

Prospero v3 DMX Cue Light Controller



User Manual

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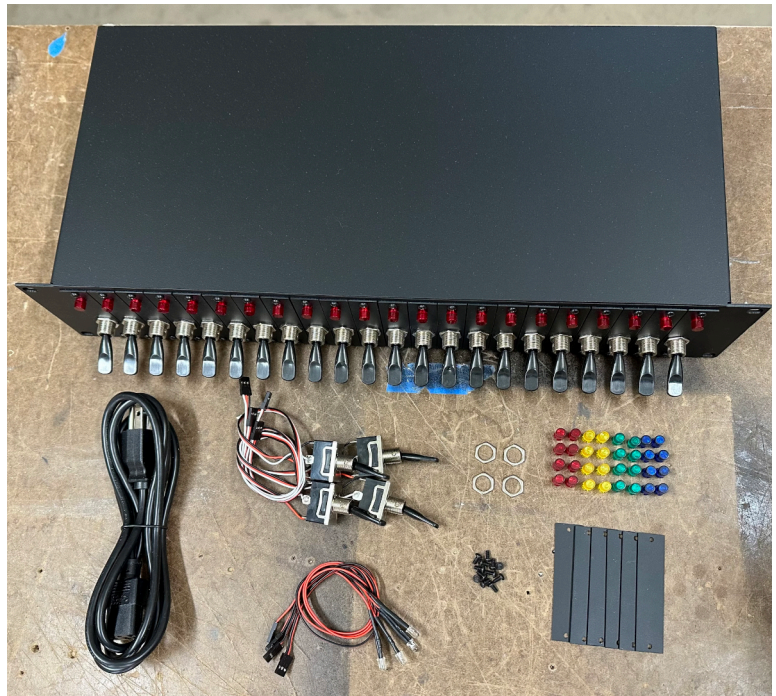
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Unpacking your Prospero

What's in the Box?

A standard Prospero unit includes:

- Prospero cue light panel (1) with (22) switches installed
- Power cord (1)
- Spare parts kit, including:
 - Red, Green, Yellow, Blue colored lenses, (8) each
 - Spare switches (4)
 - Spare switch nuts (4)
 - Spare LEDs (4)
 - Blank plates (single-wide) (6)
 - Spare screws (12)



How do I know if I have a Prospero v2 or v3?

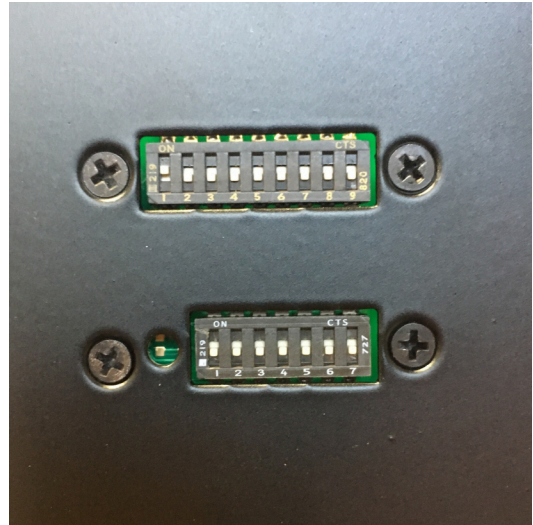
The outside case of the v2 and the v3 are identical (and can be physically upgraded - v3 is backwards compatible with v2), but v3 has an ethercon connector below the DMX ports.

Getting Started - Setting the DIP Switches

All DIP switches on the back of the unit must to be set to OFF (down) for the unit to operate in v3 mode.

It is possible for Prospero v3 to operate in **v2 emulation mode**.

If the start address is set to anything other than 0 on the DIP switch module, the unit will operate as a v2 unit, with the functionality described in the **Prospero v2 User Manual**.



The DIP switch module can be completely unplugged from the main board if you want it to always be in v3 mode. Be aware that this will disable the configuration reset function as well - the module will need to be reconnected before the unit can be reset.

Customizing the Switch Configuration

Individual switch plates can be rearranged as needed, and blank plates can be inserted between switches to create logical and tactile groups. Blank plates are available in single- and 4-wide sizes.

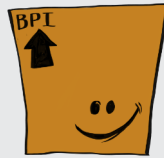
Rearranging Switch Plates

The switch plates are held on by two screws. Remove those screws, and the switch plates can be moved around and reinstalled in different slots.



We recommend only using hand tools or low-torque power tools to install and remove the screws, as they can be very hard to remove if they are sheared off in the panel.

Once the switch plates are arranged (and any blank plates installed), you can swap out the LED color on each plate by replacing the LED lens.



Need more plate screws?

They're 1/4" long, 4-40 pan-head stainless steel screws, available from McMaster-Carr (Part #91249A105).

Replacing LED Lenses

To remove the LED lens:

- Push the lens all the way in towards the back of the panel.
- Remove the LED from the lens.
- Once the LED is removed, push the lens back towards the front of the panel.
- Either use your fingers to get one of the tabs out past the hole, or once pushed all the way forwards, you can rotate the lens off-axis to get a retaining tab to pop free.
- Once a tab has popped free, the whole lens should come straight out.

To install the LED lens:

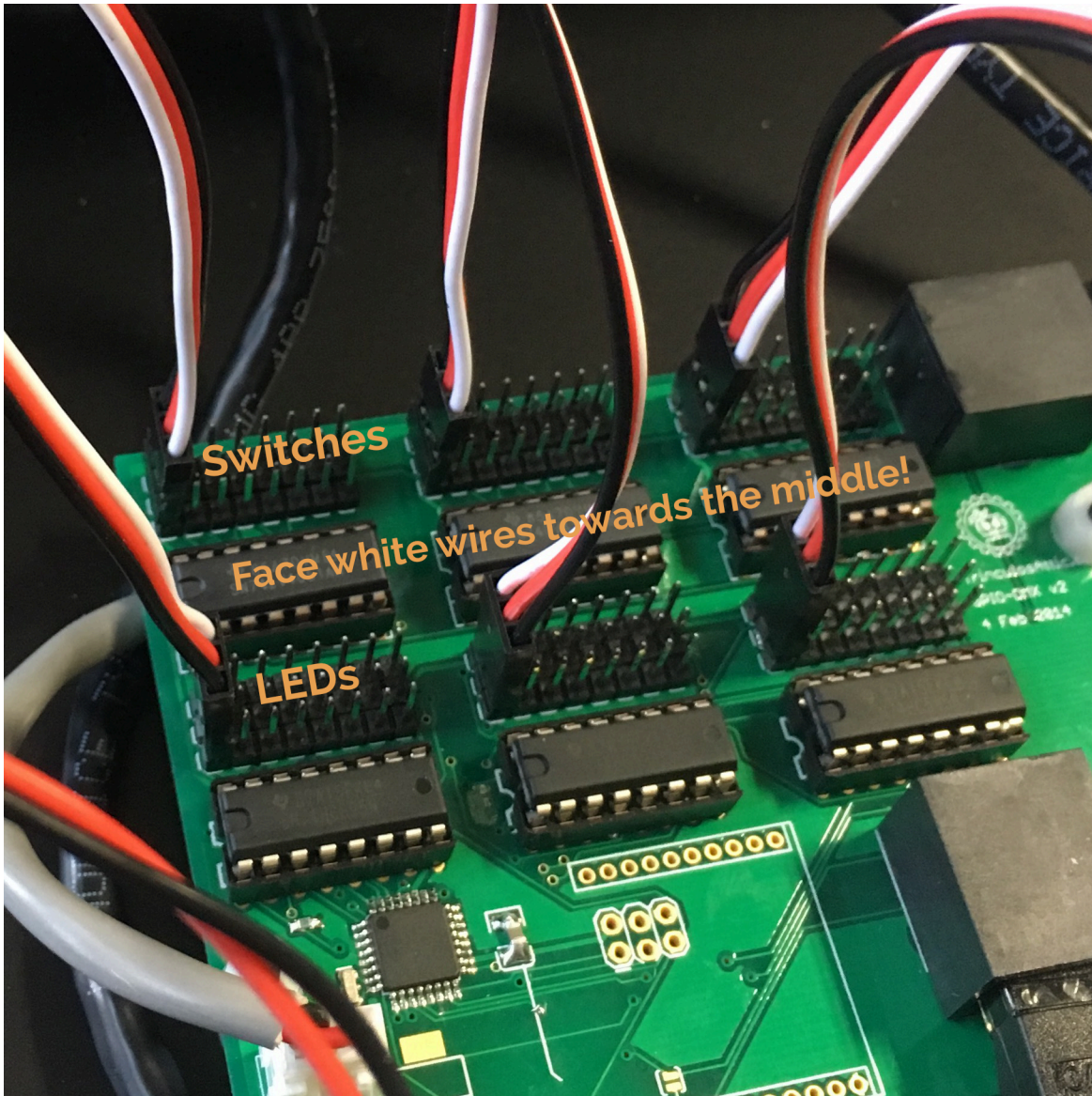
- To install the new lens, don't try to push it straight in.
- Angle the lens so that you get a couple of the retaining tabs into the hole, then rotate it to lever the lens against those to push the other tabs in.
- Once you have all four tabs in, push the lens all the way in to the ledge.
- Install the LED from the rear.
- Push the lens towards the front of the panel until the back of the tabs are against the plate.



With the currently-shipping LEDs, this will hold the LED in place. If you have an older half-size LED, you may need a dot of hot glue to hold the LED in place.

Repatching Switches & LEDs

Inside the unit, the switches and LEDs can be repatched to the main control board to match the setup of the front panel.



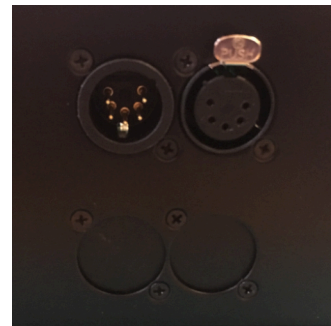
- The "top" row (away from the switches) connects to the switches while the "middle" row (closer to the switches) connects to the LEDs.
- Switch 1 is the farthest to the left, Switch 24 is farthest to the right, and they're patched in banks of 8.
- The black or brown wire for the switches faces towards the back of the panel. The black or brown wire for the LEDs faces towards the front of the panel.

Connecting Power and Data

Connecting Power

There are two options for powering the unit:

- **Wall power (95-250VAC):** Plug the included power cord into the unit's IEC connector. When using wall power, the power switch will control device power.
- **PoE (802.3af Class 0, or 48VDC passive):** Connect the unit to a PoE switch or power injector via the unit's ethernet port. When powered by PoE the power switch does not turn the device off.



When servicing the unit with the lid off, we always recommend unplugging all external connectors.

Connecting Data

There are two options for connecting data to the unit.

- **DMX:** The DMX ports on the back of the device are a straight pass through - rather than a DMX In and DMX Out, they're both connected to a DMX transmitter as long as the panel is switched on. This lets you hardwire backups inline: which device is in control is determined simply by which one is turned on.
- **Ethernet:** The v3 uses ethernet for configuration settings, as well as outputting sACN universes to control cue lights. If ethernet is already connected for PoE, you're all set. If not, connect the unit to your network switch via the ethernet port on the back.

These options can be used individually or simultaneously - see [Page 9](#) for details on data output and configuration.

Turning the Panel On

- If powering via power supply, flip the power switch on the back of the unit to On (up).
- If powering via PoE, the unit will turn on as soon as power is available.

When you turn the panel on, all the LEDs should light up from the center outward. Then DMX output will start, and the LEDs will reflect the switch state.

Programming and Configuration

Connecting to Web Interface

To use Prospero's web configuration interface, the unit must be connected to your network or computer via the ethernet port on the back of the device. See [Page 7](#) for instructions on connecting data via ethernet.

Signing In

Sign into the web interface by opening a browser and typing **10.1.0.20** into the URL bar. You may need to adjust your computer's network settings to put it on the same subnet as this.

Additionally, the Prospero's IP address can be changed. If you have changed it, please substitute that IP address for the default address here. If configuration has been reset, it will default back to 10.1.0.20.

Configuring Device and Network Settings

The first section of configuration settings controls the device as a whole.

Save Settings

This button appears at the top and bottom of the Web Interface. Changes are not saved until you press the button.

Identify Mode

Checking this box will cause the device LEDs to flash on and off, but will not blink the outputs. Unchecking the box will stop this behavior.

This is helpful if you have multiple Prosperos on a network, to ensure that you are talking to the correct one.

Device Label

This is a label used to identify the device, with a maximum of 32 characters or octets (i.e., if you use unicode it may be less than 32 characters). This information shows up in the sACN label.

IP Address

This shows the current IP address and allows you to edit the IP address if needed. Be aware that you will need to access the web interface through the new IP address to restore connection after changing the unit's IP address.

Additionally, if you change the IP address, it will not take effect until you reboot the unit.

Netmask

This should match the subnet settings on your network.

Gateway Address (optional)

This is the address for your default router, if needed.

OSC Port

This is the port for OSC packets, but is currently unimplemented.

sACN Default Universe

This is the default universe for output. The default universe is always output from the DMX connectors on the back of the device. If this value is set to 0, the default universe will not output through sACN, only through DMX.

See [Page 11](#) for more details on default universe configuration.

The screenshot shows a web interface for configuring a device. At the top, there are two buttons: 'Save Settings' (highlighted in blue) and 'Identify Mode' (with a checked checkbox). Below these is the title 'Configuration Options' and a sub-section 'Device and Network Settings'. The settings are as follows:

Device Label	Prospero
IP Address	10.1.0.20
Netmask	255.255.0.0
Gateway Address	10.1.0.1
OSC Port	9000
sACN Default Universe	1
sACN Priority	100
Group Switch ID (0 all independent):	0

sACN Priority

This is the priority 1-200 for the data output from the device. Prospero does not support per-channel priority.

Group Switch ID

- If set to 0, all of the switches operate independently.
- If set to a value 1-24, that switch will control all other switches. If the group switch is off, all switches are output as 0. If the group switch is on, all switches will output based on their value.
- Note that the Group Switch can also be patched into an output.

Reboot Controller

This button reboots the controller. When changing the IP address, the controller must be rebooted for the change to take effect. Additionally, some changes to the switch output settings will require a reboot to take effect, so it is generally a good idea to reboot after changing settings.

Save Settings

Reboot Controller

Configuring Switch Settings

The Switch Settings section settings allows you to configure output information for each switch.

Simple addressing allows you to easily set a single address to on (100%) or off (0) with each switch.

Advanced addressing allows for more complex programming of switches, including:

- Controlling multiple addresses with a single switch
- Setting each address to a specific level, rather than on/off

See details below on how to configure switch addresses.

Simple Addressing

- If a number 1-512 is put in the box next to the switch, it will patch that switch in the default universe. Note that the default universe is also output from the DMX port on the back of the controller.
- In the screenshot at right, each switch is patched to its own DMX address (so switch 1 is 1, switch 2 is 2, etc.). If we entered "45" for switch 3, then switch 3 would control DMX address 45.

Switch Settings

#	Address
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Defaults to specified universe. See manual for advanced addressing features.

If you do not need more than one universe output, it is recommended to set things up this way with the sACN Default Universe set to the universe you want output, and the switches patched as needed.

With this notation, when a switch is off, it outputs 0; when a switch is on, it outputs 100%.

Addressing Outside the Default Universe

The Prospero v3 can output multiple universes. At the moment, this is capped at 9 universes, and the default universe is always in the first one.

All universes are output as multicast.

There are two ways to notate addresses in universes other than the default universe:

- **Absolute address:** 513 is the first address in universe 2
- **Slash notation:** 2/1 is the first address in universe 2.



If sACN Default Universe is not set to 1, absolute addresses 1-512 will be mapped into the default universe. For addresses in universe 1, slash notation (1/1 - 1/512) must be used.

Advanced Addressing

Setting Levels

- Using the simple addressing method above, a number with no other delimiters or punctuation sets that slot to 255, or 100%.

Ex: "312" is the same as "312 @ 255".

- To set an address to a level between 0 and 255, use an @ symbol between the address and level.

Ex: To have Switch 1 set address 312 to 127, input "**312 @ 127**" in the address field for Switch 1.

- The level can also be set as a percentage of 255 by including a % symbol after the level number.

Ex: "**312 @ 50%**" is valid syntax and is the same as "**312 @ 127**".

All whitespace in the address field is ignored, so "312@127" is the same as "312 @ 127".

Values above 255 or 100% are invalid and will set the level to 255.

Addressing Ranges

- Addresses can be specified as inclusive ranges using the "-" operator.

Ex: "312-314" specifies the addresses 312 through 314, including both ends (312, 313 and 314)

- Ranges may be combined with the "@" operator to set a range to a specific level:

Ex: "312-314 @ 50%" will set addresses 312, 313 and 314 to 50%.

- Ranges may not span universes. "510-514" is not a valid range. In this case, use the complex syntax below to specify multiple ranges for the same switch.

Complex Syntax

- "Address @ level" phrases can be combined with semicolons

Ex: "312 at 100%", "313 at 50%" and "314 at 25%" can be written: "312 @ 100%; 313 @ 50%; 314 @ 25%".

- Semicolons and dashes can be combined as well, to include ranges rather than single addresses:

Ex: "311-316; 317 @ 127; 515 @ 10%" will set addresses 311, 312, 313, 314, 315, and 316 (in the default universe) to full, slot 317 to 127, and universe 2 address 3 to 25 (10%).

- To specify a range across multiple universes, separate the addresses into a range for each universe, and combine with a semicolon:

Ex: To specify the range "510-514", use "510-512; 513-514" (absolute addressing) or "510-512; 2/1-2" (slash notation).

Notes and Limitations

- There is a hard limit of 100 address in any switch (that is, 1-100 is fine, but 1-101 will only control 1-100)
- Address specifications are limited to 100 characters per switch
- Output is currently capped at 9 universes. If you address more than 9 universes, the first 9 used in configuration will be output, while additional universes will be ignored silently.

Finishing Configuration

- The controller must be rebooted after all configuration changes are complete.
- First click the “Save Settings” button.
- Then, click the “Reboot Controller” button at the bottom of the Configuration page.
- The controller can also be rebooted by power cycling.

23	<input type="text" value="23"/>
24	<input type="text" value="24"/>

NOTE: The web interface has not been tested with every possible long address string, so it is possible to crash the controller if using a very complicated address string.



If the controller is still working after reboot, but a specific switch isn't functioning, try rewriting the address field for that switch.

If the controller crashes on reboot, you will need to use the factory reset function to clear the configuration and start over.

If you have problems with a particular syntax crashing the system, please email us at support@benpeoples.com to report the bug!

Factory Reset

Resetting the Prospero v3

- Turn the unit off.
- Turn all of the DIP switches **off** (down) except for Switch 7 on the “mode” bank (the 7-position DIP switch module). Set Switch 7 to **on** (up).
- Turn all of the switches on the front panel **off** except for Switch 24. Turn Switch 24 **on**.
 - This may require repatching a switch into the 24th position.
- Turn the unit on, wait 30 seconds, and then turn it back off.
- Turn DIP Switch 7 and cue Switch 24 **off**.
- Turn the unit back on.

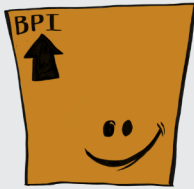
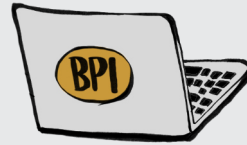
Configuration will be cleared out and the unit will be in its default state.

More Information



Having problems? Check out the [Prospero Troubleshooting page](#) on our website for up-to-date solutions to common problems!

How-to videos and Prospero setup tutorials can be found in our [Online Prospero Manual](#).



Need spare parts? Consult our [Visual Guide to Prospero Parts](#) to figure out what you need!