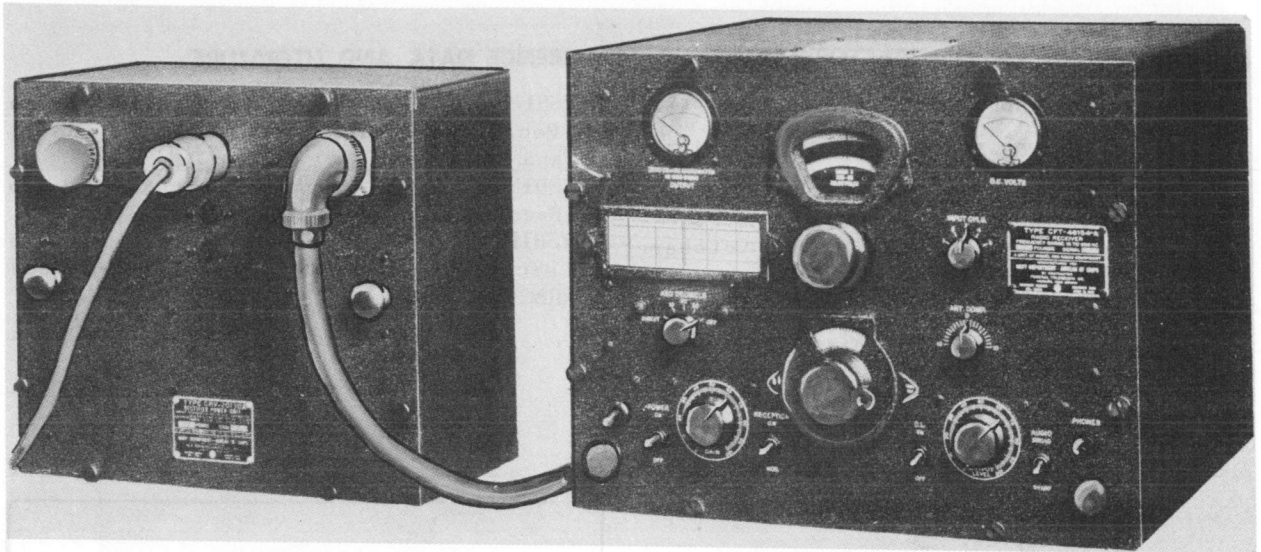


December 1956

**RADIO RECEIVING EQUIPMENT RBA,RBA-1,2,3,5,5a,6**

Radio Receiving Equipment RBA-5

**FUNCTIONAL DESCRIPTION**

The RBA, RBA-1, 2, 3, 5, 5a and 6 are designed for use aboard vessels and for shore stations for the reception of pure, modulated, or interrupted continuous wave (cw) radio frequency signals in the frequency range of 14.5 to 600 kilocycles.

Provisions are included for operation of a number of receivers from a common antenna and transmission line, for simultaneous emergency operation of two receivers from a common power unit, and automatic regulation of receiver output signal voltage as a function of load resistance, so that from one to twenty 600 ohm headphones may be connected across the output circuit with less than 40 per cent change in output voltage.

Data on this sheet reflects the following field changes, FC-3, RBA thru RBA-7 (10 August 1956).

**RELATION TO OTHER EQUIPMENT**

The RBA Series is electrically and mechanically interchangeable. The RBA, RBA-1, 2, 3, 5 and 5a are designed for table mounting, and the RBA-6 is designed for rack mounting.

Equipment Required but not Supplied: (1) Headset, 600 ohm, with Plug NT-49434, (1) antenna, Receiving.

**ELECTRICAL AND MECHANICAL CHARACTERISTICS**

**FREQUENCY RANGE:** 14.5 to 600 kc in 4 bands.

**BAND DATA**

**BAND 1 SUPPLEMENT:** 14.5 to 15 kc.

**BAND 1:** 15 to 38 kc.

**BAND 2:** 38 to 95 kc.

**BAND 3:** 95 to 235 kc.

**BAND 4:** 235 to 600 kc.

**RECEPTION:** A1, A2 on all bands. A3 is possible, but some distortion is present below 300 kc due to the high order of selectivity, and to the characteristics of filters employed in the audio frequency amplifier.

**IMPEDANCE DATA**

**OUTPUT:** 600 and 30 ohms.

**INPUT:** Adjustable over a wide range.

**POWER OUTPUT**

**600 OHM LOAD:** 50 mw.

**30 OHM LOAD:** 500 mw.

**SENSITIVITY:** 10 uv input for 6 mw output on A1 operation.

**FREQUENCY CALIBRATION DIAL ACCURACY:**  $\pm 1\%$ .

**POWER REQUIREMENTS**

RBA, RBA-1, 2, 3, 5, 6: 110, 115 or 120 v, 55 to 65 cps, single ph; 67 W, 95% pf for one receiver; 100 W, 97% pf for two receivers.

RBA-5a: 115 v, 400 cps, single ph.

**MANUFACTURER'S OR CONTRACTOR'S DATA**

Federal Telephone and Radio Corp., Newark, N. J.  
 Contract NOs-73055, dated 13 April 1940 (RBA)  
 Contract NOs-91165, dated 2 September 1941 (RBA-1)  
 Contract NXss-11780, dated 5 October 1942 (RBA-2)  
 Contract NXss-16498, dated 3 October 1942 (RBA-3)  
 Contract N5sr-17829, dated 22 February 1946 (RBA-5)  
 Contract NObsr-39341, dated 30 June 1947 (RBA-6).  
 Radio Corporation of America, Camden, N.J.  
 Contract NObsr-43335, dated 15 June 1949 (RBA-5a).  
 Approximate Cost: \$3000.00 with equipment spares.

**REFERENCE DATA AND LITERATURE**

NAVSHIPS 900,473: Technical Manual for Radio Receiving Equipments RBA, RBA-1, RBA-2 and RBA-3.  
 NAVSHIPS 900,708: Technical Manual for Radio Receiving Equipment RBA-5 and RBA-6.  
 NAVSHIPS 91319: Technical Manual for Radio Receiving Equipment RBA-5a, RBB-2a and RBC-3a.

**TUBE AND/OR CRYSTAL COMPLEMENT**

- (4) 6SK7
- (1) 6J5
- (2) 6SJ7
- (1) OC3/VR-105-30
- (1) 6K6GT
- (1) 5U4G

Total Tubes: (10)

TYPE CLASSIFICATION  
 DESIGN COGNIZANCE BUSHIPS  
 PROCUREMENT COGNIZANCE  
 STOCK NO.

**SHIPPING DATA**

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION   | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---|-----------------|-----------------------------|----------------------|
| 1               | Radio Receiver and Rectifier Unit including Spare Parts and Accessories RBA, RBA-1, RBA-2, RBA-3, RBA-5, RBA-5a, or RBA-6 | 28              | 28 X 32 X 56                | 365                  |

**EQUIPMENT SUPPLIED DATA**

| QUANTITY PER EQUIPT         | NAME AND NOMENCLATURE          | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|-----------------------------|--------------------------------|-----------------------------|---------------|
| RBA <sub>1</sub><br>1, 2, 3 | RBA-1                          |                             |               |
| 5                           | Radio Receiver NT-46154        |                             |               |
| 5a                          | Radio Receiver NT-46154A       |                             |               |
| 6                           | Radio Receiver NT-46154A (MOD) |                             |               |

December 1956

RADIO RECEIVING EQUIPMENT RBA,RBA-1,2,3,5,5a,6

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT |            | NAME AND NOMENCLATURE              | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|------------|------------------------------------|-----------------------------|---------------|
| RBA, 1,2,3          | RBA-5 5a 6 |                                    |                             |               |
|                     | 1          | Radio Receiver NT-46300            |                             |               |
|                     | 1          | Cabinet, Rack Mounting NT-10348A   |                             |               |
| 1                   |            | Rectifier Unit NT-20130            |                             |               |
|                     | 1          | Rectifier Unit NT-20130-B          |                             |               |
|                     | 1          | Rectifier Unit NT-20130-B (MOD)    |                             |               |
| 1                   | 1          | Cable, Power NT-49162              |                             |               |
|                     | 1          | Cable, Power NT-49162 (MOD)        |                             |               |
| 1                   | 1          | Plug, Concentric NT-49121          |                             |               |
| 1                   | 1          | Plug, Output NT-49160              |                             |               |
| 1                   | 1          | Adapter NT-49152                   |                             |               |
|                     | 1          | Adapter NT-49509                   |                             |               |
| 1                   | 1          | Plug, Power Input                  |                             |               |
| 1                   | 1          | Set Mounting Hardware (Receiver)   |                             |               |
| 1                   | 1          | Set Mounting Hardware (Power Unit) |                             |               |
| 1                   | 1          | Set Equipment Spare Parts          |                             |               |
| 2                   | 2          | Technical Manual                   |                             |               |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-----------------------|-----------------------------|---------------|
|                     |                       |                             |               |
|                     |                       |                             |               |
|                     |                       |                             |               |

June 1961

Radio-Receivers

## RADIO RECEIVER

RBA-4

## FUNCTIONAL DESCRIPTION

The RBA-4 is designed for use aboard vessels of the United States Navy and at Naval Radio Shore Stations. It is designed for the reception of pure modulated or interrupted continuous-wave radio frequency signals in the range of 15 to 600 Kilocycles (KC). The receiver is of the tuned radio frequency type and employs three stages of radio frequency amplification, a triode detector, a heterodyne oscillator, and three audio-frequency amplifier stages.

No field changes in effect at time of preparation (7 March 1960).

## ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF CIRCUIT: Superheterodyne.

NUMBER OF BANDS: 4 bands.

POWER OUTPUT: 50 milliwatts, max undistorted into 600-ohm load; 500 milliwatts, max undistorted into 30-ohm load.

OPERATING FREQUENCY RANGE: 15 to 600 kc.

OPERATING POWER RQMT: 110, 115, 120 v AC, 55 to 65 cps, single ph.

## MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telephone and Radio Corp., Newark, New Jersey.

## TUBE AND/OR CRYSTAL COMPLEMENT

(1) OC3W (1) 5U4GB (2) 65J7Y  
(1) 6J5 (1) 6K6GT (4) 6SK7WA

Total Tubes: (10)

No Crystals used.

## REFERENCE DATA AND LITERATURE

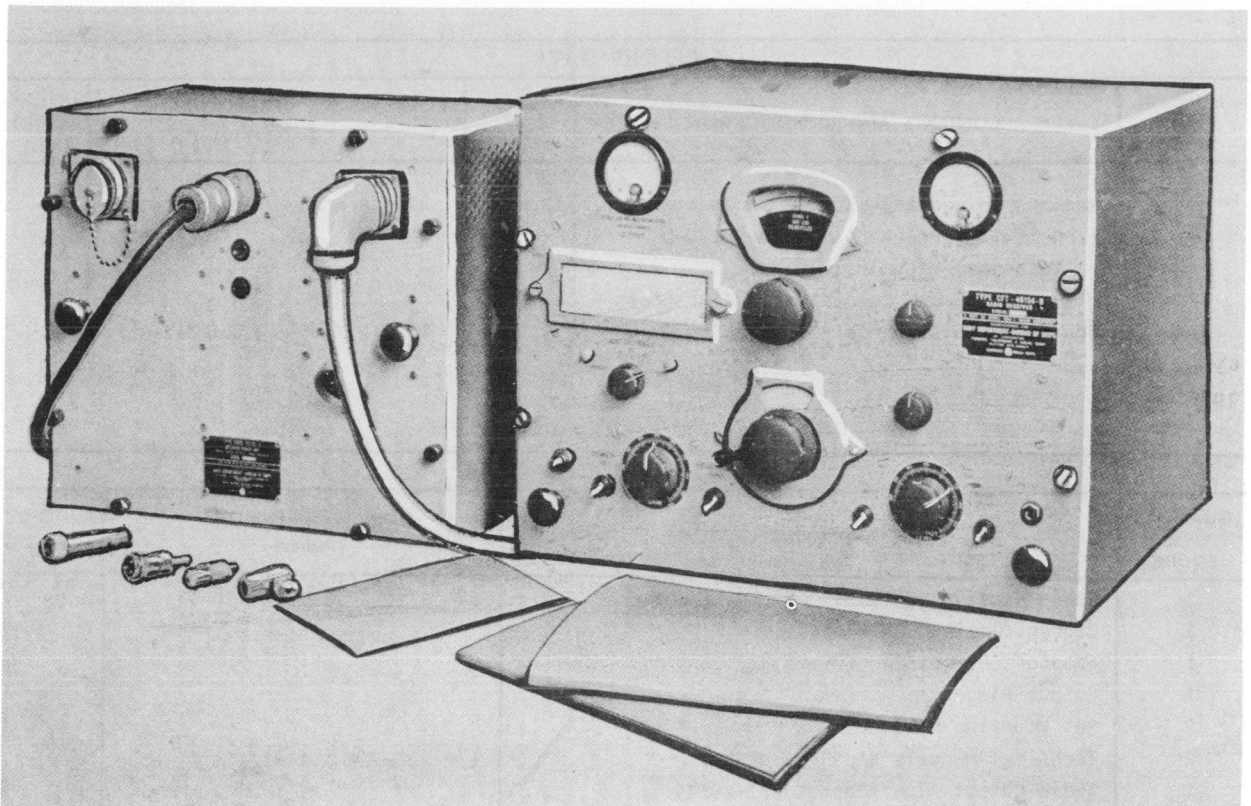
NAVSHIPS 900,123(B): Technical Manual for Naval Electronic Equipments.

TYPE CLASSIFICATION (NAVY)  
DESIGN COGNIZANCE BUSHIPS  
PROCUREMENT COGNIZANCE  
STOCK NO.  
R.D.B. IDENT. NO.

## EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIP | NAME AND NOMENCLATURE    | OVERALL DIMENSIONS (inches)  | WEIGHT (lbs.) |
|--------------------|--------------------------|------------------------------|---------------|
| 1                  | Radio Receiver RBA-4     | 13-31/32 X 17-19/64 X 18-1/8 | 95            |
| 1                  | Power Unit               | 9-3/4 X 13-1/2 X 15          | 52            |
| 1                  | Rack Mounting            | 8-29/32 X 14-9/32 X 19       | 53            |
| 1                  | Set of Mounting Hardware |                              |               |
| 1                  | Set of Equipment Spares  |                              |               |

December 1956

**RADIO RECEIVER EQUIPMENT****RBA-7***Radio Receiver Equipment RBA-7***FUNCTIONAL DESCRIPTION**

The RBA-7 is a long-wave communications receiver designed for use aboard ship or land-based stations. The equipment covers the range of 14.5 to 600 kc.

Data on this sheet reflects the following field changes, FC-3 (6 August 1956).

**RELATION TO OTHER EQUIPMENT**

Equipment Required but not Supplied: (1) headset, (1) headset plug, (1) antenna system.

**ELECTRICAL AND MECHANICAL CHARACTERISTICS**

**TYPE OF RECEPTION:** A1, A2 and A3.  
**FREQUENCY RANGE:** 14.5 to 600 kc.  
**FREQUENCY BANDS:** Four, 15 to 38 kc, 38 to 95 kc, 95 to 235 kc, 235 to 600 kc.  
**RECEIVER OUTPUT:** 50 mw into 600 ohms or 500 mw into 30 ohm load.  
**POWER SOURCE REQUIRED:** 115 v AC, 55 to 65 cps, single ph.

**MANUFACTURER'S OR CONTRACTOR'S DATA**

Federal Telephone and Radio Corp., Clifton, N.J.

Contract NObsr 52110, dated 26 May 1952.  
 Approximate Cost: \$2900.00 with equipment spares

**TUBE AND/OR CRYSTAL COMPLEMENT**

|                   |            |             |
|-------------------|------------|-------------|
| (1) 5U4G          | (1) 6J5WGT | (1) 6K6GT/G |
| (2) 6SJ7          | (4) 6SK7W  | (1) OC3W    |
| Total Tubes: (10) |            |             |

**REFERENCE DATA AND LITERATURE**

NAVSHIPS: Technical Manual for Radio Receiver Equipment Model RBA-7.

|                        |         |
|------------------------|---------|
| TYPE CLASSIFICATION    |         |
| DESIGN COGNIZANCE      | BUSHIPS |
| PROCUREMENT COGNIZANCE |         |
| STOCK NO.              |         |

RBA-7

## RADIO RECEIVER EQUIPMENT

December 1956

## SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION  | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1               | Radio Receiver CFT-46154-B including:<br>Rectifier Power Unit CB00-20130-D<br>Technical Manuals (2)<br>Set of Plugs, Connectors and Adapters | 13.4            | 22-5/8 X 25-3/8 X 40-1/4    | 270                  |
| 1               | Equipment Maintenance Parts  | 3.1             | 11-1/2 X 15-3/8 X 27-7/8    | 92                   |

## EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE               | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-------------------------------------|-----------------------------|---------------|
| 1                   | Radio Receiver CFT-46154-B          | 14-23/32 X 18-1/2 X 20-9/16 | 98            |
| 1                   | Concentric Plug CFT-49121           |                             |               |
| 1                   | Adapter CFT-49152                   |                             |               |
| 1                   | Output Plug                         |                             |               |
| 2                   | Set Mounting Hardware               |                             |               |
| 2                   | Technical Mwnuals NAVSHIPS 91559    | 1/2 X 8-7/8 X 11-1/2        |               |
| 1                   | Audio Output Plug Adapter CFT-49509 |                             |               |
| 1                   | Set Equip. Maintenance Parts        | 9-3/16 X 13-1/4 X 25-3/4    | 70            |
| 1                   | Rectifier Power Unit CB0G-20130-D   | 9-3/4 X 13-1/2 X 15         | 52            |
| 1                   | Interconnecting Power Cable (6 ft)  |                             |               |
| 1                   | Power Input Plug                    |                             |               |