

SIGNAL GENERATOR NO. 1, Mks. 1 (WY 0063), 2 (WY 0062) and 2* (WY 0268)

DATA SUMMARY

PURPOSE

To provide an R.F. signal of constant amplitude to an internal accurately calibrated variable attenuator. The output from the attenuator is used in measuring the performance of telecommunications equipment.

DESCRIPTION

A R.F. oscillator provides a C.W. signal, variable in frequency over a wide range. The output is adjusted during operation to IV R.M.S., by means of a thermocouple monitor, and fed to the variable attenuator, from which any output from $1\mu\text{V}$ to IV may be taken. A modulator stage allows of internal amplitude modulation at an audio frequency to a known variable depth, if required. Provision is also made for the application of external modulation, either direct or amplified.

PHYSICAL DATA

Weight : 78 lb.
Height : $12\frac{1}{2}$ in.
Length : $29\frac{1}{2}$ in.
Width : 10 in. } over projections.

FREQUENCY

R.F. : 85kc/s in eight ranges.
Internal modulation : 400 c/s.

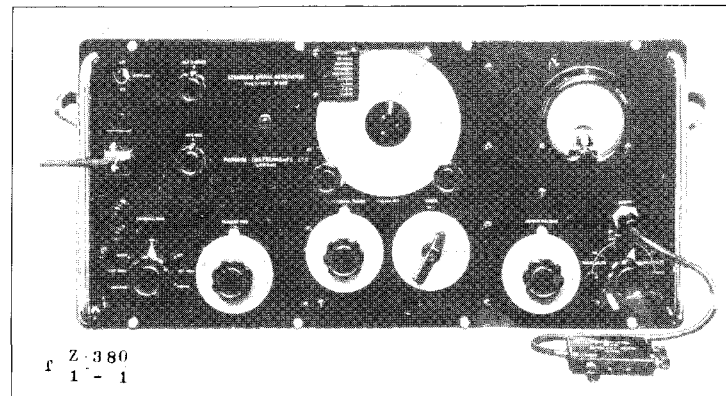


Fig. 1 General view

PERFORMANCE

Output is continuously variable from $1\mu\text{V}$ to 1V .

R.F. accuracy : Below 4.5 Mc/s 5% $0.2\mu\text{V}$
4.5 to 15 Mc/s 10% $0.3\mu\text{V}$
15 to 25 Mc/s 20% $0.5\mu\text{V}$

Modulation : depth 0 to 75% Accuracy 5%

Output impedance (Mk. 1) : 1 to $10\mu\text{V}$: 10Ω
10 to $100\mu\text{V}$: 15Ω
100 μV to 1V : 52.5Ω

Output impedance (Mks. 2 and 2*) : 1 to $100\mu\text{V}$: 10Ω
100 μV to 1V : 52.5Ω

POWER REQUIREMENTS AND CONSUMPTION

Mains or battery supply may be used.

Mains : 200 to 250V, 40 to 100 c/s, A.C. Consumption : 40W.

Battery : H.T., 200V at 30mA.
L.T., 4V at 3.5A.

OUTPUT TERMINATION

The output is taken via a screened coaxial cable terminating in a dummy aerial, which may be put in or out of circuit. The minimum external impedance should be not less than 200Ω for outputs of $1\mu\text{V}$ to 100mV , and not less than $1\text{k}\Omega$ for outputs of 100mV to 1V .

VALVES

| | Mks. 1 and 2 | Mk. 2* |
|-----------------|-----------------------|--------|
| R.F. oscillator | AC P | ML4 |
| A.F. oscillator | AC P | ML4 |
| A.F. amplifier | AC P | ML4 |
| F.W. rectifier | AU3A (UU5 or MUI2 14) | |

END