

Retrotrip Tripmeter Range - Trouble-Shooting

Electrical Interference – Please read this first

Electrical interference (EMI) coming from your car can affect your Brantz equipment in a variety of ways, although we are constantly updating our products to guard against this some interference is too strong to guard against in the equipment itself and must be suppressed within your vehicle. Symptoms such as;

- **Different results each time you calibrate on a measured distance**
- **Counters increasing at speeds unrelated to vehicle speed**
- **self-stepping when the engine is running but not moving**
- **freezing of the entire unit or intermittent freezing of 1 or more counters**

are all typical of EMI (Electrical Magnetic interference) most likely coming from your electronic ignition.

You will need to fit suppression to remove the EMI that is attacking your Brantz Tripmeter. **If you have copper cored plug leads fitted you need to start with these and fit suppressed leads (Like the Magnacor E/Sport 7 or 8mm).**

Interference is particularly common when home-made HT spark-plug leads have been used, but can come from damaged or worn alternators/fuel pumps/horn/wipers etc.

Generally we would advise investigating most likely sources of interference such as:

- Plug Leads – mentioned above (we would always advise suppressed plug leads other than on magneto driven cars*)
- The Generator (Alternator/Dynamo/Magneto)
- The Coil
- Fuel Pump
- Windscreen Wiper Motor

Suppressors for each of these items are readily available.

**We recommend having Suppressed Plug Leads fitted only during Events and returning to your usual leads for standard use.*

Test for Interference:

If interference is present it is always too powerful to defend against and should be fixed at source by suppressors or new silicon leads etc.

- Take a portable radio, select the AM band (important) and tune into a quiet spot between stations.
- Turn up the volume and start the vehicle.
- Listen for loud clicks. That's interference!!
- Compare the vehicle with a modern road car as a guide to what is acceptable. Try other vehicle accessories to locate intermittent sources of trouble. You are also welcome to send you unit in for an upgrade to the newest specification which may help; however it is best to resolve the problem with the car.

Sensor Check:

Before fitting any type of sensor to a vehicle; connect the sensor up to the Brantz meter and check its correct operation:

1. Connect your sensor to a Brantz tripmeter via the Grey Cable. Make absolutely sure that sensors are correctly connected before turning on the meter as they will be destroyed by reverse current.
2. Set the Tripmeter to a low calibration figure i.e. 009
3. Turn on the tripmeter and simulate the sensor via one of the following methods (depending on your sensor type):
 - Rotating the inner of Speedometer Cable Sensor (BR1)
 - Rotating the inner of the Gearbox Sensor (BR3/BR4)
 - Repeated touching of Wheel Sensor (BR2A) to a metal object
 - Repeated touching of the Drive/Prop Shaft Sensor (BRH2) to a Magnet

If it is suspected that either a Wheel Sensor (BR2A) or Speedometer Sensor (BR1) has been damaged whilst in use (i.e. tripmeter does not increment on the road) then the output from the sensor can be tested with a voltmeter which has the negative lead connected to Green on the tripmeter and positive to the Blue tripmeter wire. For the wheel sensor the voltage varies between 2.0 volts to 4 volts approximately, or the speedo cable sensors voltage varies between 0v to 5v as internals are rotated.

4. The readouts should increment. If the readouts do not increment there is a problem which should be investigated – first refer to **Tripmeter Check** below.

Tripmeter Check:

If the sensor check does not work you can check the tripmeter itself by the following test which must be carried out strictly in the order described:

1. Switch off the meter.
2. Pull off the three push-on connectors from the grey cable to the sensor.
3. Ease back the insulating sleeves from the Blue and Green wires of the grey cable described above. Keep these away from contact with anything else.
4. Select calibration 009 on the tripmeter.
5. Switch on the tripmeter.
6. Zero both Counters.
7. Tap the above Blue and Green wire connectors together electrically many times.
8. The tripmeter should increment.

If the tripmeter increments in this test but not during the sensor check it suggests that the sensor is faulty/been damaged.

If the tripmeter does not increment during this test it suggests there is a problem with the tripmeter itself and should be returned to Brantz for a Service

Retrotrip Self-Test mode (only on more recent models):

- Connect the Retrotrip to charged battery (not battery charger). Ignore the sensor cable.
- Set the calibration push-wheel switches to **000**.
- Turn on the Power - the readouts may take half a step.
- Within 8 seconds of turning the power on change the calibration push-wheel switches to **888**.
- After a few seconds the counters will start to self-step themselves in groups of 8 for as long as the power remains on.
- If the above functions properly the problem is likely to be something other than the meter itself.

Retrotrip Frequently Asked Questions

- **There is no power when I switch the ON/OFF switch to ON:**
 - Disconnect the Black Power cable from the base of the tripmeter and connect it directly to a spare 12v battery out of the vehicle – **NOTE: A battery charger is not a suitable power source as the current is not smoothed**
 - Connect up the Brown Core (+12V) and the Yellow/Green Core (-12v) – if a blue core is present it is NOT Used.
 - Check that none of the Cables or Wire Cores have been cut into, or frayed.
 - **Triple Check your Connections** – Poorly fitted customer crimped connections make up the majority of faults here.
 - If the meter still does not light up it is advisable to send the unit back to Brantz for a Service/Repair.
- **The Tripmeter Readings randomly increment disproportionately to the distance travelled:**
 - This is most likely Electrical Interference – See Electrical Interference information opposite
 - Ensure:
 - You have the unit connected directly to the battery terminals not the chassis, ignition or cigarette lighter.
 - You have checked for Interference from HT Leads / Pumps / Horn / Wipers / Dynamo / Alternator
 - You have tested the Tripmeter away from the vehicle on a separate battery (i.e. on a work bench) - this is a good indicator as to whether the vehicle is interfering with the electronics of the unit.
- **The Tripmeter readings increment on their own with no vehicle movement:**
 - This is most likely Electrical Interference – See Electrical Interference information opposite
 - Ensure:
 - You have the unit connected directly to the battery terminals not the chassis, ignition or cigarette lighter.
 - You have checked for Interference from HT Leads / Pumps / Horn / Wipers / Dynamo / Alternator
 - You have tested the Tripmeter away from the vehicle on a separate battery (i.e. on a work bench) - this is a good indicator as to whether the vehicle is interfering with the electronics of the unit.
- **The Tripmeter randomly stops collecting pulses:**
 - Test the Sensor – See **Sensor Check** above.
 - Test the Tripmeter – See **Tripmeter Check** above
 - CHECK your connections
- **The Tripmeter randomly loses power:**
 - You have checked and double checked ALL your connections.
 - Check all the wires to ensure good connections and that there are no cut into or frayed Cable or wire Cores.
- **My Tripmeter and my Wheel Sensor check out OK independently, but do not work properly on the vehicle:**
 - Check the sensor is close enough to the bolt heads to pick everyone up on a rotation
 - Perform the Sensor Check described opposite & Check all connections.
- **My Tripmeter counter are often not counting, or under-reading the distances:**
 - Check you have a **Power Conditioner (BR21)** fitted if you have a 6V engine or a slightly under performing 12v system.
 - (If Applicable) Check your wheel Sensor is picking up off every stud every time the wheel rotates.
 - CHECK your connections
 - If the counters are miss-matching – there is likely a fault with the counter – please contact Brantz Service & Repairs
- **My Tripmeter under-hood lighting is dim:**
 - Check you have a **Power Conditioner (BR21)** fitted if you have a 6V engine or a slightly under performing 12v system.
 - Check the Bulbs are in good condition
 - Upgrade to the new LED lighting.
- **How do I do minor adjustments in calibration:**
 - If the distance reading is too HIGH - INCREASE the calibration figures
 - If the distance reading is too LOW - DECREASE the calibration figures
- **I get a different figure each time I try and calibrate on a measured distance?**
 - This is most likely Electrical Interference – See Electrical Interference information opposite
 - Or if you have a Wheel Sensor fitted – ensure the sensor is picking up every stud on rotation and not just occasionally

Please also always ensure:

- You have earthed to the battery terminal itself, not the chassis.
- If you vehicle has a 6 volt electric system or is just a less reliable 12 volt system use a **Brantz Power Conditioner (BR21)**
- You Prevent Excessive Vibration – this can cause the counters to disagree with each other