

(Joint-Services Designation: - Frequency Swept Oscillator, (7-70 Mc/s), CT202)

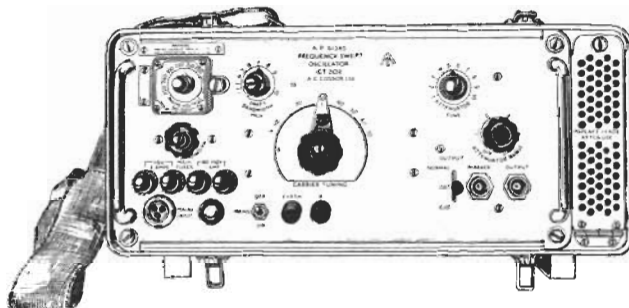
SUMMARY OF DATA

PURPOSE

Primarily for use in the visual checking and measurement of bandwidth at the -3 dB or -6 dB levels of radar I.F. amplifiers. (If bandwidth is being measured between -6 dB points, the bandwidth must be between 0.5 Mc/s and 7 Mc/s.) In addition, the response curves of some wireless receivers may be inspected but the bandwidths are not measurable.

BRIEF DESCRIPTION

The output signal of the CT202 is derived from the beat frequency between two oscillators, one of which has its frequency swept over a selected range by a saw-tooth modulating voltage obtained from the timebase generator of an external oscilloscope. The maximum frequency deviation is ± 5 Mc/s. The frequency modulated signal is fed to the I.F. amplifier under test, the video output being displayed as a response curve on the oscilloscope. Bandwidth is measured with the aid of a marker-pip provided by an external signal generator.



FREQUENCY-SWEPT-OSCILLATOR CT202

PERFORMANCE

- (a) Carrier Frequency variable 7-70 Mc/s, directly calibrated.

Accuracy ± 2 Mc/s. Provision is made for the injection of a marker-pip from an external signal generator for accurate frequency measurement.

- (b) F.M. Deviation variable up to 10 Mc/s total sweep (i.e. ± 5 Mc/s).

Modulation depth of unwanted A.M. on the F.M. sweep is not more than 10% at carrier frequencies between 10 Mc/s and 60 Mc/s and not more than 20% at 70 Mc/s. When using the full 10 Mc/s sweep at a carrier frequency of 7 Mc/s, there is some undesirable interaction of the oscillators.

NOTE: The sweep is obtained from the X-sweep voltage of an oscilloscope and a preset control is provided which enables the CT202 to accept the timebase generator voltages of most oscilloscopes in which the X-sweep is easily extracted, including the following:-

10S/831 Air Ministry Type 13A

A.P.3336A Cossor Double Beam

A.P.68622 Miniature Oscilloscope CT52

- (c) Attenuation

When terminated in 75 ohms, and with output controls at maximum, the output is not less than 100 mV. Output is variable from 5 μ V to at least 100 mV. A -3 dB or -6 dB pad may be switched into circuit to facilitate bandwidth measurements.

- (d) Output Impedance

72 ohms ± 3 ohms

400 ohms using adaptor pads

POWER REQUIREMENTS AND CONSUMPTION

115, 180, 200, 210, 220, 230, 240 or 250V, $\pm 6\%$ 50 to 500 c/s $\pm 10\%$. 45 watts approx.

PHYSICAL DATA

Weight 42 lb approx.

Height 9½ in.

Depth 8½ in.

Width 19½ in.

NEAREST COMMERCIAL EQUIVALENT

Cossor Tele-check

REMARKS

The instrument is essentially for Service use and is not intended for basic design work or measurements.

HANDBOOK

B.R.1771(14)

ESTABLISHMENT LIST

E1115

PRODUCTION SPECIFICATION

15451