RadioRA 2

Lutron Home Control+ App for the Apple® iPad™, iPhone™ and iPod® touch

revision F

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Overview

The iPad, iPhone and iPod touch App is now available for download via the Apple App Store under the name "Lutron Home Control+" for $19.99.

The Lutron Home Control+ application allows you to control your RadioRA 2 system over a Wi-Fi® network with the convenience of the iPhone or iPod Touch. It also gives a homeowner control of their home via the Internet over 3G or from a Wi-Fi hotspot.

A demo mode is available to preview the App prior to connecting to a running system.

Below are some of the capabilities of the App.

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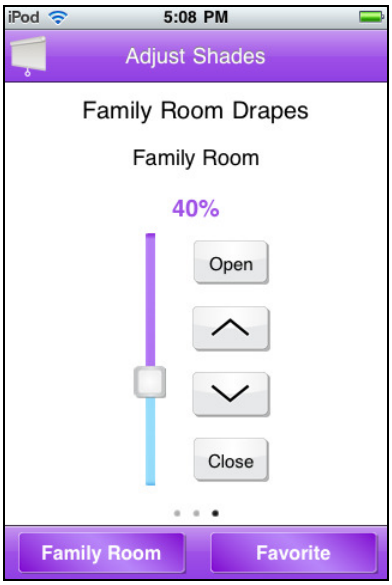
<td> 
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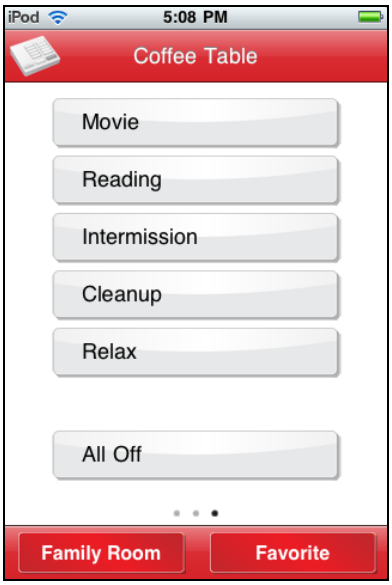
<td> 
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<tr>
<td>Adjust lights, adjust shades, or select keypad buttons.</td>
<td>Individual control of lights and shades (with 2-way lighting level feedback)</td>
<td>Activate keypad buttons for scene, individual and path of light control (with 2-way LED feedback)</td>
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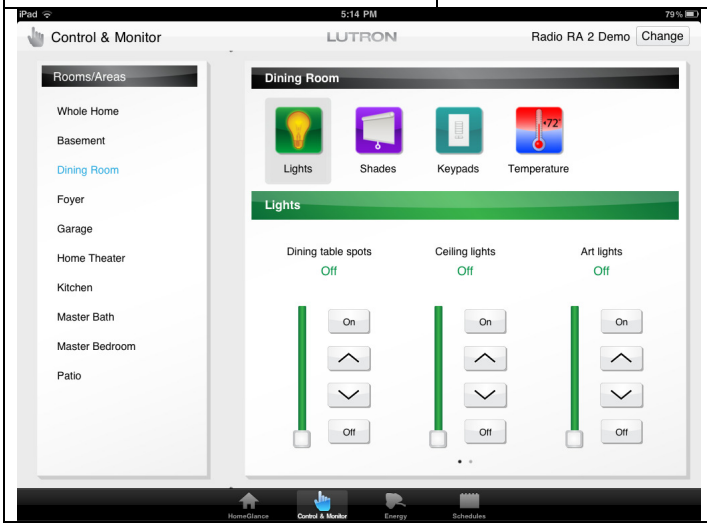
<td colspan="2"> 
</td>
<td>Control Lights, Shades, Keypads, and Temperature all from the same screen using the increased screen real estate offered by the iPad.</td>
</tr>
</table>

What hardware and software do I need?

1. An iPad, iPhone or iPod touch with iOS 3.1.3 or higher. (the iOS version can be verified by opening the "Settings" App and selecting "General", then selecting "About" and looking at the "Version" row.)

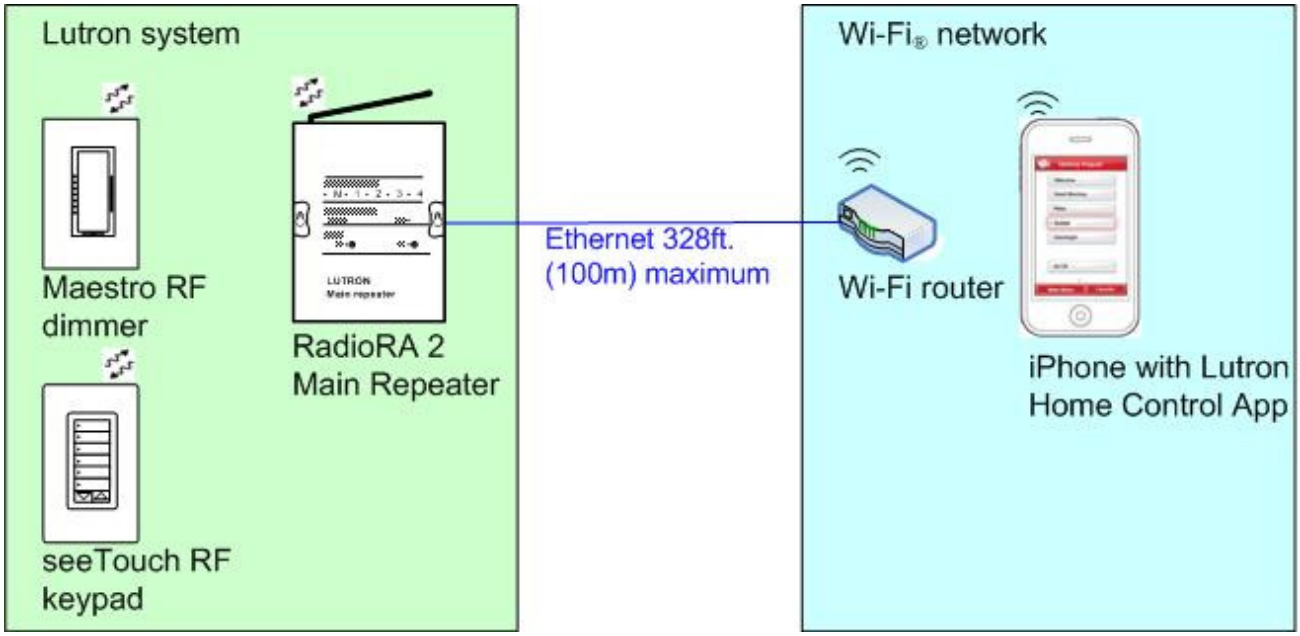
2. A Wi-Fi Ethernet router (802.11)

3. RadioRA® 2 Essentials or Inclusive revision 4.0.0 or higher transferred to your system. The RadioRA 2 software is available to qualified installers only. (Walk-around programmed systems are not compatible with the App).

4. If 3G connectivity is desired, a VPN router will need to be set up for the Lutron system. Please refer to the VPN app note and page 27 of this document for more details.

How does the iPad/iPhone/iPod Touch connect to my Lutron system?

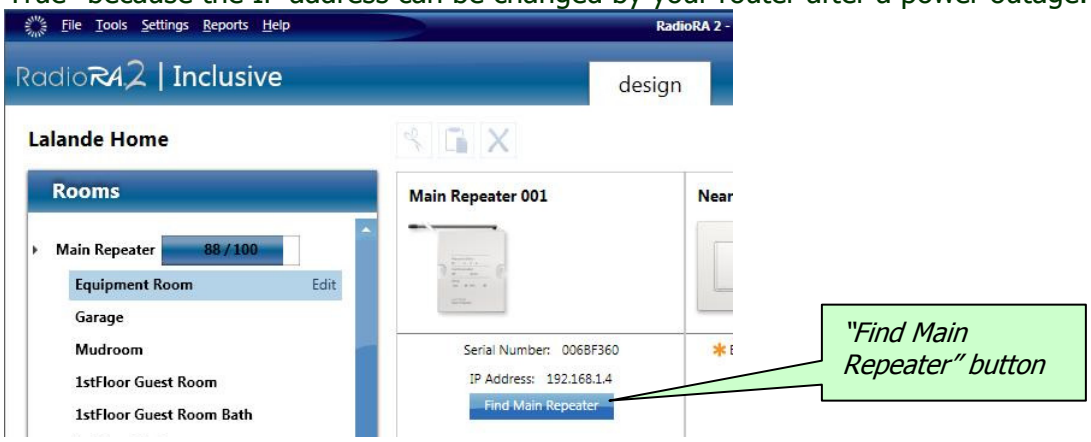
The diagram below illustrates the iPad, iPhone, and iPod touch communicating to a Lutron system via a home Wi-Fi network. A typical connection within the home includes the iPhone establishing a Wi-Fi connection to a Wi-Fi router, and the RadioRA 2 Main Repeater making a wired Ethernet connection to the same router. The Main Repeater should not be plugged into your Internet port on your router.

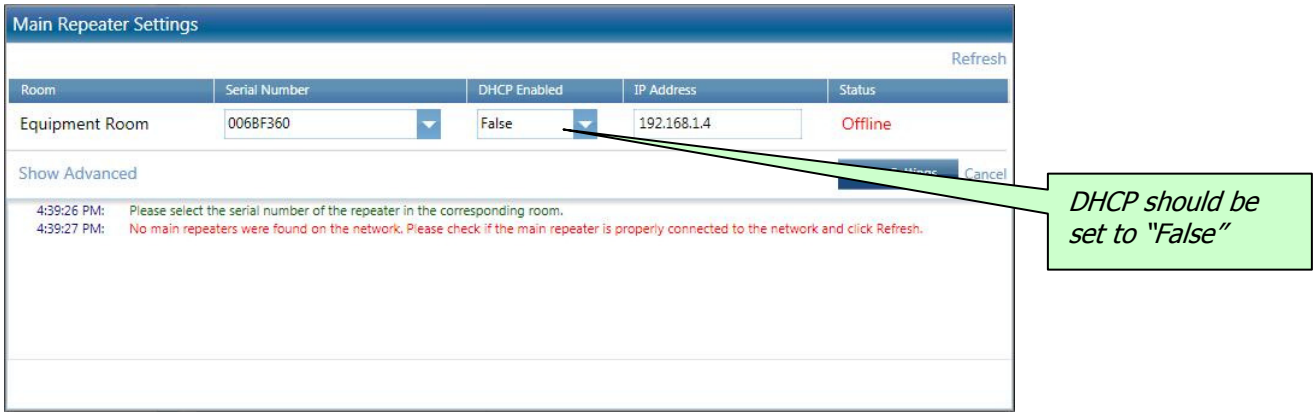


How to configure the Lutron Home Control+ App?

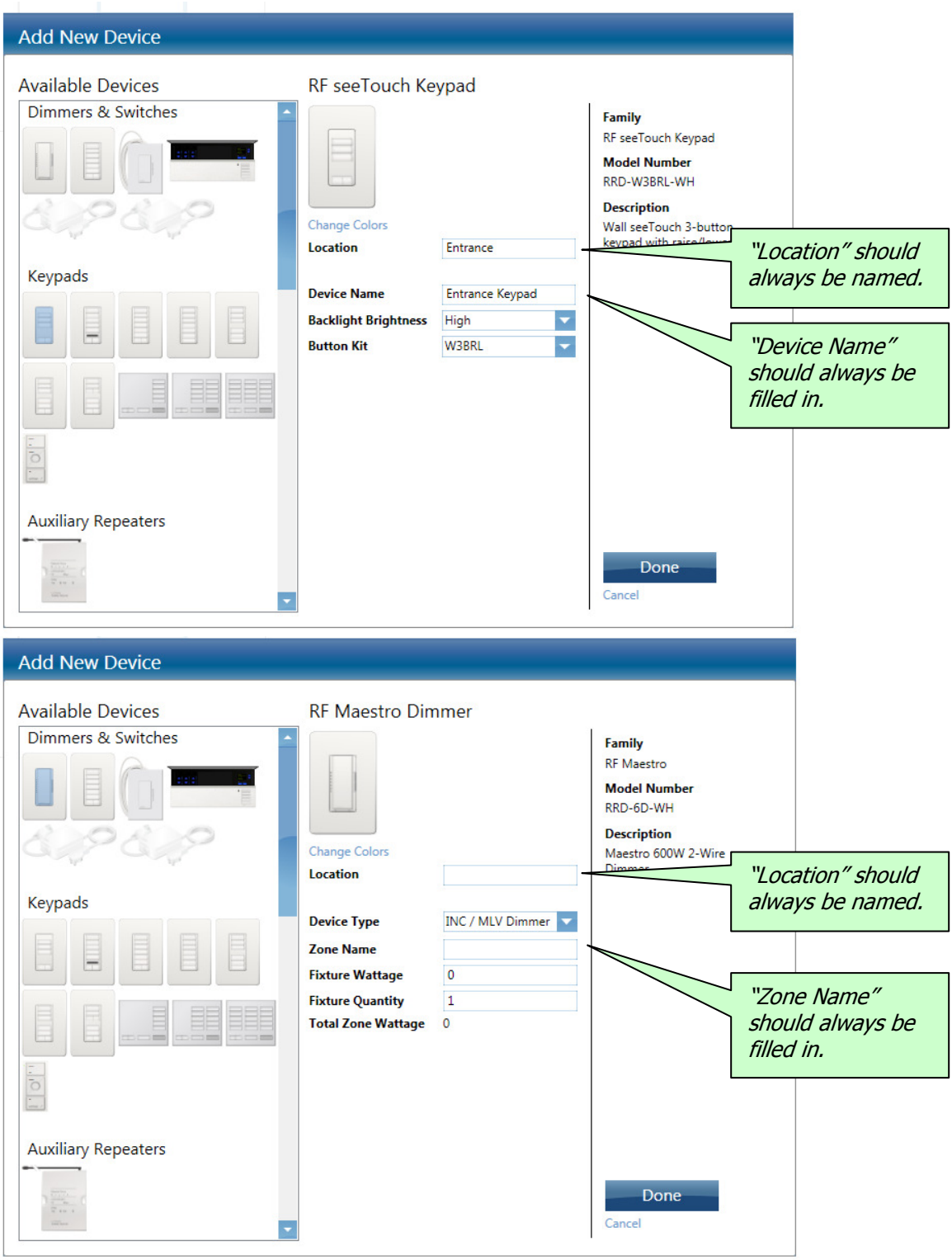
How to setup the PC software

1. Using the latest version of the PC software, set your IP address for the Main Repeater as static using the "Find Main Repeater" button. DHCP should be set to "False". It should not be set to "True" because the IP address can be changed by your router after a power outage.

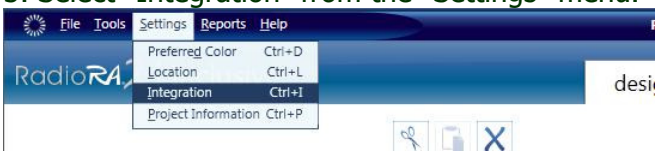




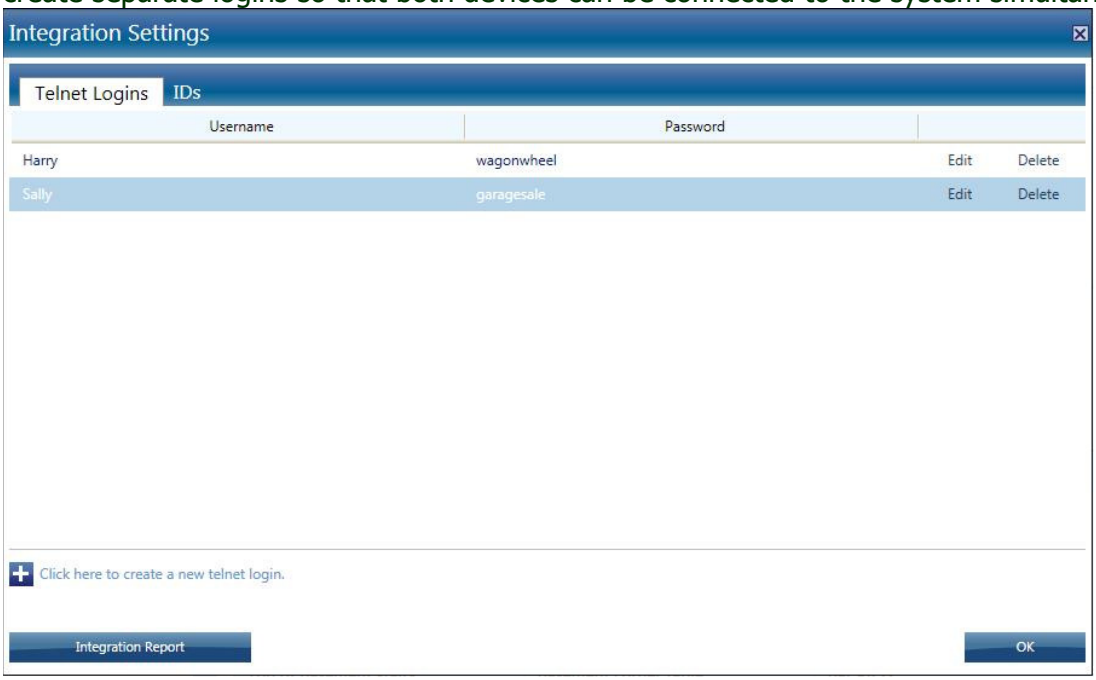
2. Always name the "Device Name" for keypads in a room. The "Device Name" is the name of the keypad that will show on the iPad, iPhone or iPod touch mobile digital device. You should also name the "Location". For dimmers, switches, and shades, make sure to set the "Zone Name".



3. Select “Integration” from the "Settings" menu. The “Integration Settings” page will appear.

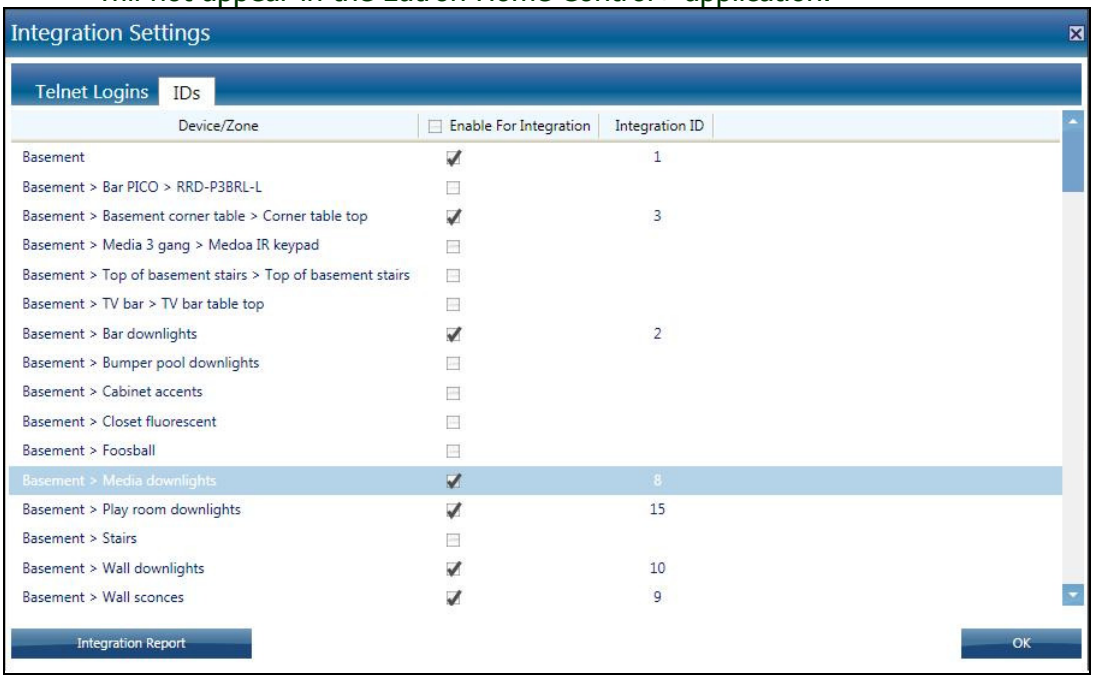


4. On the "Integration Settings" page, personalize the telnet usernames and passwords. You can have up to 10 logins. Do not use the default or built-in logings and passwords. Some features do not work for these logins. If you have two or more iPad, iPhone or iPod touch devices, you must create separate logins so that both devices can be connected to the system simultaneously.



5. On the integration settings page, the "IDs" tab allows you to enable or disable a device for integration - this would limit what keypads will appear in the iPhone / iPad app.

a. If you don't want to give the homeowner access to every keypad in the space, uncheck the "Enable for Integration" checkbox for the physical keypads you do not want to give access to.
b. You can also add additional keypads for the iPad/iPhone/iPod touch only. Add additional keypads on the Design screen, program, and then do not activate them during Activation of your system. For example, you could create a room called "iPhone keypads" and place all the keypads in that room. The additional devices will count towards your total device count.
c. Only Rooms and Devices that have "Enable for Integration" checked will appear in the Lutron Home Control+ application. If a Room does not have any devices checked, the room will not appear in the Lutron Home Control+ application.



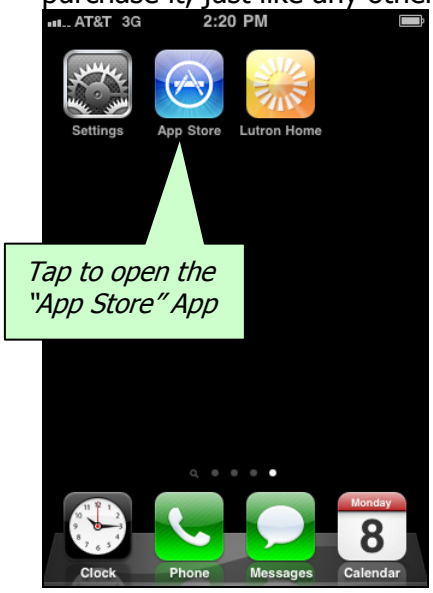
6. Activate your devices. Keypads not activated, but with integration IDs enabled, will be accessible by the iPad/iPhone/iPod touch.

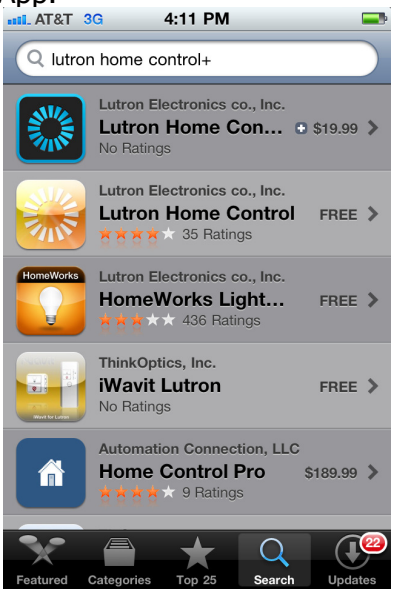
7. Transfer to your system.

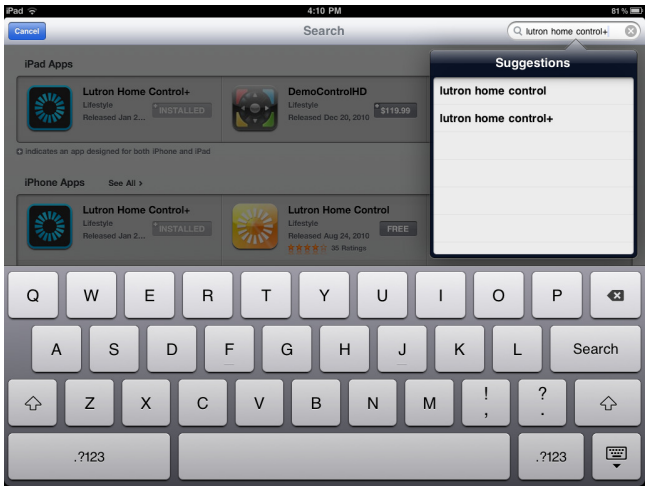
Download the Lutron Home Control+ App

The app can be downloaded from the App Store on iTunes or App Store App. Prior to installation of the App, make sure that your iPhone or iPod Touch is iOS 3.1.3 or higher.

To install the Lutron Home Control+ App, search for "Lutron Home Control" in the App Store and purchase it, just like any other App.







To install the Lutron Home Control+ App onto your iPhone or iPod touch, search for "Lutron Home Control" in iTunes in the App Store, purchase, and sync.

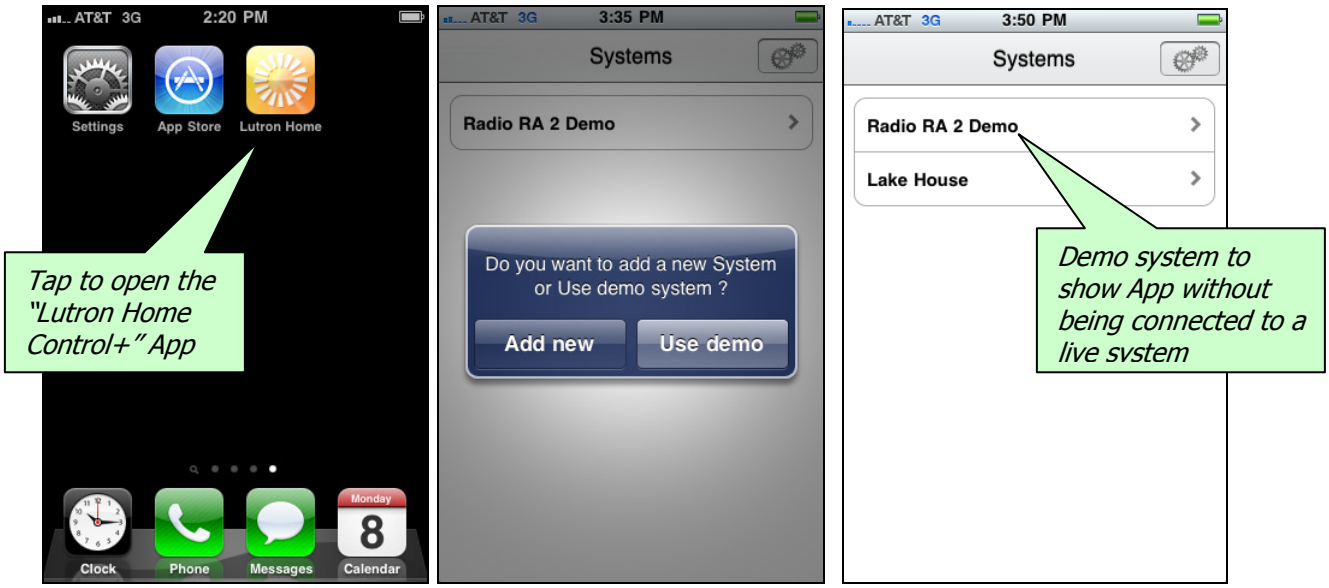
Search for "Lutron Home Control" in iTunes in the App Store

How to use the iPhone/iPod Touch App

Configure the demo system

iPhone/iPod Touch:

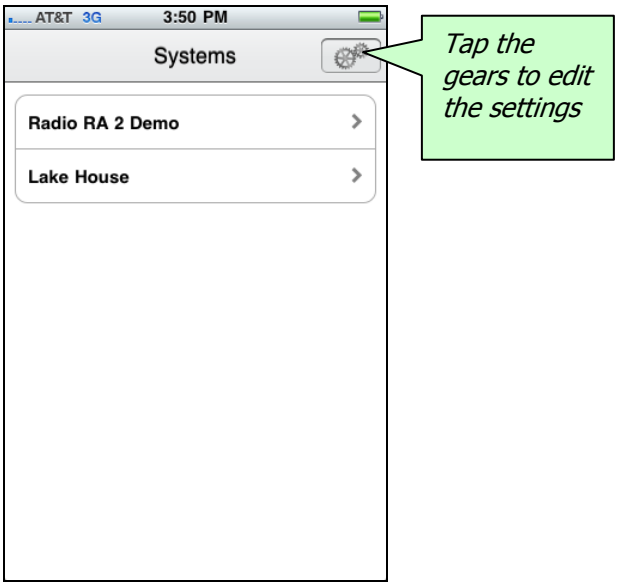
After downloading the Lutron Home Control+ App from the Apple iTunes App Store, a "Lutron Home+" icon will appear on your iPad, iPhone or iPod touch as shown below. The first time you run the application, you will be asked to "add a new System or Use demo system". The demo system is an interactive tool used to illustrate what the App can do without being connected to a live system. It can also be enabled or disabled in the Out of App advanced settings.

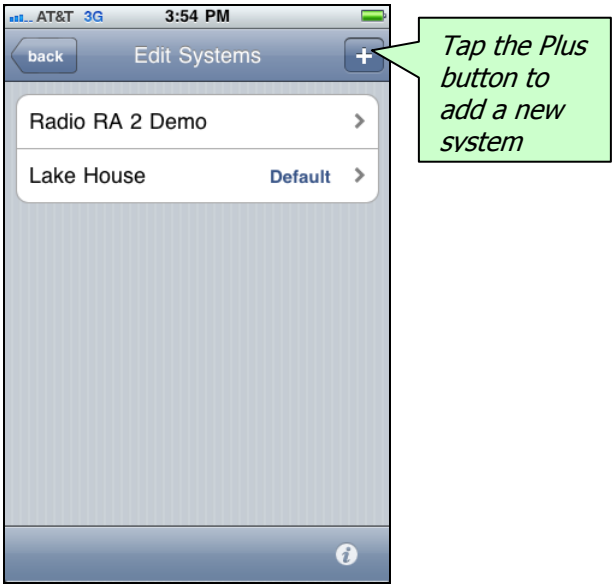


Edit Systems

iPhone/iPod Touch:

On the "Systems" screen, you can navigate to the "Edit Systems" screen by tapping the gears in the top right corner. You will see a list of the systems in your iPhone/iPod. You can add multiple systems to your iPhone/iPod touch in addition to the demo system. Tap the Plus button in the top right corner to add a new system.

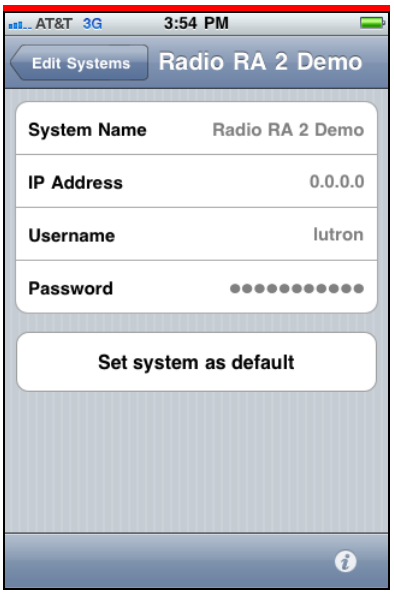




After tapping the Plus button, the App will try to discover any systems connected via your network[1] to this device. The IP address will need to be set as the static IP address of the RadioRA 2 Main Repeater. This IP address must match the settings in "Find Main Repeater" button in the RadioRA 2 PC software. For system access from outside the home, over the Internet, see the section later in this document called "Advanced: Setup your home for access when away".

The next items to configure on this screen are the System Name, Username, and Password that the application will use to make a connection to the system. These fields must match (with exact capitalization) one of the Telnet logins defined in the software. Different telnet logins should be used for each Apple device. You can also set this system as the default system by tapping the button. Tapping the info icon in the bottom right corner while on any Edit Systems screen will show the version number of the app. The default system is only applicable when multiple systems are on your iPhone or iPod. Save your settings by tapping the "Edit Systems" button to return to the previous screen.

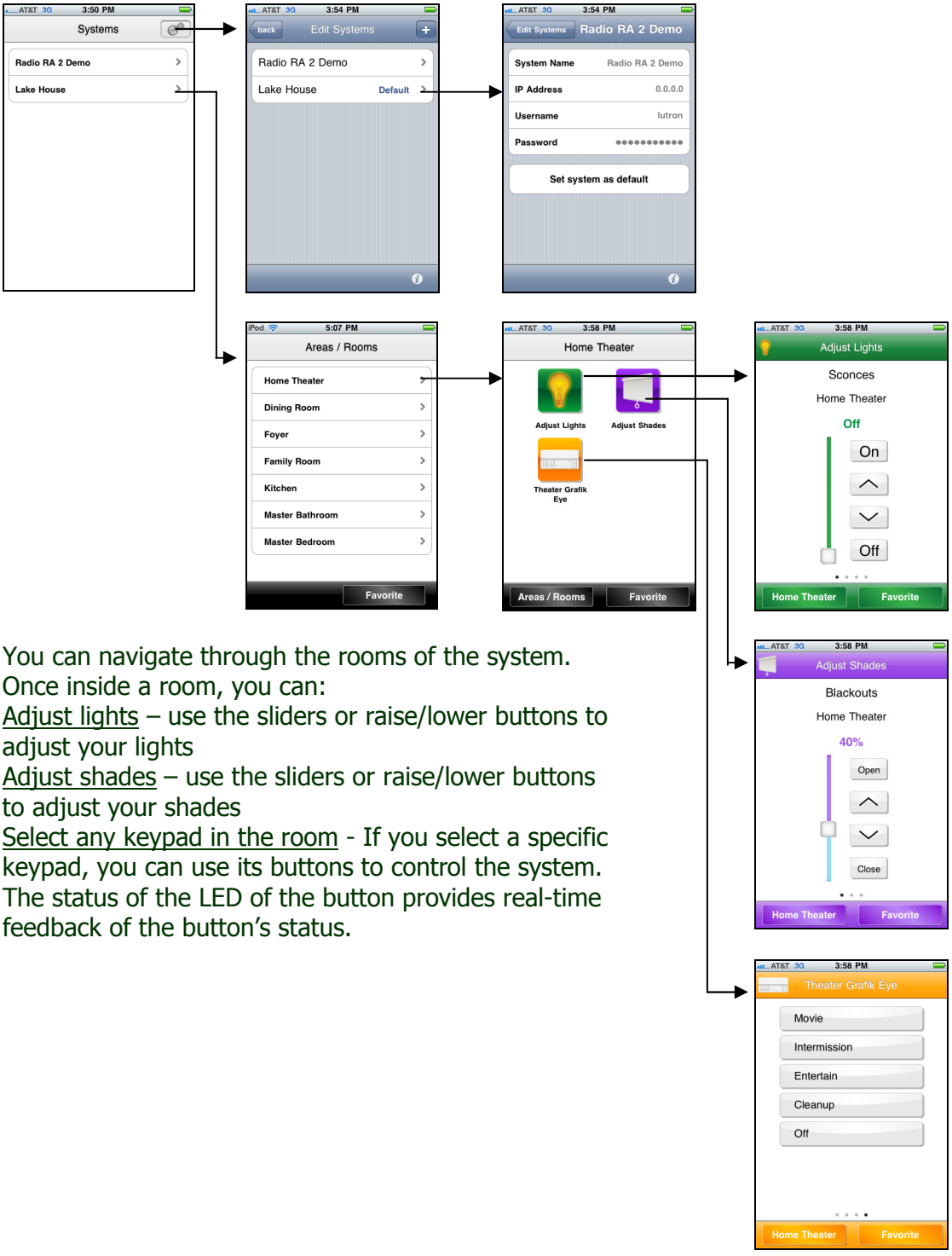
[1] In order to make the Wi-Fi connection with the iPhone, you will need to know the SSID and the type of security settings being used on the wireless network. The options available on the iPhone are None, WEP encryption and WPA encryption. If using one of the encryption options, you will need to know the encryption key. Consult the individual who set up the wireless router for these settings.



At this point, the application will try to establish a connection (using TELNET) with the system. If a connection is established, the application will then Download all the information it needs from the system (using HTTP). If you receive an error message, the iPhone/iPod failed to connect to the system. Press retry, and if the iPhone/iPod still fails to connect, double-check the settings of both the iPhone/iPod and the system. Also, make sure that the iPhone or iPod touch is successfully connected to the system's network and your network settings are consistent including your subnet masks.

Navigating the app

After a successful connection is established, and the iPhone or iPod touch extracts the information it needs from the Lutron system, you are ready to begin using the iPhone/iPod for control.



You can navigate through the rooms of the system. Once inside a room, you can:

Adjust lights – use the sliders or raise/lower buttons to adjust your lights

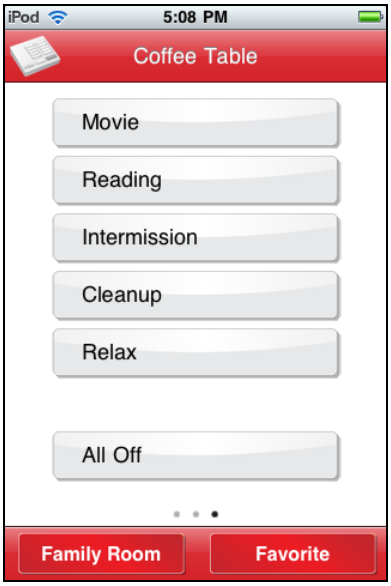
Adjust shades – use the sliders or raise/lower buttons to adjust your shades

Select any keypad in the room - If you select a specific keypad, you can use its buttons to control the system. The status of the LED of the button provides real-time feedback of the button's status.

Setup your Favorite keypad, light, or shade for iPhone/iPod Touch

You can select which keypad, light, or shade will be the Favorite. Once you are on any screen, tap the Favorite button, at the bottom right of the screen to set the current keypad as the Favorite. After you have set your Favorite keypad, subsequently tapping the favorite button will take you to the screen set as the Favorite.

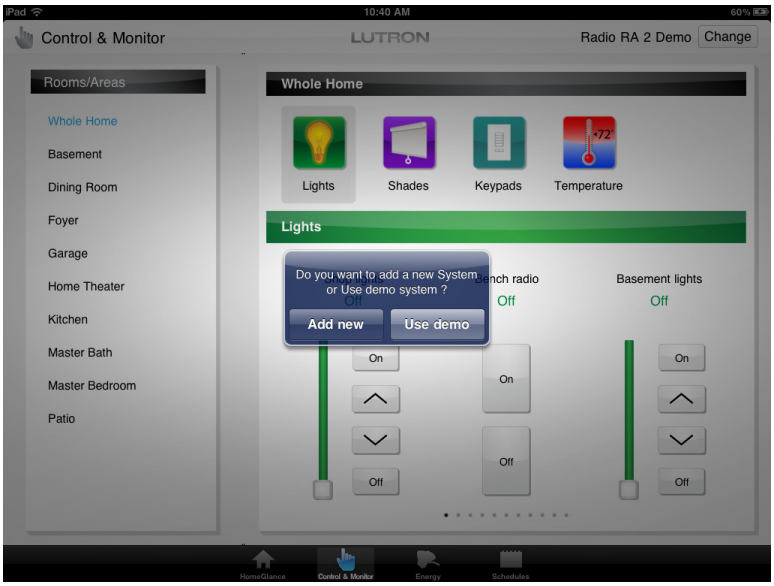
Pressing and holding the Favorite button will overwrite the previous Favorite.

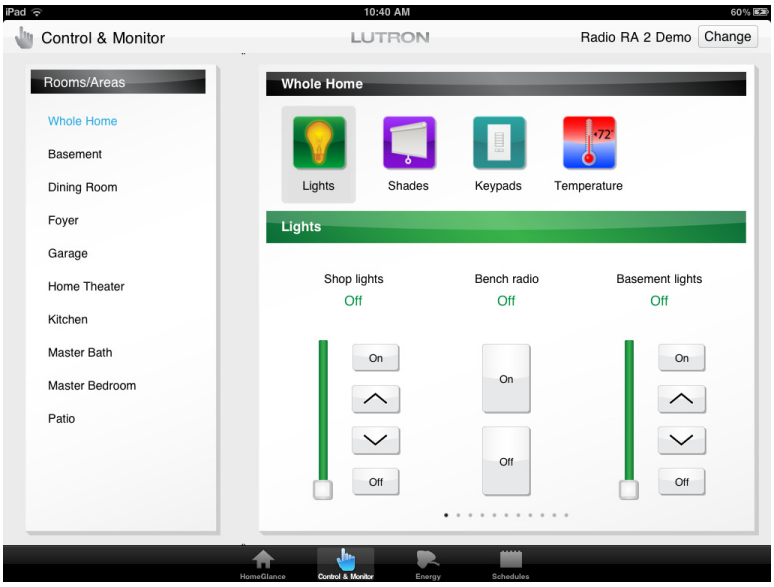


How to Use the iPad App

Configure the Demo System

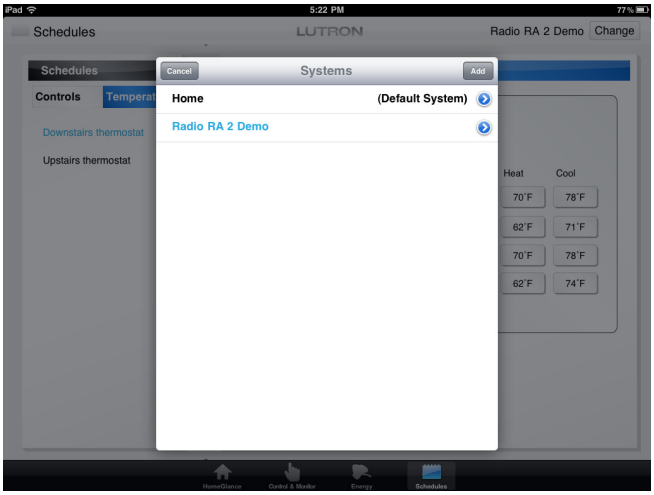
When you first launch the iPad application, you will be asked if you want to "Add New" or "Use Demo". Choose "Use Demo" to use the demonstration project. This will allow you to use the application's features without having to connect to an actual system.



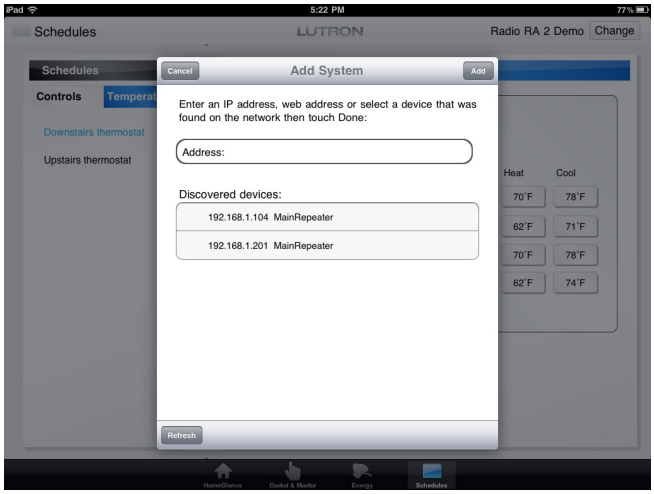


Changing Systems on iPad

From any screen in the iPad you can touch the "Change System" button in the upper right corner of the screen. You will see a list of the systems in your iPad. You can add multiple systems to your iPad in addition to the demo system. From the "Systems" dialog, click the "Add" button in the upper right to add a new system.



After tapping the Add button, the App will try to discover any systems connected via your network[2] to this device. The IP address will need to be set as the static IP address of the RadioRA 2 Main Repeater. This IP address must match the settings in "Find Main Repeater" button in the RadioRA 2 PC software. For system access from outside the home, over the Internet, see the section later in this document called "Advanced: Setup your home for access when away".



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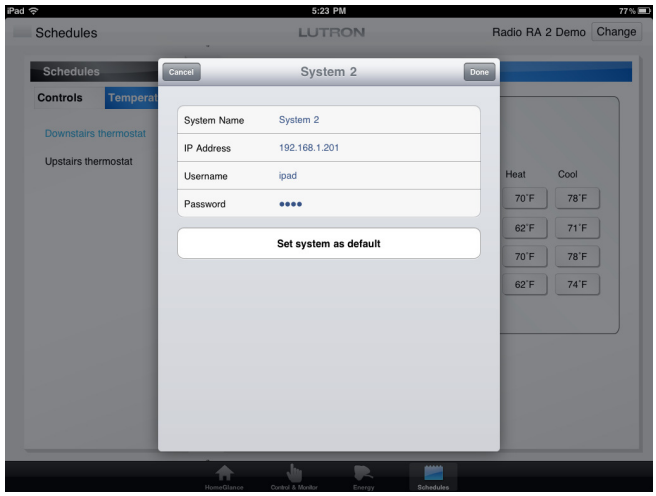
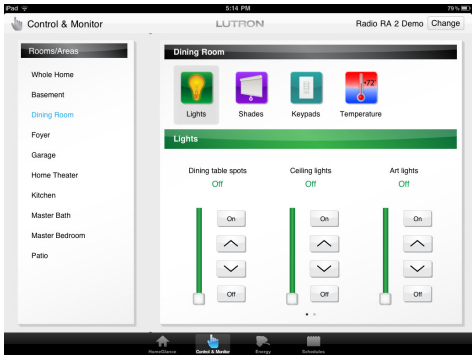
The next items to configure on this screen are the System Name, Username, and Password that the application will use to make a connection to the system. These fields must match (with exact capitalization) one of the Telnet logins defined in the software. Different telnet logins should be used for each Apple device. You can also set this system as the default system by tapping the button. The default system is only applicable when multiple systems are on your iPad. Save your settings by tapping the "Done" button in the upper right.

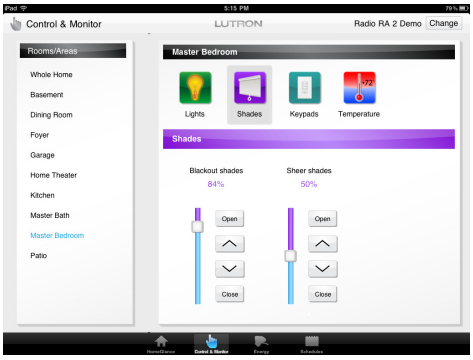


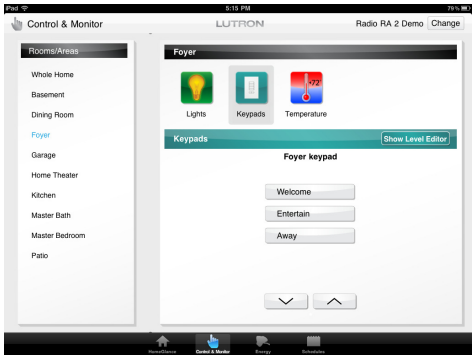
Navigating the iPad App

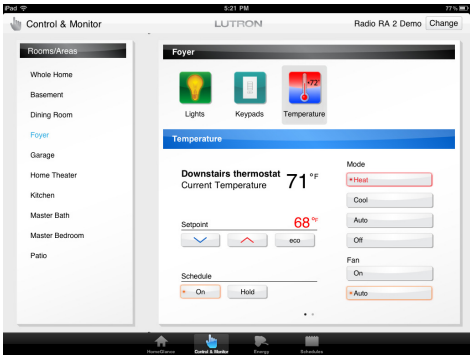
After a successful connection is established, and the iPhone or iPod touch extracts the information it needs from the Lutron system, you are ready to begin using the iPad for control.

HomeGlance:
Favorite Keypad – One keypad from the system that is always present on this screen
Favorite Adjustments – A configurable list of zones
Timeclock Overview – Shows timeclock mode and next event
Temperature Overview – Quick view of the temperature zones in the system

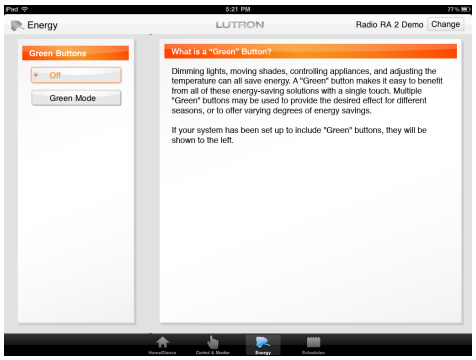




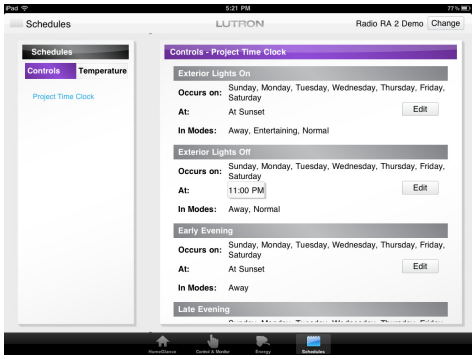


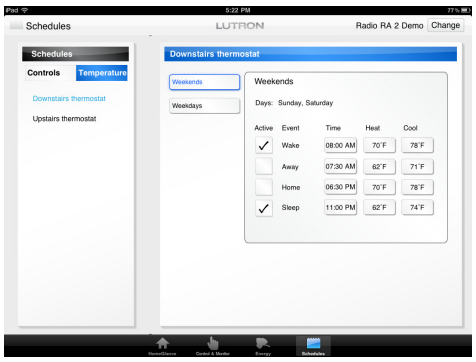


Control & Monitor:
You can select Whole Home or an individual room on the left. Then choose one of the mode icons in the upper portion of the screen. The modes allow you to do the following:
Lights – Use the sliders or raise/lower buttons to adjust your lights
Shades – Use the sliders or raise/lower buttons to adjust your shades
Keypads – Swipe through the keypads in the room or home. For the visible keypad, you can use its buttons to control the system. The status of the LED of the button provides real-time feedback of the button's status.
Temperature – Swipe through the temperature zones in the home. Change the system mode, setpoints, fan mode, schedule override, and eco mode using the controls.



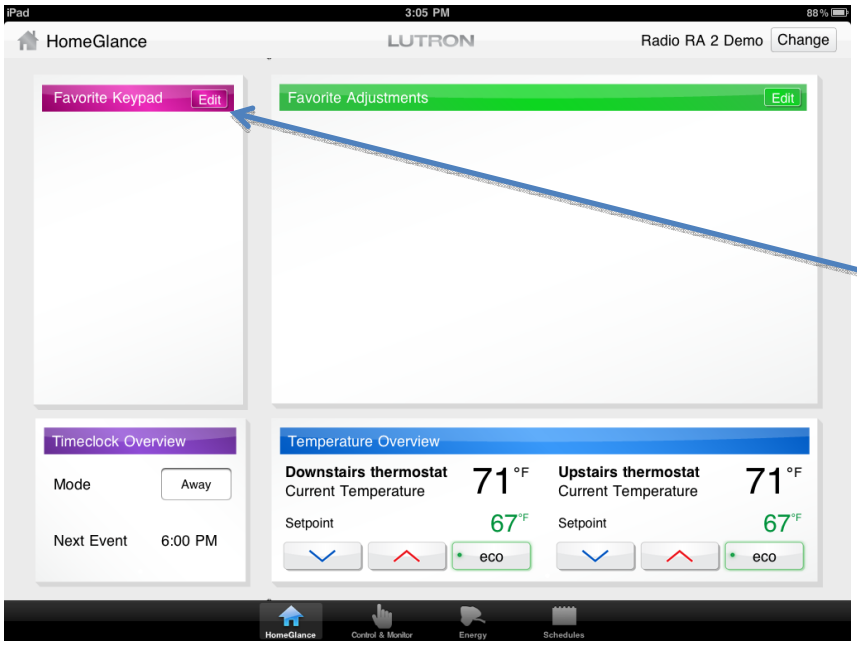
Energy:
Green Buttons that were programmed in the system will show up on the Energy tab. Selecting a Green Button will activate the corresponding Green Mode in the system. LED feedback will indicate whether any Green Modes are currently running in the system.



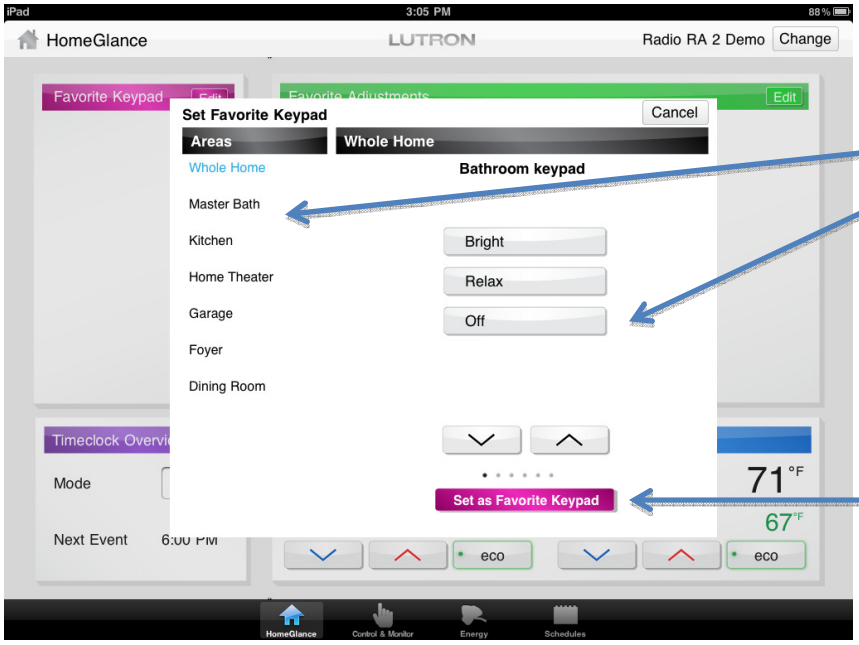


Schedules:
The Schedules tab allows you to view and edit your Timeclock and Temperature schedules.
Controls – All fixed time and astronomical timeclock events will show up in a list showing what days they occur on, what time the occur, and in which timeclock modes they occur. For fixed time events, you can tap on the time to change what time the event occurs using the pop-up controls that appear. Clicking the "Edit" button next to an event will allow you to change the levels programmed for that event.
Temperature – Select an HVAC zone on the left to view the temperature schedules for that temperature zone. Each event can be activated or deactivated. The time and the heat/cool setpoints for each event can be edited by tapping on them and using the pop-up controls. Note: the setpoint controls will not allow you to set the heat and cool setpoints too close together. This is defined by the heat/cool delta that was setup for the HVAC zone.

Set up your HomeGlance Favorite Keypad for iPad



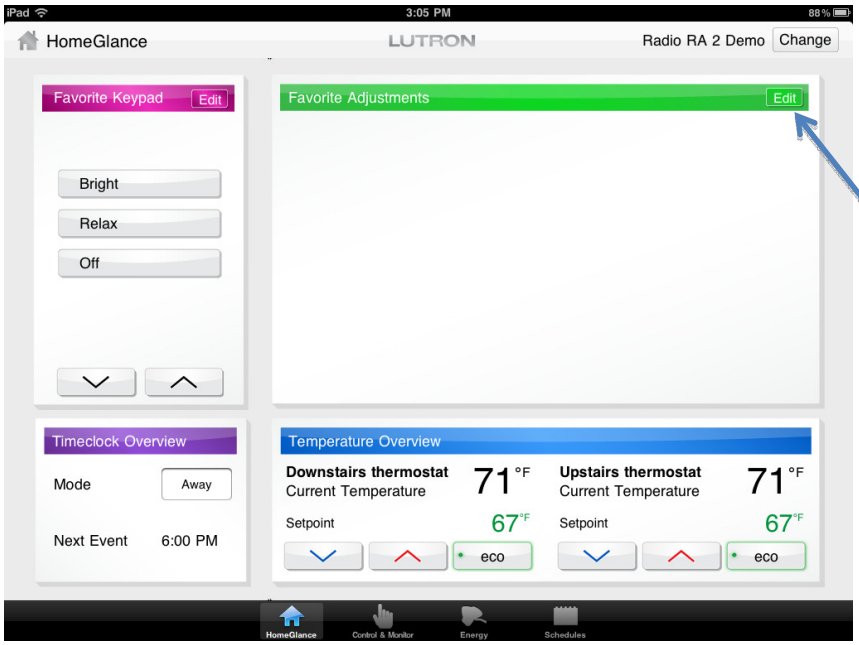
1. Tap the "Edit" button in the Favorite Keypad widget.



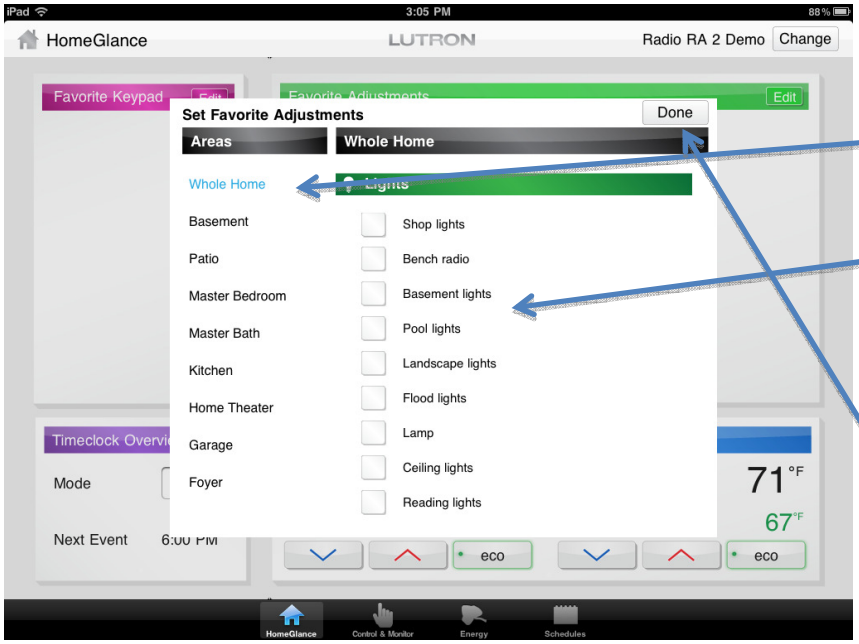
2. Find the keypad you want to be the favorite by selecting a room and swiping through the keypad list. **Note:** Only single column seeTouch keypads are supported in this version of the iPad app.

3. Tap the "Set as Favorite Keypad" button.

Set up your HomeGlance Favorite Adjustments for iPad



1. Tap the "Edit" button in the Favorite Adjustments widget.

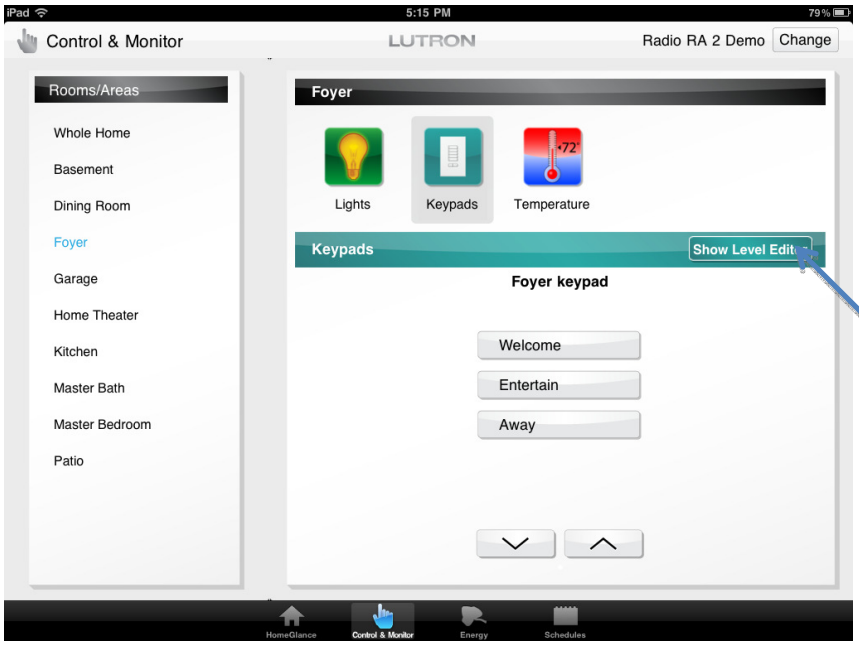


2. Select "Whole Home" or an individual room.

3. Check off the lights and shades you want to appear in the Favorite Adjustments. The order they are selected will be the order in which they appear.

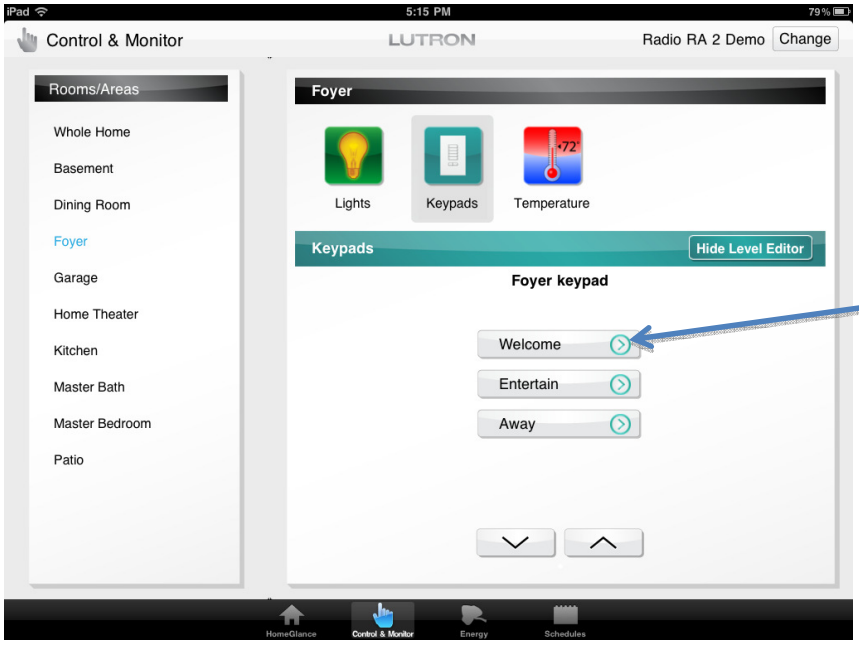
4. Tap the "Done" button.

Using the Level Editor to change keypad/timeclock event programming on iPad

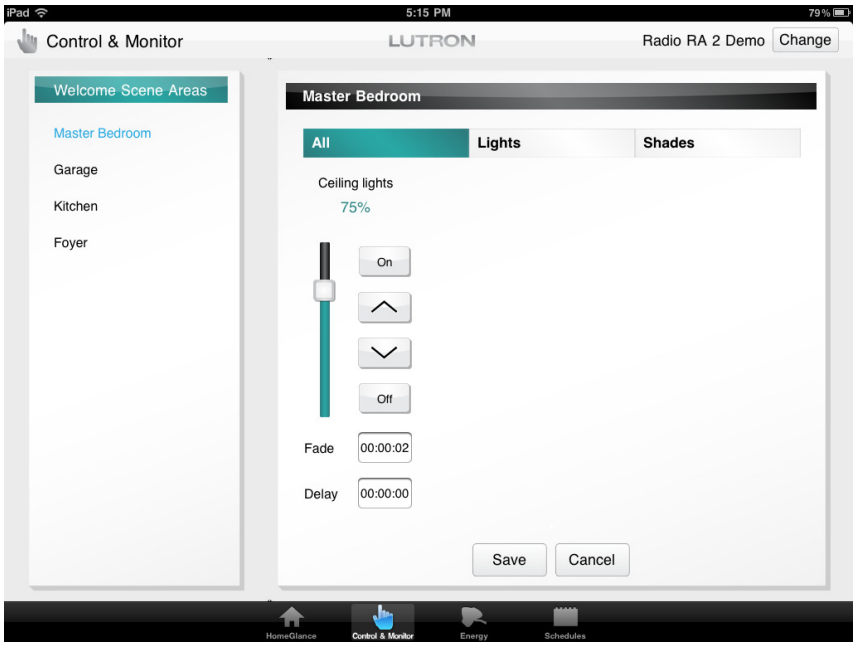


1. Go to the "Control & Monitor" tab and find the keypad you want to edit.

2. Tap on "Show Level Editor" to toggle the disclosure buttons on the keypad buttons.



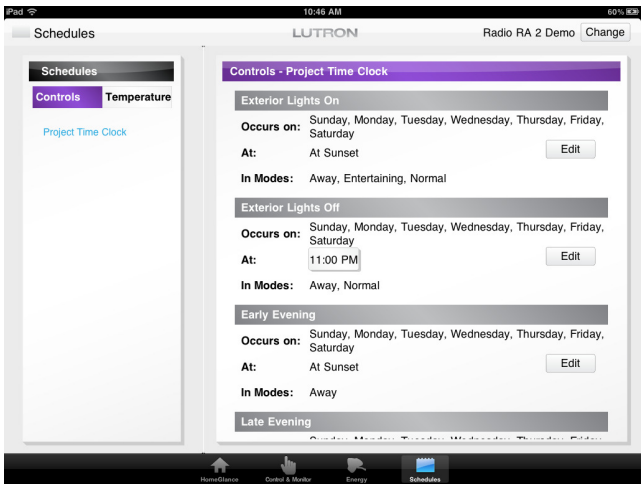
3. Tap on the disclosure button (chevron inside a circle) for the button you want to edit to bring up the level editor.

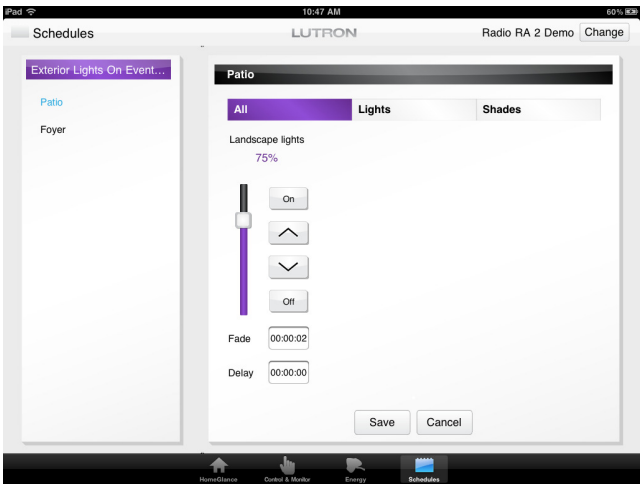


4. The rooms that have zones programmed to this button are shown on the left. Sliders representing the lights and shades programmed to the button show up in the main section along with the Fade and Delay values where applicable. Adjusting the level of a zone will adjust the light level of the zone in real-time. When you have the scene the way you want it, tap the "Save" button.

Note: Only buttons that set light levels or shade levels are supported by the level editor.

Note: Tapping the "Edit" button next to a timeclock event on the Schedules tab will bring up a level editor screen that is identical in layout to the button level editor except that it is purple to match the timeclock schedules screen instead of the keypad green. The functionality is the same.

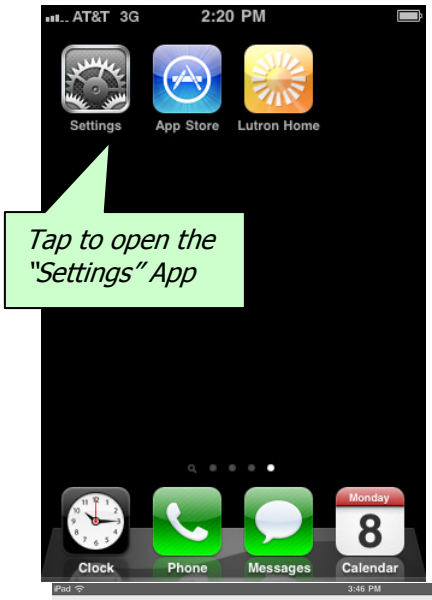


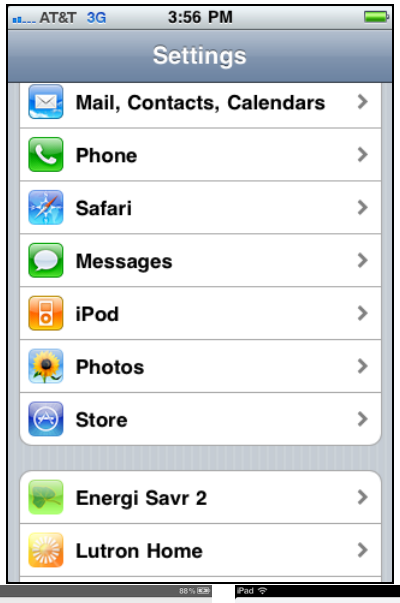


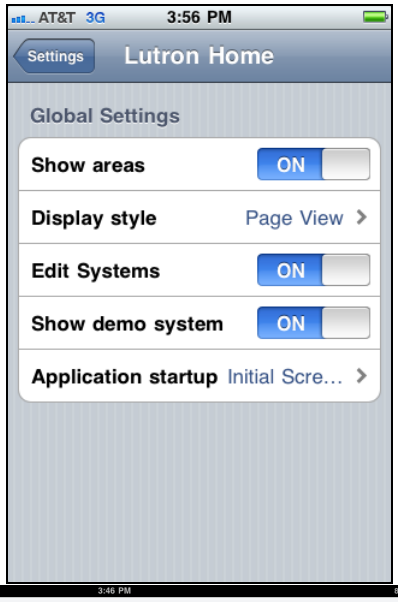
Advanced Topics

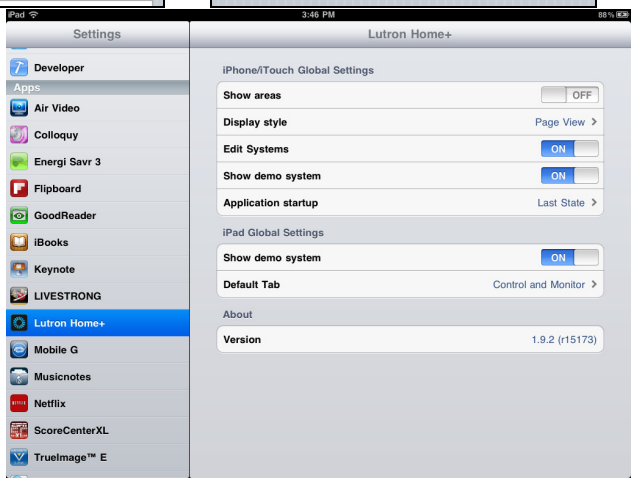
Advanced: Out-of-app settings

Your iPadPhone/iPod will have Out-of-app settings dedicated to the Lutron Home Control+ App. You can navigate by launching the Settings App, then selecting the Lutron Home row.









You can set the following out-of-app settings for the iPhone/iPod Touch:

1. Show areas – Showing areas organizes your controls by area and is useful when you have many controls.
    a. When "On", this will show a view of your rooms and let you navigate to controls by room.
    b. When "Off", all your controls will be in a single area together.
2. Display style –
    a. When set to "List View", all selections will be a top to bottom list of selections.
    b. When set to "Page View", all selections will be navigated using swipes from left to right. (if more then 20 pages are needed, the view will switch to list view)
3. Edit Systems – This is useful to turn to off after your system is configured. It prevents future tampering of your system's settings.
    a. When "On", this will show the Edit Settings icon in the App.
    b. When "Off", the Edit Settings will be hidden.
4. Show demo system – The demo system is useful for illustrating the App to potential customers or friends.
    a. When "On", this will show a demo system.
    b. When "Off", only actual systems added will be shown.
5. Application startup –
    a. "Last State" - the app navigates automatically to the screen that was being viewed the last time the app closed.
    b. "Favorite (default system)" - the app navigates automatically to the screen set as the Favorite of your default system.
    c. "Initial screen (default system)" - the app always navigates to the Area or Controls screen of your default system. The "Show Areas" settings affect which screen the app launches to with this setting.

You can set the following out-of-app settings for the iPad:

1. Show demo system – The demo system is useful for illustrating the App to potential customers or friends.
    a. When "On", this will show a demo system.
    b. When "Off", only actual systems added will be shown.
2. Default Tab – This setting determines which tab will be shown when the app is launched. Options include: HomeGlance, Control and Monitor, Energy, and Schedules.

Advanced: Syncing homeowner edits with the Lutron system

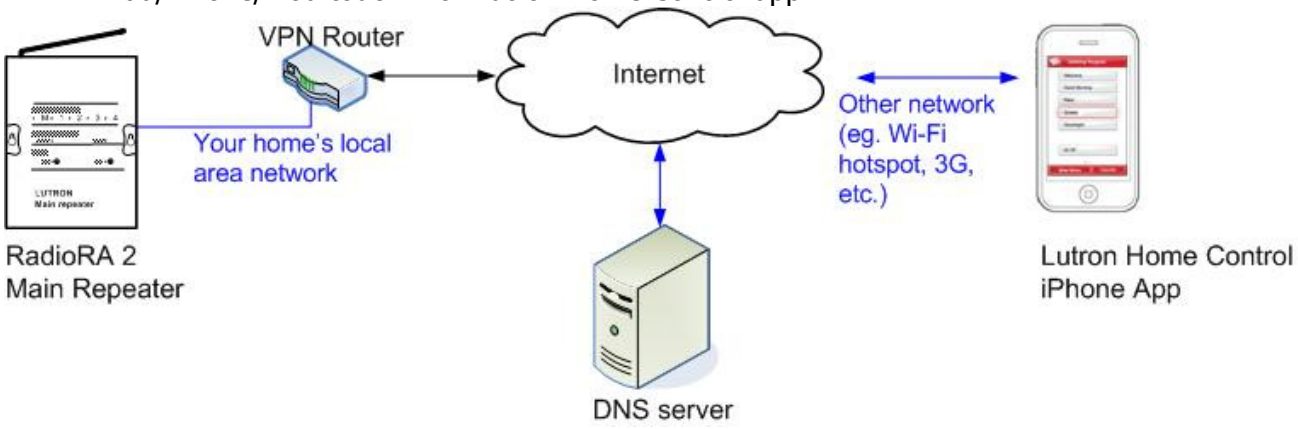
When button or timeclock programming is modified by the Lutron Home Control+ Level Editor feature, this programming will not match the programming specified in the RadioRA 2 GUI. To sync these changes with the database, run the GUI and transfer to the Main Repeater. Before the transfer occurs, the GUI will prompt stating that homeowner edits were found in the Main Repeater and provides an option to sync them. Select "Yes" from this prompt and the database will be synchronized with the changes made by Lutron Home Control+.

Advanced: Setup your home for access when away

The Lutron Home Control App can access your Lutron system from a remote location. A network professional is recommended to setup your network for remote access.

You need the following items:

A. RadioRA 2 Main Repeater
B. VPN Router and your network setup with an accessible VPN[3]
C. Static IP address from your Internet Service Provider or an account with a dynamic DNS service like DynDNS.org.
D. iPad/iPhone/iPod touch with Lutron Home Control app



After configuring your home's local area network for VPN access, you will need to configure the iPhone to access the VPN before launching the Lutron Home Control app. Below are the steps you will need to take on the iPhone:

1. Open the "Settings" app
2. Click on "General"
3. Click on "Network"
4. Click on "VPN"
5. Click on "Add VPN Configuration"
6. Select the PPTP tab
7. Enter the appropriate information, based on how you configured the VPN router.
   a. "Server" will be the IP address or Dynamic DNS name to access the router from the internet
   b. "Account" is the user name set up for the PPTP server on the VPN router
   c. "Password" is the password set up for the user name on the VPN router
8. Save the VPN configuration.

[3] For more information on VPNs, please see Lutron's App Note #231 about using a VPN Connection to Remotely access your Lutron system.

9. Slide the "VPN" switch to the ON position (this establishes the connection with the VPN, if available). Once connected, there will be an icon at the top of the screen indicating the VPN session is active.
10. Launch the Lutron Home Control app to find and connect to the RadioRA 2 Main Repeater.

Best practices

1. It is strongly suggested that the names given to the different areas, rooms, and controls in the RadioRA 2 tool are descriptive and intuitive for the user in order to provide them with the best experience possible. For example, instead of naming the rooms Room 1, Room 2 ,etc. give the rooms names that are easy for the user to identify, such as Living Room and Foyer. Always name the device "Location" for keypads in a room. The "Location" is the name of the keypad that will show on the iPhone or iPod touch mobile digital device.
2. Setting up VPN LAN connection to the system is preferred because it will give the user the ability to control from both inside and outside the home on a Wi-Fi® network. This will make it possible for the user to control their system via a 3G cellular network.
3. Limit the number of keypads that are viewed to what is really needed. Displaying 40 keypads adds complexity and time to the use of the application. Limit the number of displayed keypads so that the homeowner can quickly use the application.
4. In the PC software, set up a single iPhone only keypad with the most commonly used scenes and most commonly monitored elements in the house. Set this keypad as the Favorite in the iPhone, and it will open to the keypad when the application is first started. This quickly provides the homeowner with the commonly used functions for multiple areas of the house. The keypad does NOT need to be activated to be seen in the application.

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