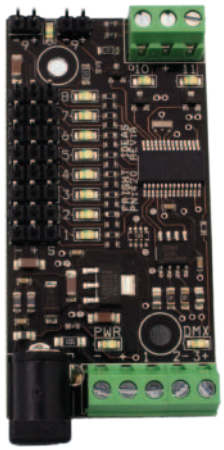
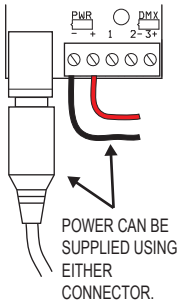


Operating Manual
ServoDMX
FI-420

Power Supply



THE POWER SUPPLY MUST BE 5 TO 6 VOLTS DC. ANYTHING ELSE WILL LIKELY DAMAGE YOUR SERVOS.

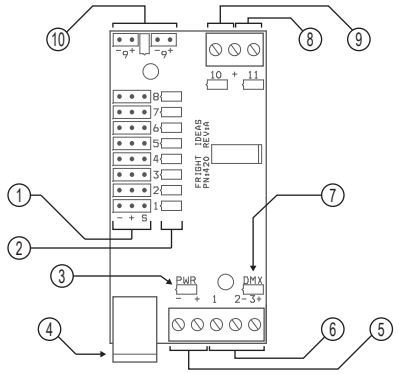
The ServoDMX includes a 5 volt 2 amp power supply. If you are using huge servos then you may need a power supply with more current (amps). Do not use a power supply that outputs a voltage higher than your servos can handle. The ServoDMX itself can handle up to 12 volts, but most servos can only handle up to 6 volts.

DMX Channels

Out of the box the default base channel is 1. This channel is reserved for setup purposes, so the servo addresses are 2 thru 9. If you're not using all the servo outputs, the extra ones can be disabled to save channels. For example, if only three servos were enabled, the LED Eye and solid-state outputs would be shifted down to channels 5, 6, and 7.

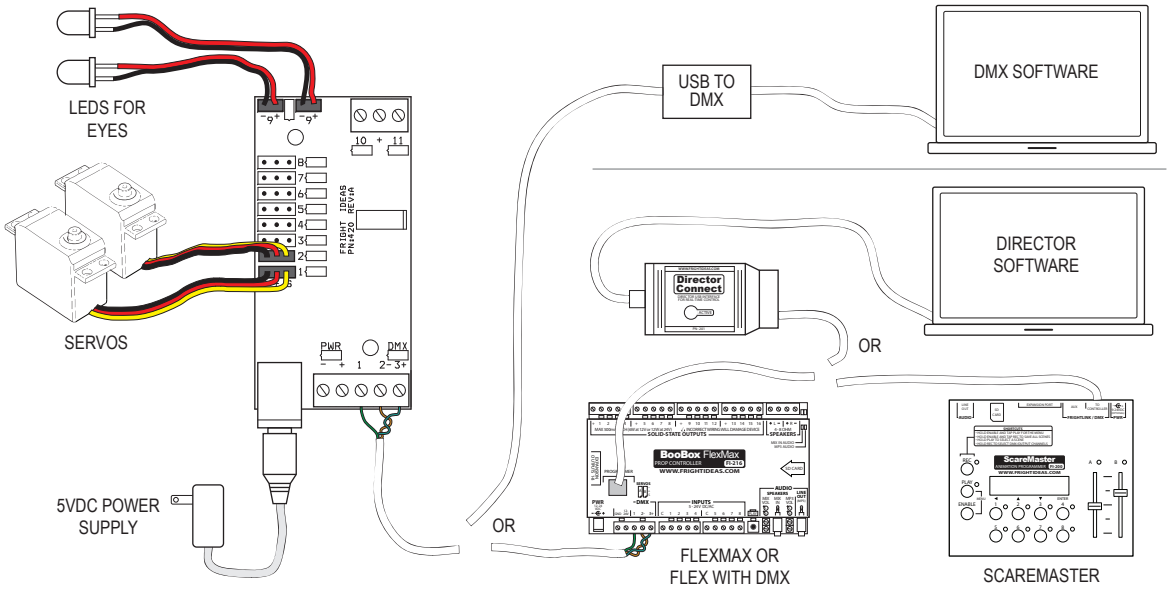
CH #	Channel Purpose
1	Base Channel (Used for setup, can be global servo sleep)
2-9	Servo Outputs 1 thru 8
10	LED Eye Outputs (Output 9)
11	Solid State On/Off or Dimming Output 10
12	Solid-State On/Off Output 11

Getting Familiar

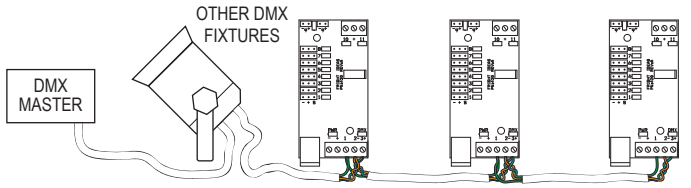


CONNECTIONS	
1	Servo connectors.
2	Servo activity LEDs.
3	Power LED.
4	Power connector, 2.1mm, center-positive, 5-6VDC.
5	Alternate power connector, connects internally to barrel connector.
6	DMX input.
7	DMX Status LED - Turns on when a valid DMX signal is detected.
8	Solid-state On/Off output. 5VDC, 100mA max.
9	Solid-state Dimmable or On/Off output. 5VDC, 100mA max.
10	LED Eye Outputs - Internal 220 Ohm resistors.

Connection Diagrams

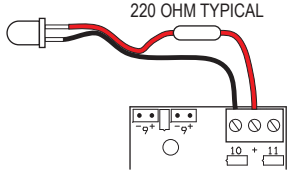


TYPICAL SETUP

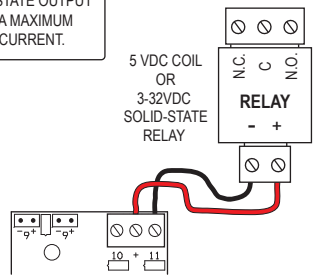


CONNECTING MULTIPLE UNITS

EACH SOLID-STATE OUTPUT CAN HANDLE A MAXIMUM OF 100mA OF CURRENT.



USING THE SOLID-STATE OUTPUTS



CONTROL ANY LOAD USING A RELAY

Getting Started

The ServoDMX can be calibrated to protect the servos and prop it's connected to. It can be programmed to limit the movement in either direction, maximum speed, maximum acceleration, wether the servo can power down, and more. If you received the ServoDMX as part of a Talking Skull, this calibration was done for you at the factory and all you'll need to do is set the Base DMX Address. Any of these settings can be adjusted using our ScareMaster, or the ServoDMX Setup Utility.

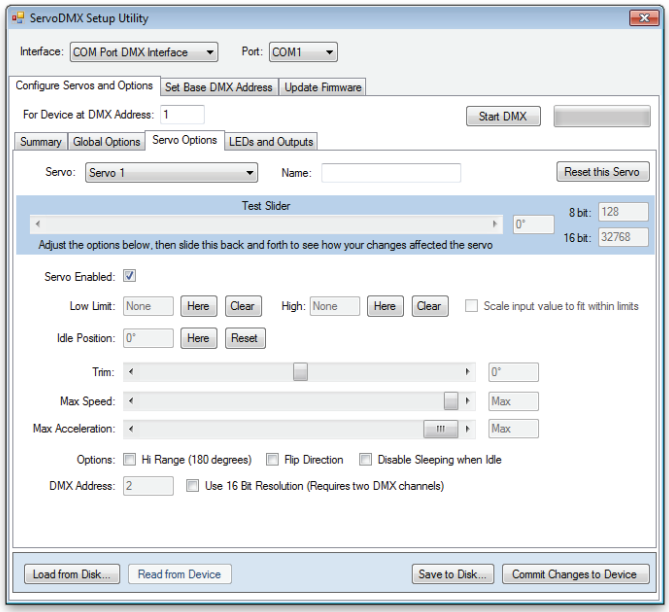
What's the Current DMX Channel?

At startup, the ServoDMX will blink the DMX LED to indicate the current base channel. It will blink each digit followed by a pause. To blink a zero it will show one long blink. For example:
Channel 1 = One quick blink
Channel 240 = Two blinks, pause, four blinks, pause, one long blink

Using the ServoDMX Setup Utility

The ServoDMX Setup Utility is included with our Director software. To use it, you will need a Director Connect or other DMX interface such as an Enttec OpenDMX. If you don't already have Director, you can download it for free at www.frightideas.com/director.

Launch Director, pull down the Tools menu, then select ServoDMX Setup Utility.



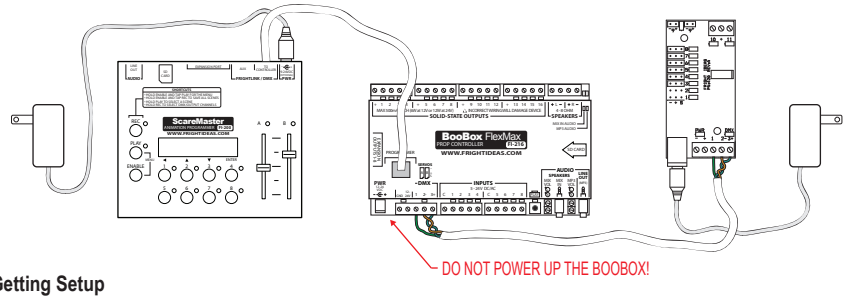
From there it's fairly straight-forward. Enter the base DMX address, then press *Start DMX*. As you make changes to the settings they'll be automatically sent to the ServoDMX. Move the test slider back and forth to see how your changes have affected the movement of the servo. Press the *Commit Changes to Device* button when you're done.

Adding the ServoDMX to your Show

If you plan on using the ServoDMX in one of your shows, click the + button in the bottom left corner to add the ServoDMX. A box will pop up asking which device you'd like to add. Select the ServoDMX, then specify the options at the bottom.

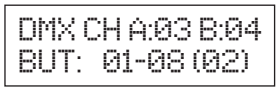
Once it's added to your show, hover over the ServoDMX's icon on the left and it will show you what the base DMX channel should be. Use the ServoDMX Setup Utility to set your base DMX channel to that value.

Using the ScareMaster



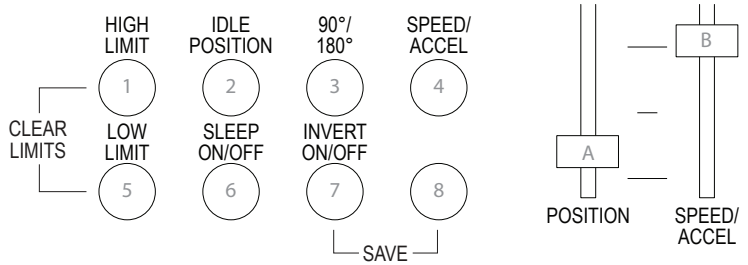
Getting Setup

1. Connect the devices as shown above. **DO NOT** provide power to the BooBox.
2. Power up the ScareMaster. Make sure the power to the ServoDMX is unplugged.
3. The ScareMaster will say "Detecting BooBox, Press 2 to Skip" - Press 2 to Skip.
4. Once the output lights light up, hold the REC button. After a few seconds a screen like the one below will appear. While still holding the REC button, slide both sliders to the bottom. If BUT displays 09-16, press 3. Your screen should look like the one below when you're done. Let go of REC.
5. Slide the B slider up to the top.



Connecting to the ServoDMX

1. Quickly keep pressing button 8 on the ScareMaster as you power up the ServoDMX. When the DMX light starts blinking twice you're connected. The ScareMaster's controls will now perform the functions shown below.

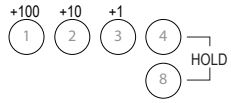


Calibrating a Servo

1. Select the servo you'd like to calibrate by holding the button for 3 seconds (ie. hold button 3 for servo 3).
2. Move the A slider up and down, the servo should move. If it doesn't, make sure slider B is up.
3. If you want the servo's movement to be inverted, or use 180° of movement, tap those buttons.
4. If you need to set limits, move the Position slider up to the high limit, tap 1. Move it down to the low limit, tap 5. As you move the slider, you'll notice the movement has now been confined between those two limits. If you need to clear the limits, hold 1 and 5 at the same time.
5. If you want to limit the maximum speed of the servo lower the B slider. Move the A slider up and down to see your changes in real-time.
6. If you want to limit the acceleration, tap 4. The B slider will now adjust acceleration instead of speed.
7. When you're happy with your settings tap 7 and 8 at the same time to save.
8. Repeat from step 1 for each servo.

Setting the Base DMX Address

Hold the 4 and 8 buttons. While still holding them, tap the 1,2 and 3 buttons to select your address (see diagram). For example, for address 236, press 1 twice, 2 three times, 3 six times, then let go of 4 and 8. The address change is saved automatically.



Enabling / Disabling Servo Outputs

Hold the 5 and 8 buttons. Watch the servo LEDs while moving the A slider to select which servos are enabled. Let go of 5 and 8 when you're done. You'll need to save after this change.

Factory Reset

Hold the 5,6,7, and 8 buttons at the same time. The DMX LED will blink 5 times.