

USING RA-BRIDGE TO INTERFACE SMART PHONES TO A RAKO SYSTEM

Equipment List:

- A RAKO lighting system.
- An RA-Bridge.
- A Smart Phone (Android or Iphone), IPad or IPod Touch
- A Wireless network (with spare router Ethernet connector).
- A PC with the supplied RASOFT software installed (version 2.2.7 or later).
- The RASOFT Configuration file for the house. (The person who commissioned the lighting system should be able to provide this) If this is not available, then see appendix 1 to create one.

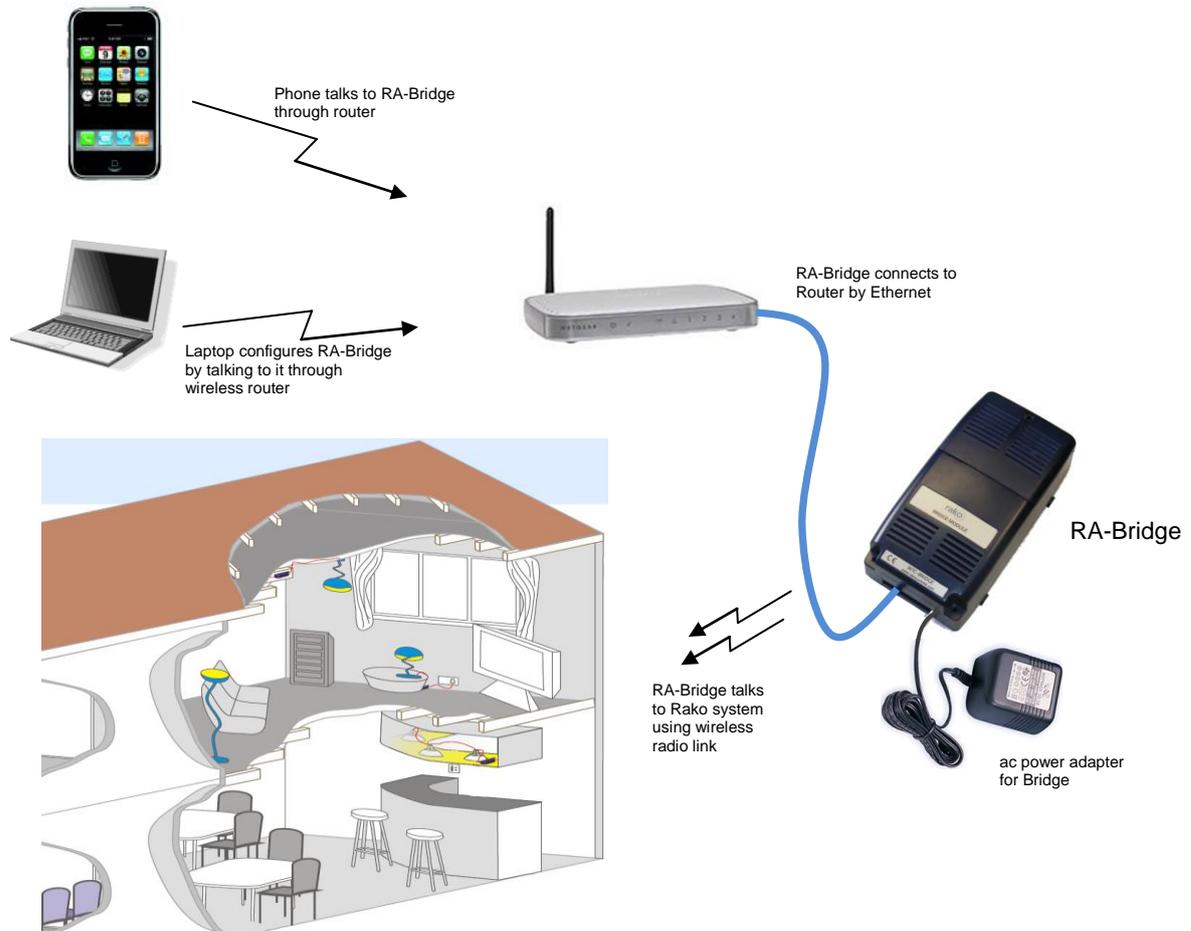


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Step 1: Connect the Bridge to the router.

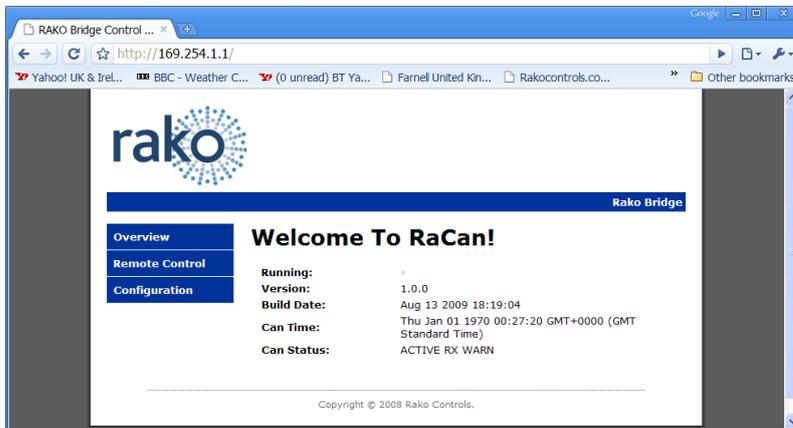
The RA-Bridge is supplied with an RJ45 network cable. Simply connect this to an unused port on the router. Connect the Bridge power supply to a convenient ac socket and switch it on. A Blue light should flash continuously within the Bridge.

Step 2: 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. It is necessary to tell the Bridge what house ID number has been set so that it talks to the correct house (and not the neighbours!). The RASOFT configuration file will tell you the House ID number. Alternatively, look at the DIP switches settings on the rear of the lighting control wall plates and decode the house ID number from those. Appendix 1 shows how to create a new Rasoft file. Appendix 2 shows how to decode the wall plate switch settings.

To configure the Bridge House number:

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 **rakobridge.local** instead. The page below should be displayed.



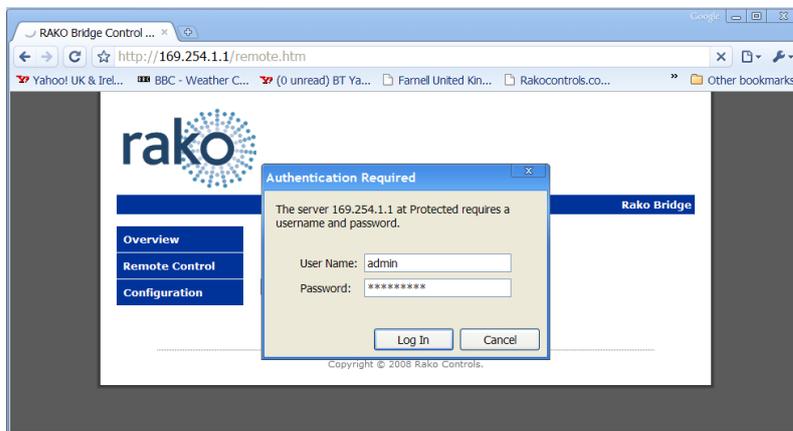
TIP:
Some firewall programs will prevent access to the Bridge. Temporarily turning off the firewall will allow Bridge configuration to be done. Remember to re-enable the firewall afterwards

TIP:
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.

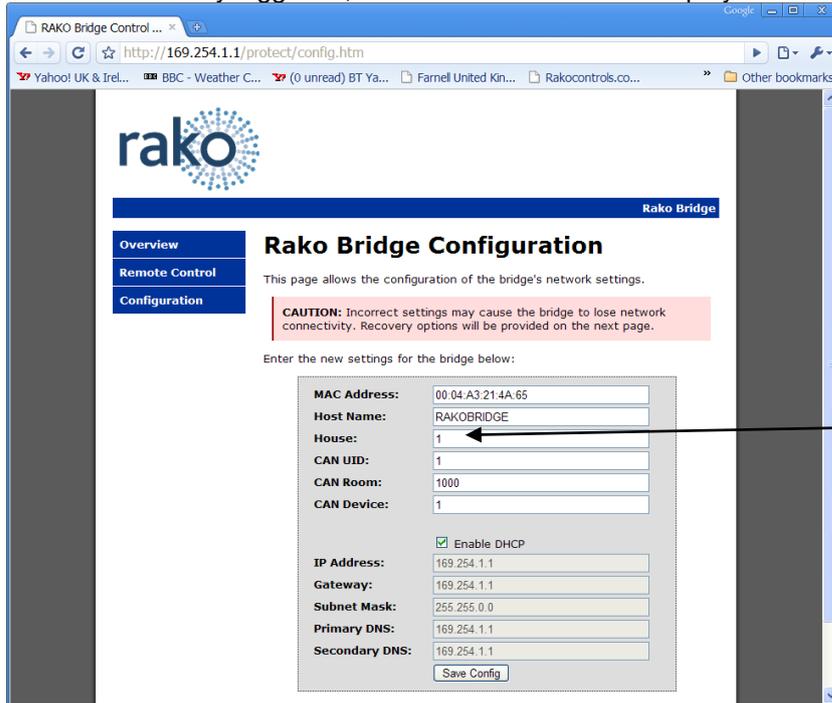
Click on the **Configuration** Button.

Login to Bridge using password.

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

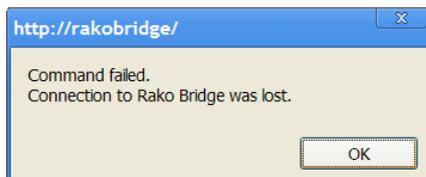


When successfully logged in, the screen below will be displayed:



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

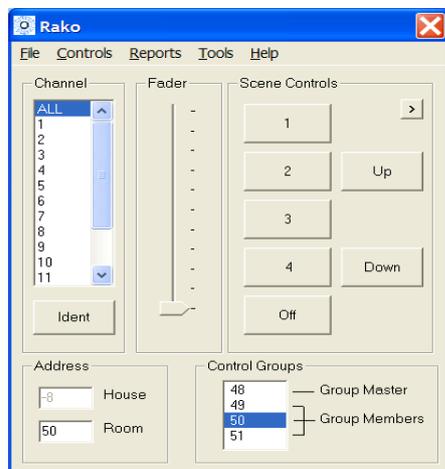
Step 3: Upload Room and Scene information to the Bridge.

The Bridge needs to be told about how the RAKO system has been configured. This is done by using the RASOFT program (version 2.2.7 or later) combined with the RASOFT Configuration file that was used to set the system up.

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

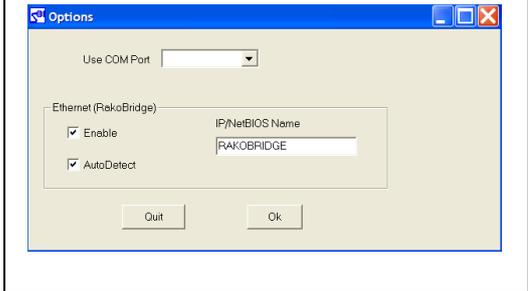
Tip: Do not have any Rako USB or RS232 devices connected to your computer as these will interfere with the Bridge setup process

Tip: It can take a minute or two from connecting the bridge to the router & switching it on, before RASOFT is able to talk to it .

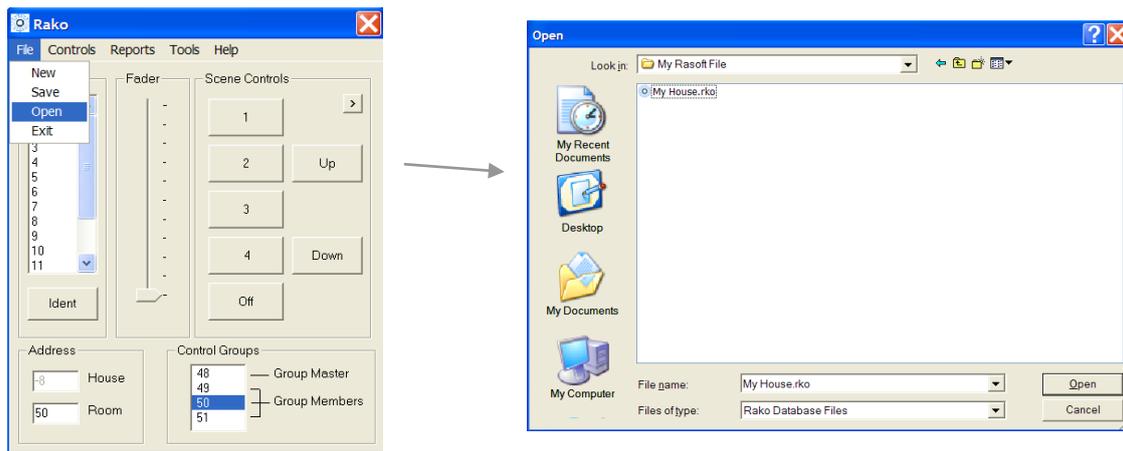


Rasoft start up screen

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

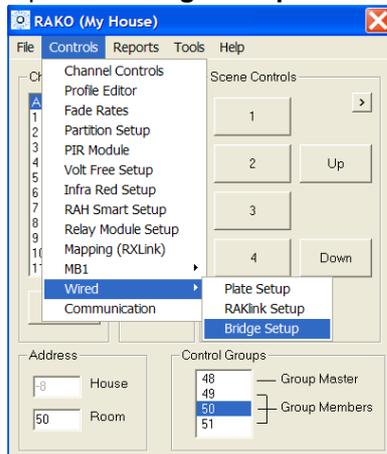


Open the configuration file for the house's RAKO system:



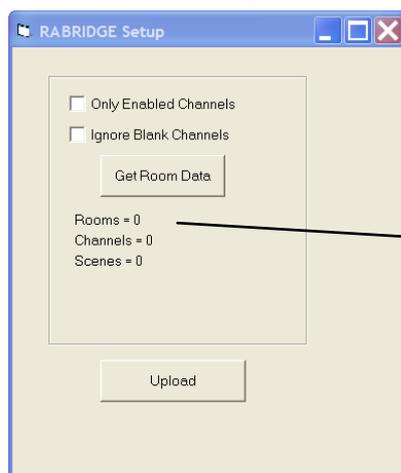
If the RASOFT configuration is not available, then refer to appendix 1 to create one.

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



Click on **Get Room Data...**

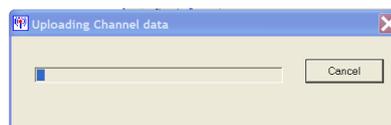
and a number of Rooms, channels etc appear.



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.



Step 4: Use RAKO Smart Phone application to control the lighting system.

Make sure the Phone is able to connect to the router.

Download the RAKO application from the app store.

Run the application. The phone will find the RA-Bridge after a few moments.

The Rako application will display the room and scene information that has been uploaded to the bridge.



Appendix 1: Configuring a Rasoft file to work with iphone

Discover House and Room Numbers

It is first necessary to find out the House and Room addresses of each control panel. To do this each one needs to be removed from the wall and it's address switches examined. The address numbering is binary coded, this can be translated into decimal using Rasoft . See appendix 2 for more detail.

Make notes of the Room Number and Location of each Control Panel.

A list like this will contain the information that you need:

Location	Room Number
Dining room	6
Kitchen	8
Outside Lights	13
Master Bedroom	11
Bedroom 2	12
Etc etc

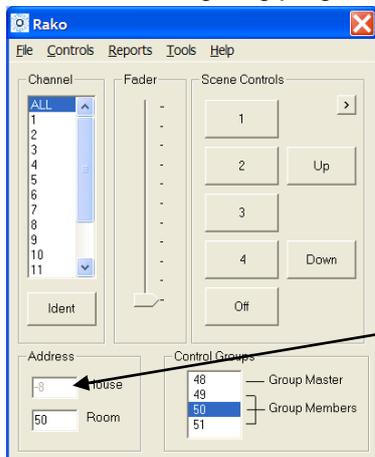
Some rooms may contain multiple control plates with same settings as each other. This is normal. You only need to record one of them.

Enter Room Numbers into Rasoft

When there is a complete list of Room Controllers the information can be entered into a RASOFT File.

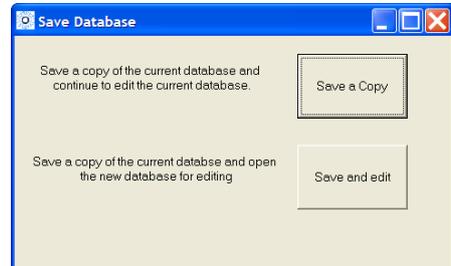
If the House address has not yet been programmed into the APR Bridge, then do so now. Follow steps 1 & 2 on Pages 2 & 3 of this document.

Run the Rako Lighting program on a PC or Laptop.

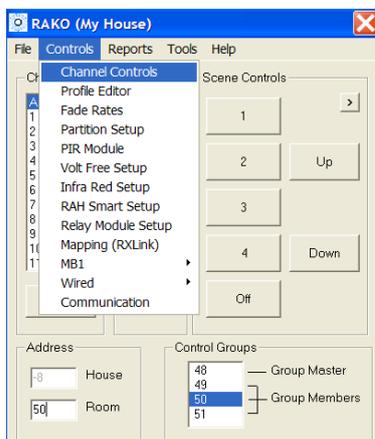


Rasoft start up screen

House number is greyed out when using Rasoft with APR Bridge

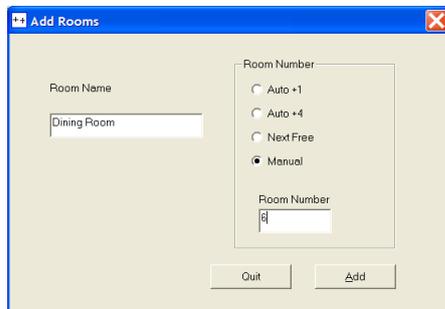
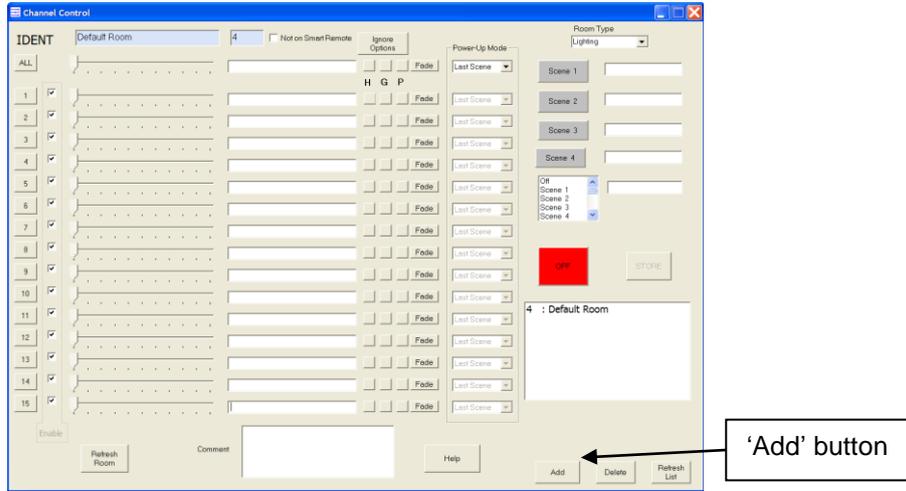


From the start up screen select 'Save' from the File menu then choose 'Save and edit'. This creates a new project file, leaving the original blank for use later if further projects are planned. Any changes made to the project file are saved live and do not need to be saved at the end of programming.



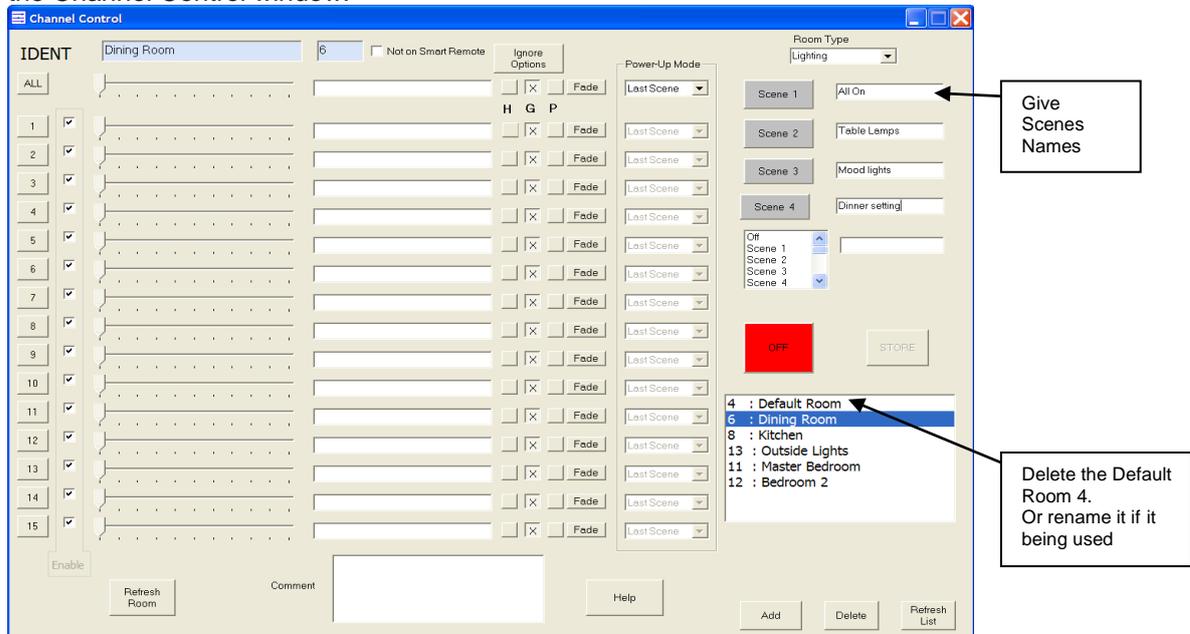
Select 'Channel Controls' to begin entering the room numbers.

Use the 'Add' button in the bottom right hand corner of the Channel Control window to create rooms. Number them according to the address switches of the panels within the rooms.



Type in the Room Names and Room Numbers from the list made earlier.

When the rooms have been added they will show as a list in the bottom right hand corner of the Channel Control window.



For each room the scenes 1 to 4 can be given a descriptive name.

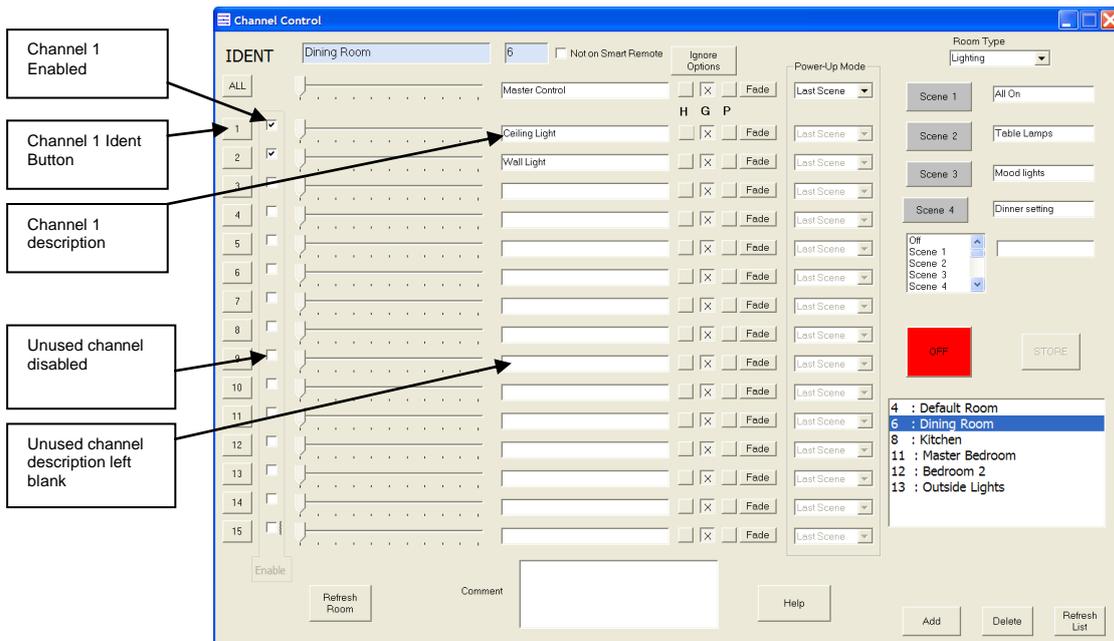
Enter Channel Names into Rasoft

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 identified.

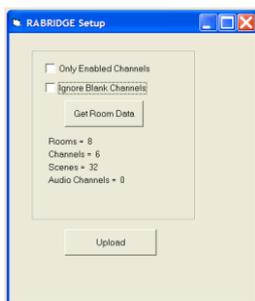
At the Left hand side of the Channel control window, press the Channel 1 Ident Button and observe which lights flash on & off in the room. Type a description of these lights in the Channel 1 description. Tick the Enable box for that channel.

Repeat for each channel in all rooms until all lights have been identified.

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-ticked.



Select which rooms and circuits should appear in the iPhone application



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 omitted from the iPhone. To do this, simply tick the "Not on Smart Remote" box at the top of the Channel control screen.

Appendix 2: How to discover House and room numbers by looking at wall plates

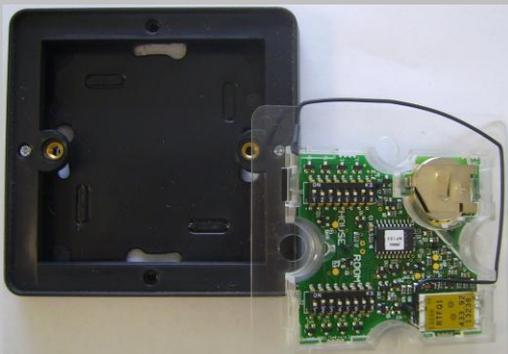
Look at Control Panel (Wall Plate) to discover House and Room settings



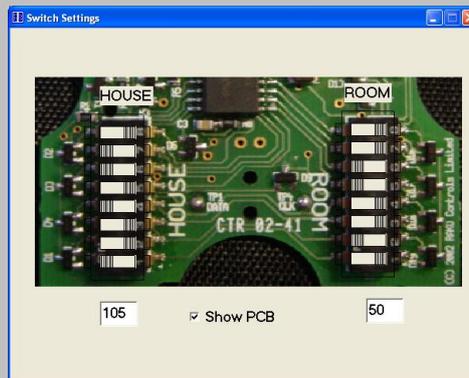
Unscrew and remove Front from Wall plate

Note: Other versions and models of room controllers also exist. Construction of these is different, but the way in which House and Room setting are done is the same.

Prise rear cover from wall plate by pulling at position marked above



Inspect 'House' and 'Room' settings



Rasoft can be used to decode the settings into House number and Room numbers.

In Rasoft go to 'Help', then 'Switch Settings'

Move the On-Screen switches to match those of the wall plate to see the House and Room numbers. In the example above, the House address is 105 and the Room number is 50

(Normally, all room controllers will have same House Address, and differing Room Addresses – The ARP Bridge requires all controllers to have same House Address)

Technical Support

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