

# TACH-ADAPT v3.3

## INSTALLATION INSTRUCTIONS

### 1. INTRODUCTION

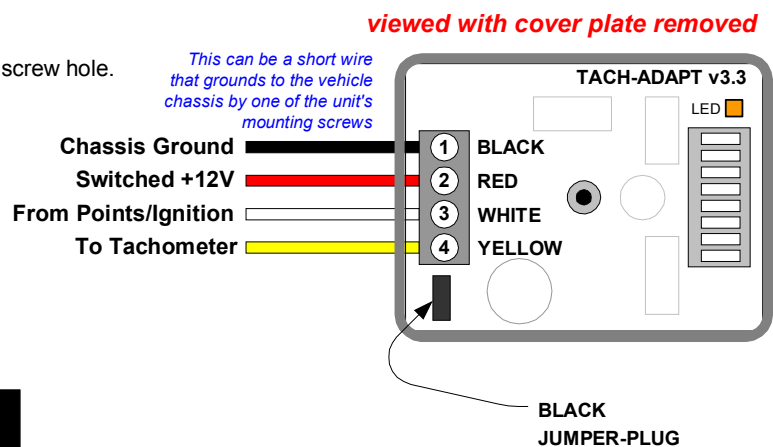
Tach-Adapt receives the pulse stream coming from the distributor points or electronic ignition, performs a mathematical conversion and outputs the rate needed by the particular tachometer being used. In this way, a tachometer designed for (example) a 4-cylinder engine will read correctly on a 6 or 8-cylinder engine. Tach-Adapt outputs a regenerated output at the correct rate. This output can be a low-voltage square-wave (for driving newer tachometers), or it can replicate the high-voltage pulse that older tachs typically need.

### 2. GETTING STARTED

- Determine your desired mounting location. Choose a place that avoids extreme engine heat and possible wet areas. Typically, under or near the instrument panel is best because most needed signals and power are generally nearby.
- Wiring: Obtain enough *stranded*, insulated automotive grade wire to make connections based on your mounting location. Small gauge wire is adequate as power consumption is very low. For easy handling, recommended size is #20. (Terminal Block will accept #16 through #24. ) **Wire color is not important, it just makes it easier to keep track of your connections.**

### 3. TACH-ADAPT CONNECTIONS

- Remove screw and lift Rear Cover from unit via the screw hole.
- Orient the unit as shown in the illustration at right.:
- Back-out Terminal block screws.
- Strip-back insulation ~1/4" to make connections to Block.
- Pass each wire through individual holes in housing to fully engage into terminal block.
- Snug-down the screws to capture wires.



### 4. SWITCH and JUMPER-PLUG SETTINGS

- Set switches according to the following table

ENGINE CYLINDERS	TACH CYLINDERS	SWITCHES ON	OUTPUT RATE
4	8	2 & 5	X2.0
4	6	3 & 6	X1.5
6	8	4 & 7	X1.33
6	4	2 & 7	X0.66
8	6	3 & 8	X0.75
8	4	1 & 6	X0.5
NOTE 1	NOTE 1	1 & 5	X1.0

**NOTE 1:** When using Tach-Adapt only to regenerate output pulse and no change in rate is required, set switches 1 and 5 to "ON".

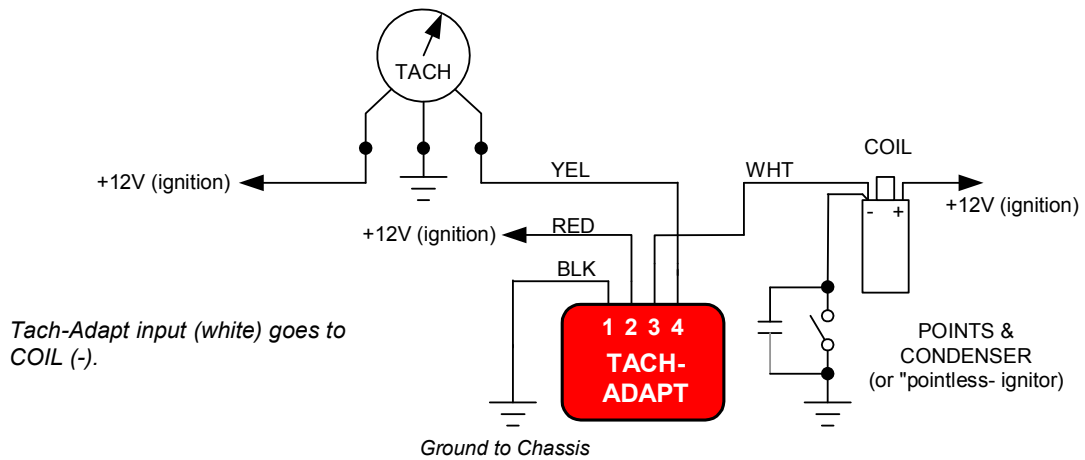
- Output Level Selection:** There is a small Jumper-Plug slid over 2-pins located near the Terminal Block. When these 2 pins are connected by the plug, Tach-Adapt outputs a low-voltage tachometer drive signal. Older tachs typically require a high-voltage pulse, provided by REMOVING the Jumper Plug. If in doubt about whether your tach requires a high-voltage pulse leave this Jumper Plug in place and proceed to next steps

### 5. VEHICLE CONNECTIONS and TESTING

- Before** mounting TACH-ADAPT, finish connecting the 4 wires to vehicle power and signals according to the diagram that applies to your vehicle ignition system on the following pages.
- With the back cover still removed from the unit, run the engine and verify the LED above the switch is **ON**. The LED indicates the unit is recognizing the trigger from your ignition system and it is producing an output.
- If the LED is on and your tach is not responding, remove the Jumper Plug to enable the high voltage pulse output. If your tach is still not responding, verify the TACH-ADAPT output goes **direct** to your tachometer and not through some other devices. For Porsche 911 vehicles '69 thru '71, pay particular attention to disconnect/bypass any wiring to the "Ballast Unit" (if still present on car), as detailed in drawings.
- Once you verify the operation of the unit, restore the Cover Plate and permanently mount unit to the vehicle.

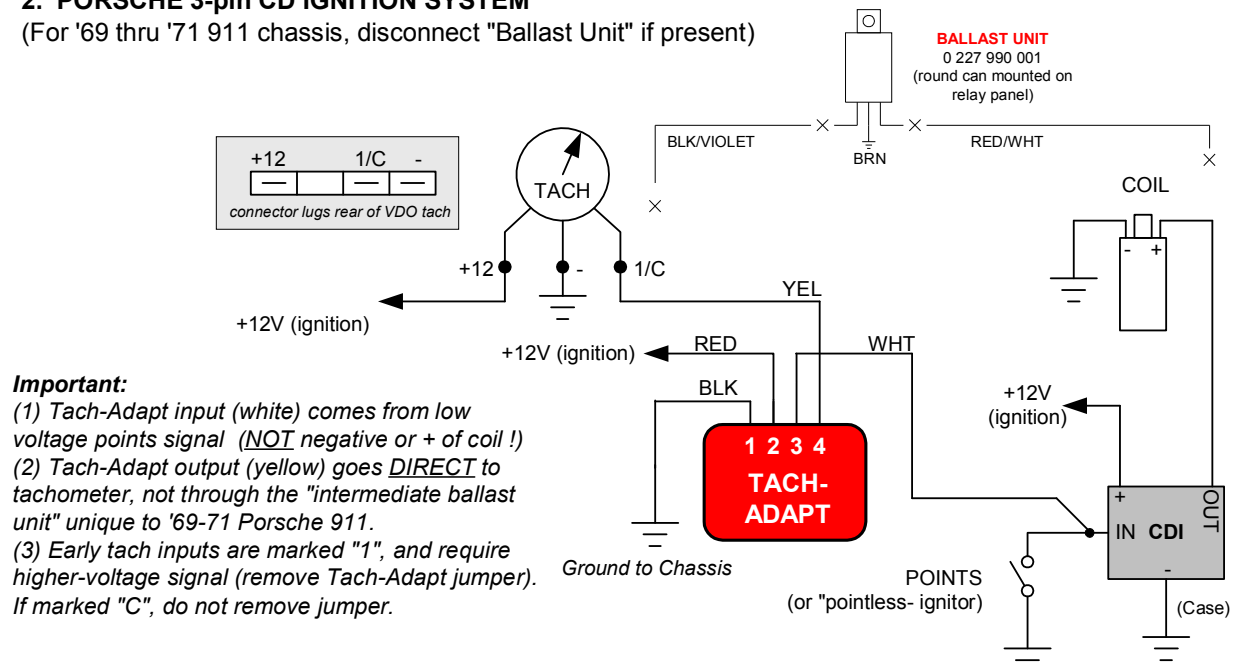
## TYPICAL VEHICLE CONNECTIONS

### 1. TRADITIONAL (KETTERING) IGNITION SYSTEM (Points and Condenser or Electronic Ignitor)



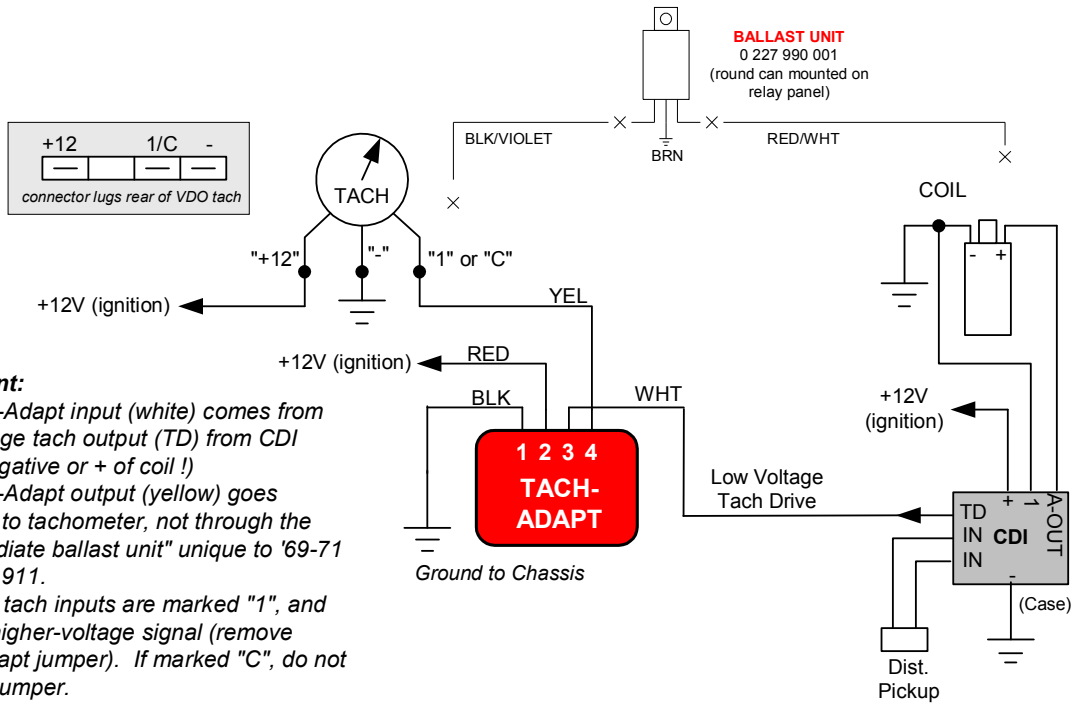
### 2. PORSCHE 3-pin CD IGNITION SYSTEM

(For '69 thru '71 911 chassis, disconnect "Ballast Unit" if present)

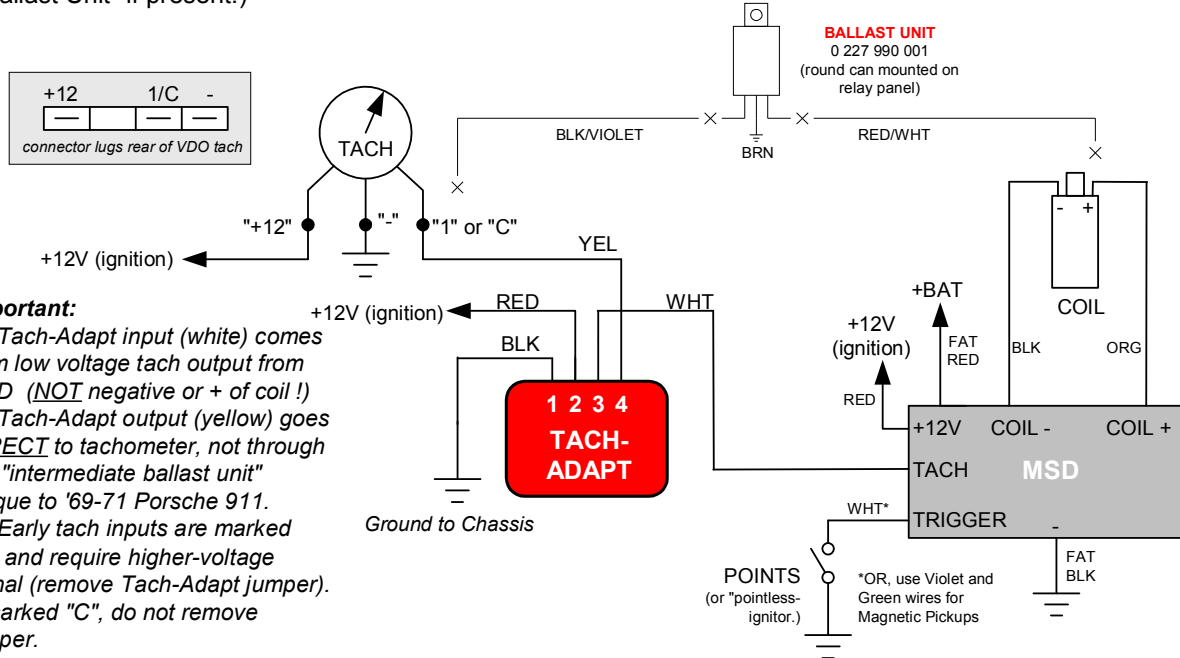


TYPICAL VEHICLE CONNECTIONS (continued)

**3. PORSCHE "6-PIN" CD IGNITION SYSTEM** (for '69 thru '71 911 chassis, disconnect "Ballast Unit" if present!)

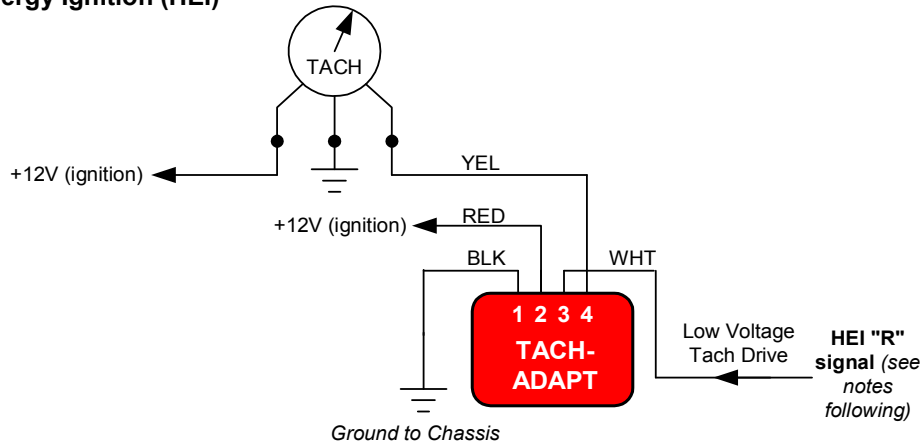


**4. MSD CDI Applications** (for '69 thru '71 Porsche 911 chassis, disconnect "Ballast Unit" if present!)



**TYPICAL VEHICLE CONNECTIONS** *(continued)*

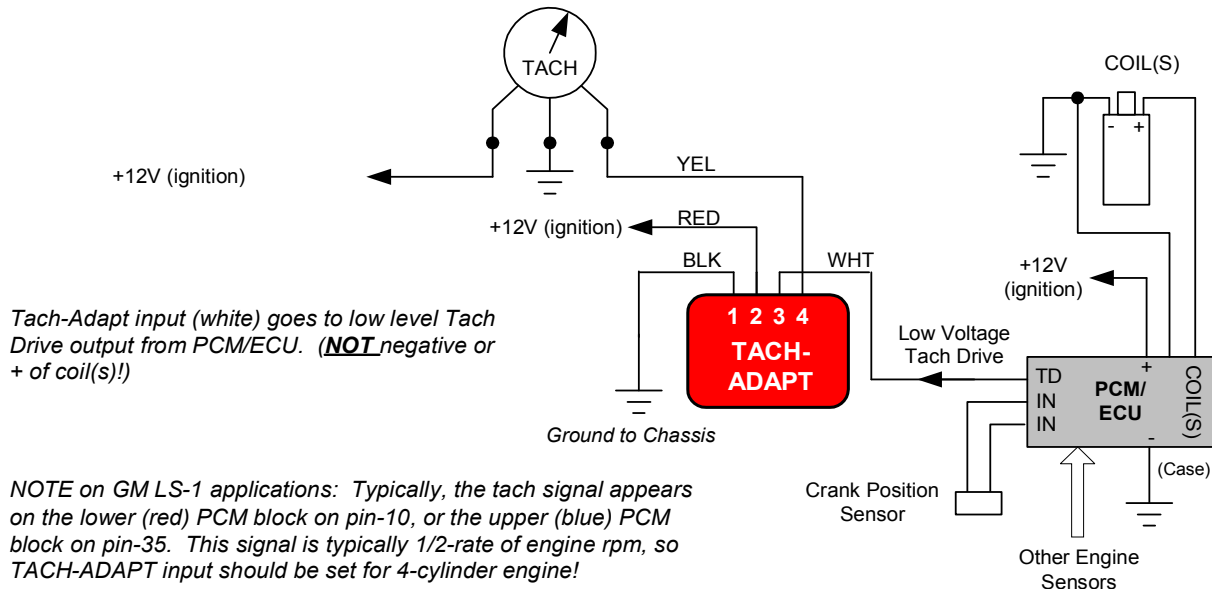
**5. GM High Energy Ignition (HEI)**



**NOTES**

Most desirable: Tach-Adapt input (white) goes to low level Tach Drive output from Distributor amplifier module. Typically, this is the "R" pin on the 7-pin HEI amplifier module in coil-in-Distributor units, and the 8-pin amplifier module for external-coil Distributors. The "R" signal is typically accessible in the distributor harness. Although not as desirable, it is possible to use the signal at "pin-C" on the external coil. (This is the equivalent of a "coil-minus" signal in a conventional ignition.)

**6. GM Engine Control Unit (ECU) or Powertrain Control Module (PCM) (generic example)**



**AshlockTech**

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**Warranty:** Tach-Adapt is warranted for 1-year from date of original purchase. A returned unit will be substituted with an equivalent functional unit. User pays shipping both directions. Disclaimers: Tach-Adapt is offered to skilled automotive enthusiasts who want to change the rate and characteristics of the pulse that triggers most tachometers. Functionality cannot be guaranteed due to the wide number of ignition system and tachometer design variations. If this unit does not work in your application, you may return it in un-damaged condition for full refund, excluding shipping costs. The purchaser and/or user of this product releases AshlockTech, its owners and employees of any unforeseen harm to persons or damage caused to tachometer or automotive electrical systems by use of this product.