

WIRELESS STATION A510

TECHNICAL HANDBOOK - DATA SUMMARY

PURPOSE

1. Lightweight, man-pack, a.m., sender-receiver with voice and c.w. facilities. Designed primarily for use by long range infantry patrols, it can be used as a man-pack station on the move, or as a ground station. For the latter role improved aerial systems are provided to achieve greater range.

DESCRIPTION

2. The receiver and sender are separated physically but are inter-dependent in operation. The receiver is a conventional five valve, reflexed superheterodyne with one stage of tuned r.f. amplification. The sender is a crystal controlled oscillator feeding two pentode valves in parallel.

3. The units are hermetically sealed and incorporate separate sealed compartments for the carriage of batteries dial lamps, and crystals.

PHYSICAL DATA

4. The approximate weights and dimensions of the station are:

	Receiver	Sender	Manpack station
Weight	9 lb	10 lb	20 lb 9 oz
Height	8½ in.	8½ in.	
Depth	3½ in.	3½ in.	
Width	6½ in.	6½ in.	

Complete station with transit case (16 lb): 41 lb 4 oz

Issue 1, 22 Mar 57

Distribution - Class 870. Code No 3

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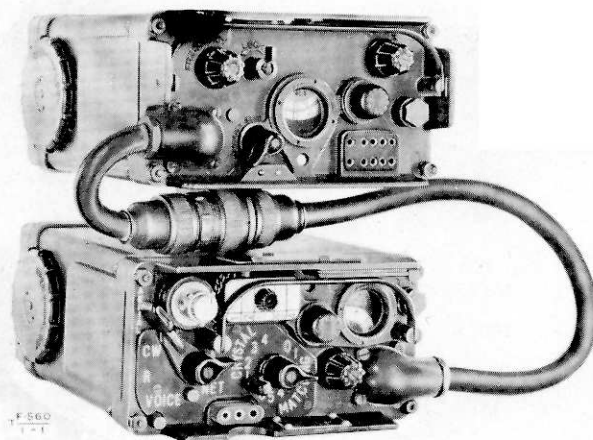


Fig 1 - Wireless station A510

FREQUENCY

5. Coverage: 2Mc/s - 10Mc/s
Intermediate frequency: 455kc/s

PERFORMANCE

Receiver: 3 to 5µV for 200µW output and signal to noise ratio of 10dB.

Sender: R/T: 0.35W max.
C.W.: 0.99W max.

POWER REQUIREMENTS AND CONSUMPTION

	H. T. 90V	L. T. 1.5V
Sender: CW:	50mA	650mA ±10%
R/T:	25mA	650mA ±10%
R and NET:	16mA	200mA ±10%
Receiver:	16mA	280mA

AERIAL SYSTEM

8. (a) 8 ft vertical rod with rod tuner
(b) End-fed wire and dipole aerials for use with ground station

MEB/385

Performance

9. Operational ranges for different type aerials:

System	Range (miles)	
	Voice	C.W.
Rod aerial	2-3	4-6
Wire aerial	6-8	12-16
End-fed aerial	25	75
Inclined dipole	30	90
Horizontal dipole	40	120

VALVES

10. Receiver: CV785 CV782 CV784 Sender: CV785 CV807
3 1 1 1 3

SPECIAL FACILITIES

11. Netting is obtained independently of the distant station simply by tuning the receiver to zero beat against its own sender crystal.

END