D/F OUTFIT FV5

SUMMARY OF DATA

PURPOSE

A fully automatic V.H.F. Direction Finder giving a continuous visual indication of the bearing. It is installed in aircraft carriers and at Royal Naval Air Stations.

FREQUENCY RANGE

100 - 150 Mc/s.

MAJOR UNITS

The equipment comprises the following main sections:

(a) Desk equipment which gives direct bearing indication as well as providing for reception of traffic comprising:-

1. Patt. 54469 Receiver P47
2. Patt. 58362 Cathode Ray Unit, Des. 34
3. Patt. 54237 Time Base Unit, Des. 17
4. Patt. 54235 Oscillator G211
5. Patt. 54236 Oscillator G212
6. Patt. 54234 Detector Unit, Des. 1
7. Patt. 54233 Amplifier M79
8. Patt. 54238 Loudspeaker Amplifier Unit
9. Patt. 58117 Control Unit, Des. 35
10. Patt. 56823 Monitor Unit, Des. 2

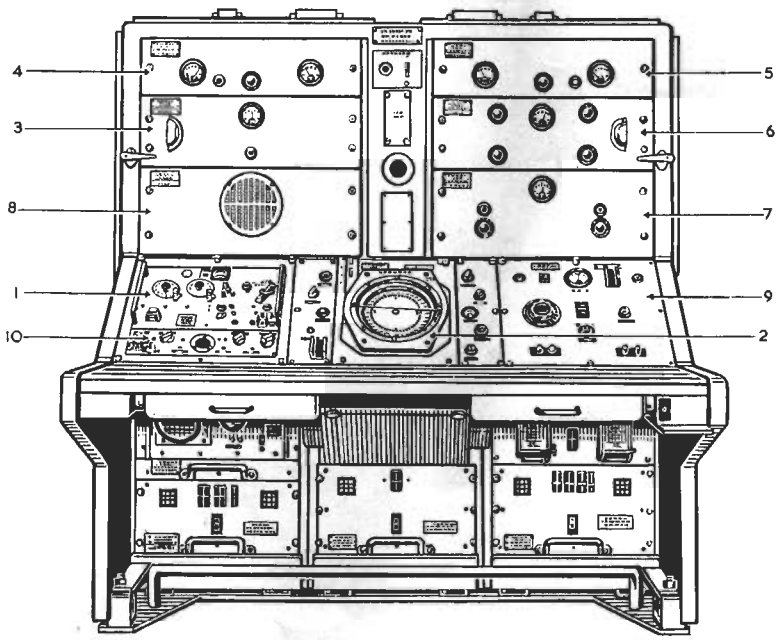
and associated power supply units.

(b) Aerial system comprising:-

11. Patt. 58115 Aerial Unit, Des. 19
12. Patt. 58429 Amplifier Unit, R.F. Des.7 (Aerial)
13. Patt. 58119 Filter Unit, Des. 28
14. Patt. 58429 Modulator Unit, Des. 13 (Aerial)

(c) Remote Indicator Unit which repeats the bearing indication in Aircraft Direction Room

15. Patt. 58118 Display Unit, Des. 12



VIEW OF DESK EQUIPMENT

PHYSICAL DATA

	Height	Width	Depth	Weight
Desk Equipment	70"	66"	43"	100 lb
Aerial Unit	76"	x 35"	x 35"	160 lb
Remote Indicator Unit	26½"	24½"	30"	292 lb
Spares Cupboard	36"	30"	18"	ϕ 112 lb

x Between dipole pairs ϕ Without spares

BRIEF DESCRIPTION

Bearings can be obtained on modulated or unmodulated signals. The bearing is displayed in the form of a radial pointer on a 12 in.cathode ray tube. There is no 180° ambiguity of indication, sense being continually indicated. The bearing scale is fixed to the face of the tube which is viewed directly, and a motor-driven gyro repeater scale so fitted for ship-board use to give true bearings. This scale is fitted with a cursor to facilitate the readings on weak signals. Three speeds of indication are provided, fast, medium and slow, for use with good, medium or weak signals respectively. The receiver can be used for normal reception of traffic without affecting D/F operation, and loudspeaker or headphone operation is available.

PERFORMANCE

The normal operating range using an airborne equipment of 5 watts output, is approximately 100 miles at 10,000 ft flying height.

The instrumental errors, excluding site errors are less than ± 2½% on the frequency of alignment and less than ± 5% on any other frequency.

POWER REQUIREMENTS AND CONSUMPTION

230 volts, 50 c/s single phase supply with consumption of 0.4 kW at 0.9 power factor.

AERIAL SYSTEM

The Aerial Unit, Design 19 (Patt. 58115) consists of two dipole pairs fixed at four corners of a square and a central rod for sense determination and for normal traffic requirements.

HANDBOOKS

B.R.1437, B.R.1454

ESTABLISHMENT LIST

E.830

INSTALLATION SPECIFICATION

B.634