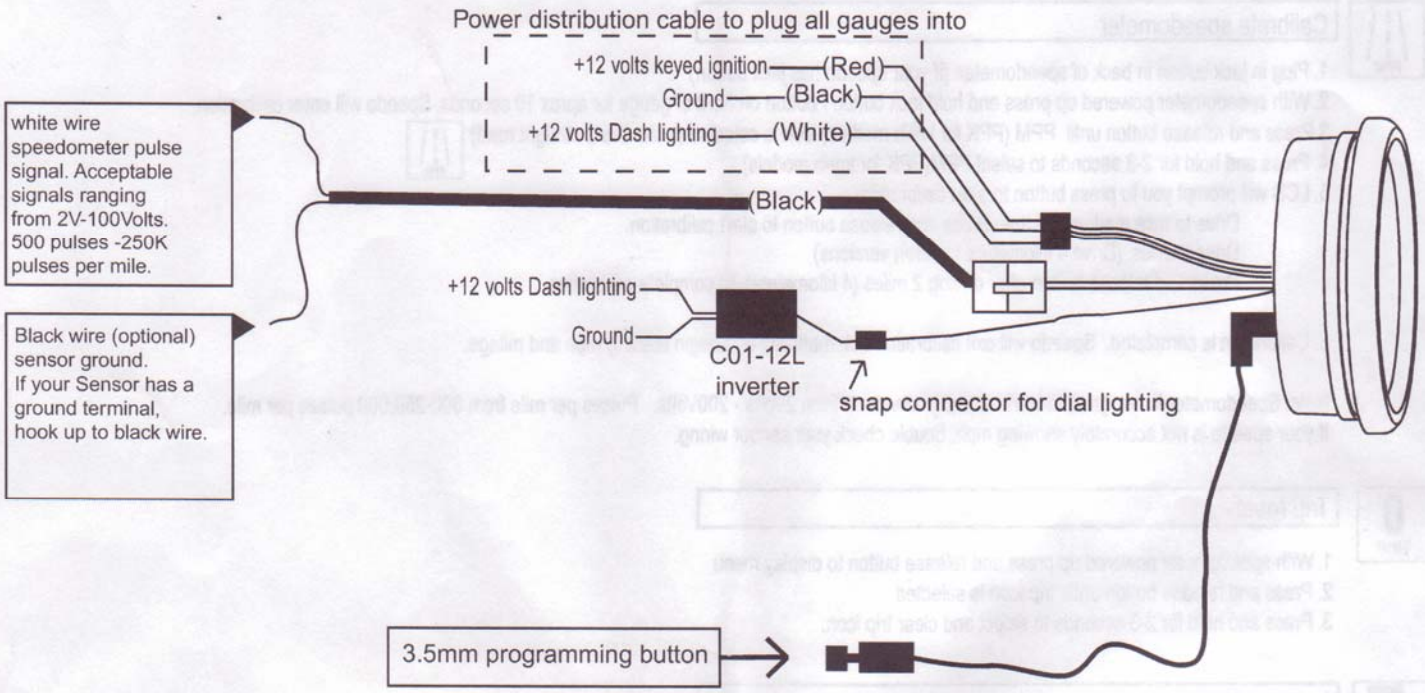
Speedometer instructions



1.Disconnect negative (-) Battery Cable

2.Connect wiring as above.

3.Mount Gauge for easy viewing. Use spin lock ring (included) to mount to panel. Spin ring threads in both directions (depending on your dash panel thickness). Snap Gauge connector to wiring connector

4.Reconnect negative (-) battery cable.

Speedometer instructions

Calibrate speedometer

1. Plug in jack button in back of speedometer. (if your speedo has jack button)
2. With speedometer powered up press and hold jack button / button on front of gauge for aprox 10 seconds. Speedo will enter calibration.
3. Press and release button until PPM (PPK for km/h models) icon is selected (looks like a straight road) 

4. Press and hold for 2-3 seconds to select PPM(PPK for km/h models)
5. LCD will prompt you to press button to start calibration.
   Drive to mile marker and then press and release button to start calibration.
   Drive 2 miles. (Drive 4 kilometers for km/h versions)
   Press and release button after driving 2 miles (4 kilometers) to complete calibration.
6. Calibration is completed. Speedo will exit calibration automatically and begin reading mph and milage.

Note: Speedometer is designed to work with any waveform from 2Volts - 200Volts. Pulses per mile from 500-250,000 pulses per mile.
If your speedo is not accurately showing mph, double check your sensor wiring.

Trip reset

1. With speedometer powered up press and release button to display menu
2. Press and release button until trip icon is selected
3. Press and hold for 2-3 seconds to select and clear trip icon.

Invert contrast

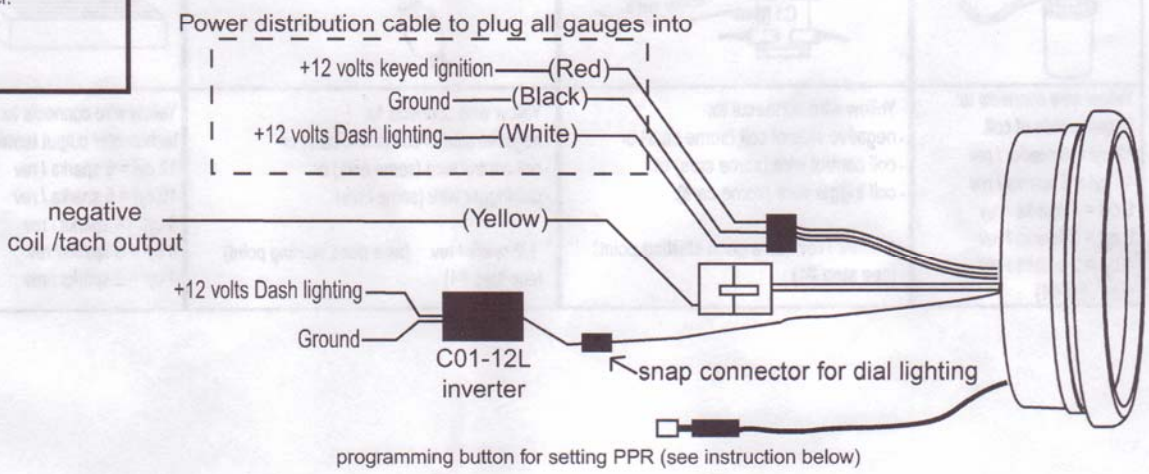
1. With speedometer powered up press and release button to display menu
2. Press and release button until B/W icon is selected
3. Press and hold for 2-3 seconds to inert contrast of screen.

4" Tachometer Instructions

Caution:
1 Do NOT handle coil wires when car is running. High voltage is sometimes present.

2. Do NOT try to splice directly into a spark plug wire. This will damage tachometer.

3. Where safety glasses.

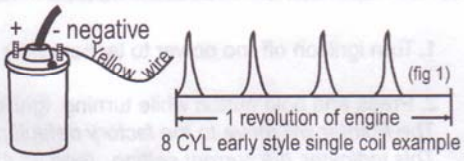


(1) Mount tachometer in good location for easy viewing. Use included screws or pop rivets (not included).

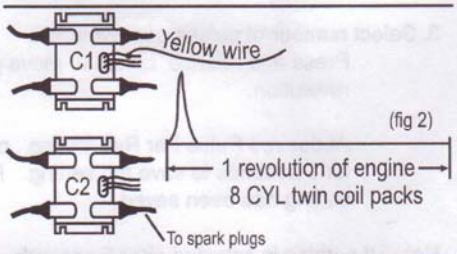
(2) Hook up red,black, and lighting wires. (refer to schematic above)

Notes on tach signals

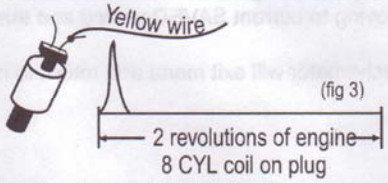
Your vehicles ignition system will fall under one of these 3 ignition types. The type of ignition system will determine where the yellow wire is connected and how the number of sparks per revolution is set up on the tachometer.



Type #1 (single coil) - Up until the 1990's tachometers picked up the signal from the (-) side a single ignition coil, reading every pulse sent to all the cylinders. For example, an 8 cylinder (4 stroke) engine fires 4 spark plugs per revolution or all 8 spark plugs in 2 revolutions. Connecting the tachometer yellow signal wire to the negative side of the single coil on an 8 cylinder results in picking up 4 sparks in 1 revolution (see fig 1). This type of ignition was used pre-dominately until the 1990's and distributes sparks to each spark plug. In some vehicles during the 90's the coil and distributor merged into one unit, but it is the same ignition system - one coil that distributes sparks to all cylinders. When connecting the yellow wire to this style of ignition you will be picking up all cylinder sparks. (see summary table below)



Type #2 (coil pack) - (Fig 2) is a 96 Mustang V8 with twin coil packs. Coil pack #1 (C1) controls the firing of 4 spark plugs and coil pack #2 (C2) the remaining 4 spark plugs. 2 or more separate coils are within each coil pack assembly. In this example each of the 2 coils within each coil pack sends sparks to 2 cylinders at the same time. When one cylinder is firing in the compression stroke, it's paired cylinder is "waste" firing in the exhaust stroke. Each separate coil within the pack is controlled by it's own trigger wire. In otherwords, if you hooked up the yellow wire to one coil trigger wire within one coil pack, instead of the yellow tach wire seeing 4 sparks per revolution as in a single coil setup (fig 1) it will see only a fraction of the total engine sparks. (see table below)

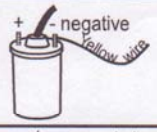
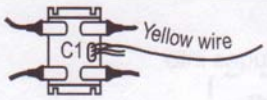
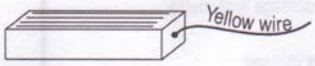


Type #3 (coil on plug) - Instead of one coil sending sparks to 2 cylinders, (like in the coil pack), an individual coil is placed directly on top of each spark plug eliminating the spark plug wires. The yellow wire, when hooked up to any coil, will pick up only 1 pulse per 2 revolutions or 1/2 pulse per 1 revolution. See (fig 3)

In summary, figure out how many cylinders you are picking up with the yellow wire and set the respective number of sparks per revolution. (see step 4). The tachometer can be configured to work on .5 sparks (coil on plug) through up to 8 sparks per revolution. Use the table below as a starting point when hooking up the yellow wire.

③ Hook up Yellow wire. **Caution- HIgh voltage sometimes present on ignition coil wires. Engine must be off when connecting yellow wire.**

Important note: connecting the tachometer to the wrong wire will NOT damage the tachometer or your ignition. It just won't work!

Tachometer yellow wire hook up options (also read setting pulses per rev on next page)			
Type #1 ignitions	Type #2- Coil Packs	Type #3 - Coil on Plug	Aftermarket ignitions / tach output
			
Yellow wire connects to: negative side of coil. 12 cyl = 6 sparks / rev 10 cyl = 5 sparks / rev 8 cyl = 4 sparks / rev 6 cyl = 3 sparks / rev 4 cyl = 2 sparks / rev (see step #4)	Yellow wire connects to: • negative side of coil (some cars) or • coil control wire (some cars) or • coil trigger wire (some cars). 1 spark / rev. (as a good starting point) (see step #4)	Yellow wire connects to: • negative side of coil (some cars) or • coil control wire (some cars) or • coil trigger wire (some cars). 1/2 spark / rev. (as a good starting point) (see step #4)	Yellow wire connects to: tachometer output terminal 12 cyl = 6 sparks / rev 10 cyl = 5 sparks / rev 8 cyl = 4 sparks / rev 6 cyl = 3 sparks/ rev 4 cyl = 2 sparks / rev

④ Set the # of pulses per revolution

1. Turn ignition off (no power to tachometer)

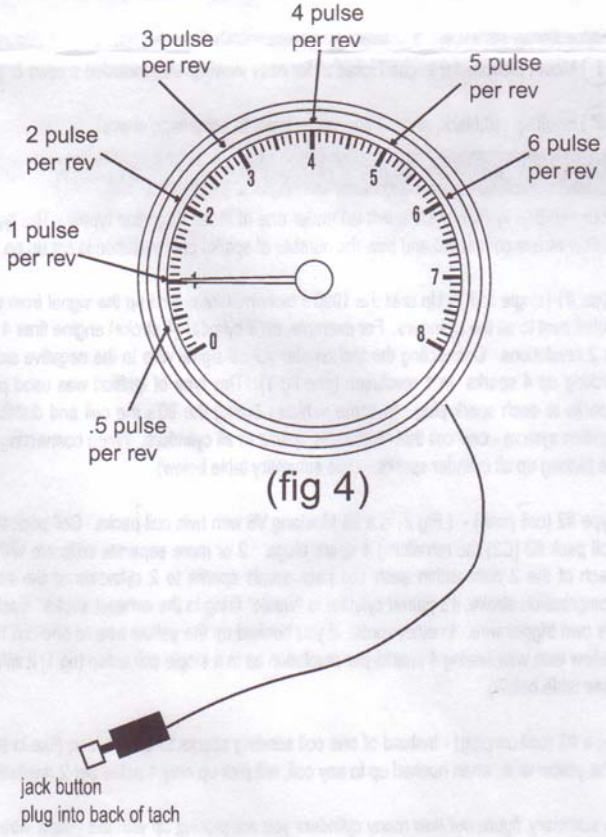
2. Press and hold button while turning ignition to the 'on' (power to tachometer).
The Pointer will move to the factory default position of 4 spark per revolution.
This indicates the current setting. (see fig 4) Release button.

3. Select number of pulses per revolution.
Press and release button to move pointer to select pulses per revolution.

At desired Pulse Per Rev setting , press and hold button down for 5 seconds to save the setting. Pointer will return to zero to indicate setting has been saved.

Note : if nothing is selected after 5 seconds, gauge will exit menu by pointer moving to current SAVED setting and then returning to zero.

Tachometer will exit menu and return to normal operation.

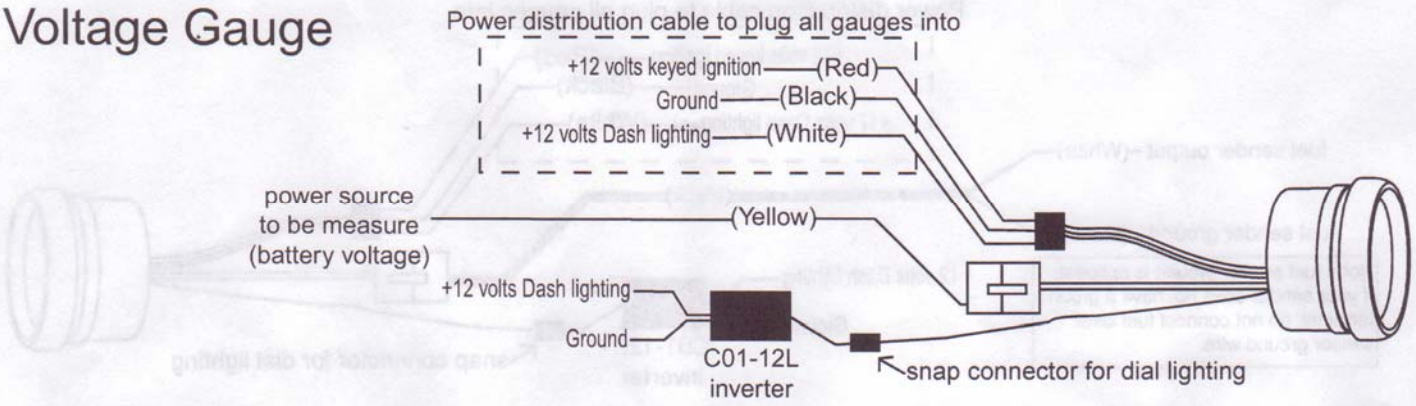


(fig 4)

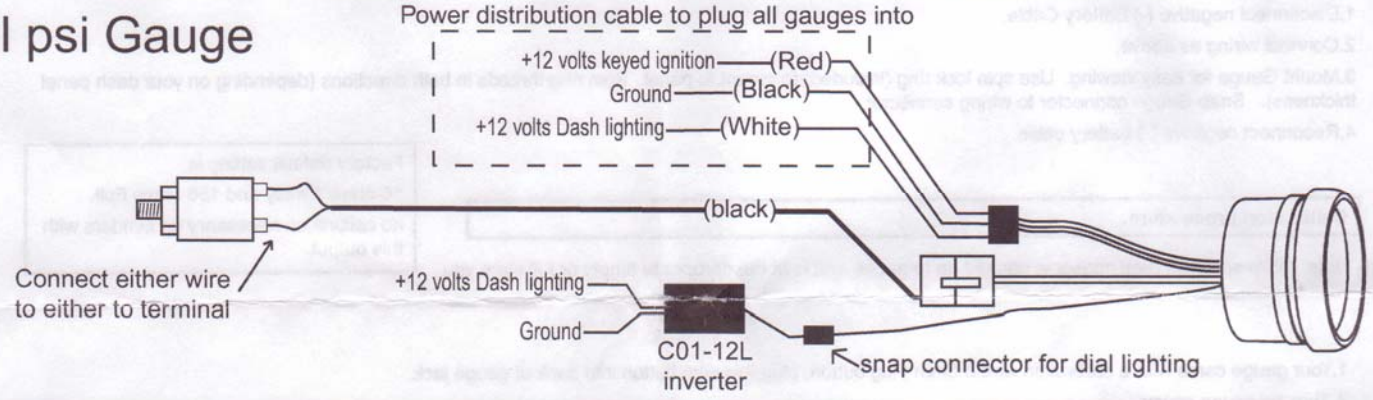
2-1/16" Gauge Instructions

Disconnect negative battery cable before installation

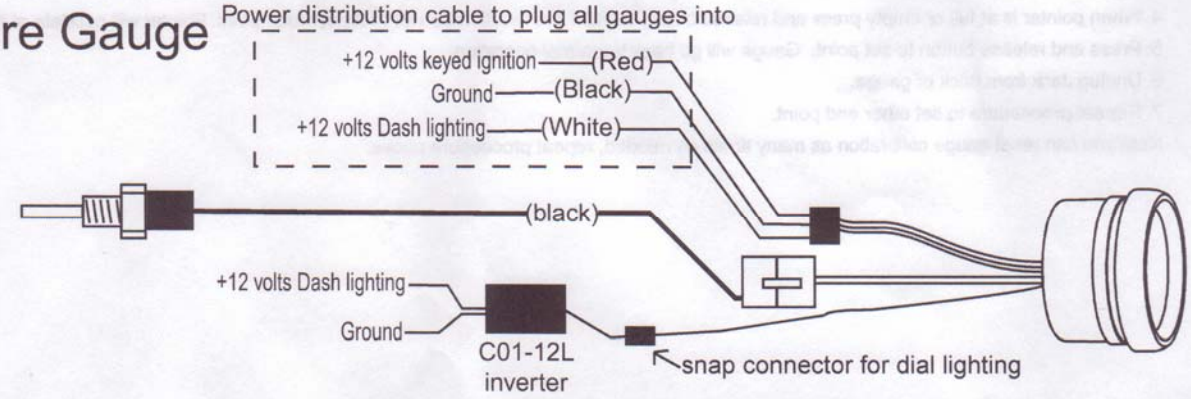
Voltage Gauge



Oil psi Gauge

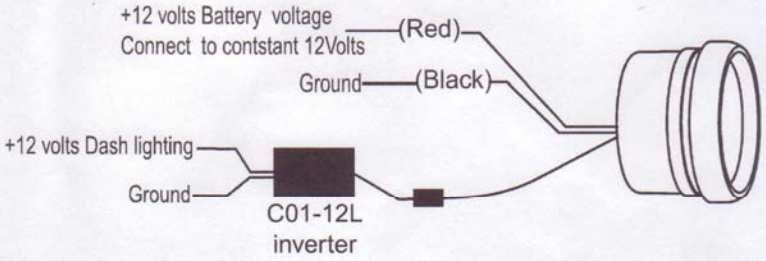


Temperature Gauge

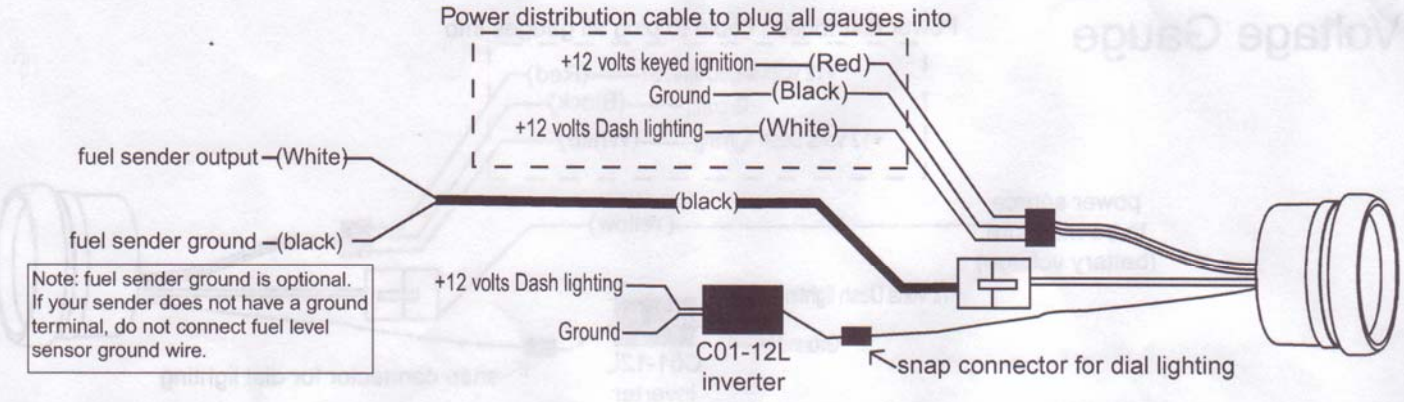


Clock Gauge

Note: To adjust time use included 3.5mm jack plug button.
1. plug into back of gauge.
2. press and hold button to rotate clock hands to current time



Programmable Fuel level instructions



Installation

1.Disconnect negative (-) Battery Cable.

2.Connect wiring as above.

3.Mount Gauge for easy viewing. Use spin lock ring (included) to mount to panel. Spin ring threads in both directions (depending on your dash panel thickness). Snap Gauge connector to wiring connector.

4.Reconnect negative (-) battery cable.

Factory default setting is
16 ohms Empty and 158 ohms Full.
no calibration necessary on senders with this output.

Calibration proceedure.

Note: make sure fuel level sensor is hooked up to gauge and is at the apropriate empty or full state you wish to calibrate.

1.Your gauge came with a calibration wire 3.5mm plug button, plug this wire button into back of gauge jack.

2. Turn on gauge power.

3. Hold down button of gauge for 10-12 seconds. Gauge will enter recalibration mode and pointer will oscillate between Full and Empty.

4. When pointer is at full or empty press and release button to enter the recalibration for that particular point. Pointer will oscillate at that point.

5. Press and release button to set point. Gauge will go back to normal operation.

6. Unplug Jack from back of gauge.

7. Repeat proceedure to set other end point.

Note you can reset gauge calibration as many times as needed, repeat proceedure above.