MDF-5
MISCELLANEOUS INFORMATION

Section 11 — D/F AND S.B.A. EQUIPMENT

Topic I — TYPE: MDF5 (10D/2632)

PURPOSE OF EQUIPMENT - Short range, ground, medium frequency, D/F receiver (Marconi)

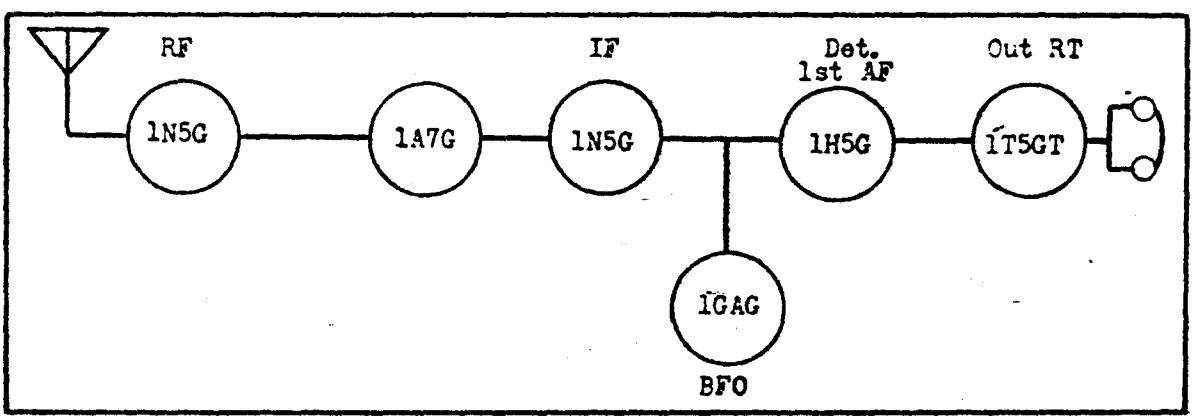
FREQUENCY RANGE - 265 - 670 kc.

FUNCTIONS -
POWER OUTPUT (NOM) - 80 milliwatts undistorted, 200 milliwatts max.
CIRCUIT DESCRIPTION - 6 tube superheterodyne with one stage of R.F. and one stage of I.F. I.F. - 175 kc.

NO. & TYPE OF TUBES - (6) 2-1N5G. 1-1A7G. 1-1G4G. 1-1H5G. 1-1T5GT.

POWER SUPPLY - Batteries A and B
POWER SUPPLY (INPUT) -
POWER SUPPLY (OUTPUT) - L.T. 1.4 volts at 300 ma.
H.T. 90 volts at 9 ma.

ACCESSORY EQUIPMENT - Marine type loop or a specially designed loop system



BLOCK DIAGRAM

Sect. 11 D/F AND S.B.A. EQUIPMENT

Topic I. TYPE: MDF5 (10D/2632) RECEIVER

RECEIVER UNIT

1. As well as the special superheterodyne type receiver and loudspeaker, this unit incorporates a quadrantal error corrector and a goniometer.

RECEIVER CIRCUIT

2. This comprises a goniometer, tuned search coil circuit with its associated balance and "sense" couplings, one R.F. pre-selector stage, oscillator-mixer, one stage of I.F. amplification, diode detector, audio-amplifier and a beat frequency oscillator.

LOOP ASSEMBLY

3. This consists of two shielded fixed loops at right angles to each other. The wires forming each loop are threaded through circular brass tubes which are mounted at right angles to each other on a substantial cast metal pedestal. The assembly is completely waterproof and is of very rugged construction.

CABLES

4. Two, twin conductor, rubber-covered cables 25 feet long are supplied for connecting the loop to the receiver. Where greater length is required, special lead-covered, paper-insulated, cables are to be used.

ACCURACY OF BEARINGS

5. Correct installation and calibration are, of course, essential to the proper functioning of this instrument. Under suitable conditions, accurate bearings may be had to within one half degree

RANGE

6. The high degree of sensitivity and selectivity of the MFD5 makes it possible to obtain accurate bearings during daylight hours at distances up to two hundred miles.

POWER OUTPUT

7. Undistorted - 80 milliwatts

Maximum - 200 milliwatts

FREQUENCY RANGE

8. 265 to 670 kc., I.F. 175 kc.

POWER SUPPLY

9. One 1.5 volt dry A battery or 1.4 volt air cell and two heavy-duty 45 volt B batteries.

Filament current - 300 ma. at 1.4 volts

B battery current - 9 ma. at 90 volts

DIMENSIONS

10. Receiver - Height 10-3/4", Width 24", Depth 10"

Loop Assembly - Height 66", Max. diameter 40"