AlexMic Speaker/Microphone for the Elecraft KX2 and KX3

Reviewed by Phil Salas, AD5X
ad5x@arrl.net

I've had an Elecraft KX3 for several years, and it is a fine low-power/portable transceiver. However, many folks, myself included, have complained about the audio quality of the radio's tiny internal speaker. Further, the internal speaker/audio amplifiers in the KX2 and KX3 transceivers are a bit anemic for use with speakers in noisy portable environments, as they are specified at 0.5 W and 1 W peak audio power, respectively. An improvement over the KX2/KX3 internal speaker, especially for SSB/AM/FM operators, is the AlexMic. This is a speaker/microphone with a built-in speaker-amplifier created specifically for the KX2 and KX3 transceivers.

The AlexMic was designed by Alex Grimberg, PY1AHD, who is known for his AlexLoop antenna.[1] The AlexMic includes a high-performance condenser microphone element and an internal speaker and amplifier capable of 2.5 W peak audio power.

Bottom Line

Elecraft KX2 and KX3 phone operators will like the additional volume and convenience of the AlexMic.

An internal rechargeable lithium battery powers the AlexMic's speaker-amplifier. The AlexMic specifications are given in Table 3.

The AlexMic is slightly wider and thicker than the Elecraft MH3 microphone. The AlexMic's additional thickness is due to the rotatable belt/lapel clip. And the AlexMic has an **ON/VOLUME** control in lieu of the **VFO UP/DOWN** buttons on the MH3.

[1]P. Salas, AD5X, "The AlexLoop Walkham Portable Antenna," Product Review, *QST*, Nov. 2013, p. 67.

Table 3
AlexMic Specifications

Microphone sensitivity: –42 $dB_{\mu V}$ ±3 dB.
Maximum audio output: 2.5 W.
Frequency response: 200 Hz – 8 kHz.
Power source: Internal lithium battery. Charges via included USB cable.
Battery operation time: 8 hours minimum.
Size (height, width, depth): 2.7 × 2.4 × 1.7 inches, including all projections (except the cord).
Weight: 7 oz (incl the cord).
Price: AlexMic $125; protective case $25.

Using the AlexMic

The AlexMic's internal lithium battery comes fully charged, which gives about 8 hours of operation. Lithium batteries don't self-discharge like NiMH batteries, so you can expect the AlexMic's battery to be fine for many months after it is charged. The charging cable plugs into a 3.5 × 1.4 millimeter dc socket in the microphone base under a flexible cover, as shown in Figure 8. The other end of the charging cable plugs into any standard USB charger or a computer USB port. There is also a 3.5-millimeter mono headphone jack under the flexible cover that mutes the AlexMic's speaker when used.

A fully discharged AlexMic lithium battery can be fully charged in about 2 hours. The AlexMic's indicator LED glows blue under normal operating conditions, and turns amber when charging. When the battery is fully charged, the AlexMic's internal smart charger stops charging and the amber-glowing LED extinguishes.

The AlexMic's speaker/mic coiled-cord cable breaks out into a 3.5-millimeter mono speaker plug and a four-conductor, 3.5-millimeter microphone plug. The KX2/KX3 internal speaker and amplifier are muted when the AlexMic's speaker plug is plugged into the radio, which also extends the KX2/KX3 battery life. In order to avoid any confusion, the speaker and microphone cable ends are clearly marked, as shown in Figure 9.

The AlexMic condenser microphone draws operating bias from the radio, so the radio's **MIC BIAS** menu setting must be turned on. As the AlexMic does not have **VFO UP/DN** buttons, set the KX2/KX3 **MIC/BTN** menu setting to **PTT**. If you've previously adjusted your KX2/KX3 microphone gain, compression, and equalization for the MH3, you will probably find that nothing needs to be changed when the AlexMic is plugged in — at least that was my experience. However, it is easy to tweak these parameters for best audio quality using the KX2/KX3 monitor function as described in the manuals.

Of course, the real advantage of the AlexMic is the impressive receive audio. The speaker sound is much more pleasant than the radio's internal speaker. That's probably due to the AlexMic's frequency response, which can be further adjusted using the radio's receiver equalizer if desired. And the AlexMic can provide a comfortable sound level in virtually any environment, especially because the speaker/mic can be placed close to your ear if necessary. Finally, should the AlexMic's lithium battery become discharged and you want to continue operating, simply unplug the **SPKR** plug from the radio and continue using the AlexMic as a standalone microphone.

Finally, there is an optional carrying case available. As Figure 10 shows, this nice looking cloth case protects the AlexMic and even provides a separate compartment for the charging cable. I also found that this is a perfect case for housing and protecting the Elecraft XG3 signal generator.

Conclusion

The AlexMic amplified speaker/mic provides improved listening pleasure compared with the internal speaker in Elecraft KX2 and KX3 transceivers. The AlexMic has a wider frequency response and offers much higher volume than the internal unit. The higher volume is particularly valuable in portable/outdoor environments.

Manufacturer: Alexandre Grimberg, PY1AHD, **www.alexloop.com**. Available in the United States from Ham Radio Outlet, **www.hamradio.com**.

Figure 8 — The charging jack is on the left, and the 3.5-millimeter mono headphone jack is on the right.

Figure 9 — The clearly marked AlexMic cable ends.

Figure 10 — The AlexMic and charging cable fit neatly in the optional carrying case.