

THE COLLINS R-392/URR: ANOTHER LOOK - By Leonard Hyde

The R-392 is a mobile Signal Corps receiver. Frequency range is 480 kHz to 32 MHz. Operating voltage is 28 VDC at about 4 amps.

The R-392 was developed to satisfy the Signal Corps specification for a portable receiver for vehicular and field use. One is the specifications was "submersible."

After fruitless attempts to adapt the R-390A (when the case was adequately sealed to meet the "submersible" spec, internal temperatures rose to heights sufficient to require an exhaust fan!) the R-392 was developed. While loosely based on the R-390, it is not a 28 volt carbon copy, as is commonly believed. A number of changes were made to accommodate the stiff requirements for a mobile receiver.

The R-392's tubes operate at 28 volts, both filament and "B" supply. Therefore, a high voltage supply is not required. This is a real plus.

The R-392 could never be described as truly portable by today's standards, but it is far more so than an R-390A. It is more compact, lighter, and in my opinion, a lot better looking. Don't get me wrong. Most people wouldn't want one in their living room. However, it looks right at home in the radio room, or in the garage.

A big advantage of the waterproof case is that the interior of the radio should look brand new. While an R-392 may have seen very rough use, it is well built enough to stand it. A surplus R-392 should be in working order, and like new inside. If it is not, send it back.

While many modifications and tips have been developed and published for the R-390A, the R-392 appears to be virtually unused.

The reason? On the surplus market, the R-392 has typically sold at or near the same price as an R-390A. Why buy an R-392 when you can get a 390A for the same price, with mechanical filters? The 392 has the same selectivity (2, 4, 8 kHz) but the R-392 uses tuned circuits instead. It works well, but does not provide the sharp cutoff bandpass characteristics of mechanical filters.

R-392 prices have recently fallen to about half that of the 390A. It is now a viable alternative for the cost conscious DXer. A 392 can be had for \$165 at current levels. This is far less than most of the good portables, and the R-392 will outperform them.

It appears that most of the R-390A mods will not work for the R-392. Many of these mods are in the form of tube substitutions. These tubes will not work in the R-392. However, the longwave mod for the 390A will work exactly the same way on the 392.

The 392 suffers from the same ABC problem as the 390A. It looks like the synchronous detection mod published by Mr. Graham Maynard of North Ireland (note 1) for the 390A should work here. I have not tried it. The tubes in the R-392 are different. I am contacting Mr. Maynard for details on the modification, to see if it can be used on the R-392.

The 28 volt DC is no problem. Fair Radio Sales of Akron OH, who sells the 392 (note 2) has several 28 VDC supplies that will fit the bill. They also have the hard to find power connector plug, as well as tubes, the manual, and other parts.

On tubes: the 26A7 audio output tube is a monster that generates gobs of heat, and uses about half the current delivered. A solid state replacement is a must. A direct plug in module is available from Fair to eliminate this turkey. If your 392 doesn't have one already, get one!

The R-392 has the same 600 ohm headphone output as the 390. If you plan to use low impedance phones, or a loudspeaker, a stepdown transformer is required. (note 3.)

In stock form, the R-392 will outperform most lower cost receivers on the market today. If the RF deck and readout are in proper working order, frequency can be read accurately to within .2 kHz. Sensitivity is excellent. With a simple 36" whip antenna, my R-392 receives as well as anything I've ever used. Add an unamplified box loop, and you have an excellent BCB DXing receiver.

Unlike many surplus receivers, the 392 performs well throughout its frequency range. There is no drop off at high frequencies. Reception is as good on 10 meters as it is on BCB.

I know what you're thinking: if this is such a great radio, why is no one using it? One reason, as before mentioned, was comparative price. Another reason is selectivity.

Though the 392 has 2 kHz selectivity, it's just not as good as those

receivers that have mechanical filters. There's a lot of "mud" still in there. Therefore, the 392 is great for domestic BCB DXing, and 5 kHz splits, but it is not likely to split closer channels. For this reason, foreign DXers have shunned it.

But take heart! The author is currently installing a 4 kHz mechanical filter in a 392. If this is successful, there's no reason why the 392 can't perform just as well as a 390A where selectivity is concerned.

The question will then be dynamic range, and how the 392 compares to other receivers in this regard. If a mechanical filter equipped R-392 compares favorably with the 390A, ICOMs, NRDs, etc. in this regard, we may see heightened interest and experimentation with this unique radio receiver.

Another 392 plus: you get a meter! Currently, meters are removed from 390As, as the radium in them is a health hazard. Also, the receiver is effortless to tune. The 390A is famous for its "cranky" tuning.

It is hoped that this article will stimulate new and heightened interest in this interesting and unique receiver. Questions, comments, & other thoughts are solicited and welcomed. 73.

1. "Collins R-390A - The Original "World's Best" - Graham Maynard. From "DX News" Volume 59, #28, August 3, 1992
2. Fair Radio Sales - P.O. Box 1105 - Lima OH 45802 - (419) 223-2196
3. For information on the R-390 family of receivers, including the step down transformer, contact Hollow State News-P.O. Box 70223-Riverside CA 92513-0223. Request a reprint of Issues 1-4.