

The R-392

by Ralph Sanserino, edited by Phil Bytheway

The R-392/URR is a high performance, compact, rugged receiver designed primarily for Army vehicular use. The receiver is immersion-proof and is sufficiently rugged to withstand parachute delivery when mounted in a ¼-ton 4 x 4 truck prepared for parachute drop, or in a standard type of U.S. Army parachute delivery container. As you can gather, it's rather sturdy, and is housed in ¼" aluminum.

Technical Characteristics

Type of Circuit: Triple conversion superheterodyne on eight lowest frequency bands, double conversion on all other bands.

Frequency Range: 500 kHz to 32 MHz in 32 bands of 1 MHz each except for first band, which covers 500 kHz to 1 MHz.

Type of Signals Received: A1 cw, A2 mcw, A3 voice, F1 frequency shift keying. A variable frequency BFO is featured.

Number of Tubes: 25, mostly using 26 volt tubes.

Intermediate Frequencies: First variable IF 9 to 18 MHz, Second variable IF 2.5 to 2 MHz on 0.5 to 1 MHz band, 3 to 2 MHz on all other bands. Third IF 455 kHz fixed. Has IF output on front.

Selectivity: 8, 4, and 2 kHz bandwidths nominal.

Type of Tuning: Continuous with 0.1 kHz resolution. Frequency reads directly on counter-type frequency indicator. A Collins mechanical wonder with MHz and kHz tuning knobs.

Method of Calibration: Built-in 100 kHz crystal calibrator.

Sensitivity: 500 kHz to 1 MHz - 9 uV or better. 1 to 2 MHz - 7 uV or better. 2 to 32 MHz - 5 uV or better, for 10 milliwatts output with a 10 to 1 signal-plus-noise to noise ratio.

Power Input: 28 volts at 3 amps DC

In almost any condition this receiver is a good buy. Fair Radio sold these for \$250 in "used-repairable" condition in their 1979 catalog. After using the R-392 for a year now, I find it to be an excellent DX machine. Operation is easily mastered and maintenance should be of no problem to most if the maintenance manual is purchased with the receiver and followed to the letter. The receiver works fine on short-wave with either a vertical or random length longwire. For broadcast band DX, I would use an un-amplified box loop. If an amplified loop is used be sure to watch for front-end overloading, as with two RF amps, the front end is fairly hot. The R-392 has good selectivity, sensitivity and the frequency readout is excellent. If you decide to buy this fine piece of DX gear, be sure to get a maintenance manual, LS-166/U speaker (it has a special Amphenol connector on it), and a power plug to fit the 392's power input jack. A 5 amp, 28 volt DC power supply does the job nicely.

More notes on the R-392 by Phil Bytheway

Selectivity is quite good, and stations come in well even 1 kHz away from weaker domestic channels, if the split has reasonable signal strength. A good loop will help to knock down domestic interference further and I've managed to log 792 in Seattle with only subtle slop from 790. However, there really is a potential for front-end overload with this receiver, particularly when tuning near local stations. Often it is difficult to hear stations 10 kHz away from locals, even with the local nulled and selectivity in the 2 kHz position. Seattle area spurs (e.g. KMPS-1300 and KYAC-1250 turn up on 1200 and 1350) are present, but are not as strong as on my SP-600. The spurs can be attenuated somewhat by using a loop, and are not bothersome when other stations on the frequency are of moderate strength. The only "birdie" noted is on 910 kHz.

The mechanically operated digital readout is very nice. There is a dial adjust that disengages the readout from the tuning mechanism for "zeroing" using the 100 kHz calibrator. Of course, you can use a known domestic for calibration and work from there. There is no backlash with the clutch disengaged and "tweaking" takes only a few moments. I can get quicker frequency determination with this than by using a frequency meter.

The receiver is quite stable once warmed up, but mine does require recalibration between bands. I have no specifications on stability however.

Antenna inputs are a BNC type and a push-button clip which is just right for the loose end of a longwire. The R-392 has an antenna trimmer control, which helps match the antenna to the receiver for better signal strength.

There are no audio adjustments except for a limiter position of the function knob. The limiter cuts down noise bursts quite well, but can also damp the desired signal somewhat. There is a squelch control, but I haven't really used it.

The S-meter is the best I've found in one way. Almost all signals indicate some degree of strength or another, but only a few locals will actually pin it. However, it seems that it is difficult to peak your loop or antenna tuner by S-meter readings alone. I often turn on the BFO, tune off channel a hair and use the strength of the beat note for peaking.

(The R-392 is not as widely known as the R-388 and R-390A receivers. Some consider the R-390A to be the best BCB receiver around with its mechanical filters and resistance to overloading.)