### STATION, RADIO, A41, NO 1 AND 2

**TECHNICAL HANDBOOK - DATA SUMMARY**

*Note: This Issue 2, Pages 1 - 5, supersedes Issue 1, Pages 1 - 3, dated 18 Mar 60. The regulation has been revised throughout.*

#### NOMENCLATURE

<table>
<thead>
<tr>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter-receiver, radio, type A41, No 1, Part No 5800-09-048-0235</td>
<td></td>
</tr>
<tr>
<td>Transmitter-receiver, radio, type A41, No 2, Part No 5800-09-049-4030</td>
<td></td>
</tr>
<tr>
<td>Unit, rebroadcast, No 2</td>
<td></td>
</tr>
<tr>
<td>Unit, relay, Tr, radio, A41/A42</td>
<td></td>
</tr>
<tr>
<td><strong>Issue 2, 30 Jun 64</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### ROLE

- **Primary role:** Manpack communication set for forward areas in all theatres and conditions
- **Secondary role:** Vehicle station
- **User arm:** Infantry

#### DESCRIPTION

The set is a lightweight, miniature, portable, v.h.f., voice-modulated f.m., transmitter-receiver designed for forward area infantry manpack use. The trans-

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**Distribution - Class 332. Code No 3**
mitter has automatic frequency control; the receiver tuning may be checked against in-built crystal-controlled oscillators. The No 2 set also incorporates a mixing circuit and 50kc/s calibration points, and differs in having individual miniature Bendix-Thorn (type 105) audio output connectors. The set, the re-broadcast unit and the relay unit are hermetically sealed in die-cast aluminium cases.

**PHYSICAL DATA**

<table>
<thead>
<tr>
<th>Set</th>
<th>Re-broadcast unit</th>
<th>Relay unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight:</td>
<td>10 1/2 lb</td>
<td>7 3/4 lb</td>
</tr>
<tr>
<td></td>
<td>excluding battery</td>
<td>excluding battery</td>
</tr>
<tr>
<td>Height:</td>
<td>17 7/8 in.</td>
<td>4 9/16 in.</td>
</tr>
<tr>
<td>Width:</td>
<td>9 3/4 in.</td>
<td>8 3/4 in.</td>
</tr>
<tr>
<td>Depth:</td>
<td>2 15/16 in.</td>
<td>6 5/16 in.</td>
</tr>
</tbody>
</table>

**CLIMATIC RANGE**

- Temperature: Normal range
- Pressure: May be used and stored at altitudes up to 5000 ft

**TRANSPORTATION DATA**

- Air transportability: May be carried at altitudes up to 25,000 ft and parachute-dropped with standard drooping equipment.
- Watertight (battery compartments - splash-proof).

**PACKAGING DATA**

DEF 1234: BPS: 2/8 (easy-access pack)

SPI: WR5/9733

**OPERATIONAL DATA**

Facilities of stations include remote control and in some cases automatic rebroadcast switching when rebroadcast unit A41/A42 is available.

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

The set has similar operational characteristics to the Canadian set AN/PRC-530 and American set AN/PRC-10A.

**PERFORMANCE**

- Normal range: 5 miles

**ELECTRICAL DATA**

- Carrier frequency: 38-65Mc/s
  - 171 channels spaced at 100kc/s intervals (No 1)
  - 341 channels spaced at 50kc/s intervals (No 2)
- Power levels
  - Transmitter: Power output 0.75W throughout frequency range
  - Deviation: 15kc/s

*Issue 2, 30 Jun 64*
### Receiver
- **Signal/noise:** 20dB for 1.25μV input with 15kHz deviation at 1kHz
- **A.F. output:** 5mW at 1kHz for 10μV input with standard modulation

### Essential Associated Equipment
- **Antenna:** 4 ft rod for manpack use, 10 ft rod for ground station, Elevated for static use
- **Antenna matching unit:** Coupler, antenna, 50Ω impedance, type A, 21/2A 5540D

### Power Requirements and Consumption

<table>
<thead>
<tr>
<th>Set</th>
<th>1.5V</th>
<th>67.5V</th>
<th>135V</th>
<th>-6V bias</th>
<th>Battery, dry, 1.1/2V, No 1 6128-68-910-1101</th>
<th>2.8V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery, dry, No 1, Y3/VC 01373</td>
<td>1.1V</td>
<td>50V</td>
<td>100V</td>
<td>-4.5V bias</td>
<td>Approx current (receive)</td>
<td>(2 off)</td>
</tr>
<tr>
<td>Battery (lower limit)</td>
<td>0.47A</td>
<td>22mA</td>
<td>-</td>
<td>-</td>
<td>Approx current (receive): continuous</td>
<td>15mA</td>
</tr>
<tr>
<td>Approx current</td>
<td>0.47A</td>
<td>15mA</td>
<td>55mA</td>
<td>0.38A bias</td>
<td>Approx current (send): intermittent</td>
<td>110mA</td>
</tr>
</tbody>
</table>

*Issue 2, 30 Jun 84*
MAINTENANCE

The set is built in sub-units with easy removal facilities. A condition indicator shows the state of the set output. Field repairs are effected by replacement of most faulty sub-units by R. Sigs using Functional tester type FT2. A TEST socket is provided which, together with a power supply unit or the set's internal battery, allows for the re-alignment and testing of the radio set. The set is functionally and physically interchangeable with Canadian and American parts from the AN/PRC-610 and AN/PRC-104 sets respectively.

ASSOCIATED PUBLICATIONS

Complete equipment schedule (CES):

<table>
<thead>
<tr>
<th>Item</th>
<th>No 1 set</th>
<th>No 2 set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground station</td>
<td>42904</td>
<td>42904</td>
</tr>
<tr>
<td>Installation kit</td>
<td>42904</td>
<td>42904</td>
</tr>
<tr>
<td>Rebroadcast unit</td>
<td>43004</td>
<td>43004</td>
</tr>
</tbody>
</table>

Illustrated Parts List:

- No 1 set W.O. Code No 13009
- No 2 set

User Handbook:

- No 1 set W.O. Code No 12336
- No 2 set W.O. Code No 13123
- Rebroadcast unit W.O. Code No 13950

EMER Functional tester type FT2 - Tels M 260-269

Page 4
General view of No 1 set
Fig 2 - Re-broadcast and relay units.

Distribution - Class 332. Code No 2