

Note 8:

KEY KM3000 Open Squelch Modification (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 and have fixed squelch.

To achieve an open squelch on the radio a value of resistor needs changing.

This modification is not difficult if carried out in a methodical way. The attached photographs show the process of changing 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

Hot air reflow station

22 SWG or thinner fluxed solder wire or SMD solder paste

SMT flux pen or SMD flux liquid

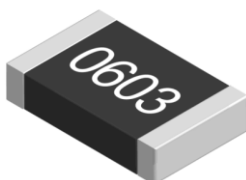
Magnifying lenses, strong glasses or bench microscope

Philips screwdriver

Tweezers

Components required

SMD 0603 1/8W 47K resistor

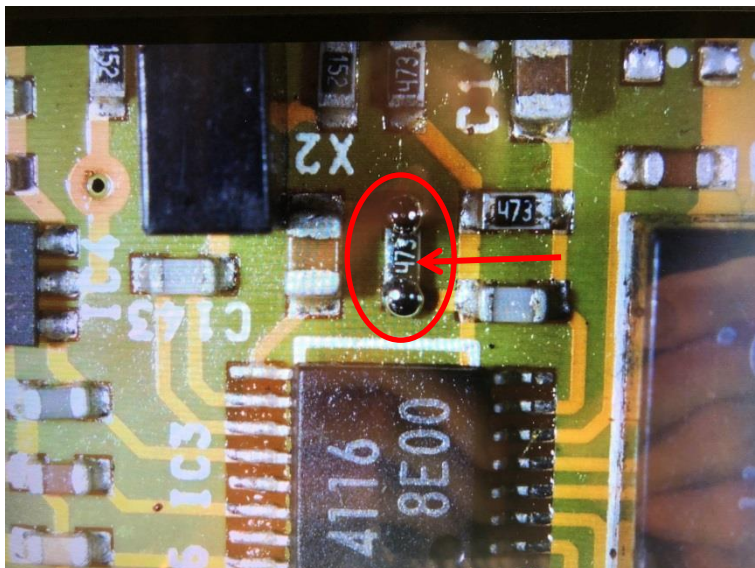


What to do next

1. Locate the SMD resistor (R97) near the 4116 chip on the main board. This needs to be changed to 47K ohms.
2. Remove the SMD resistor that is in place (there may be two resistors on top of each other) and replace with a new 47K SMD resistor.
3. Some radio may have a 110K, 150K or 220K SMD resistor on top of an existing 47K resistor or it may be a 33K resistor on its own. However, just remove anything on R97 position on the board. Replace it with a new 47K resistor.

After modification check the squelch operation using a calibrated RF signal generator for suitable operation.

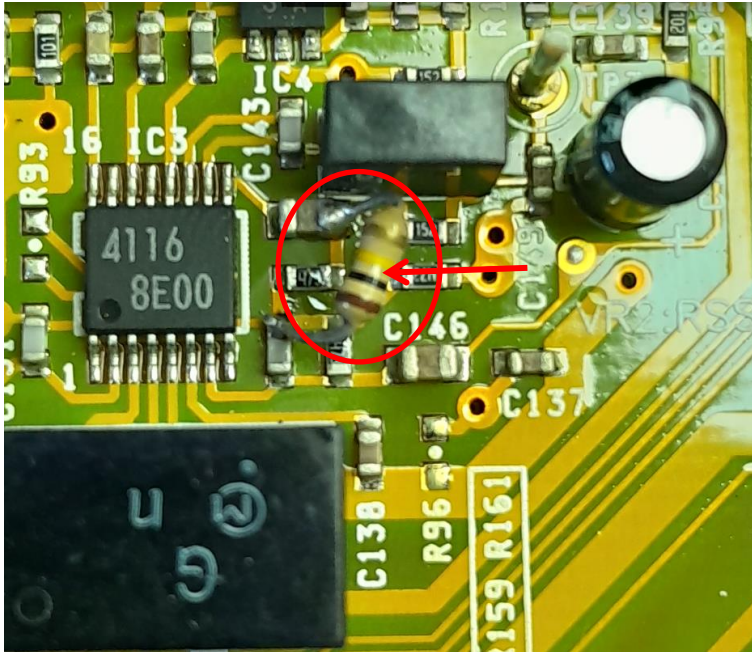
Picture 1



Note:

Occasionally some radios have been found with an additional 100K 1/8W non SMD resistor fitted as in picture 2. Although it looks different it is across R97 and the same electrically as if it was a SMD resistor is placed on top of the 47K resistor. Just remove this resistor and the radio squelch should be open as required.

Picture 2



Note 8_ KM3000 yellow modify for open squelch packet operation

TVRG 2023