VH TRIP®
TWIN

USER MANUAL

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Introduction: What's a VH TRIP TWIN?

The **VH TRIP TWIN®** is a measuring device giving you precise information on the distance you have travelled from a given point.

Easy to set up, it will require care when installing and calibrating to make sure that the information given is as accurate as possible.

We wish you many happy miles with your **VH TRIP TWIN®** but please read on to make sure you make the most of it.

I - OVERVIEW:

Technical Specifications (subject to change) :

Power: 6 to 13 Volts ;
Polarisation: Negative Earth
Maximum consumption: 1 A ;
Temperature range: -10℃ à 30℃ ;
Warranty: 24 months. Manufacturer Return To Base.
Can be used in Kms or Miles

VH TRIP TWIN® Key Buttons and Indicators:

Key :

1 Unit ON/OFF Switch
2 Probe 1 calibration Switch
3 Probe 1 calibration light
4 Probe 2 calibration Switch
5 Probe 2 calibration Light
6 Probe 1 distance display (accuracy 10 meters)
7 Probe 2 distance display (accuracy 10 meters
8 Display Reset Buttons
9 Probe 1 Rotary switch
10 Probe 2 Rotary switch
11 Distance recovery switch (with probe 1 only)
12 Distance recovery light
13 Power/probes connector
14 Probe 1 remote display connector
15 Probe 2 remote display connector

II - VH TRIP TWIN® Installation:

Distance Probe Installation:

Your **VH TRIP TWIN®** is compatible with most 2 or 3 wires probes available on the market :

- Speedo cable probes;
- Induction Probes (ABS Sensor, engine rotation, …) ;

We would however recommend to use a specific **VH TRIP TWIN®** probe which can be purchased from one of our distributors.

To avoid interferences, make sure to keep the probe wires away from HT Leads, alternator and any other electric equipment generating interferences.
Protect the probe and leads from projections which could damage or severe the leads.

Positioning the probe :
To ensure maximum accuracy, we recommend the probe to be fitted on a non-driven wheel. Where possible, fit the probe to the rear (trailing) of the vertical centre line on the wheel assembly. Position the probe so that it 'looks' at the heads of the bolts which secure the brake disc to the wheel hub of a non-driven wheel. In some cases it might be more convenient to look at holes in a metal surface. The probe must be co-axial with the centre line of the bolts and the front face of the probe must be parallel with the heads of the bolts. Cup-head [Allen] head bolts do not give the probe a good signal and should not be used if at all possible. Distance between the probe and the bolts should be 1mm to 3mm.

Universal Speedo cable probe :
For accuracy and reliability reasons, we do not recommend using a speedo probe. Your **VH TRIP TWIN®** ® is however compatible with this type of probe. Please refer to your probe installation manual for set up.

Car Installation:

The **VH TRIP TWIN®** ® needs to be placed away from the driver direct line of sight and in no way interfere with the driving of the vehicle.
Please also make sure that it is out of arms way in case of an accident.
Your **VH TRIP TWIN®** ® can be installed on any support using the casing fixing tabs and screws.

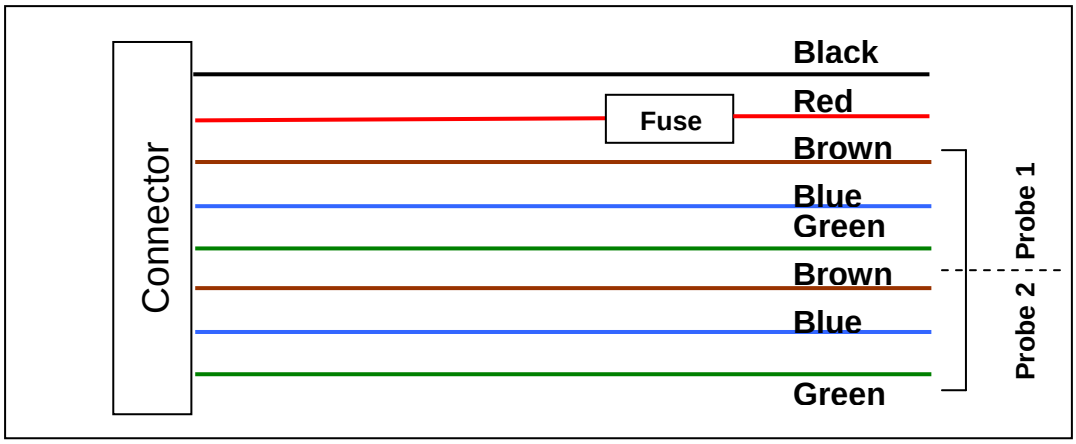
VH TRIP TWIN® Connector:

The **VH TRIP TWIN®** is supplied with a detachable connector which can stay in your car should you want to take your **VH TRIP TWIN®** out. Additional connectors can be purchased to equip several vehicles or plug in several probes.

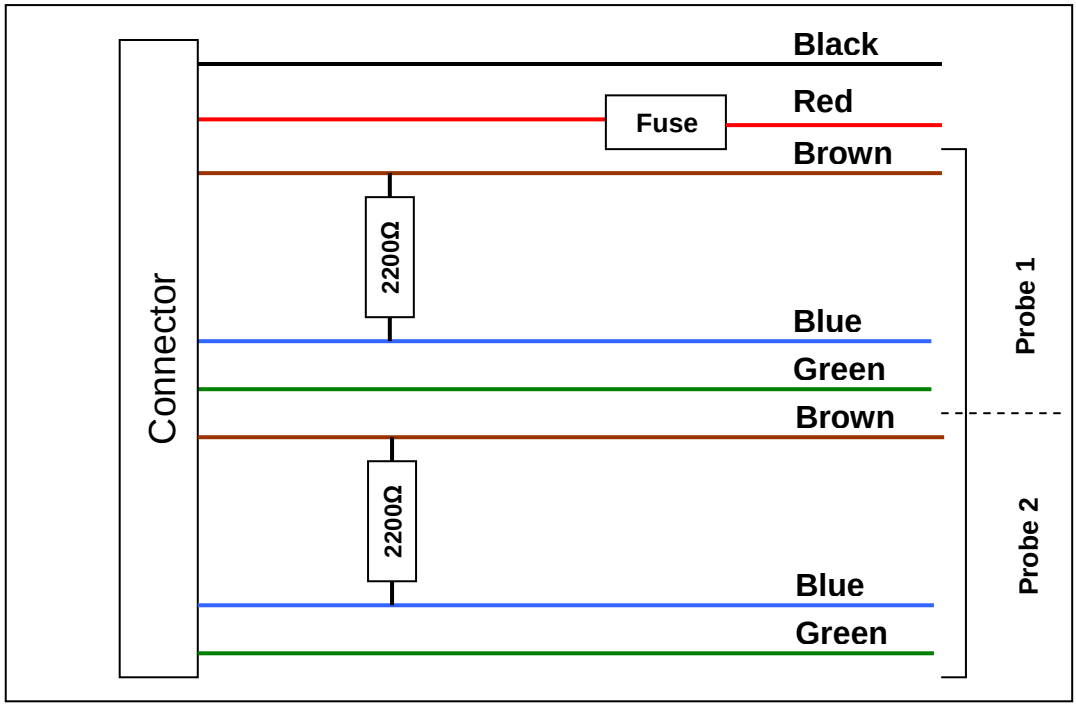
Connections:

Please respect the wiring below

Wheel or Speedo probe Connection



Gearbox Probe Connexion



Place a 2200 Ohms resistor between the Blue and Brown wires.

Warning: Make sure this resistor is properly insulated and cannot get into contact with any metallic part.

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VH TRIP TWIN® Connection

Wire Colour	Function	
Black	**Earth**	
Red	**Power (+6 à +12 volts)**	
Brown	**Probe 1 out (+ 12V)**	**Probe 1**
Blue	**Probe 1 In**	
Green/ Yellow	**Earth (Probe 1)**	
Brown	**Probe 1 Out (+ 12V)**	**Probe 2**
Blue	**Probe 2 in**	
Green / Yellow	**Earth (Probe 2)**	

If using a 2 wire probe, only connect the blue and brown wires.
Please check all connections and wiring before powering your VH TRIP TWIN®

Different type of probes can be used on the same **VH TRIP TWIN®.**

VH TRIP TWIN® TEST:

Before powering the unit, make sure that switches (**2 et 4**) are to the left.

Switch unit on (**1**).
Illumination lights should come on.
LED (**12**) should be green and LED (**3**) OFF.
Slide calibration switch (**2**) to the right.
LED (**3**) should come on.
Move car forward, display **6** should start counting (probe 1 is therefore working)

Slide switch (**2**) to the left and push probe calibration switch (**4**) to the right.
LED (**5**) comes on.
Move car forward, display (**7**) starts counting (probe 2 is working)

Your VH TRIP TWIN is ready to be set up.

Note : If LEDs (**3 or 5**) start flashing when sliding switches back to initial position, your calibration is incorrect. Please refer to **Troubleshooting** guide.

III - VH TRIP TWIN® Calibration :

Your **VH TRIP TWIN®** is easy to calibrate.

Step 1: Probes Calibration.

1. Switch Unit On.

2. Reset both displays to Zero by pressing reset buttons (**8**).

3. Slide Probe 1 calibration switch (**2**) to the right.

LED (**3**) comes ON.

4. Turn the wheel on which probe 1 is installed 3 times (no more – no less).

5. Slide Probe 1 calibration switch (**2**) back to initial position

6. Slide Probe 2 Calibration switch (**4**) to the right.

LED (**5**) comes ON.

7. Turn the wheel on which probe 2 is installed 3 times (no more – no less).

8. Slide Probe 2 calibration switch (**4**) back to its initial position

9. Switch unit OFF

Your VH TRIP TWIN® is now ready to be calibrated.

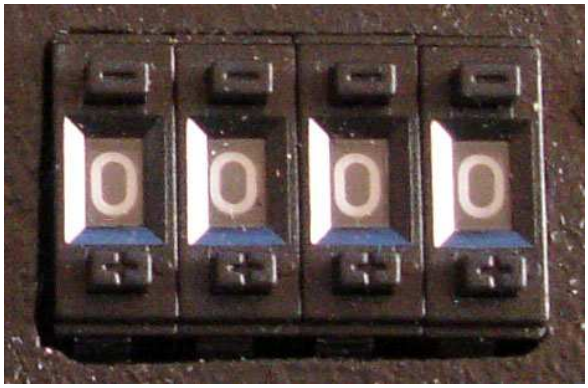
If light (**3** or **5**) flashes when sliding Probe Calibration Switch back to the left, your calibration is incorrect. Please refer to the Troubleshooting guide at the end of this instruction manual.

WARNING: If the Probe Calibration Switch is moved by mistake, the probe calibration process will have to be repeated.

Step 2: Calibration.

This is how to calibrate Display 1 (Probe 1). The same procedure applies to Display 2 (Probe 2) using coding wheel (**10**) and display (**7**).

Take a pocket calculator with you and find a straight bit of road with distance markers



1. Put rotary switches (**9**) to Zero.
Reset display (**6**) to Zero using button (**8**)

2. Drive between two markers (for example 1000 meters)
Your **VH TRIP TWIN®** display will start counting.

WARNING : Do not drive at more than 20 MPH or you may damage the equipment.

3. Once you have driven your 1000 meters, make a note of the value on the displays.

4. Then use the following formula :

$$\frac{\text{Distance travelled in meters/miles}}{\text{Display reading}}$$

5. Round up to the nearest 3 decimal points and input this value into the rotary wheels.

As per our example:

$$\frac{1000}{717} = 1.3947001\ldots \approx \mathbf{1.395}$$

Input **1395** on the rotary wheels

Your VH TRIP TWIN® is now calibrated.

NOTE : Greater accuracy can be obtain by driving on longer distances to calibrate your **VH TRIP TWIN®** . We recommend to do it over a 4000m distance.

IV – USING your VH TRIP TWIN® :

1. "Normal" Mode:

At the start of each stage, we recommend the following:

1. Switch your **VH TRIP TWIN®** OFF then back ON
2. Reset all displays to ZERO.
3. Make sure that the Distance Recovery switch is on **+**.
4. Make sure your rotary wheels are correctly set up (especially if you change wheels / tyres between stages).

Nothing more to do but drive and check the accuracy of your readings on the stage which you can easily do by using our **Average Trip Box** (available from your **VH TRIP TWIN®** distributor).

2. “Distance Recovery” Mode :

If you suddenly realise that you are off course, just follow these easy steps:

1. As you make your U turn, slide the Distance Recovery switch (10) to **-**.
2. Displays (6) will then be frozen and LED (12) turns Red .
3. Once back on the right course, slide the Distance Recovery switch (10) back to **+**.
4. **Carry on the right route,** LED (**12**) will turn to Green again once you have driven the same distance as you did from the U Turn, therefore recovering the distance travelled and correcting your mistake.

Note : Displays (**6**) will stay frozen until your **VH TRIP TWIN®** has corrected the distance. Should you take a wrong turn again before re-joining the right route, repeat same procedure, distances will automatically add up.

V – Remote Displays Installation:

1. Installation:

The remote displays must not be fixed by putting screws through them or this will void the warranty.

2. Wiring:

These displays are easily connected to your **VH TRIP TWIN®** by simply plugging them as follow:

- (**14**) for Probe 1
- (**15**) for Probe 2

3. Use:

The remote displays work exactly as the ones on your **VH TRIP TWIN®** and can be reset to Zero by simply pressing the central button.