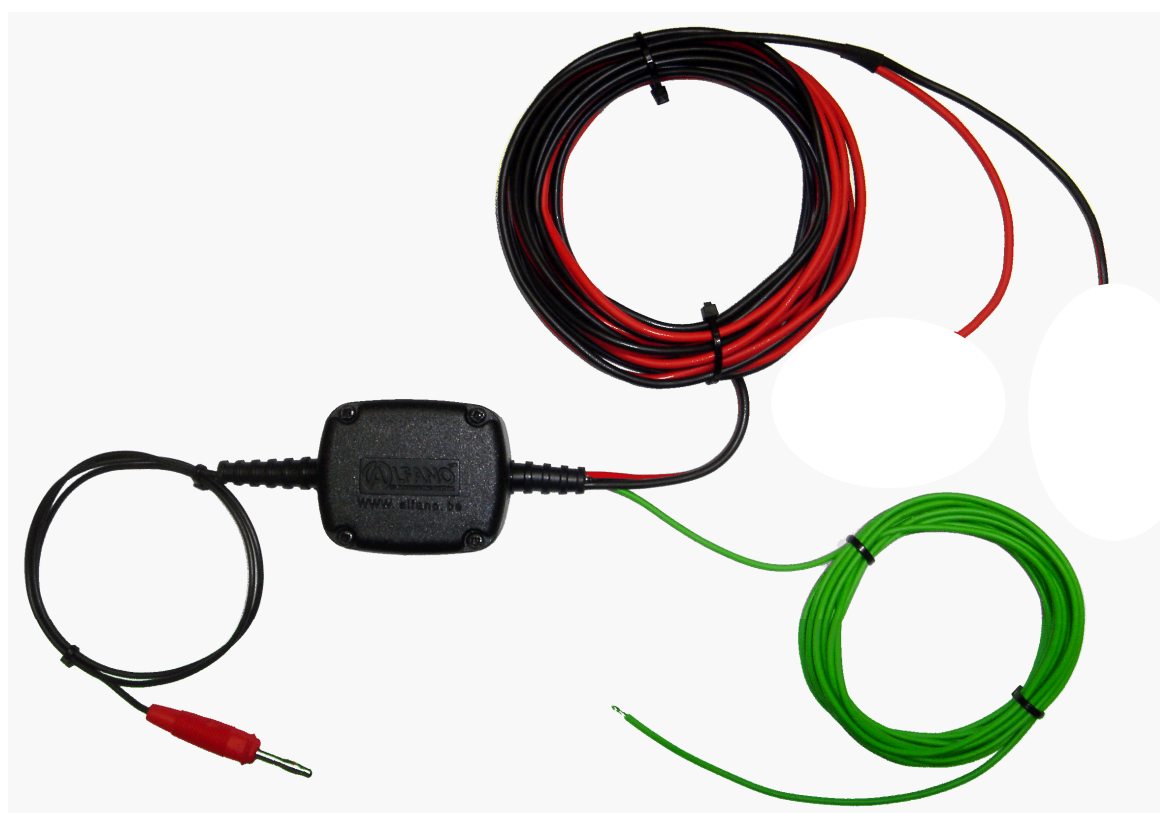




RPM Module A-451

(GB) Operating instructions



The solution for picking up the RPM on nearly all types of petrol engines

It is an electronic amp with microprocessor which adapts the RPM signals coming from nearly all types of engines, on ALFANO data acquisition systems.

The new ALFANO: PRO+(V1.05.06), AStrO(V2.05.06), AStrO formula 4T(V4.05.06) and higher versions will be able to display correctly the RPM for 3, 5, 6, 8 and 10-cylinder engines.

The A451 module has 4 wires

The "RED" and "BLACK" wires, which supply power to the module:

Connect to the positive and negative (12 Volts).

Length 350cm

The "BLACK" wire with "banana" jack, the RPM transmitter:

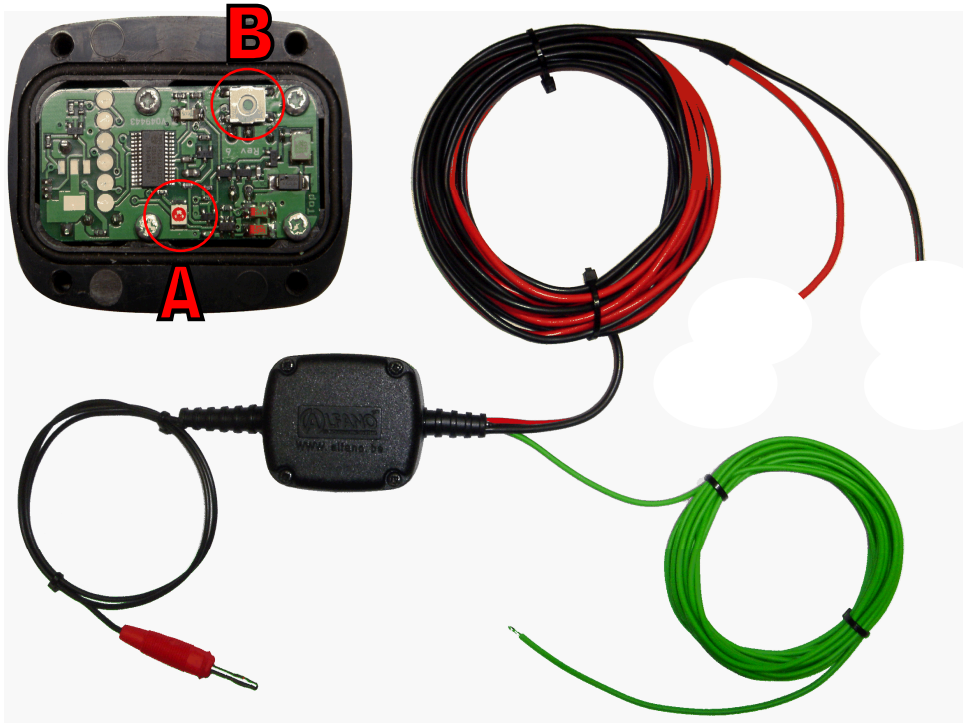
Connects to the ALFANO: Port "F".

Length 70cm

The "GREEN" wire, which picks up the RPM:

Connects to the engine ignition.

Length 350cm



The installation procedure has 4 stages

- I. Installation of the A451 module onto the vehicle
- II. How to find the RPM signal on the majority of ignitions
- III. Configuring the A451 module
- IV. Configuring the ALFANO

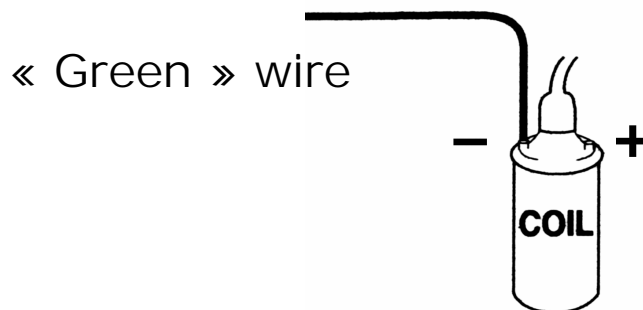
I. Installation of the A451 module onto the vehicle

- 1) Connect the "Red" and "Black" wires correctly to the vehicle's 12 Volt power circuit, preferably in the fuse box.
- 2) Plug the RPM transmitter ("Black" wire with the "banana" jack) into the "F" port of your ALFANO.
- 3) Take off the cover of the A451 module.
- 4) Finally, look for the wire carrying the RPM signal on the vehicle ignition to connect the RPM sensor ("Green" wire).

II. How to find the RPM signal on the majority of engine ignitions

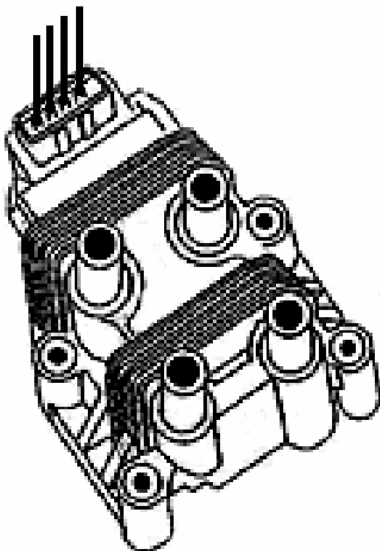
A) Traditional high voltage coil:

Connect the "Green" wire of the A451 module to the negative terminal of the coil.



B) High voltage coil (twin static type) with 2 wires and more :

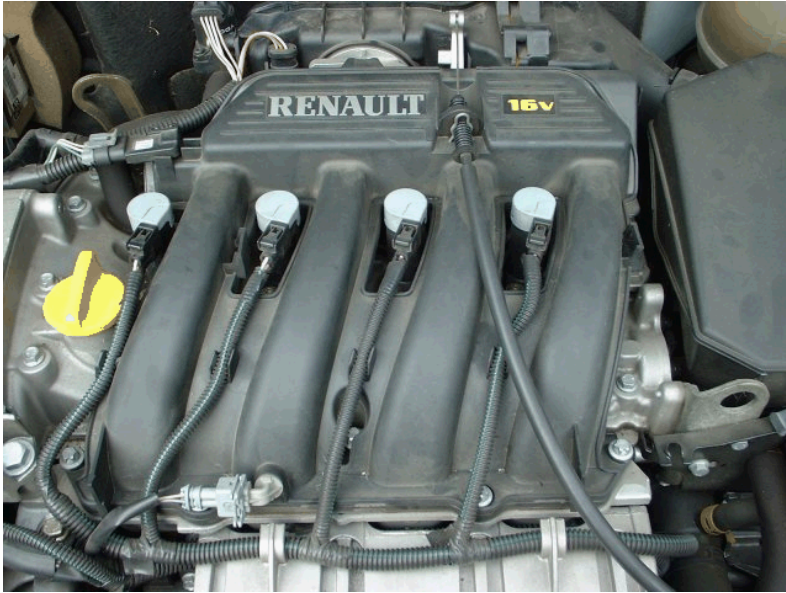
A single wire is capable of providing you with the RPM signal on the majority of ignitions. You have to locate it to connect electrically the RPM sensor to the "Green" wire of the A451 module.



Tip: to avoid damaging the insulation of the wires connected to the coil when looking for the RPM signal, use a (sewing) pin and stick it into one of the wires: make sure the pin pierces the wire right to the centre to obtain electrical contact. Strip the "Green" wire of the A451 module and twist it around the pin. BE CAREFUL of short-circuits.

Turn the engine over at idling speed and watch the "A" LED on the module (see page 2): the LED will light up when in contact with the wire carrying the RPM signal. If this does not happen, repeat the operation on the other wires until the "A" LED lights up.

C) High voltage coil located on the spark plug, with 2 wires or more :

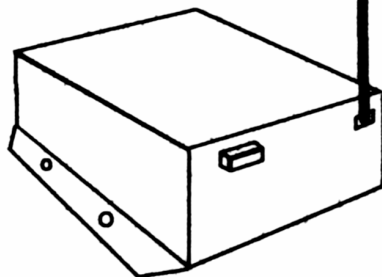


The procedure for looking for the wire carrying the RPM signal is the same as that described for the (twin static) high voltage coil above.

D) Electronic computation unit :

On electronic units, such as GM, HEI or MSD, you will find a special terminal "TACH": connect the "Green" wire of the A451 module to it.

« Green » wire



Electronic
computation unit

To guarantee long-lasting operation, carry out the wiring correctly in accordance with automobile standards, isolating electrical conductors from each other to avoid short-circuits

III. Configuring the A451 module

Once the module is installed, it must be configured.

- 1) Turn the engine over at idling speed. (DO NOT ACCELERATE)
- 2) Then simply press button "B" for one second (see page 2).
- 3) Close the unit.

IV. Configuring the ALFANO

This operation is to ensure the RPM is displayed correctly on your ALFANO.

- 1) Turn the engine over at idling speed. (DO NOT ACCELERATE)
- 2) In "menu 14" of your ALFANO, use the right-hand button to select the correct unit to display the right RPM.

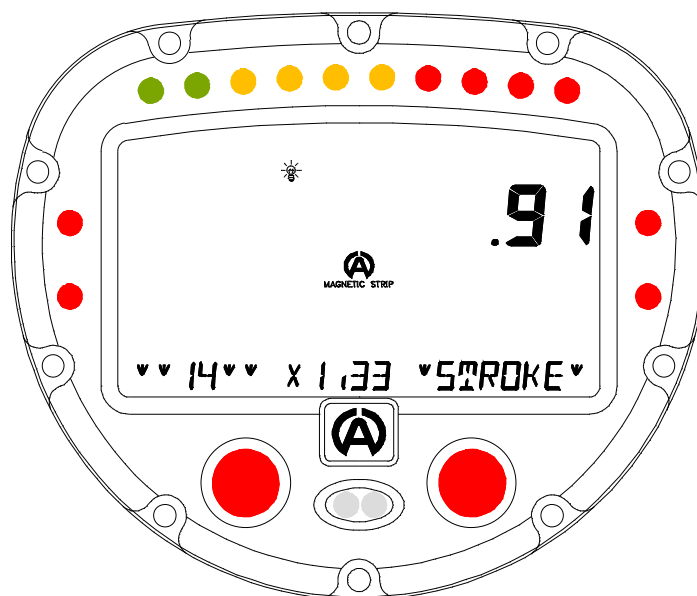
- On versions PRO+(V1.05.00), AStrO(V2.05.00), AStrO formula 4T(V4.05.02) and lower, the following units are available: (/8) (/4) (/2) (X1) (X2) (X4) (X8).

- From versions PRO+(V1.05.06), AStrO(V2.05.06), AStrO formula 4T(V4.05.06) onwards, other units have been introduced to cover additionally engines with 3, 5, 6 and 10 cylinders.

(/10) (/8) (/6) (/5) (/4) (/3) (/2.5) (/2) (/1.5) (/1.25)
(X1) (X1.33) (X1.6) (X2) (X4) (X8)

These units will divide or multiply the impulses from the RPM module and the result will be displayed above and on the right of the screen.

If you know your idling RPM, all you have to do is find it on your ALFANO.



Guarantee conditions

All our devices have been subjected to in -depth factory tests and are covered by a 24 - month guarantee against manufacturing defects. The guarantee comes into force from the date of purchase. The date of purchase is the date indicated on the invoice/till receipt given by the seller at the moment of sale. The manufacturer undertakes to repair and replace free of charge any parts which have a manufacturing defect during the guarantee period. Any defects which cannot be clearly attributed to the material or the manufacturer will be examined at one of our approved after sales service centres and invoiced depending on the results. The guarantee does not apply in cases of opening the device, of accidental damage, negligence or inappropriate usage, in cases of installation which is unsuitable, erroneous or does not comply with the instructions appearing in the notice and in cases of phenomena not associated with the rules for operation and use of the device. The guarantee is invalidated in cases of repair or handling carried out by unauthorised third parties. Intervention under guarantee does not give the right to replacement of the device or to extension of the guarantee. Intervention under guarantee is carried out at one of our approved after sales service centres or at our head office. In the latter case, the item must reach our establishment postage paid, in other words the transport costs are borne by the user. The manufacturer accepts no responsibility in case of damage to persons or goods caused by poor installation or incorrect usage of the device.

Modifications to products

Alfano SA applies a method of ongoing development. Consequently, Alfano SA reserves the right to make changes and improvements to any product described in this document, without prior warning.

Damages and responsibilities

The products are used under the customer's sole direction and responsibility, and consequently the customer shall bear the damages that the products might suffer or cause. No compensation will be paid for removal of enjoyment, and ALFANO cannot be held responsible for the direct or indirect consequences of their use or rendering useless. ALFANO's obligations are duty of care and not a performance obligation.

Disposal

The device must be disposed of with respect for the environment.
The stopwatch and its accessories contain a lot of plastic parts.
When the stopwatch or one of its accessories no longer functions, they must be dealt with according to the laws of the country. Spent batteries must be disposed of in accordance with the regulations in force in your country.

ALFANO S.A.

Rue de l' Industrie, 3b – 1400 NIVELLES

www.alfano.com