

A.P.104391 RANGE CALIBRATOR CT379

(Joint-Services Designation: Calibrator Range CT379)

SUMMARY OF DATA

PURPOSE

To check the internal calibration of radar display systems.

BRIEF DESCRIPTION

A continuous running crystal-controlled calibration generator provides impulses corresponding to 1000 yd, 5000 yd, 1, 5 or 10 nautical mile time intervals. The impulses are processed to produce suitable calibration markers. An internal sync pulse generator provides sync pulses at a pulse repetition rate between 40 and 2000 pulse/sec. Each sync pulse is delayed from the time it appears until the arrival of the next calibration marker (thus providing sync pulse calibration marker correlation). The sync pulse is then further delayed by a PHASING control which enables the markers from the Range Calibrator to be superimposed on the calibration markers generated by the equipment under test. After further processing for shape and amplitude, the delayed sync pulse is used to trigger the timebase of the display to be calibrated. The internal sync pulse generator may be triggered by an external pulse within the p.r.f. range 20 to 2000 pulse/sec. This enables the Range Calibrator to be synchronised from the same source as the equipment under test.



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The instrument is self-contained and is designed to operate from a wide range of a.c. power supplies.

PERFORMANCE

Calibration Output	Range 1	1000 yd
	Range 2	5000 yd
	Range 3	1 nautical mile
	Range 4	5 nautical miles
	Range 5	10 nautical miles
	Amplitude	Greater than 20 volts
	Source Impedance:-	Positive Output less than 150 ohms Negative Output less than 600 ohms
	Pulse Duration	Less than 1/usec

The above information refers to the main markers and not the fundamental cal. pips used for checking the divider.

Crystal Oscillator Accuracy	± 0.02% (-20°C to +70°C)	
Synchronisation Facilities	Internal P.R.F.	40 to 500 pulse/sec and 200 to 2000 pulse/sec
	External P.R.F. Range	20 to 2000 pulse/sec
	Output Sync Pulse Amplitude	Greater than 40 volts, positive and negative
	Source Impedance	Less than 100 ohms
	Output Pulse Duration	6/usec (nominal)
	External Sync Input Amplitudes	3 to 50 volts, positive or negative
Phasing, Range of Control	100/usec (nominal)	

PHYSICAL DATA

Height 11 in. Width 11½ in. Length 21½ in. Weight 45 lb

POWER REQUIREMENTS AND CONSUMPTION

110-120, 200-250 volts, 45-550 c/s

180 volts, 450-550 c/s

Power Consumption 50 watts approx.

OTHER SERVICE OR COMMERCIAL DESIGNATIONS

Marconi Type SI.101

HANDBOOK

B.R.1771(26)

ESTABLISHMENT LIST

E1115

PRODUCTION SPECIFICATION 17252