ELECTRICAL AND MECHANICAL
ENGINEERING REGULATIONS
(By command of the Army council)

RECEPTION SETS AR88D AND AR88LF

TECHNICAL HANDBOOK - DATA SUMMARY

PURPOSE
General purpose communications receivers for C.W.,
C.W. and R.T., designed to withstand wide climatic and
supply voltage variations.

DESCRIPTION
The receivers consist of two R.F. stages, a mixer,
local oscillator, three I.F. stages, a detector, noise
limiter, B.F.O., A.F. amplifier, output stage and
power supply system. The i.f. amplifiers incorporate
variable selectivity, and a crystal filter. The sets
are normally housed in steel cases but can be rack
mounted.

PHYSICAL DATA (in case)
Weight: 100 lb.
Height: 12 in.
Width: 19 1/4 in.
Depth: 19 1/4 in.

FREQUENCY

<table>
<thead>
<tr>
<th></th>
<th>AR88D</th>
<th>AR88LF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage:</td>
<td>535kc/s to 324kc/s in six bands</td>
<td>73 kc to 550kc/s and 1.18 to 30.0Mc/s in six bands</td>
</tr>
<tr>
<td>Intermediate frequency:</td>
<td>455kc/s</td>
<td>735kc/s</td>
</tr>
</tbody>
</table>

PERFORMANCE

Sensitivity: both sets:
C.W. - less than 3.0µV for 20db. signal-to-noise ratio at 500mW to loudspeaker
M.C.W. - less than 1µV for 20db. signal-to-noise ratio at 500mW to loudspeaker
Maximum undistorted output: both sets:
2.5W to loudspeaker or line

Fig 1 - General view of Reception set AR88D

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Output impedances:
- AR88D:
  - 2.5Ω to speaker
  - 600Ω to balanced line
  - 20,000Ω to headphones
- AR88LF:
  - 2.5Ω to speaker
  - 20Ω to unbalanced line
  - 20Ω to headphones

Selectivity

<table>
<thead>
<tr>
<th>Selectivity</th>
<th>Bandwidth at -60dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>control position</td>
<td>AR88D</td>
</tr>
<tr>
<td>1</td>
<td>13kc/s</td>
</tr>
<tr>
<td>2</td>
<td>7kc/s</td>
</tr>
<tr>
<td>3</td>
<td>3kc/s</td>
</tr>
<tr>
<td>4</td>
<td>1.5kc/s</td>
</tr>
<tr>
<td>5</td>
<td>0.4kc/s</td>
</tr>
</tbody>
</table>

POWER REQUIREMENTS
- AR88D: 100 - 165V or 190 - 260V, 50 - 60C/s, 100VA
- AR88LF: 115 or 230V, 25 - 60C/s, 100VA

TELECOMMUNICATIONS

REMARKS

The receiver set AR88D was originally manufactured as the receiver set AR88. It still bears this name on the front panel. The change in designation occurred between the serial nos. 003000 and 004000 and coincided with the change in the design of the output transformer to provide a 600Ω balanced line output and a 20,000Ω headphone output. The output impedances of

E 770

MANUFACTURING

END

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