



TACH PULSE SIGNAL GENERATOR

This kit is comprised of a **pickup** and a **signal generator**. Together these turn radio frequency interference from the ignition into a clean square-wave tach pulse that any tachometer, shift-light or RPM activated device will readily accept.

The pickup portion can be positioned at various locations to “hear” ignition pulses. Placing the pickup near the magneto cap, tie-wrapped to the coil wire or attached near the coil secondary (high-voltage) output are all good places to start. For best results, start the engine and have someone watch the tach/device while someone moves the device to various locations. Some places may produce a “twitchy needle”, some may not produce enough signal at idle for a consistent signal. Try some different places before permanently wiring the pickup harness to the vehicle and trimming to fit.

Do not attach the pickup to a spark plug wire as this will not emit the pulses required to do the job. Use the **COIL** wire as this lead contains all pulses.

The signal generator box **MUST** be placed as close to the tach device as possible to reduce contamination of the output signal by noise. The grey output wire is shielded to protect the signal. Keep the tach device wires as short as possible. **DO NOT** ground the shield foil or bare drain wire of the output cable. Trim off any shield or drain wire exposed as these are grounded internally.

This unit also filters the 12VDC and ground for the tach device to remove RFI that is introduced through the power supply. You **MUST** power any tachs, shift-lights, or other RPM activated logic using the small red/black pair in the grey output cable. This is filtered power for your devices. The device is thermally protected and will shut-down if more than .5 amps is drawn through it. Once it cools, it will work normally again.

The hole in the pickup is **ONLY** for a tie-wrap/zip-tie. **DO NOT** drill the hole out bigger or the pickup will be ruined. The coil wire is **NOT** supposed to go through the hole...tie-wrapping the pickup to the side of the coil wire is good enough! Two conductor foil shielded wire is supplied to connect the pickup with the **BLUE** and **VIOLET** wires on the box. Connect the stranded bare shield drain wire to ground at only **ONE** end. The pickup connections are **NOT** polarity sensitive. It doesn't matter which is **BLUE** or **VIOLET** but **DO NOT** ground either one.

Inputs:

RED - Connect to 12VDC source on vehicle. Can range from 11-14VDC max. If connecting to 16V or 18V, please use our voltage dropping diode device to lower the input voltage.

BLACK - Ground wire to engine/chassis/battery

VIOLET – External pickup lead. *Interchangeable with BLUE, non-polarity sensitive*

BLUE – External pickup lead. *Interchangeable with VIOLET, non-polarity sensitive*

Outputs (inside grey shielded cable):

RED in the grey cable - Filtered 12VDC to power the tach device (1/2 amp max)

BLACK in the grey cable - Filtered ground for the tach device

WHITE in the grey cable - Tach signal

FOIL layer - Shield, no attachment - trim off flush

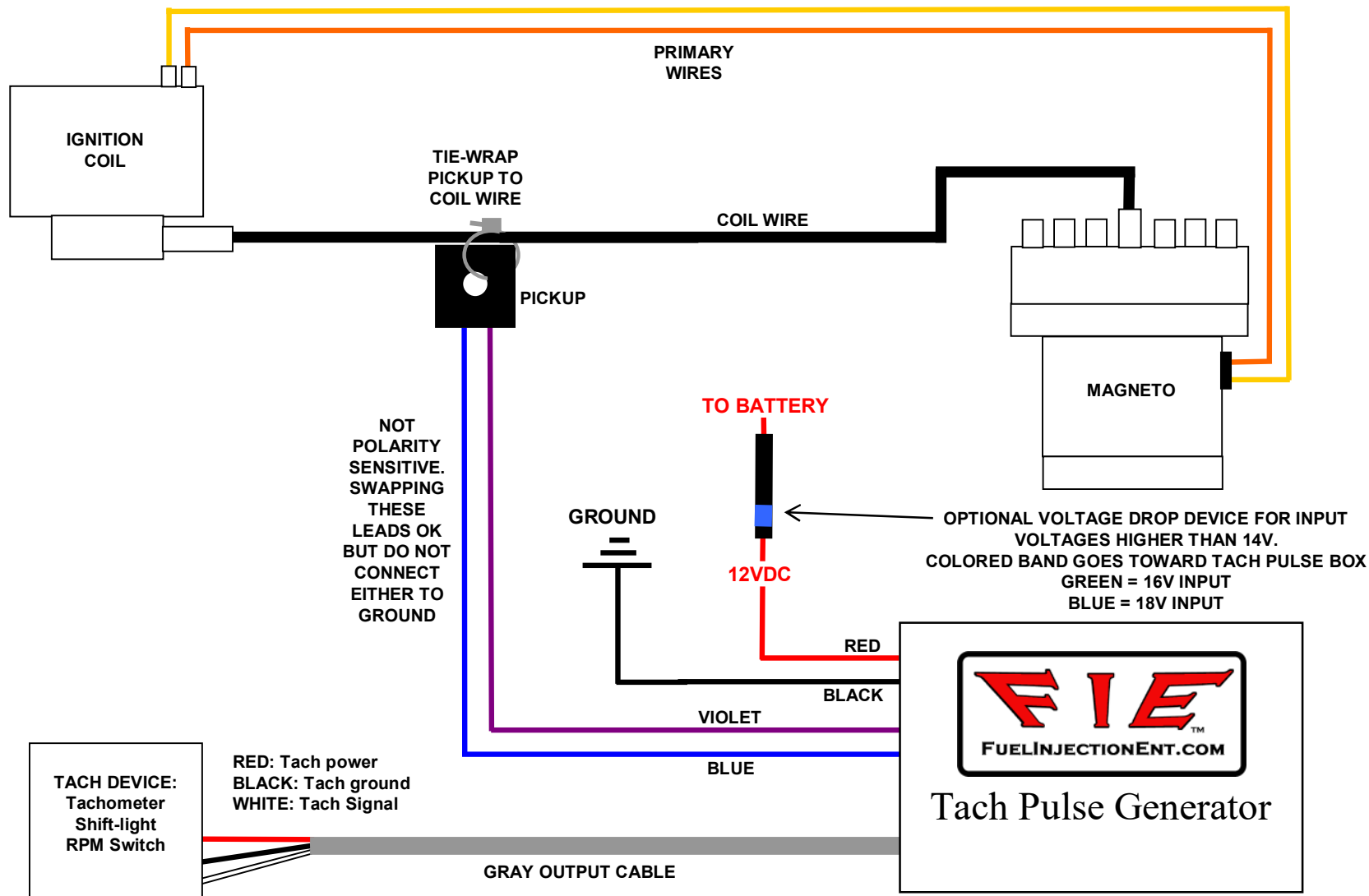
BARE stranded drain wire - No attachment - trim off flush

Foil shield and stranded drain wire: If you shorten the output cable, a foil shield and stranded (uninsulated) drain wire will become visible. These should be trimmed back flush as originally delivered to prevent contact with the **RED**, **WHITE** or **BLACK** connections. The shield and drain wire are connected inside the box and should **NOT** be connected to anything outside the box.

DO NOT power an electric shifter or other large current draw device through this product! The box can handle **HALF** an amp and is thermally protected. It will stop working if .5 amps is exceeded and resume working when it cools down. Use a relay to do any electrical “heavy lifting”.

Use our voltage dropping diode device for input voltages in excess of 14VDC. The device is directional and the colored shrink sleeve band must go **TOWARD** the tach pulse box. **GREEN** = 16V input **BLUE**=18V input. The series of diodes in the device reduces the input voltage to the required 12V.





Schematic R1.5