

At the Repair Bench – Baofeng BF-F8HP – November 2025

Not very long ago, one of our fellow Club members had come to me with a radio that held some particular nostalgic value for him, as it was the first amateur-band radio he had ever owned. The problem was that the radio apparently had no TX audio output, though it showed full output power when transmitting. The problem was that no modulated audio was passed through in the resulting transmission.

My initial thought, after asking him if the radio had ever been dropped and getting an affirmative reply, was to look at the microphone solder joints where it is mounted to the mainboard in the radio. I disassembled the radio and carefully inspected, then tested, the microphone solder points, to find that it was OK, and that the problem was apparently elsewhere. I then had a bright idea, and decided to test the radio in transmit mode using an appropriate headset plugged into the K-1 jack pair on the side of the radio. Lo and behold, the audio came through in the transmission just fine when a headset was used, but not without one. That told me that the problem was most likely either a bad solder joint at one of the two jacks, or a failed switch within the mic jack. The owner decided that he wanted to repair the radio, so I took it to my shop for repair.



Figure 1 - Baofeng BF-F8HP

Once there, I opened up the radio again and then took a good look at the solder joints for the two jacks. This type of radio uses a pair of jacks mounted directly adjacent to each other, with a unique inter-connection between the two jacks. One, the upper jack, is a 3.5mm (1/8") TRS jack having five terminals – meaning that it includes two switches. The other jack is a 2.5mm (3/32") TRS jack with four terminals, having only one internal switch. The pinout for the jack set is shown in Figure 2. This two-plug jack configuration is known in the amateur radio field as a “K-1 jack” and is generally considered a single jack, even though it is usually really made up of two discrete jacks installed side-by-side on the PCB.

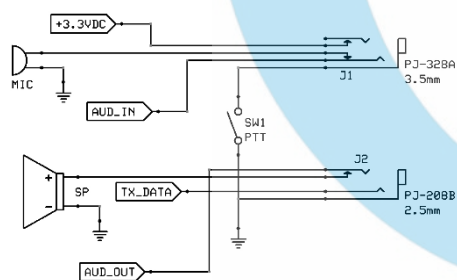


Figure 2 - K-1 jack connections

The jacks used in the Baofeng radios are actually quite commonly used, so I stock a quantity of each of them. Replacement of the jacks was straight-forward and simply required desoldering the jacks. However, in a strange twist, the PCB does not have the typical round holes in the connecting pads for these jacks. Instead, the holes are actually slots that are very closely sized to the mating tabs on the jacks. The jacks that are used, the PJ-328A (3.5mm) and the PJ-208B (2.5mm) are often sold as dual-use through-hole and surface-mount devices. This duality is accomplished simply by bending the

connecting tabs either out to the side for surface-mount use, or straight down for through-hole applications.

Disassembly of the BF-F8HP requires removal and replacement of the LCD display panel from the mainboard as well as desoldering of the antenna jack center conductor from the board. In reality, the antenna jack does not need to be desoldered for *disassembly*, but it sure makes re-assembly a more simplified task if it is desoldered.

Handling of the LCD panel calls for some care and absolute cleanliness. As is often the case with LCD panels, the connections to the panel are made through rubber connecting strips called “zebra strips” because they are frequently striped black and white when viewed on-edge. These strips are more properly known as “*elastomeric connectors*” and their use is illustrated at Figure 3. When installed, they must be clean – especially of skin oil – and carefully aligned with the edges of the LCD panel where the contact points are located, and with their mating contact pads on the PCB to which the LCD panel is mounted.

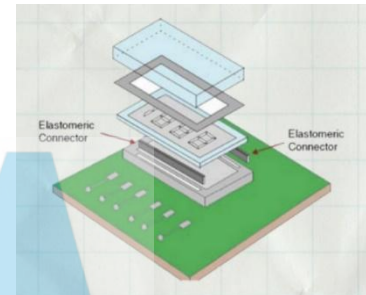


Figure 3 - LCD panel installation

Very often, after being disassembled, upon reassembly the LCD panel has missing characters or even complete lines of dots missing in the array that forms the characters on the display. This can be corrected by disassembling, cleaning, and properly positioning the panel and the zebra strips again. Once properly installed, the full display will be restored.

Repairs to this radio will most often also require the desoldering of the speaker connecting wires from the mainboard, so that the radio housing can be separated from the chassis. Proper tools are also important, as despite the fact that these radios are Chinese-made products, they actually use JIS screws whose drive ends are easily stripped when the wrong screwdriver is used. The use of a JIS screwdriver is imperative when working on these radios. On reassembly, take care to reserve the two long screws for securement of the LCD panel frame to the mainboard and chassis. The shorter screws used in all of the other locations will not work here – they are too short and will not reach the threads in the chassis.

This was an extremely simple repair, especially because I had the correct parts on hand. I should point out that I had originally considered using a pair of jacks from a “dead” Baofeng BF-F8HP that was given to me for parts. However, this particular radio, a very early version of this model, used a different jack setup with round pins in a slightly different pattern than that of the subject radio. I think that I actually came across that before, which is why I had the correct jacks in stock. Due to their age and the fact that they are used as a pair, both connected and disconnected simultaneously, I decided to replace both jacks. Needless to say, post-repair the radio worked flawlessly.

While I would not normally recommend making a repair that costs more than the replacement cost of the radio, as I mentioned earlier, this particular radio has a certain

nostalgic value to its owner, which made it worth the cost of repairs to him. It is really interesting how one can become attached to an innate piece of technology, but it does happen, and quite frequently at that.

See you next month!

