

**Digital Tachometer**

**PRO-REV 80**

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## **USER MANUAL**

The PRO REV 80 digital tachometer can be applied to any type of engine (2 or 4 stroke with 1 or more coils), using the tacho output of the ignition system, or connecting it to one of the available coils.

Ten LEDs on the tachometer can be programmed to turn on at the desired RPM value.

The tachometer records the RPM Peak value.

## **CONFIGURATION**

To configure the tachometer :

1. Turn on the instruments while pushing the push-button
2. Release the push-button after the leds flashing
3. Now you can configure the parameters :

### **Number of coil signals for each engine revolution**

This data is used to calculate the RPM on the basis of the number of command signals which the coil receives. Such a parameter must indicate the number of times the coil is charged in the arc of 1 engine cycle (720°).

During this operation all the 10 leds are ON.

1. The needle moves to the number programmed (Es.: 2000 RPM = 2)
2. By pushing the push-button you move the needle to the desired value
3. Wait for about 4 seconds in order to confirm the data and to pass to the modification of the next parameter :

### **Activation Threshold LED 1 (RPM)**

Indicates the number of RPMs above which the LEDs are activated.

1. The needle moves to the value programmed
2. By pushing the push-button you move the needle to the desired value
3. Wait for about 4 seconds in order to confirm the data and to pass to the modification of the next parameter :

### **Activation Threshold LED 2 (RPM)**

(See the description for LED 1)

### **Activation Threshold LED 3 (RPM)**

(See the description for LED 1)

### **Activation Threshold LED 4 (RPM)**

(See the description for LED 1)

### **Activation Threshold LED 5 (RPM)**

(See the description for LED 1)

### **LED Brightness**

All the leds turn ON. By pushing the push-button you change the brightness. Release the push-button at the desired value.

Wait for about 4 seconds in order to confirm the data and to pass to the modification of the next parameter :

### **Backlight Colour**

All the leds turn OFF. By pushing the push-button you change the backlight colour. Release the push-button at the desired value.

Wait for about 4 seconds in order to confirm the data and to complete the configuration.

## **FEATURES**

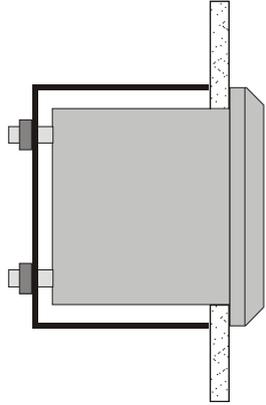
To visualize the highest value of RPM recorded :

1. Push the push-button and then the needle moves to the value recorded

To Erase the peak memory :

2. If you release the push-button the tachometer goes back to the normal operations, but if you keep the button pushed for 5 seconds the leds begin to flash. After 3 seconds the leds turn OFF and now you can release the push-button because the peak memory has been erased.

## How to install the tachometer



- Pierce the vehicle cockpit panel following the tachometer profile
- Insert the tachometer in the hole and fix it with the special fixings provided

## CONNECTIONS

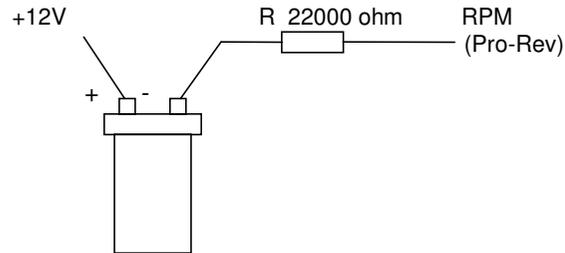
Colour	Function	Connection
Red	+12V battery	+12V Battery
Black	0V battery	0V Battery
Blue	RPM Signal	Coil or E.C.U. out <b>Attention : cable with 22.000 Ohm resistor</b>
White	Push-button signal	Contact 1 of the push-button. The other contact of the push-button must be connected to 0 Volt (black cable)

### **Connecting the RPM signal**

This paragraph is intended to supply a few suggestions for correctly gathering RPM information from 2 possible sources: the ignition coil and the electronic injection control unit.

### **Connection to the ignition coil**

The tachometer will only accept signals coming from a coil with a pole connected to +12 Volt. The tachometer's RPM signal is connected to the pole opposite the one connected to +12V and, due the high voltages present, it is necessary to insert a 22,000 Ohm resistor. Such resistor is already present in the cabling supplied with the instrument, however, should you modify the wiring, make sure the resistor is inserted to avoid damage to the instrument.

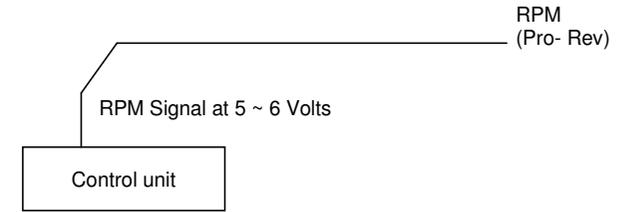


### **Connection to the electronic injection control unit**

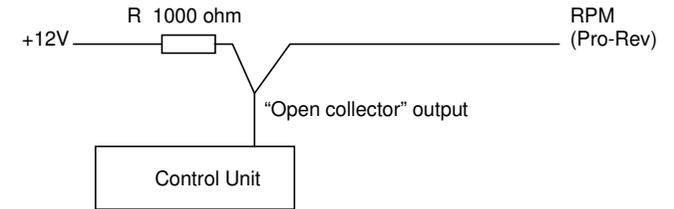
Almost all control units make use of an output dedicated to supplying an indication of RPM value; unfortunately the characteristics of this signal vary according to the brand and model of the unit. Any operations to adapt the signal will involve inserting a series of resistances between the unit and the tachometer.

Usually the signal generated by the unit is a square wave, with peak voltages that can be between 10 and 15 volts

In some cases, however, the control unit supplies a signal with a max. amplitude of 5-6 Volts; in this case it is necessary to eliminate all resistances in series with the signal, included the 22,000 Ohms present in the original wiring.



There are also control units on the market with an RPM output in the so-called "open collector" configuration; in these cases it is recommended that the control unit's users' manual is consulted. Typically it is required to connect a 1,000 Ohm resistance between the control unit's output terminal and +12V.



## Technical specifications

<b>Weight :</b>	300 g.
<b>Dimensions :</b>	100 x 100 x 60 mm.
<b>Power source :</b>	9 - 15 Vdc
<b>Current Drawn :</b>	Max 350 mA with 15 Volt supply
<b>Inputs :</b>	1 push-button
<b>Memory :</b>	RPM Peak