

A New Look for Product Review

We are always looking for ways to make Product Review, and all of *QST* for that matter, more useful for our readers. Over the years we have received many compliments on the thoroughness and relevance of our ARRL Laboratory test results, a key component of almost every Product Review. We also often receive pleas from readers for help to make the results more meaningful for them—"it's great to see the numbers, but is the result good or bad?"—or "which numbers should I care about, or be willing to pay for?"

We have made a number of attempts over the years to try to answer such queries by helping readers understand the tests,^{1,2} but it was still difficult for some readers to get a feel for how a particular radio's performance compared to that of other radios. The new *Key Measurements Summary* charts represent a way to get that feeling. Our Product Review team has agreed on the subset of data that we feel is the most significant for the decision making process for each equipment type (only *radio* equipment reviews will include this feature) and researched the range of measured values we have seen in recent years of testing. Each graph spans the range that we feel most radios will fall into for each of the key parameters.

It is important to note that for most³ parameters there is no "good/bad" threshold, and radios can be expected to be anywhere within the range. To avoid that kind of view, we have somewhat arbitrarily divided each range into thirds. The best performing radios are within the green, the middle range are yellow and the lowest performance is shown in red. The boundaries are intentionally blurred because nothing dramatic happens as you cross the boundary. It is also important to note that it is not reasonable to expect lower priced radios to perform as well as higher priced ones.

For this review of a VHF transverter,

we selected the following parameters that we thought would make a difference to most buyers:

- Noise figure—a measure of the ability of the receiver portion of the

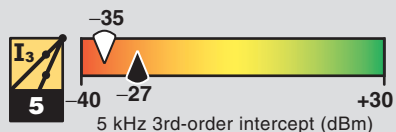
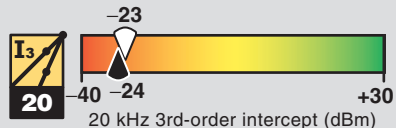
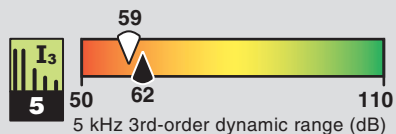
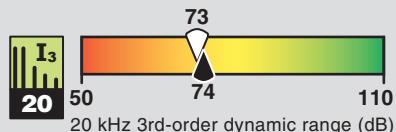
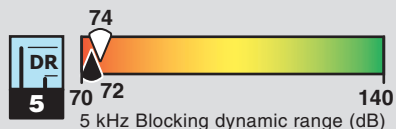
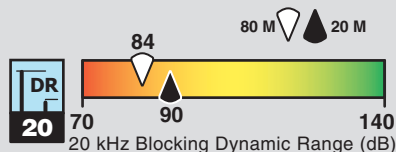
transverter to receive weak signals without adding noise.

- Transmit power output—the power output varies between different units.
- Transmit intermodulation distortion—this is a measure of how good a job the transverter's transmitter does at eliminating signals inside (3rd order) and outside (9th order) the channel that could interfere with other band users.

Other types of equipment will have parameters that relate to their key functional areas. The "Vintage Product Review—the Collins 75A-4" article on page 36 of this issue will give a preview of the parameters selected for HF receivers. In all cases, each review of a particular type of equipment will include the same parameters, to the same scale, so direct comparisons can be made.

Note that we will continue to list all the parameters in the tables—these plots supplement, but do not replace the traditional tabular data. We will also be making some subtle changes in measured parameters starting with HF transceivers. These reflect reader and technical advisor suggestions and will be described as they are introduced over the coming months.—Joel R. Hallas, W1ZR, *QST* Technical Editor

Key Measurements Summary—75A4



PR002

¹M. Tracy, KC1SX, "QST Product Reviews—in Depth, in English," *QST*, Aug 2004, pp 32-36.

²The ARRL Laboratory test procedures are described in detail in www.arrl.org/members-only/prodrev/testproc.pdf.

³The notable exceptions are transmitter spurious and harmonic suppression, which is measured against an FCC requirement of 43 dB (for VHF 25 W and above, 60 dB, with a sloped response in requirement at lower levels), and turnaround time. Radios with turnaround times greater than 35 ms will not operate properly in many digital modes.