

## Safety Message to Installers of Warning Light Equipment

### ⚠ WARNING

*To properly install this light, you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment. Before installing this device, refer to its unabridged instructions for this device, which are available online at [www.fedsig.com](http://www.fedsig.com). Print the online document and provide copies to the end users of this product and to the personnel who will service it.*

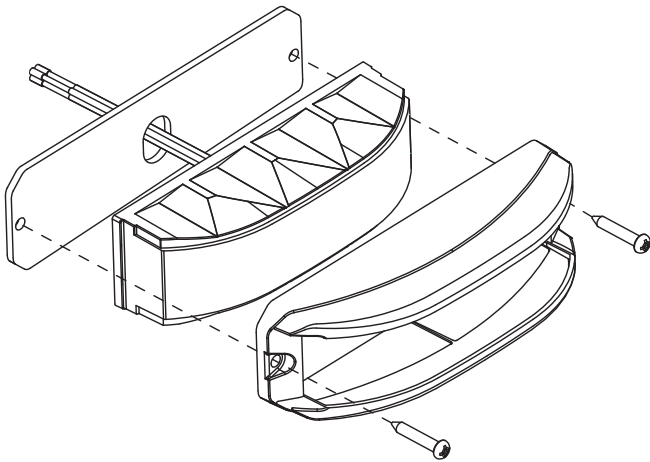
## Installing the MPSW9

- Black: To Chassis Ground
- Red: +Vdc activates Memory1 in Color1 (fuse at 1 A)
- White: +Vdc Activates Memory2 in Color2 (fuse at 1 A)
- Green: +Vdc Activates Memory3 in Color3 (fuse at 1 A)

Connect the yellow wires of multiple units together for synchronization. (All heads must be set up correctly and use the same pattern upon power-up.)

**NOTE:** The Green wire has a higher priority and overrides the Red and White wire when activated. Priority: Memory3 > Memory2 > Memory1.

Figure 1 Exploded view



### ⚠ WARNING

**LIGHT HAZARD:** *To be an effective warning device, this product produces bright light that can be hazardous to your eyesight when viewed at a close range. Do not stare directly into this lighting product at a close range, or permanent damage to your eyesight may occur.*

## Installing the Light

**NOTE:** The suggested mounting position is with the LEDs on the PCB facing downward.

To install the light:

1. Put the light head on to the selected surface and mark the two screw mounting positions.
2. Drill a wire access cutout (suggested diameter of 1/2 inch) on the selected mounting surface between the two screw marks.
3. Install the foam pad to the light head.
4. Lead the wires through the cutout and make all necessary connections.
5. Tighten the two screws and ensure that the light head is fixed.

## Making the Memory Selection

Each unit comes with three memories.

To configure:

1. Apply +Vdc to the Red, White, or Green wire to activate Memory1 or Memory2 or Memory3.
2. For a flash pattern, momentarily apply +Vdc to the Yellow wire once for the next pattern, or apply it quickly three times to reset.

Table 1 Flash patterns

Number	Pattern	Number	Pattern
1	Single 122	11	Steady
2	Single 90	12	Single 73
3	Single 113	13	Mega
4	Triple 92.3	14	Double 73
5	Triple 122	15	Quad 73
6	Triple 73	16	Quint 73
7	Double 122	17	Ultra 73
8	Quad 122	18	Single-Quad
9	Random	19	Single H/L
10	Steady Break	20	Single-Triple-Quint

**NOTE:** The unit may not be factory set at flash pattern 1.

## Selecting the Color Mode

Each Memory comes with 15 color modes.

To configure:

1. Apply +Vdc to the Red, White, or Green wire to activate Memory1, Memory2, or Memory3.
2. Apply +Vdc to the Yellow wire for 3 seconds; the light head turns off. Release the Yellow wire to enter color mode selection.
3. Momentarily apply +Vdc to the Yellow wire once to change to color mode.

COLOR MODE SELECTION		
No.	Color Combination	Visual Feedback
1	Color 1 only	1
2	Color 2 only	2
3	Color 3 only	3
4	Color 1 & Color 2	1 + 2
5	Color 2 & Color 1	2 + 1
6	Color 2 & Color 3	2 + 3
7	Color 3 & Color 2	3 + 2
8	Color 1 & Color 3	1 + 3
9	Color 3 & Color 1	3 + 1
10	Color 1, Color 2 & Color 3	1 + 2 + 3
11	Color 1, Color 3 & Color 2	1 + 3 + 2
12	Color 2, Color 1 & Color 3	2 + 1 + 3
13	Color 2, Color 3 & Color 1	2 + 3 + 1
14	Color 3, Color 1 & Color 2	3 + 1 + 2
15	Color 3, Color 2 & Color 1	3 + 2 + 1

☀ Single flash   ● Low Power Steady

- Once desired color is selected, disconnect all power to exit.

### Steady Break Shortcut (For External Flasher Application)

This shortcut allows the light head to easily and quickly be programmed as Pattern #10 Steady Break for each memory.

- Apply +Vdc to the Red, White, or Green wire to activate Memory1, Memory2, or Memory3.
- Apply +Vdc to the Yellow wire for 3 seconds; the light head turns off. Release the Yellow wire to enter color mode selection.
- Apply +Vdc to the Yellow wire for over 3 seconds; the light head flashes three times and then back to low power steady. Disconnect all power to exit color mode selection. All memory turns to Pattern #10.

Steady Break Shortcut

Memory #	Color / Flash Pattern
Memory 1	Color 1 / Pattern #10, Steady Break
Memory 2	Color 2 / Pattern #10, Steady Break
Memory 3	Color 3 / Pattern #10, Steady Break

### Synchronizing Multiple Units

- Apply +Vdc to the Red, White, and Green wires together.
- Apply +Vdc to the Yellow wire for 3 seconds; the light head turns off. Release the Yellow wire to enter group mode selection.
- Momentarily apply +Vdc to the Yellow wire once to change to group.
  - Single pulse = CONTROLLER
  - Double pulse = FOLLOWER-SYNC
  - Triple pulse = FOLLOWER-ALT

- Once the desired group is selected, disconnect all power to exit.

#### NOTES:

- If no CONTROLLER unit is present, all FOLLOWER units flash initially and then steady burn for 2 seconds to detect any synchronization signal. You can use this to pick out CONTROLLER vs. FOLLOWER units.
- FOLLOWER-SYNC units flash simultaneously with the CONTROLLER unit. FOLLOWER-ALT units flash alternately with the CONTROLLER and other FOLLOWER-SYNC units.

### Return to Factory Default

- Apply +Vdc to the Red, White, and Green wires together.
- Apply +Vdc to the Yellow wire for 3 seconds; the light head turns off. Release the Yellow wire to enter group mode selection.
- Apply +Vdc to the Yellow wire for over 3 seconds; the light head flashes ten times and then back to low power steady.
- Disconnect all power to exit color mode selection. All memory turns to the factory default.

### Getting Technical Support

For technical support, please contact:

Federal Signal Corporation  
 Service Department  
 Phone: 1-800-433-9132  
 Email: empsserviceinfo@fedsig.com

### Getting Repair Service

The Federal Signal factory provides technical assistance with any problems that cannot be handled locally. Any product returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization (RMA). Obtain an RMA from a local Distributor or Manufacturer's Representative. Provide a brief explanation of the service requested or the nature of the malfunction.

Address all communications and shipments to the following:

Federal Signal Corporation  
 Service Department  
 2645 Federal Signal Dr.  
 University Park, IL 60484-3167