

MIDLAND 6001 & 7001 (UPDATE)

This procedure gives maximum slide without loss of power on extreme ends of the slide, and gives upper frequencies without crystal switching. The only drawback is; that the upper freqs. come out on the zero-instead of fives; and must slide to reach. (This conversion does require a bit more parts than usuall, but the results are worthwhile)... Parts list follow: *See Text..

100pf disc NPO capac.	2.7K $\frac{1}{4}$ W resistor	
4.7 UH RF Choke	7 UH RF Choke	
100 ohm $\frac{1}{2}$ W resistor	1N4739 Zener Diode/ECG 139A	
10K $\frac{1}{4}$ W resistor	.01 UF disc capac.	
.047 UF disc capacitor	100 UH RF Choke	
220 UF 25WVDC Elec.Cap.	10.695MHz, or 10.681MHz Xtal (See Note 4 - HC18U case..)	
*SPST switch	*47 ohm 1/4W resistor	*3pf disc, NPO
*5.6 UH RF Choke	*Super Diode	*20K 1/4W resistor
*MPS05A transistor/ECG 123AP		

* *CLARIFIER INSTRUCTIONS* *

1. Remove R148, D49, C22, C23, C30, C29, R21, C21, C26...
2. Replace C27 with 100pf NPO capac.
3. Replace R14 with 2.7K resistor.
4. Replace D50 with 4.7 UH RF choke.
5. Replace L3 with 7 UH RF Choke.
6. Replace D4 with Super Diode, or place 5.6 UH RF choke between D4's Anode and ground...(Go with the diode..E/P)
7. Replace R20 with 10K resistor.
8. Build the 9 volt regulated supply as illustrated on skem..
9. Connect 9 Volt supply to unused terminal of the clarifier.
10. Run jumper to the junction of CT1, CT2, and CT3 from the cathode of D4..

There's the slide....

* *FREQUENCY MOD. INSTRUCTIONS* *

1. Remove X2, replace with the 10.695MHz Xtal (See Note 4)..
2. Isolate Pin 9 of PLL IC from D.C. Ground..
3. Connect a wire from Pin 9 of PLL to one side of SPST sw.. (Suggest using an existing switch, use the center leg)..

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4. Connect a wire from ground to the other side of the sw. (or outer leg of existing switch).
5. When switch is shorted/closed the radio will yield 27.420-27.860MHz.. SEE NOTE 4...

NOTE 1 - If power is not sufficient on upper freqs: parallel

R33 with a 47 ohm resistor, and R129 with a 20K.

NOTE 2 - If with the new crystal, can't resume center slot.

Isolate X2 from the junction of CT1, CT2, CT3, and

D4. Bridge the open with a 3pf NPO disc capacitor.

This will give a little more up slide.

NOTE 3 - If gain is low at TP3 after retuning of TL.

Try replacing Q3 with an MPS05A/ECG 123AP..

CAUTION-Note B-C-E leads may not be the same..!

NOTE 4 - It has come to my attention that a heterodyne whistle

may be encountered in some radios. If this is the case with your radio..These are two things you can do to correct it.

#1.. Don't do the clarifier mod listed here, - But, if you want the big slide you will have to!

#2.. Instead of replacing X2, simply make it switchable with a 10.681MHz crystal. This will make Ch. 1 start at 27.395MHz. But the squeal is eliminated..

This arrangement will also give frequencies below Ch. 1,-when the 10.46667MHz crystal is on line, and the switch on Pin 9 is activated..

See Schematic for drawing changes/9 Volt power supply.....

Clarifier/Power Supply Skem.

R & C #'s in parentheses, are changed items per instructions

