

SpriteDrive™

DMX32USB-12/24/48

Quick Reference Guide



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This quick reference guide has been designed to help you set-up your SpriteDrive™ DMX32USB-12/24/48 controlled lighting system quickly and effectively. You can find various connection diagrams in this guide that show you how to connect different controllers and fittings properly and safely.

1.0 OPREATING MODES

The SpriteDrive™ Configuration Utility can be downloaded from the SpriteDrive™ website. This allows the DMX32USB-12/24/48 controller to be configured in one of three operating modes:

1.1 ‘DMX In’ Mode

The DMX signal is input to either the XLR or the USB input. When the DMX signal is applied to the XLR input, it is wired through to the XLR output allowing the DMX signal to be daisy-chained to further DMX32USB units and/or other DMX devices (see Diagram 1-1). When the DMX signal is applied to the USB input, it is not available on the XLR output (see Diagram 1-2). **Data should not be input to both the USB and XLR inputs at the same time.**

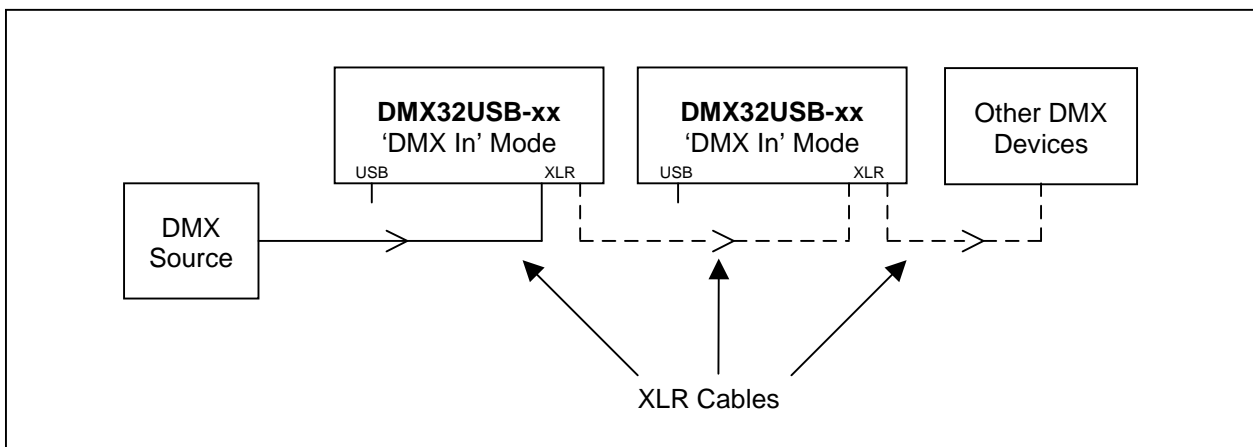


Diagram 1-1: ‘DMX In’ mode with DMX signal applied to XLR input.

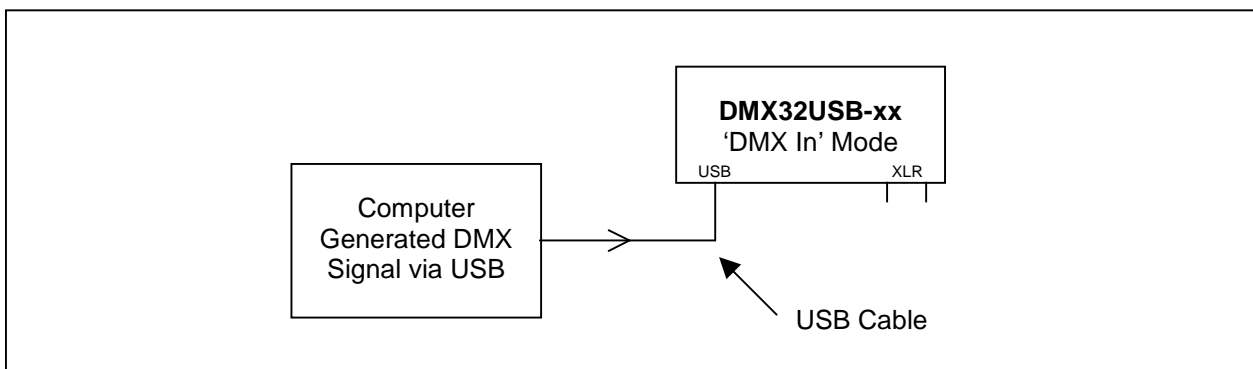


Diagram 1-2: ‘DMX In’ mode with DMX signal applied to USB input.

1.2 ‘DMX Out’ Mode

The DMX signal can only be input to the USB input, but is also output on the XLR connectors (see Diagram 1-3). In this configuration the device also acts as a USB to DMX dongle. Note that other DMX32USB units in the chain must be in the ‘DMX In’ configuration.

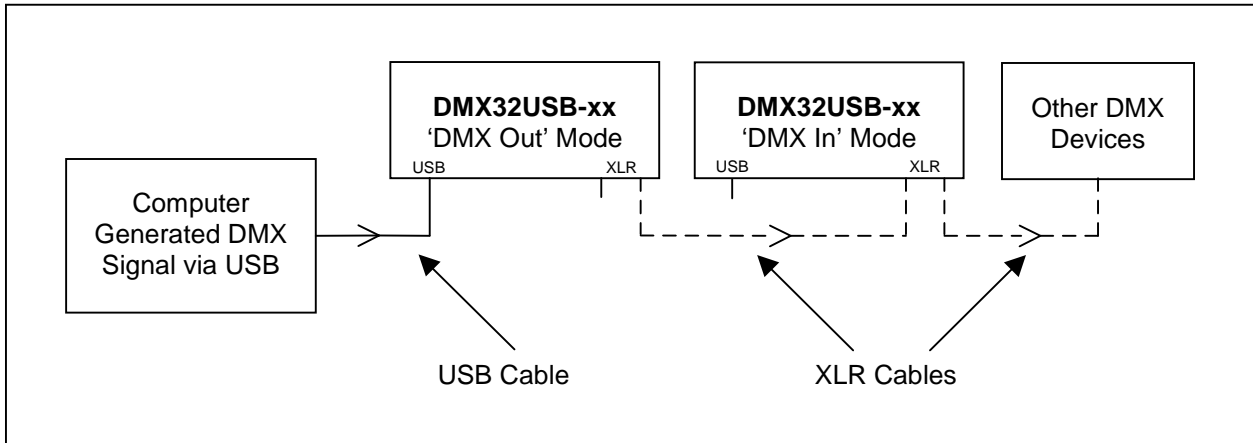


Diagram 1-3: ‘DMX Out’ mode with the first DMX32USB unit generating an XLR DMX signal.

1.3 Sequence Mode

This mode allows the DMX32USB controller to operate as a stand-alone sequencer. Custom sequence files can be loaded into the flash memory of the device using the configuration utility and then played back continuously by the controller. Playback of the sequence is activated by setting the DMX base address to any value other than zero. Note that the DMX operating modes are disabled when the device is configured as a sequencer. **DMX data should not be input to the USB or XLR inputs in this configuration.**

Sample sequence files (with the extension *.SEQ) are provided with the Configuration Utility and can be found in the "Samples" subdirectory of the installation folder.

Custom sequences can be created using a spreadsheet package or text editor to generate a comma separated file (*.CSV). This must then be converted into a sequence file (*.SEQ) using the SpriteDrive™ Sequence Converter (which can be downloaded from the SpriteDrive™ website).

Please see the additional documentation available from the SpriteDrive™ website for further information on the sequence configuration and generating custom sequences.

2.0 CONNECTING THE OUTPUT CHANNELS

Many different loads can be connected to the DMX32USB output channels. This section shows how various configurations can be achieved using different power supply set-ups.

Note that the term ‘controller voltage’ refers to the supply voltage of the DMX32USB controller (i.e. 12V, 24V or 48V), and the term ‘load voltage’ refers to the supply voltage of the loads. These two values can be different; for example a DMX32USB-12 (12V controller voltage) could be used with 24V loads (24V load voltage). All variations of DMX32USB-12/24/48 can drive loads of up to 48V.

2.1 Using a Single Power Supply

The DMX32USB controller can be incorporated into a system that uses one power supply. This arrangement is illustrated in Diagram 2-1, where one power supply is used for both the controller and the output loads. You must ensure that the proper voltage version of DMX32USB is used, e.g. 12V, 24V or 48V version, and that this matches the voltage of the loads and power supply.

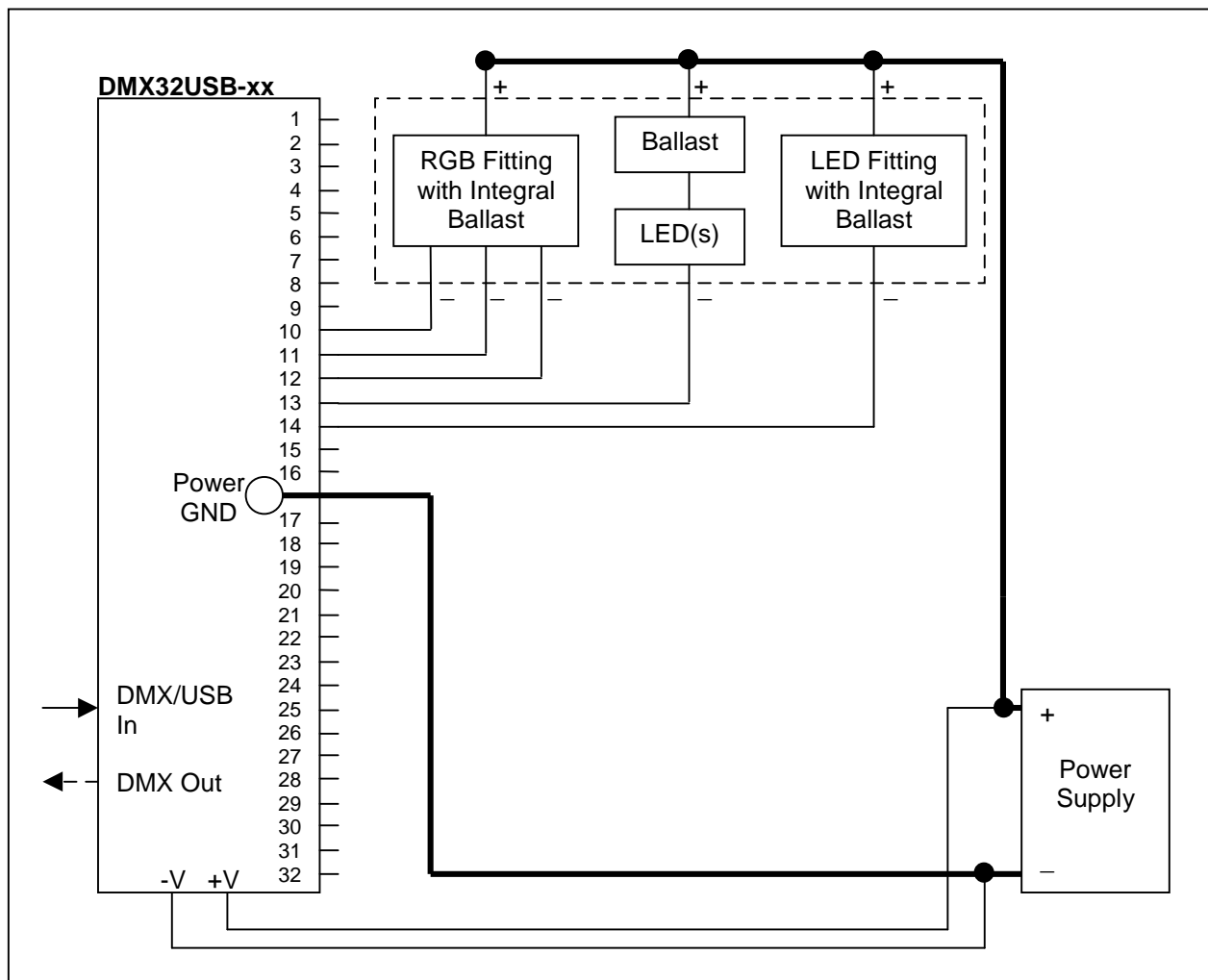


Diagram 2-1: Typical connection diagram using a single power supply.

2.2 Connecting More Than One Power Supply

Example 2.2.1

Two separate power supplies can be used, where one powers the DMX32USB controller and the other powers the loads. This is illustrated in Diagram 2-2. You must ensure that the version of DMX32USB matches the controller power supply, i.e. if a DMX32USB-12 (12V controller) is used a 12V supply must be used. The supply that is used for the loads must match the voltage of the loads, i.e. if 24V loads are used a 24V supply must be used. In this case the negative terminals of the two power supplies do not have to be connected.

It is important that the negative terminal of the load supply is wired to the ‘Power GND’ connection on the controller.

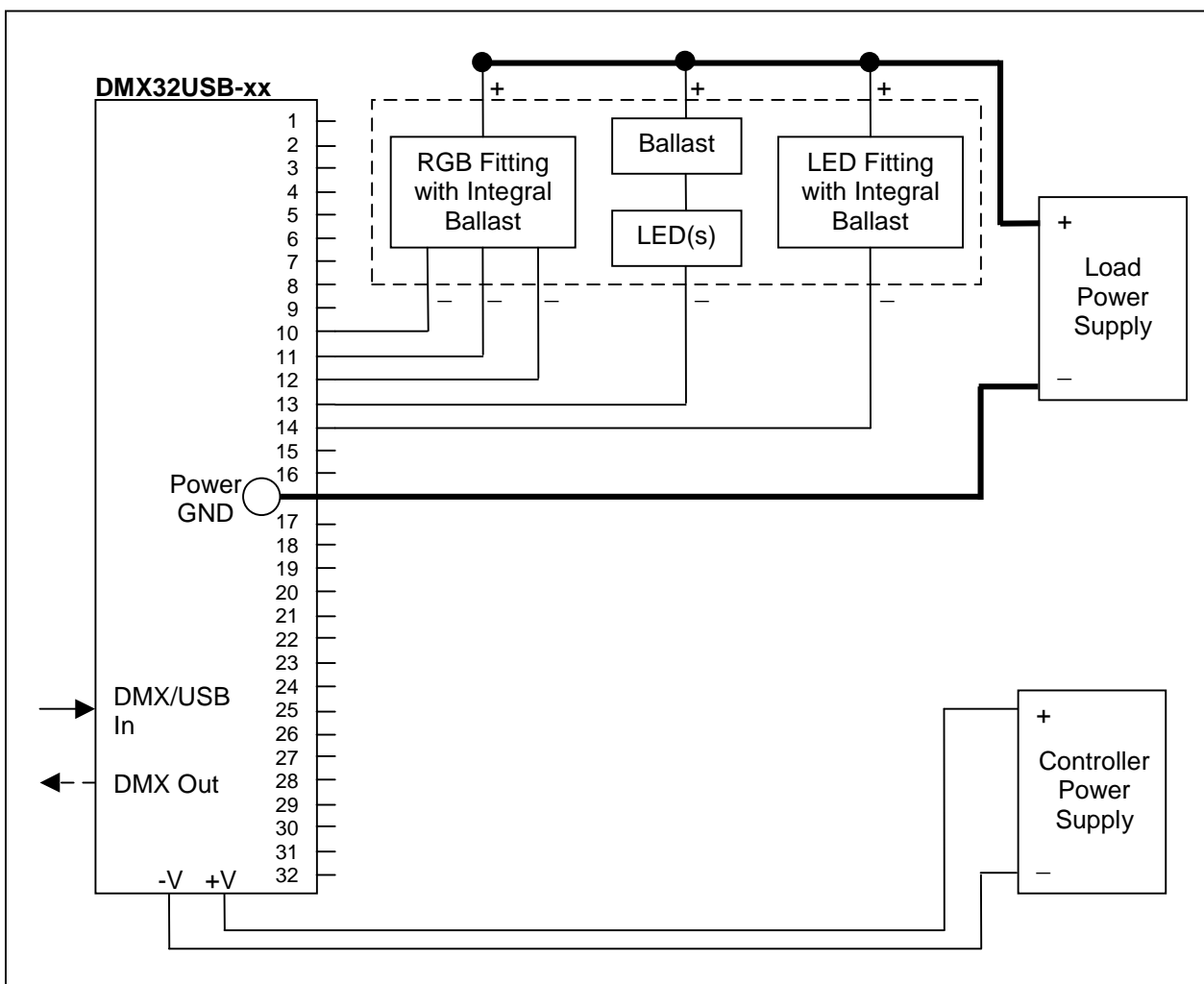


Diagram 2-2: Connection diagram using separate power supplies for the controller and loads.

Example 2.2.2

Multiple power supplies can be used to power different voltage loads. In this arrangement you can use multiple power supplies for the loads. Diagram 2-3 shows a typical wiring diagram for this arrangement, where 12V, 24V and 48V loads are used. Note that the power supply for the controller could be one of the power supplies used for the loads, e.g. if you were using a DMX32USB-24 (24V controller) it could be connected to the 24V power supply for the 24V loads. If a separate supply is used for the controller it is not necessary to connect the negative terminal of the controller supply to the negative terminal of the load supplies.

It is important that the negative terminals on all of the load supplies and the 'Power GND' connection on the controller are wired together.

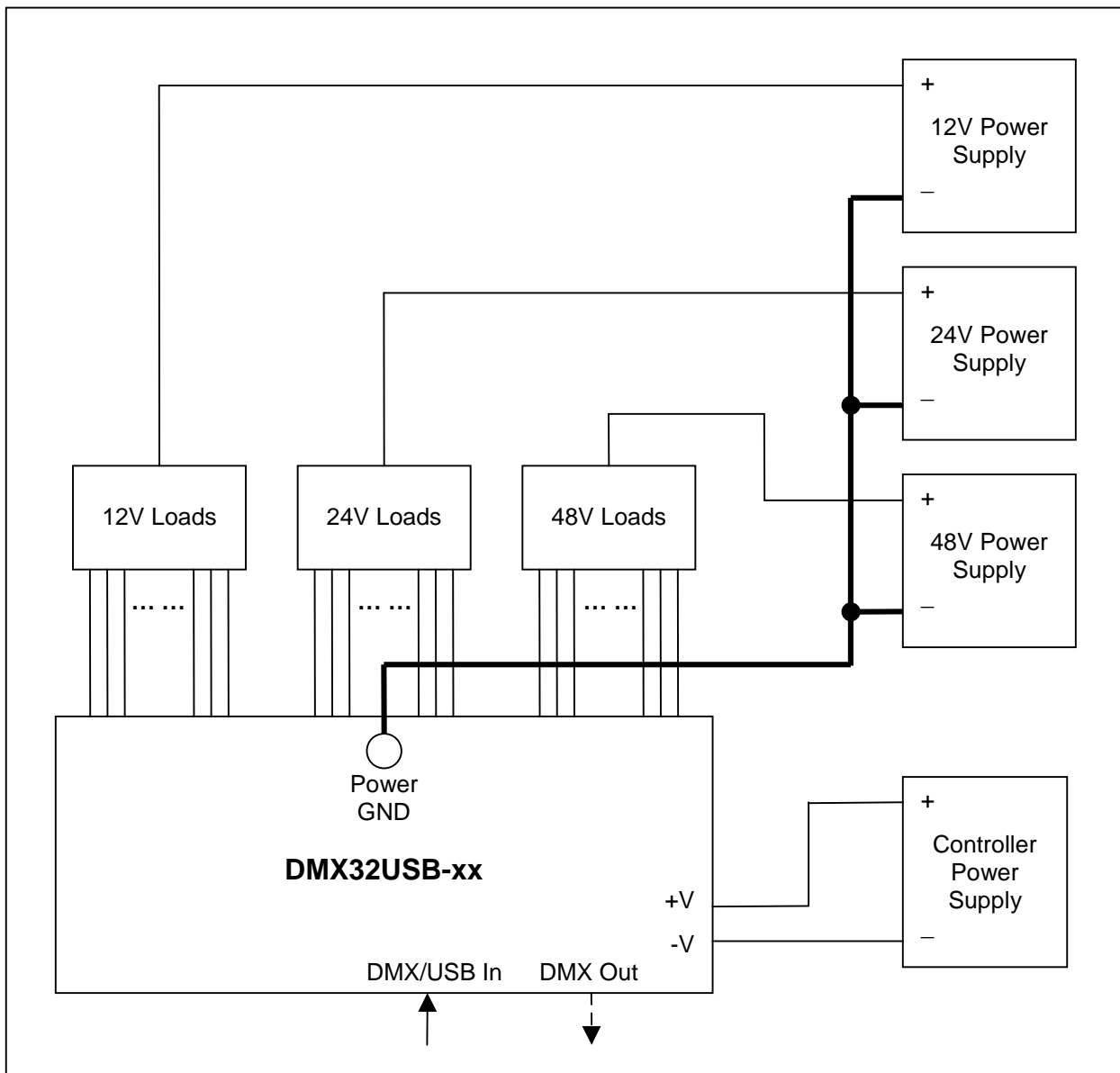


Diagram 2-3: Connection diagram using different voltage loads.

Example 2.2.3

If the load current is greater than the available current from the power supply, more than one power supply of the same voltage can be used. This is illustrated in Diagram 2-4, which shows two 12V power supplies for a number of 12V loads. Note that in this example if a DMX32USB-12 (12V controller) was used, the power supply for the controller could be one of the power supplies used for the loads. If a separate supply is used for the controller it is not necessary to connect the negative terminal of the controller supply to the negative terminal of the load supplies. Also note that further load power supplies of different voltages could be used if required (as shown in Example 2.2.2).

It is important that the negative terminals on all of the load supplies and the 'Power GND' connection on the controller are wired together.

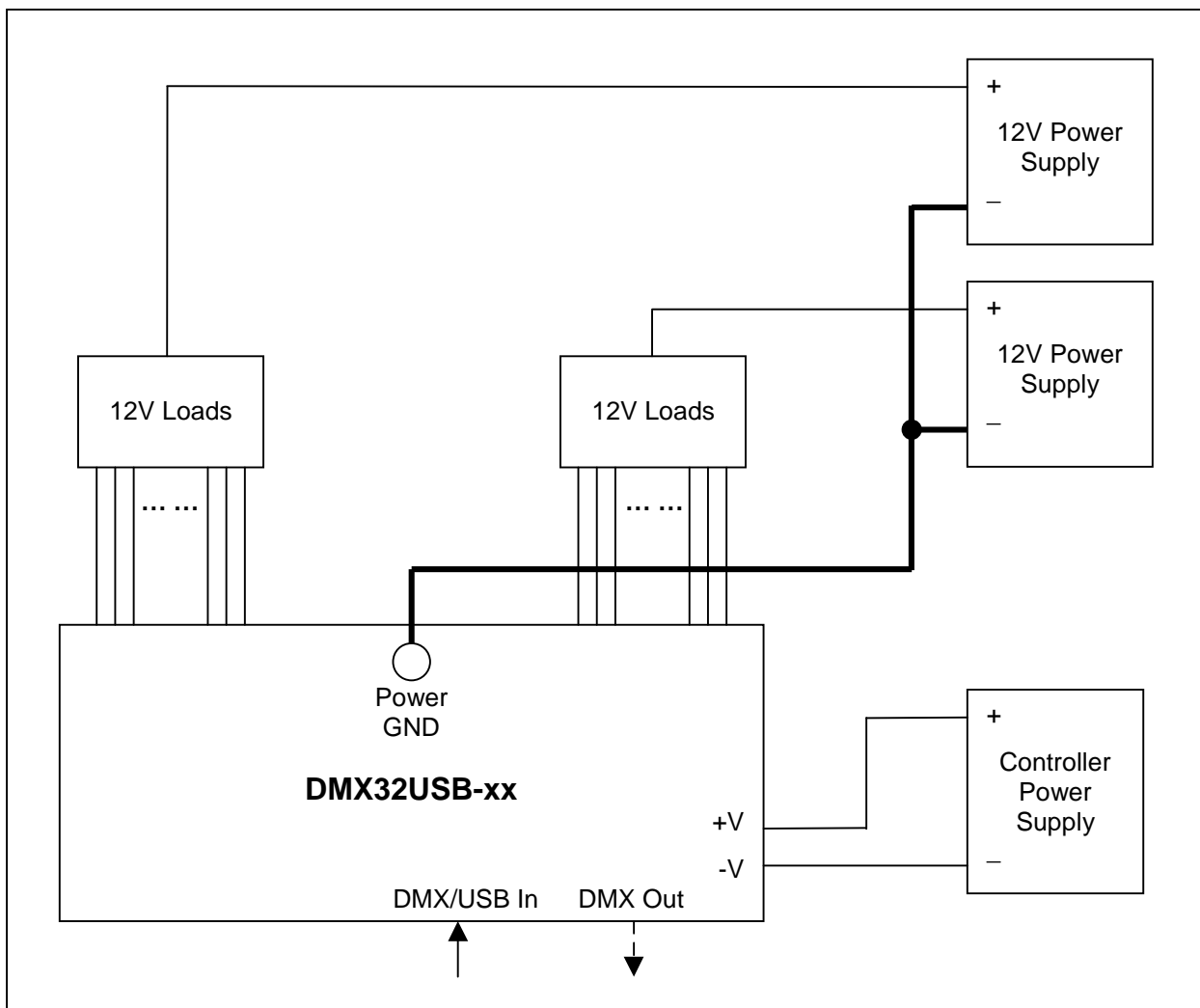


Diagram 2-4: Connection diagram using multiple power supplies of the same voltage.

3.0 DIP SWITCH SETTINGS

3.1 DMX Base Address Selection

The DMX Base Address can be selected using the DIP switches on the DMX32USB, and can be set anywhere in the range of 1 to 511. This is done by setting the required DIP switches to the 'ON' position. Diagram 3-1 shows various examples of how the DMX Base Address is set. The Base Address can be calculated by adding up the numbers written above the switches that are in the 'ON' position.

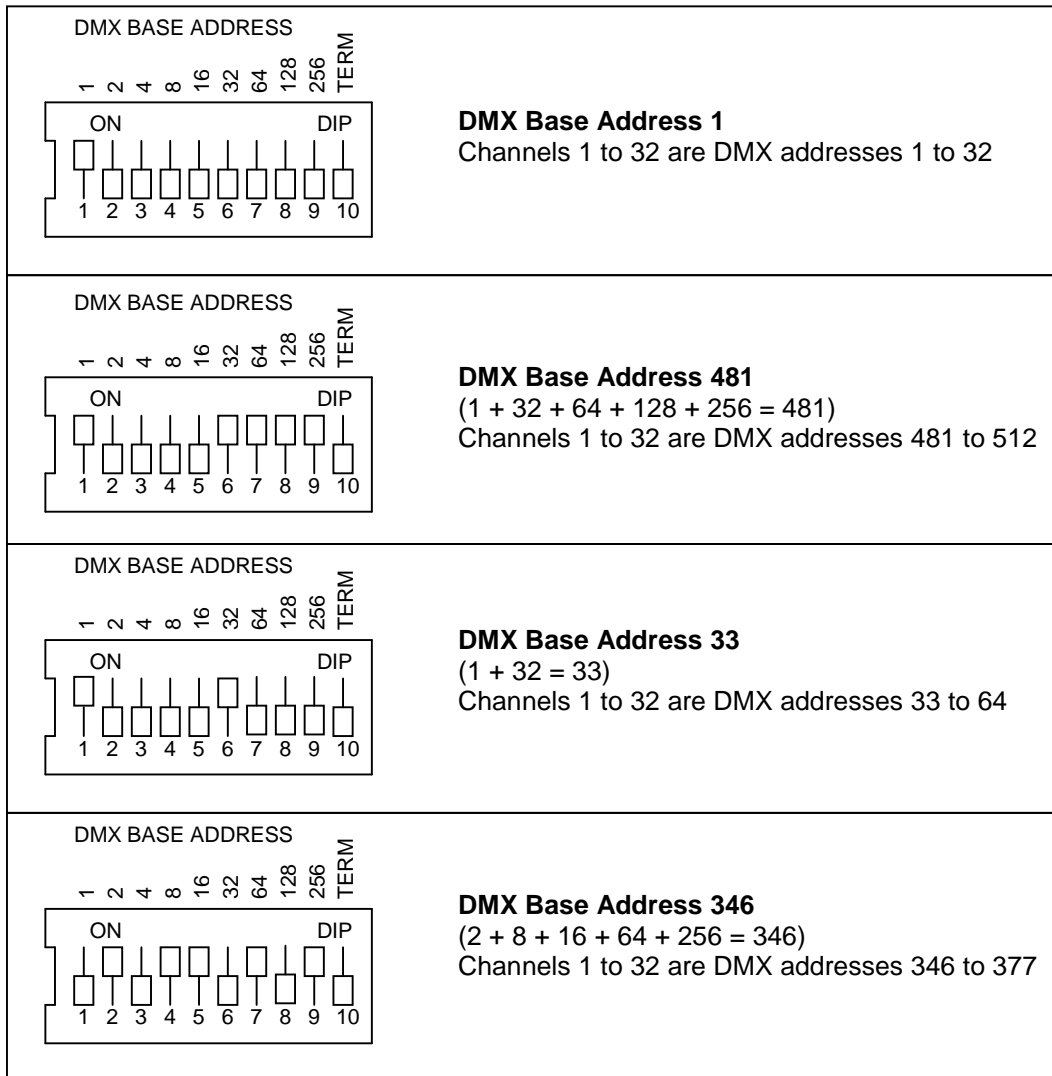


Diagram 3-1: Examples of DIP Switch Settings for Various DMX Base Addresses.

Note that the base address can be changed at any time and will take effect immediately, i.e. the DMX32USB does not need to be turned off then on again.

Units in the chain do not have to be arranged in order of increasing base address. Also note that if you wish to duplicate addresses so as to exactly copy light effects then that is possible as long as you do not have more than 16 DMX units in a chain.

3.2 DMX Termination

There is no need to purchase a DMX Terminator since the DMX32USB features switchable DMX Termination. If the DMX32USB is the last device in the DMX chain, DMX Termination is required. This is achieved by setting the 'TERM' switch to the 'ON' position, as shown in Diagram 3-2. DMX Termination is possible for any DMX Base Address setting.

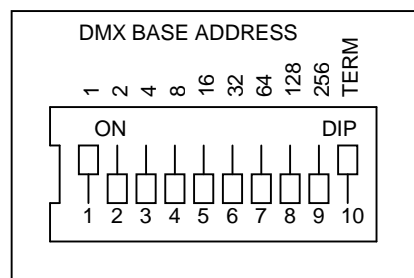


Diagram 3-2: DMX Termination.

Note that the termination should be applied to the last unit in the chain, not necessarily the unit with the highest base address.

3.3 Test Mode Activation

Setting the DMX Base Address to zero, i.e. all switches in the 'OFF' position (as shown in Diagram 3-3), activates the stand-alone Test Mode. During Test Mode the output indication LEDs on the DMX32USB scroll from side to side, i.e. power is applied momentarily at 100% to each of the output channels.

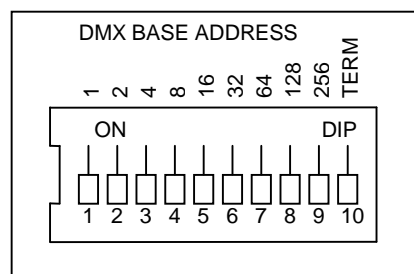


Diagram 3-3: DIP Switch Settings for Test Mode Activation.

Note that any loads connected to the output channels during test mode will be driven by the test sequence.

3.4 Reserved Addresses

Since the highest base address required for the DMX32USB is 481 (output channels 1 to 32 are DMX addresses 481 to 512), the switch settings in the range 482 to 511 are reserved for future use as built in test sequences incorporating dimming etc.

If you are uncertain in any way about how to set up your SpriteDrive™ DMX32USB-12/24/48 controller please contact our technical support team via the email address listed below.

CONTACT DETAILS

SpriteDrive
Unit 2 Diamond Court
Douglas Close
Preston Farm Business Park
Stockton-on-Tees
TS18 3SB
UK

Phone: +44 (0)1642 806911
Fax: +44 (0)1642 605772
Internet: <http://www.spritedrive.com>

Email Contacts

Sales Enquiries: sales@spritedrive.com
Technical Enquiries: tech@spritedrive.com