

80 METER RDF-RECEIVER

HRX80

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Important:

- There are three wire connections on the pcb. (In the assembly drawing designated by DR1, DR2 and DR3). Make these connections first. The connections must be placed under IC1, next to IC1 in the direction of C13 and next to F3 to ground.
- Headphone: This receiver is designed to be connected to a headphone equipped with a 3.5 mm mono plug. The receiver is switched on by connecting the battery minus to the receiver ground by the headphone plug. Headphones equipped with a stereo plug must be modified so that both earpieces are connected to the top contact of the plug. The middle contact ring must then be wired to ground inside the plug.
- One pin of the case of the oscillator coil cannot be put through the pcb. (There is no hole) Bend the pin upright next to the TCA440.
- C22, C23, C25 and C26 are electrolytic capacitors. Pay attention to their polarity (+ and -). See the assembly drawing
- The cathode of diodes is marked with a black or white ring. The 1N4148 has a black ring. The BB405 is black with a white ring. Do not overheat the diodes during soldering.

General:

The resistors are all designated by R#. The normal colour code is used:

black = 0	yellow = 4	grey = 8
brown = 1	green = 5	white = 9
red = 2	blue = 6	gold = 5%
orange = 3	purple = 7	silver = 10%

The first and second ring represent values.

The third ring represents the number of zeroes.

The last ring represents the tolerance.

C22 controls the amount of amplification of the audio IC. In case of a too loud audio signal remove C22.

For good temperature stability it is important to use the right capacitors for C10 and C28. This will greatly improve the frequency drift of the oscillator. The temperature coefficients are designated by a coloured dot on the top side of the capacitor.

red/purple	P100	+ 100 ppm
black	NP0	0 ppm
red	N75	- 75 ppm
orange	N150	- 150 ppm
yellow	N220	- 220 ppm
green	N330	- 330 ppm
blue	N470	- 470 ppm
purple	N750	- 750 ppm
orange/orange	N1500	-1500 ppm

Construction:

Mount the parts on the pcb. Start with the three wire connections. Watch the polarity of the elco's. The filters F1, F2 and F3 are symmetrical. They can be mounted either way.

Coils L1 and L2

L2 is wound on a paper or pertinax coilform. The inner diameter coilform must be just wide enough to fit easily onto the ferrite rod. L2 consists of 24 windings. L1 is 2 windings. Fix the windings with glue or sticky tape.

To be continued soon.....