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STATION, RADIO, A43R, MK 2, MANPACK/GROUND
TECHNICAL HANDBOOK - DATA SUMMARY

NOMENCLATURE
Transmitter-receiver, radio, A43R, Mk 2, Part No 21/5820-99-949-1259

ROLE
Primary role: Ground/air communication
Secondary roles: Manpack ground to ground in all theatres
                  ship to shore and
User arm: Infantry, Marines and Royal Artillery

DESCRIPTION
The set is a v.h.f. short range manpack a.m. transmitter/receiver, designed for use with an internal
power unit supplied from an attached secondary battery. It is hermetically sealed in a light alloy case. The
transmitter is crystal controlled and has a quick warm up characteristic after initial operation. The
receiver is crystal controlled and has amplified automatic gain control.

Issue 15 Apr 64

Distribution - Classes 332 and 336. Code No 2

Page 1
PHYSICAL DATA (set minus antenna)

<table>
<thead>
<tr>
<th></th>
<th>Operational</th>
<th>As packed by RAOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>13 in.</td>
<td>17.3/4 in.</td>
</tr>
<tr>
<td>Width:</td>
<td>9 in.</td>
<td>23.3/4 in.</td>
</tr>
<tr>
<td>Depth:</td>
<td>5.1/4 in.</td>
<td>26.1/4 in.</td>
</tr>
<tr>
<td>Weight excluding batteries:</td>
<td>14.1/2 lb</td>
<td>111 lb</td>
</tr>
<tr>
<td>Weight with battery:</td>
<td>21 lb</td>
<td></td>
</tr>
<tr>
<td>Complete station:</td>
<td>39 lb</td>
<td></td>
</tr>
</tbody>
</table>

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

PACKAGING DATA

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

OPERATIONAL DATA

Provides six spot frequencies within the range 240-3000 kHz. Used with whip antenna or a skeleton discone antenna mounted on a 6 ft mast for use in static role. Aural monitoring of transmitter output by a sidetone circuit, also visual indication on a fluorescent tube in the front panel. Facilities include: amplitude modulated telephony, single or double frequency simplex; beacon service c.w. unkeyed; beacon service modulated c.w. unkeyed.

PERFORMANCE

Whip antenna: four land miles
Elevated antenna: 12 land miles

Ground-to-air (Whip antenna to aircraft):
- 500 ft: 23 land miles
- 1000 ft: 40 land miles
- 5000 ft: 45 land miles

Ground-to-air (Elevated antenna to aircraft):
- 500 ft: 28 land miles
- 1000 ft: 32 land miles
- 5000 ft: 45 land miles
- 10,000 ft: 62 land miles
- 20,000 ft: 115 land miles
- 30,000 ft: 160 land miles
Fig 1 - Station, radio, A43R, Mk 2
The wearing paper must be altered only and will vary greatly with the type of country over which the set is being used.

**ELECTRICAL DATA**

**Frequency**
240-300Mc/s. Six preset crystal controlled channels, selected by a switched turret containing removable channel tuners. Minimum channel spacing 100kc/s. Stability 3 parts in 10^6. (For Army use Kits No 1 and Kits No 2 contain 96 channel tuners providing 24 alternative channels).

**Power levels**
- **Transmitter**: Power output: At least 2W carrier over frequency range
- **Receiver**: Sensitivity: Not more than 5W modulated 30% at 400kc/s for 10dB signal-to-noise ratio

**ESSENTIAL ASSOCIATED EQUIPMENT**

- **Antennae**: Quarter wave flexible whip
- **Long-range**: Discone elevated antenna with 8 ft mast and 20 ft coaxial connector

**STATION EQUIPMENT**

- **Telephone hand**
- **Microphone and receiver head gear assembly**
- **Battery charger**: (self adjusting for 12V or 24V d.c. input)

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**Battery adaptor unit and battery connector cable**

- **Battery, secondary, 12V**: Nickel-cadmium type or Redifon A 6227 Edn B (Magnatex)

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**POWER REQUIREMENTS AND CONSUMPTION**

**Voltage**
12V d.c. The set battery discharges in two hours approximately at 3:1 receive-transmit ratio

**Current**
- **Receive**: 0.208A
- **Transmit**: Telephony 2.752A
- **Transmit**: C.W. beacon 2.608A
- **Transmit**: M.C.W. beacon 3.391A

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**MAINTENANCE**

Set is built in quickly detachable units giving access to all parts.

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**ASSOCIATED PUBLICATIONS**

- Complete equipment schedule: No 42844 (Station kit No 1)
- No 42983 (Station kit No 2)
- **User handbook**: WO Code No 12790
- Illustrated spare parts: WO Code No 13596

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**END**

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