

# Midland 79-290 Mods

## Midland 79-290 v1.1



**PLL: LC7232**

**\*Modifiable** -Can be expanded to include the full range of frequencies this radio is capable of from **25.615MHz** all the way up to **29.700MHz!**

# Channel Expansion Modification

1. First, remove power to (unplug) the radio. Remove the control head from the front of the radio (this is the removable faceplate.)
2. Remove the back cover from the control head by removing the four small screws.
3. Install jumper (I just dabbed a small bit of solder to make the connection) at the two locations specified in the illustration below. Most likely you will only need to jump the bottom connection because the one at the top of the PCB should already have been done at the factory. If not, jump this connection as well.



4. Reassemble the control head. Next, use a jumper wire to short pins 1 and 6 on the back of the control head to reset the microprocessor.

5. Reattach the control head and test the radio for operation.

Your radio should now be fully expanded to operate on every frequency that it is capable of. Following are instructions for accessing the new bands and channels that have been unlocked.

### **To Access the Expanded Modes, Bands, and Frequencies**

#### ***A. Full bandwidth 240 Channel Operation:***

With the radio off, hold the “**DW**” and “**CH9**” buttons while turning the radio on. Release the buttons. Next to the indicated channel in the display you should now see a “d” (for example, **9d**.) To cycle bands A through F, press the **CH9** button. Band “d” has the typical CB channels. Following is a chart showing the different band/frequency ranges available.

Band “a”

25.615MHz -to- 26.055MHz

Band “b” (**Super-low**)

26.065MHz -to- 26.505MHz

Band “c” (**Low**)

26.515MHz -to- 26.955MHz

Band “d” (**CB channels**)

26.965MHz -to- 27.405MHz

Band “e” (**High**)

27.415MHz -to- 27.855MHz

Band “f” (**Super-high**)

27.865MHz -to- 28.305MHz

***B. 10 Meter band:***

Hold the “**LCR**” and “**MIC**” buttons while turning the radio on (similar to the 240 channel procedure.) Release the buttons. You should now see **28.000** appear in the channel display. All 170 Channels from 28.000MHz -to- 29.700MHz (mine actually went up to 29.710MHz.) can now be accessed with the channel selector.

*NOTE: Transceiver realignment may be necessary for optimum performance on the HAM band. (Mine did not need this, but I have heard of others that did.)*

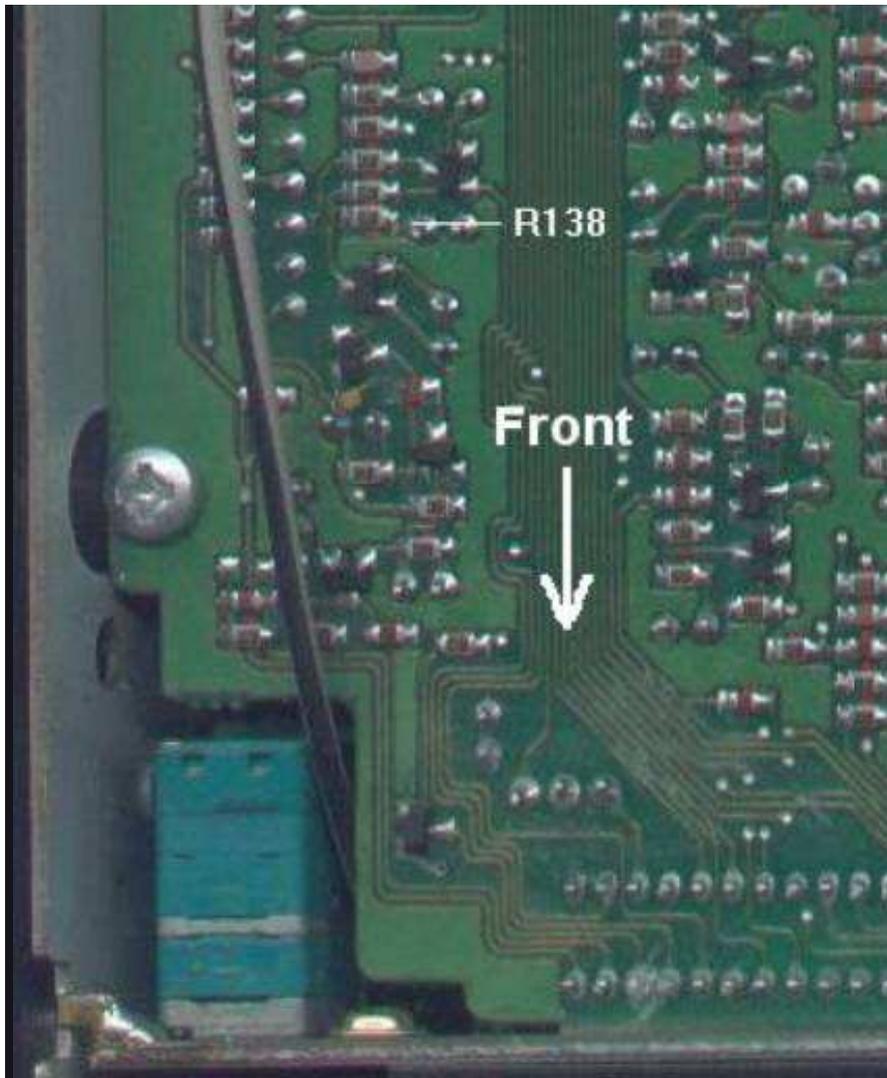
To return to normal (stock) operation, simply repeat the above procedures. The radio will maintain the mode you select (even while turned off) so long as power is not lost to the control head or it is removed, or the

microprocessor

is reset. Otherwise, the above two procedures will need to be repeated to restore expanded operation again.

### **Microphone Gain Modification:**

Chip resistor R138 controls microphone gain. Therefore, decreasing the value of this resistor increases the gain. Generally, a 270-Ohm resistor should give the best results. See below for R138 location.



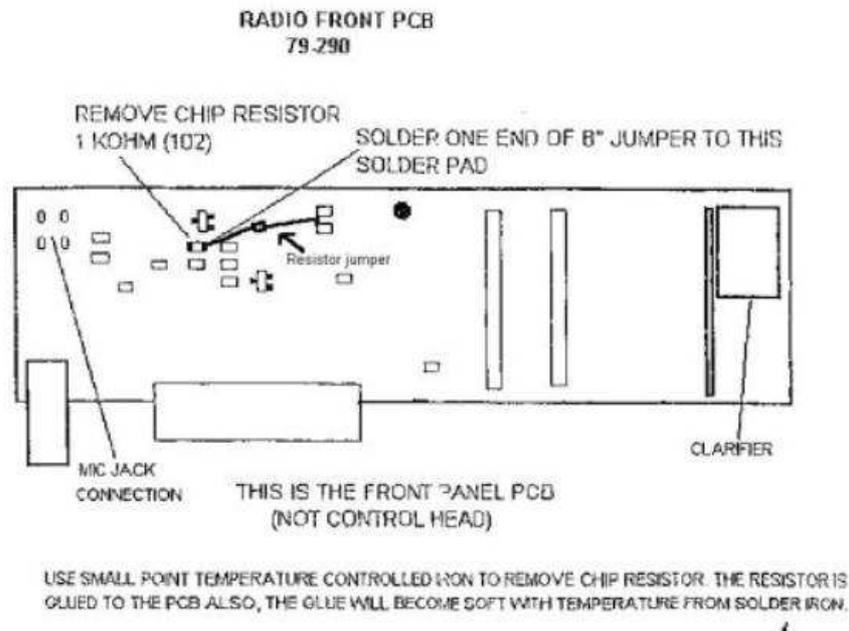
You can go as low as 150 Ohms, however; too much gain will most likely cause undesirable oscillation -especially on sideband.

**(Clarifier (Unlock) Modification (Through v1.1):**

1. First, remove power (unplug) to the radio.  
Remove the top and bottom chassis covers.
2. Prepare an 8", small-gauge jumper wire and

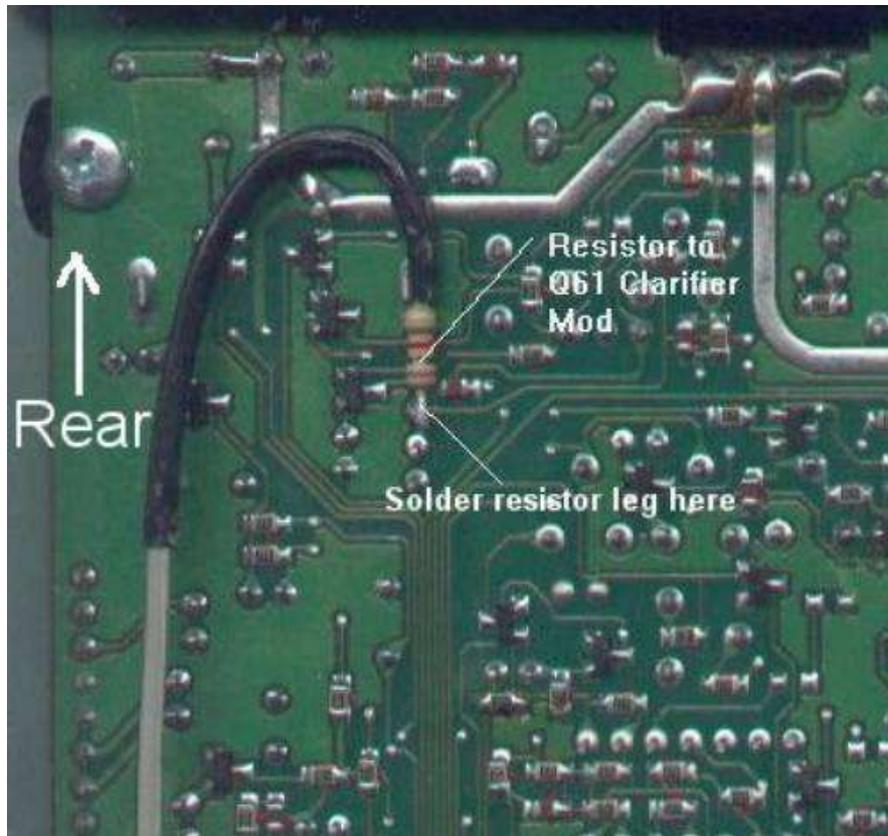
tin both ends.

3. On the radio's front panel (inside on the facing side of the control head, remove the 1K Ohm chip resistor as shown below. If there is a resistor jumper attached, it can be removed as well.



4. Solder one end of the jumper wire to the PCB pad nearest the center of the radio (the newly removed resistor location).
5. Solder a 1K Ohm 1/8 Watt (1/4 Watt will suffice) lead resistor (the non-banded end) to the other end of the jumper.
6. Solder the free end of the resistor to the emitter lead of Q61 (the lead nearest the rear of the radio).

See diagram below for location of Q61 and what the mod should look like when the wiring has been completed.



7. Finally, locate and remove chip resistor R63 (I have never been able to find this component on my v1.1 radio so it is possible the factory has omitted it in this version.) The clarifier mod should now work fine at this point, so the coarse and fine controls will now track on both transmit and receive.

Note: If your radio has this resistor, remove it. If not, the factory has done you a favor!

**“VR” Tuning & Alignment Components**

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AM Power	VR3
AMC (AM mod level limiting)	VR11
ALC (Sideband power)	VR8
TX Meter Adj.	VR7
S Meter Adj. (AM/SSB)	VR1
Squelch Threshold Adj.	VR12
TX Only Adj.	VR5
AM/USB/LSB Osc. Adj.	T16, T15, T14

\*NOTE: This information has been tested primarily with release v1.1 of the Midland 79-290 radios and includes some minor changes referenced from the original version such as certain PCB component changes (which appear to have been added to the latest version.) However, this info should still apply to the original version of this radio as well.

One particular item of note relates to the various modes the radio will operate in. It seems that when switching modes (once modified) you get the following selections in

the display: **FM/AM/USB/LSB**. This is misleading because although it appears that the **FM** mode is now available and is indeed selectable, it is actually the same as **AM**.

This is due to the fact that there is an export model produced under a different brand that does include FM. Unfortunately, the domestic version from Midland does not.

*-Happy DX-ing!*

Disclaimer:

Although all of the mods listed on this page have been verified to work, it is intended for informational purposes only. We do not recommend or condone modifying radios as this practice is illegal and voids the manufacture's warranty. Any work needing to be done on any radio should be done by a fully qualified, factory certified technician.