

Race Diagnostics Ltd

LiquidTT MK1/MK2/A3 8P Kit Assembly Manual



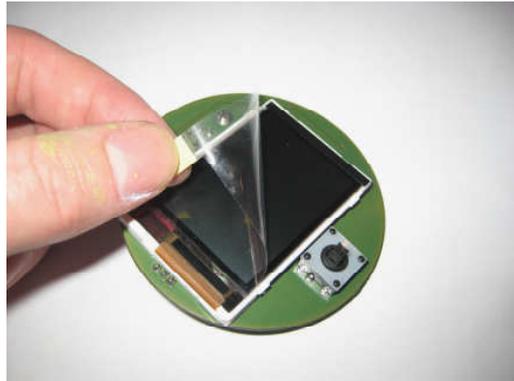
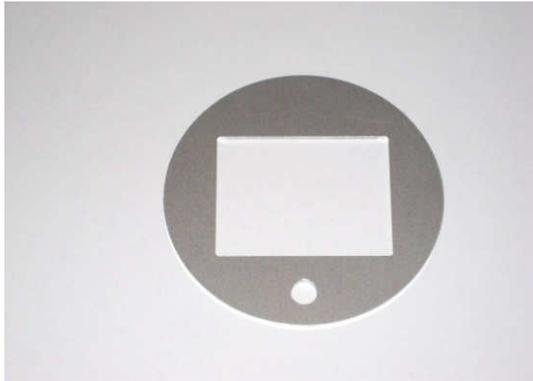
Required components

The liquidTT kit contains the following items:

One Aluminium or Black painted Aluminium fascia.

One liquidTT pcb

See pictures below.



Tools and components required to complete the assembly (not included in the kit).

Hot glue or acid free silicone gun.

Take care to use a suitable glue for the climate you will use the unit in.

Hot melt glue has the advantage of being reversible if is desired to change the fascia or/lcd module etc. and is fast to set.

Silicone may have a wider temperature durability but take a long time to set.

A 2 part epoxy glue is not recommended as repairs will be virtually impossible.

WARRANTY NOTICE

USE OF ANY GLUE OTHER THAN HOT MELT GLUE OR ACID FREE SILICONE WILL INVALIDATE YOUR WARRANTY DUE TO THE DIFFICULTY TO DISMANTLE THE UNIT.

Masking tape

TT Mk1 air vent, disassembled.



WARNING – ESD PRECAUTIONS MUST BE USED DURING THE KIT ASSEMBLY

The liquidTT PCB must be handled very carefully as it can easily be damaged by static electricity discharges.

Do not remove the PCB from its protective ESD bag. Before handling the PCB be sure to ensure that both yourself and the tools you plan to use are fully discharged. For example by touching an earthed item within your planned work area.

Kit conditions of sale:

Before assembling the liquidTT kit, the purchaser must first test the pcb.

- 1) Keeping the PCB in the protective anti static bag, take it and the OBD2 cable to your TT.
- 2) Remove the pcb from the antistatic bag, holding it only by its edges and plug in the 9 pin OBD2 cable to the pcb.
- 3) With the engine off, plug in the other end of the OBD2 cable to the TT diagnostics port.
- 4) Turn on the ignition, there is no need to start the engine. The liquidTT should start to fully function.
- 5) Unplug the liquidTT and replace in the antistatic bag.

If there is any problem at this stage, then return the PCB to Race diagnostics in its original packaging for a replacement.

If a problem is reported after the KIT has been assembled there will be a minimum £100+postage and packing fee to pay for a rework of the unit.

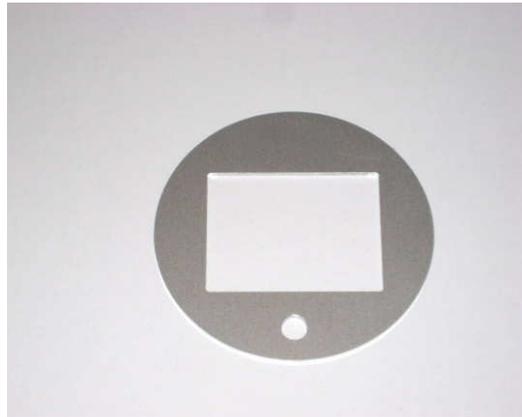
If you are not confident of your abilities to assemble the kit, then either purchase the exchange unit or complete assembled product.

Please note that assembling the kit using epoxy glue will invalidate your warranty. In addition, if the 6 pin header area on the PCB is obstructed by glue, this will also invalidate your warranty.

Assembly instructions

Note that the TTMK1 and A3 (8P) are similar but the TT MK2 is slightly different. Read the TT MK2 Appendix 2 first if you are assembling this kit.

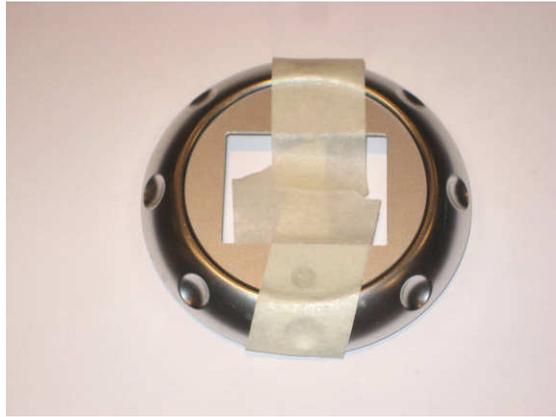
First the facia needs to be glued into the original air vent rotating control mechanism.



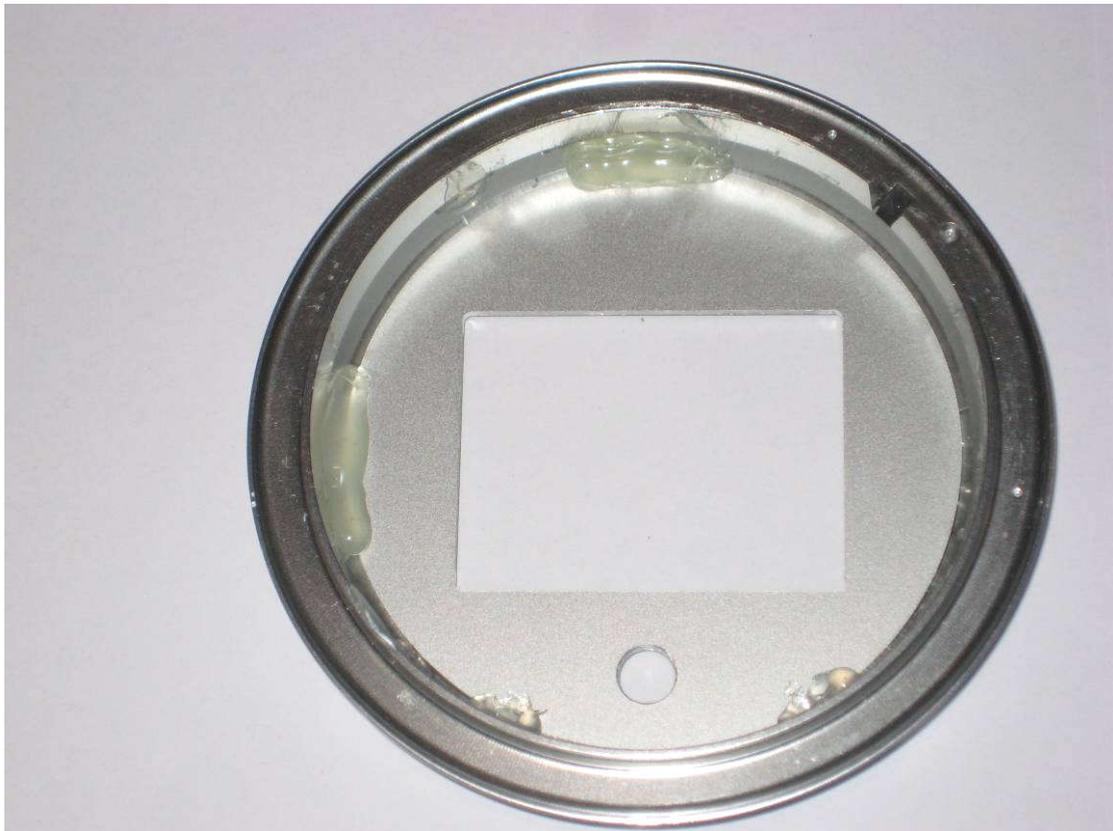
Hold the facia inside the air vent control wheel as shown below and ensure that it is in the desired alignment.



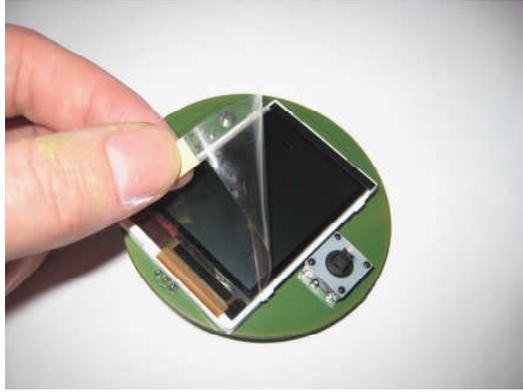
Once in alignment apply masking tape to ensure that the pieces do not move as shown below.



The hot glue gun should then be used to glue the facia into place. Care should be taken to match the position of the applied glue to that in the picture below. This will ensure that the glue does not interfere with the components on the PCB. Ensure that the glue is no more than 3mm in height.



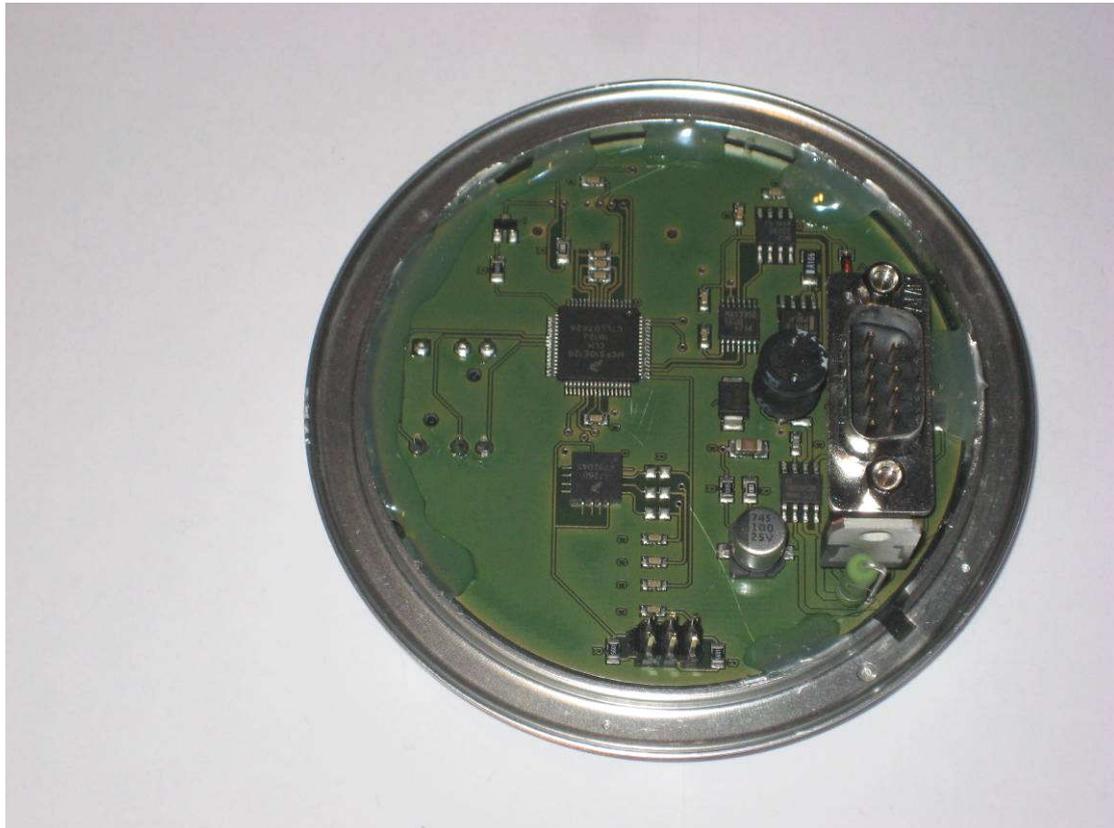
Next, remove the protective film from the face of the LCD



Hold the PCB in place behind the facia and align the display to the facia. Once aligned, hold the pieces in place with masking tape,



Next glue the PCB to the air vent control wheel as shown below. Once again match the glue position to that shown in the picture below..



The last thing that needs to be done is to glue the air vent body to the air vent control wheel.



The liquidTT kit assembly is now complete.

Appendix 1 – TT Mk1 Air vent disassembly

The TT air vent needs to be disassembled to allow the liquidTT PCB to be fitted.

The air vent unit is held together with 6 lugs, each lug has a clip mechanism on each side, in to total 12 fixing points, this makes it tricky to separate. You can see one of the lugs in the picture below. To separate the components all six lug, 12 fixing points need to be spread simultaneously. One of the lugs is shown in the picture below.



A close up of one of the lugs is shown below.



The inside of the outer body of which clips to the lugs is shown below.



One way to separate the parts is to insert multiple wedges around each lug and then pull apart as shown in the picture below.



An alternative and much faster and simpler way is simply to break off the lugs with pliers.

<http://racediagnostics.com/cms/uploads/images/videos/vent%20dissassembly.wmv>

Once separated only the parts below are needed, the remainder can be discarded or retained for future use.



Appendix 2 – TT Mk2 Air vent assembly

The Mk2 TT vent is more difficult to disassemble than the MK1, it is advisable to break it open using the method shown in this video for the MK1.

<http://racediagnostics.com/cms/uploads/images/videos/vent%20dissassembly.wmv>

The internal parts of the MK2 TT vent seems to have a coating of grease, it is advisable to clean the parts in detergent to remove this before assembly.

It may be noticed that the LCD has a small overhang beyond the edge of the PCB, it may be necessary to sand off this overhang.

It is advisable to do a “try out” of the assembly without any glue first to see how the parts fit together. It will be noted that the fascia has free movement within the vent, but the PCB has a tight fit.

It is advisable to first fit the fascia within the vent using a slow to set glue such as a non acidic silicone sealant, holding the fascia from the back, turn over and ensure that the alignment is correct. Next insert the pcb into the vent and again check the alignment from the front of the vent. Once in the correct position, tack into the vent using three spots of heat glue. Turn the vent over so that the front can be viewed, at this point the fascia may have lost its alignment but due to the slow setting glue, the alignment can be corrected. Once it is correct, set aside until the fascia glue has set. Once set, use more silicone glue to permanently fix the pcb into place.