

Application Note

Using your Android smartphone to control UPB and other automation technologies through V57 RUCs and higher

Introduction

The Web Mountain RUC (Remote Universal Controller) can be used to control your lights and appliances using UPB, or Universal Powerline Bus, or other home automation technologies. The RUC can easily be setup to control these devices based on time of day, via triggered events, or from a webpage on your personal computer. Then the RUC makes it extremely simple to control your automation devices from your Android smartphone.

This application note will explain how to use an Android smartphone along with the RUC to control your lights and appliances.

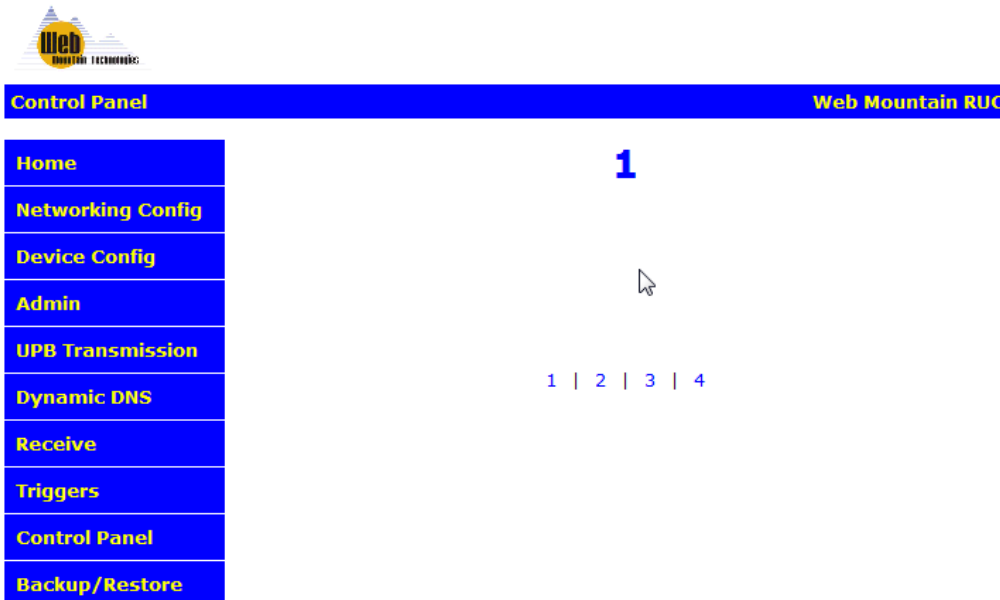
It is assumed that the reader has some familiarity with the desired home automation technology. If not, it is highly recommended that the reader perform the necessary research to gain this familiarity.

Procedure

The first step in setting up the RUC and the PNA is to get the RUC setup to control devices.

NOTE: It is highly recommended that if you are going to use the RUC with your Android, that you give the RUC a fixed IP address. This makes the address known and the RUC easily accessible.

While the RUC has many available user options, we are only concerned with the Control Panel functionality for this exercise. The Control Panel is a webpage on the RUC that can be accessed from any browser. This webpage allows the user to have a simple touchpanel like screen to easily control automation functions. When you click on the page for the first time, you will see the following:



To add buttons to this screen, you will use the Trigger screen, select Button as the Receive Command type, then use the Send Command box to determine what action will occur when the button is pressed.

Let's add a button that will Close the drapes associated with the ESI RQ motor that has an address of WBT.

On the Trigger page, select Button as the Receive command type. Select the page number (in this case, page 1). Select the button # (in this case, let's use button #1). Then, enter the text you want displayed on the button (in this case "Close Blinds").

Buttons are in two columns of 5 with button 1 being upper left, button 5 being lower left, button 6 being upper right, and button 10 being lower right. Buttons will only display once they are added using the Triggers page.

Now, select ESI in the Send command box. Select the port the ESI controller is connected to (normally this will be COM2). Then, in the ESI command box, enter WBTc (don't need the start or end characters). Before the Add Trigger button is clicked, the screen will look like this:

The screenshot shows a software interface for configuring triggers. It is divided into two main sections: 'Receive Command' and 'Send Command'.
In the 'Receive Command' section:
- 'Command Type' is set to '(B) Button'.
- 'Page #' is set to '1'.
- 'Button #' is set to '1'.
- 'Display Text' is 'Close Blinds'.
- Radio buttons for 'Day', 'Night', and 'Both' are present, with 'Both' selected.
In the 'Send Command' section:
- 'Command Type' is set to '(E) ESI'.
- 'Port' is set to '(2) COM2'.
- 'ESI Command' is 'WBTc'.
- 'Delay' is set to H: 0, M: 0, S: 0.
At the bottom of the form is an 'Add Trigger' button.

Click on the Add Trigger button and the trigger now shows up in the trigger listing like this:

14	Button	Page: 1, Button: 1, Close Blinds Both	WBTc E 2	Delete
				Edt
				Run

Now, click on the Control Panel page from the left menu, and the page looks like this:



- Home
- Networking Config
- Device Config
- Admin
- UPB Transmission
- Dynamic DNS
- Receive
- Triggers
- Control Panel
- Backup/Restore

1

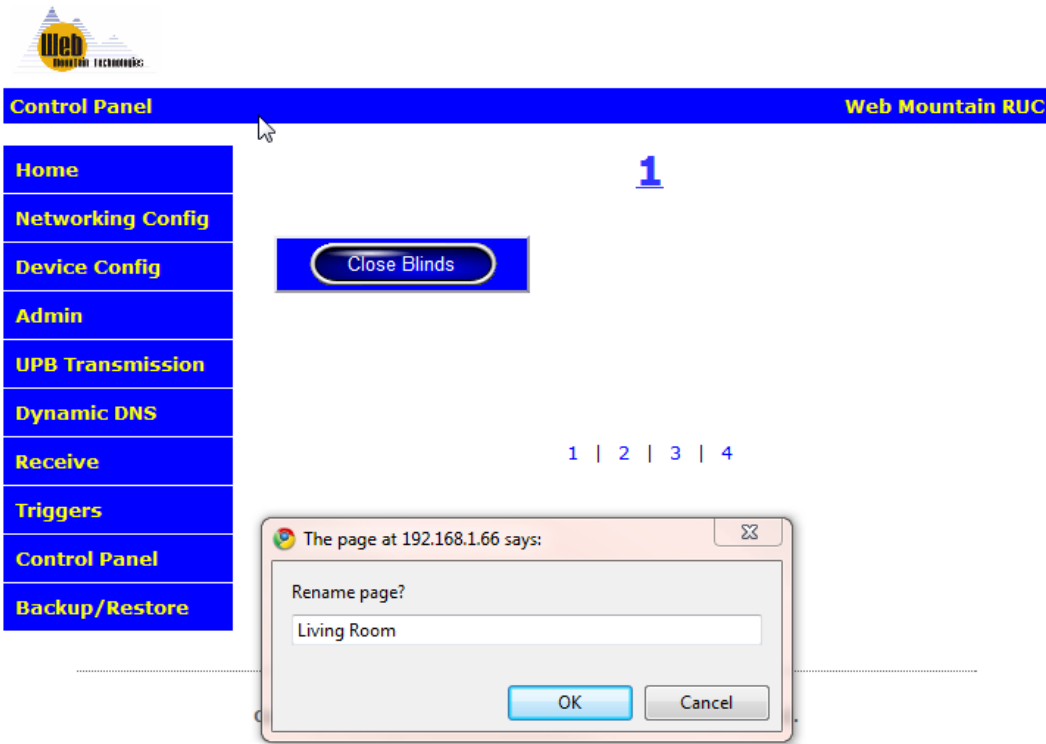


1 | 2 | 3 | 4

Now, if the button is clicked from a browser accessing this page, the RUC will send out the ESI command WBTc on COM2, causing the blinds to close.

Up to 10 buttons can be added on each of the four pages.

Notice that the page is labeled “1”. This can be changed. Left click on the “1” on this screen, and a popup window will appear. In the text box in this popup, you can enter in the desired text for this page, for example, Kitchen, or Living Room, or Exterior. Here’s a screenshot of the text box with the selected label of Living Room.



After clicking OK, here is the revised Control Panel page (the browser page will need to be refreshed in order to see the changed label):



Notice that the label also changed on the bottom of the page while the other pages are still shown with their page numbers.

Just repeat the procedure above and add buttons wherever desired. To navigate among pages, just click on the labels on the bottom. For example, to go to page 3, click on the “3”.

Another example. Let’s add a button that turns on a floor lamp using UPB. The trigger would look like this:

Receive Command	
Command Type: (B) Button	Page #: Den Button #: 4 Display Text: Floor Lamp On <input type="radio"/> Day <input type="radio"/> Night <input checked="" type="radio"/> Both
Send Command	
Command Type: (L) UPB Link (1) COM1	UPB Command -OR- NID: 18 LID: 4 CMD: (A) Activate Delay H 0 M 0 S 0

This would add button # 4 to a page called “Den” that would send a UPB command NID = 18, Link 4 Activate when the button is pressed.

Continue to setup as many of the 40 buttons (4 pages times 10 buttons per page) as you wish.

Setting up the Android

By using the Control Panel, and the WMT freely available Android Home Automation Controller app, there is a way to make the RUC work with your Android smartphone. The smartphone will act as simple user interface, and when buttons are pressed on the screen, a signal is sent to the RUC which tells the RUC that a button has been pressed and to take a specific action, such as turning on a light.

Ok, now that you have the RUC’s Control Panel configured, we can setup the Android device. Here is the procedure for setting up the app on your Android.

The android is set up completely on the device. Nothing is done via a computer.

- 1) Go to this link from your smartphone (or search for “home automation controller” in the android market) - <http://market.android.com/details?id=com.webmtn.android.app>.

Screenshot of the website shown below:

Android Market

ANDROID APPS | BOOKS

ANDROID MARKET > LIFESTYLE > HOME AUTOMATION CONTROLLER

Home Automation Controller

Web Mountain Technologies, LLC

★★★★★ (0 ratings)

INSTALL

RELATED

Memo Widget (Note Widget)
SUNJAE, LEE / LIFESTYLE
★★★★★ (1,846)
Free

Zillow Real Estate
ZILLOW.COM / LIFESTYLE

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DESCRIPTION

Use this app in conjunction with the Web Mountain Technologies RUC-01 to control home automation devices using UPB, Zwave, X10, Insteon, ESI drapery Controllers, and almost any other home automation technology with a serial interface. This app allows the user to control lights and appliances with a simple touch of a button from their Android smartphone. This app also allows the user to control Ethernet IP based devices that can be managed using POST commands, such as thermostats.

In order to use this app, you will need the RUC-01 (version 57 or higher), the appropriate serial interface unit for the technology you will be controlling, plus appropriate control devices, such as wall dimmer switches, lamp modules, appliance modules, and drapery motor controls.

For more details, see www.webmtn.com or contact us at info@webmtn.com

Visit Developer's Website >

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ABOUT THIS APP

RATING: ★★★★★

UPDATED: April 23, 2011

CURRENT VERSION: 1.0.0.1

REQUIRES ANDROID: 2.2 and up

CATEGORY: Lifestyle

SIZE: 61k

PRICE: Free

2) Click the install button in the upper right.

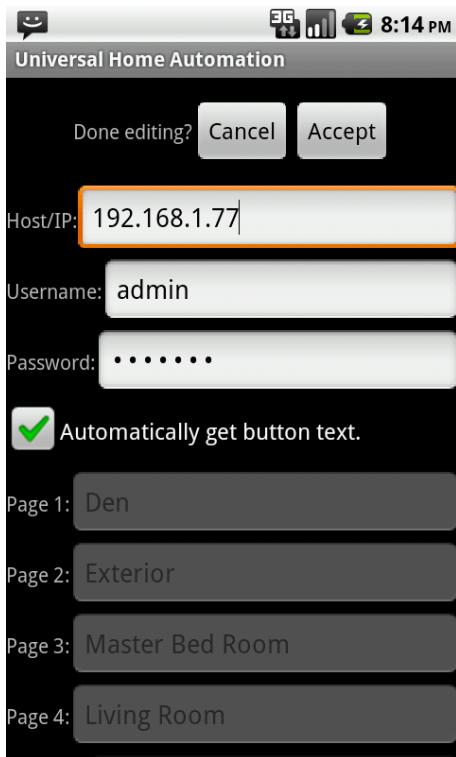
3) The phone will then tell you that this app requires permissions. It only shows "Network Communication: Full Internet Access". This is because we communicate to the RUC via a network. Accept these permissions.

4) The app will begin installing. When it is done, open the app (Universal Home Automation).

5) The first time the app runs, it will show a disclaimer. Read, then click OK.

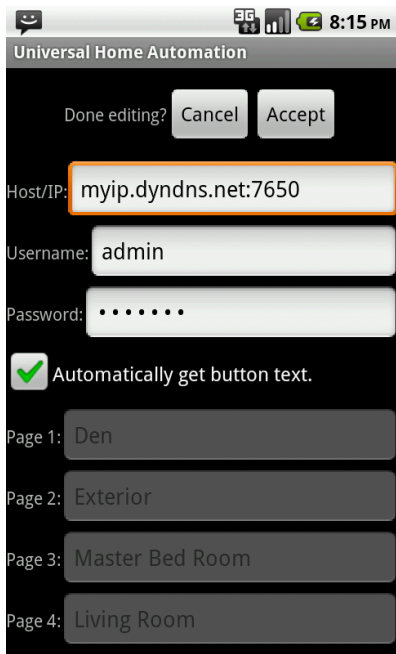
6) Now, the app will show the settings page. Enter your RUC's IP address or the hostname (and port number if you're not using port 80 for the webserver), username, and password. In most cases, you can leave the username and password. These are the default values for the RUC. If you have changed those, then you will need to change this configuration to match your new values. NOTE: the IP address is recommended if you're trying to access the unit from your local LAN and a Dynamic DNS address is recommended if you're accessing the RUC remotely over the Internet).

Also, if you check the box "Automatically get button text" (actually checked by default), the app will use the button labels you have setup on the RUC. If you uncheck this box, you will have the ability to rename the buttons and pages. Just recognize that even if you rename the buttons, the buttons, when pressed, will do the same function as how they are programmed on the RUC. The following graphic shows you the settings page:



Click Accept.

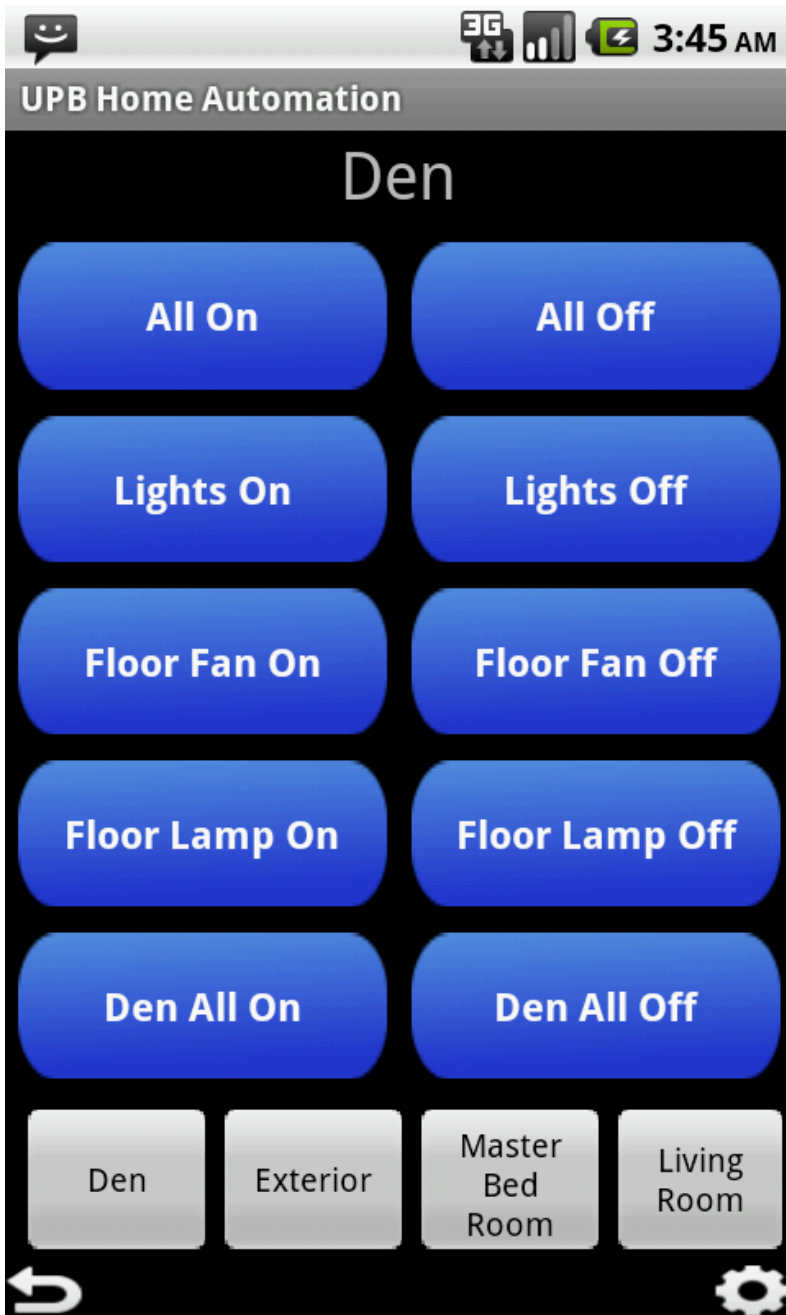
Or, if you want to remotely access the RUC, and you've changed the Remote Webserver port, use your WAN IP address, or take advantage of a Dynamic DNS account as shown below:

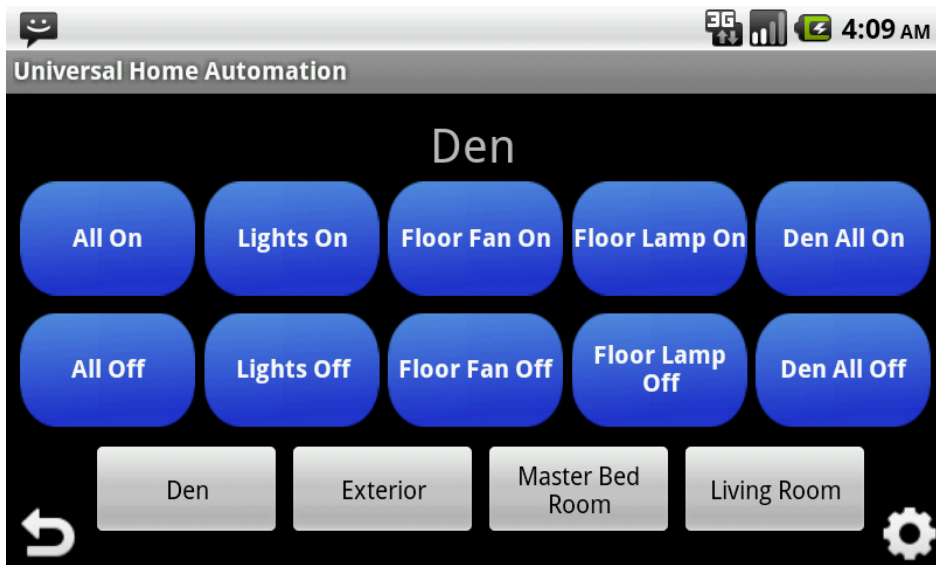


7) You can enter the settings page again at any time by pressing the menu button on your android app and choosing settings.

8) Any time (after the first time) you open the app it will return to the last control panel page you were on (without showing the disclaimer or the settings page).

Here are screenshots of what your app's screen will look like in the vertical and horizontal orientations:





To control your lights just press the desired button.

Have fun!

4/25/2011