

X - COMMUNICATION RECEIVERS

1. POINT TO POINT DELUXE DIVERSITY RECEIVING EQUIPMENT (3-24 mc)

In the later twenties RCA Communications, Inc., with their world wide MHF radio circuits, felt the need for a deluxe radio receiver to combat the fading and the interference already appearing in the 3-24 mc frequency range. Work was started to develop such an equipment and the new deluxe receiver was put into commercial service in 1931, incorporating advanced theories including "*space diversity*" and variable selectivity. This receiver still is recognized as a standard of comparison. Our military, as well as that of our allies, have eagerly consumed our entire output during the war.

2. AR88-CR91-ER88 RECEIVERS

With the success achieved by the deluxe diversity, it was decided in 1939 to develop a communications receiver for general application which would include all the desirable electrical and mechanical features possible from a theoretical standpoint as well as a design which would lend itself to mass production with the economy of price resulting thereby. Combining the technique learned in the production of millions of home receivers, experience with previous communication receivers and the advice of the U. S. Army and Navy, as well as RCA Communications, has resulted in the AR88 family of receivers. They are physically rugged, electrically stable to the extreme and possess superior selectivity and sensitivity. Their acceptance has been wide. A very large number of these units have been produced to date.

This group includes the following:

AR88 - 2-1/2 watt audio output 550 kc to 30,000 kc
ER88 - 550 kc to 30,000 kc but with 10 watts audio output
CR91 - 2-1/2 watt audio 75 - 550 kc 1500 - 30,000 kc
DR89 - 550 - 30,000 kc diversity receiver including
3AR88.

With the availability of such a receiver as the AR88, it was natural that three of these be combined with a tone keyer to form a simpler diversity than the original deluxe model. Excellent results have been realized as the military branches of the allied governments become more familiar with the advantages and performance of this simple equipment. An adaptor unit to permit reception of frequency shift signals with this receiver is now being developed.