FUNCTIONAL DESCRIPTION:

The Radio Set AN/GRC-13 is designed to provide complete facilities for two (2) way radio communications by Continuous Wave (CW) telegraphy (A1) and telephony (A3) on any one (1) of ten (10) preset frequencies in the 2 to 12 megacycle band. The complete equipment including operating accessories, hand-driven generator and operating spares, are packed in a single field case to facilitate transportation in field operations.

No field changes in effect at time of preparation (5 July 1962).

TECHNICAL CHARACTERISTICS:

TYPE OF EQUIPMENT: Radio.

EQUIPMENT PURPOSE: Communications.

TYPE OF FREQUENCY CONTROL: Crystal.
AN/GRC-13 RADIO SET

TYPE OF EMISSION: A1 (CW), A3 (phone).

TYPE OF CIRCUIT
RECEIVER: Superheterodyne.
TRANSMITTER: Crystal saver circuit.

Nominal Power Input
RECEIVE: 135 W.
TRANSMIT: 200 W.

Nominal Power Output
RECEIVER: 25 mw into 300 ohms non-inductive resistance.
TRANSMITTER: Hand generator A1-12 W; A3-45 W.
AUXILIARY POWER SUPPLY: A1-20 W; A3-6 W.

Frequency Range
RECEIVE AND TRANSMIT: 2 to 12 mc.

Number of Preset Frequencies
RECEIVE AND TRANSMIT: 10.

Number of Bands: 1 band.

Intermediate Frequency: 1600 kc.

Output Impedance
RECEIVER HEADSET: 300 ohms.
TRANSMITTER ANTENNA: 3000 ohms.

Input Impedance
RECEIVER: 40 ohms at input to R.F. stage.
TRANSMITTER: 100 ohms (Microphone line).

Receiver Selectivity: 6 db down at 7.5 kc off resonance.

Audio Frequency Response
RECEIVE AND TRANSMIT: 400 to 3000 cycles.

AVC Operation
RECEIVER: Form 4 db between 50 to 50000 microvolts.

Operating Power Reqmt: 12 v dc, 24 v dc, 115 v ac.

Relation to Other Equipment:
The Radio Set AN/GRC-13 was formerly known as Navy Model MBO.

Equipment Required But Not Supplied: None.

Major Components

<table>
<thead>
<tr>
<th>Qty</th>
<th>Item</th>
<th>Stock Numbers</th>
<th>Dimensions (Inches)</th>
<th>Weight (LBS)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Radio Set AN/GRC-13</td>
<td></td>
<td>18 x 20-1/4 x 44-1/4</td>
<td>257</td>
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<tr>
<td></td>
<td>consists of:</td>
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<td></td>
<td></td>
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<tr>
<td>1</td>
<td>Engine Generator Kit MX-1010/U</td>
<td></td>
<td>20 x 21-7/8 x 28-1/4</td>
<td>177</td>
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<tr>
<td>1</td>
<td>Power Supply Kit MX-1011/U</td>
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<td>20-1/4 x 27-1/4 x 32-3/4</td>
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<td>1</td>
<td>Installation Kit MX-1012/U</td>
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<td>19-1/4 x 22-7/8 x 27-1/2</td>
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</table>

1.7 AN/GRC-13: 2
REFERENCE DATA AND LITERATURE:


TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (2) 114  (2) 1R5  (2) 1S5  (4) 1T4  (1) 2E22  (1) 3A4  (3) 3Q4  (1) 6AU6  
         (1) 5678  (1) 1006  (1) 6X5GT

CRYSTALS: (1) CR-58/U  (1) CR-18/U

SEMI-CONDUCTORS: (3) 1N47

SHIPPING DATA

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<tr>
<th>PKGS</th>
<th>VOLUME (CU FT)</th>
<th>WEIGHT (LBS)</th>
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</table>

PROCUREMENT DATA

PROCURING SERVICE: USN  
SPEC & OR DWG:  
DESIGN CCG: USN, BuShips

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<th>CONTRACTOR</th>
<th>LOCATION</th>
<th>CONTRACT OR ORDER NO.</th>
<th>APPROX. UNIT COST</th>
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<td>RCA Victor Division</td>
<td>Camden, N. J.</td>
<td>NObsr-42227, 27 February 1948</td>
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