STATION, RADIO, C42, NO 1

TECHNICAL HANDBOOK - DATA SUMMARY

Note: This Issue 3, Pages 1-4 supersedes Issue 2, Pages 1-3, dated 10 Mar 55. The regulation has been revised throughout.

NOMENCLATURE

Transmitter-receiver, radio, type C42, No 1, Part No 5820-99-943-9362
Tuner, r.f., antenna, No 6, Part No 5820-99-949-0858

ROLE

Primary role:	Communication set for fighting vehicles	in all theatres and conditions
Secondary roles:	Manpack and animal-borne stations	
User arm:	All arms but mainly RAC	

DESCRIPTION

V.H.F. voice-modulated f.m. transmitter-receiver, designed for use with radio control harnesses in complex vehicle-mounted stations. The set is hermetically sealed in a die-cast aluminium case. The transmitter has automatic gain and frequency controls; the receiver tuning may be checked against in-built crystal-controlled oscillators.

PHYSICAL DATA

	Operational	*As packed by RAOC*
Weight:	40 lb	104 lb
Height:	8.1/2 in.	17 in.
Width:	14 in.	25 in.
Depth:	14.1/2 in.	25 in.

CLIMATIC RANGE

Temperature: Normal and extreme cold.

Pressure: May be used and stored at altitudes up to 10,000 ft.

TRANSPORTATION DATA

Air transportability: May be carried at altitudes up to 25,000 ft and parachute-dropped with standard dropping equipment.

Splash-proof

PACKAGING DATA

DEF 1234 BPS: 2/2 or 2/3
SPIS: WIR/1838

OPERATIONAL DATA

Facilities of stations include remote control, intercomm, and in some cases automatic rebroadcast switching.

Transmitter and receiver may be tuned accurately to any channel by reference to a crystal-controlled calibrator.

For operational training a Simulator, antenna tuning may be used in place of the antenna and tuning unit.

PERFORMANCE

Static long-range antennae:	High power: 20–30 miles
Normal antennae, vehicles on move	High power: 7–15 miles Low power: 3–5 miles

ELECTRICAL DATA

Carrier frequency

36–60Mc/s; 241 channels spaced at 100kc/s intervals.

Power levels

Transmitter:	High power output:	about 15W
	Low power output;	0.3 to 1.0W
	Deviation:	±18kc/s
Receiver:	Sensitivity:	1.25μW for 10dB quieting
	Output:	150mW into 50Ω
Intercomm:	Output:	250mW into 30Ω

Comparison with other C42 models

SR C42 No	Type of modulation	Channels		Receiver sensitivity for 10dB quieting	Output into 50Ω
		No	Spacing (kc/s)		
1	F.M.	241	100	1.25μW	150mW
2	F.M.	481	50	1μW	100mW
3	F.M. and pulse code modulation	241	100	1.25μW	150mW

No 2 and No 3 have tighter frequency stability tolerances than No 1. In other respects they are similar.

ESSENTIAL ASSOCIATED EQUIPMENT

Antennae

Normal: 8 ft rod

Long-range: 5 ft vertical rod mounted on a 30 ft mast with three counterpoise earth rods.

Antenna matching unit: Tuner, r.f., antenna, No 6

Station equipment

Radio harness type A (Tels L 770-779) or type B (Tels L 780-789)

Special-to-station equipment: see Comms Inst data summaries

T H 440
3-1

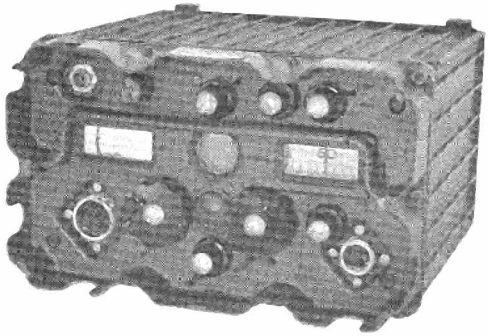

Fig 1 - General view

Power supply unit

Supply unit, vibratory, No 12, 12V input (Tels K 100-109) or 24V input (Tels K 150-159)

Supply unit, transistorized, No 1, 24V (Tels K 700-709)

POWER REQUIREMENTS

12V or 24V to power supply unit, at following currents:-

	Receive	*Standby*	*Send*
At 12V:	8.0A	6.0A	15.0A
At 24V:	4.0A	3.0A	7.5A

MAINTENANCE

Set is built of sub-units with easy removal facilities; 'bookform' construction gives access to all parts.

Field repairs effected by replacement of faulty sub-units.

ASSCCIATED PUBLICATIONS

Complete Equipment Schedule:	See appropriate Comms Inst EMER for the particular installation.
Identification Parts List:	WO Code No 12506
User Handbook:	WO Code No 11197

EME8c/1046

END