

**Programming** The TEL TAC is adjustable to suit most all racing applications. See tables below for the correct jumper setting. To change the jumper setting, remove the four cover screws and the cover. If the tach is still operating, disconnect the battery temporarily to shut it off. At the top of the circuit board above the readout are a series of pins with a plastic jumper. The jumper is placed over the **vertical pair** of pins corresponding to the letters 'A' through 'F' printed to the left of the pins. To change the setting, pull out the jumper with needle-nose pliers and install on the correct pins. **Check o-ring placement**, and reinstall the cover.

Magnetos use a different setting than battery powered ignitions. The +pulse/rev numbers printed under the letters show the number of positive (+) pulses counted per crankshaft revolution. As an example, a V/8 4-stroke engine will fire 4 times per crankshaft revolution. A battery powered ignition for this engine will produce 4 (+) pulses per revolution and use the 'A' setting. A magneto primary on the same engine will produce 2 (+) pulses (and 2 (-) pulses which aren't counted) per revolution and use the 'C' setting. The tach is normally supplied with the 'C' setting for V/8 magnetos or 4 cylinder battery powered ignitions.

|            | A | B | C | D | E | F | A | B | C | D | E | F |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|
| SETTING    |   |   |   |   |   |   | ■ | ■ | ■ | ■ | ■ | ■ |
| +PULSE/REV | 4 | 3 | 2 |   | 1 |   | ■ | ■ | ■ | ■ | ■ | ■ |

### Magnetos

| Engine (# of cylinders) | Jumper Setting |
|-------------------------|----------------|
| V/8                     | C              |
| 6 (inc. V/6 odd/even)   | D              |
| 4                       | E              |

**The isolator must be used with all magnetos.** Since the tach needs only a minimal signal, the isolator (a special 100,000 ohm high voltage resistor) reduces the voltage and minimizes the current to protect the tach, the connector and the mag. It attaches to the end of the tach white wire and connects to the mag, coil or cutoff switch. Do not ground the tach black wire to the switch, coil or electronic points/coil box—it should ground to the chassis near the tach mounting if possible.

**MSD magnetos** Connect the tach white wire through the isolator to the cutoff switch lug with the orange wire. On '44' mags, connect to the (+) coil terminal. Check the wiring of the 2-pin switch harness plug to be sure the orange switch wire connects to the orange points box wire—some plugs may be wired backwards. Be sure the electronic points/coil box has a ground wire to a cylinder head.

**Vertex** and other **internal coil magnetos** including **Fairbanks, Bendix**, etc. Connect tach white wire through isolator to points terminal on mag or to cutoff switch lug that connects to mag. **V/4 engines** with Vertex internal coil magnetos require a special tach.

**Mallory** or **Vertex external coil magnetos** Connect tach white wire through the isolator to the (+) coil terminal (orange wire on Mallory) or to the cutoff switch lug that connects to this coil terminal. Be sure the (-) coil terminal has a ground wire to engine or chassis. Some early 4 cylinder Mallory magnetos are converted V/8 units and would use the 'C' setting.

### Battery Powered Ignitions

| Engine (# of cylinders) | Jumper Setting           |
|-------------------------|--------------------------|
| V/8                     | A                        |
| 6 (inc. V/6 odd/even)   | B                        |
| 4                       | C                        |
| 1                       | E (crank triggered) or F |

**Distributor ignitions with points or trigger module and single coil** Connect tach white wire to the (-) coil terminal.

**HEI distributors** Connect tach white wire to the TACH terminal on the distributor.

**Electronic ignitions with tach signal output** (includes **MSD, Electromotive, Crane, Accel**, etc.) Connect tach white wire to the tach signal output of the ignition unit. Be sure ignition box is well grounded to chassis or engine.

**MSD 6 or 7 series including MSD 6AL** Connect the tach white wire to the round black receptacle with a recessed male tab.

**MSD 6ALN or 6HVC** Connect the tach white wire to the **brown** wire from the 6-pin connector.

Do not connect to the white wire from MSD boxes—it is NOT a tach signal output. Tach does not require a MSD tach adapter.

**Systems with 2 MSD's** using a MSD 8911 tach splitter or a changeover switch require a 10,000 ohm resistor connected from the tach white wire to ground (or tach black wire). A tach splitter with the resistor included is available. Some factory wired race cars have the splitter and resistor included in the car's wiring harness.

**EFI [brand] ignitions** (used on some midget, sprint, and champ cars) and **V/6 odd-fire engines with MSD ignition** require special tachs.

**4 Cylinder Motorcycle Ignitions** (May use 'C' or 'E' setting, see below)

**Dyna 2000** (Also used on midget engines) Connect tach white wire to green wire ('C' setting—preferred) or yellow wire ('E' setting).

**2 coil systems** Connect white wire to (-) coil terminal on one of the coils (coil terminal that is not wired to other coil). Use 'E' setting.

**4 coil systems** Connect tach white wire to the tach signal wire in factory harness ('C' or 'E' setting—see 'Hint' below).

**Honda 600F-4** and others may require a resistor (1,000 to 100,000 ohms ok; ~22,000 ohms optimum) connected from the tach white wire to ground (or tach black wire). Magneto isolator included with harness will work if connected from tach white wire to ground.

**1 Cylinder Engines** Tach may not work with some stock flywheel magnetos, CDI's or 2-stroke ignitions.

**Honda** (4 stroke only) Connect tach white wire to kill switch wire, use 'E' setting.

**Deco/Continental** (battery powered only) Connect white to (-) coil terminal. Use 'F' setting with points, 'E' setting if crank triggered.

**Hint** If you are unsure of the correct setting, try running the engine and watch the tach reading while the engine is idling smoothly. Most racing engines will idle in the 1000 to 2000 range. If idle reading appears half (tach reads around '07' while idling) move jumper two spaces to the right. If it reads double (around '30') move jumper two spaces left. Note that 'B' and 'D' are for 6 cylinder engines only and 'F' is for 1 cylinder engines only. Be sure tach smoothly tracks engine speed when slowly accelerating through RPM range.