

Amateur radio K4QKY - PR 40 review



A review of a pre-production Heil PR 40 dynamic microphone
by radio amateur Don Snodgrass "KG9OM"

New directions for Heil Sound!

Heil Sound is certainly well known to most all hams! Bob Heil has been producing superior quality amateur radio microphones for many years. Now with the introduction of the new PR 30 and 40 microphones, the company is poised to also compete in the commercial market place including broadcast, studio recording and live sound.

PR series microphones

There are currently four models in the PR series... the PR20, PR30, PR780 and the PR40. All are dynamic microphones. The PR20 is essentially a Gold Line Pro with a new look. A review of the PR30 is at <http://www.k4qky.com/pr30.htm>. The PR780, has been specifically designed for use with the ICOM 7800/756 Pro III transceivers. The PR40 is similar in appearance to the PR30 and represents the top of the line.

Initial impressions

Like the PR30, the PR40 is a great looking microphone! Nothing about it is flimsy. This microphone is sturdily constructed and appears to be built to last. The PR40's cylindrical body and grille basket boasts a satin-amber tone metallic finish reminiscent of the Electrovoice RE20.



Test scenarios

For this review, the overall performance of the PR40 was evaluated with and without external audio processing as follows:

Scenario A (PR 40 with no external audio processing)

PR40 microphone output straight to the microphone input of a Kenwood TS870. Kenwood TS870 settings as follows:

TX offset 100

X width 3000

TX EQ “high boost”

Scenario B (PR40 with external audio processing)

PR40 microphone output to a Presonus tube microphone preamp; then to a Behringer DEQ2496 processor; through the W2IHY iBox interface to the microphone input of a Kenwood TS870. Kenwood TS870 settings as follows:

TX offset 100

TX width 3000

TX EQ “off”

Note: The DEQ2496's parametric equalizer and compressor settings were optimized for the PR40. Experience has taught me that certain microphone, external processor and voice combinations work well and others not so well. I typically try out various combinations of microphones and external processor settings until I find a signal chain that best complements my particular voice.

External audio processing not all that necessary

Fine craftsmanship aside, it was the sound of the PR40 that really impressed me. Clearly, the PR40 has been designed to produce a very pleasing and accurate sound. It exhibits a presence boost for low frequencies which opens up the sound at exactly the right places to complement the human voice. I believe that the PR40 exhibits greater low end pickup than the PR30 or any other Heil microphone for that matter.

I really like the PR40's personality. The microphone does not appear entirely linear in its response; rather, the tonal color blossoms in just the right places. That makes the PR40 sound just right directly into the transceiver without the need for external processing. Like most microphones, it does require that the operator take greater care with microphone placement for correct tonal control. I found that speaking into the microphone from a distance of about two inches worked best. This distance creates a fuller and more aggressive sound than when you back away from the microphone where the tone becomes more neutral. An important added benefit from “close talking” the microphone in this fashion is reduction of ham shack ambient noise pick up since the transceiver's microphone gain control is operated at lower levels.

During the evaluation I worked numerous hams on 17, 20, 40 and 160 meters. All praised the PR40's overall performance. They were especially impressed that the microphone sounded so good directly into the transceiver. Most reported only marginal improvement when audio from the PR40 was routed through external audio processing equipment.

Note: Transmitted audio from the Kenwood TS-870 (used in this test) and the TS-2000 usually sounds best when the TXEQ function is set to high boost. This is certainly the case with the PR40 and other Heil microphones except when external audio processing equipment is used in which case TXEQ is best kept turned off.



Comes with a shock mount

The PR40, like the PR30 is designed to accept the model 309A suspension shock mount used with the ElectroVoice RE20 and RE 27 microphones. Although it wasn't available for this review, Bob Heil indicates that a companion Model SM-3 will be packaged with the PR30, 40 and 780 microphones which most hams will prefer. The SM-2 shock mount will also work.

Note: Heil Sound expects to also start tooling a special "desk stand" base by taking their existing beautiful Classic Base (an exact reproduction of the 91B 1935 RCA stainless steel trimmed base) with a PTT button on it and the SM 3 mount. This will allow the PR 780, the PR 30 and PR 40 to be used on this base as well as in the SM2 shock mount.

Bottom line

The PR40, with its exceptional 20Hz - 19KHz frequency response, is intended for the more discerning operator. The PR40 routed directly into the transceiver is the best microphone I've ever used! It's an especially great choice for the ham who wants great sounding audio but prefers to avoid purchasing and learning to effectively use external audio processing equipment.