App Note 130

“Simple” configuration changes for UPB devices

Problem
You are a homeowner with UPB devices in your home and that’s great because they all work well. Maybe the install was done by a previous owner or a professional installer. What if you want to make some changes – very simple ones – to one or more of your devices. Changes like what? Perhaps to change the action of the status LED so it doesn’t blink when UPB messages are received. Or the on-level a switch goes to when you tap the top rocker.

In this application note you will be taken through the entire process from start to finish on how to do this. Doing this means using a Windows program called UPStart that is available for free by download from the PCS web site. If you don’t have one, you will need to purchase a power line interface module (called a PIM). These are available from resellers and direct from PCS.

There are four different models of PIMs available. Here are some features of each.

PGW PulseWorx - Gateway Interface
This combines in one package a UPB interface and an autonomous scheduler. It has a network connection. It can be used with the PCS Mobile applications for Android and iOS to let you securely connect to your installation over the internet and view device states and change them. It is the most complex unit to configure as you need to understand its function, configure it for access, and adjust your network router to allow outside access.

PIM-IP PulseWorx - Powerline Interface Module, Ethernet Interface
This is a UPB interface with a network connection. Unlike the “Gateway” product above, it can’t be used to access your installation from outside your firewall in a secure manner.

PIM-R PulseWorx - Powerline Interface Module, RS232
This is a UPB Interface with a true (“DB9”) serial connection to the computer. Don’t purchase this one unless your computer has a serial port – most modern ones don’t – or you have a widget that makes a serial port from a USB port.

PIM-U PulseWorx - Powerline Interface Module, USB
This is a UPB interface that has a USB connection. This is the most useful one and will be the one that application note focuses on.

To purchase direct from PCS email sales at pcssales@pcslighting.com or call the phone number listed at the bottom of the web site home page.

Note: If you are a HAI/Leviton OMNI user, you can also use this procedure as what described in here is valid for all UPB devices – PCS, HAI/Leviton, and SAI.

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Step 1 – Download and Install the UPStart software
The first step is to download the UPStart software from PCS. During this process, you must create an account which means supplying your email address. It's no big deal as the only thing done with it is to add you to a weekly email list. And being on that list is a good idea as it provides good tips and info about UPB and other automation gear.

To get started, use your favorite browser to connect to the PCS web site: http://www.pcslighting.com/

In the menu, click on "Resources" then "Account Sign Up". While it requires you to enter a company name and phone number you can fill in just about anything. The key is to enter a valid email address and password. Once the account is created, it asks you to log in.

Select from the menu "Resources" then "Downloads" and click on "PulseWorx Downloads" section. Scroll down to "Software" and click on the "Zip" icon to download a zip file containing the Windows installer. You will see this on the web page:

If you don't see the zip file icon, you are not yet logged in. After you complete the download, open the zip file and install as any other Windows program.

Step 2 – Connecting the power line interface
Probably you are using a PIM with a USB connection - most computers no longer have serial ports – and the first step is to connect it to the computer. Even though it has a USB connection, a device driver is installed that creates a virtual serial port and that port is what UPStart uses to communicate with it.

Note: If you do have a true serial PIM, then just connect it to the computer and you will know what COM port it is using.

Depending upon your connection to the internet, it can take a while to install the device driver. The good news is that the driver comes from the Windows Update site so there is nothing you need do to start the process other than connect the PIM to the computer. To see if the device driver was installed and to learn what serial port was assigned, open the Windows device manager.

When the Windows Device Manager is open, you will see all the devices connected. Look in the "Ports" section. Once the device drivers are in place, you can see the communications port assigned.

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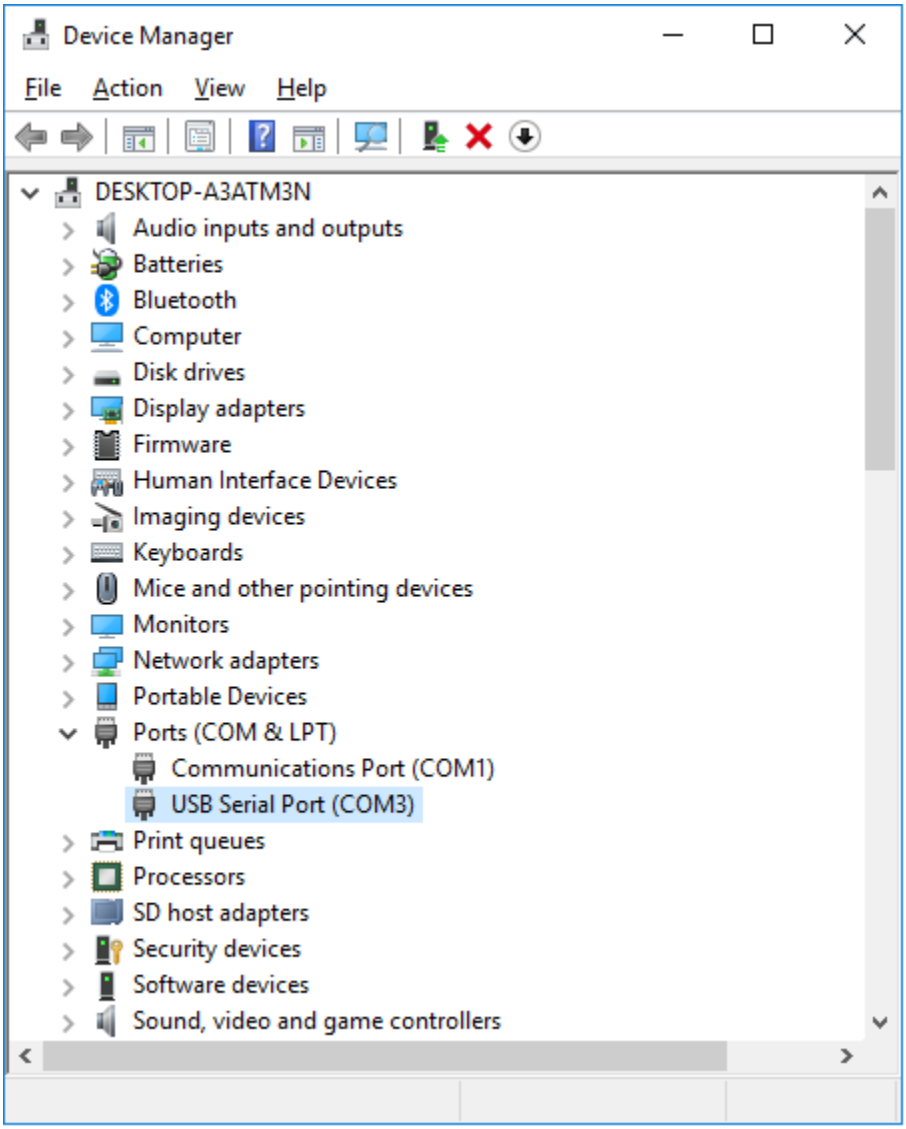

On this computer the serial port assigned is COM3. You know it is the PIM because it shows “USB Serial Port” listed under “Ports”. If you see more than one” USB Serial Port” listed, take note of what you see, then unplug the PIM and see which one disappears. When you plug it back in, note the one that returns and that is the port to use.

If the device driver isn’t fully installed, you may see this listed other “Other devices”.

You can wait a bit and Windows should finally get all the derivers installed ok, or you can right-click on it and select “Update driver” and that will force Windows to finish up.

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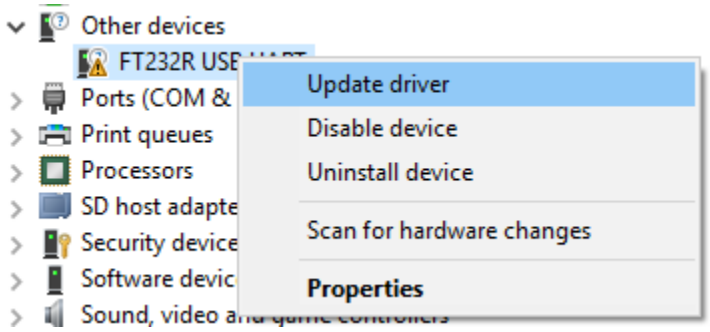
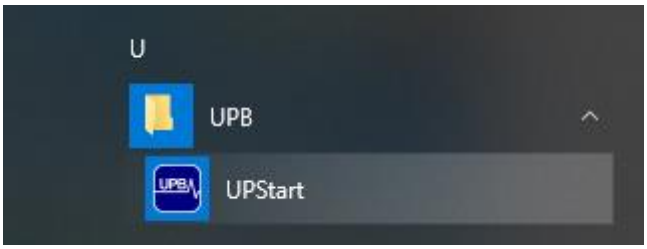
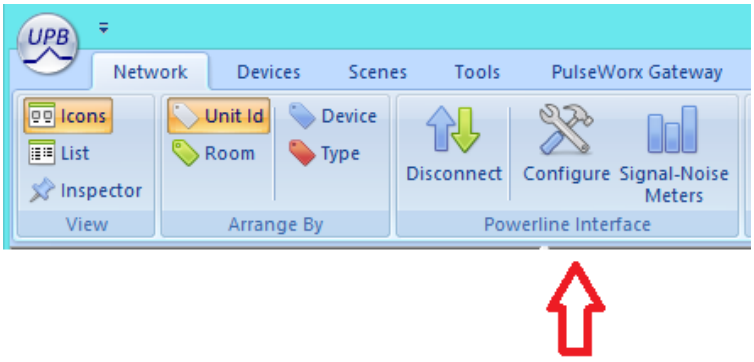


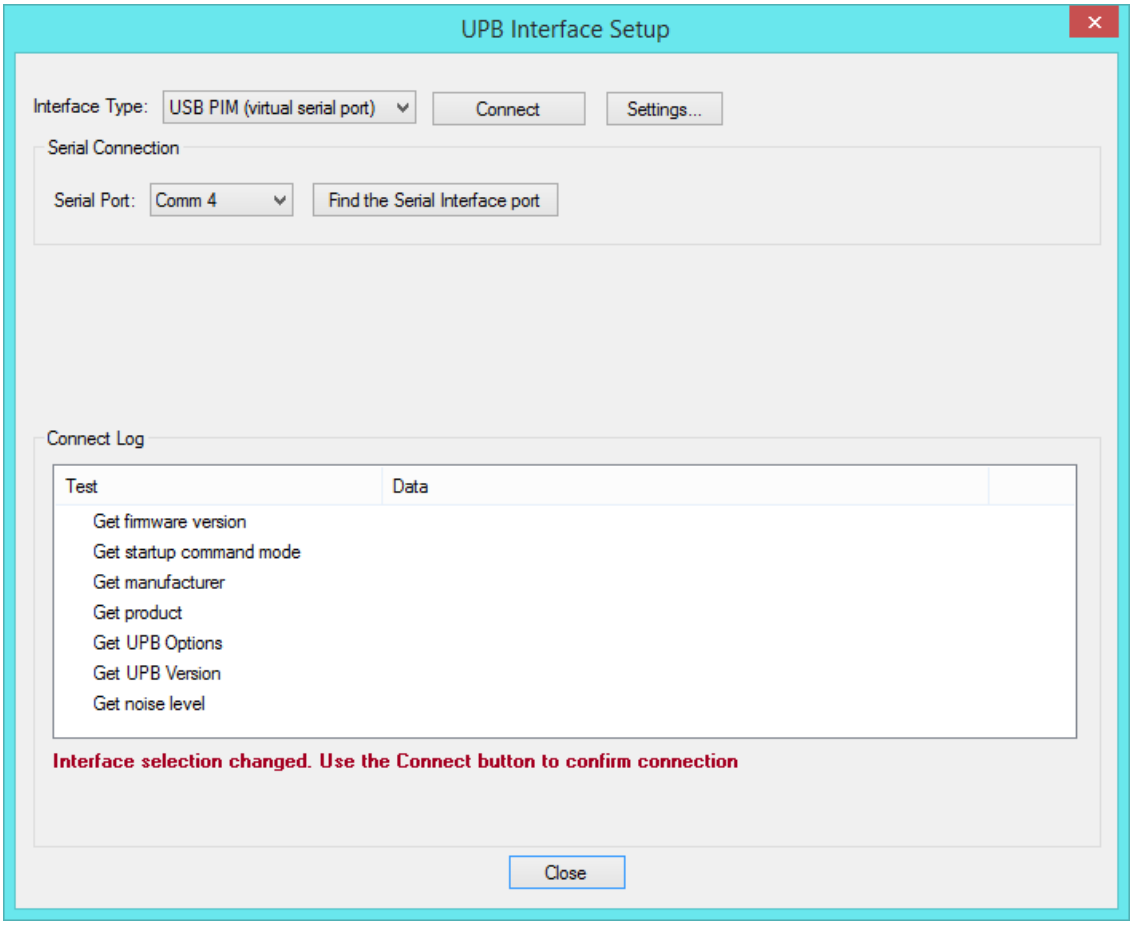
Once all the drivers are installed, you will see an image like the first picture and know the port the driver created.



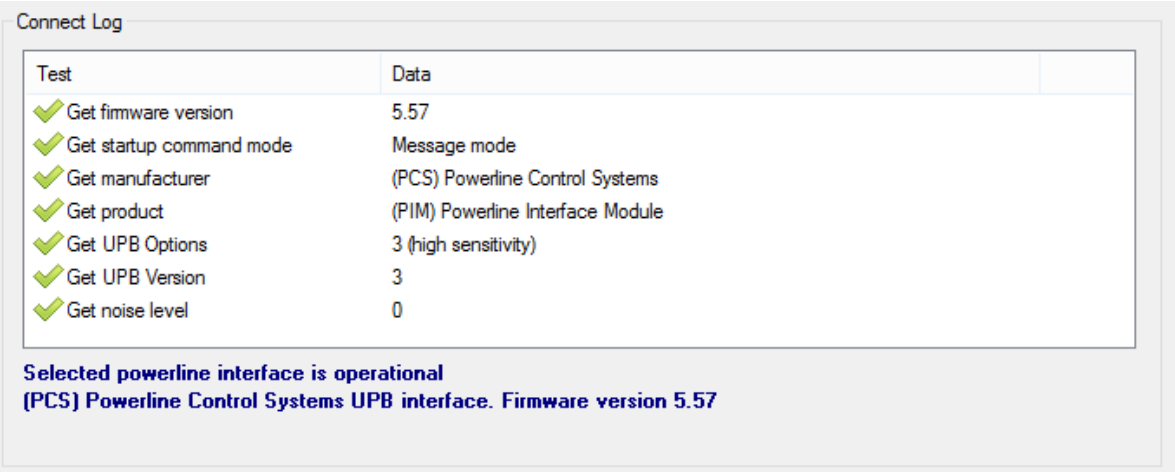
Now that the drivers are installed, you can begin with UPStart. After it is installed, from the Windows button, it appears under “U” for UPB:

UPStart uses a “ribbon” interface which is similar to applications you probably use every day like Word and Excel. After starting UPStart, press the “Configure” button in the “Powerline Interface” panel and select the model PIM you have and what port it is using.





Press the “Connect” button to complete the operation and if all is well, the dialog updates to show the connection.



The good news is that UPStart remembers all these settings. Next time you start UPStart the connection will automatically be made.

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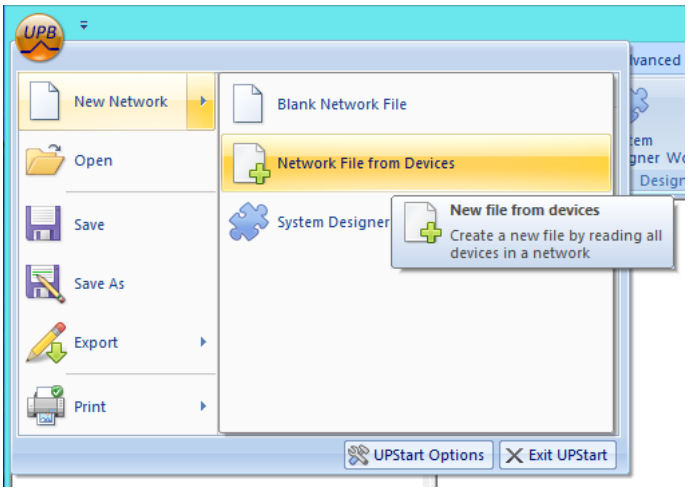
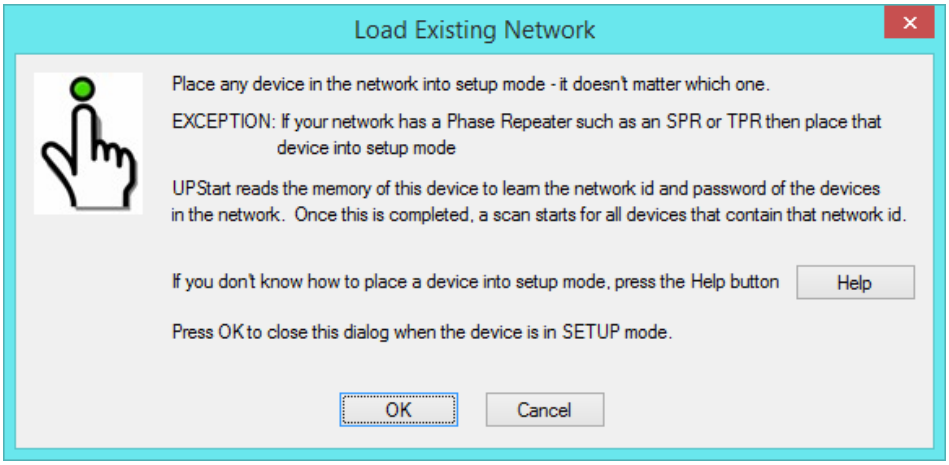
Step 3 – Creating the network File

The configuration of all your UPB devices are stored in the memory of the actual devices themselves. The network file that UPStart uses keeps a copy of these settings. Because the settings are in the devices, if you don't have a network file you can easily make one by having UPStart read the memory in each of your devices and save it all to a file.

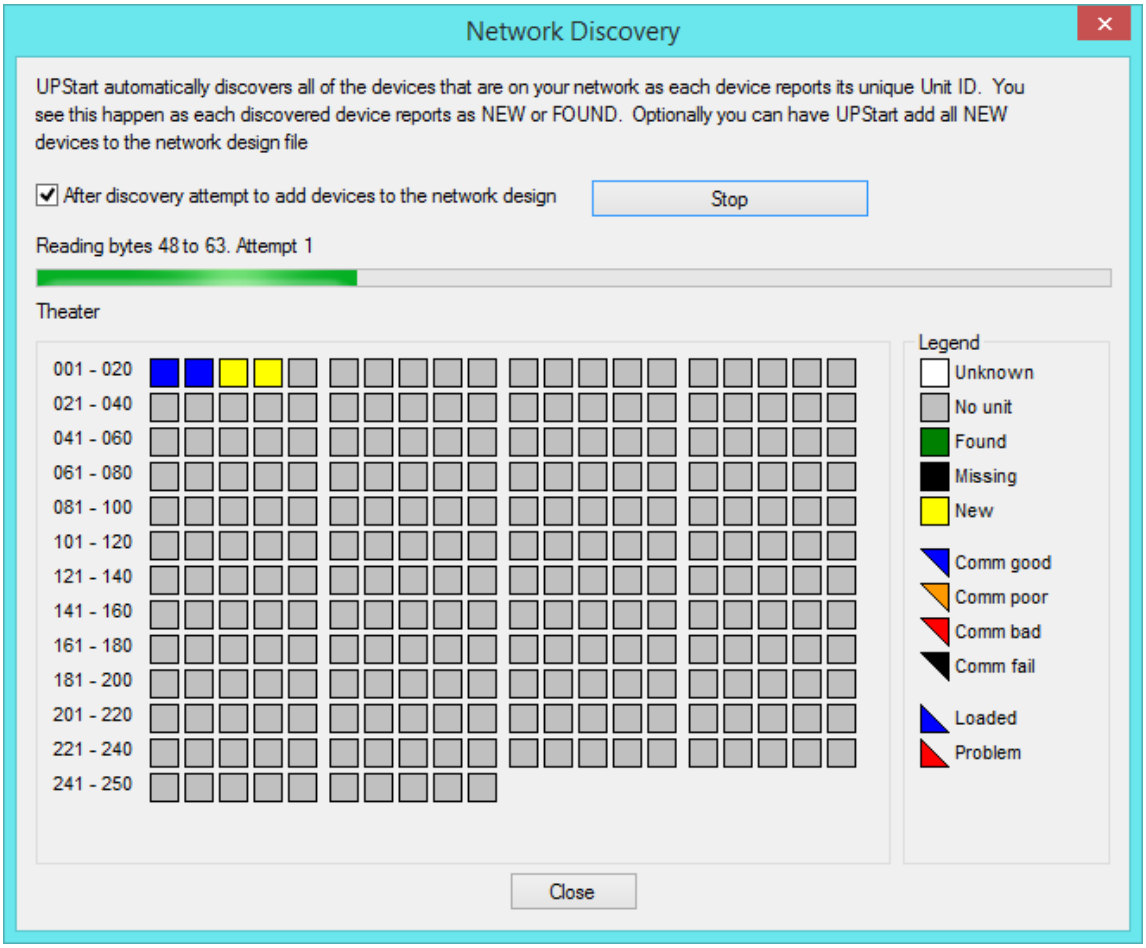
Open the application menu (click on the "UPB" bubble at the left end of the ribbon, and select "New Network" then "Network file from devices" and follow the instructions.



The instructions say to place one of your devices into setup mode – if you don't know how, press the Help button for some brief instructions.



What happens next is that UPStart reads information from the device you placed in setup mode and then uses that information to locate all your other devices and then read those as well. A colorful dialog shows the progress.



Depending upon the number of devices installed, this could take a few minutes or a lot longer. Just let it complete. When done, close the dialog and then save the file. To do that, open the application menu and select “Save”. Next time you start UPStart you can reload the file.

Step 4 – Let’s make some changes

Now that all the preparation has been completed, you can get down to the business of making the changes you want. Here are two small changes you may want to make

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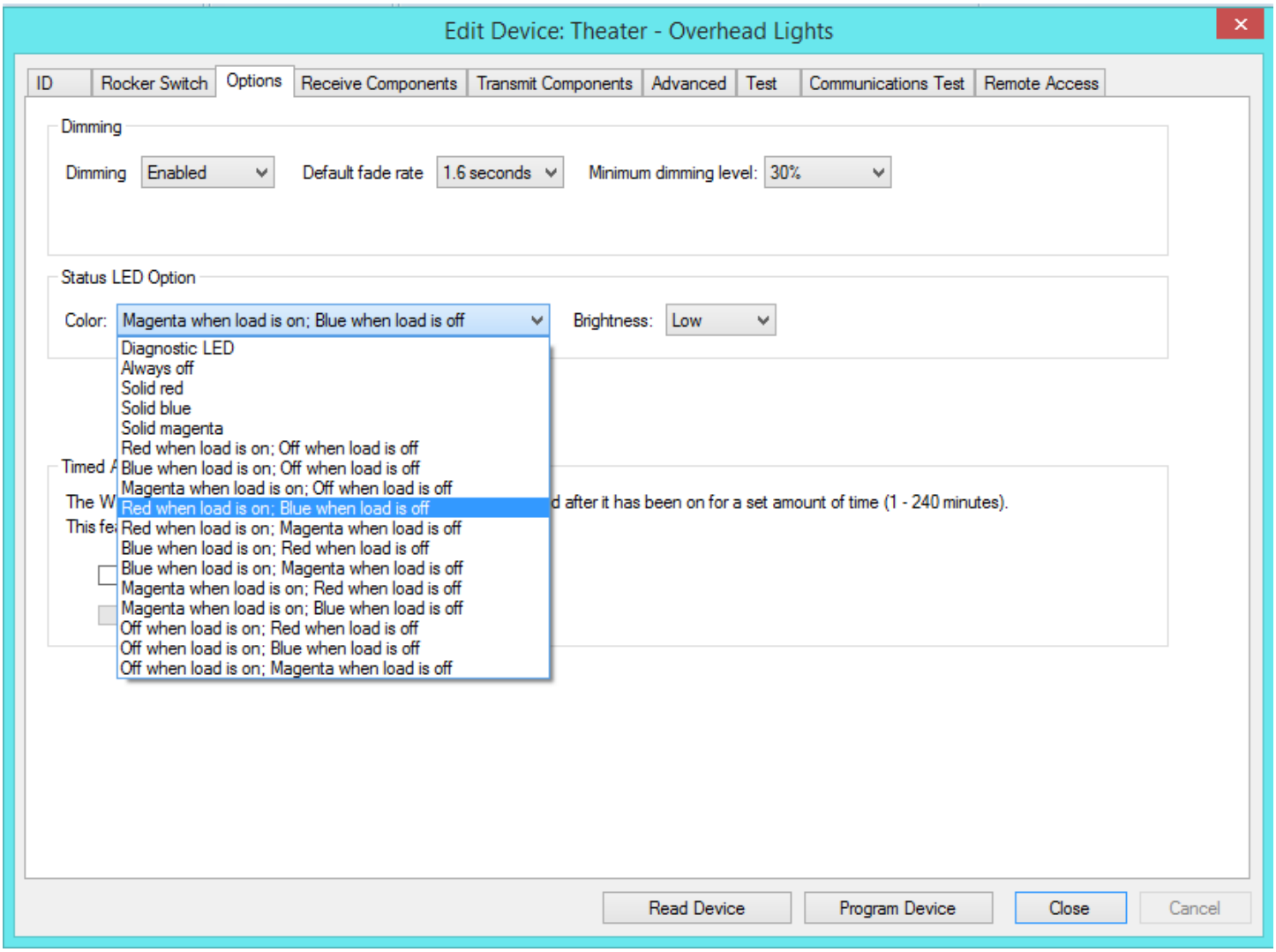
Changing the action of a device LED

Unless changed, the LED on a UPB device blinks as UPB messages are sent and received. This can give you an indication of things happening but also can be distracting. To change this, double-click on the device icon and its configuration opens. Select the “Options” tab.



Choose the LED action you want – in the above example I’ve selected one that I like – and then press the “Program device” button and that change is written to the device. If you close the dialog with OK and forget to first “Program”, UPStart asks you if you want to do that or not.

Also, in this “Options” tab are settings for timed auto shutoff and how bright the LED is. Both settings you may want to adjust.

Change the light level a switch goes to when you tap on the top rocker

To make this change, again open the configuration of the device and on the “Rocker Switch” tab. Here you can set the level that the load goes to when you tap on the top rocker.

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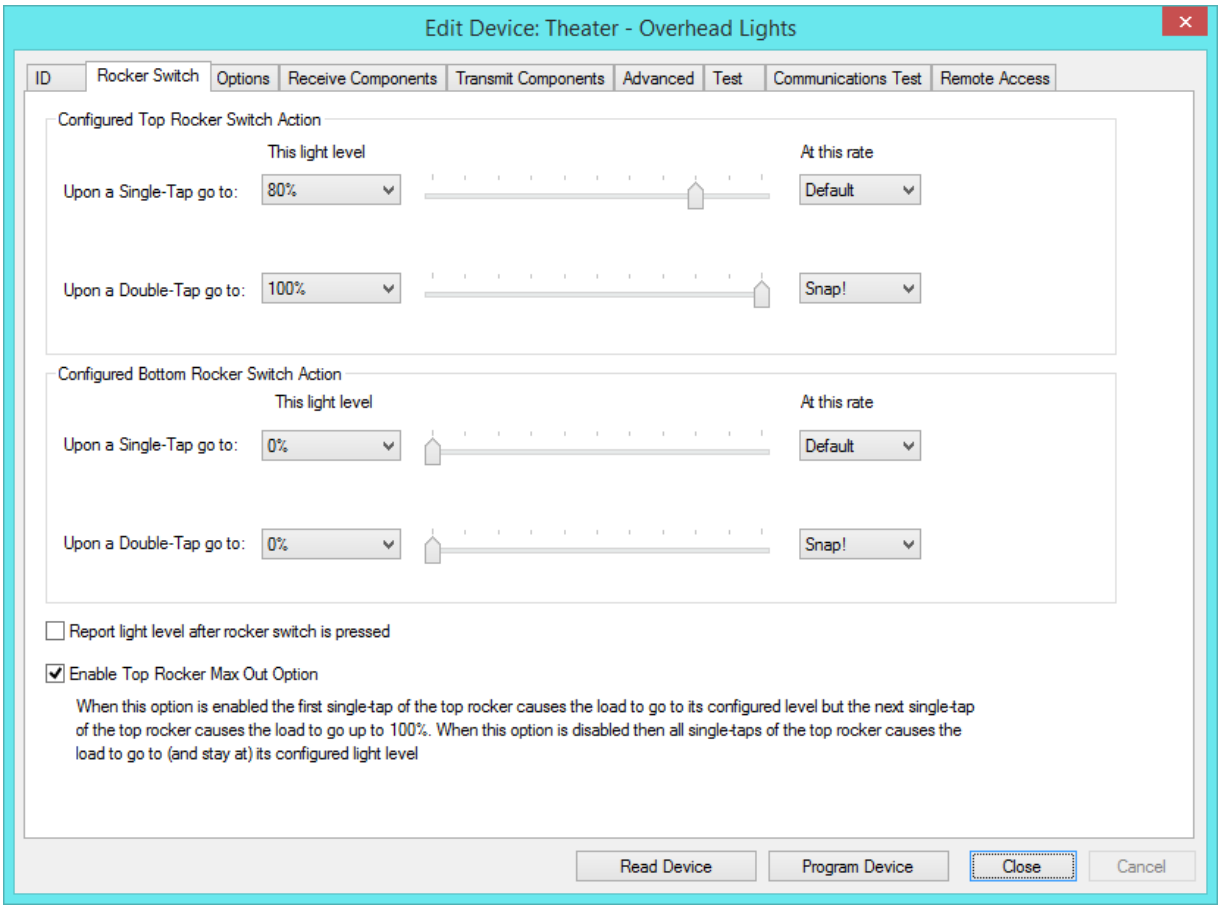

In this example, I've set the top rocker to control the lights to 80%. And if you read all the text for the "Enable Top Rocker Max Out Option" you can see that you can tap the top rocker again and the light will go to 100%. A useful option. Again, after making the change you must program the switch before the change takes effect.

Step 5 – A few words of caution

UPStart can change any option in any kind of UPB device. That's great, but like a sharp kitchen knife that makes fast work of a mess of root vegetables, it also can cut you rather badly. This application note specifically shows only the simplest configuration changes. Once you have UPStart and your network file you can made many other changes but do so only when you know what you are doing! The PCS web site has several other application notes that described various aspects of UPB devices.
To learn more about UPStart, there is a User Guide that can be downloaded that from the PCS web site as well.

Final advice: Go slow. Make only changes you are comfortable with, but it's your installation and UPB devices are more configurable than any automation gear available, so make it work the way you want.

##end##