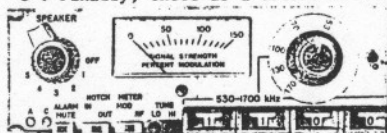
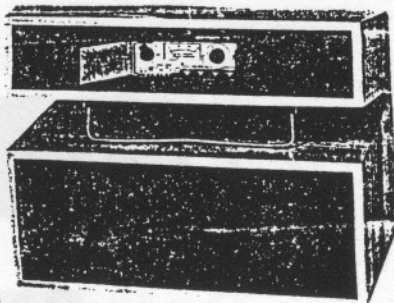


Potomac Instruments is a name that is probably not too familiar to you. They are manufacturers of test equipment for broadcasters. This receiver was designed for the broadcast market, but is available to the public. It comes in a rack mounted version, which includes two built in speakers (above), and a desk-top version, (below), which has an optional speaker as shown in the picture. They also make a tunable ferrite rod antenna to match, with a unique twist. It can be mounted outdoors when you buy the optional fiberglass weatherproof housing. The receiver is capable of quick conversion to stereo operation. Just plug in a new printed circuit board that Potomac will make available when a standard is set. This, of course, will be an option. Now for the punch line! How much does it cost? The rack mounted version is only \$1295 plus shipping, the desk model \$1395, the ferrite antenna, \$395, fiberglass housing for ferrite antenna, \$75, and should you want to take it into the woods, the rechargeable battery pack is only \$100. Assuming that you spend around \$100 for a speaker and buy the desk top version, this guy will cost you around \$2065. (The speaker in the picture to the right is not yet available). It is really the Dymek AM-3 and AM-5 revisited. It was designed for high fidelity BCB listening and monitoring, and has many unique features. The tuning is achieved by four thumbwheel switches at the bottom right of its face. You dial the frequency here and it changes the PLL to the frequency you want. You then twist the knob above it, which regulates the preselector. Looking at the two LEDs next to the thumbwheel switches, you tune the knob until they both light. If you are not tuned correctly, only one will light, telling you that you are either "HI" or "LO". There is a meter which will read either signal strength or the station's modulation, switchable. It also has a notch filter with two options currently available. The notch can be fixed at either 10 or 9 kHz. It also has two bandwidth options: 12kHz and 28kHz (6 and 14kHz response). It has an adjustable squelch, so if you are listening to your favorite station, and they sign off, you won't have to listen to all that horrible static we know and love. It also has two adjustment screws on the front, which controls alarms which will sound if the station loses audio "A" or carrier "C". Finally, there is a detent switch which controls the 600 ohm audio output by



The optional ferrite antenna (ANT - 11) looks really neat. It looks much like the Dymek antenna, except it is housed in a black weather proof plastic, and has a fiberglass shroud that can be mounted over it, when you mount it outdoors in a fixed position. If they could make this manoeuver remotely, it would be a dandy. It rests on a large swivel ball of metal, it's mounting base, and is held in place by a large knurled screw. It has a built-in pre-amp that is phantom powered from the set. I have not seen or tested one of these receivers yet, but for someone who wants to hear full-frequency response and monitor all aspects of a BCB signal, this might be just the thing. It probably is no better than a Dymek AM-3 or AM-5 for DXing. Most Potomac gear is made beautifully, and this looks about up to snuff. Their address for more info: 932 Philadelphia Ave., Silver Spring, MD 20910.



The Kenwood TS 430 Transceiver/General Coverage Receiver

by Don Moman

It should be noted that the TS430 is an amateur radio transceiver, but because it also contains a general coverage receiver it is of interest to the SWL who is also a ham radio operator. I realize this type of unit is not of interest to everyone, but it is interesting to see how Kenwood tries to serve two very different groups of radio enthusiasts.

Basic features (receiver section):

- 150 kHz to 29999 kHz, continuous tuning, auto MHz, roll over
- 8 memory channels plus A/R VFO's (mode is memorized too!)
- scanning of memory channels or programmable limits
- synthesized PLL to 10 Mhz with modifiable 10 Mhz readout
- IF shift, squelch, audio notch filter, and noise blanker

In addition to all the above features the TS430 is a full 200 watt transmitter, capable of AM, FM, USB, LSB and FM (with optional FM card). And it's all squeezed into a package that is smaller than most receivers--its front panel is less than 4 inches high and 10.5 inches wide!

Basically, it is designed for the ham bands, and for this reason it's not surprising that the SSB performance is excellent. The only standard filter is 2.4 kHz (4.4 kHz at -60 dB) and one must purchase any other filter desired--such as the 6 kHz AM filter (12 kHz at -60 dB) or the 1.8 kHz narrow SSB filter as well as 220 or 500 Mhz dB filters. Filter selection is not completely independent of mode--you have only one AM bandwidth available--6 or 2.4, installing the optional 6 kHz filter disables the 2.4 in AM (although it should likely be modified for both). Exalted carrier reception is as easy and pleasant to listen to that you don't even miss not having a narrow AM filter. You can change sidebands with just a touch of a button and no retuning, R70 owners take note!

The IF scheme places the filters at the standard Kenwood frequency near 3.830 MHz, which means the filters are the high performance crystal type, with sharp skirt selectivity. Ultimate rejection of the filters is reduced by leakage around the filters, something typical of most I/O layouts. Firms like FOX Tango already have lower cost and superior performing options.

A notch filter control is provided, but unfortunately it is only the audio variety. IF notch circuits are to be preferred but the audio notch can be quite useful in eliminating audio hets. Unlike the IF notch, the 430's circuit cannot reduce strong carriers that desensitize the set through the AGC. Other receivers (R7, R70, SPR-4) use circuits which operate at the IF stage.

General performance in all areas is very good, if not excellent. My only "complaints" center around the small amount of IF leakage around the filters, and somewhat compromising MW and LW performance. Compared to other popular sets like the R-600, 1000, 2000 and FRG-7, 7000, and 7700, the 430 is an improvement, but it falls slightly short of the excellent performance of the ICOM R-70.

Other "shortcomings" can be easily remedied if one has some technical ability. Power is 12 VDC (at 1.2 amps), BUT there is no built in AC supply. The Kenwood supply is rather expensive as it has to be capable of much higher current to supply the transmitter section. I use a storage battery with a trickle charger to provide cheap and clean DC power. Another missing item is a tape recording jack. I've added one to the ACC connectors on the rear, but it's something that should be provided by Kenwood. ACC time constants on AM are reasonable (you don't have any choice!) but I found the SSR times to be far too slow. In case you have the same complaint, change C67 to .047 uF.

The 430 is a very nice set to operate with the flexible memory and VFC system. Readout is easily modifiable internally to indicate frequencies to 10 Hz (xxxxx.xx) and the set is very stable, which makes ECSSP reception a snap. The resultant audio in the ECSSP mode is the BEST, in my opinion, of any set I've used which includes most of them.

The 430 competes against sets from ICOM, Drake and Yaesu who also have general coverage transceivers in a similar price range. The Drake TR-7 and Yaesu FT-1 cost over twice as much, while the ICOM 720 is only 25% more. Canadian price of the 430 is \$1199, however options may easily bring this to more than \$1500, closer to that of the ICOM. New sets are just out---Yaesu FT980 and the ICOM 751, but both are expected to cost in the \$1500-2000 range. The Kenwood TS930, big brother to the 430, offers more advanced selectivity schemes and filter versatility but costs well over \$2000.

In conclusion, I'm quite pleased with the 430. While at \$1200 it's not exactly cheap, it is by comparison with other sets in its class. For those SWL's with a ham ticket who want one set to do it all, the 430 is certainly a good buy.

(This review first appeared in the Canadian International DX Club Bulletin, the MESSENGER. Other hobby clubs and organizations are welcome to use this review. Questions and/or comments should be addressed to: Don Roman, 6815 12 Ave., Edmonton, Alberta T6K 3J6. SASE would be much appreciated---USA please include a loose mint stamp; we can't use US stamps here in Canada on outgoing mail!)