FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-6, -7

3 December 1958

Cognizant Serv: USN

FSN:

AN/URA-6: 5840-642-8362

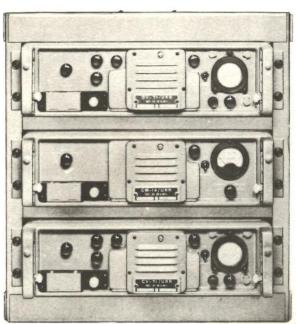
AN/URA-7: 5840-644-4841

USA

USN

USAF

TYPE CLASS: STOCK NO:



AN / U.S.

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter-Comparator Groups AN/URA-6 and AN/URA-7 are dual diversity equipments designed for demodulation of frequency-shift keyed radiotelegraph signals. These equipments thus provide keying facilities for teletypewriters, printers, or similar automatic recording devices. Keying speeds up to 100-dot cycles per second are possible.

Used by AN/URA-6: F16-Q-123395-200

AN/URA-7: F16-Q-123397-200

This corresponds to four-channel multiplex at 100 words per minute for each channel.

Both equipments are intended for table mounting; however, the converter and comparator units may be removed and installed in a standard relay rack.

Basically, both equipments are similar. The AN/URA-6 is used with Radio Receiving Equipments RBB, RBC, and Diversity Radio Receiving Equipment of the RDM series. The AN/URA-7 is used with Diversity Radio Receiving Equipments RBP and RCP.

Two receiving channels are used in a diversity arrangement, Comparator CM-14/URR selecting the stronger signal to control the teletypewriter loop and the keyed tone.

TECHNICAL CHARACTERISTICS:

Frequency Range:

AN/URA-6: 395 kc to 470 kc (dual channel)

AN/URA-7: 50 kc (dual channel)

Type Modulation: Fm

Type Reception: Frequency-shift keying

Power Output:

Electron Tube Keyer for Keying 60-ma Teletypewriter Loop Tone: 12 mw into 600-ohm load

Rf Input:

Input Signal Level: 2,500 uv to 0.5 v

Frequency Shift: 10 to 200 cps for narrow-band operation and 200 to 1,000 cps for wide-band operation

Keying Speeds: To 100 dot cps

Input Impedance:

AN/URA-6: 70 ohms, unbalanced

AN/URA-7: 910 ohms, unbalanced

Tone Signal Frequencies: 595; 765; 935; 1,105; 1,275; 1,445;

1,615; 1,785 cps

Power Requirements: 240 w; 105-, 115-, or 125-v 60-cycle, 1-phase ac

AN/URA-6, -7 FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP

MA	OR	CO	MPO	NENT	5

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet		21 3/4 x 20-1/4 x 17-5/32	
1 2	Comparator CM-14/URR Frequency Shift Converter CV-57/URR (supplied with Frequency Shift Converter- Comparator Group AN/ URA-6)		5-1/8 x 19 x 15-1/4 5-1/8 x 19 x 15-1/4	
	or			
	CV-71/URR (supplied with Frequency Shift Converter- Comparator Group AN/ URA-7)		5-1/8 x 19 x 15-1/4	
2	Panoramic Coupling Kit CN– 10563 (supplied only with Frequency Shift Converter- Comparator Group AN/ URA-6)		4-5/16 x 1-7/8 x 3-3/16	
1 set	Equipment spares (supplied with Frequency Shift Con- verter-Comparator Group AN/URA-6		12 x 12 x 6	
1 set	Equipment spares (supplied with Frequency Shift Con- verter-Comparator Group AN/URA-7)		12 x 12 x 6	
1 set	Interconnecting cables			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91355

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
FRO3	VOLOME (Cu rt)	WEIGHT (Los)

8.25

FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-6, -7

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG: CS-730

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

RCA Victor Division, Radio

Camden, N. J.

NObsr-39421, 30 June

1947

AN/URA-6 \$2,774.00 AN/URA-7

\$2,656.00

FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-8. -8A

3 December 1958

USN Cognizant Serv:

FSN:

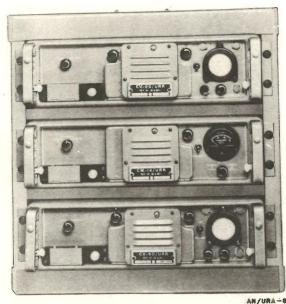
AN/URA-8: 5840-644-4842 AN/URA-8A: 5840-642-8360

USA

USN

USAF

TYPE CLASS: STOCK NO:



AN/URA-8

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter-Comparator Groups AN/URA-8 and AN/URA-8A are designed to operate on frequencyshift keved radiotelegraph signals. These signals are derived from the audio frequency outputs of radio receivers and provide keying facilities for the operation of teletypewriter printers or other automatic recording devices.

Two receiving channels are used in a diversity arrangement but the frequency-shift converters may be used separately for single receiver reception. A comparator selects the stronger signal to control the teletypewriter loop and the keyed tone.

Used by

AN/URA-8: F16-Q-

123399-200

AN/URA-8A: F16-Q-

123390-200

It is possible to obtain keying speeds of up to 60 words per minute for a single telegraph channel, or of 100 words per minute if external apparatus is used. These keying speeds are useable in the reception of four-channel, multiplex, telegraph signal, diversity, or single-unit operation.

The two equipments are used with two radio receivers and a standard or high-speed teletypewriter with loop power supply. Radio Receiving Equipments RBA, RBB, RBC, or equivalent may be used. The AN/URA-8 and AN/URA-8A are electrically and mechanically interchangeable and differ only in contractual data.

TECHNICAL CHARACTERISTICS:

Frequency Range: Audio; with center frequency of either 1,000 cps or 2,550 cps

Type Modulation: Fm

Type Reception: Frequency-shift keying

Power Output:

Electron Tube Keyer: For keying 60-ma teletypewriter

Tone Signal: 12 mw into 600-ohm load

Audio Input:

Input Power: 60 uw to 60 mw

Frequency Shifts: 10 to 200 cps for 1,000-cps center frequency, narrow band; 200 to 1,000 cps for 2,500-cps center

frequency, wide band

Impedance: 600 ohm, balanced or unbalanced

Maximum Keying Speed:

Single Telegraph Channel: 23 dot cps

Four-channel Multiplex

Telegraph Signals: 100 dot cps

Tone Signals Frequencies: 595; 765; 935; 1,105; 1,275; 1,445; 1,615; 1,785 cps

Power Requirements: 160 w or 220 w; 105-v, 115-v, or 125-v 50- to 60-cycle, 1-phase ac

AN/URA-8, -8A FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Frequency Shift Converter-Com	⊱		
	parator Group $AN/URA-8$:			
1	Comparator CM-14/URR		5-1/8 x 19 x 15-1/4	
2	Frequency Shift Converter CV-60/URR		5-1/8 x 19 x 15-1/4	47
1	Rack		$21-3/4 \times 20-1/4 \times 17-5/32$	
1 set	Equipment spares		12 x 12 x 6	95
1 set	Interconnecting cables			
	For Frequency Shift-Converter Comparator Group AN/URA-8A:	-		
1	Comparator CM-22/URA-8A		5 x 17 x 17	36
2	Frequency Shift Converter		5-1/4 x 17 x 17	47
	CV-89/URA-8A			
1	Rack MT-719/URA-8A		18 x 19-9/16 x 14-3/4	15.2
Lset	Equipment spares		12-1/2 x 25 x 16-1/2	10.12
1 set	Interconnecting cables		,,	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91339 (AN/URA-8) NAVSHIPS 91278 (AN/URA-8A)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
AN/URA-8 3	15.8	321
AN/URA-8A 2	13.10	389

AN/URA-8, -8A FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP

PROCUREMENT DATA

USN PROCURING SERVICE:

BUSHIPS Dwg RE67D2017 (AN/URA-8)

USN, BuShips **DESIGN COG:**

SPEC & /or DWG: BUSHIPS Dwg RE67F2013 (AN/URA-8A)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
(AN/URA-8) Radio Corp. of America, RCA Victor Division	Camden, N. J.	NObsr-39421, 30 June 1947	\$3,745.00
(AN/URA-8A) Hoffman Radio Corp.	Los Angeles, Calif.	NObsr-42027, 8 October 194	7 2,440.00

CODER-TIMER GROUP AN/URA-11

3 December 1958

Cognizant Serv: USN

FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Coder-Timer Group AN/URA-11 is designed for either shock mounting, on the bulkhead of a ship, or for rack mounting. It is used for the program control of a radio beacon.

This equipments consists of two coders, one being of fixed

code wheels and the other equipped with 80 push-button keys for setting any desired four letter code.

TECHNICAL CHARACTERISTICS:

Mount: Shock

Major Materials: Aluminum

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Beacon Coder KY-64/UR			
1	Cabinet CY-867/URA-11		18 x 24 x 24	
1	Electric Timer TD-48/UR			

REFERENCE DATA AND LITERATURE:

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-11 CODER-TIMER GRO	UP		
×	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG: CG-16427C		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wallace and Tiernan Products Inc.	200	Teg-38070	
Wallace and Terrain Froducts Inc.		10g 35010	

COMPARATOR-CONVERTER GROUP AN/URA-17()

3 December 1958
Cognizant Serv: USN FSN:

USA USN USAF

TYPE CLASS:
STOCK NO:

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Comparator-Converter Group AN/URA-17() accepts audio signals from its associated receivers, separates the tones, compares and selects the better of two signals, and provides a direct current output for operation of an associated teletype-writer printer.

Audio is provided for headphone monitoring and transmission by way of wire or radio links to remote teletypewriter printers.

This equipment consists essentially of two frequency-shift converters housed in one cabinet. It is suitable for either table or standard 19-inch rack mounting. Shock mounting is utilized for shipboard and brackets for shore installations.

This group is similar to Frequency Shift Converter-

Comparator Group AN/URA-8B except for transistors use of external oscilloscope for tuning purposes, and different packaging.

TECHNICAL CHARACTERISTICS:

Frequency Range: 772 cps to 3,650 cps

Number of Bands: 2

Indication: Tuning and cycle shift meters

Impedance:

Input: 600 ohms Output: 600 ohms

Mounting:

Shock Mounted: For shipboard use Bracket Mounted: For shore installations Power Requirements: 115-v, 60-cps, 1-phase ac

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Equipment Cabinet CY-1862()/URA-17			
2	Frequency Shift Converter CV-483/URA-17			

REFERENCE DATA AND LITERATURE:

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

AN/URA-17() COMPARATOR-CONVERTER GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG: SHIPS-C-1975

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Hoffman Laboratories Inc.

Los Angeles, Calif.

NObsr-71119

RADIO SET CONTROL GROUP AN/URA-19

3 December 1958

Cognizant Serv:

USN FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

Tent-Std

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set Control Group AN/URA-19 provides facilities that permit the calling of individual aircraft by normal ground-to-air communication apparatus. The group utilizes existing types of ground-to-air transmitters and airborne receivers.

This equipment relieves the pilot of the continuous monitoring of voice circuits. Ultimately, it will provide an emergency calling feature as well as a limited message capability.

TECHNICAL CHARACTERISTICS:

No information available.

			DIMENSIONS	WEIGHT
QTY	ITEM	STOCK NUMBERS	(Inches)	(Lbs)

Digital-tone-code generator
Digital-tone-decoder

REFERENCE DATA AND LITERATURE:

PKGS	DIMENSIONS (Inches)	VOLUME (Cu Ft)	WEIGHT (Lbs)

	PROCUREMENT DATA		
PROCURING SERVICE: USN SPEC &/or DWG: MIL-R-9542	7	DESIGN COG	: USN, RCUI
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SPEECH INPUT EQUIPMENT	AN/URA-type
------------------------	-------------

12 November 1958

Cognizant Serv:

USN FSN:

5820-253-0168

5820-665-1488 (with equipment spares)

50254

USA

USN

USAF

TYPE CLASS: STOCK NO: Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Speech-Input Equipment 50254 is designed to deliver amplified audio-frequency power to Transmitting Equipment TBL-2 and later TBL equipments. The speech-input equipment derives audio energy at a maximum input level of approximately 0.006 watt from a 35-ohm microphone or from 200- or 600-ohm audio lines and delivers the amplified energy to a 500-ohm load at levels up to 28 decibels.

The equipment can be used as a straight audio amplifier or with fixed compression and limiting characteristics. The normal output level is approximately 1.6 watts into a 500-ohm load. The input and output circuits are ungrounded.

Handset Assembly 51062 is included as part of the equip-

TECHNICAL CHARACTERISTICS:

Frequency Response: 300 to 3,500 cps

Amplitude Distortion: 5% Power Output: 5.5 w

Noise Level: -50 db below 3.5 w output Permitted Output Load Variation: ±10% Input Impedance: 600 and 200 ohms

Power Requirements: 125 w, 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY ITEM STOCK NUMBERS (Inches) WEIGHT (Lbs)

1 set Equipment spares
1 Speech Input Equipment 50254 12-3/8 x 14-1/4 x 16-1/2
(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,857

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

AN/URA-type SPEECH INPUT EQUIPMENT PROCUREMENT DATA PROCURING SERVICE: USN DESIGN COG: USN, BuShips SPEC & /or DWG: CONTRACT OR APPROX ORDER NO. CONTRACTOR LOCATION UNIT COST RCA Victor Division of Radio Corp. of Camden, N. J. NXsr-65279, 12 June 1944 America

AS-81/GR

ANTENNA SYSTEM AN/URA-type

4 December 1958

Cognizant Serv: USA

FSN:

USA

AN OWN CAPE

USAF

TYPE CLASS: STOCK NO:

Used by

Used by

USN



FUNCTIONAL DESCRIPTION:

Antenna System AS-81/GR is a one-tube directional antenna system designed as an additional to communication receivers. This system permits the operator to make use of unidirectional reception. Antijamming is the function of the equipment. By proper use, the pickup of any signal can be reduced greatly or completely. Satisfactory performance of the antenna system depends on the skill of the operator in adjusting it. Effective operation of the system will provide satisfactory communication and will eliminate the possibility of complete jamming by enemy or friendly station operating on the same frequency.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.1 to 16 Power Requirements: 12-v dc

AN/URA-type ANTENNA SYSTEM

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
		(USA)			
1	Antenna AN-45-G	2A245G	16 lg (collapsed)	0.75	
1	Antenna Mounting AB-9/GR	2A2571-9	7 x 8-3/8 x 8-1/2	4.25	
1	Case CY-48/GR	2Z1891-48	14 x 15-1/2 x 20-1/2	26.25	
1	Control Box C-98/GR consists of:	2C6666-98	$7-1/2 \times 9-1/2 \times 10-1/2$	18.75	
3	Fuse 3AG	3Z1927			
4	Lamp GE53	2Z5933.1			
2	Spring and contact assembly	2Z8879–19, –20, or –21			
2	Tube JAN12J5GT	2J12J5GT			
3	Vibrator	3H4496-110/N1			
1	Cord CG-52/GR	3E6015-52	96 lg	.75	
1	Cord CG-57/GR	3E6015-57	48 lg	.375	
1	Cord CX-105/GR	3E6000-105	120 lg	1	
1	Loop AT-27/GR	ZA1990-27		3.75	
1	Loop AT-28/GR	ZA1990-28		3.75	
1	Loop AT-29/GR	ZA1990-29		3.75	
1	Loop AT-30/GR	ZA1990-30		3.75	

REFERENCE DATA AND LITERATURE:

TM 11-2608

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4.5 (4) (4) (4) (4) (4) (4) (4) (4) (4) (4)		

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USA	DESIGN COG:	USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

CRV-50194

AN/URA-type MODULATOR ASSEMBLY

5 December 1958

Cognizant Serv:

FSN: USN

USA

USN USAF

TYPE CLASS: STOCK NO:

Used by F16-C-85601-1036

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Modulator Assembly CRV-50194 is used for voice-modulating Radio Transmitting Equipment of the TBK series. The speech-amplifier unit of this equipment, with the telephone assembly, is interchangeable with Speech Input Equipment DRV-50064, that is used with Radio Transmitting Equipment TBL.

TECHNICAL CHARACTERISTICS:

Modulator Unit:

Frequency Range: 250 to 3,500 cps

Type Modulation: Am

Type Emission: A1, A2 Modulation Obtainable: 100%

Input Impedance: 600 ohms Power Output: 250 w into 12.5 ohm load

Speech Amplifier:

Frequency Range: 300 to 3,000 cps Amplitude Distortion: Less than 10% Input Impedance: 600 or 200 ohms Power Output: 3 w into 500 ohm load

Hand Telephone Assembly:

Impedance of Earphones at 1,000 cps: 600 ohms Impedance of Microphones: 35 to 45 ohms

Power Requirements: 755 w at 115-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares Hand Telephone Assembly CRV-51008-A		15 x 18 x 18 5 x 11-3/4 x 3-3/8	4.75
i 1 1	Modification kit Modulator Unit CRV-50193 Speech Amplifier CRV-50055		24 x 23 x 17 14-1/2 x 24 x 17-1/2 16 x 16 x 15-13/16	75 120 75

REFERENCE DATA AND LITERATURE:

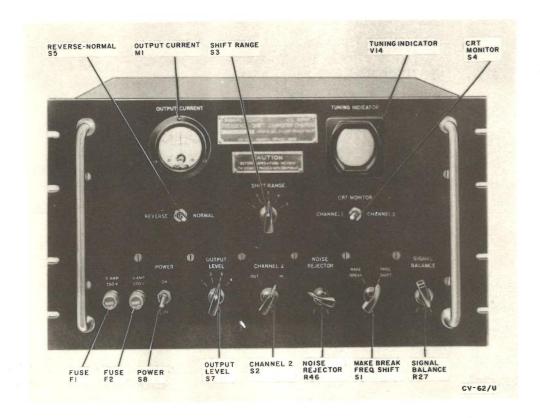
NAVSHIPS 900,778

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	22.7	480

PROCUREMENT DATA				
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Radio Corp. of America	Camden, N. J.	NXsr-65285	\$987.00	

FREQUENCY SHIFT CONVERTER AN/URA-type

	1.1.4050					
1 July 1958 Cognizant Serv:	USA	FSN:	5815-337-7277		(
		USA		USN	USAF	
TYPE CLASS:		Std				
STOCK NO:						



FUNCTIONAL DESCRIPTION:

Frequency Shift Converter CV-62/U is used to convert AF, fsk signals or make-and-break teletypewriter signals into dc output pulses for the operation of a teletypewriter.

It is intended for use at the receiving terminal of a radioteletype system and is arranged for rack-and-panel mounting.

TECHNICAL CHARACTERISTICS:

Type of Communication Circuits: Dual-diversity (or single

received signal) fsk, center frequency of 2,500 cycles with shifts of 100 to 1,100 cps or dual-diversity (or single received signal) for make-and-break signal in range of 500 to 5,000 cps or conversion of single received signal (using external discriminator) with center frequency between 850 and 5,000 cps

Power Requirements: 130 va, 115-v ($\pm 10\%$) 50/60-cycle 1-phase ac

AN/URA-type	FREQUENCY SHIF	T CONVERTER			
MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
CV	nency Shift Converter -62/U onsists of only one major co	(FSN)5815-337-7277 omponent.)	10-1/2 x 13-1/2 x 19	60	
REFERENCE [TM 11–5524	DATA AND LITERA	TURE:			
		SHIPPING DATA			
PKGS		,	VOLUME (Cu Ft)	WEIGHT (Lbs)	
1			12.1	155	
<u> </u>		PROCUREMENT DA	TA		
	SERVICE: USA VG: MIL-C-10232		DESIGN CC	OG: USA, Sig C	
CONTRACTO)R	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Radio Frequency	Labs, Inc.	Boonton, N. J.	31478-P-51-04	\$516.04	

FREQUENCY SHIFT CONVERTER AN/URA-type

1 July 1958

Cognizant Serv:

USA

FSN:

5815-503-2601

CV-115()/URR

USA

USN

USAF

TYPE CLASS: STOCK NO:

2C716-4



CV-115 ()/URR

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter CV-115()/URR converts frequency-shift keyed signals into dc output pulses that key a receiving teletypewriter.

This equipment is designed for continuous duty and operates from the intermediate frequency (450 to 510 kc) output of a single radio receiver. It can convert fsk signals at speeds as high as 100 dot-cycles per second, and has facilities to reverse the polarity of the mark and space signals. It can generate mark output signals for adjustment purposes.

An intermediate unit is usually required between the converter and the teletypewriter to effect an impedance match between the two units.

TECHNICAL CHARACTERISTICS:

If Input from Receiver: 450 to 510 kc

Signal Input Voltage: 100 microvolts (minimum)

Input Frequency Shift: 150 to 1,000 cps

Input Impedance: 50 ohms

Power Requirements: 110 w, 115-v 50/60-cycle 1-phase ac

AN/URA-	type FREQUENCY SHI	FT CONVERTER		
	5.0	MAJOR COMPON	NENTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
	Prequency Shift Converter CV-115()/URR ent consists of only one major	5815-503-2601 component.)	7-3/8 x 13-1/8 x 9	39
REFERENCE TM 11–50	CE DATA AND LITERA	ATURE:	4	
11111100	330			
		SHIPPING DAT	A	
PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
1			1.95	43
		PROCUREMENT D	PATA	
	NG SERVICE: USA r DWG: MIL-F-10610		DESIGN CO	OG: USA, Sig C
CONTRA	CTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman La	boratories, Inc.	Los Angeles, Calif.	14222-P-51-93	\$2,180.00

FREQUENCY SHIFT CONVERTER AN/URA-type

1 July 1958

Cognizant Serv:

USA

FSN: 58

5815-503-2600

CV-116/URR

USA

USN

USAF

TYPE CLASS: STOCK NO:

 Std

2C716-3



CV-116/URR

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter CV-116/URR changes fsk signals into dc pulses to key the loop circuit of teletype-writers. It operates from the if output of one or two radio receivers arranged in either space of frequency diversity.

This equipment consists of the converter unit, cables, and accessories.

The converter unit is designed for continuous duty and is used in a radioteletype communication system. In addition to the CV-116/URR, a typical system consists of a teletype-

writer, a control unit, a frequency-shift keyer, a radio transmitter, two radio receivers, two or three antennas (one or two receiving and one transmitting), and another teletypewriter.

This equipment is used with such sets as Radio Receiving Set AN/FRR-38.

TECHNICAL CHARACTERISTICS:

Operating Speed: 100 dot-cycles per second Power Requirements: 200 w, 115-v 50/60-cycle 1-phase ac

		MAJOR COMPON	ENTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 Frequency (Equipment consist	r-shift converter is of only one major con	nponent.)	8-3/4 x 17 x 19	65
REFERENCE DAT	A AND LITERAT	URE:		
		SHIPPING DATA	4	
PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
1			4.13	110
		PROCUREMENT D	ATA	
PROCURING SER SPEC &/or DWG:			DESIGN CO	OG: USA, Sig (
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SINGLE SIDEBAND CONVERTER AN/URA-type

1 July 1958

Cognizant Serv:

USA

FSN: 5820-503-2594

CV-157/URR

USA

USN

USAF

TYPE CLASS: STOCK NO:

Std

2C722-157



FUNCTIONAL DESCRIPTION:

Single Sideband Converter CV-157/URR is used at the receiving end of a radio communication system that operates in single-sideband reduced carrier transmission.

It may also be used as an aid in the reception of am double-sideband signals under severe atmospheric conditions.

This equipment consists of a single operating component arranged for rack-mounting and is intended for the handling of heavy traffic at fixed installations. In such applications,

operating with a receiver, it is used to feed carrier terminal equipment that handles several channels of telephone, teletypewriter, and facsimile.

TECHNICAL CHARACTERISTICS:

Type Modulation: Am

Type of Signal: Ssb or twin ssb

Power Requirements: 250 w, 105-125/210-250-v 50/60-cycle

AN/URA-type SINGLE SIDEBAND CONVERTER

MAJOR COMPONENTS

DIMENSIONS WEIGHT QTY ITEM STOCK NUMBERS (Inches) (Lbs)

(FSN)

Single Sideband Converter

5820-503-2594

104

CV-157/URR

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-266

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs) 7.2 177

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC &/or DWG: MIL-C-11957A DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Dubrow Development Co.	Burlington, N. J.	50964-P-57-55	\$2,391.00
Hoffman Laboratories, Inc.	Los Angeles, Calif.	08722-P-55-51	1,999.60
Munston Manufacturing & Service, Inc.	Islip, L. I., N. Y.	38706-P-56-55	3,366.53

EXPERIMENTAL	ELECTRONIC RELAY	EQUIPMENT	AN/URA-type
			51450

5 December 195 Cognizant Serv:	FSN:			CXES
	USA	USN	USAF	us
TYPE CLASS:		Used by		
STOCK NO:			7.7	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Electronic Relay Equipment CXES is a device which utilizes the intermediate-frequency output of an associated signal keyed in accordance with a continuous wave input to the receiver. This audio-frequency output is relatively noisefree, compared with reproduction of the telegraphic signal by conventional means, particulary under conditions of highnoise levels. Interchangeable coil assemblies permit operation of Experimental Electronic Relay Equipment CXES with receivers having intermediate frequencies of 175, 400, or 460 kilocycles.

The following equipment is used, but is not supplied with, the Equipment: receiver (1), loudspeaker (1), earphones (1 pair), alternating current input plug (1).

TECHNICAL CHARACTERISTICS:

Intermediate Frequencies: 175 kc, 400 kc, and 460 kc

Power Factor: 0.9

Power Requirements: 70 va at 115-v, 60-cycle, 1-phase ac

DIMENSIONS WEIGHT (Lbs) ITEM STOCK NUMBERS (Inches) QTY Audio-Output Plug AN3106-1 145 - 10S25 9-1/16 x 11-1/2 x 15-15/32 Electronic Relay CXES IF cable 2

MAJOR COMPONENTS

Phone plug Plug-in coil assembly 8 Plug-in container

Power cable 1

1

Spare parts in container 1 set

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,399

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.8	135

AN/URA-type EXPERIMENTAL ELECTRONIC RELAY EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:

USN

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Hoffman Radio Corp.

Los Angeles, Calif.

NXss-32200, 22 June 1943

TUNING INDICATOR AN/URA-type

25 November 1958

Cognizant Serv: USN

FSN:

IP-352(XN-1)/UR

USA

USN

USAF

TYPE CLASS: STOCK NO: Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Tuning Indicator IP-352(XN-1)/UR consists of a 2-inch cathode ray tube and its associated circuitry and controls. It is primarily intended for use as a remote monitor with Frequency Shift Converter CV-89A/URA-8A. However, the IP-352(XN-1)/UR can be used with any frequency shift converter that has the proper output characteristics and an external monitor jack. It provides means for the following procedures: observing the tuning of the frequency shift converter's associated receiver, indicating the output of the discriminator, checking the approximate amount of the frequency shift, observing the polarity of the mark-space characters, and observing other pertinent details of the signal such as noise, etc.

The unit is designed for table-top mounting with a swivel type mounting bracket to permit orientation within a 90degree arc in a horizontal plane, and within a 45-degree tilt from the horizontal position.

The following equipment is used with, but is not supplied with Tuning Indicator IP-352(XN-1)/UR: one or two Frequency Shift Converters CV-89A/URA-8A or equivalent.

TECHNICAL CHARACTERISTICS:

Frequency Input: Dc square waves 23 cps (usable to 100 cps)

Frequency Response: 0 to 500 cps on Y-axis

Input Impedance: 1 megohm

Power Input: 10 w

Vertical Deflection Sensivity:

Through Amplifier: 2.5 v per inch

Direct Connection: 74 to 100 v per inch (to plate)

Power Requirements: 105- to 125-v ±10% 60-cycle ±5%

1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Tuning Indicator IP-352 (XN-1)/UR		6 x 7-1/2 x 12	15
(Equ	ipment consists of only one ma	jor component.)		

REFERENCE DATA AND LITERATURE:

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
V		

AN/URA-type TUNING INDICA	TOR		
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Laboratories Inc.	Los Angeles, Calif.	NObsr-64744, 5 May 1955	

KEYER AN/URA-type

25 November 1958

Cognizant Serv:

USN

FSN:

5820-508-7335

KY-32/GRT

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by F16-K-1404-2

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-32/GRT is an electronic unit that adapts Radio Transmitting TCK-series to frequency-shift emission as an alternate to its regular A1 type emission.

This equipment may be used on any transmitters in the TCK series without overloading the transmitter power supply.

TECHNICAL CHARACTERISTICS:

Frequency:

Comparison: 425 cps

Nominal Phase Modulation: 200 cps

Nonimal Frequency Shift During Keying: 850 cps

Output Impedance: 600 ohms

Keying Input:

Neutral Keying:

Mark: +30 to +120 v Space: Open circuit

Polar Keying:

Mark: +30 to +120 v Space: -15 to -120 v

Keying Output: Reactance-tube circuit to master oscillator

tank

Mounting Data: Mounted in side panel of associated TCK series transmitter, a 9-1/4- by 4-1/8-inch cutout is re-

quire

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
l set	Accessories Keyer KY-32/GRT	***************************************	5-7/8 x 12-3/4 x 16-1/4	16 6

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91109

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.45	46

AN/URA-type KEYER

PROCUREMENT DATA

PROCURING SERVICE:

USN

DESIGN COG:

USN, BuShips

SPEC &/or DWG:

BuShips Specification CS-521

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Federal Telephone & Radio Corp.

Clifton, N. J.

NObsr-39150, 13 June 1947 \$240,00 with spares

KEYER	AN	URA-t	ype
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25 November 1958

Cognizant Serv: USN FSN:

KY-43/URT

USA

USAF

TYPE CLASS: STOCK NO:

Used by F16-M-83-151

Ltd-Std

(No Illustration Available)

USN

FUNCTIONAL DESCRIPTION:

Keyer KY-43/URT is designed for use with appropriate transmitters to adapt them for frequency-shift operation. It is a reactance modulated amplifier used to shift the frequency of the transmitter master oscillator in accordance with direct current signals from a polar keyer which is, in turn, actuated by a standard teletypewriter.

This equipment is designed primarily for use with, Transmitting Equipment TAB-5, TAB-6, or TAB-7. Provision is made for mounting of the kever on the TAB-series transmitter.

The KY-43/URT is basically identical with Keyer KY-43A/URT except for minor changes in circuitry.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc Frequency Shift Range: 170 cps

Rf Source: TAB-5, -6, -7 master oscillator

Output: To TAB-5, -6, -7 master oscillator through coaxial

cable

Keying Voltage: Polar Keyer output of 40 to 120 v Mounting Data: Left-hand side of TAB-5, -6, -7 exciter Power Requirements: 110 w, 220-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	,	WEIGHT (Lbs)
1 set 1 set 1	Accessories Equipment spares Keyer KY-43/URT		12-1/4 x 12-3/8 x 12-1/4 22-1/2 x 8 x 15-1/2		34

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91138

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
		-1
9	3.2	70

AN/L	JRA-t	vne	KEYER	?
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PROCUREMENT DATA

PROCURING SERVICE:

USN

DESIGN COG:

USN, BuShips

CONTRACTOR

SPEC &/or DWG:

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Munston Manufacturing and Service Inc.

New York, N. Y.

NObsr-42175, 19 March \$300.00 with

spares

KEYER AN/URA-type

25 November 1958

Cognizant Serv:

TYPE CLASS:

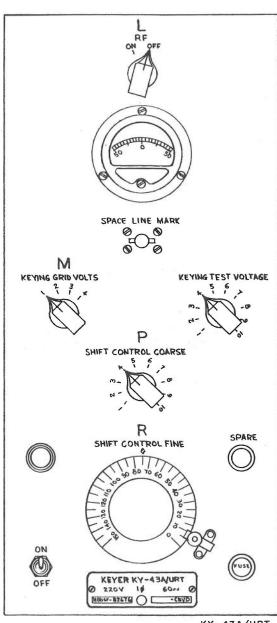
STOCK NO:

USN

FSN: 5805-665-1514

KY-43A/URT

USA	USN	USAF	
	Used by	Std	



KY-43A/URT

FUNCTIONAL DESCRIPTION:

Keyer KY-43A/URT is designed for use with appropriate transmitters to adapt them for frequency-shift operation. It permits the impression of intelligence on an radio frequency carrier by the frequency-shift method in order to minimize the effects of fading, noise interference, and static disturbances on the receiving equipment.

The KY-43A/URT is a reactance-modulated amplifier used to shift the frequency of the transmitter master oscillator in accordance with the direct current polar mark and space impulses from a teletypewriter keyer. It employs a reactance tube circuit to convert the polar direct current signals into a radio frequency carrier shift that is symmetrical with respect to the assigned frequency.

This equipment is designed primarily for use with Transmitting Equipment TAB-5, TAB-6, or TAB-7. The keyer consists of a rectangular chassis and front panel mounted on a plate for mounting of the unit on the side of the master oscillator section of the TAB-series transmitters. All controls for the keyer are located on the front panel.

The KY-43A/URT is basically identical with Keyer KY-43/URT except for minor changes in circuitry.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc

Frequency Shift Range: 170 cps (nominal)

Type Modulation: FM (F1)

Type Signal: Fsk

RF Source: TAB-5, -6, -7 master oscillator

Output: To TAB-5, -6, -7, master oscillator through coaxial

Keying Speed Maximum: At least 60 wpm

Keying Voltage: Dc polar ±40 to ±120 v Keying Input Impedance: 3,800 ohms

Mounting Data: Left-hand side of TAB-5, -6, -7 exciter

Power Requirements: 110 w, 220-v $\pm 10\%$ 60-cycle 1-phase ac

AN/URA-type KEYER

MAJOR	COMPONENTS
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QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares Keyer KY-43A/URT		6 x 12 x 6 22-1/2 x 8 x 15-1/2	14 34

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91645

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
	2 A 9		
1		3.6	66

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG: MIL-K-15651

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Fidelity Amplifier Co.

Chicago, Ill.

NObsr-52676, 22 June 1953

4 December 1958 Cognizant Serv:	USN FSN: 5820	0-642-8 492		RADIO MODULATOR	AN/URA-type MD-209/UC
	USA		USN	USAF	
TYPE CLASS: STOCK NO:	5.5 5.6		Used by		
		(No Illustrati	on Availab	le)	
shifting the phase of frequency rate. Its us by an A-1 emissic modulation signals us frequency range of 25	ESCRIPTION: 1D-209/UC is a device for a radio-frequency sign for the permits audio frequency sign for the permitter. 10 to 6000 cycles per second intended to be used well.	al at an audio- ncy transmission Audio-frequency must be in the and.	TECHNI Frequency Input Im Input Fre	Chose output frequency is in the es. ICAL CHARACTERISTICS: y Range in Mc: 2 to 5 ppedance: 500 to 600 ohms equency: 250 to 6,000 cps quirements: 115/230-v 50- to 70-c	
	4	MAJOR CO	OMPONE	NTS	
QTY	ITEM	STOCK NU	IMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	dulator MD-209/UC ts of only one major con			10-19/32 x 17-29/32 x 20-1/2	
REFERENCE DAT	TA AND LITERAT	URE:	,		
		SHIPPIN	IG DATA		
PKGS			\	OLUME (Cu Ft)	WEIGHT (Lbs

PROCUREMENT DATA					
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip		
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST		
Schuttig & Co., Inc.	Washington, D. C.	NObsr-52566	\$1,490.00		

KEYING HEAD DRIVE AN/URA-type

5 December 1958

Cognizant Serv:

USN

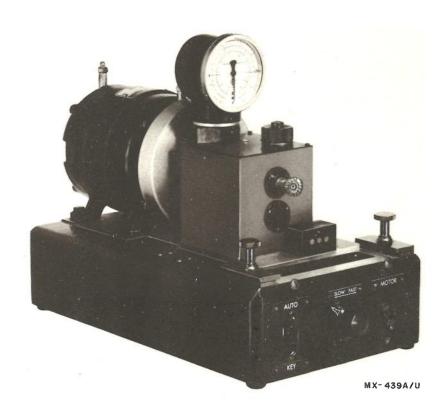
FSN:

MX-439()/U

USA USN USAF

TYPE CLASS: STOCK NO:

Used by



FUNCTIONAL DESCRIPTION:

Keying Head Drive MX-439()/U is designed to drive an automatic keying head through its entire speed range. The MX-439()/U is used in conjunction with an associated mechanical keying head to provide high speed automatic transmission of radiotelegraph signals in International Morse Code.

The MX-439()/U is capable of driving the keying head at any desired speed between approximately 20 to 400 words per minute.

The MX-439/U is similar to and interchangeable with the MX-439A/U except for the noninterchangeable keying relay and omission of the remote hand key indicator light found on the MX-439/U.

TECHNICAL CHARACTERISTICS:

Driving Range: 20 to 400 wpm

Power Requirements:

MX-439/U: 150 w, 110-v dc MX-439A/U: 150 w, 115-v dc

AN/URA-type KEYING HEAD DRIVE

MAJOR COMPONENTS

QTY

ITEM

STOCK NUMBERS

DIMENSIONS (Inches)

WEIGHT (Lbs)

1 Keying Head Drive MX-439()/U (Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92220

SHIPPING DATA

PKGS

VOLUME (Cu Ft)

WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE:

USN

SPEC & /or DWG:

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

H. O. Boehme Co.

New York, N. Y.

NObsr-63004

0-406(XN-1)/URC

RADIO FREQUENCY OSCILLATOR AN/URA-Type

5 December 1958

Cognizant Serv: USN

ANIO TREGOENCE OSCILLATOR ANIONATION

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Frequency Oscillator P-406(XN-1)/URC is a radio frequency crystal synthesizer. It is basically intended to serve as an exciter for a transmitter of a high-frequency oscillator for a receiver. In its functions as an exciter or high-frequency oscillator, it can replace a complete crystal kit numbering over 1,750 individual crystals.

FSN:

It has both a mechanical and an electrical readout. The electrical readout is primarily designed as a memory box for a remote-control system. It can also serve as an easily read, exact indicator of frequency.

The O-406(XN-1)/URC may be used with transmitters of the AN/URT-7 or TED types and receivers of the AN/URR-13 or AN/URR-28 types.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Transmitter Setting: 1/12 of the transmitter output

Receiver Setting: Incoming frequency ± the if. frequency

Warmup Time: 15 minutes to stabilize

Power Requirements: 115/230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY ITEM STOCK NUMBERS DIMENSIONS WEIGHT (Inches) (Lbs)

Radio Frequency Oscillator O-405(XN-1)/URC

1

(Equipment consists of only one major component.

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

AN/URA-type	RADIO	FREQUENCY	OSCILLATOR
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PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:

SHIPS-S-1807

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

Manson Laboratories

Stamford, Conn.

NObsr-64716

\$3,826.32

CODE PRACTICE EQUIPMENT AN/URA-type

5 December 1958

Cognizant Serv: USN

FSN:

USA

OAH, OAH-1, OAH-2

USN USAF

TYPE CLASS: STOCK NO: Used by

OAH: F16-Q-116291-200 OAH-1: F16-Q-196292-100 OAH-2: F16-Q-196293-100

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Code Practice Equipment OAH, OAH-1 and OAH-2 are used for training purposes in telegraphic code, to maintain and increase the proficiency of personnel already trained as operators. For group instruction it is possible to train up to six students at one time. The equipment may also be used for practice in the receiving of an external signal.

The OAH, OAH-1, and OAH-2 are electrically and mechanically interchangeable and may be operated on either ac or dc.

TECHNICAL CHARACTERISTICS:

Frequency Range:

OAH, OAH-1: 100 to 1,000 cps

OAH-2: 460 to 1,500 cps

Frequency Control: Continuously variable

Output Impedance:

OAH, OAH-1: 25 ohms

OAH-2: 100 ohms

Power Output: OAH, OAH-1: 1 w

OAH-2: 25 mw

Send-Receive Circuits: 7

Power Requirements: 20 w, 110-v 60-cycle 1-phase ac; or two 1.5-v batteries type CNC-19010, and two 45-v batteries type CNC-19005

MAJOR COMPONENTS DIMENSIONS WEIGHT QTY **ITEM** STOCK NUMBERS (Lbs) (Inches) For OAH, OAH-1: Oscillator Amplifier Unit $7-5/8 \times 7-3/8 \times 9-1/4$ COQ-35029 Distribution Unit COO-62077 78 long Accessories Box COQ-20170 8-1/32 x 7-17/32 x 15-3/16 Shipping Chest MCH-1 For OAH-2: Oscillator Amplifier Unit $7-3/8 \times 8-7/8 \times 7-7/8$ 15 CUZ-35058 Distribution Unit CUZ-62148 78 long Accessories Box CUZ-10362 8-3/4 x 15-1/2 x 8-1/4 13.5 -----Shipping Chest CUZ-10361 $9-1/2 \times 19-3/4 \times 17-3/8$ 25

AN/URA-type CODE PRACTICE EQUIPMENT

REFERENCE DATA AND LITERATURE:

OAH, OAH-1: NAVSHIPS 95159 OAH-2: NAVSHIPS 900552

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

1 5.78 124

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

SPEC &/or DWG: OAH, OAH-1: Spec SSD-1, RE9325, EN28/1397-43/Ships

OAH-2: Spec No. RE9325A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Automatic Signal Corp.	East Norwalk, Conn.	NXss-29645	\$300.00
U.S. Television Manufacturing Corp.	New York, N. Y.	NXsr-49707	300.00

CODE PRACTICE EQUIPMENT AN/URA-type

USAF

5 December 1958

Cognizant Serv:

USN

FSN: USA

OW-2

TYPE CLASS: STOCK NO:

Used by

USN

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

TECHNICAL CHARACTERISTICS:

Code Practice Equipment OW-2 is used for the training of radio telegraph operators. It is designed to accommodate 40 positions.

Audio Oscillator Frequency: 100 to 1,000 cps Power Requirements: 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
l	Distribution Unit 49174			
0	Headphones 49016		00 00 72 1/4	
	Mounting Rack		20 x 22 x 73-1/4	
I	Oscillator-Amplifier Unit 35009			
1()	Patch Cords			
1	Storage Battery, 6-volt			
4()	Telegraph Keys 26001			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95196

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type CODE PRACTICE EQUIPMENT

PRO	CUI	RFM	FNT	DATA

PROCURING SERVICE:

USN

DESIGN COG:

USN, BuShips

SPEC &/or DWG:

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

U.S. Navy Yard

CONTRACTOR

Washington, D. C.

MB-381-43

RBU, RBU-1, RBU-2

PANORAMIC RADIO ADAPTOR AN/URA-type

4 December 1958

Cognizant Serv:

FSN:

USN

RBU, 5820-347-9186

RBU-1, 5820-665-1069

RBU-2, 5820-347-9186

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

RBU: F16-Q-255899-200 RBU-1: F16-Q-255910-200

RBU-2:



RBU-2

FUNCTIONAL DESCRIPTION:

Panoramic Radio Adaptors RBU, RBU-1, and RBU-2 are cathode-ray-tube oscilloscopes used with radio receiving equipment to indicate simultaneously, as vertical deflections on the screen, all stations receivable within a band that extends approximately 25 kilocycles above and below the frequency to which the receiver is tuned. This permits quick interception of stations appearing on the air for short periods of time. The adaptor indicates the frequency of a signal with respect to the station to which the receiver is tuned, indicates roughly the strength of the signal, and reveals the character of the signal and type of modulation-continuous wave, voice, amplitude modulation, frequency modulation, pulse, etc.

The RBU-1, and RBU-2 are designed for use with Radio

Receiving Equipments RBB. They are essentially the same as the RBU except that they have greater sensitivity.

Equipment required for the operation of the panoramic radio adaptor are Coupling Kit 10563, and ac power cord with plug, and Radio Frequency Cable RG-11/U.

TECHNICAL CHARACTERISTICS:

Presentation: 3-inch cathode-ray tube

Input Frequency: 400 kc Maximum Sweep Width: 50 kc Sweep Frequency: 30 cps

Sensitivity: 50-uv input for deflection amplitude of more than

Type Input: Cathode follower

Power Requirements: 60 w, 115/230-v to 60-cycle 1-phase ac

AN/URA-type PANORAMIC RADIO ADAPTOR

MAJOR COMPONENTS	
	DIMENS
STOCK NUMBERS	(Inche

QTŸ	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares Panoramic Adaptor 55185 (RBU-2)		7-1/2 x 16 x 13	38
1	Panoramic Radio Adaptor: 55088 (RBU) 55088-A (RBU-1)		5-1/2 x 11 x 11-7/8 8-3/4 x 16 x 13	40 44

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,288–1B NAVSHIPS 900,717 NAVSHIPS 900,501–1B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBU: 1 For RBU-1:		
1 For RBU-2:	10.4	151
1	7.1	138

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr-43377 (RBU)	\$615 with equipment spares
Panoramic Radio Corp.	New York, N. Y.	NXss-33781, 9 July 1943 (RBUL1)	\$615 with equipment spares
Warwick Manufacturing Corp.	Chicago, Ill.	NXsr-90839, 20 Feb- ruary 1945 (RBU-2)	\$615 with equipment spares

RBV, RBV-1, RBV-2

PANORAMIC RADIO ADAPTOR AN/URA-type

4 December 1958

Cognizant Serv:

USN FSN:

USA

RBV, 5820-644-4816

RBV-1, 5820-665-2065

RBV-2, 5820-644-4816

USN

USAF

TYPE CLASS: STOCK NO:

Used by

RBV: F16-Q-256280-200 RBV-1: F16-Q-256300-200 RBV-2: F16-Q-256320-200



FUNCTIONAL DESCRIPTION:

Panoramic Radio Adapters RBV, RBV-1, and RBV-2 are cathode-ray-tube oscilloscopes used with radio receiving equipment to indicate simultaneously, as vertical deflections on the screen, all stations receivable within a band that extends approximately 50 kilocycles above and below the frequency to which the receiver is tuned. This permits quick interception of stations appearing on the air for short periods of time. The adaptor indicates the frequency of a signal with respect to the station to which the receiver is tuned, indicates roughly the strength of the signal, and reveals the character of the signal and type of modulation—continuous wave, modulated continuous wave, voice, amplitude modulation, frequency modulation, pulse, etc.

The RBV, RBV-1, and RBV-2 are designed for use with

Radio Receiving Equipments RBC. They are essentially identical; however, the RBV-2 has greater sensitivity.

Equipment required for the operation of the panoramic radio adaptor are Coupling Kit 10563, an ac power cord with plug, and Radio Frequency Cable RG-11/U.

TECHNICAL CHARACTERISTICS:

Presentation: 3-inch cathode-ray tube Input Frequency: 400 kc (±5 kc only) Maximum Sweep Width: 100 kc

Sweep Frequency: 30 cps

Sensitivity: 50-uv input for deflection amplitude or more than 1/4 inch

Input Impedance: 50 ohms

Power Requirements: 60 w, 115/230-v 50- to 70-cycle 1-phase ac

QTY

AN/URA-type PANORAMIC RADIO ADAPTOR

MAJOR COMPONENTS		
	DIMENSIONS	WEIGHT
STOCK NUMBERS	(Inches)	(Lbs)

1 set Equipment spares 1 Panoramic Adaptor

55089 (RBV) 55090-A (RBV-1) 55186 (RBV-2)

ITEM

7-1/4 x 13 x 13-1/4 46 8-3/4 x 13-1/2 x 15 44 7-1/2 x 16 x 13 38

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,288–1B NAVSHIPS 900,501–1B NAVSHIPS 900,717

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
		(4
For RBV:		
1	10.4	151
For RBV-1:		
1	7.1	138
For RBV-2:		

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:

DESIGN COG:

USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr-43377, 8 December 1943 (RBV)	
Panoramic Radio Corp.	New York, N. Y.	NXss-33781, 9 July 1943 (RBV-1)	\$552 with equip- ment spares
Warwick Manufacturing Corp.	Chicago, Ill.	NXsr-90839, 20 February 1945 (RBV-2)	\$742 with equip- ment spares

4 December 1958			PANORAMIC RADIO ADAPTO		AN/URA-type
Cognizant Serv:		FSN:			RCC
		USA	USN	USAF	
TYPE CLASS:			Used by		
STOCK NO:		2-4	F16-Q-258126-200		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Panoramic Radio Adaptor RCC is a cathode-ray-tube oscilloscope designed to provide visual observation of radio-frequency signals, utilizing the intermediate-frequency signal from suitable radio receiving equipment. It is used primarily for the quick interception and identification of transmissions, including those which are on the air for a short period of time.

All signals of sufficient amplitude, within 100 kilocycles above and below the frequency to which the receiver is tuned, are included in the sweep across the screen. Graph lines on the

face of the tube permit a frequency check of any signal in the sweep and a relative signal strength indication. In addition, the shape of any signal deflection in the sweep reveals the character of the signal and the type of modulation.

TECHNICAL CHARACTERISTICS:

Presentation: 3-inch cathode-ray tube

Input Frequency: 450 to 470 kc, adjusted to 455 kc at factory

Maximum Sweep Width: 200 kc

Sweep Frequency: 30 cps
Input Impedance: 50,000 ohms

Power Requirements: 105/115-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
	noramic Radio Adapter R consists of only one majo		* 12-3/8 x 25-3/8 x 15-1/2	7	

REFERENCE DATA AND LITERATURE:

Preliminary instruction book for Panoramic Radio Adaptor RCC

SHIPPING DATA

VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type PANORAMIC RADIO ADAPTOR				
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		PROCUREMENT DA	ATA	
PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG:	USN, BuShips
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Panoramic Radio Corp.		New York, N. Y.	NXss-18159, 24 November	1942

RADIO RECEIVING EQUIPMENT AN/URA-type

20 November 1958

Cognizant Serv:

USN FSN:

RDC-1

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by F16-Q-265520-200

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RDC-1, when used with a suitable panoramic display unit or recording device, is designed to detect radio and certain radar signals being transmitted within any one of three frequency bands. The selected frequency band is mechanically swept by a continuously rotating, motor driven, variable capacitor. A synchronizing switch is driven by the same motor.

This equipment is housed in a cabinet equipped with shock mounts for table or bench mounting. It may be removed from its cabinet and installed in a standard 19 inch rack.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 28 to 134 in three bands

Reception: Cw, mcw, or pulse with repetition frequencies of

the order of several hundred per second

Input Impedance: 50 ohms Sweep Frequency: 15 cps

Output Impedance: 50 to 70 ohms

Sensitivity: (For signal deflection five times the average maximum noise deflection) Bands 1 and 2: 10 mv input,

Band 3: 20 mv input

Antenna Requirements: Any broadly tuned antenna suitable for the frequency range or band to be covered

for the frequency range or band to be covered Power Requirements: 118 w, $\pm 15\%$ power factor, 115-v 60-

cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 (Equi	Panoramic Search Receiver CHL-46253 ipment consists of only one major	component)	16 x 27 x 26-1/2	90

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,486

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	12.5	286

AN/URA-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG: RE13A1024A

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

ORDER NO.

APPROX UNIT COST

The Hallicrafters Co.

Chicago, Ill.

NXsr-64110 NObsr-39300 NXsr-85057 \$1,000.00

					MIL-HDBK-161
20 November			PANORAMIC RAD	OIO ADAPTOR	AN/URA-type
Cognizant Serv			1101	110 4 5	RDI
	USA	•	USN	USAF	
TYPE CLASS			Used by		
STOCK NO:	7-		F16-Q-269190-200		
		(No Illustration	on Available)		
FUNCTIONA	L DESCRIPTION	N:	TECHNICAL CHA	RACTERISTICS:	
receiver, enables stations that ar quency to whice interception of softime, even if softime, even if softime, equipment	an operator to see e receivable within the the receiver is tations appearing o slightly off the assig	h a superheterodyne radio	Sensitivity: 1/4-inch de Presentation: 3-inch co Input Frequency in M Maximum Sweep Widt Sweep Frequency: 50-cycle power source 60-cycle power source Power Requirements: 1	athode-ray tube c: 30 h in Mc: 3 ee: 25 cps ee: 30 cps	
		MAJOR CO	OMPONENTS		
QTY	ITEM	STOCK NU		MENSIONS (Inches)	WEIGHT (Lbs)
				*	
		(USN	V)		
CP	ramic Radio Adapt N-55145 ent consists of only		N) 8-3/4 x 13-	1/2 x 15	4
CP (This equipme	PN-55145 ent consists of only	one major component.) ITERATURE:	8-3/4 x 13-	1/2 x 15	4:
(This equipme	PN-55145 ent consists of only	one major component.) ITERATURE:			WEIGHT (Lbs

Name of the last o			
AN/URA-type PANORAMIC RA	ADIO ADAPTOR		
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Panoramic Radio Corp.	New York, N. Y.	NXss-33781	\$150.00

RADIO	RECEIVING EQUIPMENT	AN/URA-type
		RDO
USN	USAF	
Used by		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

USN

FSN: USA

20 November 1958 Cognizant Serv: U

TYPE CLASS:

STOCK NO:

Radio Receiving Equipment RDO is a search receiver used to measure the frequency of radio signals within its frequency range. The frequency band of 38 to 1,000 mc is covered in three bands by plug-in tuning units. Tuning over the band is accomplished by manual or automatic means. This equipment is a superheterodyne receiver and is designed for RCM search applications on Naval vessels.

A panoramic adaptor and pulse analyzer equipments are required for visual presentation of received signals.

The receiver cabinet is equipped with shock mounts and is designed for table or bench mounting. A clearance of 6-1/4 inches is required in back of the receiver.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38 to 1,000 in three bands:

Band 1:28 to 105 mc (Tuning Unit TN-1B/APR-1)

Band 2: 75 to 300 mc (Tuning Unit TN-2B/APR-1)

Band 3: 300 to 1,000 mc (Tuning Unit TN-3B/APR-1)

Reception: Panoramic voice for audio output; pulses for scanning and analyzing

Power Output: 45 mw into a 600-ohm load

Output Impedance: 600-ohm phone; 30- to 600-ohm line

Sensitivity: Varies considerably over the frequency range Input Impedance: 50-ohms unbalanced to ground; transmis-

sion line connects to coaxial connector

Radiation: Unsafe at all frequencies

Power Requirements:

F16-Q-270690-200

Receiver: 126 w, 110/115/120-v 55-65-cycle 1-phase ac

Tuning Motor: 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet		10-5/8 x 18-1/8 x 24-3/4	
1	IF-AF Amplifier CZC-50198		9-13/16 x 12-23/32 x 10-13/16	16
1	Preselector Frame CZC-10369	~~~	9-13/16 x 14-3/32 x 7-5/16	4
1	Rectifier Power Supply CZC- 20314		8-3/16 x 16-1/2 x 8	37
1	Tuning Unit TN-1B/APR-1		$7-3/4 \times 6-1/2 \times 13-5/8$	
1	Tuning Unit TN-2B/APR-1		7-3/4 x 6-1/2 x 13-5/8	
1	Tuning Unit TN-3B/APR-1		7-3/4 x 6-1/2 x 13-5/8	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,527

AN/URA-type RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS

VOLUME (Cu Ft)

WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG:

Spec. No. RE9424A

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Galvin Manufacturing Co.

E. H. Scott Radio Laboratories, Inc.

Chicago, Ill.

Chicago, Ill.

NXss-48318 NXsr-48318

\$6,500.00

RADIO TELEPHONE SIMULATOR AN/URA-type

20 November 1958

Cognizant Serv: USN

FSN:

SM-40/UR

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone Simulator SM-40/UR provides simulated radio communication in Combat Information Center training. It permits a training activity to use the CIC and Helm Station communication equipments during a training exercise. (These

communication equipments normally are used aboard ship in the execution of an actual tactical problem.

TECHNICAL CHARACTERISTICS:

Audio Output Impedance: 600 ohms

Heat Dissipation: 100 w

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 (Equi	Radio Telephone Simulator SM-40/UR pment consists of only one major	component)	15-3/4 x 22-3/4 x 28-1/4	98

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91512

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.0	180

AN/URA-type RADIO TELEPH	IONE SIMULATOR		
	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mare Island Naval Shipyard	Vallejo, Calif.	46700/51	\$500.00

RADIO SET AN/URC-4

3 December 1958

Cognizant Serv: USAF FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Std 2S5509-4 Std 1600–266509670 (Ref)



FUNCTIONAL DESCRIPTION:

Radio Set AN/URC-4 is a portable, hand-operated, ultrahigh frequency and very-high frequency unit designed to furnish two-way air-to-ground and point-to-point communication in emergency rescue situations. It is dropped from air-

craft in a watertight container which floats on the surface of the water.

The transmitter is crystal-controlled and, depending upon the crystal in use, operates on any preset frequency within the given bands. The receiver is of the superregenerative type and can be tuned independently of the transmitter to any frequency within the given range.

The antenna is located in the top of the radioset from where it can be quickly extended.

This equipment may be operated while in motion and will function continuously for 24 hours in cycles of 5 minutes for transmitting and 5 minutes for receiving.

The unit can also be used for emergency airdrome traffic control.

Radio Carrier Vest AN/URC-4 and Droppable Kit AN/URC-4 are part of the radio set and are supplied in addition to the basic components if required.

TECHNICAL CHARACTERISTICS:

Frequency Range:

Preset Frequency in Mc: 120 to 130
Harmonic Operation: 240 mc to 260 mc
Number of Crystal-controlled Preset Frequencies: 1

Type Modulation: Am

Type Emission and Reception: Voice, tone, or mcw

Power Output:

Receiver: 75 mw Transmitter: 35 mw Power Requirements:

45 Ma Plate Supply: 125-v de 520 Ma Filament Supply: 125-v de

Battery Life: 24 hr when operated in cycles of 5 minutes transmitting and 5 minutes receiving

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery BA-1264/U Droppable kit, aerial delivery consisting of:	6135–164–8769 2010–559570	3-3/8 x 6-1/4 x 2-1/4 22 x 13	3 20

Parachute, Cargo G-7 and

Container, Aerial Delivery A-20

AN/URC-4 RADIO SET

	M	AJOR COMPONENTS-	-Continued	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Kit-survival radio extra large	2010-559560-4		
	or			
	large	2010-559560-3		
	or			
	medium	2010-559560-2		
	or			
I	small Radio Receiver-Transmitter RT-159/URC-4	2010-559560-155 1600-218997008		
	or			
	RT-159A/URC-4	1600-218997024		
	or			
1	RT-159B/URC-4 Special Purpose Cable Assembly CX-1093/U (2 ft 6 in.)	1600-013570005 1600-324763581		
	or			
	CX-1093/U (5 ft 6 in.)	1600-324763582		
	or			
	CX-1093A/U (2 ft 6 in.)	1600-010732050		

REFERENCE DATA AND LITERATURE:

TO 16-30URC4-2

TO 12R2-2URC4-1

TO 12R2-2URC4-2

TO 12R2-2URC4-4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.9	29.3

RADIO SET	AN/URC-4

PROCUREMENT DATA

PROCURING SERVICE: USAF, GFAE, AMC SPEC &/or DWG: MIL-R-6373, R-7240

DESIGN COG:

USAF, ARDC (WCLN)

CONTRACTOR 1

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Philharmonic Radio and Television Corp.

New Brunswick, N. J.

AF33(600)24751

\$200.00

Cognizant	Serv:	USN	FSN:			RADIO SET	AN/URC-72
			USA	l	JSN	USAF	
TYPE CL	ASS:		2.2	τ	Jsed by		
STOCK N	NO:			14			
				(No Illustratio	n Available)		
FUNCTIO	DNAL	DESCRI	PTION:		TECHNICA	AL CHARACTERISTICS:	
transmitter communica	r and a ation pur	receiver rposes.		l radio-frequency two-way general ble mounting.	Number of C Type Receptor Frequency C Transmitter	ange: 2,000 kc to 7,000 kc Thannels: 2 ion and Emission: A3 ontrol: Crystal Power Output: 25 w irements: 115-v de	
					z otto, zeogai		
				MAJOR CO		S	7.
QTY		ITE	M	MAJOR CO	MPONENTS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Cabinet		M 7/URC-7		MPONENTS	DIMENSIONS	
1 2	Cable a	CY-1027	7/URC-7		MPONENTS	DIMENSIONS	
1 2 1	Cable a Handse Modula	sembly t NT-510	7/URC-7		MPONENTS	DIMENSIONS	
1 2 1 1	Cable a Handse Modula 223/U	ssembly t NT–510 tor-Power	7/URC-7 32 Supply MD-		MPONENTS	DIMENSIONS	
1 2 1 1	Cable a Handse Modula 223/U Radio F	sembly t NT-510 tor-Power URC-7Z Receiver I	7/URC-7 32 Supply MD- R-413/URC-7	STOCK NU	MPONENTS	DIMENSIONS	
1 2 1 1	Cable a Handse Modula 223/U Radio F Radio T	c CY-1027 ssembly t NT-510 tor-Power JRC-7Z Receiver I	7/URC-7 32 Supply MD-	STOCK NU	MPONENTS	DIMENSIONS	

PKGS

VOLUME (Cu Ft)

WEIGHT (Lbs)

AN/URC-7	Z RADIO) SET
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PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG: RTRS-350-A (USCG)

DESIGN COG: USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Radiomarine Corp. of America

New York, N. Y.

TCG-39362

RADIO SET AN/URC-11

3 December 1958

Cognizant Serv:

USAF

FSN:

Cognizant Serv:	OSAL LOIM:			
	USA	USN	USAF	
TYPE CLASS:			Std	
STOCK NO:			1600-013388080	



FUNCTIONAL DESCRIPTION:

Radio Set AN/URC-11 is a portable, subminiature, handoperated, ultra-high frequency receiver-transmitter used for two-way communication between distressed personnel and searching aircraft.

This equipment can operate on any preset frequency within the band, and its receiver portion can be tuned, independently This equipment can operate on any preset frequency within the band, and its receiver portion can be tuned, independently of the transmitter, to any frequency within the specified range.

The radio set uses a one-half wave length telescopic antenna that is collapsible and storable within the receiver-transmitter case.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 240 to 260

Type Modulation: AM

Type Reception and Emission: A3 (voice, tone)

Power Output:

Transmitter: 75 mw Receiver: 25 mw

Operational Range: Line of sight

Power Requirements:

Power Source: Battery BA-1315/U

Battery Life: 24 hr of continuous operation in cycles of 5 minutes transmitting and 5 minutes receiving

Data: 1.25 v, 550 ma dc; 120 v, 35 ma dc (continuous operation) 550 ma at 1.25-v dc; 35 ma at 120-v dc for continuous operation

AN	URC-1	RADIO	SET
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MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	Battery BA-1315/U				
1	Receiver-Transmitter, Radio RT-285/URC-11	1600-013388080			
1	Special Purpose Cable Assembly CX-1093A/U	1600-012732050	30 or 66 lg		

REFERENCE DATA AND LITERATURE:

TO 12R2-2URC11-1

TO 12R2-2URC11-2

TO 12R2-2URC11-4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

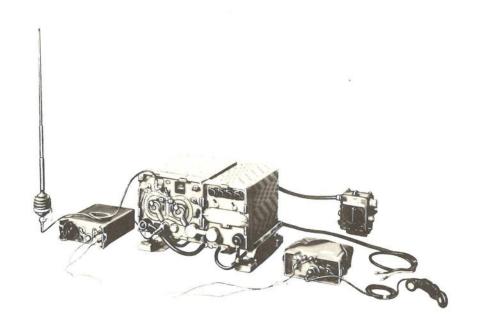
PROCURING SERVICE: USAF, GFAE, AMC SPEC &/or DWG: MIL-R-8178 (USAF)		DESIGN COG:	USAF, ARD, WCLN	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Philharmonic Radio and Television Corp.	New Brunswick, N. J.	AF33(600)27621	\$125.00	

RADIO SET AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18Y

3 December 1958				
3 December 1958 Cognizant Serv:	FSN:	AN/URC-16: AN/URC-16X: AN/URC-16Y: AN/URC-17: AN/URC-17X: AN/URC-17Y:	5820-665-3867 5820-665-3857 5820-644-4880 5820-644-4881 5820-501-3059	1 0 1
		AN/URC-18:		
		AN/URC-18X:	5820-665-3860)

	USA	USN	USAF	
TYPE CLASS:	5.5	Used by		
STOCK NO:		H =	W 200	

AN/URC-18Y: 5820-665-3858



AN/URC-16

FUNCTIONAL DESCRIPTION:

Radio Sets AN/URC-16, AN/URC-16X, AN/URC-16Y, AN/URC-17, AN/URC-17X, AN/URC-17Y, AN/URC-18, AN/URC-18X, AN/URC-18Y are portable transmitting and receiving equipments designed to operate within the frequency range of 20 to 54.9 megacycles.

These equipments are similar to Radio Sets AN/SRC-10' AN/SRC-10X, AN/SRC-10Y, AN/SRC-11, AN/SRC-11X, AN/SRC-11Y, AN/SRC-12, AN/SRC-12X, AN/SRC-12Y, AN/SRC-13, AN/SRC-13X, AN/SRC-13Y, AN/SRC-14, AN/SRC-14X, AN/SRC-14Y, AN/SRC-15, AN/SRC-

AN/URC-16, -16X, -16Y, RADIO SET -17, -17X, -17Y, -18, -18X, -18Y

 $15\mathrm{X},$ and AN/SRC-15Y except for some of the components used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

AN/URC-16, -16X, -16Y: 20 to 27.9

AN/URC-17, -17X, -17Y: 27 to 38.9

AN/URC-18, -18X, -18Y: 38 to 54.9

Type Reception and Emission: F3 (voice, tone)

Type Modulation: Fm

Type Tuning: Choice of channels or continuous

Operational Range: 10 to 15 miles

Transmitter Power Output:

AN/URC-16, -16X, -17, -17X, -18, -18X:

On High: 16 w On Low: 2 w

AN/URC-16Y, -17Y, -18Y: 13 w

Receiver Output:

At Speaker: 1 w

At Phones: 50 mw

At Fixed Level (Not Used): 30 mw

Microphone Input Impedance: 150 ohms

Audio Output Impedance: 600 ohms at all audio output

terminals

Receiver Sensitivity: 30 dv signal-plus-noise to noise ratio with

0.5 uv input signal

Power Requirements:

AN/URC-16, -17, -18: 25.2-v dc

AN/URC-16X, -17X, -18X: 12.6-v de

AN/URC-16Y, -17Y, -18Y: Hand cranked generator and

dry batteries; five BA-403/U, one Ba-419/U

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Set AN/URC-16:			
I I I I I 2 I I I I I I I I I I I I I I	Antenna Cable CG-568/U Bag CW-206/UR Cable Assembly CX-1211/U Coaxial Adapter UG-273/U Coaxial Adapter UG-306/U Control Box C-375/VRC Handset H-33()/PT Loudspeaker LS-166/U Mast Base AB-15/GR Mast Section MS-116A Mast Section MS-117A		3 x 5 x 40 4 x 7 x 7	0.5 3.5 .4 .34 .36 3.5 2
1 1 1	Mast Section MS-118A Mounting MT-299/GR Power Supply PP-112/GR Receiver-Transmitter RT-66/ GRC For Radio Set AN/URC-16X:		39-1/2 lg 4 x 13 x 20	.5 24 33 35
1 1 1 1 1 1 2 1	Antenna Cable CG-586/U Bag CW-206/GR Cable Assembly CX-1211/U Coaxial Adapter UG-273/U Coaxial Adapter UG-306/U Control Box C-375/VRC Handset H-33()/PT Loudspeaker LS-166/U Mast Base AB-15/GR Mast Section MS-116A		50 lg 3 x 5 x 40 4 x 7 x 7 2-1/16 x 3 x 3	.5 3.5 .4 .34 .36 3.5 2

RADIO SET AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18Y

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mast Section MS-117A		39-1/2 lg	1.4
1	Mast Section MS-118A			. 5
1	Mounting MT-299/GR		4 x 13 x 20	24
1	Power Supply PP-109/GR			33
1	Receiver-Transmitter RT-66/ GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC-16Y:			
1	Bag CW-206/GR		3 x 5 x 40	3.5
5	Battery BA-403/U			
1	Battery BA-419/U			
1	Loudspeaker LS-166/U			
1	Modification Kit MX-898/GR			
1	Receiver-Transmitter RT-66/ GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC-17:			
1	Antenna Cable CG-530/U		50 lg	.5
1	Bag CW-206/GR		$3 \times 5 \times 40$	3.5
1	Cable Assembly CX-1211/U			.4
1	Coaxial Adapter UG-273/U			.34
1	Coaxial Adapter UG-306/U			.30
1	Control Box C-375/VRC			3.5
2	Handset H-33()/PT		$2-1/16 \times 3 \times 3$	2
1	Loudspeaker LS-166/U			
1	Mast Base AB-15/GR			
1	Mast Section MS-116A			1.6
1	Mast Section MS-117A		(0.1	1.4
1	Mast Section MS-118A			.5
1	Mounting MT-299/GR			24
1	Power Supply PP-112/GR			33
1	Receiver-Transmitter RT-67/ GRC		9 X 11-1/4 X 13	35
	For Radio Set AN/URC-17X:		v.	
1	Antenna Cable CG-530/U	**********	50 lg	.5
1	Bag CW-206/GR		$3 \times 5 \times 40$	3.5
1	Cable Assembly CX-1211/U			.4
1	Coaxial Adapter UG-273/U			.3-
1	Coaxial Adapter UG-306/U			.36
1	Control Box C-375/VRC			3.5
2	Handset H-33()/PT		2-1/16 x 3 x 3	2
1	Loudspeaker LS-166/U			
1	Mast Base AB-15/GR		20.1/21	1 0
1	Mast Section MS-116A		: 12 3	1.6 1.4
1	Mast Section MS-117A		39-1/2 lg	1.4

AN/URC-16, -16X, -16Y, RADIO SET -17, -17X, -17Y, -18, -18X, -18Y

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mast Section MS-118A		39-1/2 lg	.5
1	Mounting MT-299/GR		4 x 13 x 20	24
1	Power Supply PP-109/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT-67/ GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC-17Y:			
1	Bag CW-206/GR		3 x 5 x 40	3.5
5	Battery BA-403/U		3	0.0
1	Battery BA-419/U			
1	Loudspeaker LS-166/U			
j	Modification Kit MX-898/GR			
1	Receiver-Transmitter RT-68/ GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC-18:			
1	Antenna Cable CG-530/U		50 lg	.5
1	$\mathrm{Bag}\;\mathrm{CW} ext{-}206/\mathrm{GR}$		3 x 5 x 40	3.5
I	Cable Assembly CX-1211/U			.4
1	Coaxial Adapter UG-273/U			.34
1	Coaxial Adapter UG-306/U			.36
J	Control Box C-375/VRC		4 x 7 x 7	3.5
2	Handset H-33()/PT		2-1/16 x 3 x 3	2
1	Loudspeaker LS-166/U			
1	Mast Base AB-15/GR		20.1./0.1	
1	Mast Section AB-24/GR Mast Section MS-117A		23-1/2 lg	.13
1	Mounting MT-299/GR		39-1/2 lg	1.4
1	Power Supply PP-109/GR		4 x 13 x 20 8 x 9 x 13	24
1	Receiver-Transmitter RT-68/			33
,	GRC		9 x 11-1/4 x 15	35
	For Radio Set AN/URC-18X:			
1	Antenna Cable CG-530/U		50 lg	.5
1	Bag CW-206/GR		3 x 5 x 40	3.5
1	Cable Assembly CX-1211/U			.4
1	Coaxial Adapter UG-273/U			.34
1	Coaxial Adapter UG-306/U			.36
1	Control Box C-375/VRC		4 x 7 x 7	3.5
2	Handset H-33()/PT		2-1/16 x 3 x 3	2
1	Loudspeaker LS-166/U			
1	Mast Base AB-15/GR			
1	Mast Section AB-24/GR		- ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	.13
1	Mast Section MS-117A			1.4
1	Mounting MT-299/GR			24
1	Power Supply PP-109/GR			33
1	Receiver-Transmitter RT-68/ GRC		9 x 11-1/4 x 13	35

RADIO SET AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18Y

	M	AJOR COMPONENT	S—Continued	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Set AN/URC-18Y:			
1 5 1	Bag CW-206/GR Battery BA-403/U Battery BA-419/U		3 x 5 x 40	3.5
1 1 «	Loudspeaker LS-166/U Modification Kit MX-898/GR Receiver-Transmitter RT-68/ GRC		9 x 11-1/4 x 13	35
TM 1	ENCE DATA AND LITERAT 1–286 ps Ltr S67/1–7 Ser 881E–1–3528, 1			
		SHIPPING DA	TA	
PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
		PROCUREMENT	DATA	
	JRING SERVICE: USN		DESIGN CO	OG: USA Sig (
CONTI	RACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
			AN/URC-16, -16X, -17 -17X, -18, -18X MIPR-800-29092, MIPR-800-29094, MIPR-800-29500	7, \$1,500.0
			AN/URC-16Y, -17Y, - MIPR-800-39406	1,500.0

RADIO SET AN/URG-22

3 December 1958

Cognizant Serv: USN

FSN: USA

USN USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/URC-22 is designed for general purpose communication use. It permits vehicular or ground application.

This equipment is similar to Radio Set AN/URC-18Y except that it includes different mounting provisions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38 to 54.9

Number of Bands: 1

Type Reception and Emission: F3 (voice, tone)

Type Modulation: Fm

Number of Frequency Channels: 170

Separation Between Channels: 100 kc

Type Tuning: Choice of channels or continuous

Operational Range: 10 to 15 miles Transmitter Power Output: 13 w

Receiver Output:

At Speaker: 1 w

At Phones: 50 mw

At Fixed Level (Not Used): 30 mw

Microphone Input Impedance: 150 ohms

Audio Input Impedance: 600 ohms at all audio output termi-

Receiver Sensitivity: 30 dv signal-plus-noise to noise ratio with 0.5 uv input signal

Power Requirements: Supplied by Hand Generator G-8/GRC

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	A 1 4 TY/3 OPPO /TY			
1	Adapter UG-273/U			
1	Adapter UG-306/U			
1	Bag CW-187/GR Bag CW-188/GR			
1	Bag CW-189/GR			
1	Bag CW-206/GR			
1	Cable, Special Purpose, Assembly CX-1211/U			0.4
I	Cable Special Purpose UM- 46/U			
1	Case CY-590/GR			
1	Case CX-684/GR			
1	Connector and bond nut			
1	Control Box C-374/VRC			
1	Generator G-8/GRC			ALE: -
2	Handset H-33/PT		2-1/16 x 3 x 3	2
1	Local Control C-434/GRC			
1	Mast Base AB-15/GR			
1	Mast Section AB-22/GR			
1	Mast Section AB-23/GR			
2	Mast Section AB-24/GR			
1	Mast Section AB-25/GR			
2	Mast Sections MS-117-A		4 40 40	0.4
1	Mounting MT-299/GR Mounting MT-652/GR		4 x 13 x 20	24

AN/URC-22 RADIO SET

MAJOR COMPONENTS—Continued				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Cable Assembly CX- 1209/U			
1	Power Cable Assembly CX- 1210/U			
1	Power Supply PP-112/GR			
1	Receiver-Transmitter RT-68/ GRC		9 x 11-1/4 x 13	35
1	Remote Control C-433/GRC			
1	RF Cable Assembly CG-530/U			

REFERENCE DATA AND LITERATURE:

TM 11-286

PKGS

SHIPPING DATA

VOLUME (Cu Ft)

WEIGHT (Lbs)

<u> </u>		PROCUREMENT D	ATA	
PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN CO	G: USA, Sig C
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/URC-type

4 December 1958

Cognizant Serv:

USN

FSN: 5820-665-3816

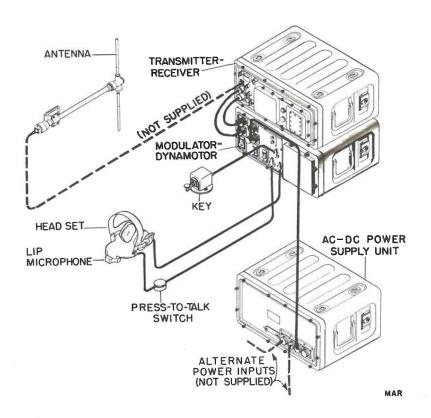
MAR

TYPE CLASS:
STOCK NO:

USA

USN

USAF



FUNCTIONAL DESCRIPTION:

VHF Radio Transmitting and Receiving Equipment MAR is a general purpose, amplitude-modulated (Modulated continuous wave, voice) transportable communication set that uses a motor-driven selector mechanism for automatic selection of 10 preset crystal-controlled frequencies within the very-high-frequency band.

This equipment is comprised of two units of the same form and size—one case containing the transmitter-receiver; the other, the modulator-dynamotor sections. In addition to these basic units, modification kits for shipboard, vehicular, and field adaptations are supplied.

The use of these kits provides for widely varying power supply inputs and operating environments.

Remote Control Unit 23485 provides for remote control

up to distances of one mile. Communication between a remote and local operator, without resultant radio emission, is controlled by a panel switch on the modulator-dynamotor unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 390 on 10 preset frequencies

Frequency Control: Crystal Type Modulation: Am Type of Signal: Mcw, voice

Power Output:

Transmitter: 8 w

Receiver: 1 w into 600-ohm load

Power Requirements: 430-w 13/24/115/230-v dc; or 430 w, 115/230-v 50/60-cycle 1-phase ac

AN/URC-type VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT

MAI	OR	CON	APON	VENTS
MAJ	V JIK	1 1 11	וניות	ALTA LO

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac-dc Power Supply Unit 20379		10-7/8 x 21-1/4 x 16-1/4	100
1	Antenna Assembly 66147		22 x 2-1/2 x 25	3.8
1	Field application kit			
1	Modulator-Dynamotor Unit 50248		9-1/2 x 21-1/4 x 16-1/4	45
1	Shipboard installation kit			
1	Transmitter-Receiver 43067		9-1/2 x 21-1/4 x 16-1/4	45

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900719(A)

SHIPPING DATA

PKGS	VOL	UME (Cu Ft)	WEIGHT (Lbs)
5	32.4		788

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RECA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr-60008	\$7,000.00

MO-1

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/URC-type

4 December 1958

Cognizant Serv:

FSN:

USN

5820-642-8382

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

F16-Q-173744-200

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting and Receiving Equipment MO-1 is a mobile transmitter-receiver for use in naval craft, combat vehicles, and for other applications where space is at a premium.

Provision is made for remote-control operation of the set, with the exception of channel switching and emission selection. The set provides sidetone and interphone facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 3 to 8 (4 channels)

Frequency Control: Crystal Type of Signal: A2, A3 Power Output: 25 w

Output Impedance: 600 ohms

Power Requirements: 6/12-v dc (storage battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS		DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit 23343		3 x 3	3-1/2 x 10	5
1	Dynamotor 21983 or Dyna- motor 21984	***************************************	5 x	4-1/2 x 8-1/2	11.5
1	Radio Transmitter-Receiver 43043		9-1/	2 x 17 x 10-1/2	27.5
1	Vibrator Power Assembly 20190				
	or				
	Vibrator Power Assembly 20193		11 x	10-1/8 x 17	36.5

REFERENCE DATA AND LITERATURE:

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HUBK-101			
AN/URC-type RADIO TELEP	HONE TRANSMITTING AN	ID RECEIVING EQUIPMENT	
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	NXs-5884	

........

					KEYER	AN/URN-type
3 December 1958 Cognizant Serv: USN FSN:	FSN:	5825-644-4434			KY-122/URN	
		USA		USN	USAF	
TYPE CLASS:				Used by		
STOCK NO:						

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-122/URN is used in navigation applications to automatically key any of several radio transmitters with a selectable identification code group.

This equipment has a magnetic circuit breaker for stopping and starting the keyer motor. A green indicator lamp lights when the keyer motor is energized. The KY-122/URN also has a momentary "on-off" push button switch and a red in-

dicator lamp for use in remote-control operation of the radio transmitter.

Keyer KY-122/URN is identical with Keyer KY-123/URN except that the KY-123/URN does not have the provisions for remote-control operation of the radio transmitter.

TECHNICAL CHARACTERISTICS:

Speed Range: 24 letters per minute

Power Requirements: 20 w, 110-v 60-cycle 1-phase ac

		MAJOR COMPONENT	S	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 (Equipm	Keyer KY-122/URN nent consists of only one majo		3 x 7 x 13-7/16	1

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92003

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.5	20

AN/URN-type KEYER			
5, p.	PROCUREMENT DATA		
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Electrical Machine Shops, Inc.	Silver Springs, Md.	NObsr-63112	\$200.00

					KEYER	AN/URN-type
3 December 1958 Cognizant Serv: USN FSN	FSN:	5825-665-2067	ra e e		KY-123/URN	
		USA	6	USN	USAF	
TYPE CLASS:				Used by		
STOCK NO:						

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-123/URN is used in navigation applications to automatically key any of several radio transmitters with a selectable identification code group.

This equipment has a magnetic circuit breaker for stopping and starting the keyer motor. A green indicator lamp lights when the keyer motor is energized.

The KY-123/URN is identical with Keyer KY-122/URN

except that the KY-122/URN also has provisions for remote-control operation of the radio transmitter. The KY-123/URN and the KY-123A/URN are electrically and mechanically interchangeable.

TECHNICAL CHARACTERISTICS:

Speed Range: 24 letters per minute

Power Requirements: 20 w, 110-v 60-cycle 1-phase ac

		MAJOR COMPONENT	S	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	ver KY-123/URN consists of only one maj		6 x 6-3/4 x 11-1/2	1

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92003

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.3	18

AN/URN-type KEYER			
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Thiebolt Aircraft Co., Inc.	Washington, D. C.	NObsr-64575	\$200.00

				MIL-HDRK-161
			KEYER	
FSN:				KY-123A/URN
USA	ı	JSN	USAF	
	1	Used by		
	,			
	(No Illustratio	n Available)		
PTION:		TECHNICA	L CHARACTERISTICS	
			and the second s	1-phase ac
	MAJOR CO	MPONENTS	3	
M	STOCK NU	MBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		6	x 6-3/4 x 11-1/2	
ND LITERA	TURE:			.=
	SHIPPING	G DATA		
		VOI	LUME (Cu Ft)	WEIGHT (Lbs
	PTION: a coding key chanically inte	(No Illustration) (No Illustrat	USA Used by (No Illustration Available) PTION:	Used by (No Illustration Available) PTION:

AN/URN-type keyer			
	PROCUREMENT DA	TA	u 13*
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Nems-Clark Inc.	Silver Springs, Md.	NObsr-71173	

RADIO RECEIVING SET AN/URR-9

USAF

3 December 1958

Cognizant Serv: USN FSN: 5820-665-1244

USA USN

TYPE CLASS: STOCK NO: Used by F16-Q-123870-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-9 is a general purpose voice communication unit for either shipboard or shore installations. It has automatic control for local or remote operation; manual tuning is provided only for local operation. To increase selectivity, the superheterodyne receiver provides double conversion for variable bandwidths. Connections to and from the receiver are filtered to eliminate possible interference. Terminals are provided for a scan output to be connected to a panoramic viewer.

This equipment operates with a vertically polarized, unbalanced broadband, coaxial stub antenna, such as Antenna Assembly AS-390/SRC, or with a broad-band dipole antenna, such as Antenna AT-150/SRC.

The set is similar to Radio Receiving Equipment RDZ except that continuous manual tuning, double conversion, and other improvements have been added. It is intended for use with Radio Transmitting Equipment TDZ. However, it will also net with Radio Transmitters AN/URT-9 and TED, and with Radio Sets AN/GRC-27, AN/GRC-32, AN/ARC-27, and MAR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Number of Preset Channels: 10 Frequency Control:

Automatic: Crystal
Manual: Self-excited

Type Receiver: Double conversion superheterodyne

Type Modulation: Am Type Reception: A3 (voice)

Output Impedance:
Audio Channel: 600 ohms
Phone Jack: 600 ohms
Video Channel: 1,000 ohms

Scan Channel: 50 ohms Input Impedance: 50 ohms (nominal)

Sensitivity:

225 to 240 Mc: 10 uv 240 to 400 Mc: 5 uv Intermediate Frequency: Double Conversion: 3.85 mc

Single Conversion: 18.6 mc

Antenna Characteristics: Half-wave, center takeoff, dipole type

of approximately 50 ohms impedance

Power Requirements: 150 w or 230 w; 115- to 120-v, 50- to 60-cycle, 1-phase ac

AN/URR-9	RADIO RECEIVING SET	

		MAJOR COMPONEN	NTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 3	Radio Receiver R-289/URR-9 Set of equipment spares		13-1/8 x 22 x 23	150

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91201

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	20.3	477

PROCUREMENT DATA

OCURING SERVICE: USN DESIGN COG: US	. w 88
OCURING SERVICE: USN DESIGN COG: US EC &/or DWG:	SN, BuShip
	PPROX
ONTRACTOR LOCATION ORDER NO. UN	UT ·

Malden, Mass.

NObsr-39298, 16 June 1949

RADIO RECEIVING SET AN/URR-13, -13A, -13B, -13C

3 December 1958

Cognizant Serv:

USN

FSN: AN/URR-13: 5820-644-4777

AN/URR-13A: 5820-642-8244 AN/URR-13B: 5820-665-2374

AN/URR-13C: 5820-644-3395

USA

USN

USAF

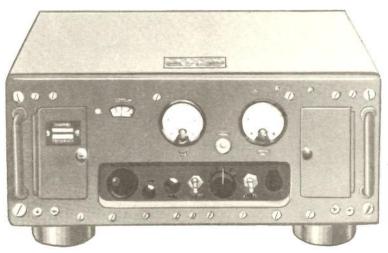
TYPE CLASS: STOCK NO:

Used by

Std AN/URR-13: F16-Q-123880-200

AN/URR-13A: F16-Q-123881-200 AN/URR-13B: F16-Q-123882-200

AN/URR-13C: F16-C-123883-200



AN/URR-13

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-13, AN/URR-13A, AN/URR-13B, and AN/URR-13C are general purpose, compact communication units designed to provide ultra-high frequency reception on naval vessels at naval air and shore stations or at other military establishments.

These equipments are used on conjunction with Radio Transmission Equipment TED. They replace Radio Receiving Equipment RED.

Each set consists of a panel, frame, and chassis assembly housed in a cabinet equipped with shockmounts for shipboard installation. For shore installation the set may be mounted in a standard 19-inch relay rack.

The circuit components are grouped on a functional basis into five major sections within the cabinet and consist of the preselector, intermediate frequency/audio frequency, power supply, cable filtering, and front panel sections.

The sets may be operated on a single crystal-controlled channel, or, through the self-excited conversion oscillator, on continuously variable manual tuning. Provision is made for connecting a panoramic type radio receiver to provide a visual image of the received signal.

All of the equipments are mechanically and electrically interchangeable but have minor differences in components. The AN/URR-13C has two additional test cables not supplied with the previous models. These sets are also similar to Radio Receiving Equipment RDZ and RCN.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Type Modulation: Am

Type Reception: A2, A3 (voice, mcw)

AN/URR-13, -13A, -13B, -13C RADIO RECEIVING SET

Number of Channels: Single

Type Control: Crystal or continuously variable Type Receiver: Double conversion superheterodyne

Intermediate Frequency: 18.6 mc (center frequency ±2 kc)

Sensitivity: Better than 8 uv for a 10 db signal-to-signal plus

noise ratio

Audio Output:

60 mw maximum into a 600-ohm load, 7% maximum dis-

tortion or 600 me into a 60-ohm load, 7% maximum distortion

Scanning Channel Bandwidth: 600 kc, flat to within 6 db

Heat Dissipation: 120 w

Antenna: Quarter-wave, broad-band with 50-ohm terminal

impedance

Power Requirements: 125 w; 110- to 120-v, 50-to 60-cycle,

1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/ URR-13() including:		8-7/16 x 17-1/2 x 19-1/8	5
1	Band Suppression Filter F-89/URR-13			
1	Radio Receiver R-266/ URR-13			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91270

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	167

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips (RCUE)

SPEC &/or DWG: MIL-R-1513A(Ships), 16R53(RE), MIL-R-1513B(Ships)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	AN/URR-13: NObsr-431' 6 January 1949	76, \$1,500.00
		AN/URR-13A: NObsr-52 13 November 1951	051, 1,500.00
		AN/URR-13C: NObsr-52 21 May 1951	398, 1,500.00
Espey Manufacturing Co., Inc.	New York, N. Y.	AN/URR-13B: NObsr-49 18 June 1950	1,500.00

RADIO RECEIVING SET AN/URR-21, -21A

3 December 1958

Cognizant Serv: USN FSN: 5820-501-4986 (AN/URR-21A)

	USA	USN	USAF
TYPE CLASS:	822	Used by	
STOCK NO:	722	AN/URR-21A: F16-Q- 123889-200	



FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-21 and AN/URR-21A are very-high frequency units used in conjunction with Radio Transmitting Equipment TDQ on aircraft carriers, and at shore stations, for communication with aircraft. They have a high degree of stability, freedom from cross modulation and radiation, and quickly selectable preset channels. In addition, they employ a squelch circuit which operates when the input signal level drops below a predetermined value.

Both receivers are designed for use with a 50-ohm fixed antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range: 115 mc to 156 mc

Preset Channels: 4

Frequency Control: Crystal Intermediate Frequency: 12 mc

Type Modulation: Am
Type Reception: A3 (voice)
Type Receiver: Superheterodyne

Output: 65 mw into 600-ohm phones or loudspeaker

Sensitivity: 5 uv

Input Impedance: 50 ohms

Features: Noise limiter, squelch circuits, automatic gain

control, 10 w oscillator radiation

Mounting Data: Shock mounted for table or bench

Power Eequirements: 106 w, 110, 115 to 120 v, 55 to 60 cps,

pf 0.95 or more

AN	/URR-21,	-21A	RADIO	RECEIVING SET
----	----------	------	-------	---------------

	6		
ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
or Radio Receiving Set AN/ URR-21:			
RR-21		10-7/8 x 18-1/8 x 23	119
of equipment spares			
or Radio Receiving Set AN/ URR-21A:			
19.5%, A. (19.4%) (19.5%) (19.5%) (19.5%) (19.5%) (19.5%) (19.5%) (19.5%)		11-21/64 x 18-1/8 x 17-1/2	11'
	for Radio Receiving Set AN/ URR-21: io Receiver R-432/ RR-21 of equipment spares or Radio Receiving Set AN/ URR-21A: io Receiver R-432A/ RR-21	for Radio Receiving Set AN/ URR-21: io Receiver R-432/ RR-21 of equipment spares or Radio Receiving Set AN/ URR-21A: io Receiver R-432A/	for Radio Receiving Set AN/ URR-21: io Receiver R-432/ RR-21 of equipment spares or Radio Receiving Set AN/ URR-21A: io Receiver R-432A/ RR-21 10-7/8 x 18-1/8 x 23 11-21/64 x 18-1/8 x 17-1/2 RR-21

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91642(A) NAVSHIPS 91497

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
2		9.72	187
	PROCUREMEN	T DATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIG	N COG: USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OF ORDER NO.	APPROX UNIT COST
Air Associates Inc., Electronics Division	Orange, N. J.	NObsr-52171, 5	January 1951

1784

RADIO RECEIVING SET AN/URR-23, -23A

3 December 1958

Cognizant Serv:

USN

AN/URR-23: 5820-642-6418 AN/URR-23A: 5820-642-6855

USA

FSN:

USN

USAF

TYPE CLASS: STOCK NO:



AN/URR - 23

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-23 and AN/URR-23A are designed for long-range, ship or shore communication application requiring maximum stability and dial accuracy. They are suitable for amplitude modulated and continuous wave reception or for presetting at a specific frequency without repeated search or frequency readjustment.

Radio Receiving Set AN/URR-23 is essentially the commercial Collins Model 51J-2; the AN/URR-23A is the Collins Model 51J-3. Both sets are similar except that the AN/URR-23A has an antenna trimmer control and chassis handles.

Used by AN/URR-23A: F16-R-38281

The sets tune with normal setting error and a drift of less than 1 kilocycle at any frequency within their range.

The fundamental or harmonic output of the frequency oscillator is controlled by one of 10 quartz crystals selected by the band-change control.

A high-impedance whip type or single-ended antenna is recommended for use with these equipments.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 30.5

Number of Bands: 30 Band Width: 1.0 mc

Frequency Stability: Dial calibration within 300 cps if nearest 100-kc calibration point is used to adjust the fiducial

Type Modulation: Am

Type Reception: A1, A2, A3 (cw, mcw, voice)

Power Output: 1.5 w at 1,000 cps, less than 15% distortion Sensitivity:

Band 1: Better than 15 uv gives 1 w with 10 db s/n Band 2-30: Better than 5 uv gives 1 w with 10 db s/n Selectivitu:

Crystal Filter In: Total bandwidth 0.2 kc at 6 db down; 12 kc at 60 db down

Crystal Filter Out: Total bandwidth 5.5 to 6.5 kc at 6 db down; 17 to 20 kc at 60 db down

Automatic Volume Control:

Less than 5 Db Increase in Audio Power: From 100 mw with an increase in rf input from 5.0 to 125,000 uv at 1,000 cps modulated 30%

Maximum of 7 Db Increase: From 125,000 to 500,000 kc

Noise Limiter: Series type

Meter: Calibrated 0 to 20, 40, 60, 80, 100 db above automatic volume control threshold, and -10 to +6 dbm audio level

Output Impedance: 4.0 and 600 ohms

Power Requirements: 85 w; 115- or 230-v, 45- to 70-cycle, 1-phase ac

AN/URR	-23.	-23A	RADIO	RECEIVING	SET
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		MAJOR COMPONE	NTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/URR-23:			
1	Dynamic Loudspeaker LS- 175/U	***************************************	10-9/16 x 15 x 8-7/8	
I	Radio Receiver R-381A/ URR-23		10-1/2 x 19 x 13	
	For Radio Receiving Set AN/URR-23A:			
l I	Case CY-1235/URR Dynamic Loudspeaker LS-		10.1 /10 17 0.7 /0	
1	199/U Radio Receiver R-388/URR			
REFERI	ENCE DATA AND LITERA	TURE:		
REFERI	ENCE DATA AND LITERA	TURE: SHIPPING DATA		e e
REFERI	ENCE DATA AND LITERA	SHIPPING DATA	VOLUME (Cu Ft)	WEIGHT (Lbs
	ENCE DATA AND LITERA	SHIPPING DATA		WEIGHT (Lbs
	ENCE DATA AND LITERA	SHIPPING DATA	VOLUME (Cu Ft)	WEIGHT (Lbs
PKGS	JRING SERVICE: USN	SHIPPING DATA	VOLUME (Cu Ft)	WEIGHT (Lbs
PROCUSPEC 8	JRING SERVICE: USN	SHIPPING DATA	VOLUME (Cu Ft)	

RADIO RECEIVING SET AN/URR-27

3 December 1958

Cognizant Serv:

USN

FSN:

5820-644-4991

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

Std

F16-Q-123894-100

or by other military establishments in general application. It is designed primarily for operation as a pretuned, single-channel receiver with provisions for continuous variable tuning as well as crystal control.

This equipment includes provisions for connecting a panoramic adapter to obtain a visual indication of the received signal frequency. The scanning channel has a bandwidth of 600 kilocycles, flat to within 6 decibels.

The AN/URR-27 is similar to Radio Receiving Set AN/URR-13 in electrical design and mechanical construction. However, the AN/URR-13 covers a frequency range of 225 to 400 megacycles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Rated: 105 to 190

Maximum: 103.9 to 191.9

Tuning Bands: Complete coverage of range with 19 consecu-

tive turns of the tuning control crank

Preset Frequencies:

Manual Tuning: None

Crystal Tuning: One; determined by crystal unit installed

Frequency Control: Crystal-controlled oscillator (crystal

tuning only)

Type Receiver: Superheterodyne

Intermediate Frequency: 18.6 mc ±2 kc

Type Reception: A2 (mcw, tone)

Type Modulation: Am

Input Impedance: 51 ohms

Output:

Audio Channel: 60 mw maximum into 600-ohm load, or 600 mw maximum into 60-ohm load with 7% distortion

Phone Jack: 60 mw maximum into 600-ohm load

Scanning Channel: 10 uv minimum across 50-ohm load for

signal input of 10 uv maximum

Mounting: Shock mounted for bench or shelf; bracket supplied

for standard relay-crack mounting

Power Requirements: 112 w nominal, 120 w maximum; 110-,

115- to 120-v 60-cycle, 1-phase ac



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-27 is an amplitude modulated communication unit used aboard ship, at shore stations,

AN/URR-27 RADIO RECEIVING SET

MAJOR COMPONENTS						
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
2	Instruction Book NAVSHIPS 91771					
1	Radio Receiver R-516/URR-27 including:		8-7/16 x 17-1/2 x 19-1/8	57		
4	Plugs					
2	Mounting brackets			.00		
1 set	Equipment spares		6-1/8 x 19 x 10	23		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91771 NAVSHIPS 91771.2 NAVSHIPS 91771.4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	166.25

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG: MIL-R-15872(SHIPS) and Amendment No. 2		DESIGN COG:	USN, BuShips (RCUE)
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr-52699, 28 J	une 1951

RADIO RECEIVING SET AN/URR-28

3 December 195 Cognizant Serv:	FSN:	5820-665-2245			
	USA		USN	USAF	
TYPE CLASS:	***		Used by	2.5	
STOCK NO:	77.7		7.7		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-28 is a double conversion type superheterodyne unit designed for table mounting. However, brackets are supplied for adaption to rack mounting.

This equipment has projection dial tuning and provisions for local or remote control of 10 preset crystal-controlled channels. No provisions for the use of plug-in coils are furnished.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Number of Bands: 1

Number of Preset Channels: 10 Frequency Control: Crystal Operation: Local or remote Type Modulation: Am Type Reception: Cw, voice

Type Receiver: Double conversion superheterodyne

Special Feature: Projection dial tuning Mounting: Table with adapters for rack

Power Requirements: 105-, 115-, or 125-v, 50- to 60-cycle 1-

phase ac

		MAJOR COMPONENT	S	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Filter assembly			
1	Radio receiver			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92563

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-28 RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE:

USN

SPEC &/or DWG:

MIL-R-16981 (SHIPS)

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

National Co., Inc.

Malden, Mass.

\$10,000.00

RADIO RECEIVING SET AN/URR-29

1 July 1958 Cognizant Serv:	USA	FSN:	5820-567-2358			
		USA		USN	USAF	
TYPE CLASS:		Std			Std	



AN/URR-29

FUNCTIONAL DESCRIPTION:

STOCK NO:

Radio Receiving Set AN/URR-29 is a transportable general purpose HF and VHF equipment used for the monitoring and reception of CW, AM, and FM signals. It can be used in fixed, semifixed, and transportable applications.

2C4565-29

This equipment consists essentially of Radio Receiver R-220/URR, an internal power supply, and accessory components.

It can be used for diversity reception, direction-finding,

frequency-shift radioteletype, facsimile, signal analysis, and single-sideband reception, when operated with suitable associated equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 230
Type Modulation: AM, FM
Type of Signal: Cw, mew, fsk, voice

Power Requirements: 253 w, 115/230-v 48-62-cycle ac

AN/URR-29 RADIO RECEIVING SET

MAJOR COMPONENTS						
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
		(USA)				
1	Antenna Assembly AS-574/ URR	2A264-574	9-3/8 x 7 x 67-3/4			
1	Power Supply PP-660/URR		6-1/4 x 5-3/4 x 11-1/2	3		
1	Radio Receiver R-220/URR	2C4180-220	10-1/2 x 14-3/4 x 19	g		
1	Receiver Case CY-956/URR	6F300-956	17-1/8 x 13-1/4 x 22	3		

REFERENCE DATA AND LITERATURE:

TM 11-882

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	10.7	270

PROCUREMENT DATA

USA, Sig C

PROCURING SERVICE: USA

SPEC &/or DWG: MIL-R-10584A

DESIGN COG:

CONTRACT OR LOCATION CONTRACT OR ORDER NO. UNIT COST

Motorola, Inc. Chicago, Ill. 08714–P-55-51

RADIO RECEIVING SET AN/URR-29X

3 December 195 Cognizant Serv:	FSN:	5820-511-8151			, , , , , , , , , , , , , , , , , , , ,
	USA		USN	USAF	
TYPE CLASS:	Std		Used by		
STOCK NO:				and the second	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-29X is a portable communication unit suitable for fixed, semifixed, or portable installations. It is designed for the reception and monitoring of amplitude-modulated and frequency-modulated signals.

The receiver has provisions for output connections to standard equipments as required for diversity reception, direction finding, carrier-shift radio teletypewriter, facsimile, signal analysis and sideband reception.

This equipment consists essentially of Radio Receiver R644/URR, and related accessory components.

The set is generally similar to Radio Receiving Set AN/URR-29; however, it differs in respect to the radio receiver and other components.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 230

Number of Bands: 7

Type Modulation: Am, fm

Type Reception: A9, F9 (mcw, cw)

Type Presentation: Electric meter

Power Requirements: 22-v to 32-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly AS-574/ URR	5985-264-7527		
1	Cord CD-307A	5995-196-9564	70-13/32	
1	Headset, Electrical H-113/U	5965-504-6370		
	or			
1	Headset, Electrical USN Type No. 49507	5965-128-8757		
1	Receiver Case CY-956/URR	5820-503-1650	13-1/4 x 17-1/8 x 22	
1	Receiver, Radio R-644/URR	5820-519-3939	19 x 14-7/8 x 10-1/2	

REFERENCE DATA AND LITERATURE:

TM 11-5016

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-29X RADIO RECEIVING SET					
	PROCUREMENT DA	TA			
PROCURING SERVICE: USA SPEC &/or DWG:		DESIGN CO	G: USA, Sig (
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST		

RADIO RECEIVING SETS AN/URR-35, -35A, -35B, -35C

3 December 1958

Cognizant Serv:

USN

FSN: AN/UR

AN/URR-35: 5820-665-2375

AN/URR-35A: 5820-665-1245 AN/URR-35B: 5820-642-8747

AN/URR-35C: 5820-644-4773

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

AN/URR-35A: Std



AN/URR-35

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-35, AN/URR-35A, AN/URR-35B, and AN/URR-35C are general purpose very-high-frequency and ultra-high-frequency units used on naval vessels, at naval air and shore stations, or at other military establishments. They provide amplitude-modulated point-to-point communications.

All of these equipments are similar functionally and in appearance. The frequency range, operating modes, sensitivity, and response characteristics are the same for the entire series.

The AN/URR-35 and AN/URR-35A are identical except for minor changes in the values of two resistors.

The AN/URR-35B contains a new blower and a plug-andjack type connection for the blower circuit. The AN/URR-35C eliminates the entire scanning circuit and the test cables included with previous models. There are, in addition, a few minor modifications of resistance values.

Auxiliary apparatus necessary to operate these equipments are the antenna, antenna transmission line, crystal units, power cable, audio output cable, headphones, and loudspeaker or other responsive devices.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Nominal: 225 to 400

Maximum: 222.75 to 404.0 Tuning Bands: 1 (continuous)

AN/URR-35, -35A, -35B, -35C RADIO RECEIVING SETS

Number of Preset Frequencies:

Manual Tuning: None

Crystal Tuning: 1; as determined by crystal unit installed Type of Frequency Control: Crystal-controlled oscillator

Type Receiver: Double superheterodyne Intermediate Frequencies: 18.6 mc; 1.775 mc

Type Modulation: Am

Type Reception: A1, A3 (voice, mc, mcw)

Outputs:

Audio Channel Output: 60 mw into 600-ohm load; 7% maximum distortion

Phone Jack Output: 60 mw into 600-ohm load; 7% maximum distortion

Scan Channel Output: 10 μv minimum across a 50-ohm load, for maximum signal input of 75 μv (AN/URR-35 and AN/URR-35A only)

Frequency Stability: Overall stability for any selected frequency, operating between 103.5 and 126.5 v ac (suing 115-v transformer tap), between -4° F. and $+122^{\circ}$ F. and between 30% and 90% humidity:

For Voltage Variation:

Crystal Operation: Negligible Manual Operation: ±0.02% For Temperature Variation: Crystal Operation: ±0.008%

Manual Operation: ±0.1%

Silencer Circuit:

Effective; Silencing Range: 300-uv input (maximum)

Audio Output Reduction: 40 db under standard output conditions (maximum)

Time-Constant: Less than 0.2 sec

Impedance:

Antenna Input: 50 ohms, coaxial

Audio Channel Output: 600 ohms, nominal Phone Jack Output: 600 ohms, nominal

Scan Channel Output: 50 ohms, coaxial (AN/URR-35.

AN/URR-35A only)

Sensitivity: 8 uv, in series with 50 ohms, for 10-db signalto-noise ratio (signal modulated 30% at 1,000 cps)

Selectivity: 70 to 85 kc down 6 db; less than 190 kc down 60 db Power Requirements: 98 w (with blower off), 108 w (with blower on); 0.97 amps, 105 to 125 v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set $AN/URR-35$:			
1	Electrical Power Cable Assembly CX-1869/U		1-1/2 x 1-3/4 x 52	0.81
.1	Maintenance parts kit			
1	Pair relay rack mounting brackets		1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482/URR-35		8-7/16 x 17-1/2 x 19-1/8	57
1	RF Cable Assembly CG- 839/U			.25
]	Set connector plugs			
	For Radio Receiving Set AN/URR -35A:			
1	Electrical Power Cable Assembly CX-1869/U	***************************************	1-1/2 x 1-3/4 x 52	.81
1	Maintenance parts kit			
1	Pair relay rack mounting brackets		1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482A/ URR-35	***	8-7/16 x 17-1/2 x 19-1/8	57
1	RF Cable Assembly CG- 839/U		1 x 1 x 50	.25
1	Set connector plugs			

RADIO RECEIVING SETS AN/URR-35, -35A, -35B, -35C

MAJOR COMPONENTS—Continued				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/URR-35B:			
1	Maintenance parts kit			
1	Pair relay rack mounting brackets	***************	1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482B/ URR-35		8-7/16 x 17-1/2 x 19-1/8	57
1	Set connector plugs			
	For Radio Receiving Set AN/URR-35C:			
1	Maintenance parts kit			
1	Pair relay rack mounting brackets		1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482C/ URR-35		8-7/16 x 17-1/2 x 19-1/8	55
1	Set connector plugs			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91906 (AN/URR-35 and AN/URR-35B) NAVSHIPS 92022 (AN/URR-35A) NAVSHIPS 92676 (AN/URR-35C)

770.700 M 22 OFF 2 W 1970 A					
PKGS	S VOLUME (Cu Ft)		WEIGHT (Lbs)		
2		5.79	125		
	PROCUREMENT I	DATA			
14	(AN/URR-35A) 20 (Each other model)	DESIGN COG:	USN, BuShips		
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST		
AN/URR-35, -35B: Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr-57142, 14 January 1952	\$1,000.00		
AN/URR-35A: National Co., Inc.	Malden, Mass.	NObsr-57143, 14 January 1952	1,000.00		
AN/URR-35C: Rauland-Borg Corp.	Chicago, Ill.	NObsr-64647, 28 February 1955	1,000.00		

RADIO RECEIVING SET AN/URR-35D

2	D	Lower	10	FO
.3	Decem	ber-	19	Эö

Cognizant Serv:	USN	FSN:			
		USA	USN	USAF	
TYPE CLASS:			Used by	Std	
STOCK NO:					

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-35D is a very-high-frequency and a ultra-high-frequency unit used on naval vessels, at naval air and shore stations, or at any other military establishments.

This equipment is designed primarily for operation as a pretuned, single-channel, crystal-controlled receiver. By selecting a suitable crystal, any channel within the frequency range of the set may be used.

An adjustable carrier relay circuit is provided to allow operation over an input signal range of 2 to 20 microvolts. A panel-mounted pilot light indicates the operation of the carrier relay.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Type Modulation: Am

Type Reception: Voice, mcw

Frequency Control: Crystal or manual Type Receiver: Double superheterodyne

Presentation: Audio type

Input Signal Voltage:

Power Requirements: 105-, 115-, or 125-v, 50- to 60-cycle,

1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGH1 (Lbs)
1	Filter, Low Pass F-318()/ URR-35			
1	Radio Receiver R-482()/ URR-35			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	5.79	125

AN/URR-35D	RADIO	RECEIVING SET	
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PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG: MIL-R-16620A(SHIPS)

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Rauland-Borg Corp.

Chicago, Ill.

and

Western Electric Co.

New York, N. Y.

RADIO RECEIVING SET AN/URR-36

3 December 1958

Cognizant Serv:

USN FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustrations Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-36 is a general purpose amplitude-modulated communication unit used aboard ship or at shore installations. It is essentially a commercial National Company Model HRO-50-1 receiving set. Frequency range coverage is accomplished by use of 12 coil sets.

This equipment includes provisions for connecting a frequency-modulated adapter and a crystal calibrator unit. These accessories may be permanently installed and switched on or off by means of a single front panel control.

Facilities for connecting a vibrator power supply to permit operation from a storage battery are also provided.

TECHNICAL CHARACTERISTICS:

Frequency Range:

Total Coverage: 50 kc to 430 kc and 480 kc to 35,000 kc

Number of Bands: 12

Coil Set A:

General Coverage: 14 mc to 30 mc Bandspread: 27 mc to 30 mc

Coil Set B:

General Coverage: 7 mc to 14.4 mc Bandspread: 14 mc to 14.4 mc

Coil Set C:

1

General Coverage: 3.5 mc to 7.3 mc Bandspread: 7 mc to 7.3 mc Coil Set D:

General Coverage: 1.7 mc to 4 mc Bandspread: 3.5 mc to 4 mc

Coil Set E:

General Coverage: 900 kc to 2,050 kc

Coil Set F:

General Coverage: 480 to 960 kc

Coil Set G:

General Coverage: 180 kc to 430 kc

Coil Set H:

General Coverage: 100 kc to 200 kc

Coil Set J:

General Coverage: 50 kc to 100 kc

Coil Set AA:

Bandspread: 27.5 mc to 30 mc

Coil Set AB:

General Coverage: 25 mc to 35 mc

Coil Set AC:

Bandspread: 21 mc to 21.5 mc

Type Modulation: Am; fm by use of accessory unit Type Reception: A1, A2, A3 (Cw, mcw, tone, voice)

Audio Output:

Undistorted: 8 w, approximately

Maximum: 10 w

Imput Impedance: 300 to 600 ohms

Antenna: 50 to 100 ft single-wire, or other transmission line of 70 ohms minimum 300- to 600-ohm line is recommeded

(not supplied)

Power Requirements: 115 w; 110- to 120-v, or 220- to 240-v, 50- to 60-cycle, 1-phase ac; or 6-v dc from storage battery

MAJOR COMPONENTS

			DIMENSIONS	WEIGHT
QTY	ITEM	STOCK NUMBERS	(Inches)	(Lbs)

12 Coil sets A through AC

Loudspeaker HRO-50-TS (for table mounting)

or

HRO-50-RS (for relay rack mounting) Receiver HRO-50-1

5 A I	11	 \neg	K_1	24

AN/URR-36 RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE: NAVSHIPS 91648

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACT OR APPROX
CONTRACTOR LOCATION ORDER NO. UNIT COST

National Co., Inc. Malden, Mass.

RADIO RECEIVING SET AN/URR-36A

	FO
3 December 19	28

Cognizant Serv: USN FSN: 5820-665-2372

USA USN USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-36A is a double conversion superheterodyne communication unit suitable for direct current or alternating current operation. Visual indication of tuning is accomplished by a frequency calibrated slide rule dial and a micrometer dial with 0° to 350° rotation calibrated from 0 to 500

This equipment is furnished with 10 plug-in coil sets as well as an 8-section coil container and an 8-inch permanent magnet loudspeaker.

The AN/URR-36A and Radio Receiving Set AN/URR-36 are basically similar; however, the an/URR-36 has 12 bands while the AN/URR-36A has 10 bands.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 kc to 430 kc; 480 kc to 35,000 kc

Number of Bands: 10 Number of Channels: 1

Number of Plug-in Coil Sets: 10

Type Modulation: AM

Type Reception: A1, A2, A3 (cw, mcw, voice)
Type Receiver: Double conversion supeheterodyne

Loudspeaker: Size: 8 in.

Type: Permanent magnet

Type Mounting: Rack

Power Requirements: 115-v or 230-v, 50- to 60-cycle, 1-phase

ac; or 6-v and 180-v de

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
10	Coil set			
1	Combination unit			
1	Crystal calibrator			
1	Mounting rack			
1	Radio Receiver R-5234/ URR-36A		12-5/8 x 20-1/2 x 29	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92563

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

AN/URR-36A RADIC	RECEIVING SET
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PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG:

USN, BuShips

SPEC &/or DWG:

880F-1(831-138)7115-A, 7 November 1955

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

National Co., Inc.

Malden, Mass.

NObsr-71193

\$1,160.00

RADIO RECEIVING SET AN/URR-39

3 December 1958

Cognizant Serv:

USN

FSN:

USA

USN

USAF

TYPE CLASS:

Used by

STOCK NO:

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-39 is a superheterodyne, table-mounted communication unit designed for amplitudemodulated reception.

This equipment incorporates a built-in crystal filter, a beat frequency oscillator, and an accessory socket.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 kc to 150 kc; 0.54 mc to 31 mc

Number of Bands: 5 Type Modulation: AM

Type Reception: Cw, mcw, voice

Mounting: Table

Number of Plug-in Coils: None

Built-in: Crystal filter

Power Requirements: 110-v to 120-v or 220-v to 240-v, 50-

to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/ URR-39 including:		14-3/4 x 20-1/2 x 27-1/4	
1	Electrical Equipment Rack MT-1529/U			
1	Permanent Magnet Loud- speaker LS-228/U			
1	Radio Receiver R-651/ URR-39			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-39 RADIO	RECEIVING	SET		
		PROCUREMENT	DATA	
PROCURING SERVIC SPEC &/or DWG:	E: USN		DESIGN CO	OG: USN, BuShip
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	τ	Malden, Mass.	NObsr-64281	

5 November 195 Cognizant Serv:	8 USN	FSN:		RECEIVER	AN/URR-type 51J-4
		USA	USN	USAF	
TYPE CLASS:		Used by	Used by		
STOCK NO:					



51J-4

FUNCTIONAL DESCRIPTION:

Receiver 51J-4 is a superheterodyne radio receiver capable of being tuned to any amplitude-modulated signal within the frequency range of the unit. When advantageous, it uses single, double, or triple conversion in tuning throughout its entire frequency range. The equipment is calibrated for direct reading in both megacycles and kilocycles, and tuning is linear with a uniform bandspread.

The receiver is designed for fixed or mobile station use. The antimagnetic case, made of aluminum, is suitable for either table or rack mounting.

The 51J-4 is similar to Radio Receiver R-388/URR, part of Radio Sets AN/GRC-26A, AN/GRC-26B, and AN/GRC-26C.

TECHNICAL CHARACTERISTICS:

Frequency Range: 540 ke to 30.5 me

Frequency Stability: Dial calibration at room temperature—within 300 cps if nearest 100-kc calibration point is used to adjust the fiducial

Type Signal: AM

Type Reception: Cw, mcw

Sensitivity:

Band 1: Less than 15 μv gives 1 w with 10 db signal-to-noise ratio

Band 2: Less than 5 μv gives 1 w with 10 db signal-tonoise ratio

Frequency Response:

Spurious: Down at least 40 db

Audio (Overall): 3 db (maximum) at 200 cps and 7 db (maximum) at 2,500 cps when 6-kc filter is used

Automatic Volume Control: Less than 3.5 db increase in audio power output with increase in RF signal from 5 to 125,000

Noise Limiter: Series type ahead of first audiostage

S Meter: Calibrated in 20, 40, 60, 80, and 100 db above ave threshold and -10 to +6 db audio level with 6 mw as reference

Audio Power Output: 1.5 w at 1,000 cps with less than 15% distortion

Output Impedance:

Audio Output: 4 and 600 ohms

IF Output: 50 ohms

RF Output: Designated to operate into high impedance whip or single-ended antenna

Temperature Range: -20° to +60°C

Power Requirements: 85 w, 115- or 230-v 45- to 70-cycle ac

AN/URR-type RECEIVER

MAJOR COMPONENTS					
QTY	ПЕМ	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1 set	Equipment spares				
1	Mechanical filter, 1.4 kc				
1	Mechanical filter, 3.1 kc				
1	Mechanical filter, 6 kc				
1	Receiver 51J-4		12-3/8 x 13-1/8 x 21-1/8		
1	Speaker		7 x 11 x 13		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92324

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USN, BuShips	DESIGN CO	OG: Commercial
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr-71045, 26 Sep- tember 1955	\$1,307 with equipment spares

AMATEUR-BAND RECEIVER AN/URR-type

6 November 1958

Cognizant Serv: USN FS

75A-4, 75A-4 (MOD)

Cognizant Serv:	0314	1.914:		13/4, 13/-4	(IVICD)
		USA	USN	USAF	
TYPE CLASS:		TA W	Used by	lee.	
STOCK NO:					



75A-4

FUNCTIONAL DESCRIPTION:

Amateur-Band Receivers 75A-4 and 75A-4 (mod) are used primarily for amateur reception on the seven high-frequency amateur bands. They are dual conversion receivers on all bands except 160 meters where single conversion is used. They are designed for single-sideband reception.

Both receivers incorporate the following features: separate detectors for double- or single-sideband reception; a fast attach; a slow release automatic-volume-control system fast enough to respond to the first few cycles of a sideband transmission that does not require a carrier for operation; a bandpass tuning system where the receiver beat frequency oscillator is mechanically ganged and tracked with the main tuning dial; a Q multiplier that results in less loss of intelligibility while still eliminating heterodynes; space for three mechanical filters that allow the operator to tailor the set to his requirements; a noise limiter designed to clip both the positive and negative peaks of the detected signal; a crystal calibrator circuit that presents calibration signals every 100 kilocycles.

The 75A-4 and 75A-4 (mod) differ only in that the 75A-4 (mod) frequency bands are different and minor mechanical changes have been incorporated. In both receivers, more than one frequency band may be included in a single frequency range.

The amateur-band receivers are designed for table mounting. However, a rack mounting bracket assembly is available so that they can be adapted for standard relay rack mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 30 Frequency Band Data:

75A-4:

1.5 to 2.5 mc

3.2 to 5.2 mc

6.8 to 7.8 mc

14 to 15 mc

20.8 to 21.8 mc

AN/URR-type AMATEUR-BAND RECEIVER

26.5 to 27.5 me 28 to 30 me 75A-4 (Mod): 1.5 to 2.5 me 3.2 to 6.2 me 6.8 to 7.8 me 13 to 15 me 29 to 30 me

Type Signal: AM

Type Reception: Ssb, cw, mcw

Sensitivity: 1 μ v for 6 db signal-to-noise ratio with 3-kc bandwidth

Selectivity: Determined by choice of mechanical filter Avc Data:

Audio Rise: Less than 3 db for 5- to 200,00 μv inputs Time Constants:

Rise Time: 0.01 second fast, .01 second slow Release Time: 0.1 second fast, 1 second slow

IF and Image Rejection: All greater than 50 db down

Audio Data:

Output: 0.75 w with a 3- μ v signal, 30% modulated Output Impedance: 500 ohms, 4 ohms

Audio Circuit Response: ± 3 db at 100 to 5,000 cps

Distortion: Less than 10%

Noise Limiter:

AM: Adjustable clip point, automatic carrier reference Cw—ssb: Adjustable clip point, clip reference controlled by flat ave

Frequency Stability (At 14.5 Mc):

Temperature: Not more than 1,200 cps drift from 0° to 60° C

Warm-up: Drift does not exceed 100 cps during any 10minute period after 30-minute warmup.

Voltage: Frequency does not change more than 100 cps for line voltage changes of $\pm 10\%$.

Humidity: Frequency does not change more than 50 cps for humidity changes from 0 to 90%.

Dial Accuracy After Calibration, All Bands: ±300 cps
Antenna Input: 50 to 150 ohms terminal impedance

Power Requirements: 85 w, 105- to 125-v 50- to 60-cycle ac

MAJOR COMPONENTS

	YTÇ	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1		Amateur-Band Receiver, Collins Type 75A-4 or 75A-4 (mod) consisting of:		10-1/2 x 15-1/2 x 17-1/4	35
1	set	Equipment maintenance parts			
1		Connector UG-21B/U (75A-4 only)			
1		Mechanical filter, 0.8 kc			
1		Mechanical filter, 3.1 kc			
1		Mechanical filter, 6.0 kc			
1		Speaker, Collins Type 270-G-3 (75A-4 only)		9-1/8 x 11-1/8 x 15	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92788

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

AMATEUR-BAND RECEIVER AN/URR-type

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:

USN, BuShips

DESIGN COG:

Commercial

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Collins Radio Co.

Cedar Rapids, Iowa

NObsr-71287, 27 April

\$1,126 with 1956 (75A-4)

NObsr-71289, 27 April 1956 (75A-4 MOD)

equipment spares

\$1,126 with equipment spares

1 July 1958

Cognizant Serv:

USA

FSN:

USA

N:

AR-88 (RCA)

USAF

USN

TYPE CLASS: STOCK NO:



AR-88 (RCA)

FUNCTIONAL DESCRIPTION:

Radio Receiver RCA Model AR-88 is a commercial radio receiving equipment, two models of which have been procured. The AR-88-D (shown above) is the cabinet-inclosed version and is used for AM (voice, cw, and mew) communication in the HF range in point-to-point, ground-to-air, ship-to-shore, and similar applications.

The AR-88-F (not illustrated) is panel-mounted and is designed for diversity applications at fixed-plant installations.

The AR-88-F differs from the AR-88-D by having auto-

matic volume control, IF gain control, a diode output circuit, and provision for connection to a tone keyer rather than to a transmitter relay.

Both models have the same technical characteristics.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 32.0

Type Modulation: AM

Type of Signal: Voice, ew, mew

Power Requirements: 100-165/190-260-v 50/60-cycle ac

LOCATION

CONTRACT OR

ORDER NO.

APPROX

UNIT COST

PROCURING SERVICE: USA

SPEC &/or DWG:

CONTRACTOR

4 December 1958

Cognizant Serv: USA FSN:

AR-88D(RCA)

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

Used by



AR-88 (RCA)

FUNCTIONAL DESCRIPTION:

Radio Receiver AR-88D is a 14-tube, general purpose medium frequency receiver used principally for communication at corps and higher headquarters in point- to-point, ground-to-air, ship-to-shore, and similar applications. The equipment is contained in a metal cabinet for table mounting.

The following equipment is used, but is not supplied with Radio Receiver AR-88D: antenna, headset or loudspeaker.

Radio Receiver AR-88F has been procured under official nomenclature Radio Receiver R-320/FRC, and is described in this handbook under that type number.

TECHNICAL CHARACTERISTICS:

Frequency Range: 540 to 32,000 kc in 6 bands Band 1: 540 to 1,600 kc Band 2: 1,570 to 4,550 ke

Band 3: 4,450 to 12,150 kc

Band 4: 11,900 to 16,600 ke

Band 5: 16,100 to 22,700 ke

Band 6: 22,000 to 32,000 ke

Reception: Cw, mcw, or AM voice

Antenna: Various types

Receiver Type: Superheterodyne

Intermediate Frequency: 455 kc Output Impedance: 2.5 ohms and 600 ohms

Maximum Undistorted Output: 2.5 w

Power In put: 100 w

Power Requirements: 100- to 165-v or 190- to 260-v, 50- to 60-cycle ac; or 6-v and 250- to 300-v dc from battery or vibrator

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Coil-adjustment tool	6R38476		
1	Plunger-trimmer tool	6R38475		
1	Radio Receiver AR-88D		11 x 19-1/4 x 19-1/4	ξ
1	Set screw wrench	6R57400		

REFERENCE DATA AND LITERATURE:

IB-25927-3 TM 11-880

SPEC & /or DWG:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.15	140
9	PROCUREMENT DATA	
PROCURING SERVICE: USA	DES	SIGN COG: USA, Sig C

		CONTRACT OR	APPROX
CONTRACTOR	LOCATION	ORDER NO.	UNIT COST

Radio Corporation of America Camden, N. J.

1 July 1958

Cognizant Serv:

USA

FSN:

BC-312, -A, -C thru N: 5820-164-7230

BC-312-()

BC-312-HX, -NX: 5820-164-6371

USA

USN

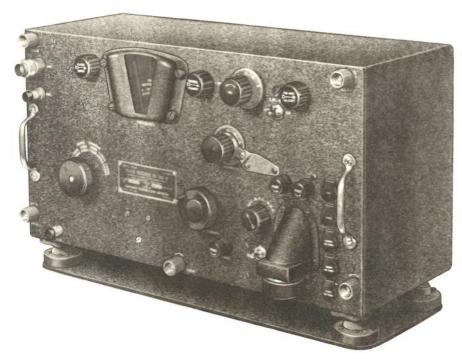
USAF

TYPE CLASS: STOCK NO:

Std

2C4312

L/Std



FUNCTIONAL DESCRIPTION:

Radio Receiver BC-312-() is an MF and HF, AM (voice, tone, and cw) general utility radio receiving equipment widely used as part of such radio sets as the AN/GRC-26 and SCR-399. It can be used in mobile, vehicular, fixed-plant, or airborne radio communication applications.

This equipment consists of a single primary operating component. It can be used with a loudspeaker or headphones.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.0 in 6 bands

Type Modulation: AM

Type of Signal: Cw, tone, voice

Power Requirements: BC-312 (most models): 12-14-v dc (storage battery); BC-312-HX, -NX: 24-28-v dc (storage battery)

AN/URR-type	RADIO	RECEIVER
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MAJOR COMPONENTS

DIMENSIONS WEIGHT **ITEM** STOCK NUMBERS QTY (Inches) (Lbs)

(FSN)

Radio Receiver BC-312 5820-164-7230 (Equipment consists of only one major component.)

10 x 9-1/16 x 18-1/16

58

REFERENCE DATA AND LITERATURE:

TM 11-850

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs) 25-3/8 x 21-7/8 x 14-3/8 4.7 120

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC & /or DWG: (USA)71-914 DESIGN COG: USA, Sig C

CONTRACT OR APPROX LOCATION ORDER NO. **UNIT COST** CONTRACTOR 4611-P-42 Farnsworth Television & Radio Ft. Wayne, Ind.

1 July 1958					NADIO RECEIVER	vial nuv-rhhe	
Cognizant Serv:	USA FSN: 5820-164-63		5820-164-6374			BC-314-()	
		USA		USN	USAF		
TYPE CLASS:		Std			lane.		
STOCK NO:		2C4314					



BC-314

FUNCTIONAL DESCRIPTION:

Radio Receiver BC-314-() is a lightweight, portable, battery-operated, AM radio receiving equipment used for voice, cw, and tone signal communication in the LF and MF bands. It is a general purpose equipment that can be used in fixed-station, mobile, or vehicular applications.

This equipment consists of a single cabinet-inclosed superheterodyne radio receiver, which is the battery-operated version of Radio Receiver BC-344, and is used as a component of such equipment as Radio Set SCR-177-B.

It uses a conventional straight wire or a vehicular whip-type antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 1.5

Type Modulation: AM

Type of Signal: Cw, tone, voice

Power Requirements: 12- to 14-v dc from storage battery

AN/URR-typ	e RADIO RECEI	√ER			
		MAJOR COMPO	ONENTS		
QTY	ITEM	STOCK NUMBE	RS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)			
	io Receiver BC-314-(consists of only one ma		10	x 9-1/16 x 18-1/16	61.5
REFERENCE TM 11-850 TM 11-4002	DATA AND LITE	ERATURE:			
		SHIPPING D	ATA		
PKGS			VOL	UME (Cu Ft)	WEIGHT (Lbs)
1		9	4.7		120
		PROCUREMENT	DATA	12	=
PROCURING SPEC &/or D				DESIGN CO	OG: USA, Sig (
CONTRACT	OR	LOCATION	V	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Te	elevision & Radio Co.			13462-P-42	

1 July 1958					KADIO RECEIVER	MM/UNN-Lype
Cognizant Serv:	USA	FSN:	5820-162-8759			BC-787-()
		USA		USN	USAF	
TYPE CLASS:		L/Std	,	de ser		
STOCK NO:		2C4787				



BC-787

FUNCTIONAL DESCRIPTION:

Radio Receiver BC-787-() is a 3-band, AM and FM, voice and cw equipment operating in the VHF range. It can be used in fixed-plant, point-to-point communication, for intercept or monitoring purposes, and for special applications in vehicles as a mobile equipment.

This equipment consists of a commercial (Hallicrafter S-36) table model, communication-type radio receiver, and a shock mount. It can be installed on a standard relay rack and arranged for standby operation at a distance by means of re-

mote control equipment. It is the principal operating component of Radio Set SCR-607 and similar equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 142

Type Modulation: AM, FM

Type of Signal: Voice, cw

Power Requirements: 110 w, 115/230-v 50/60-cycle ac; or 4.5 amp at 6-v dc from A battery and 145 ma at 270-v dc from B battery

AN/URR-typ	10 RADIO RECEIVER			
		MAJOR COMPONENT	S	
.40.00			DIMENSIONS	WEIGHT
QTY	ITEM	STOCK NUMBERS	(Inches)	(Lbs)

(FSN)

Radio Receiver BC-787 5820-162-8759 (Equipment consists of only one major component.)

9-5/16 x 21-1/4 x 14-1/2

REFERENCE DATA AND LITERATURE:

TM 11-867

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.2	170

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC &/or DWG: MIL-R-10235 DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	21686-P-50-51	\$379.22

BF

RADIO RECEIVING EQUIPMENT AN/L	J-XXI	ype	3
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4 December 19	958	ĺ
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Cognizant Serv: USN

FSN: USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment BF is used basically for shipboard or shore installations; it is designed to be used with Radio Transmitting Equipment BE.

The equipment is remotely operated by a receiving control unit at a fixed frequency of 470 mc, and is primarily used to provide visual means of recognition between vessels with Radio Transmitting Equipment BE installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 470 Intermediate Frequency: 40 mc

Reply Signal: Indicating lamp and warning buzzer

Circuit: Superheterodyne

Antenna: Vertically polarized dipole

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Receiver Antenna 66AAB	4	16	0.35
1	Receiver Control 23AAD		7-5/4 x 12-1/4 x 19-1/2	36
1	Receiver unit 46AAB		13-3/8 x 36 x 48	25

REFERENCE DATA AND LITERATURE:

Technical Manual for Radio Receiving Equipment BF

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Bridgeport, Conn.	NOs-82256	

1 July 1958

Cognizant Serv:

USA

FSN: 5820-1

5820-164-6361

R-129()/U

USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std 2C4180-129



FUNCTIONAL DESCRIPTION:

Radio Receiver R-129()/U is a transportable, AM (voice, tone, and cw) radio receiving equipment operating in the medium- and high-frequency bands in fixed station communication, monitoring, or intercept applications.

This equipment is a table model, cabinet-inclosed radio receiver that can be removed from the cabinet and mounted on a standard 19-inch rack. It can be installed and operated in a vehicle by means of appropriate shock mounts.

It uses a doublet antenna with balanced transmission line, a straight wire and ground, or similar antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc. 0.3 to 10.0 in 5 bands

Type Modulation: AM

Type of Signal: Cw, voice, tone

Power Requirements:

Battery: One 6-v storage battery, five 45-v B batteries, and one 45-v C battery

Ac: 180 w, 95–130/190–260-v 25/60-cycle ac or 180 w, 115/230-v 50/60-cycle ac. (Ac operation requires use of Power Supply Unit RA-74(), RA-84(), or RA-94-Å.)

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1 (Favi	Radio Receiver R-129/U in Cabinet CH-104A ipment consists of only one major of	(FSN) 5820–164–6361 (USA) 2C4180–129	12-1/4 x 16-1/2 x 23	73	

REFERENCE DATA AND LITERATURE:

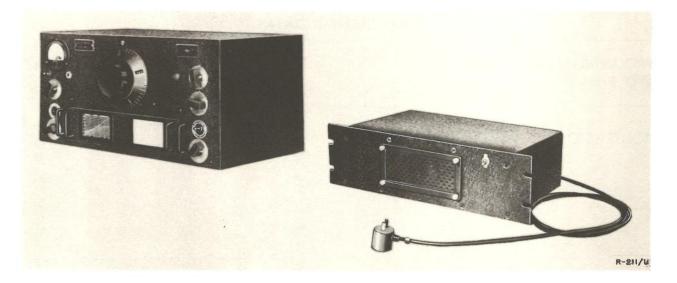
TM 11-4054

SHIPPING DATA

PKGS	VC	DLUME (Cu Ft)	WEIGHT (Lbs)	
1	4.:	3	90	
	PROCUREMENT DATA			
PROCURING SERVICE: USA SPEC &/or DWG: (USA) 71–1523		DESIGN CO	G: USA, Sig C	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Hammarlund Manufacturing Co.	New York, N. Y.			

RADIO RECEIVER AN/L	IRR-type
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1 July 1958			RADIO RECEIV	ER AN/UKK-	AN/UKK-type		
Cognizant Serv:	USA FSN: 5820-194-2998				R-211()/U	
		USA		USN	USAF		
TYPE CLASS:		L/Std					
STOCK NO:		2C4529-22			22		



FUNCTIONAL DESCRIPTION:

Radio Receiver R-211()/U is a general purpose, lightweight, AM (voice, tone, and cw) receiving equipment used for communication in the LF, MF, and HF bands.

This equipment consists of a single radio receiver, which may be table-or rack-and-panel-mounted, and has an external power supply. It operates in nine frequency bands, selected by means of interchangeable coils, and has a crystal-controlled band-pass filter that operates at 0.456 mc.

This receiver can be operated with a conventional single wire or doublet antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.05 to 0.43 and 0.48 to 30.0 in 9 overlapping bands selected by RF coil inserts

Type Modulation: AM

Type of Signal: Cw, voice, tone

Power Requirements: 115-v 50/60-cycle ac with National Type SPU-697 Power Supply; or 6-v dc with National Type SPU-686-S Power Supply

DIMENSIONS (Inches)	WEIGHT (Lbs)
	, , , ,
	79.

REFERENCE DATA AND LITERATURE:

AN/URR-type RADIO RECEIVER		
	SHIPPING DATA	
PKGS	VOLUME (Cu F	t) WEIGHT (Lbs)
3	9.1	211
	PROCUREMENT DATA	
PROCURING SERVICE: USA SPEC &/or DWG:	D	ESIGN COG: USA, Sig C
CONTRACTOR	CONTRAC LOCATION ORDER	

5 December 1958

Cognizant Serv:	USAF FSN:		R-2	278/GR
	USA	USN	USAF	
TYPE CLASS:	**		S/Std	
STOCK NO:			-4	



R-278/GR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-278/GR is a ground-operated, UHF, crystal-controlled AM receiver, operating on any one of 10 preset channels (of a total of 1,750 available channels spaced 100 kilocycles apart) in the 225 to 399.9 megacycle range. It also monitors either of two crystal-controlled, preset, standby, guard frequencies in the 238 to 248 mc range.

The equipment is used in fixed or mobile installations for ground-to-air and point-to-point communication and can be used for navigation applications with Radio Direction Finder Set AN/CRD-6.

The R-278/GR can be remotely controlled over distances up to five miles by means of Radio Set Control C-565/GR and Control Indicator C-806/GR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9

Type of Modulation: AM

Type of Signal: Voice or tone

Power Output: 3w

Power Requirements: 470 w, 115/230-v 60-cycle 1-phase ac

AN	URR-	-type	RADIO	RECEIVER
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MAJOR COMPONENTS						
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
1 (Eq	Radio Receiver R-278/GR uipment consists of only one majo	or component.)	19 x 12-1/2 x 20	115		

REFERENCE DATA AND LITERATURE:

TO 16-35-OA-192-3

	SHIPPING D	ATA	
PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs
1		6	135
	PROCUREMENT	DATA	
PROCURING SERVICE: USAF SPEC &/or DWG:			DESIGN COG:
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/U	RR-type	3
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1	Jul	y	19	58	
C	oan	iz	ant	Serv:	

USA, USN

FSN:

5820-537-3895

R-388()/URR

	USA	USN	USAF	
TYPE CLASS:	Std	Std	Std	
STOCK NO:	2C4180-388	** ·		



R-388/URR

FUNCTIONAL DESCRIPTION:

Radio Receiver R–388($\,$)/URR is a general purpose, AM (voice, cw, and frequency-shift keying) radio receiving equipment operating in the MF and HF bands for fixed-station or mobile applications.

This equipment, consisting of a single self-contained rack-mounted radio receiver, having unusual stability and calibration accuracy, is especially useful for operating on known frequencies without searching or readjustment, and for reception of frequency-shift-keyed signals. It includes a 100-kc, crystal-calibrated oscillator, a coaxial antenna input connector, a coaxial connector for tapping the IF output, and has

provision for connecting an external circuit to control the built-in remote-disabling relay. It can be operated with straight wire or doublet-type antenna systems.

Radio Receiver R-388A/URR, procured by the USN, is identical to the R-388/URR, except that it uses mechanical filters and nonmagnetic side panels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 30.5

Type Modulation: AM Type of Signal: Cw, voice, fsk

Power Requirements: 85 w, 115/230-v 45-70-cycle ac

AN/U	RR-type	RADIO	RECEIVER
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MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1 (Equi	Radio Receiver R-388/URR pment consists of only one major of	5820-537-3895 component.)	10-1/2 x 19 x 13-11/16	35

REFERENCE DATA AND LITERATURE:

TM 11-854

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: US SPEC &/or DWG:	SA, USN	DESIGN COG:	USA, Sig C USN, BuShips	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Collins Radio Co. (R-388/URR) Collins Radio Co. (R-388A/URR)	Cedar Rapids, Iowa Cedar Rapids, Iowa	3470–P–52 Nobsr–69046	\$755.00	

WALLEST TEN MINORIN CHO	RADIO	RECEIVER	AN,	URR-typ	e
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1 July 1958

Cognizant Serv:

USA

FSN:

5820-503-1417

R-389()/URR

USA

USN

USAF

TYPE CLASS: STOCK NO:

Std

2C4180-389

Used by



FUNCTIONAL DESCRIPTION:

Radio Receiver R-389()/URR is a general purpose, lowand medium-frequency, fixed station equipment used in communication, intercept, and direction-finding applications.

For radioteletype applications, this equipment has a 455-kc output that can be connected to a suitable frequency-shift converter to operate teletypewriter equipment.

It is intended for standard rack-and-panel installation in

fixed-plant applications, but may also be used in mobile applications where suitable power is available.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.015 to 1.5

Type Modulation: AM

Type of Signal: Cw, mcw, voice, fsk

Power Requirements: 250 w, 115/230-v 48-62-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
I (Faui	Radio Receiver R-389(URR pment consists of only one n	.,	10-1/2 x 17-1/4 x 19	82	

REFERENCE DATA AND LITERATURE:

TM 11-855

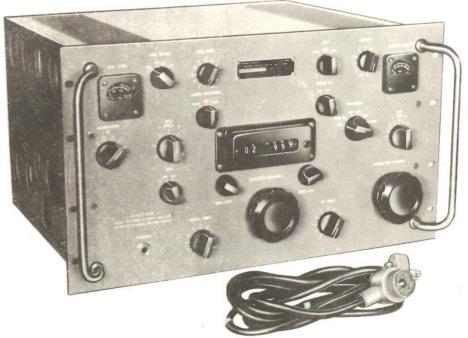
SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.4	115
PROC	UREMENT DATA	
PROCURING SERVICE: US A SPEC & / or DWG: MIL-R-10474	DESIG	GN COG: USA, Sig C

		CONTRACT OR	APPROX
CONTRACTOR	LOCATION	ORDER NO.	UNIT COST

RADIO RECEIVER	AN	URR-type
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1 July 1958 Cognizant Serv:	USA	FSN:	5820-503-1242		RADIO RECLIVER	R-390/URR
		USA		USN	USAF	
TYPE CLASS: STOCK NO:		Std 2C4180	-390		Std	



R-390/URR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-390/URR is a general purpose am (cw, mcw, and voice) medium- and high-frequency equipment of exceptional stability characteristics, used in fixed and mobile applications.

This equipment can be operated in space-diversity and single sideband arrangements for radioteletype communication, in conjunction with such equipment as Radioteletype Terminal Equipment AN/FGC-1, Frequency Shift Conver-

ter CV–116/URR, or Single Sideband Converter CV–157/URR.

This receiver is composed of seven subchassis assemblies that can be removed for troubleshooting and repair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32

Type Modulation: AM

Type of Signal: Cw, mcw, voice, fsk, composite transmissions Power Requirements: 225/270 w, 115/230-v 48-62-cycle ac

AN/URR-type RADIC	O RECEIVER
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MAJOR COMPONENTS

ITEM QTY

STOCK NUMBERS

DIMENSIONS (Inches)

WEIGHT (Lbs)

(FSN)

Radio Receiver R-390/URR (Equipment consists of only one major component.)

5820-503-1242

10-1/2 x 17-1/4 x 19

84.7

REFERENCE DATA AND LITERATURE: TM 11-264B TM 11-856

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs) 3.89 99.76 1

PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC & / or DWG: MIL-R-10474; MIL-R-13947

DESIGN COG: USA, Sig C

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

Motorola, Inc.

Chicago, Ill.

0014-P-56-93

\$431.88

RADIO RECEIVER AN/URR-type

5 December 1958

Cognizant Serv: US

USA

FSN: 5820-510-1605

R-390A/URR

USA

310-1003

USAF

TYPE CLASS: STOCK NO:

 Std

2C4180-390A

Used by

USN

sed by



FUNCTIONAL DESCRIPTION:

Radio Receiver R-390A/URR is a high performance, exceptionally stable, general purpose superheterodyne receiver for use in fixed and mobile applications. It provides reception of continuous wave, modulated continuous wave, voice and frequency-shift keyed signals within a frequency range of 0.5 to 32 megacycles.

The receiver can be operated in a space-diversity receiving system, either of two types of space-diversity radioteletype receiving systems, and in a single-side band radioteletype receiving system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32

Type of Signal: A1, A2, A3, A9, F1

Audio Power Output:

600-ohm Unbalanced Line: 500 mw (minimum)

600-ohm Balanced Line: 10 mw (minimum)

Headphones: 1 mw

IF Selectivity: 100 cps to 16 kc

Antenna:

Unbalanced: Straight wire or random length or vehicular mounted whip

Balanced: 125-ohm terminating impedance

Power Requirements: 225 w, 115/230 v (±10%) 48- to 62-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, radio frequency	(FSN) 5820-697-9667 (USA) 2C332-31	11-3/4 x 4-11/16 x 5	
1	Audio Assembly	(FSN) 5820–694–1061 (USA) 2C640C–1	11-1/8 x 5-1/4 x 3-5/16	
1	Meter, audio level	(FSN) 6625–510–1815 (USA) 3F3307.6–5	1-1/2dia (body) x 1 dia	

REFERENCE DATA AND LITERATURE:

TM 11-856A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.29	99.76

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC &/or DWG: MIL-4-1D474		DESIGN COG: USA, S		
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Collins Radio Co.	Cedar Rapids, Iowa	14214-Phila-51-93	\$2,210.00	

R-391/URR

RADIO RECEIVER AN/URR-type

1 July 1958

Cognizant Serv:

USA

FSN: 5

5815-503-1256

USN

USAF

TYPE CLASS: STOCK NO:

Std

USA

2C4180-391

Used by



R-391/URR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-391/URR is a general purpose MF and HF equipment for both fixed and mobile service and provides reception of AM (cw, mcw, voice) and fsk signals.

This equipment consists of the receiver, which contains its own power supply, and necessary cable assemblies. The antenna, headset, speaker, transmission line, adapter connectors, and a separate power supply for use with an autotune system are required but not supplied.

Two or three receivers may be connected as a spacediversity receiving system for reception of voice signals.

This receiver is one of a series that also includes the R-389/URR and R-390/URR. Eqch one, differing in the

method of tuning and frequency range, has a number of features in common, such as unitized construction and interchangeable subchassis.

This receiver, in mobile applications, requires an external Power Supply PP-629/URR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32 in 32 steps Type Modulation: AM

Type of Signal: Cw, mcw, voice, fsk

Power Requirements: 270 w, 115/230-v (±10%) 48-62-cycle ac; or 3 amp at 24-v dc with Power Supply PP-629/URR for autotune systems only

PROCURING SERVICE: USA

AN/URR-ty	PE RADIO RECEIV	ER		
		MAJOR COMPONE	NTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	dio Receiver R-391/URR consists of only one majo		10-1/2 x 17-1/4 x 19	87.2
REFERENCE TM 11–863	DATA AND LITER	ATURE:		
		SHIPPING DATA		
PKGS		٧	OLUME (Cu Ft)	WEIGHT (Lbs)
1		1	12.4	

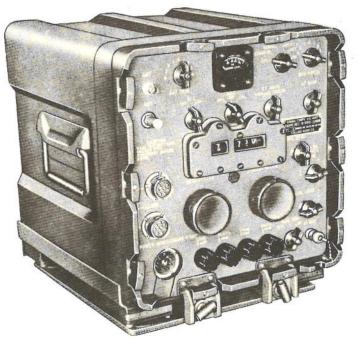
SPEC & / or DWG: MIL-R-10474		DESIGN COO: USA, Sign		
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Collins Radio Co.	Cedar Rapids, Iowa	11424-P-51-53	\$2,808.00	

PROCUREMENT DATA

DESIGN COG: USA, Sig C

RADIO RECEIVER AN/URR-type

1 July 1958 Cognizant Serv:	USA	FSN: 5820-503	3–1250	ı	R-392/U
		USA	USN	USAF	
TYPE CLASS:		Std			
STOCK NO:		2C4180-392			



R-392/URR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-392/URR is a vehicular equipment used for receiving radiotelegraph, voice, and single-channel, frequency-shift radioteletype signals.

This equipment consists of the receiver and tube case. Additional equipment required, but not supplied, includes an antenna, a headset, a speaker, the mounting, power source, and accessories.

It can be used as a conventional communication receiver; as part of a vehicular two-way communication system; or as part of a single-channel, frequency-shift radioteletype system.

This receiver is immersion proof and is sufficiently rugged to withstand parachute delivery when mounted in a truck or in standard U.S. Army parachute delivery container.

It has provision for connection of its 455-kc IF signal output to a frequency-shift radioteletype converter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32 in 32 bands

Type Modulation: AM

Type of Signal: Cw, mcw, voice, fsk Power Requirements: 3 amp, 22-28-v dc

AN/URR-type RADIO RECEIVER

URR

MAJOR COMPONENTS				
ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
Electron Tube Case CY-1298/	(USA) 6F1298-1298	4 x 3-1/16 x 10-1/8	2	

11-1/2 x 14-1/8 x 11

52

REFERENCE DATA AND LITERATURE:

Radio Receiver R–392/URR $\,$ (FSN) 5820–503–1250 $\,$

TM 11-858

QTY

SHIPPING DATA

PKGS	* 1	VOLUME (Cu Ft)	WEIGHT (Lbs)	
1		1.6	80	
	PROCUREMENT DA	ATA		
PROCURING SERVICE: USA SPEC &/or DWG: MIL-R-10474		DESIGN CO	OG: USA, Sig C	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Collins Radio Co.	Cedar Rapids, Iowa	3075-P-51-93		

RADIO RECEIVER	AN	URR-type
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1 July 1958				KADIO KI		MECEIVER MINJUNI	
Cognizant Serv:	USA	FSN:	5820-503-1403			R-520()/URR
		USA		USN	USAF		
TYPE CLASS:		S/Std			20		
STOCK NO:		2C4180)-520	40.00	(a. c.		



FUNCTIONAL DESCRIPTION:

Radio Receiver R-520()/URR is a portable superheterodyne receiving equipment used for troop information. It is capable of receiving AM signals over the broadcast and shortwave bands (total of seven), and of operating with an internal loudspeaker or an externally connected, low-impedance head-set.

Accessory equipment, such as a headset and a long-wire antenna, is not supplied with this equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 1.6; 2 to 4; 4 to 8; 9.4 to 9.8; 11.6 to 12; 14.9 to 15.5; 17.5 to 18.1

Type Modulation: AM
Type of Signal: Voice

Power Requirements: 10/20 w, 115/230-v ac; 7.5/15 w, 115/230-v dc; or 67 ma at 9-v dc (A battery) and 17 ma at 90-v

dc (B battery)

MAJOR COMPONENTS

QTY	ITEM		STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-520(URR)/	(FSN) 5820-503-1403 (USA) 2C4180-520	11-1/16 x 7-3/32 x 17-5/16	20

REFERENCE DATA AND LITERATURE:

TM 11-877

AN/URR-type RADIO RECEIVER

SHIPPING DATA

PKGS VOLUME (Cu Ft)

WEIGHT (Lbs)

1.9

29.5

PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC & /or DWG: PT/DWG SG 6640 DESIGN COG: USA, Sig C

CONTRACTOR

LOCATION

CONTRACTOR ORDER NO.

APPROX UNIT COST

Zenith Radio Corp. (R-520A/URR)

Chicago, Ill.

31241-P-55

\$73.00

VHF RECEIVER AN/URR-type

5 December 1958

Cognizant Serv:	USAF FSIN:			K-5200
-	USA	USN	USAF	
TYPE CLASS:		12.2	A/Std	
STOCK NO:	7.7			



SERVO R-5200

FUNCTIONAL DESCRIPTION:

VHF Receiver, Servo Model R-5200 is an amplitude-modulated and frequency-modulated radio receiving equipment for general communication, laboratory measurements, and direction-finding applications.

This equipment includes all features normally required for communication and laboratory work as integral parts of the receiver. In addition, special outputs are provided for the operation of external apparatus and accessory units to permit use of this receiver as a component of complete communication telemetering and direction-finding systems.

The R-5200 is used with Direction Finder Set AN/TRD-10.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 50 to 200

Type Modulation: AM (A0, A1, A2, A3); FM (F1, F2, F3)

Type of Signal: Cw, mcw, tone, voice, fsk

Power Output: 1 w

Power Requirements: 125 w, 115/230-v 50/60-cycle ac

AN/URR-type VHF RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 (Equi	VHF Receiver R-5200 pment consists of only one maj	or component.)	19 x 14 x 8-3/4	60

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
		
1	1.3	

PROCUREMENT DATA

		PROCUREMENT DA	NIA	
PROCURING SERVICE: SPEC &/or DWG:	USAF		DESIGN COG:	USAF, RADO
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Servo Corporation of America	i.	Long Island, N. Y.		

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN FSN: RAK: 5820-665-1689

RAK, RAK-1 thru -8

RAK-1: 5820-665-3667 RAK-2: 5820-644-4759 RAK-3: 5820-665-3828

RAK-4: 5820-642-8841 RAK-5: 5820-665-2250 RAK-6: 5820-665-3740 RAK-7: 5820-642-8845

RAK-8: 5820-665-3824

USA USN

USAF

TYPE CLASS: STOCK NO:

RAK: F16-Q-241810-200

RAK-1: F16-Q-241830-200

RAK-2: F16-Q-241850-200

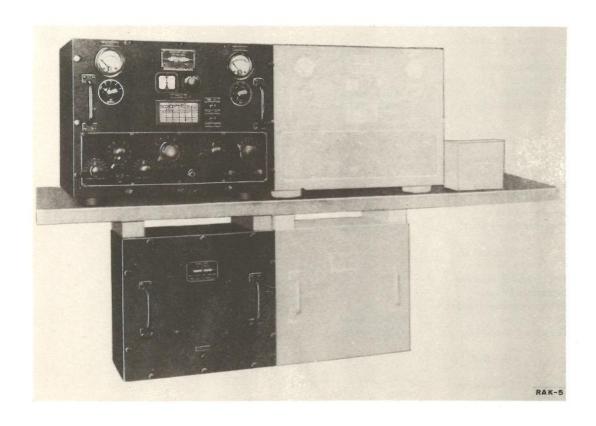
RAK-3: F16-Q-241870-200

RAK-4: F16-Q-241890-200

RAK-5: F16-Q-241910-200

RAK-6: F16-Q-241931-200 RAK-7: F16-Q-241950-200

RAK-8: F16-Q-241970-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RAK and RAK-1 through 8 are communication receivers used for ship, submarine, and shore use. These equipments may operate independently but are generally used with one of the Radio Receiving Equipment RAL series to allow two-channel guarding by one operator. In an emergency, any RAL- and RAK-series equipment combination may use a common antenna.

A control unit may be used with any RAL, RAK-series combination for combining the output of the two receivers and thus make available signals from either or both receivers through two headphone jacks. Use of this control unit is optional and it is not part of any RAK- or RAL-series equipment; however, it is shipped with the RAK-1 through 4 equipments as an accessory, as is the hardware for securing any of these RAK series equipments to any other corresponding series equipment. The control unit and hardware are shipped with the RAL-5, when the RAK-5,-RAL-5 combination is desired.

The RAK and RAK-1 through 8 are essentially similar; however, the RAK operates on batteries and thus requires no ac power unit. The RAK-6, 7, and 8 have been progressively improved to insure elimination of radar interference.

TECHNICAL CHARACTERISTICS:

Frequency Range: 15 to 600 kc Power Output: 170 mw Sensitivity: 2 to 5 µv approx Output Impedance: 600 ohms Circuit Type: TRF

Type of Reception: A1, A2, A3

Power Source Required:

RAK: 6-v storage battery, 180 v B battery

RAK-1 through -8: 200 w; 115-v ±10%, 60-cycle 1-phase

Mounting Data: Receiver, power and control units; Shelf Antenna: 6 feet from any parallel stay, mast, or stack, and erected as high as possible

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
	RAK, RAK-1, 2, 3:				
1 set	Cables and Accessories				
1	Control Unit	CRV-23073	$4-3/4 \times 5-3/8 \times 3-5/8$		
1 set	Equipment Spares				
1 set	Interconnecting Hardware				
1	Receiver V nit	CRV-46044	13-5/16 x 18 x 16-3/32	6	
1	Rectifier Power Unit	CRV-20036	12-1/4 x 14 x 8	4	
	RAK-4:				
1 set	Cables and Accessories				
1	Control Unit	CRV-23073	4-3/4 x 5-3/8 x 3-5/8		
1 set	Equipment Spares				
1 set	Interconnecting Hardware				
1	Receiver Unit	CRV-46044	13-5/16 x 18 x 16-3/32	6	
1	Rectifier Power Unit	CRV-20036A	12-1/4 x 14 x 8	4	
	RAK-5:				
1 set	Cables and Accessories				
1 set	Equipment Spares				
1 set	Interconnecting Hardware				
1	Receiver Unit	CRV-46044	13-5/16 x 18 x 16-3/32	6	
1	Rectifier Power Unit	CRV-20036A	12-1/4 x 14 x 8	4	
	RAK-6, 7:				
1 set	Cables and Accessories				
1 set	Equipment Spares				
1 set	Interconnecting Hardware				

RADIO RECEIVING EQUIPMENT AN/URR-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver Rectifier Power Unit	CRV or CND-46155 CRV or CND-20131	13-5/16 x 18 x 16-3/4 12-1/4 x 14 x 8	74 41
	RAK-8:			
1 set 1 set 1 set 1	Cables and Accessories Equipment Spares Interconnecting Hardware Radio Receiver Rectifier Power Unit	CMV-46155-A CMX-20131-A	13-5/16 x 18 x 16-3/4 12-1/4 x 14 x 8-5/8	41 41

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95231, 900,480, 95232, Instructions, Models RAK and RAK-1 Radio Receiving Equipment, Instructions, Models RAK-2 Radio Receiving Equipment, Instructions, Models RAK-3 Radio Receiving Equipment, Instructions, Models RAK-5 Radio Receiving Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	17.0	371

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USN	DESIGN COG:	BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp.	Camden, N. J.	NXss-19101	
Magnavox Co.	Fort Wayne, Ind.	$ ext{NXsr-38089}$ $ ext{NXss-21827}$	
RCA Manufacturing Co., Inc.	Camden, N. J.	NOs-41370	\$1,800.00
10011 Hamataovaring con, and	,	NOs-51782	
		NOs-55482	
		NOs-61536	
		NOs-70577	
		NOs-95022	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN

FSN: RAL: 5820-665-2058

RAL, RAL-1 thru -8

RAL-1: 5820-665-3666 RAL-3: 5820-644-4760 RAL-4: 5820-642-8844 RAL-5: 5820-665-2131 RAL-6: 5820-642-8556 RAL-7: 5820-642-8843

RAL-8: 5820-665-3825

USA

USN

USAF

TYPE CLASS: STOCK NO:

RAL: F-16-Q-242680-200

RAL-1: F-16-Q-242701-200

RAL-2: F-16-Q-242702-200

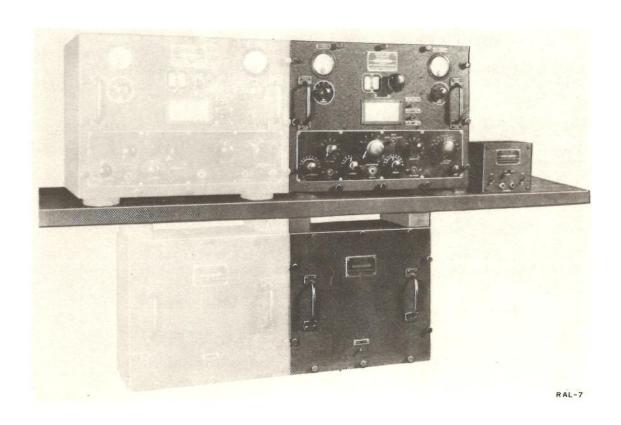
RAL-3: F-16-Q-242703-200 RAL-4: F-16-Q-242720-200

RAL-5: F-16-Q-242740-200

RAL-6: F-16-Q-242760-200

RAL-7: F-16-Q-242780-200

RAL-8: F-16-Q-242800-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RAL and RAL-1 through 8 are broad range communication receivers for ship, submarine, and shore use. These equipments may operate independently, but are generally used with one of the Radio Receiving Equipments of the RAK-series to allow two-channel guarding by one operator. In an emergency, any RAL- and RAK-series equipment combination may use a common antenna.

A control unit may be used with any RAL-, RAK-series combination for combining the output of the two receivers and thus make available signals from either or both receivers through two headphone jacks. Use of this control unit is optional and it is not part of any RAL- or RAK-series equipment; however, it is shipped with the RAK-1 through 4 equipments as an accessory, as in the hardware for securing any of these RAK-series equipments to any corresponding RAL-series equipment. The control unit and hardware are shipped with the RAL-5, when the RAK-5—RAL-5 combination is desired.

The RAL and RAL-1 through 8 are essentially similar;

however, the RAL operates on batteries and thus requires no ac power unit. The RAL-6 through 8 have been progressively improved to eliminate radar interference.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.3 to 23

Type: TRF

Type of Reception: A1, A2, A3

Power Output: 170 mw Sensitivity: 2 to 5 µv

Output Impedance: 600 ohms

Power Source Required:

RAL: 6-v storage battery, 180-v B battery

RAL-1 through 8: 200 w; 115-v $\pm 10\%$, 60-cycle, 1-phase

ac

Power Supply Equipment: Rectifier power unit for RAL-1

through 5 only.

Mounting Data: Receiver and Power Unit—Shelf Antenna—6 ft from any parallel stay, mast, or stack, and erected as high as possible

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
-	For RAL, RAL-1, 2, 3:	,	E		
1	Receiver Unit CRV-46045 Rectifier Power Unit CRV- 20036	**********************	13-5/16 x 18 x 16-3/32 12-1/4 x 14 x 8	69 41	
	For RAL-4:				
1	Receiver Unit CRV-46045 Rectifier Power Unit CRV- 20036A	***************************************	13-5/16 x 18 x 16-3/32 12-1/4 x 14 x 8	69 41	
	For RAL-5:				
1	Control Unit CRV or CND- 23073		4-3/4 x 5-3/8 x 3-5/8	2	
1	Receiver Unit CRV-46045 Rectifier Power Unit CRV- 20036A		13-5/16 x 18 x 16-3/32 12-1/4 x 14 x 8	69 41	
	For RAL-6 and 7:				
1	Control Unit CRV or CND- 23073		4-3/4 x 5-3/8 x 3-5/8	2	
1	Radio Receiver CRV or CND- 46156		13-5/16 x 18 x 16-3/4	69	

RADIO RECEIVING EQUIPMENT	AN	/URR-type
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		MAJOR COMPONENTS—Co	ontinued	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

For RAL-8:

1 set	Cables and Accessories		
1	Control Unit CMX-23073-A	 4-3/4 x 5-3/8 x 3-5/8	2
1 set	Equipment Spares	= 5, 2 h 5 5, 6 h 5 6, 6	4
1	Radio Receiver CMX-46156-A	 13-5/16 x 18 x 16-3/4	69
1	Rectifier Power Unit CMX-		09
	20131-A	 12-1/4 x 14 x 8-5/8	64

REFERENCE DATA AND LITERATURE:

USN

PROCURING SERVICE:

NAVSHIPS 480, 900, 95233, 95234 Instructions, Models RAL and RAL-1 Radio Receiving Equipment; Instructions, Model RAL-2 Radio Receiving Equipment; Instructions, Model RAL-4 Radio Receiving Equipment; Instructions, Model RAL-5 Radio Receiving Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	17.	368

PROCUREMENT DATA

SPEC &/or DWG:		DESIGN	A COG: Buship
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp. for RCA Victor Div.	Camden, N. J.	NXss 10101	\$1,800.00
The Message		NXss 38089	*-/
The Magnavox Co.	Fort Wayne, Ind.	NXss 21877	
RCA Manufacturing Co., Inc.	Camden, N. J.	NOs 41370	
		NOs 51782	
		NOs 55482	
		NOs 61436	
		NOs 70577	
		NOs 95022	

BuShips

DESIGN COG:

RAO-2 thru 7, 9

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv:

USN

FSN:

RAO-2: 5820-644-3394

RAO-3: 5820-644-0976 RAO-4: 5820-644-4766

RAO-5: 5820-665-2248 RAO-6: 5820-665-1675 RAO-7: 6625-665-0506

RAO-9: 5820-669-7031

USA

USN

USAF

TYPE CLASS: STOCK NO:

RAO-2: F16-Q-243570-200

RAO-3: F16-Q-243590-200 RAO-4: F16-Q-243610-200

RAO-5: F16-Q-243630-200

RAO-6: F16-Q-243650-200

RAO-7: F16-Q-243670-200

RAO-9: F16-Q-243710-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RAO-2 through 7 are superheterodyne receivers intended for general purpose radiotelegraph and radiotelephone reception aboard ship or at shore stations. Radiation of RF power from the internal heterodyne oscillator has been reduced to less than 400 micromicrowatts at the antenna terminals.

The Radio Receiving Equipment RAO-9 is very similar to the above equipments; however, circuit modifications better adapt this model for countermeasures use. It is used with a panoramic adaptor to detect radio signals within its frequency range and is relatively unaffected by nearby electrical noise.

TECHNICAL CHARACTERISTICS:

Frequency Range: 0.54 to 30.0 mc Type of Reception: A1, A2, A3 Sensitivity: 15 µv for A3, 10 µv for A1 Signal/Noise Ratio: A1: 20 db; A2: 10 db

Power Output:

RAO-2, 3, 4, 6, 7, and 9—0.3 W into 600 ohm load RAO-5—0.015 W for headset; 2.0 W for loudspeaker

Output Impedance: 600 ohms

Power Source Required: 6 w; 115-v, 50- to 60-cycle ac. (In emergencies the RAO-2 through 7 are powered from 6.3-v 22-w and 135-v 5.4 w batteries)

Antenna: Single-wire, 50- to 200-foot long at 70 ohms impedance

	MAJOR COMPONENTS			
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RAO-2:			
1 1	Mounting Base Radio Receiver	CNA-10125 CNA-46187	2-9/16 x 17-11/16 x 17-1/32 10-11/16 x 17-3/16 x 17-1/4	5.75 75
	For RAO-3:			
1 1	Mounting Base Radio Receiver	CWQ-10125-A CWQ-46187-A	2-11/16 x 16-1/16 x 16-1/16 10-11/16 x 17-3/16 x 17-1/4	5.78 75
	For RAO-4:			
1 1 1	Headphone Mounting Base Radio Receiver	NT-49016 CWQ-10125-A CWQ-46187-B	3/4 x 1-3/4 dia. 2-11/16 x 16-1/16 x 16 1/16 10-11/16 x 17-3/16 x 17-1/4	5.75 75
	For RAO-5:			
1 1 1	Loudspeaker Mounting Base Radio Receiver	CJS-49493 CWQ-10125-A CWQ-46229	8-1/4 x 8-1/4 x 4-3/8 2-11/16 x 16-1/16 x 16-1/16 10-11/16 x 17-3/16 x 17-1/4	5.7 75
	For RAO-6:			
1	Mounting Base Radio Receiver	CNA-10125 CWQ-46229	2-9/16 x 17-11/16 x 17-1/32 10-11/16 x 17-3/16 x 17-1/4	5.7 75
	For RAO-7:			
1	Radio Receiver	CNA-46233	12-7/16 x 19 x 17-3/4	97
	For RAO-9:			
1 1 set	Radio Receiver Equipment spares	CNA-46263	12-7/16 x 19 x 17-3/4	97

RADIO RECEIVING EQUIPMENT AN/URR-type

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,351, 900,489 1B; 900,359 1B; 900,356

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs
3		8.6	215
; *	PROCUREMENT I	DATA	
PROCURING SERVICE: USN SPEC &/or DWG:			DESIGN COG:
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NXs4681 NXsr38306 NXsr55614	
Wells-Gardner and Co.	Chicago, Ill.	NXsr85045 NXss-21446	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN FSN:

RAS-2: 5820-644-4758 RAS-3: 5820-665-3672

RAS, RAS-1 thru -5

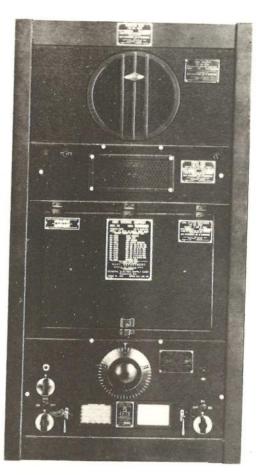
RAS-4: 5820-501-0641 RAS-5: 5820-665-2134

USA

USN

USAF

TYPE CLASS: STOCK NO:



Used by

RAS: F16-Q-244458-200

RAS-1: F16-Q-244461-200

RAS-2: F16-Q-244462-200

RAS-3: F16-Q-244463-200

RAS-4: F16-Q-244464-200

RAS-5: F16-Q-244465-200

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RAS and RAS-1 through -5 are rack-mounted superheterodyne receivers designed for shipboard or shore station reception. All models are supplied with Receiver Unit 46080 which has a narrow IF pass band. IF modification kits may be assembled to convert the 46080 to Receiver Unit 46080A, which has a wide IF pass band.

Noise Limiter 50142 is an adapter used to reduce the effects of pulse-type noise picked up by antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range: 0.19 to 30.0 mc

Type of Signal: Cw, mcw, voice

Power Output: 10 mw into 600-ohm load; 2 w into 5,000-ohm

Output Impedance: 600 ohms for headphones; 5,000 ohms for loudspeaker

Sensitivity:

Cw: 12 µv for 6 mw output Mcw: 7 μv for 6 mw output

Antenna:

Input Impedance: 500 ohms when using coil sets types CNA-47159 to 417162 inclusive; coil sets types CNA-47156 to 47158 inclusive have higher values but in no case does the impedance exceed 5,000 ohms

Length: 50 to 200 ft long

Power Requirements: 70 w, 110/120-v 25/50-60-cycle ac

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Coil Set 47156		2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47157		2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47158		2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47159		2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47160		2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47161		2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47162		2-7/16 x 10-3/8 x 5-3/8	
1	Coil System Container 10037		12-1/4 x 19 x 5-7/8	
1	Loudspeaker 49105 (rack mounting)		8-3/4 x 19 x 4-1/16	9
1	Loudspeaker 49106 (table mounting)		9-3/8 x 10-1/4 x 7-1/4	1
1	Mounting Rack 10036		39-1/2 x 20-1/2 x 12-3/8	2
1	Receiver Unit 46080		8-3/4 x 19 x 10-1/4	3
1	Rectifier Power Unit 20090 (when 25 cps source is used)		5-1/4 x 19 x 9-3/4	2

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95236, 95237, 95238, 95239, Instructions for Radio Receiving Equipment Model RAS, Instructions for Radio Receiving Equipment Model RAS-1.

SHIPPING DATA

WEIGHT (Lbs) VOLUME (Cu Ft) **PKGS**

PROCUREMENT DATA

PROCURING SERVICE: SPEC & /or DWG:

USN

DESIGN COG: USN, BuShips

NOs-66920	
NOs-70176	
NOs-79121	
	NOs-79121 NOs-94477 NXs-455 NXs-20976

5 December 1958	UPER FREQUENCY AIRCRA	AFT RADIO	RECEIVING EQUIPMENT	AN/URR-type
Cognizant Serv: USN	FSN:		9	RAY
	USA	USN	USAF	
TYPE CLASS:	414	W (*	
STOCK NO:	22			
	(No Illustra	tion Availab	le)	
FUNCTIONAL DESCR	IPTION:	Selectivity	: The IF selectivity is down at le	ast ten times at 20
Radio Receiver RAY is a	a self-contained crystal-controlled	ke off r	resonance and is down approximate	ately 1000 times at
superheterodyne receiver de communication. It may be of 23 to 28 mc band by installi	esigned for use in high frequency operated on any frequency within ing the proper crystal.	Automatic	Volume Control: The audio a 500 ohm load does not vary mo	voltage developed ore than 25% from
Frequency Range in Mc: 23 to 28 Sensitivity: 3 μv or better with 0.5 w output		Power Output: 2 w into 500 ohm load Fidelity: 3 db variation maximum from 200 to 3000 cps int a 500 ohm load Power Requirements: 11 to 14 v dc		
QTY ITEM	STOCK NUM	MBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 Radio Receiver M	Model RAY		9-1/4 x 10 x 13-1/2	22
REFERENCE DATA AND Technical Manual for Rad	ND LITERATURE: io Receiver Navy Model RAY (D	Poolittle & Fal	knor Model PR–3N)	
	SHIPPIN	G DATA		
PKGS		V	OLUME (Cu Ft)	WEIGHT (Lbs)
		.7	75	22

MIL-HDBK-161

AN/URR-type SUPER FREQUENCY AIRCRAFT-RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE:

BUSHIPS

DESIGN COG:

BuShips

CONTRACTOR

SPEC & /or DWG:

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Doolittle & Falknor, Inc.

Chicago, Ill.

69814 dated 20 November 1939

RBA, RBA-1, -2, -3, -5, -5A

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv:

USN FSN:

RBA-1: 5820-665-3671

RBA-2: 5820-665-3739 RBA-3: 5820-642-6842

RBA-5: 5820-665-2363 RBA-5A: 5820-644-3393

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBA, RBA-1, -2, -3, -5, and -5A are designed for use aboard vessels and in shore stations for the reception of cw, or modulated or interrupted continuous wave radiotelegraph signals.

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

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.5 to 600 kc

Type of Reception: Cw, mcw, or voice is possible, but some distortion is present below 300 kc due to the high order of selectivity, and the characteristics of filters employed in the audio frequency amplifier.

Output Impedance: 600 and 30 ohms

Input Impedance: Adjustable over a wide range

Sensitivity: 10 μ v input for 6 mw output on cw operation

Frequency Calibration Dial Accuracy: $\pm 1\%$

Power Output:

600 ohm load: 50 mw 30 ohm load: 50 mw Power Requirements:

RBA, RBA-1, -2, -3, -5: 67 w (one receiver, 100 w (two

receivers); 110/115/120-v 55-65-cycle 1-phase ac

RBA-5A: 115-v 400-cycle 1-phase ac

MAJOR	COMPONENT	5

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBA, RBA-1, -2, -3:			
1	Cable, Power	49162		
1	Radio Receiver	46154		
1	Rectifier Unit	20130		
	For RBA-5:			
1	Adapter	49509		
1	Cable, Power	49162		
1	Radio Receiver	46154A		
1	Rectifier Unit	20130-В		
	For RBA-5A:			
1	Adapter	49509		
1	Cable, Power	49162(MOD)		
1	Radio Receiver	46154A(MOD)		
1	Rectifier Unit	20130-B(MOD)		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,473, 900,708, 91319

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
1		28.0	365
	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN	I COG: BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Newark, N. J.	NOs-73055 NOs-91165 NXss-11780 NXss-16498 N5sr-17829 NOsr-39341	\$3,000.00
Radio Corporation of America	Camden, N. J.	NObsr-43335	

RBA-6

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv:

USN

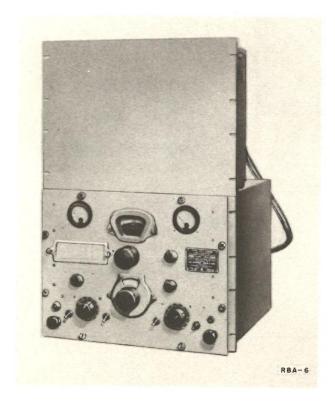
FSN: USA 5820-642-8486

USAF

TYPE CLASS: STOCK NO:

Used by

USN



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBA-6 is designed for use aboard vessels and for shore stations for the reception of cw or modulated or interrupted continuous wave radio signals in the frequency range of 14.5 to 600 kilocycles.

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

This equipment is designed for rack mounting and is electrically and mechanically interchangeable with the other models in the RBA series.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.5 to 600 kc

Power Output:

600 Ohm Load: 50 mw 30 Ohm Load: 500 mw

Impedance Data:

Output: 600 and 30 ohms

Input: Adjustable over a wide range Type Modulation: Cw, mcw, voice

Sensitivity: 10 µv for 6 mw output on A1 operation

Power Requirements: 67 w (one receiver), 100 w (two receiver);

110/115/120-v 55-65-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
I	Meter, audio level decibel;	(USA) 3F3307.9-1		
	range -10 to $+5$ db	(FSN) 6625-220-9981		
1	Meter, voltmeter DC: 0-300 v	(USA) 3F8300-22		
		(FSN) 6625-196-8977		
I	Power Supply 20130-C	(USA) 3H4496.10-2		
		(FSN) 5820–231–0649		
1	Receiver 46300	(USA) 2C4027-1		
		(FSN) 5820–221–0161		
1	Rectifier Unit 20130-B	(= 200, 0000 221 0101		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,708

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	28	365

PROCUREMENT DATA

PROCURING SERVICE:	USN	DESIGN COG:	USN, BuShips
SPEC & /or DWG:			

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Newark, N. J.	NObsr-39341, 30 June 1947	
Radio Corporation of America	Camden, N. J.	NObsr-43335 15 June 1949	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv:

USN

FSN:

5820-665-2204

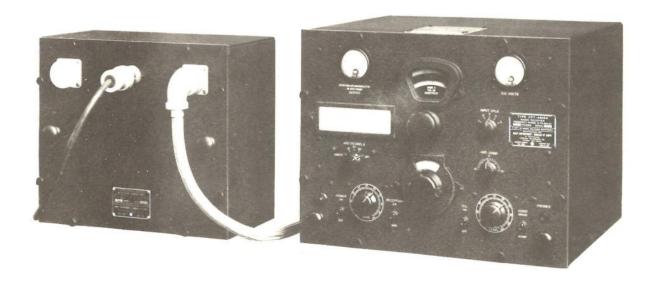
RBA-7

USA

USN

USAF

TYPE CLASS: STOCK NO:



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBA-7 is an amplitude-modulated long-wave communications receiver designed for use aboard ship or land-based stations. The equipment is capable of receiving ew and mew. Voice reception is possible but some distortion is present below .3 me because of audio frequency filtering action and selectivity.

Automatic regulation of receiver output signal voltage (as a function of load resistance) permits from one to twenty 600-ohm headphones to be connected across the output circuit with less than 40 per cent change in output voltage.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Band 1:.015 to .038

Band 2: .038 to .095

Band 3: .095 to .235 Band 4: .235 to .600

Input Impedance: Adjustable over a wide range

Receiver Output: 500 mw into 30-ohm load; 50 mw into 600-

ohm load

Reception, type: A1, A2, and A3 Sensitivity: 10 µv input for 6 mw (cw)

Power Requirements: 115 v, 55- to 65-cycle 1-phase ac

RRA-/

MAJOR COMPONENTS	MA	IOR	CON	APO	NEN	ITS
------------------	----	-----	-----	-----	-----	-----

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Set Equipment Maintenance Parts		9-3/16 x 13-1/4 x 25-3/4	70
1	Radio Receiver CFT-46154-B		14-23/32 x 18-1/2 x 20-9/16	98
1	Rectifier Power Unit CBOG— 20130-D		9-3/4 x 13-1/2 x 15	52

REFERENCE DATA AND LITERATURE:

Technical Manual for Radio Receiver Equipment Model RBA-7.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1 1	13.4 3.1	270 92

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	BuShips		DESIGN C	OG: BuShips	
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Federal Telephone & Radio C	Corp.	Clifton, N. J.	NObsr-52110 26 May 1952	\$2,900.00	

RBB, RBB-1, -2, -2A, -3 thru -6

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN

RBB: 5820-260-5319

RBB-1: 5820-644-3396

RBB-2: 5820-665-3720

RBB-3: 5820-501-3999

RBB-4: 5820-501-3994

RBB-5: 5820-665-2361 RBB-6: 5820-665-3713

USA

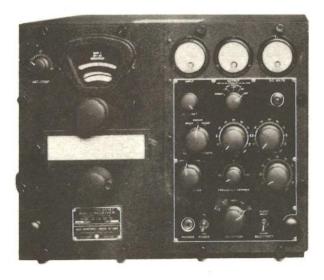
FSN:

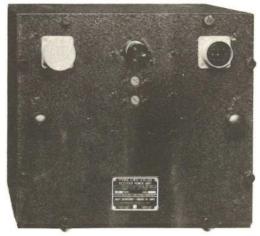
USN

USAF

TYPE CLASS: STOCK NO:

Used by





RBB

FUNCTIONAL DESCRIPTION:

The Radio Receiving Equipments RBB, RBB-1, -2, -2A, -3 through -6 are primarily designed for operation aboard ship and at shore stations. The equipments are designed for voice, mcw, and cw reception. More than one receiver can be operated on a single antenna system with little frequency separation, even when the antenna is adjacent to a transmitter antenna. These sets also have provisions for connecting a panoramic adapter or a frequency-shift converter unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 4

Type of Signal: Cw, mcw, voice Type of Receiver: Superheterodyne

Power Output: 15 mw

Intermediate Frequency: 400 kc Output Impedance: 600 ohms

Input Impedance:

Transmission line—70 ohms

Antenna-300 ohms at lowest frequency of band 1, up to 1500 ohms at high frequency end of band 4

Power Requirements:

RBB, RBB-1, -2, -3, -4, -5, -6: 100 w (one receiver), 160 w (two receiver); 110-120-v 55-65-cycle ac

RBB-2A: 115-v 400-cycle 1-phase ac

MA	IOR	CO	MPO	NFN	2TL
IVI	3 V I		AII O		M I 43

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBB, RBB-1, -2, -3,	-4:		
1	Radio Receiver	46147	14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit	20130	9-7/8 x 13-7/16 x 15	52
	For RBB-2A:			
1	Radio Receiver	47147(MOD)	14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit	20130(MOD)	9-7/8 x 13-7/16 x 15	52
	For RBB-5:			
1	Radio Receiver	46147-D	14-11/16 x 18-1/8 x 20-7/8	85
1	Rectifier Power Unit	20130-B	9-1/2 x 13-7/16 x 15	55
	For RBB-6:			
1	Radio Receiver	46296-A	14-3/16 x 19 x 20-7/8	88
1	Rectifier Power Unit	20130-B	9-13/16 x 14 x 19	59

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,477; 91101, 91469, 91319

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	22.8	312

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:

DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corporation of America	Camden, N. J.	NOs-73056 NOs-91265 NXss-17001 NXsr-39262 NObsr-43335 NObsr-39340 NObsr-52028	\$2,700.00

RBC, RBC-1, -2, -3, -3a, -4, -5, -6

5 December 1958

Cognizant Serv: USN

RBC: 5820-642-7832

RBC-1: 5810-665-2366

RBC-1: 5810-665-2366 RBC-2: 5820-642-8395

RBC-3: 5820-665-2133 RBC-4: 5820-665-2367

RBC-5: 5820-665-2132

RBC-6: 5820-665-3827

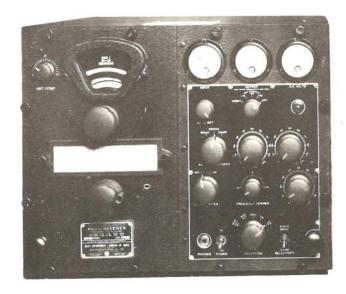
USA

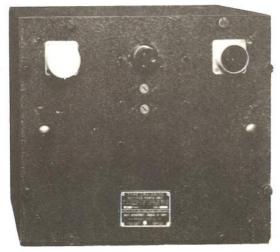
FSN:

USN

USAF

TYPE CLASS: STOCK NO: Used by





RBC

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBC, RBC-1, -2, -3, -3a, -4, -5, and -6 are general purpose, radiotelegraph, or radiotelephone receivers designed for operation aboard all types of naval vessels and at shore stations. More than one receiver can be operated on a single antenna system with little frequency separation when the antenna is adjacent to a transmitter antenna. These equipments have provisions for connecting a panoramic adapter or a frequency shift converter

The RBC series may be used with Radio Receiving Equipment RBB series to provide continuous coverage in the 0.5 to 27 megacycle range.

The RBC series are electrically and mechanically interchangeable with the exception of mountings and RBC-3a which is modified to operate on 400 cycles instead of 55 to 65 cycles. RBC-4 and RBC-6 are for rack mounting; RBC-5 and RBC-6 include Panoramic Adapter Kit 10335 for coupling

to Frequency Shift Converter CV-57/URR or Panorami ^c Adapter Units RBU and RBV.

An antenna and headset are used with Radio Receiving Equipments RBC, RBC-1, -2, -3, -3a, -4, -5, and -6. However, the antenna and headset are not supplied with the equipments.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 27 Band Data:

Band 1: 4 to 6.45 mc

Band 2: 6.45 to 10.30 mc

Band 3: 10.30 to 16.50 mc

Band 4: 16.50 to 27 mc Intermediate Frequency: 400 kc

Reception: A1, A2, A3

Type Receiver: Superheterodyne

Type Modulation: AM

Type of Signal: Cw, icw, mcw, voice

Impedance Data: Output: 600 ohms

Input:

Transmission Line: 70 ohms

Antenna: 300 ohms Power Output: 15 mw

Power Requirements:

For RBC, RBC-1, -2, -3, -4, -5, -6: One Receiver: 100 W, 96% pf; 110- to 120-v, 55- to 65-

cycle, 1-phase ac

Two Receivers: 160 W, 97% pf; 110- to 120-v, 55- to

65-cycle, 1-phase ac

For RBC-3a: 115-v, 400-cycle, 1-phase ac

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBC, RBC-1, -2, -3, -3a, -5, -6:	4,		
1 set 1 set	Accessories Equipment spares			
	For RBC:			
1 1	Radio Receiver NT-46148 Rectifier Power Unit NT-20130			82 52
	For RBC-1:			
1	Radio Receiver NT-46148 or NT-46148-B		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT-20130		9-7/8 x 13-7/16 x 15	52
	For RBC-2:			
1 1	Radio Receiver NT-46148-B Rectifier Power Unit NT-20130			82 52
	For RBC-3:			
1	Radio Receiver NT-46148-C Rectifier Power Unit NT- 20130-B		14-3/4 x 18-1/8 x 20-1/8 9-1/2 x 13-7/16 x 15	82 48
	For RBC-3a:			
1	Radio Receiver NT-46148-C (MOD)		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT-		9-1/2 x 13-7/16 x 15	48

-----14-11/16 x 18-1/8 x 20-7/8

9-1/2 x 13-7/16 x 15

82

MAJOR COMPONENTS

20130-B (MOD)

Radio Receiver NT-42697

Rectifier Power Unit NT-

20130-B

For RBC-4:

MAJOR COMPONENTS—Continued				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBC-5:			
1	Radio Receiver NT-46148-D Rectifier Power Unit NT- 20130-B		14-11/16 x 18-1/8 x 20-7/8 9-1/2 x 13-7/16 x 15	82 48
	For RBC-6:			
1 1	Radio Receiver NT-46297-A Rectifier Power Unit NT- 20130-B		14-3/16 x 19 x 20-7/8 9-1/2 x 13-7/16 x 15	82 48

REFERENCE DATA AND LITERATURE:

RBC, RBC-1, -2: NAVSHIPS 900,477 RBC-3, -4: NAVSHIPS 91101 RBC3a: NAVSHIPS 91319

RBC-5, -6: NAVSHIPS 91469

SHIPPING DATA

PKGS	VOL	UME (Cu Ft)	WEIGHT (Lbs)
For RBC, RBC-1, -2:			207
2 Wood Box	22.8 18.3		305 261
2 Corrugated Carton: For RBC-3, -3a, -4:	16.3		201
2	18.3		261
For RBC-5:	22.2		380
3 For RBC-6:	22.2		
3	25.1		382
	PROCUREMENT DATA	10	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
		CONTRACT OR	APPROX
CONTRACTOR	LOCATION	ORDER NO.	UNIT COST
RCA Victor Div., Radio Corporation of America	Camden, N. J.	For RBC: NOs-73056, 12 April 1940	\$2,400.00 with spares

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

For RBC-1: NOs-91265, 2 September

For RBC-2:

NXss-17001, 17 June

1943

NXsr-39262, 3 No-

vember 1943

For RBC-3:

NObsr-39151, 28 April

1947

For RBC-3a:

NObsr-43335, 15 June

1949

For RBC-4:

NObsr-39340, 30 June

1947

For RBC-5, -6:

NObsr-52028, 25 Sep-

tember 1950

5	Decem	ber	1958

Cognizant Serv:

USN

FSN: USA RBJ, RBJ-1, -2, -3, -4

USAF USN

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBJ, RBJ-1, -2, -3, and -4 are each complete radio receiving equipments suitable in all respects for use at Naval radio shore stations or aboard Naval vessels. The equipments are suitable for the reception of radiotelephone or radiotelegraph signals (cw or mcw) by either headphone or loudspeaker methods. The equipments are of the self-supported rack mounted type—the racks can be table mounted.

A loudspeaker or headphone and an antenna are used with, but not supplied with, Radio Receiving Equipments RBJ, RBJ-1, -2, -3, and -4.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 to 400 kc and 480 to 30,000 kc

Intermediate Frequency: 456 kc Type of Receiver: Superheterodyne Type of Reception: Cw or amplitude modulated mcw

Out Impedance: Phones: 600 ohms Loudspeaker: 5,000 ohms

Input Circuit: Single wire antenna or balanced feedline

Band Changing Method: Frequency range is covered by means of nine plug-in coil sets

Power Output: Phones: 10 mw

Loudspeaker: 2 w Power Requirements:

For RBJ, and RBJ-4: 220- to 240-v, 50- to 60-cycle, 1phase ac

For RBJ-1, and 2: 110- to 120-v, 50- to 60-cycle, 1-phase ac; or, 180-v dc and 6-v dc

For RBJ-3: 220- to 240-v, 50- to 60-cycle, 1-phase ac; or 180-v dc, and 6-v dc; or 6.3-v dc, with Vibrator Power

Supply NT-20146

MAJOR COMPONENTS

			DIMENSIONS	WEIGHT
QTY	ITEM	STOCK NUMBERS	(Inches)	(Lbs)

For RBJ, RBJ-1, -2, -3, and -4:

1	Blank panel (7 in.)	
1	Coil Set 47163	 $2-7/16 \times 5-3/8 \times 10-3/8$
1	Coil Set 47164	 2-7/16 x 5-3/8 x 10-3/8
î	Coil Set 47165	 2-7/16 x 5-3/8 x 10-3/8
1	Coil Set 47166	2-7/16 x 5-3/8 x 10-3/8
1		2-7/16 x 5-3/8 x 10-3/8
1	Coil Set 47167	
1	Coil Set 47168	 2-7/16 x 5-3/8 x 10-3/8
1	Coil Set 47169	 2-7/16 x 5-3/8 x 10-3/8
1	Coil Set 47181	 $2-7/16 \times 5-3/8 \times 10-3/8$
1		 2-7/16 x 5-3/8 x 10-3/8
1	Coil Set 47182	
1	Coil System Container 10075	 11-5/8 x 14 x 19
1	Mounting Rack 10036	 12-3/8 x 20-1/2 x 39-1/2
1		8-3/4 x 10-1/4 x 19
1	Radio Receiver 46081	 0-3/4 X 10-1/4 X 13

For RBJ, and RBJ-4:

5-1/4 x 9-3/4 x 19 1 Power Unit 20125

AN/URR-type RADIO RECEIVING EQUIPM	RADIO R	RECEIVING	EQUIPMENT
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MAJOR COMPONENTS—Continued					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
	For RBJ-1, and -2:				
1	Power Unit 20090	~~~	5-1/4 x 9-3/4 x 19		
	For RBJ-3:				
1	Power Unit 20125		5-1/4 x 9-3/4 x 19		
1	Vibrator Power Unit 20146 (for each two equipments)		0 1/1 1/ 0/1 1/10		

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
	PROCUREMENT D	PATA	
PROCURING SERVICE: USN SPEC & /or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For RBJ-3: General Electric Supply Corp.	Washington, D. C.	11-N140s-98876, 6 March	
For RBJ-4: National Company, Inc.	Malden, Mass.	1942 NXs-11-8604, 1 October 1942	

5 December 1958

Cognizant Serv:

USN

FSN:

RBK-1: 5820-665-2377

RBK-5: 5820-665-1683

RBK-7: 5820-665-2052 RBK-9: 5820-665-1688

RBK-12: 5820-665-3714

RBK-14: 5820-644-3423

USA

USN

USAF

RBK, RBK-1, -5, -7, -8, -9, -12, -13, -14

TYPE CLASS: STOCK NO:

Used by

RBK: F16-M-83-261

RBK-1: F16-Q-250581-200

RBK-5: F16-Q-250585-200

RBK-7: F16-Q-250597-200

RBK-8: F16-Q-250589-200

RBK-9: F16-Q-250591-200

RBK-12: F16-Q-250700-200

RBK-13: F16-Q-250720-200

RBK-14: F16-Q-250740-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBK, RBK-1, -5, -7, -8, -9, -12, -13, and -14 are superheterodyne very high frequency communication receivers designed for the reception of signals within the frequency range from 27.8 to 143 megacycles.

Panoramic Radio Adaptor RBW can be used with RBK to RBK-13, and Dual Panoramic Adaptor Equipment REM with RBK-14.

The RBK, RBK-1 and -9 are identical to Hallicrafters Model S-27D receivers. RBK-5, -7, and -8 are similar to Hallicrafters Model S-27D. Facilities are provided for connection to a panoramic adaptor, and a different power transformer allows operation from either 115- or 230-volts alternating current.

The RBK-12 and -13 are similar to earlier models except that they have hermetically sealed transformers and chokes and permeability-tuned intermediate frequency transformers. The RBK-14 is similar to RBK-12 and -13, except for the addition of a blanking circuit to operate with a dual display panoramic adaptor.

The following equipment is used with, but not supplied with, Radio Receiving Equipments RBK, RBK-1, -5, -7, -8,

-9, -12, -13, and -14: A receiving antenna, 600-ohm headset or a 500-ohm or 5,000-ohm loudspeaker.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143.0, in three bands

Band 1: 27.8 to 46.0 Band 2: 46 to 82 Band 3: 82 to 143

Type of Reception: A1, A2, A3, F3

FM Bandpass: ±75 kc

Sensitivity:

AM: $7 \mu v$ input for 100 db signal to noise ratio FM: $20 \mu v$ input for 20 db reduction of hiss level

Output Impedance: 500 ohms, 600 ohms balanced, 5,000 ohms Antenna Requirements: 50 to 100 ft, single wire; half wave double or multiple dipole

Mounting Data: The chassis and panel assembly are housed in a metal cabinet with a hinged lid and rubber feet for table top use. If desired, the receiver may be installed in a standard relay rack.

Power Output: 3 w at less than 5% distortion

Power Requirements: 115 w; 115- to 230-v, 50- to 60-cycle ac

MAJOR COMPONENTS DIMENSIONS WEIGHT QTY **ITEM** STOCK NUMBERS (Inches) (Lbs) For RBK, RBK-1, -5, -7, -8, -9, -12, -13, -14: 1 set Equipment spare parts 12-3/4 x 15 x 20-1/2 88 For RBK, RBK-1, -9: Radio Receiver CHL-46130 1 For RBK-5, -7, -8: Radio Receiver CHL-46130-A For RBK-12, -13: 9-5/16 x 19-1/8 x 15-13/16 Radio Receiver CHL-46130-C 63 For RBK-14: 9-1/2 x 19-1/8 x 15-5/16 Radio Receiver CHL-46130-D 63

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95244 *RBK-9*: NAVSHI*G*S 95245 *RBK-12*, -13, -14: NAVSHIPS 900,235

SHIPPING DATA

PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBK-12, -13, -14:			6.7	228
		PROCUREMENT	DATA	
PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG:	USN, BuShips
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.		Chicago, Ill.	For RBK: NOs-87293, 16 June For RBK-1: NXs-3265, 20 April 1942 For RBK-5: NXs-9513, 9 July 1942 For RBK-7: NXss-21514 For RBK-8: NXss-28816 For RBK-9: NXss-32842 For RBK-12: NXsr-39265, 10 June 1944 For RBK-13: NXsr-56768, 2 February 1945 NXsr-67988, 10 June 1944 For RBK-14: NXsr-39265, 30 June 1944 NXsr-39265, 30 June 1944 NXsr-85032, 30 December 1944	Į.

5 December 1958

Cognizant Serv:

USN

FSN:

RBK-11: 5820-665-1686

RBK-2, -11

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by RBK-2: F16-Q-250582-200 RBK-11: F16-Q-250590-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBK-2 and -11 are superheterodyne receivers designed to receive amplitude modulated or frequency modulated radiotelephone and radiotelegraph signals. Receiver disabling is provided by means of a "Send-Receive" switch located on the front panel, and a special socket for connection to the control circuit of the associated transmitter.

An antenna and headset are used with, but not supplied with, Radio Receiving Equipments RBK-2 and -11.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143.0

Type Receiver: Superheterodyne

Type of Reception: A1, A2, A3, and F1, F2, F3

Audio Response: Within ±3 db, 40 to 10,000 cps

Audio Output: 3 w into 500, 600, or 5,000 ohms

Features: BFO, AVC

Power Requirements: 80 w; 117-v, 50- to 60-cycle, 1-phase ac

AN/URR-type	RADIO	RECEIVING	EQUIPMENT
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***	MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
	For RBK-2:					
1	Loudspeaker CHL-49172 Radio Receiver CHL-46162		10-7/8 x 16 x 11 9-3/8 x 19-1/8 x 14-3/16	20 63		
	For RBK-11:					
1	Radio Receiver CHL-46241		9-5/16 x 19-1/8 x 15-13/16			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95244 NAVSHIPS 95245

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USN	DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	<i>RBK-11:</i> NXsr-47385	

RBK-15

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv:

USN FSN:

USA

5820-644-0920

USAF

TYPE CLASS: STOCK NO:

Used by

USN



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBK-15 consists of a very high frequency receiver mounted in a sheet-steel, table mounted cabinet. The receiver is entirely self-contained except for headset or speaker, panoramic adapter, and 115- or 230-volt source.

The receiver is capable of receiving both amplitude modulated and frequency modulated phone signals and continuous wave telegraph signals. Automatic volume control and automatic noise limiter circuits are incorporated.

The following equipment is used with, but is not supplied with, Radio Receiving Equipment RBK-15: headset, speaker, or panoramic adapter; single wire or doublet antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143 in three bands

Intermediate Frequency: 5.25 mc

Type of Reception: AM or FM, cw or voice

Output Impedance: Variable, 500, 600, or 5,000 ohms

Tuning Indicator: Meter calibrated in "S" units, 160-0-40

microamperes movement

Antenna: Single wire or doublet

Type of Operation: Local or remote

Cw Audio Frequency: Set at 1,000 cps

Power Requirements: 115- or 230-v, 50- to 60-cycle, 1-phase ac;

or 4.5 amp, 6-v, dc; or 145 ma, 270-v dc

AN/URR-type RAD	IO RECEIVING	EQUIPMENT		
		MAJOR COMPONE	ENTS	
QTY I	ГЕМ	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
Radio Receivin RBK-15 con UHF Radi 46298	g Equipment sists of: o Receiver NT–			
REFERENCE DATA	AND LITERAT	URE:		
		SHIPPING DATA		
PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
		PROCUREMENT DA	TA	
PROCURING SERVICE SPEC &/or DWG:	E: USN		DESIGN COG:	USN, BuShips
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.		Chicago, III.	NObsr-39304	\$750.00 with spares

5 December 1958

Cognizant Serv: USN

N

FSN: 5820-665-1976

RBK-16

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

RBK - 16

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBK-16 is intended primarily for use on ships and other stations as a very high frequency receiver. It is conventional in design but incorporates two features not found in most receivers: a radio frequency amplifier used as a radiation suppressor and a receptacle for connecting a panoramic adaptor.

The receiver is designed for satisfactory operation under extreme conditions of temperature, humidity, and vibration often encountered in marine service. It is especially treated to resist the attack of fungus which may be encountered in tropical areas. An outisde case (dust cover) is provided with each receiver so that it can be mounted on a desk or table. The receiver is self-contained, except for speaker or headset, the antenna, and the receiver connection to an external power source. An automatic noise limiter is provided for the reduction of impulse noise such as that caused by man-made interference.

The following equipment is used with, but is not supplied

with Radio Receiving Equipment RBK-16: headphones or loudspeaker, and antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143

Band 1: 27.8 to 47 Band 2: 47 to 82 Band 3: 82 to 143

Intermediate Frequency: 5.25 mc

Frequency Control: Local self-excited oscillator

Receiver Type: Superheterodyne

Audio Output: 3 w Distortion: Less than 5% Reception: AM, FM, and cw Impedance:

Output: 500 and 600 ohms Input (Antenna): 50 ohms

Power Requirements: 115 w; 115- or 230-v, 50- to 60-cycle, 1-phase ac; or 4.5 amp, 6-v dc; or 145 ma, 270-v de

AN/URR-type	RADIO	RECEIVING	EQUIPMENT
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MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Equipment RBK-16		9-5/16 x 15-3/4 x 19-1/8	78
1 set	Spare parts			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91616

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.1	200

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USN	DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	NObsr-52200, 6 January 1951	\$750.00 with spares

5 December 1958

Cognizant Serv:

SN

USA

FSN: RBL-1: 5820-644-3387

RBL-2: 5820-665-1680

RBL-5: 5820-665-2026 RBL-6: 5820-665-2025

LI

USN

USAF

RBL, RBL-1, -2, -3, -4, -5, -6

TYPE CLASS: STOCK NO:

Used by

RBL-1: F16-Q-251441-200

RBL-2: F16-Q-251442-200

RBL-3: F16-Q-251460-200

RBL-4: F16-Q-251480-200

RBL-5: F16-Q-251500-200

RBL-6: F16-Q-251520-200



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBL, RBL-1, -2, -3, -4, -5, and -6 are tuned radio frequency receivers operating in the frequency range of 15 to 600 kilocycles. The receivers are used at either shore stations or on Naval vesses. They are designed for low radiation and are considered safe for use in combat areas.

The RBL series are electrically and mechanically interchangeable with the exception of the power transformer used in the RBL-4 which is for 115- or 230-volts, alternating current.

TECHNICAL CHARACTERISTICS:

Frequency Range: 15 to 600 kc in six bands

Type Reception: A1 and A2

Power Output: 300 mw undistorted power into a 600-ohm load $Impedance\colon$

Input: Antenna capacitance can vary from 150 $\mu\mu$ f to 2,000 $\mu\mu$ f. Receiver includes a variable compensator control

Output: 600 ohms

A1 Sensitivity: Sharp: 5 μv input for 6 mw

Broad: 10 µv input for 6 mw

Audio Fidelity:

Sharp: 500 cps band-pass at 20 db down, peak response

at 750 cps

Broad: 3,500 cps band-pass at 20 db down, peak response at 1,500 cps

Mounting Data: Receiver is provided with shock-proof mounting base for table mounting only.

Power Requirements:

Built-in Rectifier Power:

Supply: 45 w; 115-v, 50- to 60-cycle, 1-phase ac

Emergency Operation: 6-v heater battery, and 135-v

B battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBL, RBL-1, -2:			
1	Mounting Base CNA-10124 Radio Receiver CNA-46161		2-9/16 x 17-21/32 x 16-5/16 12-5/16 x 17-11/16 x 17-1/4	6 75
	For RBL-3:			
1	Mounting Base CWQ-10124-A Radio Receiver CWQ-46161-A	***************************************	// 02 11 20 0/ 10	6 79
	For RBL-4:			
l Í	Mounting Base CWQ-10124-A Radio Receiver CWQ-46230		2-9/16 x 17-17/32 x 16-5/16 12-5/16 x 17-5/16 x 17-5/8	6 79
	For RBL-5:			
1 I	Mounting Base CNA-10124 Radio Receiver CNA-46161B		2-9/16 x 17-21/32 x 16-5/16 12-5/16 x 17-5/8 x 18-1/16	6 81
	For RBL-6:			
1	Mounting Base CNA-10124 Radio Receiver CNA-46235		2-9/16 x 17-21/32 x 16-5/16 12-7/16 x 19 x 17-7/8	6 104

REFERENCE DATA AND LITERATURE:

For RBL, RBL-1, -2: NAVSHIPS 900,353 For RBL, RBL-3, -4: NAVSHIPS 900,292 For RBL, RBL-5, -6: NAVSHIPS 900,350

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

			RADIO REC	EIVING EQUIPMENT	AN/URR-type
	100111111111111111111111111111111111111	PROCUREME	NT DATA		
PROCURING SERVICE: SPEC &/or DWG:	USN			DESIGN COG:	USN, BuShip
CONTRACTOR		LOCATION		CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.		Malden, Mass.		For RBL: NOs-91741, 8 September 1941 For RBL-1: NXs-456, 10 March 1942 For RBL-2: NXs-4683, 30 April 1942 For RBL-3: NXss-21440, 11 January 1943 For RBL-4: NXsr-38492, 24 September 1943 For RBL-6: NXsr-38306, 22 September 1943 For RBL-6: NXsr-38306, 22 September 1943	\$2,420.00 with spares
Wells-Gardner Co.		Chicago, Ill.		NXsr-55614, 5 April 1944	

RBO, RBO-1, -2, -2a, -3, -4

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN

FSN:

RBO: 5820-669-7046

RBO-1: 5820-642-8446

RBO-2: 5820-636-4746 RBO-3: 5820-644-3400 RBO-4: 5820-642-8249

USA

USN

USAF

TYPE CLASS: STOCK NO: Used by



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBO, RBO-1, -2, -2a, -3, and -4 are superheterodyne receivers for entertainment use aboard ships and for shore installations. The RBO-series is specifically designed to provide optimum performance and high quality reception of voice or tone modulated signals on all frequency bands covered. Provision is made for headphone or loudspeaker reception. The equipment is designed to minimize radiation from the high frequency oscillator and is considered safe for use in combat areas.

The RBO, RBO-1, -2, -3, and -4 are identical except for minor component differences, the addition of a noise limiter in the RBO-1 and -2, and other minor circuit modifications.

The RBO-2a is the RBO-2 modified for operation from a different power source than the other models.

The following equipment is used with, but is not supplied with, Radio Receiving Equipments RBO, RBO-1, -2, -2a, -3, and -4: 600 ohm headphones or loudspeaker with coupling transformer to match 600 or 5,000 ohms, power cord, and antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Three bands

Band 1: 0.53 to 1.60 Band 2: 5.55 to 9.55 Band 3: 9.2 to 15.6

Type Reception: A2 and A3

Impedance:

Input: Antenna input circuit includes a 2-position switch for operation of the receiver with a long or short, singlewire antenna

Output:

For RBO: 600 and 5,000 ohms

For RBO-1, -2, -2a, -3: 600 and 60, 600 or 5,000 ohms (late RBO-3's have balanced output)

For RBO-4: 600 to 30 ohms (variable), and 600 ohms balanced or unbalanced.

Sensitivity: 12 µv

Signal to Noise Ratio: 20 db

Antenna Input: Concentric antenna jack 49120 mounted at rear of receiver for RF connection

Mounting: Rack or shock mounting to table or bench at shore installations; shock mounting aboard ship

Power Output: 30 mw into 600 ohm load; 2 w maximum undistorted power into 600 ohm or 5,000 ohm load

Power Requirements:

For RBO, RBO-1, -2, -3, -4: 85 w; 115-v, 600-cycle, 1-phase ac

For RBO-2a: 85 w; 115-v, 400-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBO-1:			
1	Radio Receiver NT-46139 or NT-46224		13-3/4 x 18-1/2 x 20-1/2	103
	For RBO-2:			
Ī	Radio Receiver NT-46225		13-3/4 x 18-1/2 x 20-1/2	104
	For RBO-3:			
1	Radio Receiver NT-46225-A		13-3/4 x 18-1/2 x 20-1/2	104
	For RBO-4:			
1	Radio Receiver NT-46279	***************************************	13-3/4 x 18-1/2 x 20-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95247

For RBO-2: NAVSHIPS 95259(A)

NAVSHIPS 95248

NAVSHIPS 95249

For RBO-2a: NAVSHIPS 91290 For RBO-3: NAVSHIPS 95249(A)

			MIL-HDBK-161
9	RA	DIO RECEIVING EQUIPMENT	AN/URR-type
	SHIPPING DA	MA	
PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
1			
	PROCUREMENT	DATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Labs, Inc.	Chicago, Ill.	For RBO: NOs-99260, 18 March 1952 For RBO-1: NXss-20313 For RBO-2, -3: NXsr-38078 For RBO-2a: NObsr-43407	\$800.00 with spares

For RBO-4: NXsr-95080

HIGH FREQUENCY RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN

SN FSN:

: 5820-642-7793

RBQ

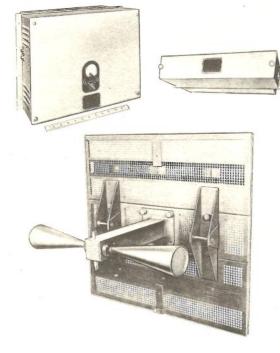
USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by



FUNCTIONAL DESCRIPTION:

High Frequency Radio Receiving Equipment is a radio receiving equipment used in ultra-high frequency radio link. The equipment is suitable for reception or single channel voice, multichannel voice carrier telegraph, or multichannel voice carrier telegraph and two channel voice carrier telephone signals.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156 Frequency Control: Crystal Type of Reception: A2, A3

Power Requirements: 115-v 60-cycle, 1-phase ac

RBQ

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)
i	Antenna D-150423		
1	Antenna D-150427		
1	Antenna Outfit D-150426		
1	Cable Outfit D-150418		
1	Indoor Cabinet X-6360BA List 1		17 x 26-1/2 x 84
1	Outdoor Cabinet D-150426		18 x 32 x 64-1/2
1	Radio-Frequency Panel D-151285		<u>.</u>

or

Radio-Frequency Panel D-150966

WEIGHT (Lbs)

MIL-HI	DBK-161			
AN/UR	R-type HIGH FREQUENCY	RADIO RECEIVING EQU	JIPMENT	
	M.	AJOR COMPONENTS—	Continued	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 1 1	Radio Receiver NT-46168 Spare Parts Panel D-150639 Test Set Oscillator NT-60037		9-3/4 x 14 x 19 3-15/32 x 9-1/2 x 19	
REFERE	ENCE DATA AND LITERAT	'URE:		
		SHIPPING DATA		
PKGS		٧	OLUME (Cu Ft)	WEIGHT (Lbs
		PROCUREMENT DAT	TA .	
	JRING SERVICE: USN		DESIGN COG:	USN, BuShip
CONTI	RACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western	Electric Co.	New York, N. Y.	NXs-149, 9 September 1942	\$2,050.00 with spares

2 December 1958

Cognizant Serv: USN

FSN:

RBS, RBS-1, RBS-2, RBS-2a

USA

USN

USAF

TYPE CLASS: STOCK NO: Used by



RBS-2

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBS, RBS-1, and RBS-2 are general-purpose, high-frequency radio receiving equipments designed for use aboard all types of vessels and at shore stations. The RBS-2a is used aboard special types of vessels only and at shore stations. The receivers can communicate with any radio transmitter operating within the same frequency range.

The RBS-series radio receiving equipments consist of a radio receiver with a separate rectifier power-amplifier unit. They are ruggedly constructed for use under adverse conditions. The illustration shows the radio receiver of the RBS-2.

The RBS and RBS-1 are designed for bulkhead mounting but also may be table-mounted. The RBS-2 and RBS-2a have no bulkhead mounting frame and can be table-mounted only. The RBS-2 is similar to the RBS and RBS-1 except that an antenna connector adapter assembly has been added. The RBS-2a is the RBS-2 modified for operation from a 115-volt,

400-cycle ac power source. This modification includes the shielding of certain leads, substitution of two crystal rectifiers for a vacuum-tube dual-diode rectifier, relocation of several chassis grounds, and disconnection of the capacitor across the filter choke.

Additional equipment required for the operation of the radio receiving equipment are a 600-ohm headphone (49015 or equal), a standard loudspeaker, connecting cable for the speaker, power cable (MCOS-2), and a receiving antenna.

The RBS, RBS-1, and RBS-2 are similar to Radio Receiving Equipment RBS-3 with the exception of minor differences in components and mounting facilities. The electrical design of the RBS-series equipments is basically the same as Portable Radio Receiving Equipment RBM. However, the RBM equipment covers the 200-kilocycle to 2-megacycle frequency range, as well as the frequencies covered by the RBS receivers.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20

Number of Channels: 4

Band 1: 2 to 3.6 mc

Band 2: 3.6 to 6.5 mc

Band 3: 6.5 to 11.4 mc

Band 4: 11.4 to 20 mc

Type Receiver: Superheterodyne

Type Signal: AM

Type Reception: Cw, mcw, voice

Sensitivity: Below 8 µv on all bands with a signal-to-noise ratio of 20 db on cw or 10 db on mcw

Power Output:

At Phonejack of Receiver: 150 mw with 1.7% distortion

At Speaker Receptacle on Rectifier Power-Amplifier Unit:

8 w with 1.7% distortion Output Impedance: 600 ohms

Antenna Requirements: Capacitance of 80 to 500 μμf

Power Requirements:

RBS, RBS-1, RBS-2: 120 w, 115-v 50- to 60-cycle 1-phase ac

RBS-2a: 120 w, 115-v 400-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessories kit		3-1/2 x 5-1/2 x 7-1/2	
1	Antenna adapter assembly (for RBS-2 and -2a)		0 1/2 1 0 1/2 1 1-1/2	
1 set	Equipment spares		9-3/4 x 16-1/4 x 19-1/8	
1	Mounting Rack Assembly 10227 (for RBS, RBS-1)		11-3/4 x 17-3/4 x 19	
1	Radio Receiver 46217 (for RBS, RBS-1)		9-3/4 x 12-1/2 x 17	32
1	Radio Receiver 46217A (for RBS-2, -2a)		10 x 14-1/2 x 17	43
1	Rectifier Power-Amplifier Unit 20234A (for RBS and RBS-1 with serial Nos. 1157 and above)		10-3/4 x 11 x 14	
1	Rectifier Power-Amplifier Unit 20235 (for RBS and RBS-1 with serial Nos. 1 through 1156)		10-3/4 x 11 x 14	
1	Rectifier Unit 20235B (for RBS-2, -2a)		10-3/4 x 11-1/4 x 16	56
1	Splashproof Cabinet		11-1/2 x 16-7/8 x 20-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,324 NAVSHIPS 91353

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBS:	19.5	333
For RBS-1: 1 For RBS 0 000	19.5	360
For RBS-2, -2a:	11.12	301

RADIO RECEIVING EQUIPMENT	AN/URR-type
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PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Maryland Electronic Manufacturing Corp.	College Park, Md.	(RBS-2a)	\$1,000 with equipment spares
Stromberg-Carlson Co.	Rochester, N. Y.	NXs-12481, 27 August 1942 (RBS)	\$1,000 with equipment spares
		NXsr-33641, 30 June 1943 (RBS-1, RBS-2)	\$1,000 with equipment spares
		NObsr-49085, 3 April 1950	\$1,000 with equipment spares
		NObsr-52687, 26 June 1951	\$1,000 with equipment spares

.

3 E)ecei	mbei	195	8
Co	aniza	nt S	erv:	

USN FSN:

RBS-3

	USA	USN	USAF
TYPE CLASS:		Used by	
STOCK NO:			

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBS-3 is a general-purpose, high-frequency radio receiving equipment designed for use aboard ship or at shore stations. It will receive a continuous range of frequencies from 2 to 20 megacycles in four calibrated channels. A beat-frequency oscillator is incorporated to permit satisfactory reception of continuous-wave signals. The RBS-3 can communicate with any radio transmitter operating within the same frequency ranges.

The equipment consists of a radio receiver with a separate rectifier power-amplifier unit. It is ruggedly constructed and designed for table mounting.

Additional equipment required for the operation of the radio receiving equipment are Headphones 49016, a loudspeaker, Speaker Cable NT-DHFA-3, Power Cable NT-MCOS-2, and an antenna.

The RBS-3 is similar to the RBS, RBS-1, and RBS-2 with the exception of minor differences in components and mounting facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20

Number of Channels: 4

Band 1: 2 to 3.6 mc

Band 2: 3.6 to 6.5 mc

Band 3: 6.5 to 11.4 me

Band 4: 11.4 to 20 mc

Type Receiver: Superheterodyne

Type Signal: AM

Type Reception: Cw, mcw, voice

Sensitivity: Below 8 µv on all bands with a signal-to-noise

ratio of 10 to 1 on cw and 3.2 to 1 on mcw

Power Output:

Phonejack: 150 mw Speaker Receptacle: 8 w Output Impedance: 600 ohms

Antenna Requirements: Any antenna having a capacitance of

80 to 500 μμf

Power Requirements: 120 w, 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessories kit			
1	Equipment spare parts box (Type M), including:			
1 set	Spare parts			
1	Radio Receiver R-303/FRR, including:			
1	Antenna Connection Adapter Assembly E-521 or 49120			
1	Mounting Plate A-505			
1	Rectifier power-amplifier unit, including:			
1	Mounting Plate A-901			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91944

AN/URR-type RADIO RECEIVIN	IG EQUIPMENT		
	SHIPPING D	ATA	
PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
2		8.33	235
	PROCUREMENT	DATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Z and W Machine Products, Inc.	Cleveland, Ohio	NObsr-43286, 16 July 1953	\$400 with equip- ment spares

Cognizant Serv:	FSN:			RCE-2
B) 40 A 11 A	USA	USN	USAF	, , , , , , , , , , , , , , , , , , ,
TYPE CLASS:	-	Used by		
STOCK NO:	17 T			

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RCE-2 is a single-frequency superheterodyne communications receiver for service in the 2- to 30-megacycle frequency range. It permits the reception of amplitude-modulated phone, modulated-continuous wave, or unmodulated-continuous-wave radio-frequency signals.

Front panel controls provide selection of crystal filter operation and automatic volume control. An "S" meter serves to indicate the strength of a received signal. Four plug-in coil assemblies, each consisting of three RF and one oscillator coil, are provided to cover the frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 30 in four bands by means of four coil sets

Band Data: 2 to 4 mc; 4 to 7 mc; 7 to 14 mc; 14 to 30 mc Sensitivity: 1 $\mu\nu$ to deliver 2-w output with a 7000-ohm load Selectivity:

Crystal Filter Off: Ratio 2, bandwidth 3 kc; ratio 10, bandwidth 7.5 kc; ratio 100, bandwidth 14 kc; ratio 1,000, bandwidth 21.5 kc

Crystal Filter In: 200-cycle bandwidth maximum selectivity, 2.5-kc bandwidth minimum selectivity

CW, Noise Equivalent: 0.2 µv

Signal-to-Noise Ratio: 16 db at 5 μv

Input Impedance: 500 ohms (average) at antenna terminals

Undistorted Power Output: 1.5 w (maximum)

Automatic Volume Control Characteristic: Flat within ±10 db between 1.0 and 100,000 μv

Power Requirements: 230-v 50/60-cycle 1-phase ac

MAJOR COMPONENT DIMENSIONS (Inches) Coil Set 47166–S (2 to 4 mc) Coil Set 47167–S (4 to 7 mc) Coil Set 47168–S (7 to 14 mc) Coil Set 47169–S (14 to 30 mc) Radio Receiver 46198 Rectifier Power Unit 20180

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95255

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:

USN

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

National Co., Inc.

Malden, Mass.

N40's-13791A, 29 December 1942

RADIO TRANSMITTING SETS AN/URT-2, -2X, -3, -3X, -4, -4X

3 December 1958

Cognizant Serv: U

USA FSN:

USA

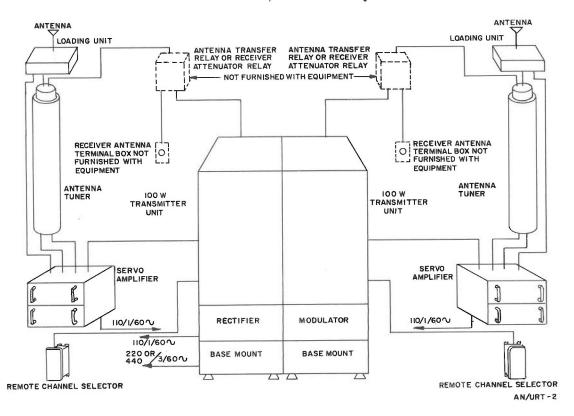
USN

USAF

TYPE CLASS: STOCK NO: Used by

AN/URT-2: F16-Q-123896-200 AN/URT-3: F16-Q-123897-200

AN/URT-4: F16-Q-123395-100



FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/URT-2, AN/URT-2X, AN/URT-3, AN/URT-3X, AN/URT-4, and AN/URT-4X are medium-frequency and high-frequency units designed for shipboard installation and ship-to-shore use. They operate in conjunction with such receivers as Radio Receiving Equipments RBA, RBB, and RBC and the shipboard remote control system.

These equipments provide two frequency bands, 300 kilocycles to 26 megacycles and 2 megacycles to 26 megacycles, with higher power output on the latter. The AN/URT-4 consists of the AN/URT-2 and the AN/URT-3, both of which may be operated simultaneously. The AN/URT-2 may be used as a replacement for Radio Transmitting Equipment TBL, TDE, or TCZ; the AN/URT-3 may replace Radio Transmitting Equipment TBA, TBK, TBM, or TCK.

The AN/URT-2X, -3X, and -4X are identical with the AN/ART-2, -3, -4 respectively, except that these latter sets may require a 400-cycle alternating current power supply.

The transmitters are designed for use with either a 35-foot whip antenna or an L-type wire antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

100 Watts: 0.3 to 26

500 Watts: 2 to 26

Tuning Bands in Mc:

Band 1: 0.3 to 0.8

Band 2: 0.8 to 2 Band 3: 2 to 5

Band 4: 5 to 11

Band 5: 11 to 19

Band 6: 19 to 26

AN/URT-2, -2X, -3, -3X, -4, -4X RADIO TRANSMITTING SETS

Number of Preset Frequencies: AN/URT-2, -2X, -3, -3X: 10 AN/URT-4, -4X: 20 Nominal Carrier Output in Watts: AN/URT-2, -2X: A1, F1, F4 Type Emission: 100 w A3 Type Emission: 67 w AN/URT-3, -3X: A1, F1, F4 Type Emission: 100 w, 500 w A3 Type Emission: 67 w, 333 w AN/URT-4, -4X: A1, F1, F4 Type Emission: 100 w and 100 w/500 w simultaneously A3 Type Emission: 67 w and 67 w/333 w simultaneously Channels: 10 preset and manual Type Modulation: AM, FM Type Emission: A1, F1, A3, F4 (cw, mcw, icw, tone, voice) Modulation Capability: A1: 100% F1: 1,000-cps total shift

F4: From 0- to +2,000-cps shift
Frequency Control: Crystal oscillator; frequency-shift oscilla-

tor
Squelch Circuit: Conventional circuit; cuts off audio amplifier

Squelch Circuit: Conventional circuit; cuts off audio amplifier in absence of audio frequency input signal Harmonic Attenuation (RF Amplifier): 40 db below carrier

level from 0.3 mc to 2 mc; 50 db below carrier level from 0 mc to 5 mc; 60 db below carrier level above 5 mc

Automatic Tuning Time: 30 to 90 sec

Power Requirements:

AN/URT-2: 1,000 w; 115-v, 60-cycle 1-phase ac AN/URT-2X: 1,000 w; 115-v, 400 cycle, 1-phase ac

AN/URT-3: 800 w; 115-v, 60-cycle, 1-phase ac: or 1,800 w; 200-v or 440-v, 60-cycle, 3-phase ac

AN/URT-3X: 800 w; 115-v; 400-cycle, 1-phase ac: or 1,800 w, 220-v or 440-v, 400-cycle, 3-phase ac

AN/URT-4: 800-w; 115-v, 60-cycle, 1-phase ac: or 1,800 w; 220-v or 440-v, 60-cycle, 3-phase ac

AN/URT-4X: 1,800 w; 115-v, 400-cycle, 1-phase ac: or 220-v or 440-v, 400-cycle, 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN URT-2:	/		
1	Antenna Control Group OA- 297/URT including:	***************************************	17-1/2 x 18 x 19	128
1	Antenna Control Group Cabinet CY-1047/URT			
1	Control Indicator C-915/ URT			
2	Electronic Control Amplifier AM-555/URT			
2	Electronic Control Pre- Amplifier AM-556/URT			
1	Power Supply PP-708/URT			
1	Capacitor Assembly CB-5/ URT		10-1/4 x 12-3/4 x 15	25
I	Equipment spare parts		15-1/2 x 16-1/4 x 44	140
1	Radio Frequency Tuner TN-197/URT		13-1/2 x 15-1/4 x 48	165
1	Transmitter Control C-916/URT		4-3/4 x 5-1/4 x 10-3/4	5
1	Transmitter Group OA- 353/URT		16 x 26-1/4 x 55-1/4	765
	For Radio Transmitting Set $AN/URT-3$:			
1	Antenna Control Group OA- 297/URT including:		17-1/2 x 18 x 19	128
1	Antenna Control Group Cabinet CY-1047/URT			

RADIO TRANSMITTING SETS AN/URT-2, -2X, -3, -3X, -4, -4X

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Indicator C-915/ URT			
2	Electronic Control Amplifier AM-555/URT			
2	Electronic Control Pre- Amplifier AM-556/URT			
1	Power Supply PP-708/URT			
1	Capacitor Assembly CB-5/ URT		10-1/4 x 12-3/4 x 15	25
1	Cover CW-287/URT-3		$2-1/2 \times 16 \times 24-1/2$	12
1	Equipment spare parts		15-1/2 x 16-1/4 x 44	140
1	Radio Frequency Tuner TN-197/URT		13-1/2 x 15-1/4 x 48	165
1	Radio Modulator-Power Supply OA-354/URT		16 x 20 x 26-1/8	325
1	Transmitter Control C-916/URT		4-3/4 x 5-1/4 x 10-3/4	5.5
1	Transmitter Group OA- 353/URT		16 x 26-1/4 x 55-1/4	765
	For Radio Transmitting Set AN/URT -4:			
2	Antenna Control Group OA- 297/URT including:		17-1/2 x 18 x 19	128
2	Antenna Control Group Cabinet CY-1047/URT			
2	Control Indicator C-915/ URT			
4	Electronic Control Amplifier AM-555/URT			
4	Electronic Control Pre- Amplifier AM-556/URT			
2	Power Supply PP-708/URT			
2	Capacitor Assembly CB-5/ URT		10-1/4 x 12-3/4 x 15	25
1	Equipment spare parts		15-1/2 x 16-1/4 x 44	140
1	Radio Frequency Tuner TN-197/URT		13-1/2 x 15-1/4 x 48	165
1	Radio Modulator-Power Supply OA-354/URT		16 x 20 x 26-1/8	325
2	Transmitter Control C-916/URT		4-3/4 x 5-1/4.x 10-3/4	5.3
2	Transmitter Group OA- 353/URT		16 x 26-1/4 x 55-1/4	765

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91833(A)

AN/URT-2, -2X, -3, -3X, -4, -4X RADIO TRANSMITTING SETS

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7 (AN/URT-2)	108.8	2,370
8 (AN/URT-3)	122.6	2,803
11 (AN/URT-4)	190.2	4,550

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG: MIL-T-15480A (SHIPS)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr-43409 12 Aug- ust 1949 NObsr-52021	(AN/URT-2) \$21,340.00 (AN/URT-3) \$24,390.00 (AN/URT-4) \$44,220.00

RADIO TRANSMITTING SET AN/URT-6(XN-1)

3	December	1958
-	_	

TYPE CLASS: STOCK NO:

F16-Q-123892-100(USN)

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-6(XN-1) is a very high-frequency unit used aboard ship or submarine, or at shore stations. It employs a control unit that provides limited remote control up to 5 miles. The set can be operated from standard shipboard remote units.

This equipment, when operating with a handset, provides carrier control, audio input to modulator, and receiver monitoring. Two associated amplifier units are employed for monitoring.

The modulator contains special circuits to provide expander, automatic volume control, and clipper-filter action; these features increase the average carrier sideband power under A3 operating conditions. A 1,000-cycle oscillator is included for A2 operation.

Radio Transmitting Sets AN/URT-6(XN-1), AN/URT-7, and AN/URT-10 are functionally similar; however, they differ electrically and mechanically. The AN/URT-6(XN-1) replaces the transmitting sections of Radio Transmitting and Receiving Equipment TBS.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 60 to 80
Frequency Stability: ±0.007%
Frequency Control: Crystal
Type Modulation: AM
Type Emission: A2, A3
Modulation Capability: 100%

Power Output: 30 w

Audio Input: 25 db to +5 db from a reference level of 0.1

to 3.4 v

AF Response: Flat within ±3 db, 300 to 3,500 cps

Impedance:

Microphone: 600 ohms Antenna: 50 ohms

Mounting: Either table or relay rack

Power Requirements: 750 w, 115-v or 230-v, 50- to 60-cycle,

1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Specials Purpose Cable Assembly CX-1826/U			1.75
1	Electrical Special Purpose Cable Assembly CX-1827/U			1.50
1	Electrical Special Purpose Cable Assembly CX-1828/U			1
1	Maintenance parts kit			. 03
2	Radio Frequency Jack UG- 21B/U			.03
1	Radio Transmitter T-334 (XN-1)/URT-6 including:		13-23/32 x 19 x 15	146
1	Amplifier Oscillator AM- 633(XN-1)/URT			
1	Electrical Equipment Cabinet CY-1126/URT			
1	Power Supply PP-773/URT			
1	Radio Modulator MD-163/ URT			
1	Transmitter Control CFT-23555		5-13/16 x 4-7/16 x 3-5/16	4

AN/URT-6(XN-1) RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91576

SHIPPING DATA

VOLUME (Cu Ft) WEIGHT (Lbs) **PKGS**

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

. Federal Telephone and Radio Corp.

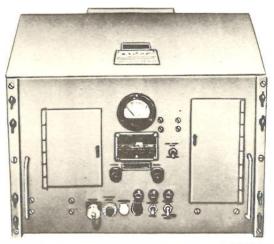
Clifton, N. J.

NObsr-52221, 11 January

RADIO TRANSMITTING SETS AN/URT-7, -7A, -7B, -7C

3 December 195	8		
Cognizant Serv:	USN	FSN:	5820-

Cognizant Serv: USN		FSN:	: 5820-665-2473 (AN/URI-7B)		
		USA	USN	USAF	
TYPE CLASS:			Used by	AN/URT-7: Ltd-Std AN/URT-7A: Std	
STOCK NO.			F16_O_123893_100	An, on -/A. Su	



AN/URT-7

FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/URT-7, AN/URT-7A, AN/URT-7B, and AN/URT-7C are low power, general purpose units designed for radiotelephone and modulated continuous wave communication on ship, submarine, or at shore installations.

This equipment may be mounted on a table or may be removed from its cabinet and mounted in a standard 19-inch relay rack. Remote control operation may be from a standard Remote Radiophone Unit NT-23500 or equivalent. Limited control from a remote location may be obtained with Transmitter Control NT-23555.

Radio Transmitting Sets AN/URT-7, AN/URT-7A, AN/URT-7B, and AN/URT-7C are interchangeable but differ in minor electrical and mechanical design.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156 Frequency Control: Crystal

Frequency Stability: ±0.007% Type Modulation: AM

Type Emission: A2, A3 (cw, mcw, voice)

Power Output: 30 w, nominal

Impedance:

Microphone: 600 ohms input Antenna: 50 ohms output

Audio Input Voltage: 25 to +5 db from a 0.006-w reference level (0.1 to 3.4 v)

Audio Frequency Response: Flat within ±3 db from a 1,000cps reference level, from 300 to 3,500 cps

Audio Frequency Filter: Flat within ±2db from a 1,000-cps reference level, and -50 db at 5,000 cps and over

Input to Clipping Stage: Normally held at 20 ±5 db above the clipping level by action of the avc circuit for variations in the input of -25 to +5 db from 0.006-w reference level

Heat Dissipation: 700 w

Power Requirements: 750 w; 115- or 230-v ±10%, 50- to 60cycle $\pm 5\%$, 1-phase ac, 0.85 pf

MAJOR COMPONENTS DIMENSIONS WEIGHT (Lbs) STOCK NUMBERS (Inches) **ITEM** QTY For Radio Transmitting Set AN/URT-7: 1.75Cable Assembly CX-1826/U 1 1.50 Cable Assembly CX-1827/U 1 Cable Assembly CX-1828/U 1 13/16 x 13/16 x 1-3/4 0.03Connector, Plug UG-21B/U 2

AN/URT-7, -7A, -7B, -7C RADIO TRANSMITTING SETS

MAJOR	COMPONENTS—Continu	ed

(QTY ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T-336/ URT-7 including:		13-23/32 x 16-1/2 x 19	146
1	Amplifier-Oscillator AM-638/URT		5 x 9-31/32 x 14-1/2	
1	Electrical Equipment Cabinet CY-1126/URT		13-23/32 x 14-13/16 x 19	
1	Power Supply PP-773/ URT		12-7/32 x 16-1/4 x 19	
1	Radio Modulator MD- 163-URT		4 x 9-31/32 x 14-3/8	
1 set	Equipment spares		12-1/8 x 16-3/8 x 25-1/8	85
	For Radio Transmitting Set AN/URT -7A:			
1	Cable Assembly CX-1826/U			1.78
1 1	Cable Assembly CX-1827/U Cable Assembly CX-1828/U			1.50
2	Connector, Plug UG-21B/U		13/16 x 13/16 x 1-3/4	.06
	For Radio Transmitting Set AN/URT –7 A :			
1	Radio Transmitter T-336A/ URT-7 including:		13-23/32 x 16-1/2 x 19	146
1	Amplifier-Oscillator AM- 638A/URT-7		5 x 9-31/32 x 14-1/2	
1	Electrical Equipment Cabinet CY-1126A/URT		13-23/32 x 14-13/16 x 19	
1	Power Supply PP-773A/ URT		12-7/32 x 16-1/4 x 19	
1	Radio Modulator MD- 163A/URT		4 x 9-32/32 x 14-3/8	
1 set	Equipment spares		12-1/8 x 16-3/8 x 25-1/8	85
	For Radio Transmitting Set AN/URT -7B:			
1	Cable Assembly CX-1826/U			1.78
1	Cable Assembly CX-1827/U Cable Assembly CX-3154/U			1.50
$\frac{1}{2}$	Connector, Plug UG-21B/U		13/16 x 13/16 x 1-3/4	. 05
1	Radio Transmitter T-336B/ ÜRT-7 including:			146
1	Amplifier-Oscillator AM- 638B/URT		5 x 9-31/32 x 14-1/2	
1	Electrical Equipment Cabinet CY-1126B/URT		13-23/32 x 14-13/16 x 19	
1	Power Supply PP-773B/ URT		12-7/32 x 16-1/4 x 19	

RADIO TRANSMITTING SETS AN/URT-7, -7A, -7B, -7C

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Modulator MD– 163B/URT		4 x 9-31/32 x 14-3/8	
1	Set of equipment spares		12-1/8 x 16-3/8 x 25-1/8	85
	For Radio Transmitting Set AN/URT-7C:			
1	Cable Assembly CX-1826/U			1.7
1	Cable Assembly CX-1827/U			1.5
1	Cable Assembly CX-3154/U			1
2	Connector, Plug UG-21D/U		13/16 x 13/16 x 1-3/4	.0
1	Radio Transmitter T-336C/		13-23/32 x 16-1/2 x 19	146
1	URT-7 including: Amplifier-Oscillator AM- 638C/URT		5 x 10 x 13-3/4	
1	Electrical Equipment Cabinet CY-1126A/URT	***************************************	13-23/32 x 15 x 19	
1	Power Supply PP-773C/ URT		12-7/32 x 16-1/4 x 19	
1	Radio Modulator MD- 163C/URT		4 x 10 x 13-3/8	
1	Set of equipment spares		7-1/2 x 01-1/2 x 21-1/2	27

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91684 (AN/URT-7, -7A, -7B)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For AN/URT-7, -7A, -7B:	11	301
For AN/URT-7C: 2	11.1	336

AN/URT-7, -7A, -7B, -7C RADIO TRANSMITTING SETS

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: MIL-R-15591 (AN/YRT-7, -7A, -7B) MIL-T-15244B (AN/URT-7C)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	(AN/URT-7, -7A) NObsr-52311, 27 June 1951	
Rauland-Borg Corp.			

RADIO TRANSMITTING SETS AN/URT-8(XN-1), -9(XN-1)

3 December 1958

Cognizant Serv:

USN FSN:

5340-205-4797 (AN/URT-9(XN-1))

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/URT-8(XN-1) and AN/URT-9(XN-1) are very-high-frequency and ultra-high-frequency units designed for shipboard or shore station installation. Both are capable for complete remote operation.

The AN/URT-8(XN-1) employed four separate radiofrequency units, each providing four crystal-controlled operating channels. The desired radio frequency can be quickly selected by using a telephone dial system.

The AN/URT-9(XN-1) essentially has the same operating principles as the AN/URT-8(XN-1); however, the AN/URT-9(XN-1) contains 10 radio frequency units. Any two of these units may be operated simultaneously, with separate or the same information being transmitted over each of the channels in operation. The AN/URT-9(XN-1) used two modulators; each with its own independent selector system, capable of applying modulation to any one of the 10 radio frequency units.

The AN/URT-9(XN-1) replaces Radio Transmitting Equipment TDZ. It nets with Radio Receiving Equipment RDZ, AN/URR-13(), AN/URR-35, and Radio Receiver R-278/GR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400 Number of Preset Channels: AN/URT-8(XN-1): 16

AN/URT-9(XN-1): 40 Frequency Control: Crystal Type Modulation: AM

Modulation: 100% Type Emission: A2, A3

Operating Range: Line of sight Frequency Stability: 0.007%

AF Response: Flat within ±3 db (1,000-cps reference level)

from 300 to 3,500 cps

Input Voltage: -25 db to +4 db from a 0.006-w reference

level (0.1 to 3.4 v)

Impedance:

Antenna Terminal: 50 ohms Microphone: 600 ohms

Power Output: 15 w, nominal

Power Requirements: 115-v or 230-v, 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
			1,000,000,000,000	100

For Radio Transmitting Set AN/URT-8(XN-1):

1 Blower-Cable Assembly HD-134(XN-1)/URT Maintenance parts kit Radio Transmitter T-394 1 (XN-1)/URT-8 including: Amplifier-Oscillator Unit AM-803(XN-1)/URT Modulator Unit MD-186 1 (XN-1)/URT1 Special Purpose Electrical Cable Assembly CX-2183(XN-1)/URT

AN/URT-8(XN-1)	-9(XN-1)	RADIO TRANSMITTING SETS
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	MA	JOR COMPONENTS—Co	ntinued	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set $AN/URT-9(XN-1)$:			
	Blower-Cable Assembly HD- 134(XN-1)/URT			
	Maintenance parts kit			
	Radio Transmitter T-395 (XN-1)/URT-9 including:			
.0	Amplifier Oscillator Unit AM-803(XN-1)/URT			
2	Modulator Unit MD- 186(XN-1)/URT			
1	Special Purpose Electrical Cable Assembly CX-2183 (XN-1)/URT			

REFERENCE DATA AND LITERATURE:

Federal Telephone and Radio Corp.

SHIPPING DATA

VOLUME (Cu Ft)

NObsr-52139, 20 December 1950

WEIGHT (Lbs)

	27	PROCUREMENT DATA		
PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG:	USN, BuShips
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

Clifton, N. J.

PKGS

RADIO TRANSMITTING SET AN/URT-10(XN-1)

3 December 1958

Cognizant Serv: USN

FSN:

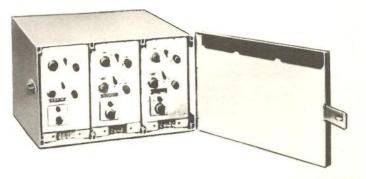
USA USN

USAF

TYPE CLASS: STOCK NO:

Used by





AN/URT-10

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-10(XN-1) is a very-high-frequency and ultra-high-frequency unit used aboard ship or submarine, or at shore installations. A control unit is employed to provide limited remote control up to 5 miles. It can be operated from standard shipboard remote control facilities. Carrier control, audio input to modulator, and receiver monitoring are available when operating with hand-set.

This equipment incorporates four interchangeable amplifier-oscillator units designed to cover a specific frequency range. Each employs crystal-controlled master oscillator control.

The modulator contains special circuits to furnish expander, automatic volume control, and clipper-filter action to increase the average carrier sideband power under A3 operating conditions. A 1,000 cycle-per-second oscillator is included for A2 operation.

Radio Transmitting Sets TED, AN/URT-6(), AN/URT-7(), and AN/URT-10(XN-1) are all similar functionally; however, they differ electrically in the frequency determining components. Mechanically all sets are similar.

The sets may be table or rack mounted.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: AM-634/URT: 30 to 60 AM-635/URT: 60 to 115

AM-636/URT: 115 to 225 AM-637/URT: 225 to 400 Frequency Control: Crystal

Type Modulation: AM
Type Emission: A2, A3
Modulation Capability: 10%

Power Output: 30 to 115 Mc: 30 w

115 to 400 Mc: 15 w Audio Input: -25 to +5 db from a 0.006 reference level AF Response: Flat within ± 3 db, 300 to 3,500 cps (from a

1,000-cps reference level)

Impedance:

Microphone: 600 ohms Antenna: 50 ohms

Frequency Stability: +0.007% Mounting: Table or relay rack

Power Requirements: 750 w; 115-v or 230-v, 50- to 60-cycle,

1-phase ac

AN/URT-10(XN-1) RADIO TRANSMITTING SET

MAJOR COMPONENT	S	
	DIMENSIONS	WEIGHT
STOCK NUMBERS	(Inches)	(Lbs)

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
				*10**
1	Electrical Special Purpose Cable Assembly CX-1826/U			
1	Electrical Special Purpose Cable Assembly CX-1827/U			
1	Electrical Special Purpose Cable Assembly CX-1828/U			
1	Maintenance parts kit			
2	Radio Frequency Jack UG- 21B/U		1-3/4 x 13/16 x 13/16	.03
1	RF storage box		10-5/8 x 18-5/8 x 14-3/4	
1	Radio Transmitter T-335 (XN-1)/URT-10 including:		13-23/32 x 19 x 16-1/2	146
1	Amplifier Oscillator AM- 634(XN-1)/URT		10 x 5 x 14-1/2	30
1	Amplifier Oscillator AM- 635(XN-1)/URT		10 x 5 x 14-1/2	30
1	Amplifier Oscillator AM- 636(XN-1)/URT		10 x 5 x 14-1/2	30
1	Amplifier Oscillator AM- 637(XN-1)/URT	***************************************	10 x 5 x 14-1/2	30
1	Electrical Equipment Cabinet CY-1126/URT		13-3/4 x 19 x 14-13/16	
1	Power Supply PP-773/ URT		12-7/32 x 19 x 16-1/4	
1	Radio Modulator MC– 163/URT		10 x 4 x 14-3/8	
1	Transmitter Control CFT- 63555		5-13/16 x 4-7/16 x 3-5/16	4

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91623

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	2.75	240

	RADIO	TRANSMITTING SET AN	URT-10(XN-1)
	PROCUREMENT D	ATA	
PROCRING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr-52221, 11 January 1951	

)

RADIO TRANSMITTING SET AN/URT-12

3 December 1958

Cognizant Serv: USN

FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO: Used by

Std

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-12 is a general purpose communication equipment designed for ship and shore use. It provides eight bands to facilitate the employment of the frequency range.

This equipment consists essentially of a radio transmitter, a power supply, a cabinet, and associated accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2 mc to 30 mc

Number of Bands: 8

Type Modulation: AM

Type Emission: A1, A3

Frequency Control: Crystal

Power Output:

Emission A1: 100 w Emission A3: 75 w

Power Requirements: 1,050 w; 115-v or 230-v, 50- to 60-cycle,

1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGH1 (Lbs)
1	Radio Transmitting Set AN/ URT-12 includes:		20 x 20 x 36	
l	Cabinet CY-1369/ URT-12			
1	Power Supply PP-950/ URT-12			
1	Radio Transmitter T-408/ URT-12			

REFERENCE DATA AND LITERATURE:

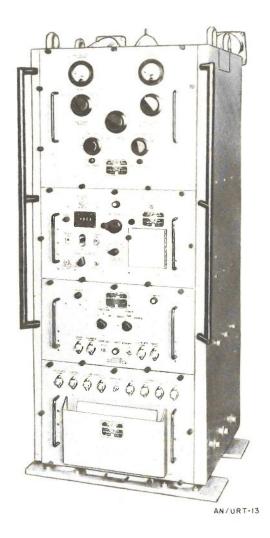
PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs

TING SET		
PROCUREMENT DA	ATA	
	DESIGN COO	i: USN, USCO
LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
New York, N. Y.	Teg-38554	
	PROCUREMENT DA	PROCUREMENT DATA DESIGN COG CONTRACT OR ORDER NO.

RADIO TRANSMITTING SET AN/URT-13

3 December 1958

Cognizant Serv:	USN	FSN:			
		USA	USN	USAF	
		(7)			
TYPE CLASS:		2.2	Used by		
STOCK NO:				22	



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-13 is a transmission facility intended for use on Coast Guard vessels and shore stations. It is designed to operate under widely varying climatic conditions.

This equipment is complete with the exception of antenna, power source, channel frequency crystals, and keying items. It is designed to operate at ambient temperatures between 0° to 55°C, and in a relative humidity up to 95 percent.

TECHNICAL CHARACTERISTICS:

Frequency Range: 239 kc to 556 kc

Frequency Control: Crystal or master oscillator

Number of Crystal Channels: 4

Type MO Control: Manual, continously variable over entire

range in 3 bands Type Modulation: AM Type Emission: A1, A2

Modulation Frequency: 1,000 cps, -10 to +20%

Modulation Capability: 100% Keying Type: On-off (electron tube)

Keying Speed:

CW: Up to 100 wpm

MCW: Up to 60 wpm; keys carrier and modulation

Control: Local or remote start-stop and keying, manual or automatic

RF Output: 200 w, 4 ohms, 750 µµf

Spurious Radiation: 50 db minimum below carrier

Hum Level: Less than 1% of value equivalent to 100%

Accuracy and Stability: Within ±0.02% of desired carrier frequency

Operating Temperature: 0° to 55° C.

Line Voltage: ±10%

Line Frequency: ±5%

Heat Dissipation: 1,510 w

Power Requirements: 115-v or 230-v, 50- to 60-cycle, 1-phase

AN/URT-13 RADIO TRANSMITTING SET

MA	IOR.	CON	APOI	NENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Box maintenance parts kit		15 x 15 x 24	275
1	Radio Transmitting Set AN/ URT-13 including:		24 x 27 x 63-5/8	840
1	Amplifier-Oscillator AM- 854/URT-13		12-11/16 x 21-1/8 x 23-5/8	75
1	Cabinet, Electrical Equip- ment CY-1384/URT-13		24 x 27 x 63-5/8	240
1	M. O. Calibration chart		3/32 x 8-1/2 x 11	
1	Power Supply PP-965/ URT-13		14-1/2 x 21-1/8 x 23-1/2	340
1	Radio Frequency Tuner Assembly TN-222/ URT-13		18-3/16 x 21-1/8 x 23-1/2	50
1	Radio Modulator MD- 197/URT-13		11-3/8 x 21-1/8 x 23-1/2	135
2 sets	Servicing diagrams		13-1/2 x 10	5 1
1 set	Test cables			5

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	66	1,350

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG:	USN, USCG
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

Radiomarine Corporation of America

New York, N. Y.

Tcg-38556, 26 June 1951

RADIO TRANSMITTING SET AN/URT-14

_	Ph.		
3	Decem	hor 1	1050
	Decem	uei	7.10

Cognizant Serv: USN FSN:

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-14 is a general purpose communication equipment designed for ship and shore use. It provides four channels to facilitate the employment of the available frequency range.

USA

This equipment consists essentially of a radio frequency oscillator, an amplifier tuner, a power supply and associated accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 kc to 535 kc

Number of Channels: 4
Type Modulation: AM, FM
Type Emission: Al, A2, F1

Type Frequency Control: Crystal and master oscillator

Power Output: 500 w

Power Requirements: 5.5 kva; 220-v or 400-v, 50- to 60-cycle,

3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/ URT-14 including:		24 x 36 x 72	
1	Amplifier-tuner			
1	Modulator-power supply			
1	RF Oscillator O-396/ URT-14	***		

REFERENCE DATA AND LITERATURE:

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, USCO
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air Associates, Inc.	Orange, N. J.		

RADIO TRANSMITTER AN/URT-type

1 July 1958

Cognizant Serv:

USA

FSN:

5820-503-2640

T-368()/URT

USA

Std

USN

USAF

Std

TYPE CLASS:

STOCK NO:

2C6900-368

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-368()/URT is a medium-power, AM (cw, voice), HF transmitter that can be used as mobile or fixed-station equipment.

It may also be used as an RF amplifier for low-powered exciter units or as a driver of high-power transmitters. In such applications, it will transmit frequency-shift keying, narrowband FM, and a combination of frequency-shift keying with

This equipment consists of the transmitter and accessory items, and requires a tuning unit when a long-wire or whiptype antenna is used. It also requires auxiliary equipment for frequency-shift keying or other special modes of transmission.



Frequency Range in Mc: 1.5 to 20 Type Modulation: AM, FM Type of signal: Cw, icw, voice, fsk Power Output:

AM: 4000 w

Cw: 450 w

Power Requirements: 2.2 kw, 115-v 50/60-cycle ac

MODULATOR DECK POWER SUPPLY DECK T-368()/URT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
-----	------	---------------	---------------------	-----------------

(FSN)

Radio Transmitter T-368/ URT

5820-503-2640

57 x 31 x 32

700

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-809

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	38	940

AN/URT-typ	RADIO	TRANSMITTER
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PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC &/or DWG: MIL-T-11770; MIL-T-11437

DESIGN COG: USA, Sig

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Barker & Williamson, Inc.

Upper Darby, Pa.

3472-P-52-31 25070-P-54-55 \$3,230.8 3,301.11

RADIO TELEGRAPH TRANSMITTING EQUIPMENT	AN/URT-type
--	-------------

1 December 1958 Cognizant Serv: U	SN FSN:			TAG
	USA	USN	USAF	
TYPE CLASS:		Used by		
STOCK NO:		776.40.41		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TAG is designed for either shipboard or shore station installation. The two models are similar, except for the power supply equipment furnished with each type.

This equipment is primarily used as the main high frequency transmitter for Fleet and Force Flagships, Aircraft Carriers first line, Cruisers first line, and for certain remote shore stations where the primary requirement is to effect distant radio transmission to the fleet components.

TECHNICAL CHARACTERISTICS:

Frequency Range: 4,000 to 4,525 kc; 8,000 to 9,050 kc; 12,000 to 13,575 kc; and 16,000 to 18,100 kc

Power Output:

At Frequencies below 9,050 kc: 6 kw In 12,000- to 13,575-kc band: 4.8 kw

In 16,000- to 18,100-ke band: 3.0 kw
Antenna: Single wire, approximately 58 feet long

Power Requirements: Shipboard: 240-v dc

Shore Station: 220-v 60-cycle 3-phase ac

MAJOR COMPONENTS

		THE CONTROLLER		
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Shipboard Installation:			
1	Automatic Starter 3093			
1	Automatic Starter 3229			
1	Automatic Starter 3248			
1	External monitor lamp and resistor			
1	Low power motor generator filter unit			
1	Motor generator set, con- sisting of:	9		
1	Generator 3091			
1	Generator 3092			
1	Motor 3090			
1	Motor generator set, con- sisting of:			
1	Motor 3094			
1	Motor 3095			
1	Protective and filter unit (for 7,500-v generator)			
1	Radio Transmitter 3079			
1	Transmitter start-stop switch			
1	Water Cooling Unit 3096			
	For Shore Station Installation:			
1	Automatic Starter 3098			
1	Automatic Starter 3105			
1	Automatic Starter 3247			

AN/URT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Low power MG filter unit			
1	Motor generator set, consisting of:			
1	Generator 3091			
1	Generator 3092			
1	Motor 3097			
1	Motor generator set, consisting of:			
1	Generator 3095			
1	Generator 3100			
1	Motor 3099			
1	Protective and filter unit (for 7,500-v generator)			
1	Radio Transmitter 3079			
1	Water Cooling Unit 3096-A			

REFERENCE DATA AND LITERATURE:

GEI 3973

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

		PROCUREMENT D	AIA	
PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG:	USN, BuShips
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	-		NOs-4374	

TBK-4

RADIO TRANSMITTING EQUIPMENT AN/URT-type

1 December 19	958
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Cognizant Serv: USN

FSN: USA

N:

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(See Illustration TBK-11 under AN/FRT-type: TBK-6, TBK-11, TBK-15, TBK-16, p. 619)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBK-4 is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words per minute. The transmitter power may be reduced from full power to 75 watts by disconnecting the power amplifier. This set is designed for either shipboard or shore station use.

Remote operation of this transmitter is possible on shipboard installations by use of a standard 4- or 6-wire control system; in shore stations, remote control may be accomplished through a landline telegraph circuit.

This equipment is essentially the same as the TBM series of transmitters, except that the TBK series does not have provisions for modulated continuous wave signaling.

Models of this equipment suitable only for shipboard instal-

lation (classified and described under AN/SRT-type) are the TBK-3, TBK-5, TBK-7, through TBK-10, TBK-12 through TBK-14, and TBK-17 through TBK-20. Models designed for use at shore installations, classified and described under AN/FRT-type equipments, are the TBK-6, TBK-11, TBK-15, and TBK-16.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1 Frequency Control: Master Oscillator

Type of Signal: Cw Power Output: 75 or 500 w

Keying Speed: 100 wpm (maximum) Antenna: 80 feet (maximum length)

Power Requirements: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auto Transformer 30286		9-3/4 x 11-13/16 x 21-3/4	171
1	Junction Box 23055		11-7/8 x 23-7/16 x 46-1/8	117
1	Radio Transmitter 52032		24 x 32 x 72	688
1	Rectifier Power Unit 20018		22-7/8 x 23-15/16 x 71-7/8	976
1	Remote Control Unit 23084		12-15/16 x 19 x 20	88

REFERENCE DATA AND LITERATURE:

Technical Manuals for Navy Model TBK-3, 4, 5, 6, 7, 8, 10, and 17, Radio Transmitting Equipment

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

IVIIL-I IDDK-101			
AN/URT-type RADIO TRANSMI	URT-type RADIO TRANSMITTING EQUIPMENT		
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs 44507	

RADIO TELEPHONE TRANSMITTING EQUIPMENT AN/URT-type

4 December 1958 Cognizant Serv: FSN:

USAF

TYPE CLASS: STOCK NO:

Used by

USN

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting Equipment TCA is designed for voice communication. Rapid frequency change to any one of four preselected frequencies in the range of 3,000 to 10,000 kilocycles is accomplished by manipulation of a single switch. Audio-frequency response and harmonic content are held to values that will give high quality transmission for the service for which designed.

USA

TECHNICAL CHARACTERISTICS:

Frequency Range: 3,000 to 10,000 kc

Frequency Control: Crystal

Power Output: 15 w

Channels: 4
Types of Signal: Voice

Audio Frequency Response: Within 2 db from 500 to 2,500 cps with sharp cutoff below 500 cps and above 2,500 cps, and

down 30 db at 60 cps and 5,000 cps Power Requirements: 110-v 50/60-cycle ac

MAJOR COMPONENTS WEIGHT DIMENSIONS (Lbs) STOCK NUMBERS (Inches) **ITEM** QTY Cabinet assembly Filter unit Microphone Modulator unit 1 Mounted crystal 2 Oscillator coil 1 2 Output cable Panel assembly 1

REFERENCE DATA AND LITERATURE:

Power supply

RF assembly

1

1

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
T KOO	D. Particular come description	

AN/URT-type RADIO TELEPH	VIRT-type RADIO TELEPHONE TRANSMITTING EQUIPMENT		
	PROCUREMENT DA	ATA	p = 0
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Corp.	Cedar Rapids, Iowa	NOs-66284, 22 April 1939	\$750.00 with spares

TCM

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958

Cognizant Serv: U

USN FSN:

USAF

TYPE CLASS: STOCK NO:

- -

USA

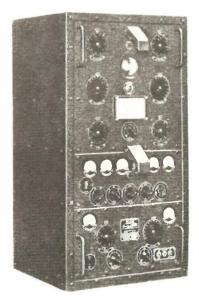
Used by

USN

5 a 5







TCM

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCM and the TCM-1 and -2 are designed for use in either shore or shipboard installations where a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one hand Microphone NT-51006-A, one Chest Microphone NT-51016A, and one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc Type of Signal: Cw, mcw, voice

Power Output: Cw: 125 w Mcw: 30 w Voice: 30 w

Power Requirements: 115-v 60-cycle 1-phase ac

QTY

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS	S	
STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

35

200

259

9 x 11-1/2 x 12-3/8

18-3/4 x 20-1/2 x 36-3/4

14-3/4 x 20-1/2 x 36-3/4

Rectifier 20122

Control Unit 23241

REFERENCE DATA AND LITERATURE:

Hf Radio Transmitter 52206

ITEM

NAVSHIPS 900,401

	SHIPPING D	PATA	
PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
5		96.01	
	PROCUREMENT	DATA	
PROCURING SERVICE: USSPEC & /or DWG:	SN	DESIGN COG	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs-48078, 4 Jan 1941	\$2,500.00 in- cluding equip- ment spares

TCM-1

RADIO TRANSMITTING EQUIPMENT AN/URT-type

Cognizant Serv:

USN F

FSN: USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(See Illustration of TCM, p. 1935)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCM-1 and the TCM and TCM-2 are designed for use in either shore or shipboard installations where a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc Type of Signal: Cw, mcw, voice

Power Output: Cw: 125 w Mcw: 30 w Voice: 30 w

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Chest Microphone 51046			
1	Control Unit 23241		9 x 11-1/2 x 12-3/8	35
1	Hand Microphone 51006A			222
1	Hf Radio Transmitter 52206		18-3/4 x 20-1/2 x 36-3/4	200
1	Rectifier 20122		14-3/4 x 20-1/2 x 36-3/4	259

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	96.01	1,013

AN/URT-type RADIO TRANSMITTING EQUIPMENT					
TA TA	PROCUREMENT DA	ATA			
PROCURING SERVICE: USN SPEC &/or DWG:	Si a	DESIGN COG: USN, BuSh			
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST		
General Electric Co	Schenectady, N. Y.	98843, 11 Feb 1942	\$3,930.00 in- cluding equip- ment spares		

TCM-2

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958

Cognizant Serv:

USN F

FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(See Illustration of TCM, p. 1935)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCM-2 and TCM and TCM-1 are designed for use in either shore or shipboard installations where a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one Chest Microphone 51016A, and one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc Type of Signal: Cw, mcw, voice

Power Output: Cw: 125 w Mcw: 30 w Voice: 30 w

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit NT-23241		9 x 11-1/2 x 12-3/8	35
1	Hand Microphone NT-51004C		18-3/4 x 20-1/2 x 36-3/4	200
1	Hf Radio Transmitter NT– 52206		18-3/4 X 20-1/2 X 30-3/4	200
1	Rectifier NT-20122		14-3/4 x 20-1/2 x 36-3/4	259

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	96.01	1,013

AN/URT-type RADIO TRANSMITTING EQUIPMENT					
	PROCUREMENT DA	ATA .			
PROCURING SERVICE: U SPEC &/or DWG:	ISN	DESIGN COG:	USN, BuShip		
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST		
General Electric Co.	Schenectady, N. Y.	NXs-15910, 1 Jun 1943	\$3,930.00 in- cluding equip- ment spares		

RADIO TRANSMITTING EQUIPMENT	AN/URT-typ){
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5 December 1958			RADIO TRANSMIT	TING EQUIPMENT	AN/UKI-type
Cognizant Serv: USN		FSN:			TCN
		USA	USN	USAF	
TYPE CLASS:			Used by		
STOCK NO:			2.4	52	



TCN

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCN and TCN-1 are designed primarily for either shore or shipboard installation wherever a compact medium-powered radio transmitter is

Equipment required but not supplied: one Hand Microphone 51106-A, one Chest Microphone 51016-A and, one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc; 2,000 to 18,100 kc

Type of Signal: Cw, mcw, voice

Power Output: Cw: 125 w Mew: 30 w Voice: 30 w

Power Requirements: 115-v 50-62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1 Control Unit 23241			9 x 11-1/2 x 12-3/8	35	
1	Hf Radio Transmitter 52206	-2	18-3/4 x 20-1/2 x 36-3/4	200	
1	IF Radio Transmitter 52205		18-3/4 x 20-1/2 x 36-3/4	175	
1	Power Transfer Switch 24094		6-1/4 x 10 x 18-3/4	25	
1	Rectifier 20122		14-3/4 x 20-1/2 x 36-3/4	259	

AN/URT-type RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)	
7		121.51		1,681	
		PROCUREMENT DA	ATA	8	
PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG	USN, BuShips	
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
General Electric Co.		Schenectady, N. Y.	NOs-48078, 4 January 1941	\$6,270.00 including equipment spares	

TCN-1

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958

Cognizant Serv: USN

FSN:

USA

USAF

TYPE CLASS: STOCK NO: Used by

USN

(See Illustration of TCN, p. 1941)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCN-1 and TCN are designed primarily for either shore or shipboard installation wherever a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc and 2,000 to 18,100 kc $Type\ of\ Signals:$ Cw, mcw, voice

Power Output:

Cw: 125 w Mcw: 30 w

Voice: 30 w

Power Requirements: 115-v 50-62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Chest Microphone 51046			
1	Control Unit 23241		9 x 11-1/2 x 12-3/8	30
1	Hand Microphone 51006A			
1	Hf Radio Transmitter 52206		18-3/4 x 20-1/2 x 36-3/4	169
1	IF Radio Transmitter 52205		18-3/4 x 20-1/2 x 36-3/4	146
1	Power Transfer Switch 24094		6-1/4 x 10 x 18-3/4	15
1	Rectifier 20122		14-3/4 x 20-1/2 x 36-3/4	229

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

PKGS	VOLUME (Cu Ft)	WEIGH	「(Lbs)
7	131.26	1,568	

N/URT-type radio transmitting equipment				
	PROCUREMENT DA	ATA		
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
General Electric Co.	Schenectady, N. Y.	NOs-98843, 11 February 1942	\$6,270.00 in- cluding equip- ment spares	

RADIO TRANSMITTING EQUIPMENT AN/URT-type

2 December 1958

Cognizant Serv: USN

FSN:

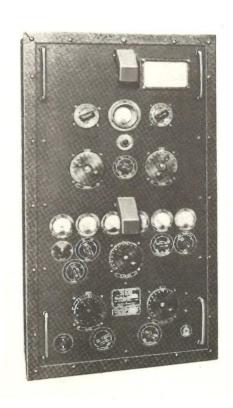
TCU, TCU-1, 2

USA

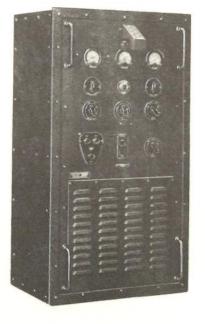
USN

USAF

TYPE CLASS: STOCK NO:







TCU

FUNCTIONAL DESCRIPTION:

Radio Transmitters TCU, TCU-1 and 2 are compact medium-powered sets designed for shore or shipboard use. The equipments are constructed to provide efficient, reliable, and rapid communication.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2000 $\rm kc$

Power Output:

Cw (A1) - 125 W

MCW (A2) -- 30 W

Power Requirements: 115-v, 50 to 60-cycle, 1-phase ac

AAA	IOD	COL	ADO	NENTS
MA.	אכאנ		VIEL	MEINIO

OTV	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
GII	TILIM	STOCK HOMBERS	(inches)	(Los)
	For TCU:			
1	Case Spare Parts 23241			
1	Control Unit 23241		9 x 11-1/2 x 12-3/8	38
1	IF Radio Transmitter 52205		18-3/4 x 20-1/2 x 36-3/4	178
1	Rectifier 20122		14-3/4 x 20-1/2 x 36-3/4	259
	For TCU-1, 2:			
1	Case Spare Parts 23241			99
1	Control Unit 23241		9 x 11-1/2 x 12-3/8	30
1	IF Radio Transmitter 52205		18-3/4 x 20-1/2 x 36-3/4	140
1	Rectifier 20122		14-3/4 x 20-1/2 x 36-3/4	229

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	95.0	986

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:

DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	Nos 48078 Nos 98843 NXs 15910	\$3,500.00

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958

Cognizant Serv: USN FSN:

115

USA

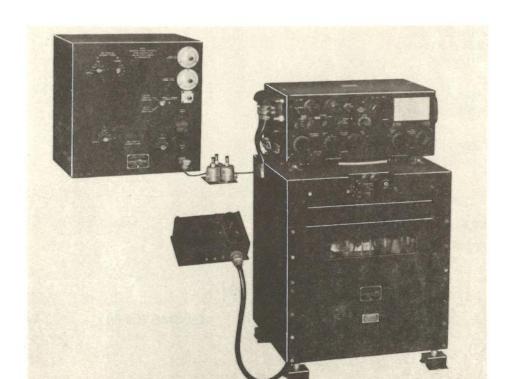
USAF

TYPE CLASS: STOCK NO:

Used by F16-Q-328525-200 (115-v dc)

USN

F16-Q-328535-200 (115-v dc)



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCZ is designed for either a ship- or a shore-based installation. Two bands of transmission frequencies are available within the specified range of th's model. Transmission facilities include A1, A2, and A3; remote control operation is also provided.

TECHNICAL CHARACTERISTICS:

Frequency Control: Master oscillator

Type Emission: A1, A2, A3 Power Output: 100 w Type Keying: Relay, 30 wpm

Power Requirements: 4.5 kw, 115-v 60-cyc'e 1-phase ac

TCZ

Antenna: Whip, 20 to 35 feet in length

MA	IOR.	CON	APO	NENT	ς
171/		~ VI 7	11 \		

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Loading Coil COL- 47370	***************************************	10-7/32 x 18-5/8 x 10-3/4	14.5
1	Antenna Shunt Capacitor COL- 481628	******	3-7/8 x 5 x 4-1/8	1.6
1 set	Equipment spares			100
1 set	Interconnecting cables			
1	Motor-Generator Rectifier COL-211101 (ac)		29-7/16 x 23-7/16 x 20-1/8	320
	or			
	Dynamotor Assembly Power COL-21102		29-7/16 x 23-7/16 x 20-1/8	210
	(de)			
ī	Radio Transmitter COL-52286		10-3/4 x 23-9/16 x 13-1/4	66
1	Remote Control Unit COL- 23140		4-3/4 x 9-31/32 x 6-9/16	8

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,854

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	61.05	1,202

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXs-491 9 May 1942	\$5,540.00 in- cluding equip- ment spares

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958

Cognizant Serv: USN

FSN:

4:

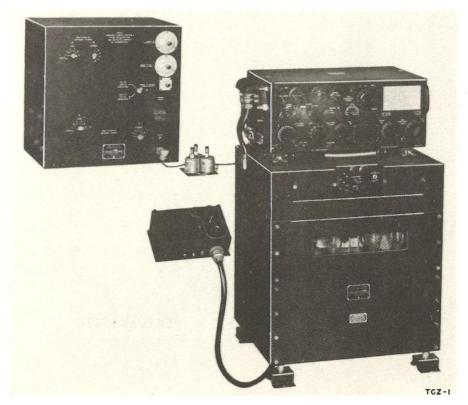
TCZ-1, TCZ-2

USA

USAF

TYPE CLASS: STOCK NO: Used by F16-Q-328560-200 (TCZ-1) F16-Q-328570-200 (TCZ-2)

USN



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TCZ-1 and TCZ-2 are medium-power equipments designed for sh'p to shore use. An auto-tune system allows rapid automatic selection of eleven preset channels or, if desired, manual tuning is possible throughout the frequency range. Provision is also made for break-in operation, so that an associated receiver may be used with the transmitter. Remote control is possible through the use of one or more remote selector units, or through four- or six-wire radiophone units.

These two models are similar, except that this model operates from an alternating current source while the TCZ-2 uses a direct current source of power.

Both models are adaptations of the Aircraft Radio Transmitting Equipment ATC.

Equipment required but not supplied: microphone, telegraph key, head-phone, and antenna.

TECHNICAL CHARACTERISTICS:

Frequency:

Range: 200 to 18,100 kc Control: Master oscillator Type Emission: A1, A2, A3 Modulation Capability: 90% Power Output: 100 w maximum

Keying Speed: 30 wpm

Tuning System: Automatic selection of 11 channels, and

manual control
Input Impedance: 40 to 200 ohms

Antenna Type: Vertical, 20 to 35 feet

Power Requirements:

For TC2–1–1, 200 w; 110- or 115-v, 50- to 60-cycle, 1-phase ac, 80% pf

For TC2-2, 1,300 w at 115-v de Mounting Data: Deck mounted

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Load Coil COL-47505		19-3/4 x 18-5/8 x 15-1/2	48
1	Antenna Shunt Capacitor COL-481628		3-7/8 x 5 x 4-1/8	1.56
1	Crystal Unit CR-2B/U		7/16 x 1-1/16 x 1-1/2	.03
4	Interconnecting Cables 65X-7		11-11/32 long	. 62
	65X-8		11-9/16 long	.56
	65X-9		120 long	. 62
	65X-10		120 long	4
1	Motor-Generator Rectifier COL-211322 (for TCZ-1)		29-7/16 x 23-7/16 x 20-1/8	320
1	Radio Transmitter COL- 52286-A		10-3/4 x 23-9/16 x 13-1/4	70
1	Remote Control Unit COL- 23410		4-3/8 x 9-31/32 x 6-1/2	8
1	Dynamotor Assembly COL- 211624 (for TCZ-2)		29-7/16 x 23-7/16 x 20-1/8	210

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,481(A)

SHIPPING DATA

	SHIPPIN	GDAIA		
PKGS		VOI	LUME (Cu Ft)	WEIGHT (Lbs)
7		8.06)	1,765
	PROCUREM	MENT DATA		
PROCURING SERVICE: SPEC &/or DWG:	USN, BuShips		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	1	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids,	Iowa	NXsr-65358, 29 June	

1944

5 December 1958			RADIO TRANSMITTIN	IG EQUIPMENT	AN/URT-type
Cognizant Serv:	USN	FSN:		1	DE, TDE-1, 2, 3
		USA	USN	USAF	-
TYPE CLASS:			42		
STOCK NO:			TDE: 16-Q-332125-200		
			TDE-1: 16-Q-332145-200 ((115-230 ac)	
			TDE-1: 16-Q-332196-200 ((115 de)	
			TDE-1: 16-Q-332176-200 ((220-440 ac)	
			TDE-1: 16-Q-332155-200 ((230 de)	
			TDE-2: 16-Q-332198-200 ((115 de)	
			TDE-2: 16-Q-332178-200 ((220-440 ac)	
			TDE-2: 16-Q-332199-200 (
			TDE-2: 16-Q-332200-200 ((115 de)	
			MDT 0 40 0 00000		



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TDE and TDE-1, 2, and 3 are low-power sets designed to facilitate rapid installation aboard surface vessels or at shore stations. They may be operated from the front panel or from a remote point by a 4or 6-wire remote control system. An hf and an mf transmitter may be used as a single unit, readily matched to a wide range of antennas; or, separate antennas may be used for the mf and hf sections.

These equipments are similar in design and operation; however, the major units vary with the type of power source available.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.3 to 1.5, and 1.5 to 18.1

Type of Emission: A1, A2, A3 Keying Speed: 100 wpm, maximum

Frequency Control: Master Oscillator

Power Output: A1-124 W; A2-35 W; A3-30 W

Power Source Required:

TDE and TDE-2-1, 2 kw, 115- or 230-v de; or 1.2 kw, 60cycle 3-phase ac

TDE-1 and TDE-3-1.2 kw, 115- or 230-v dc; or, 1.2 kw at 115- and 230-v 60-cycle, 1-phase ac; or 1.2 kw at 208-v 220-v, or 440-v 60-cycle 3-phase ac

Power Supply Equipment: Motor-generator set and rectifier power unit

	i typo					
	MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
	TDE:					
1 set	Equipment Spares			155		
1	Motor Generator and Rectifier	21848 or	22-13/16 x 28 x 19-7/16	372		
	Power Unit	21849 or	$22-13/16 \times 28 \times 19-7/16$	372		
		21850 or	22-13/16 x 28 x 19-7/16	355		
		211030	22-13/16 x 28 x 19-7/16	360		
1	Radio Transmitter	52267	$39-13/16 \times 28-1/4 \times 20-1/2$	334		
1	Remote Control Unit	23305	3-9/16 x 5-7/16 x 5-3/16	3		
	TDE-1, 3:					
1	Auto Transformer	301145	3-1/8 x 7 x 5-1/2	6.5		
1 set	Equipment Spares			155		
1	Motor Generator and Rectifier	21848 or	22-13/16 x 28 x 19-7/16	372		
	Power Unit	21849 or	$22-13/16 \times 28 \times 19-7/16$	372		
		21850 or	$22-13/16 \times 28 \times 19-7/16$	355		
		211030	22-13/16 x 28 x 19-7/16	360		
1	Radio Transmitter	52267-A	$39-13/16 \times 28-1/4 \times 20-1/2$	334		
1	Remote Control Unit	23381	3-11/16 x 5-7/16 x 5-1/8	3.5		
	TDE-2:					
1 set	Equipment Spares			155		
1	Motor Generator and Rectifier	21848 or	22-13/16 x 28 x 19-7/16	372		
=	Power Unit	21849	22-13/16 x 28 x 19-7/16	372		
1	Radio Transmitter	52267-A	39-13/16 x 28-1/4 x 20-1/2	334		
1	Remote Control Unit	23305	3-9/16 x 5-7/16 x 5-3/16	3		
				-		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,389-1B; 95328

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	6.19	205

	RADIO TR	ANSMITTING EQUIPMENT	AN/URT-type
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN	N COG, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Television & Radio Corp. Westinghouse Electric & Mfg. Co.	Fort Wayne, Ind. Baltimore, Md.	NXss-33636 NXs-3179, NXs-20802, NXss-33634, NXsr-38682	

RADIO TRANSMITTING EQUIPMENT AN/URT-type

16 October 1958

Cognizant Serv: USN FSN:

110/220/440-v Ac, 5820-665-0003;

TDZ, TDZ-a

5820-644-3405 (with equipment spares)

115-v Dc, 5820-642-7709; 115-v Dc, 5820-642-7709;

5820-665-1804 (with equipment spares)

230-v Dc, 5820-665-0002;

5820-644-4872 (with equipment spares)

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

Features of the equipment include the selection of the type of emission and starting and stopping the equipment, in addi-

tion to automatic frequency selection, either at the transmitter or through a remote channel selector and indicator unit or a six-wire radiophone remote control unit. As many as four channel selector and indicator units and four radiophones may be used at one time.

Keying may be accomplished either locally or at a remote station. Relay keying speeds up to 40 words per minute are

A carbon microphone such as the 510046C is required for operation but is not a part of the equipment. A vertical dipole type antenna such as the 66147 also may be used.

The TDZ and TDZ-a are physically and functionally identical. The TDZ-a differs from the TDZ in that it has been converted from 60- to 400-cycle power frequency operation.



Frequency Range in Mc: 225 to 400

Frequency Control: Crystal

Type Signal: AM, 95% maximum capability

Type Transmission: Mcw, voice

Type Keying: Relay

Keying Speed: 40 wpm max

Nominal Power Output: 30 w

Heat Dissipation:

Transmitter: 875 w (maximum)

Motor Alternator:

115-v Dc: 800 w (key down)

230-v Dc: 730 w (key down)

Power Requirements:

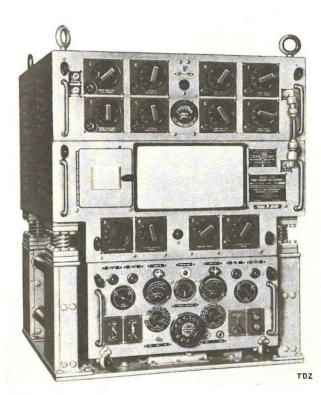
TDZ:

Ac Operation: 0.87/0.995/0.99 kva, 110/220/440-v 50-

to 60-cycle 1 phase ac

Dc Operation: 1.6/1.53 kw, 115/230-v dc

TDZ-a: 110-v 400-cycle ac



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TDZ and TDZ-a are medium-powered, multichannel very-high-frequency/ultrahigh-frequency equipments designed for shipboard, vehicular, or shore station communication within line-of-sight distances. Either of these equipments will provide manual or automatic selection of any one of 10 preset crystal-controlled channels by the use of a telephone type dial.

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		ALTOLOGICA PERIODO PERO SE		
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
1 set	Equipment spares			
1	Magnetic Controller:			
	21137 (for 115-v dc operation)		10-5/8 x 11-9/16 x 17-5/16	48
	211375 (for 230-v dc operation)		10-5/8 x 11-9/16 x 17-5/16	48
1	Motor-Generator Set:			
	211403 (for 230-v dc opera- tion)		10-1/4 x 13-1/2 x 31-15/16	250
	211405 (for 115-v dc operation)		10-1/4 x 13-1/2 x 31-15/16	250
1	Radio Transmitter 52342		24-3/4 x 25-11/16 x 32-1/16	760
1	Remote Channel Selector 23445		4-7/8 x 6-7/8 x 6-7/8	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,809 (TDZ) NAVSHIPS 91284 (TDZ-a)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	101.2	1,800

Note. Power conversion equipment for use with dc power source supplied as a separate shipment.

PROCUREMENT DATA

PROCURING SERVICE: USPEC &/or DWG:	ISN	DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Melpar, Inc.	Alexandria, Va.	NXsr-55652 (TDZ), 7 April 1944	\$8,992 with equipment spares
		NObar-43140 (TDZ-a), 13 December 1948	

RADIO TRANSMITTING EQUIPMENT AN/URT-type

17 October 1958

Cognizant Serv: USN

FSN:

TED, 5820-643-6151;

5820-644-3331 (with equipment spares)

TED, TED-1, TED-2

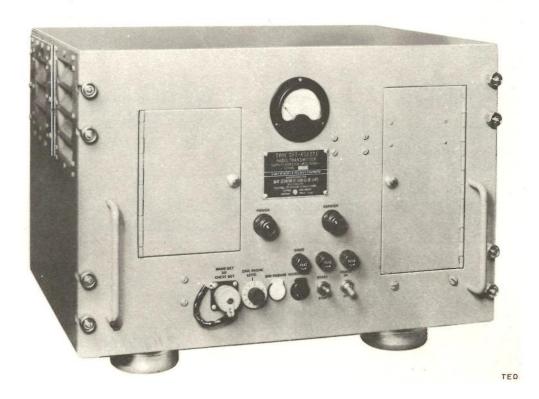
TED-1, 5820-642-6155;

5820-665-2005 (with equipment spares)

TED-2, 5820-642-6150;

5820-665-1661 (with equipment spares)

	USA	USN	USAF	
TYPE CLASS:	54 F	Used by	**	
STOCK NO:		TED: F16-Q-33		
		TED-1: F16-Q- 200	-339999	
		TED-2: F16-Q-	-339597-	
		200		



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TED, TED-1, and TED-2 are single-channel, low-powered ultra high frequency radio-telephone transmitters used either for shipboard or shore aircraft control. The transmitters may be installed in surface ships or submarines or at shore stations. Each unit may be table mounted in its own cabinet or installed on a standard relay rack.

The equipment is designed for microwave or voice-modulated transmission within line-of-sight distances. The transmitters may be used in conjunction with an associated Radio Receiving Set AN/URR-13 and a standard shipboard remote control system. They also may be controlled through two control units, one for local operation and one for limited remote control.

Additional equipment required for operation includes

Radiophone Unit 23500, Handset 51081, Chest Set 51090, Crystal Unit CR-24/U, and Antenna AT-150/SCR, AS-390/SCR, or, for submarines, AS-468/B.

The TED, TED-1, and TED-2 are identical except for the remote control unit supplied with the TED only for land operation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Frequency Control: Crystal

Type Signal: AM, 100% max capability

Type Transmission: Mcw, Voice

Power Output: 15 w

Imput Impedance: From microphone, 600 ohms

Output Impedance: To antenna, 50 ohms

Power Requirements: 750 w, 115/230-v 50- to 60-cycle 1-phase

ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Transmitted 23555 (TED only)		5-13/16 x 4-7/16 x 3-5/16	4
3	Electrical Special Purpose Cable			
(1)	Assembly: CX-1826/U			
(1)	CX-1827/U			
(1)	CX-1828/U			
1	Radio Frequency Plug UG- 218/U			
1	Radio Transmitter 52373		13-23/32 x 19 x 15	145
1 box	Spare parts (TED only)		15-1/8 x 43-1/8 x 16-3/8	139
1 box	Spare parts		12-1/8 x 25-1/8 x 16-3/8	60

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91357

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	19	557

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NObsr-39187 (TED) NObsr-43268 (TED)	\$2,200 0 2,200.00
		NObsr-52036 (TED-1)	2,200.00
Westinghouse Electric Corp.	Baltimore, Md.	NObsr-49237 (TED-2)	2,200.00
		NObsr-52310 (TED-2)	2,200.00

7 October 1958			RA	RADIO TRANSMITTING EQUIPMENT		
Cognizant Serv:	USN	FSN:	5820-642-6203 5820-665-2051 (v	vith equipment sp	pares)	TED-3
		USA		USN	USAF	
TYPE CLASS: STOCK NO:				Used by		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TED-3 is a short range radio transmitting equipment that can be used aboard ships or submarines or in shore installations. The unit may be table mounted in the cabinet supplied or it may be installed in a standard 19-inch relay rack.

The equipment is designed for modulated continuous-wave or voice-modulated transmission in the frequency range of 225 to 400 megacycles. Its effective range normally is limited to line-of-sight distances. For voice transmission, special circuits in the transmitter modulator section provide higher speech intelligibility for a given carrier level than is obtained with conventional circuits.

Four remote radiophone units, plus antenna, crystal units, and interconnecting cables, are required in the operation of this equipment. Standard shipboard remote control units may

be used, or Transmitter Control Unit 23555 may be used for limited control of the equipment from a point not normally equipped with standard remote control units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400 Frequency Control: Crystal

Type Signal: AM

Type Transmission: Mcw, voice Carrier Output: 12 to 15 w Power Output: 35 w

Impedance:

Input: 600 ohms (for microphone)
Output: 50 ohms (to antenna)

Power Requirements: 750 w, 115/230-v 50- to 60-cycle 1-phase

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Special Purpose Cable Assembly CX-1826/U			
1	Electrical Special Purpose Cable Assembly CX-1827/U			
1	Electrical Power Cable Assembly CX-3134/U			
1 set	Equipment spares		12-1/8 x 16-1/2 x 25-1/4	89
2	Plug UG-2158/U			
1	Radio Transmitter 52373-B		13-23/32 x 15 x 19	144

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91796

AN/URT-ty	pe RADIC	TRANSMITTING	EQUIPMENT
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SHIPPING DATA

VOLUME (Cu Ft) WEIGHT (Lbs) **PKGS**

2 14.7 331

PROCUREMENT DATA

DESIGN COG: PROCURING SERVICE: USN SPEC &/or DWG:

USN, BuShips

CONTRACT OR **APPROX** LOCATION ORDER NO. **UNIT COST** CONTRACTOR NObsr-52310 \$2,040.00 Westinghouse Electric Corp. Pittsburgh, Pa. NObsr-64599 2,040.00

DADIO TO A NICHAITTING FOLLIDATENT AN/IIDT tyno

8 October 1958			RADIO TRANSMITTING	EGUIPMENT	Mulnul-rahe
Cognizant Serv:	USN	FSN:	5820-503-2472 (with equipment spares)		TED-7
		USA	USN	USAF	<u>~</u> *
TYPE CLASS:			Used by	==	
STOCK NO:			2020	2/2	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TED-7 is a short-range radio transmitting equipment that can be used aboard ships or submarines or in shore installations. The unit may be table mounted in the cabinet supplied or it may be installed in a standard 19-inch relay rack.

The equipment is designed for modulated continuous-wave or voice-modulated transmission in the frequency range of 225 to 400 megacycles. Its effective range normally is limited to line-of-sight distances. For voice transmission, special circuits in the transmitter modulator section provide higher speech intelligibility for a given carrier level than is obtained with conventional circuits.

Four remote radiophone units, plus antenna, crystal units, and interconnecting cables, are required in the operation of this equipment. Standard shipboard remote control units may be used, or Transmitter Control Unit 23555 may be used for limited control of the equipment from a point not normally equipped with standard remote control units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Frequency Control: Crystal

Frequency Stability: ±0.007% under any conditions or com-

bination of conditions

Type Signal: AM

Type Transmission: Mew, voice

Modulation: Mcw: 90% Voice: 100%

Carrier Output: 12 to 15 w

Impedance:

Input: 600 ohms

Output: 50 ohms (to antenna)

Audio Input Voltage: -25 db to +5 db from 0.006 with refer-

ence level (0.1 to 3.4 v)

Af Response: Flat within ±3 db from 1,000 cps response level,

from 300 to 3,500 cps Heat Dissipation: 725 w

Power Requirements: 750 w, 0.85 pf, 115/230-v 50- to 60-cycle

1 phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares		12-1/2 x 16-1/4 x 16-1/4	51
2	Plug UG-218/U		13-23/32 x 15 x 19	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92701

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

2 9.9 263

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

SPEC &/or DWG: MIL-T-15244B(Ships)

CONTRACT OR ORDER NO. UNIT COST

CBS Columbia-Division of Columbia
Broadcasting, Inc.

CONTRACT OR ORDER NO. UNIT COST

NObsr-64800
NObsr-59925
860.00

TED-8

RADIO TRANSMITTING EQUIPMENT AN/URT-type

8 Octob	er 1958	3
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Cognizant Serv:

USN FSN:

USA

USAF

TYPE CLASS: STOCK NO:

Used by

USN

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TED-8 is a short-range radio transmitting equipment that can be used aboard ships or submarines or in shore installations. The unit may be installed in the cabinet supplied or it may be mounted in a standard 19inch relay rack.

The equipment is designed for modulated continuous-wave or voice-modulated transmission in the frequency range of 225 to 400 megacycles. Its effective range normally is limited to line-of-sight distances. For voice transmission, special circuits in the transmitter modulator section provide higher speech intelligibility for a given carrier level than is obtained with conventional circuits.

Four remote radiophone units, plus antenna, crystal units, and interconnecting cables, are required in the operation of this equipment. Standard shipboard remote control units may be used, or Transmitter Control Unit 23555 may be used for limited control of the equipment from a point not normally equipped with standard remote control units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Frequency Control: Crystal Frequency Stability: ±.0007%

Type Signal: AM

Type Transmission: Mcw, voice Modulation Capability: 100% Nominal Carrier Output: 12 to 15 w

Impedance:

Input: 600 ohms Output: 50 ohms

Audio Frequency Response: Flat within ±3 db from a 1,000 cps

response level from 300 to 3,500 cps

Maximum Permissible Line Voltage Variation: ±10%

Heat Dissipation: 725 w

Power Requirements: 750 w, 0.85 pf, 115/230-v 50- to 60-cycle

1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares		10-3/4 x 16-3/8 x 16-3/8	45
2	Plug UG-21D/U Radio Transmitter 52373-F		13-23/32 x 15 x 19	144

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92703

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	16.4	266

MIL-HDBK-161			
AN/URT-type RADIO TRANSM	SITTING EQUIPMENT		
	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShip
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Rauland-Borg Corp.	Chicago, Ill.	NObsr-71106	

				cc	ONTROL-MONITOR	AN/URW-type
5 December 195 Cognizant Serv:	8 USN	FSN:				C-1947/U
		USA	l	JSN	USAF	
TYPE CLASS: STOCK NO:			Ţ	Used by	1144	
			(No Illustratio	n Available)		
FUNCTIONAL Control-Monitor ties for up to four control in the high-frequent frequency range.	C-1947/U	J provides audi or any receivers	o remoting facili- and transmitters , and ultra-high-	Range of Audio	CHARACTERISTICS: Frequency Signals: 30 to 3 ments: 110 v, 60-cycle, 1-ph	3,500 cps
	E 9		MAJOR CO	MPONENTS	s)	
QTY	ITE	M	STOCK NU	MBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 Control (This equipment	-Monitor		or component.)	-		
REFERENCE DA	ATA A	ND LITERAT	ΓURE:			
			SHIPPIN	G DATA		

	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESI	GN COG: US
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

REMOTE CONTROL UNIT AN/URW-type

20 November 1958

Cognizant Serv: USA

FSN: 5820-162-1306

RM-29-A

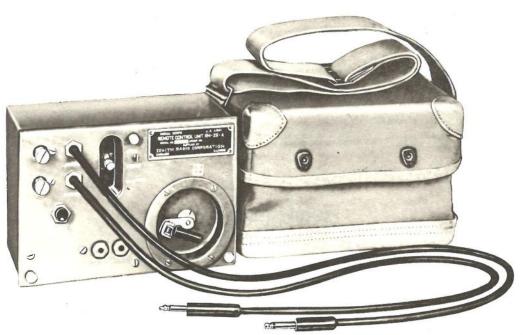
USA

USN

USAF

TYPE CLASS: STOCK NO:

Std 2C7629 Used by



RM-29-A

FUNCTIONAL DESCRIPTION:

Remote Control Unit RM-29-A is a self-contained unit which provides for remote control voice operation of Radio Sets SCR-178, SCR-284 series, SCR-299 series, SCR-608 series, SCR-609 series, SCR-610 series, SCR-628 series, and other models of similar design.

The unit operates in conjunction with Telephone EE-8A over a two-wire telephone line. Microphone T-17 and Headset P-19 (or equivalents), when plugged into the unit, are used for transmission and reception of signals via the radio set, for

monitoring signals between the telephone and the radio set and for direct telephonic communication with Telephone EE–8A.

Operational functions are selected by a switch on the front panel of the remote control unit.

This equipment is similar to Remote Control Unit RA-29-B, except for the mechanical placement of component parts.

TECHNICAL CHARACTERISTICS:

Power Requirements: 4-1/2 volts from Battery BA-27

AN/URW-type REMOTE CONTROL UNIT

THE SOLVE CONTROLLEN				
ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
Case CS-76-B Remote Control Unit RM-		7 x 9-1/4 x 10-1/2 5-3/16 x 6-5/16 x 9-5/16	2.0 13.5	

MAJOR COMPONENTS

REFERENCE DATA AND LITERATURE:

TM 11-308

29-A

QTY

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
		(200)

PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC & /or DWG:

DESIGN COG:

CONTRACT OR APPROX CONTRACTOR LOCATION ORDER NO. **UNIT COST**

Zenith Radio Corp

Chicago, Ill.

Order No. 7880-Phila-40

USA, Sig C

VOLTAGE REGULATOR AN/USA-type

5 December 1958

Cognizant Serv:

FSN: USN

CN-154/U

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Voltage Regulator CN-154/U is an electromechanical unit designed to automatically regulate fluctuating alternating current lines and to maintain a constant output voltage regardless of line or load changes.

It provides a constant output of 117 volts, alternating current, 1-phase, at 4 kilovolt-amperes with inputs ranging from 100 to 135 volts at any frequency from 45 to 65 cycles per

Voltage Regulator CN-154/U is similar to Voltage Regulator CN-154A/U except that in the CN-154A/U an aluminum cabinet is used instead of steel and no mounting plate is

Equipment required, but not supplied, with Voltage Regulator CN-154/U consists of connecting cables as required.

TECHNICAL CHARACTERISTICS:

Output Range: 4-kva (max) at 110- to 120-v, ±1%, 60-cycle 1-phase ac

Heat Dissipation:

1/4 load: 23.5 w

1/2 or Full Load: 25 w

Power Requirements: 40 amp (max) 100- to 135-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Maintenance parts kit Voltage Regulator CN-145/U		6 x 6 x 12 13-3/13 x 13-1/4 x 32-1/4	$\frac{2.5}{176}$

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91546(A)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	20.4	524

AN/USA-type VOLTAGE REGULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN SPEC &/or DWG: SHIPS-S-228

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Sangamo Electric Co.	Springfield, Ill.	NObsr-43419	\$570.00 with
		NObsr-52018	spares
		NObsr-52043	
		NObsr-52186	
		NObsr-52339	
		NObsr-52509	
1		NObsr-64056	

AUDIO SIGNAL SCRAMBLING EQUIPMENT	AN/USA-type
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5 December 195 Cognizant Serv:	FSN:	5805-644-4703			PF
	USA		USN	USAF	
TYPE CLASS:	-		Used by		
STOCK NO:			122		



FUNCTIONAL DESCRIPTION:

Audio Signal Scrambling Equipment PF is a device for obtaining voice or telegraphy privacy by scrambling (or coding) either type of signal at the transmitting terminal of a communication link, and unscrambling (or decoding) at the

receiving terminal. It normally is used in conjunction with a suitable radio transmitter and receiver for this purpose.

TECHNICAL CHARACTERISTICS:

Temperature Range: -40° F. to $+140^{\circ}$ F. Power Requirements: 22-30-v dc

AN/USA-type AUDIO SIGNAL SCRAMBLING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Signal Scrambling Unit and Enclosure 68AAA		8-1/2 x 8-1/2 x 14	22.8
1	Control Unit 23ACT		$2-1/2 \times 3 \times 6$.9
1	Mounting Plate Assembly for Remote Control 10131		$1-1/2 \times 4 \times 9$.3
1	Mounting Base 10140		2 x 9 x 13	.6
1	Card Set 151541		3-3/4 x 4-3/4 x 7-1/2	3.8

REFERENCE DATA AND LITERATURE:

 ${\tt NAVSHIPS~900922}$

SHIPPING DATA

DUGG	1/0/10 /F /C F1	\\/FIGURE (1.1.)
PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USN		DESIGN COG:	USN, BuShips
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.		New York, N. Y.	NXS 4526	\$1,650.00

TELEPHONE TERMINAL	AN/USA-type
	TA-269/U

1 December 1958

Cognizant Serv: USN

FSN:

FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO: Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telephone Terminal TA-269/U provides two-way telephone conversation over a radio circuit from a two-wire or four-wire telephone system. Connections are provided to extend the two-wire voice circuit to a point remote from the terminal; or a local four-wire handset can be used to communicate over either the radio circuit or over the two-wire voice line to a remote point.

By setting a remote three-position switch, the internal circuits of this equipment can be switched by relays for communication with the local handset over the radio circuit, to the remote station (or PBX board), or for the usual communication from the remote station on the two-wire line over the four-wire radio circuit.

TECHNICAL CHARACTERISTICS:

Frequency Range:

Amplifier Response: Within 2 db from 200 to 3,500 cps Filter Band-Pass: Within 3 db from 200 to 3,000 cps Power Output: +8 dbm (maximum) output level of both receiver and transmitter amplifier

Sensitivity: Input signal to the limiter circuit at level of -15 dbm to to +6 dbm appears at limiter circuit output at level of -28 dbm to -18 dbm

Amplification: Signal from limiter output (-28 dbm to -18 dbm) amplified by transmitting amplifier with adjustable amplification gain of 8 to 35 db

Power Requirements: 35 w, 115/230-v ($\pm 10\%$) 50–60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	elephone Terminal TA-269 t consists of only one major	/U or component.)	5-1/4 x 16 x 19	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92181

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.5	83

AN/USA-type TELEPHONE TERMINAL			
	PROCUREMENT D	ATA	
PROCURING SERVICE: USN SPEC &/or DWG: Part No. HD-	DESIGN COG:	USN, BuShip	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Laboratories, Inc.	Boonton, N. J.	NObsr-52374	\$3,850.00

MD-83A/ARN

MODULATOR	AN	USM-type
-----------	----	----------

4 December 1958

Cognizant Serv:

USN FSN:

USA

•

USN

USAF

TYPE CLASS: STOCK NO:

Used by

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Modulator MD–83A/ARN is designed to facilitate the testing and calibrating of omni-range navigation receivers for aircraft use.

In conjunction with Signal Generator SG-1/ARN, this equipment provides a synthesis of signals encountered in reception and interpretation of omni-range, tone localizer, voice, and glide slope facilities. In addition, the various components of these signals are available singly and in combination for test purposes.

All voltages obtained from the modulator are generated mechanically.

TECHNICAL CHARACTERISTICS:

Output Voltage: 3 v Voltage Stability: ±5%

Frequency Stability: Dependent upon power source

Phase Angle Stability: ± 0.2

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

			DIMENSIONS	WEIGHT
QTY	ITEM	STOCK NUMBERS	(Inches)	(Lbs)

1 Modulator MD-83A/ARN (Equipment consists of only one major component.)

10 -- 10 --

12 x 12 x 15

60

REFERENCE DATA AND LITERATURE:

TO 33A1-8-37-1

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCURING SERVICE: USN SPEC &/or DWG:	DESIGN COG: USN, BuAe
CONTRACTOR LO	CONTRACT OR APPROX ORDER NO. UNIT COST
Collins Radio Co. Cedar	Rapids, Iowa

CXDB

DUAL RECORDING EQUIPMENT AN/USP-type

5 December 1958

Cognizant Serv: USN

FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Dual Recording Equipment CXDB is an electromechanical equipment, versatile in its functions and highly accurate. It provides a means for recording, playback, or rerecording of an applied signal. Signals continuing for an extended period of time can be recorded without loss of continuity by means of overlap recording, since the CXDB provides two recorder-reproducer units.

The equipment has been designed for the recording, playback, and dubbing (rerecording) of 16-inch acetate coated recording disks rotated at a speed of 33-1/3 revolutions per minute. The rotating speed is maintained to high accuracy by internal means. The design of the equipment is such that both cutterhead and pickup are held by the same carriage arm which facilitates their tracking in a radial line. Variable equalzers, attenuators, and amplifier controls serve to make the frequency response of the recording and playback processes widely controllable. The equipment contains a monitoring speaker and test equipment consisting of an oscilloscope and a dial test indicator.

All units have been treated for moisture and fungus.

The following equipment is used with, but not supplied with, Dual Recording Equipment CXDB: dividers (1 set), Chatillion scale (1), and test equipment as required.

TECHNICAL CHARACTERISTICS:

Frequency Response: 30 to 10,000 cps; 70 to 8,000 cps±3 db (amplifier-equalizer control knobs in counterclockwise position and pickup equalizer at position 3)

Impedances:

Amplifier Input: 50, 250, and 500 ohms, balanced or unbalanced

Amplifier Output: 500 and 8 ohms

Attenuator: 500 ohms Cutterhead: 500 ohms Pickup: 50 ohms

Repeater Transformer: 500 ohms

Speaker: 8 ohms
Rotating Speed: 33-1/3 rpm
Accuracy: One part in 100,000
Cutterhead: Magnetic type

Pickup: Dynamic type with diamond-tipped stylus

Cutter or Pickup Equalizer: A capacitance and resistance network

Heat Dissipation:

Amplifier Cabinet: 175 w Recorder Cabinet: 275 w

Power Requirements: 11.9 amp (max) at 115-v, 60- cycle, 1-

phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
ŀ	Amplifier Cabinet (including jack panels) 10AYE		16-7/8 x 22-3/4 x 82-1/2	180
2	Amplifier Equalizer Unit 10AYC		11-5/8 x 19 x 21	50
3	Attenuator Unit 10AYD		4-3/16 x 5-3/16 x 19	8
1	Constant Voltage Transformer 10AYJ		5-5/8 x 6-15/16 x 14-1/2	38
2	Control and Speaker Unit 10AYF		4-7/8 x 10-1/2 x 19	15
I	Dial indicator			8
ī	External cables		99 ft	10
1	Frequency Comparator Unit 10AYG		3-1/2 x 5-1/16 x 19	8

AN/USP-type DUAL RECORDING EQUIPMENT

MAJOR	COMPO	ONENTS—(Continued
* 4 74 Jb - 11	COITH	2115110	COHUHUEU

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Frequency Standard Unit 35135-A		7 x 7-1/8 x 19	18
2	Inverter Power Supply Unit 20550-A	****************	10-1/2 x 14-1/8 x 19	75
2	Maintenance repair part box (Case 1 and 2)		9-1/2 x 16 x 25	90
1	Maintenance repair parts box (Case 3)		12-1/2 x 19-1/2 x 37-1/2	180
I	Maintenance repair parts box (Case 4)		9-1/2 x 13 x 13	36
1	Oscilloscope Unit OBL-3b		7 x 15-5/16 x 19	29
2	Recorder Cabinet 10AYM		20-1/2 x 23-3/8 x 53-1/4	260
2	Recorder Unit 10AYK (with microscope)			65
1	Repeater Transformer Unit 10AYH	***************************************	3-1/2 x 5-1/16 x 19	10
2	Stroboscope and Control Unit 10AYL		5-1/4 x 11-1/4 x 19	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91830

or in this bitter				
PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)	
20		136.2	2,600	
8	PROCUREMENT	DATA		
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	
Engineering Research Associates, Inc.	St. Paul, Minn.	NObsr-28476, 7 February NObsr-42001, 4 August 19 NObsr-63010		
		2 2 2 2		

COMBINATION RADIO RECEIVER AND RECORD PLAYER AN/USP-type

5 December 1958

Cognizant Serv:

USN FSN:

RCT: 5820-644-3401

RCU: 5853-644-4509 RCU-1: 5835-323-9075 RCT, RCU, RCU-1

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

RCT: F16-Q-263230-200 RCU: F16-Q-263980-200 RCU-1: F16-Q-263981-100

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Combination Radio Receiver and Record Players RCT, RCU, and RCU-1 are combination radio receiver and record player units, installed in a console cabinet that also houses dual speakers. An auxiliary cabinet is also supplied ,which accommodates 200 10- or 12-inch records in four compartments.

The RCT, RCU, and RCU-1 are identical in all respects except for the type of record player supplied. The RCT is equipped with a manual player with a turntable capable of 33-1/3 revolutions per minute for transcriptions only and 78 revolutions per minute for records or transcriptions. It plays recordings up to 12-inch diameter. The RCU and RCU-1 incorporate an automatic record changer that will accommodate 10- and 12-inch records, but the sizes cannot be intermixed.

TECHNICAL CHARACTERISTICS:

Radio:

Frequency Range:

Broadcast: 535 to 1720 kc Police: 1,667 to 5,680 kc Short Wave: 5.6 to 18.4 mc

Phonograph:

RCT: Manual record player
RCU: Automatic record player
RCU-1: Automatic record player

Power Requirements: 180 w, 110- to 220-v 50- to 60-cycle ac (Switch located in rear of cabinet provides selection of 110- to 220-v power source operation).

MAJOR COMPONENTS **DIMENSIONS** WEIGHT ITEM STOCK NUMBERS (Lbs) QTY (Inches) For RCT: Radio Phonograph Combina-36-1/4 x 36-1/4 x 19-1/2 1 tion 46226 Record Cabinet 10280 13-7/8 x 14 x 24-7/8 1 For RCU: Radio Phonograph Combina-36-1/4 x 36-1/4 x 19-1/2 1 tion 46227 Record Cabinet 10280 13-7/8 x 14 x 24-7/8 1 For RCU-1: Radio Phonograph Combina-36-1/4 x 36-1/4 x 19-1/2 1 tion 46228 Record Cabinet 10280 13-7/8 x 14 x 24-7/8 1

AN/USP-type COMBINATION RADIO RECEIVER AND RECORD PLAYER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,914

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC & /or DWG:

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

The Magnavox Co.

Fort Wayne, Ind.

NXss-31869, 18 June 1943

NXss-8655

RADIO RECEIVING AND REPRODUCING EQUIPMENT	AN/USQ-type
---	-------------

Cognizant Serv:	USN	FSN:			REI
		USA	USN	USAF	

TYPE CLASS: STOCK NO: Used by F16-Q-276590-200

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving and Reproducing Equipment REK is designed for hospital ship or shore use to amplify and distribute program material from recordings and microphones or from either of two radio receivers. Programs can be distributed to the various wards; patients receive them by means of earphones plugged into convenient outlets.

Four amplifiers provide four program channels which may be switched to one or more wards. The two radio receivers are identical and provide coverage of standard and short-wave broadcasts or cw transmission. An adjustable-speed turntable is provided for recording, and an automatic record changer provides for reproduction. A microphone may be plugged into each of the four amplifiers for announcements; a comprehensive switching system allows selection of the desired input to each amplifier.

This equipment is designed to be installed in two cabinettype racks side-by-side, bolted together. In addition, the two racks may be securely bolted to the floor or deck.

TECHNICAL CHARACTERISTICS:

Receiver Frequency Range: 535 to 32,000 kc.

Outlet Capacity: Approximately 800

Power Requirements: 610 w, 105-125-v 50-60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Aeropressure microphone		6 x 2 x 2-1/2	2.5 ea
4	Amplifier panel and shelf as- semblies			31.0 ea
2	Distribution transformer panel			
2	Monitor speaker panel			
2	Output distribution switch panel		19 (wide) x 3-1/2 (deep)	
2	Radio receiver CRV-46246		11 x 19-1/4 x 19-1/4	
1	Record changer and shelf as- sembly		12-7/16 x 20-3/16 x 16-3/16	
2	Relay rack			
2	Relay rack			
2	Switch and fuse panel		5-7/32 x 19 x 2-3/4	8.5 ea
1	Turntable and pickup shelf			
.2	Volume indicator and control panel	*******************	5-7/32 x 19 x 2-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,961

AN/USQ-type RADIO RECEIVING AND REPRODUCING EQUIPMENT

SHIPPING DATA

PKGS VOLUME (Cu Ft)

WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE:

USN

DESIGN COG:

USN, BuShips

CONTRACTOR

SPEC &/or DWG:

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

RCA Victor Division, Radio Corporation of America

Camden, N. J.

NXsr-62358

NXsr-95123 N5sr-4661

\$2,372.00

AN/UXA-5(XN-1)TELEVISION CAMERA GROUP

3 December 1958

Cognizant Serv:	USN	FSN:			
		USA	USN	USAF	
TYPE CLASS:		* *	Used by		
STOCK NO:			***		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Television Camera Group AN/UXA-5 (XN-1) consists of a complete unit designed for the generation and presentation of a television image.

A camera unit views the scene to be televised, and under control of the camera control unit generates a television signal of 525 sequentially scanned lines at a frame rate of 50 per second. The signal is presented on a picture display monitor, contained in the control-monitor unit.

The power supply unit furnishes power for the camera and the control-monitor units.

Controls for the camera unit are provided in the controlmonitor unit. This permits unattended operation of the cam-

TECHNICAL CHARACTERISTICS:

Camera Unit:

Type of Pickup Tube: Vidicon

Maximum Location From Point of Control: 100 ft

Maximum Lens Aperture: F/2.7

Focal Length of Lens: 25 mm

Light Filter Density: 0 to 2.1 in 8 steps of 0.3 density Scene Highlight Brightness: 100 to 10,000-ft lamberts

Scanning:

Total Lines: 525

Line Rate: 26 kc; adjustable from 22 to 32 kc Frame Rate: 50 cps; adjustable from 40 to 69 cps

Presentation:

Picture Monitor: 10-in. cathode-ray tube Wave Form Monitor: 3-in. cathode-ray tube

Video Amplifier Bandwidth: 10 mc

Wave Form Monitor Sweep Rates: 18 kc and 25 cps

Blanking Pulse Duration:

Horizontal Period: 12 to 18% Vertical Period: 4 to 8%

Power Consumption:

Control Monitor Unit: 800 w Video Indicator Unit: 300 w

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Ac power cord		120 lg	1.5
I	Camera		$5-1/2 \times 7-3/4 \times 50$	15
1	Camera cable		600 lg	23
1	Camera cable		300 lg	13
1	Control monitor		17-1/4 x 18-1/4 x 19	138
1	Indicator, Video IP-178 (XN-1)UX		14 x 18-1/4 x 18-1/2	127
1	Power cable		180 lg	5
1	Power supply		12-1/2 x 15 x 21-1/2	146 .

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91677

AN/UXA-5(XN-1) TELEVISION CAMERA GROUP

SHIPPING DATA

PKGS VOLUME (Cu Ft)

WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:

USN

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Allen B. DuMont Laboratories, Inc.

Passaic, N. J.

NObsr-52594, 13 June 1951

FREQUENCY SHIFT RECEIVER EQUIPMENT AN/UXA-type

5 December 195 Cognizant Serv:	FSN:	TREGOLITOT STILLT RECE	TVER EGO! MEIN	FRB
	USA	USN	USAF	
TYPE CLASS:	10 m	Used by		
STOCK NO:		ت ت	~ ~	



FRB

FUNCTIONAL DESCRIPTION:

Frequency Shift Receiver Equipment FRB is designed for ship or shore installations, and is used to convert audio frequency shift facsimile signals to amplitude-modulated audio signals. The signals are fed to a local facsimile machine by use of a loss pad, or to a remote facsimile machine by opening the loss pad circuit. The equipment is engineered to eliminate modulation caused by fading.

Audio FM keyer Equipment FSJ is often used with this equipment to form a converter-inverter system in conjunction with Facsimile Transmitter-Receiver Equipment TT-41/TXC-1B and Facsimile Transmitter-Receiver Equipment TT-66/TXC.

TECHNICAL CHARACTERISTICS:

Frequency Range in Kc: 1.0 to 2.5, and 2.1 to 3.0

Type Modulation: FM

Type of Signal: Frequency shift Input Impedance: 600 ohms

Signal Output Level: Adjustable, 0 to $+20~\mathrm{db}$

Output Carrier Frequency: 1,800 cps

Power Output:

Output level: 0 dbm to +10 dbm across 600 ohm load

Power Consumption: 87 w

Power Requirements: 100- to 125-v, 60-cycle 1-phase ac

11-00/1	-00/1AC.			
		MAJOR COMPONEN	ITS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 (This	Frequency Shift Receiver Inverter Model FRB equipment consists of only one ma	.jor component.)	10-1/2 x 14-3/4 x 22	74

AN/UXA-type FREQUENCY SHIFT RECEIVER EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVPERS 10857 NAVSHIPS 95002

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC & / or DWG:

DESIGN COG:

USN, BuShips

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Acme Newspictures, Inc.

Cleveland, Ohio

NXsr-85015

\$3,000.00 with spares

26 November 1958 Cognizant Serv: USN	I FSN: 58	15–665–1996	AUDIO FM	KEYER EQUIPMENT	AN/UXA-typo
	USA		USN	USAF	
TYPE CLASS:			Used by	44	
STOCK NO:					
		(No Illustratio	on Available)		
			TECHNICAL	. CHARACTERISTICS:	
FUNCTIONAL DESC Audio FM Keyer Equip- or amplitude-modulated a audio tone. It is intended f	ment FSJ is for co adio carrier to a	frequency-shifted	Input Level, M Output Level: 9 Maximum Key	dance: 600 ohms inimum: 0 dbm to 10 dbm ing Frequency: Greater tha nents: 150 w, 115-v 60-cycle	
10.000.0014.000.000.000.000.000.000.000		MAJOR CC	OMPONENTS		
QTY I	TEM	STOCK NU	MBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 Audio FM Key (Equipment consists of			8-3/	'4 x 12-1/8 x 19	7.
REFERENCE DATA	and litera	ΓURE:			
1111 21111 2000					
		SHIPPIN	G DATA		

AN/UXA-type AUDIO FM KEYE	DDOCUDE VENT D	A T A	
	PROCUREMENT D	AIA	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Acme Newspictures	Cleveland, Ohio	NXsr-85015	\$700.00 with spares

TELEGRAPH MULTIPLEX SET AN/UXC-2

USAF

3 December 1958

Cognizant Serv: USN FSN: 58

USA

: 5815-644-4808

TYPE CLASS: STOCK NO:

Used by

USN

FUNCTIONAL DESCRIPTION:

Telegraph Multiplex Set AN/UXC-2 is a single channel time and frequency division multiplex system that will combat the effects of propagational disturbances during radio transmission. It is used as terminal equipment at each end of a radio circuit to handle mark-space information that can withstand being sampled at 1 millisecond intervals without any objectionable loss of information.

This equipment effectively eliminates fading and multipath propagation disturbances. Special features include a telegraph key for manual continuous wave type transmission.

The set is intended to be installed in a fixed location. It can be used with any facsimile equipment operating from 1 millisecond, or slower, mark-space information.

TECHNICAL CHARACTERISTICS:

Frequency: 875; 1,125; 1,375; 1,625; 1,875; 2,125; 2,375; 2,625; 2,875; 3,125; 3,375; 3,625; 3,875; 4,125; 4,375; 4,625 cps

Bandwidth: 125 cps for each channel
Type Modulation: 125 cps lower side band

Impedance:

Input to Transmitter: 75 ohms Output from Transmitter: 600 ohms Input to Receiver: 600 ohms

Output from Receiver: 75 ohms *Heat Dissipation*:

Main Cabinet Equipment:

Transmitting Position: 1,035 w at 115-v 60-cycle 1-phase ac, 59 BTU per minute

Receiving Position: 920 w at 115-v 60-cycle 1-phase ac,

 $52~\mathrm{BTU}$ per minute RF Oscillator O–216/U:115 w at 115-v 60-cycle 1-phase

ac, 6.6 BTU per minute

Power Requirements: 20 amp, 115-v $\pm 10\%$, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

AN/UXC-2

QTY	ÍTEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Blower Assembly		7 x 10-1/6 x 19	16
1	Cabinet CY-859/UXC-2		22 x 26 x 72-7/16	440
1	Electrical Synchronizer SN- 110/UXC-2	***************************************	7 x 19 x 20-3/4	48
1	Filter Assembly F-100/UXC-2		7 x 19 x 20-3/4	79

AN/UXC-2 TELEGRAPH MULTIPLEX SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Oscilloscope OS-41/U		10-1/2 x 19 x 20-3/4	48
1	RF Oscillator O-216/U		18-3/8 x 21-3/4 x 26-1/2	107
1 Set	Equipment spares		17 x 26 x 31	
1	Telegraph line Control C-1120/ UXC-2		7 x 19 x 20-3/4	58
1	Telegraph Multiplex Receiver R-370/UXC-2		7 x 19 x 20-3/4	53
1	Telegraph Multiplex Trans- mitter T-423/UXC-2		7 x 19 x 20-3/4	67
1	Telegraph Multiplex Trans- mitter T-424/UXC-2	H = = = = = = = = = = = = = = = = = = =	7 x 19 x 20-3/4	67

REFERENCE DATA AND LITERATURE:

PROCURING SERVICE: USN

 ${\it NAVSHIPS~92153}$

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	68.20	1,632

PROCUREMENT DATA

DESIGN COG: USN, BuShips

SPEC &/or DWG:	MIL-T-169	95(SHIPS)		,
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Melpar, Inc.		Alexandria, Va.	NObsr-52652, 25 June 195	\$21,000.00

FACSIMILE RECORDER SET AN/UXH-2(XN-3)

3 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

Tent-Std



AN/UXH-2(XN-3)

FUNCTIONAL DESCRIPTION:

Facsimile Recorder Set AN/UNH-2(NN-3) is a continuous web-type unit designed to automatically produce a record of information transmitted by facsimile. It permits long periods of unattended operation while recording data received from a transmitter capable of sending the proper control signals.

This equipment automatically compensates for changes in signal level between transmissions; it will automatically phase, and start the recording as well as stop the apparatus when the transmission is completed.

The control signal adapter of the AN/UHX-2(XN-1) is an accessory used between any one of the Facsimile Transmitters AN/TXC-1, AN/TXC-1A, AN/TXC-1B, AN/TXC-1C or

AN/TXC--1D and the Facsimile Recorder Set AN/UXH--2(XN--3).

TECHNICAL CHARACTERISTICS:

Recording Width: 18.85 in.
Type Recording: Direct stylus
Scans Per Minute: 30, 60, 120
Type Modulation: AM

Input Frequency: 450 cps to 2,700

Speed Control: Synchronous motor controlled by 1,800 cps fork oscillator

Signal Level: +4 to -36 dbm Input Contrast: 8 to 16 db

Power Consumption: 270 w at 11-v or 230-v

Power Requirements: 115-v or 230-v, 45- to 65-cycle, 1-phase ac

(N-3) FACSIMILE RE	CORDER SET		
	MAJOR COMPON	ENTS	1
ITEM	STOCK NUMBERS	DIMENSION J (Inches)	WEIGHT (Lbs)
imile Recorder Set AN/ XH-2(XN-3)		16 x 21-3/4 x 30	180
DATA AND LITERAI 12735	ΓURE:		
	SHIPPING DAT	A	
		VOLUME (Cu Ft)	WEIGHT (Lbs
	PROCUREMENT D	ATA	
			and the last of the second sec
SERVICE: USN WG: MIL-F-19480		DESIGN COG	: USN, BuAe
OR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
e Corp.	New York, N. Y.	NObsr-57278, 1 April 1952	2
	ITEM Imile Recorder Set AN/ ICH-2(XN-3) DATA AND LITERAL IN ICH	ITEM STOCK NUMBERS Imile Recorder Set AN/ (CH-2(XN-3)) DATA AND LITERATURE: 12735 SHIPPING DATA PROCUREMENT DATA SERVICE: USN WG: MIL-F-19480 DR LOCATION	ITEM STOCK NUMBERS DIMENSIONJ (Inches) mile Recorder Set AN/ CH-2(XN-3) DATA AND LITERATURE: 2735 SHIPPING DATA VOLUME (Cu Ft) PROCUREMENT DATA SERVICE: USN WG: MIL-F-19480 DR LOCATION CONTRACT OR ORDER NO.

AUXILIARY INTERPHONE EQUIPMENT AN/VIA-1

1 December 1958

Cognizant Serv: USA FS

FSN:

5830-539-7728

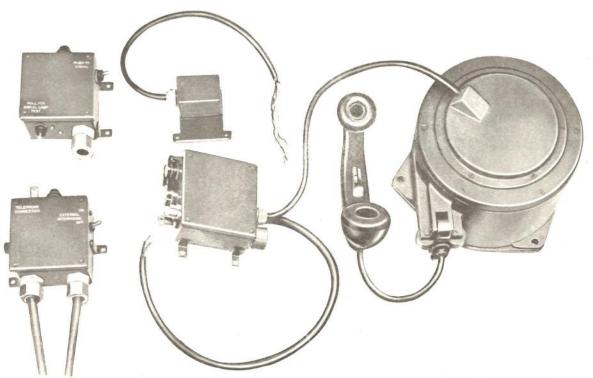
USA

USN

USAF

TYPE CLASS: STOCK NO: Std

202100-1



AN/VIA-I

FUNCTIONAL DESCRIPTION:

Auxiliary Interphone Equipment AN/VIA-1 is an assemblage of components used to extend a vehicular interphone system to the exterior of the vehicle. It is used in inclosed or armored vehicles.

This equipment consists essentially of interphone station control units that are installed within the vehicle, and a cable cel which includes a handset and a control unit designed to be mounted on the exterior of the vehicle to provide an outside interphone—station.

The stations of this system have call signal lamps to indicate that control with the exterior station is desired.

The only adjustment provided is for control of volume.

The equipment is powered by the electrical system of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Facilities: Can be used with Radio Sets SCR-508, -528, -608, -628, or AN/VRC-3 or with Interphone Equipment RC-99 or similar types of units.

Type Controls:

C-663: External interphone ON-OFF switch

C-664: External interphone PUSH TO SIGNAL switch C-665: VOLUME

Power Output: Dependent on interphone system

Power Requirements: Draws required power from system to which it is connected.

AN/VIA-1 AUXILIARY INTERPHONE EQUIPMENT

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cable Reel RL-149/VIA-1		10-3/16 x 9-13/16 x 5-13/16	
1	Handset MTS-1 (USMC)		8-7/8 x 2-3/4 x 3-1/2	
1	Interphone Control C-663/ VIA-1		6-3/8 x 4-7/16 x 5-15/16	
1	Interphone Control C-664/ VIA-1		6-3/16 x 6-9/16 x 2-17/32	
1	Interphone Control C-665/ VIA-1		8-1/2 x 5-5/8 x 3-13/16	
1	Interphone Control C-666/ VIA-1		4-7/16 x 4-3/32 x 1-11/16	

REFERENCE DATA AND LITERATURE:

TM 11-704

PKGS

SHIPPING DATA

VOLUME (Cu Ft)

WEIGHT (Lbs)

		PROCUREMENT DATA	\	
PROCURING SERVICE: SPEC & / or DWG:	USA		DESIGN COG	: USA, Sig C
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERPHONE EQUIPMENT AN/VIC-type

5 December 1958

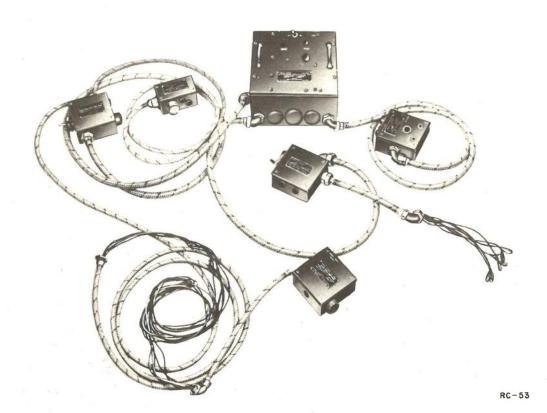
Cognizant Serv: USA

FSN: USA

RC-53

USN USAF

TYPE CLASS: STOCK NO:



FUNCTIONAL DESCRIPTION:

Interphone Equipment RC-53 is a vehicular interphone communication system for tanks and other inclosed vehicles.

This equipment consists essentially of an amplifier, control and jack boxes, and related components.

Through this equipment, the radio operator and vehicle commander may control the vehicular radio equipment and maintain communication contact. The RC-53 is powered by the 12-v storage battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Facilities Afforded: Radio and voice, between interphone station

 $Type\ Controls$: Selector switch, volume control, on-off switch $Power\ Output$: 2 w

Power Requirements: 3 to 3.5 amp at 12-v dc from vehicular storage battery

AN/VIC-type INTERPHONE EQUIPMENT

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Control Box BC-422		5-11/16 x 2-3/16 x 4-3/16	2
1 6	Control Box BC-449 Headset HS-18	FSN 5965-296-1956 2B818	5-11/16 x 2-3/16 x 4-3/16	1.7
1	Interphone Amplifier BC-367		8-15/16 x 8-15/16 x 5-5/8	18.5
1	Jack Box BC-378, -379, -448		2-3/16 x 4-11/16 x 5-1/2	3.2
5 1	Microphone T-30-A Terminal Block TM-183	FNS 5965-170-5234 2B1630		.3

REFERENCE DATA AND LITERATURE:

TM 11-700

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

4	PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN COG	i: USA, Sig C
	CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERPHONE EQUIPMENT AN/VIC-type

5 December 1958

Cognizant Serv:

FSN: USA

5830-224-5345 (12-v dc)

5830-224-5346 (24-v dc)

RC-99

USA

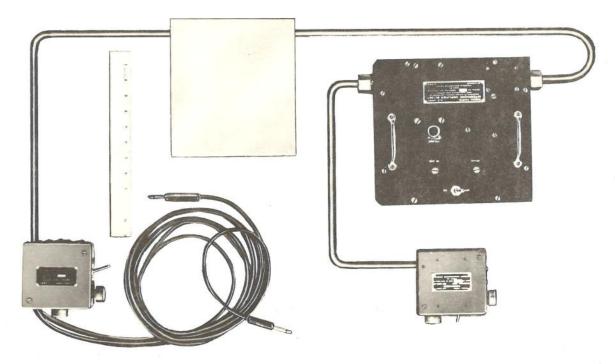
USN

USAF

TYPE CLASS: STOCK NO:

L/Std

2S99



RC-99

FUNCTIONAL DESCRIPTION:

Interphone Equipment RC-99 is a vehicular, multistation, intercommunication system used in inclosed vehicles, such as tanks.

This equipment consists of a master-station amplifier unit, two control boxes, and associated accessories. It provides intercommunication facilities within the vehicle and permits the radio operator and vehicle commander to retain partial control of the vehicle's radio equipment.

This interphone equipment is powered by the 12- or 24-volt

storage battery of the vehicle in which it is installed, through appropriate dynamotor equipment.

TECHNICAL CHARACTERISTICS:

Type of Signal: Af, vf

Type Communication Circuits: Interphone and radio communication circuits

Controls: Volume control; radio-interphone switch; and on-off switch

Power Requirements: 12-v or 24-v dc from vehicular storage

AN/VIC-type INTERPHONE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Control Box BC-739		4 x 4 x 2	2.5
1	Interphone Amplifier BC-367		8-3/4 x 8-3/4 x 4-1/2	19
	or			
I	Interphone Amplifier BC-667		8-3/4 x 8-3/4 x 4-1/2	19
1	Interphone Control Box	2C1738	4 x 4 x 2	2
	BC-606-I)	(FSN) 5830–160–4910		

REFERENCE DATA AND LITERATURE:

TM 11-702

SHIPPING DATA

PKGS	*	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & /or DWG:

CONTRACT OR APPROX
CONTRACTOR LOCATION ORDER NO. UNIT COST

\$120.00

INTERPHONE EXTENSION KIT AN/VIC-type

5 December 1958

USA Cognizant Serv:

FSN:

RC-298

USA

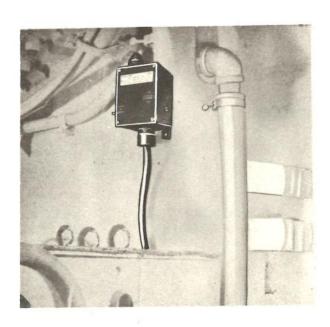
USN

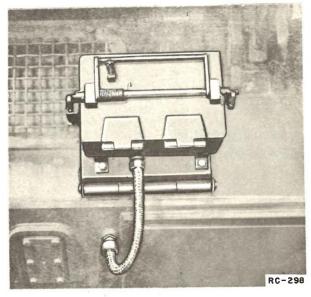
USAF

TYPE CLASS: STOCK NO:

S/Std

2C196-298





FUNCTIONAL DESCRIPTION:

Switchbox BC-1361 Toggle Switch ST52R

Interphone Extension Kit RC-298 is an assemblage of components that can be added to the existing interphone equipment of inclosed vehicles (such as tanks) to provide an interphone station located outside the vehicle. It is used in conjunction with interphone systems designed for use in armored vehicles.

This equipment consists of an external interphone box, an internal interphone switchbox, and related components. The only adjustment provided is for control of volume. Internal and external interphone stations have call signal lamps to indicate that contact with the station outside the vehicle is

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice

Type Communication Circuits: Two-way; press-to-talk Controls: Volume only (on external interphone station)

Power Requirements: Vehicular storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cordage CO-213 (hardware and necessary mounting)			
1	External Interphone Box BC-			

DESIGN COG: USA, Sig C

PROCURING SERVICE: USA

RADIO SET AN/VRC-1

1 July 1958

Cognizant Serv:

USA

FSN: USA

USN

USAF

TYPE CLASS: STOCK NO:

Std

2S4502-1



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-1 is a short-range, hf and vhf, AM (voice, tone, and cw) radio transmitting and receiving equipment that may be installed in vehicles for ground-to-air communication.

This equipment consists essentially of a ground communication transmitter and receiver, plus transmitting and receiving equipment designed for airborne use. It is usually used for communication in ground point-to-point nets but can be used as a beacon for compass-equipped aircraft and for hf groundair radio communication. Antenna and accessory equipment is included. It is powered by the 12-volt storage battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Transmitters: 3 to 6.2 (hf); 100 to 156 (vhf)

Receivers: 1.5 to 18 (hf); 100 to 156 (vhf)

Type Modulation: AM

Type of Signal:

Hf: Cs, tone, and voice

Vhf: Voice

Power Output:

Hf: 40 s, (voice); 75 w (cw)

Vhf: 8 to 9 w

Power Requirements: 65.7 amps from 12-v dc vehicular storage battery (through dynamotors)

AN/VRC-1	RADIO	SET
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QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
			,	(_0,)
		(USA)		
1	Antenna AN-24	2A224		
1	Antenna AN-27	2A275-27		
1	Dynamotor Unit BD-77	3H1777.2		
1	Dynamotor Unit PE-98-F	3H1898F		
1	Radio Control Box BC-602-D	2C3347D		
1	Radio Receiver BC-312	2C4312	10 x 9-1/16 x 18-1/16	5
1	Radio Receiver BC-624	2C4424	8-3/4 x 5-7/8 x 15-3/8	
1	Radio Transmitter BC-191	2C6191.9	21-21/32 x 23-1/8 x 9-5/16	6
1	Radio Transmitter BC-625	2C6525	8-3/4 x 5-7/8 x 15-3/8	

REFERENCE DATA AND LITERATURE:

TM 11-277

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC &/or DWG: (USA) SC-D-7124

DESIGN COG: USA, Sig C

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

Federal Telephone & Radio Corp.

Clifton, N. J.

22265-P-44-06

RADIO SET AN/VRC-2

1 July 1958

Cognizant Serv:

USA

FSN:

5820-196-1710

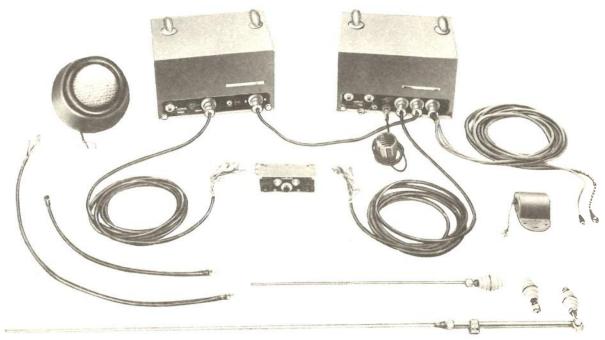
USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std 2S4502-2



AN/VRC-2

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-2 is a vehicular, short-range, vhf, FM (voice), radio receiving and transmitting equipment used by military police and security troops for highway traffic control and similar applications.

This equipment consists of a crystal-controlled radio transmitter and receiver controlled from the driver's position in a vehicle. It is powered through individual vibrator power supply units by the storage battery of the vehicle in which the equipment is installed.

It uses a single telescopic whip-type antenna controlled by an antenna change-over relay located in the transmitter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40

Type Modulation: FM

Type of Signal: Voice

Power Output: 45 w

Power Requirements:

Transmitter: 45 amp at 6.3 v dc and 0.15 amp at 540 v dc

from vibrator power supply

Receiver: 14.5 amp at 6.3 v dc and 0.08 amp at 250 v dc

from vibrator power supply

AN/VRC-2 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Antenna AT-129/VR	5985-284-4849	1-1/2 x 1-1 2 x 78	3.25
1	Dynamic Loudspeaker LS- 158/U	5965-232-4637	$9-1/2 \times 4-0/4 \text{ (diameter)}$	5
1	Radio Receiver R-237/VR	5820-163-1698	11-1/2 x 10 x 15	35
1	Radio Set Control C-493/ VRC-2	5820-161-1523	2-1/4 x 3-1/4 x 7-1/4	1.5
1	Radio Transmitter T-193/ VRC-2	5820-194-0964	11-1/2 x 10 x 15	41

REFERENCE DATA AND LITERATURE:

TM 11-607

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	8	168

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & or DWG: MIL-R-18872

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Electronics Division, Interna-	Palo Alto, Calif.	37214-P-53-51	\$697.52
tional Telephone & Telegraph Corp. Utility Electronics Corp.		16816-P-51-31	566.33

RADIO SET AN/VRC-2X

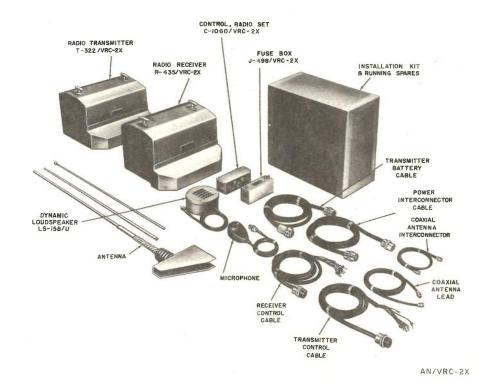
3 December 1958

Cogniza. Serv: USA

FSN:

5820-230-3958 (USA) 5820-501-0044 (USN)

3020 301 0044 (0314)					
	USA		USN	USAF	
TYPE CLASS:	L/Std		Used by	Ltd-Std	
STOCK NO:	$2\mathrm{S}4502 ext{-}2\mathrm{X}$		2	***	



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-2X is a complete communication unit, less primary power source, designed for vehicular operation.

This equipment provides two-way voice communication With similar fixed frequency radio sets. Reliable communication is possible to a maximum of 15 miles in an open terrain.

The communication circuit is of a single frequency, push-totalk type. A single antenna is used and is switched by an antenna relay, located in the transmitter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40, in 3 bands

Frequency Deviation: ±15 kc for full modulation

Type Frequency Control: Crystal

Type Receiver: Dual conversion superheterodyne

Number of Crystal Oscillators: 2

Type Modulation: FM

Type Emission and Reception: Voice

Power Input of Receiver: 24 v at 3 amp

Power Output of Transmitter: 30 s

Power Input of Transmitter: 24 v at 10 amp

Antenna: 1/4 wave telescopic, whip

Power Requirements:

Receiver: 3 amp, 24 v Transmitter: 10 amp, 24 v

AN/VRC-2X RADIO SET

MAJOR COMPONENTS

ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
Antenna		1-1/2 x 1-1/2 x 78	3.25
Cable group		5 x 11 x 11	13
Dynamic Loudspeaker		9-1/2 dia x 4-1/4	5
Fuse Box J-498/VRC-2X		2-3/16 x 2-1/2 x 6-1/8	.5
Installation components		3 x 4 x 4-1/2	1.75
Microphone M-38/U		$3-1/2 \times 3-3/4 \times 5$	1.25
Radio Receiver R-435/ VRC-2X		10 x 11-1/2 x 15	35
Radio Set Control C-1060/ VRC-2X		2-1/4 x 3-1/4 x 7-1/4	1.5
Radio Transmitter T-322/ VRC-2X	*******************	10 x 11-1/2 x 15	41
Transmitter plate coils (set of 3)		1-1/2 x 2-1/4 x 4	4
Spare parts group		5 x 6 x 8	10
Switch Guard MX-1368/		3-3/4 x 4-1/4 x 14-7/8	. 5
VRC-2X		1/2 x 8 x 10-1/2	. 5

REFERENCE DATA AND LITERATURE:

TM 11-607

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
ì	12.3	205

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC & or DWG:

DESIGN COG: USA, Sig C (RCUE)

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

\$820.00

RADIO SET AN/VRC-3

1 July 1958

Cognizant Serv:

USA

FSN:

5820-196-1735

USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std 2S4502-3



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-3 is the vehicular version of Radio Set SCR-300. It is a crystal-controlled, short-range, FM (voice) transmitting and receiving equipment used for communication in the vhf band. It is used between tanks and supporting infantry.

This equipment consists of a dry-battery operated receiver-transmitter component. It uses a whip-type antenna and includes Battery BA-70, which can be replaced by Vibrator Power Supply PP-114/VRC-3 for operation from the vehicular storage battery.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 40 to 48

Type Modulation: FM Type of Signal: Voice Power Output: 0.3 s

Power Requirements: Battery BA-70

AN/VRC-3

	MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
		(FSN)				
1	Battery Case CS-139		9-3/8 x 10-15/16 x 7-1/4	3.6		
1	Radio Receiver and Trans- mitter BC-1000	5820-196-9042	5-5/8 x 11-5/16 x 7-1/8	13		

	•			
M	L-	HD	BK-	161

AN/VRC-3 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-637

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1.	11.9	21.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR LOCATION CONTRACT OR APPROX UNIT COST

RADIO SET AN/VRC-5

1 July 1958

Cognizant Serv:

USA

FSN:

5820-196-1709

USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std

2S4502-5/12





AN/VRC-5

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-5 is a short-range, low-power, FM (voice) radiotelephone equipment used for communication by vehicles of the armored forces.

This equipment consists of a crystal-controlled transmitter and a receiver, plus antenna and related accessories. The transmitter and the receiver operate on 10 preset channel frequencies selected by means of pushbuttons mounted on the front panels of each of these components.

A single whip-type antenna is used for transmission and reception, and provision is made for automatic disabling of receiver output during operation of the transmitter dynamotor.

The radio set can be operated from the storage battery of the

vehicle in which it is used by means of appropriate dynamotors which are installed within the housings of the transmitter and the receiver.

This equipment has been replaced by Radio Set AN/GRC-

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 40.0 to 47.9 (10 preset channels) Type Modulation: FM

Type of Signal: Voice

Power Output: 30w

Power Requirements: 24 amp from 12-v storage battery through Dynamotors DM-34 & DM-35, or 14 amp from 24-v storage battery through Dynamotors DM-36 & DM-37

MIL-HDBK-161

AN/VRC-5 RADIO SET

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
		(USA)			
1	Antenna A-62 Dynamotor DM-34	2A262 3H1634	4-1/2 x 3 x 6-1/2	4.7	
1	or Dynamotor DM-36 Dynamotor DM-35	3H1636 3H1635	4-1/2 x 3 x 6-1/2 5-1/2 x 4-1/2 x 8-1/4	4.7 9.2	
	or				
1 1 1	Dynamotor DM-37 Radio Receiver BC-603 Radio Transmitter BC-604	3H1637 2C4403 2C6494	5-1/2 x 4-1/2 x 8-1/4 11-1/2 x 6-3/4 x 12-1/2 11-1/2 x 10-1/4 x 18	9.2 35 67	

REFERENCE DATA AND LITERATURE:

TM 11-600

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	29.6	645

PROCUREMENT DATA

PROCURING SERVICE: USA)		DESIGN COG:	USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-6()

1 July 1958

Cognizant Serv:

USA

FSN:

5820-096-7009

USA

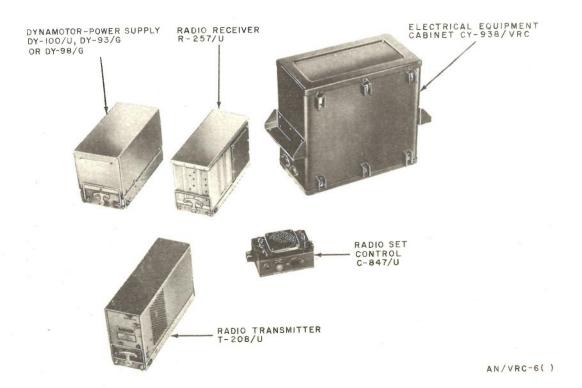
USN

USAF

TYPE CLASS: STOCK NO:

 Std

2S4502-6



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-6() is vehicular, HF, FM (voice) receiving and transmitting equipment used for nontactical radio communication with other vehicular and/or fixed stations, including civilian police authorities.

This equipment consists essentially of receiving and transmitting components, each with its own power supplies and associated components. It can be push-to-talk operated from a remote point by means of suitable remote control equipment.

The AN/VRC-6 and AN/VRC-6X enable operation from storage battery sources of 24 or 12 volts, respectively.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50

Type Modulation: FM Type of Signal: Voice Power Output: 25 w Power Requirements:

Transmitter: 20 amp at 12-v dc through Dynamotor DY-93/G; or 10 amp at 24-v dc through Dynamotor DY-98/G

Receiver: 2 amp at 12-v dc through Power Supply PP-868/U; or 1.1 amp at 24-v dc through Power Supply PP-867/U

AN/VRC-6() RADIO SET

	MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
		(FSN)				
1	Dynamotor DY-93/G	6130-393-1706	13-13/16 x 6-7/8 x 6-1/4			
	or					
1	Dynamotor DY-98/G	6130-392-7185	13-13/16 x 6-7/8 x 6-1/4			
1	Electrical Equipment Cabinet CY-938/VRC	5820-503-0793	16-1/2 x 10-1/2 x 19-1/4	33		
1	Electrical Equipment Rack MT-1236/VRC	5820-503-3446	7-3/4 x 10-3/4 x 23-1/2	10.5		
1	Power Supply PP-868/U	5820-500-4381				
	or					
1	Power Supply PP-867/U	6130-284-0228				
1	Radio Receiver R-257/U	5820-503-1255	8-1/2 x 5-3/4 x 14-1/2	16		
1	Radio Set Control C-847/U	5820-503-1015	5 x 2-1/4 x 7-1/2	4.5		
1	Radio Transmitter T-208/U	5820-545-7268	8-1/2 x 4-1/2 x 14-1/2	8.5		

REFERENCE DATA AND LITERATURE:

TM 11-283

SHIPPING DATA

PKGS	VOLUME (Cu Ft)		WEIGHT (Lbs)	
1	10.5	3	249	
<u> </u>	PROCUREMENT DATA	Tr.	8	
PROCURING SERVICE: USA SPEC &/or DWG: MIL-N-11539		DESIGN CO	COG: USA, Sig C	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	

11661-P-52-51

\$1,005.69

Chicago, Ill.

Motorola, Inc.

RADIO SET AN/VRC-7()

USAF

1 July 1958 Cognizant Serv:

USA

FSN: 5820-196-8996

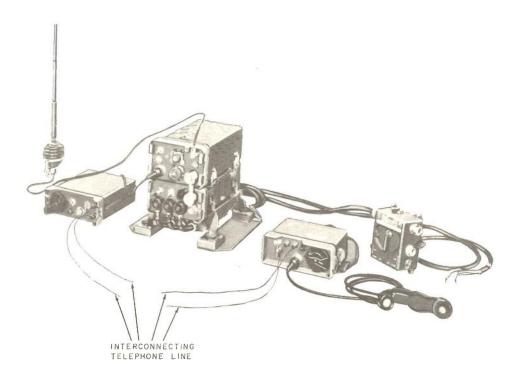
USA

TYPE CLASS:

STOCK NO:

Std

2S4502-7/12-2



USN

AN/VRC-7

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-7() is a short-range, FM (voice), vehicular radiotelephone equipment used within and between artillery, infantry, and armored force units.

This set consists of a separate, short-range, low-power receiver-transmitter component, designated as set 2 when used as part of the integrated series of radio sets, such as the AN/GRC-3 through AN/GRC-8.

It includes a vehicular installation unit, power supply equipment, and an interphone amplifier, plus various control and accessory equipment such as microphone, headset, and loudspeaker.

It can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 47.0 to 58.4

Type Modulation: FM

Type of Signal: Voice

Power Output: 500 mw

Power Requirements: 6/12/24-v dc from vehicular storage

battery

MIL-HDBK-161

AN/VRC-7() RADIO SET

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	AF Amplifier AM-65/GRC	(FSN) 5820-194-8303 (USA) 2C449-65.1	4-1/4 x 13 x 7-7/8	15.5	
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85	
1	Power Supply PP-281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6	
	or				
1	Power Supply PP-282/GR	(FSN) 5820–500–1684 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6	
	or				
1	Power Supply PP-448/GR Receiver-Transmitter RT-70/ GRC	(FSN) 6130–231–0677 (FSN) 5820–537–3913 (USA) 2C5130–70.2	4-1/2 x 6 x 3 4-3/4 x 13 x 7-1/8	6 45	

REFERENCE DATA AND LITERATURE:

TM 11-285

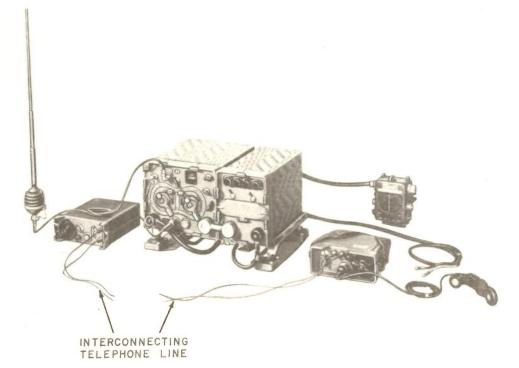
SHIPPING DATA

PKGS		VOLUME (Cu Ft)		WEIGHT (Lbs)
3			4.92	164
		PROCUREMENT DA	ATA	
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN CO	OG: USA, Sig C
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-8()

1 July 1958

Cognizant Serv:	USA	FSN:	5820-196-1718			
		USA		USN	USAF	
TYPE CLASS:		Std	0/10 0	72 M		
STOCK NO:		2S4502 - 8	8/12-2	4.2	22	



AN/VRC-8

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-8() is a short-range vehicular FM (voice) equipment for communication within and between armored units.

This set consists of a receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. A vehicular installation unit, power supply equipment, and control and accessory components are included.

This equipment can be operated from a remote point up to a

distance of about 2 miles over a telephone pair, by means of Control Group AN/GRA-6.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM Type of Signal: Voice

Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-8() RADIO SET

MAJOR COMPONE	NIS
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QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or	55		
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Receiver-Transmitter RT-66/ GRC	(FSN) 5820-503-1508 (USA) 2C5130-66.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-286

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
. 3	6.05	267

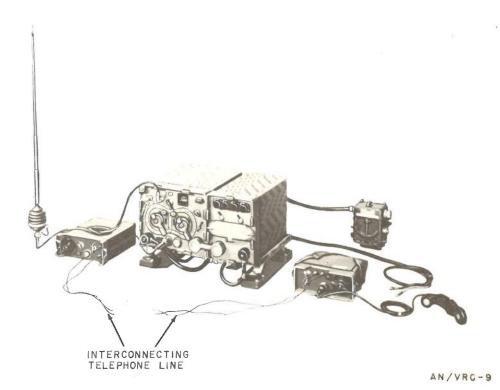
PROCUREMENT DATA

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
PROCURING SERVICE: SPEC &/or DWG:	USA	DESIGN COG:	USA, Sig C

RADIO SET AN/VRC-9()

1 July 1958

Cognizant Serv:	USA	F5N:	5820-193-8809			
		USA		USN	USAF	
TYPE CLASS: STOCK NO:		Std 2S4502	2-9/24			



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-9() is a short-range, vehicular, FM (voice) equipment for communication within and between artillery units.

This set consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. A vehicular installation unit, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice Power Output:

High Power: 9 to 16 w Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-9() RADIO SET

MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.8	
1	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33	
	or				
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (FSN) 3H4497-109.1	8 x 13 x 9	33	
1	Receiver-Transmitter RT-67/ GRC	(FSN) 5820–503–1507 (USA) 2C5130–67.1	9 x 13 x 11-1/2	35	

REFERENCE DATA AND LITERATURE:

TM 11-286

PKGS		VOLUME (Cu Ft) WEIG		WEIGHT (Lbs)
3			6.05	267
		PROCUREMENT DA	TA	
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN CO	OG: USA, Sig C
CONTRACTOR		LOCATION	CONTRACT OR ORDER MO.	APPROX UNIT COST

RADIO SET AN/VRC-10()

1 July 1958

Cognizant Serv:

USA

FSN: 5820

5820-196-1721

USA

USN

USAF

TYPE CLASS: STOCK NO:

 Std

2S4502-10/25



AN/VRC-10

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC- $10(\)$ is a short-range, vehicular, FM (voice) equipment for communication within and between infantry units.

This set consists of the receiver-transmitter components, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. A vehicular installation unit, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9

Type Modulation: FM Type of Signal: Voice Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-10() RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-109.1	8 x 13 x 9	33
I	Receiver-Transmitter RT-68/ GRC	(FSN) 5820–503–1505 (USA) 2C5130–68.1	8 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-286

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
3		6.05	267
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USA SPEC &/or DWG:		DESIGN C	OG: USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-13()

USAF

USA AN/VRC-13: 5820-192-7133 Cognizant Serv: FSN:

AN/VRC-13X: 5820-192-7134

USN

TYPE CLASS: STOCK NO:

Std

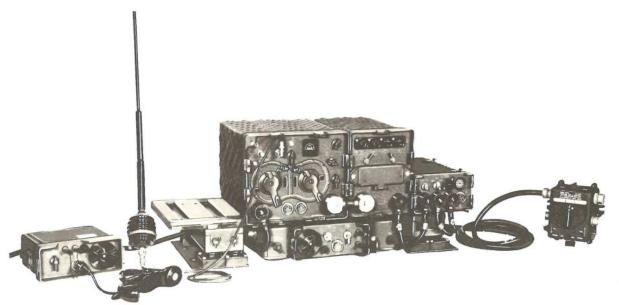
USA

AN/VRC-13: 2S4502-

13/24

AN/VRC-13X: 2S4502-

13/12



AN/VRC-13

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-13() is a short-range, vehicular, FM (voice) equipment for communication within and between armored units.

This set consists of the receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. A vehicular installation unit, power-supply equipment, an interphone amplifier, an antenna, and accessory components are included.

This equipment can be operated by means of Control Group

 $\rm AN/GRA-6$ from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM Type of Signal: Voice

Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

QTY

AN/VRC-13() **RADIO SET**

ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
AF Amplifier AM-65/GRC	(FSN)5820-194-8303 (USA)2C449-65.1	4-1/4 x 13 x 7-7/8	15.5		
Control Group AN/GRA-6	(FSN)5820-537-3848 (USA)2C684A-6	See AN/GRA-6	20.85		
Power Supply PP-109/GR	(FSN)6130-284-0231 (USA)3H4497-109.1	8 x 13 x 9	33		
or					
Power Supply PP-112/GR	(FSN)6130-284-0230 (USA)3H4497-109.1	8 x 13 x 9	33		

MAJOR COMPONENTS

Receiver-Transmitter RT-66/

Power Supply PP-281/GR

or Power Supply PP-282/GR

(FSN)5820-500-1648 $4-1/2 \times 6 \times 3$ (USA)3H4497-282.1 (FSN)5820-503-1508

 $4-1/2 \times 6 \times 3$

 $9 \times 13 \times 11-1/4$

REFERENCE DATA AND LITERATURE:

TM 11-291

SHIPPING DATA

 $({\rm FSN})5820\!\!-\!\!500\!\!-\!\!4375$

(USA)3H4497-281.1

(USA)2C5130-66.1

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.59	337

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC & / or DWG:

DESIGN COG: USA, Sig C

6

6

35

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

RADIO SET AN VRC-14

1 July 1958

Cognizant Serv: USA

FSN:

5820-197-6532

USA

USN

USAF

TYPE CLASS: STOCK NO:

 Std

2S4502-14/12-2



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-14 is a short-range, vehicular, FM (voice) equipment for communication within and between artillery units.

This set consists of a receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. A vehicular installation unit, an interphone amplifier equipment, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control

Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice Power Output:

High Power: 9 to 16 w Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-14 RADIO SET

	MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	AF Amplifier AM-65/GRC	(FSN) 5820-194-8303 (USA) 2C449-65.1	4-1/4 x 13 x 7-7/8	15.5	
1	Control Box C-375/VRC	(FSN) 5839-170-7868	7 x 4 x 7	3.5	
1	Control Group AN/GRA-6	(USA) 2C666–375 (FSN) 5820–537–3848 (USA) 2C684A–6	See AN/GRA-6	20.85	
1	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33	
	or				
1	Power Supply PP-112/GR	(FSN) 6130-282-0230 (USA) 3H4497-109.1	8 x 13 x 9	33	
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6	
	or				
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6	
1 .	Receiver-Transmitter RT-67/ GRC	(FSN) 5820–503–1507 (USA) 2C5130–67.1	9 x 13 x 11-1/2	35	
REFERE	ENCE DATA AND LITERA	TURE:			
		SHIPPING DATA			
		· · · · · · · · · · · · · · · · · · ·	`		
PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)	
-			<u></u>	WEIGHT (Lbs)	
-			VOLUME (Cu Ft) 8.59		
	JRING SERVICE: USA		VOLUME (Cu Ft) 8.59	337	

RADIO SET AN/VRC-15()

1 July 1958

Cognizant Serv:

USA

USN:

AN/VRC-15: 5820-192-7111

AN/VRC-15X: 5820-192-7109

USA

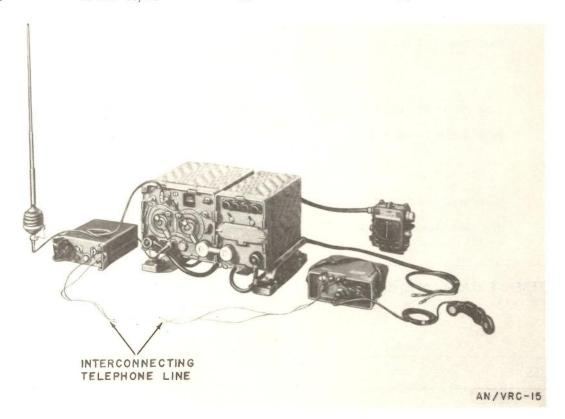
USN

USAF

TYPE CLASS: STOCK NO:

Std

2S4502-15/24



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-15 () is a short-range, vehicular, FM (voice) equipment for communication within and between infantry units.

This set consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. A vehicular installation unit, an interphone amplifier, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point at a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9

Type Modulation: FM Type of Signal: Voice Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-15() RADIO SET

MAJOR COMPONENTS					
ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
AF Amplifier AM/65-GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5		
Control Group AN/GRA-6	(FSN) 5820–537–3848 (USA) 2C684A–6	See AN/GRA-6	20.88		
Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33		
or					
Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33		
Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6		
or					
Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6		
Receiver-Transmitter RT-68/ GRC	(FSN) 5820–503–1505 (USA) 2C5130–68.1	9 x 13 x 11-1/4	35		
	AF Amplifier AM/65-GRC Control Group AN/GRA-6 Power Supply PP-109/GR or Power Supply PP-112/GR Power Supply PP-281/GR or Power Supply PP-282/GR Receiver-Transmitter RT-68/	AF Amplifier AM/65-GRC (FSN) 5820-194-8303 (USA) 2C449-65.1 Control Group AN/GRA-6 (FSN) 5820-537-3848 (USA) 2C684A-6 Power Supply PP-109/GR (FSN) 6130-284-0231 (USA) 3H4497-109.1 or Power Supply PP-112/GR (FSN) 6130-284-0230 (USA) 3H4497-112.1 Power Supply PP-281/GR (FSN) 5820-500-4375 (USA) 3H4497-281.1 or Power Supply PP-282/GR (FSN) 5820-500-1648 (USA) 3H4497-282.1 Receiver-Transmitter RT-68/ (FSN) 5820-503-1505	TEM STOCK NUMBERS DIMENSIONS (Inches)		

REFERENCE DATA AND LITERATURE:

TM 11-291

PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
3			8.59	337
		PROCUREMENT DA	ATA	
PROCURING SERVICE: USPEC &/or DWG:	USA		DESIGN CO	OG: USA, Sig C
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-16()

1 July 1958

Cognizant Serv:

USA

FSN:

AN/VRC-16: 5820-253-6131

AN/VRC-16X: 5820-234-6398

USN **USAF** USA TYPE CLASS: Std STOCK NO: AN/VRC-16: 2S4502-16/24AN/VRC-16X: 2S4502-16/12



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-16 () is a short-range, vehicular, FM (voice) equipment for communication within and between armored units.

This set consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM Type of Signal: Voice Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-16() RADIO SET

MAJOR COMPONENTS				
ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.8	
Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33	
or				
Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33	
Power Supply PP-281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6	
or				
Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6	
Radio Receiver R-108/GRC	(FSN) 5820–503–1413 (USA) 2C4180–108.1	9 x 13 x 7-1/4	35	
Receiver-Transmitter RT-66/ GRC	(FSN) 5820–503–1508 (USA) 2C5130–66.1	9 x 13 x 11-1/4	35	
	Control Group AN/GRA-6 Power Supply PP-109/GR or Power Supply PP-112/GR Power Supply PP-281/GR or Power Supply PP-282/GR Radio Receiver R-108/GRC Receiver-Transmitter RT-66/	Control Group AN/GRA-6	Control Group AN/GRA-6	

REFERENCE DATA AND LITERATURE:

TM 11-611

SHIFFINO DATA				
PKGS		VOLUME (Cu F	t) WEIGHT (Lbs)	
3		6.6		
	PROCUREM	MENT DATA		
PROCURING SERVICE: U SPEC &/or DWG:	SA s	D	ESIGN COG: USA, Sig C	
CONTRACTOR	LOCATION	CONTRAC ORDER		
×				

RADIO SET AN/VRC-17

1 July 1958

Cognizant Serv:

USA

FSN: 5820-351-3384

USA

USN

USAF

TYPE CLASS: STOCK NO: Std

2S4502-17/24



AN/VRC-17

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-17 is a short-range, vehicular, FM (voice) equipment for communication within and between artillery units.

This set consists of the receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Bange in Mc: 27.0 to 38.9

Type Modulation: FM
Type of Signal: Voice

Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage

MIL-HDBK-161

AN/VRC-17 RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.8
1	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R-109/GRC	(FSN) 5820-503-1413 (USA) 2C4180-109.1	9 x 13 x 11-1/2	35
1	Receiver-Transmitter RT-67/ GRC	(FSN) 5820–503–1507 (USA) 2C5130–67.1	9 x 13 x 11-1/2	35
				- 9

REFERENCE DATA AND LITERATURE:

TM 11-611

SH	EDDI	N 1	-	-	A 7	- 4
	וטטו	N	-	1.7	Λ I	Λ

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.6	306

PROCUREMENT DATA

CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN COG:	USA, Sig (

RADIO SET AN/VRC-18()

1 July 1958

Cognizant Serv:

USA

FSN:

AN/VRC-18: 5820-234-6399

AN/VRC-18X: 5820-234-6397

	USA	USN	USAF	
TYPE CLASS:	Std		20 1	
STOCK NO:	AN/VRC-18: 2S4502- 18/24			
	AN/VRC-18X: 2S4502- 18/12	•		



AN/VRC-18

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-18 () is a short-range, vehicular FM (voice) transmitting and receiving equipment used for communication within and between infantry units.

This equipment consists of the receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9

Type Modulation: FM Type of Signal: Voice Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage

battery

AN/VRC-18() RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.87
I	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R–110/GRC	(FSN) 5820–503–1254 (USA) 2C4180–110.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT-68/ GRC	(FSN) 5820–503–1505 (USA) 2C5130–68.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-611

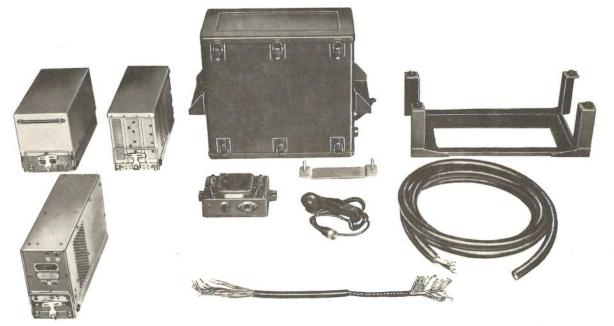
SHIPPING DATA

PKGS	\	OLUME (Cu Ft)	WEIGHT (Lbs)
3		6.6	306
	PROCUREMENT DA	TA	
PROCURING SERVICE: USA SPEC &/or DWG:		DESIGN C	COG: USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-19()

1 July 1958

Cognizant Serv:	USA	FSN:	5820-519-4103			
		USA		USN	USAF	
TYPE CLASS:		Std			Std	
STOCK NO:		2S4502	2–19			



AN/VRC-19()

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-19 () is a small, battery-powered, vehicular, low-power, FM radio communication equipment used by military police, guard, and security troops. It can be installed in railroad trains and motor vehicles.

This equipment consists essentially of a radio receiver and power supply, a transmitter and power supply, a control unit, and an electrical equipment cabinet.

The AN/VRC-19 and AN/VRC-19X operate on a 24-volt and 12-volt, vehicular battery, respectively.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174 Type Modulation: FM Type of Signal: Voice

Power Output: 20 to 25 w Power Requirements:

AN/VRC-19: 26.4 w (revr), 240 w (xmtr); 24-v dc AN/VRC-19X: 24 w (revr), 240 w (xmtr); 12-v dc

AN/VRC-19() RADIO SET

	MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
-		(USA)		national designation of the second second		
1	Dynamotor-Power Supply DY-93/G	3H1535-93	8-5/8 x 6-7/8 x 14-1/2	24		
	or					
1	Dynamotor-Power Supply DY-98/G	3H153598	8-5/8 x 6-7/8 x 14-1/2	24		
	or					
1	Dynamotor-Power Supply DY-100/U	3H1535-100	8-5/8 x 6-7/8 x 14-1/2	24		
1	Electrical Equipment Cabinet CY-938()/VRC	6F290-938	10-1/2 x 19-5/16 x 16-1/2	33		
1	Power Supply PP-867/U	3H4497-867	5 x 6-1/4 x 7	10		
	or					
1	Power Supply PP-868/U	3H4497-868	5 x 6-1/4 x 7	10		
	or					
1	Power Supply PP-869/U	3H4497-869	5 x 6-1/4 x 7	10		
1	Radio Receiver R-394/U	2C4180-394	8-1/2 x 5-3/4 x 14-1/2	16		
1	Radio Transmitter T-278/U	2C6900-278	8-1/2 x 4-1/2 x 14-1/2	8.		

REFERENCE DATA AND LITERATURE:

TM 11-297

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.3	249

PROCUREMENT DATA

PROCURING SERVICE: US	SA	DESIGN COG:	USA, Sig C
SPEC &/or DWG: MIL-N-	-11539		

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661-P-52-51	\$1,116.28

RADIO SET AN/VRC-20

1 July 1958

Cognizant Serv:

USA

FSN:

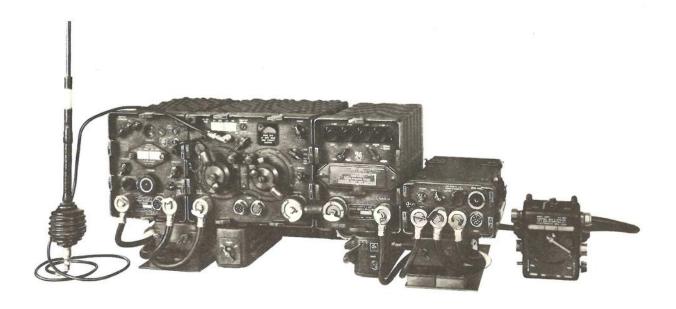
5820-519-4104

USA

USN

USAF

TYPE CLASS: STOCK NO: Std 2S4502



AN/VRC-20

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-20 is a vehicular, short-range, FM (voice), radiotelephone equipment for communication within and between armored units.

This equipment consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power

supply equipment, an antenna, and control components are included. $\,$

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM

Type of Signal: Voice

Power Output:

High Power: 9 to 16 w

Low Power: 2 w

 $\label{eq:power_power} Power \ Requirements: \ 12/24-volt \ de \ from \ vehicular \ storage \\ \ battery$

AN/VRC-20 RADIO SET

	MAJOR COMPONENTS					
QTY	ITĖM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
1	AF Amplifier AM-65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.8		
1	Control Box C-375/VRC	(FSN) 5830–170–7868 (USA) 2C666–375	7 x 4 x 7	3.8		
1	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33		
	or					
1	Power Supply PP–112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33		
2	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6		
	or					
2	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6		
1	Radio Receiver R–108/GRC	(FSN) 5820–503–1258 (USA) 2C4180–108.1	9 x 13 x 7-1/4	35		
1	Receiver-Transmitter RT-66/ GRC	(FSN) 5820–503–1508 (USA) 2C5130–66.1	9 x 13 x 11-1/4	35		

REFERENCE DATA AND LITERATURE:

TM 11-642

OLUME (Cu Ft)	WEIGHT (Lbs)
6.3	296
ТА	
DESIGN COO	G: USA, Sig (
CONTRACT OR ORDER NO.	APPROX UNIT COST
	DESIGN COO

RADIO SET AN/VRC-21

1 July 1958

Cognizant Serv:

USA

FSN:

5820-519-4102

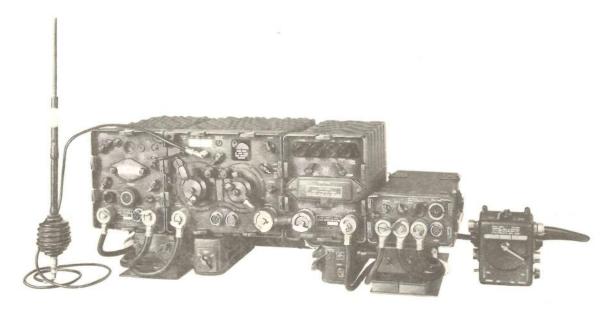
USA

USN

USAF

TYPE CLASS: STOCK NO: Std

2S4502-21/24



AN/VRC-21

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-21 is a vehicular, short-range, FM (voice), radiotelephone equipment for communication within and between artillery units.

This equipment consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power

supply equipment, an antenna, and control components are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice

Power Output:

High Power: 9 to 16 w Low Power: 2 w

 $Power\ Requirements: 12/24$ -v dc from vehicular storage battery

AN/VRC-21 RADIO SET

	MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	AF Amplifier AM-65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5	
1	Control Box C-375/VRC	(FSN) 5830–170–7868 (USA) 2C666–375	7 x 4 x 7	3.8	
1	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33	
	or				
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33	
2	Power Supply PP-281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6	
	or				
2	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6	
1	Radio Receiver R $-109/GR$	(FSN) 5820-503-1413 (USA) 2C4180-109.1	9 x 13 x 7-1/4	35	
1	Receiver-Transmitter RT-67/ GRC	(FSN) 5820-503-1507 (USA) 2C5130-67.1	9 x 13 x 11-1/2	35	

REFERENCE DATA AND LITERATURE:

TM 11-642

PKGS	AMARIA MINTER TO THE REAL PROPERTY.	V	OLUME (Cu Ft)	WEIGHT (Lbs)
3		6.	3	296
		PROCUREMENT DATA	4	
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN CO	OG: USA, Sig C
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-22

1 July 1958

Cognizant Serv:

USA

FSN:

5820-519-4101

USA

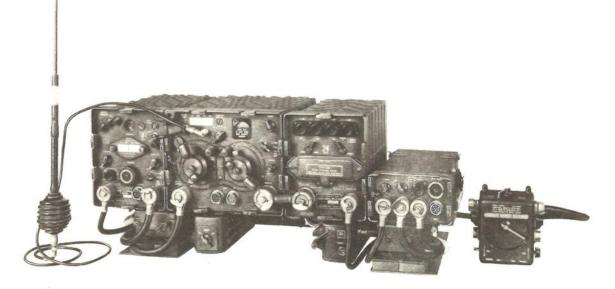
USN

USAF

TYPE CLASS: STOCK NO:

 Std

2S4502-22/24



AN/VRC-22

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-22 is a vehicular, short-range, FM (voice) radiotelephone equipment for communication within and between infantry units.

This equipment consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, and inter-

phone amplifier, power supply equipment, and antenna and accessory components are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9

 $Type\ Modulation:\ {\rm FM}$ $Type\ of\ Signal:\ {\rm Voice}$

Power Output:

High Power: 9 to 16 w

Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-22 RADIO SET

	MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	AF Amplifier AM-65/GRC	(FSN) 5820-194-8303 (USA) 2C449-65.1	4-1/4 x 13 x 7-7/8	15.5	
l	Control Box C–375/VRC	(FSN) 5830–170–7868 (USA) 2C666–375	7 x 4 x 7	3.5	
1	Power Supply PP-109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33	
	or				
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33	
2	Power Supply PP-281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6	
	or				
2	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6	
E	Radio Receiver R-110/GRC	(FSN) 5820-503-1254 (USA) 2C4180-110.1	9 x 13 x 7-1/4	35	
I.	Receiver-Transmitter RT-68/ GRC	(FSN) 5820-503-1505 (USA) 2C5130-68.1	9 x 13 x 11-1/4	35	

REFERENCE DATA AND LITERATURE:

TM 11-642

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
3		6.30	296
	PROCUREMENT DA	ATA	
PROCURING SERVICE: USA SPEC &/or DWG:		DESIGN CO	G: USA, Sig (
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-27()

1 July 1958

Cognizant Serv:

USN

FSN:

USA

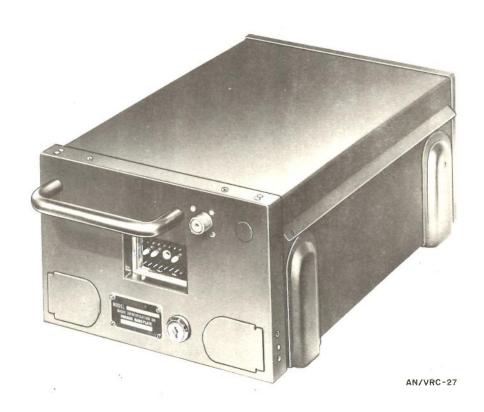
USN

USAF

TYPE CLASS: STOCK NO:

Used by

Std



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-27 () is a vehicular, medium-power, FM (voice) radio receiving and transmitting equipment of modified commercial design, used for short-range communication with land and/or mobile stations.

It provides two-way mobile communication for internal security and industrial control purposes. This equipment consists essentially of a transmitter, a receiver, and a powersupply chassis assembled in a drawer-type mobile housing. Accessories include control head with microphone, speaker, cable kit, installation kit and antenna. It is mounted at the rear, or installed in the trunk, of patrol- or passenger-type vehicles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42

Type Modulation: FM Type of Signal: Voice Power Output: 25 to 30 w

Power Requirements: 25 amp at 6-v dc; 12.5 amp at 12-v dc

		MAJOR COMPON	ENTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	lio Set AN/VRC-27 consists of only one major	component.)	6 x 9-5/8 x 18	50
REFERENCE NAVSHIPS	DATA AND LITERA 92757	ATURE:		
		SHIPPING DATA	A	
PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)
		r		
		PROCUREMENT DA	ATA	
PROCURING SPEC &/or D			DESIGN COG:	USN, BuShips
CONTRACT	TOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

Chicago, Ill.

NObsr-64259

Motorola, Inc.

RADIO SET AN/VRC-30

1 July 1958

Cognizant Serv:

USA

FSN:

USA

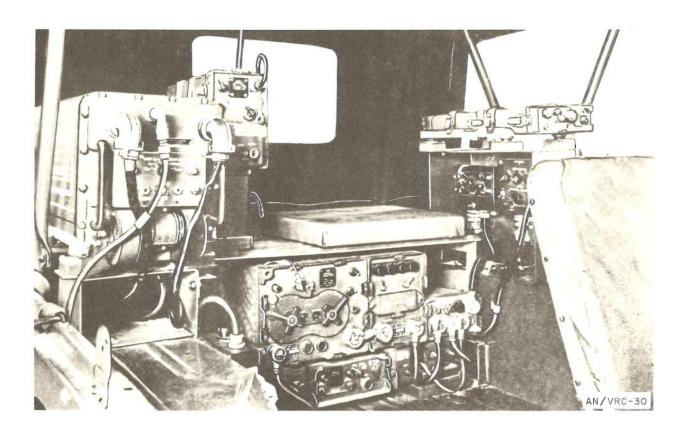
USN

USAF

TYPE CLASS: STOCK NO:

Std

2S4502-30-V76



FUNCTIONAL DESCRIPTION:

1

Radio Set AN/VRC-30 is an assemblage of transmitting and receiving equipment arranged for vehicular installation and operation. Its components operate in different rf ranges, separately or simultaneously, to increase flexibility of ground and ground-to-air communication.

This equipment consists of the following radio sets: AN/ARC-27, AN/PRC-9, AN/TRC-7 (optional), and AN/VRC-14. The AN/TRC-7 is supplied only when a frequency range of 100 to 156 mc is required.

This equipment provides ground-to-air communication between forward observation posts on the ground and aircraft assigned to close support missions, as well as communication between the forward observation post and a similar radio set at a higher tactical ground-force headquarters.

It is usually installed in a 1/4-ton, 4×4 truck (M38 or M38A1) but may be mounted in a 3/4-ton truck, an armored personnel carrier, or a tank.

For installation in the 1/4-ton truck, 3/4-ton truck, or other vehicle, a heavy-duty generator must be installed to provide the necessary power to operate all equipment.

AN/VRC-30 RADIO SET

TECHNICAL CHARACTERISTICS:

SET	AN/ARC-27	AN/PRC-9	AN/TRC-7	AN/VRC-14
FREQUENCY RANGE IN .MC	225.0 to 399.9	27.0 to 38.9	100 to 156	27 to 38.9
TYPE MODULATION	AM	FM	AM	FM
TYPE OF SIGNAL	Voice	Voice	Voice	Voice
POWER OUTPUT	10 w	I w	0.5 to 1.5 w	2 or 20
POWER REQUIREMENTS	24- to 28-v de	Battery BA-279/U	Battery BA-70 or Hand Generator G-3/TRC-7	12- or 24-v vehicular storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/ARC-27	(USA) 2S921-27	19-3/4 x 12-3/8 x 27-5/8	81.8
1	Radio Set AN/TRC-9	(FSN) 5820-254-9334		26
1	Radio Set AN/TRC-7 (optional)	(FSN) 5820-537-4006		143
1	Radio Set AN/VRC-14	(FSN) 5820–197–6532		185

REFERENCE DATA AND LITERATURE:

TB SIG 283

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	25.6	621.1

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USA	DESIGN COG:	USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX
CONTRACTOR	LOCATION	ORDER NO.	DIAIL COST

RADIO SET AN/VRC-32

3 December 1958

Cognizant Serv: USN

FSN:

5820-665-1423

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by



AN/VRC-32

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-32 is a vehicular unit used for point-to-point, two-way communication. It is a militarized version of a commercial, General Electric Company Model MW13W, vehicular radio set.

This equipment operates in vehicles having battery-generator type power systems in which either the positive or negative terminal on the storage battery is grounded.

TECHNICAL CHARACTERISTICS:

Transmitter:

Frequency Range in Mc: 30 to 42

Frequency Stability:

Unheated Crystal: ±0.002% Heated Crystal: ±0.0005% Frequency Control: Crystal

Type Modulation: FM

Type Emission: F3 phase modulation

Audio Frequency: Between +1 to -3 db of a 6 db/octave preemphasis 300 to 3,000 cps (1,000 cps reference)

Spurious and Harmonic Radiation: At least 80 db below rated power out-put at any frequency

Hum and Noise Level: -40 db (below ±kc swing)

Channel separation (Maximum): 0.4% of operating frequency (160 kc approximately) for 2, 3, or 4 channel operation

Crystal Multiplication: 12 times

Ambient Temperature: -30° C. to $+60^{\circ}$ C.

Bandwidth:

Narrow Band: ±5 kc Wide Band: ±15 kc

Receiver:

Frequency Range in Mc: 30 to 54

AN/VRC-32 RADIO SET

Frequency Stability:

Unheated Crystal: ±0.002% Heated Crystal: ±0.0005% Frequency Control: Crystal Type Modulation: FM

Type Reception: F3 phase modulation

Audio Frequency: Within +2 to -8 db of a 6 db/octave deemphasis curve from 300 to 3,000 cps (1/000 cps

reference)

Sensitivity: 0.4 µv (20 db quieting method)

Squelch: Adjustable, will open less than 0.15 µv at critical

setting

Bandwidth: ± 15 kc at the 6 db points (swing method of

measurement)

Spurious Response: At least 100 db down Ambient Temperature: -30°C. to 60°C.

Channel Separation: 0.4% operating frequency (160 kc

approximately)

Intermediate Frequencies: 3.2 mc, 290 kc

Antenna: Vertical whip Power Output: 30 w, nominal

Power Requirements: 6-, 12-, or 24-v de; battery operated

(vibrator power supply)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-671/VRC-52			
1	Cabinet, Electrical Equipment CY-1908/VRC-32			
I	Control Cable CX-3659/U			
1	Control Unit C-1847/VRC-32			
1	Fuse Box Assembly J-735/ VRC-32			
ı	Loudspeaker LS-255/U			
1	Power Cable CX-3658/U			
1	Radio Receiver-Transmitter RT-367/VRC-32			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92652

PKGS	VC	OLUME (Cu Ft)	WEIGHT (Lbs)
	PROCUREMENT DATA	4	
PROCURING SERVICE: USN SPEC &/or DWG:	1	DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric	Electronics Park, Syracuse, N. Y.	NObsr-64749, 6 June 1955	\$372.00

FREQUENCY MODULATED MOBILE EQUIPMENT

AN/VRC-type

4	Novem	ber	1958
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Cognizant Serv: USN

1

FSN: 5820-665-0404

35FMTR-7A

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Frequency Modulated Mobile Equipment 35FMTR-7A is a complete vhf radio set, less a primary power source, designed for vehicular operation. It provides two-way voice communication with similar fixed or mobile equipment operating within the same frequency band. The equipment derives its power from a 6-volt storage battery.

The complete radio set consists of a receiver, a transmitter, a control head, and associated operating and installation components. The transmitter contains a dynamotor power supply. All jacks and receptacles are mounted on the front of the trans-

Universal or roof-top antenna

mounting

mitter and receiver chassis. There are no tuning controls; the set is operated through the control head.

TECHNICAL CHARACTERISTICS:

Frequency Range in MC: 30 to 44 Frequency Deviation: ±15 kc

Type Signal: FM

System Audio Response: ±db at 500 to 3,00 cps ±2.5 db at

350 to 5,000 cps

Power Output (Transmitter): 35 w

Power Requirements:

Standby: 13.5 w 2.25 amp at 6-v de Transmitting: 180 w 30 amp at 6-v de

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cadmium plated tapered steel			
1	Radio Receiver 11-UF-ED7, including:			
I hag	Accessories, containing: Automatic circuit breakers, bolts, cable clamps, ca- pacitors, screws, sup- pressors, etc.			
l	Antenna cable with one co- axial fitting			
1	Antenna cable with two co- axial fittings			
1	Control head, two-way			
1	Handset mounting			
1	Loudspeaker with cable and plug			
1	Push-to-talk handset or hand microphone with cable at- tached			
1	Receiver control cable with			

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 35-UFM-7A, including:			30.7
1	Primary power cable with plugs			
1	Transmitter control cable with plugs			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91070

SHIPPING DATA

PKGS V	OLUME (Cu Ft)	WEIGHT (Lbs)

3

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR LOCATION CONTRACT OR APPROX UNIT COST

Link Radio Corp. New York, N. Y.

	FREQUENCY	MODULATED M	OBILE RADIO EQUIPMENT	AN/VRC-type
FS	iN:			50FMTR-7A
U	SA	USN	USAF	-

TYPE CLASS: STOCK NO:

5 November 1958 Cognizant Serv:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

USN

Frequency Modulated Mobile Radio Equipment 50FMTR-7A is a complete vhf radio set, less a primary power source, designed for vehicular operation. It provides two-way voice communication with similar fixed or mobile equipment operating within the same frequency band. The equipment derives its power from a 6-volt storage battery.

The complete radio set consists of a superheterodyne type receiver, a transmitter, a control head, and associated operating and installation components. The transmitter contains a dynamotor power supply; the receiver has a built-in synchronous type vibrator unit. All jacks and receptacles are mounted on the front of the transmitter and receiver chassis. There are no tuning controls—the set is operated through the control head.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 44 Frequency Control (Receiver): Crystal Frequency Deviation: ±15 kc

Type Signal: FM

System Audio Response: ± 1 db at 500 to 3,000 cps ± 2.5 db at

350 to 5,000 cps

Power Output (Transmitter): 50 w (nominal)

Output Impedance:

Transmitter: Any, usually fed into concentric line

Receiver: 6 or 500 ohms

Power Requirements:

Transmitter:

Standby: 22.8 w 3.8 amp at 6-v dc Transmitting: 240 w 40 amp at 6-v dc Receiver: 5 amp (approximately) at 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
l bag	Accessories, containing:			
1	Automatic reset circuit breakers, bolts, cable clamps, capacitors, screws, suppressors, etc.			
1	Antenna cable		3 or 12 ft lg	
1	Antenna cable		15 ft	
1	Cadmium plated steel antenna			
1	Hand microphone			
1	Handset mounting			
1	Permanent-magnet type loud speaker			
2	Quick release base assembly (receiver and transmitter)			
1	Radio Receiver 11-UF-ED7		8 x 10 x 12-1/4	23.7
1	Radio Transmitter 50-UFM- ED7A		8 x 10 x 12-1/4	31.7
1	Receiver control cable			
1	Remote control head			
1	Transmitter control cable			
I	Universal or roof-top antenna mounting			

		-		
M		\neg	1/	1 1 4
D.A.I	_	118	NC "	

AN/VRC-type FREQUENCY MODULATED MOBILE RADIO EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91071

SHIPPING DATA

VOLUME (Cu Ft) **PKGS**

WEIGHT (Lbs)

3

PROCUREMENT DATA

PROCURING SERVICE:

USN, BuShips

DESIGN COG: Commercial

SPEC &/or DWG:

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

Link Radio Corp.

New York, N. Y.

TRANSMITTER-RECEIVER AN/VRC-type

26 November 1958

Cognizant Serv: USN

FSN:

FMTR-30D

USA

USN

USAF

TYPE CLASS: STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitter-Receiver FMTR-301) (Motorola) is a crystalcontrolled single-frequency radiotelephone transmitter and receiver designed for installation in commercial vehicles, specifically passenger automobiles. It provides two-way voice communication with a similar fixed or mobile equipment operating on the same frequency.

A single antenna is used, which receives or transmits in accordance with the operation of an antenna relay in the transmitter. The equipment employs a dynamotor power supply operated from the 6-volt storage battery of the vehicle.

The FMTR-301) is similar to Transmitter-Receivers FMTR-25 and FMTR-50D except for power output. It is also similar to Radio Set AN/VRC-2X except for mechanical and electrical differences and in accessories supplied.

TECHNICAL CHARACTERISTICS:

Frequency Range: 30 to 40 mc Frequency Control: Crystal Type of Signal: Voice Type Modulation: FM

Type Receiver: Double superheterodyne

Receiver If: 4.3 mc and 455 kc

Power Output: 30 w

Antenna: 1/4 wave telescopic whip type Power Requirements: 6-v storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessory Bag P-8055			
1	Antenna P-253			
1	Connecting Cable Kit K-8025			
1	Control Head P-8022			
1	Generator Filter P-345			
1	Microphone P-255 or P-278			
1	Receiver Unit PA-8033			
1	Speaker (3-ohm voice coil) (as selected)			
1	Transmitter Unit PA-8021			

REFERENCE DATA AND LITERATURE:

COMMERCIAL

AN/VRC-type TRANSMITTER-RECEIVER

SHIPPING DATA

VOLUME (Cu Ft) **PKGS** WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE:

USN

DESIGN COG: Commercial

CONTRACTOR

SPEC &/or DWG:

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

Galvin Mfg. Corp.

Chicago, Ill.

RADIOTELEPHONE EQUIPMENT AN/VRC-type

USAF

4 December 1958

Cognizant Serv: USN

FSN:

USA

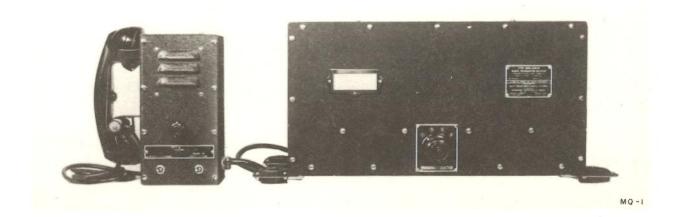
5820-665-1345 (6-v dc)

5820-665-3818 (12-v dc)

USN

MQ-1

TYPE CLASS: STOCK NO: L/Std F16-Q-174474-200 (6-v de) F16-Q-174494-200 (12-v de)



FUNCTIONAL DESCRIPTION:

Radiotelephone Equipment MQ-1 is a general purpose, compact, low-power, medium-frequency transmitter-receiver designed for two-way mobile radiotelephone communication.

Any simple single-wire antenna may be used with the MQ–1.

Remote control is provided, but does not include channel selection.

TECHNICAL CHARACTERISTICS:

Frequency Range in MC: 2 to 3.5

Type of Modulation: AM

Type of Signal: Voice

Power Output:

Transmitter: 5 w

Receiver: 50 mw

Power Requirements: 113 w 6.3-v dc or 151 w 12.6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 1	Remote Control Unit 23327 Transmitter-Receiver 43023 (6-v dc)		10-5/8 x 8-1/2 x 4	7
	or Transmitter-Receiver 43024 (12-v dc)		10-3/8 x 23-5/8 x 13-7/8	40

AN/VRC-type RADIOTELEPHONE EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95144

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.5	140

PROCUREMENT DATA

Radiomarine Corp of America	New York, N. Y.	NXss-LL-23979	\$500.00
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
SPEC &/or DWG:	USN	DESIGN COG:	USN, BuShips

4 December 195	0			RADIOTELEPHONE	EQUIPMENT	AN/VRC-type
Cognizant Serv:	USN	FSN:	5820-665-2116			MQ-2
		USA		USN	USAF	
TYPE CLASS:				L/Std		
STOCK NO:				F16-Q-174514-200		



FUNCTIONAL DESCRIPTION:

Radiotelephone Equipment MQ-2 is a general purpose, compact, low-power, medium-frequency transmitter-receiver designed for two-way mobile radiotelephone communication. Any simple single wire antenna may be used with the MQ-2.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 3.5

Type of Modulation: AM

Type of Signal: Voice Power Output:

Transmitter: 5 w

Receiver: 50 mw

Power Requirements: 189 w, 6-v dc; 16l w, 115-v 50/60-cycle

1-phase ac

MAJOR COMPONENTS OTY ITEM STOCK NUMBERS DIMENSIONS (Inches) (Lbs) 1 Transmitter-Receiver 43046 12-1/8 x 23-5/8 x 18-1/8 71 (Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95145

AN/VRC-type RADIOTELEPHO	NE EQUIPMENT		
	SHIPPING DATA		
PKGS	V	OLUME (Cu Ft)	WEIGHT (Lbs)
1	8	.5	140
	PROCUREMENT DATA	A	
PROCURING SERVICE: USN SPEC &/or DWG:		DESIGN COG:	USN, BuShips
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp of America	New York, N. Y.	NXs-12088	\$500.00

1 July 1958					RADIO SET	AN/VRC-typ	9
Cognizant Serv:	USA	FSN:	5820-355-8098			SCR-193-()
		USA		USN	USAF	=	
TYPE CLASS:		L/Std			L/Std		
STOCK NO:		2 S193.	1/12-1				



FUNCTIONAL DESCRIPTION:

Radio Set SCR-193-($\,$) is a medium frequency AM (voice and cw) field radio station used in command vehicles.

This equipment consists essentially of a transmitter (with appropriate tuning units for frequency channels in which the set is operated), a receiver, accessory items, and antenna components. The set is available in several models, each identified by model-letters indicating special application or design for the vehicle in which it is installed.

Radio Set SCR-193-() is a vehicular application of primary operating components of Radio Sets SCR-177 and SCR-188.

It operates from a vehicular storage battery and uses a whip-type antenna.

This set has been replaced by Radio Set AN/GRC-19.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitting: 1.5 to 6.2
Receiving: 1.5 to 18
Type Modulation: AM
Type of Signal: Voice or cw

Power Output: 75 w

Power Requirements: Vehicular storage battery

MIL-HDBK-161

AN/VRC-type RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor Unit BD-77	3H1777.2	11 x 11 x 7-1/2	37.3
1	Radio Receiver BC-312-()	2C4312	18-3/4 x 18 x 9	58.0
1	Radio Transmitter BC- 191-()	2C6191.8	21 x 23-1/8 x 9-1/2	55.75
3	Tuning unit	******************	7-3/4 x 16-3/4 x 8-3/4	4.43

REFERENCE DATA AND LITERATURE:

TM 11-273

PKGS		VC	DLUME (Cu Ft)	WEIGHT (Lbs)
6		4.	ı	210 to 230
7475		PROCUREMENT DATA		
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN CO	OG: USA, Sig C
CONTRACTOR	**	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SCR-293-(

RADIO SET	AN	/VRC-1	VDe
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1 July 1958

USA Cognizant Serv:

FSN:

USN

USAF

TYPE CLASS: STOCK NO:

L/Std

USA



SCR-293

FUNCTIONAL DESCRIPTION:

Radio Set SCR-293-() is a vehicular short-range, medium-power, FM (voice) equipment used in inclosed vehicles for two-way voice communication within and between armored units or between armored and infantry units.

This set consists of a receiver-transmitter plus an additional receiver (not shown in the illustration) mounted on a common shock mount, and is powered by the storage battery of the vehicle in which it is installed. Radio Set SCR-293 is the 12volt version, while the SCR-293-B is the 24- to 28-volt model of this equipment.

The additional receiver component Radio Receiver BC-499

mounted alone on the shock mount constitutes Radio Set SCR-294 (12 v) or SCR-294-B (24 v).

TECHNICAL CHARACTERISTICS:

Type Modulation: FM Type of Signal: Voice only

Power Output: High: 25 w

Low: 0.5 w

Power Requirements:

SCR-293: 12-v vehicular storage battery SCR-293-B: 24-v vehicular battery

QTY

AN/VRC-type RADIO SET

Antenna AN-42-A Mounting FT-239

Radio Receiver BC-499

BC-500

	DIMENSIONS	WEIGH1
STOCK NUMBERS	(Inches)	(Lbs)

Mounted: 12 x 14-1/2 x 34

115

REFERENCE DATA AND LITERATURE:

Instruction Book, Radio Sets SCR-293 and SCR-294

ITEM

Radio Receiver and Transmitter

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
-		

PROCURING SERVICE: USA SPEC &/or DWG:	DESIGN COG: USA, Sig C

1 July 1958

Cognizant Serv:

USA

FSN:

5820-193-8866

SCR-298-()

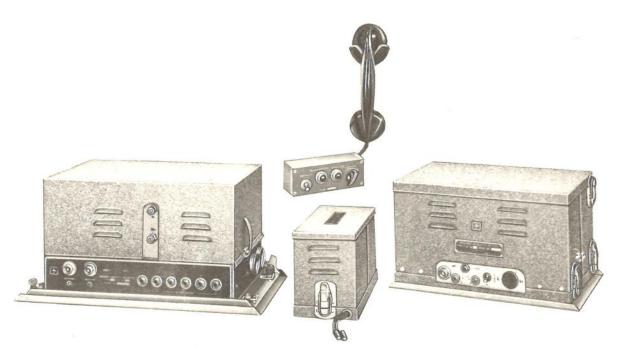
USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std 2S298T-32



SCR-298

FUNCTIONAL DESCRIPTION:

Radio Set SCR-298-() is a vehicular, short-range, FM (voice) transmitting and receiving equipment used by military police, security troops, and similar units.

This equipment is usually installed in the luggage carrier compartment of a vehicle and consists of a commercial police type radio receiver and transmitter with a power supply. The set is operated by means of a remote control unit installed in the driver's compartment.

It can be used to monitor or operate in radio communication

nets serving field artillery or armored force. It operates on power derived from the battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 28

Type Modulation: FM Type of Signal: Voice Power Output: 25 w

Power Requirements: 6-v dc from vehicular storage battery (32 amp transmitting, 2.25 amp standby)

AN/VRC-type RADIO SET

MA	IOR	COL	APOI	NENTS
IVI		CON		ALIAI'S

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Unit VPA-3A		8-1/2 x 4-1/4 x 5	7.25
I	Radio receiver (F. M. Link Radio Co., Model No. LL– UF)		9 x 13 x 7-1/2	17.5
1	Radio transmitter (F. M. Link Radio Co., Model No. 35 UFM)		9 x 17 x 8-1/4	29

REFERENCE DATA AND LITERATURE:

Instruction Book, Radio Set SCR–298 (USA Sig C Stock Number 25298C/B1)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	15	185
	*	
)	PROCUREMENT DATA	
PROCURING SERVICE: USA SPEC &/or DWG:	DES	SIGN COG: USA, Sig C
	CONTRACT	OR APPROX

ORDER NO.

UNIT COST

F. M. Link Radio Co.

CONTRACTOR

New York, N. Y.

LOCATION

1 July 1958

Cognizant Serv:

USN

FSN: 582

5820-186-9271

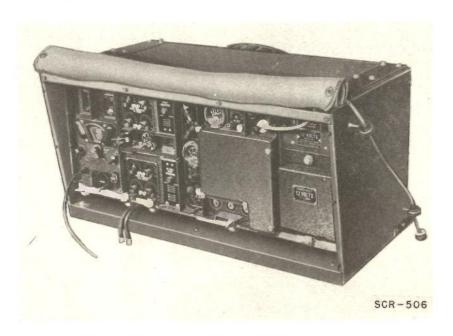
SCR-506-()

USA

USN

USAF

TYPE CLASS: STOCK NO: L/Std 2S506.1/12



FUNCTIONAL DESCRIPTION:

Radio Set SCR-506-() is a medium power, AM (voice) and cw, vehicular radio transmitting and receiving equipment used by motorized tactical units for ground-to-ground and ground-to-air communication in the medium-frequency range.

This equipment consists of a radio transmitter and a radio receiver mounted on a vehicular shock mounting common to both, and includes antenna, cording, and accessory items. It is usually installed in tanks, armored and amphibious vehicles, personnel carriers and similar vehicles. The set has provision for rapidly adjusting, and operating over, any of five preselected channels.

It operates from the storage battery of the vehicle in which it is installed.

This equipment has been replaced by Radio Set AN/GRC-19.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Transmitter: 2.0 to 4.5 (126 channels)

Receiver: 2.0 to 6.0 (201 channels, 2 bands)

Type Modulation: AM

Type of Signal: Voice and cw

Power Output:

Voice: 10 to 25 w

Cw: 50 to 90 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN	VRC-ty	pe R	RADIO	SET
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MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1 1 1	Dynamotor DM-42 Radio Receiver BC-652 Radio Transmitter BC-653	3H1642 2C4452 2C6530-653	7 x 4" (diameter) 12-1/2 x 14-5/8 x 7-5/8 12-1/2 x 14-5/8 x 25-9/32	46. 143.

REFERENCE DATA AND LITERATURE:

· TM 11–630

PKGS		VOLUME (Cu Ft)		
4		25	535	
	PROCUREMENT DA	TA		
PROCURING SERVICE: USA SPEC &/or DWG:		DESIGN C	OG: USA, Sig C	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX- UNIT COST	
			77	

1 July 1958

Cognizant Serv:

USA

FSN:

5820-192-7137 (12 v)

5820-192-7138 (24 v)

SCR-508-()

USA

USAF

TYPE CLASS: STOCK NO: L/Std

2S508/12-24v

Used by

USN

...



SCR-508

FUNCTIONAL DESCRIPTION:

Radio Set SCR-508-() is a vehicular, medium-range, crystal-controlled, FM (voice) radiotelephone equipment used by armored units.

This equipment consists of two receivers and one transmitter mounted on a common shock mount and provides a total of 20 receiving and 10 transmitting channels. It also provides for operation of the vehicular interphone system. Each receiver and the transmitter provide 80 frequency channels, 10 of which are preset, and are selected by means of a pushbutton mounted on the front panel of each. A whip-type vehicular antenna, a set of crystals, and related accessories are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM Type of Signal: Voice Power Output: 25 w Power Requirements:

Transmitter: 20 amp at 12-v dc from vehicular storage battery, through Dynamotor DM-35; 12 amp at 24-v dc from vehicular storage battery, through Dynamotor DM-37

Receiver: 4 amp at 12-v dc from vehicular storage battery, through Dynamotor DM-34; 2 amp at 24-v dc from vehicular storage battery, through Dynamotor DM-36

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
2	Dynamo.tor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
2	Dynamotor DM-36	3H1636	$4-1/2 \times 3 \times 6-1/2$	4.7
1	Dynamotor DM-35	3H1635	5-1/2 x 4-1/2 x 8-1/4	9.2

AN/VRC-type RADIO SET

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Dynamotor DM-37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.
1	Interphone Control Box BC-606-H	2C1738	4-1/2 x 2-1/4 x 4-1/4	1.
1	Mounting FT-237	2Z6721-237	5-1/2 x 13 x 33-5/8	26
2	Radio Receiver BC-603	2C4403	11-1/2 x 6-3/4 x 12-1/2	35
1	Radio Transmitter BC-604	2C6494	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11-600

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)	
7		31.6	710	
2	PROCUREMENT	DATA		
PROCURING SERVICE: USA SPEC &/or DWG: (USA) 271–1046		DESIGN (COG: USA, Sig C	
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	

1 July 1958

Cognizant Serv:

USA

FSN:

5820-355-8205

SCR-510-()

USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std

2S5109/6-12v



SCR-510

FUNCTIONAL DESCRIPTION:

Radio Set SCR-510-() is a pack and vehicular, short-range, low-power, FM radiotelephone equipment used as a command set by armored units.

This equipment consists of a receiver-transmitter, powersupply unit, and accessories. It provides 80 crystal-controlled channels spaced 100 kc apart, two of which can be preset.

It can be operated from a remote point over a telephone pair by means of standard remote control apparatus.

If it is operated on the ground from dry batteries in Case

CS-79, it is then identical with Radio Set SCR-509.

This set has been replaced by Radio Set AN/PRC-8.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM Type of Signal: Voice Power Output: 1.8 w

Power Requirements: 6- or 12-v vehicular storage battery, Battery BA-41, and Plate Supply Unit PE-97 or Power

Supply Unit PE-120

AN/VRC-type RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Case CS-79	3B879	4-1/2 x 13-3/16 x 15-9/16	10.00
1	Power Supply Unit PE-120	3H4496-120	6 x 15-3/16 x 14-15/16	20.00
1	Radio Receiver and Trans- mitter BC-620	2C5360	6-3/4 x 13-3/16 x 14-15/16	27.20

REFERENCE DATA AND LITERATURE:

TM 11-605

PKGS	VOI	LUME (Cu Ft)	WEIGHT (Lbs)
	12		235
	PROCUREMENT DATA		
PROCURING SERVICE: USA SPEC &/or DWG: (USA) 271–1057		DESIGN COO	G: USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

1 July 1958					RADIO SET	AN/VRC-type
Cognizant Serv:	USA	FSN:	5820-164-8114			SCR-528
		USA		USN	USAF	
TYPE CLASS:		L/Std		Used by		
STOCK NO:		28528/	12			



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.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 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-v vehicular battery trhough Dynamotor DM-36

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	-	(USA)		
1	Dynamotor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
1	Dynamotor DM-36 Dynamotor DM-35	3H1636 3H1635	4-1/2 x 3 x 6-1/2 5-1/2 x 4-1/2 x 8-1/4	4.7 9.2

AN/VRC-type RADIO SET

MAJOR	COMPON	VENTS-	Continued

-				
QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
	or			
1	Dynamotor DM-37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Interphone Control Box BC-606	2C1738	4-1/2 x 2-1/4 x 4-1/4	1.8
1	Mounting FT-237	2Z6721-237	5 x 12 x 33	26
1	Radio Receiver BC-603	2C4403	11-1/2 x 6-3/4 x 12-1/2	35
1	Radio Transmitter BC-604	2C6494	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11-600

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	W	EIGHT (Lbs)
6	29.6	64.	5
PROCUI	REMENT DATA		
PROCURING SERVICE: USA SPEC &/or DWG: (USA) 271–1046	DE	SIGN COG:	USA, Sig C

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

1 July 1958

Cognizant Serv:

USA

FSN:

5820-196-6130(12v)

5820-196-6131(24v)

SCR-608

USA

USN

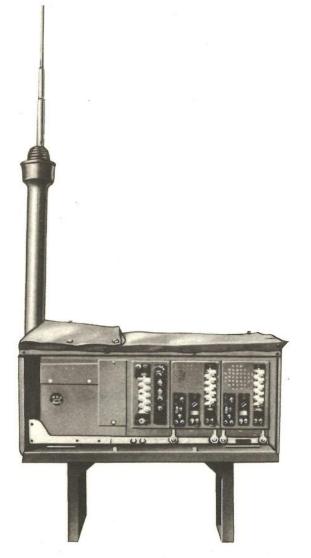
USAF

TYPE CLASS: STOCK NO:

L/Std

2S608/12-24v

Used by



FUNCTIONAL DESCRIPTION:

Radio Set SCR-608 is a crystal-controlled, vehicular, short-range, low-power radiotelephone equipment used for FM (voice) communication in the frequency range assigned artillery units.

This equipment consists essentially of two receivers, one transmitter, appropriate dynamotors, antenna components, and accessories.

The transmitter and each of the receivers provide 120 channel frequencies, 10 of which may be preset, in each case. Each of these components has on its respective front panel 10 pushbuttons for selecting frequency channels. Thus, 10 transmitting and 20 receiving channels are provided.

This set provides for operation of the interphone equipment of the vehicle in which it is installed.

Through selection of appropriate dynamotors, it can operate from 12- or 24 volt vehicular storage batteries.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice Power Output: 20 w Power Requirements:

Transmitter: 20 amp at 12-v de from vehicular storage battery through Dynamotor DM-35, 12 amp at 24-v de from vehicular storage battery through Dynamotor

DM-37

Receiver: 4 amp at 12-v dc from vehicular storage battery through Dynamotor DM-34, 2 amp at 24-v dc from vehicular storage battery through Dynamotor DM-36

SCR-608

MIL-HDBK-161

AN/VRC-type RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Dynamotor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
2 1	Dynamotor DM-36 Dynamotor DM-35	3H1636 3H1635	4-1/2 x 3 x 6-1/2 5-1/2 x 4-1/2 x 8-1/4	$\begin{array}{c} 4.7 \\ 9.2 \end{array}$
	or			
1 1 2 1	Dynamotor DM-37 Mounting FT-237 Radio Receiver BC-683 Radio Transmitter BC-684	3H1637 2Z6721–237 2C4460–683 2C6530–684	5-1/2 x 4-1/2 x 8-1/4 5-1/2 x 13 x 33-5/8 11-1/2 x 6-3/4 x 12-1/2 11-1/2 x 10-1/4 x 18	9.2 44.0 35.0 67.0

REFERENCE DATA AND LITERATURE:

TM 11-620

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	31.6	660

PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC &/or DWG: (USA)271-1317

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

Western Electric Co.

New York, N. Y.

1 July 1958

Cognizant Serv:

USA FSN:

5820-355-8291

SCR-610-()

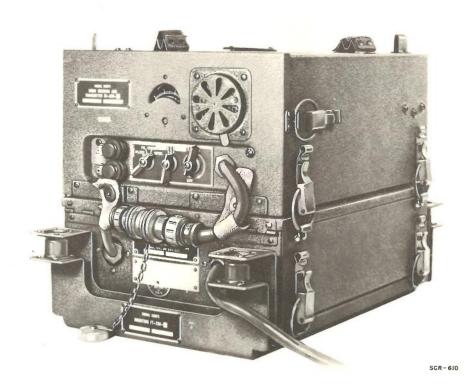
USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std 2S610.1/6-1



FUNCTIONAL DESCRIPTION:

Radio Set SCR-610-() is a transportable and vehicular, short-range, low-power, FM radiotelephone equipment used as a command set by field artillery units.

This equipment consists of a receiver-transmitter, powersupply unit, and accessories. It provides 120 crystal-controlled channels spaced 100 kc apart, two of which can be preset. This equipment can be operated from a remote point over a telephone pair by means of standard remote control equipment. When operated on the ground from batteries (in Case CS-79) the equipment is identical with Radio Set SCR-609.

TECHNICAL CHARACTERISTICS:

Frenquency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice Power Output: 1.3 w

Power Requirements: Plate supply Unit PE-117 from 6- or 12-v storage battery or Power Supply Unit PE-120 from 6-, 12-, or 24-v storage battery

AN	/VRC-type	RADIO SET
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MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Supply Unit PE-120	3H4496-120	8-7/8 x 16-1/2 x 18-7/8	33.8
1	Radio Receiver and Transmitter B-659	2C5379	11-7/8 x 16-3/8 x 21-1/2	35.13

REFERENCE DATA AND LITERATURE:

TM 11-615

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	13.04	280

PROCUREMENT DATA

PROCURING SERVICE: SPEC &/or DWG:	USA	DESIGN COG:	USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	16130-P-44-01	

1 July 1958

Cognizant Serv:

USA

5820-193-7110

SCR-628

USA

USN

USAF

TYPE CLASS: STOCK NO:

L/Std 2S628/12 Used by



SCR-628

FUNCTIONAL DESCRIPTION:

Radio Set SCR-628 is a crystal-controlled, vehicular short-range, low-power radiotelephone equipment used for FM (voice) communication in the frequency range assigned field artillery units.

This equipment consists essentially of one receiver and one transmitter, appropriate dynamotors, antenna components, and accessories. The transmitter and the receiver each provide 120 channel frequencies, 10 of which may be preset. Each of the components are equipped with 10 pushbuttons for selecting frequency channels.

The SCR-628 also provides for operation of the interphone equipment of the vehicle in which it is installed.

It can operate from either 12- or 24-v vehicular storage batteries by installation of appropriate dynamotors.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice Power Output: 20 w

Power Requirements: 20 amp at 12-v dc or 12 amp at 24-v dc 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-v vehicular battery through Dynamotor DM-36

MIL-HDBK-161

AN/VRC-type RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
1	Dynamotor DM-36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM-35	3H1635	$5-1/2 \times 4-1/2 \times 8-1/4$	9.2
	or			
1	Dynamotor DM-37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Mounting FT-284		5 x 12 x 33	26
1	Radio Receiver BC-683-BM	2C4460-683	$11-1/2 \times 6-3/4 \times 12-1/2$	35
1	Radio Transmitter BC-684- BM	2C6530-684	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11-620

SHIFFING DATA					
PKGS			VOLUME (Cu Ft)	WEIG	SHT (Lbs)
6			31.5	660 ·	
		PROCUREMENT	DATA		
PROCURING SERVICE: SPEC &/or DWG:	USA			DESIGN COC	G: USA
CONTRACTOR		LOCATION	CONTRACT (PROX T COST

RADIO SET AN/VRQ-1

1 July 1958

Cognizant Serv:

USA

FSN:

5820-222-6404

USA

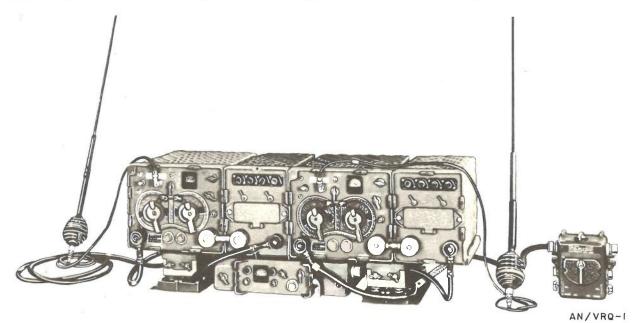
USN

USAF

TYPE CLASS: STOCK NO:

Std

2S4505-1/24



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRQ-1 is a short-range, vehicular, FM (voice) equipment for point-to-point, retransmission, or radio-relay communication within and between armored units.

This set consists of two receiver-transmitters, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. A vehicular installation unit, power-supply equipment, and control and accessory units are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM
Type of Signal: Voice

Power Output (Each Transmitter):

High Power: 9 to 16 w Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage

battery

QTY

2

AN/VRQ-1 RADIO SET

STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)		
(FSN)5820-537-3848 (USA)2C684A-6	See AN/GRA-6	20.85		
(FSN)6130-284-0231 (USA)3H4497-109.1	9 x 13 x 8	33		

ITEM

Control Group AN/GRA-6

Power Supply PP–109/GR

or 2 Power Supply PP-112/GR Receiver-Transmitter RT-66/ GRC

(FSN)6130-284-0230 (USA)3H4497-112.1 (FSN)5820-503-1508 (USA)2C5130-66.1

9 x 13 x 11-1/4

9 x 13 x 8

REFERENCE DATA AND LITERATURE:

TM 11-287

SHIPPING DATA

MAJOR COMPONENTS

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.4	427

PROCUREMENT DATA

PROCURING SERVICE: SPEC & /or DWG:

USA

DESIGN COG:

USA, Sig C

33

35

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX **UNIT COST**

RADIO SET AN/VRQ-2()

1 July 1958

Cognizant Serv:

USA

FSN:

AN/VRQ-2: 5820-193-8838

AN/VRQ-2X: 5820-193-8839

USA

USN

USAF

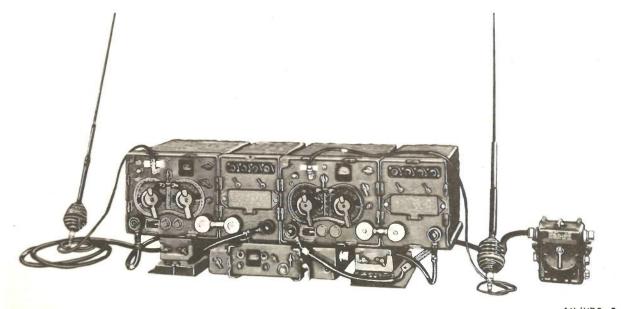
TYPE CLASS: STOCK NO:

Std

AN/VRQ-2: 2S4305-2/24 __

AN/VRQ-2X: 2S4305-

2/12



AN/VRQ-2

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRQ-2() is a short-range, vehicular, FM (voice) equipment for point-to-point, retransmission, or radio-relay communication within and between artillery units.

This set consists of two receiver-transmitters, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. A vehicular installation unit, power-supply equipment, and control and accessory units are included.

This equipment can be operated by means of Control Group

AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM
Type of Signal: Voice

Power Output (Each Transmitter):

High Power: 9 to 16 w Low Power: 2 w

Power Requirements: 12/24-v dc from vehicular storage

battery

AN/VRQ-2() RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN)5820-537-3848 (USA)2C684A-6	See AN/GRA-6	20.85
2	Power Supply PP-109/GR	(FSN)6130-284-0231 (USA)3H4497-109.1	9 x 13 x 8	33
	or			
2	Power Supply PP-112/GR	(FSN)6130-284-0230 (USA)3H4497-112.1	9 x 13 x 8	33
2	Receiver-Transmitter RT-67/ GRC	(FSN)5820-503-1507 (USA)2C5130-67.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-287

PKGS			VOLUME (Cu Ft)	WEIGHT (Lbs)	
3			8.4	427	
		PROCUREMENT DA	ATA		
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN C	OG: USA, Sig C	
CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST	

RADIO SET AN/VRQ-3()

1 July 1958

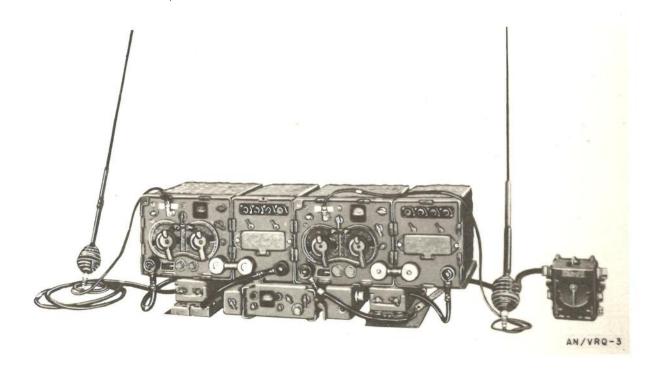
Cognizant Serv:

USA

FSN:

AN/VRQ-3: 5820-193-8811

AN/VRQ-3X: 5820-193-8831				
*	USA	USN	USAF	
TYPE CLASS:	Std	8680	22	
STOCK NO:	$rac{ m AN/VRQ}{ m -3:2S4405} - \ 3/24$			
	AN/VRQ-3X: 2S4505-			



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRQ-3() is a short range, vehicular, FM (voice) equipment for point-to-point, retransmission, or radiorelay communication within and between infantry units.

This set consists of two receiver-transmitters designated as set 1 when used as part of the integrated series of radio sets such as the AN/GRC-7 and AN/GRC-8. A vehicular installation unit, power supply equipment, and control and accessory units are included.

This equipment can be operated by means of Control Group

 $\rm AN/GRA-6$ from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9

Type Modulation: FM
Type of Signal: Voice

Power Output (Each Transmitter):

High Power: 9 to 16 w

Low Power: 2w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRQ-3() RADIO SET

MAJOR COMPONENTS				
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
2	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	9 x 13 x 8	33
	OI,			
2	Power Supply PP-112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	9 x 13 x 8	33
2	Receiver-Transmitter RT-68/ GRC	(FSN) 5820-503-1505 (USA) 2C5130-68.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-287

YOLUN		WEIGHT (Lb)
8.4		427
MENT DATA		
	DESIGN COG	i: USA, Sig C
N	CONTRACT OR ORDER NO.	APPROX UNIT COST
	8.4	MENT DATA DESIGN COG CONTRACT OR

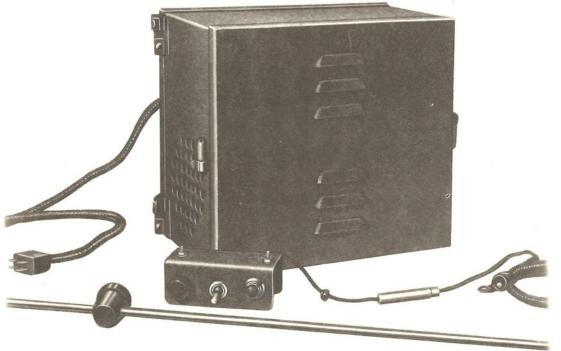
RADIO RECEIVING SET AN/VRR-2

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7197

TYPE CLASS: Std





AN/VRR-2

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/VRR-2 is a vehicular, single fixed-frequency, AM (voice), medium range, receiving equipment used in traffic control, monitoring, and similar applications by military police, guard, and security troops.

This equipment consists essentially of a commercial (KAAR Type 11X) police-type radio receiver and associated components. The radio receiver, which has an integral loudspeaker, is designed to be installed under the dashboard or instrument panel of the vehicle, with the control unit at the driver's position.

Control of volume, power, and squelch circuit is provided. A vehicular-type antenna is included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Single preset frequency in range 1.6 to 2.9

Type Modulation: AM

Type of Signal: Voice, tone

Power Requirements: 4.5 amp at 6-v dc from vehicular storage battery

AN/VRR-2 RADIO RECEIVING SET

MAJOR CON	MPONENTS
-----------	----------

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna, Cable, Spare Parts, etc			6.75
1	Control Unit KAAR Type K-SR1		2 x 2-5/8 x 4	.50
1	Radio Receiver KAAR Type 11X	(**************************************	9-1/4 x 9-3/8 x 11-7/8	17.00

REFERENCE DATA AND LITERATURE:

TM 11-888

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

SPEC &/or DWG:	USA	DESIGN COG:	USA, Sig C
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX JNIT COST

RADIO RECEIVING SET AN/VRR-4

1 July 1958

Cognizant Serv:

USA

FSN:

5820-164-7175

USA

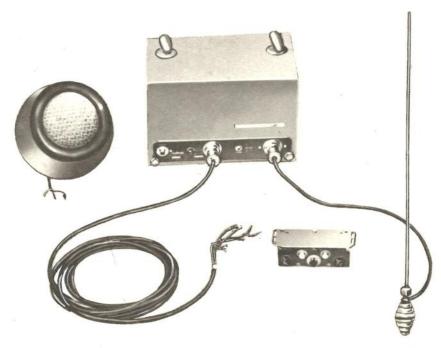
USN

USAF

TYPE CLASS: STOCK NO:

L/Std

2C4520A-13V



AN/VRR-4

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/VRR-4 is a vehicular, short-range, FM, fixed-frequency, crystal-controlled radio receiver used by military police, guard, and security troops for traffic control and similar communication in the vhf band.

This equipment consists essentially of a commercial (Galvin FMR-13 v), police car radio receiver and loudspeaker, plus accessories.

This set is composed of the receiver components of Radio

Set AN/VRC-2 and uses a whip-type vehicular antenna. It is powered by the storage battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40

Type Modulation: FM
Type of Signal: Voice

Power Requirements: 8 amp at 6-v from vehicular storage

battery.

		MAJOR COMPONEN	NTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	E	(USA)		
1 1 1	Antenna P-253 Control Head w/cables P-8022 (Galvin) Loudspeaker P-327 Power supply	3H6694-4	8-3/4 x 4 x 8	
1	Radio Receiver Unit FMR-13V (P8028)		9-5/16 x 14-3/4 x 9-1/2	
REFEREN	NCE DATA AND LITERAT	URE:		
REFEREN	NCE DATA AND LITERAT			
	NCE DATA AND LITERAT	SHIPPING DATA	OLUME (Cu Ft)	WEIGHT (Lbs
REFEREN	NCE DATA AND LITERAT	SHIPPING DATA	OLUME (Cu Ft)	WEIGHT (Lbs)
	NCE DATA AND LITERAT	SHIPPING DATA		WEIGHT (Lbs)
PKGS PROCUR	RING SERVICE: USA	SHIPPING DATA	TΑ	WEIGHT (Lbs)

RADIO RECEIVING SET AN/VRR-7

1	Ju	ly	1	958
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Cognizant Serv: USA

FSN: USA

USN

USAF

TYPE CLASS: STOCK NO:

Std

(No Photograph Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/VRR-7 is a vhf, FM (voice) equipment used in monitoring and communications applications.

This set consists essentially of a radio receiver with an appropriate power supply, housed in a metal equipment cabinet, and includes either a roof mounted *whisker* type antenna for hard-top vehicles or a bumper-mounted coaxial antenna for canvas-top vehicles.

It is a vehicular version of Radio Receiving Set AN/FRR– 36.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174

Type Modulation: FM
Type of Signal: Voice
Power Requirements:

Power Supply PP-867/U: 1.1 amp at 24-v dc Power Supply PP-868/U: 2 amp at 12-v dc Power Supply PP-869/U: 3.7 amp at 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AT-496/G	2A204A-496		
1	Electrical Equipment Cabinet CY-1150/U	6F290-1150	10-5/8 x 21-1/4 x 7-1/2	14.5
1	Power Supply PP-867/U		5 x 6-1/4 x 7	10
	or			
1	Power Supply PP-868/U		5 x 6-1/4 x 7	10
	or			
1	Power Supply PP-869/U		5 x 6-1/4 x 7	10
1	Radio Receiver R-394/U	2C4180-394	8-1/2 x 14-1/2 x 5-3/4	17

REFERENCE DATA AND LITERATURE:

TM 11-229

AN/VRR-7	RADIO RECEIVING SET	
_		

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

2 7.25 176

PROCUREMENT DATA

PROCURING SERVICE: USA SPEC &/or DWG: MIL-N-11539

DESIGN COG: USA, Sig C

CONTRACTOR LOCATION CONTRACT OR APPROX UNIT COST

Motorola, Inc. Chicago, Ill 11661--P-52-51 \$615.24

RADIO RECEIVER AN/VRR-type

4 December 1958

Cognizant Serv: USA

FSN:

5820-352-0033

BC-683-A, -B, -BM

USA

USN

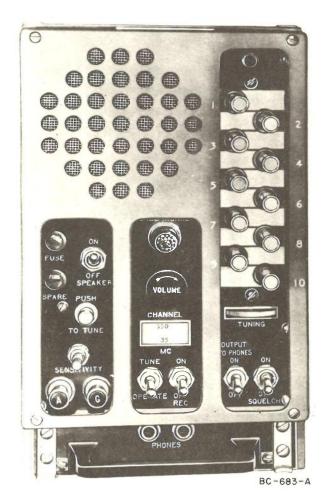
USAF

TYPE CLASS: STOCK NO:

L/Std 2C4460-683 Used by BC-683-A: F16-R-2019-0115

BC-683-B: F16-R-2033-0007 BC-683-BM: F16-Q-

125546-100



FUNCTIONAL DESCRIPTION:

Radio Receivers BC-683-A, BC-683-B, and BC-683-BM are components of Radio Sets SCR-608-() and SCR-628-(). These receivers provide frequency modulated radiotelephone reception facilities for various types of ground units. The radio sets may be installed and operated in combat vehicles. The receivers are used with Radio Transmitter BC-684-BM and associated equipment for two-way communications.

The -A model differs operationally from the -B and -BM models in that it cannot be used with remote interphone control equipment. In addition, later models incorporate minor circuit changes. The overall performance of all the receivers is the same.

The following equipment is used with, but is not supplied with, Radio Receivers BC-683-A, BC-683-B, and BC-683-BM: whip antenna, dynamotor, and accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range in MC: 27.0 to 38.9

Number of Preset Channels: 10

Bandwidth: 80 kc

Intermediate Frequency: 2.65 mc

Type Reception: FM Sensitivity: 1 uv. Power Output:

Speaker: 2 w Headset: 0.2 w Antenna: 10-ft whip

Power Requirements: 12-v dc vehicular battery through Dynamotor DM-34; or 24-v dc vehicular battery through Dyna-

motor DM-36

AN/VRR-	type	RADIO	RECEIVER
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MAJOR COMPONENTS					
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)	
1	Radio Receiver BC-683-A, BC-683-B, or BC-683-BM		6-3/4 x 12-1/2 x 11-1/2	35	

REFERENCE DATA AND LITERATURE:

TM 11-4036

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

CONTRACTOR		LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN COG	USA, Sig (

\$239.00 with spares

RADIO RECEIVER AN/VRR-type

5 December 1958

Cognizant Serv: USA FSN:

R-108/GRC: 5820-503-1258

R-109/GRC: 5820-503-1413

R-110/GRC: 5820-503-1254

R-108/GRC, -109/GRC, -110/GRC

USA

USN

Used by

USAF

TYPE CLASS: STOCK NO:

Std

R-108/GRC: 2C4180-

108

R-109/GRC: 2C4180-

109

R-110/GRC: 2C4180-

110



FUNCTIONAL DESCRIPTION:

Radio Receivers R-108/GRC, R-109/GRC, and R-110/GRC are small, lightweight, frequency-modulated, superhetrodyne-type receivers designed for use in vehicular or ground installations. They provide for the reception of voicemodulated FM signals between the range of 20 to 55 megacycles, and are similar except for their operating frequency range, the components that determine the frequency range, and the bias source for the squelch oscillator.

The equipments contain continuously variable tuning; detent selection of three preset frequencies is also included. They may be operated from a storage battery, in conjunction with a plug-in vibrator-type voltage supply, or from an external power source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: R-108/GRC: 20 to 28

AN/VRR-type RADIO RECEIVER

R-109/GRC: 27 to 39 R-110/GRC: 38 to 55

Channel Data: R-108/GRC 80 R-109/GRC: 120 R-110/GRC: 170

Channel Spacing: 100 kc

Type of Signal: Voice or tone

Audio output:

Loudspeaker: 500 mw Earphones: 40 mw

Output Impedance: 600 ohms (unbalanced)

Antenna Type: Portable whip

Power Requirements: Power Supply PP-448/GR with 6-v storage battery, Power Supply PP-281/GRC with 12-v storage battery, or Power Supply PP-282/GRC with 24-v

storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-108/GRC, R-109/GRC, or R-110/GRC		7-1/4 x 9 x 12-13/16	20.2
(Equi	pment consists of only one major co	mponent.)		

REFERENCE DATA AND LITERATURE:

TM 11-898

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.69	38.6

PROCUREMENT DATA

## 1			
PROCURING SERVICE:	USA	DESIGN COG:	USA, Sia C
			,g
SPEC & /or DWG:			

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For R-108/GRC: Lewyt Corp.	Brooklyn, N. Y.	DA-36-039-SC3769	\$440.00
For R-109/GRC: Lewyt Corp.	Brooklyn, N. Y.	DA-36-039-SC12102	440.00
For R-110/GRC: Federal Telephone and Radio Corp.	Newark, N. J.	MIpr 881–53060	570.00

RADIO SET AN	VRR-type
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1 July 1958					KADIO JEI	MIN AUTO-TAbe
Cognizant Serv:	USA	FSN:	5820-194-7069			SCR-294-()
		USA		USN	USAF	
TYPE CLASS:		L/Std				
STOCK NO:		2S294			H.A.	



SCR-294

FUNCTIONAL DESCRIPTION:

Radio Set SCR-294-() is a vehicular, short-range FM (voice) radio receiving equipment used in armored vehicles. It is also part of Radio Set SCR-293 and is used as the *additional* receiver component of that equipment.

This equipment consists essentially of a single radio receiver and a shock mount. The receiver is capable of operating on five channels spaced 100 kc apart.

Radio Set SCR-294 is the 12-volt model of this equipment; Radio Set SCR-294-B is the 24-volt model.

Power is supplied by the battery of the vehicle in which the equipment is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9

Type Modulation: FM
Type of Signal: Voice

Power Requirements: 12- or 24-v dc from vehicular storage

battery, depending on model

AN/VI	R-type radio set			
		MAJOR COMPON	NENTS	
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting FT-239 Radio Receiver BC-499	***************************************	12-1/2 x 34-1/2 x 2-1/2 9 x 9-1/2 x 12-1/4	19
REFER	ENCE DATA AND LITER	RATURE:		
		SHIPPING DAT	Α	
PKGS			VOLUME (Cu Ft)	
1 103			VOLUME (Cult)	WEIGHT (Lbs)
		* *	VOLUME (CUT)	WEIGHT (Lbs)
			VOLUME (CUT)	
		PROCUREMENT D		
PROC	URING SERVICE: USA &/or DWG:	PROCUREMENT D		200

RADIO SET	AN/VRR-type
-----------	-------------

1 July 1958					h	ADIO SEI	AN/VKK-LYPI	G
Cognizant Serv:	USA	FSN:	5820-268-3113				SCR-678-()
		USA		USN		USAF		
TYPE CLASS: STOCK NO:		L/Std 2S678.1		8.6				



FUNCTIONAL DESCRIPTION:

Radio Set SCR-678-() is a short-range, low-power, vehicular, FM (voice) receiving equipment used for monitoring, intercept, and communication.

This equipment consists essentially of the radio receiver component of Radio Set SCR-608, plus a vehicular-type shock mount and related accessories. It operates on 10 crystalcontrolled preset frequencies selected by means of pushbuttons arranged on the front panel, and uses a whip-type vehicular antenna.

The set is powered by the storage battery (12 or 24 v) of the vehicle in which it is installed, through an appropriate dynamotor mounted within the receiver.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: FM Type of Signal: Voice

Power Requirements: 4 amp at 12-v dc or 2 amp at 24-v dc from vehicular storage battery through Dynamotor DM-34 or DM-36

SCR-678

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor DM-34 or	3H1634	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM-36 Radio Receiver BC-683	3H1636 2C4460–683	4-1/2 x 3 x 6-1/2 11-1/2 x 6-3/4 x 12-1/2	4.7 35

AN/VRR-type RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-620 TM 11-4036

SHIPPING DATA

PKGS VOLUME (Cu Ft) WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA

SPEC & /or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR

LOCATION

CONTRACT OR ORDER NO.

APPROX UNIT COST

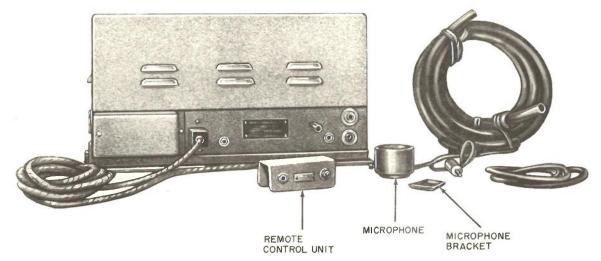
RADIO TRANSMITTING SET AN/VRT-1

1 July 1958

Cognizant Serv: USA FSN: 5820-164-8117

USA USN USAF

TYPE CLASS: STOCK NO: Std 2C6729



AN/VRT-I

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/VRT-1 is a vehicular, short-range, high-frequency, AM (voice) equipment for use of military police, security troops, and similar units.

This equipment consists of a police-type radio transmitter and includes microphone, operator's remote control unit, and accessories permitting installation of the transmitter in the trunk of the vehicle or other convenient location. It uses a whip-type vehicular antenna.

It operates from the 6-volt battery of the vehicle in which

it is installed. When operated from vehicular storage batteries of higher voltage, appropriate modifying equipment must be added.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30.0 to 40.0

Type Modulation: AM Type of Signal: Voice Power Output: 22 w Power Requirements:

6-v dc from vehicular storage battery

		MAJOR COMPONENTS		
QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/	2.	2	45

 $\begin{tabular}{ll} VRT-1\\ (Equipment consists of only one major component.) \end{tabular}$

AN/VRT-1 RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

TM 11-842

SHIPPING DATA

PKGS		VOLUME (Cu	Ft) WE	IGHT (Lbs)
2		3.9	73	
3		PROCUREMENT DATA		
PROCURING SERVICE: SPEC &/or DWG:	USA		DESIGN COG:	USA, Sig C

CONTRACTOR LOCATION CONTRACT OR APPROX UNIT COST

APPENDIX I

GLOSSARY OF ABBREVIATIONS

This appendix is a listing of abbreviations used in this publication, arranged alphabetically. The exact word or phrase for which the abbreviation is used, is given in each case.

A /Std	Alternate Standard	HI	High
	alternating current		_interrupted continuous wave (generally
	Automatic Direction Finder	ICW	to be construed to mean a con-
	audio frequency		
	Alternate Standard		tinuous radio frequency interrupted
			at regular intervals in order to pro-
	amplitude modulated (modulation)		duce an audio-frequency tone, and
amp			keyed by means of a telegraph key
approx	approximate, approximately		in International Morse code).
	automatic volume control		intermediate frequency
	beat frequency oscillator	In	
	Bureau of Aeronautics	Inc	
	Bureau of Ordnance	INPH	
•	Bureau of Ships	INTER	1
C	O .		kilocycle(s) per second
CHAN	Channel	kva	kilovolt-ampere(s)
	Combat Information Center	kw	kilowatt(s)
Class	Classification	L/Std	Limited Standard
Cog	Cognizance	Lbs	pounds
COMM	Communication(s)	lf	_low frequency (30 to 300 kc)
Corp	Corporation	ma	_milliampere(s)
cps	cycle(s) per second	mc	_megacycle(s) per second
cu	cubic	mcw	_modulated continuous wave (generally
cw	continuous wave (generally construed		to be construed to mean a con-
	to mean continuous radio frequence,		tinuous radio frequency, modulated
	keyed in International Morse code).		by a steady audio-frequency tone,
cyc	cycle(s)		and keyed by telegraph key in
db	decibel(s)		International Morse code).
dbm	decibels referred to 1 milliwatt	mf	_medium frequency (300 to 3,000 kc)
dc	11		- Incurant frequency (500 to 5,000 kc)
	direct current	MIC	
		MIC	Microphone
Dept	Department	MIL	Microphone Military
Deptdia	Departmentdiameter	MIL	Microphone Military millivolt(s)
Deptdiadsb	Department diameter double sideband	MIL mv mw	Microphone Military millivolt(s) milliwatt(s)
Deptdia.dsbDwg	Department diameter double sideband Drawing	MIL mv mw NAV	Microphone Military millivolt(s) milliwatt(s) Navigation
DeptdiadsbDwgea	Department diameter double sideband Drawing each	MIL mv mw NAV No	MicrophoneMilitarymillivolt(s)milliwatt(s)Navigationnumber
Dept	Department diameter double sideband Drawing each Edition	MIL mv mw NAV No Obs	MicrophoneMilitarymillivolt(s)milliwatt(s)NavigationnumberObsolete
Dept	Department diameter double sideband Drawing each Edition facsimile	MIL mv mw NAV No Obs Obt	MicrophoneMilitarymillivolt(s)milliwatt(s)NavigationnumberObsoleteObsolescent
Dept	Department diameter double sideband Drawing each facsimile filament	MIL	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute
Dept dia dsb Dwg ea Ed fax fil	Department diameter double sideband Drawing each Edition facsimile filament frequency modulated (modulation)	MIL mv mw NAV No Obs Obt Opm P/Std	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute - Planned standard
Dept_dia_dsb_Dwg_ea_Ed_fax_fil_fm_fpm_	Department diameter double sideband Drawing each Edition facsimile filament frequency modulated (modulation) feet per minute	MIL mv mw NAV No Obs Obt Opm P/Std pf	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute - Planned standard - power factor
Dept_dia_dsb_Dwg_ea_Ed_fax_fil_fm_fpm_fsk_	Department diameter double sideband Drawing each flacsimile flament frequency modulated (modulation) feet per minute frequency-shift keyed (keying)	MIL mv mw NAV No Obs Obt Opm P/Std pf Pkgs	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute - Planned standard - power factor - Packages
Dept_dia_dsb_Dwg_ea_Ed_fax_fil_fm_fpm_fsk_FSN_	Department diameter double sideband Drawing each Edition facsimile filament frequency modulated (modulation) feet per minute frequency-shift keyed (keying) Federal Stock Number	MIL mv mw NAV No Obs Obt Opt P/Std pf Pkgs Qty	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute - Planned standard - power factor - Packages - Quantity
Dept dia dsb Dwg ea Ed fax fil fm fpm fsk FSN ft	Department diameter double sideband Drawing each Edition facsimile filament frequency modulated (modulation) feet per minute frequency-shift keyed (keying) Federal Stock Number feet	MIL mv mw NAV No Obs Obt Opt P/Std pf Pkgs Qty RADC	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute - Planned standard - power factor - Packages - Quantity - Rome Air Development Center
Dept dia dsb Dwg ea Ed fax fil fm fpm fsk FSN ft GFE	Department diameter double sideband Drawing each Edition facsimile filament frequency modulated (modulation) feet per minute frequency-shift keyed (keying) Federal Stock Number	MIL mv mw NAV No Obs Obt Opt P/Std pf Pkgs Qty RADC	- Microphone - Military - millivolt(s) - milliwatt(s) - Navigation - number - Obsolete - Obsolescent - operations per minute - Planned standard - power factor - Packages - Quantity - Rome Air Development Center - Rome Air Development Center

REC	Receiver	uhfultra-high frequency	(300 to 3,000 mc)
RF	70120701	USUnited States	
	root mean square	USAUnited States Army	1
	revolutions per minute	USAFUnited States Air F	orce
rtt	radioteletype (frequency-shift keyed)	USCGUnited States Coast	Guard
S-Std		usecmicrosecond(s)	
Serv		USNUnited States Navy	1
shf		uufmicromicrofarad(s)	
SIII	mc	$uv_{}$ microvolt(s)	
Sig C	~ ~ ~	uwmicrowatt(s)	
SOS		u/wused with	
BOB	telegraph)	vvolt(s)	
Spec		vavolt-ampere(s)	
SPL		vfvoice frequency	
ssb		vhfvery high frequency	(30 to 300 mc)
Std	~	vpsvibrations per secon	d (used to describe
SWI		pitch of tuning fo	rk)
T-Std		vuvolume unit(s)	
Tel		wwatts	
	Tentative Standard	WADC Wright Air Develop	ment Center
	Technical Manual	WCLEWright Air Develop	ment Center
TO		wpmwords per minute	
TTY		xmtrtransmitter	
A A A			

APPENDIX II INDEX OF ITEMS BY NAME

This appendix consists of a listing of all items described in this publication, arranged alphabetically by official nomenclature. In every case, nomenclature appears in narrative style rather than in catalogue style. For example, Frequency Shift Converter CV-62/U (narrative style) is found under F instead of being listed as Converter, Frequency Shift CV-62/U (catalogue style). Thus, all radio sets are found under the letter R and all teletypewriters under T.

AF Amplifier AM-65/GRC AN/GIA 756 Aircraft Radio Equipment: AN/ARW-34 AN/ART 125 RU-18, -19 AN/ARR 116 Aircraft Radio Receiver ARB AN/ARR 117 Aircraft Radio Receiving Equipment: ABK, ABK-1, through -7 AN/ARR 100 ARJ AN/ARR 100 AN/ARR 113 Aircraft Radio Transmitter-Receiver: MB AN/ARR 113 Aircraft Radio Transmitting Equipment: ATA AN/ART 123 ATD AN/ART 123 ATD AN/ART 124 ATK AN/ART 125 ATK AN/ART 126 GP-7 AN/ART 129 GP-7 AN/ART 129 GP-7 AN/ART 120	Nomenclature	Type	Page
AF Åmplifier AM-65/GRC. Aircraft Radio Equipment: AN/ARW-34. AN/ARW 137 ATB. AN/ARR 118 Aircraft Radio Receiver ARB. Aircraft Radio Receiver ARB. Aircraft Radio Receiving Equipment: ABK, ABK-1, through -7. ARA. AN/ARR 100 ARJ. AN/ARR 138 ARK. AN/ARR 138 ARYARR 138 AN/ARC 85 ME. AN/ARC 85 AIrcraft Radio Transmitter-Receiver: MB. AYAR AN/ARR 128 AIRCRAFT 128 ATD. AN/ART 128 ATD. AN/ART 128 ATD. AN/ART 129 AN/ART 129 AN/ART 129 AN/ART 129 AN/ART 131 AMALURA AN/ART 131 AN/	A		
Aircraft Radio Equipment: AN/ARW-34 AN/ARW-34 RU-18, -19 AN/ARR Aircraft Radio Receiver ARB AN/ARR Aircraft Radio Receiving Equipment: ABK, ABK-1, through -7 ARA AN/ARR AN/ARR ARJ ARJ AN/ARR AN/ART 123 ATD ATA ATA ATA ATA ATA ATA AT	Adapter Keyer KY-44/FX, -44A/FX, -44B/FX, -44C/FX	AN/TXA	1603
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APPENDIX III

INDEX OF ITEMS BY TYPE NUMBER

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CV-115()/URR	Frequency Shift Converter	AN/URA	1713
CV-116/URR	Frequency Shift Converter	AN/URA	1715
m CV-157/URR	Single Sideband Converter	AN/URA	1717
CXES	Experimental Electronic Relay Equipment	AN/URA	1719

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IP-352(XN-1)/ UR.	Tuning Indicator	AN/URA	1721
KY-32/GRT	Keyer	AN/URA	1723
KY-43/URT	Keyer	AN/URA	1725
KY-43A/URT	Keyer	AN/URA	1727
MD-209/UC	Radio Modulator	AN/URA	1729
NX-439()/U	Keying Head Drive	AN/URA	1731
O-406(XN-1)/ URC	Radio Frequency Oscillator	AN/URA	1733
OAH, OAH -1 , -2	Code Practice Equipment	AN/URA	1735
OW-2	Code Practice Equipment	AN/URA	1737
RBU, RBU–1, –2	Panoramic Radio Adaptor	AN/URA	1739
RBV, RBV-1, -2	Panoramic Radio Adaptor	AN/URA	1741
RCC	Panoramic Radio Adaptor	AN/URA	1743
RDC-1	Radio Receiving Equipment	AN/URA	1745
RDK	Panoramic Radio Adaptor	AN/URA	1747
RDO	Radio Receiving Equipment	AN/URA	1749
SM-40/UR	Radio Telephone Simulator	AN/URA	1751
AN/URC-4	Radio Set	AN/URC	1753
AN/URC-7Z	Radio Set	AN/URC	1757 1759
AN/URC AN/URC-16, -16X,	Radio Set	AN/URC AN/URC	1761
-16Y, -17, -17X, -17Y, -18, -18X, -18X.	nadio Gev.	ANTOICO	1701
AN/URC-22 AN/URC-type:	Radio Set	AN/URC	1767
MAR	Vhf Radio Transmitting and Receiving Equipment	AN/URC	1769
MO-1	Radio Telephone Transmitting and Receiving Equipment	AN/URC	1771
AN/URN-type:			
KY-122/URN	Kever	AN/URN	1773
KY-123/URN	Keyer	AN/URN	1775
KY-123A/URN	Keyer	AN/URN	1777
AN/URR-9	Radio Receiving Set	AN/URR	1779
AN/URR-13, -13A, -13B, -13C	Radio Receiving Set	AN/URR	1781
AN/URR-21, -21A	Radio Receiving Set	AN/URR	1783
AN/URR-23, -23A	Radio Receiving Set	AN/URR	1785
AN/URR-27	Radio Receiving Set	AN/URR	1787
AN/URR-28	Radio Receiving Set	AN/URR	1789
m AN/URR–29	Radio Receiving Set	AN/URR	1791
AN/URR-29X	Radio Receiving Set	AN/URR	1793
AN/URR-35, -35A,	Radio Receiving Set	AN/URR	1795
-35B, -35C	n !: n : :	ANT/IIDD	1700
AN/URR-35D	Radio Receiving Set	AN/URR	1799
AN/URR-36	Radio Receiving Set	AN/URR AN/URR	1801 1803
AN/URR-36A	Radio Receiving Set	AN/URR	1805
AN/URR-39 AN/URR-type:	Radio Receiving Set	AN/ORK	1000
51J-4	Receiver	AN/URR	1807
75A-4, 75A-4- (MOD)	Amateur-Band Receiver	AN/URR	1809
AR-88 (RCA)	Radio Receiver	AN/URR	1813
AR-88D (RCA)	Radio Receiver	AN/URR	1815
BC-312-()	Radio Receiver	AN/URR	1817
BC-314-()	Radio Receiver	AN/URR	1819
BC-787-()	Radio Receiver	AN/URR	1821
BF	Radio Receiving Equipment	AN/URR	1823
R-129()/U	Radio Receiver	AN/URR	1825
R-211()/U	Radio Receiver	AN/URR	1827

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R-278/GR	Radio Receiver	AN/URR	1829
R-388()/URR	Radio Receiver	AN/URR	1831
R-389()/URR	Radio Receiver	AN/URR	1833
R-390/URR	Radio Receiver	AN/URR	1835
R-390A/URR	Radio Receiver	AN/URR	
R-391/URR	Radio Receiver		1837
R-392/URR	Radio Receiver	AN/URR	1839
R-520()/URR	Radio Receiver	AN/URR	1841
R-5200		AN/URR	1843
		AN/URR	1845
RAK, RAK-1 through 8.	Radio Receiving Equipment	AN/URR	1847
RAL, RAL-1 through -8.	Radio Receiving Equipment	AN/URR	1851
RAO -2 through -7 , -9 .	Radio Receiving Equipment	AN/URR	1855
RAS, RAS-1 through -15.	Radio Receiving Equipment	AN/URR	1859
RAY	Super Frequency Aircraft Aircraft Radio Receiving Equipment	AN/URR	1861
RBA, RBA-1	Radio Receiving Equipment	AN/URR	1863
through -3, -5, -5A.	3 1 1	1117, 01010	1000
RBA-6	Radio Receiving Equipment	AN/URR	1865
RBA-7	Radio Receiving Equipment	AN/URR	1867
RBB, RBB-1,	Radio Receiving Equipment	AN/URR	1869
-2, -2A, -3 through -6.		miy out	1009
RBC, RBC-1	Radio Receiving Equipment	AN/URR	1871
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RBK-2, -11	Radio Receiving Equipment	AN/URR	1881
RBK-15	Radio Receiving Equipment	AN/URR	1883
RBK-16	Radio Receiving Equipment	AN/URR	1885
RBL, RBL-1	Radio Receiving Equipment		
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RBO, RBO-1, -2, -2A, -3, -4	Radio Receiving Equipment	AN/URR	1891
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RBS, RBS-1, -2, -2A.	Radio Receiving Equipment	AN/URR	1897
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RCE-2	Radio Receiving Equipment	AN/URR	1903
AN/URT-2, -2X, -3, -3X, -4, -4X.	Radio Transmitting Set	AN/URT	1905
AN/URT-6(XN-1)	Radio Transmitting Set	AN/URT	1909
AN/URT-7, -7A, -7b, -7C.	Radio Transmitting Set	AN/URT	1911
AN/URT-8(XN-1), -9(XN-1).	Radio Transmitting Set	AN/URT	1915
AN/URT-10(XN-1)	Radio Transmitting Set	AN/URT	1917
AN/URT-12	Radio Transmitting Set	AN/URT	1921
AN/URT-13	Radio Transmitting Set	AN/URT	
AN/URT-14	Radio Transmitting Set		1923
AN/URT-type:	ATOMANIH VILLE DOU	AN/URT	1925
T-368()/URT	Radio Transmitter	AN/URT	1927

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TCA	Radio Telephone Transmitting Equipment	AN/URT	1933
TCM	Radio Transmitting Equipment	AN/URT	1935
TCM-1	Radio Transmitting Equipment	AN/URT	1937
TCM-2	Radio Transmitting Equipment	AN/URT	1939
TCN	Radio Transmitting Equipment	AN/URT	1941
TCN-1	Radio Transmitting Equipment	AN/URT	1943
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TCZ	Radio Transmitting Equipment	AN/URT	1947
TCZ-1, -2	Radio Transmitting Equipment	AN/URT	1949
TDE, TDE-1	Radio Transmitting Equipment	AN/URT	1951
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TDZ, TDZ-a	Radio Transmitting Equipment	AN/URT	1955
TED, TED-1, -2	Radio Transmitting Equipment	AN/URT	1957
TED-3	Radio Transmitting Equipment	AN/URT	1959
TED-7	Radio Transmitting Equipment	AN/URT	1961
TED-8	Radio Transmitting Equipment	AN/URT	1963
AN/URW-type:		/	
C-1947/U	Control-Monitor	AN/URW	1965
RM-29-A	Remote Control Unit	AN/URW	1967
AN/USA-type:			
CN-154/U	Voltage Regulator	AN/USA	1969
PF	Audio Signal Scrambling Equipment	AN/USA	1971
TA-269/U	Telephone Terminal	AN/USA	1973
AN/USM-type:	26.13.	A DT /TTODE	1024
MD-83A/ARN	Modulator	AN/USM	1975
AN/USP-type:		ANT /TIOD	1077
CXDB	Dual Recording Equipment	AN/USP	1977
RCT, RCU,	Combination Radio Receiver and Record Player	AN/USP	1979
RCU-1.			
AN/USQ-type:	Radio Receiving and Reproducing Equipment	AN/USQ	1981
REK	Television Camera Group	AN/UXA	1983
AN/UXA-5(XN-1)	Television Camera Group	ANTOAA	1900
AN/UXA-type: FRB	Frequency Shift Receiver Group	AN/UXA	1985
FSJ	Audio FM Kever Equipment	AN/UXA	1987
AN/UXC-2	Telegraph Multiplex Set	AN/UXC	1989
AN/UXH-2(XN-3)	Facsimile Recorder Set	AN/UXH	1991
AN/VIA-1	Auxiliary Interphone Equipment	AN/VIA	1993
AN/VIC-type:	numming into phono Equipment	1111/ 1111	1000
RC-53	Interphone Equipment	AN/VIC	1995
RC-99	Interphone Equipment.	AN/VIC	1997
RC-298	Interphone Extension Kit.	AN/VIC	1999
AN/VRC-1	Radio Set	AN/VRC	2001
AN/VRC-2	Radio Set	AN/VRC	2003
AN/VRC-2X	Radio Set	AN/VRC	2005
AN/VRC-3	Radio Set	AN/VRC	2007
AN/VRC-5	Radio Set	AN/VRC	2009
AN/VRC-6()	Radio Set	AN/VRC	2011
AN/VRC-7()	Radio Set	AN/VRC	2013
AN/VRC-8()	Radio Set	AN/VRC	2015
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AN/VRC-10()	Radio Set	AN/VRC	2019
AN/VRC-13()	Radio Set	AN/VRC	2021
AN/VRC-14	Radio Set	AN/VRC	2023
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35FMTR -7 A	Frequency Modulated Mobile Radio Equipment	AN/VRC	2047
50FMTR-7A	Frequency Modulated Mobile Radio Equipment	AN/VRC	2049
FMTR-30D	Transmitter-Receiver	AN/VRC	2051
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SCR-193-()	Radio Set	AN/VRC	2057
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SCR-508-()	Radio Set	AN/VRC	2065
SCR-510-()	Radio Set	AN/VRC	2067
SCR-528	Radio Set	AN/VRC	2069
SCR-608	Radio Set	AN/VRC	2009
SCR-610-()	Radio Set	AN/VRC	2073
SCR-628-()	Radio Set	AN/VRC	2075
AN/VRQ-1	Radio Set	AN/VRQ	2077
AN/VRQ-2()	Radio Set	AN/VRQ	2079
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AN/VRQ=2	Radio Receiving Set	AN/VRR	2083
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AN/VRR-7	Radio Receiving Set	AN/VRR	2087
AN/VRR-type:		2111/ 11010	2001
BC-683-A, -B, -BM.	Radio Receiver	AN/VRR	2089
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SCR-294-()	Radio Set	AN/VRR	2093
SCR-678-()	Radio Set	AN/VRR	2095
AN/VRT-1	Radio Transmitting Set	AN/VRT	2097
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ARA	Aircraft Radio Receiving Equipment	AN/ARR	109
ARB	Aircraft Radio Receiver	AN/ARR	111
ARK	Aircraft Radio Receiving Equipment	AN/AXR	141
ARJ	Aircraft Radio Receiving Equipment	AN/AXR	139
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AS-768/GR	Antenna	AN/GRA	771
AT-150/SRC	Antenna	AN/SRA	1165
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AT-317/BRR	Loop Antenna System	AN/BRA	147
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BC-339-()	Radio Transmitter	AN/FRT	567
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BC-344-()	Radio Receiver	AN/GRR	861
BC-365-()	Radio Transmitter	AN/FRT	569
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BC-447-()	Radio Transmitter	AN/FRT	573
BC-610-()	Radio Transmitter	AN/GRT	879
BC-683-A, -B, -BM	Radio Receiver	AN/VRR	2089
BC-779	Radio Receiver	AN/FRR	469
BC-787-()	Radio Receiver	AN/URR	1821
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C-492/SG	Transmitter-Teletypewriter Control	AN/SGA	1107
C-682/SR	Radio Set Control	AN/SRA	1167
C-806/GR	Control Indicator	AN/GRA	775
C-1624/FRC-36	Remote Control Console	AN/FRW	711
C-1670/U	Antenna Control	AN/SRA	1169
C-1846/FRC-42	Radio Set Control	AN/FRW	713 1965
C-1947/U	Control-Monitor	AN/URW AN/TCC	1369
CF-1()	Telephone Terminal	AN/TCC	1371
CF-2-()	Telegraph Terminal	AN/TCC	1373
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CLR-6, Phileo	Microwave Radio Relay Set	AN/FRC	421
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CN-154/U CNP	Transceiver		1609
CRV-50194	Modulator Assembly	AN/URA	1709
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CU-284/UR	Antenna Coupler	AN/SRA	1171
CU-377/UR	Antenna Coupler	AN/SRA	1173
CV-2/TX, $-2A/TX$,	Converter	AN/TXC	1611
-2B/TX	Converter	AN/TXC	1613
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CV-31()/TRA-7	Frequency Shift Converter	AN/URA	1711
CV-62/U	Frequency Shift Converter	AN/URA	1713
CV-115()/URR	Frequency Shift Converter	AN/URA	1715
CV-116/URR CV-157/URR	Single Sideband Converter	AN/URA	1717
CV-157/URR CV-172/U, -172A/U	Frequency Shift Converter	AN/TXA	1601
CW-50101	Audio Frequency Amplifier	AN/TCA	1335
CW-50101 CW-50124	Demodulator	AN/TCA	1337
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EE-84	Signal Lamp Equipment	AN/PVC	1101 1103
EE-89- ()	Telephone Repeater	AN/TTC	1585
EE-97-()	Telegraph Printer Set	AN/TGC	1407
EE-98-()	Teletypewriter Set	AN/TGC	1409
EE-102	Teletypewriter Set	AN/TGC	1411
FMTR-30D	Transmitter-Receiver	ART (TYP) C	
FOA	Transmitter-Receiver Facsimile Transmitter-Receiver Equipment	AN/VRC	2051
FOC	Facsimile Transmitter-Receiver Equipment	AN/TXC	1615
FRB	Frequency Shift Receiver Equipment	AN/TXC	1617
FRC	Frequency Shift Receiver Converter	AN/UXA	1985
FSB	Frequency Shift Keyer Equipment	AN/FRA	355
FSD	Frequency Shift Keyer Equipment	AN/FGA	213
FSH	Frequency Shift Keyer Equipment	AN/FRA	357
FSJ	Audio FM Keyer Equipment	AN/FRA	359
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G-1T	Telegraph Terminal	AN/FGA	215
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KY-7/FRT	Tone Keying Unit	AN/FRA	361
KY-32/GRT	Keyer	AN/URA	1723
KY-43/URT	Keyer	AN/URA	1725
KY-43A/URT	Keyer	AN/URA	1727
KY-44FX, -44A/FX, -44B/FX, -44C/FX.	Adapter Keyer	AN/TXA	1603
KY-58/GRT	Keyer	AN/FRA	363
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KY-83()/S	Keyer	AN/SRA	1175
KY-122/URN	Keyer	AN/URN	1773
KY-123/URN	Keyer	AN/URN	1775
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LS-124()/FI	Intercommunicating Station	AN/FIC	313
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LS-130()/FI	Intercommunicating Station	AN/FIC	325
LS-138/FI	Intercommunicating Station	AN/FIC	327
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MAM	Emergency Mobile Communication Equipment	AN/ARC	83
MAR	Vhf Radio Transmitting and Receiving Equipment	AN/URC	1769
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MAY, MAY-1	Portable Radio Transmitting and Receiving Equipment	AN/PRC	1025
MB	Aircraft Radio Transmitter-Receiver	AN/ARC	85
MD-83A/ARN	Modulator	AN/USM	1975
MD-168/UX	Radio Modulator	AN/TXA	1605
MD-209/UC	Radio Modulator	AN/URA	1729
MD-280/TRC	Radio Transmitter Modulator	AN/TRA	1463
ME	Aircraft Radio Transmitter-Receiver	AN/ARC	87
MO-1	Radio Telephone Transmitting and Receiving Equipment	AN/URC	1771
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MW	Radio Transmitter	AN/FRT	577
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OA-11/FC	Carrier Terminal	AN/FCC	197
OA-12/FC	Carrier Terminal	AN/FCC	199
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OA-58/FC	Radio Receiver Assembly	AN/FRR	475
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PE, PE-1	Voice Recording Equipment	AN/UNH	1679
PF	Audio Signal Scrambling Equipment	AN/USA	1971
PG	Sound Recording Equipment	AN/PNH	981
PH	Sound Reproducing Equipment	AN/UNH	1681
PJ	Sound Recording Equipment	AN/UNH	1683
PM	Teletypewriter Repeater	AN/FGC	255
PP-1098/GRC-9	Power Supply	AN/GRA	781
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R-80()/PR	Radio Receiver	AN/PRR	1079
R-96()/SR	Radio Receiver	AN/SRR	1223
R-108/GRC,	Radio Receiver	AN/VRR	2091
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R-129()/U	Radio Receiver	AN/URR	1825
R-137/GR	Radio Receiver	AN/GRR	863
R-230()/SR	Radio Receiver	AN/SRR	1225
R-206()/PR	Radio Receiver	AN/PRR	1081
R-208/FR	Radio Receiver	AN/FRR	481
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R-390/URR	Radio Receiver	AN/URR	1835
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R-392/URR	Radio Receiver	AN/URR	1841
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TBM-4 Radio Transmitting Equipment AN/SRT 1303 TBM-6 Radio Transmitting Equipment AN/FRT 625 TBM-6 Radio Transmitting Equipment AN/FRT 625 TBM-7 Radio Transmitting Equipment AN/FRT 627 TBM-8 Radio Transmitting Equipment AN/FRT 629 TBM-9 Radio Transmitting Equipment AN/SRT 1309 TBM-10 Radio Transmitting Equipment AN/SRT 1313 TBM-11 Radio Transmitting Equipment AN/SRT 1313 TBM-12 Radio Transmitting Equipment AN/SRT 1313 TBN-3 Transmitting Equipment AN/SRT 1315 TBU Radio Telegraph Transmitting Equipment AN/SRT 1317 TBU-2 Radio Telegraph Transmitting Equipment AN/FRT 633 TBW-3 Radio Telegraph Transmitting Equipment AN/FRT 635 TBW-1 Portable Radio Transmitting Equipment AN/TRT 636 TBW-2 Portable Radio Transmitting Equipment AN/TRT 1563 <td></td> <td>Radio Transmitting Equipment</td> <td></td> <td>1295</td>		Radio Transmitting Equipment		1295
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TC-5 Auxiliary Telephone Central Equipment AN/FTC 749 TC-10-() Telephone Central Office Set AN/TTC 1593 TC-12 Telephone Central Office Set AN/TTC 1595 TC-16-() Reperforator-Teletypewriter Set AN/TGC 1415 TC-18 Repeater Set AN/TGC 1417 TC-19 Repeater Set AN/TCC 1387	TC-3	Telegraph Central Office Set	AN/TGC	1413
TC-5 Auxiliary Telephone Central Equipment AN/FTC 749 TC-10-() Telephone Central Office Set AN/TTC 1593 TC-12 Telephone Central Office Set AN/TTC 1595 TC-16-() Reperforator-Teletypewriter Set AN/TGC 1415 TC-18 Repeater Set AN/TGC 1417 TC-19 Repeater Set AN/TCC 1387			AN/TTC	1591
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