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Installation

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RaliTripp Tripmeter

Installation Contents

Connections

Dimensions

Connections Overview








- The connections into the RaliTripp tripmeter are:
  - Main Battery – from the main vehicle battery
  - Auxiliary Battery – normally from a compact 12v battery
  - Sensors - proximity/wheel bolt, gearbox, pulse and magnetic types
  - Remote Unit – for operating the most common tripmeter functions
  - Remote Display – normally in front of the driver

- The batteries and sensors are connected via Molex connectors and looms supplied with the tripmeter - this booklet describes how to connect the looms to the batteries and the different types of sensors.

- Up to 4 sensors can be connected to RaliTripp at the same time:
  - Up to 2 inductive proximity sensors (typically known as “wheel sensors”) as Sensor 1 and Sensor 2
  - Up to 2 sensors that produce pulses (“speedo cable sensors”, “electronic speedo connections” etc) as Sensor 3 or Sensor 4

- Navigator and Driver Remote Units have a cable terminating in a miniature jack plug which can be plugged into the RH side of the tripmeter. An adaptor cable (jack socket to Molex) is also supplied to allow either type of Remote Unit to be plugged into the rear of the tripmeter if required.

- The Remote Display has a cable terminating in a Molex connector which is simply plugged into the rear of the tripmeter.

Connections Overview

Either type of remote unit can be connected to the jack socket on the RH side of the tripmeter or to the rear Molex connector using the cable/adapter supplied with the tripmeter

Navigator and Driver red buttons control display resets. Navigator black button controls trip distance direction

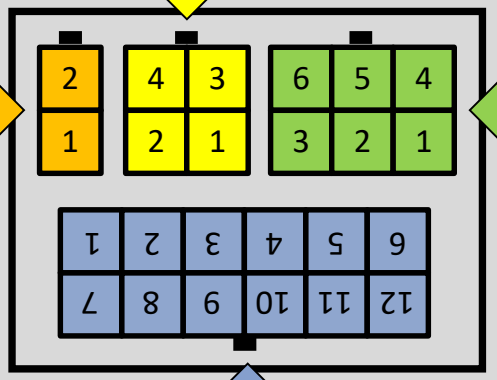
Navigator

Driver

Remote Units (optional)

Auxiliary Battery (optional)

Page 6



Remote Display (optional)

Connect via the loom supplied with the tripmeter

Connect to the rear Molex connector using the cable supplied with the Remote Display

Main Battery and Sensors

Pages 5 to 10

Connect via the loom supplied with the tripmeter

Using Molex plug pin numbers

Looking into rear of unit

Main Connector

Pin	Colour	Connection	Direction	Pin set
1	Red	Main battery +12v	In	1 / 7
2	Black	Sensor S3 (3-wire)	In	2 / 3 / 8
3	Brown	Sensor S3 (3-wire) +5v feed	Out	2 / 3 / 8
4	Brown	Sensor S4 (3-wire) +5v feed	Out	4 / 9 / 10
5	Brown	Sensor S1 (2-wire)	In	5 / 11
6	Brown	Sensor S2 (2-wire)	In	6 / 12
7	Black	Main battery ground	n/a	1 / 7
8	Blue	Sensor S3 (3-wire) ground	n/a	2 / 3 / 8
9	Blue	Sensor S4 (3-wire) ground	n/a	4 / 9 / 10
10	Black	Sensor S4 (3-wire)	In	4 / 9 / 10
11	Blue	Sensor S1 (2-wire) ground	n/a	5 / 11
12	Blue	Sensor S2 (2-wire) ground	n/a	6 / 12

!! **Details of how to connect the different types of sensor to the S1/S2/S3/S4 loom connections are shown in pages 7 to 10**

Using Molex plug pin numbers

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Batteries

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Main

Pin	Connection
1	Main battery +12v
7	Main battery ground

!! **The main battery +12v connection can be directly from the battery or via a master switch. It should be protected with a 3 or 5 amp inline fuse**

Auxiliary

Pin	Connection
1	Aux battery ground
2	Aux battery +12v in

!! **An auxiliary battery allows the tripmeter to continue operation if the Main Battery Connection fails and/or can be useful in a Service Area when the Main Battery is disconnected via a master switch**

Using Molex plug pin numbers

Proximity Sensors



2 wire
Sensor signal wire – usually brown
Sensor ground wire – usually blue

!! **Check manufacturer/ supplier specifications for your sensor(s)**

3 wire NPN or PNP
Sensor supply wire – usually brown
Sensor signal wire – usually black
Sensor ground wire – usually blue

Type	Wire to sensor	12-way connector pins	Notes
2-wire	S1 or S2	S1 - Signal – pin 5 – brown S1 - Ground – pin 11 – blue S2 - Signal – pin 6 – brown S2 - Ground – pin 12 – blue	
3-wire NPN	S1 or S2	S1 - Signal – pin 5 – brown S1 - Ground – pin 11 – blue S2 - Signal – pin 6 – brown S2 - Ground – pin 12 – blue	Connect sensor supply wire to +12v Connect sensor supply wire to +12v
3-wire PNP	S3 or S4	S3 - Signal – pin 2 – black S3 - Ground – pin 8 – blue S4 - Signal – pin 10 – black S4 - Ground – pin 9 – blue	Connect sensor supply wire to +12v Connect sensor supply wire to +12v

Speedo Cable / Gearbox Sensors

Sensors with wires attached:

Sensor supply wire – usually brown or red
Sensor signal wire – usually black or possibly white in the case of "industrial" type sensors
Sensor ground wire – usually blue or the cable's copper screen/braid

!! **Check manufacturer/ supplier specifications for your sensor(s)**

Sensors with ¼" spade tags:

Sensor supply wire – usually brown dot
Sensor signal wire – usually blue dot
Sensor ground wire – usually green or yellow dot

Type	Wire to sensor	12-way connector pins	Notes
3-wire	S3 or S4	S3 - +5v supply – pin 3 – brown S3 - Signal – pin 2 – black S3 - Ground – pin 8 – blue S4 - +5v supply – pin 4 – brown S4 - Signal – pin 10 – black S4 - Ground – pin 9 – blue	

Pulse Sensors

For example, electronic speedos/radio speed-sensitive volume pulses/ODBC interfaces/GPS sensors etc

Pulses can be between 4v and 12v amplitude

The ground reference for pulse source will normally be connected to the RaliTripp via the main battery ground (pin 7) by the vehicle wiring

The recommendation is to use single core screened wire, with the screen connected to RaliTripp ground (pin 8 or pin 9) at the main unit end of the wire and for the screen not to be connected at the pulse source end

!! Check manufacturer/ supplier specifications for your pulse sources

!! It is your responsibility to ensure that connecting the vehicle pulse source to RaliTripp will not have any safety or security impacts on your vehicle

Type	Wire to sensor	12-way connector pins	Notes
Various	S3 or S4	S3 - Signal – pin 2 – black S3 - Ground – pin 8 – blue S4 - Signal – pin 10 – black S4 - Ground – pin 9 – blue	

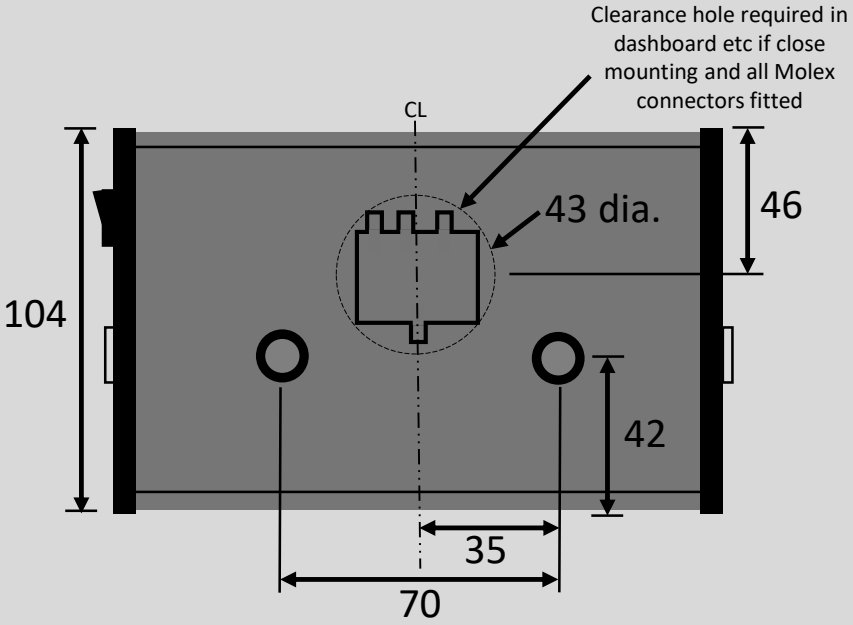
Prop Shaft / Magnetic Sensors

Sensor signal wire – usually brown
Sensor ground wire – usually white

!! **Check manufacturer/ supplier specifications for your sensor(s)**

Type	Wire to sensor	12-way connector pins	Notes
2-wire	S1 or S2	S1 - Signal – pin 5 – brown S1 - Ground – pin 11 – blue S2 - Signal – pin 6 – brown S2 - Ground – pin 12 – blue	The sensor brass body is usually isolated from both wires

Main Display



All rivnuts are M6 thread

Display depth is 34mm max

!! Do not insert anything more than:
- 10mm long into the rear rivnuts
- 20 mm long into the side rivnuts !!

All dimensions to nearest mm
Not to scale

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Mounting Bracket

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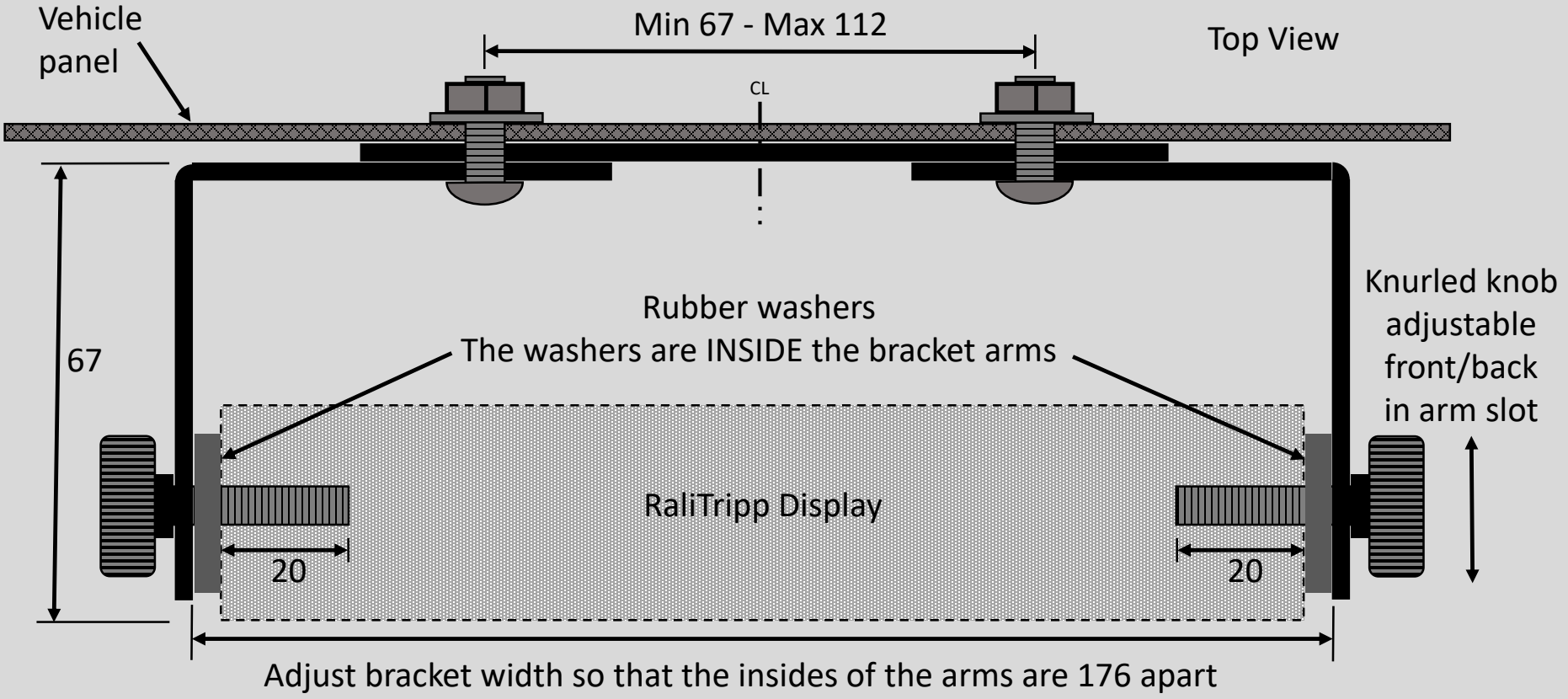
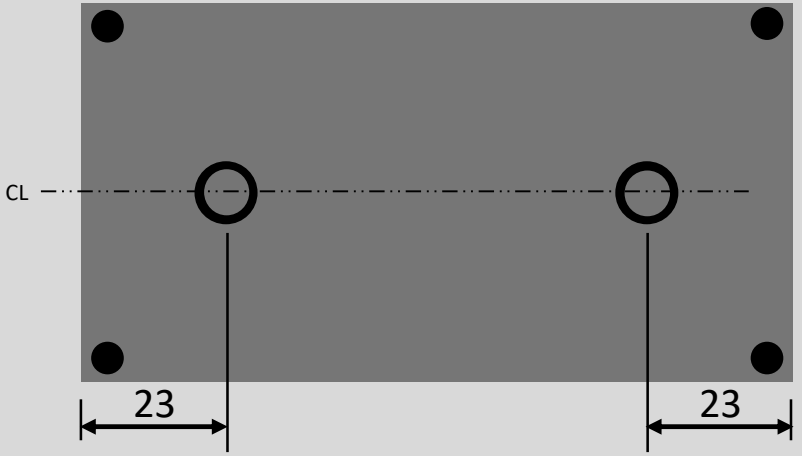


!! **For best viewing angle, adjust the display tilt so that you are looking straight at the display**

All dimensions to nearest mm
Not to scale

Remote Display

Display depth is 24mm



Rivnuts are M4 thread, maximum inserted depth must not be more than 11mm

!! **Do not drill into the case or screw/bolt anything into it** !!

All dimensions to nearest mm
Not to scale

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Notes

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RaliTripp Tripmeter

Road Mode

Rally Mode

Regularity Mode

Jogularity Mode

Stage Mode

Time Mode

Service Mode

Totals Mode

It’s a Navigator’s Thing

Version 1.01