



NANO/COM

**DESIGNERS AND MANUFACTURERS OF CUTTING EDGE AUTOMOTIVE
DIAGNOSTIC EQUIPMENT.**

TRIP MASTER

MODULE FOR NANOCOM ONE ONLY

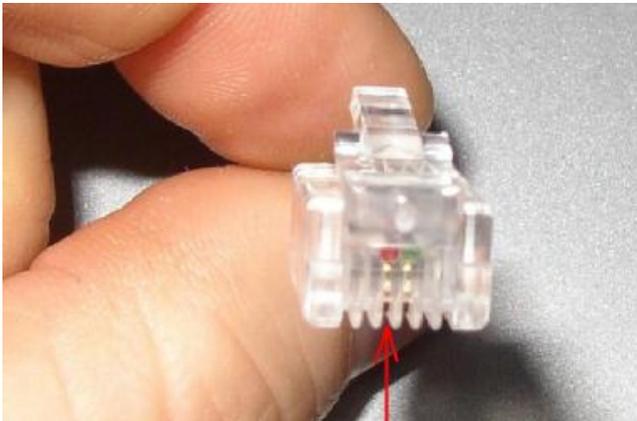
The nanocom has a simple trip master utility that through the speed signal used by the TD5 ECU is able to Calculate the trip distance. This signal is not taken from the diagnostic port as OBD information, so it is necessary to physically connect this wire to the expansion port of the NANOCOM.

For what concerns the Defender vehicle, the speed measurement and so the relative signal is performed by a Transducer installed on the transfer box that generates a square signal 0-12V with a frequency proportional to the transfer output shaft speed. Each rotation generates four variations of this signal, allowing the nanocom to calculate the trip distance with a precision lower than one meter.

As for the Discovery vehicle, unfortunately the speed measurement is performed by the SLABS unit, that Makes an emulated signal calculated through the four wheel sensors of the ABS system. As this signal is not a real speed signal but it is synthesized by the electronic devices, it may not have a good precision in particular for the movement at the lower speed.

HOW TO CONNECT THE TRIP MASTER

This trip master function gets the speed signal from the expansion port, so to connect the signal it is required a standard telephone cable with 6 pole RJ11 connector. The telephone cables usually have 2 wires but they may have 4 or 6 wires; each of this cable is correct to be used for this connection because the signal is only on one line and it is connected to the wire 3.



The contact used for this purpose is the third starting from the left (in the standard cable is the red one). Once the wire is located, you just need to connect it in parallel to the speed signal wire.

The current used by the nanocom is less than 10mA (very low) so you don't need to take any special care to make this connection, the only important thing to do is insulate the useless wires.

In the Defender models the signal can be found at these points:

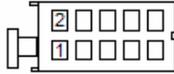
C1060-1 BLACK-RED wire (this wire connects the transducer within the speedometer)

C1060-2 YELLOW-PINK wire (this wire connects the speedometer within the TD5 ECU C0658-13)

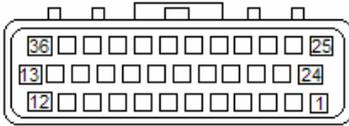
In the Discovery models the signal can be found at these points:

C0504-3 wire GREEN-PINK (this wire connects the SLABS within the TD5 ECU C0658-13)

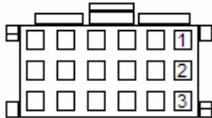
C1060 connector, contact side (6 pole connector located behind the speedometer – colour PINK)



C0658 connector, contact side (36 pole connector located in the TD5 ECU – colour BLACK)



C0504-3 connector, contact side (18 pole connector located in the SLABS ECU – colour BLACK)



HOW TO ADJUST THE TRIP MASTER

To adjust the trip master please follow this procedure:

- 1) Enter the TRIP INPUT TEST function from the NANOCOM SETUP menu.
- 2) Once entered the display shows a counter set at 000 number and the LED is off. Now move forward, very slowly the car until the LED turns on, red or green, and the counter shows the number 1.
- 3) Stop the car and mark a reference line on the ground corresponding to a car's part (centre of the wheel, bumper etc.) that will indicate the starting position.
- 4) Now move the car forward until the counter reaches the number 100, taking care to go as slow as possible to stop the car with the maximum precision.
- 5) Once the car is stopped, mark a reference line on the ground corresponding to the car's part used in the 3^o point.
- 6) Measure the distance between the two lines on the ground.
- 7) Escape the function and enter the TRIP ADJUST function of the NANOCOM SETUP menu.
- 8) The display will show the current value stored.
- 9) Insert the distance measured in cm (19,34m = 1934).
- 10) Escape the function, now the trip master is ready to work.

HOW TO USE THE TRIP MASTER

To use the trip master you have to enter the TRIP MASTER function from the NANOCOM main menu. When you enter the function the display shows the following values:

The number on the left is the total trip count in Km, with two decimal digits.

The number on the right is the partial trip count in Km, with 3 decimal digits.

With key 1 (tot) you can clear the total count.

With key 4 (par) you can clear the partial count.

Key 3 allows you to select the count mode, which can be incremental, decremented or no count. When this key is pressed the second line of the display will change some of the characters this way:

The symbol >>> means that the trip master is set to have an incremental count (forward)

The symbol <<< means that the trip master is set to have a decremented count (reverse)

The symbol --- means that the trip master stops the count.

Key 2 allows escaping from the function. Each time this key is pressed the counter's values are automatically stored in the memory and they will be automatically loaded in the counters when you enter the trip master function next time. This stored data are available even if the Nanocom is turned off or is completely disconnected from the power.

If the nanocom is disconnected from the power supply during the trip utility, the counter's values will be lost.