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: '3 lb 17 in., 10 in. 9\(\frac{3}{2}\) 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.'
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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.

Issue 2, 24 Feb 66

Distribution - Class 333. Code No 3

<table>
<thead>
<tr>
<th>Designation</th>
<th>Part No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter/receiver A13</td>
<td>5820-90-946-8563</td>
</tr>
<tr>
<td>Amplifier, r.f., No 12</td>
<td>5820-90-946-6156</td>
</tr>
</tbody>
</table>
TELECOMMUNICATIONS

ROLES

Primary role: Mainly infantry.
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 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 1200W charging engines; stabilizers voltage are also required during this operation.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Part No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifier, r.f., No 12 Mk 2</td>
<td>5820-99-102-3163</td>
</tr>
<tr>
<td>Tuner, r.f., antenna</td>
<td>5820-99-949-6154</td>
</tr>
<tr>
<td>Stabilizer voltage</td>
<td>5820-99-949-6111</td>
</tr>
<tr>
<td>Control, TR - remote</td>
<td>5820-99-949-6365</td>
</tr>
<tr>
<td>Generator, d.c.</td>
<td>5820-99-949-8134</td>
</tr>
<tr>
<td>Battery, secondary alkaline 12V 2AH</td>
<td>6140-99-949-6146</td>
</tr>
<tr>
<td>Harness adaptor</td>
<td>5820-99-949-6109</td>
</tr>
<tr>
<td>Charger, battery, resistance</td>
<td>6130-99-102-2886</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Designation</th>
<th>Weight</th>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter/receiver A12</td>
<td>16 lb 2 oz</td>
<td>12.1/4 in.</td>
<td>8.3/4 in.</td>
<td>6 in.</td>
</tr>
<tr>
<td>Amplifier, r.f., No 12</td>
<td>9 lb 10 oz</td>
<td>12.1/4 in.</td>
<td>6 in.</td>
<td>6 in.</td>
</tr>
<tr>
<td>Amplifier, r.f., No 12, Mk 2</td>
<td>32 lb</td>
<td>17 in.</td>
<td>10 in.</td>
<td>9.1/2 in.</td>
</tr>
<tr>
<td>Tuner, r.f., antenna</td>
<td>4 lb 1 oz</td>
<td>9 in.</td>
<td>3 in.</td>
<td>5.3/4 in.</td>
</tr>
<tr>
<td>Stabilizer, voltage</td>
<td>5 lb</td>
<td>6 in.</td>
<td>7.1/4 in.</td>
<td>4 in.</td>
</tr>
<tr>
<td>Control, TR - remote</td>
<td>1 lb 15 oz</td>
<td>3.5/4 in.</td>
<td>6.1/2 in.</td>
<td>3 in.</td>
</tr>
<tr>
<td>Generator, d.c.</td>
<td>11 lb 6 oz</td>
<td>7.3/4 in.</td>
<td>5.3/4 in.</td>
<td>5.3/4 in.</td>
</tr>
</tbody>
</table>

Issue 2, 24 Feb 66
**Fig 1 - High power manpack set**

**CLIMATIC RANGE**

**Temperature:**
- Operational: $-32^\circ C$ to $+52^\circ C$
- Storage: $-45^\circ C$ to $+71^\circ C$

**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.
TELECOMMUNICATIONS

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 (with amplifier)
A.M. 0.75W
Ph.M. 1.0W
C.W. 1.5W

Deviations: Ph.M. 1.2 radians

Receiver:
Sensitivity: 17dB S/N
Output: A.M. and Ph.M. 5-10mW
C.W. 2-50mW

Essential associated equipment
Antenna: 8 ft whip with gooseneck
18 ft fibreglass mast may be used to elevate whip or support dipole or end-fed antennas.
150 ft braid (26ff)
Ground spike and 4 x 30 ft counterpoise.

Antenna matching unit: Tuner, r.f. used with whip and end-fed antennas
Station equipment: As detailed by CES

Power requirements
TRA12:
Low power
TRA13 + RFA12:
High power
TRA13 + RFA12 Mk.2:

12V nickel cadmium secondary cell gives a life of approx 8 hours on T/R ratio of 1 : 9.
2 x 12V nickel cadmium cells give a life of approx 6 hours on T/R ratio of 1 : 9.
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.

Issue 2.24 Feb 86
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

EM28c/2195

END

CES 43001 SRA13 LP
CES 43002 SRA13 HP (RFA No 12)

CES 43254 SRA13 HP (RFA No 12 Mk 2)

Army Code No 12120

Issue 2, 24 Feb 66