MDM-4000 Speaker Selection & Modification if both Internal & External Speakers are needed

Date: 8-7-25

Firstly, the "Settings" function must be enabled on the radio. This is done using the programming software and cable. Once enabled, go to the menu on the radio itself and select; Settings / Sound / Speaker path. Here there are 3 selections in the menu on the radio for speaker path; they are:

External: when selected, only the speaker on the DB15 is available. This enables pins 3 and 15.

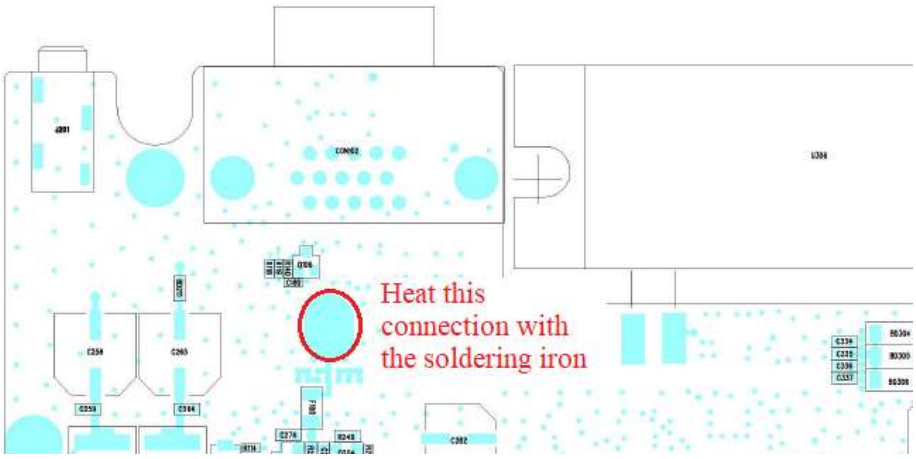
Internal: when selected, it sends audio to the internal speaker and the 3.5mm jack on the back of the radio. Plugging into the jack will disable the internal speaker on the radio.

All Paths: when selected, there is audio at the DB15 and the internal speaker. When plugging into the 3.5mm jack on the back of the radio, the internal speaker is turned off.

If someone wishes to hear both the internal speaker and the external speaker by plugging into the 3.5mm jack, a hardware modification to the radio must be made.

Modification Method

1. Remove the top cover of the radio by prying one side outward and lifting it up. Remove the orange rubber gasket too.
2. Remove the control head by using a small screwdriver and prying both sides out on each end. Slots for this are located on the bottom of the radio.
3. Carefully pull the head away from the radio then disconnect the ribbon cable. The easiest way is to lift the brown tab up on the main PCB and slide the ribbon out.
4. Remove the 2 screws from the antenna jack. Heat up the center conductor and pull the SO-239 out. Next using the soldering iron, remove the grounding ring.
5. Next remove the 15 screws holding the main PCB and the power amplifier.
6. Gently lift up on the front of the main PCB while heating the power wire to melt the solder. Lift the board out of the chassis.



7. Turn the PCB upside down and locate the speaker jack.

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8. Solder a wire across the 2 paths shown.

9. In the radio menu, set the path to “Internal”.
10. Assemble the radio in the reverse order and test.