ARMY VERSION OF FR12

RESTRICTED

WIRELESS SET CD 12

GENERAL DESCRIPTION

Purpose

1. Wireless Set CD 12 is a low power transmitter-receiver unit designed for general military communication service in the frequency range of 2.0–4.0 Mc/s. Provision is made for the transmission and reception of R/T, M.C.W. or C.W. signals.

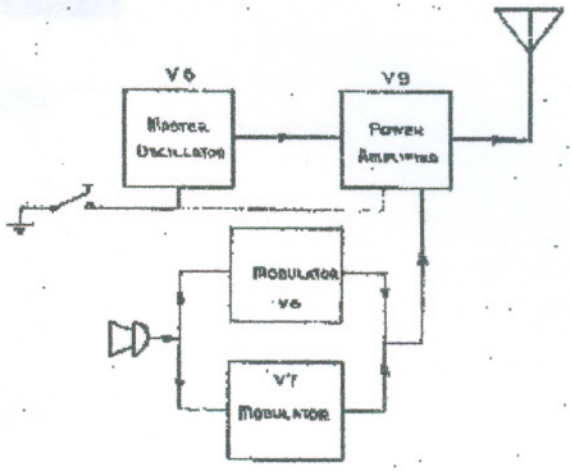
Brief Mechanical Description

2. The set employs single chassis construction and is housed in a rugged, weather proof, steel cabinet which is made semi-portable by the provision of carrying handles. A hinged front cover protects the panel controls during transit, and gives protection against rain and snow during operation. Also contained in the unit case are a built-in loudspeaker, a pair of featherweight headphones, battery cable, and set of spare valves, fuses and pilot lamps.

Brief Electrical Description

Transmitter

3. The transmitter section of the unit employs four 6L6 valves, and is arranged for three channel operation in the frequency range of 2–4 Mc/s. Two of these channels are wired for crystal control, while the third channel is arranged for master oscillator operation on any frequency within the specified frequency range. This latter channel is provided mainly for emergency telephonic use. One valve is used as an oscillator for both crystal and master oscillator operation. The power amplifier stage is plate modulated through a modulation transformer by a pair of 6L6 valves connected in push-pull.



T FZ-182 1-1 FIG. 1 BLOCK DIAGRAM OF SENDER

Receiver

4. The receiver section of the unit employs a five-valve superheterodyne circuit designed for the reception of frequencies between 300 and 600 Kc/s. and between 1460 and 3800 Kc/s. A.V.C. is incorporated on both bands and is combined with the manually-operated volume control. The receiver circuit consists of one stage of R.F. amplification, a tuned frequency changing rectifier combined with a H.F. oscillator as a conversion stage, one stage of I.F. amplification using iron-cored transformers, a diode 2nd detector, one stage of audio amplification and a pentode power output stage. The I.F. valve is also used as the A.F. amplifier, and the diode detector valve as the beat frequency oscillator.