

VEI Systems Installation Instructions

V1-TAC-Lx – Digital Tachometer

Please read these instructions completely before beginning installation to ensure that you have the tools and skills necessary for installation and operation of this instrument. If you are not sure that you can perform the installation safely, then consult a qualified installer. Further instructions available at www.VEISystems.com/technical.html.

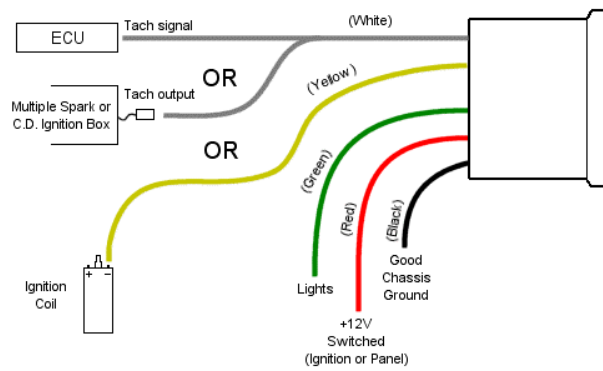
MOUNTING

Install the unit through the front of the mounting hole in the dash pod or panel. If you are making a custom dash panel, you will need to drill a 3-3/8" hole. Slide the clamp onto the 2 studs on the back of the instrument. Secure with the 2 thumb-nuts. Use a small drop of threadlocker or nail polish on the thumb-nuts to prevent them from loosening under vibration.

This tachometer has been designed for use with a tachometer pulse output from an MSD or directly off an ignition coil. No sender is needed.

WIRING

The wires should be connected as below using crimp-on butt-splice connectors, or soldered and sealed with heat-shrink tubing. Before connecting any wires, you should either disconnect the battery power, or carefully connect the wires in the order shown. If not, you may damage the instrument. Use an existing fuse in the fuse panel, or an external fuse to supply power to the instrument. The V1 series instruments use an 105mA of current avg. and 175mA max, so ensure the fuse is sized appropriately. For a typical 6- or 7-gauge setup, a single 5 Amp fuse is good.



- BLACK -- connect to a solid chassis ground under the dashboard, or directly to the battery. You may need to expose the metal connection point under the dash by scraping or lightly sanding it. A ring terminal and a screw should work well in most cases.
- RED -- connect this to a source of **switched** +12V power. This will usually be found at or near the ignition switch, and will usually have a relay wired through the ignition switch. An alternate source of this is a switched power line from a nearby light or accessory (radio, etc). If you are unsure that the wire can supply the power required for the instrument, then use an external relay.
- GREEN -- connect this wire to the positive line (+12V) from the headlight switch. When this line receives a positive voltage, the gauge will use the “park-lights” brightness setting. Alternatively, if setting up a racing-mode display, this can be connected to a separate mode switch (12V or 0V signal).
- YELLOW – This is the HIGH-signal level input wire. You will need to connect **EITHER** this wire **OR** the yellow wire (explained below), but **NOT BOTH**. If you are taking the tachometer pulse signal directly from the coil, connect this wire to the negative terminal on the coil. If you are taking the tachometer pulse signal from the ECU, from a multiple spark unit or any other digital signal, you will need to use the “Tach output” signal from that unit. In this case, use the white wire (explained below). If you are unsure what the signal level is, try this wire first, or preferably contact us first.
- WHITE – This is the LOW-signal level input wire. You will need to connect **EITHER** this wire **OR** the yellow wire (explained above), but **NOT BOTH**. If you are taking the tachometer pulse signal from the ECU, from a multiple spark unit or any other digital signal, connect this wire to that signal output/point. If you are taking the tachometer signal directly from the spark signal (ignition coil), follow the instructions for the yellow wire (described above). If you are unsure what the signal level is, try the yellow wire first, or preferably contact us first. Connecting this white wire to a high-level signal will damage the instrument.

OPERATION

Press and hold the button for a few seconds to change the mode. Press and release quickly (tap the button) to change the setting in any mode. Modes are as follows:

MODE	DISPLAY	SETTINGS
Normal	(Engine RPM)	Tap to reset the peak indicator.
Set bargraph scale	Sc 6	“6” => 0-6000 RPM, “9” => 0-9000 RPM, “12” => 0-12000 RPM
Peak feature on/off	P . Of	Turns on of off the bargraph peak indicator feature. Tap during run to reset.
Brightness Regular	Br . 9	Last digit shows regular brightness level from 1 to 9.
Brightness park-lights on	BP . 1	Last digit shows brightness level with lights on from 1 to 9.
Set startup mode	Run	Sets the mode in which the gauge will start on next power-up (“Run” or “Cal”).

CALIBRATION

You will need to setup this tachometer for the number of engine cylinders. To enter the calibration mode, switch to Set-Startup mode (shown in the table below), set the value to "Cal" (rather than "Run"), then power the unit off and back on using the ignition key. The first thing displayed is the existing setting for number of cylinders. Tap the button until the correct number of cylinders is displayed, then power off and on again to return to regular run mode. Note that there are a few ignition systems that put out a different number of ignition pulses than a typical distributor system (such as double pulses for each cylinder combustion stroke), so the setting will need to be different than just the number of cylinders. Contact us for the proper setting in these cases.

WARRANTY & LIABILITY

Neither VEI Systems, nor its dealers or agents shall be liable in any way, for any damage, loss, injury or other claims, resulting from the installation or use of this product. By purchasing or installing this product, you assume all liability of any kind connected with the use and/or application of this product. If you are unsure that you can safely install and use this product, consult a qualified installer or mechanic. The warranty on this product covers only the product itself for a period of 1 year from the date of purchase, and it will be at our discretion to repair or replace the affected parts. No user serviceable parts inside. Warranty void if product enclosure opened.