



**B-755**  
115051  
Rev 1: 9/17/02

**PRECAUTIONS:**

- ❑ Read ALL instructions before installing instrument.
- ❑ Follow ALL safety precautions when working on vehicle—wear safety glasses!
- ❑ ALWAYS disconnect (-) negative battery cable before making electrical connections.

**HELP?:**

- ❑ If after reading these instructions you don't fully understand how to install your instrument(s), contact your local Stewart Warner distributor, or contact our Technical Support Team toll free at **1-866-797-7223 (SWP-RACE)**.
- ❑ Additional applications information may be found at [www.SW-Performance.com](http://www.SW-Performance.com).

**GENERAL APPLICATION:**

- ❑ 12-volt DC negative (-) ground electrical systems (11-20 VDC operating voltage range for the tachometer, 11-16 VDC for the Light bulb).

**Installation Instructions**  
Memory/Shift Tachometer 3-3/8" & 5"



1

2

**TACHOMETER MOUNTING (Figure 1 & 2):**

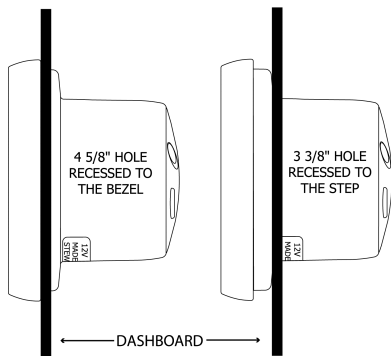
**NOTE:** Instructions apply to 3-3/8" & 5" Tachometer.

- ❑ Recommended panel cut-out (hole size) for 3-3/8" tachometer is 3-3/8".
- ❑ Recommended panel cut-out (hole size) for 5" tachometer is 4-5/8" if recessed to the bezel, or 3-3/8" if recessed to the step (Figure 1).
- ❑ Secure the tachometer in the hole using the supplied bracket for the 3-3/8" and the 5". Remove the 3 Torx screws using a T10 Torx driver. Insert the 3 studs and install lock washers and nuts to secure the rear cover. Install the bracket as shown in figure 2 and tighten the 3 locking nuts (5 in. Lb. max).
- ❑ When mounting on the dash or roll cage or steering column, use the cushioned strap & bracket as shown in figure 3.

**TACHOMETER WIRING (Figure 3):**

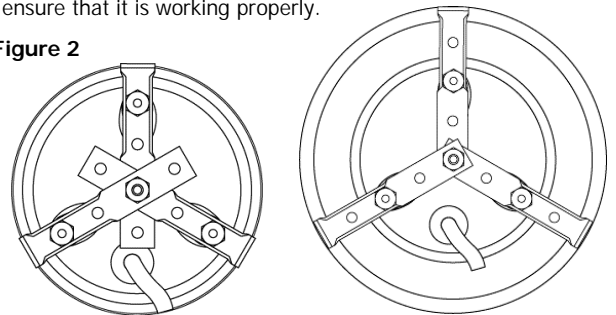
1. Disconnect negative (-) battery cable.
2. Using 18-ga. wire, connect the **(BLACK)** wire to a clean (rust/paint-free) ground, preferably battery negative terminal.
3. Using 18-ga. wire, connect the **(RED)** wire to a switched +12V source, like the ignition wire.
4. Using 18-ga. wire, connect the **(GREEN)** wire to the coil negative or the tachometer terminal of the ignition module.
5. There are two (2) wires for the lighting. Connect the **(WHITE)** lighting wire to the dash lighting circuit or to a +12V switched source, like the ignition wire.
6. Connect the **(BLACK)** lighting wire to a chassis ground.
7. Calibrate the pulses per revolution (PPR). Refer to the programming set-up section.
8. Reconnect the negative (-) battery cable & test instrument to ensure that it is working properly.

Figure 1



3

Figure 2

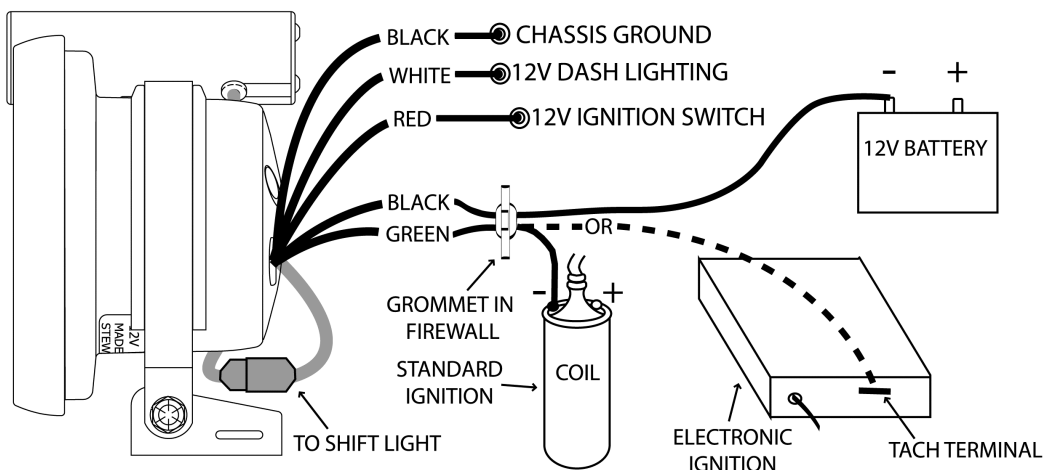


3-3/8" Installation

5" Installation

4

Figure 3



**NEVER CONNECT GREEN WIRE TO THE COIL WHEN USING AN MSD OR SIMILAR HIGH OUTPUT CAPACITIVE DISCHARGE STYLE IGNITION SYSTEM**

Damage to the tachometer will occur—Connect GREEN wire to the tachometer terminal only.

5

6

### **CALIBRATION (PPR/Number of Cylinders):**

Until recently, tachometers were calibrated based on the number of cylinders in the engine. Now, there are all types of engine control modules (ECMs - on-board computers) and distributor-less ignitions and the old standard rule—"half the number of cylinders equals the pulses per revolution (PPR)"—no longer applies. "Pulses per revolution" relates to how many times the ignition fires per crankshaft revolution. The tachometer outputs from the ECMs can range from 1-PPR to 4-PPR for a V-8 engine. So, the new standard is to refer to PPR instead of the number of cylinders.

### **SIGNAL INTERFACING:**

Stewart Warner Performance tachometers are designed to work with a wide variety of ignition types, including standard inductive [coil (-) connection] and any ignition system with a clean tachometer output signal. The input level can range from TTL 5V (outputs from newer engine control modules) and 300-400 volt pulses from coil (-) on most inductive ignition systems. Stewart Warner Performance tachometers will operate on most traditional capacitive discharge ignitions when connected to the ignition primary circuit. However, for high-output CD's (such as MSD) only connect to the tach output terminal, never the coil primary. It's best to consult our tech support hotline if you're unsure, rather than risk damage to the tachometer, ignition or your warranties.

7

### **SHIFT RPM SET-UP:**

1. Turn ignition switch on, engine may be running, or not running, as you wish!
2. Shift lamp will flash briefly to indicate proper shift-light function.
3. Press and hold the **ENTER** button for 1 second until the shift-light flashes. The flashing of the light in this case acknowledges entry to the shift setting mode. The tachometer pointer will now indicate the current shift-light RPM setting.
4. Press the **Up/Clear** or **Down/Recall** buttons to adjust the shift-light RPM set point. The pointer will move up or down to indicate the new setting.
5. To exit programming mode at any time, momentarily press the **Enter/Change** button to lock in the setting, or turn ignition switch off, or if there are no buttons pressed for 5 seconds, the tachometer will store all changes and exit to normal tachometer operation.

9

### **TROUBLESHOOTING:**

**Q:** My tachometer does not respond at all, what do I do?

**A:** Check all of the wiring connections and power to the tachometer.

1. If the tachometer needle goes to zero when powered up, but does not respond when the engine is started, there is no signal to the green wire. Check to ensure that the green wire is properly connected to a valid tach signal.
2. If the tachometer needle does not go to zero when powered up, the tachometer is not grounded properly or does not have power to the **(RED)** wire. Check to ensure a good chassis ground, preferably at the battery ground. Verify that the **(RED)** wire has a 12VDC supply.

**Q:** My tachometer does not read correctly, what do I do?

**A:** First, determine how the reading is incorrect (example: Double, half, quarter etc.), then re-set the PPR calibration for correct readings.

1. If the RPM reads double, re-set the PPR calibration for 1/2 of the current setting.
2. If the RPM reads 1/2, re-set the PPR calibration for 2 times the current setting.
3. If the RPM reads 1/4, re-set the PPR calibration for 4 times the current setting.

11

### **PROGRAMMING SET-UP (1, 2, 3, 4, 5, 6 PPR):**

**NOTE:** Stewart Warner Performance Tachometers come pre-set from the plant for a standard 8 cylinder (4 PPR) application.

1. Hold down the **Enter/Change** button while turning the ignition switch on.
2. Release **Enter/Change** Button.
3. The shift-light will light for 1 second to indicate calibration set mode has been accessed.
4. The needle will go to the previously set range, or the factory default 4 PPR (indicated by pointer position of 4,000 RPM).
5. Press the **Up/Clear** or **Down/Recall** buttons to adjust for the number of cylinders or pulses per rpm (the pointer will move to indicate the new setting).
6. To exit programming mode at any time, momentarily press the **Enter/Change** button to lock in the setting, or turn ignition switch off, or if there are no buttons pressed for 5 seconds, the tachometer will store all changes and exit to normal tachometer operation.

8

### **MEMORY RECALL & CLEAR OPERATIONS:**

This Tachometer will store 1 current and 1 old peak RPM value. The stored peak values are shifted through memory, so that the oldest value is cleared and the current peak is stored as the previous peak and a new current peak is acquired.

#### **Recalling Current Peak RPM (engine running)**

1. With the engine running, press and hold the **Down/Recall** button. This will display the current peak RPM and will continue to update even while the button is held down.
2. Release the button to return to normal operation.

#### **Recalling Peak and Previous Peak RPM (engine not running)**

1. Turn the ignition on (the pointer should indicate "0" RPM)
2. Press and hold the **Down/Recall** button to recall the current peak RPM.
3. Release, then within 3 seconds, press and hold the **Down/Recall** a second time to select the previous Peak RPM. The shift-light will flash to indicate that you are viewing the previous peak rpm.
4. Release button to return to return to normal operation.

#### **Clearing Peak RPM**

1. Turn the power on (the pointer should be at 0 RPM or indicating actual RPM if engine is running).
2. Press the **Up/Clear** button for one second and release. The oldest stored Peak RPM reading will be cleared, and the current value will be stored as the previous Peak RPM reading.

10

### **CLEANING DIRECTIONS:**

- For proper cleaning of instrumentation/accessories, use a glass cleaner or mild detergent with a spray on and wipe method.

### **WARRANTY INFORMATION:**

**TWO (2) YEAR LIMITED WARRANTY.** SWP products are warranted against defects in workmanship and materials for a period of two (2) years from the date of purchase. Proof-of-purchase is required; otherwise, the warranty period shall default to two (2) years from date-of-manufacture (as indicated by the date code on the product). See detailed Warranty Policy for other Terms & Conditions.

STEWART WARNER PERFORMANCE

1-866-SWP-RACE (797-7223)

www.SW-Performance.com



12