

STATION, RADIO, A13

TECHNICAL HANDBOOK - DATA SUMMARY

Erratum

Note: This Page 0, Issue 1, is to be filed immediately in front of Page 1, Issue 2, dated 24 Feb 66.

1. The following amendment is to be made to the regulation.

2. PHYSICAL DATA (Page 2 and 3)

a. Against Amplifier, r.f., No 12, Mk 2

Delete: '32 lb 17 in. 10 in. 9 $\frac{1}{2}$  in.'

Insert: '5 lb 9 $\frac{1}{2}$  in. 6 in. 5 in.'

b. Against Charger, battery, resistance

Delete: '5 lb 9 $\frac{1}{2}$  in. 6 in. 5 in.'

Insert: '32 lb 17 in. 10 in. 9 $\frac{1}{2}$  in.'

HQ/TRG/Pubs

Issue 1, 22 Sep 66

Distribution - Class 333. Code No 3

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**RESTRICTED**

**ELECTRICAL AND MECHANICAL  
ENGINEERING REGULATIONS**  
(By Command of the Defence Council)

**TELECOMMUNICATIONS**  
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**STATION, RADIO, A13**

**TECHNICAL HANDBOOK - DATA SUMMARY**

**Note:** These Pages 1 - 5, Issue 2, supersede Pages 1 - 4, Issue 1, dated 31 Dec 64. The regulation has been revised throughout.

**NOMENCLATURE**

The following major items may be composed into various man load combinations or into a vehicle borne equipment. The user handbook gives full details.

<i>Designation</i>	<i>Part No</i>
Transmitter/receiver A13	5820-99-949-6353
Amplifier, r.f., No 12	5820-99-949-6158

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<i>Designation</i>	<i>Part No</i>
Amplifier, r.f., No 12 Mk 2	5820-99-105-3158
Tuner, r.f., antenna	5820-99-949-6154
Stabilizer voltage	5820-99-949-6111
Control, TR - remote	5820-99-949-6365
Generator, d.c.	5820-99-949-8134
Battery, secondary alkaline 12V 2AH	6140-99-949-6145
Harness adaptor	5820-99-949-6108
Charger, battery, resistance	6130-99-103-2895

which may be used with either the low-power or the high-power station. A hand generator and vehicle battery regulator are provided for charging the secondary cells used by the station. A harness adaptor allows the set and amplifier to be converted to a vehicle borne station with connections for use with radio control harnesses, types A and B. A charger, battery resistance permits the bulk charging of batteries from 300W or 1260W charging engines; stabilizers voltage are also required during this operation.

**PHYSICAL DATA**

<i>Designation</i>	<i>Weight</i>	<i>Length</i>	<i>Width</i>	<i>Depth</i>
Transmitter/receiver A13	16 lb 2 oz	12.1/4 in.	8.3/4 in.	6 in.
Amplifier, r.f., No 12	9 lb 10 oz	12.1/4 in.	6 in.	6 in.
Amplifier, r.f., No 12, Mk 2	32 lb	17 in.	10 in.	9.1/2 in.
Tuner, r.f., antenna	4 lb 1 oz	9 in.	3 in.	5.3/4 in.
Stabilizer, voltage	3 lb	6 in.	7.1/4 in.	4 in.
Control, TR - remote	1 lb 15 oz	3.3/4 in.	6.1/2 in.	3 in.
Generator, d.c.	11 lb 6 oz	7.3/4 in.	5.3/4 in.	5.3/4 in.

**ROLE**

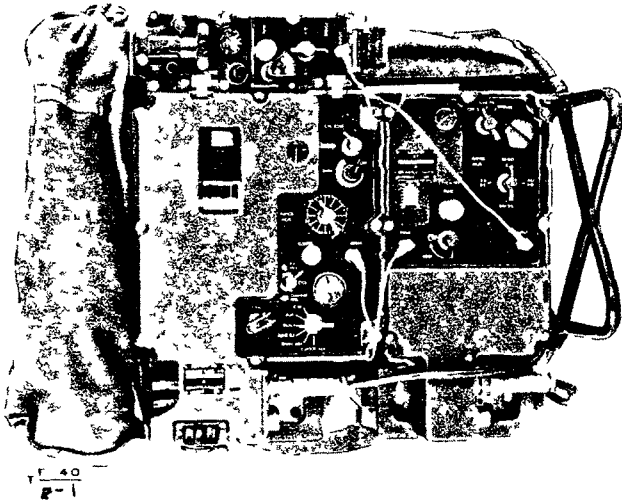
Primary role: Manpack infantry net communications where v.h.f. equipment cannot be used.

Secondary role: Airborne forces, amphibious forces, artillery.

User arm: Mainly infantry.

**DESCRIPTION**

It is a h.f. transistorized transmitter-receiver contained in a sealed light metal case. An increase of power(x10) can be obtained by the addition of a sealed r.f. amplifier. The receiver tuning is set against an in-built crystal controlled oscillator. The station includes, in addition, a sealed antenna tuning unit



Designation	Weight	Length	Width	Depth
Battery, secondary alkaline, 12V, 2AH	3 lb 14 oz	5.1/4 in.	3 in.	3.3/4 in.
Harness adaptor	30 lb			
Charger, battery, resistance	5 lb	9.1/2 in.	6 in.	5 in.

**CLIMATIC RANGE**

Temperature: Operational -32°C to +52°C  
Storage -45°C to +71°C  
Pressure: Operation and storage up to 10,000 ft

**TRANSPORTATION DATA**

Air transportability: May be carried in unpressurized aircraft at altitudes up to 25,000 ft, and parachute dropped in a standard container.  
Climatic: May be exposed to heavy rain, salt spray, driving dust, sand, snow or to high wind.

Fig 1 - High power manpack set

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## PACKAGING DATA

DEF 1234 BPS: Ancillaries 2/2 or 2/3  
Major items 2/6 (easy access packs)

## OPERATIONAL DATA

Station includes remote control facilities.

## PERFORMANCE

Low power rod antenna: 5 miles average terrain  
High power rod antenna: 15 miles average terrain  
Sky wave antenna: 100 miles average terrain  
Remote control up to 880 yards using D10 cable.

## ELECTRICAL DATA

Carrier frequency: 2-8Mc/s  
Channel spacings using calibrator - 10kc/s  
By dial interpolation - 2.5kc/s

## Power levels:

Transmitter:	Low power	High power (with amplifier)
A.M.	0.75W	8W
Ph.M.	1.5W	15W
C.W.	1.5W	15W

Deviation Ph.M. 1.2 radians

## Receiver:

Sensitivity: 17dB S/N  
Output: A.M. and ) into  
Ph.M. 5-10mW ) 150Ω  
C.W. 2-5mW )

## ESSENTIAL ASSOCIATED EQUIPMENT

Antennae: 8 ft whip with gooseneck  
18 ft fibreglass mast may be used to elevate whip or support dipole or end-fed antennae.  
150 ft braid (20ff)  
Ground spike and 4 x 30 ft counter-poise.  
Antenna matching unit: Tuner, r.f. used with whip and end-fed antennae  
Station equipment: As detailed by CES

## POWER REQUIREMENTS

TRA13: 12V nickel cadmium secondary cell gives a life of approx 8 hours on T/R ratio of 1 : 9.  
(Low power)  
TRA13 + RFA12: 2 x 12V nickel cadmium cells give a life of approx 6 hours on T/R ratio of 1 : 9.  
(High power)  
TRA13 + RFA12 Mk 2: As TRA13 and RFA12, but the batteries are series connected (24V) for the amplifier supply.

## MAINTENANCE

The set is built of a number of modules (printed circuit boards). Field repairs will be confined to the exchange of modules. Base repairs will include module repairs.

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ASSOCIATED PUBLICATIONS

Complete equipment  
schedules:

CES 4300 Conversion from LP  
to HP (RFA12)

CES 43256 Conversion from LP  
to HP (RFA No 12 Mk 2)

User handbook:

CES 43001 SRA13 LP

CES 43002 SRA13 HP (RFA No 12)

CES 43264 SRA13 HP (RFA No 12  
Mk 2)

Army Code No 13120

EME8c/2185

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