The HRO receiver has turned out to be a much more unusual receiver than we had hoped. We set out, of course, to provide every feature we thought the amateur would want, but we have had to go much further than that. That is why we did not have the set ready for delivery last month as we had expected.

For instance, we equipped the set with a new type of dial which logs directly to one part in 500. We promptly discovered that it would be necessary to correct for temperature changes to a degree we had not foreseen, because the slightest drift was magnified enormously. The solution of this little problem required, among other things, the use of air dielectric condensers throughout the H.F. Circuit each individually compensated for temperature error. This was done by using a combination of aluminum plates, brass spacers and steel studs, so proportioned that increased area, due to expansion of the plates, was balanced by increased spacing, due to expansion of the studs.

Furthermore, our fancy dial showed up errors in selectivity to an appalling degree. When the carrier width amounts to the thickness of a gnats eyebrow, as it does on a conventional dial even with band spreading, small errors in selectivity pass unnoticed. However, when the width of the carrier is an inch or so, due to the magnification of the dial and band-spread coils, then any variation becomes unpleasantly noticeable.

It perhaps would not be out of place to comment on the actual selectivity of the HRO. A visitor at our factory, speaking of a competitive receiver, told us that a carrier was completely detuned by moving the dial one division, and added, "That's selectivity for you!" May we point out that this does not mean selectivity, it merely means difficult tuning. We can explain this best by comparing the HRO and the FB-7. On 20 meter phone, using band-spread, a carrier covers about 3 divisions on the FB-7, and 10 divisions (nearly 3 inches!) on the HRO, yet the HRO is twice as selective as the FB-7. Specifically, the response of the HRO is down 60 db (1000 times weaker) at 10 KC off resonance, which is mighty selective performance. In short, band spreading, either electrical or mechanical, does not affect selectivity at all; it is a device to make tuning easy and accurate, and nothing more.

So much for that. First shipments of the HRO will probably be made about the time that you read this page. This is the reason why the HRO is late, and this is our apology. We are not sorry that our plans miscarried, in spite of all our headaches and heartaches, for we think the results are worth it. And when you try it out, we think you will find that the HRO was worth waiting for.

JAMES MILLEN