

OSCILLATOR, TEST, NO. 1

TECHNICAL HANDBOOK - DATA SUMMARY

PURPOSE

To provide a variable R.F. signal, amplitude modulated (A.M.), frequency modulated (F.M.) or continuous wave (C.W.) for use when carrying out unit and field repairs to field wireless equipment.

DESCRIPTION

A portable, sealed equipment with leads and terminating unit carried in the lid. The R.F. signal is variable in frequency and output. For A.M. the depth is fixed at 80% and of 1kc/s frequency. The equipment may be operated from mains or external battery.

PHYSICAL DATA

Height: 8½ in.
Length: 13 in.
Depth: 10½ in.
Weight: 30 lb.

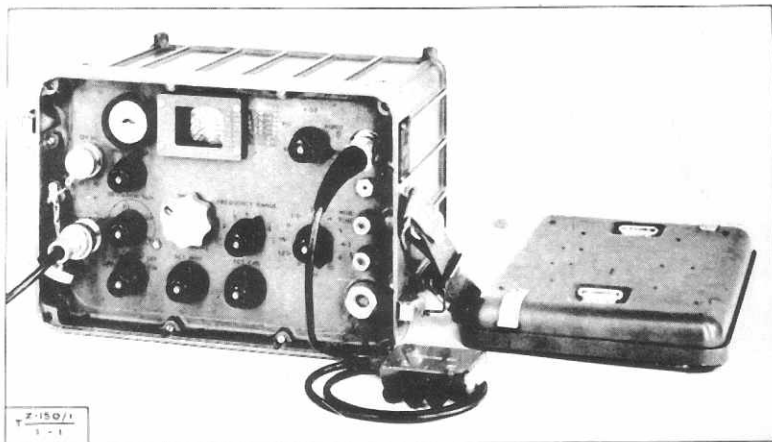


Fig. 1 - General view of equipment

FREQUENCY

The Oscillator, test, No. 1 covers the band 85kc/s - 30Mc/s in seven bands:-

- (a) 85kc/s-250kc/s
- (b) 250kc/s-700kc/s
- (c) 700kc/s- 2Mc/s
- (d) 2Mc/s- 4Mc/s
- (e) 4Mc/s- 8Mc/s
- (f) 8Mc/s- 16Mc/s
- (g) 16Mc/s- 30Mc/s

The short term frequency stability is within $\pm 2\%$.

PERFORMANCE

R.F. output

Continuously variable from $1\mu\text{V}$ - 100mV in 2 db. steps up to 20db. and 20db. steps up to 80db.

Accuracy $\pm 2\text{db.}$ except below $6\mu\text{V}$ where it is $\pm 1\mu\text{V.}$

A.M.

Pre-set to approximately 30% at 1kc/s

F.M.

Deviation continuously variable and linear up to 40kc/s with indications at 0, 10, 20, 30 and 40kc/s.

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Output impedance

Via concentric cable and terminating unit giving 7.5Ω or 75Ω . With the lower impedance the output is reduced to approximately one tenth of that indicated.

POWER REQUIREMENTS

The equipment may be operated from either A.C. mains or battery as follows:-

Mains : 110-115-120 or 220-230-240V, 45-66c/s
Consumption 50VA (approx.)

Battery: 12V
Consumption 42W (approx.)

VALVES

Reference	Type	Function
V1	CV 138	A.F. oscillator
V2	CV 287	Stabilizer
V3	CV 138	Reactor
V4	CV 138	R.F. oscillator
V5	CV 138	Buffer amplifier
V6	CV 138	Modulator/amplifier
V7	CV 493	Rectifier

SPECIAL FACILITIES

The modulation tone is available at a fixed level at a pair of terminals for A.F. tests. The termination for the modulation tone output should be not less than 600Ω .

END

Issue 1, 5 Sep. 1952