

Frank / K7SFN

SIMPLE Ham Radio Bluetooth Audio Interface

One morning, while chatting with several friends on 75 Meters, we got to talking about how nice it would be to have a wireless audio interface with our HF transceivers. It would provide freedom to wander around the shack, or go refill our coffee cup in the kitchen, without having to miss anything. Isn't it amazing that none of the transceiver manufacturers are providing a wireless interface?

After searching on the "Net", Ed, K6ED found the Jabra A-210, which is an "off-the-shelf" Bluetooth interface, designed to provide Bluetooth capability for non-Bluetooth equipped cell phones. They are readily available, but the best price was found on Ebay (Typically \$10-\$15).

We initially tried a couple different conventional cell phone headsets; the ones that have a small microphone that rests alongside your cheek. They worked OK, but seemed to pick up a lot of room noise, and sound a little "boomy".

Digging a little further, we found the VXI Blue Parrott B-150, which resembled a more conventional headset, had an adjustable boom microphone, and was equipped with an effective noise canceling circuit.

Since writing this article, the B150 headset has been replaced with a B250, which is supposed to have twice the battery life and range. Several reviews indicated that it's performance and audio quality, were very good, so Ed, K6ED and I decided to bite the bullet, and order them.

For the A-210 to ICOM adapter, I purchased an 8-Pin Microphone connector and 3/32" stereo jack from Radio Shack for about \$7. Refer to your transceiver's instruction manual, and wire the Mic Input, Receiver audio output, and ground leads to the 3/32 jack, so the Jabra A-210 can be plugged into it.

I used some heatshrink to dress things up a little. (See the picture below.)

The 3/32" Plug on the Jabra A-210 is wired as follows:

Tip = Bluetooth Audio Out (Goes to Xcvr Mic Input - Pin 1 on IC-756/IC-7700 Mic connector)

Ring = Bluetooth Audio In (Goes to Xcvr Audio out – Pin 8 on IC-756/IC-7700 Mic connector)

Sleeve = Ground. (Pin 7 on IC-756/IC-7700 Mic connector)

After assembling your adapter, Plug the A210 into the 3/32" jack, and plug the 8-Pin connector into your radio. "Pair" the A210 with your Bluetooth headset, put your radio in VOX Mode, and adjust the VOX Gain, Anti-Trip, and Delay to suit your operating style.

There is a small 3-position switch at one end of the Jabra A-210, which controls the audio output level towards your transceiver. I found that Position 2 worked great for the IC-756 Pro III / IC-7000 / IC-7700. Position 1 is less and Position 3 is more. Put your radio in VOX mode, and you're ready to go. Adjust the AF gain on your radio from a comfortable listening level.

How does it work?

From initial tests, this arrangement works well up to 50 feet from the transceiver. . The noise canceling works amazingly well. Stations I was talking with were unable to detect any background noise at all. There was a slight difference in transmit audio between the desk microphone and a wired Heil headset, but not enough to require any compensation.

This afternoon, I connected the Bluetooth adapter to my mobile rig (an IC-7000). It is installed in a 4-wheel drive 1999 Dodge diesel pickup, which is a relatively noisy environment. I called a local friend, Forrest, K7OCR for some on-the-air tests.

Sitting in the driveway with both windows open, and engine idling, he was unable to hear any engine noise whatsoever. He said the audio quality was as good as if I was inside the house sitting in front of my IC-756 Pro III. Since this seemed to work so well,

I decided to take a little drive and see what would happen with both windows down at 60 MPH. I was amazed when Forrest said he still could not hear ANY background noise! In addition, the VOX in the IC-7000 worked perfect, and never tripped from any background noise. The VXI Bluetooth headset worked unbelievably well.

I would be interested in hearing from anyone else who decides to try this. Please let me know what headset you try, and how well it works for you. I am sure there are many excellent noise canceling headsets out there.

Good Luck!

73s,

Frank – K7SFN

Project Pictures:

