

From March 2001, QST Hints and Kinks

MORE ON D-104 MODS FROM W1AW

In Steven Fraasch's, KØSF, article "Adapting the Astatic D-104 Microphone for Use with Modern Transceivers," (*QST*, Aug 1999, pp 34-36) he suggests that an Archer TLC274 op amp can be used in place of the LPC662AIM.

Here at W1AW, I have an Astatic D-104 (with the UG8 base) and decided to modify it for use with our Kenwood radios. Because I couldn't find the LPC662AIM chip locally, I opted to use an Archer TLC274 single-supply quad op amp. Unlike the 8-pin LPC662AIM, the TLC 274 is a 14-pin DIP. The pin locations for the first op amp in this package almost match, except for ground and V_{dd}. On the TLC274, pin 4 is V_{dd} and pin 11 is ground. The TLC274 is a quad op amp, so the other three op amps are unused in this application. I tied the unused op amps together in the same fashion as the unused one (U1B) in the LPC662AIM circuit.

Since the original three-conductor (with ground) mic cable I had was rather old, I replaced it with a new four-conductor (with ground) cable. This allowed me to pull +8 V dc from the Kenwood microphone connector without using the dc power insertion circuit as shown in the article.

I didn't want to produce a printed circuit board, so I decided to fuse a 14-pin wire-wrap socket and perfboard for the circuit. Even with this high-profile socket, the board fit nicely in the UG8 base.

I wired up an eight-pin mic plug for our Kenwood TS-950 and tuned to 20 meters. Although I did need crank the mic gain down a bit, on-the air tests proved quite favorable. The Astatic D-104 is a nice addition to the equipment complement here at the station. This microphone now sits proudly in one of our W1AW visitor-operating studios.--*Joe Carcia, NJ1Q, ARRL Staff*