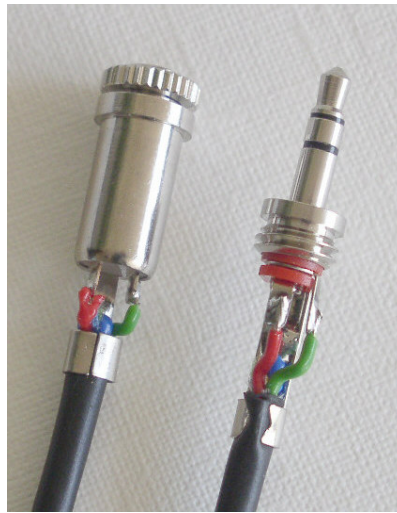
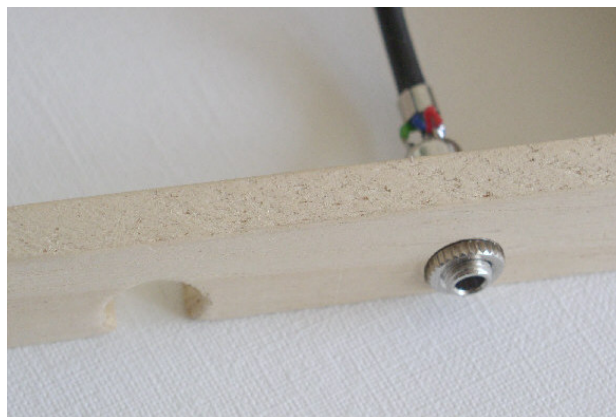


## DCF77/WWVB RECEIVER ENCLOSURE KIT

Cut a short piece of 15 cm. of the provided cable and attach this to the female 3.5mm connector. The blue wire is GND, green is for the signal, and red is for power. Attach the remaining length of cable to the male 3.5mm jack.

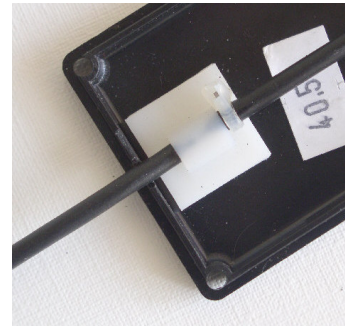
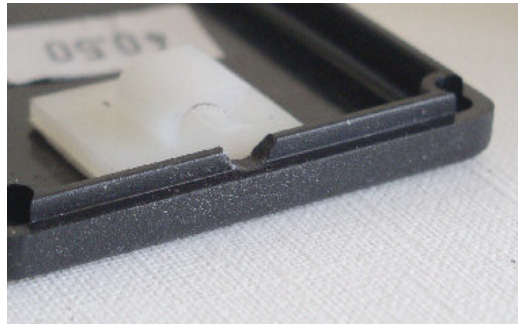
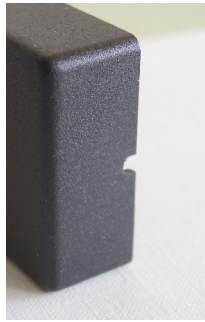


To make a hole in the frame, it is advised to practice on another piece of wood first, because at a first attempt you might ruin the frame. First drill 9~10 mm hole, but with a depth of only a few mm. Then use an 8 mm drill and complete the hole. Insert the chassis connector in the hole, secure it with some glue. Later, you can connect the cable to the clock PCB, red is +, black is GND and green is the signal.



The other end of the cable goes to the board. The markings on the board makes this very straight forward. The blue wire to GND, the green wire in the middle, and the red wire to “+”.

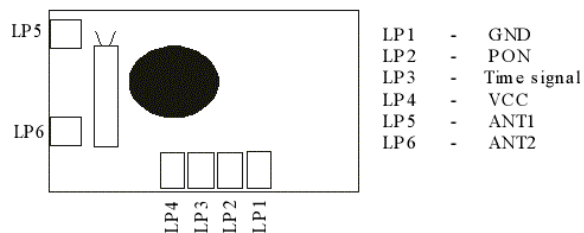
Make a small half round opening at the edge of the plastic box. Make a similar half round at the rim of the cover. Put the selfadhesive the cable clamp on the insider of the cover, as show in the picture. Slip the cable under the clamp and secure it with a tywrap.



Next we need to connect the cable to the receiver. Depending on your project, you have a DCF77 or a WWVB receiver module. Put the antenna and receiver board in the box, and use some glue to keep them in place.

The wires for the DCF77 receiver are connected as follows: blue wire to pin 1, red wire to pin 2 and the green wire to pin 4. The DCF77 antenna needs to be placed horizontal. The long side must face towards the DCF77 transmitter in Frankfurt, Germany.

The wires for the WWVB receiver are connected as follows: the antenna wires are connected to LP5 and LP6. The black wire of the cable goes to LP2 and also to LP1. The red wire goes to LP4. The green wire goes to LP3. That's it. The WWVB antenna needs to be placed horizontal. The long side must face towards the WWVB transmitter in Boulder, Colorado.



Plug the receiver into the clock, and check if it synchronizes. If reception is perfect, this takes 3-4 minutes. If the clock does not synchronize, make sure that antenna and receiver are kept at a fair distance from possible noise sources such as PC's, motors, microcontrollers and other nasty digital circuits, switched power supplies and so on. If you experience difficulties in reception and synchronization of the clock, this is the first to check for.

Some versions of the software allows to check the incoming signal. For instance the Z570M-1 clock can be programmed to use the center LED as an indicator for the DCF77 or WWVB signal. This is also possible with the 6TM-V1.02 or higher versions of software for the 6 tube clocks. Please read the user manuals for these clocks for instructions how to do this.

As usual, if any questions remain, you can always email me.

Best regards,  
Frank Bemelman

