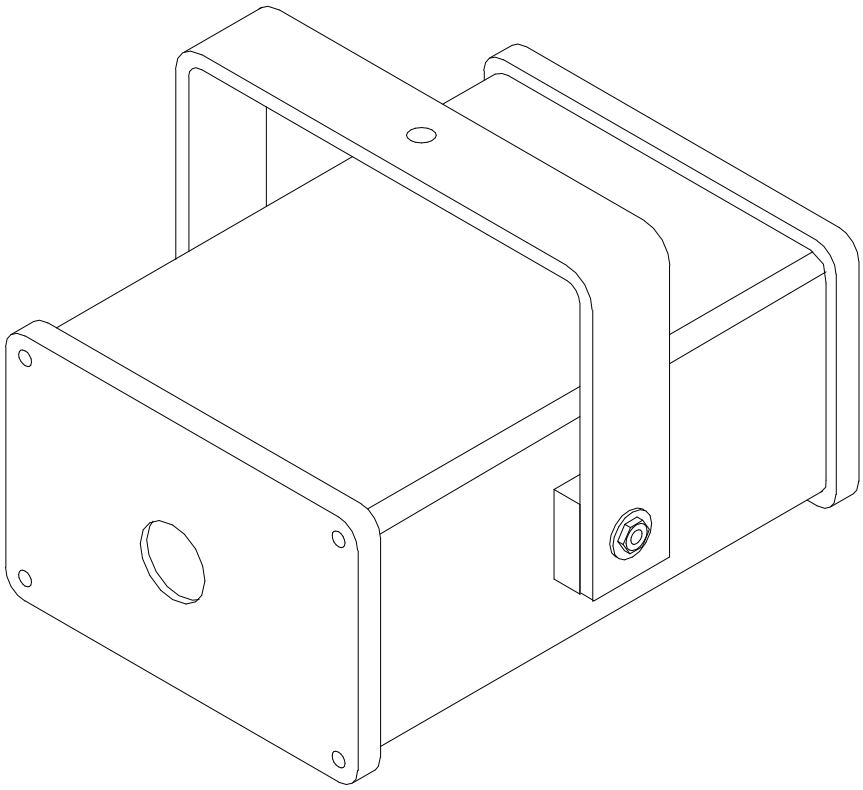
Weather Resistant Housing

For outdoor applications, the LED versions of the PPS Wavelight and Firelight fixture are now available in a weather resistant enclosure. The enclosure is rated IP65, and the fixture will withstand all dust and moisture intrusion applicable to that rating when properly installed.

The exterior housing is all aluminum, with all stainless steel fasteners, and is typically powder coated to provide additional weather protection. Black finish is standard, but white and custom colors are available as special orders to match any theming or design requirements.

The weather resistant housing may include a 100 to 240 volt AC to 9-24 volt Class 2 DC power supply, so the fixture can be powered by any standard AC circuit worldwide. Fixtures may also be powered from 9 to 24 volt DC power sources with suitable current capacity. Each fixture is only a 10 to 30 watt load on the power source, depending on the fixture installed. The use of a dedicated timer circuit to power the fixtures is recommended, as the fixture lifetimes will be extended when they are operated only in the evening or nighttime hours, when the output is clearly visible.



Once installed, the fixture should provide years of service with little or no maintenance required. An occasional inspection of the fixture housing for any evidence of water intrusion, and periodic cleaning of any excessive dirt or dust accumulation on the output window are the only maintenance work recommended.

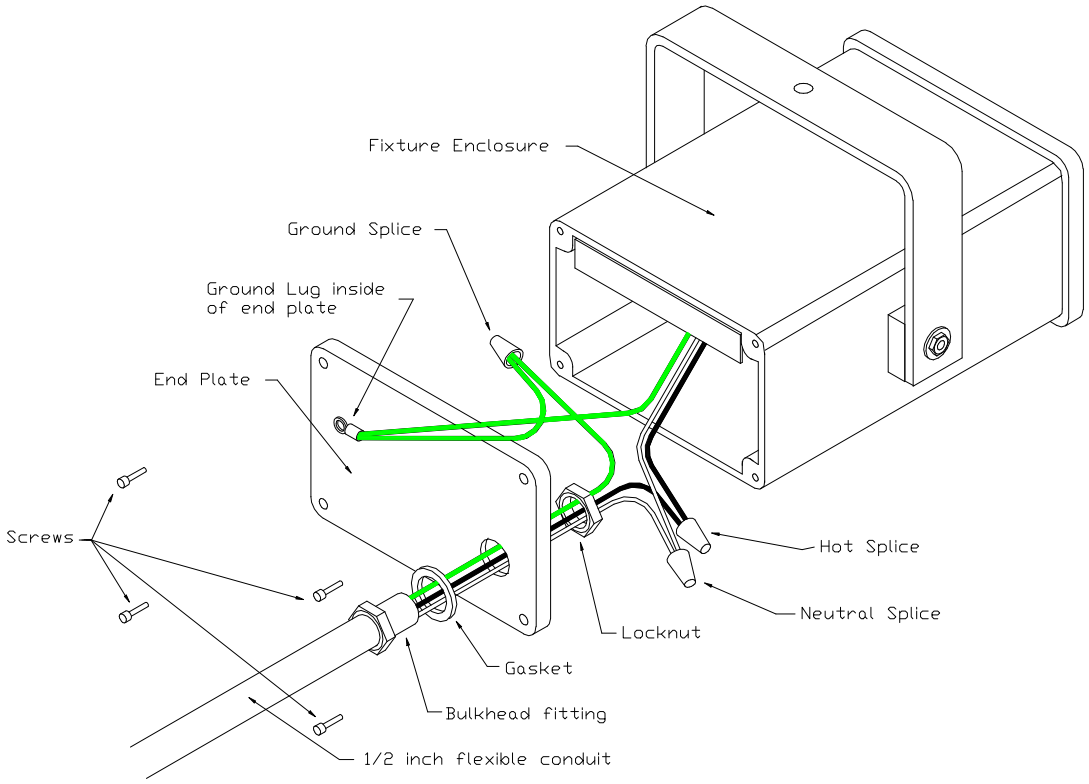
PRECISION PROJECTION SYSTEMS INCORPORATED
17508 STUDEBAKER ROAD, CERRITOS, CA 90703-3638
TELEPHONE: 562 865-8552 FACSIMILE: 562 924-7133
WEBSITE www.ppsfx.com EMAIL: info@ppsfx.com

Fixture Installation, AC Electrical Power

Correct installation of AC powered fixtures will require the attachment of suitable AC power and ground connections to the line voltage input wiring inside the fixture. These connections are intended to be made through ½ inch flexible waterproof conduit, such as “Seal-Tite” or equivalent.

To install the wiring, first prepare the conduit end by pulling the normal ground, neutral, and hot AC connections through the conduit, leaving about 6 inches of wiring free at the end. Install a standard ½ inch bulkhead fitting onto the end of the conduit, retaining the gaskets and locknut. Position the gasket on the equipment side of the conduit fitting to prepare it for installation into the fixture.

Remove the rear panel of the outdoor enclosure by removing the four attachment screws at the corners, retaining the screws for reinstallation. The ground wire from the panel will remain attached to the fixture chassis. Fit the supply wiring and the conduit fitting with gasket through the hole at the lower corner of the rear panel, leaving the wires free on the inside of the panel. Place the locknut over the wires, and thread the nut onto the conduit fitting to secure the conduit in place. Tighten the locknut firmly to insure that the external gasket is properly compressed.



With the AC circuit disabled, remove the insulation to expose about ½ inch of the bare conductor for each supply wire. Connect the AC supply wires to the AC input lead wires installed in the fixture, following the usual color standards, (Green = Ground, White = Neutral, Black = Hot). These connections can be made using wire nuts, insulated crimp connections, or insulated screw terminal blocks, as available, or as required by local electrical codes.

Once the supply connections are made, and are positioned to avoid any electrical contact between the wiring and the fixture chassis, AC power may be applied to the circuit to test and adjust the fixture. The fixture should operate immediately upon application of AC power, and will continue to operate as long as power is applied.

Fixture Installation, DC Electrical Power

Correct installation of DC powered fixtures is similar to that of AC powered fixtures , except that low voltage DC electrical power with suitable voltage, polarity, and current capacity will be applied directly to the power input connections of the installed fixture. These connections are again intended to be made using ½ inch flexible waterproof conduit, such as "Seal-Tite" or equivalent.

Fixtures can be operated from any DC voltage from a minimum of 9 volts to a maximum of 24 volts. The current required per fixture will vary inversely with the applied voltage, but will generally range from 10 to 30 watts per fixture, depending on the model installed.

For installations with multiple fixtures operating from a common DC power supply, insure that the main power supply can deliver adequate current for all of the fixtures in total without overloading. It is good practice to operate DC power supplies at no more than 75 to 80 percent of their maximum current rating to insure reliable long term operation.

WARNING

Pay particular attention to the polarity of all DC power connections. Application of DC power with reversed polarity to any fixture will cause circuit damage which is not covered by the system warranty. Be especially careful where a common power supply is used for multiple fixtures, as one reversed connection may cause damage to several fixtures at the same time.

For installation of DC powered fixtures, DC power wiring should be installed through the conduit and prepared for termination in the same manner as AC power wiring. The procedures for opening the fixture, mounting the conduit to the rear panel, and for terminating the supply wiring to the internal connections for each fixture are also essentially the same. Ensure that the earth ground connection, the DC negative, and the DC positive supply wires are connected to the proper terminals or wiring inside the fixture. Confirm that the coaxial DC power connector at the rear of the fixture is fully seated before application of DC power for any fixture adjustments.

Once the supply connections are made, and are positioned to avoid any electrical contact between the wiring and the fixture chassis, DC power may be applied to the circuit to test and adjust the fixture. The fixture should operate immediately upon application of DC power, and will continue to operate as long as power is applied.

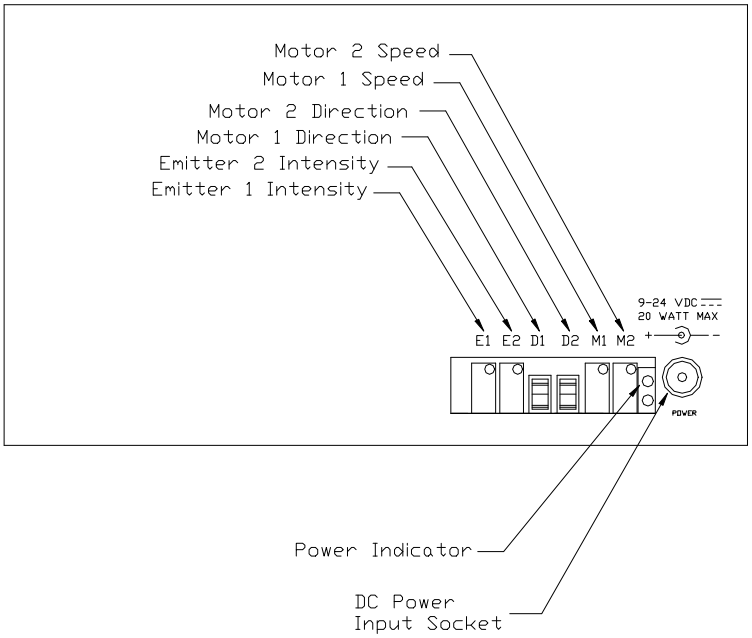
Fixture Adjustment

The process of adjusting the output of each fixture is the same for AC or DC powered fixtures. Each fixture has electronic controls which are accessible through the rear panel of the outdoor housing. These controls will allow for either manual adjustment of the pattern, or for setting up the parameters of the DMX interface which will allow remote control of the fixture output.

Setting the fixture focus, or installing a color filter at the fixture output will require removing the fixture chassis from the exterior housing. This is easily accomplished by sliding the chassis out through the open rear panel. Refer to the fixture user manual for specific instructions on focus adjustments or filter installation. Once any focus or filter adjustments are complete, the chassis should be reinstalled into the same position into the outdoor housing, and should slide fully forward to allow the completion of any electronic adjustments before the outdoor housing is closed.

Manual Pattern Adjustment

To adjust the fixture pattern for manually controlled fixtures, the rear panel must be open to allow access to the speed and intensity trimmer controls at the rear of the fixture. These adjustments are preset during manufacturing to produce a full intensity pattern at a reasonable speed, but may be readjusted as necessary to obtain the desired output color or pattern speed if necessary. Refer to the fixture User Manual for complete information on how to adjust the output pattern.



DMX Controlled Fixtures

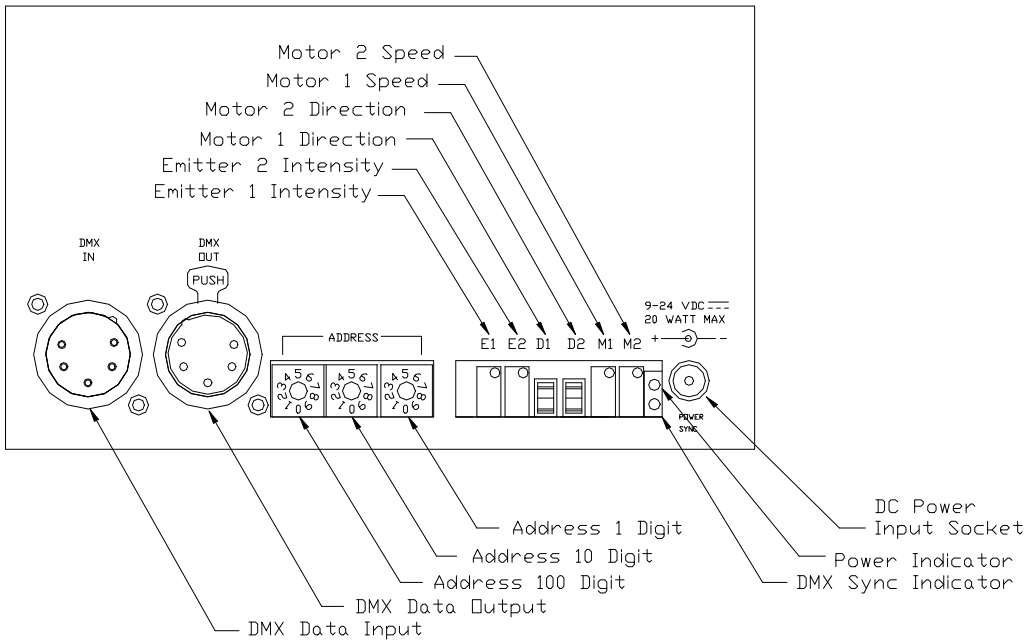
Fixtures with the available DMX-512 control option will require additional signal wire connections and settings to allow the remote operation of the fixture, controlled through the DMX interface.

In addition to the AC power wires, a DMX control cable with at least two shielded conductors should be routed through the conduit to the fixture. The signal cable should be terminated with a DMX standard 5 pin female XLR type connector using the USITT pinout. A second cable and a male connector may be required if DMX connections are to be "daisy-chained" between other outdoor fixtures. The standard pinout of pin 1: ground / common; pin 2: data negative / minus; pin 3: data positive / plus, should be used for all DMX input or output connections. Once properly terminated, the DMX input and any required output connectors should be installed into the sockets at the rear of the fixture, as per the illustration which follows.

Operation of DMX controlled fixtures requires proper setting of the DMX address selection switches on the rear panel of DMX equipped fixtures. The address settings are read by the fixture when power is first applied, so power must be removed from the fixture and then restored for any updated DMX address settings to become effective.

Refer to the fixture User Manual for complete information on how to set the DMX address for DMX equipped fixtures, and for information on DMX channel assignments for control of output intensity, output color, and the speed of the fixture output pattern. The fixture user manual also provides instructions for interpreting the "SYNC" status indicator for DMX input signal quality, and for troubleshooting or bypassing the DMX interface if necessary.

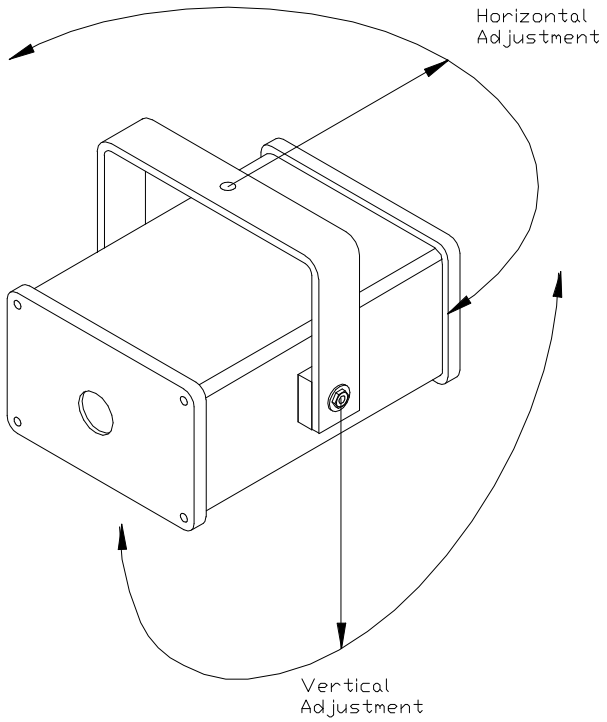
DMX Fixture Control Illustration



Closeout and Final Positioning

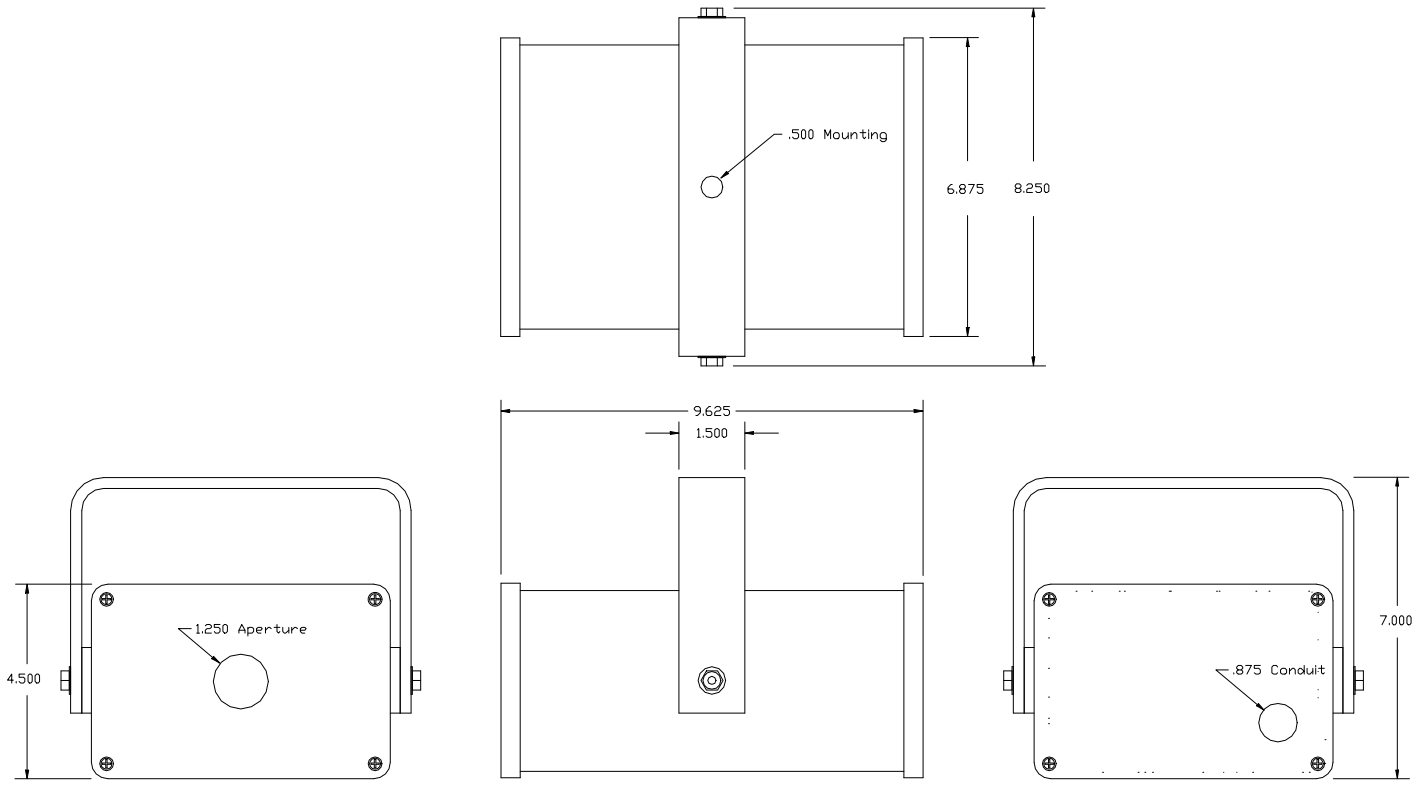
Once the pattern or DMX control settings are complete, the rear panel may be installed onto the housing using the four screws at the corners. Reinstall the rear panel, making sure that the gasket is properly positioned to seal the enclosure. Tighten the screws firmly to insure a good seal.

Once the housing is closed, the entire enclosure may be positioned using the pivot bolts at the sides of the fixture, and the single mounting bolt at the center of the yoke to direct the fixture output to cover the required area. When the fixture is properly aimed, all of these fasteners should be firmly tightened to lock the fixture in place.



MODEL WVL-WP WEATHER PROOF HOUSING

SPECIFICATIONS



MECHANICAL:

Housing	Extruded Aluminum frame Cast aluminum end plates
Finish:	Black Powder Coat Standard Custom colors available
Yoke:	1.5" x .250" Aluminum, .5" hole
Weight:	WVL-WP Unit, 7.5 lbs (2.5 Kg)
Mounting	Any Orientation

ELECTRICAL:

Input Voltage:	100 - 240 VAC 50/60 Hz. with UL listed Class 2 power supply, or 9 to 24 volt low voltage DC, 15-30 watts, as per installed fixture
Controls:	DMX effect speed and intensity, manual controls internally accessible
DMX	5 pin XLR, in/out, internal connections

OPTICAL:

Emitters	As per installed fixture model
Lumen Maint.	25,000 hours at 70% minimum
Color Temp	As per installed fixture model
Dispersion	53 degrees typical, soft edge
Gel / Filter	2 x 2" or 50 x 50mm square, 1/16" or 1.5mm max thickness, internally accessible

INSTALLED FIXTURE OPTIONS:

Wavelight:	White LED; WVL-L1, WVL-L1DMX Blue/Green LED; WVL-L2 WVL-L2DMX High Power LED; Wavelight Flood
Firelight	White LED; FL-L1, FL-L1DMX Red/Amber; FL-L2, FL-L2DMX High Power LED; Firelight Blaze

PRECISION PROJECTION SYSTEMS, INCORPORATED
17508 STUDEBAKER ROAD, CERRITOS, CA.90703
562 865-8552 TELEPHONE 562 924-7133 FAX
WEBSITE: ppsfx.com EMAIL: info@ppsfx.com