

# ***PNET DC Power Control***

## **Quick Start Guide v2**

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Complete details can be found in the full length Layout Lighting Users Manual. You may download it from the PRICOM web site at [www.pricom.com](http://www.pricom.com).

# 1 Quick Start

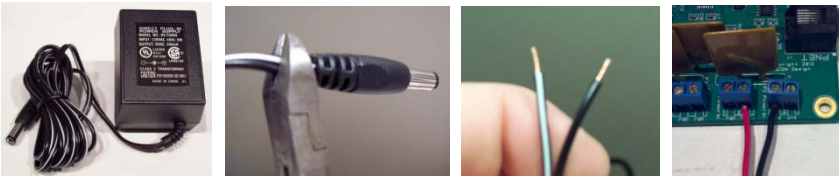
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The PNET DC Power Controller provides High-Current Control of DC loads. It can operate as a Switching device or as a Dimmer. The Dimmer function is perfect for driving LED lights, and LOTS OF THEM! Each of the 4 Control Outputs on this board can switch or dim up to 8Amps DC. The PNET control provides not only Control and Dimmer commands, but also software updates right over the network. This manual will get you going as quick as possible. Here are the basic steps to using your new PNET board.

1. Unpack the PNET DC Power Controller.
2. Connect the Required External Power Input.
3. Connect the Control Output Loads.
4. Set the DIP Switches.
5. Connect the PNET cable.
6. Test your new DC Power Controller.

## 2 Power Input (Required)

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**Figure 1 - Power Connection**

The PNET DC Power Controller requires an external power input to supply the current to drive large loads. Since each of the 4 outputs can supply 8Amps DC, you will need a power source of up to 32Amps. We suggest using 12VDC as your power source, it's easy to work with, and directly drives our LED strip lights. You can use up to 24VDC as your application requires. If your desired power-supply comes with a connector on the end, simply clip it off, and strip it as shown above. Secure the stripped wire ends to the GND and PWR terminal strips. We provided 2 positions of GND and PWR to make 'looping' a large power supply to multiple boards easier. There is no protection from reversed polarity, so be careful when attaching a large power supply!

## 3 Connecting Control Output Loads

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The Control Outputs are driven LOW (or SINK), so no voltage will appear from any of the Control Outputs. As a convenience to your wiring, we provided 2 PWR positions on the Output terminal strip. This is simply whatever PWR you have supplied to the Power Input terminal strip. The status of each Control



Output driver is indicated by the Output Monitor LED's. These LED's show on/off state, but also show the dimmer value in an approximation of intensity when running in Dimmer Mode. See the complete User Manual or our web site for examples of connecting various devices to the Control Outputs. See Figure 2 for the Control Output terminal strip pinout.

Terminal	Name	Description
1	Output-1	Control Output #1
2	Output-2	Control Output #2
3	Output-3	Control Output #3
4	Output-4	Control Output #4
5	PWR	Power supply output (12VDC)
6	PWR	Power supply output (12VDC)

**Figure 2 – Control Output Terminal Strip Pinout (P3)**

## 4 Set the DIP Switches

Operating modes are set using the on-board DIP Switch. The most important setting is the “slot number”. The slots are numbered from 0-15, using the DIP Switch position 1-4 to set the slot number desired.

Slot	Switch 1 2 3 4	Binary
0	↓↓↓↓	0000
1	↑↓↓↓	1000
2	↓↑↓↓	0100
3	↑↑↓↓	1100
4	↓↓↑↓	0010
5	↑↓↑↓	1010
6	↓↑↑↓	0110
7	↑↑↑↓	1110
8	↓↓↓↑	0001
9	↑↓↓↑	1001
10	↓↑↓↑	0101
11	↑↑↓↑	1101
12	↓↓↑↑	0011
13	↑↓↑↑	1011
14	↓↑↑↑	0111
15	↑↑↑↑	1111

**Figure 3 - Slot DIP Switch Settings**

The Slot setting is important so that devices can talk to each other on the PNET. There can be any number of devices with the same slot number, so you don't have to worry about making a mistake. With a PRICOM Layout Lighting Controller, you can send Control Output events to any output on any slot, so there is much flexibility for slot assignments.



The other Switch Setting of interest is Switch #8 which selects the Switch or Dimmer Mode. When switch #8 is off, the Control Outputs operate in Switching Mode. When switch #8 is on, the Control Outputs operate in Dimming Mode.

## 5 Connect the PNET Cable

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The PNET Jacks are both the same, giving you the flexibility to ‘loop’ through and connect many devices to the PNET network. The cables are 6-wire Modular cables and can be flat or twisted pairs. PNET cables include 12VDC power that comes in very handy for the PNET Control Output as the 12VDC on the cable can power many of the smaller boards. PNET Cables should be wired as “Straight Through” and not “flip” anywhere along the path. Nothing will be damaged if a cable is reversed, but the PNET Communications Data lines would be reversed making PNET malfunction. PNET cables can be plugged or unplugged with the power on.

Pin	Name	Description
1	+12VDC	PNET Power Supply
2	GND	PNET Signal Ground
3	PNET	Communications Data
4	PNET	Communications Data
5	GND	PNET Signal Ground
6	+12VDC	PNET Power Supply

**Figure 4 - PNET Jack Pinout**

## 6 Test Your New Module

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With the power applied from your external power supply, and the PNET cable attached, you should see the Green LED light showing a functional board. The Red LED will show anytime this board sends data on the PNET, or if this board receives any data. In Dimmer Mode, the Red LED will flash anytime there is a dimmer intensity change to the PNET DC Power Controller.

If you have any further questions you can consult the full length manual from our website [www.pricom.com](http://www.pricom.com). You may also visit [www.bobsbench.com](http://www.bobsbench.com) for some fun Layout Lighting and Dream Player applications.

