



**B-861**  
117924  
Rev 1: 1/20/05

**Installation Instructions**

Circle Track Tachometer 5" With Peak Recall and Clear

**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).
- ❑ Tachometer signal calibration range of 2, 3, 4, & 6 pulses per revolution (PPR) for most 4, 6, 8, & 12 cylinder engines.

1

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

- ❑ 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).

**NOTE:** It may be easier to calibrate the tachometer for the engine before mounting the unit. Refer to the calibration set-up section for additional information.

- ❑ Secure the tachometer in the hole using the supplied bracket. 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.

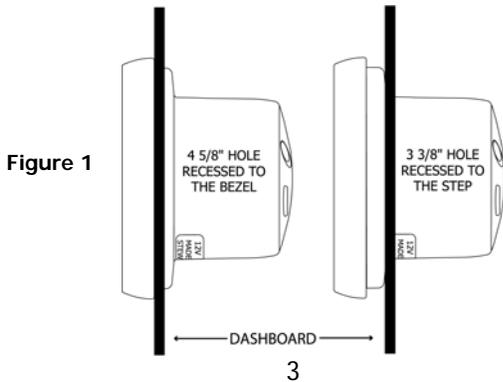


Figure 1

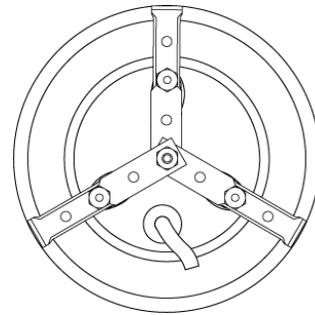
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**TACHOMETER HOOK-UP (Figure 3):**

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

Figure 2



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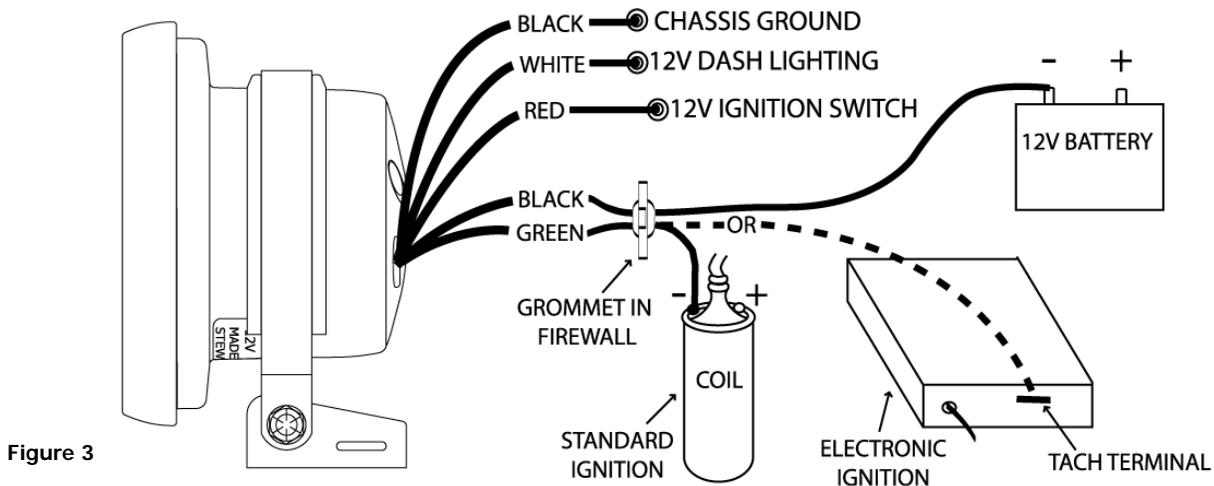


Figure 3

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**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.

**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 tachometer 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.

**PEAK PRM RECALL AND CLEAR:**

- Use the two (2) buttons on the front of the tachometer labeled "RECALL" and "CLEAR" to control the memory functions.
- When the tachometer is operating, the RPM is monitored and the highest RPM attained is stored. This stored "peak" RPM value can be recalled anytime the tachometer is powered.
- To display the current peak RPM value, simply press and hold the "RECALL" button. While the button is pressed, the needle will indicate the peak RPM value. When the button is released, the needle will again indicate actual engine RPM.

**NOTE:** The stored peak RPM value will be stored for at least 2 hours after power to the tachometer has been removed.

- To clear the peak PRM, simply push the "CLEAR" button. Once the memory has been cleared, the tachometer will immediately start to monitor the engine RPM to store a new peak value.

**CALIBRATION SET-UP (Figure 4):**

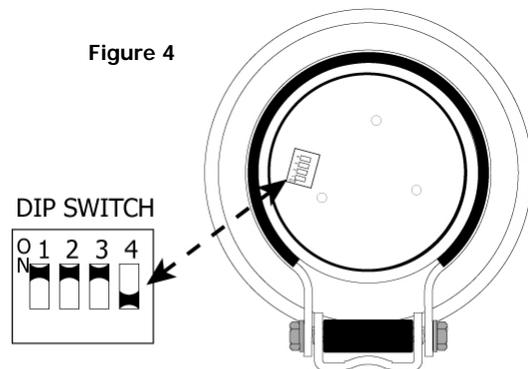
**NOTE:** Stewart Warner Performance Tachometers come pre-set from the plant for a standard 8 cylinder (4 PPR) application. See "DIP-switch setting chart" for additional applications.

- Remove the 3 Torx screws using a T10 Torx driver.
- Refer to the "DIP-switch setting chart" to determine the settings for your application.
- Set the DIP-switches to the appropriate positions.
- (See switch setting chart)

**TIP:** A small screw driver or pick may aide in the switch setting.

- Replace the rear cover and 3 Torx screws. Be sure that the rear sealing o-ring stays in place.

Figure 4



SWITCH SETTINGS				
	1	2	3	4
4 CYLINDERS / 2 PPR	X	-	-	X
6 CYLINDERS / 3 PPR	X	X	-	-
8 CYLINDERS / 4 PPR	-	X	-	X
12 CYLINDERS / 6 PPR	X	X	X	-

"X" = ON, "-" = OFF

**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 hooked to the proper location for a valid signal.
2. If the tachometer needle doesn't 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.), re-set DIP-switches for correct readings.

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

**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)

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