

All about Remotii

Here are ideas as to how Remotii modules work. First you need to know how Remotii thinks, the large wealth of things it can do, and why it's different and better than other devices that are available.

Most Internet devices and controllers are dedicated to a specific task. Remotii is a universal Internet control platform that can manage multiple devices simultaneously. Each time you see an electric door, an alarm system, a garage door or contractor space, you have a potential Remotii use case and a potential End User.

Here is a partial list of things already being done with Remotii.

- Heating fuel level too low
- Doctor's office doors real time remote chime
- Home wine chiller monitor
- Remote zone control for hard wire systems
- Garage door control and monitor
- Gun Safe monitor
- Dual thermostat (A/B) control
- Temp too low and back up heat control
- Dog walker access monitor
- Weekend only party detector
- Wine store, "after hours" access notification
- Electric driveway and gutters heat control
- Heating fuel level too low
- Doctor's office doors real time remote chime
- Bio laboratory freezers and incubators
- Two Alarms + timed Cleaners key FOB
- Sabbath temple control alarm and doors
- Day care: alarm and door schedules
- Hot tub smart scheduled reset and monitor
- Early/late Override for card access system
- Instant open and close report
- Vacation house alarm and A/B thermostat
- Schedule control for school alarms/doors
- Pool filter/heater monitor and control
- Sequenced electric vestibule doors
- Timed nanny key FOB control
- Bio laboratory freezers and incubators
- Two Alarms + timed Cleaners key FOB
- Sabbath temple control alarm and doors
- Day care: alarm and door schedules
- Hot tub smart scheduled reset and monitor
- Early/late Override for card access system

HOW IT WORKS

Inputs tell Remotii what's happening:

Remotii RM4 modules have 4 inputs that can sense power from 3 to 30 volts. These inputs are isolated from each other, so you can have one kind of device connected to input 1 without worrying whether it will affect another kind of device connected to input 2. When an input is connected to both + and - voltage the Remotii considers that input "energized". You can remove either + or - to change the input to the "not energized" condition. On the web page, powered and unpowered conditions may have any color and label attached to them.

Outputs tell real world devices what Remotii wants them to do:

Remotii RM4 modules have three output relays to control things nearby the Remotii module from the Internet. These Relays (relays 1, 2 and 3) may be commanded to open or close, or to deliver a momentary pulse the connected device. The momentary pulses can be as short as 1/10 of a second or as long as 49 days. When a momentary pulse is activated, the Remotii will toggle the specified relay for the configured amount of time and then reverse the action

automatically. For example, suppose you want to water the lawn, or open a door for 12 minutes each time you click a web page button. All output relays have normally open and normally closed contacts. This enables the installer to determine the desired 'safe' behavior in the event of a power loss. Each relay can switch up to 2 amps with a maximum voltage of 30vdc.

Power it up from about anything:

Due to its flexible internal switching power supply, Remotii RM4 modules can be powered by voltages of 7 to 30 volts DC. The Remotii draws approximately 2.6 watts, or 220 milliamps when powered by a 12v source. The Remotii can easily be powered from a 12-volt burglar alarm panel, 24-volt fire panel, an inexpensive camera power supply, or a battery.

Secure computer technology:

All data to and from the Remotii is secured by 128-bit bank grade encryption to ensure data privacy.

Multiple network backup and supervision:

Unlike other Internet devices, Remotii can connect to the Internet using an Ethernet cable, internal WiFi, or a long range external WiFi interface. Each network interface may be connected to unique networks for redundancy. Should all network connectivity be lost, the Remotii server can notify you by sending any number of configured recipients a text message or email.

Getting up and running: End user registration:

Each Remotii RM4 has a unique serial number (MAC address) associated with it. If you are already a registered user, then just log in and add a new Remotii. If you have not yet registered, you will need to do so before any information is displayed or logged. To register please browse to <http://www.remotii.com> and click the **Register** button.

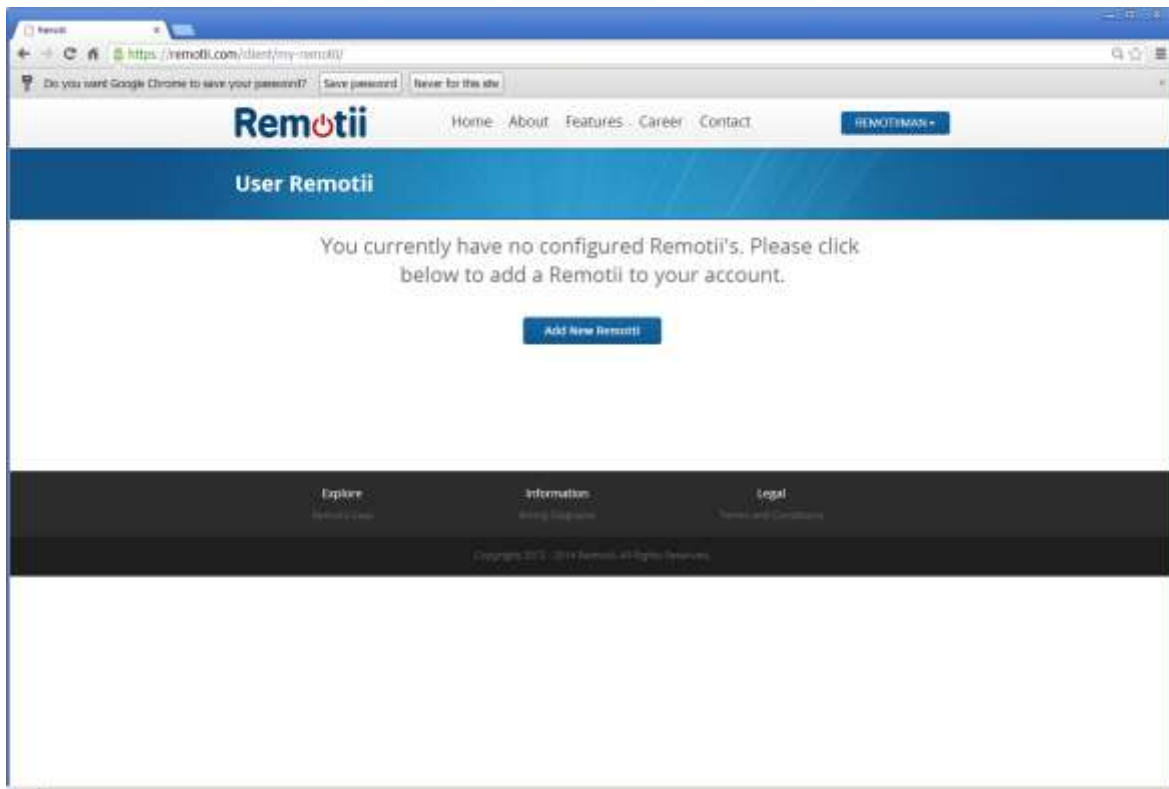


The site will ask you to fill out some simple information about yourself to help us secure your RM4. Your user name will be able to see and control one or more Remotii boards. Please fill out the form and the CAPTCHA so we know it's you.

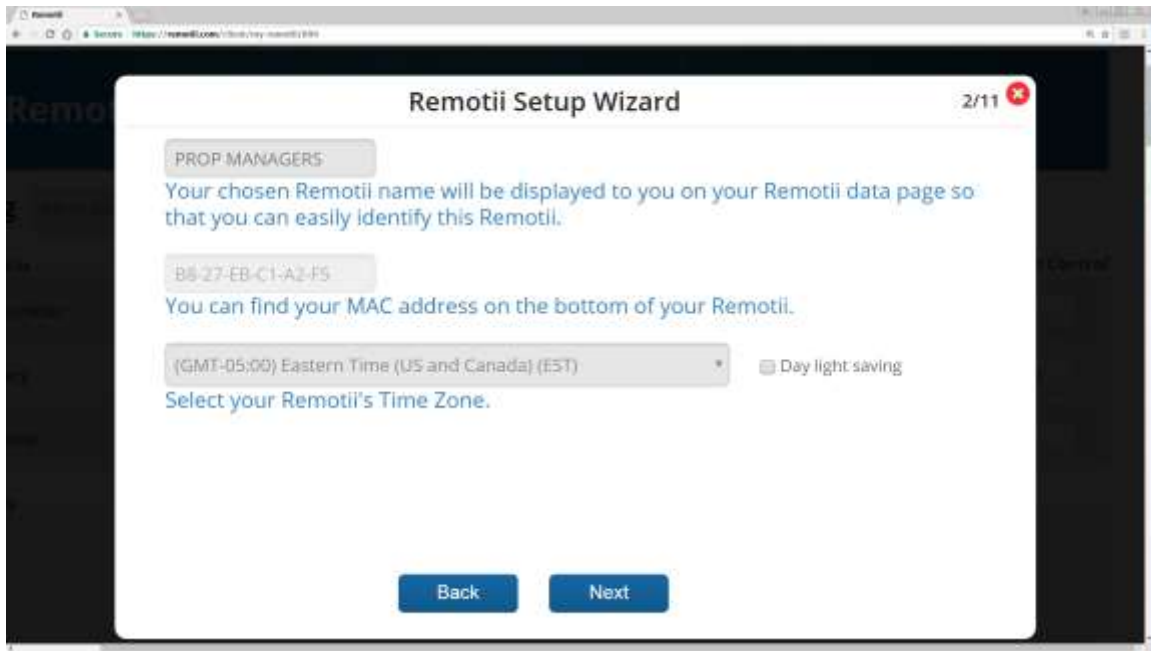
A screenshot of a web browser showing the Remotii registration page. The page has a blue header with the Remotii logo and navigation links: Home, About, Features, Career, Contact. Below the header is a 'Register' section with a form. The form includes fields for 'First Name', 'Last Name', 'Email', 'Password', and 'Confirm Password'. There is also a CAPTCHA field at the bottom. A 'Register' button is visible at the bottom right of the form.

Now that you are all registered, and rewarded with “Registration successful”, please log into your account. You will need your newly created user name and password.

Since you are a new user and have no running Remotii, the system will show this screen:



Click the “Add New Remotii” button. This will start the Remotii Setup Wizard. First let's get your Remotii “on the air”. Click next in the set-up Wizard to navigate to page two.



Decide on a name for you Remotii. Home, South, Cape, Bill's, Garage are all popular and you can use anything.

Enter the MAC address found on the Remotii label and on the packing box into the MAC area. You do not need dashes and case of letters will be taken care of automatically.

Next select the time zone that this Remotii will be working in. East coast time (EST) is -5. Check the daylight savings box if you are on daylight savings time.

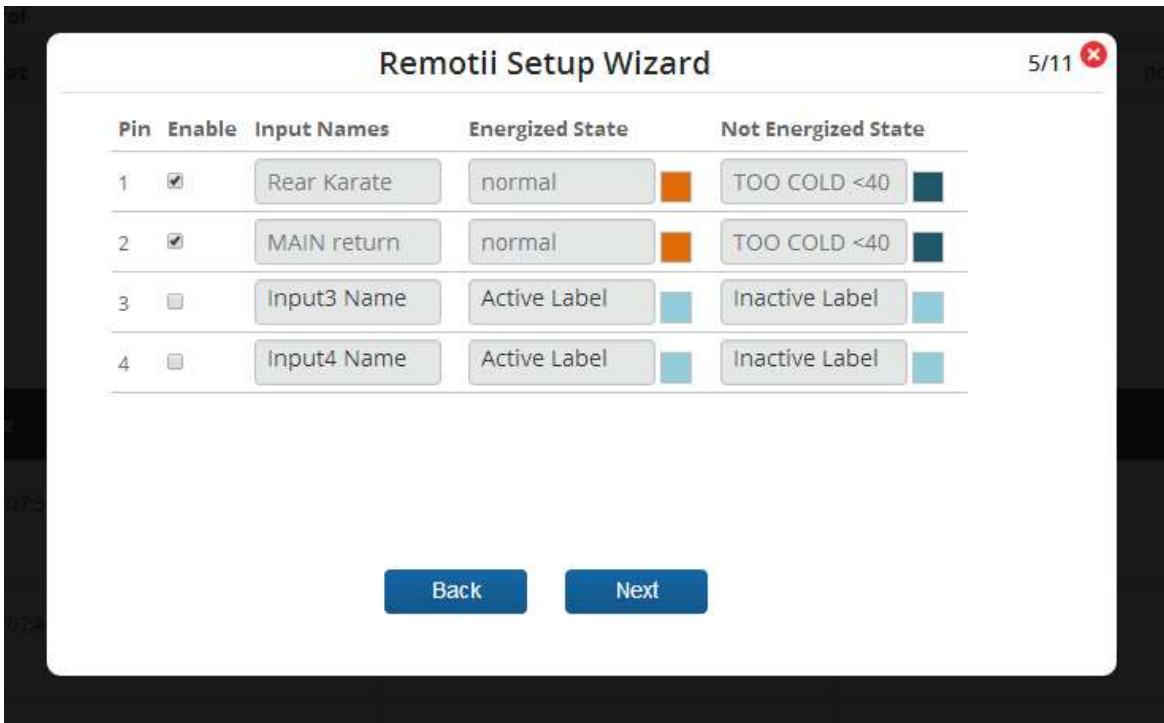
Click Next:

Setup can be easy or more sophisticated as you realize all that Remotii can do.

There are three quick start programming selections. First, RSPs may create a configuration template for future device to inherit from. This option, number 1, may be used when configuring future devices with the same base setup. However, if you prefer to program your Remotii from scratch, not that hard, then select option two. If you already have a Remotii and you want to copy those settings, then select option 3. Don't worry if you are unsure about a specific setting, you can always come back later and change them.

Click Next:

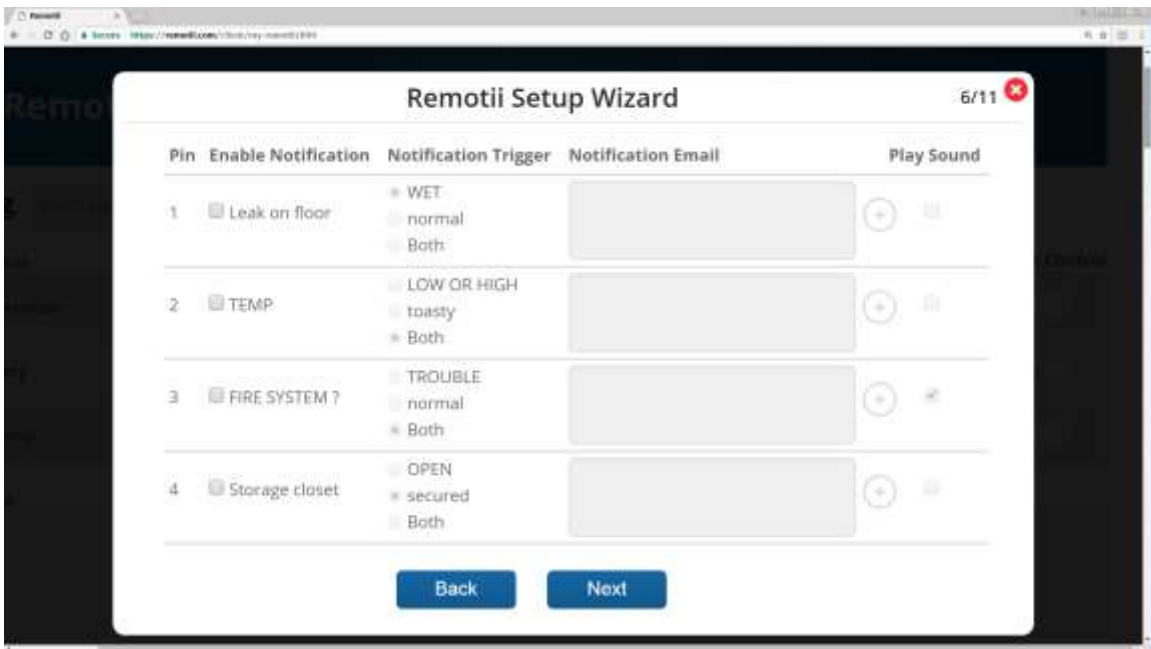
Page 4 welcomes you to Remotii input configuration. Click Next to page 5.



Remember Remotii inputs. They are either energized or not energized. On this screen you can name each input, and name the energized and non-energized conditions. Like, MAIN AIR RETURN TEMP, normal and too cold. You can pick colors that represent each condition by clicking on the colored square next to the condition and selecting from the “color picker”.

If you don't want to use an input you can leave its enable box unchecked. Remember, you can always enable it later.

Click Next to screen 6



Screen 6 is the notifications wizard:

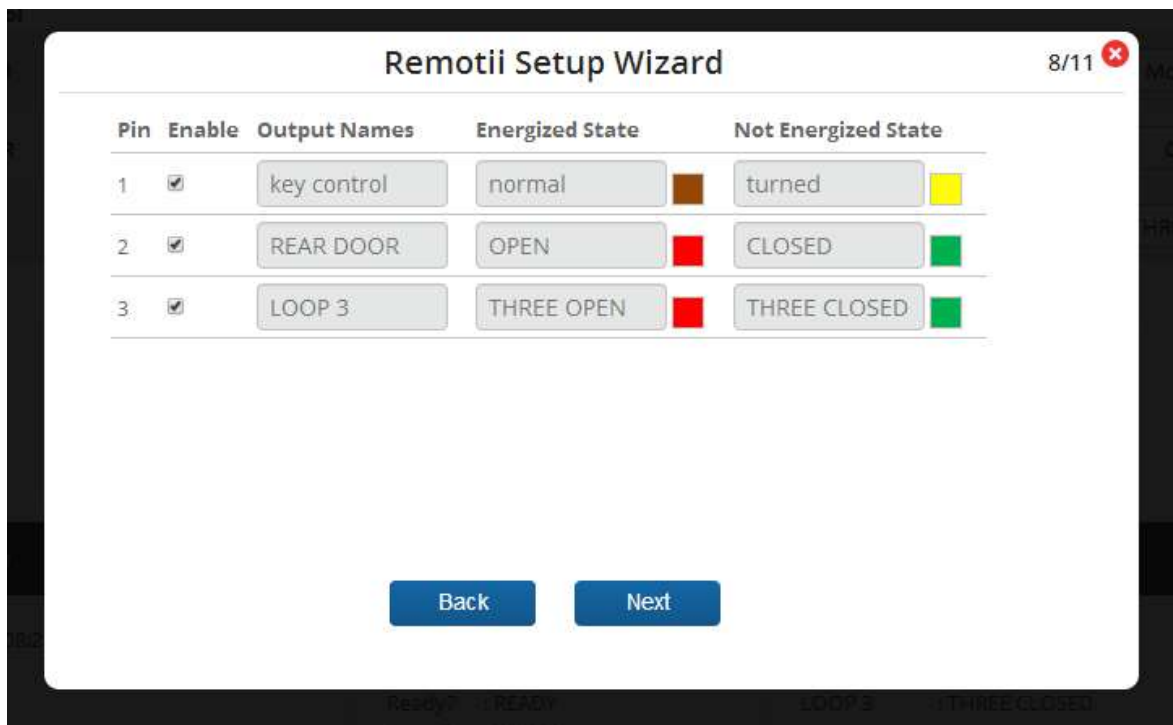
Who gets emails and texts for each kind of condition? In this example, we have a leak detector on input 1. I want to know when there is a leak, so I check the box next to Leak on the Floor. Then I decide, do I want to get notified when its wet, or dry, or in both cases. Then I click on the circle with the + inside. Using the popup window, I can select email or text. If text you will need to supply both the phone number and the phone service carrier of the person you want to notify. You may configure as many notifications as you need.

BING:

Sometimes you want an immediate indication that an event has occurred, like the Liquor storage room has opened. If you are logged into the Remotii site, your phone or computer will “bing” when this condition is met if the small “play sound” box is checked.

Click Next to the welcome to Remotii outputs screen.

Click Next to the output configuration screen:

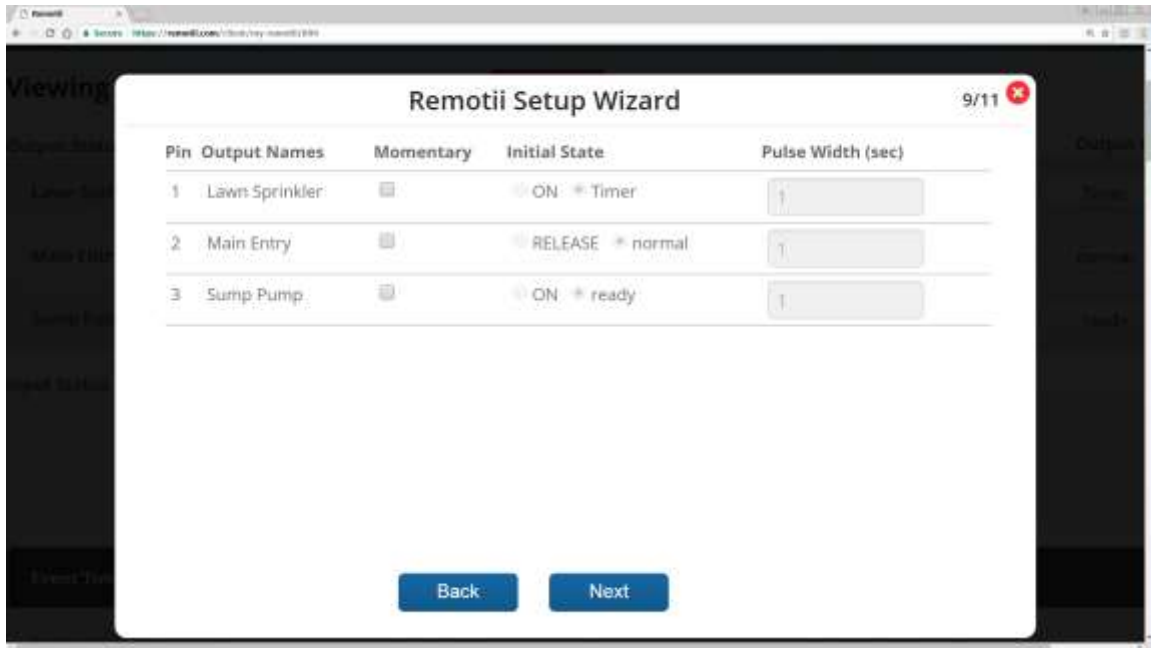


RM4 devices have three output relays. When energised the C (common) and NO (normally open) contacts are connected. When not energized, the C and NC (normally closed) contacts are connected.

To customize the RM4 outputs, begin by deciding how many outputs you want to use. The enable check box, will make the output control visible on your Remotii page.

Just like the custom inputs, outputs themselves are named. Each state of the output relays, energized and not energized, are also named; and just like the inputs you can select colors for each state of each output.

Make your selections and Click Next



The screenshot shows the 'Remotii Setup Wizard' interface. At the top right, there is a clock showing '9/11' with a red 'x' icon. Below the title is a table with the following columns: 'Pin', 'Output Names', 'Momentary', 'Initial State', and 'Pulse Width (sec)'. There are three rows of data:

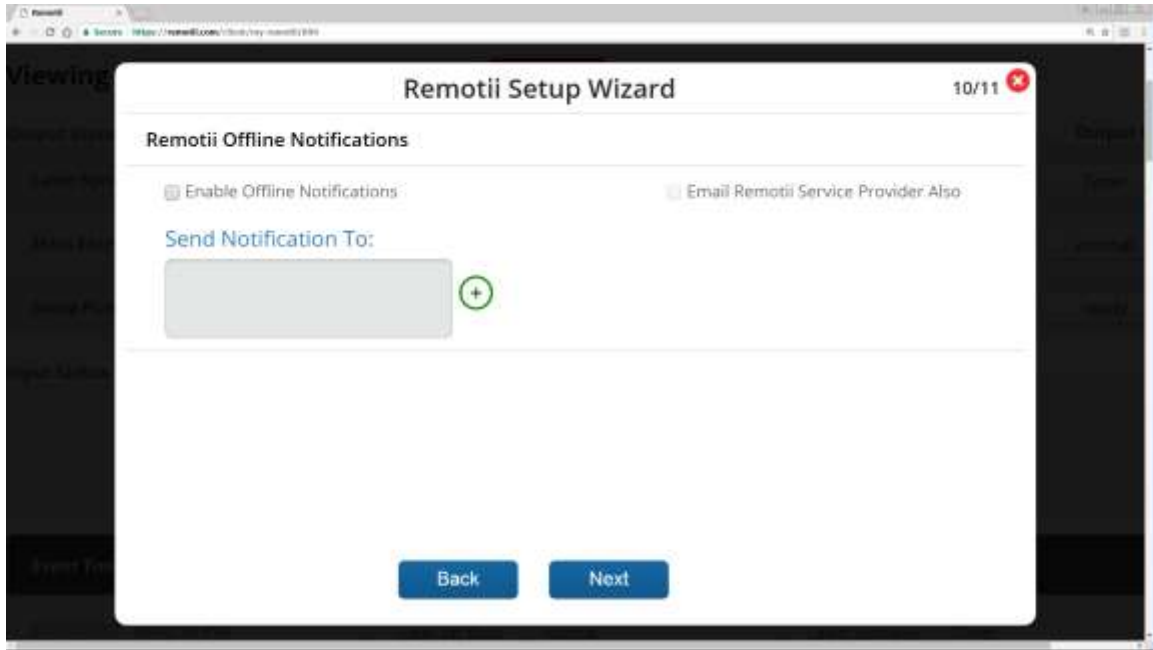
Pin	Output Names	Momentary	Initial State	Pulse Width (sec)
1	Lawn Sprinkler	<input type="checkbox"/>	<input type="radio"/> ON * Timer	<input type="text"/>
2	Main Entry	<input type="checkbox"/>	<input type="radio"/> RELEASE * normal	<input type="text"/>
3	Sump Pump	<input type="checkbox"/>	<input type="radio"/> ON * ready	<input type="text"/>

At the bottom of the wizard, there are two blue buttons: 'Back' and 'Next'.

In real life, there are switches and buttons. Switches toggle between the on and off states, while some buttons only remain in the on or off state while being momentarily pressed. Garage doors and alarm systems use these kinds of momentary connections to open and arm. Remotii implements both types of behavior. On this screen select which outputs are momentary. When clicked or pressed, momentary buttons will switch for the amount of time you want in seconds and then return to the state they were in. Recall that you can select a momentary operation of duration between 1/10 of a second and 49 days; entered in seconds, that would be 254,016,000!

Initial state tells Remotii which way the outputs will go when first powered up. Once in operation Remotii remembers what the outputs are supposed to be doing and after power interruption Remotii will set all the outputs to their previous state. Usually, it makes sense to turn things on using the energized state (generally C and NO) and off when not energized. (generally C and NC).

Click Next



Screen 10 is the offline notification wizard.

When you have the Enable Offline Notification box checked, should your Remotii go offline for more than 1 hour, Remotii will contact you. You can enter emails and texts for as many people as you wish to be notified, just like the input notifications. Checking the Email Remotii Service provider box, will notify your RSP as well.

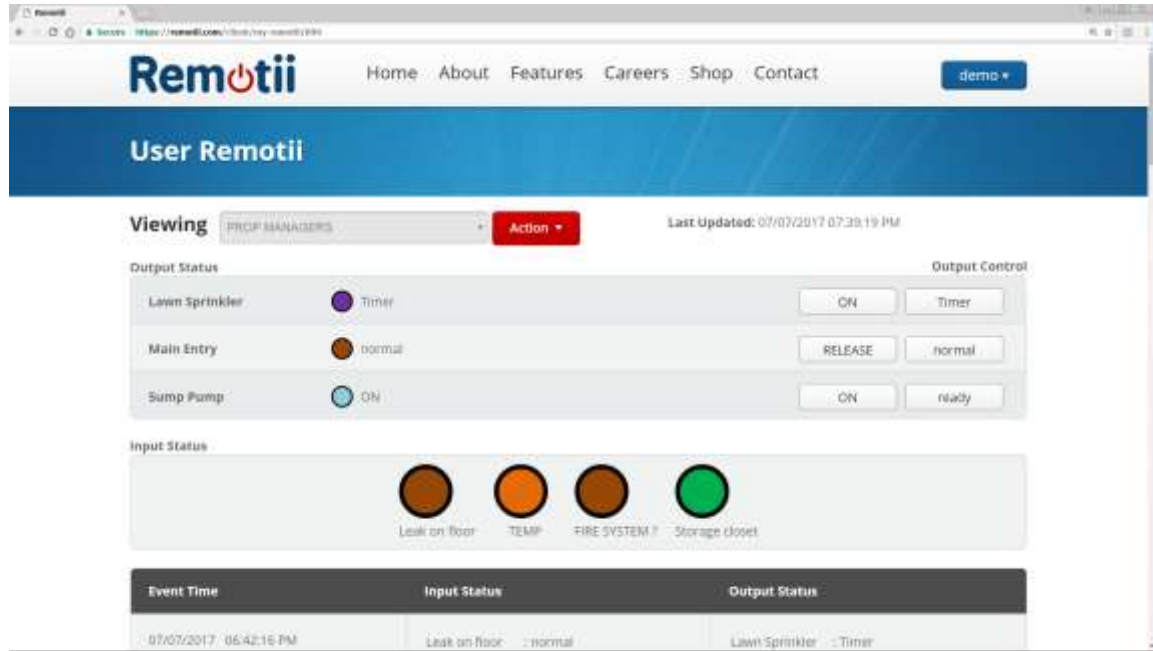
Click NEXT and Click FINISHED

Your Remotii is configured. You can go through the wizard at any time and change as few or as many things as you wish. Select Modify Settings in your **Action** menu to return to the wizard.

You must go all the way through the Wizard to the FINISH button on the last screen for the changes to be applied.

Ready to Explore the Site!

Navigate to the Remotii homepage: <http://www.remotii.com> and log in with an End User account.



Select the Remotii you wish to view:

The “Viewing” window will show the name of the Remotii you are looking at. The pull down will list all the Remotii that you have authority to view and control. If you select view “all Remotii”, you can see current information from all of them. Clicking on their names will bring any Remotii back to full screen. If you want to make your screen go to a particular Remotii like “home” when you first log in, make it full screen and select “Set as Default” in the **Action** menu.

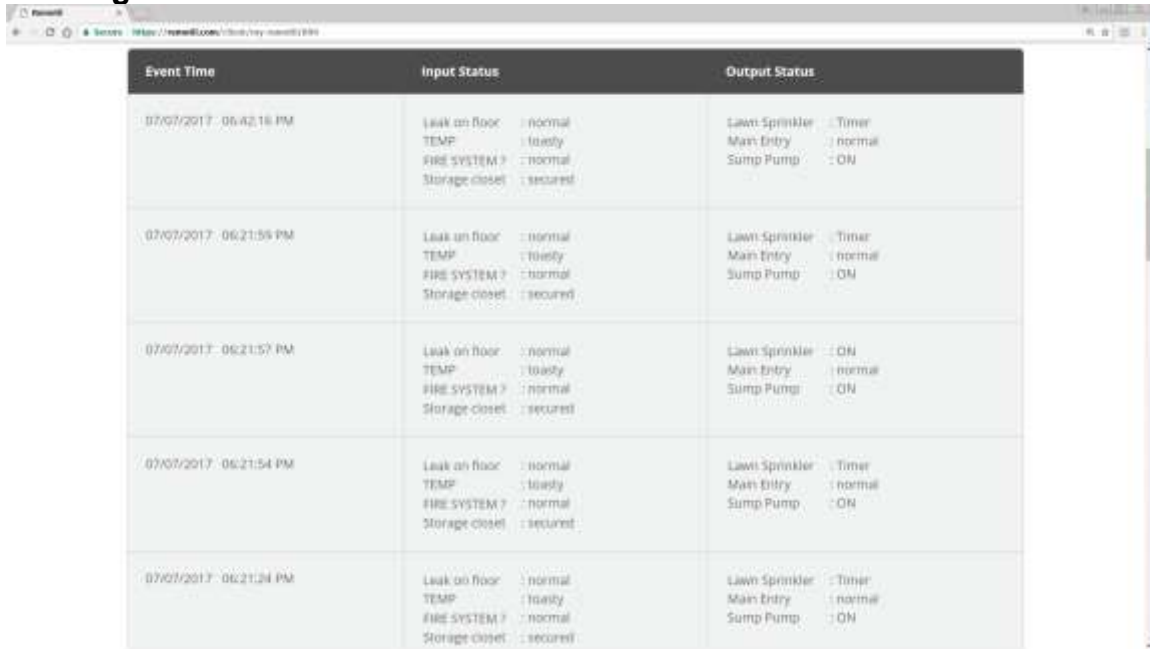
Control your relays:

Just below the “Viewing” selector is the Output Status window. On the left are the names of the three (less if some are disabled) output relays. Next to each on its right are “indicators” showing the status of each relay along with the color you picked for each condition. You can turn each on and off with the control buttons on the right. Momentary relays will have just one button on the right.

View the input conditions:

Below the output status box is the Input status box. The four inputs (less if some are disabled) are shown in the color you defined for each condition. Upon input status change, the indicator will update. You do not need to refresh the page.

The Log:



Event Time	Input Status	Output Status
07/07/2017 06:42:18 PM	Leak on floor : normal TEMP : busy FIRE SYSTEM ? : normal Storage closet : secured	Lawn Sprinkler : Timer Main Entry : normal Sump Pump : ON
07/07/2017 06:21:55 PM	Leak on floor : normal TEMP : busy FIRE SYSTEM ? : normal Storage closet : secured	Lawn Sprinkler : Timer Main Entry : normal Sump Pump : ON
07/07/2017 06:21:57 PM	Leak on floor : normal TEMP : busy FIRE SYSTEM ? : normal Storage closet : secured	Lawn Sprinkler : ON Main Entry : normal Sump Pump : ON
07/07/2017 06:21:54 PM	Leak on floor : normal TEMP : busy FIRE SYSTEM ? : normal Storage closet : secured	Lawn Sprinkler : Timer Main Entry : normal Sump Pump : ON
07/07/2017 06:21:34 PM	Leak on floor : normal TEMP : busy FIRE SYSTEM ? : normal Storage closet : secured	Lawn Sprinkler : Timer Main Entry : normal Sump Pump : ON

At the bottom of the page is a scrolling log. Each time an input or output condition is changed a log entry is created. These show all aspects of this Remotii at that instant. Logs will self fill at the end of the page and will store about two weeks of data.

Action Menu:

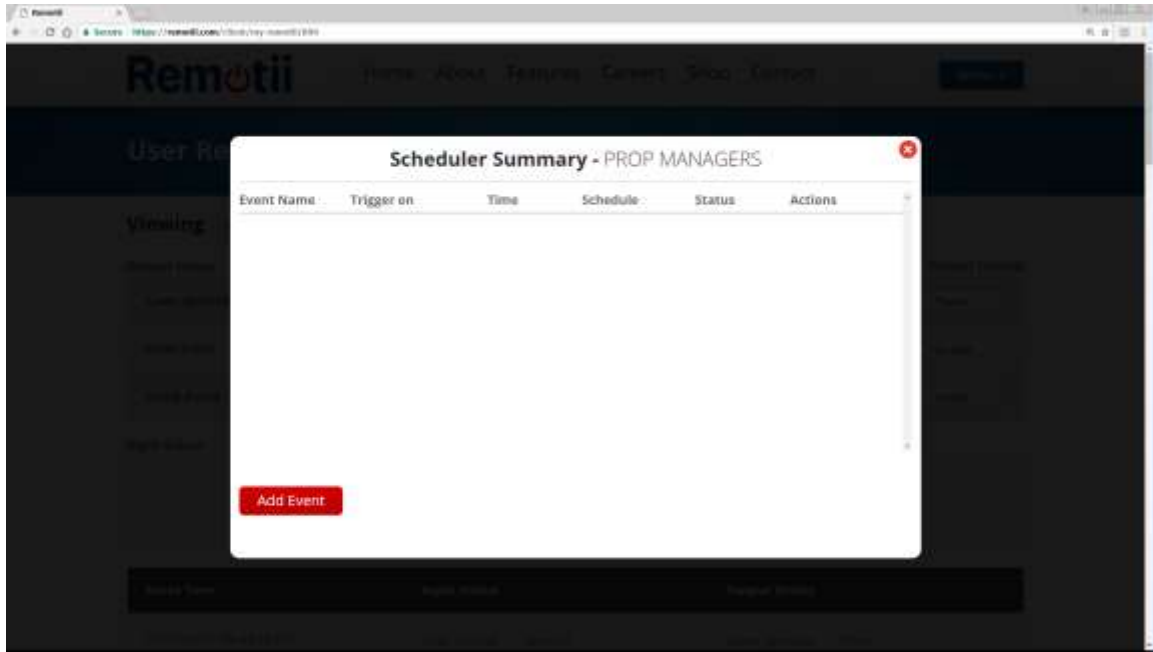
Other than Profile information, the Action menu is where you get to Remotii features.

Selecting Service provider will show you information about your service provider. You can send them a message from this panel if needed.

Selecting Add a new Remotii will let you add another Remotii device to your account in case you have more things you wish to control or if those things are separated by distance.

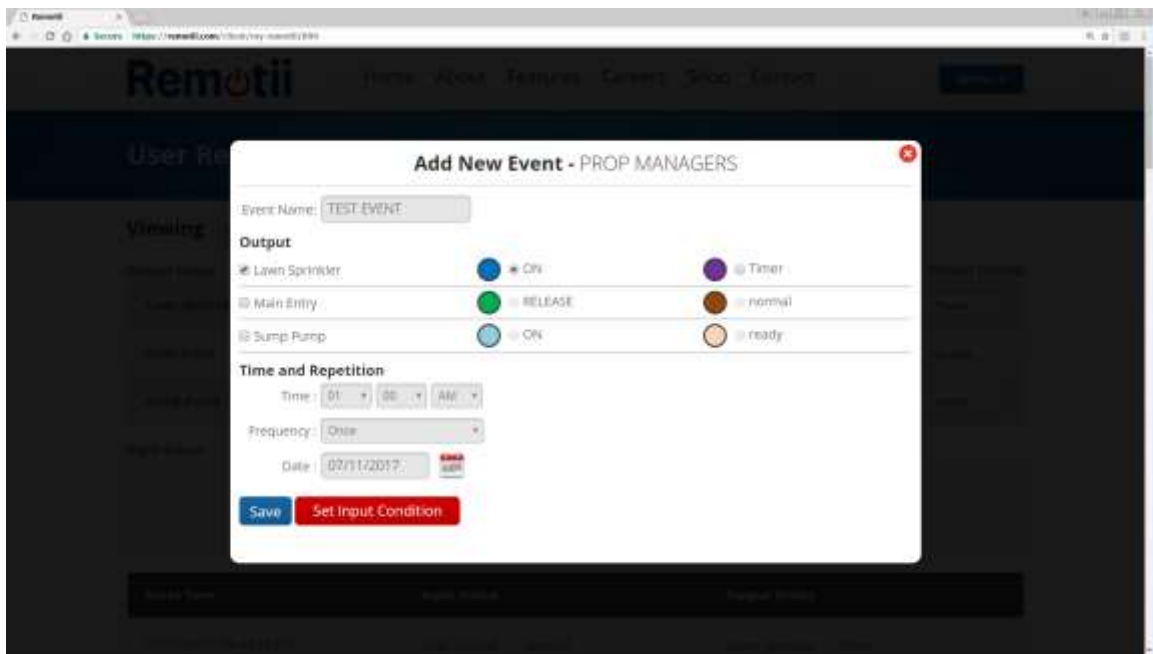
Modify settings can revisit all the labels, color, buttons actions and notifications.

Schedule Events lets you plan what your relays will do based on calendar and time. Here you can see any schedules you have created, edit them, delete them, and disable/enable them.



Let's add an Scheduled Event:

Select add an event. Agree to the warning screen and you will be presented with the Add New Event screen.

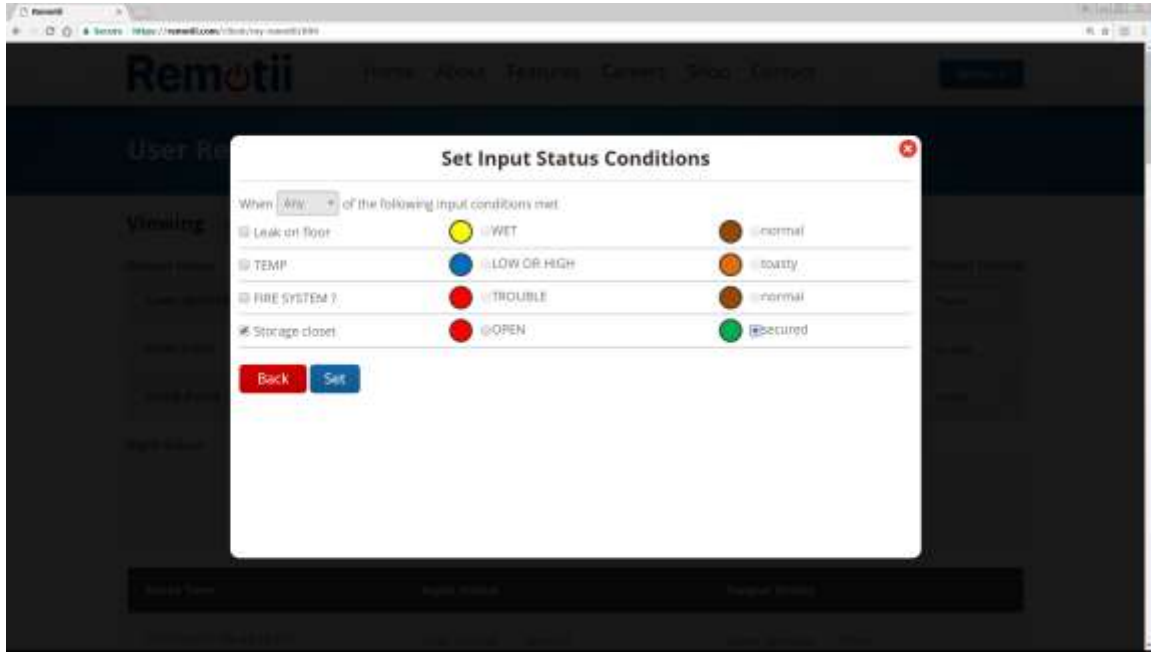


Name your event, choose an output relay, select the output's desired state, and set the desired date and time for which the scheduled event should occur. Each event can control any or all three relays. Select the time of day, frequency (once, Tuesdays, monthly, yearly etc). If your relay is configured as a momentary output, it will toggle for configured amount of time. If the output relay is of on/off type, and you wish to reverse the action with a schedule, then you will need to control the relay manually or configure a second event to turn things back off. You can have as many events as you want. When you are done you

can press [Save](#) OR you can explore the intelligent part of the scheduler by pressing the red [Set Input Condition](#) button.

Conditional Scheduler

If you pressed the Set Input Condition button you will see a screen similar to the one shown below.

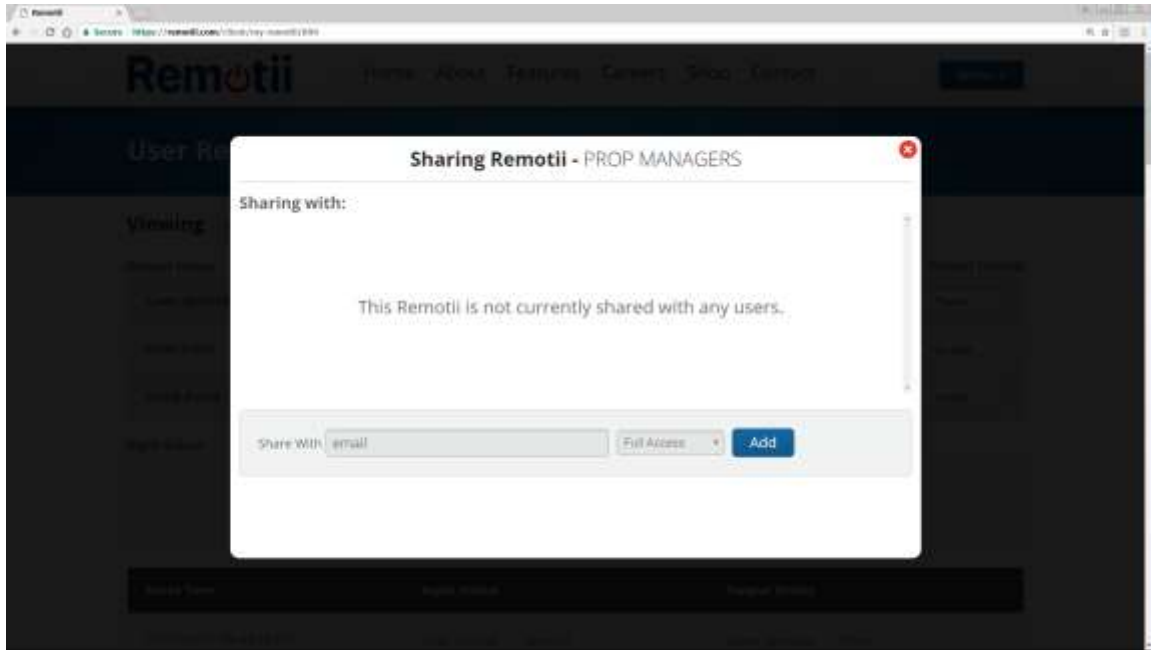


This is a very powerful logic screen that can let Remotii make decisions based on inputs. In the last screen we scheduled a lawn sprinkling. This may not be such a great idea if somebody is mowing the lawn. If an input were to be used to monitor the mower shed door, then one could create a scheduled event that only occurs when the mower shed door is closed. You can use the “any” and “all” pull down to make powerful decisions like do not unlock doors if the alarm is on.

Sharing your Remotii

Of course, you can give your log-in information to a spouse, but sometimes you want to share a log in temporarily or in less than a full manner. You can share your Remotii with anyone who registers an email with Remotii. They can log in with their own credentials and see the status and optionally control your Remotii.

Select Sharing Remotii from the [Action menu](#).



On this screen You can add as many people as you wish to share your Remotii. You can decide if each one gets full access, control with no logs visible, or view only with no control. This is handy for temporary visitors or when obtaining help from Remotii Service Providers.



Boston Atlanta Configuring WiFi and Special Connection Settings

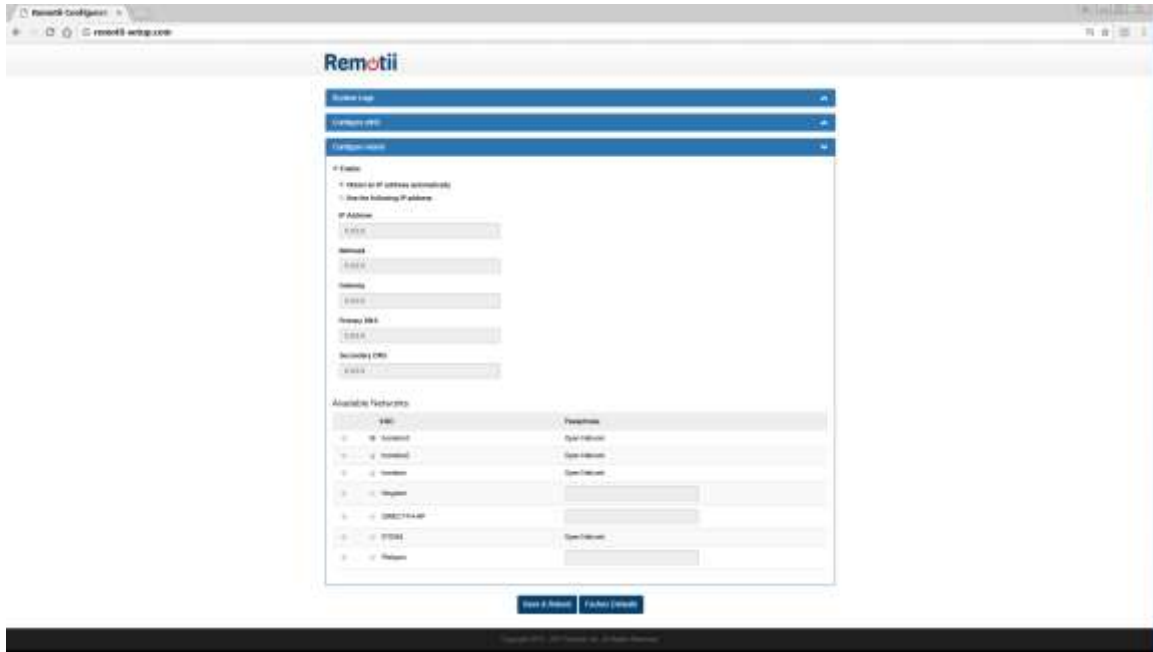
Power Up you Remotii and plug in Ethernet if you have it.

Power your Remotii Module and if you are connected by Ethernet cable you are ready to go. If you have not yet registered you Remotii, log-in and do that now.

Or, Setup Your WiFi:

If you wish use built in WiFi or set static IP values you can use your phone and the Remotii configuration tool. While powered, you can press the recessed button located on the right back side of the device. When you do, the Remotii will leave its normal operation and present itself as a WiFi access point. The Remotii power symbol indicators will illuminate red and green to confirm entrance into configuration mode. The name of this server is 'rem' followed by the MAC number of your Remotii. You can find that number on the Remotii label. Use your phone to connect to that WiFi access point. After you connect you will be offered a browser connection. If you do not get this automatic connection, you can set your browser to 192.168.3.1 or www.remotii-setup.com.

When you connect you will get a page allowing you to set Remotii configurations for as many WiFi connections as are available. Each connection may be set for static IP and DNS servers if you prefer to do that. Normally the Remotii DHCP is very effective and will work fine. There is no need to adjust your router settings. Remotii does not require port forwarding. When you have finished your settings click Save and Reboot and the Remotii module will restart using the new settings. You can repeat this configuration technique as needed.



What do the flashing lights mean?

RM4 modules have two LED indicator lights behind the power symbol on the front of the Remotii. About 1 minute after power up the indicators become active. The red LED tells the condition of the connections. If it is on the Remotii has NO CONNECTION to the Internet or is not configured correctly. If the red LED is blinking, it indicates that the Remotii is connected but is missing one or more of its possible Internet connections. In normal operation the Red LED is not lit.

The green LED is a status indicator for real world inputs and outputs. This allow you to quickly visualize what your Remotii is seeing. You can of course see this information on the web page, it's just an aid if you have no phone / network coverage handy. Periodically, in normal operation with no inputs or outputs connected, the green LED will emit a short burst of fast flashes. This is a **marker** to separate input and output flashes.

More specifically, the green LED blinks as follows:

```
<input1><input2><input3><input4>
<marker>
<output1><output2><output3>
<LED off><delay>
```

Each input or output pin, if energized, will cause the green LED to blink 1, 2, 3 or 4 times depending on the pin number.

Once the status of all input and output pins have been displayed, the LED will turn off and a short delay is applied. The pattern then repeats.

For example:

flash
flash, flash, flash, flash
marker,
flash, flash,
LED off,
delay

Would indicate that input 1, input 4, and output 2 are energized.

Autonomous Relay Action

Remotii is constantly improving. Added to the wireless configuration pages, Remotii now offers an ***Autonomous Relay action on Disconnect***. It is now possible to select an action for your Remotii to take if it becomes disconnected from the Internet. In the same manner used to configure WiFi settings, connect to the Remotii using your phone, laptop or tablet. In the System Settings pull down, check the enable connection loss action. Next select the relay you wish to actuate, and how many seconds to wait after network connectivity is lost before action is taken. The Remotii decides if connectivity is lost based on how long it has been since it last spoke with the Remotii server. However, it can also use a second URL as well. If you prefer your Remotii to “Double Check” using a second URL, click the Double Check box and use the default google.com web site or enter your own.

Note: Autonomous relay action can reboot your own router on loss of connection.

Disconnect notifications without relay action is available in the normal Remotii *Action/Modify settings* menu on your web login.

Chained Events:

Remotii is proud to announce the next level of IOT device. Chained Events allow one Remotii to make smart judgments and control outputs on another Remotii. Now your home can respond to an issue with your summer place. Your lights can turn on when your office locks up. One button can lock many doors, anywhere in the world. A combination of conditional Scheduled Events and conditional Chained Events may be used to create long lists of autonomous actions. For example, process control in small factories, function rooms that need to lock up late, emergency lock down or open conditions, businesses with multiple access points that open depending on what’s happening, and so on.

Chains are very easy to set up and open endless possibilities. Log into Remotii and select the Remotii module you want that should provide the “trigger” the chained event. From the **Action** menu, select **Chained Events**. **Click add an event.**

Add New Chained Event For pi3b

Event

Destination

Condition

Trigger Condition (pi3b)

Input			
<input checked="" type="checkbox"/> INPUT 1	<input checked="" type="radio"/>	<input checked="" type="radio"/> ON	<input checked="" type="radio"/> OFF
<input type="checkbox"/> INPUT 2	<input type="radio"/>	<input type="radio"/> ON	<input type="radio"/> OFF
<input type="checkbox"/> INPUT 3	<input type="radio"/>	<input type="radio"/> ON	<input type="radio"/> OFF
<input type="checkbox"/> INPUT 4	<input type="radio"/>	<input type="radio"/> ON	<input type="radio"/> OFF
Output			
<input checked="" type="checkbox"/> OUT 2	<input checked="" type="radio"/>	<input checked="" type="radio"/> ON	<input checked="" type="radio"/> OFF
<input type="checkbox"/> OUT 3	<input type="radio"/>	<input type="radio"/> ON	<input type="radio"/> OFF

Save
Set Resulting Action

Name your event. Select the Remotii that you want to respond to your event. Then **select the conditions** you want to see trigger the event. Select **ANY** or **ALL** of your conditions. In the example above, the Remotii *pizerodesk* will respond when input one is energized AND relay 2 in energized.

Click **Set Resulting Action**

Set Resulting Action For - pizerodesk

<input checked="" type="checkbox"/>	OUT 1	<input checked="" type="radio"/>	<input type="radio"/> ON	<input checked="" type="radio"/>	<input type="radio"/> OFF
<input type="checkbox"/>	OUT 2	<input type="radio"/>	<input type="radio"/> ON	<input type="radio"/>	<input type="radio"/> OFF
<input type="checkbox"/>	OUT 3	<input type="radio"/>	<input type="radio"/> ON	<input type="radio"/>	<input type="radio"/> OFF

Back

Select which relay and which direction you want the chain command to trigger. In this example relay 1 in Remotii module

pizerodesk will become 'off' when the chain is triggered by correct conditions at Remotii module ***pi3b***.

Click BACK and SAVE.

If you want to have a relay follow an input simple make two chains, one for on and one for off.

THANK YOU FOR USING REMOTII PROODUCTS

Remotii
Boston Atlanta