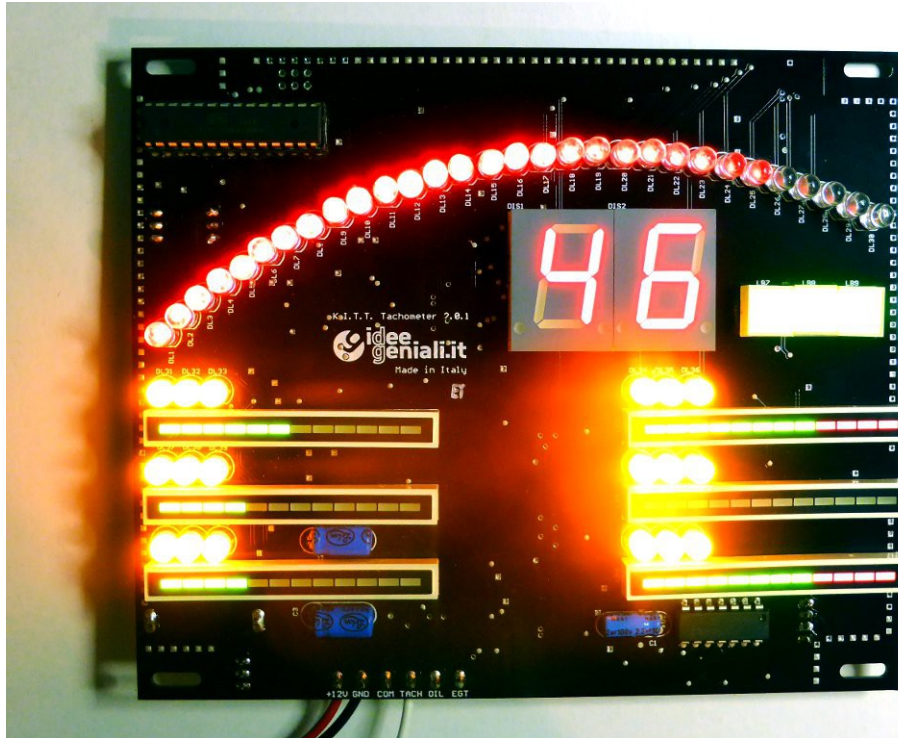


K.I.T.T. Tachometer

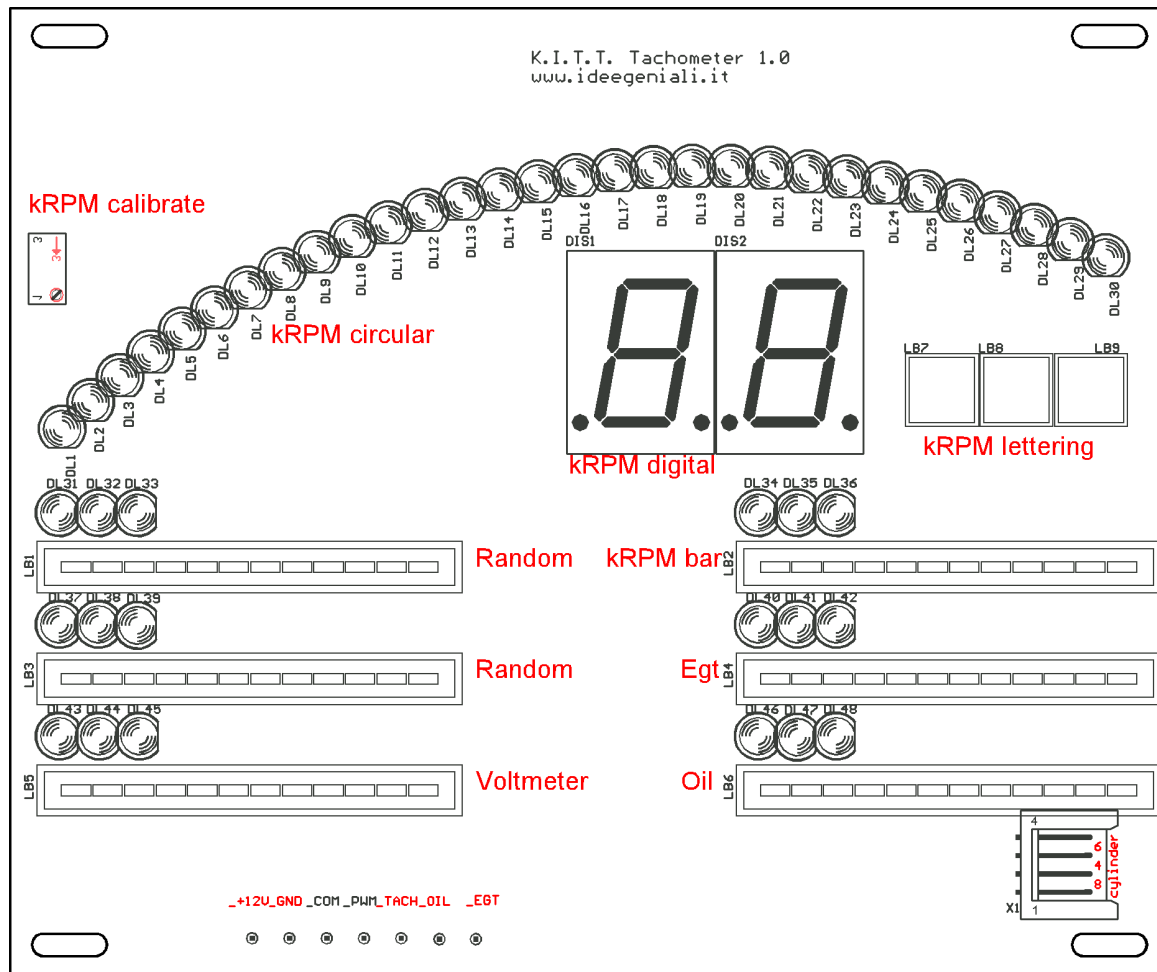
Hardware revision: 2.0.1

Firmware revision: V9

User manual revision: 2.1



Tachometer board for K.I.T.T. dash



Items

Engine rotation per minute are shown three times:

kRPM circular: 30 red light leds, in circular bar shape, special function “slowed fall back”

kRPM digital: 2 digits numerical readout, special function “anti flicker”

kRPM bar: bargraph display (upper right bar) with proportional lighting up

kRPM lettering: this zone is lighted in green for the lettering “kRPM” found on overlay or label

EGT Bar: right side, middle, 12 led segment bargraph shows “coolant liquid temperature”, as read from the resistive coolant temperature sending unit

OIL Bar: right side, lower, 12 led segment bargraph shows oil pressure, as read from the resistive oil pressure sending unit

Volt: battery voltage (12,0V – 13,8V typical) is shown on 12 led segment bargraph, this information is taken directly from power supply input lines

Random: These two bars show random light games while K.I.T.T. does its calculations.

18 yellow leds complete the Tachometer display. These are always on.

Jumpers setting and calibration

In the **cylinder** zone find a jumper to set the Engine kind, number of cylinders. You may choose between 4, 6 and 8 cylinders, by inserting the jumper on the proper location. This is typically the only customization needed.

The multiple rotations trimmer VR1 kRPM calibrate, find on the rear side of the board, lets you the fine calibration of the numerical readout of engine rotation per minute. This is calibrated at factory and typically doesn't need any adjustment.

The multiple rotation trimmer VR2 adjusts coolant temperature. This is calibrated at factory and typically doesn't need any adjustment.

Electrical wire up

Power supply (+12V, GND): connect a 12VDC power supply (max 13,8VDC) between +12V and GND. Red wire (+12V) is connected to +12V screw terminal; black wire (0V) is connected to GND screw terminal. The board has a protection against inverted polarity and 1 Amp fuse on board for overcurrent, but you are advised to respect correct polarity. Never replace fuse with >1Amp fuses. Always use exactly 1Amp fuse when replacing.

When board is powered, kRPM digital, circular and bar go to zero, Egt is full off, Oil is full on, Voltmeter will start working immediately, showing current battery voltage, Random bar start their light games, kRPM lettering and yellow leds are on.

Tach, Oil, Egt: connect respectively: rpm frequency sending unit, oil pressure resistive sending unit, engine temperature resistive sending unit.

Let's sum up the connections on the 6-ways screw terminal:

+12V	Power supply, Red wire: +12V
GND	Power supply, Black wire: 0V
COM	Reserved for intercommunication between all boards. No use in current firmware. Don't connect anything here.
TACH	Rotation per minute sensing unit, frequency kind
OIL	Oil pressure sending unit, resistive kind
EGT	Engine temperature sending unit, resistive kind

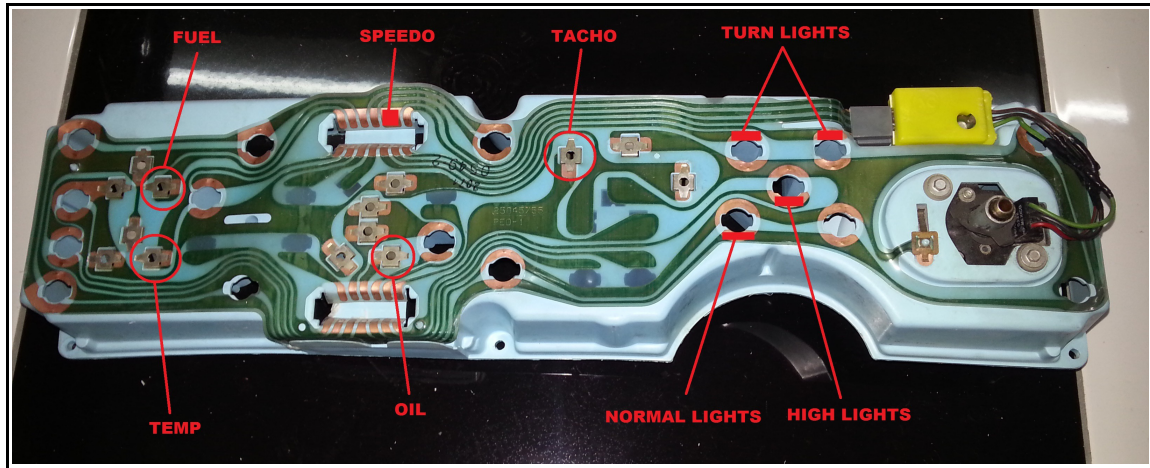
It's 5 connections: 2 for supply, and 3 for sensors. The other screw terminals are no-connect.

Connection points on car electrical plant

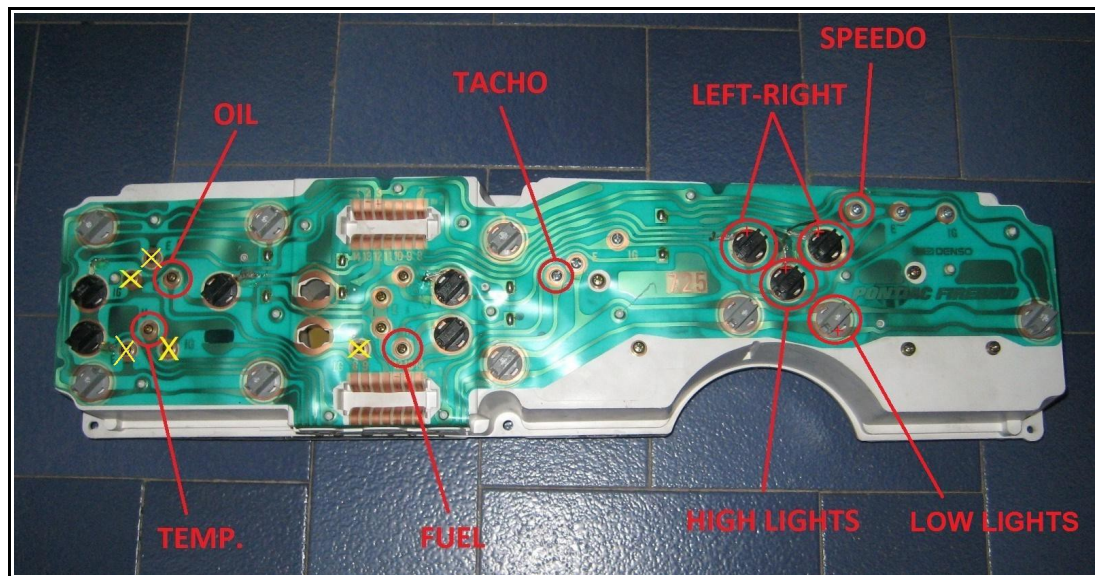
On 1982-1984 electrical plant, you must remove all original instruments (oem gauges), except the speed, that must be kept on position (mounted). Please leave connected the yellow box for speed signal conditioning as well. This is necessary, and present on cruise control equipped vehicles. If your car doesn't have cruise control, must purchase and mount a speed sensor like cyberdine 8901 or equivalent.

On 1985-1992 electrical plant, you must leave all original instruments (oem gauges) in place, and must remove the screws marked with a yellow cross or FUEL, EGT and OIL won't work.

Disclaimer: verify compatibility between signals of your vehicle and this board inputs and vice versa. We don't assume any responsibility or liability for erroneous connections and/or damage of vehicle electrical plant and/or electronic board. We put maximum efforts when writing this manual to provide accurate information, but we give no guarantee, express or implicit, on the faithful of provided information, on the suitability of this board for any purpose, including the information knowing or not knowing which, may result in damage of things or injury of persons. Using this board, any modification to vehicle electric plants, to operate in safe conditions, is in full charge of user / installer. It could be a legal requirement for the user/installer to get the necessary authorizations to use the apparatus described in this manual. Pontiac brand and other brands are property of respective owners..



Point of connection on Pontiac 1982-1984 electrical plant



Point of connection on Pontiac 1985-1992 electrical plant

SPEEDO	Vehicle speed sensor, connect to SPEED (on Speedo board)
FUEL	Fuel in the tank level sensor, connect to FUEL (on Speedo board)
LEFT	Left turn indicator, connect the + to BAR1 (on Speedo board)
RIGHT	Right turn indicator, connect the + to BAR2 (on Speedo board)
HIGH LIGHTS	High lights indicator, connect the + to BAR3 (on Speedo board)
LOW LIGHTS	Low lights indicator, connect the + to BAR4 (on Speedo board)
TACHO	Engine rotation per minute sensor, connect to TACH
OIL	Oil pressure sensor, connect to OIL
TEMP	Engine refrigerant temperature sensor, connect to EGT