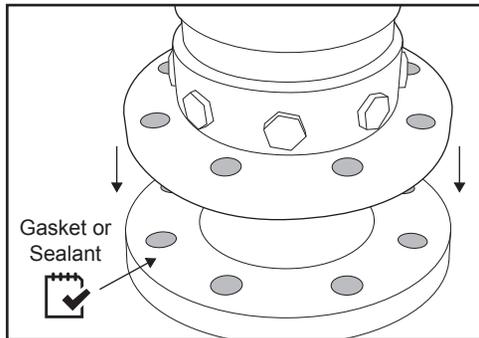


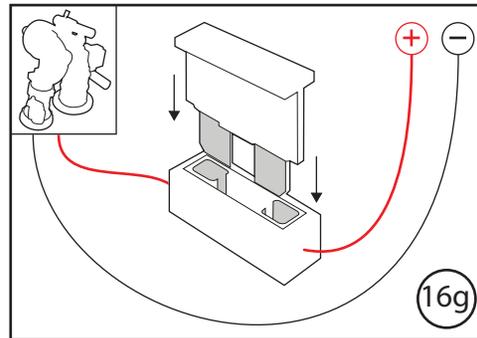
Step 1. Mount Monitor onto base

MOUNT MONITOR - FLANGE



Install monitor to flange using 5/8"-11 UNC Grade 5 bolts and nuts. Tighten uniformly (20 lb increments) to 60-70ft/lb using Loctite 242 or equivalent.

SUPPLY POWER - FUSE

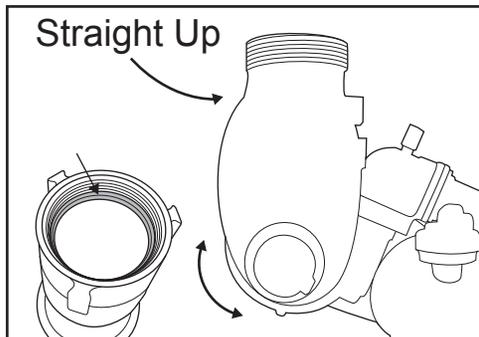


Install a 20A fuse (12VDC) into the positive power lead; 10A fuse for 24VDC. Use a 40A fuse if nozzle with foam expansion tube is utilized.

NOTE: We recommend using 14 AWG for monitor power and ground (12 AWG if using nozzle with foam expansion tube). See installation instructions section of the Scorpion EXM manual (98342000) for length to gauge recommendations.

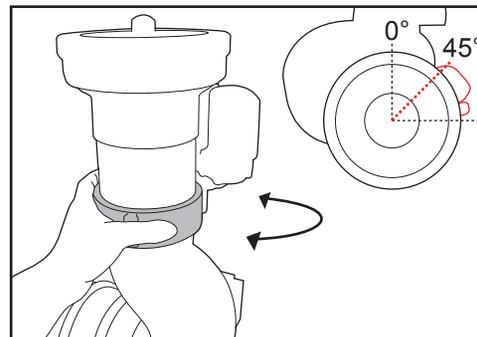
Step 2. Attach Nozzle to Monitor

POSITION DISCHARGE



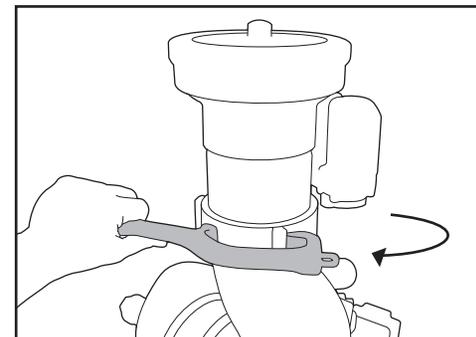
Position monitor discharge elbow vertically (straight up). Ensure gasket is inside nozzle swivel before installing.

POSITION NOZZLE ACTUATOR



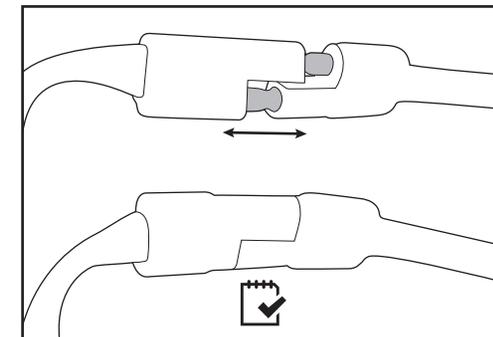
Hand tighten nozzle to monitor using swivel. Position actuator assembly about 45° as shown above.

TIGHTEN NOZZLE



Tighten swivel using a spanner wrench to ensure a secure connection.

CONNECT POWER



Connect nozzle & monitor two-way connectors.

Step 3. Confirm Connections

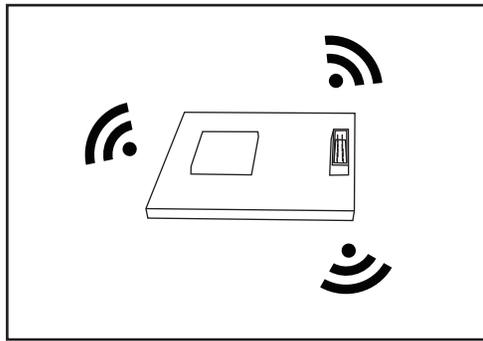
Confirm that all connections are tight and all electrical connections have been reconnected. If installing additional components, such as controllers, you may choose to double check the connections after everything has been installed.

ELKHART BRASS
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PHONE: 1.574.295.8330 • 800.346.0250
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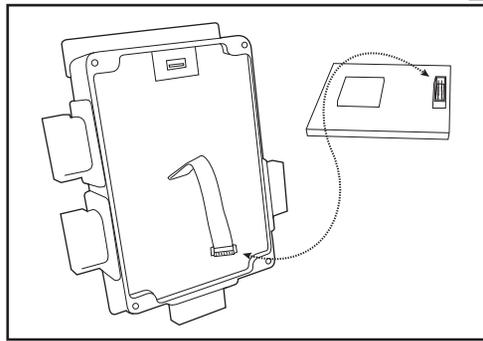
© ELKHART BRASS MFG. CO., INC. 2014

Step 4. RF Installation

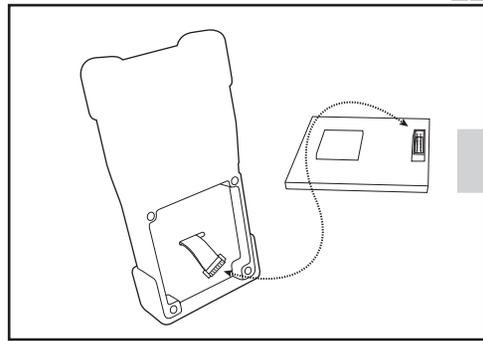
INSTALL RF MODULE



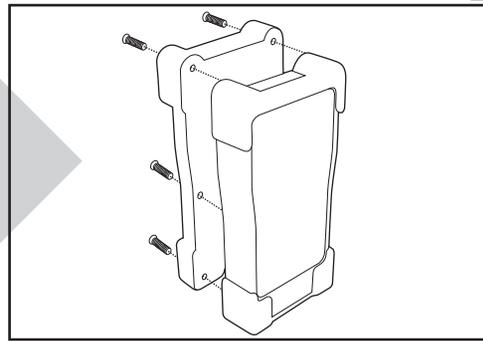
INSTALL RF - OEM



INSTALL RF - HANDHELD

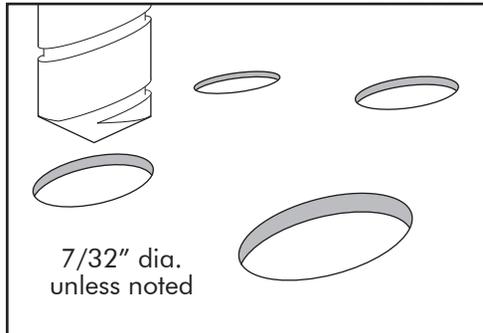


INSTALL BATTERY PACK



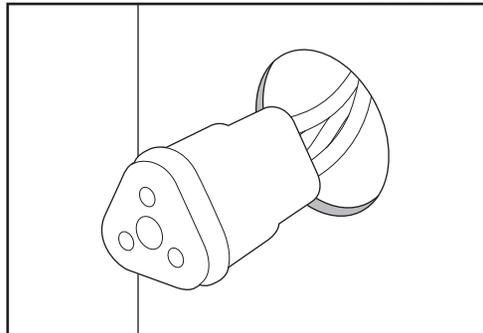
Step 5. Component Mounting

DRILL MOUNT HOLES



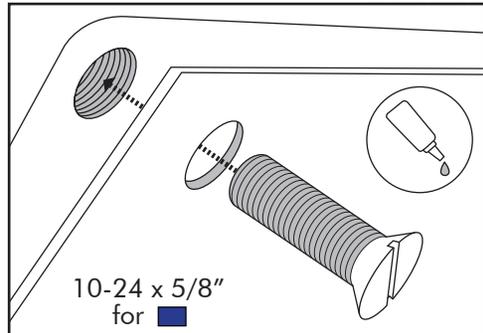
Use mounting templates found in the instruction manual for dimensions.

DRILL CAN HOLES



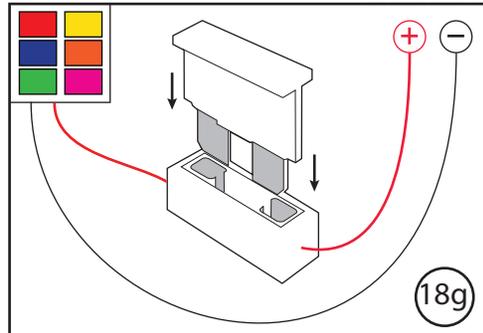
Drill holes for CAN network and power cables for each component.

MOUNT COMPONENTS



Mount components using 10-24 x 1/2" screws. Use Loctite 242 or equivalent.

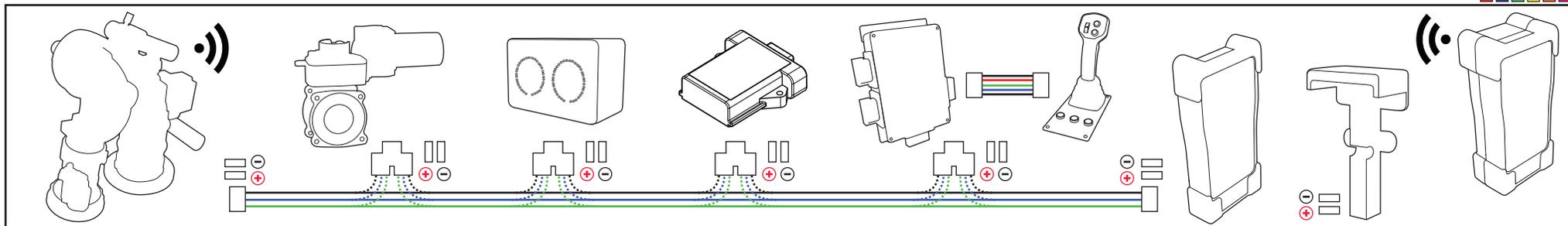
SUPPLY POWER - FUSE



Install a 1A fuse (12VDC) into the positive power lead; 0.5A fuse for 24VDC.

Step 6. Wiring

CAN NETWORK WIRING DIAGRAM

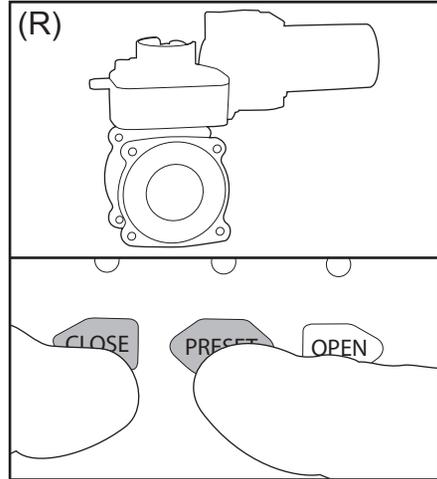


Connect entire CAN network together using 18-20 AWG. Ensure every component connected to the CAN network is connected in between the two (2) end components that have CAN termination. Please refer to the BLUE, GREEN, and BLACK lines as the CAN wires above.

Step 7. Operational Settings

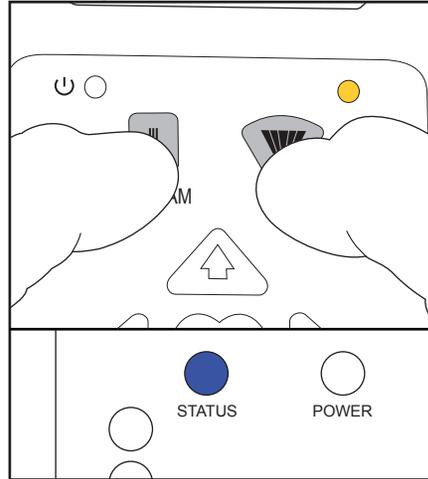
NOTE: (R) This step is required. (O) This step is optional.

CALIBRATE VALVE



You will need to calibrate the valve before use. While you are **NOT** in setup mode, place the valve in a half open position, then press and hold PRESET & CLOSE until calibration begins. The valve will automatically start to calibrate itself.

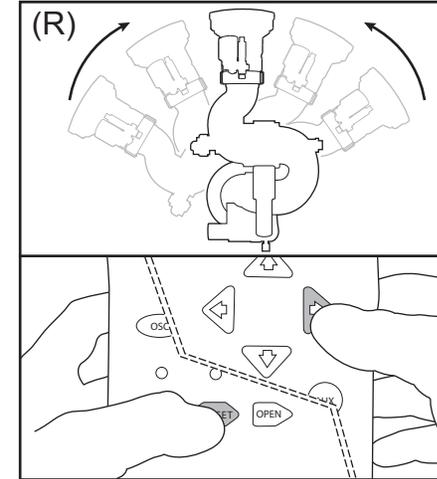
ENTER/EXIT SETUP MODE



On the Handheld, press and hold FOG & STREAM buttons for 5 sec. (AUX & PRESET on Joystick). Blue Status LED on monitor & yellow LED on controller will be lit.

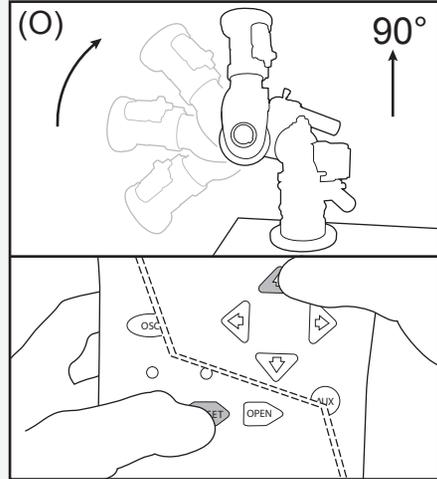
Press and release FOG & STREAM (AUX & PRESET on Joystick) one time. LEDs will turn off.

CALIBRATE HORIZONTAL



Aim monitor at center forward "zero" position. Hold PRESET, then press and release LEFT or RIGHT. The Status LED on monitor should blink and return to solid. Release PRESET button.

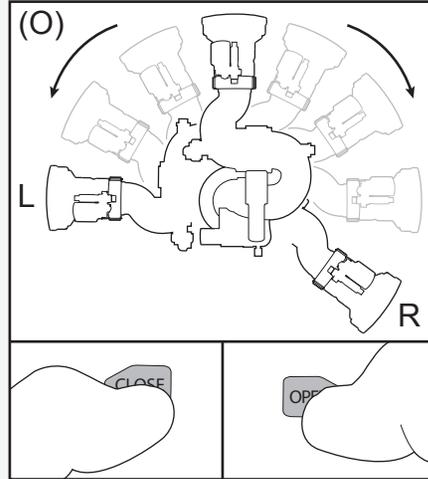
CALIBRATE VERTICAL



Aim monitor at the uppermost limit of travel. Hold PRESET, then press and release UP. The Status LED on monitor should blink and return to solid. Release PRESET button.

NOTE: This calibration point is factory set at 90° (straight up).

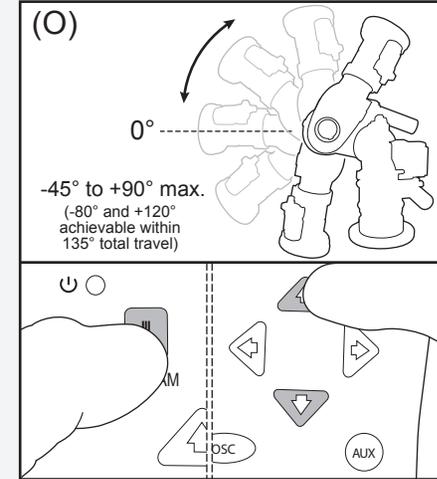
HORIZONTAL TRAVEL LIMITS



Move monitor to the left limit and press CLOSE. Move monitor to the right limit and press OPEN.

Maximum travel limits will allow +175° from the calibrated "zero" position in either direction.

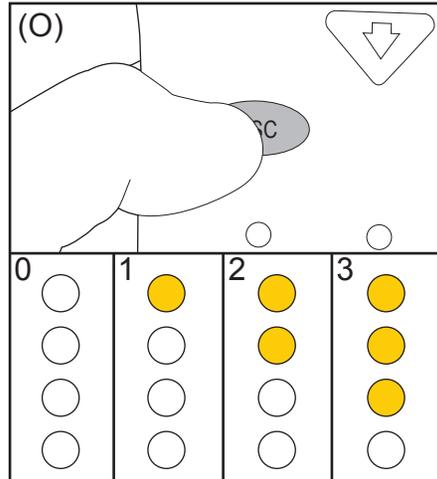
VERTICAL TRAVEL LIMITS



Upper: Move monitor to highest point of travel. Hold STREAM, then press UP, and release both.

Lower: Move monitor to lowest point of travel. Hold STREAM, then press DOWN, and release both.

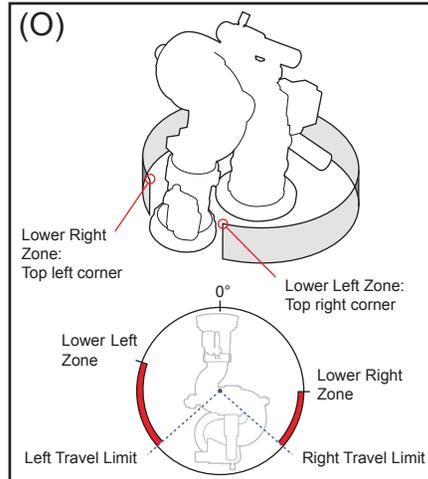
MONITOR MOTOR SPEEDS



Pressing the OSC button will cycle through the monitor speed options:

LEDs - Vert / Horz
 0 - Fast / Fast
 1 - Slow / Fast
 2 - Fast / Slow
 3 - Slow / Slow

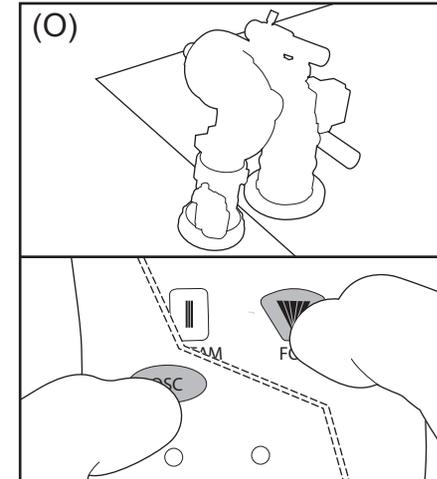
KEEP-OUT ZONES



Lower Left: Move to top right corner of the lower left zone, hold PRESET, press CLOSE, and release both.

Lower Right: Move to top left corner of the lower right zone, hold PRESET, press OPEN, and release both.

STOW POSITION



Move monitor to desired position, then press FOG and OSC at the same time to store a stow position.

Stow position must be within allowed limits of travel.

Step 8. Verify

NOTE: Changes made during setup mode won't take effect until you exit setup mode.

Valve Calibration - If the LEDs above the closed & open buttons on an input controller are flashing, the valve has not been calibrated.

Rotational Limits - If Travel Limits haven't been set, you can check the horizontal and vertical rotation limits by moving the monitor until it stops at the maximum allowed rotation. This will be $\pm 175^\circ$ for horizontal movement, and 135° for total vertical movement.

Travel Limits - Move the monitor in all directions. The discharge should stop at the set Travel Limits. If it does not stop at the set Travel Limits, and travels all the way to the calibrated Rotational Limits, enter Setup Mode and repeat the Travel Limit steps.

Monitor Motor Speed - Motors come factory set both in fast mode (all yellow LEDs off). If a motor speed setting other than fast/fast is desired, follow step 7.7 Monitor Motor Speeds to change the motor speeds to the desired speed combination.

Keep-Out Zones - Raise discharge above the set Keep-Out point. Rotate discharge above the Keep-Out Zone. Lower discharge down until it stops at set Keep-Out point. Rotate the monitor toward the "Zero" forward position, and try to move discharge down every inch. Once discharge clears Keep-Out point, it should rotate all the way down to the Rotational or set Travel Limit.

Stow Position - While outside of Setup Mode, press and hold the FOG and OSC button to initiate the Stow function. The discharge should move to the set Stow Position. If monitor does not Stow, repeat step 7.9 to set a stow position. (Rotate thumb wheel down for FOG on joystick).

Button Press Logic

Left, Right, Up, Down / Fog & Stream / Valve Open & Close

These buttons/commands function normally.

Valve Preset

Opens or closes the valve to a predetermined position.

To set: open/close valve to desired position. Then press and hold PRESET until preset LED blinks (10 sec.).

Valve Auto Travel

Auto Open: Hold OPEN, press CLOSE, and release both.

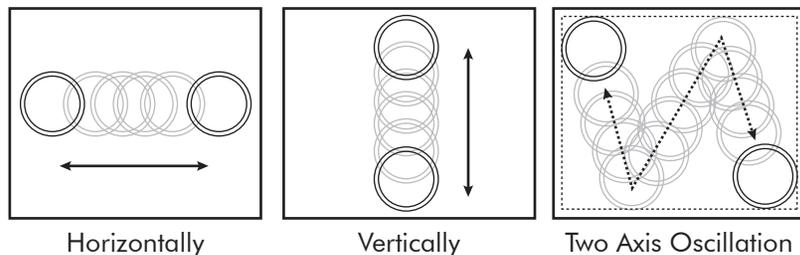
Auto Close: Hold CLOSE, press OPEN, and release both.

Stow

Hold FOG and OSC until monitor begins to stow.

Oscillate

Press the OSC button at each end, or corner, of the desired oscillation pattern. Monitor will begin to oscillate.



NOTE: You can manually control nozzle position while in a single axis oscillation (Ex: Up/Down in Horz., and Left/Right in Vert.). Any direction in a two axis oscillation will cancel the oscillation.

