2 Uploading a template to a RNC

By default an RNC will behave as if they are a seven button keypad, ie four scenes fade up and fade down. When other types of RNC are used or if custom button maps are required the "button config (mapping)" screen needs to be used.

The button mapping screen can be accessed by selecting it in the device list this will open the device editor of the RNC.

Mapping templates for all common RNC button layouts are available in Rasoft Pro.

To apply a template to a RNC:

- In the button mapping tab of the device editor scroll to the bottom to view the templates tile

Templates	
RNC-020 - 1 Scene and Off.	Load Template
RNC-030 - Standard 3 Button - 3 button curtain/blind controller. Raise Stop Lower of local room	
RNC-040 - Standard 4 Button - 1 Scene and Off with master raise and lower.	
RNC-041 - Standard 4 Button - 1 Scene and Off with secondary 1 Scene and Off.	Save Template
RNC-060 - Standard 6 Button - 6 button curtain/blind controller. Raise Stop Lower of local room	·
RNC-070 - Standard 7 Button - 4 Scenes and Off with master raise and lower.	
BUC 100 C 1 110 B TC 100 SI	Advanced

- Select the relevant template and click load template. This will open a pop up box; select yes to overwrite the mapping with the template



- The mappings for this template will now appear in the left tile of the device editor
- Click "save for upload" at the bottom of the page to upload these setting onto the RNC.
- At this point a progress bar will appear on the screen. Touch the RAMPI on the RNC to upload these settings.

6.3 Setting custom button mappings

By default or when any of the templates are uploaded the RNC will only send commands to the "local room" defined during the initial setup of the RNC. With a programmable keypad it is possible to make any button send a command to any device in the system by manually writing the mappings into the software.

The main section of the mapping screen is divided into three sections, from left to right "mappings" "keypad" and "button action".

Mappings

This section shows the mappings that will be uploaded to the plate. This tile is also used to select the mapping to be edited. The mapping is summarised in this tile in the format:

Button input: letter corresponding to that selected in the keypad tile **Room**: this will only show if the room number is different to the "local room" **Action**: scene, fade, level etc.

A RNC can hold twenty four maps but macros are available when lots of commands need to be sent from a single button press.

Ten button plate maps (requires template):

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Mappings Mappings 1 - A -> Scene 1 1 - A -> Scene 1 2 - B -> Scene 2 2 - B -> Scene 2 3 - C -> Scene 3 3 - C -> Scene 3 4 - D -> Scene 4 4 - D -> Scene 4 5 - F -> Scene 5 5 - E -> Off 6 - G -> Scene 6 6 - G -> Fade Up+Stop 7 - H -> Scene 7 7 - I -> Fade Down+Stop 8 - E -> Off 8 - Disabled 9 - I -> Fade Up+Stop 9 - Disabled 10 - J -> Fade Down+Stop 10 - Disabled 11 - Disabled 11 - Disabled 12 - Disabled 12 - Disabled 13 - Disabled 12 - Dicabled 14 - Disabled

Keypad

Seven button plate maps (default):

	Required	Buttons	
	A	F	
	В	G	
	с	H	
	D		
	E		
apping (Options ed (Select Act	on)	
apping (Enable) Send Trigge	Options ed (Select Acti Stop On Rele r on Press	on) ase	
apping (2 Enable 3 Send Trigge Input L	Options ed (Select Acti Stop On Rele r on Press onger than	on) ase C	
apping (2 Enable 3 Send Trigge Input L	Options ed (Select Acti Stop On Rele r on Press onger than	on) ase O	

This tile defines the input to be mapped. The lettered buttons equate directly to all the buttons available for use on a RNC, often not all these will be occupied and will remain unmapped. So on a ten button plate (RNC100) all buttons A-J will be used whereas on a two button plate (RNC020) only inputs B and D are used.

There are two types of button input that can be used in a RNC mapping:

Trigger on press:

As soon as the button is pressed the mapped "button action" will be sent. In nearly all cases this is the setting used.

Trigger on release:

A trigger on release will send the mapped "button action" command once the button is released. This is usually used to allow two function to be associated with a single button.

When mapping a fade command it is vital that the "send stop on release" check box is ticked. When a dimmer hears a fade command it will continue to fade until it receives a "stop".

Button action



This tile is used to set the command sent from the input selected in "keypad". By default room will be the local room for that keypad. All the rooms in the project will be visible in the drop down menu as will an option for a "custom room", which can be manually added, and previous room.

The next drop down menu can be used to change the channel affected by this command. Usually "all channels" is selected so that the entire room will be affected by this map. All the rooms added in the room editor will appear in this drop down menu as will "last used" and "custom".

Previous room and last used functions:

Previous room will set the room number to that which was last sent by this keypad. It will not track commands sent by any other keypads.

The last used function sets the channel to the most recent previous command sent from that device. This is commonly used when a RNC is set up to toggle individual channels. In this case "last used" is used for the fade buttons so that the user can adjust the brightness of the channel they have just turned on. An example of this setup can be seen in the template "RNC-CHANNEL-070"

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NB

The "last used" function only works per RNC. It will not track the commands from another RNC even if it is shares a local room.

The action section sets which command will be sent to the room and channel that have been set.

7 Setting scenes

With all the circuits addressed and wall-plates set up the system should be fully functioning. At this stage the scene settings will be on default:

Scene 1 – All on 100% Scene 2 – All on 75% Scene 3 – All on 50% Scene 4 – All on 25%

7.1 How to set a scene

While this is fine it does not provide particularly imaginative mood settings for the room. To set scenes:

- Click on the room to bring up the room editor tab
- Select a scene (the selected scene will turn blue)
- Move the slider for each channel to the desired light level
- Press "store scene"

Scenes can be given names rather than numbers. This will change how they are displayed on the Rako App.

To set more than 4 scenes click the add scene button. Up to 16 scenes are programmable on each dimmer.

7.2 Advanced 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 These extra options allow scenes to be transmitted without the need to individually reset every slider for every channel. This is particularly useful when a dimmer has been swapped and the scenes need to be reuploaded to match those in the removed dimmer.

Send Store Command:

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

Transmit all sliders:

Retransmits all the current slider levels for the selected scene.

Write Scene "1" Level Data:

Uploads all levels and stores the currently selected scene (in this case scene 1)

Write All Scenes Level Data:

Uploads all levels and stores all scenes. Essentially reuploads all scene information for this room to all dimmers addressed to this room.

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A1 Setting up a communication devices:

A1.1 RAMPI

To connect to the RAMPI simply plug the module into the USB port on your computer. Rasoft should find the device, right click on "RAMPI" in the communications box and select connect. If the "RAMPI" icon does not appear click refresh below the communications box.

A1.2 Bridge

Step 1: Connect the Bridge to a router:

The WA & WTC-Bridges are supplied with an RJ45 network cable. Connect this to an unused port on a wireless router. Connect the Bridge the Rako Wired Network via the RJ11 port and supplied cable (white cable). This can be plugged directly into the RAKLink or RAKstar (if used). It can also be punched down at any point in the wired network via a WP-CON or WP-CONC. A Blue light should flash continuously within the Bridge. Connect your PC to the same router, either by wireless network or by fixed Ethernet cable.

Set the Bridge House Number:

Every RAKO wireless system has a House ID number between 1 and 255. It is necessary to tell the Bridge which house ID number has been chosen so that it talks to the correct house. The RASOFT configuration file gives the chosen House ID number at the top of the room list.

NB

For a system that has already been programmed but there is no file: look at the DIP switches settings on the rear of the lighting control wall plate. The dip-switch information panel (right click on room in room list and select dip-switches) can be used to decode these binary settings. Move the switches on the screen to match those of the wall-plate to show the House and Room number.

The Bridge house number is set via the web page interface.In Rasoft Pro in the bottom right communications window right click on the Bridge and select "Open in Browser".

When successfully loaded the Webpage will appear as below:





Click on the Configuration Button on the right hand side.

The default User Name is **admin** The default password is **microchip**

When successfully logged in, the screen below will be displayed:

rako			
			Rako Bride
Overview	lako Bridge Con	nfiguration	
Remote Control	is page allows the configuration of	f the bridge's network settin	ac
Hardware	is page allows the configuration of	in the bridge's network setun	ys.
C	CAUTION: Incorrect settings ma	ay cause the bridge to lose n	etwork
configuration	connectivity. Recovery options w	nii be provided on the next p	age.
- Events Er	ter the new settings for the bridge	e below:	
Macro States		· · · · · · · · · · · · · · · · · · ·	
- Holiday States	MAC Address:	00:1E:C0:9A:08:24	
- Dip Switch	Host Name:	RAKOBRIDGE	
	Wireless House Address:	1	
	UID:	1	
	Bridge Address:	1000	
	Bridge Channel:	1	
	Password:	microchip	1
	Disable Wireless		
	Wireless Rate Mode		
	Wireless Booster Mode	(Disable RAB100)	
	Wireless Link Mode	🗌 (Link bridges via Wireless)	
	Enable EtherBridge	 (connect Bridges by Ethernet) 	
	Disable Auto Detect	(Hide from smartphone)	
	Require smartphone	Requires iPhone V2.5.0/	

Change the "Wireless House Address" to the house number in the project file (default will be

1). Scroll to the bottom of the screen and press "save config". The following message will be displayed if the settings are successfully changed:

Reboot In Progress...

Your settings were successfully saved, and the bridge is now rebooting to configure itself with the new settings.

Your bridge is now located at: http://RAKOBRIDGE/

NB

Some firewall programs will prevent access to the Bridge. Temporarily turning off the firewall will allow Bridge configuration. Remember to re-enable the firewall afterwards. If it is not possible to make connection to the Bridge from the laptop, it could be due to IP addressing in the router. Try connecting the Bridge directly to the laptop using an RJ45 cable. This will allow the Bridge to be configured. Connect the Bridge back onto the router afterwards in order to enable the App to work.

Adding the Bridge as a Device in Rasoft Pro:

Once the Bridge is successfully connected and the House number has been set the Bridge is ready to talk to the system. The communications window in the bottom right of the screen will say if the Bridge is connected or not. When Rasoft can see the Bridge a green tick will appear next to it.



To add the Bridge as a device select "File" - "New Device" to bring up the "New Device Wizard". Choose "Bridge" from the device list (it will always be at the top of the list).

Skip through the "Assign to room" page by clicking next.

This will bring up the screen as below. The Bridge you are connected to will appear followed by its IP and MAC address. Select it and click "finish".

1. Select Device 2. Name Device 3. Assign to room 4. Link Device	Device Setup Mode Bridge RAKOBRIDGE – 169.254.56.91 (MAC: 00-04-A3-E1-01-36)
	Refresh Select the appropriate bridge to continue. Add as virtual Device
Help	o < Back Next > Finish Cancel

Once the device has been successfully set up then it will appear in the device list with green text and a blue icon.

Now this device is assigned on the software all Bridge functions will be accessible via tabs in the device editor. For more information on the Bridge functions please see the Bridge instructions contained within the Bridge box.



A2 Power up modes

The power up mode dictates the output of a circuit on power restoration. While still on factory default settings all Rako products will have a power up mode setting of 100%.

When new Rako modules are addressed from default then the power up mode will automatically change from 100% to Off. For all other Rako products the power up mode must be changed using the software.

To manually change the power up mode of a specific channel select it in the device list and then go to the "advanced options" tab to show the power up mode options.

Room List		Start Page 🕺 Room Editor	Device Editor			
My Example Rako Project (House:4)		Device Type: RMT500			Description: <auto title=""></auto>	
🗄 🖓 Living Room [Rm: 9]		Room: 💡 Ma	aster Bed [Rm: 41]	▼ Cha	nnel: Pendant [Ch: 2]	
Kitchen [Rm: 17]		Fada Datas Januar Ostinus Da	Advar	red Options Duefle Editor Changes 7	Sure Date Transfer	
Hall [Rm: 25]		Fade Rates Ignore Options Ra	tes per scene Advar	Profile Editor Change I	ype Data fransfer	
Master Red [Dm: 41]						2
Master Bed [Rm: 42]						
					Power Up Mode:	
					rower op mode.	
				March 1997	Last Scene .	
				Power Up Mode:		₹.
				100%		
Show Group Masters				Smartphone Channel Types	I his will write the powerup mode to every	
Device List				Default	room in the project. It will update all devices	8
Scan Wired Network for devices]			Slider	currently in the project.	
A Devices	-			Switch		
in Project	1.26			Scenes		
Bridge TESTBRIDGE				Fades		
RACUB (Relay Module) R:MASTER	BEI					
RACUB (Relay Module) R:MASTER	BEI					
RMT500 R MASTER BED C DOWN	IGE					
RMT500 R:MASTER BED C:PENDAN	π					
RMT500 R:MASTER BED C:BEDSID	5				Transmit	
RMT500 R:MASTER BED C:BEDSUD	E!				Inditantic	
RMT500 R:STUDY C:DOWNLIGHTS	5					
RMT500 R:STUDY C:5A LAMPS						
RMT500 R:HALL C:CHADALEIR	-					
III III III III III III IIIIIIIIIIIII	•			Save For Up	load	

It is possible to set the power up modes "globally" for the entire system. To access this menu select "tools" - "global power up". This will send a House master power up mode to all modules.

•	Rasoft Pro				
File	e Edit User Level View To	ools Window Help			
P	🗏 😫 🌒 🍫 🚄	Glohal Power Up	1		
ote	Room List	Wired Device Address	t Page	88	F
Remo	My Example Rako Pro	Reset Defaults File Types	Name:		00
	Hall [Rm: 25]	Plugins	Channel (Con	tre
		Options			
	🗄 📕 Master Bed [Rm: 42]]	All	11	11

It is advised that the power up mode is either left on "off" or set to "last scene." In general it is not a good idea to have the lights come on after a power cut so a scene or percentage power up mode is best avoided unless specifically requested.

To test the power-up modes it is a good idea to turn off Rako circuits from the MCB to make sure that the desired power-up modes have been uploaded successfully.

A3 Fade rates

Using Rasoft pro it is possible to edit the rate at which Rako modules move between different lighting levels. To change the fade rates for the entire room right click on "room devices" in the top right of the room editor.



NB

This will set fade rates for every device in the master bedroom. 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.

Device Type: Multiple Devices		Description	Multiple Devices		Properties	
Multiple Devices Fade Rates Rates per scene Topore Opl	ions Profile Editor	Advanced Ontions Data Tr	ander	1	litie	<null value=""> 🔚</null>
Hotpe beries					UniquelD	-1
Scene Control	FAS	T Fader Controls		1	Room Number	41
R-t-	Darray	Start Rate Acceler	ation Max Rate		Channel Number	<different th="" valu<=""></different>
Rate	Decay			1	Type	
N E					lote	
18				1	/irtual	(m)
	<u> </u>					
				· · · · · ·	RMT500 R:MASTE	R BED C:DO 🆤
					RMT500 R:MASTER	BED
					C:DOWNLIGHTS, H	PINDANT.
					RMT500 R:MASTER	BED C:BEDSIDE
					5A LAMPS LEFT, R	MT500 R:MASTER
			P		BED C:BEDSUDE 5/	A LAMPS RIGHT
					Communication	
					Communication	- III
					 Communication 	Devices
29 🐳	20 🖶 SLO	W 80 🗘 1	57 🐳			
			Reset To Defaults			
		Save For Upload			Refresh	Manual Add

The fade rates menu will be displayed as above. Notice the window on the right hand side (highlighted above) lists the circuits that will be affected by these changes are listed.

There are two types of fade rates that can be adjusted:

Scene controls will change the rate at which circuits move between scenes (including Off).

Fader controls will change the rate at which circuits dim up or down when the fade buttons (raise/lower) are used.

NB

Setting all of the fader controls to max. speed will make it almost impossible to dim the lights from the fade up/down buttons.

A5 Uploading to a Bridge and App setup

When the system is programmed the last thing required is a Bridge upload. This ensures that the programming data on the computer matches that on the Bridge. Even if the Rako App.is not being used it is important as it will enable a later download of the project information without the need for the original file.

To upload to the Bridge select the bridge from device list, opening the Bridge options in the device editor tab. Go to the "data transfer" tab and click "upload".



Wireless RAK setup guide

evice type	e: Bridge						Des	cription:	TESTBRIDGE			
artphone / W	Veb Data	Room Import	Mappings	Custom String	s Firmware	Advanced	Feedback	Data Trans	fer			
	Note: Sor	ting the Poom o	olumos will	affect the smar	tohone order							
	Rooms:			arreet are arread	control or der							
	ID		Enabled		Title		Т	ype		Mode		
	9				iving Room		Lig	ghts		4 Scenes	+ Off	
	17			V	litchen		Lig	ghts		4 Scenes	+ Off	
	25			V	Hall		Lig	ghts		4 Scenes	+ Off	
	33				Study		Lig	ghts		4 Scenes	+ Off	
	41				Master Bed		Lig	ghts		4 Scenes	+ Off	
	42				Master Bed		Bli	inds		4 Scenes	+ Off	
	40			V	Master Bed Gr	roup master	Lig	ghts		4 Scenes	+ Off	
	Channels:						Scenes:					
	Channels:						Scenes:	2				
	Channels:	Enabled	Title		Туре		Scenes:	2	Enabled	Title		
	Channels: ID	Enabled	Title		Туре		Scenes:	<u>}</u>	Enabled	Title		
	Channels: ID	Enabled	Title		Туре		Scenes:	;	Enabled	Title		
	Channels:	Enabled	Title		Туре		Scenes:	; ;	Enabled	Title		
	Channels:	Enabled	Title		Туре		Scenes:	· · · · · · · · · · · · · · · · · · ·	Enabled	Title		
	Channels:	Enabled	Title		Туре		Scenes:	<u>;</u>	Enabled	Title		
	Channels:	Enabled	Title		Туре		Scenes: ID	<u>.</u>	Enabled	Title		
	Channels: ID	Enabled	Title		Туре		Scenes: ID		Enabled	Title		
	Channels: ID	Enabled	Title		Туре		Scenes: ID		Enabled	Title		
	Channels: ID	Enabled	Title		Туре		Scenes: ID	<u>.</u>	Enabled	Title		
	Channels:	Enabled	Title		Туре		Scenes:		Enabled	Title		

There are several settings that can be altered to change the appearance and functionality of the Rako App. Select the "Smartphone/Wed Data" tab. This should display all the rooms that have been added to the project:

From this page the various setting to define how the App will appear are set. To bring up the channels and scene settings to be uploaded highlight the desired room:



Enable – When this box is checked this room/channel/scene will appear on the app.

Title – This will be the label given to this room/channel/scene on the app. Changing this will also change the room name in the room list of the project file.

Type – This will change the screen layout of the channels section in the app.

Mode - This will change how the on screen keypad in the App is displayed. It can represent either a 7 or 10 button keypad. It can also be displayed as a scrolling menu showing all 16 scenes.

It is also possible to change the order in which the rooms will appear in the App. To do this just click and drag the rooms to the desired position.

NB

The Master Bed group master is unchecked, typically group masters or "dummy rooms" will be excluded as they do not have channels associated with them directly.