Note 6:

KM3000 Squelch setting (Yellow board)

Disclaimer

This modification is carried out at your own risk. The resistor is very small and needs careful soldering to ensure the main board and components are not damaged. It is recommended that you attempt this modification with care if you are not conversant with SMD soldering work.

Background

The KM3000 2M radios sold by TVRG were originally used in remote locations as data radios. As the radios were just listening data all the time the squelch level was not considered important. Consequently, there is no squelch level adjustment on the main board. Used now for voice the default squelch setting may be considered unacceptable for amateur operation in simplex mode without CTCSS.

All yellow PCB radios sold by TVRG have had this modification carried out prior to sale. The following modification will set the squelch levels to around -115 / -118dB depending on the value of resistor chosen for (R97).

The modification is not difficult if carried out in a methodical way. The attached photographs show the process of adding the resistor and testing of the radio.

This modification can easily be completed in 30 minutes even if you are not familiar with these radios.

So, clean and clear the working area, prepare a container for the screws and small parts, turn on your soldering iron.

The components are going to look very small!

Tools required

Weller or Antex type temperature controlled soldering iron with 1mm tip max

Heated tweezers

22 SWG or thinner fluxed solder wire or SMD solder paste

SMT flux pen or SMD flux liquid

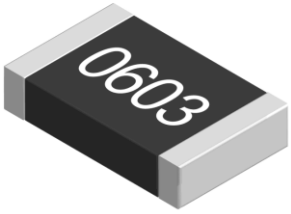
Magnifying lenses, strong glasses or bench microscope

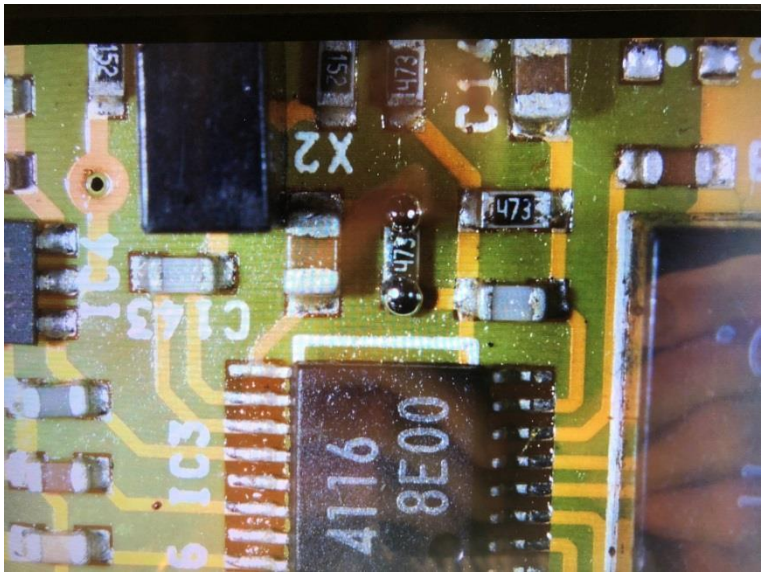
Philips screwdriver

Tweezers

Components required

SMD 0603 1/8W resistor 36K or 39K ohms





What to do

1. Locate the SMD 47K 0603 resistor *(R97) near the 4116 chip on the main board. This needs to be changed to around 38K ohms. This can be achieved in three ways.

2. Using heated tweezers or a heat gun remove the 47K SMD resistor *(R97) and replace with a resistor 39K SMD resistor. Note: if there are any additional resistors fitted at *(R97) position remove these as well and just fit one new 39K resistor.

3. After modification check the squelch operation using a calibrated RF signal generator for approx. operation at -119dB.

4. Should the squelch operation still be slightly too sensitive and not reliably closing remove and replace *(R97) with a 36K resistor

*R97 Original value 47K ohms

Note 6_KM3000 squelch setting yellow PCB

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