

Parts Needed for 6 Meter conversion of Receiver Board:

Midland 70-066 Parts:

Capacitors.

		Jaycar
2.2pf	- 2 of	RC-5304
5.6pf	- 2 of	RC-5309
8.2pF	- 3 of	RC-5311
22pf	- 3 of	RC-5216

Note: All capacitors are 50V Ceramic

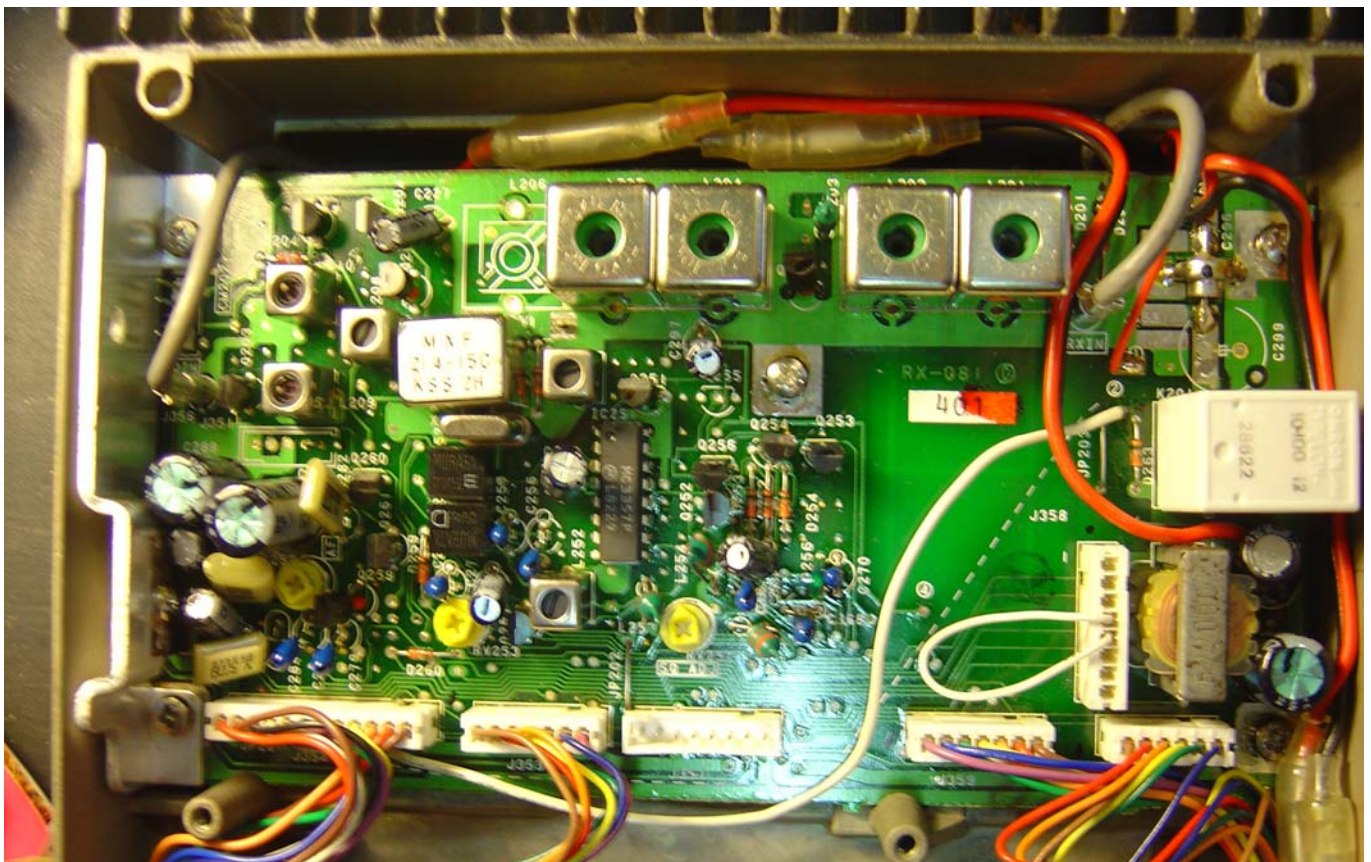
NOTES:

If your transceiver has a 2.5 Khz step frequency, then your receiver should have a narrow pass filter, eg 5 Khz. Thus when you receive normal 10 Khz deviation signals – they will sound distorted, get the sending operator to back off from the microphone.

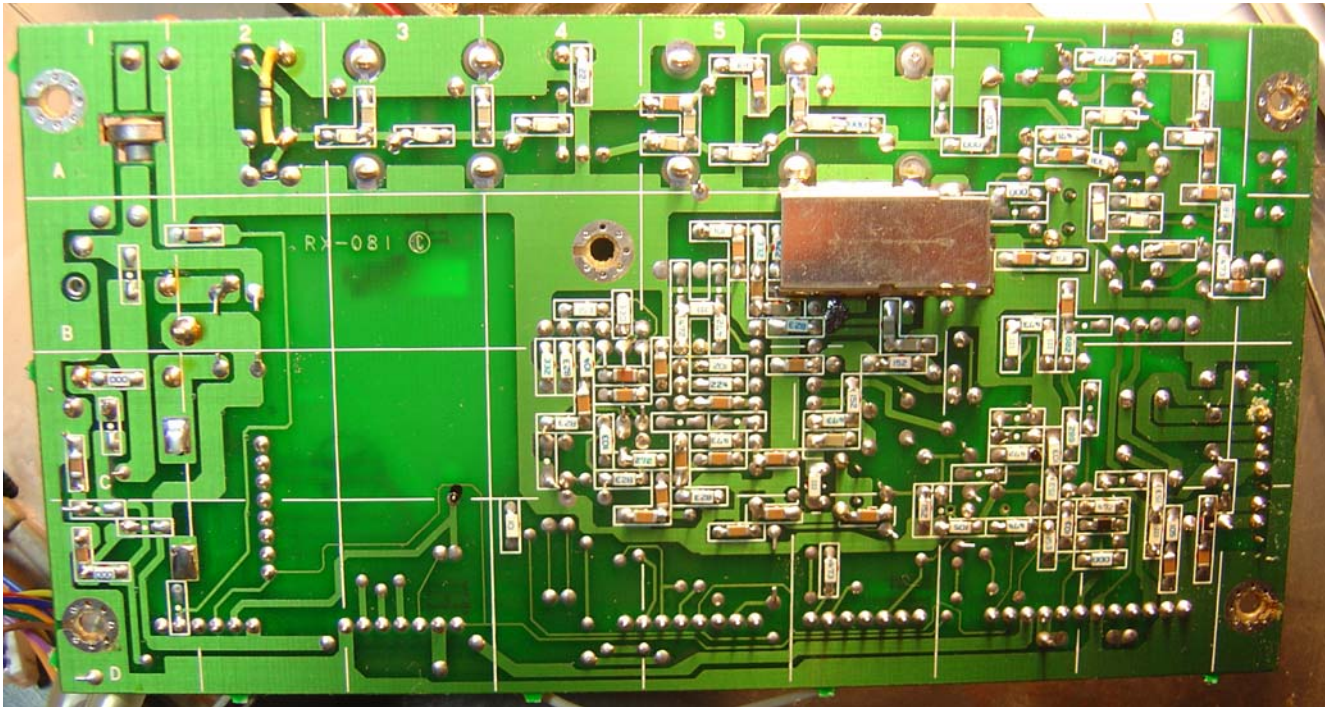
The Receiver Board:

Partially remove the receiver board from the Midland 70-066 transceiver below. ie. Remove all white plugs connected to the white sockets on the board. Then remove all screws holding the receiver board to the transceiver chassis. NOTE: - Do not unsolder the power cables to the receiver board.

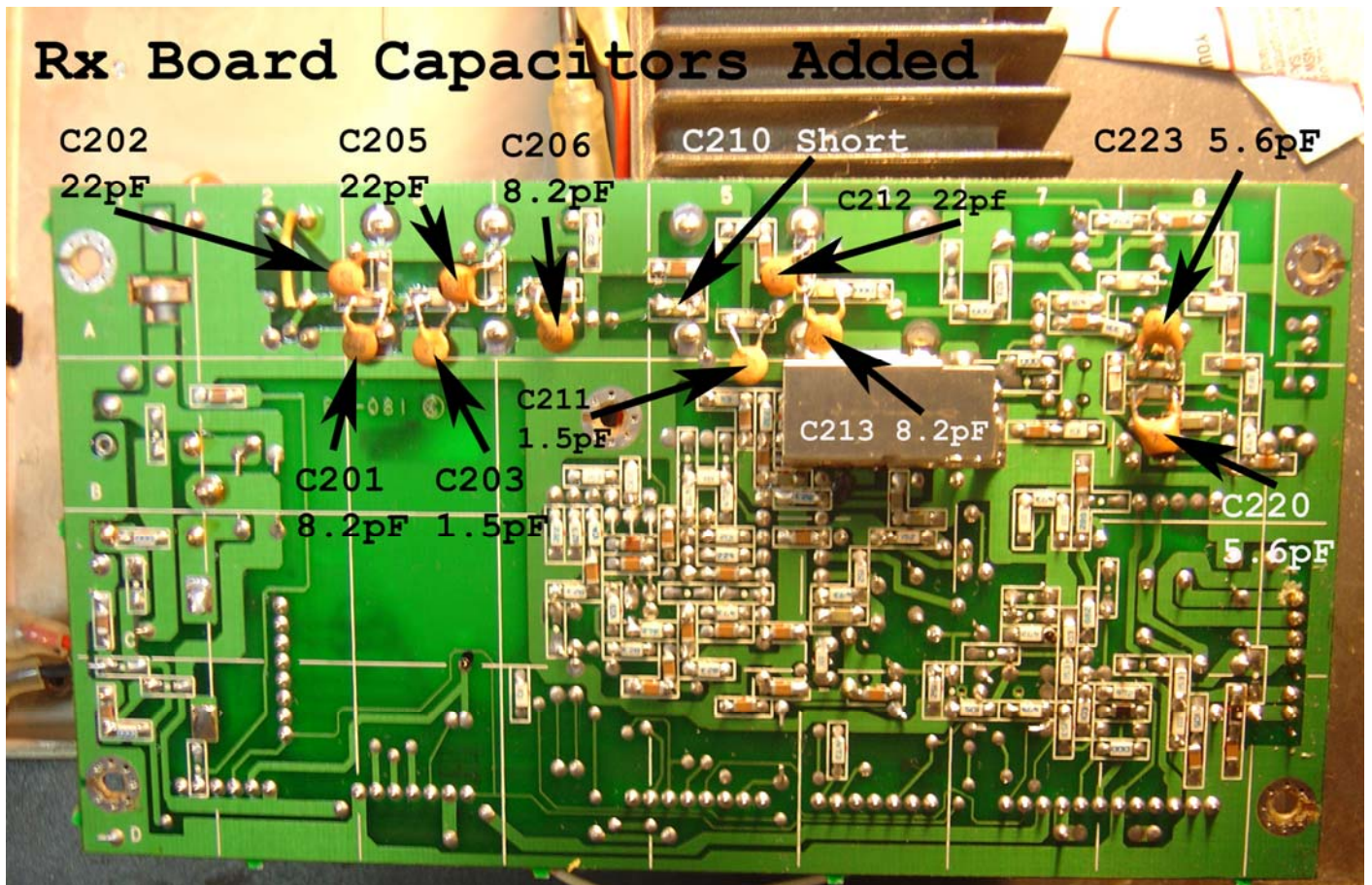
Midland 70-066 Receiver Board - below.



RT85 Receiver Board Bottom below.

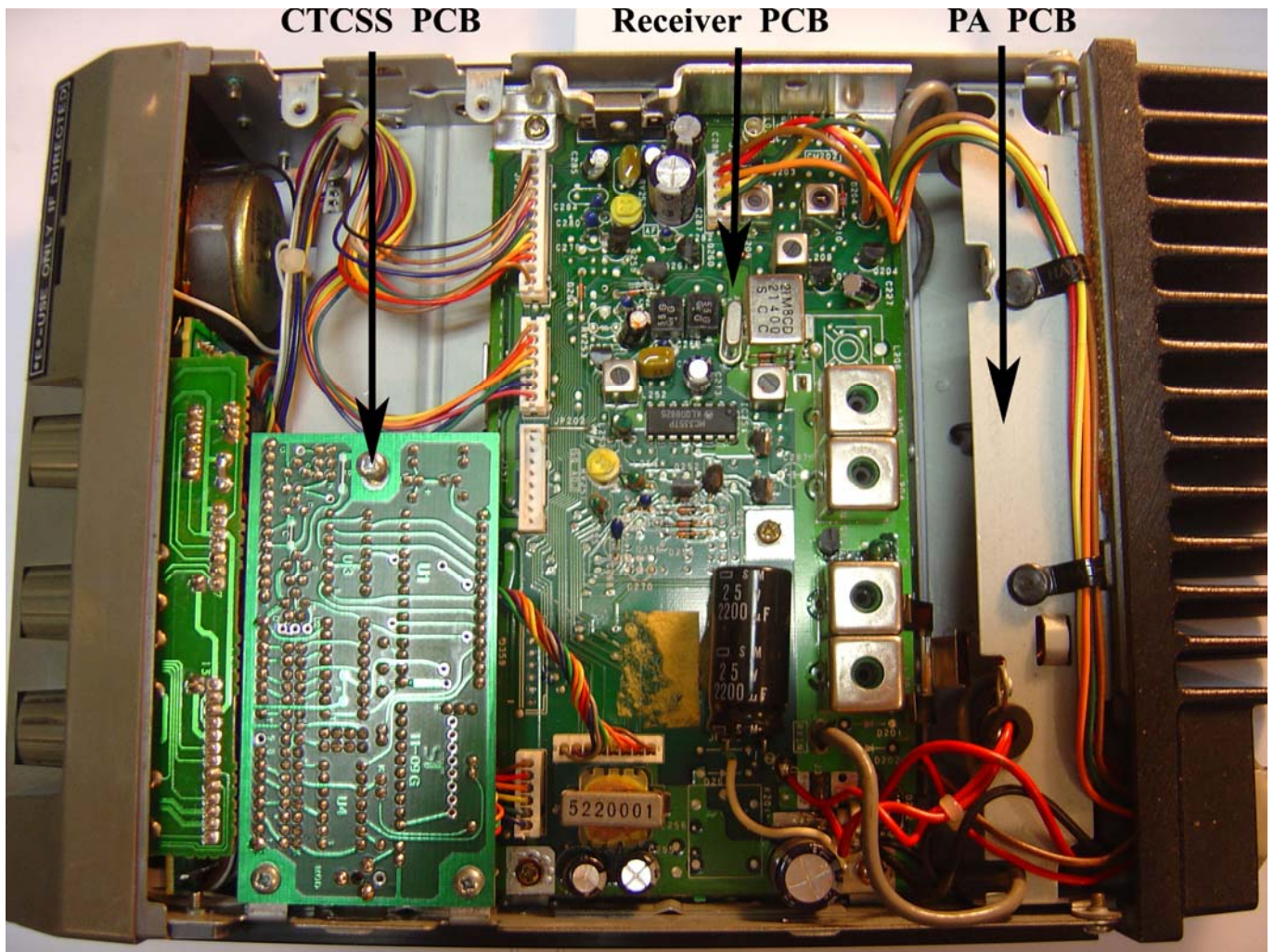


Midland 70-066A Receiver Board Bottom Capacitors Added below.



NOTE Above: C203 & C211 has been changed to 2.2pF for the Midland 70-066A

Midland 70-066A Top View of PCB below:



Remove CTCSS PCB from transceiver chassis by unscrewing and bending back away from the receiver PCB.

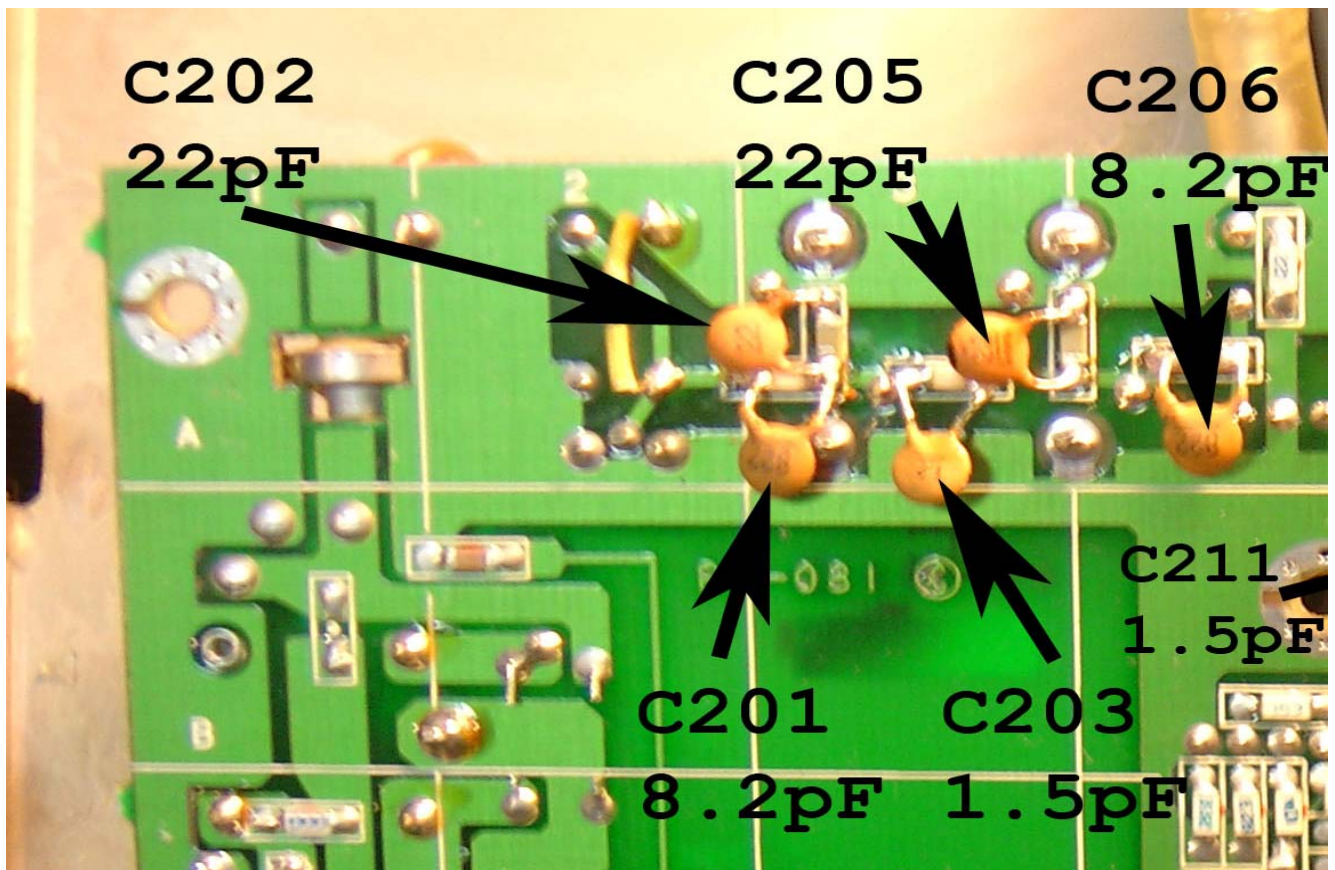
Unplug the two RF leads from the Receiver PCB.

Unplug all plugs from the Receiver sockets. NOTE: The power cables are left

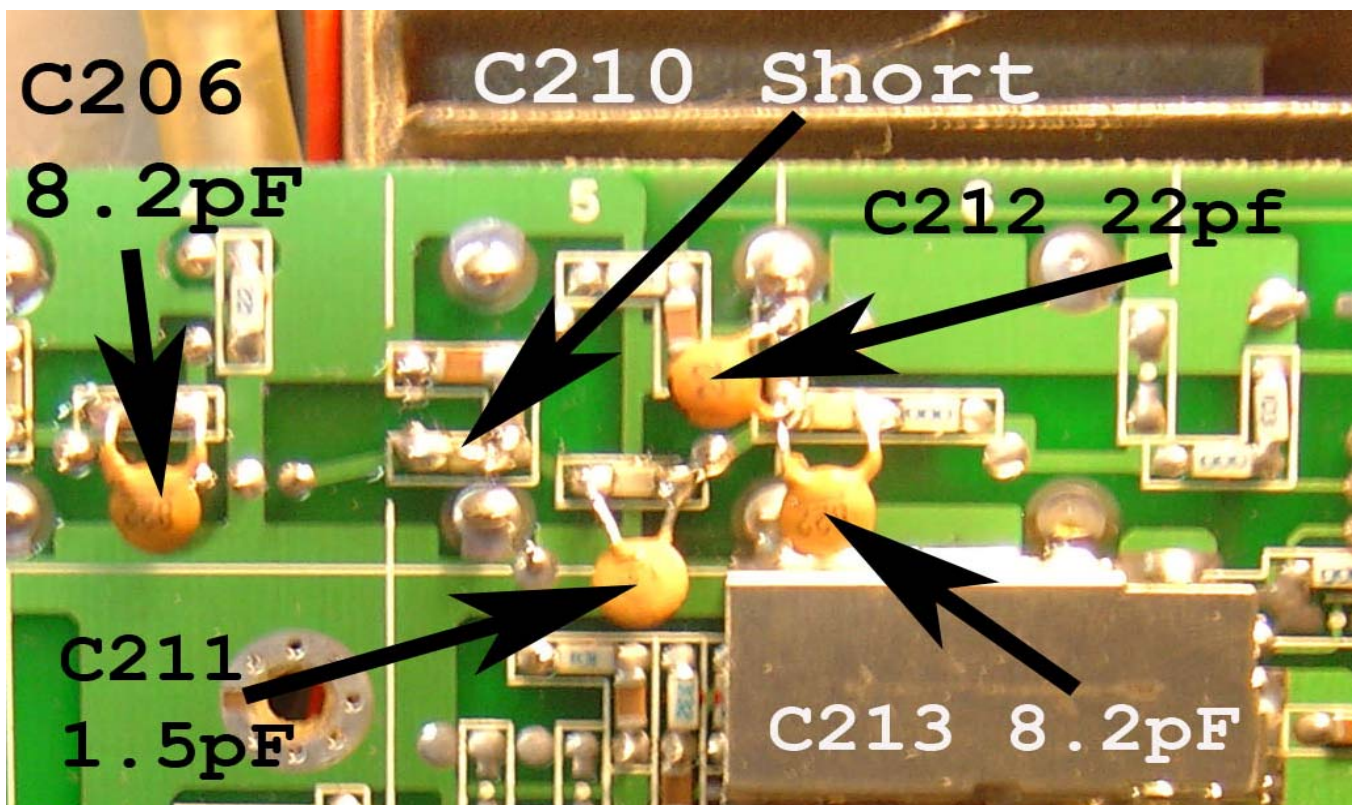
Remove Receiver PCB and bend back to view bottom of board.

Rx Front end. Add 22pF to C202, C205, and C212.
Short C210.
Add 2.2pF to C203 and C211.
Add 8.2pF to C201, C206, and C213.

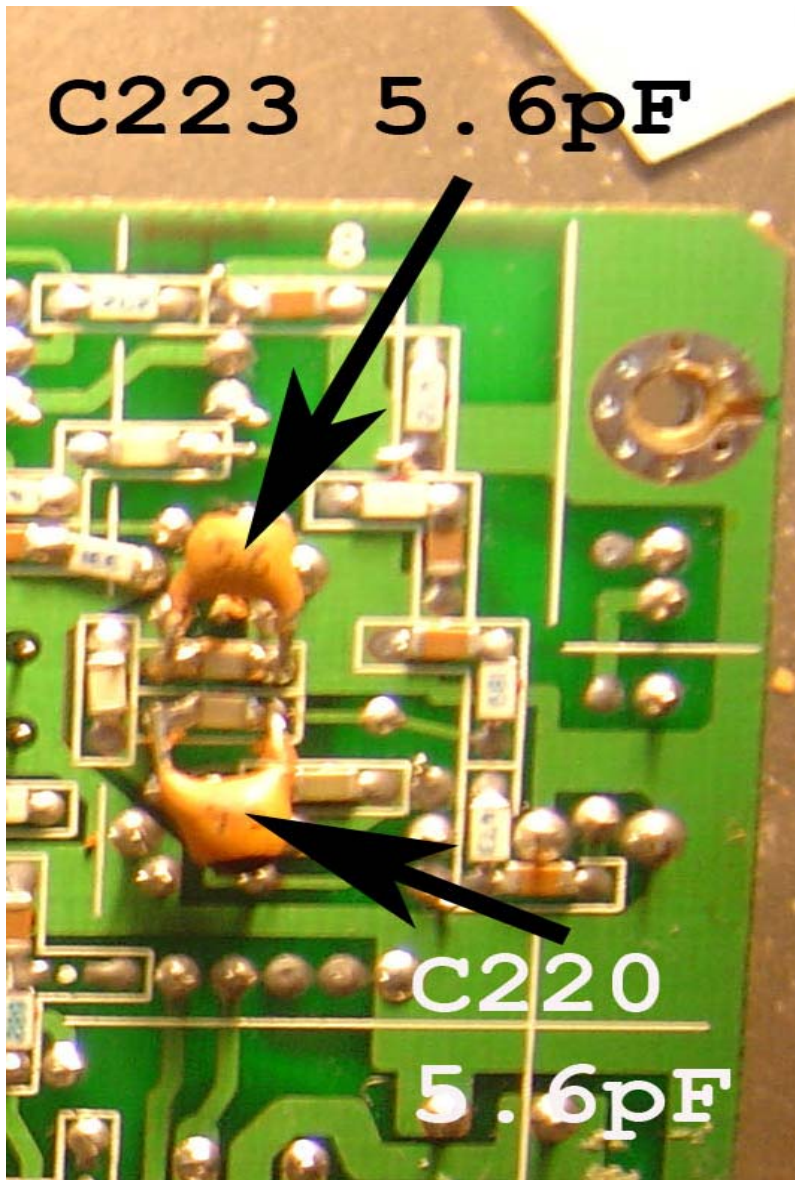
LO tuned buffer. Add 5.6pF to C220 and C223.



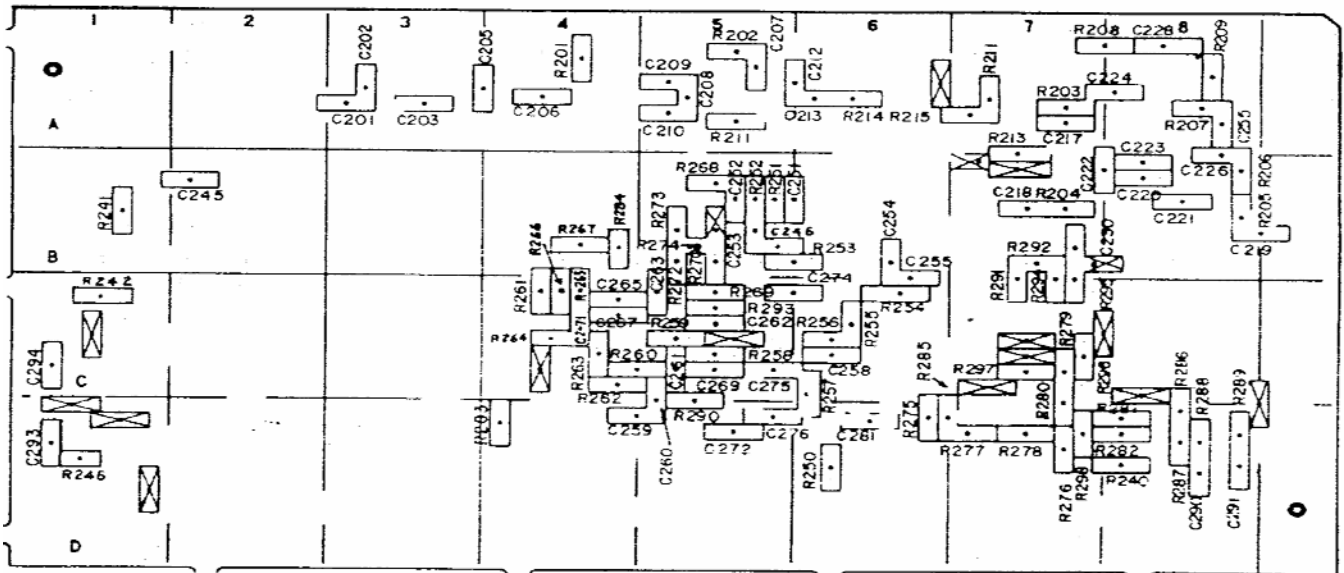
NOTE Above: C203 & C211 has been changed to 2.2pF for the Midland 70-066A



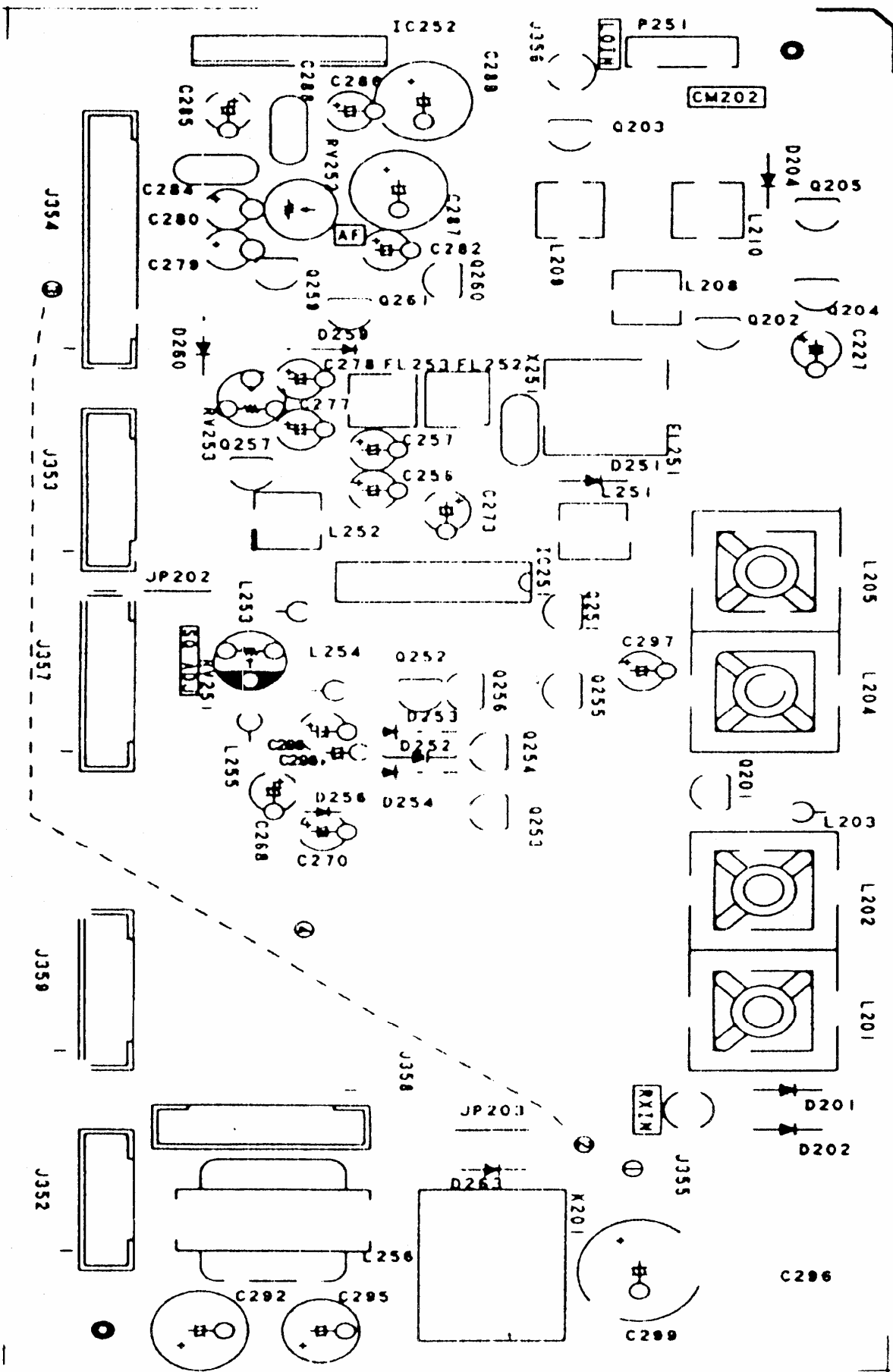
NOTE Above: C211 has been changed to 2.2pF for the Midland 70-066A



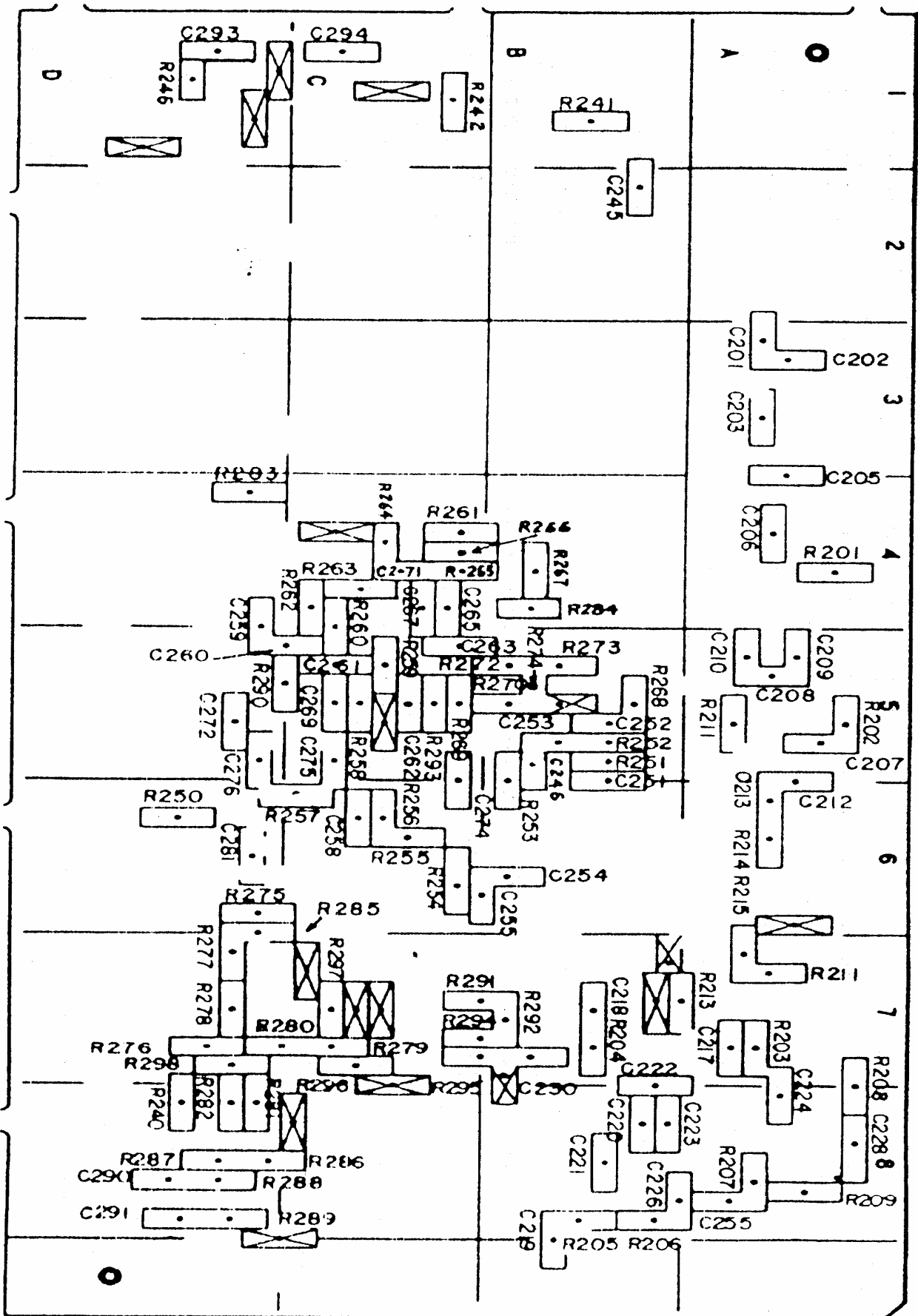
Midland 70-066 Receiver Board Bottom Capacitors below. [see larger diagram at end for printout]



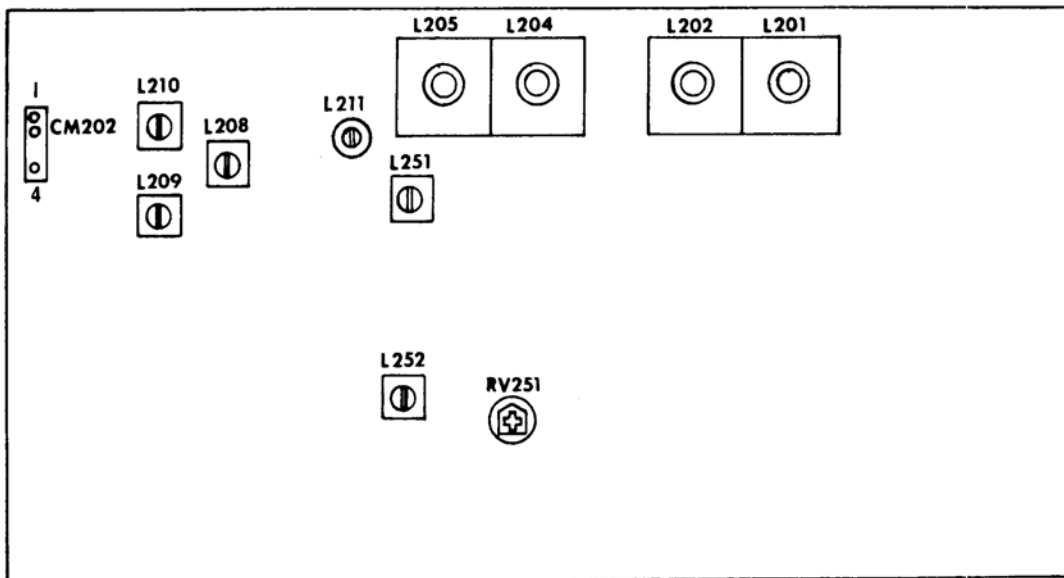
Midland 70-066 Receiver Board Top Assembly View - below:



Midland 70-066 Receiver Board Bottom Capacitor View - below:



Rx Tune Up.



Midland 70-066 Receiver Alignment Points Above:

Receiver tune up is straight forward. Reconnect the Receiver Local Oscillator J365 cable to the synthesizer board.

LO Amplifier Alignment:

Connect multi-meter or DVM to Monitor CM202 pin 1. Note pin 2 is missing key pin). Switch to center frequency – **Channel 49 - 53.250Mhz** [center between 53.975Mhz and 52.500Mhz.]

To tune the local oscillator multipliers - Adjust **L209 and L210** for maximum reading. A typical reading is 0.4 V. A common problem with these transceivers is lack of LO injection if they are not modified and tuned correctly.

RF-IF Alignment:

Tuning the RF front end - On a mid frequency channel (**Channel 49 - 53.250Mhz**) feed a signal in from a signal generator to the Midland 70-066 antenna socket. Connect a multi-meter or DVM to Monitor CM202 pin 2 and peak **L201, L202, L204 and L205** for maximum reading while remaining in the linear range [ie Set signal generator level for positive meter reading before limiting occurs.. Note the reading at this pin will be negative until sufficient RF input signal is available. Repeat adjustments for optimum.

An alternative method is to use a Sinad meter or tune for maximum quieting. When correctly aligned the sensitivity is typically 0.35uV for 12db sinad over the range 52.5 to 54 MHz.

Tests have concluded that the Midland 70-066 should lift the mute at 0.1uV for a reasonable audio quality.

Quadrature Coil Alignment:

Adjust **L252** for maximum audio output.

Tight Squelch Alignment:

Adjust **RV251** for the desired tight squelch sensitivity.