How To Fit An External Antenna To Your TomTom TMC Receiver.

Revision 2, 12th January 2007
By Gary Bierton.

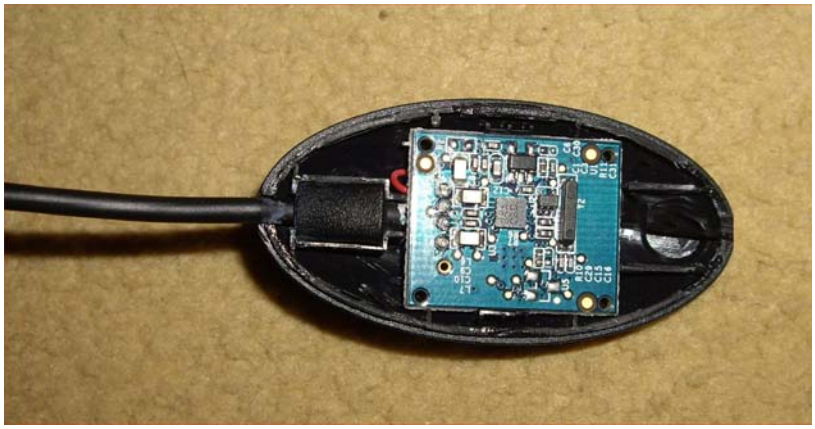
This is an updated version of the instructions to take into account problems which can occur in some cases when the audio output of the TomTom is connected to an external source.

This document explains how to modify your TomTom TMC Receiver to fit an external antenna. It should be noted that doing this will certainly invalidate the warranty on your TMC receiver. This has worked with mine and now TMC works great however I provide no guarantees so proceed at your own risk! I am very happy with my TMC receiver now that it has an external antenna as it now performs like it always should have done.

Here on the right is the completed modification. I fitted mine with an antenna socket that allows me to plug my standard car radio antenna into it.

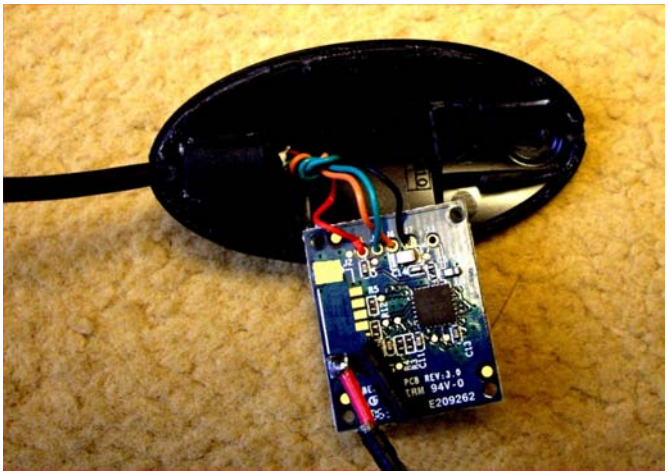
I started by carefully opening up the TMC receiver. This is glued together in two halves. I found that by turning the receiver onto its side, placing it on a hard surface and tapping around the join with a hammer, it loosened most of the glue. I then used a normal kitchen knife in the edge, and with a twisting motion, I separated the two halves. Be very careful not to jam anything inside the case as this could damage the internal components.

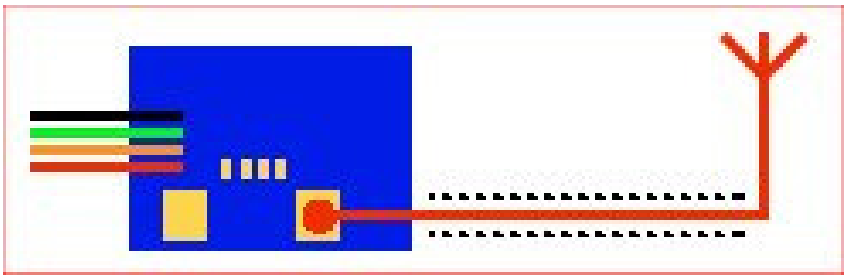
Once opened up, it should look like this.



At the top and bottom of the PCB in this picture, there are two small clips which need to be pushed away from the PCB to allow the PCB to be removed from the case. Note that the cable is still held into the case by the cable strain. I found it best to leave this in place and just turn the PCB over rather than remove it completely.

When the PCB is turned over, you can see where the TomTom cable is soldered onto the PCB (4 thin wires at the top of the picture). When oriented this way, you will see two large gold pads to the left of the PCB. Use a thin piece of cable and solder onto the pad furthest away from the existing TomTom wires as shown on the picture to the left. Make sure that any cable you attach does not short-out with anything else on the PCB. Originally I used both pads, however some people have had problems when using the other pad and it seems to make very little difference (if any at all) so its probably best just to use this one pad. In this picture the red wire connects to the external antenna. On a car antenna it would connect to the centre of the antenna and NOT that shield of the antenna. See the diagram below:





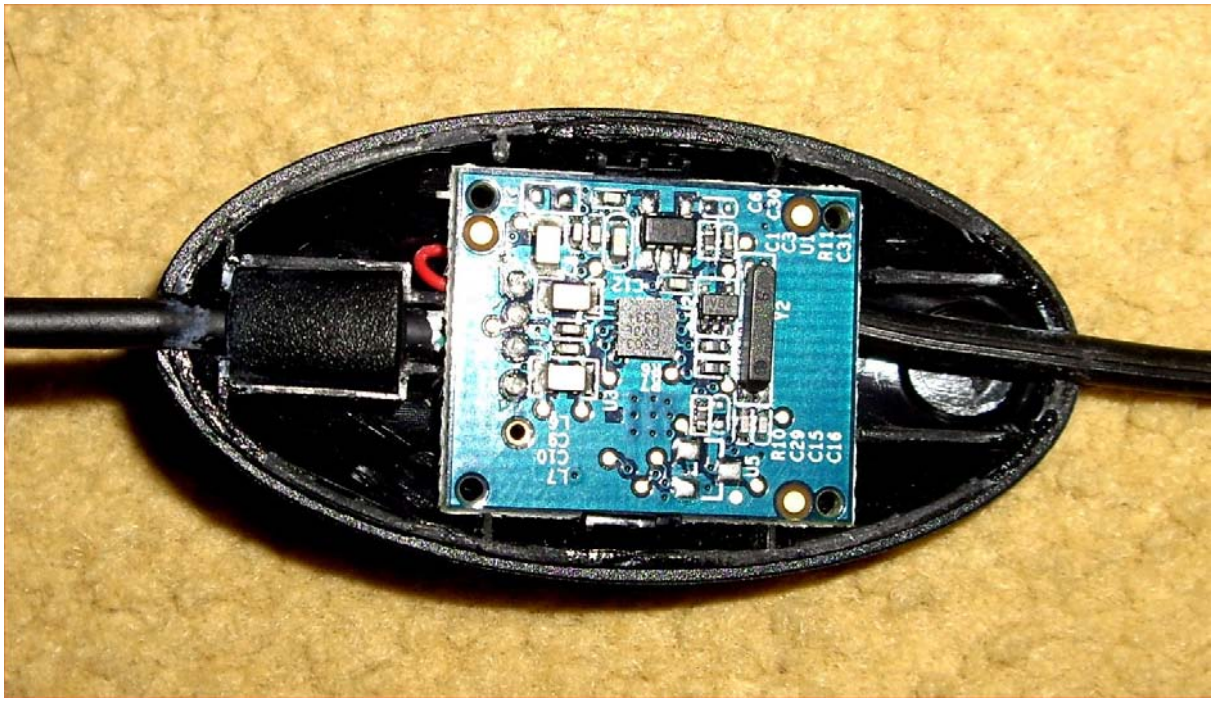
Antenna Connection Diagram

Next I used a small pair of cutters to remove some of the plastic internal strengthening, allowing the new cable to be routed out of the case. I have tried to show this by the red circled area in this picture but it is not very clear. I also trimmed out two small parts in the edge of the case to allow the cable to exit in the same way as the original TomTom cable enters the case.

Now to re-assemble the TMC receiver. Carefully twist the PCB back over in the same direction that you untwisted it (to allow the cables to twist together again). Then feed the cables back into the case where they were previously located, under the PCB.

The new cable should feed out of the case now that you have trimmed some plastic away.

The PCB should fit back into the PCB clips as before.



All you now need is a few drops of superglue to put the case back together again, although I would recommend that you test it first.

Depending on the quality of the antenna that you connect your modified TMC receiver, your mileage may vary. Since doing this original modification, I have now connected an aerial signal amplifier to the external antenna of TomTom TMC receiver to gain even better results.

Parts Used:

A few inches of thin cable. I used audio co-axial cable (and ignored the screen), but any will do.

1 x Car Aerial Line Socket from http://www.maplin.co.uk Part # FJ76H

You may wish to use a splitter cable if you want to plug into your car aerial. The required cable will depend on your car. If you have a standard Din antenna, you could use something like the following:

Part# PC5-105 from
http://www.nexxia.co.uk/Car_Stereo_fitting_kits/antenna_adaptors.htm