

The Kenwood R-600

by Bruce Portzer and Tim O'Hare

The R-600 is a cute little thing, about 4" high by 8" wide by 6" deep. It has digital readout, built-in speaker, noise blanker, RF attenuator, wide ( $\pm 6$  kHz) and narrow ( $\pm 3$  kHz) AM modes, SSB (USB, LSB)/CW modes, tape and headphone jacks, S-meter, and tone and volume controls. It can operate from AC mains or 12 volts DX. The price is in the \$350 range.

The receiver was designed for extremely simple operation. Tuning a station in requires only the main tuning knob and the MHz selector, as opposed to 3 or more things to tweak on many other receivers. Other controls include only the bare essentials.

The following comments on the R-600 are based on one Tim recently purchased:

Medium wave performance (I'm sorry to say) leaves a bit to be desired. Sensitivity seems okay. Tim hasn't heard anything on his SPR-4 that he couldn't also hear on the R-600, but with conditions the way they've been that's not saying much! The 3 kHz selectivity seems adequate; Tim has heard a few TP splits on the thing recently. However, the R-600 seems to overload quite easily. Tim can't use his Space Magnet with it because it overloads the receiver, even with the attenuator switched in. His random wire keeps the signal levels down to something reasonable, but the receiver still overloads on strong locals. Various spurs from local KVI-570 are present on 531, 555 etc. And a continuous background of KIRO-710 audio is present between channels from 720 to 760. KOMO-1000 is quite potent on 2000 kHz and a strong mix between KOMO and KJR-950 was noted on 1950. 660 and 840 had jumbles of audio from unidentified locals. An unamplified loop would probably improve the situation a great deal but so far we haven't tried one with the R-600.

Longwave performance seems good. Kenwood claims the receiver will operate down to 150 kHz, but LORAN signals on about 100 kHz were also noted. The longwave band is surprisingly free of ECB spurs.

Shortwave performance is good. Lots of signals could be heard on the SWBC bands. The receiver was quite stable on amateur SSB stations, but required careful tuning.

With the antenna disconnected, no carriers were noted on the BCB (not even 910 kHz) and almost no signals from locals. The set is apparently well shielded inside. The noise blanker works extremely well on certain types of noise. In one case, a beacon on about 200 kHz which was buried in noise became perfectly clear when the blanker was switched on. But it was completely ineffective on other types of noise.

The R-600 becomes surprisingly warm after it's been on for awhile. There doesn't seem to be any significant "warm-up" drift, however. As long as the ventilation holes are kept uncovered, this shouldn't present any problems.

In conclusion, the R-600 seems to be an average to above average performer on short wave. Medium wave performance is not nearly as good. For the money, there are better medium wave rigs on the market.

strong stations in the "AM-Wide" setting; the best sounding communications receiver I ever listened to, by far. It pulled in weak stations between strong ones just about as well as did my modified SPR-4. A few birdies did appear on the 31 meter band, but disappeared after the "powerhouses" signed off. At this point I knew I would end up keeping the R-600 after all, as I was rapidly getting very attached to it.

I dusted off the Radio West loop and tried the R-600 on the BCB again. Using the loop, the R-600 was much more useable on the BCB, though it still had several prominent birdies and the QRN from the LED's had to either be nulled out or the loop placed about four feet away from the receiver. In spite of using the loop, however, the R-600 still has serious problems on the BCB, both with birdies and with mixes of local stations popping up at various places on the dial.

The spurs aside, the R-600 does have very good sensitivity on the BCB. At nighttime when my local stations are running reduced power or are off the air, the R-600 fares much better, with only a few strong birdies remaining. A particularly strong one occurs near 1030 kHz. One positive note on these birdies is that they seem to tune out very rapidly. Usually by tuning only  $\frac{1}{2}$  kHz from the desired station's frequency, the birdie can be made to disappear. Most of these birdies do not actually cause a zero-beat effect with the desired station's signal. I suspect that some of these noises are caused by the LED frequency display, but there's no way to tell, because the display can't be switched off. Looking inside the R-600's case, it seemed to me that the display module was not sufficiently shielded, so possibly it is a source of undesired noise.

With my locals on nighttime power I found that the R-600 can handle a random wire after all, but only the little 30 foot one; when hooked up to the 250-foot "monster-wire" the R-600 is totally swamped. Seems to be an extreme case of a bugaboo of many modern solid state receivers--they can't handle a long random wire, yet are too insensitive with a short one. Quite a contrast to the SPR-4, which handles the 250-footer with no serious spurs, and is also very sensitive using just the 30-footer. With my locals operating on daytime power (three 5 kWers, one 1 kW) the R-600 is useable only with a loop, and I might add, only with very, very careful operation of that loop. I would predict from this experience that the R-600 will be impossible to DX with on the BCB in an area loaded with 50 kW locals, unless Kenwood makes some major improvements in the R-600's design (or is my set somehow defective?)

The bad side of the R-600 is its severe overloading on the BCB. Some of its many good features include: The S-meter is excellent. AVC action is fixed but seems to be set at a good compromise setting. Audio quality is the best I've heard in a communications receiver. Selectivity is good in the narrow setting. The receiver is very compact and weighs only 10 pounds, yet is solidly constructed. Inside the case, it's a work of art, totally modern in design and beautifully built. Switches and controls are first rate in quality, and operation is quite simple. On a scale of 1 to 10, this receiver gets a solid "10" when it comes to ease of operation and good looks. The bottom line is: if you're looking for a good second rig for checking shortwave parallels, SWling, or just for tuning in strong BCB stations, the R-600 is hard to beat, but if you can afford only one good DX receiver, definitely avoid this one.

(ed note)...There's been some question as to why the Kenwood R-600 is so much less expensive than the R-1000 in spite of its having nearly all the R-1000's features. A DX Post (Southern Cross DX Club's magazine) article forwarded by Pete Taylor mentions comparisons between the two receivers found in the German DX magazine Weltweit Horen. The magazine mentions that when tested together, the R-600 and R-1000 had nearly identical specifications, but that sensitivity was somewhat greater in the R-1000. At MW frequencies, the R-1000 was found to be considerably more sensitive (on the order of 12-14 dB), but judging by our R-600 reviews, this lesser sensitivity is not a problem.

The R-600's front end is quite different from the R-1000's, being triple conversion rather than dual conversion, and its first IF filter is an LC rather than a crystal job, which probably helps explain some of the overload problems. In this case, triple conversion doesn't mean it's better, just that there is more opportunity for spurious signals to be generated.

The Kenwood R-600

by Randy Tomer

I ordered this new receiver by telephone from Ham Radio Outlet in Burlingame, California and received it the very next day! Their price was \$299; \$100 below list price. After unpacking it and hooking it up to a medium length random wire antenna (60 feet long), my first reaction was to return the set for a refund! The broadcast band was swamped with spurious signals of my local stations, and lots of loud birdies were found everywhere. In the few spaces of the dial that were free of spurious responses, weak QRN from the receiver's LED digital display was heard, and I didn't like that either. (The display cannot be switched off). I was just about to send the set back. However, I have other radio interests besides the BCB and this little radio was so slick looking, so smooth in operation, that I just had to give it a more thorough checking out.

Tuning down into the low frequencies (100-500 kHz), I was again disappointed, as the low band was full of BCB interference. But tuning up in the shortwave bands made me realize the potential of the little R-600. Tuning in SSB ham signals was a real snap, and it pulled them in just as easily as the SPR-4 did; and much more easily than the FRG-7 and HQ-180A. Tuning in the International SW broadcasters was also a snap, with good selectivity in the "AM-Narrow" position, and with great hi-fi sound from