TELECOMMUNICATIONS H 440

CONDITIONS OF RELEASE

(Applicable to copies supplied with War Office approval to Commonwealth and Foreign Governments)

- This document contains classified UK information.
- This information is disclosed only for official use by the recipient Government and (if so agreed by HM Government) such of its contractors, under seal of secrecy, as may be engaged on a defence project. Disclosure or release to any other Government. national of another country, any unauthorized person, the Press, or in any other way would be a breach of the conditions under which the document is issued.
- This information will be safeguarded under rules designed to give the same standard of security as those maintained by HM Government in the UK.

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 NOMENCLATURE throughout. DESCRIPTION

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

User arm:

Primary role: Communication set

for fighting vehicles

in all Secondary roles: Manpack and animaltheatres and borne stations conditions

All arms but mainly RAC

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. mitter has automatic gain and frequency controls: the receiver tuning may be checked against in-built crystal-controlled oscillators.

Issue 3, 22 Nov 63

Page 1

RESTRICTED

TELECOMMUNICATIONS
H 440

ELECTRICAL AND MECHANICAL ENGINEERING REGULATIONS

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.

Fressure: 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 parachutedropped with standard dropping

equipment.

Splash-proof

PACKAGING DATA

DEF 1234 BPS: 2/2 or 2/3

SPIS: WIR/1838

CFERATIONAL DATA

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

Page 2

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 High power: 7-15 miles on move Lc# power: 3-5 miles

ELECTRICAL DATA

Catrier 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 10åB

quieting

Output: 150mW into 50Ω

Intercomm: Output: 250mW into 3 Ω

Issue 3 , 22 Nov 63

Comparison with other C42 models

SR C42 Nc	Type of modulation	-	Spacing (kc/s)	Receiver sensitivity for 10dB quieting	Output into 500.
1	F.M.	241	100	1.25µW	150mW
2	F.M.	481	50	1uW	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 780-7891

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

Fig 1 - General view

Issue 3, 22 Nov 63

Page 3

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.OA	15.0A
At 24V:	4.OA	3.OA	7.5A

EME8c/1046

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 subunits.

ASSOCIATED 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

END