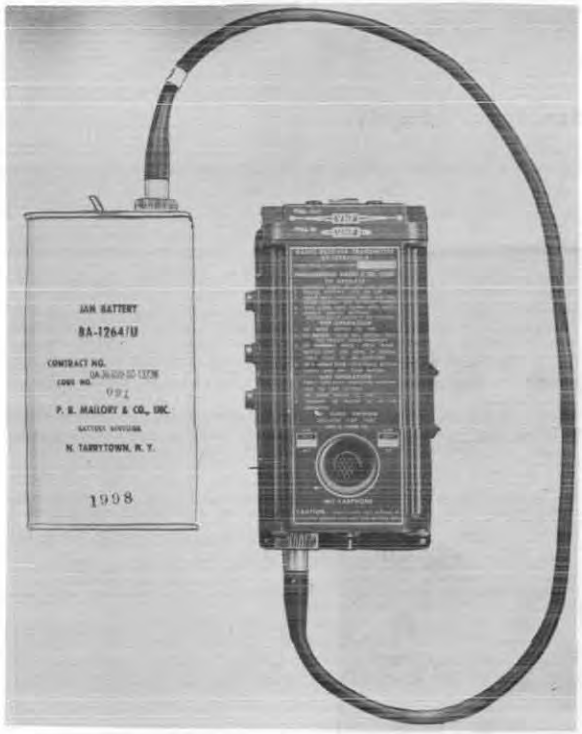
April 1958

Radio-Transceivers

RADIO RECEIVER-TRANSMITTER RT-159B/URC-4



Radio Receiver-Transmitter RT-159B/URC-4

FUNCTIONAL DESCRIPTION

The RT-159B/URC is a sub-miniature radio receiver-transmitter used for air rescue. This unit is used with any air-borne communication equipment which operates over the standard VHF and UHF air rescue frequencies. The RT-159B/URC-4 may be included in the air rescue kit or may be an item of personal issue.

No field changes in effect at time of preparation (6 March 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 121.5 mc and 243 mc.
POWER
VHF: 75 mw.
UHF: 45 mw.
MODULATION: AM voice and square wave tone.
ANTENNA DATA
TYPE: Tubular dipole, adjustable.
IMPEDANCE: 51 ohms nominal.
EMISSION: Voice and tone.
POWER SOURCE REQUIRED: Battery BA-1264/U.

MANUFACTURER'S OR CONTRACTOR'S DATA

Philharmonic Radio and Television Corp, New Brunswick, N.J.
Contract: AF33(600)-21243, dated 30 June 1952.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 6147 (1) 304 (4) 6050 (1) 2E32
Total Tubes: (8)
(1) CR-24/U
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

T.O. 16-30 URC-4-2: Handbook Operation and Service Instrustions for Radio Receiver-Transmitter AN/URC-4.

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE MIL-R-6373B (USAF)
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Receiver-Transmitter RT-159B/URC-4	0.074	3-1/2 X 4 X 8	3-1/2

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Receiver-Transmitter RT-159B/URC-4	2-1/4 X 3-3/4 X 6-3/4	
1	Battery BA-1264/U		
1	Special Purpose Cable Assy CX-1093A/U	30 lg	
1	Special Purpose Cable Assy CX-1093A/U	66 lg	

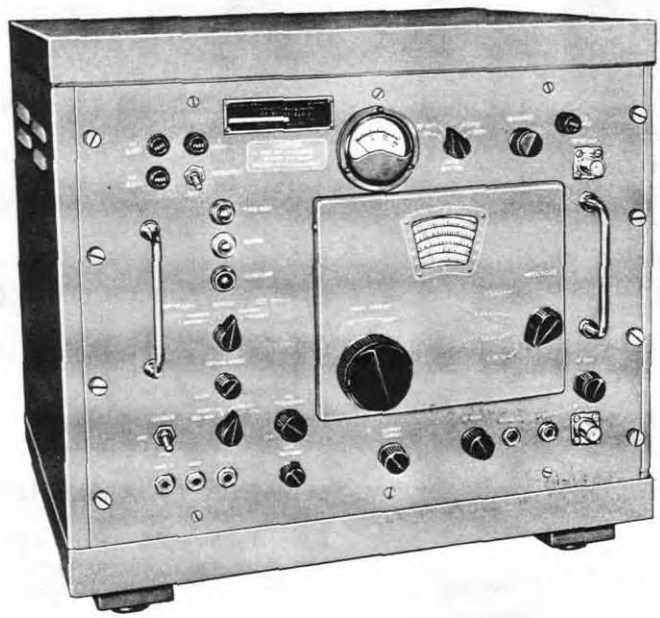
24 July 1962
Cog Service: TASSA FSN:

RADIO RECEIVER-TRANSMITTER RT-260A/GLQ-2
Functional Class:

USA	USN	USAF

TYPE CLASS: Used by Used by

MANUFACTURER'S NAME/CODE NUMBER: Barker & Williamson Inc., (05690).



Radio Receiver-Transmitter RT-260A/GLQ-2

FUNCTIONAL DESCRIPTION:

The Radio Receiver-Transmitter RT-260A/GLQ-2 is designed to provide reception of victim signal and excitation to transmitter at victim frequency. It is a countermeasures equipment that is used primarily to jam signals from Amplitude Modulated (AM) and continous wave (CW) transmitters operating over a frequency range 1.5 to 20 megacycles (MC).

No field changes in effect at time of preparation (30 January 1962).

TECHNICAL CHARACTERISTICS:

TYPE OF EMISSION: A1, A2 and F3 type.
OUTPUT POWER: 0.5 W.
FREQUENCY RANGE: 1.5 to 20 mc.
RECEIVER DATA
TYPE: Superheterodyne, am.

TYPE OF SIGNALS TRACKED: CW, tone and voice.
INTERMEDIATE FREQUENCY: 465 kc.
SENSITIVITY: 5 microvolts.
OUTPUT IMPEDANCE: 4, 8, 16, 150 or 600 ohms.
TYPE OF ANTENNA: Whip.

TRANSMITTER DATA

TYPE OF SIGNALS: CW, tone and voice.
TYPE OF MODULATION: Narrow-band FM (tones or voice) or CW.
MAXIMUM DEVIATION: Porm 3 kc.
OUTPUT IMPEDANCE: 1,000 ohms.
POWER OUTPUT: Approx. 1 W.
TRACKING RANGE WITHOUT RETURNING: Porm 1,200 cycles.

NUMBER OF BANDS: 4 bands.

OPERATING POWER RQMT: 115 v ac, 50 to 60 cps, single ph.

RELATION TO OTHER EQUIPMENT:

The RT-260A/GLQ-2 is designed as part of Radio Set AN/GLQ-2.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBER	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Radio Receiver-Transmitter RT-260A/GLQ-2		14 x 17-1/2 x 19	

REFERENCE DATA AND LITERATURE:

TM11-640A: Technical Manual for Radio Set AN/GLQ-2 of which Radio Receiver-Transmitter RT-260A/GLQ-2 is a part of.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (2) 576/6AL5W (2) 6C4W (6) 5749/6BA6W (5) 5750/6BE6W (2) 6AH6 (1) 2E26 (4) 6005/6AQ5 (1) 12AT7WA (3) 5Y3WGTA (2) 6AS7G (1) 0B2 (2) 991 (1) 6S4 (1) 2D21W

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

SHIPPING DATA

PKGS	VOLUME (CU FT)	WEIGHT (LBS)

PROCUREMENT DATA

PROCURING SERVICE: TASSA (Sig C) DESIGN COG: TASSA
SPEC &/OR DWG: MIL-R-11437 (Sig C)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Barker & Williamson Inc.	Upper Darby, Pa.	3472-PH-52	

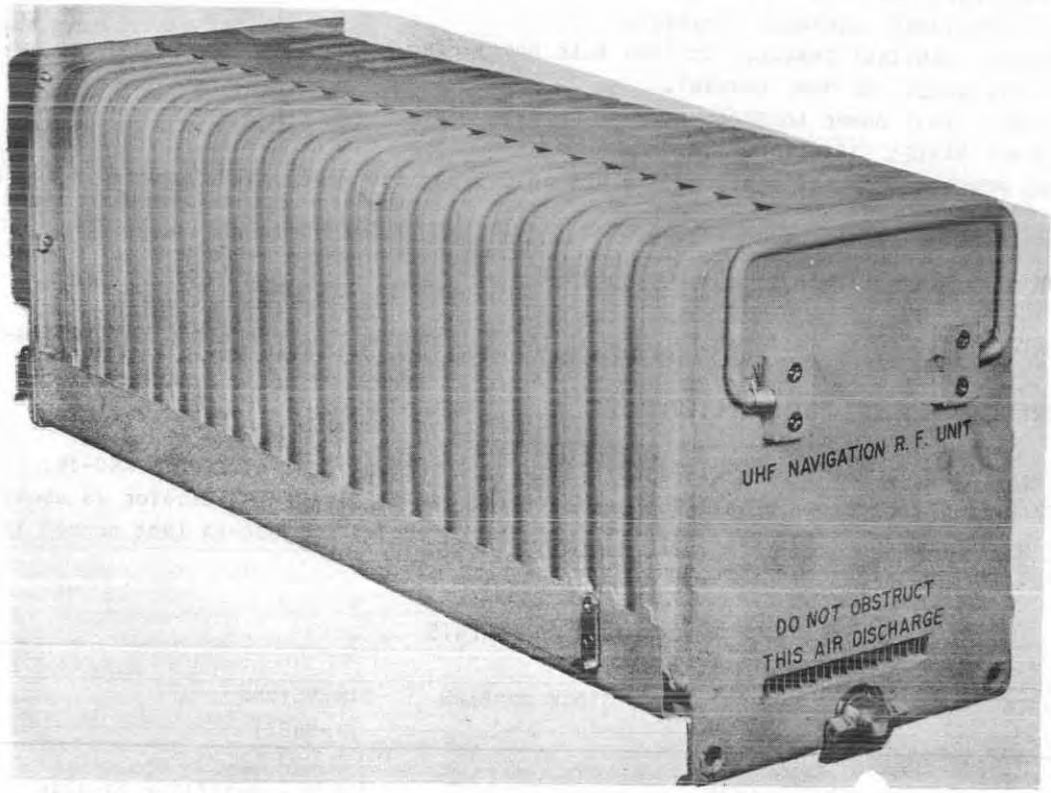
28 August 1962
Cog Service: FSN:

RADIO, RECEIVER-TRANSMITTER RT-547/ASQ-19
Functional Class:

USA USN USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Collins Radio Company.



Radio, Receiver-Transmitter RT-547/ASQ-19

FUNCTIONAL DESCRIPTION:

The Radio, Receiver-Transmitter RT-547/ASQ-19 is an Ultra-High Frequency TACAN (Tactical Air Navigation) transmitter and receiver; designed to operate in the frequency range of 1025 to 1150 megacycles (MC). It provides reception and transmission of TACAN signals.

No field changes in effect at time of preparation (2 August 1961).

TECHNICAL CHARACTERISTICS:

RECEIVER DATA

TYPE OF EMISSION: P9 type.
NUMBER OF CHANNELS: 126 channels.
CHANNEL SELECTION TIME: 9 seconds max.
TYPE OF FREQUENCY CONTROL: Crystal.
METHOD OF FREQUENCY CHANGE: Collins Auto positioner.

R.F. IMPEDANCE: 52 ohms coaxial.
ALTITUDE: Full power to 70000 ft.
FREQUENCY RANGE: 962 thru 1024 mc and 1151 thru 1213 mc.

TRANSMITTER DATA

TYPE OF EMISSION: P2 d type.
NUMBER OF CHANNELS: 126 channels.
CHANNEL SELECTION TIME: 9 seconds max.
TYPE OF FREQUENCY CONTROL: Crystal.
METHOD OF FREQUENCY CHANGE: Collins Auto positioner.
R.F. IMPEDANCE: 52 ohms coaxial.
ALTITUDE: Full power to 70000 ft.
FREQUENCY RANGE: 1025 thru 1150 mc.

OPERATING POWER RQMT: 115 v ac, 380 to 420 cps, 3 ph; 430 v dc, 140 v dc, 130 v dc, 27.5 v dc.

RELATION TO OTHER EQUIPMENT:

The RT-547/ASQ-19 is designed as part of the Integrated Electronic Central AN/ASQ-19.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Power Supply (Amplifier) AM-2349/ASQ-19; (1) Central Control C-3076/ASQ-19; (1) Headset H-87/U; (1) Indicator ID-387 (Not needed if AN/ARM-31 Test Set Indicator is used); (1) UHF Navigation Antenna; (1) Bearing-Distance Heading Indicator 331C-4A (Not needed if AN/ARM-31 Test Set Indicator is used).

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Radio, Receiver-Transmitter RT-547/ASQ-19		7-1/2 x 8-17/32 x 22-9/16	40

REFERENCE DATA AND LITERATURE:

NAVWEPS 16-35RT547-1: Technical Manual for Radio Receiver-Transmitter RT-547/ASQ-19.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (1) 3E29 (1) 5636 (1) 5654 (2) 5687 (1) 5718 (1) 5814A (8) 5840
(2) 6AN4 (1) 6110 (1) 6111 (1) 6112 (5) 6442

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

SHIPPING DATA

PKGS	VOLUME (CU FT)	WEIGHT (LBS)

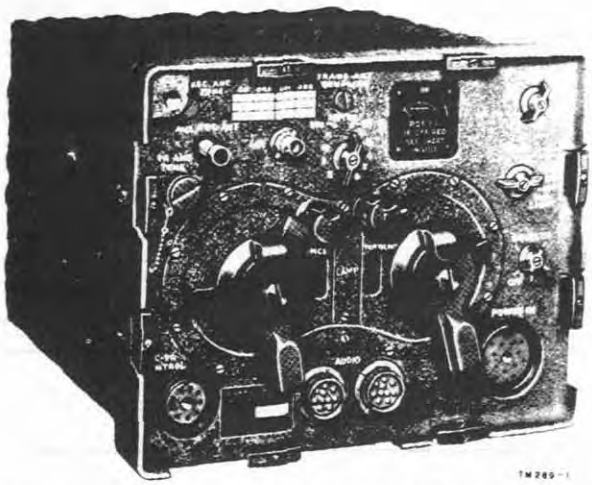
PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/OR DWG:

DESIGN COG: BuWeps

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Collins Radio Company Pt/Dwg no. 542 4999 004	Cedar Rapids, Iowa	NOas 59-0245	

RECEIVER-TRANSMITTER RT-66/GRC, 67/GRC,68/GRC



Receiver-Transmitter RT-66/GRC 67/GRC 68/GRC

FUNCTIONAL DESCRIPTION

The RT-66/GRC, RT-67/GRC and RT-68/GRC are compact, lightweight radio sets designed for the transmission and reception of frequency modulated signals. The sets are arranged for use in either vehicular, semi-fixed, or portable installations. When suitably powered and equipped with an antenna and a microphone and a headset (or a handset), each receiver-transmitter provides two-way communication with smaller vehicular, ground or portable equipment.

The RT-66/GRC, RT-67/GRC and RT-68/GRC are all similar in function, structure, detailed circuit and mechanical arrangement. They differ from each other primarily in their operating frequency ranges and in those components which determine the frequency ranges.

The equipments can also be used to provide retransmission facilities for radio telephone, telegraph and facscimile signals.

No field changes in effect at time of preparation (1 August 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) microphone, (1) headset or handset with a push-to-talk-button, (1) loudspeaker (optional), (1) antenna with mounting components and hardware (1) power supply, suitable control boxes, mounting facilities, connecting cables and a set of spare parts.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE
- RT-66/GRC: 20 to 27.9 mc.
- RT-67/GRC: 27 to 38.9 mc.
- RT-68/GRC: 38 to 54.9 mc.

TYPE OF SIGNALS: FM voice and 1600 cps ringing.

TYPE OF TUNING: Choice of detent or preset channels or continuous tuning.

NUMBER OF DETENT CHANNELS AVAILABLE.
- RT-66/GRC: 80.
- RT-67/GRC: 120
- RT-68/GRC: 170.

NUMBER OF PRESET DETENTED CHANNELS: 2.

CHANNEL SPACING: 100 kc.

COMMUNICATION RANGE
- VEHICLES IN MOTION: 10 miles approx.
- STATIONARY VEHICLES: 15 miles approx.

ANTENNA: Whip.

TYPE OF OPERATION: Push-to-talk; transmitter normally off.

OPERATING POWER REQUIREMENTS: 6.3 v, 5-6 v, 85 v, 105 v, 150 v, 250 v, 950 v DC.

MANUFACTURER'S OR CONTRACTOR'S DATA

RT-66/GRC, RT-67/GRC, RT-68/GRC
Federal Telegraph and Radio Corporation, Clifton, New Jersey
RT-66/GRC-part/DWG-GA2514-14-GR1
Contract MIPR 800-53024, dated 30 November 1954.
Contract MIPR-800-5306, dated 23 February 1955.
Approximate Cost: $960.00 with equipment spares.
Pt/Dwg-GA-2514-14-GRII
RT-67/GRC
Contract MIPR-800-19547, dated 18 May 1954.
Contract MIPR-800-39194, dated 26 May 1953.
Contract MIPR-800-53006, dated 4 August 1954.
Approximate Cost: $960.00 with equipment spares.
Pt/Dwg-2514-14-GRIII
RT-68/GRC
Contract MIPR-800-29092, dated 23 June

RT-66/GRC, 67/GRC,68/GRC

RECEIVER-TRANSMITTER

1952.
Contract MIPR-800-29620, dated 16 March 1955.
Contract MIPR-800-53006, dated 4 August 1954.
Approximate Cost: $850.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 1R5	(2) 1A3	(2) 1AE4
(3) 1L4	(1) 1S5	(3) 1U4
(1) 2E24	(1) 3A4	(3) 3A5
(2) 3B4	(4) 3Q4	(1) 6AK5

Total Tubes: (27)

RT-66/GRC	RT-67/GRC	RT-68/GRC
(8) CR-18/U	(12) CU-18/U	(17) CR-18/U

Total Crystals: (8) Total (12) Total (17)

REFERENCE DATA AND LITERATURE

TM11-289, T016-35RT66-5 Army and Air Force Technical Manual for Receiver-Transmitters-RT-66/GRC, RT-67/GRC, RT-68/GRC.

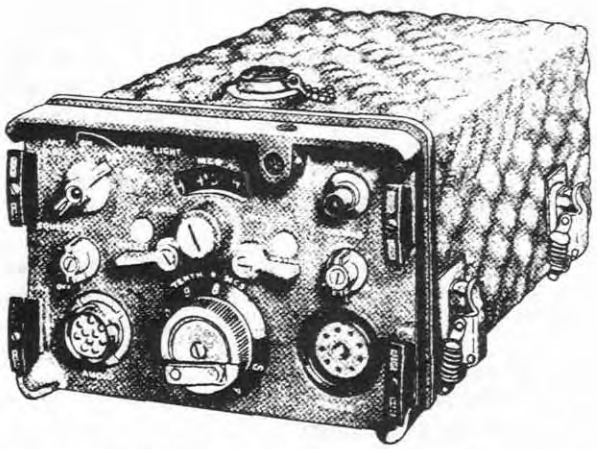
TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Receiver-Transmitter RT-66/GRC or RT-67/GRC or RT-68/GRC	9-1/4 X 11-1/4 X 12-7/8	35

March 1957

RECEIVER-TRANSMITTER RT-70/GRC



Receiver-Transmitter RT-70/GRC

FUNCTIONAL DESCRIPTION

The RT-70/GRC is a small, lightweight radio set, less power supply and accessory equipments, designed for use in portable, ground or vehicular installations. When suitable powered the set provides two-way communication with similar portable, ground or mobile equipments over a range up to 1 mile. The receiver-trsnsmitter operates in the frequency range of 47 to 58.4 mc and uses frequency modulation. The communication circuit is of the push-to-talk type.

The RT-70/GRC may be used as a component of a portable field set such as Radio Set AN/PRC-16, as part of a vehicular installation such as Radio Set AN/VRC-7 or as part of systems such as Radio Sets AN/GRC-3 through-8.

No field changes in effect at time of preparation (1 August 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Microphone, (1) headset or handset with a push-to-talk button, an antenna with mounting components and hardware, a 90 and 6 volt power source, interconnecting cables.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 47 to 58.4 mc.
TYPE OF SIGNALS: Voice, FM.
RANGE: 1 mile.
PRESET CHANNELS: 2.
CHANNEL SPACING: 100 kc.
NUMBER OF CHANNELS: 115.
TRANSMITTER
  POWER OUTPUT: 500 milliwatts.
  MODULATION FREQUENCY DEVIATION: ±20 kc at 1000 cps with .25 volt input.
RECEIVER
  TYPE: Double conversion superheterodyne
  1ST IF: 15 mc.
  2ND IF: 1.4 mc.
  SENSITIVITY: 25 db signal to noise ratio at 1 uv-15 kc deviation at 1000 cps.
  AUDIO POWER OUTPUT: 75 milliwatt.
OPERATING POWER REQUIREMENTS: 90 v at 80 ma, 6.3 v at 360 ma, 6.3 v at 160 ma; all DC voltages.
ANTENNA: Whip type 50 ohm impedance.

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telephone and Radio Corp., Clifton, New Jersey.
Pt/dwg-GA-2197-14
Contract: MIPR-57-881E-73003, dated 25 June 1956.
Approximate Cost: $340.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 1AE4	(2) 1L4	(2) 1R5
(1) 1S5	(7) 1U4	(1) 3A5
(1) 3B4	(4) 3Q4	

Total Tubes: (19)

(4) CR-18/U
Total Crystals: (4)

REFERENCE DATA AND LITERATURE

TM11-290 Dept. of Army Technical Manual for Receiver-Transmitter RT-70/GRC.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

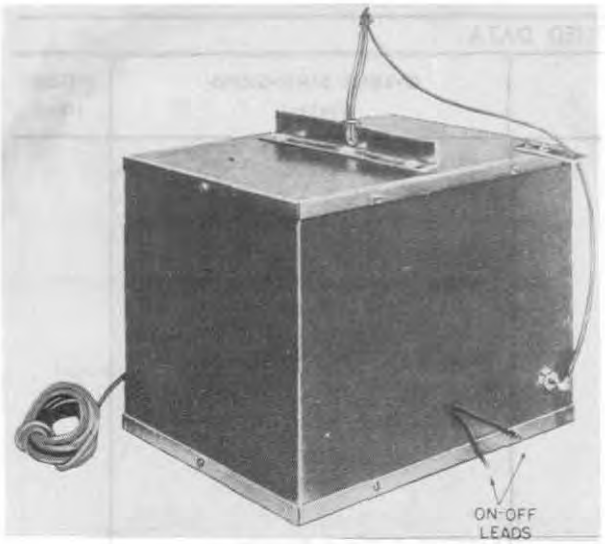
RT-70/GRC RECEIVER-TRANSMITTER

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
(With Radio Set-AN/PRC-16)Portable Installation			
1	Receiver-Transmitter-RT-70/GRC	5-1/4 X 7-7/8 X 12-7/8	
1	Carrying Case CY-590/GRC		
1	Equipment Mounting MT-673/UR		
1	Antenna Mounting MT-652/GR		
1	Mast Section AB-22/GR		
1	Mast Section AB-24/GR		
1	Power Cable Assembly CX-1209/U		
1	Handset w/push-to-talk button H-33( )/PT		
	Technical Manual-TM11-282 or		
(With Radio Set-AN/VRC-7)Vehicular Installation			
1	Receiver-Transmitter RT-70/GRC	5-1/4 X 7-7/8 X 12-7/8	
1	Interphone Amplifier-AM-65/GRC		
1	Power Supply PP-448/GR or PP-281/GRC or PP-282/GRC		
1	Equipment Mounting MT-300/GR		
	Vechicular Antenna components:		
	Mast Base AB-15/GR		
	Mast Section AB-22/GR		
	Mast Section AB-24/GR		
1	Interphone Control Unit Control Box C-375/GRC		
1	Remote Control Equipt. Control Group AN/GRA-6, Inc. Local Control C-434/GRC Remote Control C-433/GRC(optional)		
1	RF Cable Assembly CG-530/U	50	
1	Special Purpose Cable WM-46/U		
1	Special Purpose Cable Assembly CX-1213/U		
1	Connector and Bondnut (Appleton Electric Co. No. 61007 and BL-50) or equal		
1	Adapter UG-273/U		
1	Adapter UG-306/U		
1	Bag CW-206/GR		
1	Case CY-684/GR		
	Technical Manual TM11-285		
1 set	Spare Parts-		
	Tools:		
	Allen Wrench #6 and #10		
	Tube Puller		

Radio-Transceivers

RECEIVER-TRANSMITTER RT-81/AM



Receiver-Transmitter RT-81/AM

FUNCTIONAL DESCRIPTION

The RT-81/AM is a transponder that provides a means of determining altitude and upper air wind velocity and direction when attached to a free balloon, and tracked by wind Sounding Set AN/GMQ-5. It is an expendable, self-contained unit enclosed in a lightweight, weather-resistant aluminum case.

No field changes in effect at time of preparation (9 September 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Balloon, (1) Parachute, (1) Battery Filler, Helium Gas as Required.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY DATA

RECEIVE: 27.75 mc.
TRANSMIT: 111.25 mc.
POWER OUTPUT: 15 mw.
TYPE MODULATION
RECEIVE: FM ±10 kc.
TRANSMIT: FM, AM at 300, 420, 590 cps.
POWER REQUIREMENTS: 3.6 and 88 v battery pack.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corporation, New York, N.Y.
Contract N5sa-7263.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 1LN5 (1) 1R5 (1) 3D6 (3) 3E6
Total Tubes: (6)

REFERENCE DATA AND LITERATURE

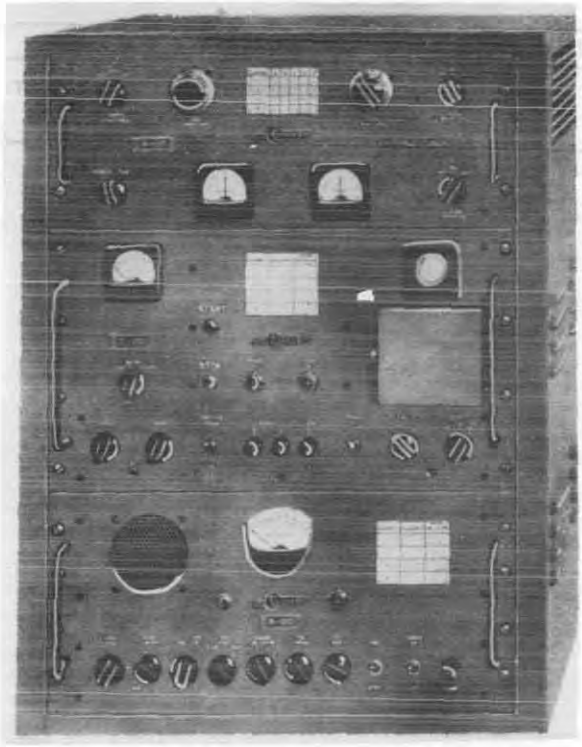
NAVSHIPS 900616(A): Technical Manual for Radio Wind Sounding Set AN/GMQ-5.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Receiver-Transmitter RT-81/AM including: Wet Battery NT-19048	6-1/2 X 7-1/8 X 7-3/8	2.4

RADIO SET S-100



Radio Set S-100

FUNCTIONAL DESCRIPTION

The Eldico S-100 is a single sideband Transmitter/Receiver system consists of four individual units. These are the M-100 Antenna Tuner, the T-100 Transmitter, The R-100 Receiver and the M-102 microphone bias supply. The four units comprise the S-100 system are supplied as an integral unit in a steel rack cabinet. Provision is made for easy servicing, all majors units can be rolled out on slides.

Remote control features have been incorporated so that the complete system can be operated from one or more distant locations. Operating in either single sideband, amplitude modulation or continuous wave. The S-100 system is compatible with any and all existing communications equipment. Frequency coverage of the system is from 2.2 to 30.0 mc in four pre-selected channels. Any oscillators which contribute to the frequency stability in both the receiver and transmitter are crystal controlled. The more critical oscillators are equipped with oven controlled crystals, with variable padder capacitors for exact frequency adjustment.

No field changes in effect at time of preparation (16 June 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

RECEIVER SENSITIVITY: 5 uv for 10 db signal-to-noise ratio at 1 W audio output.
RECEIVER SELECTIVITY: 2.9 kc at 6 db down, 7.0 kc at 50 db down.
IMAGE REJECTION: +50 db.
RECEIVER NOISE LIMITER: IF noise limiter, adjustable threshold, automatic signal reference on AM and SSB/CW.
TRANSMITTING MODES: Single sideband, suppressed carrier, one sideband with carrier AM, continuous wave CW.
TRANSMITTER POWER OUTPUT
PEAK ENVELOPE POWER: 100 W.
CW OUTPUT: 50 W.
AM OUTPUT: 20 W.
TRANSMITTER BANDWIDTH: 3.3 kc at 6 db points on voice signals.
TRANSMITTER CARRIER ATTENUATION: +50 db.
NUMBER OF CHANNELS: 4 channels.
NUMBER OF BANDS: 1 band.
OPERATING POWER REQUIREMENTS: 117 v, 60 cps, 1 ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Eldico Electronics, Long Island City, N.Y.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tube or Crystal data available.

REFERENCE DATA AND LITERATURE

The Eldico Mfg Co Technical Manual for S-100 Radio Set.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUSHIPS
PROCUREMENT COGNIZANCE	
STOCK NO.	

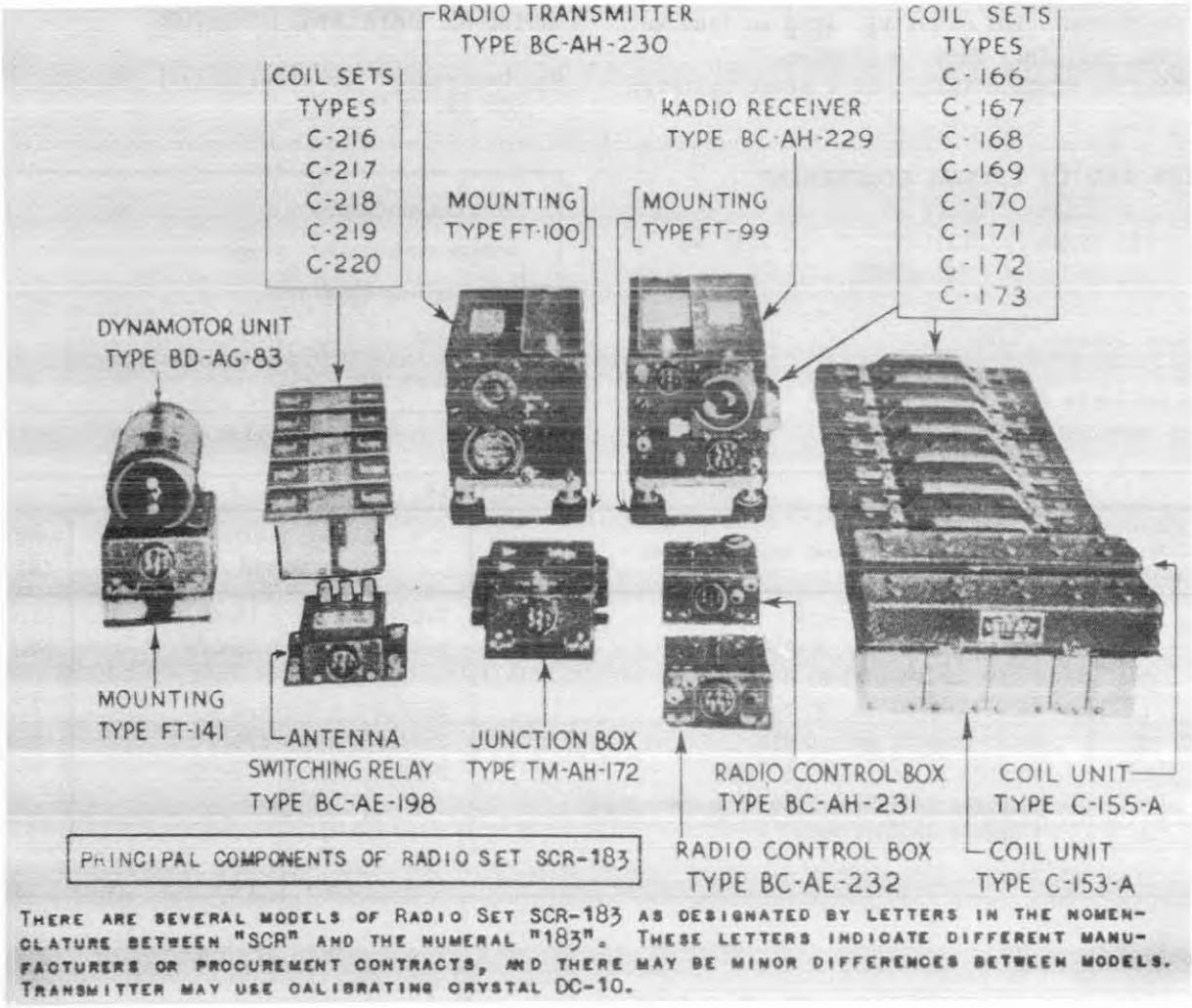
Radio-Transceivers
S-100

RADIO SET

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	S-100 Radio Set including:	19 X 21-3/4 X 28	175
1	T-100 Transmitter		
1	R-100 Receiver		
1	M-100 Antenna Tuner		
1	M-102 DC Supply Remote Control Unit		

RADIO SET SCR-183



Radio Set SCR-183

FUNCTIONAL DESCRIPTION

The SCR-183 is designed as a two-way communication airborne radio frequency receiver and transmitter, used for the reception and transmission of modulated continuous wave (mcw) and voice signals over the frequency range of 201 to 7700 kilocycles (kc).

No field changes in effect at time of preparation (13 August 1958).

RELATION TO OTHER EQUIPMENT

The SCR-183 is similar to the SCR-283 except that the SCR-183 uses a 12 v airplane battery for power and the SCR-283 uses a 24 v airplane battery for power.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF SIGNAL: CW; Tone, Voice.
COMMUNICATION RANGE
  PLACE-TO-PLANE: 30 to 45 miles.
  PLANE-TO-GROUND: 10 to 20 miles.
TYPE OF TUNING: (MO or XTAL) MO.
ANTENNA
  RECEIVER: 5 ft vertical Mast Antenna.
  TRANSMITTER: "T" or "L" type 16 to 18 ft long.
FREQUENCY RANGE

Radio-Transceivers

SCR-183 RADIO SET

RECEIVER: 201 to 398 kc, 4150 to 7700 kc.
TRANSMITTER: 2500 to 7700 kc.
OPERATING POWER SOURCE: 12 v plane battery.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 39/44 (1) 37 (1) 38
(2) 10 (2) 45SPL

Total Tubes: (10)

No Crystals Used.

REFERENCE DATA AND LITERATURE

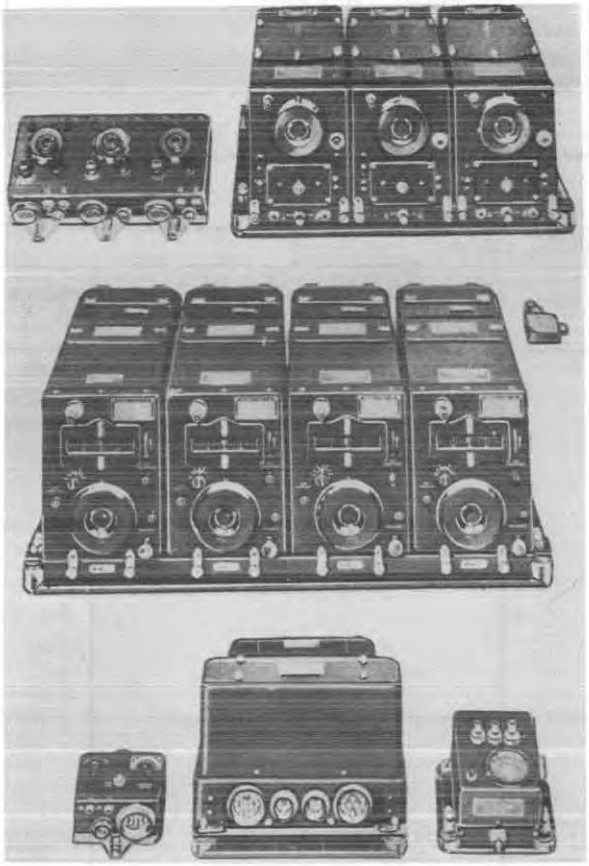
War Department Technical Manual TM11-227 for SCR-183 Radio Set.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.
R.D.B. IDENT. NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Receiver BC-229	7-5/8 X 8-1/4 X 15-11/16	12.0
1	Radio Transmitter BC-230	6-5/8 X 7-5/8 X 13-1/4	10.2
1	Dynamotor Unit BC-83 or BD-83		
1	Radio Control Box BC-231	2-7/16 X 4 X 4-5/8	0.9
1	Radio Control Box BC-232	2-7/16 X 4 X 4-5/8	0.9
1	Antenna Switch Relay BC-198	2-3/4 X 4-9/16 X 4-5/8	1.1
2	Receiver Coil Sets (one is a dual coil)		
6	Transmitter Coil Sets		

RADIO SET SCR-274-N



Radio Set SCR-274-N

FUNCTIONAL DESCRIPTION

The SCR-274-N is a multi-channel aircraft radio receiving and transmitting equipment. It consists basically of a group of three receivers, one to four transmitters, a modulator, and separate control boxes for the groups of receivers and transmitters.

The receiving equipment may be locally or remotely controlled, and the output of the receivers may be paralleled to one line, or fed to two lines for use by more than one operator. A single antenna may be used for all receivers and transmitters.

Racks and mountings of various sizes are supplied, which are suitable for the installation of from one to four receivers, and from one to four transmitters.

No field changes in effect at time of preparation (7 May 1958).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Microphone T-17 or equal, (1) Headset HS-33 or equal, (1) Headset Adapter MC-385 or Series, (1) Storage Battery (28 v DC) (1) Test Set RC-54-A or Series, (1) Test Set RC-55-A or Series.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TRANSMITTER
FREQUENCY: 3 to 4 mc, 4 to 5.3 mc, 5.3 to 7 mc, or 7 to 9.1 mc.
EMISSION: A1, A2, A3.
POWER OUTPUT
RF PEAK POWER: A-1, 40 W; A-3, 20 W.
MODULATION: 85%.
RECEIVER
TYPE: Superheterodyne.
FREQUENCY: 0.19 to 0.55 mc, 3 to 6 mc, or 6 to 9.1 mc.
FEATURES: Manual sensitivity control, built-in auxiliary control circuit.
SENSITIVITY: 7 to 8 uv for 10 mw output into 4000 ohm load.
POWER REQUIREMENTS: 24-28 v DC; 1.6 amp per receiver, 9 amp for 2 transmitters, 2.5 amp standby.
ANTENNA
TYPE: L or T.
SIZE: 50 ft max, 18 ft min.

MANUFACTURER'S OR CONTRACTOR'S DATA

Western Electric Co., New York, N.Y.
Approximate Cost: $1,115.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

Transmitter		
(2) 1625	(1) 1626	(1) 1629
Total Tubes: (4) (each)		
Receiver		
(3) 12SK7		(1) 12K8
(1) 12A6		(1) 12SR7
Total Tubes (6) (each)		
Modulator		
(1) 12J5GT	(1) 1625	(1) OD3
Total Tubes: (3) (each)		

No Crystals used.

SCR-274-N RADIO SET

REFERENCE DATA AND LITERATURE

16-40SCR274-5: Handbook of Maintenance Instructions for Radio Set SCR-274-N.
Technical Manual for Operation and Maintenance of SCR-274-N.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT (No. Installed)				NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	2	3	4	Receiving Equipment		
1	*	1	*	Radio Receiver BC-453-A or B	4-27/32 X 5-17/32 X 7-5/8	5.7
or	*	1	*	Radio Receiver BC-454-A or B	4-27/32 X 5-27/32 X 7-5/8	5.7
or	*	1	*	Radio Receiver BC-455-A or B	4-27/32 X 5-27/32 X 7-5/8	5.7
1	2	3	4	Dynamotor DM-32-A		3.0
1	2	3	4	Adapter FT-230-A or FT-260-A		0.1
		3		Control Unit MC-237-A		0.1
1	2	3	4	Plug PL-192 (for Local Control)		0.13
1	2	3	4	Coupling MC-211-A		0.25
		1		Rack FT-220-A		4.0
		1		Mounting FT-221-A	1-3/8 X 10-23/32 X 16-9/16	1.0
		6		Plug PL-152-A		0.13
		1		Plug PL-147-A		
		1		Plug PL-151-A		
		1		Radio Control Box BC-450-A	2-15/16 X 5-15/32 X 9-1/2	2.7
1	2	3	4	Set of Tubes		
1				Rack FT-233-A		1.3
*				Mounting FT-231-A	1-3/8 X 6-11/16 X 10-23/32	0.7
*				Radio Control Box BC-473-A or B	2-15/16 X 3-1/4 X 5-15/32	0.9
	*			Rack FT-277-A		2.3
	*			Mounting FT-279-A	1-3/8 X 10-23/32 X 11-5/8	0.8
	*			Radio Control Box BC-496-A	2-15/16 X 5-15/32 X 6-3/8	1.7
		*		Mounting FT-278		
		*		Rack FT-264-A		
				Transmitting Equipment		
1	1	1	1	Radio Control Box BC-451-A	2-3/4 X 4-1/8 X 4-3/8	0.9
1	1	1	1	Mounting FT-228-A	1/16 X 3-7/32 X 4-1/8	0.7
1	1	1	1	Plug PL-153-A		0.13
1	1	1	1	Modulator Unit BC-456-A, B or E	7-1/16 X 8-7/8 X 10-3/16	9.0
1	1	1	1	Dynamotor DM-33-A		8.0
1	1	1	1	Mounting FT-225-A	29/32 X 8-7/8 X 10-3/16	0.7
1	1	1	4	Set of Tubes		0.3
1	1	1	1	Plug PL-153-A		
1	1	1	1	Plug PL-148-A		
1	1	1	1	Plug PL-151-A		
1	1	1	1	Plug PL-154-A		
1	1	1	1	Antenna Relay Unit BC-442-A or -AM	4-21/32 X 5-5/8 X 6-9/16	2.2
1	1	1	1	Mounting FT-229-A	29/32 X 5 X 5-5/8	0.7
1	1	1	1	Plug PL-156-A		0.13
1	1	1	1	Tuning Shaft MC-215		
1	1	1	1	Cord		

RADIO SET SCR-274-N

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT (No. Installed)				NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	2	3	4			
1	*	*	1	Radio Transmitter BC-696-A	7-1/4 X 8-13/16 X 15-1/32	8.3
or	*	*	1	Radio Transmitter BC-457-A	7-1/4 X 8-13/16 X 15-1/32	8.3
or	*	*	1	Radio Transmitter BC-458-A	7-1/4 X 8-13/16 X 15-1/32	8.3
or	*	*	1	Radio Transmitter BC-459-A	7-1/4 X 8-13/16 X 15-1/32	8.3
			*	Rack FT-331-A	1-25/32 X 11-13/16 X 23-3/4	4.0
			*	Mounting FT-332-A		1.0
	*			Rack FT-226-A	1-25/32 X 11-13/16 X 12-3/4	2.0
1	*			Mounting FT-227-A	1-25/32 X 11-13/16 X 12-3/4	0.8
1				Rack FT-234-A		1.0
1				Mounting FT-232-A	1-25/32 X 7-1/4 X 11-13/16	0.7
		*		Rack FT-276		
		*		Mounting FT-262		

*Variable, depending upon operating requirements.

December 1956

RADIO SET

Radio Transceiver

SCR-281-A,B,D

Radio Set SCR-281-A,B and D

FUNCTIONAL DESCRIPTION

The SCR-281-A, B, or D is an AM radio telephone transmitter and receiver designed for operation on coastal and harbor vessels or inland stations for communication with such vessels. It cannot be used for radiotelegraph transmission or reception.

The SCR-281-A and B are identical except for the method of coupling the oscillator and mixer stages. The SCR-281-D is the same as the A and B except for having minor differences in circuit wiring.

No field changes in effect at time of preparation (19 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE
TRANSMITTER: 1700 to 2750 kc.
RECEIVER: 1700 to 2750 kc.
TYPE SIGNALS EMITTED: AM, voice.
TYPE SIGNALS RECEIVED: AM, voice, mcw.
TYPE MODULATION: Amplitude.
PERCENTAGE MODULATION: 90%.
DISTANCE RANGE: 10 mi. overland, 25 mi. over water.
TYPE TRANSMITTER: Crystal-controlled, plate and screen-modulated.
TYPE RECEIVER: AM superheterodyne.
TRANSMITTER POWER OUTPUT: 25 W.
POWER INPUT: 115 v, 60 cps, single phase.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 807	(1) 6L7	(1) 6K6G
(2) 6L6	(2) 6K7	(1) 6Q7
(2) 5Z3	(1) 6C5	

Total Tubes: (13)

REFERENCE DATA AND LITERATURE

TM11-244: Technical Manual for Radio Sets SCR-281-A,B and D.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

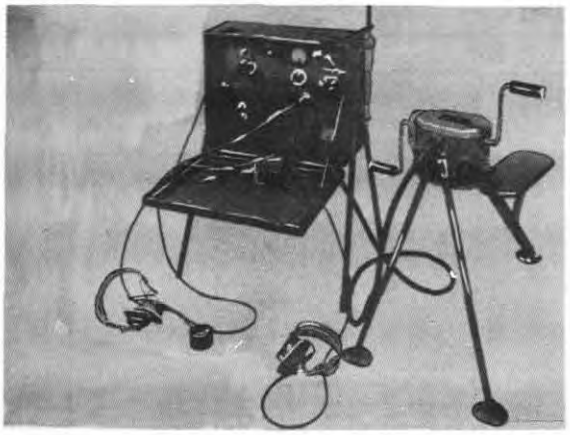
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Set SCR-281-(*)	6	16 x 24-1/2 x 26-1/2	143

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-281-					
A	B	D			
1			Radio Receiver and Transmitter BC-441-A	10 x 16 x 16-1/16	102
	1		Radio Receiver and Transmitter BC-441-B	10 x 16 x 16-1/16	93
		1	Radio Receiver and Transmitter BC-441-D	10 x 16 x 16-1/16	93
1	1	1	Handset		
1	1	1	Snockproof Mounting Bracket	1-7/16 x 2-1/2 x 17-7/8	4
1	1	1	Wall Brackets WML	3/4 x 4-3/4 x 4-3/4	0.65
1	1	1	Wall Brackets WMR	3/4 x 4-3/4 x 4-3/4	0.65
1	1	1	Set Tube Spares		
1	1	1	Set Spare Parts	4-11/16 x 8-11/16 x 21-5/8	8.5

Radio-Transceivers

RADIO SET SCR-284



Radio Set SCR-284

FUNCTIONAL DESCRIPTION

The SCR-284 is a portable self-contained radio transmitter and receiver which can be carried by two or three men or in a vehicle. It is designed for use in the field as a command radio set. The frequency range of the equipment is from 3.8 to 5.8 megacycles. It is capable of CW or voice emission and reception over a distance range of 30 miles on CW and 7 miles on voice operation.

No field changes in effect at time of preparation (1 February 1957).

RELATION TO OTHER EQUIPMENT

Similar to SCR-288.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 3.8 to 5.8 mc.
ANTENNA: 15 ft 5 section fishpole type for vehicular use. 25 ft eight section fishpole type when stationary or for field use "L" type wire.
TUNING: master oscillator with crystal calibrator.
POWER OUTPUT:
HIGH POWER: CW, 20 W; VOICE, 5 W.
LOW POWER: CW, 8 W; VOICE, 2 W.
TYPE OF SIGNAL: CW and VOICE.
DISTANCE RANGE: CW, 30 mi; VOICE, 7 mi.
POWER SOURCE REQUIRED: hand generator GN-45-A or Power Unit PE-103 (12 volt) Recvr by dry batteries or power unit PE-104 (6 or 12 v DC).

MANUFACTURER'S OR CONTRACTOR'S DATA

Crosley Corp., Cincinnati, Ohio

TUBE AND/OR CRYSTAL COMPLEMENT

(8) 3Q5GT
(1) 1H5GT
Total Tubes: (15)
(1) 1A7GT
(2) 307A
(3) 1N5GT

(1) Crystals
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

TM11-227: Technical Manual - Signal Communication Equipment Directory for Radio Communication Equipment.

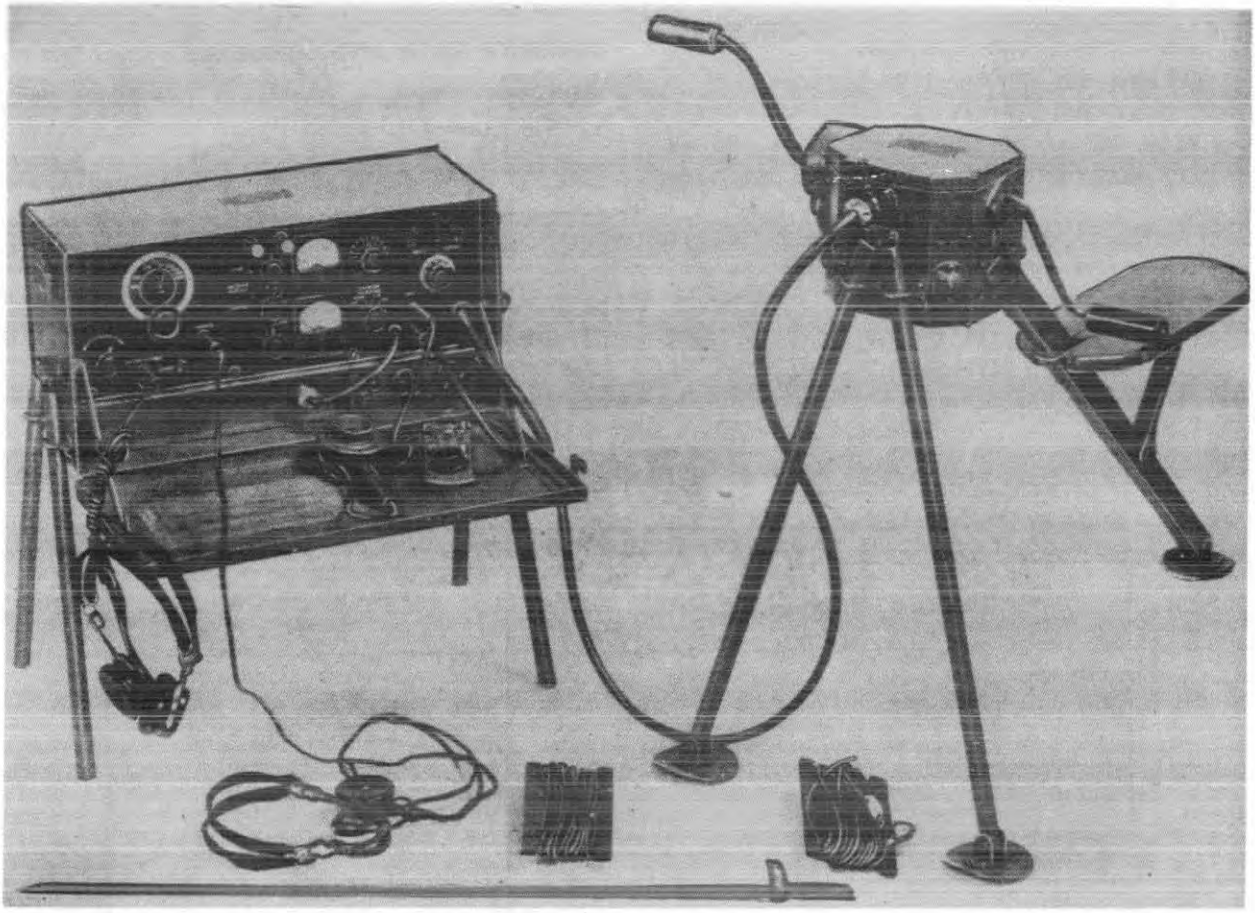
TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Receiver and Transmitter BC-654	9-3/4 x 14 x 18	44
1	Generator GN-45	6-1/4 x 6-3/4 x 9	22
1	Power Unit PE-103	5-1/2 x 12-3/4 x 16-1/2	53
1	Remote Control Unit RM-29	6-1/4 x 8-1/2 x 10-1/8	15

Radio-Transceivers

RADIO SET SCR-288



Radio Set SCR-288

FUNCTIONAL DESCRIPTION

The SCR-288 is a portable amplitude-modulated transmitting and receiving set. The transmitter is designed to operate within the frequency range of 3500 to 6300 Kilocycles and to deliver 4 watts of power into the antenna for either voice-modulated or continuous wave operation. The receiver is designed to operate within the frequency range of 2300 to 6500 Kilocycles on either voice-modulated, tone-modulated or continuous wave operation. The approximate reliable communication range is 15 miles for continuous wave operation and 8 miles for voice-modulated operation. The transmitter power is derived from a hand-operated generator and the receiver power may be obtained either from a dry cell battery pack or from the hand-operated generator.

No field changes in effect at time of preparation (1 February 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TRANSMITTER

FREQUENCY RANGE: 3500 to 6300 kc.
POWER OUTPUT: 4 W.
PERCENT MODULATION: 90%.
FREQUENCY DRIFT: 750 cps, first 5 minutes of operation.

RECEIVER

FREQUENCY RANGE: 2300 to 6500 kc.
SENSITIVITY: 10 uv.
SELECTIVITY: 42 kc bandwidth at 60 db down.
IMAGE RATIO: 250 at 6300 kc.

SCR-288 RADIO SET

MAX POWER OUTPUT: 100 mw.
CALIBRATION ERROR: 1.0%.

HAND GENERATOR
HIGH VOLTAGE OUTPUT: 290 v at 100 ma.
LOW VOLTAGE OUTPUT: 6.6 v at 1.65 amp.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 6V6-GT (1) 1N5-GT (1) 1A7-GT
(1) 1D8-GT (1) 3A8-GT
Total Tubes: (7)

REFERENCE DATA AND LITERATURE

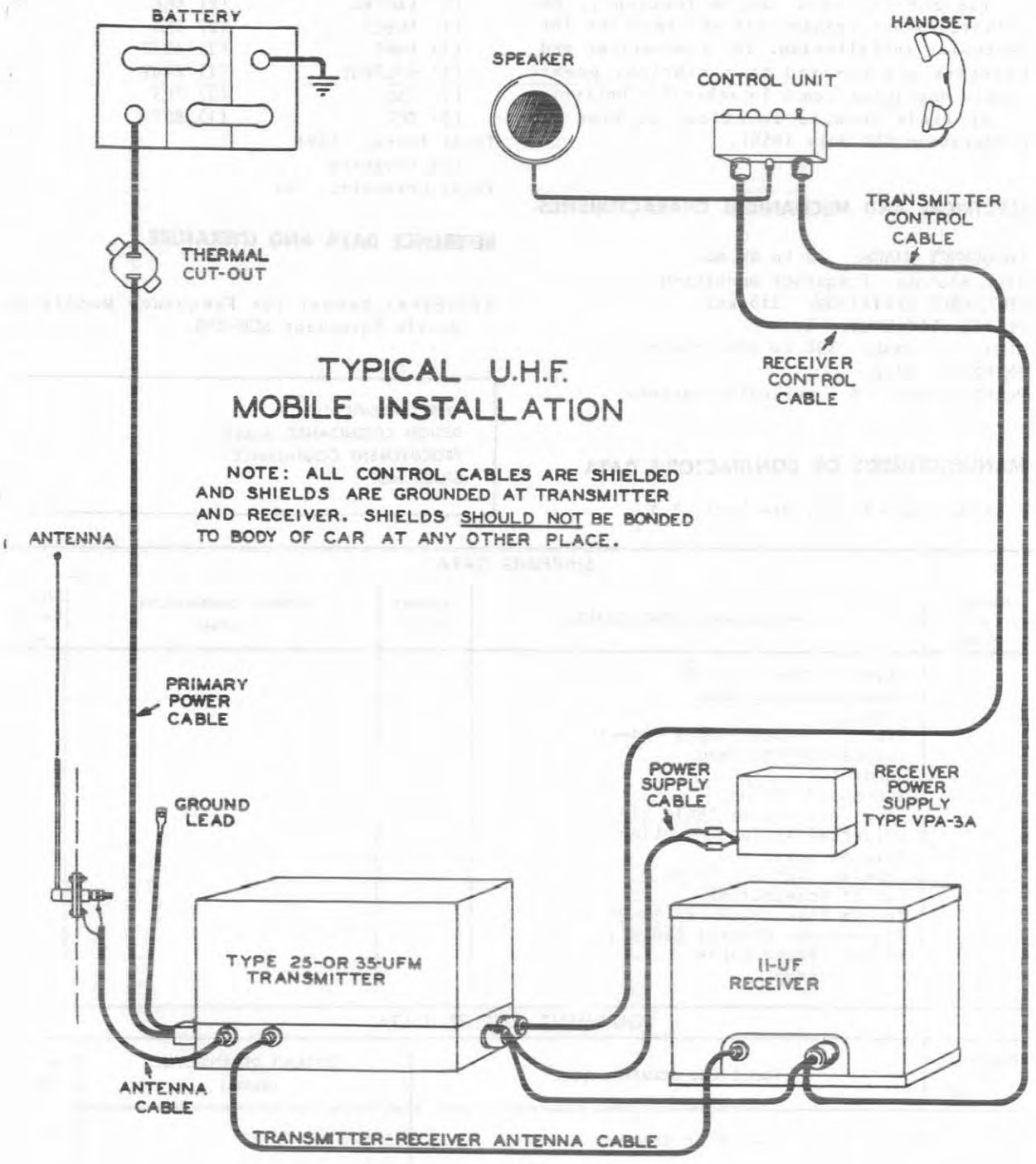
TM11-250: Technical Manual for Radio Set SCR-288.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Antenna	2-1/2 X 3-1/2 X 7 (spool)	0.75
1	Antenna Strain Post	5/16 X 31	0.7
1	Carrying Bag	7-1/2 X 9-1/2 X 18	3.8
1	Carrying Bag	6 X 6-1/2 X 8	1.8
1	Carrying Bag	7-3/4 X 35-3/8	1.5
2	Battery Packs	2-3/16 X 4-7/8 X 9-7/8	5.0
1	Cord CD-125	84	0.9
2	Crank	1 X 6 X 7-1/2	0.5
1	Filter FL-10	1-3/4 X 4-3/4 X 4-3/4	1.75
1	Generator GN-44-A	6 X 6-1/2 X 8	19.5
2	Headsets		0.7
2	Telegraph Keys		0.8
1	Microphone		0.7
1	Radio Receiver and Transmitter BC-174-A	7-1/2 X 9-1/2 X 18	23.75
1	Allen Wrench		

FREQUENCY MODULATED MOBILE EQUIPMENT



Frequency Modulated Mobile Equipment SCR-298

SCR-298

FREQUENCY MODULATED MOBILE EQUIPMENT

December 1956

FUNCTIONAL DESCRIPTION

The SCR-298 is a single frequency, FM radiotelephone transmitter and receiver for vehicular installation. The transmitter and receiver are powered by a vibrator power supply operating from a 6 v vehicular battery.

No field changes in effect at time of preparation (19 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 30 to 40 mc.
TYPE SIGNAL: Frequency modulated.
FREQUENCY DEVIATION: ±15 kc.
PRESET FREQUENCY: 1.
AUDIO RESPONSE: 300 to 3000 cycles.
ANTENNA: Whip.
POWER SOURCE: 6 v vehicular battery.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corp., New York, N.Y.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 6AC7WA
(1) 6K6GT
(1) 6SH7
(1) 6SL7WGT
(2) 7A8
(3) 7C7
(2) 6H6
(2) 6K8
(2) 6SJ7
(1) 6V6Y
(1) 7C5
(1) 807

Total Tubes: (19)
(3) Crystals
Total Crystals: (3)

REFERENCE DATA AND LITERATURE

Technical Manual for Frequency Modulated Mobile Equipment SCR-298.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Receiver 11-UF (ED.3) Shock Mounting Base Speaker Vibrator Power Supply VPA-3A Remote Control Heed Handset Handset Mounting Receiver Control Cable (18 ft) Universal Antenna Mounting Antenna Cable Receiver Antenna Cable Set of Accessories			
1	Transmitter 25-UFM or 34-UFM(ED.2) Transmitter Control Cable (18 ft) Primary Power Cable			
1	Whip Antenna			

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter 25-UFM or 35-UFM	8-1/4 X 9 X 17	29
1	Receiver 11-UP	7-1/2 X 9 X 13	17-1/2
1	Receiver Power Supply VPA-3A	4-1/4 X 5 X 8-1/2	7-1/4
1	Accessories		

RADIO SET SCR-299

FUNCTIONAL DESCRIPTION

The SCR-299 is designed as a high power, vehicular radio station providing voice or continuous wave (CW) communication over a range of more than 100 miles under all conditions of atmosphere and terrain, either from a stationary position, or while moving at high speeds over rough roads. It consists of a completely equipped radio station installed in a 1-1/2 ton truck K-51-D, combined with power plant carried in a 1-ton cargo trailer K-52-D. It is designed primarily to provide reliable headquarters communication for Corps, Division and other higher echelons. The SCR-299 is Amplitude Modulated (AM).

No field changes in effect at time of preparation (15 March 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TRANSMITTER DATA
- TYPE OF EMISSION: A1, A3 types of emission.
- POWER OUTPUT: 300 W and 400 W max power output.
- FREQUENCY DATA
  - NUMBER OF CHANNELS: 3 channels.
  - FREQUENCY RANGE: 2.0 to 8.0 mc.

RECEIVER DATA
- TYPE OF EMISSION: A1, A2, A3 types of emission.
- FREQUENCY DATA
  - NUMBER OF BANDS: 6 bands.
  - FREQUENCY RANGE: 1.5 to 18.0 mc.

OPERATING POWER RQMT: 115 v AC, 60 cps, single ph; 12 v DC.

MANUFACTURER'S OR CONTRACTOR'S DATA

The Hallicrafters Co., Chicago, Illinois.
Order No. 2659-CHI-42.
Order No. 2660-CHI-42.
Order No. 4668-CHI-42.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) OD3W	(2) 100TH	(2) 2A3
(1) 250TH	(2) 3B28	(1) 5Y3WGTB
(2) 5Z3	(4) 6C5	(2) 6F6
(1) 6J5	(8) 6K7	(1) 6L6
(2) 6L7	(2) 6R7	(3) 6SN7WGTA
(1) 6SQ7	(1) 6SR7	(1) 6V6GTY
(L) 80	(2) 807	

Total Tubes: (42)

No Crystals used.

REFERENCE DATA AND LITERATURE

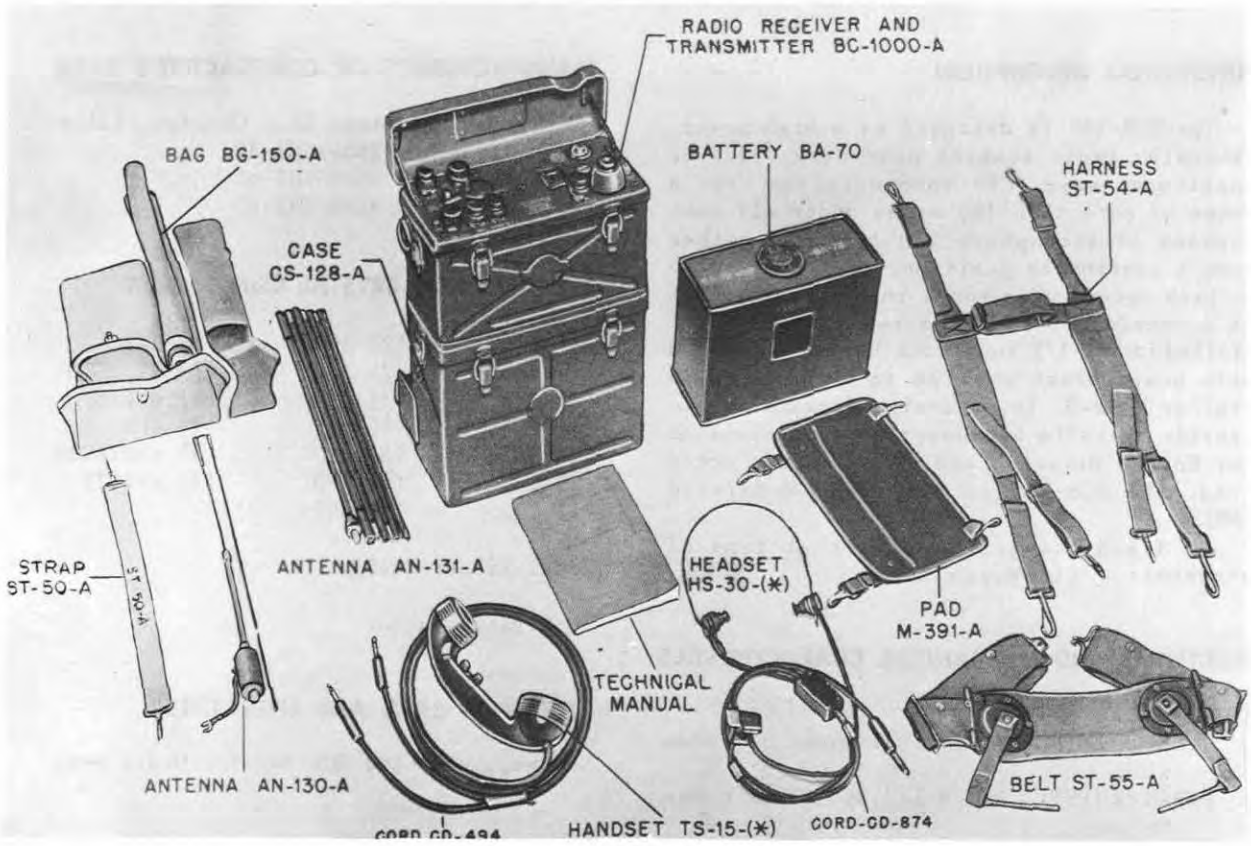
Nomenclature Card SCR-299 for Radio Set.

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

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter BC-610	21-3/8 X 29-5/8 X 39-7/8	
1	Radio Receiver BC-312		
1	Radio Receiver BC-342		
1	Speech Amplifier BC-614-A	9-1/4 X 11 X 16-1/2	
1	Antenna Tuning Unit BC-729		
1	Power Unit PE-95	28-1/4 X 38-1/2 X 67-1/2	
1	Track K-51		
1	Trailer K-52		

RADIO SET



Radio Set SCR-300,-A,-B

FUNCTIONAL DESCRIPTION

The SCR-300, 300A, and 300B are low power, portable, frequency modulated radio transmitters and receivers powered by batteries. The set is designed for two way voice communication over short ranges and is primarily for use by combat troops on foot.

No field changes in effect at time of preparation (24 May 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

OPERATING RANGE: 3 miles or more using long Antenna AN-131-A; slightly less when using short Antenna AN-130-A.
FREQUENCY RANGE: 40 to 48 mc.
NUMBER OF CHANNELS; 40 channels, separated by 20 kc each.
POWER SOURCE: Battery BA-70, consisting of 3 sections 4.5 v, 90 v and 60 v.
POWER OUTPUT
RECEIVER: 2 mw.
TRANSMITTER: 0.5 W
RECEIVER TYPE: Double superheterodyne.
ANTENNA DATA
AN-130-A: Consists of 2 sections and is 33 in. lg.
AN-131-A: Consists of 8 sections and is 10 ft. 8 in. lg.
TYPE: Whip.

MANUFACTURER'S OR CONTRACTOR'S DATA

Galvin Manufacturing Corp., Chicago, Ill.
Approximate Cost: $360.00 including equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(6) 1T4	(5) 1L4	(3) 1S5
(2) 3A4	(1) 1R5	(1) 1A3

Total Tubes: (18)

(1) 4300 kc (1) 6815 kc
Total Crystals: (2)

RADIO SET

REFERENCE DATA AND LITERATURE

TM-11 242: Technical Manual for Radio Set SCR-300-A.
SIG 7 & 8 BC-1000: Radio Receiver and Transmitter BC-1000; BC-1000-A, B, C.

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE Spec 71-1601
STOCK NO.

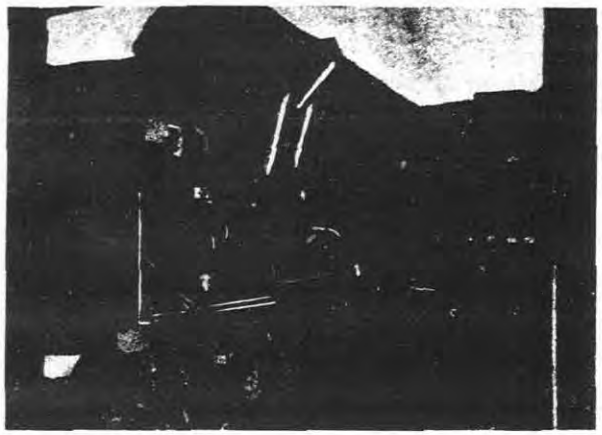
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-					
300	-A	-B			
1			Radio Receiver and Transmitter BC-1000	6-5/8 X 7-1/8 X 11-15/16	13.0
	1		Radio Receiver and Transmitter BC-1000-A	6-5/8 X 7-1/8 X 11-15/16	13.0
		1	Radio Receiver and Transmitter BC-1000-B	6-5/8 X 7-1/8 X 11-15/16	13.0
1	1	1	Antenna AN-130-A (2 Sections)	33 lg (assembled)	0.39
1	1	1	Antenna AN-131-A (8 Sections)	128 lg (assembled)	0.93
1	1	1	Case CS-128-A	7-1/16 X 9-3/8 X 11-15/16	3.66
1	1	1	Bag BG-150-A (Empty)	2-7/8 X 7-1/4 X 17-1/2	0.66
1	1	1	Battery BA-70	4-1/2 X 7-23/32 X 10-5/16	15.0
1	1	1	Belt ST-55-A		
1	1	1	Handset TS-15-( )		
1	1	1	Pad M-391-A		
1	1	1	Strap ST-50-A		
1	1	1	Harness ST-54-A		
1	1	1	Headset HS-30- ( )		
1	1	1	Technical Manuals TM-11-242		

October 1957

Radio-Transceivers

RADIO SET SCR-399



Radio Set SCR-399

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE:
TRANSMITTER: 2 to 18 mc.
RECEIVER: 1.5 to 18 mc.
PRESET FREQUENCIES: 3.
ANTENNA: Whip or long wire.
TUNING: Master oscillator and crystal.
MAX POWER OUTPUT: 400 W CW, 300 W VOICE.
POWER SOURCE REQUIRED: 110 v, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Approximate Cost: $5260.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 2A3	(1) 6SQ7	(3) 6SN7WGTA
(3) OD3W	(8) 6K7	(1) 6V6Y
(4) 3B28	(1) 6L6	(1) 12A6
(1) 5Y3WGTB	(2) 6L7	(1) 80
(2) 5Z3	(2) 6R7	(2) 100TH
(4) 6C5	(1) 6R7GT	(1) 250TH
(2) 6F5GT	(2) 6J5	(2) 807

Total Tubes: (46)

(36)
Total Crystals: (36)

REFERENCE DATA AND LITERATURE

TM11-227: Technical Manual of Signal Communication Equipment Directory for Radio Communication Equipment.

FUNCTIONAL DESCRIPTION

The SCR-399 is a transportable, complete radio transmitting and receiving station for telephone and telegraph communications. It is capable of transmitting 400 Watts of CW emission and 300 Watts of voice emission. The frequency range of the equipment is 2 to 18 mc. It can be operated from commercial power lines or from a trailer mounted gasoline engine generator either at a fixed location or when the shelter is mounted on a 2-1/2 ton truck.

No field changes in effect at time of preparation (4 February 1957).

RELATION TO OTHER EQUIPMENT

Replaces in part SCR-197 and SCR-299.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

SCR-399 RADIO SET

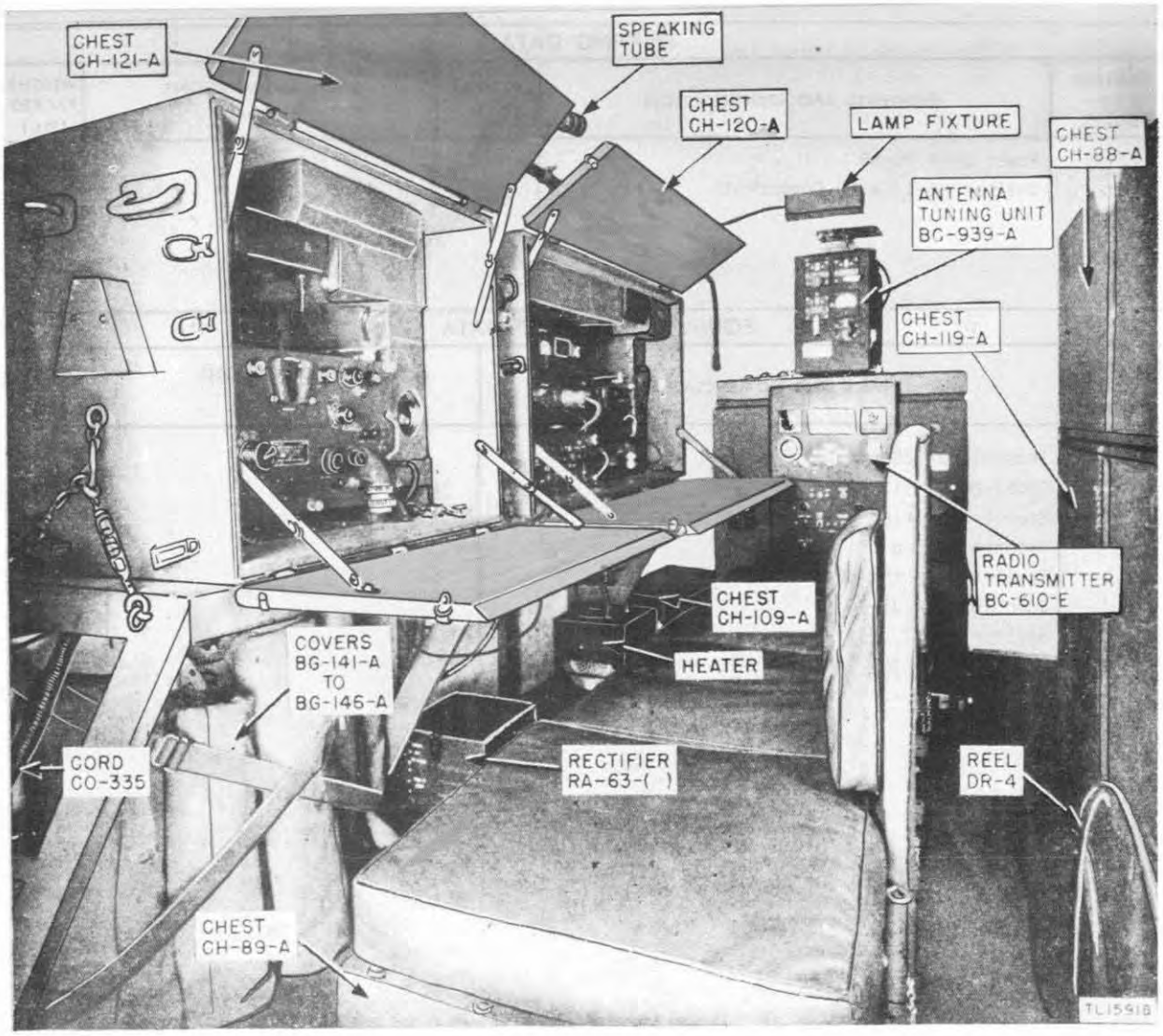
SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1 Trailer	Power Unit PE-95			
1 Truck	Shelter HO-17 with Components		72 x 72	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter BC-610		
1	Receiver BC-312 and BC-342		
1	Speech Amplifier BC-614-E		
1	Antenna Tuning Unit BC-939		
1	Trailer K-52 Includes Power Unit PE-95		
1	Junction Box JB-70		
1	Shelter HO-17		

RADIO SET SCR-399-A



Radio Set SCR-399-A

FUNCTIONAL DESCRIPTION

The SCR-399-A is designed as a mobile communication station. It is a relatively high-power radio communications station. Under all conditions of atmosphere and terrain, the radio set will provide voice continuous wave (cw) communication over a range of more than 100 miles from a stationary position, or while moving at high speed. For mobile use, Shelter HO-17-A should be mounted on a 2-1/2 ton, 6 X 6 cargo truck.

No field changes in effect at time of preparation (4 January 1960).

RELATION TO OTHER EQUIPMENT

The SCR-399-A is the same as the SCR-499-A except that it is a mobile unit, and a shelter and trailer are used.

SCR-399-A RADIO SET

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF CIRCUIT: Master oscillator-power amplifier.
TYPE OF SIGNALS TRANSMITTED: CW and voice.
DISTANCE RANGE
CONTINUOUS WAVE: Stationary 250 miles; moving 250 miles.
VOICE: Stationary 100 miles, moving 100 miles.
TYPE OF MODULATION: Amplitude modulation.
TYPE OF CIRCUIT: Superheterodyne.
TYPES OF SIGNALS RECEIVED: CW tone, and voice.
INTERMEDIATE FREQUENCY: 470 kc.
METHOD OF CALIBRATION: Frequency Meter Set SCR-211-( ).
POWER SOURCE: PE-95-( ) or commerical.
NUMBER OF CHANNELS: 3 channels.
OPERATING FREQUENCY RANGE: 2 to 18 mc.
POWER INPUT: 115 v, 50 to 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Hallicrafters Mfg Co., Chicago, Illinois.
Contract Proc. 21418-PH-50.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) OD3W	(2) 100TH
(1) 12A6	(2) 2A3
(1) 250TH	(4) 3B28
(1) 5Y3WGTB	(2) 5Z3
(4) 6C5	(2) 6F6
(2) 6J5	(8) 6K7
(1) 6L6	(2) 6L7
(2) 6R7	(1) 6R7GT
(3) 6SN7GTA	(1) 6SQ7
(1) 6V6Y	(1) 80
(2) 807	

Total Tubes: (46)

No Crystals used.

REFERENCE DATA AND LITERATURE

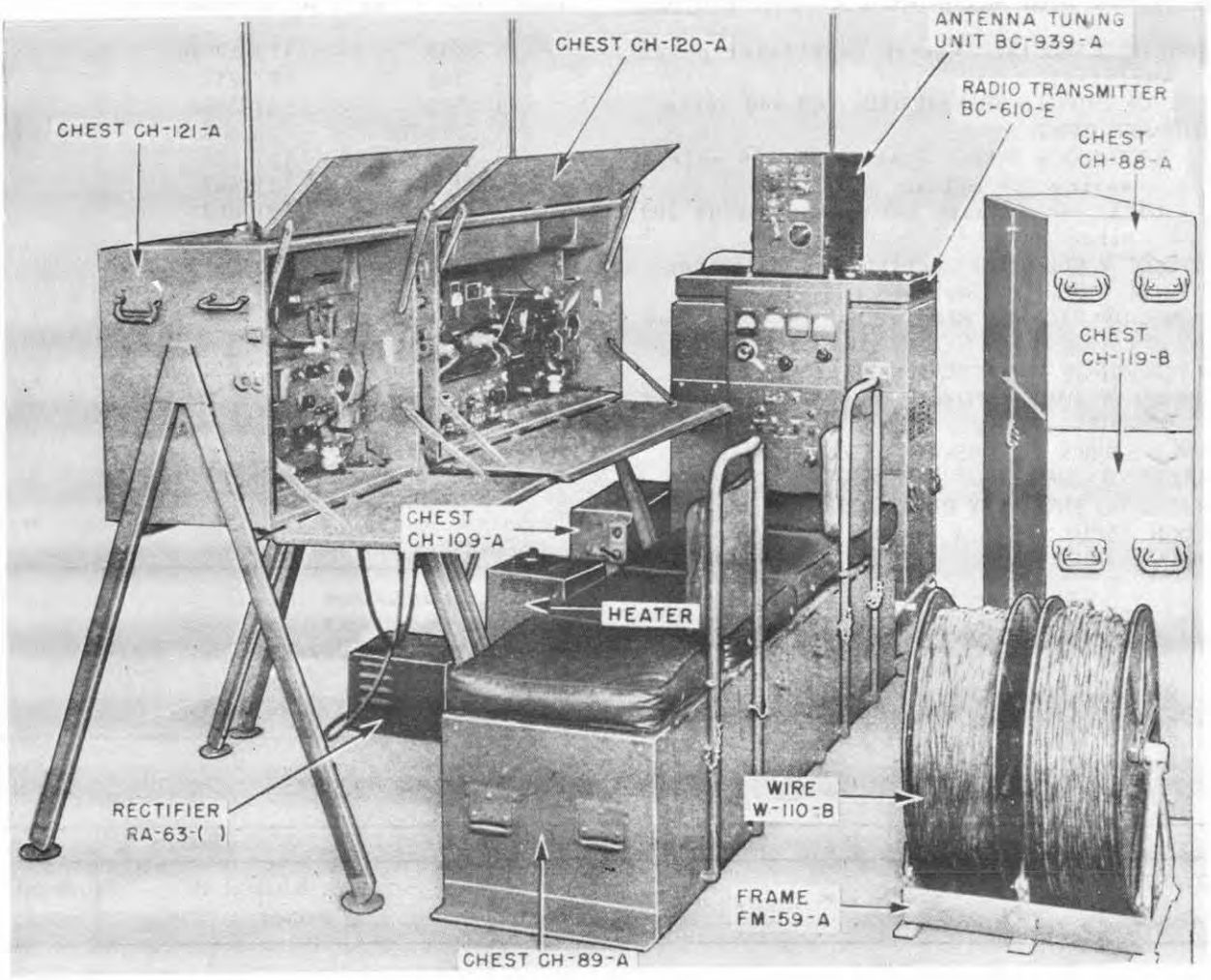
Technical Manual: TM11-281 for Radio Sets SCR-399-A and SCR-499-A.

TYPE CLASSIFICATION	(NAVY)
DESIGN COGNIZANCE	USA, SIG C
PROCUREMENT COGNIZANCE	SPEC: 71-1683 (ARMY)
STOCK NO.	
R.D.B. IDENT. NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set SCR-399-A		
1	Radio Transmitter BC-610-E	21-3/8 X 32-5/8 X 39-7/8	
1	Speech Amplifier BC-614-E		
1	Antenna Tuning Unit BC-939-( )	9-3/32 X 13-5/16 X 21-1/4	
1	Radio Receiver BC-342-( ) or BC-312-( )		
1	Junction Box JB-70-( )	7-1/8 X 12-5/8 X 19	
8	Transmitter Tuning Unit TU-47 to TU-54	2 X 6-1/8 X 9-1/8	
1	Frequency Meter SCR-211-( )	9-9/16 X 10 X 12-1/2	
2	Telephone EE-8	5-1/2 X 11-1/4 X 14-1/2	
1	Shelter HO-17-A	66-1/2 X 81-1/2 X 145	
1	Trailer K-52	6 X 6	5000
1	Chest CH-89-A	14-1/8 X 18 X 76	
1	Chest CH-109-A	9-3/4 X 11-1/2 X 25-13/16	
1	Chest CH-119-A	12-5/8 X 32-1/4 X 55	
1	Chest CH-120-A	17-3/16 X 28-7/8 X 50-5/8	
1	Chest CH-88-A	13 X 18-1/2 X 58	
1	Reel DR-4		
1	Chest CH-121-A	17 X 23-5/8 X 30-5/8	
5	Covers BG-141-A to BG-146-A	19 X 19-1/2 X 77-1/2	
1	Rectifier RA-63-( )	8-31/32 X 11-1/16 X 17-1/8	

RADIO SET SCR-499A



Radio Set SCR-499A

FUNCTIONAL DESCRIPTION

The SCR-499A is designed as a fixed communication station. It is a relatively high-power radio communication station. Under all conditions of atmosphere and terrain, the radio set will provide voice continuous wave (cw) communication over a range of more than 100 miles from a stationary position, or while moving at a high speed.

No field changes in effect at time of preparation (4 January 1960).

RELATION TO OTHER EQUIPMENT

The SCR-499-A is the same operation wise as is the SCR-399-A except that it is used as a fixed station; and a shelter and trailer are not provided.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: A1 and A3 type of emission.
TYPES OF SIGNALS TRANSMITTED: CW and voice.
TYPE OF MODULATION: Amplitude modulation.
DISTANCE RANGE
CONTINUOUS WAVE: Stationary 250 miles; moving 250 miles.
VOICE: Stationary 100 miles; moving 100 miles.

Radio-Transceivers

February 1960

SCR-499A RADIO SET

ELECTRICAL AND MECHANICAL CHARACTERISTICS

POWER OUTPUT
CONTINUOUS WAVE OPERATION: 400 W approx.
VOICE OPERATION: 300 W approx.
TYPE OF CIRCUIT: Superheterodyne.
TYPE OF SIGNALS RECEIVED: CW, tone and voice.
METHOD OF CALIBRATION: Frequency Meter Set SCR-211-( ).
POWER SOURCE: PE-95-( ) or commerical.
POWER INPUT: 115 v, 50 to 60 cps, single ph.
NUMBER OF CHANNELS: 3 channels.
OPERATING FREQUENCY RANGE: 2 to 18 mc.

MANUFACTURER'S OR CONTRACTOR'S DATA

Hallicrafters Mfg Co., Chicago, Illinois.
Contract Proc. 21418-PH-50.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) OD3W
(2) 100TH
(2) 2A3
(1) 250TH
(2) 3B28
(1) 5Y3WGTB
(2) 5Z3
(4) 6C5
(2) 6F6
(1) 6J5
(4) 6K7
( ) 6K7GT
(1) 6L6
(2) 6L7
(2) 6R7GT
(3) 6SN7WGTA
(1) 3B28
(1) 6SQ7
(1) 6SR7
(1) 6V6GTY
(1) 80
(2) 807

Total Tubes: (42)

No Crystals used.

REFERENCE DATA AND LITERATURE

Technical Manual: TM11-281 for Radio Sets SCR-399-A and SCR-499-A.

TYPE CLASSIFICATION	(NAVY)
DESIGN COGNIZANCE	USA, SIG C
PROCUREMENT COGNIZANCE	SPEC: 71-1683 (ARMY)
STOCK NO.	
R.D.B. IDENT. NO.	

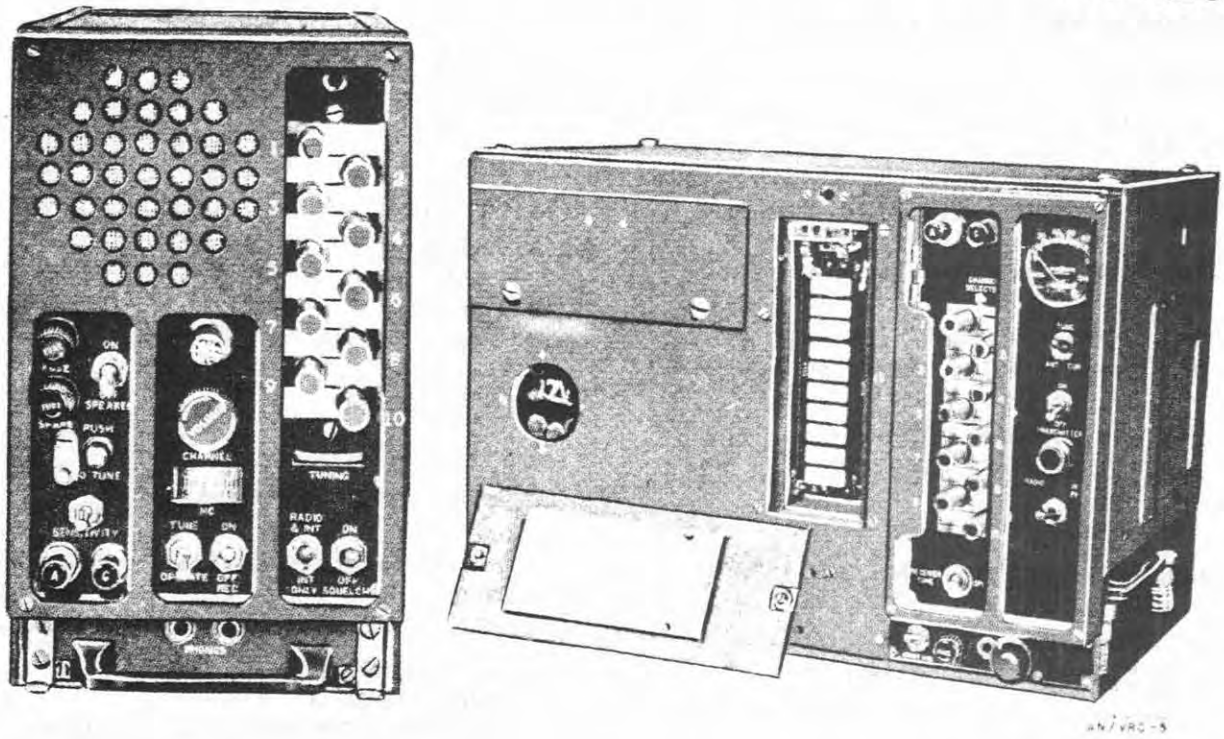
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set SCR-499-A		
1	Radio Transmitter BC-610-E	21-3/8 X 32-5/8 X 39-7/8	
1	Speech Amplifier BC-614-E		
1	Antenna Tuning Unit BC-939-( )	9-3/32 X 13-5-16 X 21-1/4	
1	Radio Receiver BC-342-( ) or BC-312-( )		
1	Junction Box JB-70-( )	7-1/8 X 12-5/8 X 19	
8	Transmitter Tuning Unit TU-47 to TU-54	2 X 6-1/8 X 9-1/8	
1	Frequency Meter SCR-211-( )	9-9/16 X 10 X 12-1/2	
2	Telephone EE-8	5-1/2 X 11-1/4 X 14-1/2	

March 1957

RADIO SET

Radio Transceivers
SCR-508-A,C,D,AM,CM,DM
SCR-528-A,C,D,AM,CM,DM
AN/VRC-5



Radio Set AN/VRC-5

FUNCTIONAL DESCRIPTION

The SCR-508-A,C,D,AM,CM,DM, SCR-528-A,C,D, AM,CM,DM and AN/VRC-5 are designed to provide frequency modulated radio telephone facilities for operation in combat vehicles such as tanks, scout cars, half tracks, command cars and other authorized vehicles.

The nomenclature followed by ( ) eg., SCR-508 ( ), will be used to indicate all applicable models used per this description.

The Radio Set SCR-508 ( ) consists basically of Radio Transmitter BC-604 ( ) and two Radio Receivers BC-603 ( ).

The Radio Set SCR-528 ( ) consists basically of Radio Transmitter BC-604 ( ) and one Radio Receiver BC-603 ( ).

The Radio Set AN/VRC-5 consists basically of Radio Transmitter BC-604 ( ) and one Radio Receiver BC-603 ( ) each separately mounted.

Radio Sets SCR-508-AM, CM, DM and SCR-528-AM, CM, DM are modified so that when operated on interphone, the radio receiver(s) are disabled. This modification prevents interference of interphone communication by incoming radio signals.

No field changes in effect at time of preparation (18 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TRANSMITTER
- FREQUENCY RANGE: 20 to 27.9 mc.
- FREQUENCY CHANNELS: 10 preset, 80 available.
- CHANNEL SPACING: 100 kc.
- CRYSTAL FREQUENCIES: 370.370 to 516.667 kc.
- EMISSION: F3
- DISTANCE RANGE: 10 to 15 mile approx.
- POWER OUTPUT: 30 W.
- INTERPHONE OUTPUT: 3 w.
- FREQUENCY DEVIATION: 40 kc nominal.
- FREQUENCY MULTIPLICATION: 54.
- POWER INPUT: 12 v DC, 20 amp (DM-35( )) or 24 v DC, 12 amp (DM-37-( )).

RECEIVER
- FREQUENCY RANGE: 20 to 27.9 mc.
- RECEPTION: F3.
- TYPE: Superheterodyne.
- FREQUENCY CHANNELS: 10 preset.
- FREQUENCY CONTROL: Local.
- SENSITIVITY: 1 uv.
- INTERMEDIATE FREQUENCY: 2.65 mc nominal.
- BAND WIDTH: 80 kc.
- POWER OUTPUT
  - HEADSET: 0.2 w.
  - SPEAKER: 2 w.

SCR-508-A,C,D,AM,CM,DM
SCR-528-A,C,D,AM,CM,DM
AN/VRC-5

RADIO SET

NOISE SUPPRESSION: Squelch circuit.
POWER INPUT: 12 v DC, 4 amp (DM-34-( ))
or 24 v DC, 2 amp (DM-36-( )).
POWER REQUIREMENTS: 12 or 24 v DC vechicular battery.
ANTENNA: 10 ft whip.

MANUFACTURER'S OR CONTRACTOR'S DATA

Approximate Cost: $2990.00 with equipment spares for SCR-508.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-508-(*)

(6) 6AC7WA	(2) 6V6GT
(2) 6H6	(4) 12SG7Y
(2) 6J5	(7) 1619
(4) 6SL7WGT	(1) 1624

Total Tubes: (28)

SCR-528-(*) and AN/VRC-5

(3) 6AC7WA	(1) 6V6GT
(1) 6H6	(2) 12SG7Y
(1) 6J5	(7) 1619
(2) 6SL7WGT	(1) 1624

Total Tubes: (18)

(80) Crystals

Total Crystals: (80)

REFERENCE DATA AND LITERATURE

TM11-600: Technical Manual for Radio Sets SCR-508-A,C,D,AM,CM,DM; SCR-528-A,C,D,AM,CM,DM and AN/VRC-5.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

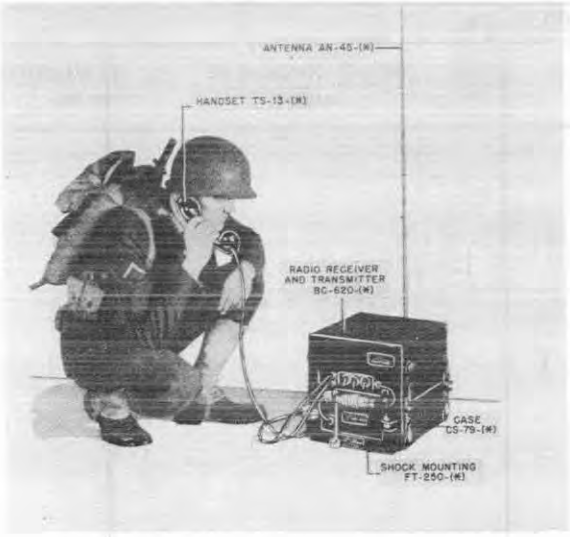
QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-508	AN/VRC-5	SCR-528			
2	1	1	Radio Receiver BC-603 ( )	6-3/4 X 11-1/2 X 12-1/2	35
1	1	1	Radio Transmitter BC-604 ( )	10-1/4 X 11-1/2 X 18	67
1		1	Mounting FT-237 ( )	5-1/2 X 13 X 33-5/8	44
	1		Mounting FT-346	3-7/8 X 7 X 11-3/4	6
	1		Mounting FT-508	4-1/2 X 9-1/2 X 19-1/2	14.7
1	1	1	Antenna A-62 (Phantom)	4 X 4 X 7	3
1	1	1	Mast Base AB-15/GR	15 lg.	2
1	1	1	Roll BG-56-A	2 X 4 X 42	1.7
1	1	1	Cover BG-96	10-1/2 X 12-1/2 X 32	3.3
1	1	1	Chest CH-264	6-7/8 X 11-1/2 X 11-7/8	12
2	1	1	Dynamotor DM-34 or DM-36	3 X 4-1/2 X 6-1/2	4.7
1	1	1	Dynamotor DM-35 or DM-37	4-1/2 X 5-1/2 X 8-1/4	9.2
2	2	2	Mast Section MS-117	39-1/2 lg.	0.7
2	2	2	Mast Section MS-118	39-5/8 lg	0.8
1	1	1	Wire W-128	72 lg.	0.4
2	2	2	Connector (Conduit)	1-3/4 lg.	0.3
1	1	1	Inter-Phone Control Box BC-606-H	2-1/4 X 4-1/4 X 4-1/4	1.8
1	1	1	Cabinet CH-74	16 X 18 X 36	92.

1.7 SCR-508-A: 2

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-508	AN/VRC-5	SCR-528			
1	1	1	Cordage CO-218	252 lg.	1.4
1	1	1	Mounting FT-284	5 X 12 X 33	26
2	2	2	Headset H-16/U		1.0
1	1	1	Cover CW-110/U		0.01
1	1	1	Mast Base Bracket MP-52	26 lg.	20
1	1	1	Microphone T-17		0.7
1	1	1	Microphone T-45		1.8
2	2	2	Chest Set TD-4		1
1	1	1	Bag of Hardware		2
1	1	1	Technical Manual TM-11-2721		0.3

RADIO SET SCR-509,SCR-510



Radio Set SCR-509, SCR-510

FUNCTIONAL DESCRIPTION

The SCR-509 and SCR-510 are portable low power frequency modulated radio receiver and transmitter used for communication.

The set may be operated from a stationary position or used in vehicular installation.

These sets differ from each other in certain minor circuit details and type and quantity of accessories.

No field changes in effect at time of preparation (13 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 20.0 to 27.9 mc (80 channels).
TYPE OF RECEPTION AND TRANSMISSION: F3.
POWER OUTPUT: 1.8 W.
TUNING: Crystal control
RANGE: 5 miles (approx).
POWER SOURCE REQUIRED: 6 v or 12 v DC.
ANTENNA: 8 ft telescopic mast or vehicular whip.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-509

(2) 1291	(4) 1299	(1) 1LC6
(4) 1LN5	(1) 1294	(1) 1LH4

Total Tubes: (13)

SCR-510

(1) 1LC6	(1) 1LH4	(4) 1LN5
(1) 1294	(1) OB3	(2) 1291
(4) 1299	(1) 1005	

Total Tubes: (15)

REFERENCE DATA AND LITERATURE

TM11-227: Technical Manual for Signal Communication Equipment Directory Radio Communication Equipment.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	
PROCUREMENT COGNIZANCE	BUAER
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-509	SCR-510			
1	1	Alignment Tool TL-150 or TL-207	5 X 7/8 dia	
1	1	Antenna AN-45 (Collapsed)	17-3/16 X 1/2 dia	.63
		(Extended)	98-1/2	
6	2	Battery BA-39 (Transmitter)	3-3/4 X 6-7/16 X 7-1/2	7.25
6	2	Battery BA-40 (Receiver)	4-1/16 X 5-1/4 X 7-3/8	6.50
2	2	Battery BA-40 (For BC-620)	2-1/8 X 2-3/8 X 3-1/2	.66
	*	Box TM-206 (Antenna Terminal)	1-7/16 X 2-1/4 X 2-9/16	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-509	SCR-510			
2	2	Bracket Assembly (For Power Cable)		
	*	Bracket FT-419 (For FT-250)	1-1/2 X 12-15/16 X 18	
	*	Bracket FT-420 (For FT-250)	1-1/2 X 12-15/16 X 18	
	*	Bracket FT-422 (Brush Guard)	1-1/4 X 1-1/4 X 13-1/4	
	*	Bracket (SC-A-8687)		
	*	Bracket (SC-A-8688)		
	*	Bracket FT-424 (For FT-250)		
	*	Bracket (SC-A-8689)		
	*	Bracket FT-426		
	*	Bracket FT-428		
	*	Bracket (SC-A-7110)		
	*	Bracket (SC-A-7111)		
1	1	Case CS-79 (For Battery Power Supply)	4-1/2 X 13-3/16 X 15-9/16	10.00
	2	Clamp MC-423 (For MS-51)	1 X 11/16 dia	
	2	Clamp MC-424 (For MS-52)	1 X 11/16 dia	
	*	Connector and Bondnut Appleton No's 61004 and BL-50 respectively	1-1/4 dia X 1-3/4	.25
	*	Connector and Bondnut Appleton 61007 and BL-50		
	*	Cord CD-307-A (65" lg. for HS-30)		
	*	Cord CD-318-A (For Microphone T-30 or T-45)	84	
	*	Cord CD-509 (For PE-120)	96	1.50
	*	Cord CD-604 (For HS-30)	10	
	*	Cord CD-636 (Coaxial Antenna Lead)		
	*	Cordage CO-218		
	1	Cover BG-108 (For MP-48-A)	6-1/2 X 14	.30
	*	Cover BG-153 (For Radio Set)		
	2	Microphone Cover M-367 (For Microphone T-17), 1 in Use, 1 Spare		
	2	Fitting (used with Rope RP-5), 1 in Use, 1 Spare		
	*	Frame FM-43		
	*	Frame FM-48		
1	1	Handset TS-13	2-1/2 X 3-3/8 X 79-1/8	1.80
	*	Footman's Loop, No. 1165 1 in., for Power Unit		
	1	Hardware Kit		
	*	Headset HS-30		
	*	Installation Kit MC-450		
	*	Installation Kit MC-475		
	2	Insulator (Used with Rope RP-5) 1 in Use, 1 Spare		
	2	Insulator IN-86 (For Aux. Antenna)	1-1/4 dia X 3	
	*	Insulator IN-121		
	*	Insulator IN-111		
	*	Interphone Control Box BC-606 with attached hardware		
	1	Mast Base MP-48 or MP-48-A (includes		

EQUIPMENT SUPPLIED DATA

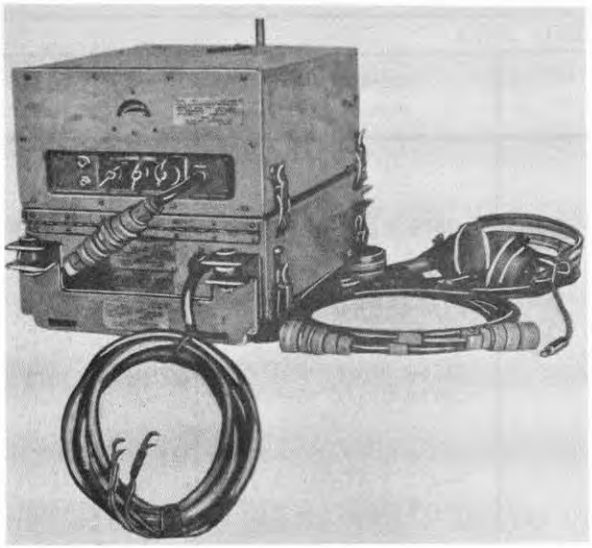
QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-509	SCR-510			
		6 ft. wire W-126)	3-3/4 dia X 15	11.25
	*	Mast Bracket MP-50	5 X 5-1/4 X 8	4.25
	*	Mast Base Bracket MP-60		
	*	Mast Base Bracket MP-54	6 X 7-1/2 X 11-7/8	6.25
	2	Mast Section MS-51, 1 in Use, 1 Spare		
	2	Mast Section MS-52, 1 in Use, 1 Spare	41/64 dia X 38-1/2	.57
	2	Mast Section MS-53, 1 in Use, 1 Spare	23/32 dia X 38-5/8	.69
	1	Microphone T-17		
	1	Microphone T-30 or T-45		
	*	Mounting FT-250	4-1/2 X 11-3/4 X 20	11.50
	*	Mounting FT-317	6-1/8 X 12 X 20-7/8	12.50
	*	Plug PL-55 (Used with CO-218 and BC-606)		
	*	Mounting Strap ST-51 (For Power Unit)		
	*	Mounting Strap ST-52 (For Power Unit)		
1	1	Radio Receiver and Transmitter BC-620 Consist of: 1 Fuse (80) Crystal Holders FT-243, 2 in Use, 78 Spares (2) tubes 1LH4, 1 in Use, 1 Spare (2) tubes 1LC6, 1 in Use, 1 Spare (7) tubes 1LN5, 4 in Use, 3 Spares (4) tubes 1291, 2 in Use, 2 Spares (2) tubes 1294, 1 in Use, 1 Spare (8) tubes 1299, 4 in Use, 4 Spares	6-3/4 X 13-3/16 X 14-15/16	27.20
	*	Reinforcing Plate FT-429 (For MP-50)	3/16 X 1-1/2 X 4-1/2	
	1	Roll BG-56-A (For Mast Sections)	9-1/4 X 45	1.50
	*	Support FT-418		
	15 ft	Rope RP-5		
2	2	Strap ST-19-A		
2	2	Technical Manual	5-1/2 X 8-1/2	
27 ft	27 ft	Wire W-29 (Auxiliary Antenna)		
	6 ft	Wire W-126 (issued with MP-48)		
	*	Plate (For BC-606)		
	*+	Power Unit PE-120 (1) Regulator, Current, type 9-2-4 Amperite		
	2	Tubes VR-90-30, 1 in Use, 1 Spare		
	2	Tubes QMG-159, 1 in Use, 1 Spare		
	2	Vibrator, 1 in Use, 1 Spare		

*Item is issued in quantities authorized, depending upon the type of installation to be made. If Power Unit PE-120 is not available Plate Supply Unit PE-97, (which includes necessary tubes, and Vibrator VB-1, Capacitor CA-403, Fuse FU-36, one each in use and one spare may be used.)

April 1958

Radio-Transceivers

RADIO SET SCR-509-A,B,SCR-510-A,B



Radio Set SCR-509-A,509-B,SCR-510-A,510-B

FUNCTIONAL DESCRIPTION

The SCR-509-A, -B and SCR-510-A, -B contain a portable, low power FM receiver and transmitter for field communication over distances up to 5 miles. The sets operate on any two of 80 channels 100 kc apart, between 20.0 and 27.9 mc. Either frequency may be selected by moving the channel switch. The change from receiving to transmitting is made by pressing a button on the handset or microphone.

The Radio Sets SCR-509-A and B are practically identical to the SCR-510-A and B, differing principally in that no provisions are made for vehicular operation.

No field changes in effect at time of preparation (8 May 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

RANGE: 5 mi.
FREQUENCY RANGE: 20 to 27.9 mc.
PRESET FREQUENCIES: 2.
FREQUENCY CONTROL: Crystal.
TYPE RECEIVER: Superheterodyne.
FEATURES: AFC.
CHANNELS: 80.

ANTENNA
TYPE: Collapsible rod and wire for stationary use of equipment. Telescopic Whip, or 27 ft wire for vehicular use.
FEED: Coaxial cable for whip antenna.

POWER REQUIREMENTS
STATIONARY OPERATION
RECEIVER "A": 1.5 v, 7.0 amp; or 1.1 v, 0.55 amp.
RECEIVER "B": 90 v, 0.025-0.045 amp; or 66 v, 0.019-0.035 amp.
TRANSMITTER "A": 7.5 v, 0.3 amp; or 5.5 v, 0.22 amp.
TRANSMITTER "B": 150 v, 0.045 amp; or 110 v, 0.035 amp.
VEHICULAR OPERATION
RECEIVER: 6.2 v, 2.8 amp, 17.4 W; or 12.4 v, 2.1 amp, 21 W.
TRANSMITTER: 6.2 v, 3.5 amp, 21.7 W; or 12.4 v, 2.9 amp, 36 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Galvin Mfg Corp, Chicago, Illinois.
Approximate Cost: $669.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

Receiver-Transmitter

(2) 1291	(4) 1LN5	(4) 1299
(1) 1294	(1) 1LC6	(1) 1LH4

Total Tubes: (13)

Power Supply

(1) OB3	(1) 1005

Total Tubes: (2)

(80) Crystals (20 mc to 27.9 mc).
Total Crystals: (80)

REFERENCE DATA AND LITERATURE

TM-11-605: Technical Manual for Radio Sets SCR-509(*) and SCR-510(*).

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUAER
PROCUREMENT COGNIZANCE	
STOCK NO.	

SCR-509-A,B,SCR-510-A,B RADIO SET

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-509-A,B	SCR-510-A,B			
1	1	Alignment Tool TL-150 or TL-207	5 X 7/8 dia	
1	1	Antenna AN-45 (Collapsed)	17-3/16 X 1/2 dia	.63
		(Extended)	98-1/2	
6	2	Battery BA-39 (Transmitter)	3-3/4 X 6-7/16 X 7-1/2	7.25
6	2	Battery BA-40 (Receiver)	4-1/16 X 5-1/4 X 7-3/8	6.50
2	2	Battery BA-40 (For BC-620)	2-1/8 X 2-3/8 X 3-1/2	.66
	*	Box TM-206 (Antenna Terminal)	1-7/16 X 2-1/4 X 2-9/16	
2	2	Bracket Assembly (for Power Cable)		
	*	Bracket FT-419 (For FT-250)	1-1/2 X 12-15/16 X 18	
	*	Bracket FT-420 (For FT-250)	1-1/2 X 12-15/16 X 18	
	*	Bracket FT-422 (Brush Guard)	1-1/4 X 1-1/4 X 13-1/4	
	*	Bracket (SC-A-8687)		
	*	Bracket (SC-A-8688)		
	*	Bracket FT-424 (For FT-250)		
	*	Bracket (SC-8689)		
	*	Bracket FT-426		
	*	Bracket FT-428		
	*	Bracket (SC-A-7110)		
	*	Bracket (SC-A-7111)		
1	1	Case CS-79 (For Battery Power Supply)	4-1/2 X 13-3/16 X 15-9/16	10.00
	2	Clamp MC-423 (For MS-51)	1 X 11/16 dia	
	2	Clamp MC-424 (For MS-52)	1 X 11/16 dia	
	*	Connector and Bondnut Appleton No's 61004 and BL-50 respectively		
	*	Connector and Bondnut Appleton 61007 and BL-50	1-1/4 dia X 1-3/4	.25
	*	Cord CD-307-A (65" lg. for HS-30)		
	*	Cord CD-318-A (For Microphone T-30 or T-45)	84	
	*	Cord CD-509 (For PE-120)	96	1.50
	*	Cord CD-604 (For HS-30)	10	
	*	Cord CD-636 (Coaxial Antenna Lead)		
	*	Cordage CO-218		
	1	Cover BG-108 (For MP-48-A)	6-1/2 X 14	.30
	*	Cover BG-153 (For Radio Set)		
	2	Microphone Cover M-367 (For Microphone T-17), 1 in Use, 1 Spare		
	2	Fitting (used with Rope RP-5), 1 in Use, 1 Spare		
	*	Frame FM-43		
	*	Frame FM-48		
1	1	Handset TS-13	2-1/2 X 3-3/8 X 79-1/8	1.80
	*	Footman's Loop, No. 1165 1 in., for Power Unit		
	1	Hardware Kit		
	*	Headset HS-30		
	*	Installation Kit MC-450		
	*	Installation Kit MC-475		
	2	Insulator (Used with Rope RP-5) 1 in Use, 1 Spare		
	2	Insulator IN-86 (For Aux. Antenna)	1-1/4 dia X 3	
	*	Insulator IN-121		
	*	Insulator IN-111		
	*	Interphone Control Box BC-606 with attached hardware		
	1	Mast Base MP-48 or MP-48-A (includes		

RADIO SET SCR-509-A,B,SCR-510-A,B

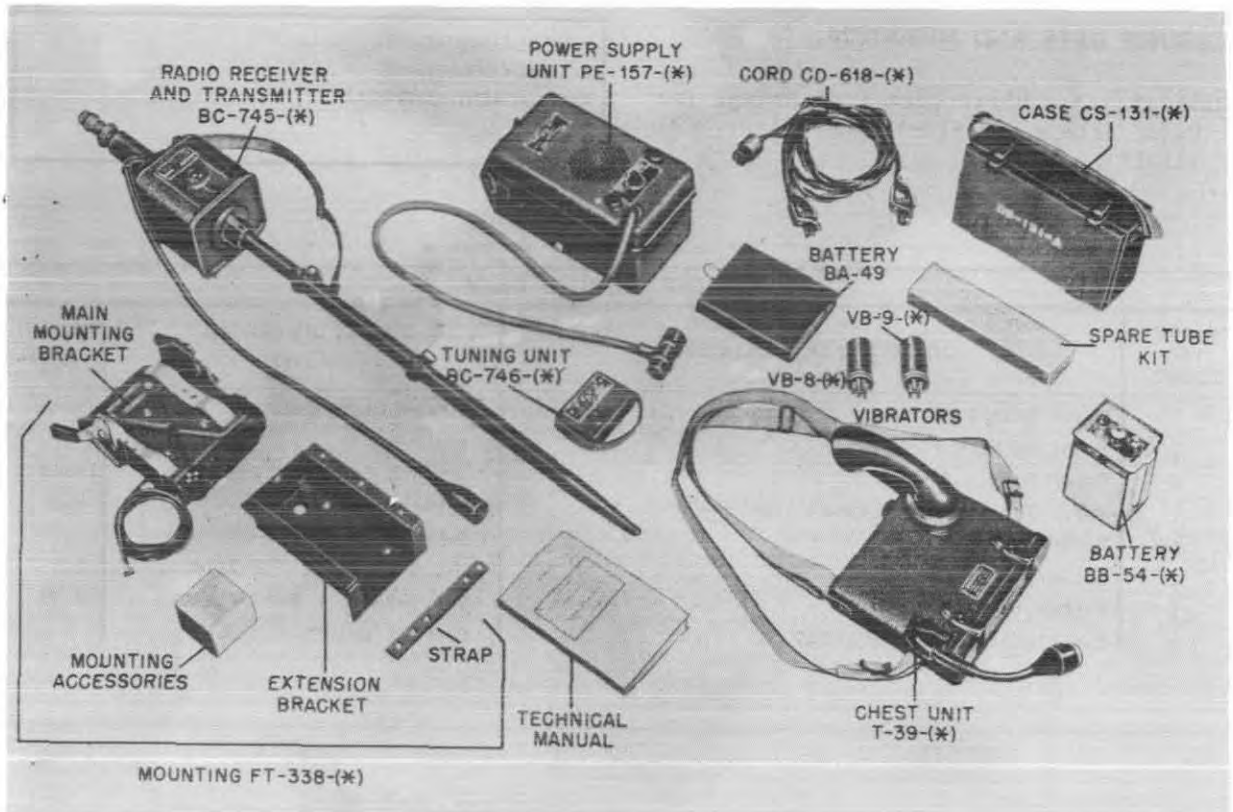
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-509-A,B	SCR-510-A,B			
		6 ft. wire W-126)	3-3/4 dia X 15	11.25
	*	Mast Bracket MP-50	5 X 5-1/4 X 8	4.25
	*	Mast Base Bracket MP-60		
	*	Mast Base Bracket MP-54	6 X 7-1/2 X 11-7/8	6.25
	2	Mast Section MS-51, 1 in Use, 1 Spare		
	2	Mast Section MS-52, 1 in Use, 1 Spare	41/64 dia X 38-1/2	.57
	2	Mast Section MS-53, 1 in Use, 1 Spare	23/32 dia X 38-5/8	.69
	1	Microphone T-17		
	1	Microphone T-30 or T-45		
	*	Mounting FT-250	4-1/2 X 11-3/4 X 20	11.50
	*	Mounting FT-317	6-1/8 X 12 X 20-7/8	12.50
	*	Plug PL-55 (Used with CO-218 and BC-606)		
	*	Mounting Strap ST-51 (For Power Unit)		
	*	Mounting Strap ST-52 (For Power Unit)		
1	1	Radio Receiver and Transmitter BC-620 Consist of: 1 Fuse (80) Crystal Holders FT-243, 2 in Use, 78 Spares (2) Tubes 1LH4, 1 in Use, 1 Spare (2) Tubes 1LC6, 1 in Use, 1 Spare (7) Tubes 1LN5, 4 in Use, 3 Spares (4) Tubes 1291, 2 in Use, 2 Spares (2) Tubes 1294, 1 in Use, 1 Spare (8) Tubes 1299, 4 in Use, 4 Spares	6-3/4 X 13-3/16 X 14-15/16	27.20
	*	Reinforcing Plate FT-429 (For MP-50)	3/16 X 1-1/2 X 4-1/2	
	1	Roll BG-56-A (For Mast Sections)	9-1/4 X 45	1.50
	*	Support FT-418		
	15 ft	Rope RP-5		
2	2	Strap ST-19-A		
2	2	Technical Manual	5-1/2 X 8-1/2	
27 ft	27 ft	Wire W-29 (Auxiliary Antenna)		
	6 ft	Wire W-126 (issued with MP-48)		
	*	Plate (For BC-606)		
	*+	Power Unit PE-120 (1) Regulator, Current, type 9-2-4 Amperite		
	2	Tubes VR-90-30, 1 in Use, 1 Spare		
	2	Tubes QMG-159, 1 in Use, 1 Spare		
	2	Vibrator, 1 in Use, 1 Spare		

*Item is issued in quantities authorized, depending upon the type of installation to be made. If Power Unit PE-120 is not available Plate Supply Unit PE-97, (which includes necessary tubes, and Vibrator VB-1, Capacitor CA-403, Fuse FU-36, one each in use and one spare may be used).

RADIO SET

Radio-Transceivers
SCR-511, A,B,C



Radio Set SCR-511-(*), Components

FUNCTIONAL DESCRIPTION

The SCR-511, A, B, and C are low power, portable, amplitude modulated radio telephone receiver-transmitters powered by dry or storage batteries. A two conductor cable (cord CD-618-C) is used to connect the battery charger circuit to a six or twelve volt vehicular battery for the purpose of charging battery BB-54-( ) when power supply unit PE-157-( ) is in portable operation.

No field changes in effect at time of preparation (February 4, 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

RANGE: 5 mi.
FREQUENCY RANGE: 2 to 6 mc.
POWER OUTPUT: 0.75 W.
RECEIVER TYPE: Superheterodyne.
POWER SOURCE REQUIRED
RECEIVER: 1.5 v filament at 355 ma, 67.5 v plate at 20 ma.
TRANSMITTER: 1.5 v filament at 0.49 amp. 105 to 125 v plate at 50 ma.
ANTENNA TYPE: Collapsible.

MANUFACTURER'S OR CONTRACTOR'S DATA

Galvin Manufacturing Corp, Chicago, Ill.
Approximate Cost: SCR-511A $440.00 with equipment spares.
Approximate Cost: SCR-511B $440.00 with equipment spares.
Approximate Cost: SCR-511C $440.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-511, -A, -B, -C
(1) 1S5 (3) 1T4 (5) 3S4
Total Tubes: (9)
(26) --
Total Crystals: (26)

Radio-Transceivers

August 1957

SCR-511, A,B,C

RADIO SET

REFERENCE DATA AND LITERATURE

TM11-245: War Dept. Technical Manual for Radio Sets - SCR-511-A, SCR-511-B, SCR-511-(*).

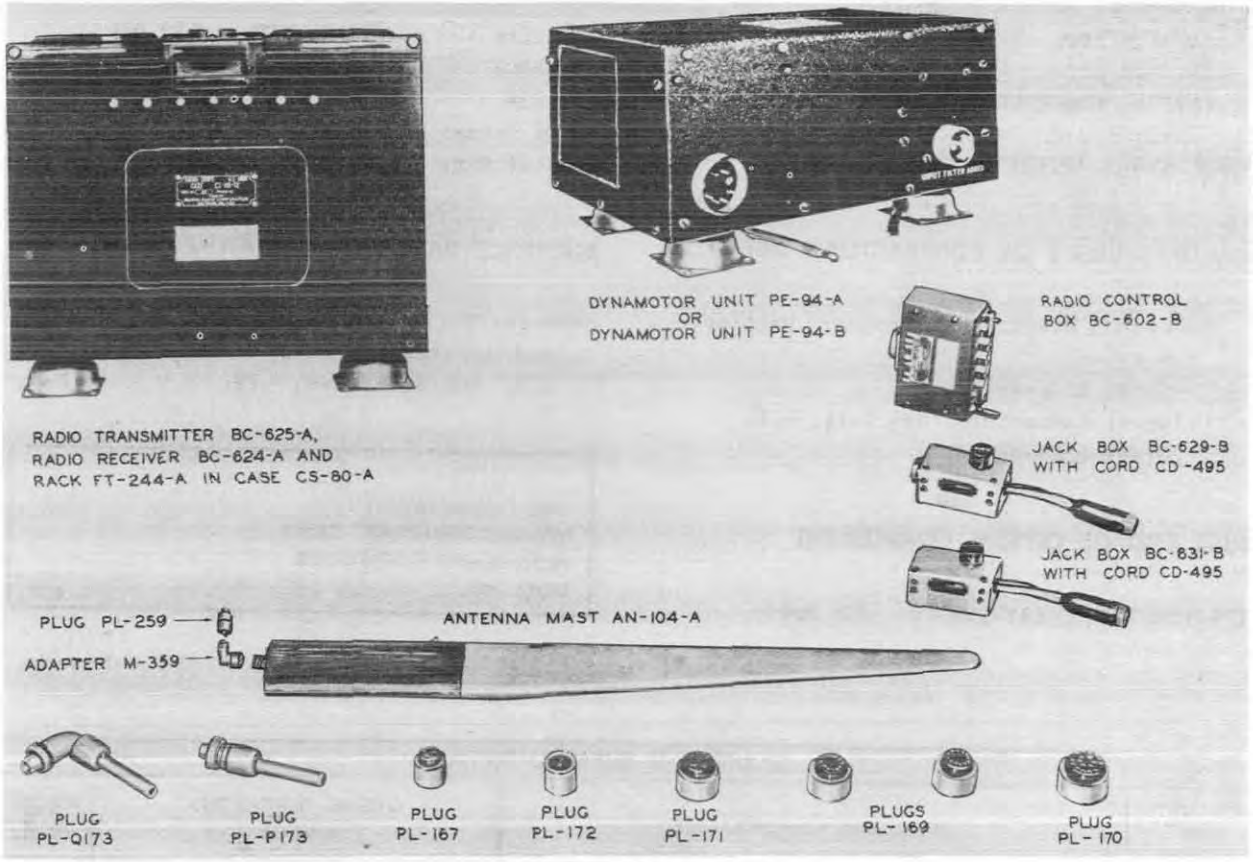
TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Chest Unit T-39	5 X 8-1/4 X 10-1/4	3.7
1	Mounting Foot FT-338		
1	Power Supply PE-157	5-5/8 X 8-3/8 X 11-9/16	16.13
1	Radio Receiver and Transmitter BC-745	5-1/2 X 5-1/2	9.3
1	Tuning Unit BC-746-( )	1-1/4 X 2-3/4 X 4-1/4	.5
1	Battery BA-49 OR	1-3/8 X 5-5/16 X 6-7/16	2.5
1	Battery BB-54	3 X 3-27/32 X 5-17/32	4.75
2	Technical Manuals TM11-245	5-1/2 X 8-1/2	

Radio-Transceivers

RADIO SET SCR-522,SCR-522-A



Radio Set SCR-522, -522A

FUNCTIONAL DESCRIPTION

The SCR-522 and SCR-522-A are used in aircraft, and provide two-way radiotelephone communication between aircraft in flight, and between aircraft and ground stations. Any one of four crystal-controlled channels is selected by remote control. Contactor Unit BC-608-A provides for continuous tone transmission on channel D only. Interphone communication is accomplished by combining the audio input circuits of the transmitter and receiver.

The SCR-522 and SCR-522-A are identical except for minor circuit changes.

No field changes in effect at time of preparation (8 May 1958).

RELATION TO OTHER EQUIPMENT

The SCR-522-A differs from Radio Set SCR-542-A only in the primary power supply voltage and the dynamotor used.

Equipment Required but not Supplied: Antenna, Microphones, Headsets and Contactor Unit BC-608-A.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

RANGE (GROUND AND AIRCRAFT): 30 to 180 mi at altitudes from 1000 to 20,000 ft.

TRANSMITTER
- FREQUENCY: 100-156 mc.
- EMISSION: A2, A3.
- FREQUENCY CONTROL: Crystal.
- NUMBER OF CHANNELS: 4.
- AVERAGE POWER OUTPUT: 8 to 9 W.

RECEIVER
- TYPE: Superheterodyne.
- FREQUENCY: 100-156 mc.
- RECEPTION: A2, A3.
- FREQUENCY CONTROL: Crystal.

Radio-Transceivers

SCR-522,SCR-522-A RADIO SET

SENSITIVITY: 3 to 4 uv.
IF: 12 mc.
CRYSTAL TEMPERATURE LIMIT: -40 deg C and +50 deg C.
POWER SOURCE REQUIRED: 22-32 v DC.

(3) 12A6 (1) 6L6WGB (3) 9003
(1) 12C8 (2) 6SS7 (1) 12J5GT
(2) 832
Total Tubes: (18)
Crystal Data Not Available.

MANUFACTURER'S OR CONTRACTOR'S DATA

Radio Div, Bendix Aviation Corp, Baltimore, Maryland.
Order 4046-WF-43.
Colonial Radio Corp, New York, N.Y.
Order 5220-WF-43.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 12AH7G (3) 12SG7Y (1) 9002

REFERENCE DATA AND LITERATURE

AN08-10-105: Technical Manual for Operation and Maintenance of Radio Set SCR-522-A, -T2, and SCR-542-A, -T2.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Case CS-80-A Containing: 1 Radio Transmitter BC-625-A 1 Radio Receiver BC-624-A 1 Rack FT-244-A	12-9/16 X 16-5/32 X 10-11/16	49
8	Crystal Unit DC-11-A	1-13/16 X 1-9/16 X 1-1/6	0.13
1	Dynamotor Unit PE-94-A	8-27/32 X 12-25/32 X 6-15/64	37
1	Jack Box BC-629-A (Pilot)	2-29/64 X 4-27/64 X 1-61/64	0.6
1	Jack Box BC-630-A (First crew)	2-29/64 X 4-27/64 X 1-61/64	0.6
1	Jack Box BC-631-A (Other crew)	2-29/64 X 4-1/16 X 1-61/64	0.54
1	Junction Box JB-29-A	4-1/8 X 8-15/32 X 2-7/16	2.19
1	Radio Control Box BC-602-A	5-9/16 X 5-7/8 X 2-1/2	2.41
1	Pkg Maintenance Parts		
20	Plugs for connecting		6.64

June 1961

Radio-Transceivers

RADIO SET SCR-528

Radio Set SCR-528

FUNCTIONAL DESCRIPTION

Radio Set SCR-528 is a vehicular, short-range, crystal-controlled, FM (voice), transmitting and receiving equipment used for radio communication by vehicles of armored units. It also provides for operation of the interphone system of armored vehicles.

This equipment consists of a radio transmitter and radio receiver mounted on a common shock mount, dynamotors, antenna, and accessories. The transmitter and receiver operate on 10 preset channel frequencies selected by means of 10 push-buttons on the front panels of these components.

No field changes in effect at time of preparation (6 September 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 20.0 to 27.9 at 0.1 mc intervals.
TYPE MODULATION: FM.
TYPE OF SIGNAL: Voice.
POWER OUTPUT: 30 W.
POWER REQUIREMENTS
TRANSMITTER: 12 v vehicular battery through Dynamotor DM-35, 24 v vehicular battery through Dynamotor DM-37.
RECEIVER: 12 v vehicular battery through Dynamotor DM-34, 24 vehicular battery through Dynamotor DM-36.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 12SG7Y	(7) 1619	(1) 1624
(3) 6AC7WA	(1) 6H6	(1) 6J5
(2) 6SL7WGT	(1) 6V6GTY	

Total Tubes: (18)
No Crystal data available.

REFERENCE DATA AND LITERATURE

TM11-600: Technical Manual for RADIO SET SCR-508, SCR-528.

TYPE CLASSIFICATION (NAVY)
DESIGN COGNIZANCE USA, SIG C
PROCUREMENT COGNIZANCE SPEC: (USA)271-1046
STOCK NO.
R.D.B. IDENT. NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS. (inches)	WEIGHT PACKED (lbs.)
		29.6		645

SCR-528 RADIO SET

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Dynamotor DM-34 or DM-36	3 x 4-1/2 x 6-1/2	4.7
1	Dynamotor DM-35 or DM-37	4-1/2 x 5-1/2 x 8-1/4	9.2
1	Interphone Control Box BC-606	2-1/4 x 4-1/4 x 4-1/2	1.8
1	Mounting FT-237	5 x 12 x 33	26
1	Radio Receiver BC-603	6-3/4 x 11-1/2 x 12-1/2	35
1	Radio Transmitter BC-604	10-1/4 x 11-1/2 x 18	67

April 1958

Radio-Transceivers

RADIO SETS SCR-536, A, B, C, D, E, F

Radio Sets SCR-536,A,B,C,D,E,-F

FUNCTIONAL DESCRIPTION

The SCR-536, A thru -F are portable, low powered, dry battery operated, single frequency, receiving and transmitting (transceiver) sets used for voice communication between ground units. Its outstanding portability make it a handy walkie-talkie for communicating over short distances. It is preset to operate on only one frequency in a frequency range of 3.5 to 6 megacycles.

The sets are turned on by extending the antenna. When thus connected to its internal dry battery supply, it functions as a receiver. Pressing the press-to-talk switch converts the receiver circuit to a transmitter circuit.

Radio sets SCR-536, A,B,C,D,E and F are all very similar. Later models of SCR-536-F are equipped with a new type bottom cover which provides jacks for use of an external headset and microphone when desired.

No field changes in effect at time of preparation (4 February 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: Batteries BA-37 and BA-38.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

GENERAL
- FREQUENCY RANGE: 3.5 to 6 mc.
- FREQUENCY CONTROL: Crystal.
- DISTANCE RANGE
  - OVER LAND: Approx 1 mi
  - OVER WATER: Approx 3 mi.
- POWER SOURCE REQUIRED: 1.5 v battery BA-37; 103.5 v battery BA-38.

TRANSMITTER
- OUTPUT POWER: 0.02 W.
- EMISSION: Voice.

RECEIVER
- TYPE: Superheterodyne.
- RECEPTION: Voice.
- IF: 455 kc.

ANTENNA
- TYPE: 40 in. telescopic rod.

MANUFACTURER'S OR CONTRACTOR'S DATA

Galvin Mfg Co., Chicago, Illinois

Radio-Transceivers

SCR-536, A, B, C, D, E, F RADIO SETS

April 1958

Purchase Order 2538 - Chi. -42(SCR-536-B)
Purchase Order 1345 - Wf. -43(SCR-536-C)
Purchase Order 29056 - Phila.- 43 (SCR-536-D).
Purchase Order 16090 - Phila. - 44 (SCR-536-E).
Approximate Cost: $200.00 with equipment spares.

REFERENCE DATA AND LITERATURE

TM11-235: War Dept. Technical Manual for Radio Sets - SCR-536, -A, -B, -C, -D, -E, and -F.
Technical Manual - Signal Communication Equipment Directory of Radio Communication Equipment.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 3S4
(1) 1S5
(1) 1R5
(1) 1T4
Total Tubes: (5)

(2) Type not available.
Total Crystals: (2)

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

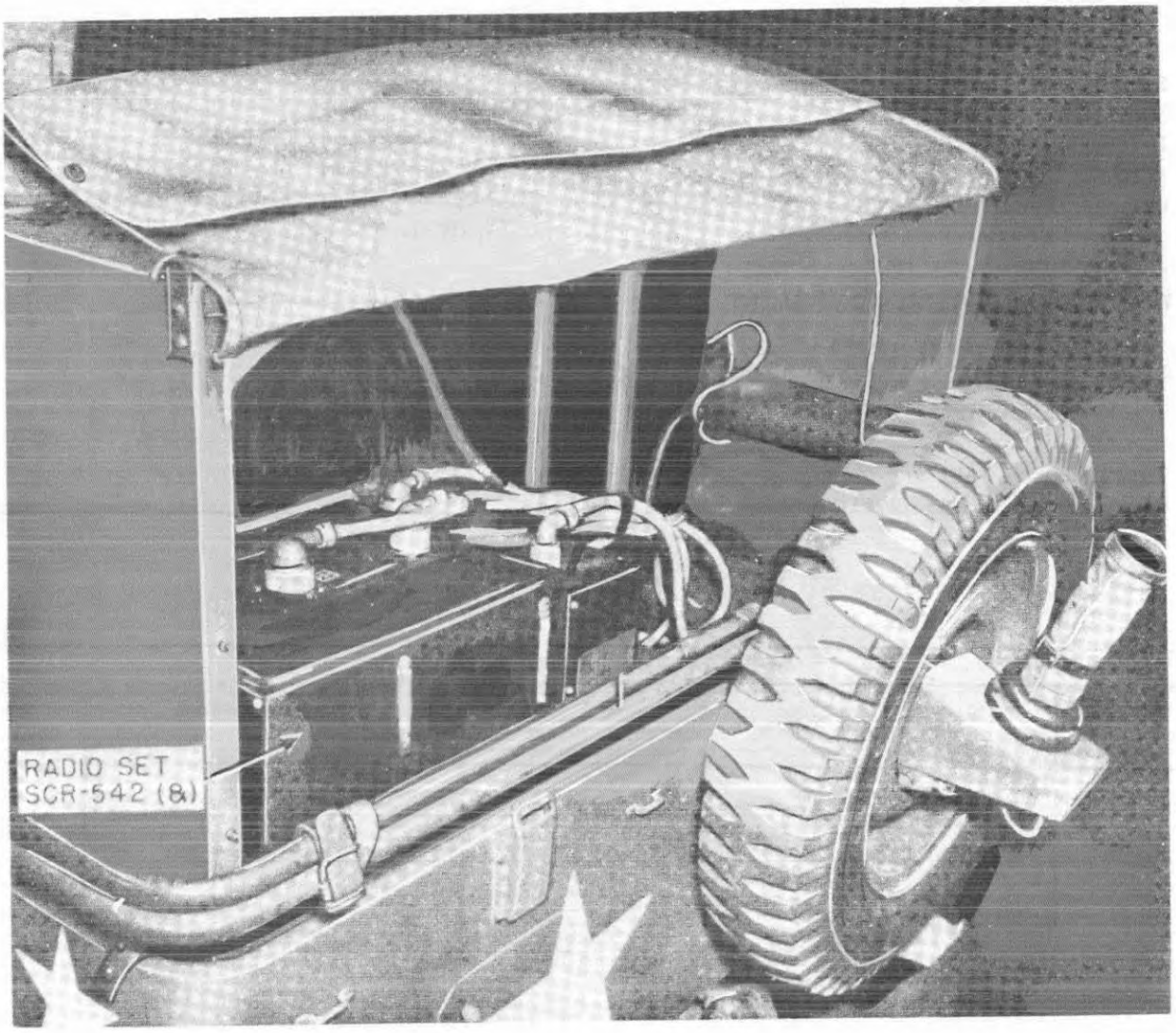
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Set - SCR-536 (*)	0.95	7-3/8 x 10-1/2 x 21-1/4	17

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
4		Battery BA-37 (1.5 volts)	1-5/16 x 6-1/8	0.55
4		Battery BA-38 (103.5 volts)	1-11/32 x 1-11/32 x 11-3/4	1.10
2		Technical Manuals	8-1/2 x 11	
1		Radio Receiver and Transmitter BC-611 (*) (with coils, crystals and tubes)	3-5/8 x 5-3/8 x 15-3/4	3.85
Note 5	1	Set Crystals (spare)		
1		Set Electron Tubes (spare)		
Note 2	1	Box BX-49 - Containing: 12 Sets Crystals, 12 Sets Antenna Coils, 12 Sets R-F. Tank Coils		2.6
Note 3	1	Microphone Cover M-367		
Note 4	1	Cover Assembly	1-1/2 x 3-1/4 x 3-3/4	
Note 4	2	Battery Adapters FT-501		

NOTES
#1 Component of SCR-536A only
2 Component of SCR-536C only
3 Component of SCR-536D only
4 Component of SCR-536F only
5 *Means all Models A, B, C, etc.

RADIO SET SCR-542



Radio Set SCR-542

FUNCTIONAL DESCRIPTION

The SCR-542 is designed as a combination high-frequency (H.F.) and Very-high-frequency (VHF) radio set, for installation in, and operation from, the 12-volt model of Truck, 1/4 ton, 4 x 4.

The H.F. section is normally used for communication within a ground point-to-point net although use as a beacon for compass equipped aircraft and for communication with H.F. equipped aircraft is also practicable. The V-H-F section is normally used for ground-air-communication with aircraft fitted with V-H-F equipment.

No field changes in effect at time of preparation (18 March 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION
  RECEIVER AND TRANSMITTER: A3 type.
NUMBER OF CHANNELS
  RECEIVER AND TRANSMITTER: 4 channels.
TYPE OF FREQUENCY CONTROL

Radio-Transceivers

SCR-542 RADIO SET

RECEIVER AND TRANSMITTER: Crystal.
SENSITIVITY: 3 to 4 uv.
POWER OUTPUT: 6 W max.
INTERMEDIATE FREQUENCY: 12 mc.
FREQUENCY RANGE: 100 to 156 mc.
OPERATING POWER RQMT: 12 v DC.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 12AH7G	(3) 12SG7Y	(1) 9002
(3) 12A6	(1) 12C8	(2) 832
(1) 6L6WGB	(2) 6SS7	(3) 9003
(1) 12J5GT		

Total Tubes: (18)
Crystal Data not Available.

REFERENCE DATA AND LITERATURE

AN08-10-105: Technical Manual for Operation and Maintenance of Radio Set SCR-522-A, -TR, and SCR-542-A, -T2.
TM11-277: Technical Manual for Radio Set AN/VRC-1.

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

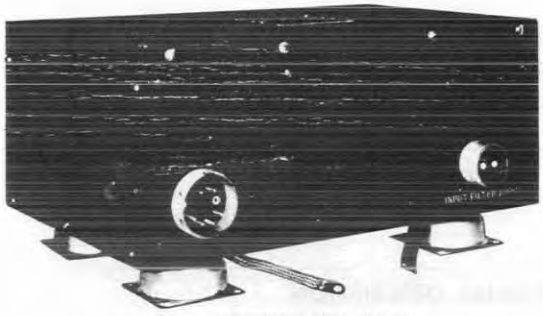
EQUIPMENT SUPPLIED DATA

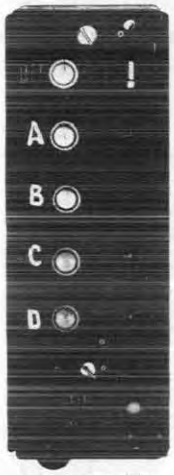
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Dynamotor Type PE-98	6-15/64 X 8-27/32 X 12-25/32	37
1	Rack Type FT-244		
1	Radio Control Box Type BC-602	2-1/2 X 5-9/16 X 5-7/8	2.41
1	Radio Receiver Type BC-624		
1	Radio Transmitter Type BC-625		

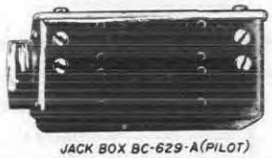
June 1961

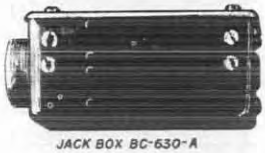
Radio-Transceivers

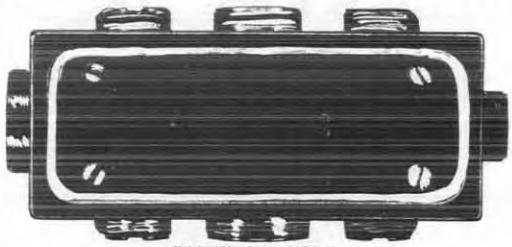
RADIO SET SCR-542-A











Radio Set SCR-542-A

FUNCTIONAL DESCRIPTION

Radio Set SCR-542-A is designed for use in aircraft to provide a two-way radio telephone communication system between aircraft in flight or between aircraft and ground stations.

No field changes in effect at time of preparation (31 August 1960).

TYPE OF EMISSION: A3.
FREQUENCY CONTROL: Crystal.
NUMBER OF CHANNELS: 4.
POWER REQUIREMENTS: 14 v dc.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio Corp, Baltimore, Md.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 100 to 156 mc.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 12AH7GT (4) 12A6 (1) 12C8

Radio-Transceivers

June 1961

SCR-542-A RADIO SET

(1) 12H6 (1) 12J5GT (3) 12SG7Y
(1) 6G6G (2) 6SS7 (2) 832A
(1) 9002 (4) 9003

Total Tubes: (22)
(8) DC-11-A
Total Crystals: (8)

SETS SCR-522-A, SCR-522-T2, SCR-542-A, SCR-542-T2.

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

FUNCTIONAL DESCRIPTION

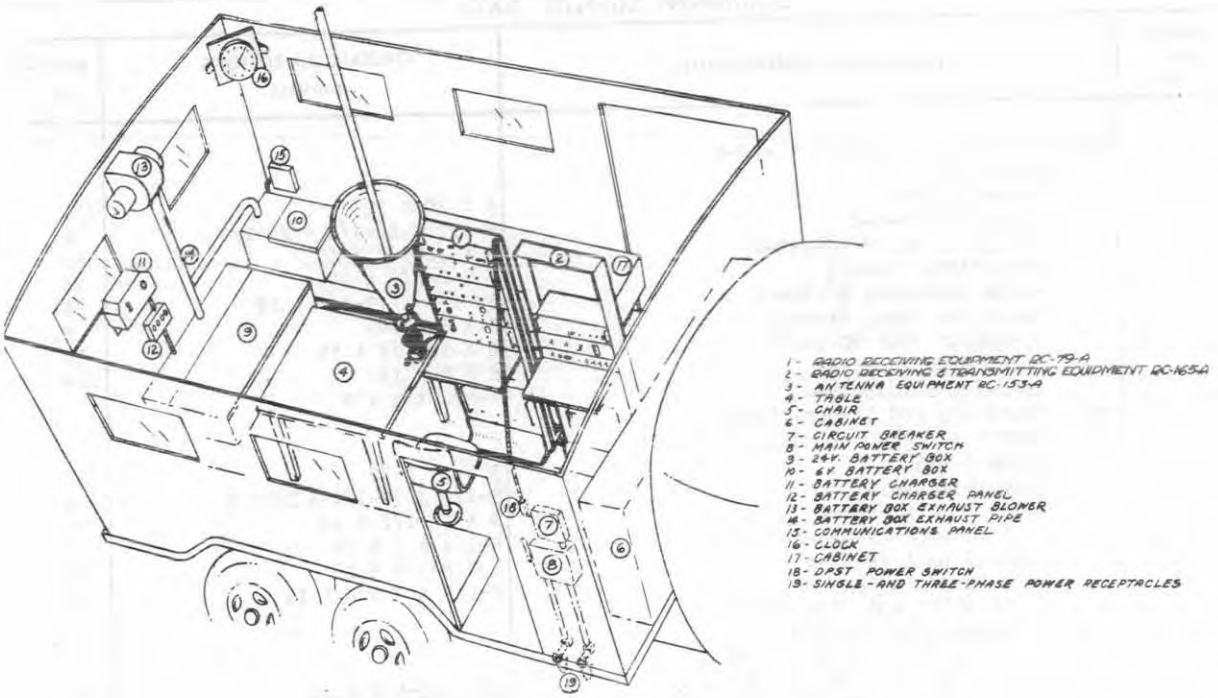
TO: 08-10-105: Technical Manual for RADIO

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Case CS-80-A	10-11/16 x 12-9/16 x 16-5/32	49
1	Dynamotor Unit PE-98-A	6-15/64 x 8-27/32 x 12-25/32	37.0
1	Jack Box BC-629-A	1-61/64 x 2-29/64 x 4-27/64	0.60
1	Jack Box BC-630-A	1-61/64 x 2-29/64 x 4-27/64	0.60
1	Jack Box BC-631-A	1-61/64 x 2-29/64 x 4-1/16	0.54
1	Junction Box JB-29-A	2-7/16 x 4-1/8 x 8-15/32	2.19
1	Rack FT-244-A		
1	Radio Control Box BC-602-A		
1	Radio Receiver BC-624-A		
1	Radio Transmitter BC-625-A		

RADIO SETS

SCR-575-A,B



Radio Sets SCR-575-A,B

FUNCTIONAL DESCRIPTION

The SCR-575-A,B is a complete mobile radio station, used for direction-finding and two-way radio communication

The SCR-575-A,B is contained in truck K-53. A small two-wheeled trailer K-63 contains power supply unit PE-99 ( ).

Normally it is used as a fixed direction finding station, may also be used as a homing station.

Difference between SCR-575-A,B is test equipment IE-19-A is supplied with SCR-575-B and I-139-A is with SCR-575-A.

No field changes in effect at time of preparation (25 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 100 to 156 mc (4 channels).
TYPE RECEPTION AND TRANSMISSION: A2, A3.
POWER OUTPUT: 9 W.
POWER SOURCE REQUIRED: 110 v 50 to 60 cycles or 6 v to 24 v DC.

MANUFACTURER'S OR CONTRACTOR'S DATA

Approximate Cost: $30,000.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1A5GT	(4) 6K6GT	(4) 6SQ7
(3) 5Y4G	(1) 6L5G	(3) 6SS7
(1) 6E5	(16) 6SG7Y	(1) 6X5WGT
(2) 6G6G	(2) 6SK7WA	(4) 12A6
(2) 12AH7GT	(1) 12J5GT	(4) 25L6GT
(2) 12C8	(6) 12SG7Y	(1) 71A
(4) 832	(2) 958A	(8) 9002
(22) 9003		

Total Tubes: (95)

REFERENCE DATA AND LITERATURE

AN 16-40 SCR-575-3: Technical Manual for Radio Sets SCR-575-A and B.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

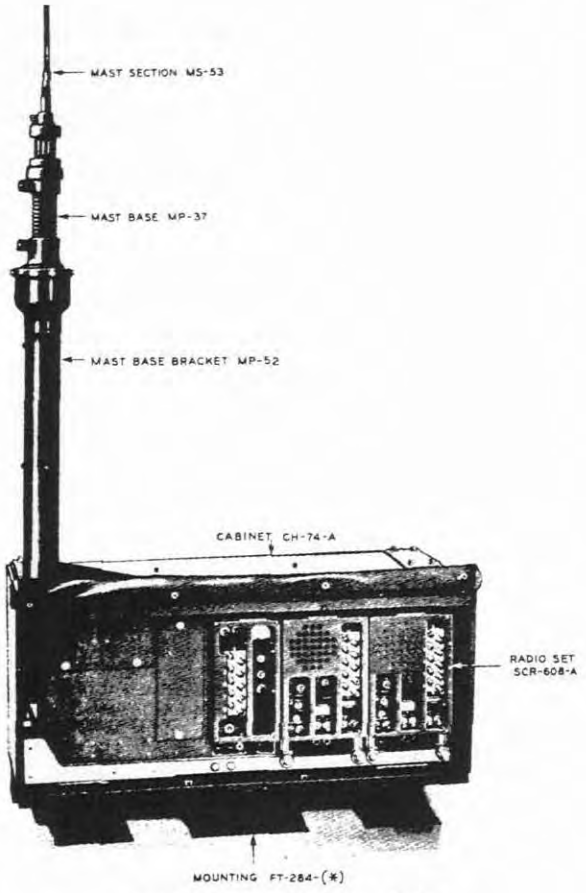
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	Radio Receiving Equipment RC-79-A Consist of:		
1	Frame FM-39-A	3 X 20 X 72	121
1	Desk Unit PN-1-A	3-1/2 X 12-1/4 X 20-1/2	8
1	Frequency Meter BC-638-A	7 X 11-1/2 X 19	35
2	Rectifiers RA-42-( )	7 X 8-5/8 X 19	26
2	Radio Receivers BC-639-A	10-1/2 X 13-1/4 X 19	36
1	Switching Panel PN-6-A	5 X 7 X 19	8.50
1	Dynamotor Unit PE-100-A	6 X 10-1/2 X 19	23
1	Fuse Panel PN-15-A	5 X 5 X 19	24
1	Junction Box JB-45-A	4-3/4 X 6 X 8	
	Radio Receiving and Transmitting Equipment RC-165-A Consisting of:		
1	Frame FM-39-A	3 X 20 X 72	121
1	Desk Unit PN-1A	3-1/2 X 12-1/4 X 20-1/2	8
1	Relay Unit BC-687-A	9 X 12-1/2 X 19	36
1	Control panel PN-25-A	6-1/4 X 7 X 19	
1	Control Unit RM-18-A	5 X 8-3/4 X 19	16
1	Fuse Panel PB-5-A	2-1/2 X 4-5/8 X 19	15
1	Transmitter and Receiver Assembly Consisting of:		
1	Mounting Frame FT-314-A		
1	Case CS-80-A, Containing:	10 X 12-1/2 X 16	10
1	Radio Transmitter BC-625-A	6 X 9 X 15-1/2	16.25
1	Radio Receiver BC-625-A	6 X 9 X 15-1/2	14.50
1	Dynamotor Unit PE-94-A	6-15/64 X 8-27/32 X 12-25/32	36
1	Junction Box JB-29-A	2-7/16 X 4-1/8 X 8-15/32	2.25
1	Mounting Frame FT-316-A		
	Antenna Equipment RC-153-A Consisting of:		
1	Central shaft, upper	3-1/2 X 14	
1	Central shaft, lower	3-1/2 X 4-1/2	
1	H-Frame	10-3/4 X 16-1/2 X 45-1/2	16
1	H-Frame Cover Cap	3-1/2 dia X 27-1/4 lg	1
1	Handwheel		
1	Azimuth Scale, double		
1	Cursor		
1	Sense Control Disc		
1	Coupling Unit		
1	Antenna Brake Mechanism		
1	Set of 8-dipole Rods (100-124 mc)	28 lg	
1	Set of 8-dipole Rods (122-146 mc)	23 lg	
1	Set of 8-dipole Rods (132-156 mc)	21 lg	
1	Output Meter, 0-5 v a-c		
1	Knee Switch		
1	Antenna Tripol Support		
1	Telescope, Compass, and level Assembly with Chest		
	Power Equipment Consisting of:		
1	Power Unit PE-99( ) in Trailer K-63( )		
1	Power Cable Assembly, Consisting of:		
1	Power Cable	150 ft lg	
1	Power Matching Stub and Fitting	5 ft lg	
1	Reel DR-11		
1	Main Power Switch		
1	Circuit breaker		
1	3-phase, Power-input receptacle		
1	Single-phase, Power-input Receptacle		

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
4	12 v, 136 amp-hour Storage Batteries		
1	Battery Charger Assembly		
1	Charger Panel Assembly		
	Miscellaneous Equipment Consist of:		
1	Communication Panel Assembly		
1	Oscillator Test Equipment RC-93-A With Cover, Antenna, and Tripod	6-1/4 X 6-3/4 X 8-3/4 (Not incl. Ant and trip)	
1	Test Equipment IE-19-A (with Radio Set SCR-575-B only)		
1	Test Equipment I-139-A (with Radio Set SCR-575-A only)		
1	Telephone EE-8-A		
3	Headset HS-23		
3	Handset TS-14		
2	Microphone T-48-A		
5	Dual, 20-Watt, 110 v Flourescent Lamps		
2	1500 Watt Electric Heaters or		
1	Gas Heater		
3	Ground Rods		
1	Clock: 8-day Mechanical, with Winding Key		
1	Battery Ventilating Equipment		
1	Buzzer BZ-8-A		
1	Cabinet: For Antenna Equipment RC-153-A and Oscillator Test Equipment RC-93-A		
1	Cabinet: For Maintenance Equipment ME-49-( )		
1	Cable: Coaxial, Junction Box JB-45-A	20 in.	
1	Cable: Coaxial, Coupling Unit	14 in.	
2	Cap		
2	Chairs: Folding		
1	Chair: Operating		
3	Cords CD-307-A		
1	Key J-44 with 5 ft Cord and Plug PL-165		
1	Loudspeaker		
1	Maintenance Equipment ME-49-( )		
1	Table: Wood	24 X 30	
1	Reels Holder Assembly		
1	Set Tester		
1	Tool Equipment TE-48		
1	Tool Equipment TE-96		
1	Truck K-53	2-1/2 ton 6 X 6	
As Req.	Wiring: Power and Communication, in flexible Conduit, with necessary Connectors, Boxes, Cable Straps, etc, for installation		
As Req.	Hardware: Screws, Bolts, Nuts, Fittings, etc. for installation		

RADIO SET SCR-608,608A



Radio Set SCR-608, 608-A

FUNCTIONAL DESCRIPTION

The SCR-608 and SCR-608-A provide FM radio telephone communication for anti-aircraft, anti-aircraft, anti-tank warning, control, fire direction nets, and intrabattalion communication. They are installed and operated in combat vehicles such as command cars, half tracks or any other authorized vehicles.

The SCR-608 and SCR-608-A are similar except that the SCR-608 operates on 24 volts only.

No field changes in effect at time of preparation (12 September 1956).

RELATION TO OTHER EQUIPMENT

The SCR-608 is identical to the SCR-508 in appearance but it has a higher frequency range and lower power output. The SCR-608-A is very similar to the SCR-628-A, the major difference being an auxiliary receiver in the SCR-628-A.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 27 to 38.9 mc.
DISTANCE RANGE: 5 to 15 mi depending upon Terrain.
TRANSMITTER
- FREQUENCY CONTROL: Crystal.
- CHANNELS: 10 preset, 120 available, 100 kc spacing between channels
- FREQUENCY DEVIATION: ±40 kc.
- FREQUENCY MULTIPLICATION: 72.
- POWER OUTPUT: 20 W.

RECEIVER
- TYPE: Superheterodyne.
- FREQUENCY CONTROL: Crystal.
- BANDWIDTH: 80 kc.
- I.F.: 2.65 mc.
- POWER OUTPUT
  - SPEAKER: 2 W.
  - HEADSET: 0.2 W.
- SENSITIVITY: 1 uv.
- NOISE SUPPRESSION: Squelch.

POWER SOURCE
- TRANSMITTER: 12 v DC, 240 W or 24 v DC, 288 W.
- RECEIVER: 12 v DC, 48 W or 24 v DC, 48 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Approximate Cost: $1800.00 with equipment spares. SCR-608.
Approximate Cost: 1800.00 with equipment spares. SCR-608A.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-608,	SCR-608A
(3) 6AC7W	(2) 6S17GT
(1) 6H6	(1) 6V6
(1) 6J5	(2) 12SG7

SCR-608,608A RADIO SET

March 1957

(7) 1619
Total Tubes: (18)

(1) 1624

Sets SCR-608-A, -B, and SCR-628-A.
Marine Corp Vol. II for Radio Set SCR-608.

(120) FT-241-A
Total Crystals: (120)

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

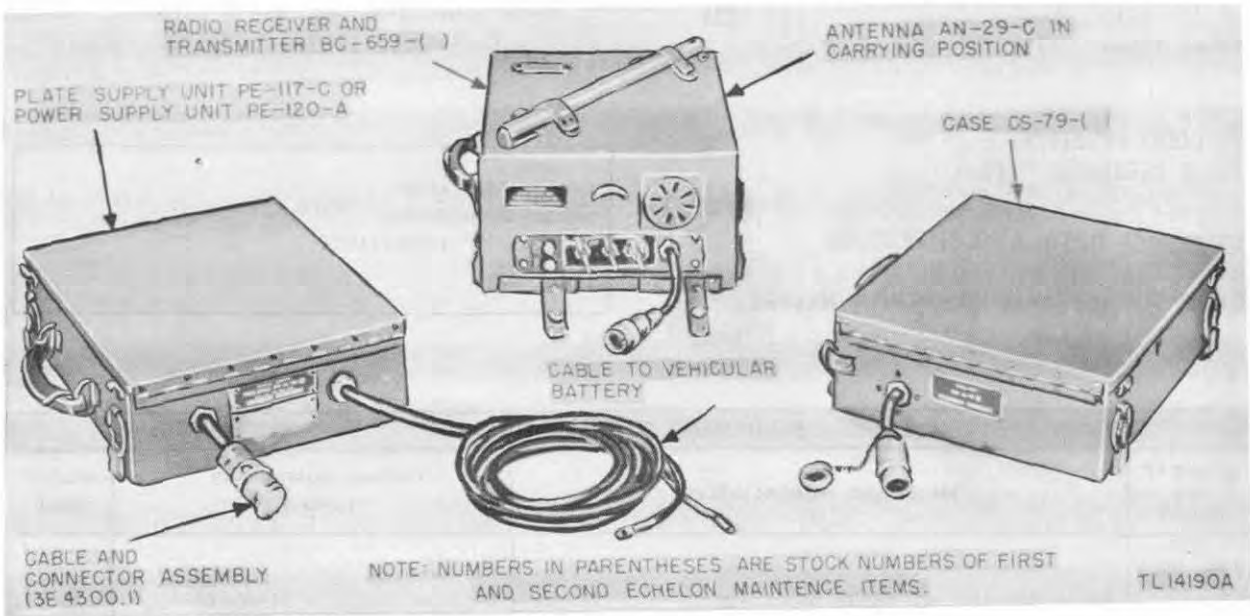
REFERENCE DATA AND LITERATURE

Dept. of the Army Technical Manual for

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-608, 608A				
2		Radio Receiver-BC-683BM	6-3/4 x 11-1/2 x 11-13/16	35
	2	Radio Receiver-BC-683A	6-3/4 x 11-1/2 x 12-1/2	35
2		Dynamotor DN-36		
	2	Dynamotor DN-34	3 x 4-1/2 x 6-1/2	4.7
1		Radio Transmitter-BC-684	6-3/4 x 11-1/2 x 18	67
	1	Radio Transmitter BC-684A	10-1/4 x 11-1/2 x 18	67
1		Dynamotor-DM-37	4-3/8 x 5 x 8-3/16	
	1	Dynamotor-DM-35	4-3/8 x 5 x 8-3/16	
1	1	Mounting FT-237 with Cord for Power Supply	5-1/2 x 13 x 33-5/8	44
1	1	Mast Section MS-116	39-1/2	
2	2	Mast Section MS-117	39-1/2	0.7
2	2	Mast Section MS-118	39-1/2	0.8
1	1	Mast Base AB-15/GR	15	2
1	1	Interphone Control Box-BC-606H	2-1/4 x 4-1/4 x 4-1/4	1.8
	1	Cabinet CH-74	16 x 18 x 36	92
1	1	Set of Accessories Including Microphones, Headsets, Cables.		

RADIO SET SCR-609, SCR-609-A,-B



Radio Set SCR-609,SCR-609A,-B

FUNCTIONAL DESCRIPTION

The SCR-609, SCR-609-A, and SCR-609-B are low-power, frequency-modulated equipments designed to provide two-way voice communication over short distances from a stationary ground position. They are self-contained units that are powered by dry batteries, and can be operated over either of two preset frequencies controlled by plug-in crystals.

No field changes in effect at time of preparation (26 November 1957).

RELATION TO OTHER EQUIPMENT

The SCR-609, SCR-609-A, and SCR-609-B are the same as the SCR-610-( ) less the components for vehicular mounting and operation.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 27.0 to 38.9 mc.
POWER OUTPUT(TRANSMITTER): 1.3 W.
EMISSION: F3.
FREQUENCY CONTROL: Crystal controlled oscillator.
CHANNEL DATA
QUANTITY: 120.
FREQUENCY SEPARATION: 100 kc between channels.
TYPE RECEIVER: Superheterodyne.
IF: 4.3 mc.
RANGE: Approx 5 mi.
POWER REQUIREMENTS: (1) BA-39, (1) BA-40, (1) BA-41 battery.
TYPE ANTENNA: Telescopic, approx 1/2 wavelength at the center of the frequency range when fully extended.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) OB3
(1) 1LC6
(1) 1LH6
(5) 1LN5
(1) 1R4/1294
(1) 1005
(2) 3B7/1291
(4) 3D6/1299
Total Tubes: (16)
(2) FT-423
Total Crystals: (2)

REFERENCE DATA AND LITERATURE

TM11-615: Technical Manual for Radio Sets SCR-609-A and -B and SCR-610-A and -B.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

Radio-Transceivers

SCR-609, SCR-609-A,-B RADIO SET

April 1958

SHIPPING DATA

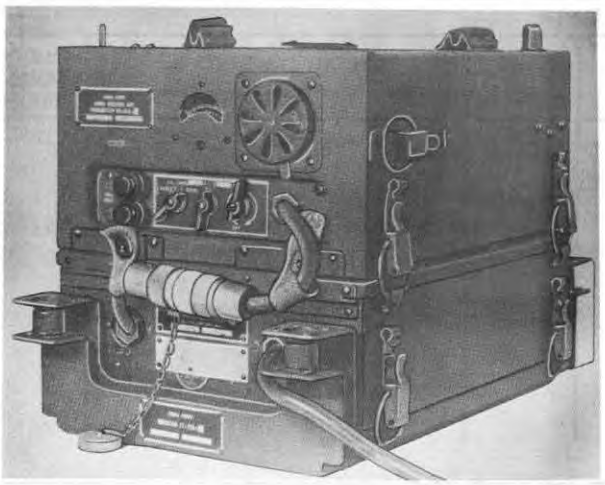
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Receiver-Transmitter BC-659-( ) including: (1) Set of Crystals	4.0	13-1/8 x 17-1/8 x 30-1/2	81.5
1	Antenna AN-29-C including: (1) Alignment Tool TL-207 (1) Case CS-137 including Crystals (1) Case CS-79-( ) (1) Handset TS-13 (2) Strap ST-19-A (2) Technical Manual TM11-615 (1) Wire W-29	3.4	13-3/8 x 17-7/8 x 24-1/2	56.0

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Receiver-Transmitter BC-659-( ) including: (1) Set of Crystals	11-7/8 x 16-3/8 x 21-1/2	35.13
1	Antenna AB-29-C	154 lg extended	2.0
1	Alignment Tool TL-207	2-1/8 x 2-1/4 x 7-7/8	0.02
1	Case CS-137 containing: (118) Crystal	4-3/8 x 4-5/8 x 12-1/2	6.45
1	Case CS-79-( )	6-1/2 x 15-1/4 x 18-1/4	14.94
1	Handset TS-13	2-3/4 x 4-1/2 x 13-7/8	2.7
2	Strap ST-19-A	2-5/8 x 3 x 6-1/2	1.96
2	Technical Manual TM11-615	1 x 8 x 10-1/2	1.0
1	Wire W-29	3/4 x 5-1/4 x 6-1/4	0.56

September 1956

RADIO SET SCR-610,A,B



Radio Set SCR-610,A,B

FUNCTIONAL DESCRIPTION

The SCR-610,A and B is a low power frequency-modulated two-way communication set designed for installation and operation in vehicles.

This set is intended to serve as a complete installation and is not designed for use as a part of any other system.

No field changes in effect at time of preparation (12 July 1956).

RELATION TO OTHER EQUIPMENT

Radio Set SCR-610,A,B and Radio Sets SCR-609A,B are identical, except that Radio Set SCR-610,A,B provided with additional components necessary for vehicular installation.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 27.0 to 38.9 mc (120 channels).
POWER OUTPUT: 1.3 W.
TYPE RECEPTION AND TRANSMISSION: F3.
TYPE CONTROL: Crystal.
RANGE: 5 mile (approx).
POWER SOURCE REQUIRED: 6 v, 12 v or 24 v battery.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 1LC6	(1) 1LH4
(5) 1LN5	(1) 1R4/1294
(1) OB3	(2) 3B7/1291
(4) 3D6/1299	(1) 1005

Total Tubes: (16)

REFERENCE DATA AND LITERATURE

TM11-Technical Manual for Radio Sets SCR-609A and B and SCR-610A and B.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

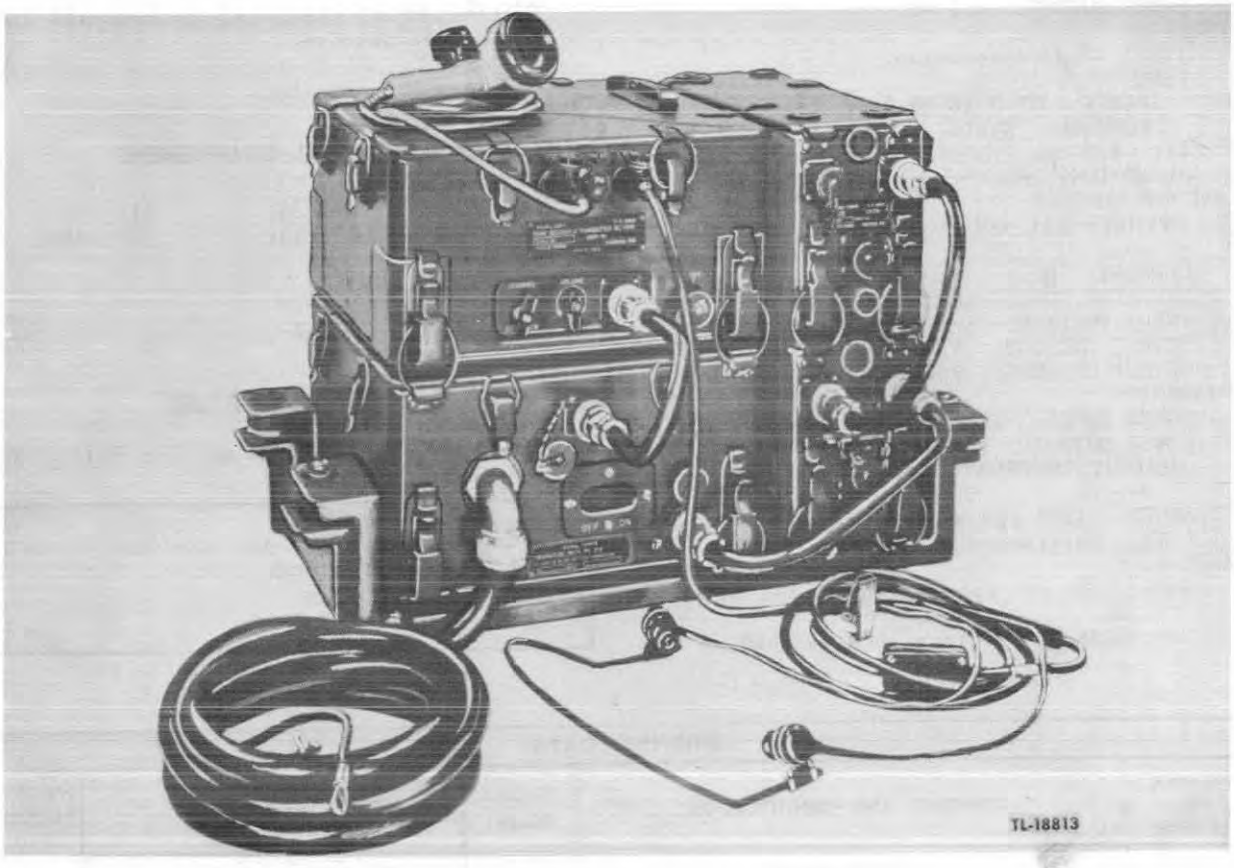
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Receiver and Transmitter BC-659-J	11-7/8 X 16-3/8 X 21-1/2	35.13
1	Power Supply Unit PE-120-A	8-7/8 X 16-1/2 X 18-7/8	33.8
1	Mounting FT-250	4-1/2 X 11-3/4 X 20	11.5
1	Antenna AN-29-C (extended)	7/8 dia. X 154 lg.	2.0
	(collapsed)	7/8 dia. X 15-1/2 lg	2.0
2	Mast Sections MS-116	3/8 dia. X 39-1/4 lg	
2	Mast Sections MS-117	9/32 dia. X 39-1/4 lg	
2	Mast Sections MS-118	7/8 dia. X 39-1/4 lg	

April 1958

RADIO SET

Radio-Transceivers
SCR-619



Radio Set SCR-619

FUNCTIONAL DESCRIPTION

Radio Set SCR-619 is a combined radio transmitter and radio receiver with facilities for providing short range voice communication between similar sets and other sets operating in the same frequency range. The set is designed for pack operation and it has an average distance range of 5 miles. The range will vary with the antenna height, frequency, time of day, power output, type of antenna, terrain, condition of batteries, and other operating conditions.

Radio Set SCR-619 consists of a 19-tube low powered, single unit Receiver-Transmitter BC-1335 or BC-1335-A and various power source combinations. Although the equipment is designed for field operation, it may be operated from a vehicle equipped with a 6, 12 or a 24 volt power source. It is quickly converted from vehicular to pack transportation for emergency use in close combat areas.

The radio set covers a frequency range of 27.0 to 38.9 mc using 120 channels. Any two of the channels, which are spaced at 100 kilocycle intervals may be preset. A channel selector switch on the receiver-transmitter provides selection of the preset channels while the set is in operation. The major components are of water proof construction, but continued exposure to moisture is detrimental to the equipment. The transmitter is frequency modulated and crystal controlled. It has a power output of 1-1/2 watts.

No field changes in effect at time of preparation (26 November 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

GENERAL
- POWER SOURCE REQUIRED
  - PACK OR FIELD USE: (3) BB-54-A battery.
  - VEHICULAR USE: 6/12 or 24 v vehicular battery, and (6) BB-54-A batt.

TRANSMITTER
- FREQ
  - RANGE: 27.0 to 38.0 mc.
  - CHANNELS: 2 preset, 120 possible.
  - SPACING: 100 kc.
  - CONTROL: Xtal.
- EMISSION: F3.

Radio-Transceivers

SCR-619 RADIO SET

April 1958

POWER OUTPUT: 1.5 W.
RECEIVER
TYPE: Superheterodyne.
FREQ
RANGE: 27.0 to 38.0 mc.
CONTROL: Xtal.
IF: 4.3 mc.
RECEPTION: F3.
BATTERY CHARGER
OPERATIONAL VOLTAGE: 5.7 v min, 24 v max.
CURRENT: DC.
VIBRATOR FREQ: 120 cps.
INPUT VOLTAGE: 6, 12 or 24 v.
OUTPUT VOLTAGE: 6 v.
OUTPUT CURRENT: 3 to 10 amp.
DYNAMOTOR
POWER INPUT: 28 v DC at 3.0 amp.
POWER OUTPUT: 12.9 v DC at 3.5 amp.
AMBIENT TEMPERATURE RANGE: +10 to +65 deg C.
SPEED: 4500 rpm at full load.
DUTY: Continuous.
ANTENNA
PACK: 56 in. impedance matched by mast base.
VEHICULAR: 9 ft impedance matched.
FIELD: 12 ft requiring no external impedance matching.
EMERGENCY: 27 ft requiring no external impedance matching.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) OB3	(5) 3A5	(1) 1A3
(2) 3Q4	(7) 114	(1) 6AF6G
(2) 1R5		

Total Tubes: (19)
(120) CR-6/U
Total Crystals: (120)

REFERENCE DATA AND LITERATURE

TM11-619: Technical Manual for Radio Set SCR-619.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
	Early Models			
1	Crate c/o (1) Receiver-Transmitter BC-1335 (1) Set of Spare Tubes c/o 1. 1L4 2. 1R5 1. 3A5 1. 3Q4 1. 6AF6G 1. OB3/VR90 1. 1A3 (3) Box CH-291 (9) Battery BB-54-A	5.8	13-1/2 X 19-13/16 X 38-3/4	148
1	Crate c/o (3) Fuse FU-21 (2) Dial Lamp (1) Vibrator (1) Set of xtals (1) Bag BG-190 (1) Mast Base AB-15/GR (2) Technical Manuals TM11-619 (2) Technical Manuals TM11-879	6.0	14-1/4 X 18-1/2 X 47-3/4	102

RADIO SET

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
	(1) Bag BF-189 (1) Cover BG-192 (3) Cord CD-1294 (1) Terminal Box J-72/GR (1) Mast Base MP-74 (27 ft) Wire W-29 (1) Cable Kit (6) Mast Sections AB-21/GR (2) Mast Sections AB-22/GR (4) Mast Sections AB-23/GR (2) Mast Sections AB-24/GR (1) Bag BG-188 (2) Mast Sections MS-116-A (2) Mast Sections MS-117-A (2) Mast Sections MS-118-A (1) Roll BG-56			
1	Crate c/o (1) Battery Charger PE-219 (1) Mounting FT-506 (1) Connector (conduit) (1) Cord CG-67/MRQ-2 (2) Adapter M-359 (2) Technical Manual TM-11-982 Late Models	4.3	13-5/8 X 21-3/4 X 25-1/4	116
1	Crate c/o (1) Receiver-Transmitter BC-1335-A (1) Battery Box CY-740/PRC (1) Mounting FT-506 (1) Roll BG-56 c/o 2 Mast Sections MS-116-A 2 Mast Sections MS-117-A 2 Mast Sections MS-118-A (1) Bag BG-188 2 Mast Sections AB-24/GR 4 Mast Sections AB-23/GR 2 Mast Sections AB-22/GR 6 Mast Sections AB-21/GR (1) Bag BG-190 1 Case CS-137 120 xtal holders FT-243 (w/xtals CR-6/U) (1) Cable Kit c/o 1 Cordage CO-134 1 Cable Clamp	14.5	20 X 24 X 52	120

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
	2 Terminal Kits			
	1 Connector AN3106-14S-7S			
	1 Connector, Appleton 61007			
	(1) Mast Base MP-74			
	(1) Mast Base AB-15/GR			
	(1) Terminal Box J-72/GR			
	(1) Cord CG-67/MRQ-2			
	(2) Adapter M-359			
	(1) Bag BG-189			
	(1) Packboard			
	(1) Mounting MT-702/U			
	27 ft of wire W-29			
	(2) Lamps, Mazda #49			
	(3) Fuse FU-21			
	(2) Technical Manual TM-11-879			
	(2) Technical Manual TM-11-619			
1	Crate c/o	1.6	10-1/2 X 11 X 24	30
	(1) Dynamotor DY-44/U			

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	Late Models		
1	Receiver-Transmitter BC-1335-A	6-21/32 X 12-1/2 X 13-9/32	22.75
1	Dynamotor DY-44/U *	5-1/4 X 6 X 11	18
1	Battery Box CY-740/PRC	5-3/4 X 10-1/4 X 11	9
1	Battery BA-70	4-1/2 X 8-1/4 X 10-5/16	15.5
1	Mounting FT-506	3-3/8 X 10-3/8 X 16-3/4	12.25
1	Mast Bracket MP-50	5-1/64 X 8-1/16 X 5-1/4	10.4
1	Mast Base AB-15/GR	3 dia X 15-3/4	1.4
2	Mast Sections MS-116-A	.393 dia X 39-1/2	.59
2	Mast Sections MS-117-A	.373 dia X 39-1/2	.59
2	Mast Sections MS-118-A	.246 dia X 39-1/2	.59
1	Terminal Box J-72/GR	2-1/2 X 3-1/2 X 4-3/8	.59
1	Cord CG-67/MRQ-2 (w/2 plugs PL-259)	3/4 dia X 108	.59
2	Adapter M-359	3/4 X 1-7/32 X 1-13/16	.09
2	Mast Section AB-24/GR	.246 X 23-1/2	1.88
2	Mast Section AB-22/GR	.373 X 23-1/2	1.88
4	Mast Section AB-23/GR	.246 X 23-1/2	1.88
6	Mast Section AB-21/GR	.393 dia X 23-1/2	1.88
2	Headset HS-30-U	2-1/2 X 5 X 7	.8
1	Microphone T-17	2-1/8 X 2-1/4 X 6	.6
2	Microphone T-45 (w/cord and plug)	1 X 1-7/8 X 2-1/2	.19
1	Chest Set TD-4		1.25
2	Cord CD-604	1/2 dia X 9	.19

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
2	Cord CD-307-A	1/2 dia X 65	.3
1	Roll BG-56	1-1/2 X 4-1/2 X 40	1.8
1	Bag BG-188	2 X 4-13/16 X 25-7/8	0.81
1	Bag BG-189	3-1/2 X 5 X 11	.56
1	Packboard	2-1/2 X 14-1/2 X 25-1/2	4.7
1	Mounting MT-702/U	13/16 X 11-5/32 X 22-3/4	1.5
1	Case CS-137	3-1/4 X 4-1/4 X 11	3.25
120	Crystal Holder FT-243 w/xtals CR-6/U	7/16 X 13/16 X 1-9/16	.04
1	Bag BG-190	2 X 6-3/16 X 11-5/8	.69
1	Mast Base MP-74	4-3/8 X 14-1/8	.53
1	Cordage CO-134	.45 dia X 10 ft	1.81
2	Technical Manual		1
1	Wire W-29	27 ft lg	.35
	Early Models		
1	Receiver-Transmitter BC-1335	6-31/32 X 12-1/4 X 13-9/32	22.75
1	Battery Charger PE-219	6-11/32 X 12-1/8 X 12-5/16	35.0
9	Battery BB-54-A (3 ea per Box CH-291)	3 X 3-31/32 X 5-7/16	4.3
3	Box CH-291	5-15/16 X 6-5/8 X 12-9/16	3.75
1	Mounting FT-506	3-3/8 X 10-3/8 X 16-3/4	12.25
3	Cord CD-1294	1-1/16 X 14-3/4	.38
1	Mast Bracket MP-50	5-1/64 X 5-1/4 X 8-1/16	10.4
1	Mast Base AB-15/GR	3-1/8 dia X 15-1/4	1.4
2	Mast Section MS-116-A	.393 dia X 39-1/2	.59
2	Mast Section MS-117-A	.373 dia X 39-1/2	.59
2	Mast Section MS-118-A	.246 dia X 39-1/2	.59
1	Terminal Box J-72/GR	2-5/16 X 3-7/16 X 4-9/32	.59
1	Cord CG-67/MRQ-2	3/4 dia X 108	.59
2	Adapter M-359	3/4 X 1-1/8 X 1-1/8	.09
2	Mast Section AB-24/GR	.246 dia X 23-1/2	1.88
4	Mast Section AB-23/GR	.246 dia X 23-1/2	1.88
2	Mast Section AB-22/GR	.373 dia X 23-1/2	1.88
6	Mast Section AB-21/GR	.393 dia X 23-1/2	1.88
2	Headset HS-30-U	2-1/4 X 5 X 7	.8
1	Microphone T-17	2-1/8 X 2-1/4 X 6	.6
2	Microphone T-45 (w/cord and plug)	1 X 1-7/8 X 2-1/2	.19
1	Chest Set TD-4		1.25
2	Cord CD-604 (incl transformer for Headset)	1/2 dia X 9	.19
2	Cord CD-307-A	1/2 dia X 63-1/2	.3
1	Roll BG-56-A	1-1/2 X 4-1/2 X 45	1.8
1	Bag BG-188	2 X 5 X 25-1/2	.81
1	Bag BG-189	2 X 6-3/16 X 11-5/8	.56
1	Cover BG-192	12-3/4 X 17-1/4 X 17-1/2	1.5
1	Packboard	2-7/8 X 15-1/2 X 24	4.7
1	Packboard Adapter	7/8 X 11 X 16	1.5
1	Case CS-137	3-1/4 X 4-1/4	3.25
120	Crystal Holder FT-243 w/xtals	7/16 X 13/16 X 1-9/16	.04
1	Bag BG-190	2 X 6-3/16 X 11-5/8	.69
1	Mast Base MP-74	4-3/8 X 14-1/8	.53
10 ft	Cordage CO-134	.45 dia	1.81

April 1958

Radio-Transceivers

RADIO SET SCR-624-A,-B

Radio Set SCR-624-A,-B

Radio-Transceivers

SCR-624-A,-B RADIO SET

April 1958

FUNCTIONAL DESCRIPTION

Radio Set SCR-624-A and SCR-624-B are complete radio ground stations consisting of a transmitter and receiver designed for communications work at very high frequencies. They are especially constructed for transportation by air.

Radio Set SCR-624-A or SCR-624-B may be operated on any one of four crystal-controlled channels within 100 to 156 megacycles. Control facilities are provided so that the transmitter and receiver may be operated at the station, at a remote distance of 500 ft from the station, or at a remote distance up to two miles. Channel selection can be made at the station or at the 500 ft remote points of control, while only send-receive communication is possible at the two-mile remote point. Land line telephone control is possible between any two points of control by use of Telephone EE-8-A or EE-8-B.

Except for slight differences in components, the SCR-624-A and SCR-624-B are practically identical.

No field changes in effect at time of preparation (22 November 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: Power Unit PE-75-D when AC power source is not available.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQ RANGE: 100 to 156 mc.
FREQ CONTROL: Xtal.
EMISSION: A3.
POWER OUTPUT: 6 to 8 W.
RECEIVER
TYPE: Superheterodyne.
IF: 12 mc.
SENSITIVITY: 3 to 4 uv.
SIG/NOISE RATIO: 10 db.
POWER SOURCE REQUIRED: 115 v, 40 to 60 cps, single ph, 325 W; or 230 v, 40 to 60 cps, single ph, 320 W.
ANTENNA: "J" type w/a long radiator and a short matching section mounted in a base. The sections are telescopic.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 12AH7GT
(1) 12J5GT
(2) 6SS7
(3) 9003
(3) 12A6
(3) 12SG7Y
(1) 6X5WGT
(1) 12G8
(2) 5U4G
(2) 832
(1) 12H6
(1) 6G6G
(1) 9002
Total Tubes: (23)

(8) CR-1/A
Total Crystals: (8)

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Chest CH-173-A* c/o	13-3/4 x 16-3/4 x 34	134
	(1) Control Box BC-1175-A	4-1/8 x 4-3/4 x 7-1/4	
	(1) Control Box BC-1171-A	3-3/8 x 3-3/8 x 6-3/4	
	(1) Control Box BC-1176-A	2-1/2 x 2-7/8 x 6-5/8	
	(2) Telephone EE-8-A		
	(1) Tool Roll		
	(1) Cord CD-875	6 lg	
	(1) Cord CD-809-A	6 lg	
	(1) Cord CD-951-A	6 lg	

EQUIPMENT SUPPLIED DATA

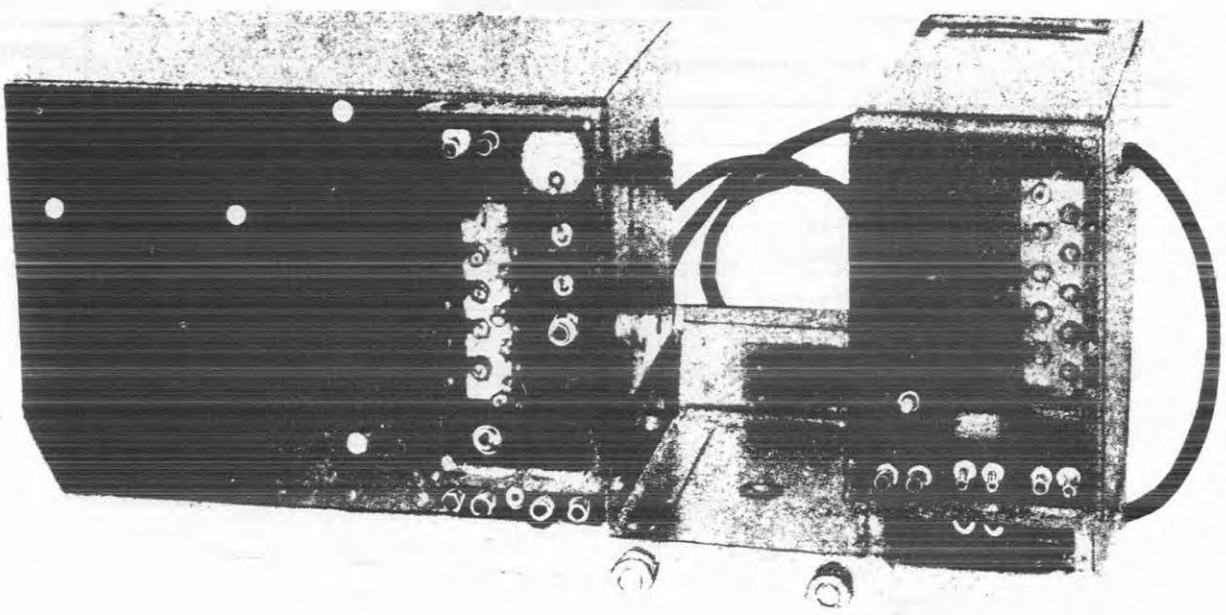
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	(1) Loudspeaker LS-10-A		
	(2) Chest Set TD-2		
	(2) Headset HS-33		
1	Chest CH-173-B** c/o	15-3/4 x 16-3/4 x 34	188
	(1) Control Box BC-1312	4-1/8 x 4-3/4 x 7-1/4	
	(1) Control Box BC-1314	3-3/8 x 3-3/8 x 6-3/4	
	(1) Control Box BC-1313	2-1/2 x 2-7/8 x 6-5/8	
	(1) Tool Roll		
	(2) Telephone EE-8-A or EE-8-B		
	(2) Cord CD-875-A	6 lg	
	(1) Cord CD-809-A	6 lg	
	(1) Cord CD-951-A	6 lg	
	(3) Cord CD-1191	6 lg	
	(1) Loudspeaker LS-10-A or LS-10-B		
	(2) Chest Sets TD-2		
	(2) Headsets HS-33		
1	Chest CH-172-A* c/o	13-3/4 x 16-3/4 x 34	205
	(1) Rectifier RA-62-B or RA-62-C	10-5/8 x 11-5/32 x 16	75
1	Chest CH-172-B** c/o	15-3/4 x 16-3/4 x 34	205
	(1) Rectifier RA-62-B or RA-62-C	10-5/8 x 11-5/32 x 16	75
1	Chest CH-170-A* c/o	6-3/8 x 14-3/8 x 47-1/4	41
	(1) Antenna *** AN-94-A,-B or -C	20-1/2 lg	
1	Transmitter-Receiver Assembly c/o	10-11/16 x 12-9/16 x 16-5/32	49
	(1) Radio Transmitter BC-625-A or BC-625-AM		
	(1) Radio Receiver BC-624-A,-B or -C		
1	Mast Strap Crate incl Antenna Mast MA-7-A and Accessories	11 x 12 x 16-1/2	152
1	Stays Box w/Accessories	11 x 13-1/2 x 23	121
1	Set of Equipment Spares		

NOTES: *SCR-624-A only
**SCR-624-B only
***Used w/both SCR-624-A and -B.

October 1957

Radio-Transceivers

RADIO SET SCR-628



Radio Set SCR-628

FUNCTIONAL DESCRIPTION

The SCR-628 is a radio transmitter and receiver operating in 10 preset channels over a frequency range from 27 to 38.9 megacycles. It is a mobile set designed for operation in halted or moving vehicles. Its carrier is frequency modulated by the voice mode of operation and its distance range is ten miles from a moving and fifteen miles from a halted vehicle. It is used for tactical communications.

No field changes in effect at time of preparation (5 February 1957).

RELATION TO OTHER EQUIPMENT

The equipment is similar to SCR-528 and SCR-608 but differs from the former in frequency range and from the latter in that it has only one radio receiver.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 27 to 38.9 mc.
PRESET FREQUENCIES: 10.
ANTENNA: Fishpole type, vehicular.
TUNING: Crystal.
POWER OUTPUT: 35 W.
DISTANCE RANGE: 10 mile moving vehicle; 15 mile halted vehicle.
MODULATION: FM.
EMISSION AND RECEPTION: Voice signals.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 6AC7	(1) 6V6GT
(1) 6J5	(2) 6SL7GT
(2) 12SG7	(7) 1619
(1) 6H6	(1) 1624

Total Tubes: (18)

(120) Crystals

Total Crystals: (120)

REFERENCE DATA AND LITERATURE

TM11-227: Technical Manual - Signal Communication Equipment Directory of Radio Communication Equipment.

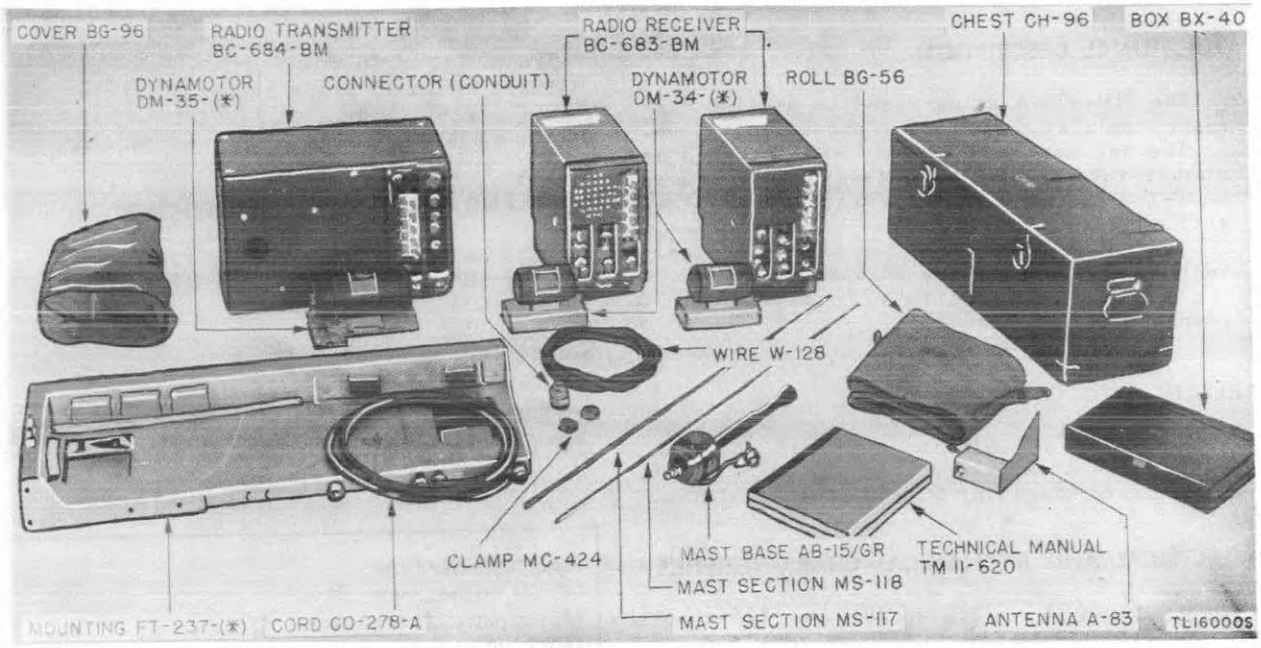
TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

SCR-628 RADIO SET

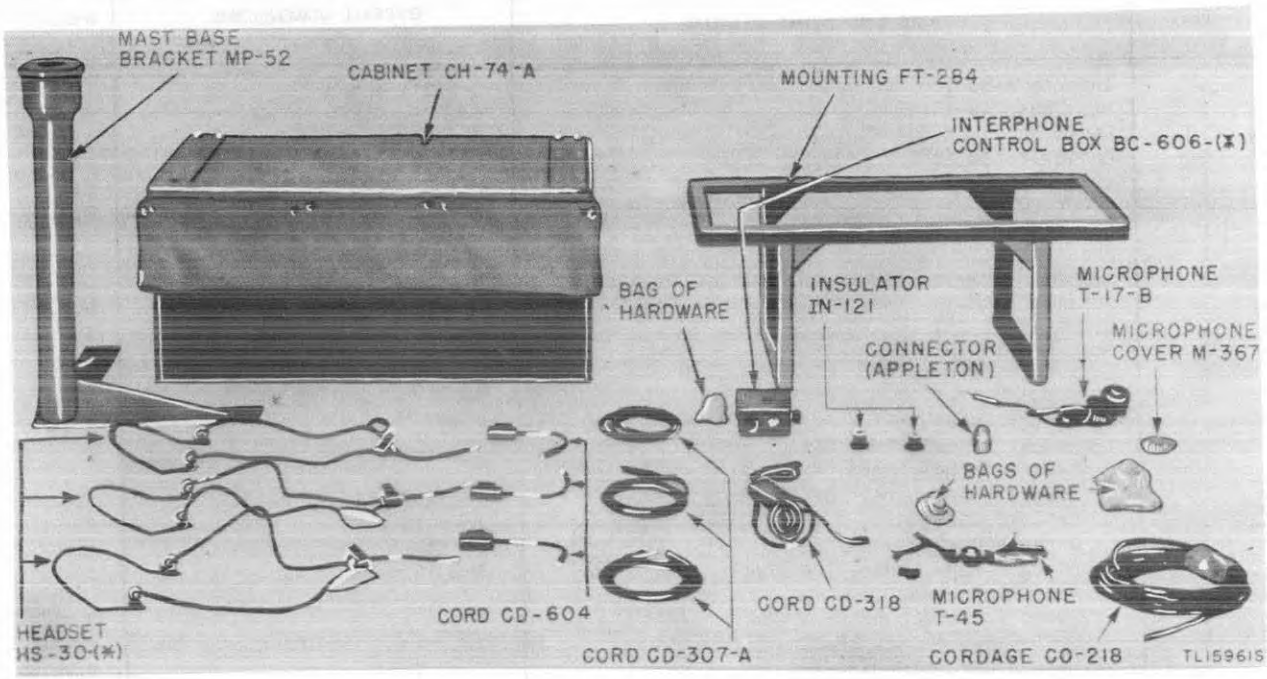
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter BC-684	14 X 14-1/2 X 34	190
1	Receiver BC-683		
1	Mounting Foot FT-237		
1	Antenna Mast Base MP-48		
1	Remote Control Unit RM-29		

RADIO SET



Radio Set SCR-628A Minus 1 Radio Receiver



Radio Set SCR-628A

SCR-628-A RADIO SET

December 1956

FUNCTIONAL DESCRIPTION

The SCR-628-A is designed to provide frequency modulated radio telephone facilities.

The set may be installed and operated in combat vehicles such as tanks, scout cars, half-tracks and command cars, or any other authorized vehicle.

The set may have any ten preset channels in the range of 27.0 to 38.9 mc.

No field changes in effect at time of preparation (13 July 1956).

RELATION TO OTHER EQUIPMENT

Radio Set SCR-628 is identical to Radio Set SCR-608-A, B, except that radio Set SCR-628-A has one Receiver BC-683 instead of two.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 27.0 to 38.9 mc (120 channels).
TYPE OF RECEPTION AND TRANSMISSION: F 3.
POWER OUTPUT: 20 W.
RANGE: 10 to 15 miles (approx)
SENSITIVITY: 1 uv.
POWER SOURCE REQUIRED: 12 v or 24 v DC.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 6AC7WA	(1) 6V6GT	(2) 6SL7WGT
(1) 6B6	(7) 1619	(2) 12SG7Y
(1) 6J5	(1) 1624	

Total Tubes: (18)

REFERENCE DATA AND LITERATURE

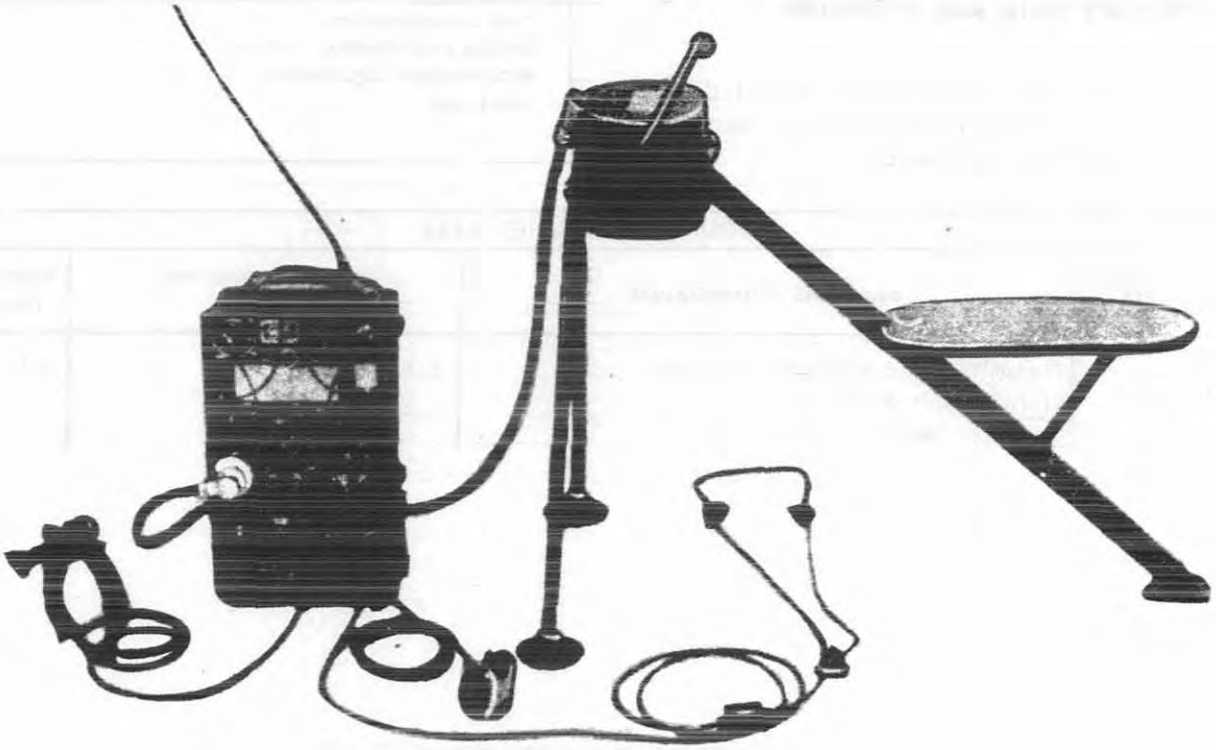
TM11-620: Technical Manual for Radio Set SCR-638-A.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BAUER
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Antenna A-83 (Phantom)	3-1/2 x 4 x 6	1
1	Mast Base AB-15/GR	15	2
1	Radio Receiver BC-683	6-3/4 x 11-1/2 x 12-1/2	35
1	Radio Transmitter BC-684	10-1/4 x 11-1/2 x 18	67
1	Roll BG-56	2 x 4 x 42	1.7
1	Cover BG-96	10-1/2 x 12-1/2 x 32	3.3
1	Box BX-40	2 x 7-3/4 x 11	5.0
1	Chest CH-96	10 x 10 x 28	25
2	Dynamotor DM-34	3 x 4-1/2 x 6-1/2	4.7
1	Dynamotor DM-35	4-1/2 x 5-1/2 x 8-1/4	9.2
1	Mounting FT-237	5-1/2 x 13 x 33-5/8	44
2	Mast Section MS-117	39-1/2	0.7
2	Mast Section MS-118	39-5/8	0.8
6	Wire W-128	72	0.4
1	Connector (Conduit)	1-3/4	0.3
2	Technical Manuals TM-11-620	1 x 8-1/2 x 11	1
	Installation Unit Consisting of:		
1	Interphone Control Box BC-606-H	2-1/4 x 4-1/4 x 4-1/4	1.8
1	Cabinet CH-74	16 x 18 x 36	92
	Cordage Co-218	18 ft	1.4
1	Mounting FT-284 Consisting of:	5 x 12 x 33	26
2	Headset H-16/U		1.0
1	Cover CW-110/U		0.01
1	Mast Base Bracket CP-52	26	20
1	Microphone T-17		0.7
1	Microphone T-45		1.8
1	Bag of Hardware		1
1	Connector (Conduit)		2
1	TM 11-2721	1-3/4	0.3

RADIO SET SCR-694



Radio Set SCR-694

FUNCTIONAL DESCRIPTION

The SCR-694 is a radio transmitter and receiver designed to provide communication between moving or stationary vehicles or for use as a portable field set. Power is provided by a hand-cranked generator in the field and by storage battery and vibrator power supply for vehicular operation.

No field changes in effect at time of preparation (6 February 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 3.8 to 6.5 mc.
PRESET FREQUENCIES: 2.
ANTENNA: 15 ft whip type.
TUNING: Master oscillator and crystal.
POWER OUTPUT
  VEHICLE OPERATION.
    CW EMISSION: 25 W.
    VOICE EMISSION: 7 W.
  FIELD OPERATION
    CW EMISSION: 20 W.
    VOICE EMISSION: 5 W.
DISTANCE RANGE
  STATIONARY
    CW: 30 mi.
    VOICE: 15 mi.
  MOVING
    CW: 15 mi.
    VOICE: 7 mi.
POWER SOURCE REQUIRED: 6 or 12 v vehicle battery w/vibrator Unit PE-237, Hand Generator GN-57 for field use or battery BA-48 for Receiver only.

MANUFACTURER'S OR CONTRACTOR'S DATA

Approximate Cost: $1470.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1R5	(1) 1S5	(2) 1L4
(1) 2E22	(2) 3A4	(1) 3Q4
(1) 0C3W	(1) 1005	(1) 1006

Total Tubes: (12)

(2) Crystals
Total Crystals: (2)

SCR-694 RADIO SET

REFERENCE DATA AND LITERATURE

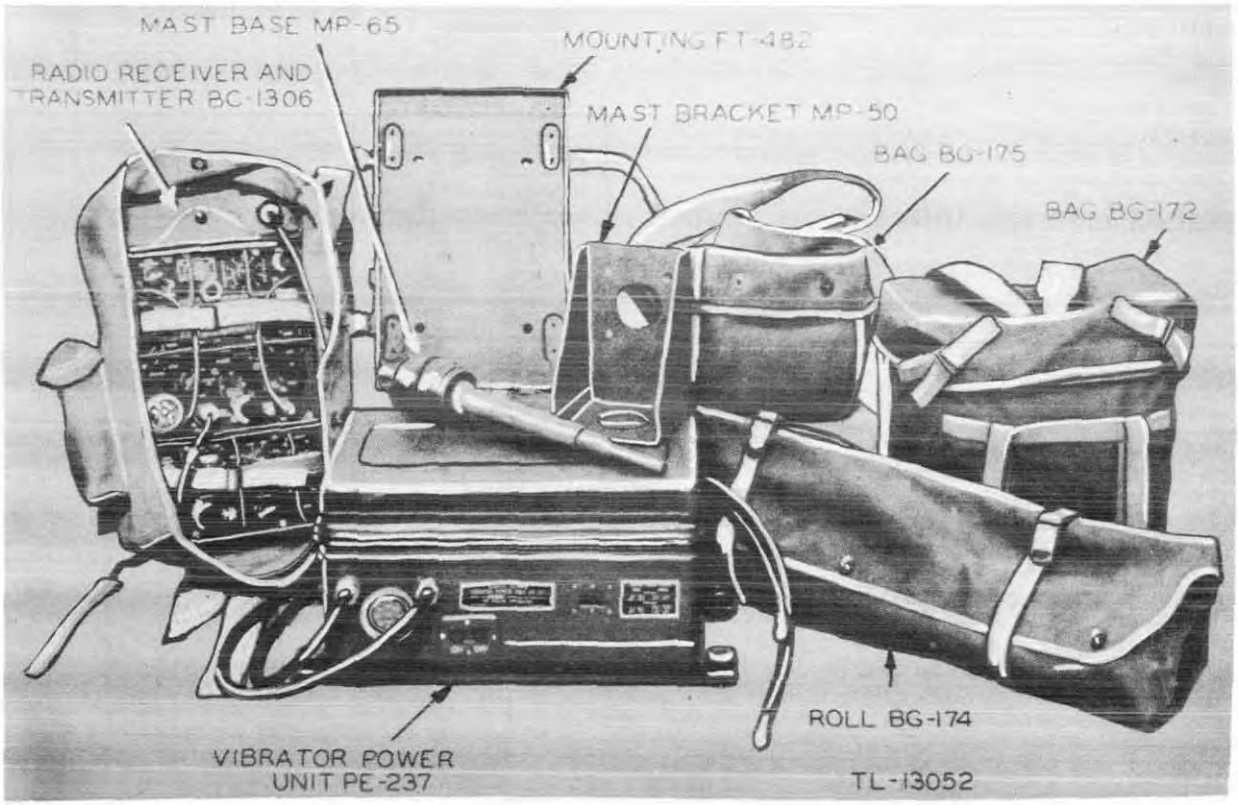
TM11-227: Technical Manual - Signal Communication Equipment Directory of Radio Communication Equipment.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter and Receiver - BC-1306	5 X 9 X 14-1/2	27
1	Vibrator Unit PE-237		
1	Generator GN-57		

RADIO SET SCR-694-C



Radio Set SCR-694-C

FUNCTIONAL DESCRIPTION

The SCR-694-C is a compact and efficient two-way radio telephone and radio telegraph unit which will provide communication between moving or stationary vehicles, or as a portable field radio set.

It is designed to provide communication up to 15 miles on voice transmission and up to 30 miles on cw transmission between moving vehicles.

No field changes in effect at time of preparation (18 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

POWER SOURCE REQUIRED
- VEHICULAR USE: 6, 12 or 24 v vehicular storage battery; (not a radio set component).
- FIELD USE: Generator type GN-58.

FREQUENCY RANGE

TRANSMITTER
- MASTER OSCILLATOR: 3800 to 6500 kc.
- CRYSTAL: 3800 to 6490 kc.
- POWER OUTPUT
  - VIBRATOR USE: 8.5 w max on phone and 25 w max on cw.
  - GENERATOR USE: 6 w max on phone and 17 w on cw.

RECEIVER
- TYPE: Superhetrodyne
- MASTER OSCILLATOR: 3800 to 6500 kc
- CRYSTAL: 3800 to 6490 kc.
- POWER OUTPUT: At least 75 mw, except slightly lower when operated from battery BA-48.

MANUFACTURER'S OR CONTRACTOR'S DATA

Approximate cost $1470.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1L4	(2) 1R5	(1) 1S5
(1) 2E22	(2) 3A4	(1) 0C3W

SCR-694-C

RADIO SET

December 1956

(1) 1005 (1) 3Q4 (1) 1006 SCR-694-C.
Total Tubes: (12)

(2) CR-8B/U
Total Crystals (2)

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

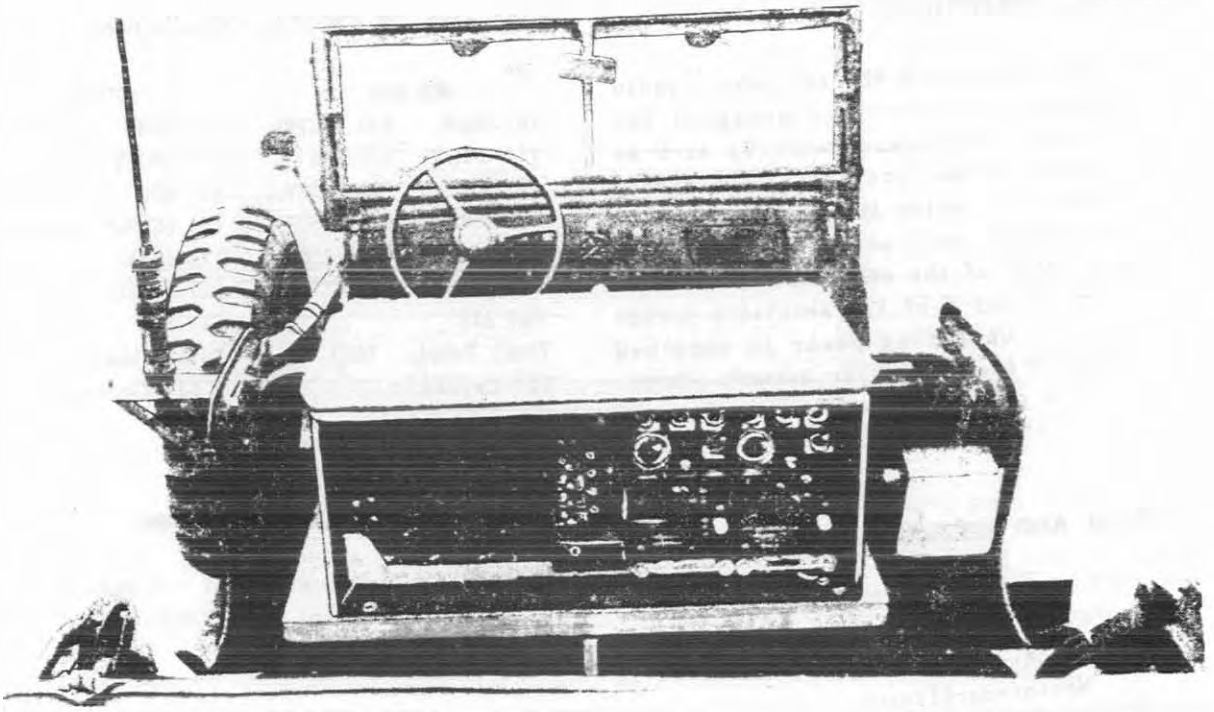
REFERENCE DATA AND LITERATURE

TM 11-230C Technical Manual for Radio Set

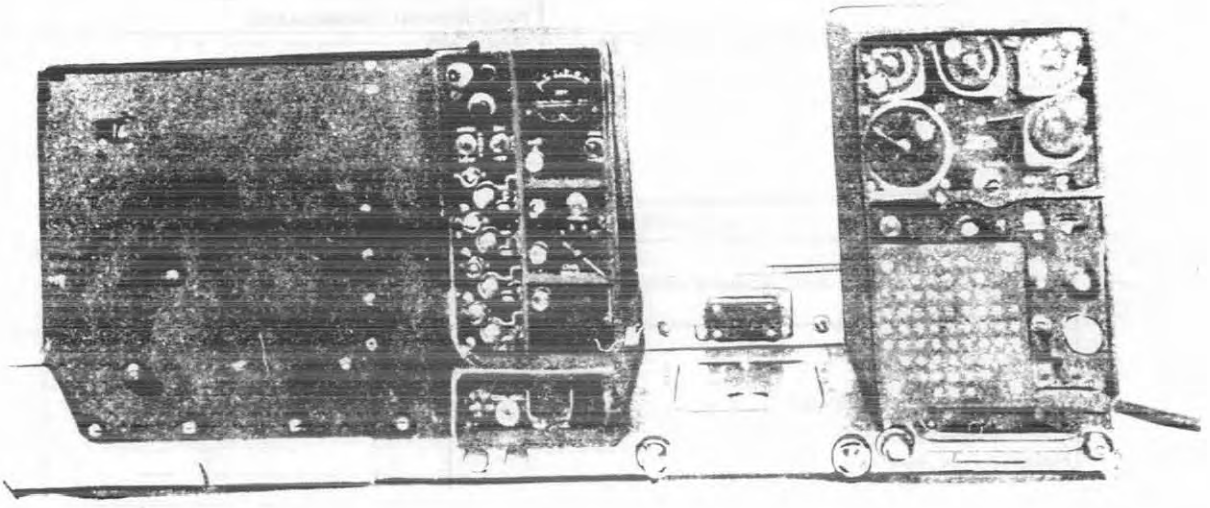
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Antenna AN-160		
1	Bag BG-172 (for Accessories)		
1	Bag BG-173 (for Radio-Receiver Transmitter)		
1	Bag BG-175 (for Generator GN-58)		
1	Box BX-53-A (for Spare Tubes)		
1	Box BX-54-A (for Spare Crystals)		
2	Card CD-307-A (headset extension card), 1 in use, 1 spare		
1	Card CD-318-A (card and control switch for Microphone T-45)		
2	Card CD-604 (for Headset), 1 in use, 1 spare		
2	Card CD-933 (attached to Headset), 1 in use, 1 spare		
1	Card CD-1086(7'), (connects Generator to set)		
1	Card CD-1086(44 in.), (connects Vibrator Unit to set)		
1	Card CD-1119 (connects Battery BA-48 to set)		
1	Counterpoise CP-12		
1	Counterpoise CP-13		
2	Crank GC-7 (for Generator GN-58)		
1	Generator GN-58, including one set spare brushes inside case.		
1	Guy GY-12		
1	Guy GY-42		
1	Halyard M-378		
1	Halyard M-379		
2	Headset HS-30, 1 in use, 1 spare		
1	Insulator IN-127		
1	Key J-45		
2	Lamp, Pilot (installed in spare tube box)		
1	Leg LG-2-A		
2	Leg LG-3		
1	Mast Base MP-65		
1	Mast Bracket MP-50		
6	Mast Section MS-116-A, 3 in use, 3 spare		
2	Mast Section MS-117-A, 1 in use, 1 spare		
2	Mast Section MS-118-A, 1 in use, 1 spare		
1	Microphone T-17		
1	Microphone T-45		
1	Mounting FT-482		
3	Neon Bulb (installed in space tube box)		
1	Panel Cover M-404		
1	Receiver and Transmitter BC-1306		
2	Reel RL-29		
1	Roll BG-174		
4	Stake GP-27-A		
2	Technical Manual TM 11-230C		
1	Vibrator power Unit PE-237		

RADIO SET



Radio Set SCR-808



Radio Set SCR-828

Radio-Transceivers

October 1957

SCR-808, 828 RADIO SET

FUNCTIONAL DESCRIPTION

The SCR-808 and SCR-828 are mobile radio transmitters and receivers designed for installation in military vehicles such as tanks, jeeps, ducks, etc. They have a distance range of 10 miles in moving open vehicles and from 5 to 7 miles in tanks. The frequency range of the equipments is from 27 to 38.9 mc in any 4 of 120 available preset frequencies. Operating power is obtained from the 12 or 24 v vehicular battery source.

No field changes in effect at time of preparation (6 February 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 27 to 38.9 mc.
PRESET FREQUENCIES: 4.
ANTENNA: Sectional mast type, vehicular.
TUNING: Master-oscillator.
TRANSMITTER POWER OUTPUT: 35 W.
DISTANCE RANGE: 10 mi in open moving vehicles; 5 to 7 mi in moving tanks.
TYPE OF MODULATION: Frequency modulated carrier.
POWER SOURCE: Vehicular battery, 12 or 24 v DC.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-808		SCR-828	
(3) OD3W	(4) 6AC7WA	(2) OD3W	(2) 6AC7WA
(1) 6AG7Y	(2) 6H6	(1) 6AG7Y	(1) 6H6
(1) 6J5	(4) 6SJ7Y	(1) 6J5	(3) 6SJ7Y
(5) 6SL7WGT	(3) 6V6GT	(3) 6SLWGT	(2) 6V6GT
(2) 12SA7Y	(6) 12SC7	(1) 12SA7Y	(3) 12SC7
(4) 12SG7Y	(4) 12SJ7	(2) 12SG7Y	(2) 12SJ7
(2) 815		(2) 815	
Total Tubes: (41)		Total Tubes: (25)	
(2) Crystals		(1) Crystals	
Total Crystals: (2)		(1)	

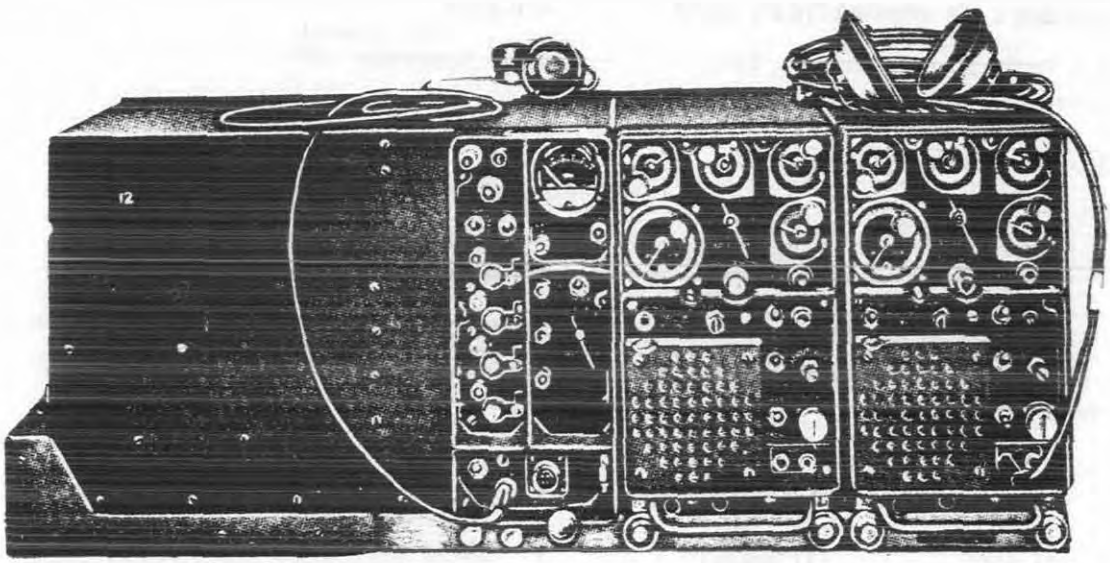
REFERENCE DATA AND LITERATURE

TM11-227: Technical Manual - Signal Communication Equipment Directory of Radio Communication Equipment.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-828	SCR-808			
1	1	Radio Transmitter BC-924		
1	2	Radio Receiver BC-923		
1	1	Mounting FT-237		



Radio Sets SCR-808A, 828A

FUNCTIONAL DESCRIPTION

The SCR-808-A and SCR-828-A provide voice transmission and reception for anti-aircraft and anti-tank warnings and control nets, fire control and fire direction nets, and intra-battalion communication. The sets may be installed in command cars, half tracks, or other vehicles. The SCR-808-A and SCR-828-A are similar except that SCR-828-A has only one receiver.

No field changes in effect at time of preparation (15 August 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: Batteries as required.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

RADIO TRANSMITTER BC-924-A.
- FREQUENCY RANGE: 27 to 38.9 mc (4 preset channels).
- CHANNEL SPACING: 100 kc.
- TYPE: FM.
- EMMISSION: Voice.
- DISTANCE RANGE: 10 to 15 mi.
- POWER INPUT
  - 12 V INPUT: High 26 amp; Low 21 amp.
  - 24 V INPUT: High 16 amp; Low 12 amp.
- POWER OUTPUT: High 30 to 35 W; Low 2 W.
- ANTENNA TYPE: Whip (10 ft lg).
- POWER SUPPLY: 12 v DC storage battery through Dynamotor DM-65-A or 34 v DC storage battery through Dynamotor DM-47-A.
- FREQUENCY DEVIATION: 20 kc.
- FREQUENCY MULTIPLICATION: 2.

RADIO RECEIVER BC-923-A.
- FREQUENCY RANGE: 27 to 38.9 mc.
- TYPE: Superheterodyne.
- RECEPTION: Voice.
- IF: 2.85 mc.
- POWER INPUT
  - 12 V INPUT
    - CALIBRATOR ON: 7.2 amp.
    - CALIBRATOR OFF: 6.5 amp.
  - 24 V INPUT
    - CALIBRATOR ON: 3.85 amp.
    - CALIBRATOR OFF: 3.45 amp.
- POWER OUTPUT
  - SPEAKER: 3 W.
  - HEADSET: 180 mw.
- POWER SUPPLY: 12 N DC Battery through Dynamotor DM-64-A or 24 v DC Battery through Dynamotor DM-66-A.

MANUFACTURER'S OR CONTRACTOR'S DATA

Zenith Radio Corp., Chicago, Ill.
Purchase Order 7880-Phila-43.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-808A

(3) OD3/VR-150	(4) 6AC7
(1) 6AG7	(2) 6H6
(1) 6J5	(4) 6SJ7Y
(4) 6SL7	(1) 6SL7GT
(3) 6Y6GT/G	(2) 12SA7
(6) 12SC7	(4) 12SG7
(4) 12SJ7	(2) 815

Total Tubes: (41)

SCR-828A

(2) OD3/VR-150	(2) 6AC7
(1) 6AG7	(1) 6H6
(1) 6J5	(3) 6SJ7Y
(2) 6SL7	(1) 6SL7GT
(2) 6V6GT/G	(1) 12SA7
(3) 12SC7	(2) 12SG7
(2) 12SJ7	(2) 815

Total Tubes: (25)

SCR-808A
(2) Crystal
Total Crystals: (2)

SCR-828A
(1) Crystal
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

TM 11-601: Technical Manual for Radio Sets SCR-808A and SCR-828A.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES		CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
SCR					
808A	828A				
2	1	Radio Receiver BC-923-A (Complete with Tubes, Fuses and Lamps).	2.2	9-3/4 X 14-1/1 X 26-5/8	42
1	1	Radio Transmitter BC-924-A	3.75	14-7/8 X 15 X 38-7/8	49
1	1	Mounting FT-237-()	3.7	9-9/16 X 17 X 39	83
1	1	(2) Mast Section MS-117 including: (2) Mast Section MS-118 (1) Chest CH-96 (1) Cover BG-96 (1) Roll BG-56-A (1) Connector and Bondnut (6) Wire, Electrical (2) Technical Manuals TM-11-601	5.8	13-1/2 X 15-7/8 X 48	80.5
1		Mast Base AB-15/GR including: (2) Dynamotor DM-64-A (12v) or (2) Dynamotor DM-66-A (24v) (1) Dynamotor DM-65-A (12v) or (1) Dynamotor DM-47A (24v)		9-3/4 X 14-3/4 EQ-11/16	77
	1	Mast Base AB-15/GR including: (1) Dynamotor DM-64-A (12v) or (1) Dynamotor DM-66-A (24v) (1) Dynamotor DM-65-A (12v) or (1) Dynamotor DM-47-A (24v)	2.6	9-3/4 X 14-3/4 X 31-11/16	77

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT		NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR				
808A	828A			
2	1	Radio Receiver BC-923-A (complete with Tubes, Fuses, and Lamps)	6-1/4 X 11-1/2 X 12-3/4	42
1	1	Radio Transmitter BC-924-A	10-1/2 X 11-1/2 X 18	49
2	1	Dynamotor DM-64-A (12v) or	3-1/4 X 4-1/4 X 6-5/8	5.25
2	1	Dynamotor DM-66-A (24V)	3-1/4 X 4-1/4 X 6-5/8	5.25
1	1	Dynamotor DM-65-A (12v) or	4-1/2 X 5-1/2 X 8-3/4	13.25
1	1	Dynamotor DM-47-A (24v)	4-1/2 X 5-1/2 X 8-3/4	13.25
1	1	Mounting FT-237 ( )	5-1/2 X 13 X 33-5/8	44
1	1	Roll BG-56-A	2 X 4 C 42	1.72
2	2	Mast Section MS-117	39-1/2 in. lg	0.66
2	2	Mast Section MS-118	39-5/8 in. lg	0.81
1	1	Mast Base AB-15/GR	25 in. lg	2
1	1	Chest CH-96	9-1/2 X 9-11/16 X 28-1/4	21
1	1	Cover BG-96	10-1/2 X 12-1/2 X 32	
1	1	Connector and Bandnut	1-3/4 in. lg	0.27
6	6	Wire Electrical	6 in. lg	
2	2	Technical Manuals TM-11-601		

NOTE: Additional components are issued for different installations of Radio Set SCR-808A or SCR-828A. For a complete listing of the components required for installations in vehicles, see Technical Manual of the TM-11-2700 series which covers the vehicle concerned.

RECEIVER-TRANSMITTER, RADIO SSB-1

Radio-Transmitter-Receiver SSB-1

FUNCTIONAL DESCRIPTION

The SSB-1 Receiver-Transmitter, Radio is a single-sideband, low-power, suppressed carrier system designed for simplex telephone or telegraph operation. It may also be operated as a single sideband with carrier equipment to make it compatible with existing amplitude modulated (AM) systems.

No field changes in effect at time of preparation (13 June 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE
CHANNELS 1 AND 2: 3.0 to 6.7 mc.
CHANNELS 3 AND 4: 6.7 to 15.0 mc.
CHANNELS: 4.
TYPE OF OPERATION: Simplex.
EMISSION: A1, A2, A3.
KEYING SPEED: 60 wpm teleprinter operation.

TRANSMITTER
POWER OUTPUT: 60 W.
FREQUENCY STABILITY: ±0.0005%.
CLARIFIER RANGE: ±75 cps.
TRANSMITTED SIDEBAND: Lower.
RECEIVER
SENSITIVITY: 1 mv for 50 mw output with 6 db signal to noise ratio.
SELECTIVITY: 3.2 kc nominal bandwidth for 6 db attenuation, 6.5 kc bandwidth for 60 db attenuation.
AUDIO FIDELITY: ±2 db, 350 to 3000 cps.
AUDIO OUTPUT: 2 W maximum in speaker.
AUDIO DISTORTION: 2.5% (1000 cps' at 50 mw output).
POWER REQUIREMENTS: 115/230 v, ±10%, 50 to 60 cps, 1 ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

RCA; New York, N.Y.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) OA3/VR-75
(6) 12AT7
(1) 6AL5
(3) 6BA6
(2) 6CL6
(1) OD3/VR-150
(3) 5R4GY
(1) 6AQ5
(5) 6BE6
(1) 6U8
(2) 6146

Total Tubes: (26)
(2) 1N34A

Total Crystals: (2)

REFERENCE DATA AND LITERATURE

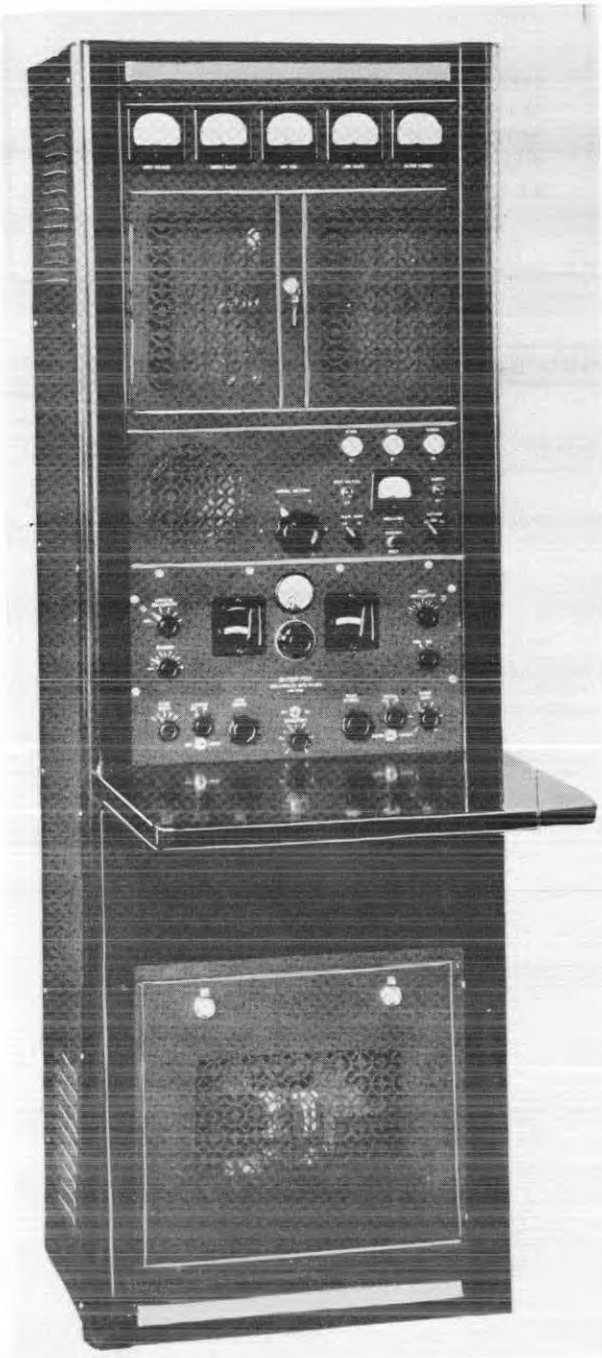
NAVSHIPS 92917: Technical Manual for Radio Receiver Transmitter SSB-1.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter-Receiver, SSB-1	16-3/8 x 22-3/8 x 24-1/8	150

RADIO SET T-100-TC



Radio Set Model T-100-TC

FUNCTIONAL DESCRIPTION

The T-100-TC (Harvey-Wells) is designed as a continuously variable or fixed tuned six channel Transmitter-Receiver. It may be used for phone, Continuous Wave (CW), Modulated Continuous Wave (MCW) transmission.

The T-100-TC has the possible applications as follows:

(1) Shipboard station
(2) Shore-to-ship station
(3) Aircraft Ground station
(4) Headquarters station
(5) General Communication service
(6) Auxiliary to larger station transmitter, such as H-WT-1000 TC
(7) Point-to-point communication

No field changes in effect at time of preparation (22 March 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION
TRANSMITTER AND RECEIVERS: A1, A2, A3 types.
CARRIER NOISE: 36 db below 100% modulation.
AUDIO DISTORTION: 400 cycles at 95% modulation.
INPUT LEVEL FOR 100% MODULATION: 42 db.
AUDIO CHARACTERISTICS: ±1 db, from 100 to 3000 cycles.
POWER FACTOR: 94%.
POWER OUTPUT: 100 W max.
FREQUENCY RANGE
CHANNEL ONE: 1950 to 3450 mc.
CHANNEL TWO: 3350 to 6100 mc.
CHANNEL THREE: 6000 to 10,200 mc.
CHANNEL FOUR: 1950 to 3450 mc.
CHANNEL FIVE: 3350 to 6100 mc.
CHANNEL SIX: 6000 to 10,200 mc.
OPERATING POWER RQMT: 115 to 120 v, 50 to 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Harvey-Wells Electronics Co., Southbride, Massachusetts.
Model No. T-100-TC.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 5U4G	(2) 6L6	(1) 6N7
(1) 6SJ7	(2) 6SN7GT	(1) 6SR7

Radio-Transceivers

T-100-TC RADIO SET

(1) 6V6 (1) 807 (2) 811
(1) 813 (2) 866

Total Tubes: (16)
No Crystals used.

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

REFERENCE DATA AND LITERATURE

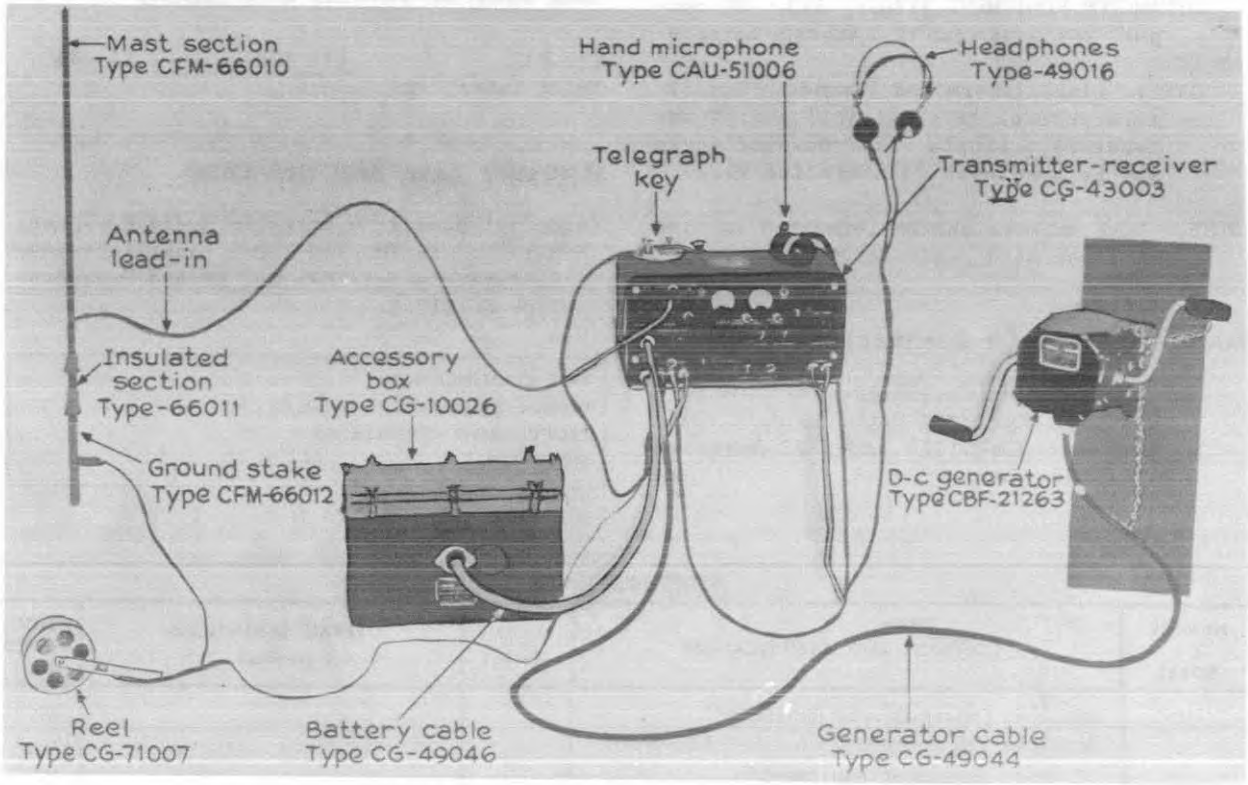
Harvey-Wells Electronics Company Catalog No. #1 for Radio Set Model No. T-100-TC.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set Model T-100-TC	18 X 22-1/2 X 67-1/2	

PORTABLE RADIO EQUIPMENT

TBO, TBO-1



Portable Radio Equipment TBO, TBO-1

FUNCTIONAL DESCRIPTION

The TBO, TBO-1 is a transportable equipment for general high frequency communications between shore stations and shore stations and surface craft. It is composed of a transmitter and receiver combined within a single cabinet, a hand generator and a battery box. The transmitter employs a continuously variable master-oscillator and two crystal channels, and the receiver incorporates a continuously variable oscillator for frequency control. Auxiliary power supplies for the transmitter (dependent on various installations) may be used in lieu of the hand generator supplied with the basic equipments.

The TBO is replaced by Portable Radio Transmitting and Receiving Equipment TBX Series.

No field changes in effect at time of preparation (25 September 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (3) Batteries type 19005, (2) Batteries type 19010, (2) Batteries type 19011.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

GENERAL
- RANGE: 30 mi for A1 transmission and 15 mi for A3 transmission.
- POWER SOURCE REQUIRED: 500 and 12.6 v DC hand generator for the transmitter and 3 v, 90 v, 135 v, 6 v and 15 v DC for the receiver.

TRANSMITTER
- FREQUENCY RANGE: 2.0 to 3.5 mc.
- FREQUENCY CONTROL: Continuously variable master oscillator, and 2 preset crystal frequencies.
- EMISSION: A1, A3.
- POWER OUTPUT: 9 W for A1 emission and 3 W for A3 emission.

RECEIVER
- TYPE: Superheterodyne.
- RECEPTION: A1, A3.
- FREQUENCY RANGE: 2 to 8 mc.

AUXILIARY POWER EQUIPMENT*
- MODEL EF: Gasoline engine-driven generator equipment.
- MODEL EG: AC motor-generator equipment, 115 v ±10%, 60 cps ±2%.
- MODEL EH: DC motor-generator equipment, 115 v, ±10% DC.

TBO, TBO-1 PORTABLE RADIO EQUIPMENT

DYNAMOTOR EQUIPMENT 21265: 500 v DC output, operates from 12 v storage battery

ANTENNA

TYPE: Flagelliform and T types. Flagelliform antenna is a vertical rod; T antenna is a single wire. Both of these may be used with counterpoise wires.

NOTE: *One or more may be furnished in lieu of the hand generator.

MANUFACTURER'S OR CONTRACTOR'S DATA

General Electric Co, Schenectady, N. Y.
Contract NOs-43256 dated 20 July 1935.
Contract NOs-51710 dated 23 November 1936.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 837 (1) 1C6 (4) 34
Total Tubes: (6)

REFERENCE DATA AND LITERATURE

Technical Manual for Portable Radio Equipment Navy Models TBO and TBO-1, Auxiliary Power Equipment Models EF, EG, EH and Dynamotor Type CG-21265.

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	Gasoline Engine Driven Generator*			134.6
1	Complete TBO Equipment or TBO-1 Equipment			196.6
1	AC Motor Generator Equipment*			92.1
1	DC Motor Generator Equipment*			91.0
1	Dynamotor Equipment*			35.2

Note: *One or more may be furnished in lieu of the hand generator.
** For field transportation.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter-Receiver Unit 43003 w/	7-53/64 x 10 x 15-53/64	29.2
	(1) Carrying Case 10027	9-1/4 x 11-1/4 x 17	3.0
	(2) Crystal Holders 19027		
1	Accessory Box 10026 containing	8-5/8 x 10 x 16-5/8	32.2
	(1) Receiver, Telephone 49016	1-3/4 dia x 3/4	
	Generator Cable 49044	1/2 dia x 9-2/3	
	Battery Cable 49046	2-2/5 x 6 dia	
	(1) Telegraph Key		
	(1) Hand Microphone w/cord and plug 51006	2-5/8 x 3-5/16 x 3-1/2	
	(1) Reel 71007	5 x 5-5/16 x 9-1/2	
	(4) Strain Insulators 61018	1 dia x 1-1/4	
	(2) Crank for Generator 21263		

PORTABLE RADIO EQUIPMENT

TBO, TBO-1

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	(1) Single Wire T Type Antenna w/accessories		
	(1) Carrying Case 10027	9-1/4 x 11-1/4 x 17	3.0
1	Generator, Hand or Engine Driven 21263 w/	6-1/2 x 6-3/8 x 9-1/2	22.0
	(1) Carrying Case 10028	10 x 12-1/2 x 14	1.7
1	Carrying Case 10029, containing	9-3/4 x 27	6.9
	(7) Mast Sections, (1) Insulated Base,		
	(1) Ground Stake and (4) Guy Stakes		
1	Set of Equipment Spares		4.6
1	Set of Vacuum Tube Spares		0.82
1	Shipping Chest 10017	12-5/8 x 17-3/8 x 49-1/8	77.0
1	Auxiliary Power Equipment Gasoline Engine Driven Generator Equipment EF*		
1	AC Motor Generator Equipment EG*		58.5
1	DC Motor Generator Equipment EH*		64.9
1	Dynamotor 21265* w/12 v storage battery	5-1/8 x 6-1/2 x 7-21/32	

Note: *One or more may be furnished for use in lieu of the hand generator.

VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT

TBS, TBS-1 THRU -8

VHF Radio Transmitting and Receiving Equipment TBS,TBS-1 thru -8

FUNCTIONAL DESCRIPTION

The TBS, TBS-1 thru -8, operating on any frequency in the 60 to 80 megacycle range are fixed tuned and crystal controlled and will provide radio communication between small surface craft for a distance up to ten miles. Remote operation is possible from two control units that may be located as desired, on the vessel.

Data on this sheet reflects the following Field Changes: No. 1, 2 and 3 (21 April 1958).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: Interconnecting Cables, Telegraph Key w/leads and Telephone Headset.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

RECEIVER
- FREQUENCY RANGE: Single channel in the 60 to 80 mc band.
- RECEPTION: A2, A3.
- FREQUENCY CONTROL: Crystal.
- RF INPUT IMPEDANCE: 70 ohms.
- OUTPUT IMPEDANCE: 600 ohms.
- POWER OUTPUT: 2 W.
- CIRCUIT TYPE: Superheterodyne.
- SENSITIVITY: 6 mw output with 5 uv input.
- POWER SOURCE REQUIRED: 110 v, 1 ph, 60 cps, 110 W.

TRANSMITTER
- FREQUENCY RANGE: Single channel in the 60 to 80 mc band.
- EMISSION: A2, A3.
- FREQUENCY CONTROL: Crystal.
- AF INPUT IMPEDANCE: 600 ohms.
- POWER OUTPUT: 50 W.
- MODULATION: 100%.
- POWER SOURCE REQUIRED: 120/230 v DC; 220/440 v, 3 ph, 60 cps, 1000 W.
- POWER SUPPLY EQUIPMENT: Motor-Generator Set.

ANTENNA: Vertical, quarter-wave.
- MOUNTING DATA: Shock mounted for bulkhead, shelf, or table mounting of combined units.

MANUFACTURER'S OR CONTRACTOR'S DATA

RCA Victor Div, Radio Corp of America, Camden, N.J.
- TBS: Contract NOs-60613, dated 16 May 1938.
- TBS-1: Contract NOs-70095, dated 18 December 1939.
- TBS-2: Contract NOs-70095 Supplement, dated 6 April 1941.
- TBS-3: Contract NOs-1736, dated 10 October 1942.
- TBS-5: Contract NXss-18747, dated August 1943.
- TBS-6: Contract NXsr-36725, dated 25 August 1943.
- TBS-8: Contract NXsr-51552, dated 11 March 1944.

General Electric Co, Schenectady, N.Y.
- TBS-4: Contract NXss-17599, dated 2 December 1942.
- TBS-7: Contract NXsr-38310, dated June 1944.
- Approximate Cost: $6,000 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 2A3	(5) 6D6
(1) 6Y6G	(1) 84/6Z4
(1) 5Z3	(1) 6F7

TBS, TBS-1 THRU -8

VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT

(1) 75
(1) 6A6
(2) 807
(1) 6J5
(1) 956
(1) 6F8G
(2) 6C6
(4) 808
Total Tubes: (24)

(2) Quartz
Total Crystals: (2)

REFERENCE DATA AND LITERATURE

NAVSHIPS 900590: Technical Manual for Radio Transmitting and Receiving Equipment TBS Thru TBS-8.

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	Transmitter, Receiver, and Stand	15.6	33 X 27 X 30	300
1	Motor-Generator	3.1	24 X 13 X 12	190
1	Accessories	4.6	34-1/2 X 18 X 13	82
2	Tubes	3.9	34 X 13-1/2 X 12	57
1	Equipment Spares	7.2	28 X 29-1/2 X 18	212
1	Motor-Generator Spares	2.7	23 X 13 X 12	93
1	Antenna	6.6	67 X 27 X 9	120
1	Transmission Line and Kit	4.4	43 X 37 X 7	86

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter CG-52093 (TBS-4,-7)	10-1/2 X 23-1/2 X 17-1/4	75
	CRV-52093 (TBS-1,-2,-3,-5,-6)		
	CRV-52093A (TBS-8)	10-1/2 X 23-1/2 X 17-1/4	75
1	Radio Receiver CG-46068 (TBS-4)	8-3/4 X 25-13/16 X 16-7/8	45
	CRV-46068 (TBS-1,-2,-3)		
	CRV-46068A (TBS-7) (TBS-5,-6)	8-3/4 X 16-7/8 X 25-13/16	45
	CRV-46068B (TBS-8)	8-3/4 X 16-7/8 X 25-13/16	45
1	Motor Generator Set 21300* (TBS) or 21300A**		
	(TBS-1,-2,-3) or	8-9/16 X 11-3/8 X 23-7/8	131
	21301*** (TBS-3,-4)	8-9/16 X 11-3/8 X 19-3/8	110
	CG-21302**** (TBS-1,-2,-3,-5)	8-9/16 X 19-3/8 X 11-3/8	110
	CG-21745** (TBS-3,-4,-5)	8-9/16 X 23-13/16 X 11-3/8	120
	CG-211127* (TBS-7,-8)	10-13/16 X 23-13/16 X 10-15/16	120
	CG-211129**** (TBS-6,-7)	10-13/16 X 19-3/8 X 10-15/16	131
	CG-211130** (TBS-6,-7,-8)	10-13/16 X 23-13/16 X 10-15/16	125
1	Magnetic Controller CG-21319* (TBS-4,-7)		
	CRV-21319* (TBS-1,-2,-3,-5,-8)	17-1/4 X 14-1/2 X 7-3/4	45
	CG-21320***** (TBS-7)	15-1/8 X 10-5/8 X 7-1/4	34
	CRV-21320***** (TBS-1,-2,-3,-5,-6)		
	CG-21804** (TBS-4,-7)	17-1/4 X 14-1/2 X 7-3/4	45

VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT

TBS, TBS-1 THRU -8

EQUIPMENT SUPPLIED DATA

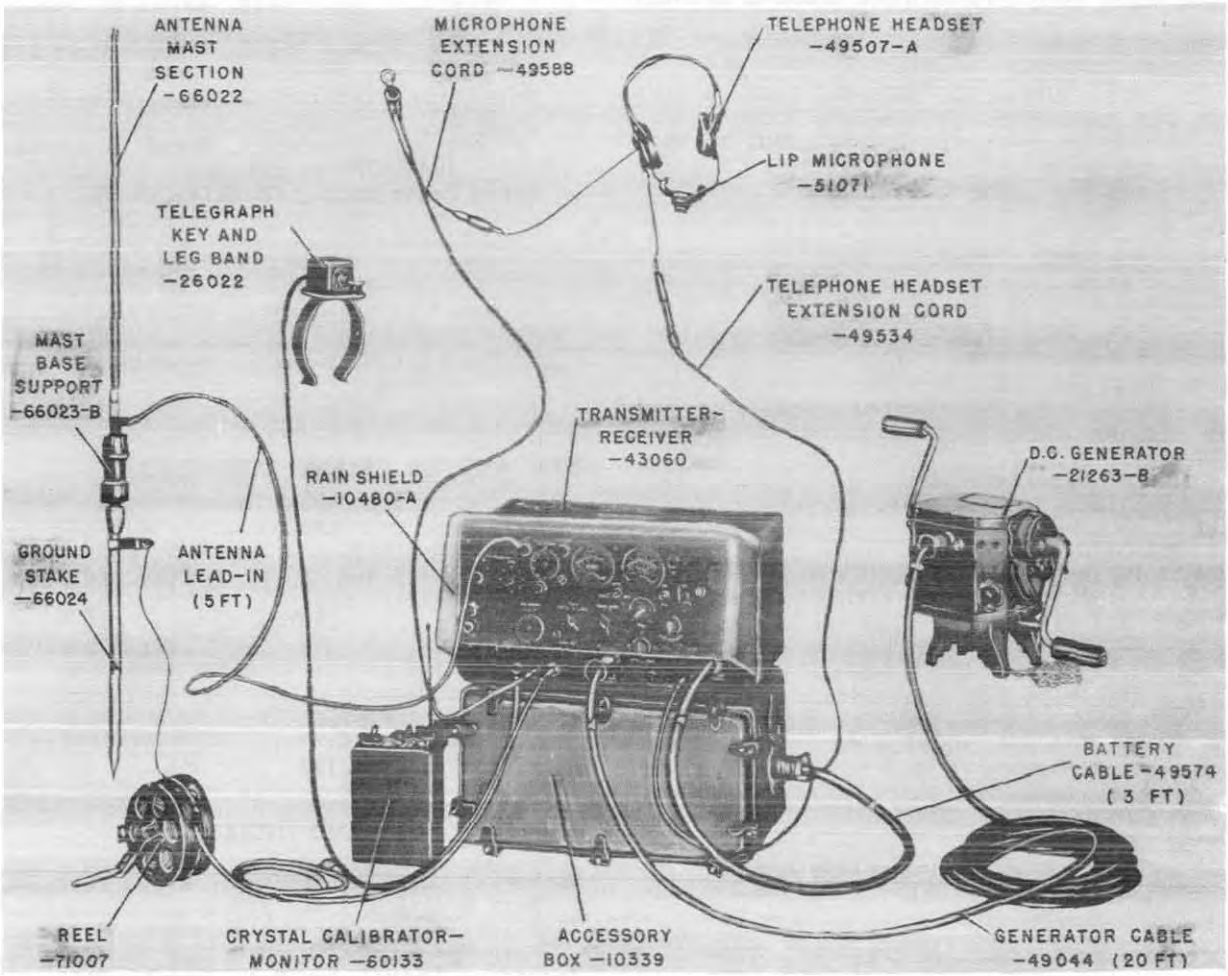
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	CRV-21804** (TBS-3,-5,-6,-8)		
2	Control Unit CG-23135 (TBS-4,-7)	5-15/16 X 10-7/16 X 7-1/4	9
	CRV-23135 (TBS-1,-2,-3,-5,-6,-8)		
1	Loudspeaker CRV-49101 (TBS-1,-2)	5 X 11-1/8 dia	21
	CRV-49155 (TBS-3,-5)	5 X 11-1/8 dia	21
	CMX-49155 (TBS-4,-6,-7,-8)		
2	Handset CRV-51019 (TBS-1,-2,-3,-5,-6)		1.5
	CYH-51019 (TBS-4,-7)		
	CRV-51019A (TBS-8)		1.5
1	Chest Set CRV-51018 (TBS-1,-2,-3,-5,-6)		1.4
	CYH-51018 (TBS-4,-7)		
	CRV-51018A (TBS-8)		1.4
1	Antenna, Surface Type CRV-66015 (TBS-1,-2,-3,-5,-6,-8)	104	46
	CPD-66015 (TBS-4,-7)		
	Antenna, Submarine Type CRV-66016 (TBS-1,-2,-3)	104	46
1	Transmission Line Surface Vessels (TBS Series)	120 ft long X 3/8 dia	
	Submarines (TBS Series)	80 ft long X 3/8 dia	
1	Line Transformer CAT-30445**** (TBS-1,-2,-3,-5,-6,-7)	7-3/8 X 4-1/2 X 4	16.4
1	Set of Accessories and Spares		

*For 120 v DC operation.
**For 230 v DC operation.
***For 220 v AC operation.
****For 440 v AC operation.
*****For 220/440 v AC operation.

April 1958

PORTABLE RADIO EQUIPMENT

TBX,TBX-1,-2,-3,-4, -4a,-5,-6,-7,-8



Portable Radio Equipment TBX, TBX-1, -2, -3, -4, -4a, -5, -6, -7, -8

FUNCTIONAL DESCRIPTION

The Models TBX, TBX-1, TBX-2, TBX-3, TBX-4, TBX-4a, TBX-5, TBX-6, TBX-7, TBX-8 are designed to provide communication between similar equipments installed ashore, aboard ship, or in small boats, and between such equipments and other units of the Naval Communication System at ranges of approximately 30 miles for continuous-wave transmission and 15 miles for voice transmission. They basically use a hand generator as the transmitter power source with batteries for the receiver, but can be operated from an auxiliary power supply available.

The Model TBX series equipments are electrically and mechanically similar with the Model TBX-8 differing in many respects from the earlier models of the series.

No field changes in effect at time of preparation (31 October 1957).

RELATION TO OTHER EQUIPMENT

The Model TBX series equipments replace the Model TBO series Radio Transmitting and Receiving Equipments.

Equipment Required but not Supplied: (TBX-8) (10) Crystal CR-5B/U, (1) Telephone Headset NT-49507A, (1) Telephone Extension Cord and Plug Assembly NT-49534, (1) Lip Microphone Assembly NT-51071, (1) Microphone Extension Cord and Switch Assembly NT-49561, (1) Telegraph Key and Leg Band Assembly NT-26022.

Radio-Transceivers

TBX,TBX-1,-2,-3,-4, -4a,-5,-6,-7,-8 PORTABLE RADIO EQUIPMENT

April 1958

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY DATA
- TRANSMITTING
  - TBX, TBX-1, -2, -3, -4: 2000 to 4525 kc.
  - TBX-4a, -5, -6, -7, -8: 2000 to 5800 kc.
- RECEIVING: 2000 to 8000 kc.

POWER OUTPUT
- CW
  - TBX, TBX-1 THRU-7: 9 W.
  - TBX-8: 8.5 W.
- VOICE
  - TBX, TBX-1 THRU-7: 3 W.
  - TBX-8: 2.5 W.

EMISSION: A1, A3.

FREQUENCY CONTROL: Master oscillator and crystal.

RECEIVER DATA
- TYPE: Superheterodyne.
- RECEPTION: A1, A2, A3.

POWER REQUIREMENTS
- STANDARD
  - TRANSMITTING (HAND-DRIVEN GENERATOR)
    - NT-21263A: 500 v DC, 0.065 amps and 12.6 v DC, 0.86 amps.
    - NT-21263B: 550 v DC, 0.085 amps and 12.6 v DC, 2 amps.
  - RECEIVING (DRY BATTERIES)
    - TBX, TBX-1, THRU-7: (3) 45.0 v, (2) 1.5 v, (2) 7.5 v.
    - TBX-8: (2) 45.0 v, (2) 1.5 v, (1) 7.5 v.
- OPTIONAL
  - TRANSMITTING
    - EF SERIES: Self-contained.
    - EG SERIES: 115 v, 60 cps, single ph.
    - EH SERIES: 115 v DC.
    - EJ SERIES: 12 v DC.
  - RECEIVING
    - EL SERIES: 115 v, 60 cps, single ph.
    - EM SERIES: 6 v DC.
    - EN SERIES: 12 v DC
    - EO SERIES: 24 v DC.
    - EP SERIES: 32 v DC.
    - EQ SERIES: 110 v DC.
    - MODEL EAO: 115 v, 60 cps, single ph.
    - MODEL EAP: 12 v DC.
  - TRANSMITTING-RECEIVING
    - NT-20337: 12 v DC.

MANUFACTURER'S OR CONTRACTOR'S DATA

General Electric Company, Schenectady, N. Y.
- Contract NOs-65704, dated 16 March 1939 (TBX, TBX-1).
- Contract NOs-71808, dated 15 February 1940 (TBX, TBX-1).
- Contract NOs-81118, dated 22 January 1941 (TBX-2).
- Contract NXsr-35352, dated 30 July 1943 (TBX-6, TBX-7).

Hazeltine Electronics Corp., New York, N. Y.
- Contract NXss-18179, dated 19 November 1942 (TBX-4, TBX-4a).

Gared Radio Corp., Brooklyn, N. Y.
- Contract NXss-31870, dated 28 June 1943 (TBX-5).
- Contract NXsr-38500, dated 22 April 1944 (TBX-8).
- Contract NXsr-69224, dated 2 March 1945 (TBX-8).
- Contract NXsr-71254, dated 28 July 1944 (TBX-8).

TUBE AND/OR CRYSTAL COMPLEMENT

TBX, TBX-1 Thru 7

(1) 1C6	(4) 34	(1) 837

Total Tubes: (6)

(2) NT-40024-A

Total Crystals: (2)

TBX-8

(1) 1A5GT	(1) 2E22
(1) 1A7GT	(3) 3A4
(3) 1N5GT	(1) 5U4G

Total Tubes: (10)

(2) NT-40024-A (10) FT243

Total Crystals: (12)

REFERENCE DATA AND LITERATURE

Technical Manual for Portable Radio Equipment Navy Models TBX and TBX-1.

Technical Manual for Portable Radio Equipment Navy Model TBX-2.

Technical Manual for Navy Models TBX-4 and TBX-4a Portable Radio Equipment.

NAVSHIPS 95297: Technical Manual for Navy Model TBX-5 Portable Radio Equipment.

NAVSHIPS 95298: Technical Manual for Navy Models TBX-6 and TBX-7 Portable Radio Equipment.

NAVSHIPS 900706: Technical Manual for Navy Model TBX-8 Radio Transmitting and Receiving Equipment.

Technical Manual for Receiver Power Equipments Navy Models EL, EM, EN, EO, EP, and EQ.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

April 1958

PORTABLE RADIO EQUIPMENT

Radio-Transceivers
TBX,TBX-1,-2,-3,-4, -4a,-5,-6,-7,-8

SHIPPING DATA

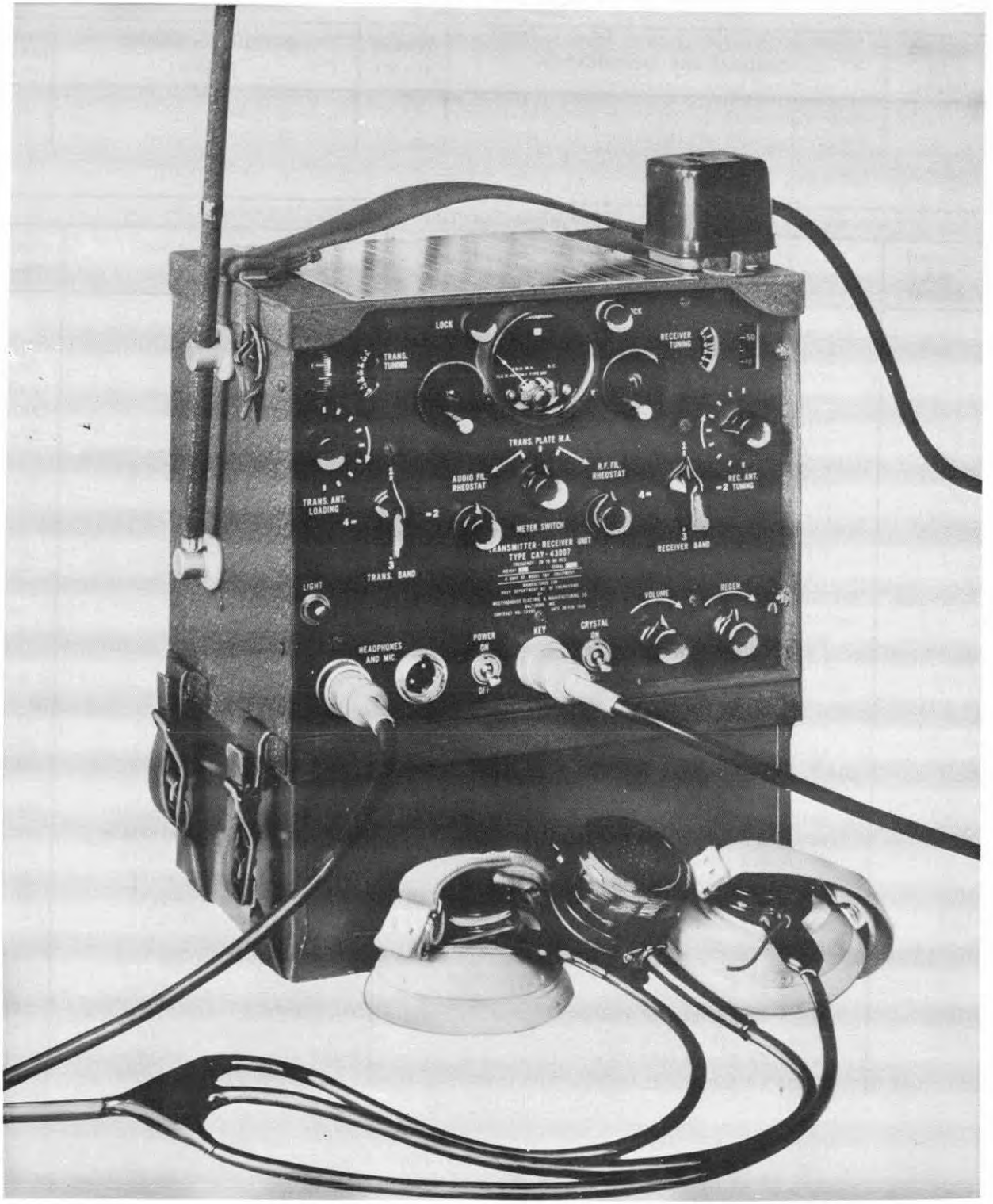
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Basic Equipment in Shipping Chest NT-10017A	17.7	22 X 24 X 58	355
1	Basic Equipment in Shipping Chest NT-10017B	17.5	20 X 24 X 52.5	320

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter-Receiver Unit		
	NT-43005 (TBX, TBX-1, -2, -3)	8-1/2 X 10 X 15-53/64	29.0
	NT-43005A (TBX-4)	8-1/2 X 10 X 15-53/64	29.0
	NT-43005D (TBX-4a, -5)	8-1/2 X 10 X 15-53/64	29.0
	NT-43005C (TBX-6, -7)	8-1/2 X 10 X 15-53/64	29.0
	NT-43060 (TBX-8)	8-1/2 X 10-13/16 X 16-1/2	32.9
1	Hand Generator		
	NT-21263A (TBX, TBX-1 Thru 7)	6-11/32 X 14-1/8 X 19-1/2	22.3
	NT-21263B (TBX-8)	6-11/32 X 9 X 9-1/2	24.3
1	Antenna Assembly for		
	(TBX, TBX-1 Thru 7)		7.5
	(TBX-8)		10.5
1	Set of Accessories		31.0
1	Set of Equipment Spares for		
	(TBX, TBX-1 Thru 7)		5.8
	(TBX-8)		14.5
2	Technical Manual	1/2 X 8-1/2 X 11	1.8
1	Shipping Chest		
	NT-10017A (TBX, TBX-1 Thru 7)	17-3/4 X 18-3/8 X 49-3/4	82.0
	NT-10017B (TBX-8)	17-3/4 X 17-3/4 X 49-3/4	80.0
1	Gasoline Engine-Driven Generator Model EF Series or	10-1/2 X 15-1/2 X 19-5/8	60.5
	Motor-Generator Model EH Series or	7-19/32 X 8-7/16 X 22-1/16	134.2
	Motor-Generator Model EG Series or	7-19/32 X 8-7/16 X 21-11/16	134.2
	Dynamotor Model EJ Series or	6-13/16 X 7-21/32 X 9-1/4	20.2
	Rectifier Model EA0 or	8-13/16 X 9-3/8 X 10-1/8	30.0
	Dynamotor Model EAP or	6-1/2 X 7-11/16 X 9-3/16	18.0
	Vibrator Power Supply NT-20337	8-1/2 X 10-1/8 X 16-1/2	
1	Auxiliary Rectifier Power Equipment		
	Model EL Series (115 VAC)	8-7/8 X 9-1/4 X 9-3/4	19.0
	Model EM Series (6 VDC)	5-1/8 X 7-13/16 X 8-5/8	11.5
	Model EN Series (12 VDC)	5-1/8 X 7-13 X 8-5/8	11.5
	Model EO Series (24 VDC)	5-1/8 X 7-13/16 X 8-5/8	11.5
	Model EP Series (32 VDC)	5-1/8 X 7-13/16 X 8-5/8	11.5
	Model EQ Series (110 VDC)	5-1/8 X 7-13/16 X 8-5/8	11.5

April 1958

PORTABLE TRANSMITTING AND RECEIVING EQUIPMENT TBY,TBY-1,-2,-4,-6,-7,-8



Portable Transmitting and Receiving Equipment TBY, TBY-1, -2, -4, -6, -7, -8

Radio-Transceivers

TBY,TBY-1,-2,-4,-6,-7,-8 PORTABLE TRANSMITTING AND RECEIVING EQUIPMENT

April 1958

FUNCTIONAL DESCRIPTION

The Models TBY, TBY-1, TBY-2, TBY-4, TBY-6, TBY-7, and TBY-8 are very-high frequency communication sets of the ultra-portable or pack type designed to provide two-way communication by either voice or modulated continuous-wave on any one of 131 different channels within the 28 to 80 megacycle frequency range.

They are completely self-contained, designed for field use or at advanced bases, and can be operated by one man while it is mounted on his back. They may be used with two operators, either of which may control transmission, with reception being had by both simultaneously.

These equipments are all similar in performance, differing only slightly in mechanical and electrical design.

No field changes in effect at time of preparation (30 October 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 28 to 80 mc in 4 bangs.
POWER OUTPUT
TBY, TBY-1, -2: 0.5 W.
TBY-4, -6, -7, -8.
A2: 0.75 W.
A3: 0.5 W.
EMISSION: A2, A3.
FREQUENCY CONTROL: Master oscillator.
FREQUENCY CALIBRATION: 5000 kc crystal-controlled oscillator furnishes calibration points every 12.5 channels throughout frequency range.
KEYING SPEED: 40 wpm.
MODULATION CAPABILITY: 70% min for voice transmission.
RECEIVER OUTPUT: 1 mw into 600 ohm load.
POWER REQUIREMENTS: 156 v DC, 30 ma; 7.5 v DC, 20 ma; 3 v DC, 375 ma; 1.5 v DC, 200 ma battery pack.
TYPE ANTENNA: Whip.

MANUFACTURER'S OR CONTRACTOR'S DATA

Westinghouse Electric and Manufacturing Company, Baltimore, Maryland.
Contract NOs-72055, dated 26 February 1940 (TBY, TBY-1).
Contract NOs-80643, dated 8 January 1941 (TBY-2).
Colonial Radio Corporation, Buffalo, N. Y.
Contract NXss-14329, dated 19 December 1942 (TBY-4).
Contract NXss-20570, dated 8 June 1943 (TBY-6).
Contract NXss-31648 (TBY-7).
Contract NXsr-37799, dated 29 September 1942 (TBY-8).

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1E7G
(2) 30
(4) 958A
(2) 959
Total Tubes: (10)
(1) 5000 KC
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

NAVSHIPS 95299: Technical Manual for Model TBY and Model TBY-1 Ultra-Portable Ultra-High Frequency Transmitting-Receiving Equipments.
Technical Manual for Navy Model TBY-2 Ultra-Portable Ultra-High Frequency Transmitting-Receiving Equipment.
Technical Manual for Navy Model TBY-4 Ultra-Portable Very-High Frequency Transmitting-Receiving Equipment.
Technical Manual for Navy Model TBY-6 Ultra-Portable Very-High Frequency Transmitting-Receiving Equipment.
NAVSHIPS 95596: Technical Manual for Navy Model TBY-8 Ultra-Portable Very-High Frequency Transmitting-Receiving Equipment.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

April 1958

PORTABLE TRANSMITTING AND RECEIVING EQUIPMENT TBY,TBY-1,-2,-4,-6,-7,-8

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Portable Transmitting and Receiving Equipment Model TBY or TBY-1 or TBY-2	2.1	10-7/8 X 16-7/16 X 20	82
1	Portable Transmitting and Receiving Equipment Model TBY-4 or TBY-6 or TBY-7 or TBY-8	2.6	11-7/8 X 18 X 22-5/8	90

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	TBY		
1	Transmitter-Receiver Unit NT-43007	7-1/16 X 10-21/32 X 12-1/16	23.0
1	Antenna NT-66025	3/8 dia X 108	0.7
1	Battery Pack NT-19018	4-1/4 X 6-9/16 X 9-3/8	13.0
1	Key, Cord and Plug Assembly NT-26013		1.0
2	Headphone and Microphone Assembly NT-51022		1.25
1	Canvas Carrying Case NT-10039	7-5/8 X 12-3/8 X 15-7/8	3.5
1	Shipping Chest NT-10038	10-7/8 X 16-7/16 X 20	20.6
1	Set of Equipment Spares		
2	Technical Manual NAVSHIPS 95299	1/2 X 8-1/2 X 11	
1	Test Data Manual		
	TBY-1		
1	Transmitter-Receiver Unit NT-43007	7-1/4 X 10-23/32 X 12-3/32	23.0
1	Antenna NT-66025	3/8 dia X 108	0.7
1	Battery Pack NT-19018	4-1/4 X 6-9/16 X 9-3/8	13.0
1	Key, Cord and Plug Assembly NT-26013		1.0
2	Headphone and Microphone Assembly NT-51022		1.25
1	Canvas Carrying Case NT-10039	7-5/8 X 12-3/8 X 15-7/8	3.5
1	Shipping Chest NT-10038	10-7/8 X 16-7/16 X 20	20.6
1	Set of Equipment Spares		
2	Technical Manual NAVSHIPS 95299	1/2 X 8-1/2 X 11	
1	Test Data Manual		
	TBY-2		
1	Transmitter-Receiver Unit NT-43007	7-1/4 X 10-23/32 X 12-3/32	23.0
1	Antenna NT-66025	3/8 dia X 108	0.7
1	Battery Pack NT-19018A	4-1/4 X 6-9/16 X 9-3/8	13.0
1	Key, Cord and Plug Assembly NT-26013		1.0
2	Headphone and Microphone Assembly NT-51022		1.25
1	Canvas Carrying Case NT-10039	7-5/8 X 12-3/8 X 15-7/8	3.5
1	Shipping Chest NT-10038	10-7/8 X 16-7/16 X 20	20.6
1	Set of Equipment Spares		
2	Technical Manual	1/2 X 8-1/2 X 11	
1	Test Data Manual		
	TBY-4		
1	Transmitter-Receiver Unit NT-43044	7-1/4 X 11-7/8 X 12-3/32	33.4
1	Antenna NT-66025	3/8 dia X 108	0.7
1	Battery Pack NT-19018B	4-1/4 X 6-9/16 X 9-3/8	13.0
1	Key, Cord and Plug Assembly NT-26013A		0.5
2	Headphone and Microphone Assembly NT-51022A		1.25
1	Canvas Carrying Case NT-10039A	8 X 12-1/2 X 16-1/2	3.5

Radio-Transceivers

TBY,TBY-1,-2,-4,-6,-7,-8 PORTABLE TRANSMITTING AND RECEIVING EQUIPMENT

April 1958

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Shipping Chest NT-10197	11-7/8 X 18 X 22-5/8	22.5
1	Set of Equipment Spares		
2	Technical Manual	1/2 X 8-1/2 X 11	
1	Test Data Manual		
1	Set of Tuning Charts		
	TBY-6		
1	Transmitter-Receiver Unit NT-43044	7-1/4 X 11-7/8 X 12-3/32	33.7
1	Antenna NT-66087 or NT-66087-S	1-11/32 dia X 108	1.0
1	Battery Pack NT-19018B	4-1/4 X 6-9/16 X 9-3/8	13.0
1	Key, Cord and Plug Assembly NT-26013A		0.5
2	Headphone and Microphone Assembly NT-51022		1.25
1	Canvas Carrying Case NT-10039B	8 X 12-1/2 X 16-1/2	3.5
1	Shipping Chest NT-10197	11-7/8 X 18 X 22-5/8	22.5
1	Set of Equipment Spares		
2	Technical Manual	1/2 X 8-1/2 X 11	
1	Test Data Manual		
1	Set of Tuning Charts		
	TBY-7, -8		
1	Transmitter-Receiver Unit NT-43044	7-1/4 X 11-7/8 X 12-3/32	33.7
1	Antenna NT-66087 or NT-66087-S	1-11/32 dia X 108	1.0
1	Battery Pack NT-19018B	4-1/4 X 6-9/16 X 9-3/8	13.0
1	Key, Cord and Plug Assembly NT-26013B		0.5
2	Headphone and Microphone Assembly NT-51022B or NT-51022C		1.25
1	Canvas Carrying Case NT-10039B	8 X 12-1/2 X 16-1/2	3.5
1	Shipping Chest NT-10197	11-7/8 X 18 X 22-5/8	22.5
1	Set of Equipment Spares		
2	Technical Manual	1/2 X 8-1/2 X 11	
1	Test Data Manual		
1	Set of Tuning Charts		

ULTRA HIGH FREQUENCY TRANSMITTING-RECEIVING EQUIPMENT

TBY-5

FUNCTIONAL DESCRIPTION

The TBY-5 is designed as a Ultra-high frequency transmitter-receiver, of the ultra portable or pack type. It provides two-way communication by either voice (Telephone) or Modulated Continuous Wave (MCW) Telegraphy on any one of 130 different channels throughout the frequency range of 28 to 80 megacycles (MC). It is supplied complete in all details, including battery power supply and antenna, and can be set up for operation in a minimum. It is designed for transportation as a knapsack load and may be operated by one man while it is being carried on his back.

No field changes in effect at time of preparation (9 March 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPES OF TRANSMISSION: MCW Telegraphy, Telephony.
TYPE OF EMISSION: A2 and A3 types of emission.
OPERATING FREQUENCY RANGE: 28 to 80 mc.
NOMINAL POWER OUTPUT: 0.5 watts.
POWER SUPPLY: Battery operated.

MANUFACTURER'S OR CONTRACTOR'S DATA

Westinghouse Electric Mfg Co., Baltimore, Maryland.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1E7G	(2) 30
(4) 958A	(2) 959

Total Tubes: (10)

Crystal Data not available.

REFERENCE DATA AND LITERATURE

NAVSHIPS 95299: Technical Manual for Model TBY Series Ultra-Portable Ultra High Frequency Transmitting-Receiving Equipments.
NAVSHIPS 900,123(B): Technical Manual for Naval Electronic Equipments.

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

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter-Receiver Unit	7-1/16 X 10-21/32 X 12-1/16	23
1	Battery Pack	4-1/4 X 6-9/16 X 9-3/8	13
1	Antenna	108 lg X 3/4 dia	100Z
1	Canvass Carrying Case	7-5/8 X 12-3/8 X 15-7/8	3-1/2
1	Key, Cord and Plug ASs'y	1-3/4 X 1-13/16 X 2-51/64	1
1	Microphone-Headphone Ass'y		1.25
1	Microphone	1-5/8 h X 2-3/32 dia	0.25
1	Headphone Assy		0.5
1	Shipping Chest	10-7/8 X 16-7/16 X 20	20.6
1	Set of Equipment Spares		

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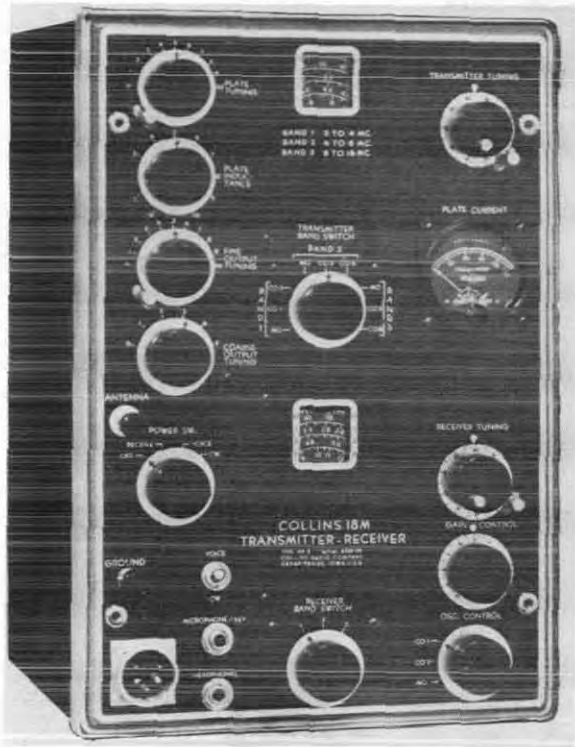
TRANSMITTER AND RECEIVING EQUIPMENT



Transmitting and Receiving Equipment TCH

FUNCTIONAL DESCRIPTION

The Model TCH is a two-way communication equipment for use in the field or on vehicles designed for voice or continuous-wave operation in the 2 to 16 megacycle frequency range. It employs a master oscillator of continuously variable frequency control and contains provisions for crystal control on any of two preset frequencies. It will operate into a wide range of antenna lengths and requires an external power supply operating from batteries or an AC line.

No field changes in effect at time of preparation (6 November 1957).

RELATION TO OTHER EQUIPMENT

The Navy Model TCH Transmitter-Receiver is the Collins Radio Company Type 18M-5.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 2 to 16 mc.
POWER OUTPUT
VOICE: 5W.
CW: 15 from 2 to 8 mc, 12 W from 8 to 16 mc.
EMISSION: A1, A3.
FREQUENCY CONTROL: Master oscillator or crystal.
KEYING SPEED: 30 wpm.
AUDIO FREQUENCY RESPONSE: Uniform within 5 db from 400 to 5000 cps.
AUDIO DISTORTION: 10% max at 85% modulation, measured at 400 cps.
CARRIER NOISE: At least 40 db below 100% modulation.
RECEIVER DATA
TYPE: Superheterodyne.
SENSITIVITY(50 MW AUDIO OUTPUT FROM 30% MODULATED SIGNAL AT 400 CPS):
BAND 1: 30 uv.
BAND 2: 50 uv.
BAND 3: 75 uv.
BANDWIDTH: 5 kc at 6 db down, 20 kc at 40 db down.
OUTPUT: 200 mw max into a 500 ohm load.
POWER REQUIREMENTS: 12 v DC, 8.5 amps or 24 v DC, 6.7 amps or 32 v DC, 4.7 amps or 115 v DC, 2 amps or 115 v AC, 2.85 amps.

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Company, Cedar Rapids, Iowa.
Contract NOs-75324, dated 20 July 1940.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 0D3W	(1) 12SQ7	(3) 6V6GTY
(1) 12SA7Y	(1) 6G6G	(1) 807
(2) 12SK7		

Total Tubes: (10)

(2) Quartz Crystal
Total Crystals: (2)

REFERENCE DATA AND LITERATURE

Technical Manual for Navy Model TCH Radio Telephone and Telegraph Transmitting and Receiving Equipment.

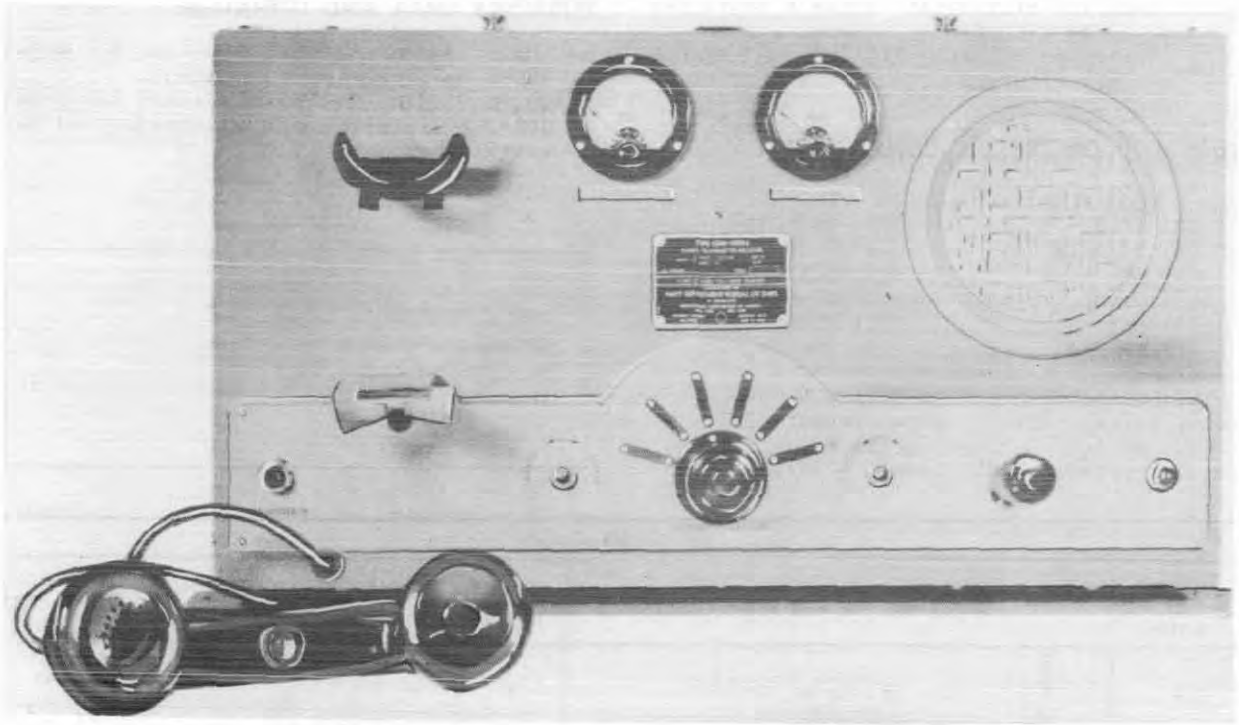
TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

TRANSMITTER AND RECEIVING EQUIPMENT

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter-Receiver Unit Type 18M-5	9-5/8 x 9-3/4 x 14-1/4	25.7
1	Power Unit Type 415E-3(12 v DC)	3-1/2 x 6-3/8 x 6-5/8	8.7
1	Power Unit Type 416T-1(24 v DC)	6-1/4 x 6-3/8 x 6-5/8	18.0
1	Power Unit Type 416T-2(32 v DC)	6-1/4 x 6-1/2 x 7-1/2	18.0
1	Power Unit Type 413B-1(115 v AC/DC)	9-1/2 x 12 x 22-1/4	95.0
1	Antenna Loading Coil Type 190U-1	2-15/16 x 4-1/4 x 4-7/8	1.2
1	Antenna Kit		
2	Technical Manual	3/8 x 8-1/2 x 11	
1	Set of Headphones Type 273N3		
1	Telegraph Key, Cord and Plug Type 67A-1		
1	Microphone Type 20N404		
2	Quartz Crystal Type 1E		
1	Set of Interconnecting Cables		

RADIOTELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT



Radio Transmitter-Receiver NT-43026 p/o TCO-2

FUNCTIONAL DESCRIPTION

The Navy Models TCO, TCO-1, and TCO-2 are compact, medium power radiotelephone equipments designed primarily for marine service. They are designed to provide transmitting and receiving facilities on any one of six pre-tuned channels within the 2,000 to 3,000 kilocycle frequency range for Navy Models TCO and TCO-1, and within the 2,000 to 3,500 kilocycle frequency range for Navy Model TCO-2. They contain provisions for operation from a remote station and are so designed that a selective ringer may be added.

The Models TCO and TCO-1 are identical, differing from Model TCO-2 in the frequency range covered and the addition in the Model TCO-2 of an RF amplifier stage to reduce receiver radiation.

No field changes in effect at time of preparation (29 April 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE
TCO, TCO-1: 2000 to 3000 kc.
TCO-2: 2000 to 3500 kc.

POWER OUTPUT: 25 W.
EMISSION: A3.
FREQUENCY CONTROL: Crystal oscillator.
MODULATION CAPABILITY: Substantially 100%.
RECEIVER DATA
TYPE: Superheterodyne.
IF: 455 kc.
RECEPTION: A3.
POWER OUTPUT: 50 mw.
SENSITIVITY: 10 uv for 50 mw audio output to loudspeaker with a 4 to 1 signal-to-noise ratio.
FIDELITY: ±2.5 db from 200 to 3500 cps at 400 cps reference level.
POWER REQUIREMENTS: 12 v DC, 32 v DC, 115 v DC, 230 v DC, or 115 v, 60 cps, single ph.
ANTENNA REQUIREMENTS
TYPE: Single wire, approx 35 ft lg.
IMPEDANCE: 16 ohms resistance, 200 uuf capacitance.

MANUFACTURER'S OR CONTRACTOR'S DATA

Radiomarine Corp of America, New York, N.Y.
Contract NOs-81014 (TCO).
Contract NOs-81903 (TCO-1).
Contract NXsr-39243, dated 28 October 1943 (TCO-2).

Radio-Transceivers

TCO,TCO-1,-2

RADIOTELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

Contract NXsr-39646, dated 6 September 1943 (TCO-2).
Approximate Cost: $1500.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

TCO, TCO-1	TCO-2
(4) 1624	(1) 5Y3WGTB
(1) 5Y3WGTB	(4) 1624
(1) 6H6	(1) 6H6
(1) 6K6GT	(1) 6K6GT
(1) 6K8	(1) 6K8
(3) 6SK7WA	(4) 6SK7WA
(1) 6SQ7	(1) 6SQ7
(2) 866A/866	(2) 866A/866
Total Tubes: (14)	Total Tubes: (15)
(12) R1	(12) R1
Total Crystals: (12)	Total Crystals: (12)

REFERENCE DATA AND LITERATURE

NAVSHIPS 95314: Technical Manual for Model TCO-1 Radiotelephone Equipment.
NAVSHIPS 95315: Technical Manual for Model TCO-2 Radiotelephone Transmitting and Receiving Equipment.

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	Radiotelephone Transmitter-Receiver Model TCO or TCO-1 or TCO-2	17.5	21 X 29 X 50	230
1	Equipment Accessories and Equipment Spares	7.7	23 X 24 X 24	100

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
TCO	TCO-1	TCO-2			
1	1		Radio Transmitter-Receiver NT-43008 or	13-3/16 X 18-3/16 X 24	80
		1	NT-43026		
1	1	1	Power Unit NT-21563(12 v DC) or	5 X 12-7/8 X 22	44
			NT-21564(32 v DC) or	5 X 12-7/8 X 22	44
			NT-21554(115 v DC) or	5 X 12-7/8 X 22	44
			NT-21565(230 v DC) or	5 X 12-7/8 X 22	44
			NT-20120(115 v AC)	9-1/4 X 10-1/4 X 19	54
1	1	1	Remote Control Unit NT-23229	5-3/8 X 10-3/8 X 13-5/8	11
1	1	1	Remote Control Cable	600 lg	
1	1	1	Set of Equipment Spares		
2	2	2	Technical Manual		

April 1958

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

Radio-Transceivers

TCP, TCP-1, 2,-3

Radio Telephone Transmitting and Receiving Equipment TCP-1

FUNCTIONAL DESCRIPTION

The TCP, TCP-1 thru -3 are designed for two-way radio telephone communication between ships and between ships and associated shore activities. Each transmitter-receiver is capable of operation from more than one type of power supply.

The TCP Series are all similar except for minor modifications made on later models and the AC power supply equipment available with the TCP-3.

No field changes in effect at time of preparation (24 April 1958).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (As required) Antennas.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

EMISSION: A3.
FREQUENCY RANGE
TRANSMITTER: 2000 to 3000 kc, max of 10 preset channels.
RECEIVER: 2000 to 3000 kc, max of 10 preset channels.
NOMINAL POWER OUTPUT: 75 W.
FREQUENCY CONTROL: Crystal.
TYPE RECEIVER: Superheterodyne.
RECEIVER OUTPUT IMPEDANCE: 4 ohms, 200 ohms.
RECEIVER SENSITIVITY: 50 mw audio output for 2 to 5 uv input.
POWER REQUIREMENTS
TCP, TCP-1,-2: 32 v DC or 115 v DC.
TCP-3: 32 v DC, 115 v DC, 230 v DC or 115 v, 50 to 60 cps, single ph.
POWER SUPPLY EQUIPMENT
DC: Motor Generator and Rotary Converter.
AC: Rectifier Power Unit.

MANUFACTURER'S OR CONTRACTOR'S DATA

Radiomarine Corp of America, New York, N.Y.
Contract NOs-81903, dated 12 February 1941. (TCP)
Contract NOs-87455 dated 18 June 1941 (TCP-1).
Contract NXsr-36947 dated 6 September 1943 (TCP-2).
Contract NXs-10299 dated 2 August 1942 (TCP-2).
Contract NXsr-55686 dated 19 April 1944 (TCP-3).
Approximate Cost: $2200.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

TCP, TCP-1, -2

(5) 807	(2) 809
(3) 6A6	(4) 6L7
(1) 6V6Y	(1) 6C5
(1) 5Y3WGTB	(1) 6R7

Total Tubes: (18)

TCP-3

(5) 807	(2) 809	(3) 6A6
(4) 6L7	(1) 6V6Y	(1) 6C5
(1) 5Y3WGTB	(1) 6R7	(2) 866A

Total Tubes: (20)

(20) R1/R2

Total Crystals: (20)

TCP, TCP-1, 2,-3

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

REFERENCE DATA AND LITERATURE

NAVSHIPS 95316: Technical Manual for TCP, TCP-1 Transmitting-Receiving Radiotelephone equipment.
NAVSHIPS 95137: Technical Manual for TCP-2, Transmitting-Receiving Radiotelephone Equipment.
NAVSHIPS 95318: Technical Manual for TCP-3 Transmitting-Receiving Radiotelephone Equipment.

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	Transmitter-Receiver	23.8	28 X 30 X 49	388
1	Accessories and Spare Parts	16.2	24 X 25 X 47	190

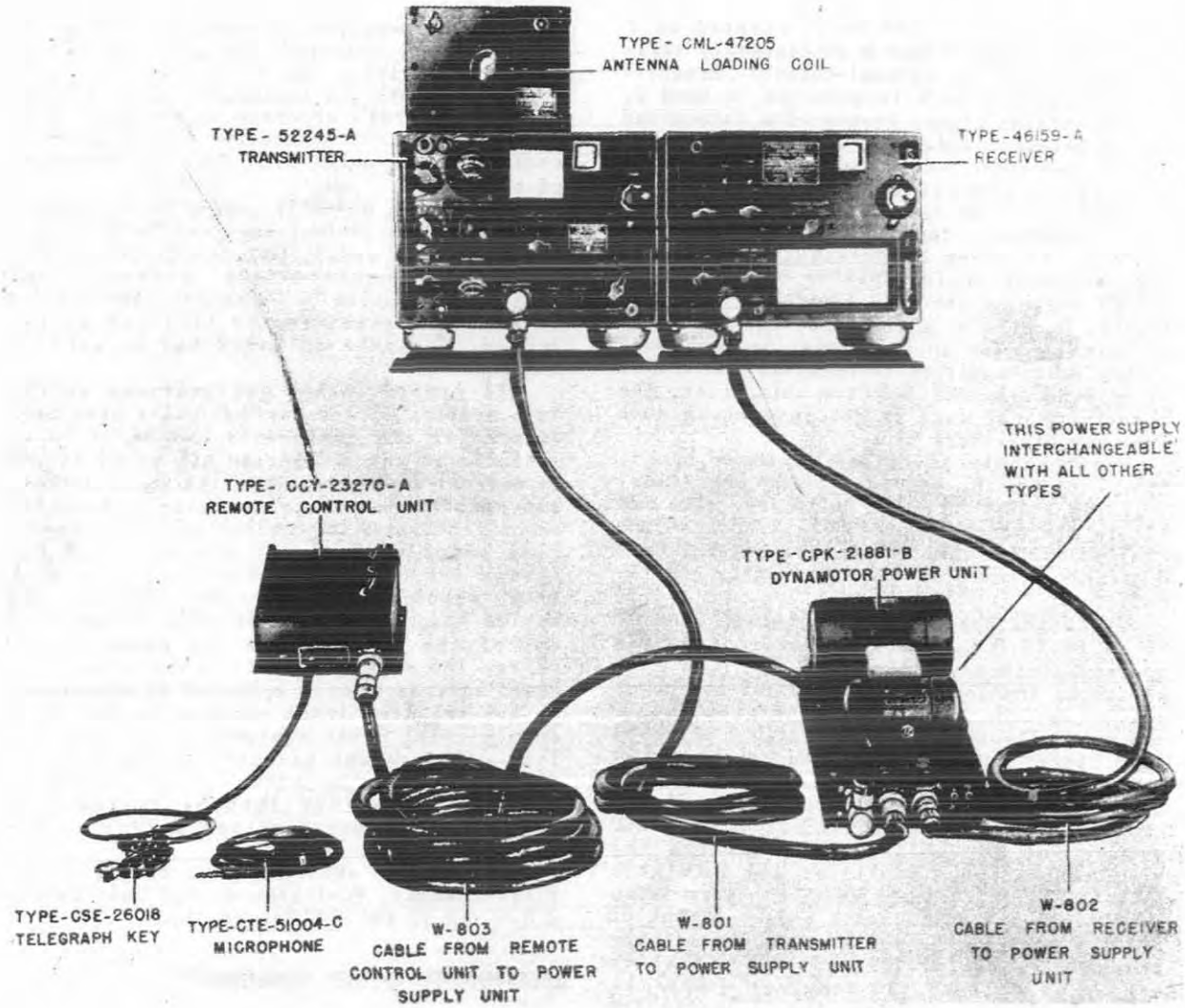
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	TCP		
1	Transmitter-Receiver NT-43009 (for 32 v DC) or NT-43010 (for 115 v DC)	20-1/8 X 22 X 37	310
1	Line Filter Unit NT-53076 (for 32 v DC) or NT-53077 (for 115 v DC)	3-1/2 X 6-1/4 X 10-1/2	7
1	Hand Telephone Assembly NT-51026	3-1/2 X 6-1/4 X 9	4
1	Remote Control Unit NT-23230	5-3/8 X 10-3/8 X 13-5/8	11
1	Set of Equipment Spares		
	TCP-1		
1	Transmitter-Receiver NT-43009 (for 32 v DC) or NT-43010 (for 115 v DC)	20-1/8 X 22 X 37	310
1	Line Filter Unit NT-53085 (for 32 v DC) or NT-53086 (for 115 v DC)	3-5/8 X 9-3/8 X 10-9/16	9
1	Hand Telephone Assembly NT-51026	3-1/2 X 6-1/4 X 9	4
1	Remote Control Unit NT-23230	5-3/8 X 10-3/8 X 13-5/8	11
1	Set of Equipment Spares		
	TCP-2		
1	Transmitter-Receiver NT-43009A (for 32 v DC) or NT-43010A (for 115 v DC)	21-1/8 X 22-1/4 X 37	310
1	Line Filter Unit NT-53085 (for 32 v DC) or NT-53086 (for 115 v DC)	3-5/8 X 9-3/8 X 10-9/16	9
1	Hand Telephone Assembly NT-51026	3-1/2 X 6-1/4 X 9	4
1	Remote Control Unit NT-23230	5-3/8 X 10-3/8 X 13-5/8	11
1	Set of Equipment Spares		
	TCP-3		
1	Transmitter-Receiver NT-43009A (for 32 v DC) or NT-43010A (for 115 v DC) or NT-43061 (for 230 v DC) or NT-43062 (for 115 v AC)	21-1/8 X 22-1/4 X 37	310
1	Line Filter Unit NT-53085 (for 32 v DC) or NT-53086 (for 115 v DC) or NT-53192 (for 230 v DC)	3-5/8 X 9-3/8 X 10-9/16	9
1	Hand Telephone Assembly NT-51026	3-1/2 X 6-1/4 X 9	4
1	Remote Control Unit NT-23230	5-3/8 X 10-3/8 X 13-5/8	11
1	Set of Equipment Spares		

March 1957

RADIO TRANSMITTING AND RECEIVING EQUIPMENT

TCS SERIES



Radio-Transmitting And Receiving Equipment TCS

FUNCTIONAL DESCRIPTION

The Navy Models TCS to TCS-15 semiportable transmitting-receiving equipments are designed for medium and high frequency telegraph and telephone operation. These equipments are used extensively on patrol and landing craft, reconnaissance vehicles, and for similar purposes.

All units are mounted in corrosion-proof cabinets of sheet steel or non-magnetic aluminum utilizing the subassembly type of construction. The transmitter and receiver may be assembled either side by side or stacked vertically with the horizontal type of mounting preferred. The assembly may be located on a shelf or bulkhead.

The transmitter is composed of an oscillator, buffer-doubler and power-amplifier stage with modulator. The frequency range is covered by means of three bands. Crystal-control is provided on any four desired frequencies within the range, and eight harmonics of these frequencies. For master oscillator use, a separate oscillator tube and associated circuits continuously variable, and capable of controlling output at any frequency within the range are used. The single-button carbon microphone works directly into the modulator-stage without the use of a speech-amplifier. The loading coil permits the use of short length antennas down to 20 feet, although better efficiency is obtained with the use of a longer wire up to 75 feet in length.

The receiver utilizes a superheterodyne circuit, with 1 radio-frequency stage and 2 I.F. stages, with AVC used for A3 reception.

TCS SERIES — RADIO TRANSMITTING AND RECEIVING EQUIPMENT

A range of 1500-12,000 kc is covered in 3 bands, utilizing either a continuously variable oscillator or crystal-control. Crystals may be employed on 4 frequencies in band 1, and on various higher frequencies determined by the harmonic frequencies of the crystals.

The remote-control unit, which may be mounted vertically or horizontally at a distance up to 20 feet from the power supply unit, contains a loudspeaker, audio volume-control, receiver output-switch providing for headphone or loudspeaker operation and ON-OFF switches for both receiver and transmitter. Headphone, microphone, and key jacks are also located in this unit. No frequency control of transmitter or receiver, or choice of emission is provided from this point. The remote-control unit is not interchangeable with any other Navy type.

Power supply units are of three types, dynamotor, motor-generator, and rectifier. Starting relays for these units are contained within the power supply units, and are controlled from either the remote-control unit or panel switches in the transmitter and receiver.

Dynamotor operation is obtained from 12 or 24 volts D.C. Units of interchangeable operation are available. Type 21770 is connected to the grounded terminal of the power source as indicated by the instructions on the unit. The types 21881 and 211035 are used with either power source lead connected to the grounded terminal. The high-voltage section of each unit has an input of 9.9 amperes at 12 volts, and an output of 0.180 ampere, at 400 volts. This supplies the transmitter power amplifier and modulator stages. The low voltage section has an input of 3.8 amperes at 12 volts and an output of 0.100 ampere at 220 volts, and operates the transmitter oscillator and buffer-doubler stages as well as the receiver. When the dynamotor units are used, the filaments are operated directly from the power source.

The motor generator units consists of two double units mounted on a common bed-plate. The motors are interchangeable for various line voltages, and mount on the front as viewed from the power cable side. AC motors for 115/1/60 operation are 1/4 horsepower. The HV generator is located to the back and left of the unit and supplies 415 volts D.C. at 0.180 ampere for the transmitter power amplifier and modulator. The LV generator is located at the back and right of the unit and supplies 240 volts D.C. at 0.100 ampere for the receiver and oscillator and buffer-doubler stages of the transmitter. It also supplies filament voltage through the use of a separate winding rated at 3.5 amperes and 12.6 volts. Fuses are located under a plate on the top center of the unit.

The rectifier power unit combines two rectifier filter supplies in a single case. The high voltage section supplies 400 or 450 volts D.C. as required, and the low-voltage section furnishes 225 volts D.C. Filament supply for both the transmitter and receiver is obtained from a separate transformer which also provides, in connection with a dry-disc rectifier, 12 volts D.C. for the operation of the relays.

The antenna normally used with this equipment is of the 20-foot vertical "whip" type. A change over relay operated by the key or microphone "push-to-talk" button allows break-in operation by connecting the antenna to either transmitter or receiver as required. Separate antennas may be used if desired.

All prefix letter designations to the type numbers of the various units have been omitted as the equipments and major units included in the TCS series are manufactured by several different companies under different contracts. The transmitter, receiver, remote control unit, loading coil and accessories supplied with any one model of the series are directly interchangeable with those supplied for any other model of the series and may be used in combination with any of the various types of power supply units. The supply line from which the combined equipment may be operated is determined by the required input voltage to the power supply unit. Power equipments designed for like voltages are essentially the same - difference in type number of these units or addition of suffix letters indicates a difference in manufacturer and/or a very slight change in design.

Data on this sheet reflects the following field changes, FC-1 thru 4, (12 July 1956). 6,8,9 and 10 for TCS Equipments.

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (4) Crystals.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TRANSMITTER NT-52245 and NT-52245-A

FREQUENCY RANGE: 1500 to 12000 kc.

NUMBER OF BANDS: 3 bands, 1500 to 3000, 3000 to 6000 and 6000 to 12000 kc.

FREQUENCY RESPONSE: ±3 db (NT-52245), ±5 db (NT-52245-A) from 300 to 3000 cps.

AUDIO FREQUENCY DISTORTION: Less than 10% RMS measured with 90% modulation at 400 cps.

RESIDUAL NOISE LEVEL (ON CARRIER): 40 db min (NT-52245), 46 db min (NT-52245-A) below the 100% modulation level.

AUDIO INPUTS: 0.86 v required to modulate the carrier 90% at 400 cps.

RADIO TRANSMITTING AND RECEIVING EQUIPMENT

TCS SERIES

EMISSION: CW or voice-modulated.
POWER OUTPUT: 20 W voice and 40 W CW (NT-52245); 10 W voice and 25 CW (NT-52245-A).
FREQUENCY STABILITY
LINE VOLTAGE: Changes of ±10% from normal will not exceed 0.01% variation in frequency.
HUMIDITY: An increase from normal to 95% humidity will cause a frequency variation of 0.10% max.
CONTROL: Crystal or master oscillator.

RECEIVER NT-46159 AND NT-46159-A.
FREQUENCY RANGE: 1500 to 12000 kc.
NUMBER OF BANDS: 3 bands, 1500 to 3000, 3000 to 6000 and 6000 to 12000 kc.
DISTORTION: Less than 5% with the gain control set for 1 W audio output.
AUDIO OUTPUT CIRCUIT: Designed to work into a 500 ohm load.
MAXIMUM AUDIO OUTPUT: 1.5 W measured at the output jack with a signal 30% modulated at 400 cps being fed into the receiver at the antenna terminal.
SENSITIVITY: 6 mw audio power with less than 15 uv input (on all bands).
SELECTIVITY: 2 stages of IF amplification.
CONTROL: Crystal or master oscillator.
TYPE: Superheterodyne.
RECEPTION: A1, A2, A3.

ANTENNA DATA: 20 ft vertical whip or single wire 20 to 75 ft (used for both transmitting and receiving).

POWER SUPPLIES AVAILABLE
DYNAMOTORS: 12 or 24 v DC.
MOTOR GENERATORS SETS: 24, 32, 115 and 230 v DC; 115, 60 cps, single ph AC.
RECTIFIERS: 115 or 230 v, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

N5SR-8595	NXSR-38314	NXSS-16730
N5SR-10539	NXSR-48390	NXSS-18844
NOS-84440	NXSR-86279	NXSS-22666
NXSR-LL-36727	NXSR-91960	NXSS-29815
NXSR-38307	NXSS-LL-8142	NXSS-33361

Approximate Cost: $200.00 with equipment spares. (Each)

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 5R4WGB	(2) 6X5WGT	(5) 12A6
(1) 12SA7Y	(3) 12SK7	(1) 12SQ7
(4) 1625		

Total Tubes: (18)

(4) Crystals
Total Crystals: (4)

REFERENCE DATA AND LITERATURE

Technical Manuals for Radio Telephone and Telegraph Transmitting and Receiving Equipment TCS, TCS-1 through TCS-15.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitters NT-52245,-A	11-11/16 X 11-13/16 X 13-3/4	41.81
1	Receivers NT-46159,-A	11-11/16 X 11-13/16 X 13-3/4	36.81
1	Remote Control Unit NT-23270.-A	3-7/16 X 5-13/16 X 7-3/8	6.0
1	Antenna Loading Coil NT-47205	6 X 6-3/4 X 9-1/2	3.69
1	*Dynamotors:		
	12 v DC NT-21770	6-5/8 X 7-15/16 X 13-1/32	28.50
	12 v DC NT-21881,-A,-B	7-1/4 X 7-5/8 X 12-3/4	27.0
	12 v DC NT-211035	7-1/4 X 7-5/8 X 12-3/4	27.0
	12 or 24 v DC NT-211330,-A,-B	8-25/32 X 9-5/8 X 12-15/16	35.0
1	*Motor Generator Sets:		
	24 v DC NT-21774	11-1/2 X 17-1/2 X 23	115.0
	24 v DC NT-21826	11-1/2 X 17-1/2 X 23	115.0

RADIO TRANSMITTING AND RECEIVING EQUIPMENT

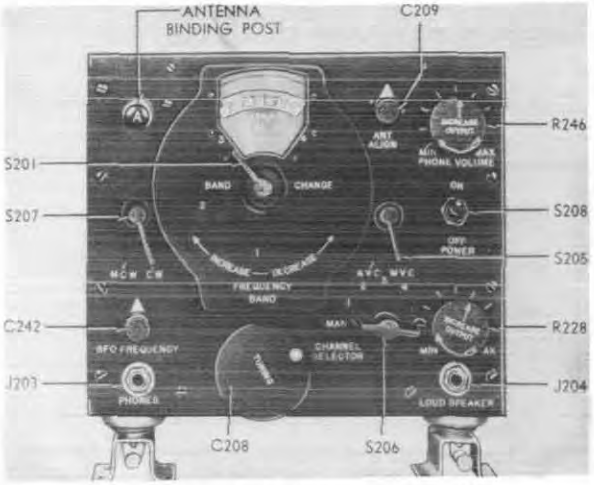
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	32 v DC NT-21775	11-1/2 X 17-1/2 X 23	115.0
	115 v DC NT-21776	11-1/2 X 17-1/2 X 23	115.0
	115 v DC NT-211100	11-1/2 X 17-1/2 X 23	115.0
	230 v DC NT-21827,-A	11-1/2 X 17-1/2 X 23	115.0
	115 v AC NT-21777	11-1/2 X 17-1/2 X 23	115.0
	115 v AC NT-21909	11-1/2 X 17-1/2 X 23	115.0
1	*Rectifiers:		
	115 v AC NT-20218	10-5/16 X 16-1/4 X 16-1/4	91.0
	230 v AC NT-20242	10-5/16 X 16-1/4 X 16-1/4	91.0
	115 or 230 v AC NT-20309	10-1/8 X 16-1/4 X 17-1/4	93.0
1	Set of Interconnecting Cables		
1	Telegraph Key Cord and Plug		
2	Carbon Microphones		
1	Set of Spare Parts		
1	Filter Kit NT-10597	4-7/32 X 7-23/32 X 9-25/32	
1	Noise Limiter Adapter Unit NT-50159	2-21/32 X 3 X 3-1/4	

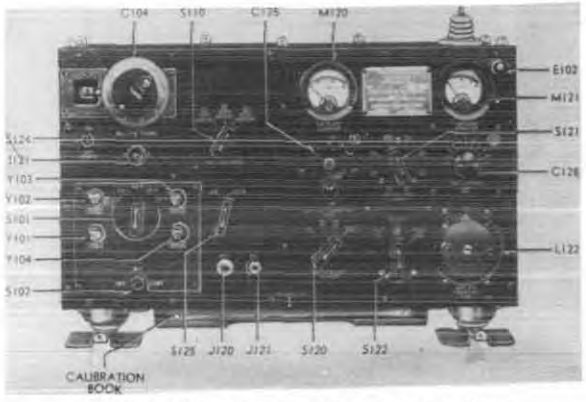
*Only One Power Supply furnished per equipment.

RADIO TRANSMITTING AND RECEIVING EQUIPMENT

TCX AND RBD



Model RBD Receiver, Front View



Model TCX Transmitter, Front View

FUNCTIONAL DESCRIPTION

The Navy Models TCX and RBD Telegraph and Telephone Transmitting and Receiver Equipments are designed to fulfill the paramount requirements of providing satisfactory communication between similar equipments installed ashore, aboard ship, or in small boats; also between such equipments and other units of the Naval Communication System. This equipment, as supplied, is particularly designed for application to small boats where weight and power consumption are of major importance.

Radio Transmitter, Navy Type 52228 is capable of CW (A1) and phone (A3) emission. self excited transmission is possible at any frequency within the range, 1.5 to 12 mc. Continuous wave and phone crystal-controlled transmission is possible on any one of four frequencies in the range for which crystals are provided.

Radio Receiver, Navy Type 46132 is capable of receiving CW (A1), MCW (A2) and phone (A3) signals within the range, 1.5 to 12 mc. Crystal controlled reception is possible on any one of four frequencies for which crystals are provided.

The equipments are designed for storage-battery operation and with the proper dynamotor units may be operated from either a 12 volt or a 24 volt source. Dynamotor-Filter Units, Navy Type 21687 and Navy Type 21683 are furnished by the manufacturer for 12 volt storage battery operation, and Dynamotor-Filter Units, Navy Type 21688 and Navy Type 21684 are supplied when operation is to be obtained from a 24 volt storage battery.

No field changes in effect at time of preparation (19 August 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

NAVY MODEL TCX

FREQUENCY RANGE: 1.5 to 12 mc.

FREQUENCY CONTROL: Crystal controlled on 4 selected frequencies. Self excited at any frequency within range.

ANTENNA: Grounded vertical, 24 feet in height.

POWER REQUIREMENTS: 12 volt or 24 volt DC source.

NAVY MODEL RBD

TYPE: Superheterodyne.

FREQUENCY RANGE: 1.5 to 12 mc, 4 bands.

ANTENNA: Grounded vertical, 24 feet in height. One antenna is used for transmission and reception.

POWER REQUIREMENTS: 12 volt or 24 volt DC source.

MANUFACTURER'S OR CONTRACTOR'S DATA

General Electric Co., Schenectady, N.Y.

Contract NOs-87630, dated 30 June, 1941.

Radio-Transceiver

TCX AND RBD RADIO TRANSMITTING AND RECEIVING EQUIPMENT

TUBE AND/OR CRYSTAL COMPLEMENT

Navy Model TCX	Navy Model RBD
(1) 12SJ7	(1) 12K8
(1) 1625	(4) 12SK7
(1) 1626	(1) 6SR7
(2) 837	(1) 6V6GTY
Total Tubes: (5)	Total Tubes: (7)
4 Crystals used as provided	4 Crystals used as provided

REFERENCE DATA AND LITERATURE

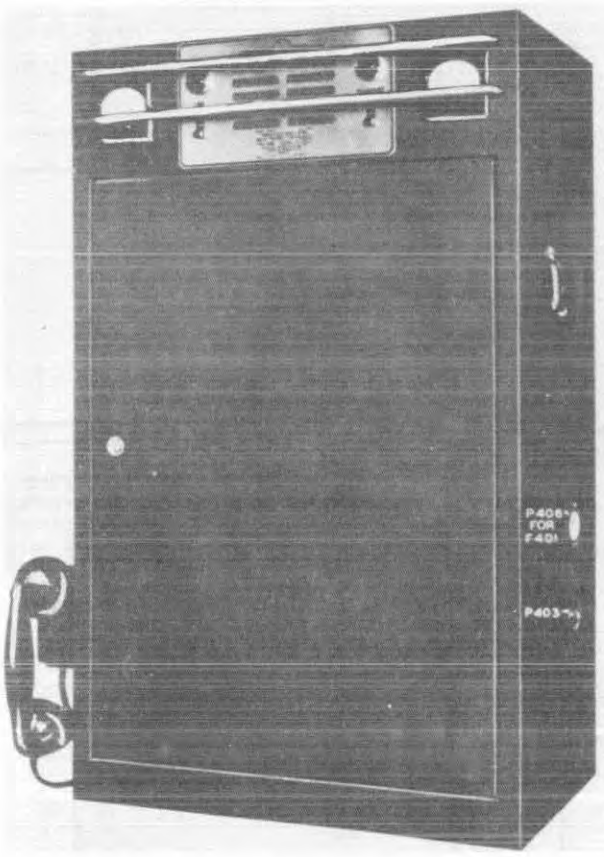
Technical Manual for Navy Models TCX and RBD.

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

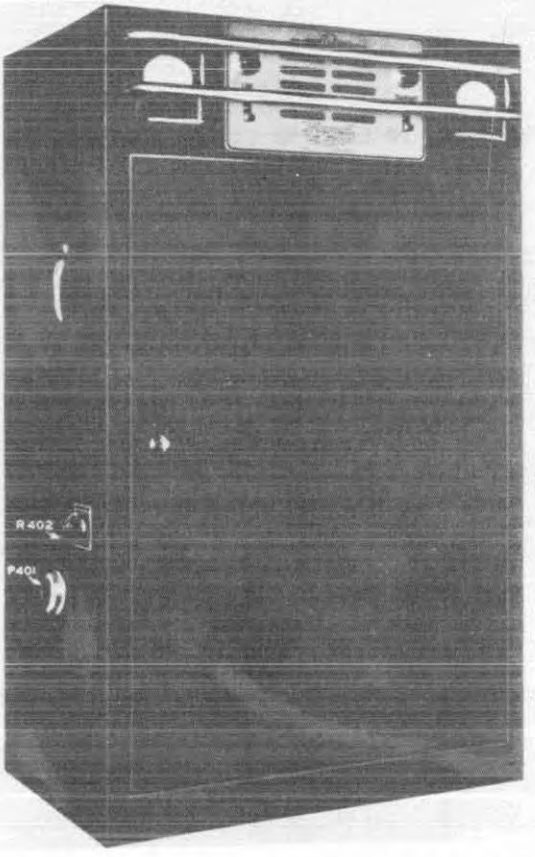
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter, NT-52228	11-15/32 X 14-17/32 X 20	
1	Radio Receiver, NT-46132	9-1/8 X 9-3/16 X 14-1/4	
1	Dynamotor-Filter Unit, NT-21687	9-5/16 X 11 X 12-7/16	
1	Dynamotor-Filter Unit, NT-21683	6-1/16 X 7-13/16 X 9-5/8	
2	Key, NT-26001	1-1/4 X 2-13/16 X 5-5/16	
2	Hand Microphone, NT-51006	2-5/8 X 3-5/16 X 3-1/2	
2	Head Set Receiver, NT-49016		
1	Remote Control Unit, NT-23246	3-1/8 X 6-15/16 X 7-13/16	

RADIO TRANSMITTER-RECEIVER 1498



Radio Transmitter-Receiver Type 1498, Cabinet, Closed Oblique Right Front View



Radio Transmitter-Receiver Type 1498, Cabinet, Closed Oblique Left Front View

FUNCTIONAL DESCRIPTION

The 1498 is designed to provide radiotelephone communication over distances up to 100 mi when line-of-sight signaling is possible. The equipment utilizes the Armstrong frequency-modulation method of transmission and reception in the frequency range of 70 to 100 mc. It is completely self-contained except for antenna and power source of 115 v, 50 to 60 cps.

No field changes in effect at time of preparation (6 September 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 70 to 100 mc.
TYPE EMISSION: Frequency modulated.
CRYSTAL FREQUENCY RANGE: 2187.5 to 3125 kc.
FREQUENCY DEVIATION: ±15 kc.
AUDIO RESPONSE: ±2 db. 300 to 2750 cps overall Transmitter-Receiver.
POWER INPUT: 6.3 v AC at 3.0 amp, 500 v DC at 220 ma.
OUTPUT IMPEDANCE: 50 to 100 ohms into concentric line.
POWER OUTPUT: 500 W max.

1498 RADIO TRANSMITTER-RECEIVER

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corporation, New York, N.Y.

REFERENCE DATA AND LITERATURE

Technical Manual for Radio Transmitter-Receiver 1498.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 7F7 (7) 7W7 (4) 7C5
(1) 815 (2) 7C7 (1) 7S7
(2) 7A6 (1) 7A4 (1) 7Z4
Total Tubes: (21)

(2) FT-243
Total Crystals: (2)

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Receiver 1498-R			
1	Transmitter Power Supply 1498-P			
1	Cabinet consisting of:			
	(1) Radio Transmitter 1498-T			
	(1) Relay Connection Panel 1498-C			
	(1) Push-to-talk handset			
	(1) Hangup box			
	(1) Control cable			
	(1) Power cable			
1	Antenna Assembly 1509 consist of:			
	(1) Adjustable coaxial antenna flexible transmission line connector		100 ft.	
	(2) Mounting Clamps			
	(16) Lag Screws and Washers			
1	Remote Control Unit 1504 consisting of:			
	(1) Cabinet and Chassis with tubes			
	(1) Handset and hangup box ass'y			
	(1) Antenna and transmission line Assembly.			

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Cabinet consisting of:	11 X 21 X 34-1/4	151
1	Radio Transmitter 1498-T		
1	Radio Receiver 1498-R		
1	Transmitter Power Supply 1498-P		
1	Relay and connection Panel 1498-C		
1	Antenna Assembly 1509	100 ft.	
1	Remote Control Unit 1504	9 X 11 X 15" 1	35

June 1961

Radio-Transceivers

RADIO SET 25FMTR-ED-7

FUNCTIONAL DESCRIPTION

The 25 FMTR-ED-7 (Link Radio Co) is designed as a Frequency Modulated (FM) radio telephone transmitter and receiver. It is mobile and provides two way voice communication with a similar fixed or mobile equipment operating on the same frequency. The equipment employs a dynamotor power supply operated from a 6 volt storage battery. A single antenna is used which receives or transmits in accordance with the antenna relay in the transmitter.

No field changes in effect at time of preparation (25 March 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: F3 type.
TYPE OF CONTROL: Crystal.
TYPE OF ANTENNA: 1/4 wave telescopic whip type.
FREQUENCY RANGE: 30 to 42 mc.
POWER OUTPUT: 25 W max.
POWER-SOURCE REQUIRED: 6 v storage battery.

MANUFACTURER'S OR CONTRACTOR'S DATA

Fred M. Link Corp., New York, N. Y.
Model 25 FMTR-ED-7.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 7A6	(2) 7A8	(1) 7C5
(4) 7C7	(1) 7B5	(1) 7F7
(1) 7S7	(5) 7W7	(1) 807

Total Tubes: (18)

Crystal Data not available.

REFERENCE DATA AND LITERATURE

Fred M. Link Catalog No. 1810 for FM Radio Communication Equipment Model 25 FMTR-ED-7.

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

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set 25 FMTR-ED-7 Including:	8-1/2 X 16 X 28	70
1	Receiver Type 11-UF-DC ED-6	7-1/2 X 9 X 13	30
1	Transmitter Type 25-UFM ED-2	8-1/2 X 9 X 17	33

September 1956

RADIO TRANSMITTER-RECEIVER 25/FSTR

Radio Transmitter Receiver 25/FSTR

FUNCTIONAL DESCRIPTION

The 25/FSTR is Link Radio Corp Transmitter Type 25-UFS ED. 2, Receiver Type 12-UF ED. 6 and all accessories for accomplishing an operating two-way communication system in a fixed station. It is designed for local or remote control in the 30 to 40 megacycle range. The Transmitter and receiver are frequency modulated and crystal controlled and operate from a 115 volt alternating current line.

No field changes in effect at time of preparation (28 May 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 30 to 40 mc.
SYSTEM AUDIO RESPONSE: ±3 db, 300 to 3000 cps.
POWER REQUIREMENTS: 115 v, 50 to 60 cps, single ph, 125 W standby, 230 W transmitting.

TRANSMITTER
- TRANSMISSION: F3.
- POWER OUTPUT: 25 W nom.
- FREQUENCY DEVIATION: ±15 kc.
- POWER SUPPLY: Self contained.
- POWER INPUT: From 115 v AC, 60 W standby, 165 W transmitting.
- OUTPUT IMPEDANCE: Any-usually fed into 50 to 70 ohm concentric line.
- CONTROL: Local or remote. Provisions for coordinated receiver control.

RECEIVER
- FREQUENCY RANGE: 30 to 44 mc.
- RECEPTION: F3.
- FREQUENCY DEVIATION: ±15 kc.
- AUDIO RESPONSE: ±3 db, 300 to 3000 cps (system). Sharp cut-off filter attenuates frequencies above 3000 cps.
- POWER SUPPLY: Self contained.
- POWER INPUT: From 115 v AC, 65 W.
- OUTPUT IMPEDANCE: 500 ohm.
- CONTROL: Coordinated with transmitter control.
- POWER OUTPUT: Approx 1 W into 500 ohms.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corp., New York, N.Y.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 7C7	(5) 7AG7	(1) 80
(1) 5Z3	(1) 7B5	(1) 807
(1) 7F7	(1) 7C5	(2) 7A6
(2) 7A8	(1) 7S7	

Total Tubes: (20)

(3) Crystals
Total Crystals: (3)

REFERENCE DATA AND LITERATURE

NAVSHIPS 91070: Technical Manual for Radio Transmitter-Receiver Type 25-UFS.

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE
STOCK NO.

25/FSTR RADIO TRANSMITTER-RECEIVER

September 1956

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Transmitter–Receiver Type 25–UFS	4.7	12 x 22–1/2 x 30	120

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter Type 25–UFS ED.2		
1	Radio Receiver Type 12–UF ED.6		
1	Speaker		
1	Rack Cabinet		
1	Handset, Local Control		
3	Cables		

RADIO SET 25-UFS

FUNCTIONAL DESCRIPTION

The 25-UFS (Link Radio Co) is designed as a complete Frequency Modulated (FM) fixed station transmitter and receiver. It provides two way communication on the 30 to 40 megacycle (MC) Ultra-High-Frequency (UHF) band.

No field changes in effect at time of preparation (23 March 1960).

RELATION TO OTHER EQUIPMENT

The 25-USF is similar to the 50-UFS except that it differs in power output and equipment supplied.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION
TRANSMITTER AND RECEIVER: F3 type.
NUMBER OF BANDS
TRANSMITTER AND RECEIVER: 1 band.
TYPE OF ANTENNA AND MOUNT: Type 3-CA or 4-CA vertical coaxial on mast or other elevated support.
FREQUENCY RANGE
TRANSMITTER: 30 to 40 mc.
RECEIVER: 30 to 44 mc.
POWER OUTPUT: 25 W max.
OPERATING POWER RQMT: 115 v AC, 50 to 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corp., New York, New York.
Model No. 25-UFS.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 7A6	(2) 7A8	(1) 7B5
(1) 7C5	(4) 7C7	(1) 7F7
(1) 7S7	(5) 7W7	(1) 5Z3
(1) 80	(1) 807	

Total Tubes: (20)

Crystal Data not available.

REFERENCE DATA AND LITERATURE

Link Radio Corporation Catalog #1810 for Radio Set Model No. 25-UFS.

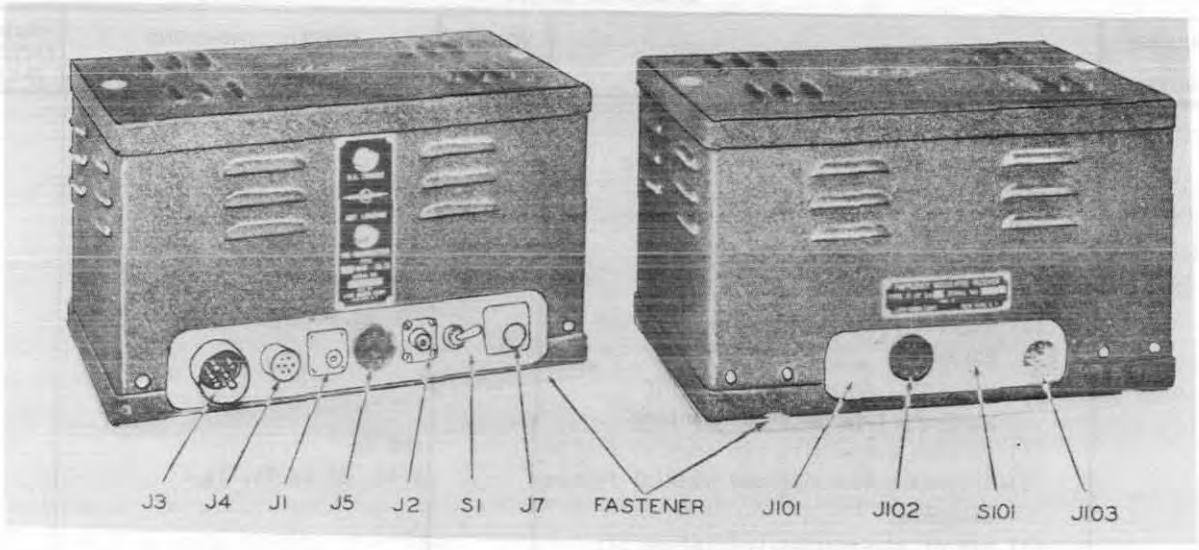
TYPE CLASSIFICATION (NAVY)
DESIGN COGNIZANCE COMMERCIAL
PROCUREMENT COGNIZANCE
STOCK NO.
R.D.B. IDENT. NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set Model No. 25-UFS Including:	10 X 21 X 27	90
1	Transmitter	8-1/2 X 9 X 17	33
1	Receiver Type No. 12-UF	7-1/2 X 9 X 13	20

FREQUENCY MODULATED MOBILE EQUIPMENT

35FMTR-7A



Frequency Modulated Mobile Equipment

FUNCTIONAL DESCRIPTION

The 35 FMTR-7A is a complete assembly designed for mobile two-way communication on the 30 to 44 mc VHF band.

No field changes in effect at time of preparation (4 Sept 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 30 to 44 mc.
TYPE EMISSION: Frequency modulated.
FREQUENCY DEVIATION: ±15 KC
SYSTEM AUDIO RESPONSE: 500 to 300 cycles ±1 db, 350 to 500 cycles ±2.5 db.
POWER SUPPLY: Self-contained dynamotor.
POWER INPUT
STAND BY: 6 v at 2.25 amp (13.5 W).
TRANSMITTING: 6 v at 30 amp (180 W).
POWER OUTPUT: 35 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corp., New York 11, N.Y.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 7F7	(1) 7AG7
(9) 7C7	(1) 807
(1) 7A8	(2) 7A6
(1) 7B5	

Total Tubes: (17)

REFERENCE DATA AND LITERATURE

NAVSHIPS 91071 Technical Manual for Frequency Modulated Mobile Equipment 35FMTR-7A.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUSHIPS
PROCUREMENT COGNIZANCE	
STOCK NO.	

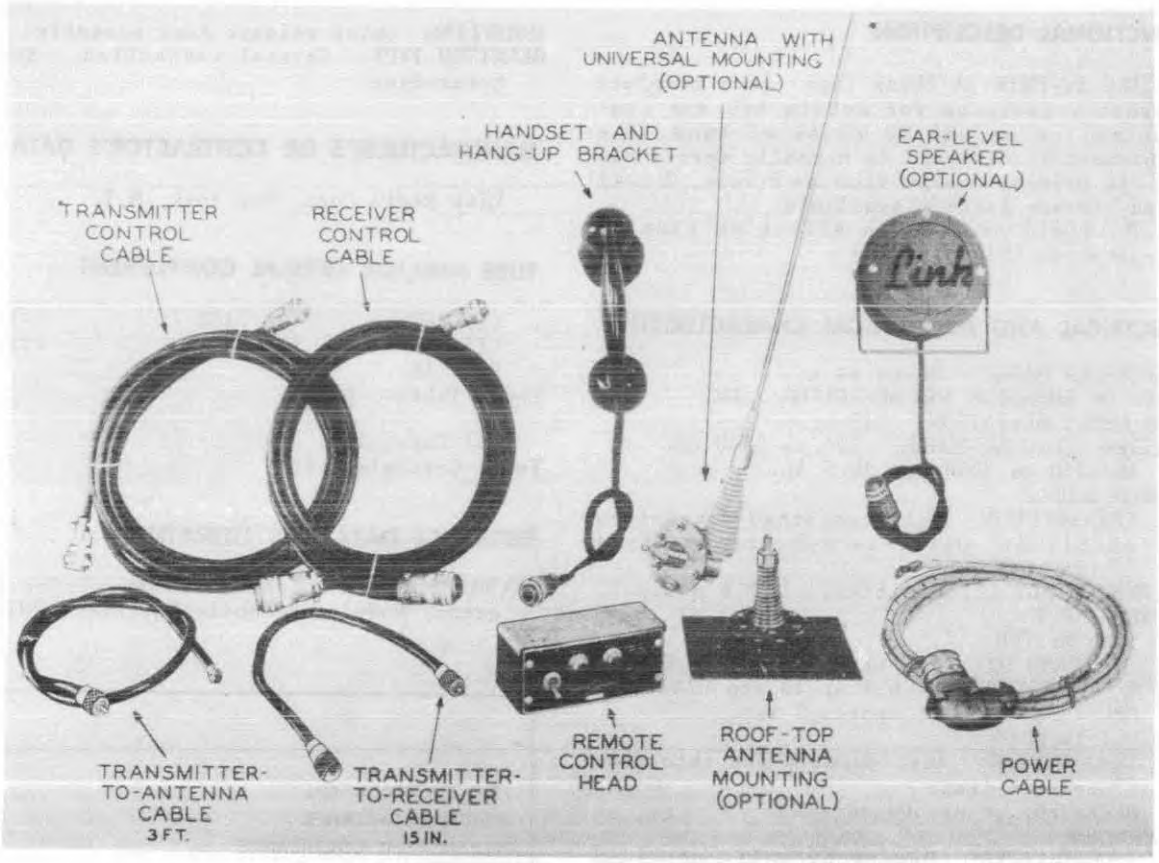
35FMTR-7A FREQUENCY MODULATED MOBILE EQUIPMENT

SHIPPING DATA

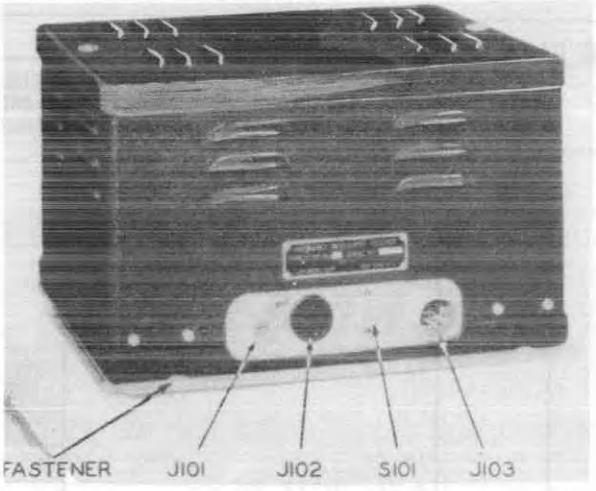
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Receiver 11-UF-ED7 (including)			
	(1) Loudspeaker with Cable and Plug			
	(1) Two-Way Control head			
	(1) Push-to-talk handset or hand microphone with Cable attached			
	(1) Handset Mounting			
	(1) Receiver Control Cable with Plugs attached		216 lg.	
	(1) Universal Antenna Mounting or Roof-top type Antenna Mounting			
	(1) Antenna Cable with two coaxial fitting		180 lg	
	(1) Antenna Cable with one coaxial fitting attached		3 ft. or 12 ft. lg.	
	(1) Bag of Accessories Consisting of: Cable clamps, screws, bolts, automatic circuit breaker, suppressors, capacitors, etc.			
1	Radio Transmitter 35UFM-ED-7A, consist of:			
	(1) Transmitter Control Cable with plugs		216 lg.	
	(1) Primary power Cable with plug		216 lg	
1	Cadmium Plated tapered steel Antenna			

EQUIPMENT SUPPLIED DATA

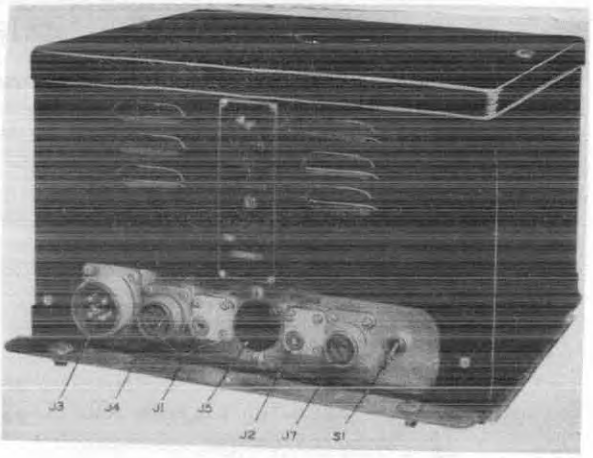
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter 35-UFM-ED7A		30-3/4
1	Radio Receiver 11-UF-ED7	8 X 10 X 12-1/4	23-3/4
	Accessories		



Accessories



Radio Receiver Type 11-UF-ED. 7



Radio Transmitter Type 50-UFM-ED. 7A

FM Mobile Radio Equipment 50-FMTR-7A

50-FMTR-7A FM MOBILE RADIO EQUIPMENT

FUNCTIONAL DESCRIPTION

The 50-FMTR-7A (Link Type) is a complete assembly designed for mobile two way communication on the 30 to 44 mc band. The equipment is designed to normally derive all of its primary energy from the 6 volt, 3 cell lead storage battery available.

No field changes in effect at time of preparation (21 May 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 30 to 44 mc.
TYPE OF EMISSION AND RECEPTION: FM.
FREQUENCY DEVIATION: ±15 kc.
SYSTEM AUDIO RESPONSE: 500 to 3000 cps ±1 db; 350 to 5000 cps ±2.5 db.
POWER SUPPLY
TRANSMITTER: Self-contained dynamotor.
RECEIVER: Built-in synchronous type vibrator.
POWER OUTPUT (Transmitter): 50 W nominal.
POWER INPUT
TRANSMITTER
STAND BY: 6 v at 3.8 amp (22.8 W.).
TRANSMITTING: 6 v at 40 amp (240 W.).
RECEIVER: 6 v at approx 5 amp.
OUTPUT IMPEDANCE
TRANSMITTER: Any, usually fed into concentric line.
RECEIVER: 6 or 500 ohms.
CONTROLS
TRANSMITTER: Remote by self-contained relays; provisions for coordinated receiver control.
RECEIVER: Remote: coordinated with transmitter.
MOUNTING Quick release base assembly.
RECEIVER TYPE: Crystal controlled, Superheterodyne.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corp, New York, N.Y.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 7F7 (1) 7AG7 (9) 7C7
(1) 7C5 (1) 829-B (1) 7A8
(9) 7A6
Total Tubes: (18)

(4) Crystals
Total Crystals: (4)

REFERENCE DATA AND LITERATURE

NAVSHIPS 91071: Technical Manual for Frequency Modulated Mobile Equipment FMTR-7A

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (cu Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs)
1	Radio Receiver Type 11-UF-ED. 7 Permanent-Magnet Loudspeaker Quick-Release Base Assembly Two-way Control Head Push-To-Talk Handset or Hand Microphone Handset Mounting Receiver Control Cable Universal Antenna Mounting or Roof-Top Antenna Mounting Antenna Cable Antenna Cable Bag of Accessories containing Cable Clamps, Screws, Bolts,		18 ft 15 ft 3 ft. or 12 ft.	

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (cu Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
	Automatic Reset Circuit Breakers Suppressors, Capacitors			
1	Radio Transmitter Type 50-UFM-ED.7A			
	Transmitter Control Cable		18 ft	
	Primary Power Cable		18 ft	
	Quick-Release Base Assembly			
1	Cadmium Plated Steel Antenna			

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter Type 50-UFM-ED. 7A	8 X 10 X 12-1/4	31.750
1	Radio Receiver Type 11-UF-ED. 7	8 X 10 X 12-1/4	23.750
2	Quick Release Base Assembly (Receiver and Transmitter)		
1	Permanent-Magnet Loud Speaker		
1	Remote Control Head		
1	Push-To-Talk Handset or		
1	Hand Microphone		
1	Handset Mounting		
1	Receiver Control Cable	18 ft	
1	Universal Antenna Mounting or		
1	Roof-Top Antenna Mounting		
1	Antenna Cable	15	
1	Antenna Cable	3 ft or 12 ft	
1	Bag of Accessories containing Cable Clamps, Screws, Bolts Automatic Reset Circuit Breaker, Suppressors, Capacitors.		
1	Transmitter Control Cable	18 ft	
1	Primary Power Cable	18 ft	
1	Cadmium Plated Steel Antenna		

March 1957

FREQUENCY MODULATED STATION EQUIPMENT

50-UFS

FUNCTIONAL DESCRIPTION

The 50-UFS is a complete assembly designed for two-way communication on the 30 to 40 mc UHF band.

No field changes in effect at time of preparation (4 September 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 30 to 40 mc.
TYPE EMISSION: Frequency modulated.
FREQUENCY DEVIATION: ±15 KC.
AUDIO RANGE: 300 to 3000 cycles with high frequency pre-emphasis.
POWER INPUT
STANDBY: 115 v, 50 to 60 cps, 125 W (with receiver only).
TRANSMITTING: 115 v, 50 to 60 cps, 320 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Link Radio Corp., New York 11, N. Y.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 7C7	(2) 7A8
(1) 7C5	(1) 6L6
(2) 807	(2) 816/866JF
(2) 6AC7	(2) 6K8
(1) 6SH7	(1) 6SJ7
(2) 6H6	(1) 6SL7GT
(1) 6K6GT	(1) 6V6
(1) 80	

Total Tubes: (22)

REFERENCE DATA AND LITERATURE

NAVSHIPS 95403: Technical Manual for Frequency Modulated Station Equipment 50-UFS.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUSHIPS
PROCUREMENT COGNIZANCE	
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter-50-UFS		
1	Receiver 12-UF		
1	Rack	11 X 21 X 34-1/4	