

SUMMARY OF DATA

PURPOSE

A short range, lightweight, sub-miniature VHF F.M. Transmitter-Receiver, for Voice Communication. It is fully sealed for use anywhere, or to be parachute dropped, or for transport at altitudes up to 25 000 ft. It is provided with straps for carriage as a manpack. It is intended to be a replacement for Type 615. It is similar to Canadian Radio Set CPRC-26. It is also known as Army Wireless Set A40, the Naval versions (Models A and B) only differing from the A40 in the channel frequencies used. Model A is for general Naval use; Model B is more particularly for R.M. Commandos.

FREQUENCY RANGE

R.F. 47.0-54.4 MHz, with six spot frequencies - three channels common to both types.

Type A - 47.0, 47.2, 47.4, 47.6, 48.8, 54.2 MHz

Type B - 47.0, 47.4, 47.6, 47.8, 52.6, 54.4 MHz

I.F. 4.3 MHz



BRIEF DESCRIPTION

A 13 valve VHF F.M. transceiver, employing plug-in sub-assemblies and circuit stages. The receiver is a superhet., the stages being r.f., mixer, xtal controlled oscillator, 4-double tuned i.f. stages, limiter, discriminator, and a.f. amplifier. The transmitter stages are, P.A., M.O., Ferrite reactor modulator; it is held on frequency by an a.f.c. circuit referred to the receiver crystal oscillator. The set and battery share a common case.

GENERAL VIEW

PHYSICAL DATA

ARMY REF.	DESCRIPTION	HEIGHT	WIDTH	DEPTH	WEIGHT
ZA 53443	Wireless Set A40 <u>Type A</u> part of ZA 53444 Wireless Set A40 Type A, Set Kit No. 1	11 in.	3.5 in.	5.25 in.	10 lb
ZA 53445	Wireless Set A40 <u>Type B</u> part of ZA 53446 Wireless Set A40 Type B, Set Kit No. 1				

Note 1. Models will be identified by a disc bearing the type letter on the front panel and the Ref. No.

Note 2. Crystals are engraved with their nominal frequency. This will always be 4.3 MHz BELOW CHANNEL FREQUENCY.

PERFORMANCE

Receiver 2 μ V input for 20 dB Signal/Noise with 15 kHz deviation at 1 kHz and 6 mW output.

Transmitter 300 mW r.f. output.

Deviation \pm 15 kHz peak.

Range 1.0-2.0 miles over open country, between sets fitted with 4 ft rod aeriads.

3.0-5.0 miles, between sets fitted with remote 10 ft aeriads.

Gives good quality speech, free from interference.

POWER REQUIREMENTS AND CONSUMPTION

Dry battery	:	volts	1.25	45	90	-2.5 bias	} Battery life approximately 18 hours under normal conditions.
Current receive	:	mA	550	14	5	-	
Current send	:	mA	900	8	35	-	
Battery end point	:	volts	1.05	34	68	-	

AERIAL SYSTEM

- (i) 4-foot vertical rod.
- (ii) 4-foot wire.
- (iii) 4-foot vertical rod with earthed counterpoise wire.
- (iv) A remote (up to 54 ft) half-wave aerial including matching unit and a ground spike.
- (v) A portable homing loop. (Not yet available.)

SPECIAL FACILITIES

A test socket is provided which, together with a wireless set A40 functional tester, allows of the realignment and testing of the wireless set.

A number of sub-units and components are interchangeable with Canadian parts from CPRC-26.

Remote control operation, up to a distance of 60 ft, is possible by use of a.f. extension leads.

Remote battery operation is provided for use in arctic conditions, the battery being kept warm by the operator's body.

HANDBOOK

BR 1193

ESTABLISHMENT LIST

E1193

INSTALLATION SPECIFICATION