Rako Controls Ltd

WA-Bridge User Guide

Figure 1 below shows how WA-Bridge is used with Rako Wired System for the following purposes:

- Allows Rako Wireless products to be incorporated into the overall (wired) lighting scheme.
- Can be used with Rasoft as a programming tool to commission a lighting system.
- It can interface between a Rako Wired System and a Smart Phone: Android, IPhone, IPod Touch or IPad (via a wireless router).

FIGURE 1.
A SIMPLE INSTALLATION.

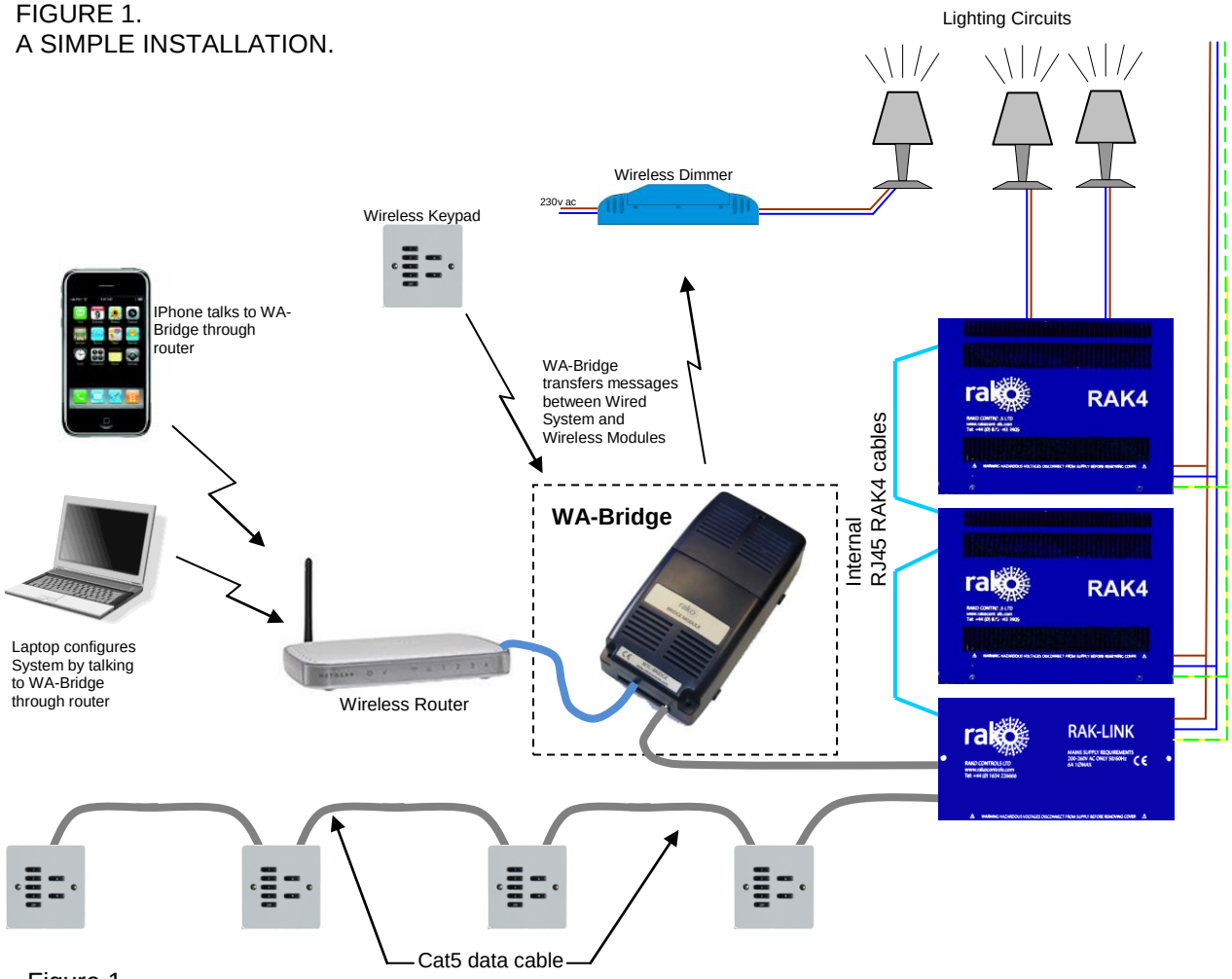

Figure 1

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Using WA-Bridge to commission a Wired system

RASOFT must be used to commission a wired system. RASOFT needs to communicate with the wired system via a WA-Bridge. The Bridge may be part of the finished system, or it may be part of the Commissioning Engineers toolkit.
A wired system will work perfectly well without a Bridge. If a Bridge is included in the system the following additional features are available to the system:

- Communication with Rako Wireless transmitters. The system can take commands from Wireless wallplates, wireless PIR's, or any other Rako wireless transmitter.
- Communication with Rako wireless receivers. The system will be able to control Rako wireless dimmers, Relay modules, Curtain and blind controllers.

Step 1: Connect the Bridge to the Rako system

The WA-Bridge is supplied with two cables attached to it. An RJ45 network cable and a RJ12 cable.
Plug the RJ12 cable into one of the sockets on a RAKLink. This will connect the WA-Bridge to the Rako wired system as well as providing power to the WA-Bridge. A blue light inside the Bridge will be flashing to indicate that the power is on and the Bridge is operating correctly.

Step 2: Connect the Bridge to a router

Plug the RJ45 to an unused port on a router.
The router may be part of the finished system, or it may be part of the commissioning engineers toolkit.

Step 3: Connect to the router

A PC that has Rasoft installed needs to be connected to the router. This can be done by wireless, or by an Ethernet cable.
A wireless connection is useful as it allows the PC to be moved around the property easily. This makes it easy to identify lighting circuits and set scenes. However, it has been noted that wireless connections can fall over quite easily when the PC is moved too far from the router.
An Ethernet cable between the PC and the router is less flexible, but does have the advantage of being a more reliable connection.

Step 4: Set the Bridge to the same House ID number as your Rako system.

Every RAKO *wireless* system has a House ID number between 1 and 255. One of the uses of WA-Bridge is to provide an interface between Rako wired & wireless devices.
It is strongly advised to change the House ID number. The bridge factory setting is House 1. If the bridge is left on this setting then there is risk that Rako systems in neighbouring houses can interfere with each other.

The RASOFT configuration file *will not* tell you the House ID number as Rasoft will use whatever House number that the Bridge has been set to.
Alternatively, if wireless modules are already installed, look at the DIP switches settings on the rear of the lighting control wall plates and decode the house ID number from those.

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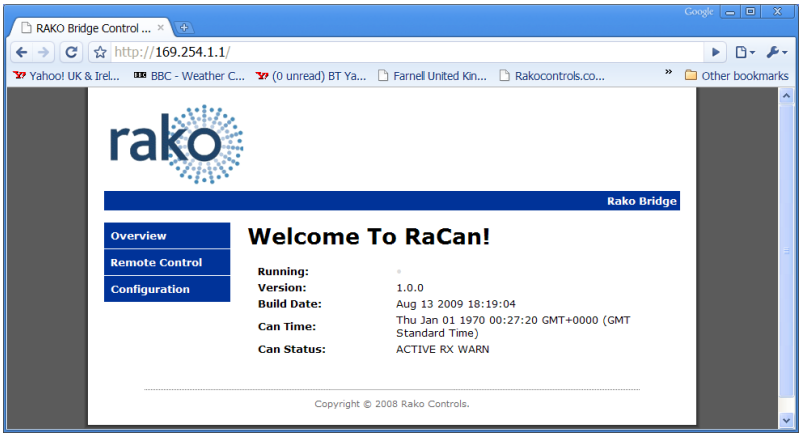
On a laptop, start the WEB Browser (e.g. Windows Internet Explorer).
In the URL line type **RAKOBRIDGE** and press Enter
If this does not work, then try typing **rakobridge.local** in the URL line.
The page below should be displayed.



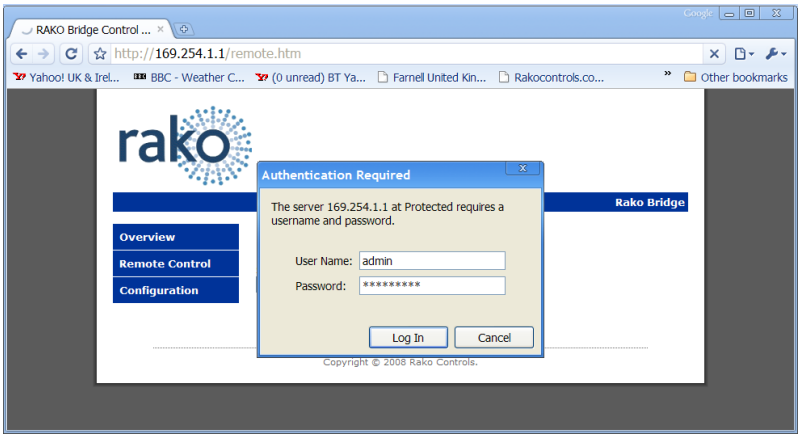
TIP:
Some firewall programs will prevent access to the Bridge. Temporarily turning off the firewall will allow Bridge configuration to be done.
Remember to re-enable the firewall afterwards

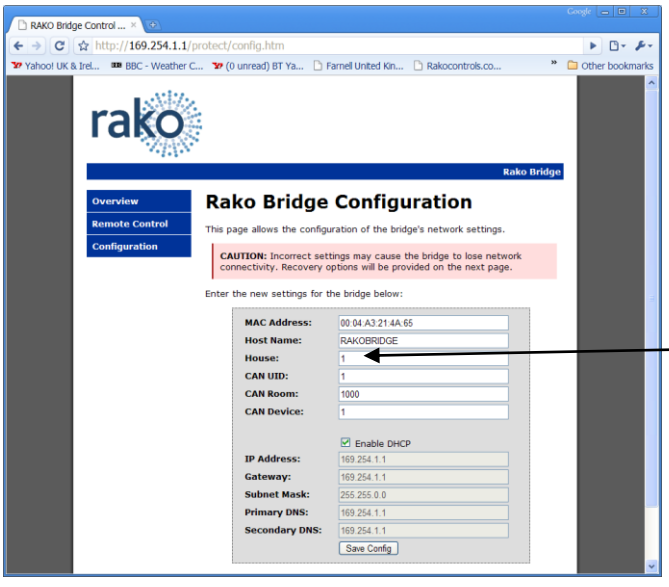
TIP:
When first plugging, replugging or applying power to the WA-Bridge the router can take some time to (re)assign an IP address. During this time it will not be possible for software to connect to the WA-Bridge.
The connection often works well if the network connection is "repaired" in the PC network settings.

TIP:
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 crossover cable*. This will allow bridge to be configured. But, connect the bridge back onto the router afterwards in order to let the iphone work with it.

Login to Bridge using password.

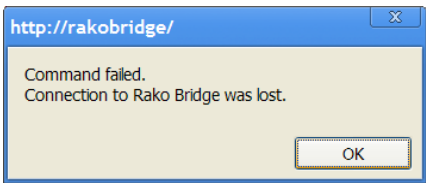
Click on the **Configuration** Button.
The default User Name is *admin*
The default password is *microchip*
When successfully logged in, the screen below will be displayed:





House ID Number

Change the House ID number to match that of the RAKO system.
Then press the **Save Config** button.

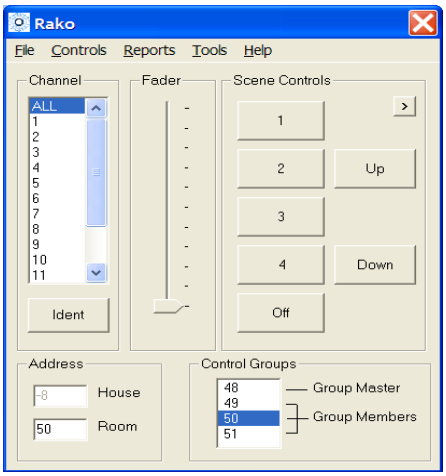


This error message will probably appear after changing the configuration. This is normal. Just click OK

Can close the browser windows at this stage.

Step 5: Begin programming the system using Rasoft

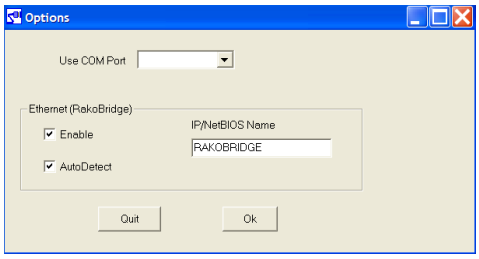
On the laptop, Run Rako Lighting RASOFT program. After a short delay the Rasoft start up screen will be displayed.



Rasoft start up screen

Tip: Do not have any Rako USB or RS232 devices connected to your computer as these will interfere with the

Tip: The *Communication* Check boxes should be set like this for RASOFT to find Bridge easily



Once Rasoft has started and is connected to the WA-Bridge, the system can be configured. See the Wired System Programming Guide for help on this.

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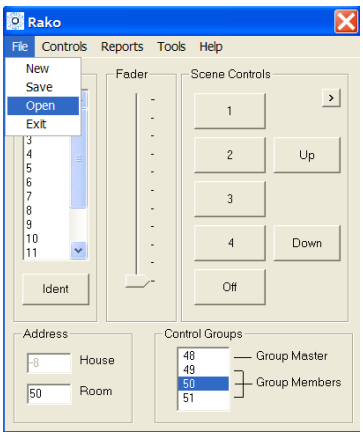
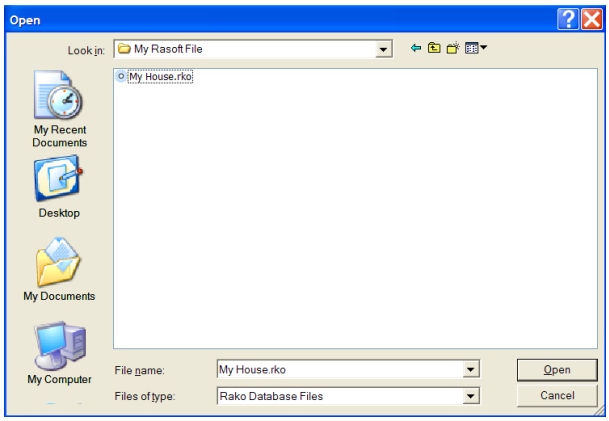
Setting the WA-Bridge to operate with Rako IPhone App

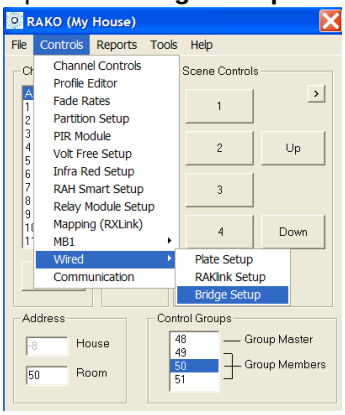
Step 1 – Upload the Rako system information to the Bridge

Open the configuration file for the house's RAKO system:

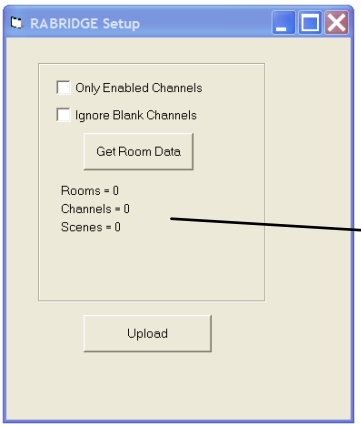




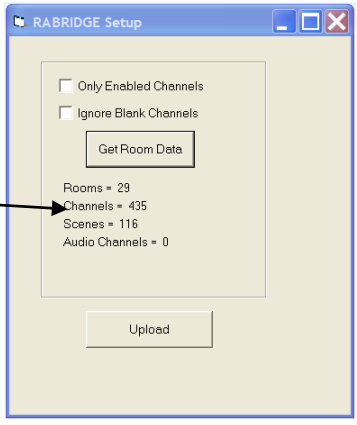
When the Configuration File is successfully loaded:
Open the **Bridge Setup** menu item.



Click on ***Get Room Data….***



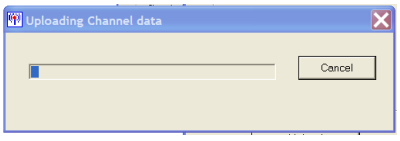
and a number of Rooms, channels etc appear.



TIP:
For best results tick either the "*Only Enabled Channels"* or *"Ignore Blank Channels"* check box.

These boxes are ticked by default in later versions of Rasoft

Now just click on ***Upload*** to transfer the Room data to the Bridge. Should take a few moments to complete.



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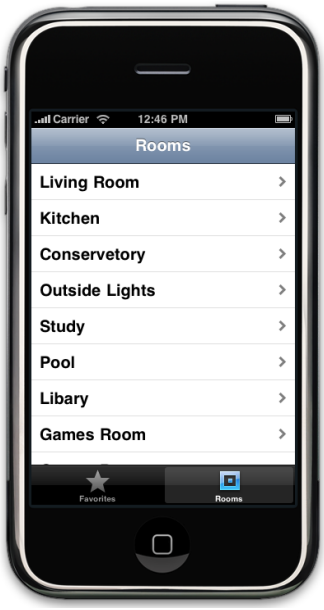
Step 2: Use RAKO iphone application to control the lighting system.

Make sure iphone is able to connect to the router.
Download the RAKO application from the iphone app store.
Run the application. The iphone will find the WA-Bridge after a few moments.
The Rako application will display the room and scene information that has been uploaded to the bridge.



If the Bridge is programmed with a new Rasoft Configuration file then the I-Phone App must be told of this new configuration. The Rako logo at the bottom of some of the app screens gives access to this function.

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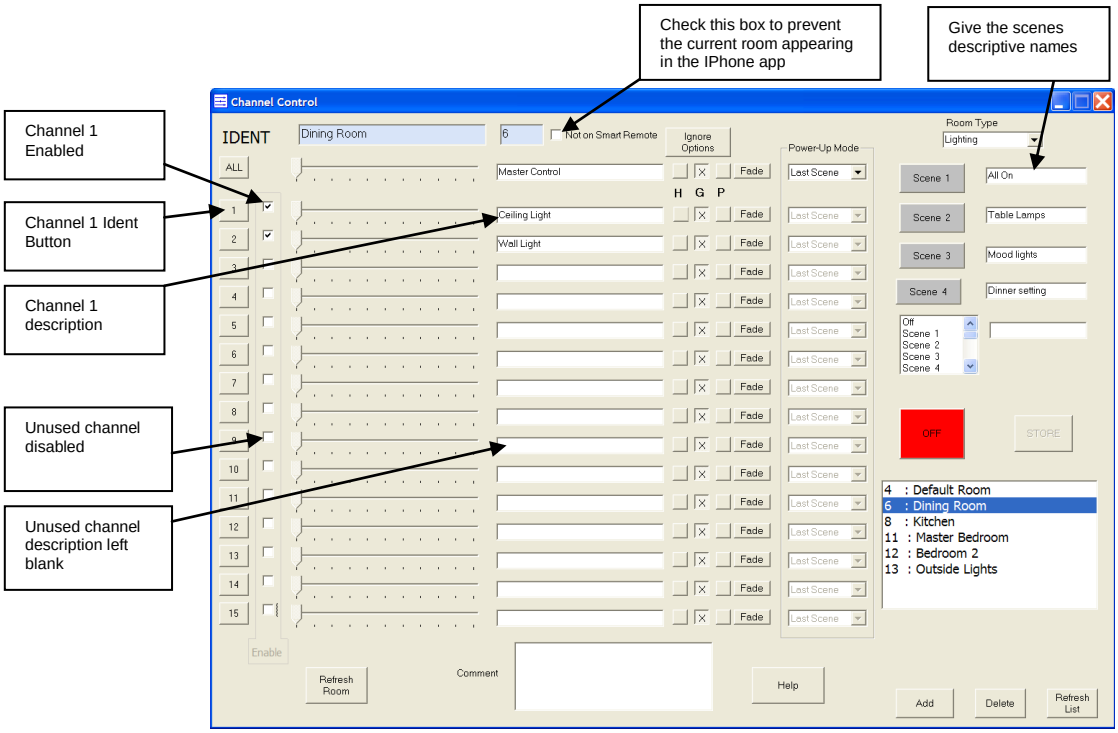
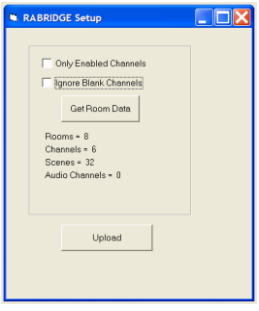
Appendix 1: Configuring a Rasoft file to work with iphone

The Channel Control window is used to define how the IPhone App will operate with the Rako system.
As well as allowing selection of Rooms and Scenes, the iphone Application can control individual circuits within the house. To do this properly the channels in each room must be properly labelled.
At the Left hand side of the Channel control window, press the Channel 1 Ident Button and observe which lights flash on & off in the room. Type a description of these lights in the Channel 1 description. Tick the Enable box for that channel.
Repeat for each channel in all rooms until all lights have been correctly labelled.
Any channels that are not being used (i.e. no lights flash when the Ident button is pressed) should be left with a blank description and the enable box should be un-checked.



Open the RABridge Setup screen



The *Rabridge Setup* utility has two check boxes. These are used to prevent the iphone application being clogged up with unwanted menu items which refer to unused channels. The Bridge can only hold information for 256 channels: Unused channels will quickly exceed this limit if neither of these boxes are ticked.

By ticking 'Only Enabled Channels' the iphone will only use channels that are ticked as enabled within the Rasoft Channel control window.

By ticking 'Ignore Blank Channels' the iphone will only use channels that have been given proper descriptive names.

In addition, an entire room can be omited from the iphone. To do this, simply tick the "Not on Smart Remote" box at the top of the Channel control screen.

Press the "Get Room Data" to get the information from the Channel Control settings. Then press the "Upload" button to send that information to the Bridge.
Any time that the system is changed – ie new circuits added or removed, the system should be re-uploaded to the bridge.

Technical Support

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