



## ***PNET Hex Driver***

### **Quick Start Guide v1**

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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 Hex Driver 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 16 Control Outputs on this board can switch or dim up to 1Amp 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 quickly as possible. Here are the basic steps to using your new PNET Hex Driver board.

1. Unpack the PNET Hex Driver.
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 Hex Driver.

## 2 Power Input (Required)

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**Figure 1 - Power Connection**

The PNET Hex Driver requires an external power input to supply the current to drive large loads. Since each of the 16 outputs can supply 1 Amp DC, you will need a power source of up to 16Amps. We suggest using 12VDC as your power source, it's easy to work with, and directly drives 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 “Power In” Terminal Strip GND and PWR terminals.

**There is no protection from reversed polarity!**

**Please be careful when attaching a large power supply!**



### 3 Connecting Control Output Loads

The Control Outputs are driven LOW (or SINK), so no voltage will appear from any of the 16 Control Outputs. As a convenience to your wiring, we provided 2 PWR positions on the “Power Out” 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 Status 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 on our web site for examples of connecting various devices to the Control Outputs.

### 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 0-63, using the DIP Switch position 1-6 to set the slot number desired.

The following table shows the first 16 slots in Binary form. Switch-1 is the Low bit (LSB), and so on.

Slot	Switch 1 2 3 4 5 6	Binary	Slot	Switch 1 2 3 4 5 6	Binary
0	↓ ↓ ↓ ↓ ↓ ↓	000000	8	↓ ↓ ↓ ↑ ↓ ↓	000100
1	↑ ↓ ↓ ↓ ↓ ↓	100000	9	↑ ↓ ↓ ↑ ↓ ↓	100100
2	↓ ↑ ↓ ↓ ↓ ↓	010000	10	↓ ↑ ↓ ↑ ↓ ↓	010100
3	↑ ↑ ↓ ↓ ↓ ↓	110000	11	↑ ↑ ↓ ↑ ↓ ↓	110100
4	↓ ↓ ↑ ↓ ↓ ↓	001000	12	↓ ↓ ↑ ↑ ↓ ↓	001100
5	↑ ↓ ↑ ↓ ↓ ↓	101000	13	↑ ↓ ↑ ↑ ↓ ↓	101100
6	↓ ↑ ↑ ↓ ↓ ↓	011000	14	↓ ↑ ↑ ↑ ↓ ↓	011100
7	↑ ↑ ↑ ↓ ↓ ↓	111000	15	↑ ↑ ↑ ↑ ↓ ↓	111100

Figure 2 - Slot DIP Switch Settings

The Slot setting is important so that devices can talk to each other over 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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Both of the PNET Jacks are 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 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 3 - 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 lights up. This shows you the board is functioning. The Red LED will light anytime the board sends data over PNET, or if the board receives any data. In Dimmer Mode, the Red LED will flash anytime there is a dimmer intensity change to the PNET Hex Driver.

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.

