

RADIO RECEIVING SET **AN/SRR-3**

1 December 1958

Cognizant Serv: USA FSN: 5820-164-7214

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	--
STOCK NO:	2C4589	--	--



AN/SRR-3

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/SRR-3 is a superheterodyne unit suitable for shipboard, or shore installation. It is adapted for the reception of radiotelephone or radiotelegraph signals by either headphones or loudspeaker.

This equipment is essentially a commercial Scott Model SLR-F set. It is designed for alternating current operation and is equipped with a rectifier type power supply. The headphones used with the set must have an impedance of either 600 or 20,000 ohms. These headphones may be used separately or in conjunction with a local loudspeaker of the permanent magnet type.

The set is contained in a steel cabinet suitable for installation on top of a table or bench with cradle type shock mount-

ing. The chassis is constructed to permit mounting in a standard type relay rack.

TECHNICAL CHARACTERISTICS:*Frequency Range:*

- Band 1: 80 kc to 220 kc
- Band 2: 210 kc to 560 kc
- Band 3: 1.9 mc to 5.1 mc
- Band 4: 4.5 mc to 12 mc
- Band 5: 8.8 mc to 24 mc

Antenna: Balance feed line or single wire

Type modulation: AM

Type Emission: Cw, mcw, voice

Operational Range: Medium and long

Power Requirements: 85 w; 110- to 120-v 60-cycle, 0.75 amp

MIL-HDBK-161

AN/SRR-3 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Inverter Model 262	-----	8 x 8-11/16 x 10-7/16	28
1	Radio Receiver Model SLR-F	-----	13-7/8 x 20-13/16 x 21	106
1	Speaker Model SPM-8	-----	5 x 9-3/16 x 10-1/2	6.5

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Laboratory	Chicago, Ill.		

RADIO RECEIVING SET AN/SRR-11, -12, -13, -13A

1 December 1958

Cognizant Serv: USN FSN: AN/SRR-11: 5820-642-8254
 AN/SRR-12: 5820-642-8251
 AN/SRR-13: 5820-665-2373
 AN/SRR-13A: 5820-503-6763

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/SRR-11

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/SRR-11, AN/SRR-12, AN/SRR-13 and AN/SRR-13A are low, medium and high frequency equipments designed for all types of vessels.

The frequency range in each receiver is divided into five bands; continuous tuning is available throughout. All of the units are compartmentalized for ease of maintenance and application. Each major assembly is physically independent and thus affords quick replacement.

These equipments operate in conjunction with panoramic adapters, frequency-shift receiver converters, facsimile, and similar facilities.

TECHNICAL CHARACTERISTICS:*Frequency Range:*

AN/SRR-11:

Band 1: 14 kc to 30 kc

Band 2: 30 kc to 63 kc

Band 3: 63 kc to 133 kc

Band 4: 133 kc to 283 kc

Band 5: 283 kc to 600 kc

AN/SRR-12:

Band 1: 0.25 mc to 0.5 mc

Band 2: 0.5 mc to 1 mc

Band 3: 1 mc to 2 mc

Band 4: 2 mc to 4 mc

Band 5: 4 mc to 8 mc

AN/SRR-13, AN/SRR-13A:

Band 1: 2 mc to 4 mc

Band 2: 4 mc to 8 mc

Band 3: 8 mc to 16 mc

Band 4: 16 mc to 24 mc

Band 5: 24 mc to 32 mc

Type Modulation: AM, FM

AN/SRR-11, -12, -13, -13A RADIO RECEIVING SET

Input Impedance:

Lot: 70 ohms

High: Antenna with capacity of 30 to 5,000 μf (200 nominal); antenna consisting of 20 uh in shunt with series combination of 400 μf capacitor and 400 ohm resistor, the entire combination being in series with a 200 μf capacitor

Intermediate Frequency:

AN/SRR-11:

Band 1: 60 kc and 200 kc

Band 2: 200 kc

Band 3: 200 kc

Band 4: 60 kc and 200 kc

Band 5: 200 kc

AN/SRR-12:

Band 1: 200 kc

Band 2: 200 kc

Band 3: 200 kc

Band 4: 1,600 kc and 200 kc

Band 5: 1,600 kc and 200 kc

AN/SRR-13, AN/SRR-13A:

Band 1: 1,600 kc and 200 kc

Band 2: 1,600 kc and 200 kc

Band 3: 1,600 kc and 200 kc

Band 4: 1,600 kc and 200 kc

Band 5: 1,600 kc and 200 kc

Type Reception:

AN/SRR-11: A1, A2, F1

AN/SRR-12, AN/SRR-13, AN/SRR-13A: A1, A2, A3,

F1 (cs, mcw, icw, tone, voice)

Sensitivity:

AN/SRR-11:

14 to 18 Kc: 8 uv

18 to 100 Kc: 5 uv

100 to 600 Kc: 3.5 uv

AN/SRR-12:

0.250 to 8 Mc: 5 uv

AN/SRR-13, AN/SRR-13A:

2 to 16 Mc: 6 uv

16 to 32 Mc: 10 uv

Power Requirements: 75 w; 105- 115- or 125-v, 50- to 60- or 400-cycle 1-phase ac; 0.85 amp at 90% pf

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Radio Receiving Set AN/SRR-11:</i>				
2	Clamp, Cable AN3057-4			
1	Clamp, Cable AN3057-8			
2	Connector AN3106A-10SL-4S			
1	Connector AN3106A-16S-5S			
1	Connector UG-21B/U			
1	Connector UG-88/B			
1	Radio Receiver R-439/SRR-11	-----	8-23/32 x 17-1/4 x 18-11/32	65
1	Test Cable Assembly CG-1101/SRR			
<i>For Radio Receiving Set AN/SRR-12:</i>				
3	Clamp, Cable AN3057-4			
1	Clamp, Cable AN3057-8			
3	Connector AN3106A-10SL-4S			
1	Connector AN3106A-16S-5S			
1	Connector UG-21B/U			
2	Connector UG-88/U			
1	Radio Receiver R-440/SRR-12	-----	8-23/32 x 17-1/4 x 18-11/32	65
1	Test Cable Assembly CG-1101/SRR			
<i>For Radio Receiving Set AN/SRR-13:</i>				
3	Clamp, Cable AN3057-4			
1	Clamp, Cable AN3057-8			

RADIO RECEIVING SET AN/SRR-11, -12, -13, -13A

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Connector AN3106A-10SL-4S			
1	Connector AN3106A-16S-5S			
1	Connector UG-21B/U			
2	Connector UG-88/U			
1	Radio Receiver R-441/SRR-13	-----	8-23/32 x 17-1/4 x 18-11/32	65
<i>For Radio Receiving Set AN/SRR-13A</i>				
3	Clamp, Cable AN3057-4			
1	Clamp, Cable AN3057-8			
3	Connector AN3106A-10SL-4S			
1	Connector AN3106A-16S-5S			
1	Connector UG-21B/U			
2	Connector UG-88/U			
1	Radio Receiver R-441A/ SRR-13	-----	8-23/32 x 17-1/4 x 18-11/32	65
1	Test Cable Assembly CG- 1101/SRR			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91875(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2 (AN/SRR-11)	4.9	122
2 (AN/SRR-12)	8.2	152
2 (AN/SRR-13)	5	136

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.	NObsr-52014, 31 August 1950 NObsr-57134, 31 August 1950	

RADIO RECEIVING SET **AN/SRR-15**

1 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/SRR-15 is a general purpose communication equipment for shipboard use. It has an extremely accurate tuning dial and frequency control.

Late models of this equipment have, in addition, circuits and facilities for reception of signal sideband suppressed carrier signals.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 32*Number of Bands:* 4*Type Emission:* A1, A2, A3, A4, A3b*Power Output:* 60 mw*Power Requirements:* 105-, 115-, or 125-v, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/ SRR-15			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRR-15 RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr-63391	

RADIO RECEIVER AN/SRR-type

1 July 1958

Cognizant Serv: USA FSN: 5820-221-0177

R-96()/SR

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 2C4180-96



R-96/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-96()/SR is a five-channel, AM (voice, cw, icw, and mcw) receiving equipment used in the low-, medium-, and high-frequency bands in radio operation aboard ship. It may be installed on harbor patrol or seagoing craft.

This equipment consists of a crystal-controlled receiver designed to operate in conjunction with Radio Transmitter T-83/SR, to which it may be connected by cables. Change-over relays in the transmitter control sending and receiving and are operated by means of the press-to-talk switch in the handset.

This receiver requires a conventional ship's antenna or other suitable array.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.135 to 12.12 in 5 overlapping bands

Type Modulation: AM

Type of Signal: Voice, cw, icw, mcw

Power Requirements: 0.4 amp, 115-v dc or 115-v 50/60-cycle ac

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-96()/SR (Equipment consists of only one major component.)	(FSN) 5820-221-0177 (USA) 2C4180-96	10 x 20-7/8 x 17-1/2	87.5

REFERENCE DATA AND LITERATURE:

TM 11-878A

SHIPPING DATA (DOMESTIC PACK)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.69	160.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 69-3

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	14048-P-48-77	\$406.46

RADIO RECEIVER AN/SRR-type

1 July 1958

Cognizant Serv: USA FSN: 5820-194-2982

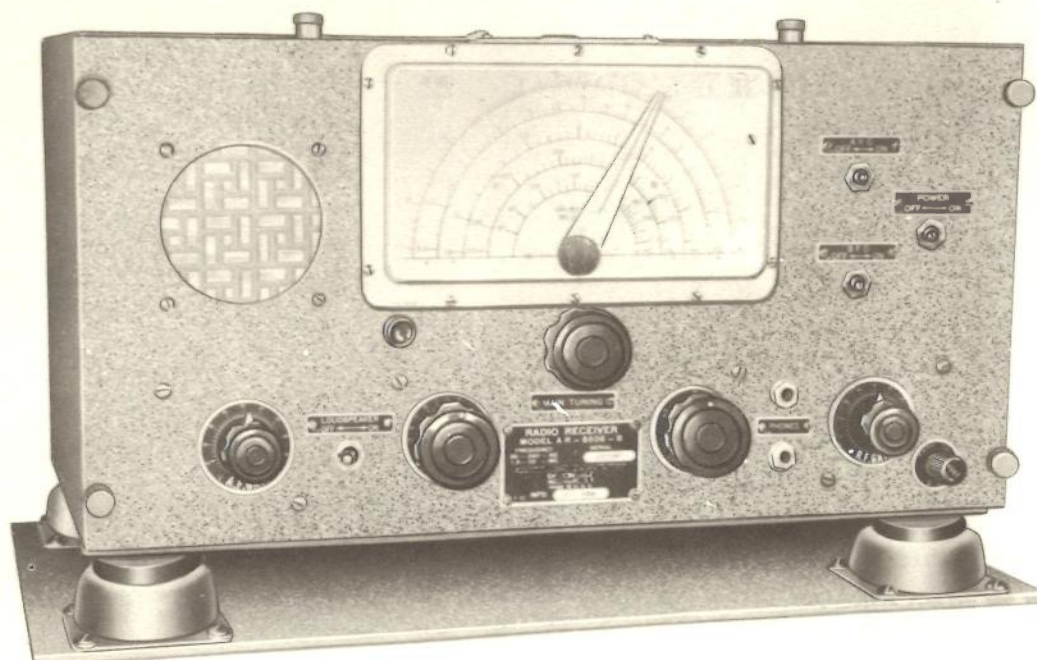
R-203()/SR

USA

USN

USAF

TYPE CLASS: Std
 STOCK NO: 2C4180-203A



R-203/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-203()/SR is a table model receiving equipment for AM (voice and cw) signals in the low-, medium-, and high-frequency bands used in shipborne and similar applications.

This equipment consists essentially of a commercial (RMCA model AR8506-A) marine receiver that is contained in a metal cabinet but can be removed from the case and installed on a standard relay rack. It has a built-in loudspeaker and includes a headset and accessories.

It can be operated on a ship's antenna or other suitable array.

It operates from 115-v ac or dc sources, from 230-v ac sources, or, by means of fixed Resistor MX-1024/U, from 230-v dc.

If required by local conditions, Electrical Noise Suppressor F-91/U is used to reduce background noise and local electrical interference.

TECHNICAL CHARACTERISTICS:*Frequency Range in Mc:*

Band 1: 0.085 to 0.22

Band 2: 0.21 to 0.55

Band 3: 1.9 to 5.4

Band 4: 5.2 to 12.0

Band 5: 11.5 to 25.0

Type Modulation: AM*Type of Signal:* Voice, tone, cw

Power Requirements: 45 w, 115-v 50/60-cycle ac; 90 w, 230-v 50/60-cycle ac; 115-v dc; or (using Fixed Resistor MX-1024/U) 230-v dc

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-203()/SR (Equipment consists of only one major component.)	(FSN) 5820-194-2982 (USA) 2C1480-203A	11-3/4 x 13-1/16 x 21	65

REFERENCE DATA AND LITERATURE:

TM 11-875

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12	145

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	24675-P-49-7	\$431.80

RADIO RECEIVER AN/SRR-type

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7185

R-212/SR

USA

USN

USAF

TYPE CLASS:

Std

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STOCK NO:

2C4498

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R-212/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-212/SR is a tuned-radio-frequency, AM (cw, icw, and mcw) radiotelegraph receiver equipment used in shipborne and fixed station applications.

This equipment consists of a commercial (Federal 128 AY) receiver having a regenerative detector. It can be operated with a single wire antenna system.

It operates on ac or dc or from storage or dry batteries and has a power-selection switch by means of which the power source can be selected.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.015 to 0.650 in 4 overlapping bands

Type Modulation: AM

Type of Signal: Cw and mcw

Power Requirements:

Ac: 36 w; 115 v, 60 cycles;

Dc Line Plus A Battery: 0.17 amp at 115 v from line, 1.9 amp at 6.3 v from battery; or

Batteries: 1.9 amp at 6.3 v from A battery and 7 to 12 ma at 90 v from B battery

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-212/SR (Equipment consists of only one major component.)			43

REFERENCE DATA AND LITERATURE:

TM 11-868

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.2	43

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO RECEIVER **AN/SRR-type**

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7191

R-213/SR

USA

USN

USAF

TYPE CLASS:

L/Std

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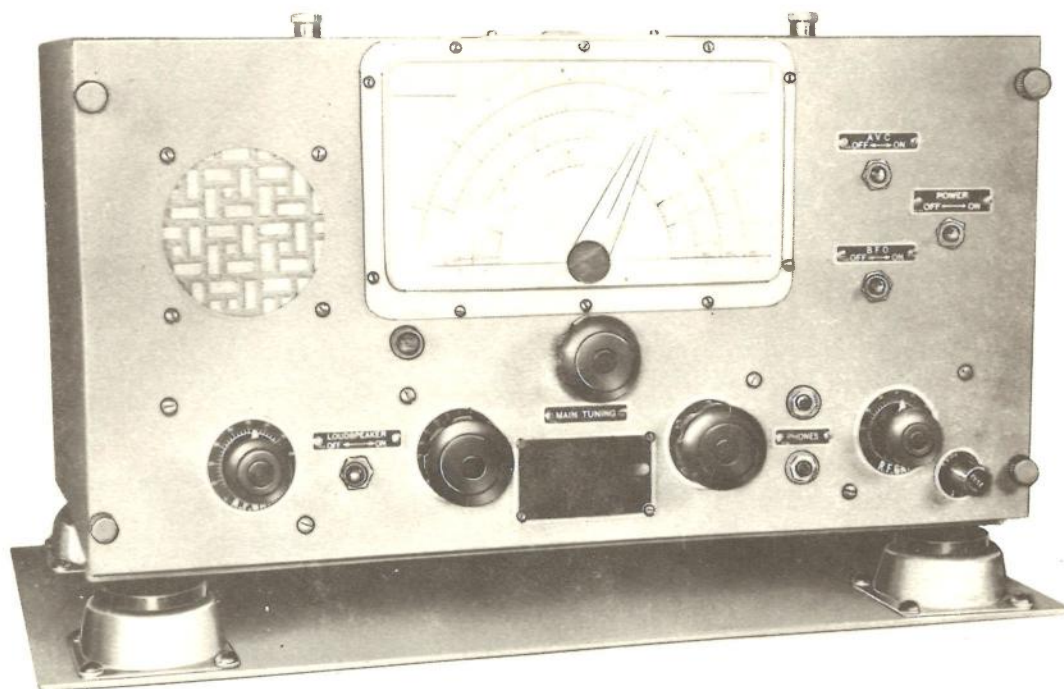
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STOCK NO:

2C4519-8506BC

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R-213/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-213/SR is a transportable, am (voice, tone, and cw) receiving equipment used for communication in the low-, medium-, and high-frequency bands on shipboard, in similar marine applications, or in fixed land stations.

This equipment is a self-contained, table model radio receiver inclosed in a metal cabinet and provided with a shock mount. It has a built-in loudspeaker and jacks for high- or low-impedance headphones and is provided with a beat-frequency oscillator, automatic or manual volume control, and electrical band-spread tuning.

It operates in four frequency bands with a doublet or other suitable antenna array.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Band 1: 0.21 to 0.55; Band 3: 5.2 to 12.0; Band 2: 1.90 to 5.40; Band 4: 11.5 to 25.0

Type Modulation: AM

Type of Signal: Cw, tone, and voice

Power Requirements: 45 w, 115-v ac or dc; or 90 w, 250-v ac or dc with 325-ohm, 75-w external resistor

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line filter unit	-----	7-1/4 x 6-7/8 x 3-5/8	5
1	Radio Receiver R-213/SR	-----	11-3/4 x 21 x 13-1/16	63

REFERENCE DATA AND LITERATURE:

SHIPPING DATA (DOMESTIC PACK)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	4.5	100

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & /or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACTOR ORDER NO.	APPROX UNIT COST
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RADIO RECEIVER AN/SRR-type

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7192

R-215/SR

USA

USN

USAF

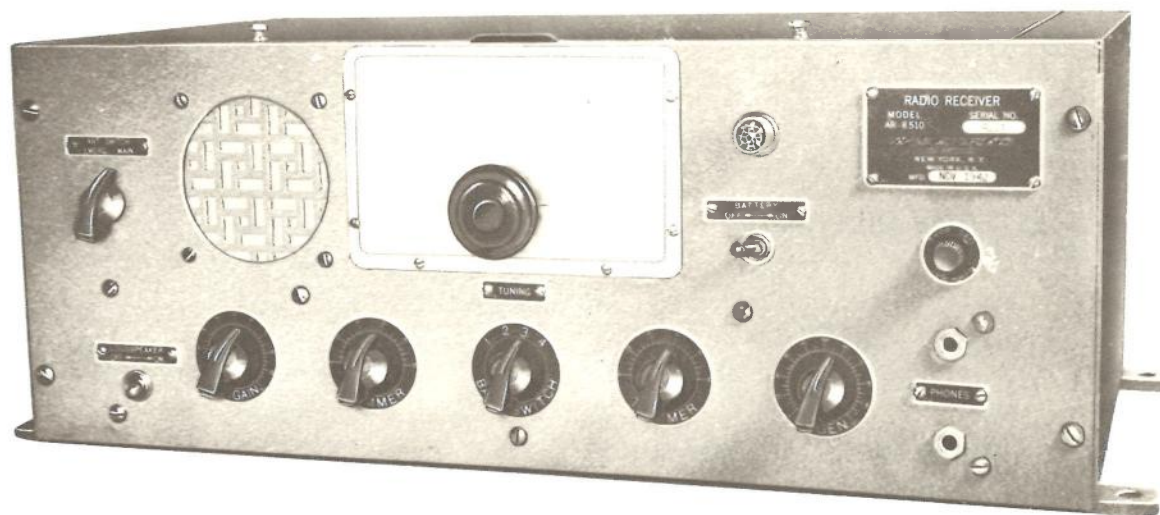
TYPE CLASS: L/Std
 STOCK NO: 2C4519-8510

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R-215/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-215/SR is a medium-range, AM (cw and mcw) receiving equipment, operating in the very-low-, low-, and medium-frequency ranges on shipboard, or in equivalent communication applications.

This equipment consists essentially of a commercial (RMCA AR-8510) table model radio receiver.

It operates by means of a conventional long wire or ship's antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 0.65 in 4 bands

Type Modulation: AM

Type of Signal: Mcw and cw

Power Requirements: 6-v battery and 90-v battery; 110-v dc; or 35 w, 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-215/SR (Equipment consists of only one major component.)	-----	8-1/4 x 22 x 13	39

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER

REFERENCE DATA AND LITERATURE:

Instruction Book, Radio Receiver R-215/SR (FSN 7610-233-2314)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & /or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO RECEIVER **AN/SRR-type**

5 December 1958

Cognizant Serv: USN FSN: 5820-316-8686

RAZ

USA

USN

USAF

TYPE CLASS: --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiver RAZ is a shipboard radio receiving equipment designed for medium and low frequency reception, covering a continuous frequency range of 15 to 600 kc, divided into four bands, with selector switches for a convenient, rapid selection of desired frequency.

The receiver may be operated from batteries.

A separate rectifier power supply unit is used when the receiver is operated from a 110-volt, 60-cycle ac source.

TECHNICAL CHARACTERISTICS:

Antenna Type: Ground straight wire, 75 to 250 ft.

Frequency Range in Kc: 15 to 600 in four bands: A, 15 to 40 kc; B, 40 to 100 kc; C, 100 to 250 kc; D, 250 to 600 kc

Receiver Type: Tuned RF with one stage of preselection

Type of Reception: Cw, mow and voice

Input Impedance: 20,000 to 100,000 ohms

Output: For high impedance telephone receivers of approximately 2,000 to 3,000 ohms; on low impedance, a matching transformer is used with headphones

Sensitivity: 30 to 500 uv for 6 mw in headphones

Power Requirements: 40 w at 115 v, 60-cycle 1-phase ac; or a 6-v "A" battery and a 90-v "B" battery with a current drain of 2 amp and 8.6 milliamperes respectively

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver RAZ	-----	8 x 12 x 20-1/8	29
1	Rectifier Power Supply Unit	-----	8 x 8 x 10-5/8	16

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95936

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.1	55

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER

PROCUREMENT DATA

PROCURING SERVICE: U. S. NAVY
SPEC &/or DWG:

DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corporation of America, Engineering Department	New York, N. Y.	-----	\$300.00

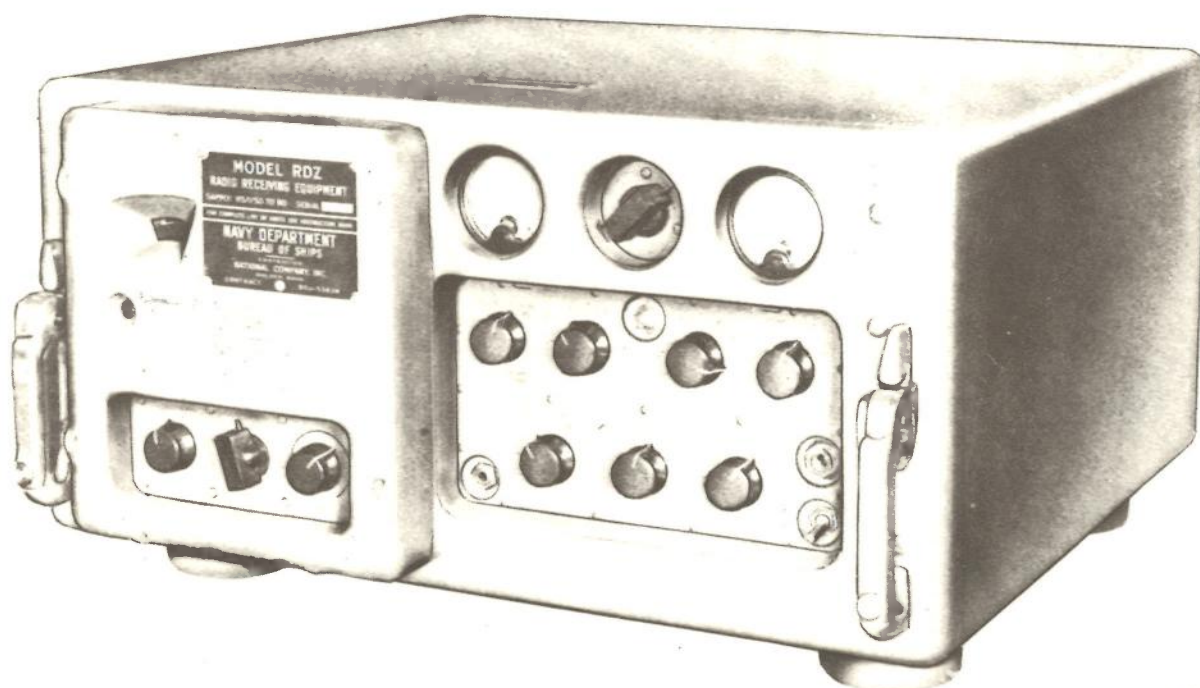
RADIO RECEIVING EQUIPMENT **AN/SRR-type**

20 November 1958

Cognizant Serv: **USN** FSN:

RDZ, RDZ-1, RDZ-A

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RDZ: F16-Q-274390- 200	--



RDZ

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RDZ, RDZ-1, and RDZ-a are designed for shipboard or shore use. The superheterodyne receiver incorporates a crystal-controlled oscillator and provides reception of radiotelephone transmissions on any 10 channels in the frequency band of 200 to 400 mc; however, the frequencies between 222 and 232 mc are rendered inoperative by interaction within the set of the intermediate-frequency amplifier and harmonics of the crystal multiplier circuits.

An automatic 10-channel tuning unit is associated with the receiver to permit local or remote operation. Connections to and from the receiver are filtered to limit possible interference from nearby electronic apparatus.

Three types of output are available: frequency scan, video scan, and audio. This equipment is mounted in a case, which is provided with shock mounts, and the entire assemblage is designed for installation on a table or bench. A clearance of at least 19-7/16 inches is required in front of the equipment.

These three equipments are functionally interchangeable—the only differences being minor electrical or mechanical modifications.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 400 mc; any 10 preset frequencies except between 222 and 232 mc

Frequency Control: Crystal

Type Reception: Mew or voice

Power Output:

Phone Jack: 1.5 v or 4 mw into 600-ohm load

Audio Channel: 6 v or 60 mw into 600-ohm load, or 600 mw into 30-ohm load at rear audio receptacle

Scanning Terminals: 10,000 uv into 50-ohm load

Output Impedance:

Headphones: 600 ohms

Output Terminals: 30 to 600 ohms

Sensitivity: 5 to 15 uv

Input Impedance: 50 ohms

Power Requirements:

Receiver and Crystal Oven: 175 w, 110/115-120-v 50-60-cycle 1-phase ac

Automatic Tuning: 175 w, 110/115/120-v 50-60-cycle 1-phase ac

AN/SRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna NT-66147 or AT-150/ SRC or AS-390/SRC			
2	Remote Oven CFT-40148	-----	2-1/4 x 3-21/32 x 2-19/32	0.75
1	Radio Receiver CNA-46275	-----	13-1/8 x 22 x 22-5/32	150
1	Remote Channel Selector NT- 23492 (Supplied only with initial 1,000 Model RDZ equipments.)	-----	3-5/16 x 4-9/16 x 5-1/4	2
1	Set of 100 Crystals CFT-40161 or CFT-40162 (Supplied by Navy only with sets serial No. 1 through No. 3500.)	-----	1-1/2 x 9-1/4 x 5-1/2	2

REFERENCE DATA AND LITERATURE:

RDZ, RDZ-1: NAVSHIPS 900,617; NAVSHIPS 91331

RDZ-a: NAVSHIPS 91229.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.78	428

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC & or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RDZ: National Co., Inc.	Malden, Mass.	NXsr-55624	\$9,195.00
RDA-1: Admiral Corp.	Chicago, Ill.	NXsr-7194	3,900.00
RDA-a: National Co., Inc.	Malden, Mass.	NObsr-43174	5,500.00

RADIO RECEIVER TRANSFER SWITCHBOARD AN/SRR-type

20 November 1958

Cognizant Serv: USN FSN:

SB-82/SRR

USA

USN

USAF

TYPE CLASS: --

Used by

STOCK NO: --

F17-P-23308-5364

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiver Transfer Switchboard SB-82/SRR is a multiple selection switchbox capable of transferring the outputs of up to five radio receivers to various remote locations. Any one receiver output may be supplied to any number of remote locations from 1 to 10; or, up to 5 receiver outputs may be supplied to any combination of remote stations simultaneously.

This equipment is designed primarily for use aboard ship and is part of the shipboard radio remote control system. Essentially, it consists of a terminal strip and 10 rotary switches

on a hinged front. It is usually used collectively in a bank arrangement and, by interconnection of switchboards, an increased number of remote stations can be supplied.

Removable panels at top, bottom and three sides make connections accessible.

This equipment is designed for bulkhead mounting.

TECHNICAL CHARACTERISTICS:

Operation: Manual

Number of Lines: 5 receivers; 10 remote lines

Power Requirements: None

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver Transfer Switchboard SB-82/SRR (Equipment consists of only one major component.)		9-1/2 x 5-1/8 x 7-1/4	10

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
*1		67

* Six equipments shipped together in one box.

MIL-HDBK-161

AN/SRR-type RADIO RECEIVER TRANSFER SWITCHBOARD

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Radio Hardware Co., Inc.	New York, N. Y.	NObsr-52025	
National Electrical Machine Shop, Inc.	Silver Spring, Md.	NObsr-52438	
Transcontinental Electric Corp.	New York, N. Y.	NObsr-42425	

RADIO RECEIVING EQUIPMENT **AN/SRR-type**

20 November 1958

Cognizant Serv:

SLR-12B

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment SLR-12B (Scott Radio Laboratories) is suitable for and is primarily intended for use aboard ship, but is equally suitable for use at shore stations.

The equipment provides optimum performance and high quality reception of voice or tone-modulated radio frequency signals, and supplies audio signals to either headphones or loudspeaker.

It is designed for table top or bench mounting.

TECHNICAL CHARACTERISTICS:

- Frequency Range in Mc:* 0.53 to 1.60 and 5.55 to 15.6
- Reception:* Voice or tone modulated
- Power Output:* 30 mw at phone jack
- Intermediate Frequency:* 455 kc ±1 kc
- IF. Rejection:* 75.0 db minimum
- HF Oscillator Radiation:* 400 uw at any frequency
- Undistorted Output (Max):* Approximately 10 w with 3% distortion measured at 400 cps across 600-ohm load impedance
- Loudspeaker:* Permanent magnet type with 600-ohm matching transformer
- Antenna:* 50- to 200-ft single-wire or balanced feed line
- Power Requirements:* 95 w, 110-125-v 58-62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Equipment SLR-12B	-----	13-3/4 x 18-1/2 x 20-1/2	104
1	Loudspeaker SPM-12	-----	9-3/4 x 14-3/8 x 14-3/8	28

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95274

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRR-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

DESIGN COG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Laboratories, Inc.	Chicago, Ill.		

RADIO RECEIVING EQUIPMENT AN/SRR-type

20 November 1958

Cognizant Serv: USN FSN:

SLR-H

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment SLR-H (Scott Radio Laboratories) is designed primarily for installation aboard ship, but can also be used at shore installations. It is similar to Radio Receiving Equipment SLR-12B in appearance and technical characteristics, but the SLR-H has a beat-frequency oscillator circuit, which provides for reception of cw telegraph signals.

It is designed for table-top or bench mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.53 to 1.60; 5.55 to 15.6

Reception: Voice, tone modulated, or cw signals

Type Receiver: Superheterodyne

Power Output: 30 mw at phone jack

Intermediate Frequency: 455 ± 1 kc

IF. Rejection: 75.0 db minimum

HF Oscillator Radiation: 400 uw at any frequency

Undistorted Output (Maximum): 19 w (approximately) with 3% distortion measured at 400 cps across 600-ohm load impedance

Loudspeaker: Permanent magnet type with 600-ohm matching transformer

Antenna: 50- to 200-foot single-wire or balanced feed line

Power Requirements: 95 w, 100-125-v 58-62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver SLR-H (Equipment consists of only one major component.)	-----	13-1/4 x 18-1/2 x 20-1/2	104

REFERENCE DATA AND LITERATURE:

E. H. Scott Radio Laboratories, Inc., Technical Manual for Radio Receiving Equipment Model SLR-H.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRR-type RADIO RECEIVING EQUIPMENT

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 Laboratories, Inc.	Chicago, Ill.		

RADIO TRANSMITTING SET AN/SRT-1

1 December 1958

Cognizant Serv: USA FSN:

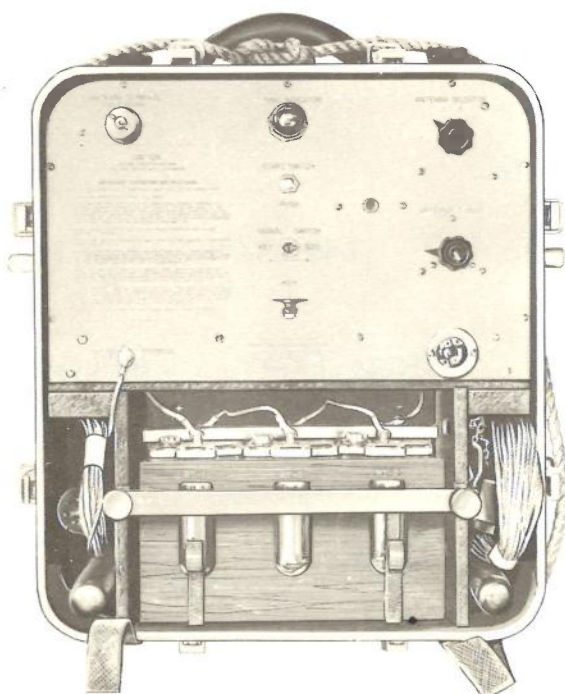
USA

USN

USAF

TYPE CLASS: Obsolete
 STOCK NO: 2C6657

Used by
 F16-Q-150972-100



AN/SRT-1

FUNCTIONAL DESCRIPTION:

Radio Transmitter Set AN/SRT-1 is a compact, portable, fixed-frequency, single-channel, battery-operated lifeboat transmitter. It transmits automatically for a period of 2 minutes each time the button is pressed and then automatically stops to conserve the battery.

This equipment is housed in a watertight case. During each 2-minute period, the SOS distress signal is sent 18 times, and long dashes are sent 6 times to facilitate the taking of bearings by rescue ships.

To send the specified signals does not require a trained operator; however, a hand telegraph key is provided for use by a radio operator to permit the transmission of messages.

The battery has a life of 96 minutes, or will last for 48 of the 2-minute message cycles. This will be sufficient for 48 hours if the unit is used only on the hour.

A battery charging panel, consisting of an ammeter and current limiting resistors, is used to charge the transmitter storage battery from the 115 volt direct current ship mains.

TECHNICAL CHARACTERISTICS:

Frequency in Mc: 0.5

Frequency Control: Designed for single frequency only

Type Modulation: AM

Type Emission: A1 (automatic keying); A2 (hand keying)

Power Output: 5 w

Operational Range: 50 to 100 miles

Antenna: Equipment has wire antenna attached for lifeboat use

Power Requirements: 6 v, 16 amp dc (storage battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/SRT-1, consisting of:	2C6657	21-11/16 x 15-13/16 x 13-1/2	60
2	Antenna wire	-----	600	1.875
1	Battery BB-54-A	-----	3-31/32 x 5-1/2 x 3	4.50
1	Battery charging panel	-----	20-1/4 x 8-1/4 x 14-1/2	16
1	Rope	-----	480	1.75

MIL-HDBK-161

AN/SRT-1 RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	11.46	190

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USA, Sig C

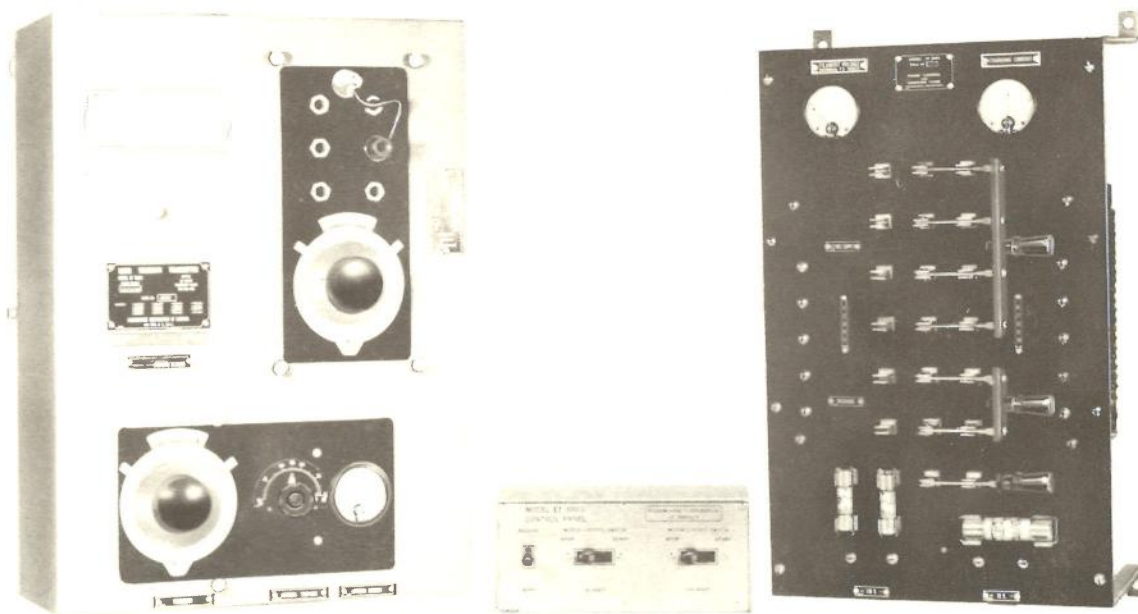
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO TRANSMITTING SET **AN/SRT-2**

1 December 1958

Cognizant Serv: USA FSN: 5820-189-7027

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6773	--	--



AN/SRT - 2

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SET-2 is used on small boats as the main or emergency transmitter. It is operated in the standard international medium frequency band for ship-to-ship and ship-to-shore communication.

This equipment consists essentially of a commercial Radiomarine Model ET 8003 radiotelegraph transmitter. It can be operated from a 110 volt direct current power source or from a 12 volt storage battery capable of supplying 45 amperes for a 6 hour period.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.355 to 0.5

Type Modulation: AM

Type Emission: A2 (700 cps tone)

Operating Range: 100 miles

Power Output: 30 w

Power Requirements: 45 amp at 12-vdc or 4 amp at 110- to 115-vdc

MIL-HDBK-161

AN/SRT-2 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor generator	-----	9-1/3 x 30 x 9-1/4	128
1	Power control and charging panel	-----	21 x 12 x 9-1/2	24
1	Radiotelegraph transmitter	-----	20-7/8 x 15-7/8 x 11-1/6	26

REFERENCE DATA AND LITERATURE:

TM 11-831

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	---	330

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

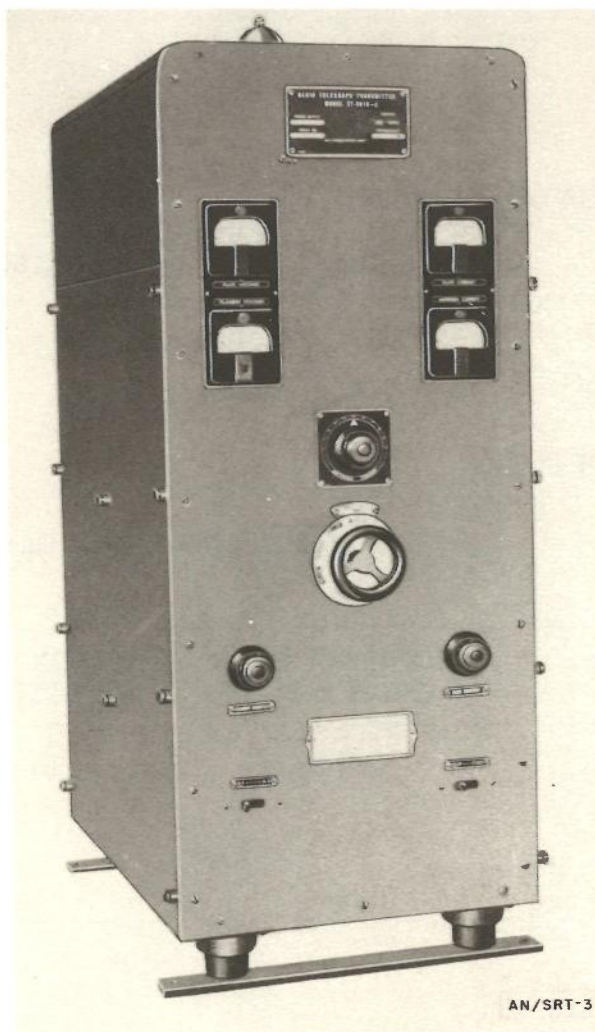
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO TRANSMITTING SET AN/SRT-3()

1 July 1958

Cognizant Serv: USA FSN: 5820-189-7040

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6655C	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Transmitting Set AN/SRT-3() is a medium-power, medium-range, crystal-controlled am (cw and mcw) transmitting equipment for ship-to-ship and ship-to-shore communication in the mf band.

This equipment consists of a floor-type transmitting assembly fitted with shock-mountings and includes a motor generator, plus associated components.

It can be used in emergencies by adding an emergency panel and a small dynamotor.

The set operates in eight preset frequency channels and uses the normal ship's antenna system.

This equipment has been replaced by Radio Set AN/SRC-7

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.35 to 0.515

Type Modulation: AM

Type of Signal: Cw and mcw

Power Output: 300 w, mcw; 200 w, cw

Power Requirements: 1,300 w, 150/230-v dc; or 4.5 am.
220/440-v 60-cycle 3-phase ac

MIL-HDBK-161

AN/SRT-3() RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor generator	-----	14-1/8 x 27-3/4 x 9-3/4	225
1	Transmitter	-----	44-3/4 x 17-3/8 x 28-3/4	200

REFERENCE DATA AND LITERATURE:

TM 11-860

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	17	562

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG: Wilcox 25-2220

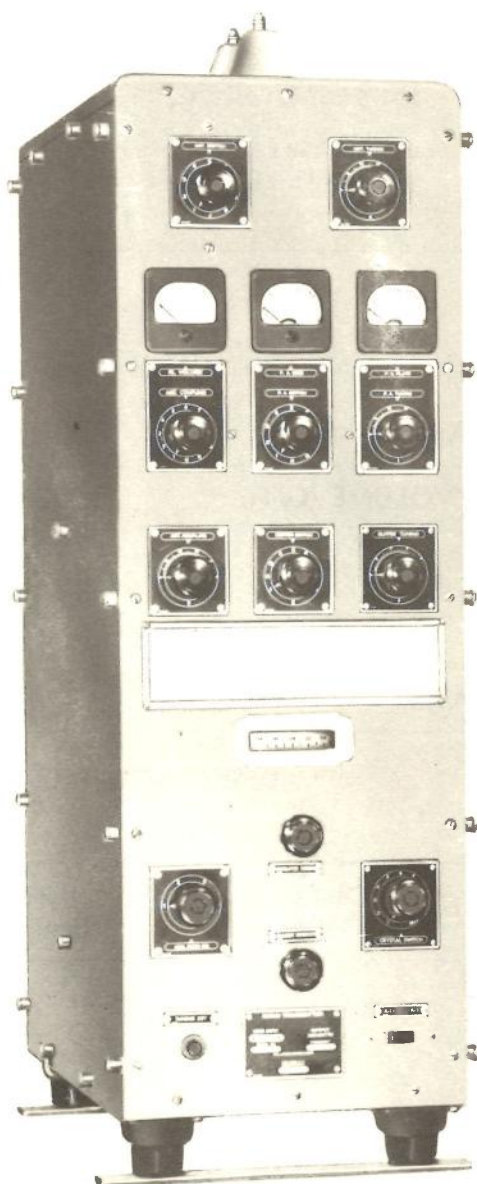
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
(AN/SRT-3A): Radiomarine Corp. of America	New York, N. Y.	3367-P-52-02	\$1,984.25

RADIO TRANSMITTING SET AN/SRT-4()

1 July 1958

Cognizant Serv: USA FSN: 5820-189-7032

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6656A.2	--	--



AN/SRT-4

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-4() is a low-power, medium-range, AM (cw and mcw) transmitting equipment designed for use aboard ship in ship-to-ship or ship-to-shore communication in the MF and HF bands.

This equipment consists of a single, shock-mounted, floor-type cabinet containing the operating components and control apparatus. It includes a motor generator and motor starter, control panel, crystal units, and related items. It operates on two preset frequencies and uses the ship's antenna array.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.00 to 22.14

Type Modulation: AM

Type of Signal: Cw, mcw

Power Output: 200 w below 17 mc, 150 w above 17 mc

Power Requirements: 1,300 w, 115-v dc

MIL-HDBK-161

AN/SRT-4() RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Noise Suppressor F-198/SRT-3A	5915-501-4119	9-3/4 x 3 x 6	6.75
1	Generator Control C-1192/ SRT-4A	6110-635-5554	12-1/4 x 7-3/8 x 10-1/2	14.5
1	Motor Generator PU-255/ SRT-3A	6125-231-2874	14-1/8 x 27-3/4 x 9-3/4	225
1	Motor Starter SA-306/SRT-3A	2920-378-3396	9-1/2 x 7-1/2 x 6-1/2	15
1	Radio Transmitter T-397/ SRT-4A	5820-503-3297	45-3/16 x 13-1/4 x 19-1/2	360

REFERENCE DATA AND LITERATURE:

TM 11-852

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	40.1	735

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

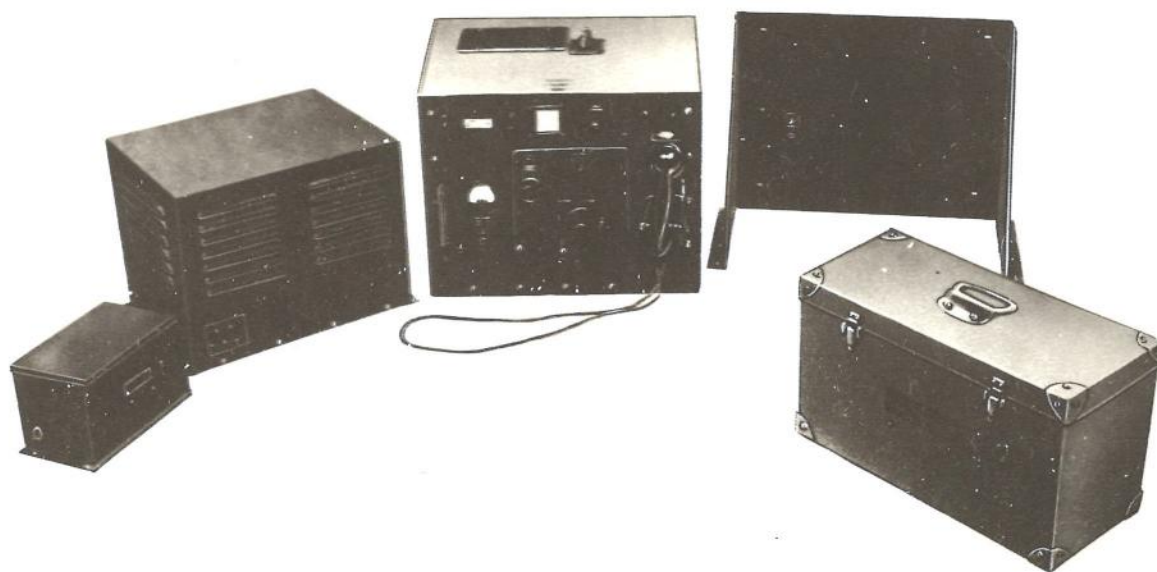
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	3367-P-52-02	\$2,033.70

RADIO TRANSMITTING SET AN/SRT-10()

1 July 1958

Cognizant Serv: USA FSN: 5820-222-0059

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	2C6657-10	--	--



AN/SRT-10

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-10() is a 50-watt am (cw, voice) marine telephone and telegraph radio transmitter used on small ships. Provisions are included for its operation by remote control.

This set operates from a 115-volt ac or a 24-, 32-, or 110-volt dc source. When operating from the dc source, a motor starter and a suitable converter (not supplied) must be used.

This equipment is functionally identical with Radio Transmitter T-83/SR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.7 to 8.7

Type Modulation: AM

Type of Signal: Cw, voice

Power Output: 50 w

Power Requirements: 450 w, 115-v 50/60-cycle ac; or 500 w, 24/32/110-v dc

MIL-HDBK-161

AN/SRT-10() RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Motor Starter RE-79/SRT-10	6110-406-1963	10-1/2 x 6-1/8 x 6-1/16	
1	Power Supply PP-462/U	6130-231-0666	18 x 15-3/4 x 13-1/2	
1	Radio Transmitter T-240/ SRT-10	5820-222-0063	20-3/4 x 17-3/4 x 17-7/8	

REFERENCE DATA AND LITERATURE:

TM 11-837

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	20	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
J. H. Bunnell & Co.	New York, N. Y.	25671-P-49-01	\$1,969.83
A. F. Smuckler & Co., Inc.	Brooklyn, N. Y.	21866-P-50-06	

RADIO TRANSMITTING SET AN/SRT-13()

1 July 1958

Cognizant Serv: USA FSN: 5820-503-2633

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6657-13	--	--



AN/SRT-13

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-13() is a marine emergency radio telegraph transmitting set. It consists of a radio transmitter, a motor generator, a terminal box, a battery charger, two storage batteries, and accessories.

Radio Transmitting Sets AN/SRT-13 and AN/SRT-13X are identical, except for the battery charging circuit and the battery charger. Radio Transmitters T-433/SRT-13 and T-434/SRT-13X are not interchangeable, unless circuit changes are made to permit battery charging with the particular battery charger used.

This equipment is operated from two 6-volt batteries that

may be charged by Battery Charger PP-1030/SRT-13 from a 115-volt ac source, or by Battery Charger PP-1031/SRT-13X from a 115-volt dc source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.35 to 0.505

Type Modulation: AM

Type of Signal: Tone

Power Output: 40 w

Power Requirements: 12-v dc from batteries supplied with equipment; 115-v 50/60 cycle 1-phase ac to operate battery charger, PP-1030/SRT-13; 115-v dc to operate battery charger PP-1031/SRT-13X

MIL-HDBK-161

AN/SRT-13() RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Battery Charger PP-1030/ SRT-13	3H791.1-1030	12-3/4 x 8-5/8 x 12-1/4	29
	or			
1	Battery Charger PP-1031/ SRT-13X	3H791.1-1031	11 x 7-1/8 x 10-3/4	10
1	Motor Generator PU-277/SRT	-----	12-1/8 x 8-1/4 x 9-5/16	52
1	Radio Transmitter T-433/ SRT-13	2C6900-433	21 x 13 x 18-1/2	75
	or			
1	Radio Transmitter T-434/ SRT-13X	2C6900-434	21 x 13 x 18-1/2	75

REFERENCE DATA AND LITERATURE:

TM 11-844

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	15.6	635

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mackay Radio & Telegraph Co., Inc., Marine Division	Clark, N. J.	25615-P-53-36	\$1,170.66

RADIO TRANSMITTING SET AN/SRT-14, -14A

1 December 1958

Cognizant Serv: USN FSN: AN/SRT-14: 5820-501-3056
 AN/SRT-14A: 5820-665-2125

USA

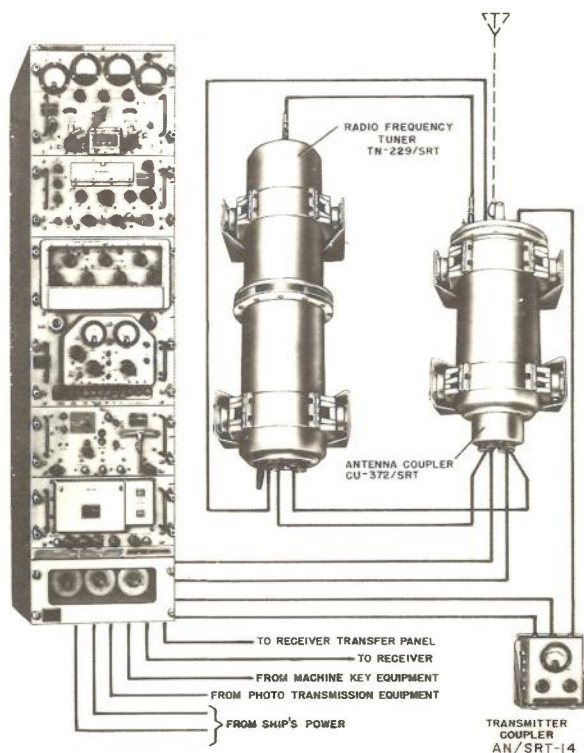
USN

USAF

TYPE CLASS: --
 STOCK NO: --

Used by

--



from the standard type only in the material used for cabinet panels.

TECHNICAL CHARACTERISTICS:

Frequency Range 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

Frequency Control: Crystal and frequency shift oscillator

Type Emission and Modulation Capability:

- A1: 100%
- A3: 100%
- F1: $\pm 1,000$ cps shift about carrier
- F4: 0 to 2,000 cps shift

Squelch Circuit Characteristics: A conventional circuit that cuts off the audio amplifier when the microphone is not receiving voice signals

Harmonic Attenuation in Amplifier:

- 40 DB Below Carrier Level: 0.3 mc to 2 mc
- 50 DB Below Carrier Level: 2 mc to 5 mc
- 60 DB Below Carrier Level: Above 5 mc

Characteristics of Recommended Antennas: The antenna tuning system is capable of tuning an antenna consisting of a standard 35-foot ship antenna (NT-66047) or a single-wire antenna between 60- and 130-feet long with a 40-foot height.

Nominal Carrier Output:

- A1, F1: 100 w
- A3: 67 w

Heat Dissipation of 100 W Transmitter Group and Mounting:
 1,600 w maximum

Power Requirements:

Primary Power:

Voltage: 110 v $\pm 10\%$, 60-cycle $\pm 5\%$, 1-phase ac

Current and Power Factor:

Start: 15 amp, 0.92 pf

Standby: 7.9 amp

Operate (A1): 13.4 amp, 0.90 pf

Operate (A3): 13.6 amp, 0.92 pf

Oven Heater Power:

Voltage: 110 v $\pm 10\%$, 60-cycle $\pm 5\%$, 1-phase ac

Current and Power Factor: 0.8 amp, 1.0 pf

FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/SRT-14 and AN/SRT-14A are designed to transmit continuous wave, voice, facsimile or frequency shift signals with a nominal 100 watt output over a 9.3 to 26 megacycle range. These sets are limited to transmission on one frequency at a time. Output power may vary from 80 per cent to 160 per cent of the nominal output level.

Transmission of continuous wave signals may be from either hand or machine keying facilities; frequency shift signals are generated by machine keying. Tuning is manual and, when used with appropriate United States Navy furnished equipment, these units may be energized and have key or voice signals supplied from a remote position.

Radio Transmitting Set AN/SRT-14A is a nonmagnetic version of the AN/SRT-14. The nonmagnetic version differs

AN/SRT-14, -14A RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	<i>For Radio Transmitting Set AN/SRT-14:</i>			
1	Antenna Coupler CU-372 SRT	-----	13-3/8 x 16-1/2 x 34-5/8	500
1	Electrical Equipment Cabinet CY-1572/SRT			
1	Electrical Equipment Cabinet CY-1573/SRT			
1	Installation Kit MK-230/ SRT-14	-----		53
1	Mounting MT-1423/SRT	-----	7 x 16 x 24	100
1	Power Supply PP-1096/SRT			
1	Radio Frequency Tuner TN- 229/SRT	-----	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator MD-230/ SRT			
1 set	Equipment spares for antenna coupler			
1 set	Equipment spares for mounting			
1 set	Equipment spares for radio frequency tuner			
1 set	Equipment spares for trans- mitter group			
1	Transmitter Group OA-684/ SRT including:	-----	16 x 26 x 55-3/8	765
1	Electrical Equipment Cabi- net CY-1571/SRT			
1	Power Supply PP-1094/ SRT			
1	Power Supply PP-1095/ SRT			
1	Radio Frequency Amplifier AM-1008/SRT			
1	Radio Frequency Oscillator O-275/SRT			
1	Radio Modulator MD-229/ SRT			
1	Transmitter Coupler CU- 402/SRT	-----	7-11/16 x 9-1/4 x 9-7/16	11
	<i>For Radio Transmitting Set AN/SRT-14A:</i>			
1	Antenna Coupler CU-372/SRT	-----	13-3/8 x 16-1/2 x 34-5/8	100
1	Electrical Equipment Cabinet CY-1572A/SRT			
1	Electrical Equipment Cabinet CY-1573A/SRT			
1	Installation Kit MK-231/ SRT-14A	-----		53

RADIO TRANSMITTING SET **AN/SRT-14, -14A**

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting MT-1423/SRT	-----	7 x 16 x 24	100
1	Power Supply PP-1096/SRT	-----		
1	Radio Frequency Tuner TN-229/SRT	-----	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator MD-230/SRT	-----		
1 set	Equipment spares for antenna coupler	-----	-----	2
1 set	Equipment spares for mounting	-----	-----	7
1 set	Equipment spares for radio frequency tuner	-----	-----	20
1 set	Equipment spares for transmitter group	-----	-----	
1	Transmitter Group OA-684/SRT including:	-----	16 x 26 x 55-3/8	765
1	Electrical Equipment Cabinet CY-1571A/SRT	-----		
1	Power Supply PP-1094/SRT	-----		
1	Power Supply PP-1095/SRT	-----		
1	Radio Frequency Amplifier AM-1008/SRT	-----		
1	Radio Frequency Oscillator O-275/SRT	-----		
1	Radio Modulator MD-229/SRT	-----		
1	Transmitter Coupler CU-402/SRT	-----	7-11/16 x 9-1/4 x 9-7/16	11

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92121(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11 (AN/SRT-14) and (AN/SRT-14(A))	76.5	1,841.5

MIL-HDBK-161

AN/SRT-14, -14A RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	NObsr-52021, 1 September 1950	\$22,700.00

RADIO TRANSMITTING SET AN/SRT-15, -15A

1 December 1958

Cognizant Serv: USN FSN: AN/SRT-15: 5820-669-7829

USA

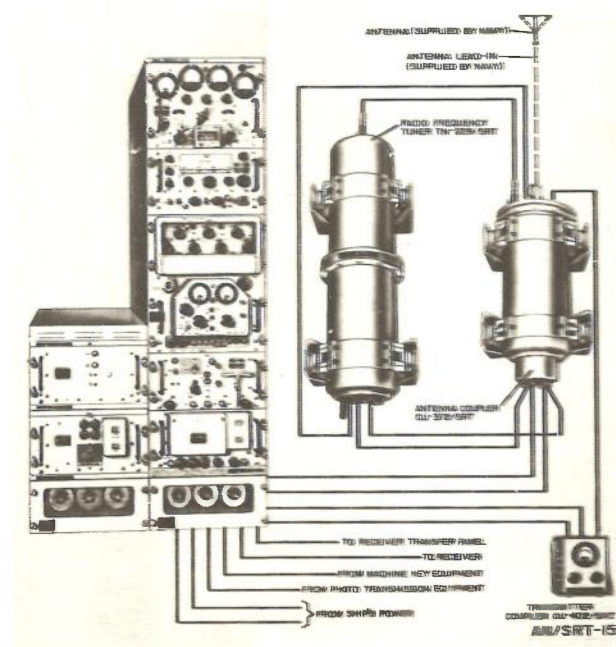
USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --



TECHNICAL CHARACTERISTICS:

Frequency Range 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

Frequency Control: Crystal and frequency shift oscillator*Type Emission and Modulation Capability:*

- A1: 100%
- A3: 100%
- F1: $\pm 1,000$ cps shift about carrier
- F4: 0 to 2,000 cps shift

Squelch Circuit Characteristics: A conventional circuit that cuts off the audio amplifier when the microphone is not receiving voice signals.

- 40 DB Below Carrier Level: 0.3 mc to 2 mc
- 50 DB Below Carrier Level: 2 mc to 5 mc
- 60 DB Below Carrier Level: Above 5 mc

Characteristics of Recommended Antennas: The antenna tuning system is capable of tuning an antenna consisting of a standard 35-foot ship antenna (NT-66047) or a single-wire antenna between 60 to 130 feet long with 40-foot height*Nominal Carrier Output:*

- A1, F1: 100 w, 500 w
- A3: 67 w, 333 w

Heat Dissipation:

- 100 W Transmitter Group and Mounting: 1,600 w maximum
- Radio Modulator-Power Supply (Booster): 1,900 w maximum

*Power Requirements:**Primary Power:*

- Voltage: 110-v $\pm 10\%$, 60-cycle $\pm 5\%$, 1-phase ac
- Current and Power Factor:
 - Start: 15 amp, 0.92 pf
 - Standby: 7.9 amp
 - Operate (A1): 13.4 amp, 0.90 pf
 - Operate (A3): 13.6 amp, 0.92 pf

Oven Heater Power:

- Voltage: 110 v $\pm 10\%$, 60-cycle $\pm 5\%$, 1-phase ac
- Current and Power Factor: 0.8 amp, 1.0 pf

FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/SRT-15 and AN/SET-15A are designed to transmit continuous wave, voice, facsimile or frequency shift signals with a 100 watt or 500 watt output. These sets are limited to transmission on one frequency at a time. Output power may vary from 80 per cent to 160 per cent of the nominal output level.

Transmission of continuous wave signals may be from either hand or machine key facilities; frequency shift signals are generated by machine keying. Tuning is manual and, when used with appropriate United States Navy furnished equipment, these units may be energized and have key or voice signals supplied from a remote position.

Radio Transmitting Set AN/SRT-15A is a nonmagnetic version of the AN/SRT-15. The nonmagnetic version differs from the standard type only in the material used for cabinet panels.

AN/SRT-15, -15A RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Radio Transmitting Set AN/SRT-15:</i>				
1	Antenna Coupler CU-372/SRT	-----	13-3/8 x 16-1/2 x 34-5/8	100
1	Electrical Equipment Cabinet CY-1572/SRT	-----		
1	Electrical Equipment Cabinet CY-1573/SRT	-----		
1	Equipment spare transformer	-----		80
1	Installation Kit MK-232/ SRT-15 including Cover CW-341/SRT	-----		100
2	Mounting MT-1423/SRT	-----	7 x 16 x 24	100
1	Power Supply PP-1096/SRT	-----		
1	Radio Frequency Tuner TN- 629/SRT	-----	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator MD-230/ SRT	-----	16 x 18-1/4 x 26	350
1	Radio Modulator Power Supply OA-685/SRT	-----		
1 set	Equipment spares for antenna coupler	-----		2
2 set	Equipment spares for mounting	-----		7
1 set	Equipment spares for radio frequency tuner	-----		20
1 set	Equipment spares for radio modulator power supply	-----		90
1 set	Equipment spares for trans- mitter group	-----		
1	Transmitter Group OA-684/ SRT including:	-----	16 x 26 x 55-5/8	765
1	Electrical Equipment Cabi- net CY-1571/SRT	-----		
1	Power Supply PP-1094/ SRT	-----		
1	Power Supply PP-1095/ SRT	-----		
1	Radio Frequency Amplifier AM-1008/SRT	-----		
1	Radio Frequency Oscillator O-275/SRT	-----		
1	Radio Modulator MD- 229/SRT	-----		
1	Transmitter Coupler CU- 402/SRT	-----	7-11/16 x 9-1/4 x 9-7/16	11
<i>For Radio Transmitting Set AN/SRT-15A:</i>				
1	Antenna Coupler CU-372/SRT	-----	13-3/8 x 16-1/2 x 34-5/8	100
1	Equipment spare transformer	-----		80

RADIO TRANSMITTING SET AN/SRT-15, -15A

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Installation Kit MK-233/ SRT-15A including cover	-----	-----	105
1	CW-341A/SRT	-----	-----	100
2	Mounting MT-1423/SRT	-----	7 x 16 x 24	135
1	Radio Frequency Tuner TN- 229/SRT	-----	13-3/8 x 16-1/2 x 50	350
1	Radio Modulator-Power Supply OA-685/SRT including:	-----	16 x 18-1/4 x 26	
1	Electrical Equipment Cabi- net CY-1572A/SRT	-----	-----	
1	Electrical Equipment Cabi- net CY-1573A/SRT	-----	-----	
1	Power Supply PP-1096/ SRT	-----	-----	
1	Radio Modulator MD-230/ SRT	-----	-----	
2 sets	Equipment spares for antenna coupler	-----	-----	2
2 sets	Equipment spares for mounting	-----	-----	7
1 set	Equipment spares for radio frequency tuner	-----	-----	20
1 set	Equipment spares for radio modulator power supply	-----	-----	
1 set	Equipment spares for trans- mitter group	-----	-----	
1	Transmitter Group OA-684/SRT including:	-----	16 x 26 x 55-3/8	765
1	Electrical Equipment Cabi- net CY-1571A/SRT	-----	-----	
1	Power Supply PP-1094/ SRT	-----	-----	
1	Power Supply PP-1095/ SRT	-----	-----	
1	Radio Frequency Amplifier AM-1008/SRT	-----	-----	
1	Radio Frequency Oscillator O-275/SRT	-----	-----	
1	Radio Modulator MD- 229/SRT	-----	-----	
1	Transmitter Coupler CY-402/SRT	-----	7-11/16 x 9-1/4 x 9-7/16	11

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92121 (A)

MIL-HDBK-161

AN/SRT-15, -15A RADIO TRANSMITTING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
16 (AN/SRT-15)	99.7	2,345.5
17 (AN/SRT-15A)	99.1	2,490.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	NObsr-52021, 1 September 1950	\$26,500.00

RADIO TRANSMITTING SET AN/SRT-16, -16A

1 December 1958

Cognizant Serv: USN FSN: AN/SRT-16: 5820-665-2278
AN/SRT-16A: 5820-665-2306

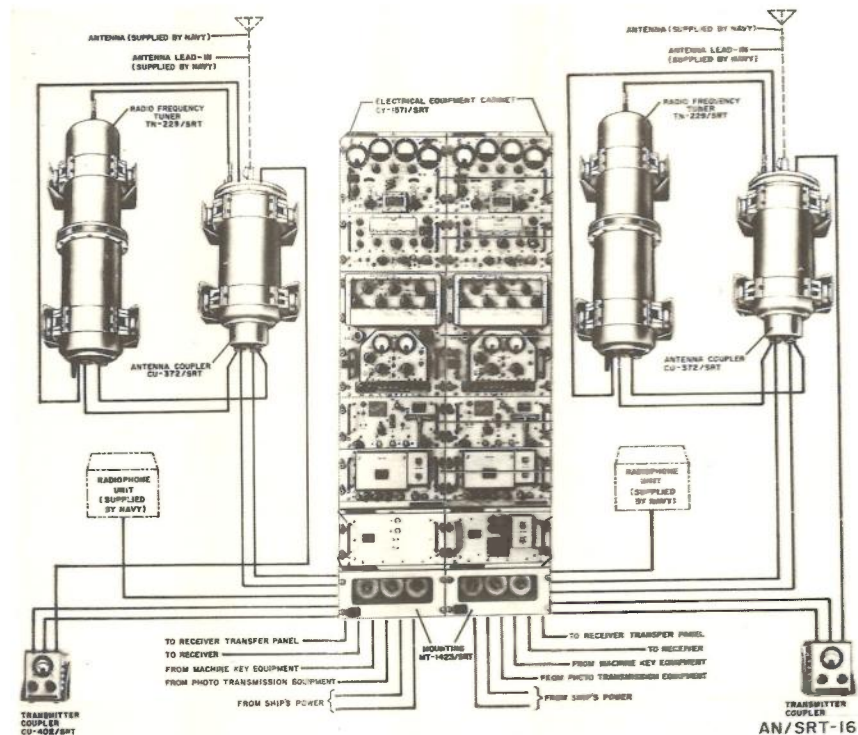
USA

USN

USAF

TYPE CLASS: --
STOCK NO: --

Used by

**FUNCTIONAL DESCRIPTION:**

Radio Transmitting Sets AN/SRT-16 and AN/SRT-16A are designed to transmit continuous wave, voice, facsimile or frequency shift signals, with a 100 watt or 500 watt output. These sets may transmit two signals simultaneously from two transmitter bays; both signals may be at the 100 watt level, or one transmitter may be at the 100-watt output and the other transmitter at 500-watt output. Output power may vary from 80% to 160% of the nominal output level.

Transmission of continuous wave signals may be from either hand or machine key facilities; frequency shift signals are generated by machine keying. Tuning is manual and, when used with appropriate United States Navy furnished equipment, these units may be energized and have key or voice signals supplied from a remote position.

Radio Transmitting Set AN/SRT-16A is a nonmagnetic version of the AN/SRT-16. The nonmagnetic version differs

from the standard type only in the material used for cabinet panels.

TECHNICAL CHARACTERISTICS:*Frequency Range 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

Frequency Control: Crystal and frequency shift oscillator
Type Emission and Modulation Capability:

- A1: 100%
- A3: 100%
- F1: $\pm 1,000$ cps shift about carrier
- F4: 0 to 2,000 cps shift

AN/SRT-16, -16A RADIO TRANSMITTING SET

Squelch Circuit Characteristics: A conventional circuit that cuts off the audio amplifier when the microphone is not receiving voice signals

Harmonic Attenuation in Amplifier:

40 DB Below Carrier Level: 0.3 mc to 2 mc

50 DB Below Carrier Level: 2 mc to 5 mc

60 DB Below Carrier Level: Above 5 mc

Characteristics of Recommended Antennas: The antenna tuning system is capable of tuning an antenna consisting of standard 35 ft ship antenna (NT-66047) or single-wire antenna between 60 to 130 ft long with 40 ft height.

Nominal Carrier Output:

A1, F1: 100 w or 100 w and 500 w

A3: 67 w or 67 w and 333 w

Heat Dissipation:

100 W Transmitter Group and Mounting: 1,600 w maximum
Radio Modulator-Power Supply (Booster): 1,900 w maximum

Power Requirements:

Primary Power:

Voltage: 110 v $\pm 10\%$, 60-cycle $\pm 5\%$, 1-phase ac

Current and Power Factor:

Start: 30 amp, 0.92 pf

Standby: 18.8 amp, 0.92 pf

Operate (A1): 26.8 amp, 0.90 pf

Operate (A2): 27.2 amp, 0.92 pf

Oven Heat Power:

Voltage: 110 v $\pm 10\%$, 60-cycle $\pm 5\%$, 1-phase ac

Current and Power Factor: 16 amp, 1.0 pf

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Radio Transmitting Set AN/SRT-16:</i>				
2	Antenna Coupler CU-372/SRT	-----	13-3/8 x 16-1/2 x 34-5/8	100
1	Equipment spare transformer	-----		80
1	Installation Kit MK-234/ SRT-16	-----		90
2	Mounting MT-1423/SRT	-----	7 x 16 x 24	100
2	Radio Frequency Tuner TN- 229/SRT	-----	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator-Power Supply OS-685/SRT including:	-----	16 x 18-1/4 x 26	350
1	Electrical Equipment Cabi- net CY-1572/SRT	-----		
1	Electrical Equipment Cabi- net CY-1573/SRT	-----		
1	Power Supply PP-1096/ SRT	-----		
1	Radio Modulator MD- 230/SRT	-----		
2 sets	Equipment spares for antenna coupler	-----		2
2 sets	Equipment spares for mounting	-----		7
2 sets	Equipment spares for radio frequency tuner	-----		20
1	Equipment spares for radio modulator power supply	-----		90
2 sets	Equipment spares for trans- mitter group	-----		
2	Transmitter Group OA-684/ SRT including:	-----	16 x 26 x 55-3/8	765
2	Electrical Equipment Cabi- net CY-1571/SRT	-----		
2	Power Supply PP-1094/ SRT	-----		

RADIO TRANSMITTING SET AN/SRT-16, -16A

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Power Supply PP-1095/ SRT			
2	Radio Frequency Amplifier AM-1008/SRT			
2	Radio Frequency Oscillator P-275/SRT			
2	Radio Modulator MD- 29/SRT			
2	Transmitter Coupler CU- 402/SRT	-----	7-11/16 x 9-1/4 x 9-7/16	11
<i>For Radio Transmitting Set AN/SRT-16A:</i>				
2	Antenna Coupler CU-372/SRT	-----	13-3/8 x 16-1/2 x 34-5/8	100
1	Equipment spare transformer	-----		80
1	Installation Kit MK-235/ SRT-16A	-----		105
2	Mounting MT-1423/SRT	-----	7 x 16 x 24	100
2	Radio Frequency Tuner TN- 229/SRT	-----	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator-Power Supply OA-685/SRT including:	-----	26 x 18-1/4 x 26	350
1	Electrical Equipment Cabi- net CY-1572A/SRT			
1	Electrical Equipment Cabi- net CY-1573A/SRT			
1	Power Supply PP-1096/ SRT			
1	Radio Modulator MD- 230/SRT			
2 sets	Equipment spares for antenna coupler	-----		2
2 sets	Equipment spares for mounting	-----		7
2 sets	Equipment spares for radio frequency tuner	-----		20
1 set	Equipment spares for radio modulator power supply	-----		90
2 sets	Equipment spares for trans- mitter group			
2	Transmitter Group OA-684/ SRT including:	-----	16 x 26 x 55-3/8	765
2	Electrical Equipment Cabi- net CY-1571A/SRT			
2	Power Supply PP-1094/ SRT			
2	Power Supply PP-1095/ SRT			
2	Radio Frequency Amplifier AM-1008/SRT			

MIL-HDBK-161

AN/SRT-16, -16A RADIO TRANSMITTING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Radio Frequency Oscillator O-275/SRT			
2	Radio Modulator MD- 229/SRT			
2	Transmitter Coupler CU- 402/SRT	-----	7-11/16 x 9-1/4 x 9-7/16	11

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92121(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
24 (AN/SRT-16)	97.5	2,492.5
22 (AN/SRT-16A)	98.1	2,335.5

PROCUREMENT DATA

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

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	NObsr-52021, 1 September 1950	\$47,200.00

RADIO TRANSMITTING SET **AN/SRT-18(XN-2)**

1 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS: --

Used by

--

STOCK NO: --

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(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-18(XN-2) is a communication equipment designed to be operated by itself or in conjunction with a 1,000 watt amplifier or with an external power source.

This equipment consists essentially of five rack mounted units. These units are a radio frequency amplifier, an oscillator-multiplier, a modulator, a control indicator, and a power supply.

The set is similar to Radio Transmitting Set AN/SRT-18(XN-1) except for minor electrical and mechanical changes.

TECHNICAL CHARACTERISTICS:*Frequency Range in Mc: 225 to 400**Type Emission: A3**Type Control: Crystal**Power Output: 100 w modulated**Power Requirements: 440-v 60-cycle 3-phase ac***MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/ SRT-18(XN-2) includes:		19-5/8 x 27-5/8 x 50-7/16	
1	Amplifier, radio frequency unit 1			
1	Control-indicator unit 4			
1	Modulator unit 3			
1	Oscillator-multiplier unit 2			
1	Power supply unit 5			
1	Rack unit 6			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92741

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRT-18(XN-2) RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS-T-1904

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air Associates, Inc.	Orange, N. J.	NObsr-64774, 31 May 1955	\$30,221.00

RADIO TRANSMITTER **AN/SRT-type**

12 November 1958

Cognizant Serv: USN FSN:

149-A

USA

USN

USAF

TYPE CLASS:
STOCK NO:

Used by

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(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter 149-A is an emergency radio telegraph transmitter designed for use on shipboard. This battery-operated unit, such as is required by International Law for every ship at sea, is capable of being operated on two 6-volt batteries for a period of at least 1 hour.

The transmitter provides telegraph communication on all frequencies within the range of the equipment. Five frequencies may be preset by the operator for quick selection by adjustment of detent stops on the frequency dial. The frequencies

in general use for ships on the high seas are 375, 400, 425, 468, and 500 kilocycles.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 500 kc*Distance Range:* 100 to 50 miles*Type Transmission:* Mew*Power Output:* 25 w*Output Impedance:* 4 ohms*Power Requirements:* 12-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery (single unit consisting of two 6-v batteries)	-----	9-1/2 x 17-1/2 x 20-1/2	174
1	Battery Charger 104-B	-----	7-5/32 x 10-3/4 x 11-1/16	9.75
1	Motor Generator 114-A	-----	8-1/4 x 9-1/8 x 11-1/8	49
1	Motor Generator 132-A	-----	8-7/16 x 8-15/16 x 11-1/8	48
1	Transmitter 149-A	-----	12-1/8 x 15-3/4 x 28-7/8	76

REFERENCE DATA AND LITERATURE:

TM 11-822

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRT-type RADIO TRANSMITTER

PROCUREMENT DATA

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

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PORTABLE LIFEBOAT RADIO TRANSMITTER **AN/SRT-type**

13 November 1958

Cognizant Serv: USN FSN:

265

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Portable Lifeboat Radio Transmitter 265 is a battery-operated set designed to transmit distress signals efficiently under adverse conditions in an open lifeboat at sea. The transmitter automatically sends SOS signals for approximately 2-1/2 minutes, and then shuts off to conserve the battery. An operator's telegraph key is included as a part of the equipment.

TECHNICAL CHARACTERISTICS:

*Frequency Range:**Type Signal:**Type Transmission:**Power Requirements: 6-v dc*

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF oscillator			
1	Antenna			
1	Antenna coil			
1	Automatic SOS			
1	Battery (6-v)			
1	Battery-charging panel			
1	Dynamotor			
1	Manual telegraph key			
1	Modulator			
1	RF oscillator			
1	RF power oscillator			
1	Self-releasing switch			
1	Test antenna			

REFERENCE DATA AND LITERATURE:

Technical manual for Portable Lifeboat Radio Transmitter 265

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRT-type PORTABLE LIFEBOAT RADIO TRANSMITTER

PROCUREMENT DATA

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

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brelco Corp.	New York, N. Y.		

RADIO TRANSMITTER AN/SRT-type

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7149

T-83/SR

USA

USN

USAF

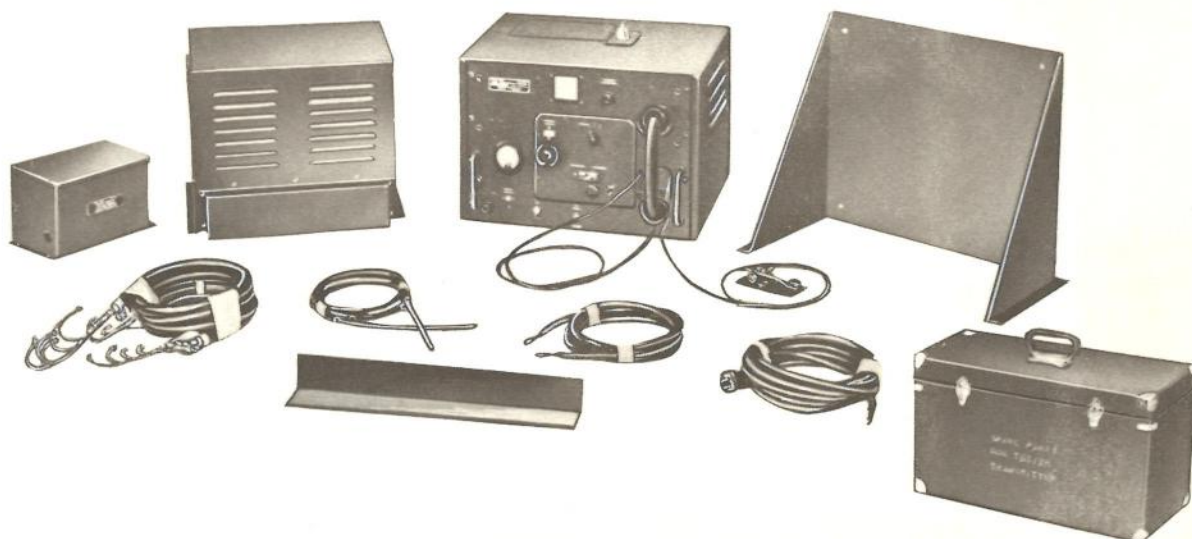
TYPE CLASS:

L/Std

Used by

STOCK NO:

2C6900-83



T-83/SR

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-83/SR is a crystal-controlled short-range, AM (voice and cw) transmitting equipment used in two-way, ship-to-shore communication in the medium- and high-frequency range.

This equipment consists of the radio transmitter component and associated power supply and includes a converter starter box and accessories. It operates on five preset frequency channels selected by a five-position switch and can be controlled from a remote operating location.

It uses a long-wire or whip-type antenna and may be table or shelf-mounted.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.7 to 8.7

Type Modulation: AM

Type of Signal: Cw and voice

Power Output: 50 w

Power Requirements: 460 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Converter Starter Box RE-79/ SRT-10	6110-406-1963	6 x 6-1/8 x 10-1/2	8.5
1	Power supply	6130-231-0666	13-3/8 x 15-1/4 x 18-1/8	127.0
1	Radio Transmitter T-83/SR	5820-164-7149	13-1/2 x 16 x 21	118.0

MIL-HDBK-161

AN/SRT-type RADIO TRANSMITTER

REFERENCE DATA AND LITERATURE:

TM 11-837

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	17.22	325

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 69-2

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		PR-44-3531	

500 WATT TRANSMITTING EQUIPMENT **AN/SRT-type**

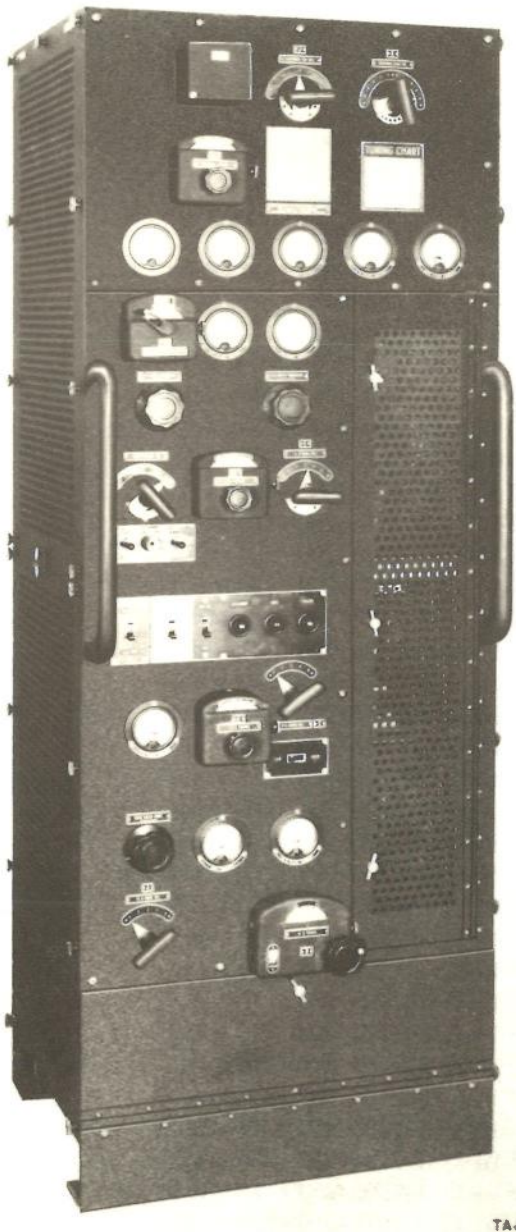
1 December 1958

Cognizant Serv: FSN:

TAJ, TAJ-1 thru TAJ-19

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TAJ: F16-Q-307416-200	--
		TAJ-1: F16-Q-307435-200	
		TAJ-2: F16-Q-307455-200	
		TAJ-3: F16-Q-307475-200	
		TAJ-4: F16-Q-307495-200	
		TAJ-5: F16-Q-307515-200	
		TAJ-6: F16-Q-307535-200	
		TAJ-7: F16-Q-307555-200	
		TAJ-8: F16-Q-307558-200 (230-v ac)	
		TAJ-8: F16-Q-307559-200 (220-v ac)	
		TAJ-8: F16-Q-307560-200 (115-v ac)	
		TAJ-8: F16-Q-306561-200 (440-v ac)	
		TAJ-9: F16-Q-307596-200 (440-v ac)	
		TAJ-10: F16-Q-307615-200 (115-v dc)	
		TAJ-10: F16-Q-307625-200 (230-v dc)	
		TAJ-10: F16-Q-307635-200 (440-v ac)	
		TAJ-11: F16-Q-307655-200 (115-v dc)	
		TAJ-11: F16-Q-307665-200 (230-v dc)	
		TAJ-11: F16-Q-307675-200 (440-v ac)	
		TAJ-12: F16-Q-307685-200 (115-v dc)	
		TAJ-12: F16-Q-307695-200 (230-v dc)	
		TAJ-12: F16-Q-307715-200 (440-v ac)	
		TAJ-13: F16-Q-307725-200 (115-v dc)	
		TAJ-13: F16-Q-307728-200 (230-v dc)	
		TAJ-13: F16-Q-307735-200 (115/230-v dc)	
		TAJ-14: F16-Q-307755-200 (155-v dc)	
		TAJ-14: F16-Q-307776-200 (230-v dc)	
		TAJ-14: F16-Q-307765-200 (440-v ac)	
		TAJ-15: F16-Q-307785-200 (115-v dc)	
		TAJ-15: F16-Q-307777-200 (230-v dc)	
		TAJ-16: F16-Q-307788-200 (115-v dc)	
		TAJ-16: F16-Q-307787-200 (230-v dc)	
		TAJ-16: F16-Q-307790-200 (440-v ac)	
		TAJ-17: F16-Q-307791-200 (220-v ac)	
		TAJ-18: F16-Q-307795-200 (115-v dc)	
		TAJ-18: F16-Q-307815-200 (230-v dc)	
		TAJ-18: F16-Q-307835-200 (440-v ac)	
		TAJ-19: F16-Q-307855-200 (115-v dc)	
		TAJ-19: F16-Q-307875-200 (220-v ac)	
		TAJ-19: F16-Q-307885-200 (230-v dc)	
		TAJ-19: F16-Q-307895-200 (440-v ac)	

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT



FUNCTIONAL DESCRIPTION:

500 Watt Transmitting Equipments TAJ and TAJ-1 through TAJ-19 are primarily intended for shipboard installation, except for TAJ-13 and TAJ-17, which are designed for use at shore installations. All of these transmitters operate with medium power output at low frequencies. Relay keying speeds up to 100 words per minute on cw may be used. The transmitters can be operated locally, or from a remote location by use of a Navy standard four- or six-wire remote control unit (Remote Control Unit 23005 or 23146).

The TAJ-3 through TAJ-19 are electrically and mechanically similar with the exception of power supply units. All models prior to the TAJ-3 have a separate filter unit. A crystal-controlled oscillator unit is furnished with all models prior to the TAJ-4. The TAJ-4 and TAJ-5 only are supplied with a rectifier unit; other models use a motor-generator set.

TECHNICAL CHARACTERISTICS:

Frequency Range:

TAJ and TAJ-1 thru TAJ-3: 195 to 600 kc

TAJ-4 thru TAJ-19: 175 to 600 kc

Type of Signal: Cw, mcw

Keying: 100 wpm (maximum) on cw; 50 wpm (maximum) with 800 cps modulated tone

Power Output:

TAJ: 300 w

TAJ-1 thru TAJ-19: 500 w on cw; 250 w on mcw

Frequency Control:

TAJ-4 through TAJ-19: Master oscillator

TAJ-1 through TAJ-3: Crystal control

Power Requirements:

TAJ, TAJ-1 through TAJ-3: 3 kw, 115-v dc; or 3 kw, 230-v dc

TAJ-4: 2.82 kw, 230-v 60-cycle 3-phase ac

TAJ-5: 2.65 kw, 440-v 60-cycle 3-phase ac

TAJ-6, TAJ-7, TAJ-9: 4.5 amp (43 amp starting), 440-v 60-cycle 3-phase ac

TAJ-8, TAJ-11, TAJ-12, TAJ-14, TAJ-16, TAJ-18, TAJ-19: 4.1 amp (45 amp starting), 440-v 60-cycle 3-phase ac; 8.2 amp (90 amp starting), 220-v 60-cycle ac; 15 amp (45 amp starting, 230-v dc; or 28 amp (90 amp starting), 115-v dc

TAJ-10: 4.1 amp, 400-v 60-cycle 3-phase ac; 15 amp, 230-v dc; or 28 amp 115-v dc

TAJ-13: 8.7 amp (90 amp starting), 220-v 60-cycle 3-phase ac

TAJ-15: 15 amp (45 amp starting), 230-v dc

TAJ-17: 8.2 amp (90 amp starting), 220-v 60-cycle 3-phase ac; or 7.9 amp (90 amp starting), 220-v 50-cycle 3-phase ac

500 WATT TRANSMITTING EQUIPMENT **AN/SRT-type**

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TAJ:</i>				
1	Magnetic Controller CAY-3415 (115-v dc)	-----	25-3/8 x 21-1/8 x 13-11/16	135
	or			
1	Magnetic Controller CAY-3416 (230-v dc)	-----	25-3/8 x 21-1/8 x 13-11/16	135
1	Motor-Generator Set CAY- 3689 (115-v dc)	-----	20-5/16 x 36 x 18	1,200
	or			
1	Motor-Generator Set CAY- 3690 (230-v dc)	-----	20-5/16 x 36 x 18	1,200
1	Radio Transmitter CAY- 3334-A	-----	46 x 26-1/8 x 17	425
<i>For TAJ-1:</i>				
1	Crystal Frequency Indicator CAY-3336	-----	11-1/2 x 8-7/8 x 10	24
1	Filter Unit CAY-3335	-----	27-7/8 x 14 x 12-1/8	91
	or			
1	Filter Unit CAY-3335-A	-----	27-7/8 x 14 x 12-1/8	100
1	Magnetic Controller CAY-3415 (115-v dc)	-----	25-3/8 x 21-1/8 x 13-11/16	135
	or			
1	Magnetic Controller CAY-3416 (230-v dc)	-----	25-3/8 x 21-1/8 x 13-11/16	135
1	Motor-Generator Set CAY- 3422 (115-v dc)	-----	20 x 35 x 16-1/2	590
	or			
1	Motor-Generator Set CAY- 3423 (230-v dc)	-----	20 x 35 x 16-1/2	590
1	Radio Transmitter CAY-3334	-----	47-3/4 x 27-1/8 x 17-1/4	426
<i>For TAJ-2:</i>				
1	Crystal Frequency Indicator CG-4441	-----	14-3/4 x 19 x 16-3/8	45
1	Filter Unit CG-4442	-----	25-1/2 x 18-1/2 x 7-9/16	90
1	Magnetic Controller CG-4443 (115-v dc)	-----	22-3/4 x 16-1/2 x 14-1/2	75

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller CG-4445 (230-v dc)	-----	22-3/4 x 16-1/2 x 14-1/2	75
1	Motor-Generator Set CG-4083 (230-v dc)	-----	15-3/8 x 36 x 14	485
	or			
1	Motor-Generator Set CG-4084 (115-v dc)	-----	14-3/8 x 36 x 14	485
1	Radio Transmitter CG-4440 (115-v dc)	-----	70 x 26-7/8 x 19	450
	or			
1	Radio Transmitter CG-4444 (230-v dc)	-----	50 x 26-7/8 x 19	450
	<i>For TAJ-3:</i>			
1	Crystal Frequency Indicator 74007	-----	10-5/16 x 16 x 9-29/32	27
1	Magnetic Controller 21042 (115-v dc)	-----	24-7/8 x 15 x 13-7/8	85
	or			
1	Magnetic Controller 21043 (230-v dc)	-----	24-7/8 x 15 x 13-7/8	87
1	Motor-Generator Set 21044 (115-v dc)	-----	18 x 33-3/8 x 18	527
	or			
1	Motor-Generator Set 21045 (230-v dc)	-----	18 x 33-3/8 x 18	527
1	Radio Transmitter 52009	-----	70 x 26-3/4 x 20	370
	<i>For TAJ-4:</i>			
1	Radio Transmitter 52022	-----	72 x 27 x 20	375
1	Rectifier Unit 20007	-----	72 x 21 x 23-1/2	650
	<i>For TAJ-5:</i>			
1	Radio Transmitter 52029	-----	71-7/8 x 27 x 20	375
1	Rectifier Unit 20018	-----	71-7/8 x 23-15/16 x 22-7/8	975
	<i>For TAJ-6:</i>			
1	Magnetic Controller 21258	-----	17-15/16 x 10-1/8 x 7-3/4	22

500 WATT TRANSMITTING EQUIPMENT AN/SRT-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor Generator Set consisting of 21255, 21256, and 21257	-----	22-1/2 x 72 x 17-1/4	850
1	Radio Transmitter 52069	-----	72 x 27 x 24	645
	<i>For TAJ-7:</i>			
1	Magnetic Controller 21258	-----	17-15/16 x 10-1/8 x 7-3/4	22
1	Motor Generator Set consisting of 21296, 21297, and 21298	-----	19 x 29/32 x 71-3/4 x 17	860
1	Radio Transmitter 52078	-----	72-1/4 x 27 x 24-3/16	605
	<i>For TAJ-8:</i>			
1	Magnetic Controller 21457 (115-v dc)	-----	24 x 16-11/16 x 26	105
1	Magnetic Controller 21458 (230-v dc)	-----	24 x 16-11/16 x 26	105
	or			
1	Magnetic Controller 21459 (220-v ac)	-----	28 x 15-13/16 x 20-11/16	111
	or			
1	Magnetic Controller 21460 (440-v ac)	-----	28 x 15-13/16 x 20-11/16	111
1	Motor-Generator Set 21466 (115-v dc)	-----	19-5/16 x 75 x 16-5/8	775
	or			
1	Motor-Generator Set 21467 (230-v dc)	-----	19-5/16 x 75 x 16-5/8	775
	or			
1	Motor-Generator Set 21468 (220/440-v ac)	-----	19-13/32 x 70-7/16 x 16-5/8	775
1	Radio Transmitter 52142 (115/230 v dc)	-----	72-1/4 x 27 x 24	610
	or			
1	Radio Transmitter 52143 (220/440-v ac)	-----	72-1/4 x 27 x 24	610
	<i>For TAJ-9:</i>			
1	Magnetic Controller 21455	-----	22-1/8 x 20-1/4 x 10-1/4	65
1	Motor-Generator Set 21456	-----	19-7/8 x 71-3/4 x 18-5/8	860
1	Radio Transmitter 52140	-----	72-1/4 x 27 x 24-3/16	605

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TAJ-10:</i>				
1	Magnetic Controller 21455 (440-v ac)	-----	22-1/8 x 20-1/4 x 10-1/4	65
1	Magnet8c Controller 21567 (115-v dc)	-----	25 x 14-1/4 x 13-1/4	75
1	Magnetic Controller 21568 (230-v dc)	-----	22 x 14-1/4 x 11	75
1	Motor-Generator Set 21456-A (220/440-v ac)	-----	18 x 71-5/8 x 18-1/2	800
or				
1	Motor-Generator Set 21571 (115-v dc)	-----	18 x 64-3/4 x 12-3/4	950
or				
1	Motor-Generator Set 21572 (230-v dc)	-----	18 x 64-3/4 x 12-3/4	960
1	Radio Transmitter 52167 (115/230-v dc)	-----	72 x 27 x 24-1/8	550
or				
1	Radio Transmitter 52189 (220/440-v ac)	-----	72 x 27 x 24-1/8	550
1	Magnetic Controller 21752 (115-v dc)	-----	25 x 14-1/4 x 13-1/4	70
or				
1	Magnetic Controller 21753 (230-v dc)	-----	22-3/4 x 14-1/4 x 13-1/4	70
or				
1	Magnetic Controller 21754 (220-v ac)	-----	21-7/8 x 20 x 9	70
or				
1	Magnetic Controller 21755 (440-v ac)	-----	21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756 (115-v dc)	-----	20 x 76-1/2 x 18-3/4	960
or				
1	Motor-Generator Set 21757 (230-v dc)	-----	20 x 76-1/2 x 18-3/4	960

500 WATT TRANSMITTING EQUIPMENT AN/SRT-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor-Generator Set 21758 (220/440-v ac)	-----	20 x 72 x 18-3/4	850
1	Radio Transmitter 52240 (115/230-v dc)	-----	74 x 27 x 25	540
1	Radio Transmitter 52241	-----	74 x 27 x 25	540
	<i>For TAJ-12:</i>			
1	Magnetic Controller 21874 (115-v dc)	-----	24-3/8 x 14-1/2 x 14	
	or			
1	Magnetic Controller 21875 (220/440-v ac)	-----	22 x 18-1/4 x 12-1/4	101
	or			
1	Magnetic Controller 21880 (230-v dc)	-----	24-3/8 x 14-1/2 x 14-1/4	
	or			
1	Magnetic Controller 21891 (220/440-v ac)	-----	22 x 18-1/4 x 12-1/4	
1	Motor-Generator Set 21783 (220/440-v ac)	-----	18 x 57-7/8 x 18-3/4	
	or			
1	Motor-Generator Set 21784 (115-v dc)	-----	18 x 62-1/8 x 18-3/4	
1	Motor-Generator Set 21785	-----	18 x 52-1/8 x 18-3/4	
1	Radio Transmitter 52259	-----	72-1/4 x 27 x 24	
	or			
1	Radio Transmitter 52260	-----	72-1/4 x 27 x 24	
	<i>For TAJ-13:</i>			
1	Land-Line Control Unit 23269	-----	42-1/8 x 24 x 14-1/4	165
2	Magnetic Controller 21754 (220-v ac)	-----	21-7/8 x 20 x 9	70
2	Motor-Generator Set 21758	-----	20 x 72 x 18-3/4	850
1	Power Transfer Switch 24092	-----	12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52241	-----	74 x 27 x 25	540

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>TAJ-14:</i>				
1	Magnetic Controller 21752 (115-v dc)	-----	25 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21753 (230-v dc)	-----	22-3/4 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21754 (220-v ac)	-----	21-7/8 x 20 x 9	70
	or			
1	Magnetic Controller 21755 (440-v ac)	-----	21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756-A (115-v dc)	-----	20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21757A (230-v dc)	-----	20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21956 (220/440-v dc)	-----	20 x 72 x 18	850
1	Radio Transmitter 52240 (115/230-v dc)	-----	74 x 27 x 25	540
	or			
1	Radio Transmitter 52241 (220/440-v ac)	-----	74 x 27 x 25	540
<i>For TAJ-15:</i>				
1	Magnetic Controller 21753	-----	22-3/4 x 14-1/4 x 13-1/4	70
1	Motor-Generator Set 21757-A	-----	20 x 76-1/2 x 18-3/4	1,040
1	Radio Transmitter 52240	-----	74 x 27 x 25	540
<i>For TAJ-16:</i>				
1	Magnetic Controller 21753 (230-v dc)	-----	22-3/4 x 14-1/4 x 13-1/4	70

500 WATT TRANSMITTING EQUIPMENT **AN/SRT-type****MAJOR COMPONENTS—Continued**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 21754 (220-v ac)	-----	21-7/8 x 20 x 9	70
	or			
1	Magnetic Controller 21755 (440-v ac)	-----	21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756 (115-v dc)	-----	20 x 76-1/2 x 18-3/4	960
	or			
1	Motor-Generator Set 21757 (230-v dc)	-----	20 x 76-1/2 x 18-3/4	960
1	Motor-Generator Set 21758 (220/440-v ac)	-----	20 x 72 x 18-3/4	850
1	Radio Transmitter 52240	-----	74 x 27 x 25	540
	or			
1	Radio Transmitter 52241	-----	74 x 27 x 25	540
	<i>For TAJ-17:</i>			
2	Magnetic Controller 211005	-----	21-7/8 x 20 x 9	70
	or			
2	Magnetic Controller 211006	-----	21-7/8 x 20 x 9	70
2	Motor-Generator Set 21956	-----	20 x 72 x 18	850
1	Power Transfer Switch 24092	-----	12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52241	-----	74 x 27 x 25	540
	or			
1	Radio Transmitter 52293	-----	73-3/4 x 27 x 24-1/8	540
	<i>For TAJ-18:</i>			
1	Magnetic Controller 21752 (115-v dc)	-----	25 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21753 (230-v dc)	-----	22-3/4 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21754 (220-v ac)	-----	21-7/8 x 20 x 9	70

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 21755 (440-v ac)	-----	21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756-A (115-v dc)	-----	20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21757-A (230-v dc)	-----	20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21956 (220/440-v ac)	-----	20 x 72 x 18	850
1	Radio Transmitter 52240 (115/230 v dc)	-----	74 x 27 x 25	540
	or			
1	Radio Transmitter 52241 (220/440-v ac)	-----	74 x 27 x 25	540
	<i>For TAJ-19:</i>			
1	Magnetic Controller 211086 (115-v dc)	-----	17-5/16 x 11-9/16 x 10-5/8	55
	or			
1	Magnetic Controller 211087 (230-v dc)	-----	17-5/16 x 11-1/8 x 10-5/8	55
	or			
1	Magnetic Controller 211088 (220-v ac)	-----	9-3/4 x 7-1/2 x 7-1/2	45
1	Magnetic Controller 211089 (440-v ac)	-----	9-3/4 x 7-1/2 x 7-1/2	45
1	Motor-Generator Set 21757-A	-----	20 x 76-1/2 x 18-3/4	1,040
1	Radio Transmitter 52240-A (115/230-v dc)	-----	73-3/4 x 27 x 24	560
	or			
1	Radio Transmitter 52241-A (220/440-v ac)	-----	73-3/4 x 27 x 24-1/8	560

500 WATT TRANSMITTING EQUIPMENT **AN/SRT-type****REFERENCE DATA AND LITERATURE:**

TAJ: NAVSHIPS IB-5536A
 TAJ-1: NAVSHIPS IB-5542
 TAJ-2: NAVSHIPS GEI-5747A
 TAJ-3: NAVSHIPS IB-5727
 TAJ-4: NAVSHIPS IB-23231
 TAJ-5: NAVSHIPS IB-23271
 TAJ-6: NAVSHIPS GEI-8689A
 TAJ-7: NAVSHIPS GEI-11023A
 TAJ-8: NAVSHIPS 900,295
 TAJ-9: NAVSHIPS 95288
 TAJ-10: NAVSHIPS 900,428
 TAJ-11, TAJ-13, TAJ-16, TAJ-17; NAVSHIPS 900,863
 TAJ-12: NAVSHIPS 900,554
 TAJ-14: TAJ-15, TAJ-18: NAVSHIPS 900,833
 TAJ-19: NAVSHIPS 900,492

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For TAJ, TAJ-1 thru TAJ-12, TAJ-14 thru TAJ-16, TAJ-18, and TAJ-19: 4</i>	159	3,120
<i>For TAJ-13: 7</i>	221	4,643
<i>For TAJ-17: 6</i>	194	4,323

PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For TAJ:</i> Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs-6616	\$9,200.00
<i>For TAJ-1:</i> Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs-12856	
<i>For TAJ-2:</i> General Electric Co.	Schenectady, N. Y.	NOs-20727	
<i>For TAJ-3:</i> RCA Victor Division, RCA	Camden, N. J.	NOs-27519	
<i>For TAJ-4:</i> RCA Victor Division, RCA	Camden, N. J.	NOs-31197	
<i>For TAJ-5:</i> Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs-36091	

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For TAJ-6:</i> General Electric Co.	Schenectady, N. Y.	NOs-43790	
<i>For TAJ-7:</i> General Electric Co.	Schenectady, N. Y.	NOs-58412	
<i>For TAJ-8:</i> Bendix Radio Corp.	Baltimore, Md.	NOs-66778	
<i>For TAJ-9:</i> General Electric Co.	Schenectady, N. Y.	NOs-67756	
<i>For TAJ-10:</i> General Electric Co.	Schenectady, N. Y.	NOs-80656	
<i>For TAJ-11:</i> General Electric Co.	Schenectady, N. Y.	NOs-97255	
<i>For TAJ-12:</i> General Electric Co.	Schenectady, N. Y.	NOs-97255	
<i>For TAJ-13:</i> General Electric Co.	Schenectady, N. Y.	NOs-97255	
<i>For TAJ-14:</i> General Electric Co.	Schenectady, N. Y.	NXs-4843	
<i>For TAJ-15:</i> General Electric Co.	Schenectady, N. Y.	NXs-18530	
<i>For TAJ-16:</i> General Electric Co.	Schenectady, N. Y.	Tcg-34571	
<i>For TAJ-17:</i> General Electric Co.	Schenectady, N. Y.	NXss-18530	
<i>For TAJ-18:</i> General Electric Co.	Schenectady, N. Y.	NXss-33082	
<i>For TAJ-19:</i> General Electric Co.	Schenectady, N. Y.	NXsr-36960	

TRANSMITTING EQUIPMENT, 2 KW AN/SRT-type

1 December 1958

Cognizant Serv: USN FSN:

TAQ-4 thru TAQ-6b, TAQ-9, TAQ-10

USA

USN

USAF

TYPE CLASS: --
STOCK NO: --

Used by

TAQ-4: --

TAQ-5: F16-Q-308646-200 (115-v dc)

TAQ-5: F16-Q-308666-200 (230-v dc)

TAQ-5: F16-Q-308656-200 (220-v ac)

TAQ-5: F16-Q-308676-200 (440-v ac)

TAQ-6: F16-Q-308647-200 (115-v dc)

TAQ-6: F16-Q-308667-200 (230-v dc)

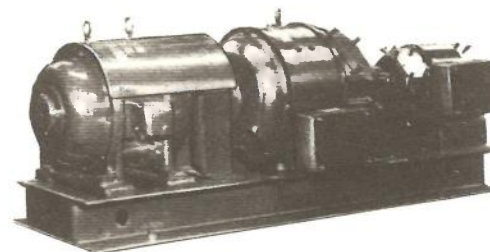
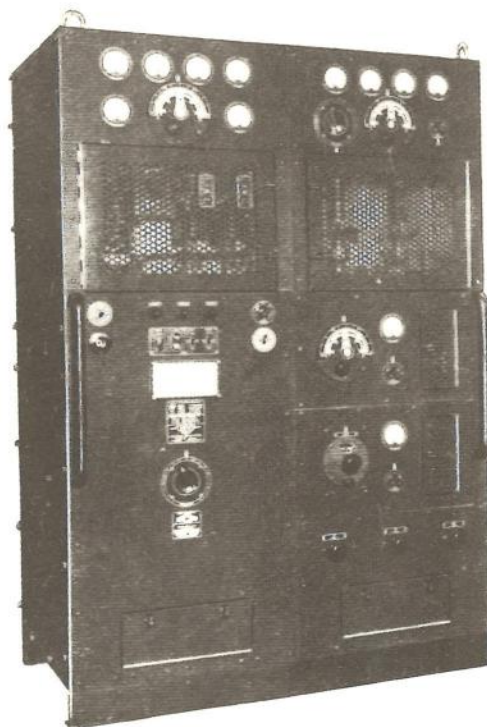
TAQ-6: F16-Q-308657-200 (220-v ac)

TAQ-6: F16-Q-308677-200 (440-v ac)

TAQ-9: F16-Q-308725-200 (115-v dc)

TAQ-9: F16-Q-308735-200 (440-v ac)

TAQ-10: F16-Q-308745-200



TAQ-9

FUNCTIONAL DESCRIPTION:

2 KW Transmitting Equipments TAQ-4, TAQ-5, TAQ-6, TAQ-6b, TAQ-9, and TAQ-10 are all similar in appearance and application. The TAQ-4 uses a rectifier unit instead of

the motor-generator units provided with the other models of this equipment. The TAQ-10 is designed for shore installation, and all the other models are designed primarily for shipboard installations.

AN/SRT-type TRANSMITTING EQUIPMENT, 2 KW

This equipment provides cw or mcw radiotelegraph transmission at keying speeds up to 100 words per minute (500-wpm speed in the TAQ-10) at any frequency in the band from 175 to 600 kc. The units may be controlled locally, or from a remote location with a 4- or 6-wire remote control unit or the landline control unit supplied with the TAQ-10.

Power Output:

Cw: 2 kw

Mcw: 1 kw

Keying Method and Speed:

TAQ-4 thru TAQ-6b, TAQ-9: Relay keying, 100 wpm (maximum)

TAQ-10: Vacuum tube keying, 500 wpm (maximum), cw; relay keying, 100 wpm (maximum) on cw, 50 wpm (maximum) on mcw

Power Requirements:

TAQ-4: 7.5 kw, 440-v 60-cycle 3-phase ac

TAQ-5, TAQ-6, TAQ-6b, TAQ-9: 8.6 kw, 115/230-v dc;

8.0 kw, 220/440-v 60-cycle 3-phase ac

TAQ-10: 8.0 kw, 220/440-v ac

TECHNICAL CHARACTERISTICS:

Frequency Range: 175 to 600 kc*Frequency Control:* Master oscillator*Type of Signal:* Cw, mcw

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TAQ-4-</i>				
1	Radio Transmitter 52036	-----	35-3/8 x 49 x 72	940
1	Rectifier Unit 20009	-----	23-5/8 x 35-3/4 x 72	965
<i>For TAQ-5, TAQ-6, TAQ-6b:</i>				
1	Magnetic Controller 21366 (115-v dc)	-----	22-1/2 x 16-1/2 x 14-1/2	109
	or			
1	Magnetic Controller 21367 (230-v dc)	-----	22-1/2 x 13-1/2 x 14-1/2	74
	or			
1	Magnetic Controller 21368 (220-v ac)	-----	26-7/16 x 27 x 12-19/32	140
	or			
1	Magnetic Controller 21369 (440-v ac)	-----	26-7/16 x 27 x 12-19/32	140
1	Motor-Generator 21358 (115-v dc)	-----	27 x 78-3/8 x 22-1/4	1,325
	or			
1	Motor-Generator 21359 (230 v dc)	-----	27 x 78-3/8 x 22-1/4	1,325
	or			
1	Motor-Generator 21360 (220/440-v ac)	-----	27 x 78-3/8 x 22-1/4	1,325

TRANSMITTING EQUIPMENT, 2 KW AN/SRT-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 52113 (115-v dc)	-----	72 x 49-1/4 x 34-1/8	985
	or			
1	Radio Transmitter 52114 (230-v dc)	-----	72 x 49-1/4 x 34-1/8	970
	or			
1	Radio Transmitter 52115 (220/440-v ac)	-----	72 x 49-1/4 x 34-1/8	1,050
	<i>For TAQ-9:</i>			
1	Magnetic Controller 21366 (115-v dc)	-----	22-1/2 x 16-1/2 x 14-1/2	109
	or			
1	Magnetic Controller 21367 (230-v dc)	-----	22-1/2 x 13-1/2 x 14-1/2	74
	or			
1	Magnetic Controller 21368 (220-v ac)	-----	26-7/16 x 27 x 12-19/32	140
	or			
1	Magnetic Controller 21369 (440-v ac)	-----	26-7/16 x 27 x 12-19/32	140
1	Motor-Generator 21358-A (115-v dc)	-----	27 x 78-3/8 x 22-1/4	1,325
	or			
1	Motor-Generator 21359-A (230-v dc)	-----	27 x 78-3/8 x 22-1/4	1,325
	or			
1	Motor-Generator 21360-A (220/440-v ac)	-----	27 x 78-3/8 x 22-1/4	1,185
1	Radio Transmitter 52182 (115/230-v dc)	-----	72 x 49-1/4 x 34-1/8	985
	or			
1	Radio Transmitter 52183	-----	72 x 49-1/4 x 34-1/8	1,050
	<i>For TAQ-10:</i>			
1	Land-Line Control Unit 23269	-----	14-1/2 x 42-1/8 x 24	165
1	Magnetic Controller 21896	-----	27 x 25 x 10-7/8	100
1	Motor-Generator 21892	-----	26-11/16 x 71-5/8	1,200
1	Power Transfer Switch 24092	-----	16 x 12-1/2 x 9-1/4	26
1	Radio Transmitter 52279	-----	72 x 49-1/4 x 34-1/8	960

AN/SRT-type TRANSMITTING EQUIPMENT, 2 KW**REFERENCE DATA AND LITERATURE:**

TAQ-4: Technical Manual (Navy) for 2 KW Radio Telegraph Transmitting Equipment Model TAQ-4
 TAQ-5, TAQ-6, TAQ-6b: NAVSHIPS 900,248
 TAQ-9: NAVSHIPS 900,273
 TAQ-10: NAVSHIPS 900,549

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For TAQ-4:</i>		
<i>For TAQ-5, TAQ-6, TAQ-6b, TAQ-9: 5</i>	----	4,500
<i>For TAQ-10: 7</i>	----	4,930

PROCUREMENT DATA

PROCURING SERVICE: USN	DESIGN COG: USN, BuShips
SPEC &/or DWG: TAQ-4:	
TAQ-5: RE 13A351J	
TAQ-6: S-500-1257	
TAQ-6b:	
TAQ-9: Spec No. RE 13A351J	
TAQ-10: Spec EN 28 (1725-42)	
SHIPS; S-500-4372	

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For TAQ-4:</i> General Electric Co.	Schenectady, N. Y.	NOs-37323	
<i>For TAQ-5, TAQ-6, TAQ-6b:</i> General Electric Co.	Schenectady, N. Y.	NO-62958 NO-70094	\$12,000.00
<i>For TAQ-9:</i> General Electric Co.	Schenectady, N. Y.	NOs-70094	
<i>For TAQ-10:</i> General Electric Co.	Schenectady, N. Y.	NXs-4843	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

1 December 1958

Cognizant Serv: USN FSN:

TBA-3, TBA-5, TBA-6, TBA-9

	USA	USN	USAF
--	-----	-----	------

TYPE CLASS:	--	Used by	--
STOCK NO:	--	TBA-3: F16-Q-309495- 200	--
		TBA-5:	
		TBA-6: F16-Q-309545- 200 (115-v dc)	
		TBA-9: F16-Q-309577- 200	

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBA-3, TBA-5, TBA-6, and TBA-9 are high frequency radiotelegraph transmitters designed for use aboard large naval vessels. They are similar in appearance and performance, but differ in the power supply equipment furnished. The TBA-5 is equipped with a rectifier power supply, while the other shipboard models are equipped with motor-generator units.

The TBA-5 and the TBA-9, in addition to the master oscillator frequency control provided with the other models of this equipment, also have provisions respectively for 16 and 10 crystal-controlled frequency channels.

The TBA-3, TBA-5, TBA-6, and TBA-9 are similar to the TBA-8, TBA-10, and TBA-11, which are versions of this equipment designed for shore station use. (See Radio Transmitting Equipment TBA-8, TBA-10, TBA-11, classified as AN/FRT-type.)

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.0 to 26.0

Frequency Control:

TBA-5: 16 channels crystal-controlled; master oscillator

TBA-9: 10 channels crystal-controlled; master oscillator

TBA-3, TBA-6: Master oscillator.

Nominal Power Output: 1 kw

Type of Signal: Cw

Keying Speed: 100 wpm (keying relay)

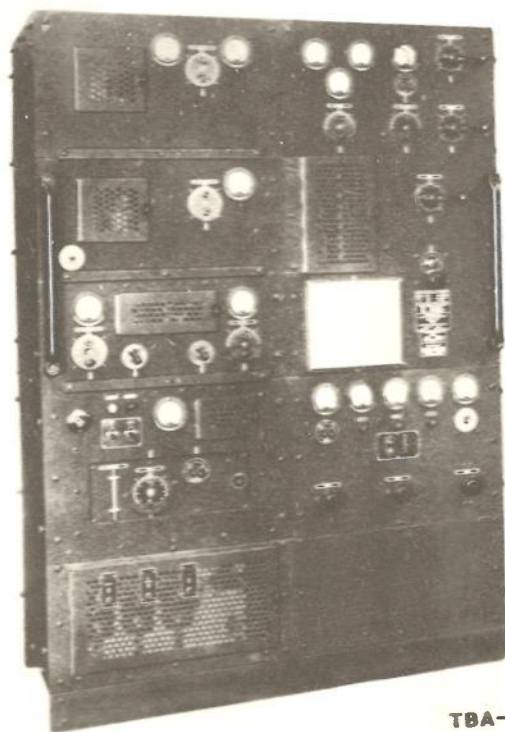
Power Requirements:

TBA-3: 4.98 kw (30.2 kw starting), 220/440-v 60-cycle 3-phase ac

TBA-5: 5.76 kw, 440-v 60-cycle 3-phase ac

TBA-6: 5.3 kw (12 kw starting), 115/230-v dc; 4.6 kw (30 kw starting), 440-v 60-cycle 3-phase ac

TBA-9: 4.6 kw (30 kw starting), 440-v 60-cycle 3-phase ac



TBA-6

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TBA-3:</i>				
2	Magnetic Controller 21373 (220-v ac)	-----	22-1/8 x 20-1/4 x 10-1/4	65
	or			
1	Magnetic Controller 21374 (220/440-v ac)	-----	22-1/8 x 20-1/4 x 10-1/4	65
1	Motor-Generator Set 21375 (220/440-v ac)	-----	17-9/16 x 70-7/16 x 16	815
	or			
1	Motor-Generator Set 21375-A (220/440-v ac)	-----	17-9/16 x 70-7/16 x 16	815
1	Radio Transmitter 52116	-----	72 x 48-3/4 x 31-1/8	975
<i>For TBA-5:</i>				
1	Radio Transmitter 52040	-----	72 x 49 x 33-5/8	1,090
1	Rectifier 20027	-----	72 x 33-3/4 x 23	1,000
<i>For TBA-6:</i>				
1	Control switch assembly			
1	Magnetic Controller 21374 (220/440-v ac)	-----	22-1/8 x 20-1/4 x 10-1/4	65
	or			
1	Magnetic Controller 21591 (115-v dc)	-----	22 x 17-9/32 x 15-1/4	65
	or			
1	Magnetic Controller 21592 (230-v dc)	-----	22 x 17-9/32 x 15-1/4	65
1	Motor-Generator Set 21375-A (220/440-v ac)	-----	17-9/16 x 70-7/16 x 16	815
	or			
1	Motor-Generator Set 21595 (115-v dc)	-----	17-9/16 x 70-7/16 x 18	815
	or			
1	Motor-Generator Set 21596 (230-v dc)	-----	17-9/16 x 70-7/16 x 18	815

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 52195 (115-v dc)	-----	72 x 49 x 31-1/8	953
	or			
1	Radio Transmitter 52196 (230-v dc)	-----	72 x 49 x 31-1/8	953
	or			
1	Radio Transmitter 52197 (440-v ac)	-----	72 x 49 x 31-1/8	953
	<i>For TBA-9:</i>			
1	Magnetic Controller 21898	-----	23-7/8 x 21-7/16 x 9-1/16	74
1	Motor-Generator Set 21899	-----	19-15/16 x 71-5/16 x 16-5/8	815
1	Radio Transmitter 52281	-----	72 x 49 x 31-1/8	1,044

REFERENCE DATA AND LITERATURE:

TBA-3: NAVSHIPS 900,398

TBA-5: Technical Manual (Navy) for Radio Telegraph Transmitting Equipment Model TBA-5

TBA-6: NAVSHIPS 900,406

TBA-9: NAVSHIPS 900,454

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	250.0	3,809

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: TBA-3: RE13A420F, C-S-500-617

TBA-5:

TBA-6: RE13A420F

TBA-9: EN28/1447-42(SHIPS CG), S-500-4372, RE13A420G

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For TBA-3:</i> General Electric Co.	Schenectady, N. Y.	NOs-64824	
<i>For TBA-5:</i> General Electric Co.	Schenectady, N. Y.	NOs-74717	\$9,580.00
<i>For TBA-6:</i> General Electric Co.	Schenectady, N. Y.	NOs-64824	
<i>For TBA-9:</i> General Electric Co.	Schenectady, N. Y.	NXs-4843	

RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

1 December 1958

Cognizant Serv: USN FSN:

TBK-3, TBK-5, TBK-7 thru TBK-10,
TBK-12 thru TBK-14, TBK-17 thru
TBK-20

USA

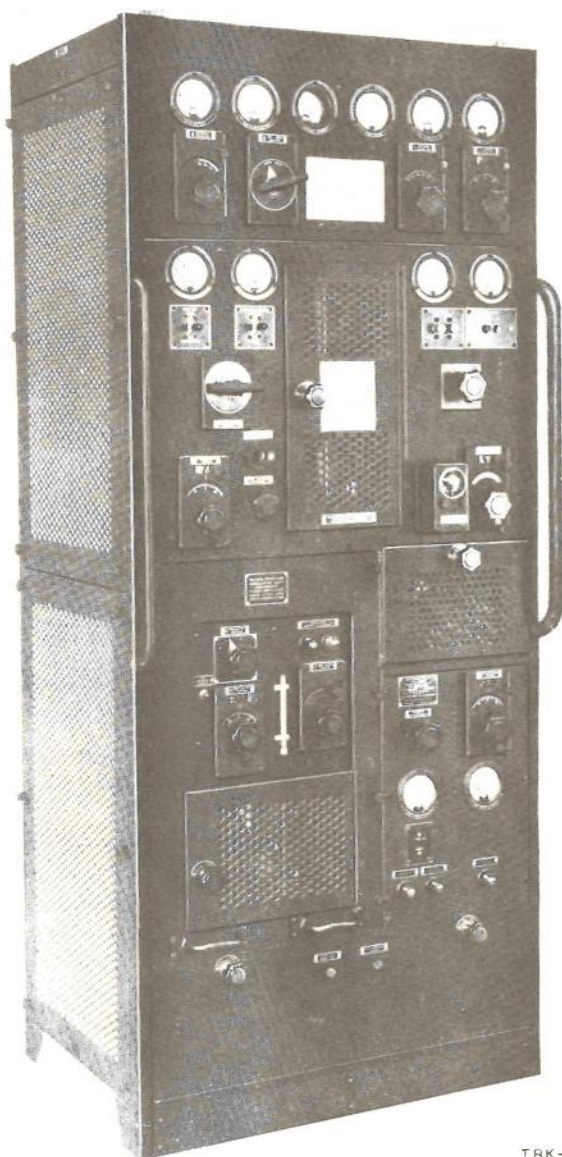
USN

USAF

TYPE CLASS: ---

Used by

STOCK NO: ---



TBK-7

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBK-3, TBK-5, TBK-7, TBK-8, TBK-9, TBK-10, TBK-12, TBK-13, TBK-14, TBK-17, TBK-18, TBK-19 and TBK-20 are medium power, high frequency transmitters capable of relay keying speeds up to 100 words per minute, and designed primarily for shipboard installation. The transmitter power may be reduced from full power to 75 watts by disconnecting the power amplifier.

Remote operation of these transmitters is possible by use of a standard 4- or 6-wire control system.

These transmitters are essentially the same as the TBM series of transmitters, except that the TBK series does not include provisions for modulated continuous wave signaling.

Shore-based models in the TBK series (classified and described under AN/FRT-type) are the TBK-6, TBK-11, TBK-15, and TBK-16. The TBK-4 is suitable for either shipboard or shore installation, and is classified and described under AN/URT-type equipment.

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:

TBK-3: 115/230-v dc

TBK-5: 115/230-v dc; 440-v 60-cycle 3-phase ac

TBK-7: 440-v 60-cycle 3-phase ac

TBK-8: 115/230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-9: 115/230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-10: 115/230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-12: 115/230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-13: 115/230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-14: 115-230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-17: 115/230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-18: 440-v 60-cycle 3-phase ac

TBK-19: 230-v dc; 220/440-v 60-cycle 3-phase ac

TBK-20: 115/230-v dc

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TBK-3:</i>				
1	Motor generator unit	-----	15-15/32 x 18-7/16 x 74-1/16	700
1	Motor Starter 21158 (115-v dc)	-----	12-9/16 x 14 x 25-1/8	80
or				
1	Motor Starter 21159 (230-v dc)	-----	12-9/16 x 14 x 25-1/8	80
1	Radio Transmitter 52031	-----	24 x 32 x 72	760
<i>For TBK-5:</i>				
1	Motor generator unit (115/ 230-v dc)	-----	18-9/16 x 18-3/4 x 75	900
or				
1	Motor generator unit (440-v ac)	-----	18-9/16 x 18-3/4 x 70-1/8	885
1	Motor Starter 21249 (440-v ac)	-----	9 x 10-5/8 x 18-3/4	30
or				
1	Motor Starter 21250 (115-v dc)	-----	14-1/2 x 15-1/4 x 28-1/2	90
or				
1	Motor Starter 21251 (230 v dc)	-----	14-1/2 x 15-1/4 x 28-1/2	90
1	Radio Transmitter 52064 (440-v ac)	-----	24 x 32 x 72	695
or				
1	Radio Transmitter 52066 (115/230-v dc)	-----	24 x 32 x 72	662
<i>For TBK-7:</i>				
1	Motor generator unit	-----	18-9/16 x 18-3/4 x 70-1/8	885
1	Motor Starter 21304	-----	8-1/2 x 11 x 17	30
1	Radio Transmitter 52079	-----	24 x 32 x 72	695
<i>For TBK-8, TBK-10, TBK-12:</i>				
1	Magnetic Controller 21333 (115-v dc)	-----	13 x 17 x 20-21/32	80
or				
1	Magnetic Controller 21334 (230-v dc)	-----	13 x 17 x 20-21/32	80

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 21335 (220-v ac)	-----	9 x 16 x 19-21/32	48
	or			
1	Magnetic Controller 21336 (440-v ac)	-----	9 x 16 x 19-21/32	48
1	Motor Generator Unit 21330 (115-v dc)	-----	19 x 23 x 74-1/4	1,170
	or			
1	Motor Generator Unit 21331 (230-v dc)	-----	19 x 23 x 74-1/4	1,170
	or			
1	Motor Generator Unit 21332 (220/440-v ac)	-----	19 x 23 x 71-1/16	1,150
1	Radio Transmitter 52103 (115-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52104 (230-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52105 (220/440-v ac)	-----	24-9/16 x 31-5/8 x 72	664
	<i>For TBK-9:</i>			
1	Motor Generator Unit 21401 (115-v dc)	-----	20-1/4 x 20-1/2 x 78-7/8	1,067
	or			
1	Motor Generator Unit 21402 (230-v dc)	-----	20-1/4 x 20-1/2 x 78-7/8	1,067
	or			
1	Motor Generator Unit 21403 (220/440-v ac)	-----	20-3/8 x 20-1/2 x 78-7/8	1,033
1	Motor Starter 21409 (115-v dc)	-----	16-7/8 x 17-1/2 x 26-1/4	110

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Starter 21410 (230-v dc)	-----	15-7/8 x 17-1/2 x 26-1/4	95
	or			
1	Motor Starter 21411 (220-v ac)	-----	11-5/8 x 17 x 24-1/4	80
	or			
1	Motor Starter 21412 (440-v ac)	-----	11-5/8 x 15 x 21-1/4	50
1	Radio Transmitter 52126 (115-v dc)	-----	24 x 32 x 72	720
	or			
1	Radio Transmitter 52127 (230-v dc)	-----	24 x 32 x 72	720
	or			
1	Radio Transmitter 52128 (220/440-v ac)	-----	24 x 32 x 72	720
	<i>For TBK-13:</i>			
1	Magnetic Controller 21668 (220-v ac)	-----	9-3/16 x 16-5/8 x 18-3/4	50
	or			
1	Magnetic Controller 21669 (440-v ac)	-----	9-3/16 x 16-5/8 x 18-3/4	50
1	Motor Generator Unit 21677	-----	20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171	-----	24 x 32 x 72	780
	<i>For TBK-14:</i>			
1	Magnetic Controller 21333 (115-v dc)	-----	13 x 17 x 20-21/32	80
1	Magnetic Controller 21334 (230-v dc)	-----	13 x 17 x 20-21/32	80
	or			
1	Magnetic Controller 21336 (220/440-v ac)	-----	9 x 16 x 19-21/32	48
1	Motor Generator Unit 21330-A, -B, -C (115-v dc)	-----	19 x 23 x 74-1/4	1,170

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator Unit 21331-A, -B, -C (230-v dc)	-----	19 x 23 x 74-1/4	1,170
	or			
1	Motor Generator Unit 21332-A, -B, -C (220/440-v ac)	-----	19 x 23 x 71-1/16	1,150
1	Radio Transmitter 52103 (115-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52104 (230-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52105 (220/440-v ac)	-----	24-9/16 x 31-5/8 x 72	664
	<i>For TBK-17:</i>			
1	Magnetic Controller 211104 (115-v dc)	-----	10-1/2 x 20-1/2 x 23	95
	or			
1	Magnetic Controller 211105 (230-v dc)	-----	10-1/2 x 15-1/2 x 23	85
	or			
1	Magnetic Controller 211106 (220-v ac)	-----	8-5/16 x 9-3/4 x 14	40
	or			
1	Magnetic Controller 211107 (440-v ac)	-----	8-5/16 x 9-3/4 x 14	40
1	Motor Generator Unit 21330-A (115-v dc)	-----	19 x 23 x 73-3/8	1,170
	or			
1	Motor Generator Unit 21331-A (230-v dc)	-----	19 x 23 x 73-3/8	1,170
	or			
1	Motor Generator Unit 21332-A (220/440-v ac)	-----	18-7/8 x 22-9/16 x 70-1/8	1,150

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 42105 (220/440-v ac)	-----	24-9/16 x 31-5/8 x 72	664
	or			
1	Radio Transmitter 52103 (115-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52104 (230-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	<i>For TBK-18:</i>			
1	Magnetic Controller 21669	-----	9-3/16 x 16-5/8 x 18-3/4	50
1	Motor Generator Unit 21677	-----	20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171	-----	24 x 32 x 72	780
	<i>For TBK-19:</i>			
1	Magnetic Controller 211105 (230-v dc)	-----	10-1/2 x 15-1/2 x 23	63
	or			
1	Magnetic Controller 211106 (220-v ac)	-----	8-5/16 x 10-3/8 x 14	30
	or			
1	Magnetic Controller 211107 (440-v ac)	-----	8-5/16 x 10-3/8 x 14	30
1	Motor Generator Unit 211286 (220/440-v ac)	-----	17-13/16 x 18-1/8 x 58	727
	or			
1	Motor Generator Unit 211340 (230-v dc)	-----	18-1/16 x 18-1/8 x 62-3/8	769
1	Radio Transmitter 52104 (230-v dc)	-----	24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52105 (220/440-v ac)	-----	24-9/16 x 31-5/8 x 72	664
	<i>For TBK-20:</i>			
1	Magnetic Controller 211231 (115-v dc)	-----	10-3/16 x 15 x 20-1/4	68

RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 211232 (230-v dc)	-----	10-3/16 x 15 x 20-1/4	76
1	Motor Generator Unit 21675 (115-v dc)	-----	20-5/16 x 20-3/8 x 78-13/16	1,275
	or			
1	Motor Generator Unit 21676 (230-v dc)	-----	20-5/16 x 20-3/8 x 78-13/16	1,275
1	Radio Transmitter 52217 (115-v dc)	-----	24 x 32 x 72	740
	or			
1	Radio Transmitter 52218 (230-v dc)	-----	24 x 32 x 72	740

REFERENCE DATA AND LITERATURE:

TBK-3, TBK-5, TBK-7, TBK-8, TBK-10, TBK-17: Technical Manuals for Navy Model TBK-3, 4, 5, 6, 7, 8, 10 and 17,
Radio Transmitting Equipment
TBK-9: NAVSHIPS 900380
TBK-12: NAVSHIPS 95293
TBK-13, TBK-18, TBK-20: NAVSHIPS 900388
TBK-14: NAVSHIPS 95294
TBK-19: NAVSHIPS 900482

SHIPPING DATA

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

For TBK-3:
Westinghouse Electric & Mfg. Co.

Baltimore, Md.

NOs-36091

For TBK-5:
Westinghouse Electric & Mfg. Co.

Baltimore, Md.

NOs-47498

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For TBK-7:</i> Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-58126	
<i>For TBK-8:</i> Radio Corp. of America	Camden, N. J.	NOs-16006	
<i>For TBK-9:</i> Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-67051	
<i>For TBK-10:</i> Radio Corp. of America	Camden, N. J.	NOs-70875	
<i>For TBK-12:</i> Radio Corp. of America	Camden, N. J.	NOs-80750	
<i>For TBK-13:</i> Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72975 NOs-80646 NXsr 18237 NXsr 38688 NXsr 36550 NXsr 51573	
<i>For TBK-14:</i> Radio Corp. of America	Camden, N. J.	NXs-655	
<i>For TBK-17:</i> Radio Corp. of America	Camden, N. J.	NXss 28616	
<i>For TBK-18:</i> Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs 72975 NOs 80646 NXsr-38688 NXsr-18237 NXsr 36550 NXsr 51573	
<i>For TBK-19:</i> Radio Corp. of America	Camden, N. J.	NXsr 38496	
<i>For TBK-20:</i> Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs 72975 NOs 80646 NXsr 18237 NXsr 38688 NXsr 36550 NXsr-51573	

RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

18 November 1958

Cognizant Serv: FSN: 5820-665-2292

TBM-4

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-4 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radio-phone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc*Power Output:*

A1: 75 or 500 w

A2, A3: 250 w

Frequency Control: Master oscillator*Type Emission:* A1, A2, A3*Keying Speed:*

A1: 100 wpm (maximum) on A1

A2: 50 wpm (maximum)

Modulator Data:

Speech Input: 6 mw level from 600-ohm source

Modulation: 100%

AF Distortion: 10% (maximum)

Gain: 60 db

Output: 400 w

Antenna Data: 80 feet (maximum length outside trunk)*Power Requirements:*

Motor Generator 21401: 115-v dc

Motor Generator 21402: 230-v dc

Motor Generator 21403: 220- or 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Dc Operation:</i>				
1	Modulator 50065	-----	18 x 24 x 72	380
1	Motor Generator Set 21401 (115-v)	-----	20-1/4 x 20-1/2 x 78-7/8	1,062
	or			
	Motor Generator Set 21402 (230-v)	-----	20-1/4 x 20-1/2 x 78-7/8	1,067
1	Motor Starter 21409 (115-v)	-----	16-7/8 x 17-1/2 x 26-1/4	110
	or			
1	Motor Starter 21410 (230-v) Radio Transmitter 52126 (115-v)	-----	15-7/8 x 17-1/2 x 26-1/4 24 x 32 x 72	95 720

AN/SRT-type RADIO TRANSMITTING EQUIPMENT**MAJOR COMPONENTS—Continued**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
	Radio Transmitter 52127 (230-v)	-----	24 x 32 x 72	720
	<i>For Ac Operation:</i>			
1	Modulator 50065	-----	18 x 24 x 72	380
1	Motor Generator Set 214403	-----	20-3/8 x 20-1/2 x 78-7/8	1,033
1	Motor Starter 21411 (220-v)	-----	11-5/8 x 17 x 24-1/4	80
	or			
1	Motor Starter 21412 (440-v)	-----	11-5/8 x 15 x 21-1/4	50
	Radio Transmitter 52128	-----	24 x 32 x 72	720

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900380

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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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
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-67051, 12 June 1939	
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72975, 8 May 1940	

RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

18 November 1958

Cognizant Serv: FSN: 5820-642-6184

TBM-5

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-5 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radio-phone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:*Frequency Range:* 2,000 to 18,100 kc*Power Output:*

A1: 75 or 500 w

A2, A3: 350 w

Frequency Control: Master oscillator*Type Emission:* A1, A2, A3*Keying Speed:*

A1: 100 wpm (maximum)

A2: 50 wpm (maximum)

Modulator Data:

Speech Input: 6 mw level from 600-ohm source

Modulation: 100%

AF Distortion: 10% (maximum)

Gain: 60 db

Output: 400 w

Antenna Data: 80 feet (maximum length outside trunk)*Power Requirements:* 440-v 60-cycle 3-phase (Motor Generator 21522)**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller 21412	-----	11-5/8 x 15 x 21-1/4	50
1	Modulator 50065	-----	18 x 24 x 72	385
1	Motor Generator Set 21522	-----	20-3/8 x 20-1/2 x 74-21/32	1,100
1	Radio Transmitter 52171	-----	24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

MIL-HDBK-161

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
14	160.62	3,684

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72975, 8 May 1940 NOs-80646, 8 January 1941 NOs-80646 Sup, 21 September 1942 NXsr-18237, 1 July 1943 NXsr-38688, 28 September 1943 NXsr-36550, 23 August 1943 NXsr-51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958

Cognizant Serv: FSN: 5820-644-0880

TBM-7

USA

USN

USAF

TYPE CLASS:
STOCK NO:

Used by

--
--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc*Power Output:*

A1: 75 or 500 w

A2, A3: 250 w

Frequency Control: Master oscillator*Type Emission:* A1, A2, A3*Keying Speed:*

A1: 100 wpm (maximum)

A2: 50 wpm (maximum)

Modulator Data:

Speech Input: 6 mw level from 600-ohm source

Modulation: 100%

AF Distortion: 10% (maximum)

Gain: 60 db

Output: 400 w

Antenna Data: 80 feet (maximum length outside trunk)*Power Requirements:*

Motor Generator 21675: 115-v dc

Motor Generator 21676: 230-v dc

Motor Generator 21677: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Dc Operation:</i>				
1	Magnetic Controller 21666 (115-v)	-----	13-3/8 x 16 x 22-1/2	70
	or			
	Magnetic Controller 21667 (230-v)	-----	13-3/8 x 16 x 22-1/2	70
1	Modulator 50065-A	-----	18 x 24 x 72	385
1	Motor Generator Set 21675 (115-v)	-----	20-5/16 x 20-3/8 x 78-13/16	1,275
	or			
	Motor Generator Set 21676 (230-v)	-----	20-5/16 x 20-3/8 x 78-13/16	1,275

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AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 52217 (115-v)	-----	24 x 32 x 72	740
	or			
	Radio Transmitter 52218 (230-v)	-----	24 x 32 x 72	780
	<i>For Ac Operation:</i>			
1	Magnetic Controller 21669	-----	9-3/16 x 16-5/8 x 18-3/4	50
1	Modulator 50065-A	-----	18 x 24 x 72	385
1	Motor Generator Set 21677	-----	20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171	-----	24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For dc operation: 12</i>	169.03	4,076
<i>For ac operation: 11</i>	161.20	3,758

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72975, 8 May 1940 NOs-80646, 8 January 1941 NOs-80646, 21 September 1942 NXsr-18237, 1 July 1943 NXsr-38688, 28 September 1943 NXsr-36550, 23 August 1943 NXsr-51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958

Cognizant Serv: FSN: 5820-644-0906

TBM-9

USA

USN

USAF

TYPE CLASS: --

Used by

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-9 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc*Power Output:*

A1: 75 or 500 w

A2, A3: 350 w

Frequency Control: Master oscillator*Emission:* A1, A2, A3*Keying Speed:*

A1: 100 wpm (maximum)

A2: 50 wpm (maximum)

Modulator Data:

Speech Input: 6 mw level from 600-ohm source

Modulation: 100%

AF Distortion: 10% (maximum)

Gain: 60 db

Output: 400 w

Antenna Data: 80 feet (maximum length outside trunk)*Power Requirements:*

Motor Generator 21676: 230-v dc

Motor Generator 21677: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For dc operation:</i>				
1	Magnetic Controller 21667	-----	13-3/8 x 16 x 22-1/2	70
1	Modulator 50065-A	-----	18 x 24 x 72	385
1	Motor Generator Set 21676	-----	20-5/16 x 20-3/8 x 78-13/16	1,275
1	Radio Transmitter 52218	-----	24 x 32 x 72	780
<i>For ac operation:</i>				
1	Magnetic Controller 21669	-----	9-3/16 x 16-5/8 x 18-3/4	50
1	Modulator 50065-A	-----	18 x 24 x 72	385
1	Motor Generator Set 21677	-----	20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171	-----	24 x 32 x 72	780

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For dc operation: 1</i>	207.94	4,302
<i>For ac operation: 0</i>	190.54	3,969

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC & /or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72975, 8 May 1940 NOs-80646, 8 January 1941 NOs-80646, 21 September 1942 NXsr-18237, 1 July 1943 NXsc-38688, 28 September 1943 NXsr-36550, 23 August 1943 NXsr-51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958

Cognizant Serv: FSN:

TBM-11

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-11 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc

Power Output:

A1: 75 or 500 w

A2, A3: 350 w

Frequency Control: Master oscillator

Type Emission: A1, A2, A3

Keying Speed:

A1: 100 wpm (maximum)

A2: 50 wpm (maximum)

Modulator Data:

Speech Input: 6 mw level from 600-ohm source

Modulation: 100%

AF Distortion: 10% (maximum)

Gain: 60 db

Output: 400 w

Antenna Data: 80 feet (maximum length outside trunk)

Power Requirements:

Motor Generator 21675: 115-v dc

Motor Generator 21676: 230-v dc

Motor Generator 21677: 440-v 60-cycle 3-phase

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For dc operation</i>				
1	Magnetic Controller 211231 (115-v)	-----	10-3/16 x 15 x 20-1/4	68
	or			
	Magnetic Controller 211232 (230-v)	-----	10-3/16 x 15 x 20-1/4	76
1	Modulator 50065-A	-----	18 x 24 x 72	385
1	Motor Generator Set 21675 (115-v)	-----	20-5/16 x 20-3/8 x 78-3/16	1,275
	or			
	Motor Generator Set 21676 (230-v)	-----		
1	Radio Transmitter 52217 (115-v)	-----	24 x 32 x 72	740

AN/SRT-type RADIO TRANSMITTING EQUIPMENT**MAJOR COMPONENTS—Continued**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
	Radio Transmitter 52218 (230-v)	-----	24 x 32 x 72	780
	<i>For ac operation:</i>			
1	Magnetic Controller 211233	-----	6-3/4 x 8-7/32 x 11-9/32	18
1	Modulator 50065-A	-----	18 x 24 x 72	385
1	Motor Generator Set 21677	-----	20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171	-----	24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11 <i>for dc operation</i>	204.1	4,321
11 <i>for ac operation</i>	189.6	3,944

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOS-72975, 8 May 1940 NOS-80646, 8 January 1941 NOS-80646, 21 September 1942 NXsr-18237, 1 July 1943 NXsr-38688, 28 September 1943 NXsr-36550, 23 August 1943 NXsr-51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

18 November 1958

Cognizant Serv: FSN:

TBM-12

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-12 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is

some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:*Frequency Range:* 2,000 to 18,100 kc*Power Output:*

A1: 75 or 500 w

A2, A3: 350 w

Frequency Control: Master oscillator*Type Emission:* A1, A2, A3*Keying Speed:*

A1: 100 wpm (maximum)

A2: 50 wpm (maximum)

Modulator Data:

Speech Input: 6 mw level from 600-ohm source

Modulation: 100%

AF Distortion: 10% (maximum)

Gain: 60 db

Output: 400 w

Antenna Data: 80 feet (maximum) length outside trunk*Power Requirements:* 230-v dc (Motor Generator 21676)**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller 211232	-----	10-13/32 x 15 x 20-1/4	68
1	Modulator 50065-B	-----	18 x 24 x 72	385
1	Motor Generator Set 21676	-----	20-1/4 x 20-1/4 x 78-13/16	5,225
1	Radio Transmitter 52218	-----	24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900763

MIL-HDBK-161

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
10	138.55	3,962

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsr-65327, 20 June 1944	

TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958

Cognizant Serv: USN FSN:

TBN-3

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitting Equipment TBN-3 is a combined intermediate and high frequency equipment designed for shipboard installation. It consists of a 500-watt high frequency unit for continuous wave and modulated continuous wave telegraph and telephone transmission plus a 1,000-watt intermediate frequency transmitter for continuous wave and modulated continuous wave telegraph transmission. Suitable switching facilities are provided to permit alternate operation of either transmitter unit from a common rectifier unit.

The TBN-3 is supplied with single channel speech input equipment making it possible to connect the component units together to form a remote telephone operation of one high frequency transmitter. The transmitter units may be controlled and keyed using the Navy standard 4-wire remote control system using Remote Control Unit 23005 when provided. Provisions are made in the high frequency transmitter unit for low power operation with a nominal output of 75 watts in the frequency range of 2,000 to 9,050 kilocycles for continuous wave and modulated continuous wave telegraphic signalling.

Transmitting Equipment TBN-3 is similar to other models of the TBN series. Some models are used aboard ship, while others are used at shore stations. The major difference is that some models use rectifier units while the others operate from motor generators.

TECHNICAL CHARACTERISTICS:*Frequency Range:*

Intermediate: 300 to 2,000 kc

High: 2,000 to 18,100 kc

Power Output:

Intermediate Frequency: 1,000 w

High Frequency: 500 w

Type Emission:

Intermediate Frequency: A1, A2

High Frequency: A1, A2, A3

Frequency Control: Master oscillator*Keying Speed (High Frequency Transmitter):* 100 wpm*Power Requirements:* 440-v ($\pm 5\%$) 60-cycle ($\pm 2\%$) 3-phase ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Rectifier-Modulator Unit 20033	-----	24 x 38 x 72	1,460
1	High Frequency Transmitter Unit 52048	-----	24 x 32 x 72	748
1	Intermediate Transmitter Unit 52046	-----	24 x 32 x 72	626
1	Single Channel speech input equipment consisting of:			
1	Master Monitor Unit 23072	-----	11-3/4 x 12-1/4 x 13-7/8	45
1	Telegraph Power Unit 20039	-----	12-3/8 x 13-3/8 x 15-5/8	85
1	Station Control Unit 23070	-----	8-1/2 x 10 x 20-5/16	38

MIL-HDBK-161

AN/SRT-type TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

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
Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs-38614, 9 October 1934	

RADIO TELEGRAPH TRANSMITTING EQUIPMENT **AN/SRT-type**

4 December 1958

Cognizant Serv: USN FSN:

TBU

USA

USN

USAF

TYPE CLASS: --

Used by

--

STOCK NO: .

F16-Q-315376-200

--

(See Illustration: TBU-1, p. 633)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TBU is primarily designed for use on all larger types of surface vessels where a medium frequency, medium power transmitter is desired. Frequency is continuously variable throughout the specified range. The transmitter may be operated from the front panel or from a remote location by use of Navy standard four- or six-wire remote control unit.

The TBU is identical with the TBU-1 and TBU-3 models except that the latter two have been adapted for shore instal-

lations by the addition of duplicate motor-generator sets and a land line control unit.

TECHNICAL CHARACTERISTICS:*Frequency Range:* 300 to 2,000 kc*Type of Signal:* Cw, mew*Keying Data:* Relay keying, 100 wpm max speed*Nominal Power Output:*

Cw: 1,000 w

Mew: 500 w

Frequency Control: Master oscillator*Power Supply Equipment:* Motor generator*Power Requirements:* 220/440-v 60-cycle 3-phase ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CAY- 21695	-----	18-29/32 x 16-5/8 x 9-3/16	50
1	Motor Generator Unit CAY- 21448	-----	22-1/8 x 74-21/32 x 20-3/4	1,185
1	Radio Transmitter CAY-52223	-----	72 x 34 x 24	769

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,384

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
15	158.10	4,087

MIL-HDBK-161

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Mfg. Co.	Baltimore, Md.	NOs-66593, 9 May 1939 NOs-82338 24 Feb 1941	\$12,500.00 in- cluding spares

RADIO TELEGRAPH TRANSMITTING EQUIPMENT **AN/SRT-type**

4 December 1958

Cognizant Serv: USN FSN:

TBU-2

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

115-v dc: F16-Q-

315415-200

230-v dc: F16-Q-

315425-200

(See Illustration: TBU-1, p. 633)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TBU-2 is primarily designed for use on all larger types of surface vessels where a medium frequency, medium power transmitter is desired. Frequency is continuously variable throughout the specified range. The transmitter may be operated from the front panel or from a remote location by use of a Navy standard four or six wire remote control unit.

Radio Telegraph Transmitting Equipment TBU-2 is identical to TBU-1 and TBU-3 models except that the latter two have been adapted for shore installations by the addition of duplicate motor-generator sets and a land line control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc*Type of Signal:* Cw, mcw*Keying Data:* Relay keying, 100 wpm max speed*Nominal Power Output:*

Cw: 1,000 w

Mcw: 500 w

Frequency Control: Master oscillator*Power Supply Equipment:* Motor-generator*Power Requirements:* 220/440-v 60-cycle 3-phase; 115/230-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CAY- 21695	-----	18-29/32 x 16-5/8 x 9-3/16	50
1	Motor Generator Unit CAY- 21448	-----	22-1/8 x 74-21/32 x 20-3/4	1,185
1	Radio Transmitter CAY-52223	-----	72 x 34 x 24	769

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,384

MIL-HDBK-161

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	105.32	2,672

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Mfg. Co.	Baltimore, Md.	NOS-66593, 9 May 1939 NOS-82338, 24 Feb 1941	\$12,500.00 including spares

RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

5 December 1958

Cognizant Serv: USN FSN:

TCJ, TCJ-1

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TCJ and TCJ-1 are designed for use in certain types of submarines, destroyers, cruisers, or in other applications requiring similar radio equipments. Model TCJ-1 may also be used for shore station service. These equipments are designed to effect communication with precision, speed, and reliability without the necessity

of preliminary calling and without causing interference with other units in the same frequency band.

TECHNICAL CHARACTERISTICS:*Frequency Range:* 300 to 600 kc*Type of Signal:* Cw and mcw*Power Requirements:* 115/230-v dc; or 220-v ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	TCJ-1:			
	Ship Operation:			
1	Magnetic Controller Unit 21629	-----	8-13/16 x 19-15/16 x 20-7/8	40
1	Motor-generator Set 21765	-----	11-1/4 x 14 1/8 x 34-15/16	267
1	Radio Transmitter Unit 52243	-----	18-1/4 x 25 x 52-3/8	285
	Shore operation:			
1	Land Line Control Unit 23269	-----	15-3/4 x 24 x 42-1/8	160
1	Magnetic Controller Unit 21627 (115-v dc)	-----	13-11/16 x 19-7/16 x 29-3/16	130
1	Magnetic Controller Unit 21628 (230-v dc)	-----		
	or			
1	Radio Transmitter Unit 52243 (220-v ac)	-----	18-1/4 x 25 x 52-3/8	285
2	Magnetic Controller Unit 21629	-----	8-14/16 x 19-15/16 x 20-7/8	40
2	Motor-generator Set 21765	-----	11-1/4 x 14-1/8 x 34-15/16	320
1	Motor-generator Set 21764 (115-v dc)	-----	11-1/4 x 14-1/8 x 38-5/8	328
	or			
1	Motor-generator Set 21798 (230-v dc)	-----		
1	Power Transfer Switch 24092	-----	9-1/4 x 12-1/4 x 16	14

MIL-HDBK-161

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter Unit 52242 (115-v dc)	-----	18-1/4 x 25 x 52-3/8	275
	or			
1	Radio Transmitter Unit 52257 (230-v dc)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS-900,402-1B

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
General Electric Co.	Schenectady, N. Y.	NOs-97255, 9 Oct 1944	\$8,200.00 in- cluding equip- ment spares

PORTABLE EMERGENCY RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

5 December 1958

Cognizant Serv: **USN** **FSN:**

TCY, TCY-1

USA

USN

USAF

TYPE CLASS:

STOCK NO:

TCY: 16-Q-327825-200

TCY-1: 16-Q-327845-200



TCY

FUNCTIONAL DESCRIPTION:

Radio Transmitters TCY and TCY-1 are portable emergency sets designed for operation in lifeboats, life rafts, and on shipboard. The equipment is capable of transmitting SOS interspersed with 10-second dashes (automatically) to furnish radio bearings, or it may be keyed manually for transmission.

TECHNICAL CHARACTERISTICS:

Frequency Range: 500 kc $\pm 5\%$

Type of Reception: A2, modulated in excess of 70% at 1,000 cps

Frequency Control: Master oscillator

Nominal Power Output: 5 w

Duration of Operation: 48 periodic operations (approx 2 minutes ea), or 1-1/2 hour continuous keying

Power Source Required: 90 w at 6 v dc

Power Supply Equipment: Storage battery and vibrator packs

MIL-HDBK-161

AN/SRT-type PORTABLE EMERGENCY RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TCY:</i>				
1	Antenna Materials Kit			
1 set	Equipment Spares			
1	Radio Transmitter 52236	-----	16-1/4 x 21-1/4 x 9-3/8	60
<i>For TCY-1:</i>				
1	Antenna Materials Kit			
1 set	Equipment Spares			
1	Radio Transmitter 52236-A	-----	16-1/4 x 21-1/4 x 9-3/8	60

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95324

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18.35	145

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: EN 28/3210-43/Ships
EN 28/2658-43/NSA
EN 28/2944-43/Ships
DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Newark, N. J.	NXsr-46043	\$462.00

RADIO TELEGRAPH TRANSMITTING EQUIPMENT **AN/SRT-type**

5 December 1958

Cognizant Serv: USN FSN: TDA
 USA USN USAF

TYPE CLASS: -- Used by --
 STOCK NO: -- F16-Q-329265-200 --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TDA is a compact, medium power transmitter designed for shipboard use in effecting ship-to-shore and ship-to-ship transmission. It employs a master oscillator frequency control but is arranged so that crystal units may be easily installed.

Frequency Control: Master oscillator
Type Emission: A1, A2
Power Output: 200 w
Keying Speed:
 A1: 100 wpm
 A2: 50 wpm
Power Requirements: 1,210 w, 115-v dc
Antenna Type: Any antenna with capacitance between 500 and 1,500 micromicrofarads and resistance of 4 to 10 ohms

TECHNICAL CHARACTERISTICS:

Frequency Range: 355 to 550 kc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor-Generator Set CRM-ET-8010	-----	15 x 28 x 11	210
1	Radio Transmitter CRM-ET-8010-C	-----	45-3/16 x 17-3/4 x 29	175

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

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

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO TELEGRAPH TRANSMITTING EQUIPMENT **AN/SRT-type**

5 December 1958

Cognizant Serv: **USN** **FSN:****TDB****USA****USN****USAF**TYPE CLASS:
STOCK NO:--
--Used by

--

TDB

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TDB is a high-frequency radiotelegraph transmitter designed primarily for marine applications to provide A1 and A2 emission in the frequency range of 2,000 to 22,140 kilocycles. It can be crystal controlled with a maximum of ten quartz crystals that may be installed. This equipment also has provision, by means of front panel adjustments, to cover continuously the frequency range for which it is designed.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 22,140 kc in 4 bands

Type Emission: A1, A2

Power Output (A2): 200 w between 2,000 and 17,000 kc,
150 w above 17,000 kc

Frequency Control: Crystal or dial

Modulation Data (A2):

Frequency: 500-cycle

Percentage: 70%

Frequency Tolerance:

Master Oscillator Operation: $\pm .05\%$

Crystal-Control Operation: $\pm .02\%$

Power Requirements: 1,300 w, 110/230-v dc

Antenna Type: 30 to 40 feet vertical wire for low frequencies;
ships main antenna for higher frequencies

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit ET-8019			
1	Filter Type 20			
1	Motor Generator ET-8010			
1	Motor Starter CR-4052-Y1			
1	Radio Telegraph Transmitter TDB		12-1/4 x 19-1/4 x 45-3/16	150
1	Switch, Antenna Transfer ATS-7			
1	Telegraph Key CQ			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

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

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		\$3,000.00 in- cluding equip- ment spares

EMERGENCY RADIO TELEGRAPH EQUIPMENT **AN/SRT-type**

1 July 1958

Cognizant Serv: USN FSN: 5820-189-7027

TDK

USA

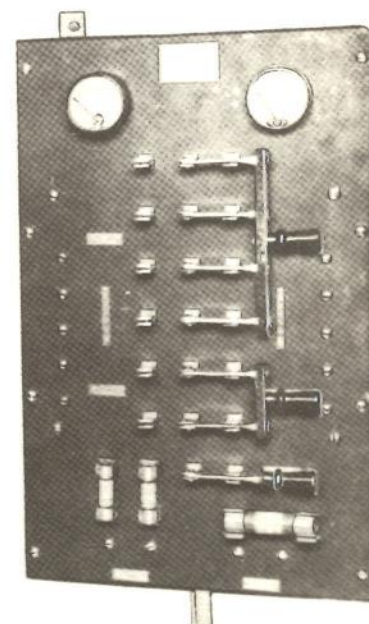
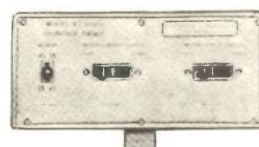
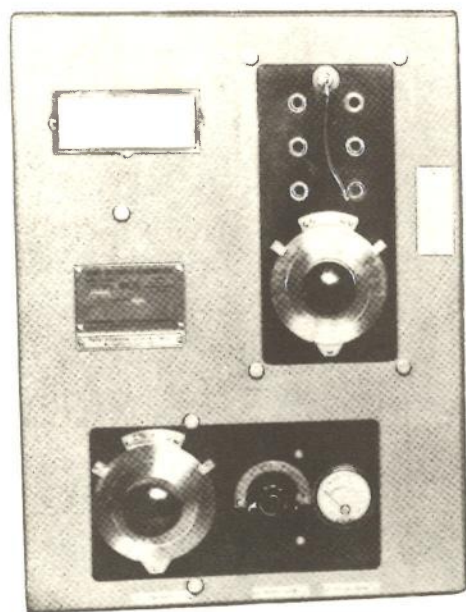
USN

USAF

TYPE CLASS:
STOCK NO:

Used by

L/Std

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TDK

FUNCTIONAL DESCRIPTION:

Emergency Radio Telegraph Transmitter TDC is AM (mcw) equipment for emergency mf transmission aboard ship. It provides a high degree of reliability, together with simplified operation and minimum drain from the power-supply circuits.

This transmitter uses a simple self-excited oscillator for frequency control.

It will operate from 115-volt dc or 12-volt storage battery power sources. When it is used only for emergency service from a 12-volt battery, no connections are needed to the 115-volt

motor; but 115-volt dc must be connected to the power control panel for battery charging.

This transmitter is essentially the same as Radio Transmitter AN/SRT-2.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.355 to 0.50

Type Modulation: AM

Type Signal: Mew

Power Output: 30w into a 750- μ f, 4-ohm antenna

Power Requirements: 45 amp at 12-v dc; or 4 amp at 110-115-v dc

MIL-HDBK-161

AN/SRT-type EMERGENCY RADIO TELEGRAPH EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit CRM-23309	-----	4 x 9-1/8 x 5	4.1
1	Motor Generator Set CBP- 21864	-----	9-1/8 x 30 x 7-3/4	130
1	Plate Transformer CAY-30882	-----	5 x 5 x 5-3/4	8.1
1	Power Control Panel CRM- 23310	-----	19 x 12 x 8-3/8	25
1	Radio Transmitter Unit CRM- 52269	-----	20-1/8 x 15-1/8 x 7-1/2	26

REFERENCE DATA AND LITERATURE:

TM 11-831

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

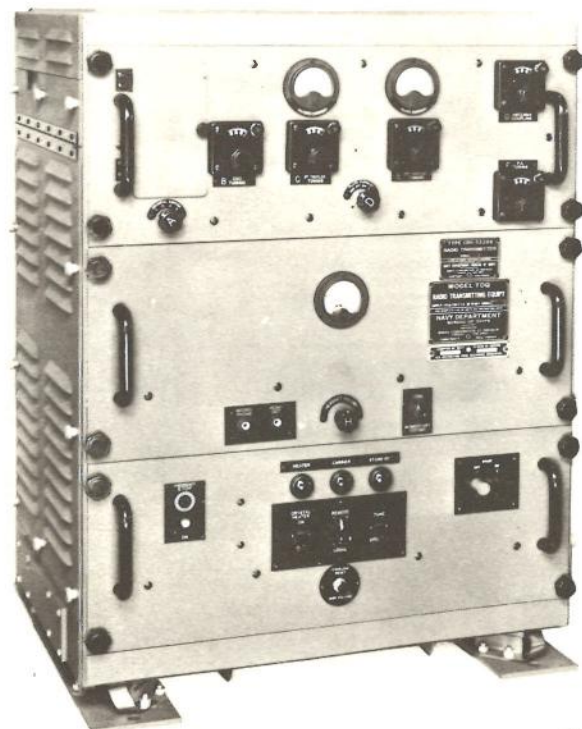
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

VHF RADIO TRANSMITTING EQUIPMENT **AN/SRT-type**

9 October 1958

Cognizant Serv: USN FSN: 115-v Ac, 5820-644-0864 TDQ
 5820-665-3715 (with equipment spares)
 230-v Ac, 5820-665-3530
 5820-644-4875 (with equipment spares)
 440-v Ac, 5820-644-0870
 5820-665-3707 (with equipment spares)
 115-/230-v Dc, 5820-644-0877
 5820-665-1098 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	115-v Dc: F16-Q- 336585-200	--
		230-v Dc: F16-Q- 336575-200	



TDQ

FUNCTIONAL DESCRIPTION:

VHF Radio Transmitting Equipment TDQ is a low-powered, general purpose radio transmitter operating in the VHF band from a fixed, vertically polarized, half-wave antenna. It can be operated locally or from a remote location by a four- or six-wire remote control unit. Keying speeds up to 40 words per minute are possible.

The transmitter is designed primarily for shipboard installation and can be operated from any of the usual ship's power sources. It is used for ship-to-shore, ground-to-air, or point-to-

point communication. Signals can be received by any amplitude-modulated receiver with the same frequency coverage. In addition, Navy field change No. 4 has converted the equipment to extend the audio-frequency response and to permit operation in conjunction with Portable Carrier Control System UF and Telephone Terminal CF-1-A.

Crystals for any four frequencies within the range of the equipment may be used and selected as desired by a switch on the transmitter. The transmitter must be returned, however, each time the frequency is changed. In installations where rapid variation of transmission from one frequency to another or simultaneous transmission on different frequencies is desired, two or more equipments must be used.

The radio transmitter consists of a radio-frequency unit, a modulator, and a power unit contained in a single cabinet. Remote Control Unit 23172 or 23211 and an RF transmission line are required for the operation of the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156

Frequency Control: Crystal

Type Signal: AM

Type Transmission: Mcw, voice

Type Keying: Relay

Keying Speed: 40 wpm

RF Transmission Line:

RG-10/U: For distances of less than 100 ft

RG-18/U: For distances over 100 ft

Power Output: 45 w

Power Requirements:

Ac Operation:

2.6 amp (starting), 6.8 amp (operating), 115-v 60-cycle 1-phase ac

1.23 amp (starting), 3.5 amp (operating), 230-v, 60-cycle 1-phase ac

.75 amp (starting), 1.8 amp (operating) at 440-v, 60-cycle 3-phase ac

Dc Operation:

50 amp (starting), 13 amp (operating) at 115-v dc 25 amp (starting), 6.5 amp (operating) at 230-v dc

AN/SRT-type VHF RADIO TRANSMITTING EQUIPMENT**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66095	-----	24-1/2 x 46-1/2 x 4-3/4	17
1	Line Transformer 30984 (for 440-v ac operation)	-----	13-3/4 x 11 x 9	57
1	Microphone 51004C	-----	2-7/16 x 2-1/8 x 1-5/16	0.5
1	Motor Generator:			
	211092 (for 115-v dc opera- tion)	-----	11-3/4 x 27-3/8 x 13-3/8	210
	211093 (for 230-v dc opera- tion)	-----	11-3/4 x 27-3/8 x 13-3/8	210
1	Motor Starter:			
	211090 (for 115-v dc opera- tion)	-----	21 x 17-3/8 x 13	16
	211091 (for 230-v dc opera- tion)	-----	21 x 17-3/8 x 13	16
1	Radio Transmitter 52328	-----	32-1/4 x 25-1/4 x 18-3/8	283

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,474

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	42.5	908

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

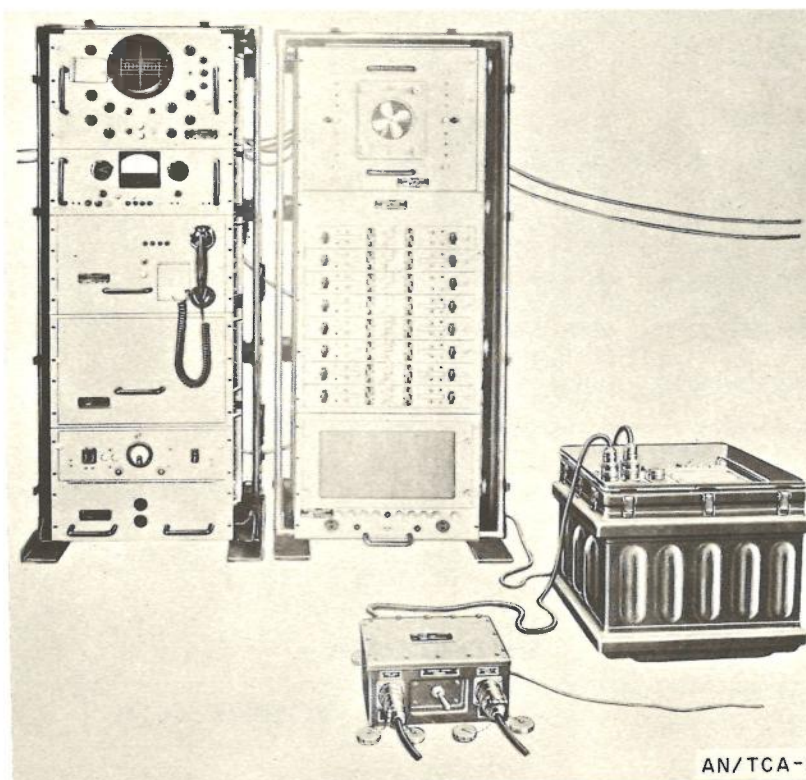
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of Radio Corp. of America	Camden, N. J.	NXss-29644, 17 May 1943	\$3,500 with equipment spares

MULTIPLEXER GROUP AN/TCA-1

1 July 1958

Cognizant Serv: USA FSN: 5805-309-3342

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2Z6823-2	--	--

**FUNCTIONAL DESCRIPTION:**

Multiplexer Group AN/TCA-1 is used as a drop and insert terminal at a microwave repeater station in systems using Multiplexer Sets AN/TCC-13 at its terminals.

The AN/TCA-1 provides eight independent voice channels for use in the area of the repeater station at which it is installed. Each of the eight channels can be dropped for local use or passed through the system without change. It also restores the 23- or 45-channel video pulse train from the microwave radio receiver into a standard wave shape before it is fed into the microwave radio transmitter.

This equipment is part of Radio Repeater Set AN/TRC-41.

TECHNICAL CHARACTERISTICS:

Facilities Required: Radio Set AN/TRC-29 or equivalent

Facilities Provided: Restores pulse train of 23- or 45-channel voice system, and allows up to 8 drop-and-insert voice channels

Type of Signal: Pulse position, time-division multiplex

Frequency (Each of channel):

Modulating Bandwidth: 300 to 3,500 cps

Signaling: 20 cps

Video Signal Characteristics:

Pulse Rate: 192 kc

Pulse Width: 0.6 microsecond

Bandwidth: 1 mc

Power Requirements: 1.1 kw, 115/230-v ($\pm 10\%$) 47.3-63-cycle ac

AN/TCA-1 MULTIPLEXER GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C-1151/TC	(FSN) 5805-503-3288 (USA) 2C684-1151	19 x 19 x 10-1/2	
1	Electrical Equipment Rack MT-1433/TCA-1	(FSN) 5805-503-3459 (USA) 2Z7383-1433		
2	Electrical Standardized Com- ponents Case CY-1280/U	(FSN) 5805-333-9806 (USA) 6F300-1280	26-1/2 x 27 x 60	*515 *534
1	Multiplexer Subassembly MX-1442/TC	(FSN) 5805-395-9412 (USA) 4B2137-1442	19 x 17-1/4 x 8-1/2	
1	Power Supply PP-691/G	(FSN) 5805-548-1669 (USA) 3H4497-691	19 x 19 x 12	123
1	Pulse Form Restorer TD-68/G	(FSN) 5820-510-1600 (USA) 2C5620-68	22-3/4 x 19 x 15-5/8	
2	Remote Switching Control C-1509/TC	(FSN) 5805-503-1103 (USA) 2C684-1509	4-1/2 x 2-3/4 x 5-1/2	
16	Telephone Modem MD-179/ TC	(FSN) 5805-503-1065 (USA) 4B1925B-179	16 x 2-1/2 x 8-1/2	5.5
1	Voltage Regulator CN-236/G	(USA) 3H4498-236	23 x 17-1/2 x 19-1/2	215

* Weights of cases are total weights of case plus equipment normally installed therein.

REFERENCE DATA AND LITERATURE:

TM 11-2141
TM 11-2682

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	159.5	2,576

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-14267

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
International Telephone & Telegraph Corp., Federal Radio & Telephone Division	Clifton, N. J	43018-P-56-55	\$17,539.00

AUDIO FREQUENCY AMPLIFIER **AN/TCA-type**

5 December 1958

Cognizant Serv: USN FSN:

CW-50101

USA

USN

USAF

TYPE CLASS: --
STOCK NO: --Used by --
F16-A-28090-6957 --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Audio Frequency Amplifier CW-50101 is a two-stage vacuum tube amplifier used to raise the signal level in telephone and telegraph communication circuits. It is used as a part of Carrier Control System UN.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cycles: 300 to 10,000
Amplifier Gain: -10 db to +50 db
Output Power Level: 1 w
Input and Output Impedances: 600 ohms
Power Requirements: 125 w, 105- to 125-v, 50 to 60 cycle
 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Frequency Amplifier CW-50101	-----	10-1/2 x 19 x 10	65
(This equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,591

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.8	130

MIL-HDBK-161

AN/TCA-type AUDIO FREQUENCY AMPLIFIER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShip

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXsr-83392, 13 February 1945 NObsr-39293, 23 June 1947	\$215.00 with spares

DEMODULATOR AN/TCA-type

5 December 1958

Cognizant Serv: USN FSN:

CW-50124

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

F16-A-4691 --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Demodulator CW-50124 is used to convert the modulated carrier current, obtained at the receiving end of a carrier telegraph channel, into pulses of direct current or voltage suitable for operating telegraph recording equipment.

The direct current signals obtained from the demodulator are suitable for operating a telegraph recorder, teletypewriter arranged for 20 milliampere polar operation, a relay-operated keying circuit for a radio transmitter, the direct keying of a radio transmitter, or for the receiving relay of Teletypewriter Repeater Equipment PM. The CW-50124 is also part of Carrier Control System UN.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cycles: 425 to 4,675 with optimum operation above 1,000

Reception: A1*Signal Input:* Sine wave carrier, 100% modulated with un-biased telegraph signals*Signal Input Level:* From -10 dbm to 0 dbm with optimum level of -6 dbm (reference level of 0 dbm is equivalent to 1 mw input)*Keying Speed:*

Carrier Frequencies Above 1,000 cps: Up to 180 dot-cycles per second

Carrier Frequencies Below 1,000 cps: Up to 140 dot-cycles per second

Input Impedance: 500 ohms*Output Impedance:* 1,800 ohms*Mounting Data:* The demodulator is designed for mounting in a standard 19-inch relay rack*Power Requirements:* 100 w, 105- to 125-v, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Demodulator CW-50124	-----	10-1/2 x 19 x 10	60
1 set	Equipment spares			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,816

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.6	125

MIL-HDBK-161

AN/TCA-type DEMODULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXsr-83392, 13 February 1945	\$600.00 without spares

MULTIPLEXER AN/TCA-type

5 December 1958

Cognizant Serv: USN FSN:

TD-159/U

USA

USN

USAF

TYPE CLASS: --

Used by

--

STOCK NO: --

--

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(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Multiplexer TD-159/U is designed to multiplex the maximum of four audio channels and a synchronization channel into one video channel. To accomplish this, pulse position modulation (ppm) is used for the video channel. This ppm-video channel is intended to amplitude modulate a radio transmitter, and to demultiplex and to demodulate similar ppm and am. video information into four outgoing audio channels.

*Impedance: 600 ohms**Frequency Range: 300 to 3,500 cycles*

Video Channel:

*Band Width: 3-1/2 x 4-1/2 mc**Impedance: 91 ohms**Frequency Range: 0 to 4-1/2 mc*

Output:

Audio:

*Band Width: 3,200 cycles**Impedance: 600 ohms**Frequency Range: 300 to 3,500 cycles*

Video:

*Band Width: 3-1/2 to 4-1/2 mc**Impedance: 91 ohms**Frequency Range: 0 to 4-1/2 mc**Power Requirements: 115-v 400-cycle 1-phase ac*

TECHNICAL CHARACTERISTICS:

Input Channel:

Audio Channel:

Band Width: 3,200 cycles

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Multiplexer TD-159/U	-----	10 x 13 x 22	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/TCA-type MULTIPLEXER

PROCUREMENT DATA

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

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Raytheon Manufacturing Co.	Waltham, Mass.	NObsr-63079	

PORTABLE CARRIER CONTROL SYSTEM AN/TCA-type

28 October 1958

Cognizant Serv: USN FSN: 5820-665-1928 (with equipment spares)

UF

USA

USN

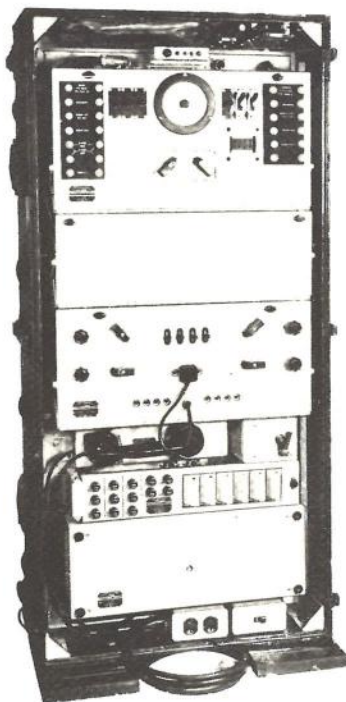
USAF

TYPE CLASS: --

Used by

STOCK NO: --

F16-Q-341095-200



UF

FUNCTIONAL DESCRIPTION:

Portable Carrier Control System UF is used in multichannel carrier telegraph operation over land lines or radio links. It converts dc telegraph or teletypewriter signals into voice frequencies for transmission over the wire line or radio link, and reconverts the ac signals to dc signals.

The system consists of four Line Terminal Equipments UG and two Radio-Line Terminal Equipments UH. The UG is the carrier telegraph terminal equipment for the system, and the UH is the radio and line amplifier equipment for the radio link. For operation over a radio link, these six units and the necessary radio transmitting and receiving equipment for two radio channels (one for each direction of transmission) provide four two-way telegraph circuits.

Either duplex or half-duplex operation may be used; either is capable of handling manual telegraph or teletypewriter and automatic tape-recorded transmission. Operation may be on either a neutral or polar basis, depending upon the type of communication equipment used with the UF.

For use when a land line is practicable, the line terminal equipment at opposite ends of a system may be directly connected by either a two- or four-wire line having an equivalent loss of not more than 25 decibels. When operation over radio links is desired, two radio terminal units are required, one at either end of the system. Typical radio communication equipment with which the UF will operate are Radio Set AN/TRC-1, Radio Transmitter BC-640-B and Radio Receiver BC-639-A, Radio Transmitter TDQ and Radio Receiver RCK, and High-Frequency Radiotelephone Transmitting Equipment TGD and High-Frequency Radio Receiving Equipment RBQ.

TECHNICAL CHARACTERISTICS:*Operating Frequencies:*

Low: 595, 765, 935, 1,105 cps

High: 1,445, 1,614, 1,785, 1,955 cps

Type Modulation: AM*Type Ringing:* 20-cycle

AN/TCA-type PORTABLE CARRIER CONTROL SYSTEM

Transmission Speed:

Teletypewriter: 60 wpm

Automatic Tape Keyer and Recorder: 100 wpm

Radio Link Range: 15 to 40 miles*Load Circuit Range:* 1/4 mile (max) length of field wire*Line Circuit Ranges:*

Between Two UG Line Terminals: 6 to 16 miles

Between UG and UH Line Terminals: 5 miles

Between UH Line Terminal and Transmitter or Receiver:
500 feet*Radio Frequency Range:* 30 to 300 mc*Telegraph Carrier Frequency Band:* 500 to 2,050 cps*Output Level, UG Line Terminal:* 0 dbm per telegraph circuit*Input Level to Transmitter:* -25 dbm and +10 dbm for single telegraph carrier frequency*Output Level From Radio Receiver:* -10 dbm and +10 dbm for single telegraph carrier frequency*Terminating Impedances:*

UG and UH: 600 ohms

Radio Transmitter: 50, 200, or 600 ohms

Radio Receiver: 600 ohms

Power Requirements: 15 w (UH), 135 w (UG), 103- to 126/207- to 253-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
4	Line Terminal Equipment UG, consisting of:	-----	49-1/2 x 24-1/4 x 17-1/8	373
1	Fuse Panel Unit 28016			
1	Line Control Unit 23426			
1	Load Control Unit 50177			
1	Rectifier Power Unit 20290			
1	Telephone Unit 51068			
2	Radio-Line Terminal Equip- ment UH, consisting of:	-----	24-1/4 x 23-7/8 x 17-1/8	163
1	Control Unit 23427			
1	Telephone Unit 51068			
<i>Note:</i> One set of equipment spares (seven boxes) furnished for 10 UF systems. Spare tubes, relays, fuses, and fuseholders are attached to equipment panels in the cabinets.				
Equipment spares, consisting of:				
	Box 1	-----	36-3/16 x 25-3/4 x 17-3/4	276
	Box 2	-----	36-1/16 x 25-3/4 x 17-3/4	228
	Box 3	-----	36-1/16 x 25-3/4 x 17-3/4	239
	Box 4	-----	36-1/16 x 25-3/4 x 17-3/4	199
	Box 5	-----	36-1/16 x 25-3/4 x 17-3/4	208
	Box 6	-----	36-1/16 x 25-3/4 x 17-3/4	236
	Box 7	-----	36-1/16 x 25-3/4 x 17-3/4	252

Note. Eight boxes of ground rods furnished for 10 UF systems.

8 Rods (2 per UG)	-----	20-1/4 x 1/2 dia
8 Rods (2 per UG)	-----	20-1/2 x 1/2 dia
8 Rods (4 per UH)	-----	46-1/2 x 1/2 dia
8 Rods (4 per UH)	-----	46-0/2 x 1/2 dia

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,223

 PORTABLE CARRIER CONTROL SYSTEM **AN/TCA-type**

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For one UF system</i> 2	36	1,083
<i>For ten UF systems</i> 35	1,851	14,017

 PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr-41001 25 October 1945 NXsr-85031 N5sr-5495	\$13,000 with equipment spares

TELEPHONE TERMINAL AN/TCC-3

1 July 1958

Cognizant Serv: USA FSN: 5805-503-2648

USA

USN

USAF

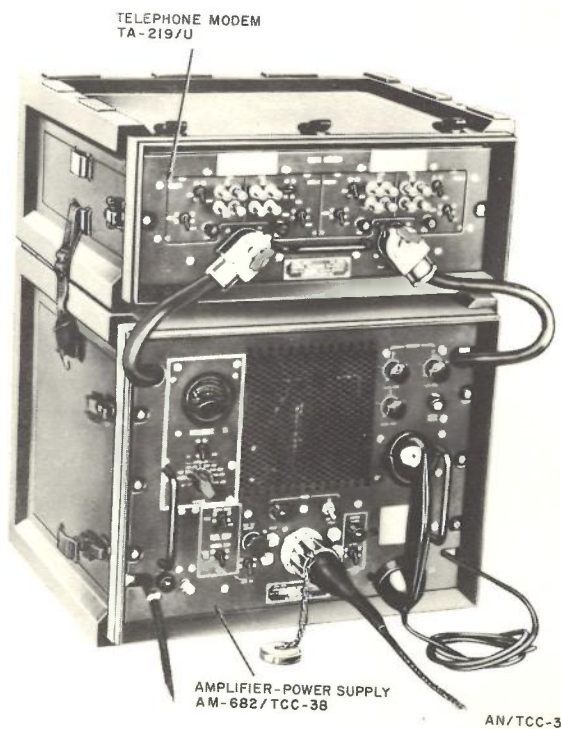
TYPE CLASS:

Std

STOCK NO:

4B8364-2

Std



FUNCTIONAL DESCRIPTION:

Telephone Terminal AN/TCC-3 is a four-channel carrier telephone terminal set used to provide four traffic channels and one order-wire channel over loaded spiral-four cable. It can also be used to carry a single wide-band special-service channel.

This equipment consists essentially of a telephone modem unit and an amplifier power supply.

This set is the major component of Telephone Terminal AN/TCC-23. It also is used in multiple combinations in Telephone Terminal AN/TCC-7.

TECHNICAL CHARACTERISTICS:

Facilities Required: Loaded spiral-four cable or equivalent four-wire facilities

Facilities Provided: Four vt traffic channels plus one order-wire channel; or one wide-band channel plus one order-wire channel

Channel Carrier Frequency:

Channel 1: 8 kc

Channel 2: 12 kc

Channel 3: 16 kc

Channel 4: 20 kc

Frequency Band:

Order wire: 300 to 3,100 cps

Channel 1: 4,500 to 7,700 cps

Channel 2: 8,500 to 11,700 cps

Channel 3: 12,500 to 15,700 cps

Channel 4: 16,500 to 19,700 cps

Type Modulation: AM; lower sideband of each channel

Type Ringing: 1,600 cps

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

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Amplifier Power Supply AM-682/TCC-3	4B107	9-1/8 x 18-1/16 x 20-5/8	73
1	Telephone Modem TA-219/U	4B1925A	17-1/16 x 18-1/16 x 20-5/8	103

MIL-HDBK-161

AN/TCC-3 TELEPHONE TERMINAL

REFERENCE DATA AND LITERATURE:
TM 11-2142

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	13.8	296

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10485

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1667-P-51-61	\$4,069.00

TELEGRAPH TERMINAL AN/TCC-4

1 July 1958

Cognizant Serv: USA FSN: 5805-537-7387

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2811-4	--	--



AN/TCC-4

FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/TCC-4 is used for high-speed, frequency-shift, voice-frequency, carrier telegraph communication. It provides terminal equipment for eight teletypewriter channels over a standard two- or four-wire telephone facility, or 16 channels over a four-wire facility.

Different arrangements of this equipment can be made to provide for more or less telegraph channels. Two of these sets can be combined to provide for 16 telegraph channels; or one set can be split to provide two separate four-channel terminals.

This equipment consists essentially of two Telegraph Terminals AN/TCC-20 plus one Telegraph Modem TH-14/T.

TECHNICAL CHARACTERISTICS:*Facilities Required:*

Loops: VF frequency shift teletypewriter signal, 1,325- and 1,225-cps; or dc neutral signal

Lines: Two- or four-wire telephone channel (wire or radio), flat characteristics between 300 and 3,000 cps

Facilities Provided:

Two-wire line circuits: 8 channels

Four-wire line circuits: 8 channels or 16 channels

Frequency of Line Signals: 425 to 2,975 cps

Type Modulation: Fsk

Type Ringing: 20 cycle

Power Requirements: 480 w, 115/230-v 50/60-cycle 1-phase ac

MIL-HDBK-161

AN/TCC-4 TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Modem TH-14/T	(USA) 4A1472	9 x 18-1/8 x 20-5/8	49
2	Telegraph Modem Assembly TH-15/T	(USA) 4A1473	16-7/8 x 18-1/8 x 20-5/8	82
2	Telegraph Terminal Group TH-13/T	(FSN) 5805-356-2633	16-7/8 x 18-1/8 x 20-5/8	104

REFERENCE DATA AND LITERATURE:

TM 11-2242
TO 31W4-2TCC-1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	22.7	495

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10568

DESIGN COG: USA, Sig C

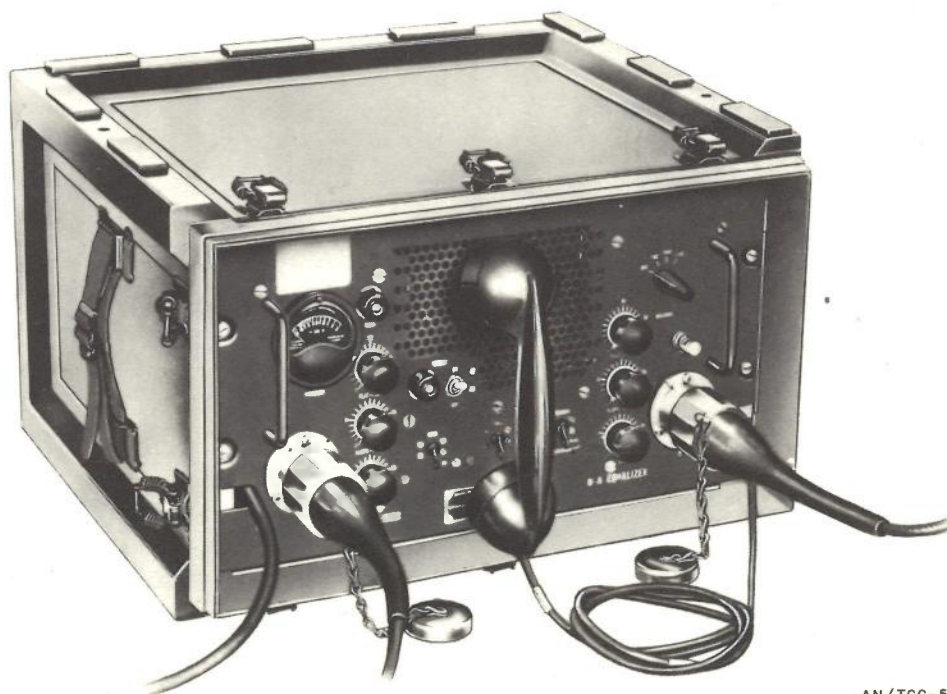
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Electronics Co. Division, International Telephone & Telegraph Corp.	Fort Wayne, Ind.	10676-P-54-53	\$7,690.17

TELEPHONE REPEATER **AN/TCC-5**

1 July 1958

Cognizant Serv: USA FSN: 5805-256-4055

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-5	--	--



AN/TCC-5

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-5 is a four-wire carrier telephone repeating equipment specifically designed for use at intermediate points of a system terminated by Telephone Terminal AN/TCC-3 to permit the addition of spiral-four cable sections within a system. It may also be operated with suitable radio terminal equipment in a radio link in such a system.

This equipment consists of a single major operating component that includes provisions for ringing, monitoring, and connection facilities to the order-wire channel of the system.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable with Telephone Terminal AN/TCC-3 carrier equipment

Facilities Provided: Four-channel telephone carrier plus one VF order-wire channel; amplified in both directions

Frequency:

Carrier Channel: 4,500 to 19,700 cps

Order Wire: 300 to 3,100 cps

Order-wire Signaling: 1,600 cps

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

MIL-HDBK-161

AN/TCC-5 TELEPHONE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telephone Repeater AN/ TCC-5 (Equipment consists of only one major component.)	5805-256-4055	12-3/16 x 18-1/16 x 20-5/8	86

REFERENCE DATA AND LITERATURE:

TM 11-2136

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6.8	150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10486

DESIGN COG: USA, Sig C

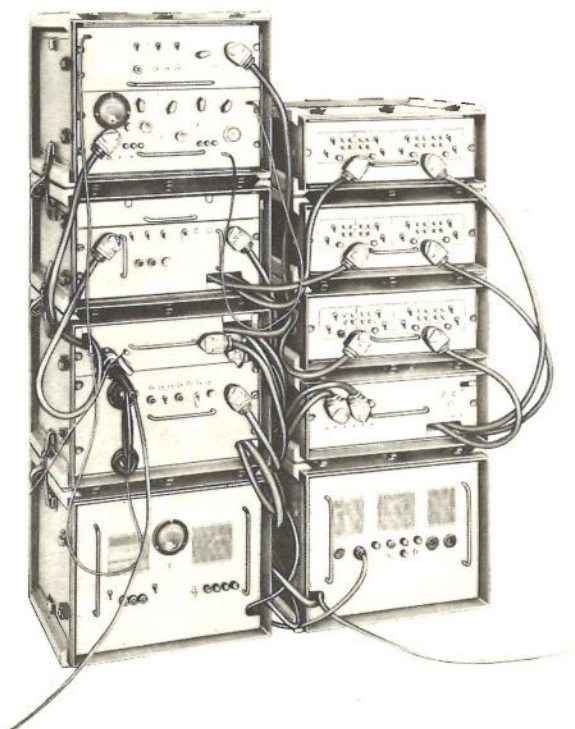
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1667-P-51-61	\$1,396.00

TELEPHONE TERMINAL AN/TCC-7

1 July 1958

Cognizant Serv: USA FSN: 5805-503-1228

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B8364-5	--	--



AN/TCC-7

FUNCTIONAL DESCRIPTION:

Telephone Terminal AN/TCC-7 is the terminal equipment used in a 12-channel telephone carrier system over a single nonloaded spiral-four cable and/or radio-relay links. This system includes attended Telephone Repeater AN/TCC-8 and unattended Telephone Repeater AN/TCC-11, and can provide two-way telephone communication over 12 VF channels and one order-wire circuit over distances up to 200 miles.

TECHNICAL CHARACTERISTICS:

Facilities Required: Nonloaded spiral-four cable or equivalent; appropriate repeater equipment and another AN/TCC-7 terminal at distant end of system

Facilities Provided: 12 VF telephone channel; one order-wire channel; monitoring and ringing facilities

Frequency:

Over Spiral-four Cable Alone: 0.3 to 99 kc

Over Spiral-four Cable and/or Radio Links: 12 to 60 kc

Type Modulation: AM

Type Ringing: 1,600 cps

Power Requirements: 710 w, 115/230-v 49-65-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
1	Amplifier-Pilot Regulator AM-707/TCC-7	4B107-707	17-1/16 x 18-1/16 x 20-5/8	108
1	Power Supply PP-826/U	3H4497-826	17-1/16 x 18-1/16 x 20-5/8	103
1	Power Supply PP-827/U	3H4497-827	17-1/16 x 18-1/16 x 20-5/8	100
1	Receiver-Transmitter-Test Set Group OA-443/TCC-7	3F3937-443	17-1/16 x 18-1/16 x 20-5/8	83

MIL-HDBK-161

AN/TCC-7 TELEPHONE TERMINAL

REFERENCE DATA AND LITERATURE:

TM 11-2139

SHIPPING DATA

PKGS	DIMENSIONS (Inches)	VOLUME (Cu Ft)	WEIGHT (Lbs)
9		51.2	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	21729-P-56-56	\$11,100.00

TELEPHONE REPEATER **AN/TCC-8**

1 July 1958

Cognizant Serv: USA FSN: 5805-333-9796

USA

USN

USAF

TYPE CLASS:

Std

Std

STOCK NO:

4B3185-8

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-8 is the attended repeater element of a 12-channel carrier telephone system that includes Telephone Terminal AN/TCC-7 and unattended Telephone Repeater AN/TCC-11. Such a system can be operated over nonloaded spiral-four cable and/or radio links for distances up to 200 miles.

This equipment consists of an amplifier, a receiver-transmitter test set group, and two power supplies that also furnish power to one, two, or three unattended repeaters located in the system. A voice-frequency channels and a ringing signal are provided for communication between attended point of the system.

TECHNICAL CHARACTERISTICS:

Facilities Required: Single nonloaded spiral-four cable with Telephone Terminal AN/TCC-7 and/or radio links

Facilities Provided: 12-channel telephone carrier plus one VF order-wire channel, amplified in both directions

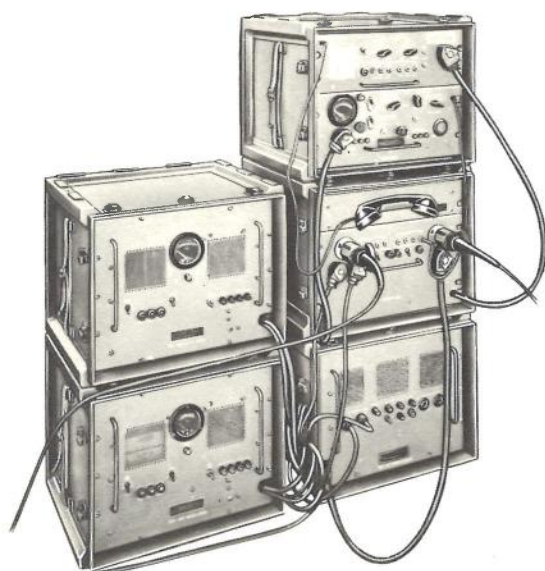
Frequency:

Carrier Channel: 12 to 60 kc (pilot frequency, 68 kc; test frequency, 83, 91, 99 kc)

Order-Wire Channel: 300 to 1,700 cps

Order-Wire Ringing: 1,600 cps

Power Requirements: 900 w, 115/230-v 50/60-cycle 1-phase ac



AN/TCC-8

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
1	Amplifier-Pilot Regulator AM-708/TCC-8	4B107-708	17-1/16 x 18-1/16 x 20-5/8	118
2	Power Supply PP-826/U	3H4497-826	17-1/16 x 18-1/16 x 20-5/8	103
1	Power Supply PP-827/U	3H4497-827	17-1/16 x 18-1/16 x 20-5/8	100
1	Receiver-Transmitter Test Set Group OA-446/TCC-8	3F3937-446	17-1/16 x 18-1/16 x 50-5/8	87

MIL-HDBK-161

AN/TCC-8 TELEPHONE REPEATER

REFERENCE DATA AND LITERATURE:

TM 11-2140
TM 11-2150

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	41.8	831

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10624

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	14181-P-51-61	

TELEPHONE REPEATER AN/TCC-11()

1 July 1958

Cognizant Serv: USA FSN: 5805-356-2661

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-11	--	--



AN/TCC-11

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-11() is a four-wire, unattended, carrier-telephone repeater. It is used to extend the length of a 12-channel spiral-four carrier-telephone system that uses Telephone Terminals AN/TCC-7 and attended Telephone Repeaters AN/TCC-8. The extension obtained for each AN/TCC-11() added to the system is 5-3/4 miles.

This equipment contains facilities for amplifying, equalizing, and regulating the two-way transmission of a band of frequencies from 12 to 99 kc. This band contains 12 carrier-frequency message channels, a 68-kc pilot frequency, and three fault-finding frequencies of 83 kc, 91 kc, and 99 kc. Amplification is supplied to overcome cable loss at the various frequen-

cies transmitted; regulation is applied to correct for changes in cable loss that occur with changes in temperature.

In addition, a means of ringing, talking, and listening at attended points is provided over an unamplified voice-frequency order-wire circuit.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable; 12-channel carrier telephone system using Telephone Terminals AN/TCC-7 and Telephone Repeaters AN/TCC-8

Facilities Provided: Amplification of signal in both directions

Power Requirements: 0.1 amp at 150-v regulated dc supplied over spiral-four cable by Telephone Terminal AN/TCC-7 or Telephone Repeater AN/TCC-8.

MIL-HDBK-161

AN/TCC-11() TELEPHONE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater AN/ TCC-11	5805-356-2661	28-1/4 long x 10 diameter	70
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11-2148
TM 11-2150

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.4	130

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10622

DESIGN COG: USA, Sig C

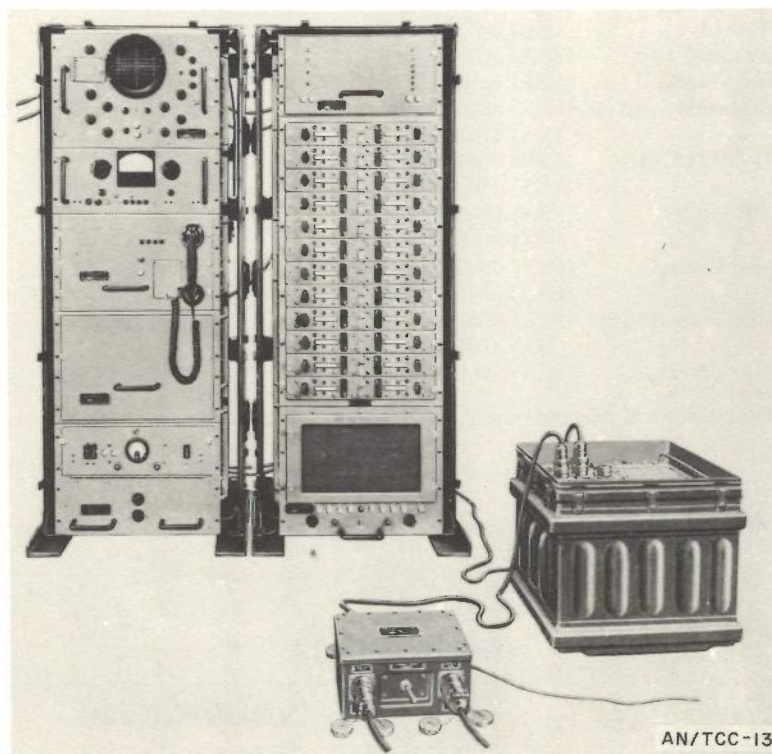
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	21729-P-56-56	\$1,199.00

MULTIPLEXER SET **AN/TCC-13**

1 July 1958

Cognizant Serv: USA FSN: 5805-503-1040

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B2135-13	--	--

**FUNCTIONAL DESCRIPTION:**

Multiplexer Set AN/TCC-13 is used as a terminal in a multichannel microwave radio-relay communication network.

It combines 23 independent vf channels into one composite video signal for transmission over a single RF carrier; conversely, it separates a video signal into 23 individual vf channels.

Two of these sets at each end of the microwave system can provide 45 individual vf channels.

This set can be used only with manual telephone switching centrals; it can operate with either two-wire or four-wire lines for each of the 23 or 45 channels.

This equipment is a component part of Radio Telephone Terminal AN/TRC-38.

TECHNICAL CHARACTERISTICS:

Facilities Required: Radio Set AN/TRC-29 or equivalent
Facilities Provided: Combines 23 vf channels into 1 video channel

Type of Signal: Pulse-position, time-division multiplex
Frequency (Each vf channel):

Modulating Bandwidth: 300 to 3,500 cps

Signaling: 20 cps

Video Signal Characteristics:

Pulse Rate: 192 kc

Pulse Width: 0.6 microsecond

Bandwidth: 1mc

Power Requirements: 1.1 kw, 115/230-v ($\pm 10\%$) 47.5-63-cycle ac

AN/TCC-13 MULTIPLEXER SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C-1151/TC	(FSN) 5805-503-3288 (USA) 2C684-1151	19 x 19 x 10-1/2	
1	Electrical Equipment Rack MT-1165/TCC-13	(FSN) 5820-503-3425 (USA) 2Z7383-1163	19 x 19 x 31-1/2	
2	Electrical Standardized Com- ponents Case CY-1280/U	(FSN) 5805-333-9806 (USA) 6F300-1280	26-1/2 x 27 x 60	*535 *534
1	Multiplexer Subassembly MX- 1442/TC	(FSN) 5805-395-9412 (USA) 4B2137-1442	19 x 17-1/4 x 8-1/2	
1	Multiplexer TD-60/TCC-13	(FSN) 5805-503-1039 (USA) 4B2136-60	19 x 19 x 8-3/4	
1	Power Supply PP-691/G	(FSN) 5805-548-1669 (USA) 3H4497-691	19 x 19 x 12	123
2	Remote Switching Control C-1509/TC	(FSN) 5805-503-1103 (USA) 2C684-1509	4-1/2 x 2 3/4 x 5-1/2	
24	Telephone Modem MD-179/TC	(FSN) 5805-503-1065 (USA) 4B1925B-179	16 x 2-1/2 x 8-1/2	5.5
1	Voltage Regulator CN-236/G	(USA) 3H4498-236	23 x 17-1/2 x 19-1/2	215

* Weights of cases are total weights of case plus equipment normally installed therein.

REFERENCE DATA AND LITERATURE:

TM 11-2147
TM 11-2682

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	159.5	2,596

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-14182

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
International Telephone & Telegraph Corp., Federal Radio & Telephone Co. Division	Clifton, N. J.	38721-P-56-55	\$9,767.00

TELEGRAPH-TELEPHONE TERMINAL **AN/TCC-14**

1 July 1958

Cognizant Serv: USA FSN: 5805-238-9873

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2895-3	--	1730-407-778-030

TELEGRAPH TERMINAL

TELEGRAPH-TELEPHONE
SIGNAL CONVERTER

FILTER ASSEMBLY, ELECTRICAL



AN/TCC-14

FUNCTIONAL DESCRIPTION:

Telegraph-Telephone Terminal AN/TCC-14 is an assemblage of three separate operating components that permits simultaneous transmission of telegraph pulses and speech.

This equipment can be operated in four different types of systems: point-to-point, networks connecting three or more teletypewriter stations, switched systems serving several teletypewriter stations, and push-to-talk remote control radio applications.

It is used in systems composed of two-wire, four-wire, carrier or voice-frequency telegraph facilities, and includes components enabling normal telephone ringing and supervision required for both local battery and common battery switchboards.

TECHNICAL CHARACTERISTICS:

Facilities Required: Two-wire or four-wire vf carrier and/or radio remote control circuits

Facilities Provided: Alternate telegraph and telephone; simultaneous telegraph and telephone; speech plus half-duplex; push-to-talk radio control; and/or telegraph only

Frequency:

Telegraph terminal: Mark, 1,325 cps; space, 1,225 cps

Electrical filter assembly: 1,275 cps (midfrequency)

Type Ringing: 20 cps

Power Requirements: 115-v ($\pm 10\%$) 50/60-cycle ac

MIL-HDBK-161

AN/TCC-14 TELEGRAPH-TELEPHONE TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Filter Assembly F-98/U	(FSN) 5915-356-2134	10 x 8-3/4 x 6-1/2	25.5
1	Telegraph-Telephone Signal Converter TA-182/U	(USA) 4F350-182	11 x 10-1/2 x 7-1/2	15
1	Telegraph Terminal TH-5/TG	(USA) 4A2895-5	11 x 10-1/2 x 7-1/2	18.5

REFERENCE DATA AND LITERATURE:

TM 11-2239

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.1	88.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10267

DESIGN COG: USA, Sig C

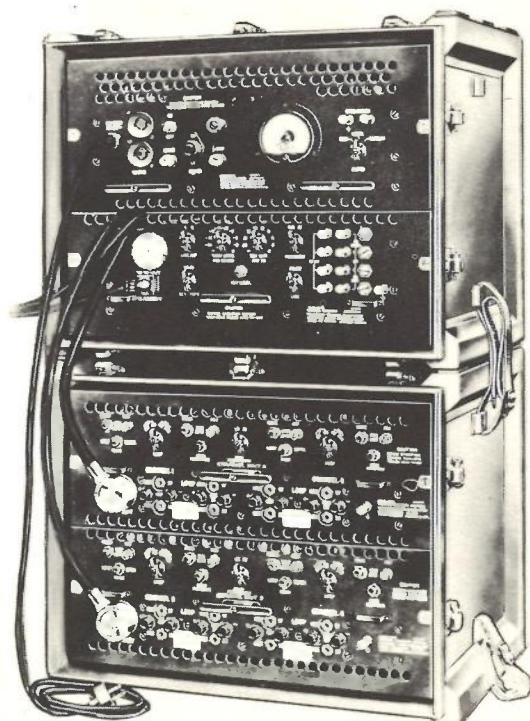
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Dynamics Corp., Stromberg-Carlson Division	Rochester, N. Y.	3291-P-52-31	\$ 996.00
Great American Industries, Inc.	Meriden, Conn.	30005-P-51-31	787.00
Kellogg Switchboard & Supply Co.	Chicago, Ill.	6438-P-51-31	1,048.00

TELEGRAPH TERMINAL AN/TCC-20

1 July 1958

Cognizant Serv: USA FSN: 5805-338-4451

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2894	--	--



AN/TCC-20

FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/TCC-20 is used for high-speed, frequency-shift, voice-frequency, carrier telegraph communication. It provides terminal equipment for four teletypewriter channels over a standard two- or four-wire telephone facility. Two of these sets, plus a Telegraph Modem TH-14/T make up Telegraph Terminal AN/TCC-4.

In various combinations with Telegraph Terminal AN/TCC-4, a maximum of 16 teletypewriter channels may be obtained on a four-wire line basis.

TECHNICAL CHARACTERISTICS:

Facilities Required:

Loops: V_f frequency shift teletypewriter signal, 1,325- and 1,225-cps; or dc neutral signal

Lines: Two- or four-wire telephone channel (wire or radio), flat characteristics between 300 and 3,000 cps

Facilities Provided: Four-channel, two- or four-wire line operation

Frequency of Line Signals: 425 to 1,615 cps

Type Ringing: 20 cycle

Power Requirements: 240 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Modem Assembly TH-15/T	(USA) 4A1472	16-7/8 x 18-1/8 x 20-5/8	82
1	Telegraph Terminal Group TH-13/T	(FSN) 5805-356-2633	16-7/8 x 18-1/8 x 20-5/8	104

MIL-HDBK-161

AN/TCC-20 TELEGRAPH TERMINAL

REFERENCE DATA AND LITERATURE:

TM 11-2242

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.2	215

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10568

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Dynamics Corp., Stromberg-Carlson Division	Rochester, N. Y.	55987-P-57-56	\$2,629.10

TELEPHONE REPEATER **AN/TCC-21**

1 July 1958

Cognizant Serv: USA FSN: 5805-692-6777

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-21	--	--

(See Illustration of AN/TCC-8)

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-21 is the attended repeater element of a 12-channel carrier telephone system that includes Telephone Terminal AN/TCC-7 and unattended Telephone Repeater AN/TCC-11. Such a system can be operated over nonloaded spiral-four cable and/or radio links for distances up to 200 miles.

This equipment consists essentially of one Telephone Repeater AN/TCC-8 plus power units and accessory equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Single nonloaded spiral-four cable with Telephone Terminal AN/TCC-7 and/or radio links

Facilities Provided: 12-channel telephone carrier plus one vt order-wire channel, amplified in both directions

Frequency:

Carrier Channel: 12 to 60 kc (pilot frequency, 68 kc; test frequency, 83, 91, 99 kc)

Order-Wire Channel: 300 to 1,700 cps

Order-Wire Ringing: 1,600 cps

Power Requirements: 900 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(FSN)				
1	Ground Rod MX-148/G	5975-224-5260	72 long x 3/4 diameter	4
1	Junction Box J-85/G	5820-244-0706	4-1/16 x 5 x 5-0/2	8
1	Junction Box JB-110	6150-498-9130	2-1/4 x 4-1/2 x 12-1/4	8.5
2	Power Unit PE-75	6115-228-5815	26-1/2 x 19 x 36	330
1	Telephone Repeater AN/ TCC-8	5805-333-9796		

REFERENCE DATA AND LITERATURE:

TM 11-2140

TM 11-2150

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	41.35	664

MIL-HDBK-161

AN/TCC-21 TELEPHONE REPEATER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10624

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEPHONE REPEATER **AN/TCC-22**

1 July 1958

Cognizant Serv: USA FSN: 5805-503-1234

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-22	--	--

(See Illustration of AN/TCC-5)

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-22 is a four-wire carrier telephone repeating equipment specifically designed for use at intermediate points of a system terminated by Telephone Terminal AN/TCC-3 to permit the addition of spiral-four cable sections within a system. It may also be operated with suitable radio terminal equipment in a radio link in such a system.

This equipment includes provisions for ringing, monitoring, and connection facilities to the order-wire channel of the system.

It is composed essentially of Telephone Repeater AN/TCC-5 plus a power unit and accessory items.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable with Telephone Terminal AN/TCC-3 carrier equipment

Facilities Provided: Four-channel telephone carrier plus one order-wire channel, amplified in both directions

Frequency:

Carrier Channel: 4,500 to 19,700 cps

Order Wire: 300 to 3,100 cps

Order-Wire Signaling: 1,600 cps

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

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Ground Rod MX-148/G	5975-224-5260	72 long x 3/4 diameter	4
1	Junction Box J-85/G	5820-244-0706	4-1/16 x 5 x 5-1/2	8
1	Junction Box JB-110	6150-498-9130	2-1/4 x 4-1/2 x 12-1/4	8.5
2	Power Unit PE-214-B	6115-230-40-02	14 x 18-1/2 x 10	40
1	Telephone Repeater AN/ TCC-5	5805-256-4055	12-3/16 x 18-1/16 x 20-5/8	86

REFERENCE DATA AND LITERATURE:

TM 11-2136

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.29	200

MIL-HDBK-161

AN/TCC-22 TELEPHONE REPEATER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10486

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEPHONE TERMINAL AN/TCC-23

1 July 1958

Cognizant Serv: USA FSN: 5805-338-4452

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-23	--	--

(See Illustration of Telephone Terminal AN/TCC-3)

FUNCTIONAL DESCRIPTION:

Telephone Terminal AN/TCC-23 is a four-channel carrier telephone terminal set used to provide four traffic channels and one order-wire channel over loaded spiral-four cable. It can also be used to carry a single wide-band special service channel.

This equipment consists of one Telephone Terminal AN/TCC-3 plus two power units (one in use, one spare) and accessory items.

TECHNICAL CHARACTERISTICS:

Facilities Required: Loaded spiral-four cable or equivalent four-wire facilities

Facilities Provided: 4 vf traffic channels plus 1 order-wire channel; or 1 wide-band channel plus 1 order-wire channel

Channel Carrier Frequency:

Channel 1: 8 kc
 Channel 2: 12 kc
 Channel 3: 16 kc
 Channel 4: 20 kc

Frequency Band:

Order Wire: 300 to 3,100 cps
 Channel 1: 4,500 to 7,700 cps
 Channel 2: 8,500 to 11,700 cps
 Channel 3: 12,500 to 15,700 cps
 Channel 4: 16,500 to 19,700 cps

Type Modulation: AM, lower sideband of each channel

Type Ringing: 1,600 cps

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

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
2	Power Unit PE-75	3H4575	24-1/2 x 19 x 36	330
1	Telephone Terminal AN/ TCC-3	4B8364-2	26-3/16 x 18-1/16 x 30-5/8	176

REFERENCE DATA AND LITERATURE:

TM 11-2142

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	16.2	530

MIL-HDBK-161

AN/TCC-23 TELEPHONE TERMINAL

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10485

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEPHONE TERMINAL AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: CF-1-A: 5805-170-4770
CF-1-B: 5805-170-4772

CF-1-()

USA

USN

USAF

TYPE CLASS:

L/Std

Used by

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STOCK NO:

CF-1-A: 4B8361A

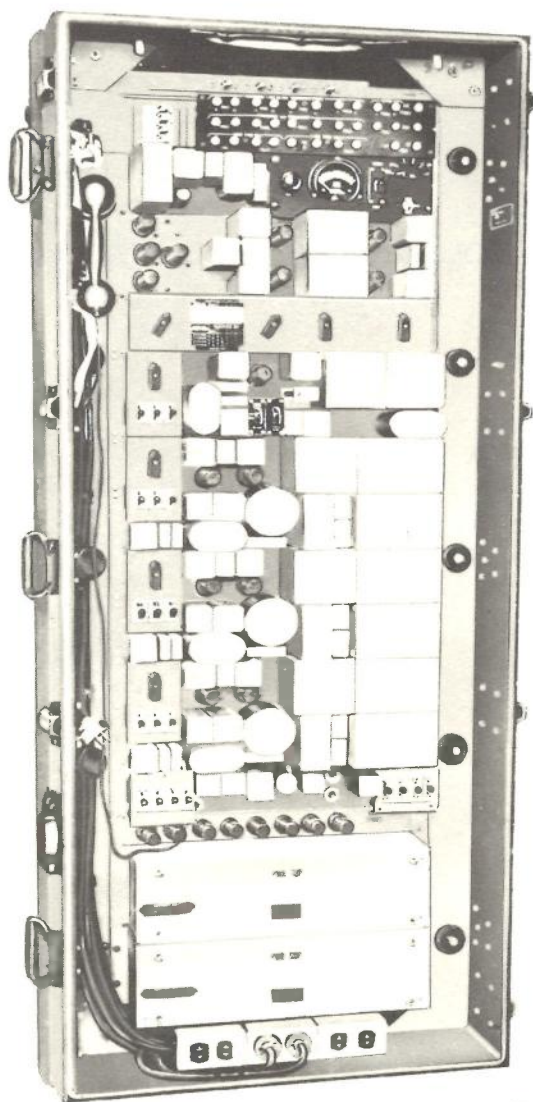
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CF-1-B: 4B8361B

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CF-1

FUNCTIONAL DESCRIPTION:

Telephone Terminal CF-1-() is a transportable, four-channel, carrier telephone terminal equipment used in systems composed of spiral-four cable or equivalent facilities.

This equipment consists of a single bay of apparatus that provides one voice-frequency, plus three-carrier-frequency channels.

It requires additional equipment for ringing. It may be used with other carrier terminal equipment to provide telephone and telegraph traffic handling and transmission facilities. Distances up to about 100 miles are possible with repeaters at 25-mile intervals, over cable on the ground or in the air, and up to 400 miles over buried cable. Operation over nonrepeated circuits is possible up to 45 miles.

This terminal is the principal operating component of Telephone Terminal Set TC-21.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or facility of equivalent quality

Facilities Provided: One vf plus three carrier-frequency voice channels

CF-1-A: two-wire termination

CF-1-B: two- or four-wire termination

Line Frequency: 200 to 12,000 cps; approximate band spacing of 2,600 cps

Type Modulation: AM

Type Ringing: Vf, with additional equipment

Power Requirements:

Normal: 115/230-v 50/60-cycle ac

Emergency: One 12-v, two 6-v storage batteries

MIL-HDBK-161

AN/TCC-type TELEPHONE TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Terminal CF-1-A (Equipment consists of only one major component.)	5805-170-4770	66 x 28 x 19	475

REFERENCE DATA AND LITERATURE:

TM 11-801

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	32	562

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-1552

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	14870-P-43-23	\$2,455.08

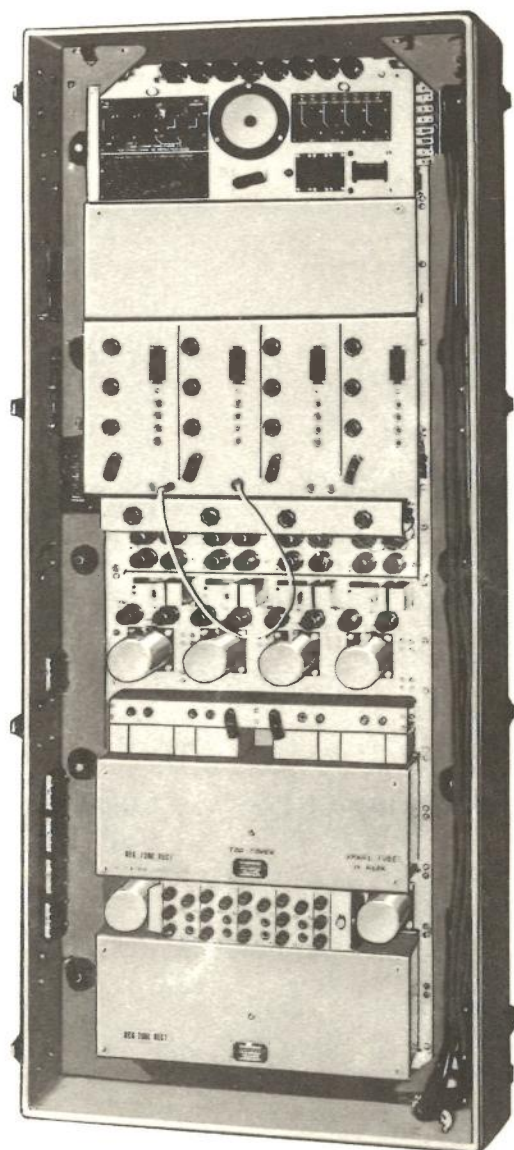
TELEGRAPH TERMINAL AN/TCC-type

5 December 1958

Cognizant Serv: USA FSN: For CF-2-A: 5805-239-8260
For CF-2-B: 5805-239-8264

CF-2-()

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--
For CF-2-A:	4A2892A		
For CF-2-B:	4A2892B		



FUNCTIONAL DESCRIPTION:

Telegraph Terminal CF-2-() is a transportable, four-channel, voice-frequency carrier terminal equipment used for two-way transmission of teletypewriter signals in each channel, and which operates over a channel of a carrier-telephone system derived by means of Telephone Terminal CF-1, Repeater CF-3, and associated equipment. It is used in spiral-four cable, or equivalent systems, serving division and higher headquarters.

This equipment consists of panel-mounted apparatus covering four channels, inclosed in a single cabinet. (CF-2-A, not illustrated here, consists of equivalent apparatus arranged in two cabinets but performing the identical service.)

It can be installed adjacent to the carrier telephone terminal, but may be operated from a distant point over a two-wire circuit (between carrier telephone and telegraph bays) that has a net loss not exceeding 8 db; or over any telephone circuit terminating on a two-wire basis (of the required stability and freedom from interference) that has a net loss not exceeding 25 db (at 500-2,050 cps).

TECHNICAL CHARACTERISTICS:

Frequency Range in cps: 500 to 2,050, 8 channels spaced 170 cps apart

Type of Modulation: AM

Power Requirements: 200 to 250 w, 100- to 125-v, or 200- to 250-v, 50- to 60-cycle, ac

CF-2

MIL-HDBK-161

AN/TCC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For CF-2-A:</i>				
1	Telegraph Terminal CF-2-A (1 or 2 bays of equipment)	-----	66 x 27-1/2 x 19	530 (each bay)
<i>For CF-1-B:</i>				
1	Telegraph Terminal CF-2-B (1 bay of equipment)	-----	66 x 27-1/2 x 19	575

REFERENCE DATA AND LITERATURE:

For CF-2-A: TM 11-355
For CF-2-B: TM 11-355B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For CF-A-A:</i> 2	74.44	1,580
<i>For CF-2-B:</i> 1	70.63	1,297

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 71-1554

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1685-P-51-10	\$3,902.00

REPEATER **AN/TCC-type**

1 July 1958

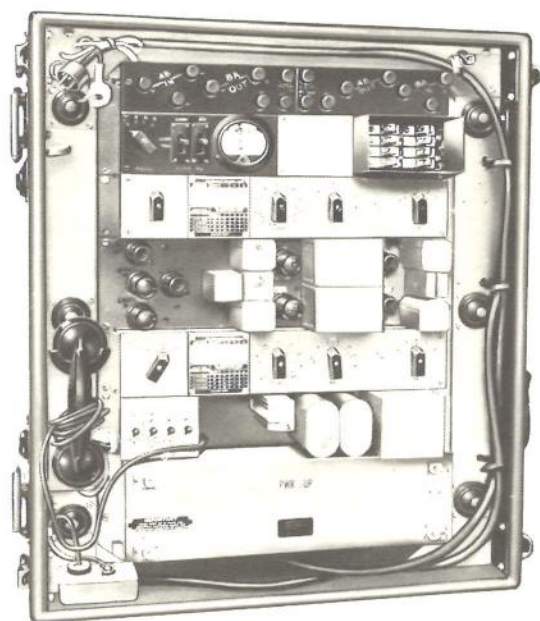
Cognizant Serv: USA FSN: 5805-164-7064

CF-3

USA

USN

USAF

TYPE CLASS: L/Std
STOCK NO: 4B3203--
--**FUNCTIONAL DESCRIPTION:**

Repeater CF-3 is a carrier repeater equipment used to extend the range of telephone and telegraph carrier facilities using spiral-four or equivalent wire or cable facilities.

This equipment consists essentially of two one-way amplifiers. It provides for two dc ground-return simplex circuits from the two associated cable pairs. One of these ground-return circuits is used for signaling; the other may be used for dc telegraph.

This equipment is the primary operating component of Repeater Set TC-23.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or equivalent

Facilities Provided: Four-wire telephone and telegraph amplification in both directions

Frequency: 200 to 12,000 cps

Type of Modulation: AM

Power Requirements: 30 w, 115-230-v 50/60-cycle ac; or 3.75 amp at 12-v dc from storage battery in emergency

CF-3

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Repeater CF-3 (Equipment consists of only one major component.)	5805-164-7064	28 x 14 x 34	225

REFERENCE DATA AND LITERATURE:

TM 11-341

MIL-HDBK-161

AN/TCC-type REPEATER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.9	340

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-1553

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1928-P-42-23	\$1,445.00

CONVERTER AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-228-6104

CF-4

USA

USN

USAF

TYPE CLASS:

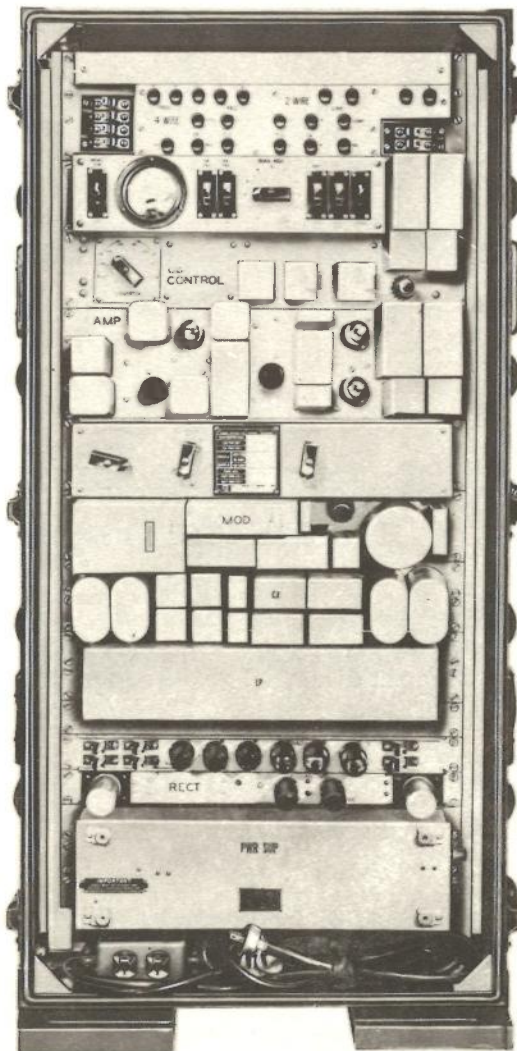
Std

Std

STOCK NO:

4B448-4

1790-412552640



CF-4

FUNCTIONAL DESCRIPTION:

Converter CF-4 is carrier-converter equipment, designed to be used at junctions of open wire and Telephone Terminal CF-1 or spiral-four cable. It changes four-wire operation from the terminal (or the cable) to effective two-wire operation over the open-wire pair.

This equipment consists of a single bay or cabinet of apparatus. It provides equivalent four-wire operation in direction BA by maintaining the frequency of that channel in the 0.2 to 11.6 kc band, and by raising transmission in the AB direction to the 20.85 to 32.25 kc band.

It is the primary operating component of Converter Set TC-33 and can be used at either terminal A or B, in systems using Repeater CF-5 at intermediate points. It can also be used in conjunction with Repeater CF-3 at junctions between four-wire and two-wire facilities.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open wire or equivalent

Facilities Provided: Equivalent four-wire

Frequency:

Converter A: 20.85 to 32.25 kc

Converter B: 0.2 to 11.6 kc

Type Modulation: AM

Power Requirements: 30 w, 115/230-v 50/60-cycle ac; or 3.5 amp at 12-v dc

MIL-HDBK-161

AN/TCC-type CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Converter CF-4 (Equipment consists of only one major component.)	5805-228-6104	49-1/2 x 24 x 17	280

REFERENCE DATA AND LITERATURE:

TM 11-2008

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	11.67	280

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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REPEATER **AN/TCC-type**

1 July 1958

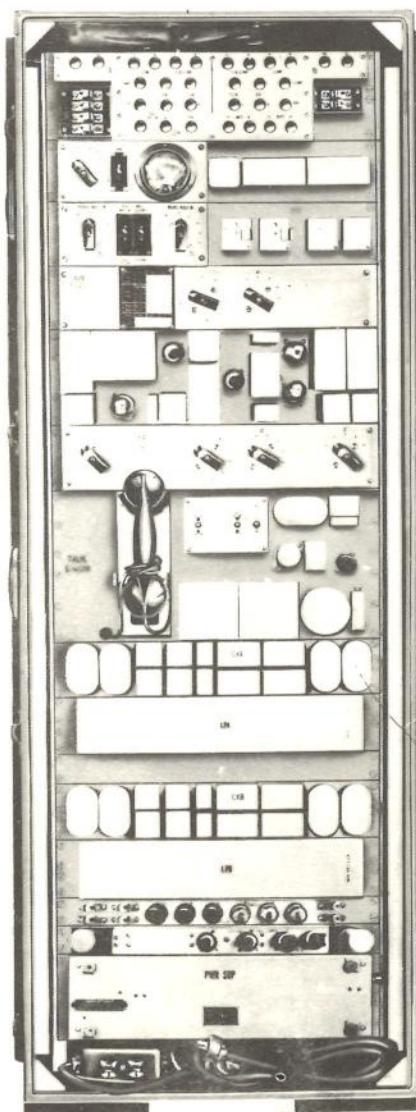
Cognizant Serv: USA FSN: 5805-164-7066

CF-5

USA

USN

USAF

TYPE CLASS:
STOCK NO:Std
4B3205--
--Std
1790-416801000

CF-5

FUNCTIONAL DESCRIPTION:

Repeater CF-5 is a carrier repeater equipment used to extend the transmission range of open-wire carrier systems in which Telephone Terminal CF-1, Converter CF-4, and related equipment are operated.

This equipment consists essentially of two independent amplifiers and related alarm and signaling circuits arranged on relay rack panels and housed in a vertical cabinet as a single bay of equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open-wire or equivalent facilities; terminal carrier equipment

Facilities Provided: Two-wire, intermediate repeater range amplification

Frequency:

AB Direction: 20,850 to 32,250 cps

BA Direction: 200 to 11,600 cps

Type of Modulation: AM

Type Ringing: V_f

Power Requirements: 45 w, 105-125/210-250-v 50/60-cycle ac; or 12-v dc from storage battery in emergency

MIL-HDBK-161

AN/TCC-type REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Repeater CF-5 (Equipment consists of only one major component.)	5805-164-7066	73 x 28 x 27	380

REFERENCE DATA AND LITERATURE:

TM 11-2008
TM 11-4405

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	690

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG: (USA) 71-3052

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	20443-P-45-23	\$2,632.00

TELEGRAPH TERMINAL AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-247-9306

CF-6

USA

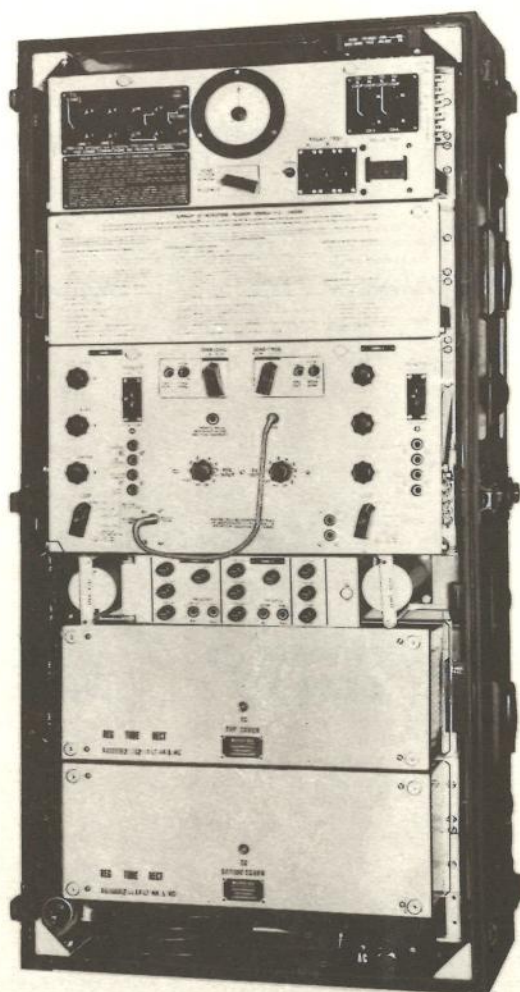
USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4A2892-6

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CF-6

FUNCTIONAL DESCRIPTION:

Telegraph Terminal CF-6 is a portable unit providing two channels of voice-frequency carrier telegraph. It may be used separately or in combination with Telegraph Terminal CF-2-().

A system using Telegraph Terminals CF-2-() and CF-6 is designed to operate over one channel of a four-channel telephone facility using Telephone Terminal CF-1-A. Such a system provides six two-way telegraph circuits.

In four-wire operation, transmission in each direction is over a separate line pair and each of the 12 channel frequencies can be transmitted in both directions. Eight of these 12 frequencies are provided by Telegraph Terminal CF-2-() and four by Telegraph Terminal CF-6. Two each of the CF-2-() and the CF-6 are required at each end of the carrier line.

TECHNICAL CHARACTERISTICS:

Facilities Required: Normally used with Telegraph Terminal CF-2-() and Telephone Terminal CF-1-()

Facilities Provided: 2 channels of telegraph

Frequency: 425, 1,275, 2,125, and 2,295 cps

Power Requirements: 150 w, 115/230-v ($\pm 10\%$) 50/60-cycle ac

MIL-HDBK-161

AN/TCC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telegraph Terminal CF-6 (Equipment consists of only one major component.)	5805-247-9306	49-3/8 x 24 x 17	400

REFERENCE DATA AND LITERATURE:

TM 11-2009

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USA
 SPEC &/or DWG: (USA) 71-3078

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	25690-P-45-43	

CARRIER HYBRID AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5915-190-5214

CF-7

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4B1467	--	--



CF-7

FUNCTIONAL DESCRIPTION:

Carrier Hybrid CF-7 is a unit used to connect Telephone Terminal CF-1-A (carrier) or Repeater CF-3-A (carrier), both of which are designed for four-wire operation, to a two-wire line. With this equipment, four two-way telephone circuits can be obtained over a single pair of wires. In addition, two dc ground-return telegraph circuits or one dc signaling circuit and one dc telegraph circuit can be obtained.

This equipment is used primarily with open-wire lines but may also be used on field wire or spiral-four cable.

Four voice-frequency telegraph channels can be made available in place of one of the telephone circuits by applying Telegraph Terminal CF-2-A or CF-2-B (carrier) at the telephone terminals.

This unit is similar to and interchangeable with Hybrid Circuit Network TA-225/TT.

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice, dc telegraph

Type Circuit: Field wire or spiral-four cable

MIL-HDBK-161

AN/TCC-type CARRIER HYBRID

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Carrier Hybrid CF-7 (Equipment consists of only one major component.)	5915-190-5214	18-3/8 x 9-1/2 x 7-3/8	48

REFERENCE DATA AND LITERATURE:

TM 11-2003

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.74	48

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO No. X-66107

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	35791-P-43	

HYBRID CIRCUIT NETWORK **AN/TCC-type**

1 July 1958

Cognizant Serv: USA FSN: 5915-392-7669

TA-31()/U

USA

USN

USAF

TYPE CLASS: Std
 STOCK NO: 4C59990A-31

--
--Std
--

TA-31()/U

FUNCTIONAL DESCRIPTION:

Hybrid Circuit Network TA-31()/U is a portable unit that electrically couples two- and four-wire circuits and permits full-duplex operation in two-wire systems.

This equipment can be used in either wire or radio systems. Provision is made for establishing simplex facilities, signaling, and remote control of radio transmitters, with the use of additional equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Two-wire line facilities, with four-wire equipment

Facilities Provided: Full duplex operation on two-wire lines

Frequency: 250 to 3,200 cps

Impedance: 600 to 4,000 ohms

Power Requirements: 115/230-v 50/60-cycle ac; 24-v dc; or Battery BA-419/U

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Hybrid Circuit Network TA-31()/U (Equipment consists of only one major component.)	5915-392-7669	9 x 11 x 16	

REFERENCE DATA AND LITERATURE:

TM 11-2144

MIL-HDBK-161

AN/TCC-type HYBRID CIRCUIT NETWORK

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.25	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-V-10759

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Daven Co.	Livingston, N. J.	6513-P-51-03	\$818.00

HYBRID CIRCUIT NETWORK AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5915-190-5214

TA-255/TT

USA

USN

USAF

TYPE CLASS:

Std

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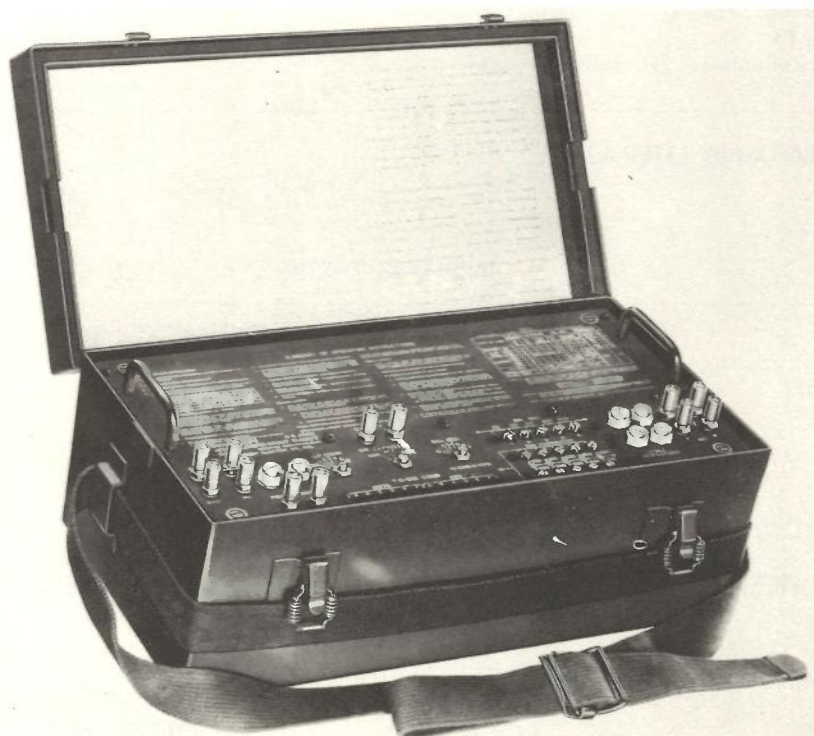
Std

STOCK NO:

4B1467

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TA-255/TT

FUNCTIONAL DESCRIPTION:

Hybrid Circuit Network TA-225/TT is a portable unit used to connect four-wire line equipment (such as Telephone Terminal CF-1() or Repeater CF-3-A) to a two-wire line. It can also be used to connect Radio Terminal Set AN/TRC-3 to a two-wire line.

This equipment will permit operation of a phantom circuit, two ground-return dc telegraph circuits, or one ground-return dc signaling and one ground-return dc telegraph circuit on the two-wire line.

One network is used at each junction of the two-wire and four-wire lines. This equipment is designed for operation over open-wire lines, but in an emergency it may be used on field wire or on one pair of a spiral-four cable system.

This unit is similar to and interchangeable with Carrier Hybrid CF-7.

TECHNICAL CHARACTERISTICS:

Type of Signal: Dc telegraph and carrier telephone

Type of Communication Circuits: Four channel two-way carrier-telephone system; two dc telegraph circuits

MIL-HDBK-161

AN/TCC-type HYBRID CIRCUIT NETWORK

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Hybrid Circuit Network TA-255/TT	5915-190-5214	7 x 10 x 18-1/2	45
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11-2003A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.17	78

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lenkurt Electric Co., Inc.	San Carlos, Calif.	3280-P-52-10	\$469.00

REPEATER SET AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-194-9449

TC-19

USA

USN

USAF

TYPE CLASS: Std
STOCK NO: 4A2119

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Std

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TC-19

FUNCTIONAL DESCRIPTION:

Repeater Set TC-19 is a portable, field, dc telegraph repeater used for single operation at intermediate points between terminal repeater equipment.

This equipment consists essentially of a repeater, contained in a field-type carrying case, and two ground rods. It can repeat signals in either direction, but in only one direction at a time. It provides one channel for telegraph communication on a simplex, or composited, ground-return basis. When used as an intermediate repeater, only one set can be used in the line circuit between two terminal repeaters.

The operating range of Repeater Set TC-18 can be extended by using this equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Field wire or open wire; simplex or composited

Power Requirements: 190 w, 95-125/190-250-v 50/60-cycle ac; 115 w, 115-v dc; or 12-v storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
2	Ground Rod MX-148/G	5975-224-5260	72 x 3/4 (dia)	9.5
1	Intermediate Telegraph Repeater TG-31	5805-194-9448	25 x 16 x 14-1/2	120

REFERENCE DATA AND LITERATURE:

TM 11-2005

MIL-HDBK-161

AN/TCC-type REPEATER SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	13.23	186

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEPHONE TERMINAL SET **AN/TCC-type**

1 July 1958

Cognizant Serv: USA FSN: 5805-222-2105

TC-21-()

USA

USN

USAF

TYPE CLASS:

L/Std

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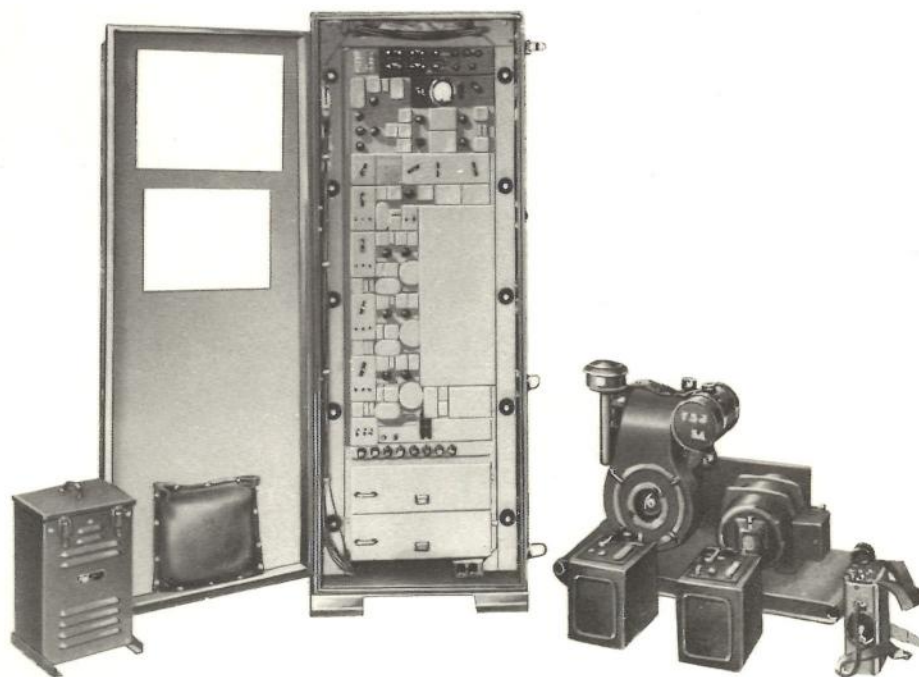
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STOCK NO:

4B8360-21

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TC-21

FUNCTIONAL DESCRIPTION:

Telephone Terminal Set TC-21-() is a carrier telephone terminal equipment providing four vf channels over a spiral-four system up to 100 miles in length, an open wire pair, or a combination of these facilities, for telephone (and teletype-writer) communication in long-range tactical carrier communications applications.

This equipment consists essentially of Telephone Terminal CF-1 (carrier), plus rectifier and power unit components and related accessories.

It is usually installed at the terminal of a system in which Repeater Set TC-23 is used at intermediate points to extend the operating range; or it is operated in conjunction with

Repeater Sets TC-33 and TC-37 in open-wire systems. It can also be used in a system that is transmitted over a radio link.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open wire or spiral-four cable

Facilities Provided: Four 2,600-cps channels, either two-wire or four-wire

Frequency: 200 to 12,000 cps

Type Modulation: AM

Type Ringing: Vf from Ringing Equipment EE-101-A or equivalent

Power Requirements: 115/230-v 50/60-cycle ac; or emergency operation from 12-v storage battery

MIL-HDBK-161

AN/TCC-type TELEPHONE TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
2	Battery BB-55	6140-126-1540	26 x 14 x 19	110
2	Power Unit PE-75	6115-228-5815	36 x 19 x 26	660
1	Rectifier RA-83	6130-222-6214	14 x 10 x 16	57
1	Telephone EE-8	5805-162-6251	7 x 16 x 7	10
1	Telephone Terminal CF-1-()	5805-170-4770	66 x 28 x 19	475

REFERENCE DATA AND LITERATURE:

TM 11-341
TM 11-369
TM 11-2001

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	53.4	1,340

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	2457-P-45	

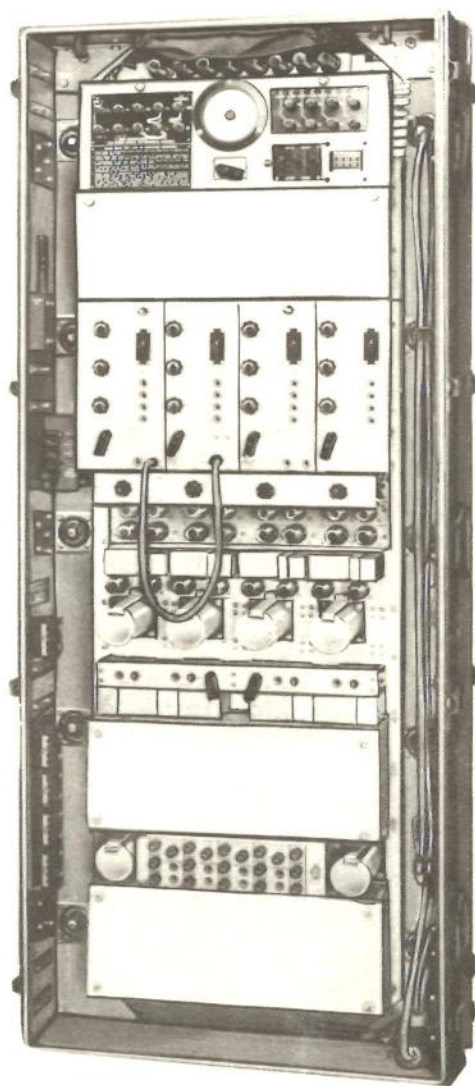
TELEGRAPH TERMINAL SET AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-223-7448

TC-22()

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4A2822	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal Set TC-22() is a transportable four-channel, v_f carrier telegraph terminal equipment providing two-way transmission of teletypewriter signals in each channel. It can operate in one channel of a carrier-telephone facility in which Telephone Terminal Set CF-1 and Repeaters CF-3 are used.

There are two models of this equipment: Telegraph Terminal Set TC-22-A consists of panel-mounted apparatus covering four channels, contained in two floor-type cabinets; Terminal Set TC-22B (illustrated) consists of equivalent panel-mounted apparatus covering four-channels, contained in a single floor-type cabinet.

This terminal set may be installed adjacent to a carrier-telephone terminal, or it may be operated over a two-wire or four-wire circuit (which has a net loss not exceeding 8 db) between telephone and telegraph terminals located at a distance from each other. It can also be operated over a telephone circuit terminating on a two-wire or four-wire basis of the required stability and freedom from interference, and having a net loss not exceeding 25 db at 500 to 2,050 cps.

TECHNICAL CHARACTERISTICS:

Facilities Required: One channel of Telephone Terminal Set TC-21, or equivalent telephone facility

Facilities Provided: Four two-wire teletypewriter channels
Frequency: 500 to 2,050 cps; 8 channels spaced 170 cps apart
Type Modulation: AM

Power Requirements: 200 to 250 w, 100-125/200-250-v 50/60-cycle ac

TC-22

AN/TCC-type TELEGRAPH TERMINAL SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS* (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Maintenance Equipment ME-75			
1	Telegraph Terminal CF-2-A	5805-239-8260	19 x 27-1/2 x 66 (each bay)	530 (each bay)
	or			
1	Telegraph Terminal CF-2-B	5805-190-6814	19 x 27-1/2 x 66	530

* CF-2-A contained in two bays; CF-2-B in one bay.

REFERENCE DATA AND LITERATURE:

TM 11-355

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	85	1,540

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	148-P-43	

REPEATER SET AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-164-8047

TC-23

USA

USN

USAF

TYPE CLASS:

L/Std

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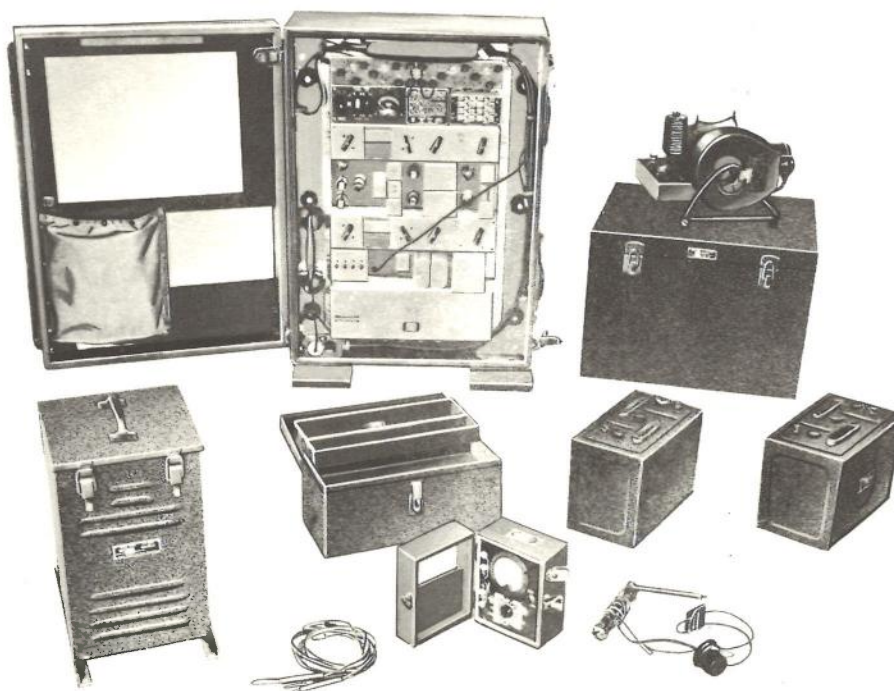
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STOCK NO:

4B3223

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TC-23

FUNCTIONAL DESCRIPTION:

Repeater Set TC-23 is a transportable, four-wire, carrier repeater equipment used at intermediate points in a spiral-four cable carrier facility.

This equipment consists of the repeater component, a power unit, rectifier, and related accessories. It has facilities for transmitting, testing, and monitoring a vf channel and for automatic transfer to emergency power supply.

The primary operating component of this equipment is

part of Telephone Central Office Set AN/TCC-2; and consists of repeater apparatus mounted on panels and contained in a wooden case. It is used with Telephone Terminal CF-1.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable

Facilities Provided: Two simplex circuits of the spiral-four line

Power Requirements: 115/230-v 50/60-cycle ac; emergency power provided by 12-v storage battery

MIL-HDBK-161

AN/TCC-type REPEATER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Battery BB-55	(FSN) 6140-126-1540	13 x 7 x 9-3/8	110
1	Power Unit PE-214	(USA) 3H4600-214	14-1/8 x 17-3/4 x 12-3/16	57
1	Rectifier RA-83	(FSN) 6130-222-6214	14 x 10 x 16	51
1	Repeater CF-3	(USA) 4B3203	28 x 14 x 34	225

REFERENCE DATA AND LITERATURE:

TM 11-341
TM 11-369
TM 11-2001

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	35	1,036

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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6596-P-51-03

CONVERTER SET AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-228-6102

TC-33-()

USA

USN

USAF

TYPE CLASS:

Std

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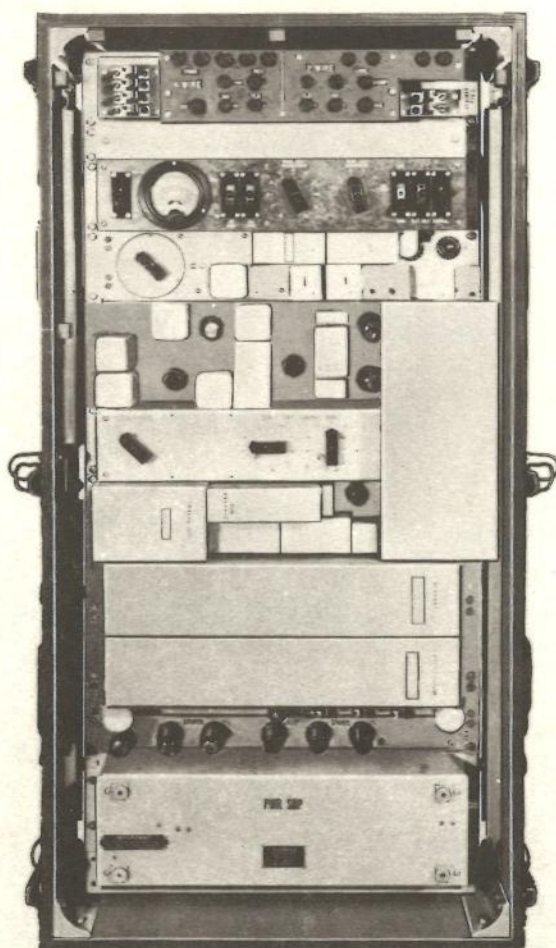
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STOCK NO:

4B449-33

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TC-33

FUNCTIONAL DESCRIPTION:

Converter Set TC-33-() is a transportable, vf, group-modulator equipment used for adapting four-wire transmission to two-wire facilities.

This equipment consists of panel-mounted apparatus contained in a steel cabinet and is normally installed adjacent to a telephone carrier terminal or a repeater.

It is designed for use with a four-channel vf carrier telephone system and can provide equivalent four-wire operation over an open-wire pair.

It may be used to monitor at adjacent telephone terminals, and one of its composite circuits may be used as a signal and alarm circuit.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or open-wire line

Facilities Provided: Conversion of four-wire carrier system to equivalent two-wire operation

Type of Modulation: AM

Type Ringing: Vf

Power Requirements: 30 w, 115/230-v 50/60-cycle ac; or 12-v dc from storage battery in emergency

MIL-HDBK-161

AN/TCC-type CONVERTER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
2	Battery BB-55	6140-126-1540	13 x 7 x 9-3/8	110
1	Case CS-111	6140-160-4995	18-5/8 x 16-3/4 x 13-1/8	
1	Chest BC-5	1290-356-3902	28-7/8 x 18-1/8 x 12	
1	Converter CF-4-()	5845-228-6104	24 x 17 x 49	300
2	Ground Rod MX-148/G	5975-224-5260	72 long x 3/4 diameter	4

REFERENCE DATA AND LITERATURE:

TM 11-2008

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	44	830

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3051

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	4436-P-53-33	\$2,050.06

REPEATER SET AN/TCC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-164-7068

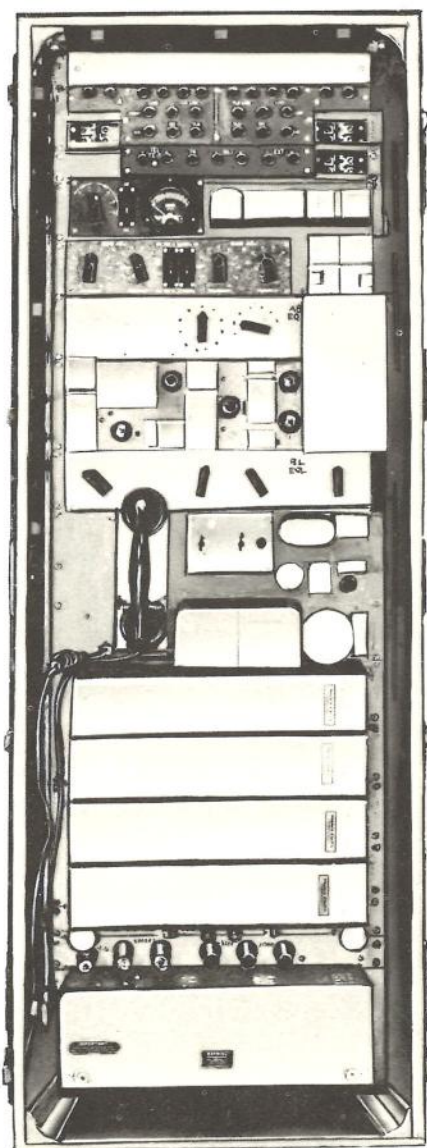
TC-37

USA

USN

USAF

TYPE CLASS: Std
 STOCK NO: 4B3237



TC-37

FUNCTIONAL DESCRIPTION:

Repeater Set TC-37 is a two-wire, four-channel carrier repeater for extending the transmission range of four-channel telephone carrier terminal equipment over open-wire lines.

This equipment consists essentially of Repeater CF-5 with power unit and accessory equipment. It usually is operated in conjunction with Converter Set TC-33 and Telephone Terminal Set TC-21.

This system provides four telephone channels, one of which is usable for v_f telegraph communication.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or open-wire line

Facilities Provided: Two-wire four-channel telephone carrier repeater

Frequency:

AB direction of transmission: 200-11,600 cps

BA direction of transmission: 20,850-32,250 cps

Channel spacing: 2,600 cps

Power Requirements: 46 w, 110/220-v 50/60-cycle ac

MIL-HDBK-161

AN/TCC-type REPEATER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Battery BB-55	(FSN) 6140-126-1540	26 x 14 x 19	110
1	Power Unit PE-214	(USA) 3H4600-214	12-3/16 x 14-1/8 x 17-1/8	56
1	Rectifier RA-83	(FSN) 6130-222-6214	14 x 10 x 16	57
1	Repeater CF-5	(FSN) 5805-164-7066	24 x 19 x 65	380

REFERENCE DATA AND LITERATURE:

TM 11-2008

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	48.1	942

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Maspeth Tel. & Radio Corp.	Brooklyn, N. Y.	3590-P-52-31	\$4,090.00

LINE TERMINAL EQUIPMENT AN/TCC-type

30 October 1958

Cognizant Serv: USN FSN: 5805-644-4571

UG

USA

USN

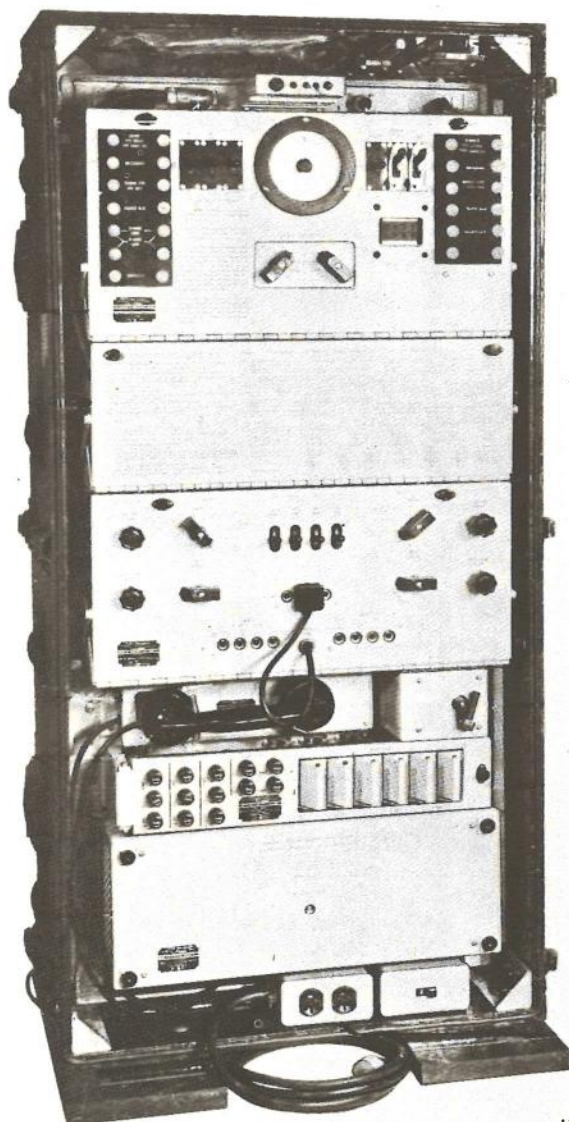
USAF

TYPE CLASS: --

STOCK NO: --

Used by

F16-Q-3+1100-100



UG

FUNCTIONAL DESCRIPTION:

Line Terminal Equipment UG is used for carrier telegraph transmission over a land line or radio link. It converts dc telegraph signals to audio-frequency tone for transmission over the line or radio link, and reconverts the AF tone signals to direct current.

The system consists of two two-way telegraph circuits. By the use of two switches, one that selects the operating frequencies for two oscillators and another that selects the two corresponding filters for each circuit, the two circuits of a terminal unit may be set to operate on any one of four combinations of frequencies.

Either duplex or half-duplex operation may be used. Either is capable of handling manual telegraph or teletypewriter and automatic tape-recorded transmissions. Operation may be on either a neutral or polar basis. Either a two or four-wire system may be used provided its loss is not greater than 25 decibels.

The UG is used with Radio-Line Terminal Equipment UH as part of Portable Carrier Control System UF.

TECHNICAL CHARACTERISTICS:

Operating Frequencies:

Low: 595, 765, 935, 1,105 cps

High: 1,445, 1,615, 1,785, 1,955 cps

Number of Channels: 2*Type Signal:* AM*Transmission Speed:*

Teletypewriter: 60 wpm

Automatic Tape Keyer and Recorder: 100 wpm

Line Circuit Ranges:

W-110-B: 6 miles

W-143: 16 miles

19-gage Quadruple Unloaded Line: 16 miles

Output Level: 0 dbm

Power Requirements: 135 w, 103- to 126/207- to 253-v 50- to 60-cycle 1-phase ac

MIL-HDBK-161

AN/TCC-type LINE TERMINAL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line Terminal Equipment UG, consisting of:	-----	49-1/2 x 24-1/2 x 17-1/8	373
1	Cabinet 10331			
1	Fuse Panel 28016			
1	Control Unit 23426			
1	Load Control Unit 50177			
1	Rectifier Power Unit 20290			
1	Telephone Set Unit 51068			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,223

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	22.5	710

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

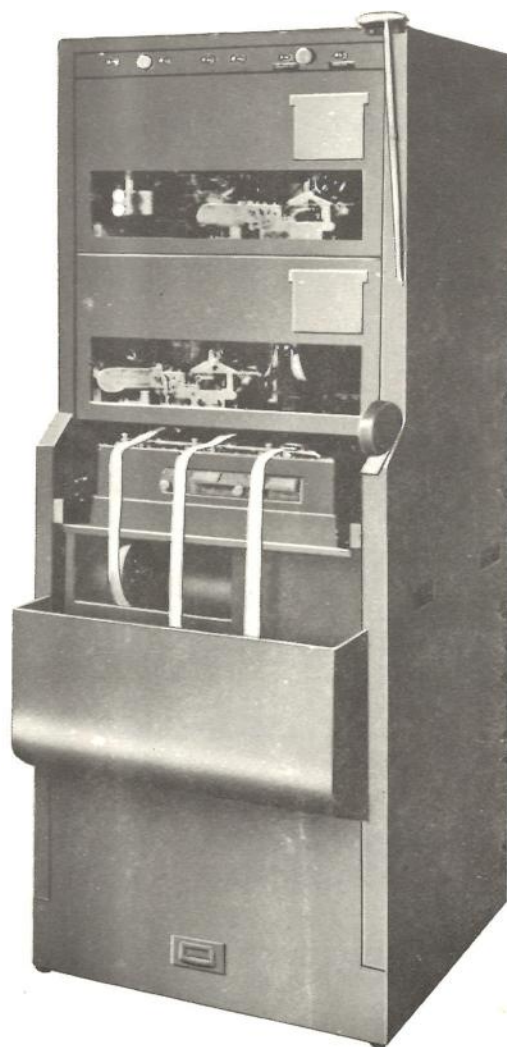
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr-41001, 25 October 1954 NXsr-85031 N5sr-5945	

TELETYPEWRITER SET AN/TGC-1()

1 July 1958

Cognizant Serv: USA FSN: 5815-198-5952

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	4T1000-1		--



AN/TGC-1

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/TGC-1() is an automatic, high-speed, multichannel, teletypewriter station equipment used for sending, receiving, or monitoring, by means of typed and perforated paper tape.

This equipment consists of a single operating assemblage composed of a multiple transmitter-distributor (which provides one number transmitter and two message transmitters) and two typing reperforators. It can be used for conventional duplex make-and-break, duplex polar, single, split duplex make-and-break, split duplex polar, or split single operation.

Several of these equipments may be installed side by side for handling large traffic loads. It can be used for tape-relay operation, and is designed for continuous operation.

It operates on 115-volt ac or dc; the tapewinder motor operates on ac only.

TECHNICAL CHARACTERISTICS:

Operating Functions: No keyboard; number release key; message release key; tape feed key; break key; alarm switch

Operating Speed: 368.1 or 600.0 opm

Motor Characteristics: Series-governed motor, tuning fork adjustable to 2,102 rpm, or a synchronous motor requiring no adjustment

Power Requirements: 115-v dc; or 115-v 50/60-cycle ac

AN/TGC-1() TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Electrical equipment cabinet	5815-243-9684	24 x 24 x 65	250
1	Rectifier 54A	5815-242-7797	5 x 15-3/4 x 6-3/4	35
1	Signal indicator panel	6350-162-6298	5 x 21 x 1-3/4	20
1	Tape winder	5815-129-1877	12 x 6 x 11	10
1	Teletypewriter distributor-transmitter (multiple)	5815-222-4290	15-1/4 x 16-3/4 x 5-3/4	90
2	Teletypewriter reperforators	5815-199-0186	13 x 12 x 8	34.25
1	Tuning fork	6625-243-2927		

REFERENCE DATA AND LITERATURE:

TM 11-2203

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	42.5	1,267

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG: (USA) SC-D-31245

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Molded Insulation Co.	Philadelphia, Pa.	14524-P-48-77	\$1,162.61
Thomas A. Edison, Inc.	Orange, N. J.	18042-P-50-09	1,014.82

TELETYPEWRITER SET AN/TGC-3

Cognizant Serv: USA FSN: 5815-198-9035

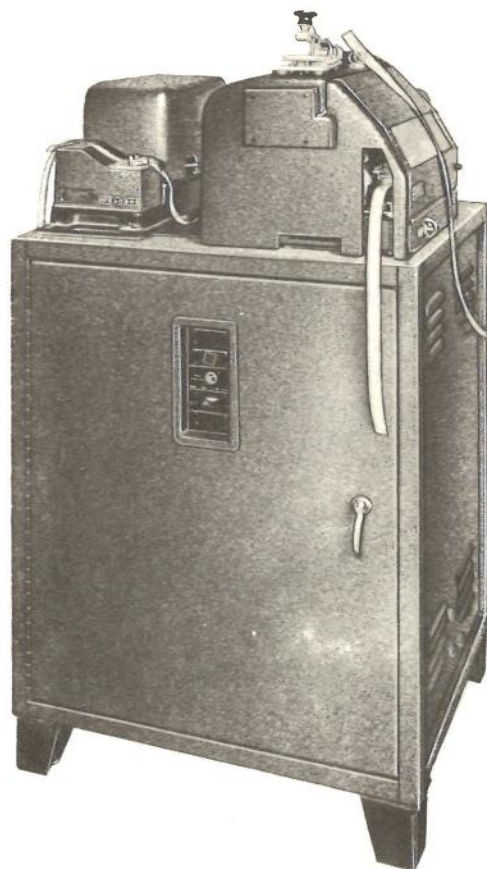
USA

USN

USAF

TYPE CLASS: S/Std
STOCK NO: 4TW133A2

Used by Std



AN/TGC-

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/TGC-3 is an automatic transmitting and receiving unit used for torn-shape switching or teletypewriter relay applications by means of typed and perforated paper tape.

This equipment consists essentially of a transmitter-distributor and a receiving-only typing reperforator. It includes an operating table and related accessories. Tape received by means of the reperforator unit can be used to transmit through the transmitter-distributor.

The set operates in neutral or polar channels and can be used with telegraph terminal equipment and with Teletypewriter Repeater-Mixer AN/FGQ-1.

TECHNICAL CHARACTERISTICS:

Transmission and Reception: Polar or neutral

Tape:

Width: 11/16 in.

Type: Perforated, chad, or chadless

Operating Speed: 368 opm

Motor Characteristics:

Type: Series-governed

Cycles per Second: 87.6

Revolutions per Minute: 2,100

Power Requirements:

With Power Unit: 300 w; 95-, 125-, 190-, or 250-, 25- or 60-cycle, ac

Without Power Unit:

DC Supply: 120 v (3), 0.8 amp drain

AC Supply: 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Distributor-Transmitter, Teletypewriter TT-52/FG	5815-199-0188	9 x 9-3/8 x 15-1/2	33
1	Power Supply PP-748/U	3H4497-748	13-5/16 x 11-7/8 x 20-3/4	89
1	Reperforator TT-53/FG	5815-199-0188	11-3/4 x 13-1/2 x 16-3/4	62.25
1	Teletypewriter table	-----	34 x 22 x 26	205

MIL-HDBK-161

AN/TGC-3 TELETYPEWRITER SET

REFERENCE DATA AND LITERATURE:

TM 11-2214

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	33.8	663

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	25802-P-54-53	\$1,695.59

TELETYPEWRITER SET **AN/TGC-6**

1 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS:

Used by

STOCK NO:

4T1001-6

(No Illustration Available)**FUNCTIONAL DESCRIPTION:**

Teletypewriter Set AN/TGC-6 is a lightweight, portable, sending and receiving teletypewriter station primarily intended for field use.

This equipment is designed for operation in a nominal 60 milliamper, direct current, network or in a 20 milliamper wire line or radio carrier system.

The covers of the components are immersion-proof and thus afford complete protection from the effects of weather and permit self-floatation in amphibious activities.

Power is supplied by a gasoline-driven generator, Engine-

Generator PU-181/PGC-1, which furnishes 120- or 240-volt, 60-cycle, single-phase ac power.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications

Characters per Line: 72

Speed: 368.1 and 404 operations per minute

Words per Minute: Approximately 60 and 66

Operational Range: 25 miles

Power Requirements:

Motor: 150 w; 105- to 125-v, 50 to 60-cycle, 1-phase ac

Line: Dc line, 60 ma; voice frequency line, 20-ma dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Case CY-553/PGC-1	6F300-553	30 x 19 x 6	
1	Engine-Generator PAU-181/ PGC-1	3H1927-181		121
1	Teletypewriter Set AN/PGC-1	4T2.19	25-5/16 x 20-1/4 x 14-1/8	147

REFERENCE DATA AND LITERATURE:**SHIPPING DATA**

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	18.2	351

MIL-HDBK-161

AN/TGC-6 TELETYPEWRITER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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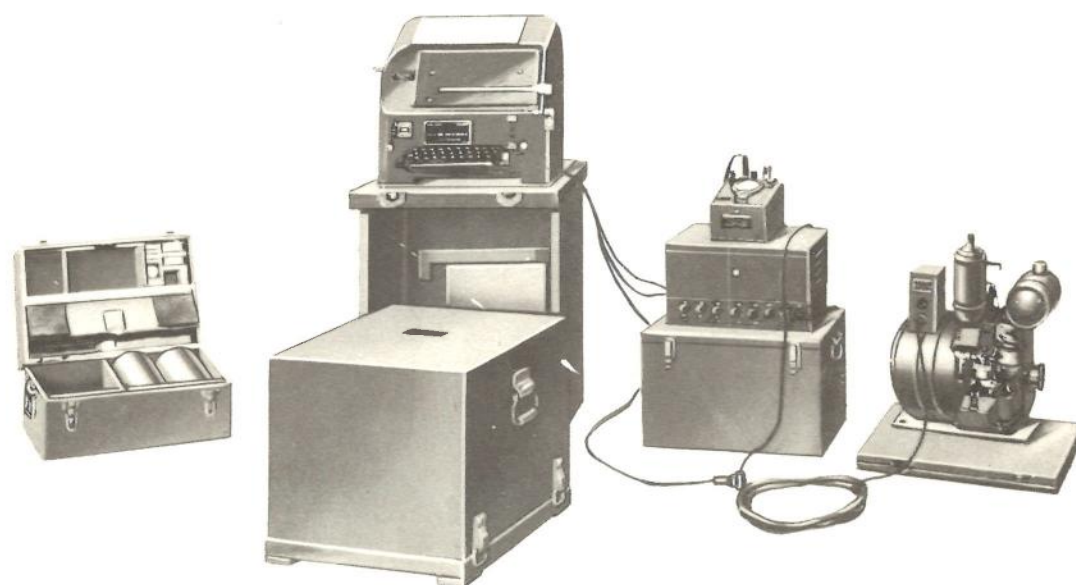
TELEGRAPH PRINTER SET AN/TGC-type

1 July 1958

Cognizant Serv: USA FSN: 5815-164-7102

EE-97-()

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TEE97	--	--



EE-97

FUNCTIONAL DESCRIPTION:

Telegraph Printer EE-97-() is a complete, transportable, field teletypewriter station used for transmitting and receiving telegraph communications at battalion and higher headquarters.

This equipment consists primarily of a conventional page-printing, sending and receiving teletypewriter (printer), line control unit, and power generating equipment contained in carrying cases.

The set is designed for quick installation in the open or

under shelter. It requires only connection to wire facilities for operation.

TECHNICAL CHARACTERISTICS:

Operating Functions: Standard communications keyboard
Operating Speed: 60 wpm (368 opm), adjustable to 66 wpm (404 opm)

Motor Characteristics: Series governed; 0.4 amp at 115-v dc
Power Supplied: 250 w, 115-v dc from Power Unit PE-77

MIL-HDBK-161

AN/TGC-type TELEGRAPH PRINTER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Line Unit BE-77	4T103554	7-3/4 x 6 x 6	6
1	Power Unit PE-77	3H4577	22 x 12 x 22	127
1	Printer TG-7	4T2.28	19 x 20 x 42	225
1	Rectifier RA-37	-----	12-1/2 x 8-1/4 x 6-1/2	24

REFERENCE DATA AND LITERATURE:

TM 11-354

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	40	700

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER SET AN/TGC-type

26 November 1958

Cognizant Serv: USA FSN: EE-98-A: 5815-164-7113

EE-98-()

USA

USN

USAF

TYPE CLASS:

L/Std

Used by

--

STOCK NO:

EE-98: 4TEE98

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EE-98-A: 4TFE98A



EE-98

FUNCTIONAL DESCRIPTION:

Teletypewriter Sets EE-98 and EE-98-A are complete, transportable, field teletypewriter stations which require only connection to power and communication lines in order to operate.

This equipment consists of a conventional page-printing teletypewriter, line control unit, rectifier, and related accessories contained in carrying cases. It can be used in conjunction with carrier terminal facilities and at teletypewriter centrals and radio terminals.

The equipment is designed for quick installation in the open

or under shelter. It is connected for operation by means of cords and plug connectors.

TECHNICAL CHARACTERISTICS:

Keyboard: Standard communication

Operating Speed: 60 wpm (368 opm) adjustable to 66 wpm (404 opm)

Motor Characteristics: Series-governed, 115-v dc or 250-v, 50 to 60 cps, 87.6 vps tuning fork speed adjusting frequency 1,800 rpm

Power Requirements: 200 w; 115-v dc; 95-125/190-250-v 50-60-cycle ac

MIL-HDBK-161

AN/TGC-type TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
<i>For EE-98:</i>				
1	Line Unit BE-77	4T103554	7-3/4 x 6 x 6	6
1	Printer TG-7-A (mounted on Chest CH-50-A)	4T2.13	19 x 20 x 42	225
1	Rectifier RA-37	3H4677	12-1/2 x 8-1/2 x 6-1/2	24
<i>For EE-98-A:</i>				
1	Line Unit BE-77-A	4TBE77A	7-3/4 x 6 x 6	6
1	Rectifier RA-87	3H4698-87	8-3/8 x 14-9/16 x 7-1/2	40
1	Teletypewriter TG-7-B (mounted on Chest CH-50-A)	4T2.28	19 x 20 x 42	225

REFERENCE DATA AND LITERATURE:

TM 11-354

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For EE-98:</i>		
5	32	547
<i>For EE-98-A:</i>		
5	32	562

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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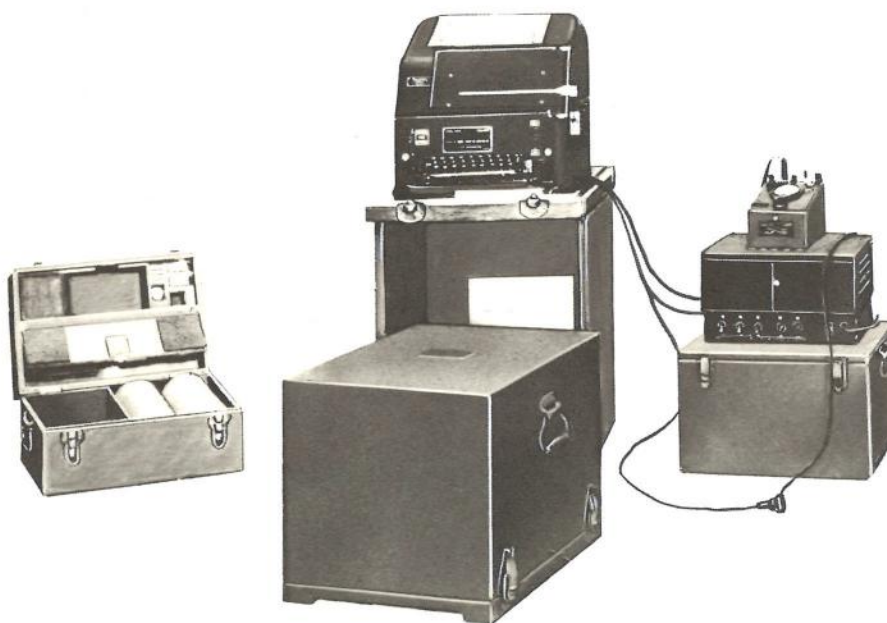
TELETYPEWRITER SET AN/TGC-type

26 November 1958

Cognizant Serv: USA FSN: 5815-198-9036

EE-102

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	---
STOCK NO:	--	--	--



EE-102

FUNCTIONAL DESCRIPTION:

Teletypewriter Set EE-102 is a transportable field teletypewriter equipment used in weather reporting stations.

This equipment consists primarily of a page-printing field teletypewriter having a weather symbol keyboard, a line unit, power supply, rectifier, and associated accessories contained in carrying cases.

The equipment is designed for quick installation in the open

or under shelter. It is connected for operation by means of cords and plug connectors.

TECHNICAL CHARACTERISTICS:

Keyboard: Weather symbols

Operating Speed: 60 wpm (368 opm) adjustable to 66 wpm (404 opm)

Motor Characteristics: Series-governed; 87.6 vps tuning fork speed adjusting frequency; 1,800 rpm

Power Requirements: 200 w; 115-v dc; or 85- to 95-125/190-250-v 50-60-cycle ac

MIL-HDBK-161

AN/TGC-type TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Line Unit BE-77-A	4TBE77A	7-3/4 x 6 x 6	6
1	Rectifier RA-87	3H4699-87	8-3/8 x 14-9/16 x 7-1/2	40
1	Teletypewriter TG-37-B	4T2.23A-1	19 x 20 x 42	225

REFERENCE DATA AND LITERATURE:

TM 11-354

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	32	562

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEGRAPH CENTRAL OFFICE SET **AN/TGC-type**

1 July 1958

Cognizant Serv: USA FSN: 5815-198-9035

TC-3

USA

USN

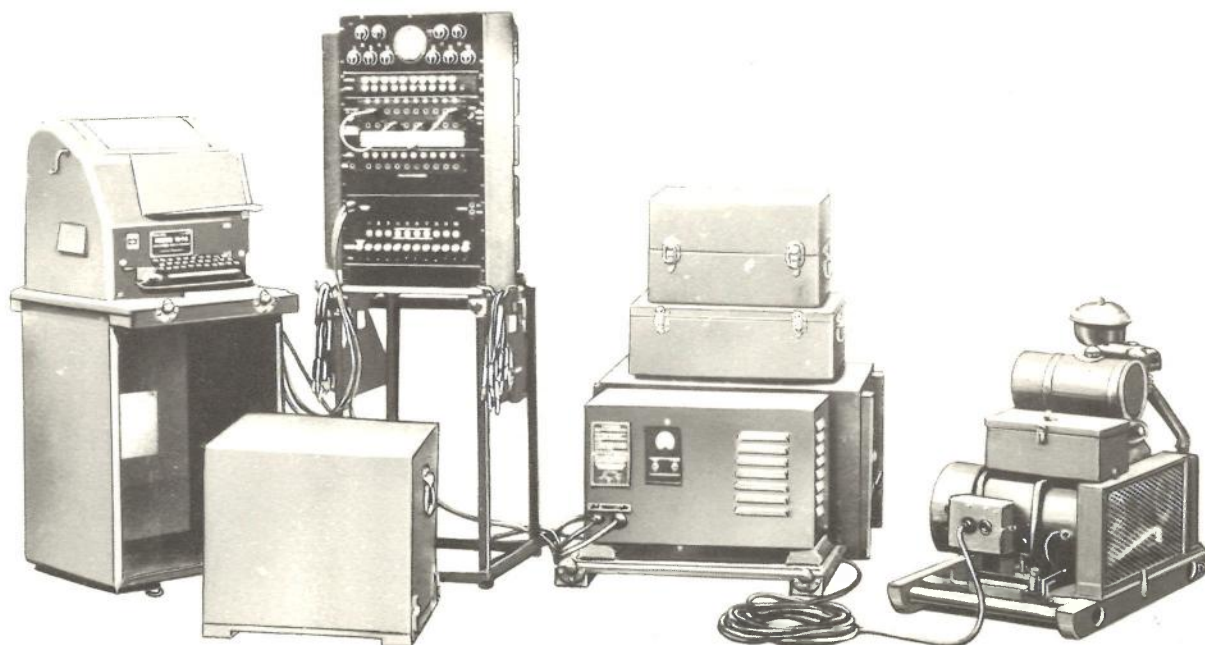
USAF

TYPE CLASS:

L/Std

STOCK NO:

4TW133A2



TC

FUNCTIONAL DESCRIPTION:

Telegraph Central Office Set TC-3 is a complete transportable central office for receiving, transmitting, and switching tactical teletypewriter traffic in a field wire or cable system.

This equipment consists essentially of a switchboard, teletypewriter, and associated accessories. It has provision for supplying line current alone, in conjunction with the remote station, or by the distant station alone. The switchboard provides switching and full repeating facilities for 10 lines (maximum), which may be ground return or metallic.

When it becomes necessary to expand the capacity of this

telegraph central office, a maximum of two switchboards may be added and operated in multiple with the switchboard of this equipment.

It operates on about 500 w of ac power through appropriate rectifying equipment.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1 to 3

Number and Type of Circuits Per Position: 1 cord, 10 line

Power Requirements: 500 w, 115/230-v 50/60-cycle 1-phase ac

Rectifier Power Output: 4.5 amp at 115-v dc

MIL-HDBK-161

AN/TGC-type TELEGRAPH CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE-75	3H4575	36 x 19 x 26	325
1	Printer TG-7-A	4T2.28	19 x 20 x 42	225
	or			
1	Teletypewriter TG-7-B	4T2.28	19 x 20 x 42	225
1	Rectifier RA-43	3H4683	30 x 16 x 19	190
1	Switchboard BD-100	4A2560	16 x 16 x 26	180

REFERENCE DATA AND LITERATURE:

TM 11-358

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	93.3	1,683

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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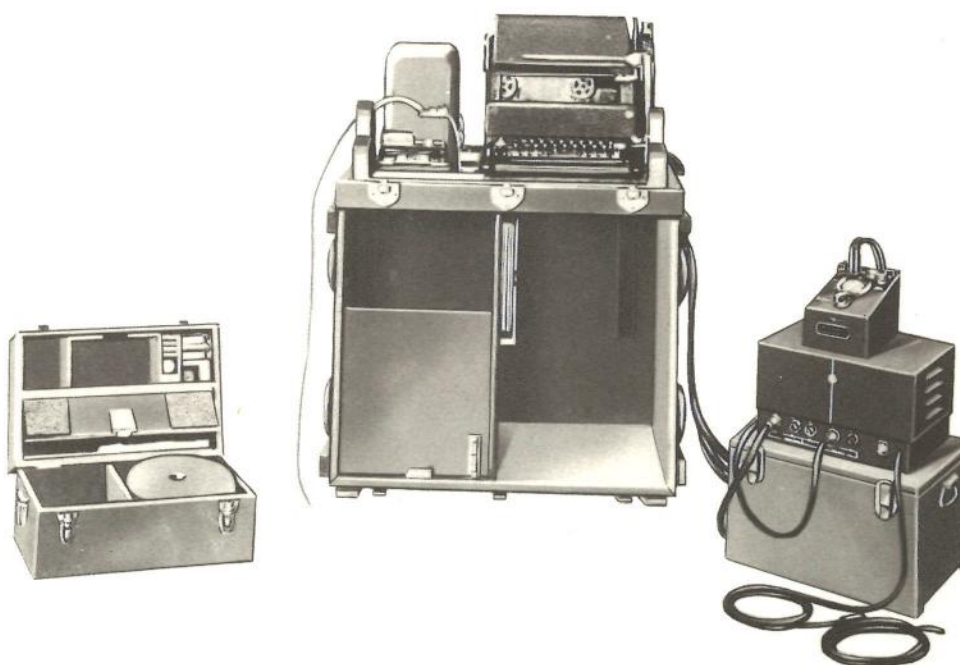
REPERFORATOR-TELETYPEWRITER SET **AN/TGC-type**

1 July 1958

Cognizant Serv: USA FSN: 5815-198-5964
5815-356-3158

TC-16-()

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TTC16, 4TTC16-1	--	--



TC-16

FUNCTIONAL DESCRIPTION:

Reperforator-Teletypewriter Set TC-16-() is a field, transportable, standard communication, tape sending and receiving teletypewriter station equipment.

This equipment consists essentially of a reperforator transmitter having standard communication keyboard and type pallets, plus a transmitter-distributor, a line unit, rectifier, and accessory items. The line unit provides a means for

measuring and adjusting for bias and distortion of line signals.

It can be connected to other teletypewriters in field wire or cable, open wire, carrier, or radio systems.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 opm and 404 opm

Motor Characteristics: Series ac governed

Power Requirements: 300 w, 85-135/170-270-v 50/60-cycle ac

MIL-HDBK-161

AN/TGC-type REPERFORATOR-TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Ground Rod MX-148/G	(FSN) 5975-224-5260	72 x 3/4 (dia)	9.5
1	Line Unit BE-77A	(FSN) 5805-162-6302	6 x 8-1/4 x 6-3/8	31
1	Rectifier RA-87	(FSN) 6130-230-7257	12-1/2 x 18-1/2 x 10-1/2	57
1	Reperforator-Transmitter TG-26-A	(USA) 4T12.1A-1	19 x 33 x 38	225

REFERENCE DATA AND LITERATURE:

TM 11-2201

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	33	587

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 123848

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
J. H. Bunnell & Co.	New York, N. Y.	25578-P-49	

REPEATER SET AN/TGC-type

1 July 1958

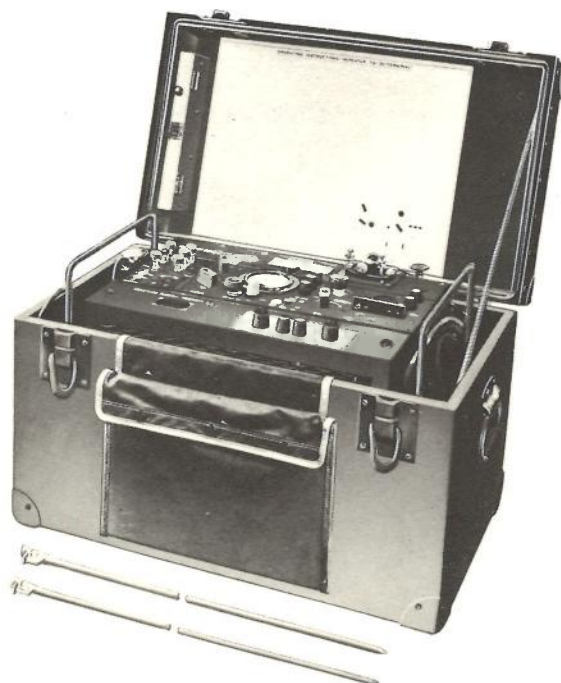
Cognizant Serv: USA FSN: 5805-224-4962

TC-18

USA

USN

USAF

TYPE CLASS: Std
STOCK NO: 4A2118--
--Std
--

TC-18

FUNCTIONAL DESCRIPTION:

Repeater Set TC-18 is a transportable, dc telegraph terminal repeater equipment used in simplex field-wire line circuits or in open-wire, composited, ground-return facilities.

This equipment consists of a single primary operating component and two ground rods.

It is equipped with a hand telegraph key for use of supervisory and maintenance personnel and is usually operated on a half-duplex basis, providing one channel of teletypewriter communication. It is designed to extend the operating range of teletypewriter station equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Simplex field wire or open-wire (composited, ground return)

Facilities Provided:

Line Side: Polarential send, differential send; two-path

Local Side: 30- to 60-ma neutral

Power Requirements: 95-125/190-250-v 50/60-cycle ac; or 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
2	Ground Rod MX-148/G	5975-224-5260	72 x 34 (dia)	9.5
1	Telegraph Terminal Repeater TG-30	5805-224-4957	25 x 16 x 14-1/2	130

REFERENCE DATA AND LITERATURE:

TM 11-2004

MIL-HDBK-161

AN/TGC-type REPEATER SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	6.5	195

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PRINTER AN/TGC-type

31 October 1958

Cognizant Serv: USA FSN: 5815-503-2651

TG-7

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4T2.13-1

Used by --
 --

FUNCTIONAL DESCRIPTION:

Printer TG-7 is a portable, page-printing sending and teletypewriter station equipment designed for the interchange of typewritten messages between two or more points connected by telegraph communication channels.

The equipment consists essentially of a modified commercial teletypewriter (Teletype Model 15) and two chests. One chest serves as a seat for the operator; the other is used as an operating table for the teletypewriter.

The TG-7 is functionally similar to the TG-7A and TG-7B. However, in addition to the normal operating speed, the A and B models may be adjusted to operate at 404 operations per minute (67 words per minute) for interoperation with British equipment by increasing the speed of the motor. This is accomplished by changing the adjustment of the motor governor. The B model also can operate on 115-volt, 40-cycle ac.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications

Characters Per Line: 72

Operating Speed: 368 ohm, 60 wpm

Code: 5-unit, start-stop

Transmission Pattern: 7.5-unit

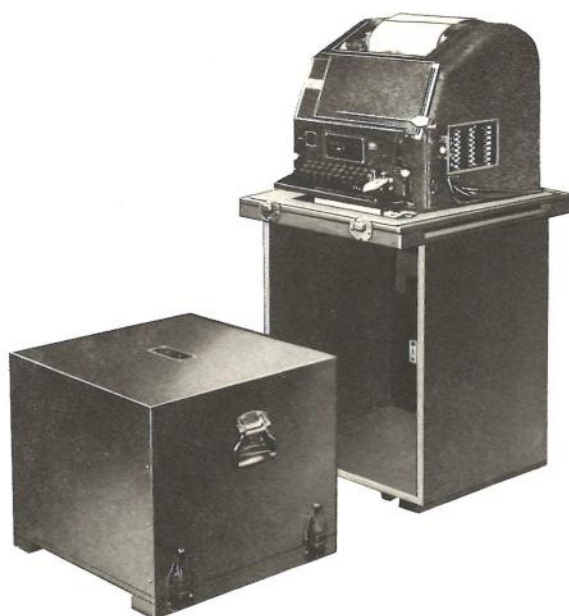
Number of Channels: 1

Type Motor: Series-governed

Motor Speed: 1,800 rpm

Tuning Fork Frequency: 87.6 vps

Power Requirements: 140 va, 115-v 25-/50- to 60-cycle 1-phase ac; 110 w, 115-v dc



TG-7

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Chest CH-50			
1	Chest CH-62			
1	Teletypewriter (Teletype Model 15)			

(Equipment consists of only one major operating component.)

MIL-HDBK-161

AN/TGC-type PRINTER

REFERENCE DATA AND LITERATURE:

TM 11-352

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	13465-P-48-77	\$901.56

PRINTER AN/TGC-type

31 October 1958

Cognizant Serv: USA FSN: 5815-315-2873

TG-7-A

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	4T2.28	F16-T-995413	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Printer TG-7-A is portable, page-printing sending and receiving teletypewriter station equipment designed for the interchange of typewritten messages between two or more points connected by telegraph communication channels.

The equipment consists essentially of a modified commercial teletypewriter (Teletype Model 15) and two chests. One chest serves as a seat for the operator; the other is used as an operating table for the teletypewriter.

The TG-7-A may be adjusted to operate at 404 operations per minute (67 words per minute) for interoperation with British equipment by increasing the speed of the motor. This is accomplished by changing the adjustment of the motor governor.

The TG-7-A is similar in appearance to the TG-7-B. The A model, however, will operate only on 115-volt, 25-cycle ac or 115-volt, 50- to 60-cycle ac; the B model also will operate on 115-volt, 40-cycle ac.

TECHNICAL CHARACTERISTICS:*Type Keyboard:* Standard communications*Characters Per Line:* 72*Operating Speed:* 368 opm, 60 wpm*Code:* 5-unit, start-stop*Transmission Patterns:* 7.5-unit*Number of Channels:* 1*Type Motor:* Series-governed*Power Requirements:* 95 w, 115-v 25-50 to 60-cycle, 1-phase ac; 115-v dc**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Chest CH-50-A	4T103370		
1	Chest CH-62-A	4T103368		
1	Teletypewriter (Teletype Model 15)			

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

TM 11-352

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

MIL-HDBK-161

AN/TGC-type PRINTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	S&A-20869	\$1,200 with equipment spares
		S&A-22558	\$1,200 with equipment spares

TELETYPEWRITER AN/TGC-type

31 October 1958

Cognizant Serv: USA FSN:

TG-7-B

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4T2.28A-4

Used by
 F16-P-7052-5

L/Std

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriter TG-7-B is portable, page-printing sending and receiving teletypewriter station equipment designed for the interchange of typewritten messages between two or more points connected by telegraph communication channels.

The equipment consists essentially of a modified commercial teletypewriter (Teletype Corp. Model 15) and two chests. One chest serves as a seat for the operator; the other is used as an operating table for the teletypewriter.

The TG-7-B may be adjusted to operate at 404 operations per minute (67 words per minute) for interoperation with British equipment by increasing the speed of the motor. This is done by changing the adjustment of the motor governor.

The TG-7-B is similar in appearance to the TG-7-A.

The B model, however, will operate on 115-volt, 40-cycle ac in addition to 115-volt, 25-cycle ac or 115-volt, 50- to 60-cycle ac.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications

Characters Per Line: 72

Operating Speed: 368 opm, 60 wpm

Code: 5-unit, start-stop

Transmission Pattern: 7.5-unit

Number of Channels: 1

Type Motor: Series-governed

Power Requirements: 95 w, 115-v 25/50- to 60-cycle 1-phase ac;
 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Chest CH-50-B	4T105299		
1	Chest CH-62-B	4T105367		
1	Teletypewriter (Teletype Model 15)			

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

TM 11-352

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

MIL-HDBK-161

AN/TGC-type TELETYPEWRITER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	S&A-20869	\$1,200 with equipment spares
		S&A-22558	\$1,200 with equipment spares

REPERFORATOR-TRANSMITTER AN/TGC-type

1 July 1958

Cognizant Serv: USAF FSN: 5815-164-7098

TG-27

USA

USN

USAF

TYPE CLASS: Std
 STOCK NO: 4T12.2A-1



TG-27

FUNCTIONAL DESCRIPTION:

Reperforator-Transmitter TG-27 is a transportable standard weather communication teletypewriter station equipment used for sending and receiving weather data by means of perforated paper tape.

This equipment consists essentially of a transmitter-distributor and a typing reperforator having a weather communication keyboard and type pallets. It is transported in a carrying case, which is used as the operating table.

This equipment is the major component of Reperforator-Teletypewriter Set TC-17.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 or 404 opm (60 or 66 wpm)

Motor Characteristics: Series-governed

Power Requirements: 225 w, 115-v 50/60-cycle ac; or 225 w, 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Reperforator-Transmitter TG-27	5815-164-7098	19 x 33 x 38	225
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2201

MIL-HDBK-161

AN/TGC-type REPERFORATOR-TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, RCSSE-2

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELETYPEWRITER AN/TGC-type

1 July 1958

Cognizant Serv: USA FSN: 5815-164-7172

TG-37-()

USA

USN

USAF

TYPE CLASS:

Std

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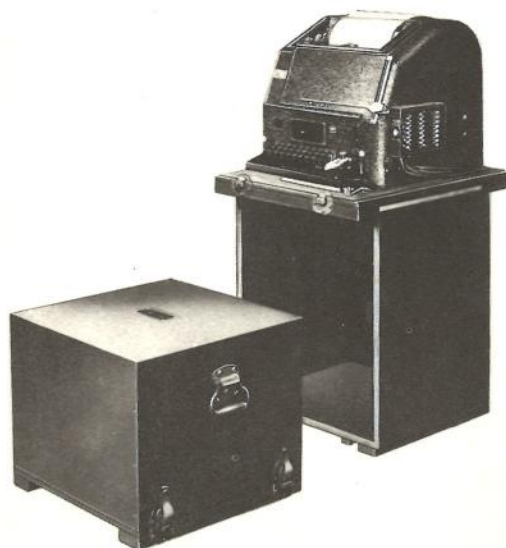
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STOCK NO:

4T2.23A-1

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TG-37

FUNCTIONAL DESCRIPTION:

Teletypewriter TG-37-() is a portable, field, page-printing teletypewriter station equipment having weather communication keyboard and type-pallets.

This equipment consists essentially of a commercial (Teletype Corp. Model 15) teletypewriter that has been modified for tactical use. It is carried in field-type cases that are used to form the operating table and operator's seat.

It can receive and transmit messages, but is not used for full-duplex operation. It is the weather communication version of Teletypewriter TG-7.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 or 404 opm (60 or 66 wpm)

Motor Characteristics: Series-governed; 87.6 vps tuning-fork frequency; 1,800 rpm

Power Requirements: 110 w, 115-v dc; 140 va, 115-v 25/50-60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter TG-37 (Equipment consists of only one major component.)	5815-164-7172	20 x 19 x 42	225

REFERENCE DATA AND LITERATURE:

TM 11-352

MIL-HDBK-161

AN/TGC-type TELETYPEWRITER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42.0	557

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEGRAPH TERMINAL AN/TGC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-240-6225

TH-5/TG

USA

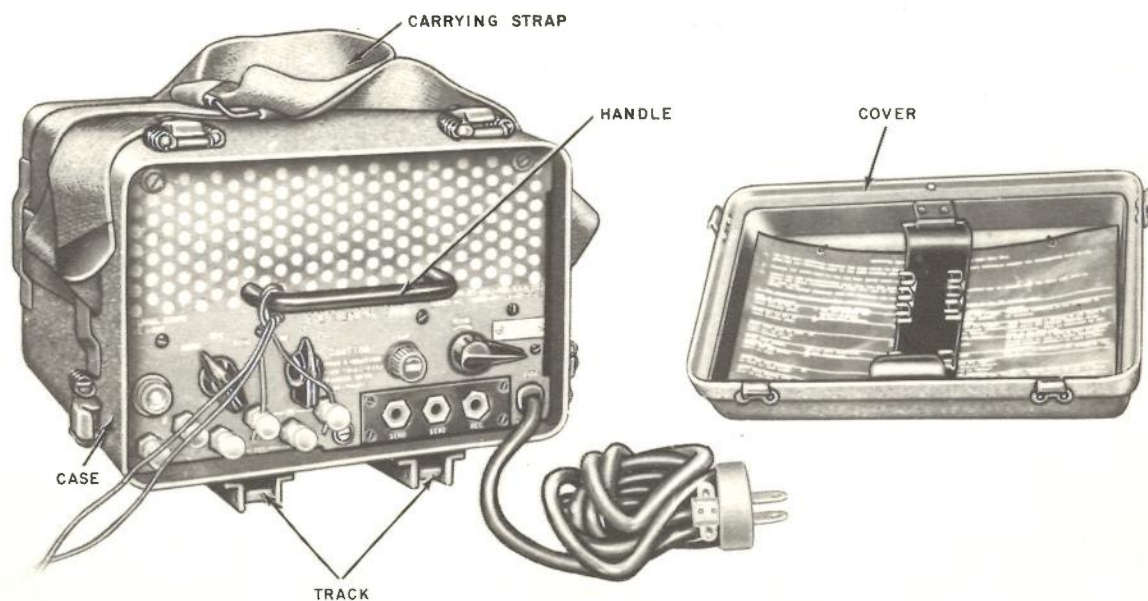
USN

USAF

TYPE CLASS: --

Std

STOCK NO: 4A2895-5



TH-5/TG

FUNCTIONAL DESCRIPTION:

Telegraph Terminal TH-5/TG is a small, transportable, frequency-shift modulator and demodulator equipment used in one-way reversible operation of teletypewriter circuits over two-wire, four-wire, or radioteletype facilities.

This equipment can be operated in conjunction with associated equipment in circuits controlled by either local-battery or common-battery switchboards. It can also transmit and receive 20-cycle signaling current.

TECHNICAL CHARACTERISTICS:

Facilities Required: Teletypewriter equipment; two-wire, four-wire, or radioteletype circuits

Facilities Provided: Translates dc teletypewriter signals into vf, frequency-shift, 1,225- and 1,325-cps signals; or demodulates 1,225- and 1,325-cps signals and translates them into dc impulses; also provides 20-cps ringing

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

MIL-HDBK-161

AN/TGC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telegraph Terminal TH-5/TG (Equipment consists of only one major component.)	5805-240-6225	11 x 10-1/2 x 7-1/2	18.5

REFERENCE DATA AND LITERATURE:

TM 11-2239

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.78	22.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10267

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELETYPEWRITER AN/TGC-type

1 July 1958

Cognizant Serv: USA FSN: 5815-198-4433

TT-4()/TG

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4TTT4	--	1730-486121-750



TT-4/TG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-4()/TG is a portable, lightweight, page-printing teletypewriter for the transmission, monitoring, and reception of messages at battalion headquarters and communications centers of higher headquarters. It is immersionproof and may be floated during amphibious operations and can be carried on a standard packboard.

Normally used in neutral circuits only, this equipment may be adapted to receive and transmit polar signals. It can be connected to distant teletypewriters in field wire or cable, open wire, carrier or radio systems. It can be arranged for half-duplex, full-duplex, receiving only, or sending-only operation.

When suitable power for the motor and line is available, two or more Teletypewriters TT-4()/TG may be connected directly and operated without associated line equipment.

This teletypewriter is the major operating component of tactical Teletypewriter Set AN/PGC-1 and fixed station Teletypewriter TT-61/FG.

TECHNICAL CHARACTERISTICS:

Operating Functions: Keyboard operation; remote motor stop; break-in facilities

Operating Speed: 368.1 opm (60 wpm); gears furnished for 600 opm (100 wpm)

Motor Characteristics: Universal (ac or dc) series type
Motor Speed: Tuning fork adjusted to 180 vps; 3,600 rpm

Power Requirements: 105-125-vdc; or 150 w, 105-125-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter TT-4/TG (Equipment consists of only one major component.)	5815-198-4433	22-1/2 x 18-7/8 x 11-1/4	43

MIL-HDBK-161

AN/TGC-type TELETYPEWRITER

REFERENCE DATA AND LITERATURE:

TM 11-2234

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.15	95

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-14579

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kleinschmidt, Inc.	Deerfield, Ill.	6610-P-51-09	\$1,954.02
National Cash Register Co.	Dayton, Ohio	6611-P-51-09	1,799.31

TELETYPEWRITER AN/TGC-type

26 November 1958

Cognizant Serv: USA FSN: 5815-198-9028

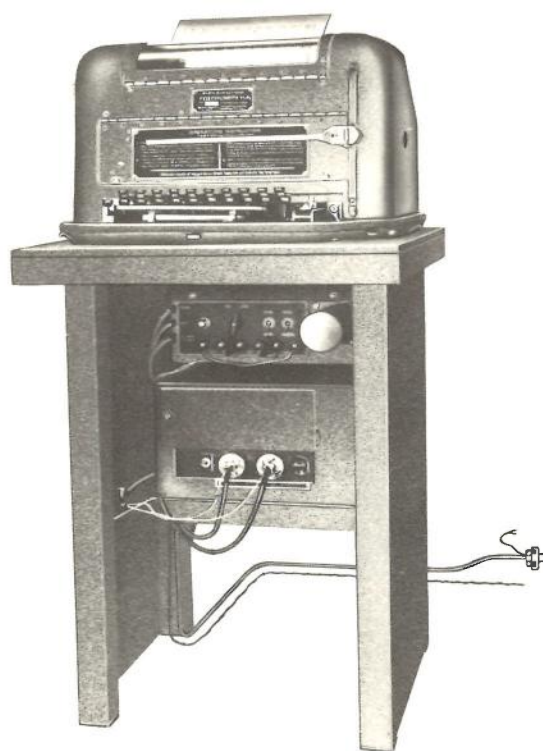
TT-61/FG

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4TTT61



TT-61/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-61/FG is a complete sending and receiving teletypewriter station comprised of compact, transportable units suitable for use at fixed or semifixed station installations in which space is limited. The set is designed for use in a nominal 60-milliampere dc neutral or polar network or in a 20-milliampere wire line or radio carrier system. Interoperation is possible with most types of United States and British standard communications teletypewriters in military or commercial use.

The typing unit is a page-printing teletypewriter with a standard communications keyboard. It is capable of sending

and receiving messages in standard start-stop, five-unit code. The printing mechanism is capable of operating on neutral signals only, but can be adapted to incoming polar signals through the use of a line unit. Normally this equipment is not used for polar transmission. However, provision is made in the transmitting mechanism for polar as well as neutral sending operation providing additional equipment is used and wiring changes are made.

The TT-61/FG consists of Teletypewriter TT-4/TG, Teletypewriter Adapter TT-73/FG (line unit), rectifier type Power Supply PP-604/FG, and Teletypewriter Table FN-45/FG. The table is used as a mounting and operating table for all other components.

TECHNICAL CHARACTERISTICS:

RF Suppression: Teletypewriter does not interfere with radio reception at frequencies between 0.35 and 150 mc when located 1 foot or more from radio antenna.

Ambient Temperature Limits:

Equipment in Use: 32°F. to 132°F.

Equipment in Storage: -80°F. to 160°F.

Teletypewriter TT-4/TG:

Type Keyboard: Standard communications

Characters Per Line: 72 (maximum)

Operating Speed: 368, 404, or 600 opm

Service Range:

368 or 404 Opm: 25 miles

600 Opm: 15 miles

Signaling Code: 5-unit, start-stop; stop-impulse length equals start-impulse length multiplied by 1.42.

Type Signals: Neutral

Bias:

Output Signals: $\pm 5\%$ (maximum) at 368 opm on DC LINE

Input Signals (Tolerance):

368 or 404 Opm: $\pm 40\%$

600 Opm: $\pm 35\%$

End Distortion Tolerance, Input Signals:

368 or 404 Opm: 35% marking or spacing

600 Opm: 30%

Type Motor: Governed series, universal (ac or dc)

Motor Speed: 3,600 rpm $\pm 5\%$ at all operating speeds

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

Teletypewriter Adapter TT-73/FG:

Type Relay: Polar

Relay Operating Current: 60 or 20 ma

Relay Bias Circuit Input: 115-v dc

MIL-HDBK-161

AN/TGC-type TELETYPEWRITER

Power Supply PP-604/FG:

De Output:

Voltage and Current: 2 amp (maximum) at 115-v dc

Regulation: 12-v variation over load-current range of 0.01 to 0.2 amp

Ac Ripple: 0.5-v (maximum) at all rated loads

Ac Output: 2.6 amp (maximum) at 115-v ac for any rated input

Input: 45 w (with no ac load), 95- to 125-/190- to 250-v 25- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Power Supply PP-604/FG	6130-250-5500	12 x 8-7/8 x 7-1/8	29.25
1	Teletypewriter TT-4/TG (includes Case CY-694/PGC and contents)	5815-198-4438	24-3/8 x 20-7/8 x 16-3/8	94.5
1	Teletypewriter Table FN-45/FG (includes Teletypewriter Adapter TT-73/FG with relay)	3815-256-8333	18-5/8 x 21-1/4 x 27	24.75

REFERENCE DATA AND LITERATURE:

TM 11-2236

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	23.7	260

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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1 December 1958

Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/TIP-1

FUNCTIONAL DESCRIPTION:

Public Address Sets AN/TIP-1 and AN/TIP-1A are designed to provide a high quality loudspeaker system for projecting voice, music, or other signals from microphones, electrical transcriptions, and radio receivers in auditoriums, stadiums, or buildings.

The amplifier part of the set provides five separate input channels; three for microphone and/or reproducer, one for radio input, plus one miscellaneous channel. Each channel has an individual volume control, but all channels are controlled at a master volume control which regulates the over-all gain. As many as 12 loudspeakers may be connected to the audio frequency amplifier.

Radio Receiving Equipment RBO is usually used in conjunction with this equipment.

TECHNICAL CHARACTERISTICS:

Facilities:

Input: 5 channel; microphone, phonograph, radio

Output: 12 speakers

Type Controls: One volume control for each channel, master volume control for all channels, and separate bass and treble controls

Power Output: 60 w into 30 ohms

Power Requirements: 300 w, 115-v 50- to 60-cycle 1-phase ac

MIL-HDBK-161

AN/TIP-1, -1A PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-282A/ TIP-1	-----	14-7/8 x 28-7/8 x 18-3/8	141
2	Dynamic Speaker CUL- 491888A	-----	18-1/4 x 28-7/8 x 23-3/4	60
5	Loudspeaker, Radial CUL- 491887	-----	18-1/2 x 54-3/8 x 19-1/2	22
2	Microphone CAFI-51096	-----	8-1/4 x 37-5/8 x 15-5/8	42
1	Sound Reproducer RD-56A/ TIP-1	-----	80-3/8 x 25-5/8 x 20-1/4	75

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91168, 91419

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	78.2	910

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PUBLIC ADDRESS SET **AN/TIP-2**

1 December 1958

Cognizant Serv: USN FSN: 5830-511-4448

USA

USN

USAF

TYPE CLASS:

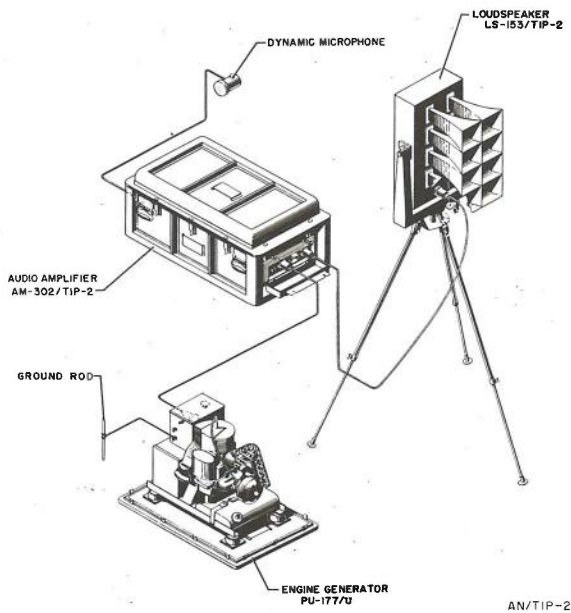
Std

Used by

Std

STOCK NO:

6C211-2

**FUNCTIONAL DESCRIPTION:**

Public Address Set AN/TIP-2 is a transportable, high-level, high-gain system used for the distant projection of a signal during landing operations.

This equipment can be operated from a microphone or telephone-line signal input over a wide temperature range and under adverse weather conditions.

TECHNICAL CHARACTERISTICS:*Sound Projection:*

Optimum conditions: 10,000 ft

Battle conditions: 2,500 ft

Type Controls: Gain control with volume indicator

Power Output: 500 w (350 to 5,000 cps)

Power Requirements: 1,100 w, 115-v 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-302/TIP-2	S17-A-53896-4086 (BuShips No.)	14-1/4 x 34 x 19-3/4	220
1	Case CY-719/TIP-2	2Z1891-719	16-1/4 x 43-3/4 x 15-3/4	169
1	Case CY-760/TIP-2	6C12-760	20-5/8 x 30-1/8 x 19-3/4	190
1	Engine Generator PU-177/U	3H1927-177	24-1/4 x 28-1/4 x 20-5/8	615
1	Loudspeaker Assembly LS-153/ TIP-2	-----	24 x 17-1/4 x 13	106.5

REFERENCE DATA AND LITERATURE:

TM 11-5554

MIL-HDBK-161

AN/TIP-2 PUBLIC ADDRESS SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	45	1,477

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CS-276

DESIGN COG: USN, BuShips (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PUBLIC ADDRESS SET AN/TIQ-2()

1 December 1958

Cognizant Serv: USA FSN: 5830-164-6618

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Ltd-Std (AN/TIQ-2, AN/TIQ-2A), Std (AN/TIQ-2B)
STOCK NO:	6C200-2		



AN/TIQ-2

FUNCTIONAL DESCRIPTION:

Public Address Set AN/TIQ-2() is a portable, electrical sound amplification system designed to project speech, music, or signals from radio, communication circuits, or records. It is intended to serve large audiences and is used in a variety of applications.

This equipment consists essentially of a medium-power audio amplifier, a phonograph turntable, loudspeakers, and related accessories. It is contained in field-type carrying cases.

Provision is made in the amplifier output for connection to a booster amplifier to obtain added coverage. A suitable booster amplifier is Amplifier AN-20/TIQ-2.

There are three models of this equipment AN/TIQ-2, AN/TIQ-2A, and AN/TIQ-2B; all of these items are basically similar with the exception of minor changes in components.

The set can be operated from sources of 115- or 230-volts of alternating-current power, or from either a 6- or 12-volt storage battery using Vibrator Power Supply PP-31/TIQ-2.

TECHNICAL CHARACTERISTICS:*Amplifier:*

Frequency Range: 50 cps to 10,000 cps; maximum variation 3 db

Input Channels: 5 microphone inputs, 1 radio input, 1 line input, 1 phone input

Power Output: 20 w at less than 5% distortion

Turntable:

Heat Control: 75 w heating unit controlled by thermostatic switch

Speed: 33-1/3 and 78 rpm

Speed Control: Governor operated by accessible lever

Microphone:

Type: Dynamic, moving coil, unidirectional

Frequency Range: 60 cps to 7,500 cps

Output: -56 db

Swivel: Permits full 180° travel

Speaker:

Type: Permanent magnet

Impedance: 250, 500, 1,000 or 2,500 ohms

Power Requirements: 275 w; 115- or 230-v, 60-cycle 1-phase ac; or 6- or 12-v storage battery dc through Vibrator Power supply PP-31/TIQ-2

AN/TIQ-2() PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Public Address Set AN/ TIQ-2:</i>				
1	Amplifier AM-20/TIQ-2	2C449-20	14 x 8-3/4 x 19	
1	Case CY-37/TIQ-2	5965-280-3432	33-1/4 x 22-7/8 x 23-1/4	151
3	Case CY-38/TIQ-2	2Z1891-38	22 x 16-3/16 x 10-1/8	
1	Headset HS-30-()	5965-164-7259	-----	0.8
2	Loudspeaker LS-103/TIQ-2	6C42-103	48 lg (collapsed)	18.5
1	Turntable MX-39/TIQ-2	5835-128-8762	19 x 15 x 6	

*For Public Address Set AN/
TIQ-2A:*

1	Amplifier AM-20A/TIQ-2	2C449-20A	19 x 14 x 8-3/4	
1	Case CY-37A/TIQ-2	5830-404-7266	33-3/4 x 22-7/8 x 23-1/4	
2	Case CY-38/TIQ-2	2Z1891-38	22 x 16-3/16 x 10-1/8	
1	Headset HS-30-()	5965-164-7259	-----	0.8
2	Loudspeaker LS-103A/TIQ-2	6C42-103	48 lg (collapsed)	18.5
1	Turntable MX-39A/TIQ-2	5835-128-8762	19 x 15 x 6	

*For Public Address Set AN/
TIQ-2B:*

1	Amplifier AM-20B/TIQ-2	2C449-20B	19 x 14 x 8-3/4	
1	Case CY-37A/TIQ-2	5830-404-7266	33-3/4 x 22-7/8 x 23-1/4	
2	Case CY-38/TIQ-2	2Z1891-38	22 x 16-3/16 x 10-1/8	
1	Headset HS-30-()	5965-164-7259	-----	0.8
2	Loudspeaker LS-103B/TIQ-2	6C42-103	48 lg (collapsed)	18.5
1	Turntable MX-39A/TIQ-2	5835-128-8762	19 x 15 x 16	

REFERENCE DATA AND LITERATURE:

TM 11-2586

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	31.04	576

PUBLIC ADDRESS SET **AN/TIQ-2()**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 7-3023

DESIGN COG: USA, Sig C (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PUBLIC ADDRESS SET AN/TIQ-3()

1 December 1958

Cognizant Serv: USA FSN: 5830-164-6619

	USA	USN	USAF
TYPE CLASS:	Std	--	Ltd-Std (AN/TIQ-3) Std (AN/TIQ-3A)
STOCK NO:	6C200-3	--	--



AN/TIQ-3

FUNCTIONAL DESCRIPTION:

Public Address Set AN/TIQ-3() is a portable, sound amplifying, and projecting equipment used in delivering commands or briefing instructions, or in the control of groups of personnel at airfields and at division and higher headquarters.

This equipment consists essentially of an amplifier, a control unit, loudspeakers, and power unit, and accessories.

The set can be modulated by a handset or microphone and by its loudspeaker components, such as the phonograph or similar pick-up devices. It has a tone generator for signaling over the system.

Power is supplied by its power unit or an equivalent source of 115 or 230 volts alternating current.

There are two models of this equipment Public Address Set AN/TIQ-3 and AN/TIQ-3A. Both of these are basically similar, differing only in details of the components.

TECHNICAL CHARACTERISTICS:*Facilities:*

Loudspeakers: 12

Tone Generator: For signaling over system

Piped in Sound: Provided for

Intercommunication: Among any and all stations

Type Controls: Sound-mixing, volume, loudspeaker selector, press-to-talk*Frequency Range:* 50 cps to 10,000 cps*Power Output:* 50 w \pm 10% distortion maximum*Power Input:*

Amplifier: 255 w, 2.2 amp

Control Unit: 20 w, 0.2 amp

Power Requirements:

Available Source: 275 w; 115- or 23-v, 50- to 60-cycle, 1-phase ac

Power Unit PE-214-B, or Equal: 300 w; 120- or 240-v, 60-cycle, 1-phase ac

AN/TIQ-3() PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Public Address Set AN/ TIQ-3:</i>				
1	Amplifier AM-34/TIQ-3	2C449-34 FSN: 5830-164-7276	18 x 15 x 8	65
1	Chest CY-96/TIQ-3	6C13-96 FSN: 5965-407-6684	27 x 17 x 21	
1	Control Unit C-104/TIQ-3	2C684-104 FSN: 5830-160-2465	18 x 15 x 8	40.75
12	Loudspeaker LS-104/TIQ-3	6C42-104 FSN: 5965-221-5786	19-9/16 lg x 13-1/4 dia	20.25
12	Loudspeaker Stand MT-128A/ TIQ-2	6C83-128A FSN: 5965-498-8177	53 minimum, 90 maximum	19
1	Power Unit PE-214, PE- 214A, B, or C	3H4600-214 FNS: 6115-230-4002	17-3/4 x 14-1/8 x 12-3/16	60.75
<i>For Public Address Set AN/ TIQ-3A:</i>				
1	Amplifier AM-700/TIQ-3	2C448A-700 FSN: 5830-254-2155	18 x 15 x 8	
1	Chest CY-96/TIQ-3	6C13-96 FSN: 5965-407-6684	27 x 17 x 21	
1	Control Unit C-1090/TIQ-3A	2C684-1090	18 x 15 x 8	
1	Handset H-33/PT, H-33B, C, D	2B620-33 FSN: 5805-163-9947		
1	Handset H-94/U	2B613 FSN: 5805-164-6632		
12	Loudspeaker LS-104/TIQ-3	6C42-104 FSN: 5965-221-5786	19-9/16 lg x 13-1/4 dia	20.25
12	Loudspeaker MT-128A/ TIQ-2	6C83-128A FSN: 5965-498-8177	53 minimum, 90 maximum	19
1	Power Unit PE-214, PE-214A, PE-214B or PE-214C	3H4600-214 FSN: 6115-230-4002	17-3/4 x 14-1/8 x 12-3/16	60.75

REFERENCE DATA AND LITERATURE:

TM 11-2531

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	67.4	1,324

PUBLIC ADDRESS SET **AN/TIQ-3()**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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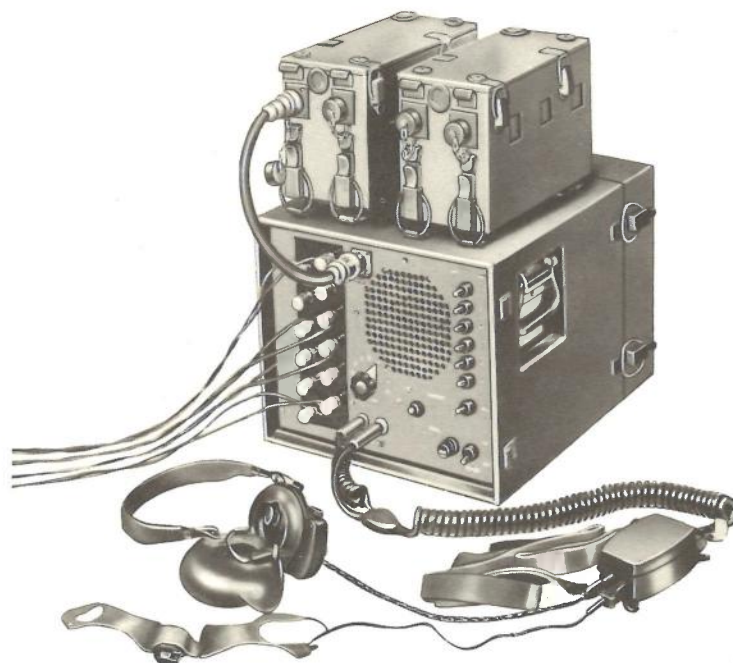
INTERCOMMUNICATION SET AN/TIQ-type

5 December 1958

Cognizant Serv: USA FSN: 5830-171-2859

PA-8

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	6C208	--	--



PA-8

FUNCTIONAL DESCRIPTION:

Intercommunication Set PA-8 is a rugged, portable, sound-amplifying and projecting equipment used as a loudspeaker intercommunication system.

This equipment consists of a single amplifier unit, battery boxes, a head-and-chest set, and related accessories. The master control unit and remote station speaker units are blastproof and waterproof.

It can be used for two-way half-duplex type communication and can interconnect up to six remote speaker station units on a single station or all call basis. It provides for calling the

master or control station from a speaker station unit only when the master station selector switch is in the ON position.

TECHNICAL CHARACTERISTICS:

Facilities Afforded: Communication with one or all remote stations on a listen-talk basis; remote station can communicate with central station only if central station is standing by for that (or all) remote stations

Power Output: 1.5 w

Power Requirements: Three BA-54 in series; 6 v from three batteries in series, or 6 v from six batteries in series parallel

MIL-HDBK-161

AN/TIQ-type INTERCOMMUNICATION SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
9	Battery BB-54	-----	5-1/2 x 3 x 4	3.25
1	Box CH-291	-----	6-1/4 x 11-3/4 x 5-1/2	3.25
1	Chest Set TD-4	-----	1-3/8 x 3 x 6	.7
1	Control Amplifier Unit BC-1346	-----	10-5/8 x 16 x 13-3/4	36
1	Headset H-16/U	-----	8 x 3-3/4 x 6	.75
4	Loudspeaker LS-13	-----	7 x 11-7/8 x 8-1/2	11.25
1	Microphone T-45	-----	3/8 x 1-1/4 x 1-1/4	.11

REFERENCE DATA AND LITERATURE:

TM 11-2564

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	17	296

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PORTABLE SOUND REPRODUCING EQUIPMENT **AN/TNP-type**

5 December 1958

Cognizant Serv: USN FSN:

PR

USA

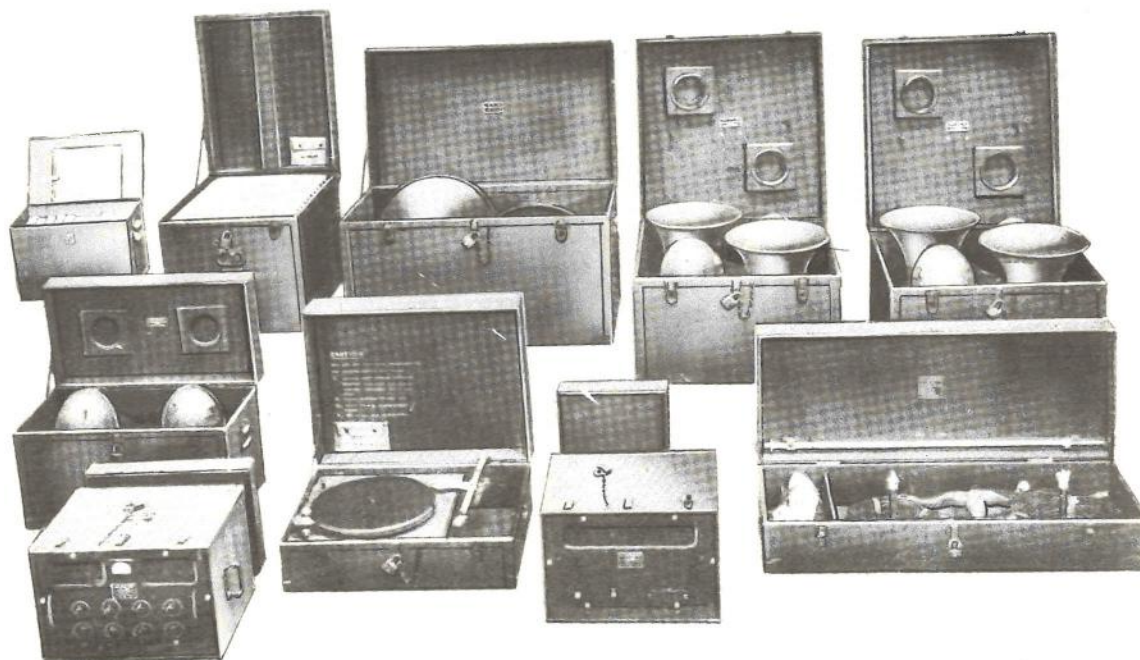
USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --



PR

FUNCTIONAL DESCRIPTION:

Portable Sound Reproducing Equipment PR is designed for use in connection with activities at Naval and Marine Corps shore stations and provides a loudspeaker system for voice, electrical transcriptions, and radio programs.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 to 8000 cps

Amplifier Output: 60 w

Input Impedance:

Microphone 1, 2, 3: 50/230/500 ohms

Radio: 600 ohms

Miscellaneous: 5,000/500,000 ohms

Output Impedance: 2.5, 4, 8, 15, 30, and 50 ohms

Power Requirements: 115-v 50-60-cycles ac

AN/TNP-type PORTABLE SOUND REPRODUCING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessory Carrying Case 10504	-----	10-1/4 x 18 x 45-1/4	72
1	Amplifier Unit 50252	-----	14-3/4 x 19-1/8 x 21-3/4	91
1	Record Carrying Case 10500	-----	21-1/2 x 22 x 25-3/4	99
1	Rectifier Power Unit 20403	-----	14-3/4 x 19-1/8 x 21-3/4	106
1	Reproducer Unit 67015	-----	10-7/8 x 23 x 30	70
1	Speaker Carrying Case 10501	-----	21-3/8 x 22-1/8 x 39	123
2	Speaker Carrying Case 10502	-----	19 x 23-3/4 x 28-3/4	96
1	Speaker Carrying Case 10503	-----	17-1/8 x 19 x 32	60

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900741

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
10	107.5	1,583

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Radio Corp.	Los Angeles, Calif.	XXsr-83353	

AMPLIFIER EQUIPMENT AN/TRA-1()

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7146

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5006-1	--	--



AN/TRA-1

FUNCTIONAL DESCRIPTION:

Amplifier Equipment AN/TRA-1() is a transportable, fm, high-power amplifier used to increase the power output and range of Radio Set AN/TRC-1, Radio Terminal Set AN/TRC-3, and Radio Relay Set AN/TRC-4.

The frequency range and power output of the various models of the amplifier are the same; it can be used with all models of Radio Transmitter T-14/TRC-1 (part of the AN/TRC-1, -3, and -4).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70 to 100

Type Modulation: FM

Type of Signal: Voice

Power Output:

AN/TRA-1: 250 w

AN/TRA-1A, -1B, -1C, -1D: 200 w

Power Requirements: 800 w, 115-v 50/60-cycle ac (from Power Supply PP-13/TRA-1)

MIL-HDBK-161

AN/TRA-1 () AMPLIFIER EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier AM-8/TRA-1	(FSN) 5895-164-7136 (USA) 2C449-8	10-3/4 x 12-3/4 x 19-1/8	48
1	Power Supply PP-13/TRA-1	(FSN) 5820-498-4504 (USA) 3H4497-13	9-3/8 x 14 x 25	130

REFERENCE DATA AND LITERATURE:

TM 11-2601

SHIPPING DATA

PGKS	VOLUME (Cu Ft)	WEIGHT (Lb)
3	----	547

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-A-10725

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
F. M. Link Radio Co.	New York, N. Y.	3203-P-51-06	\$1,257.52

REMOTE CONTROL EQUIPMENT **AN/TRA-2**

1 July 1958

Cognizant Serv: USA FSN: 5820-324-8744

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5006-2	--	--



AN/TRA-2

FUNCTIONAL DESCRIPTION:

Remote Control Equipment AN/TRA-2 is a transportable assemblage that permits operational control of Radio Set AN/TRC-1, Radio Terminal Set AN/TRC-3, and Radio Relay Set AN/TRC-4 from distances up to 2 miles. This equipment also enables automatic radio-relay operation when

the transmitter and receiver of the radio set are more than 10 feet apart, and provides intercommunication between local and remote operating locations.

TECHNICAL CHARACTERISTICS:

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

MIL-HDBK-161

AN/TRA-2 REMOTE CONTROL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Control Unit C-113/TRA-2	5820-164-7154	9 x 12 x 12	20
1	Remote Control Unit C-112/ TRA-2	5820-164-6303	9 x 12 x 12	20

REFERENCE DATA AND LITERATURE:

TM 11-2621

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	5	98

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271-3086

DESIGN COG: USA, Sig C

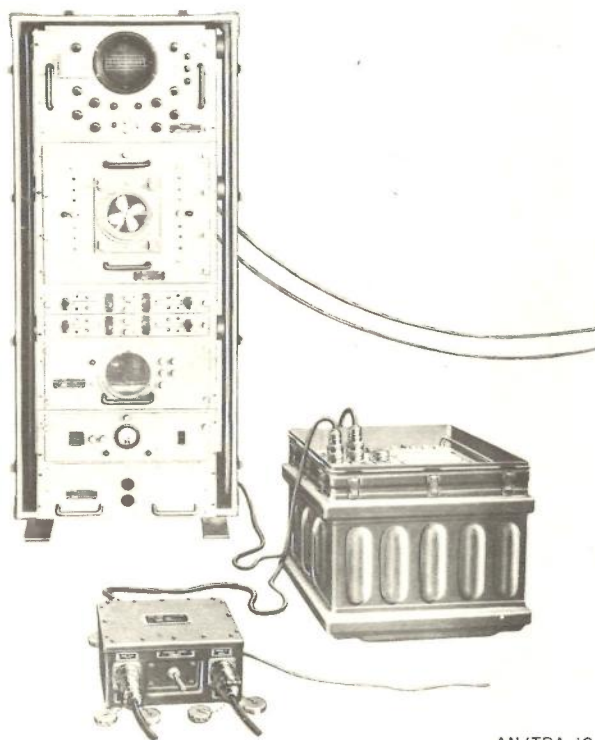
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	2200-MPD-44	\$190.12
Scott Radio Laboratories Inc.	Chicago, Ill.	16802-P-51-38	342.87

PULSE FORM RESTORER GROUP **AN/TRA-10**

1 July 1958

Cognizant Serv: USA FSN: 5820-510-1600

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C5615-10	--	--



AN/TRA-10

FUNCTIONAL DESCRIPTION:

Pulse Form Restorer Group AN/TRA-10 reshapes the 23- or 45-channel pulse train received from microwave radio receiving equipment into a standard wave shape before it is fed to the radio transmitter at a microwave radio relay system.

This equipment is inserted into the system once every four or five hops.

In addition to reshaping the video signal, this equipment provides communication at the relay station by two drop-and-insert channels.

This set is a major component of Radio Repeater Set AN/TRC-40.

TECHNICAL CHARACTERISTICS:

Facilities Required: Radio Set AN/TRC-29 or equivalent

Facilities Provided: Restores pulse train of 23- or 45-channel voice system, and allows for two drop-and-insert voice channels.

Type of Signal: Pulse position, time-division multiplex
Frequency (Each of channel):

Modulating Bandwidth: 300 to 3,500 cps

Signaling: 20 cps

Video Signal Characteristics:

Pulse Rate: 192 kc

Pulse Width: 0.6 microsecond

Bandwidth: 1 mc

Power Requirements: 785 w, 115/230-v ($\pm 10\%$) 47.3-63-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C-1151/TC	(FSN) 5805-503-3288 (USA) 2C684-1151	19 x 19 x 10-1/2	
1	Electrical Equipment Rack MT-1434/TRA-10	(FSN) 5805-537-7901 (USA) 6F8400-1434	20-3/4 x 19 x 24-3/8	
1	Electrical Standardized Com- ponents Case CY-1719/G	(FSN) 5820-310-2438 (USA) 6F300-1719	26-1/2 x 27 x 60	*595
1	Power Supply PP-691/G	(FSN) 5805-548-1669 (USA) 3H4497-691	19 x 19 x 12	123

* Weight of case is total weight of case plus equipment normally installed therein.

AN/TRA-10 PULSE FORM RESTORER GROUP

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Pulse Form Restorer TD-68/G	(FSN) 5820-510-1600 (USA) 2C5620-68	22-3/4 x 19 x 15-5/8	
2	Remote Switching Control C-1509/TC	(FSN) 5805-503-1103 (USA) 2C684-1509	4-1/2 x 2-3/4 x 5-1/2	
4	Telephone Modem MD-179/ TC	(FSN) 5805-503-1065 (USA) 4B1925B-179	16 x 2-1/2 x 8-1/2	5.5
1	Voltage Regulator CN-236/G	(USA) 3H4498-236	23 x 17-1/2 x 19-1/2	215

REFERENCE DATA AND LITERATURE:

TM 11-2141
TM 11-2682

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	98.7	1,746

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-M-10615

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
International Tel. & Tel. Corp., Federal Radio & Telephone Co. Division	Clifton, N. J.		

AMPLIFIER-POWER SUPPLY GROUP AN/TRA-19

1 July 1958

Cognizant Serv: USA FSN: 5820-503-3282

USA

USN

USAF

TYPE CLASS: S/Std
 STOCK NO: 2C-6656A.2

--
--L/Std
--

AN/TRA-19

FUNCTIONAL DESCRIPTION:

Amplifier-Power Supply Group AN/TRA-19 is auxiliary equipment used with such vhf radio equipment as Radio Set AN/TRC-8, Radio Terminal Set AN/TRC-11, and Radio Relay Set AN/TRC-12 to extend the effective transmission range of the transmitter components of these equipments.

This group consists essentially of a Class C RF power amplifier and a power-supply unit contained in a standardized equipment cabinet.

It can be used to improve transmission over long distances, grazing paths, and shadow areas, and to overcome other adverse conditions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250

Type Modulation: FM

Type of Signal: Voice, teletypewriter, facsimile (composite)

Power Output: 75 w (nominal)

Power Requirements: 400 w, 115/230-v ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Electrical Standardized Components Case CY-1204/TRA-19	5820-351-8207	26-1/2 x 18-3/8 x 17-3/4	53
1	Power Supply PP-840/TRA-19	5820-500-4380	10-1/2 x 12-7/8 x 14-3/4	64
1	Radio Frequency Amplifier AM-456/TRA-19	5820-503-3375	11 x 12-7/8 x 13-11/16	46

MIL-HDBK-161

AN/TRA-19 AMPLIFIER-POWER SUPPLY GROUP

REFERENCE DATA AND LITERATURE:

TM 11-618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	13.7	275

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-A-0010489B

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lewyt Mfg. Corp.	Long Island City, N. Y.	25745-P-54-55	\$547.11

CONTROL UNIT AN/TRA-type

1 July 1958

Cognizant Serv: USA FSN: 5815-162-8257

C-292()/TRA-7

USA

USN

USAF

TYPE CLASS:

Std

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STOCK NO:

2C684-292

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C-292()/TRA-7

FUNCTIONAL DESCRIPTION:

Control Unit C-292()/TRA-7, together with other components of a radioteletype system, provides facilities for establishing radioteletype full-duplex, half-duplex, one-way reversible, emergency cw, or frequency-shift transmission and reception.

This equipment is a single component containing an integral power supply and may be used in several different systems such as those using Radio Set AN/GRC-26 or AN/MRC-2.

It is an electronic repeater of polar and neutral teletypewriter signals and converts polar telegraph signals received from a dual-diversity converter into neutral signals to operate a receiving teletypewriter. This control unit also translates neutral signals from a sending teletypewriter into polar signals

for transmission over a wire line to control a frequency-shift exciter.

When not used in a specific system, this control unit may be located at the receiving station, the transmitting station, or any desired location within 10 miles of the two.

The C-292/TRA-7, C-292A/TRA-7, and C-292B/TRA-7 are functionally interchangeable and differ from each other in design details only.

TECHNICAL CHARACTERISTICS:*Type of Signal:*

Polar input: Mark, +0.025 amp; space, -0.025 amp

Polar output: Mark, +0.020 amp; space, -0.025 amp.

Neutral input and output: Mark, +0.060 amp; space, 0 amp

Power Requirements: 170 w, 115-v 50-60-cycle ac

MIL-HDBK-161

AN/TRA-type CONTROL UNIT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Control Unit C-292()/ TRA-7	5815-162-8257	12-1/4 x 16-7/8 x 21-1/2	100
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11-262

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	100

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-13172

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc. Stelma, Inc.	Upper Darby, Pa. Stamford, Conn.	25751-P-54-55	\$413.77

DUAL DIVERSITY CONVERTER AN/TRA-type

1 July 1958

Cognizant Serv: USA FSN: 5815-503-2602

CV-31()/TRA-7

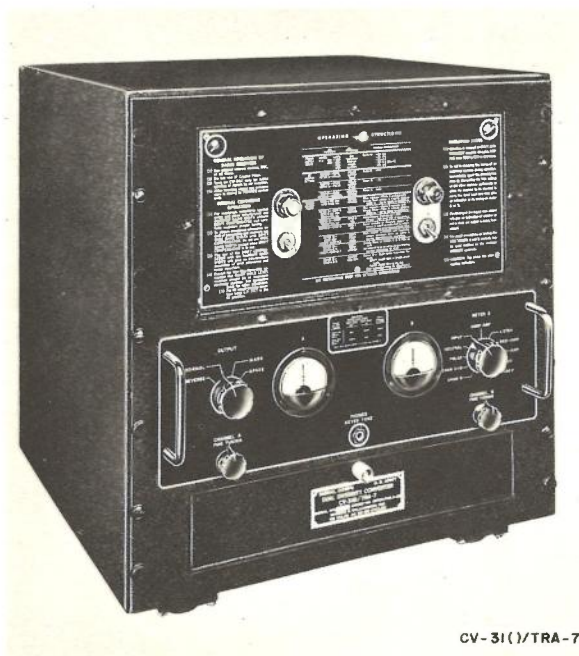
USA

USN

USAF

TYPE CLASS: Std
STOCK NO: 2C720-31

Used by



CV-31()/TRA-7

FUNCTIONAL DESCRIPTION:

Dual Diversity Converter CV-31()/TRA-7 is a component of a radioteletype system that provides full-duplex, half-duplex, or one-way reversible, frequency-shift transmission and reception. In an emergency, it also can provide the same service in a cw system.

This equipment consists of one component that contains its own meters, power supply, and oscillator. The oscillator provides an audible means of indicating mark and space signals when required.

The output of each of the two receivers is applied to the dual-diversity converter to combine the received frequency-shifted signals and to convert the stronger receiver output into dc neutral and polar signals.

The CV-31/TRA-7, CV-31A/TRA-7, CV-31B/TRA-7, CV-31C/TRA-7, and CV-31D/TRA-7 are identical except for minor electrical and mechanical differences.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

CV-31, -31A, early -31C/TRA-7: 0.400 to 0.470

CV-31C, -31D/TRA-7: 0.440 to 0.510

Type of Communication Circuit: Radioteletype

Power Requirements: 175 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Dual Diversity Converter CV-31()/TRA-7 (Equipment consists of only one major component.)	5815-503-2602	25-1/4 x 20-5/8 x 22	220

REFERENCE DATA AND LITERATURE:

TM 11-261

TM 11-264

TM 11-278

MIL-HDBK-161

AN/TRA-type DUAL DIVERSITY CONVERTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-13172

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc.	Upper Darby, Pa.	3135-P-51-31	\$1,333.63

RADIO TRANSMITTER MODULATOR **AN/TRA-type**

4 December 1958

Cognizant Serv: USN FSN:

MD-280/TRC

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter Modulator MD-280/TRC is used to amplitude modulate Radio Transmitter T-597/TRC.

Input Impedance: 150 ohms*Output Impedance:* 6,500 ohms*Power Output:* 10 w (maximum)**TECHNICAL CHARACTERISTICS:***Frequency Response:* 300 to 3,000 cps*Power Requirements:* 12-v dc (storage battery)**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter Modulator MD-280/TRC (Equipment consists of only one major component.)	-----	2-1/4 x 5 x 6-3/4	

REFERENCE DATA AND LITERATURE:**SHIPPING DATA**

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/TRA-type RADIO TRANSMITTER MODULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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FREQUENCY SHIFT EXCITER AN/TRA-type

1 July 1958

Cognizant Serv: USA FSN: 5815-224-5287

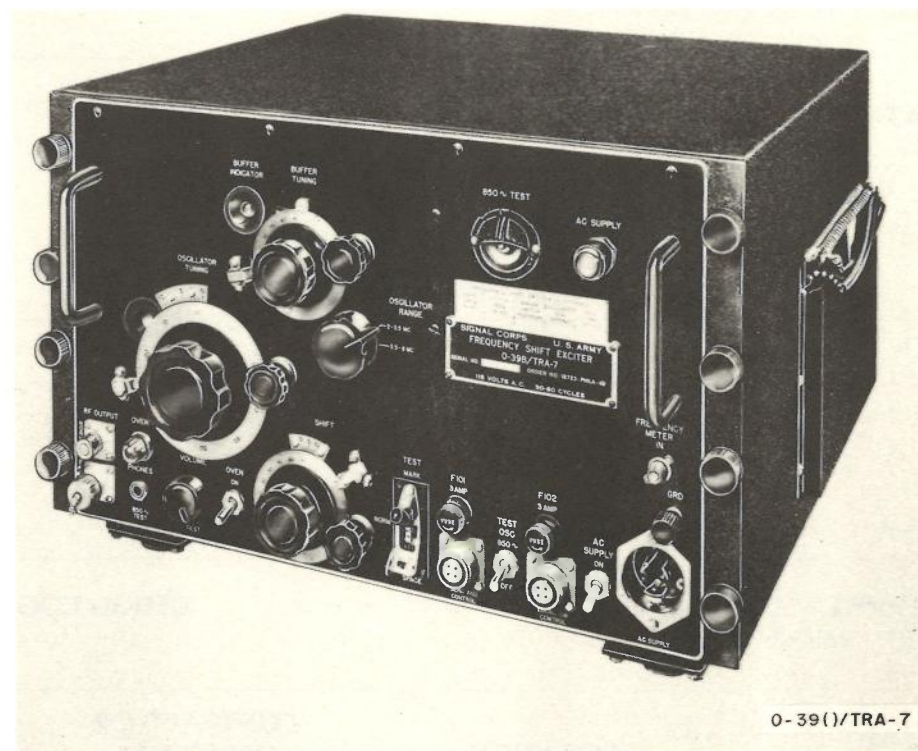
0-39()/TRA-7

USA

USN

USAF

TYPE CLASS:
STOCK NO:Std
2C2710-39--

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FUNCTIONAL DESCRIPTION:

Frequency Shift Exciter 0-39()/TRA-7 functions as the oscillator of the radio transmitter with which it is associated. It translates a teletypewriter signal into low-power, frequency-shift keyed, RF signals.

The 0-39/TRA-7, 0-39A/TRA-7, and 0-39B/TRA-7 and 0-39C/TRA-7 are identical except for minor electrical and mechanical differences.

TECHNICAL CHARACTERISTICS:

Type of Signal:

Dc Input: Mark, +0.02 amp; space, -0.025

Frequency shift: 212.5 to 850 cycles, depending on frequency multiplication of associated radio transmitter

Output Frequency: 2 to 6 mc

Power Requirements: 185 w, 115-v 50/60-cycle ac

MIL-HDBK-161

AN/TRA-type FREQUENCY SHIFT EXCITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Exciter O-39()/TRA-7	(FSN) 5185-224-5287	16-7/8 x 21-1/2 x 13	125
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

- TM 11-257
- TM 11-264
- TM 11-278
- TM 11-624

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
 SPEC &/or DWG: MIL-R-13171

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc. The Hallicrafter Co.	Upper Darby, Pa. Chicago, Ill.	32053-P-55-55 3467-P-52-06	\$1,184.05 868.71

MULTIPLEXER **AN/TRA-type**

5 December 1958

Cognizant Serv: USN FSN:

TD-164/TRC

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Multiplexer TD-164/TRC is used between two receiver-transmitter units at a repeater station. This equipment provides one channel part-line order-wire communications to the attendants at all repeater stations of a multi-hop link. All channels originated at a terminal station pass unaltered through this drop and insert unit with the exception of the order-wire channel.

TECHNICAL CHARACTERISTICS:*Input Channel:*

Video:

*Number Channels: 24**Frequency: 3 mc**Impedance: 93 ohms*

Audio:

*Number Channels: 1**Frequency Range: 300 to 3,500 cycle**Impedance: 600 ohms*

Output:

Video:

*Frequency: 3 mc**Voltage: 24 umin**Impedance: 93 ohms*

Audio:

*Frequency Range: 300 to 3,500 cycles**Voltage: 1.5-v maximum (+4 dbm)**Impedance: 600 ohms**Power Requirements: 115-v 400-cycle 1-phase ac***MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Multiplexer TD-164/TRC	-----	10 x 14-1/4 x 25-1/4	50

REFERENCE DATA AND LITERATURE:**SHIPPING DATA**

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/TRA-type MULTIPLEXER

PROCUREMENT DATA

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

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO SET AN/TRC-1()

1 July 1958

Cognizant Serv: USA FSN:

USA

USN

USAF

TYPE CLASS:

Std

Used by

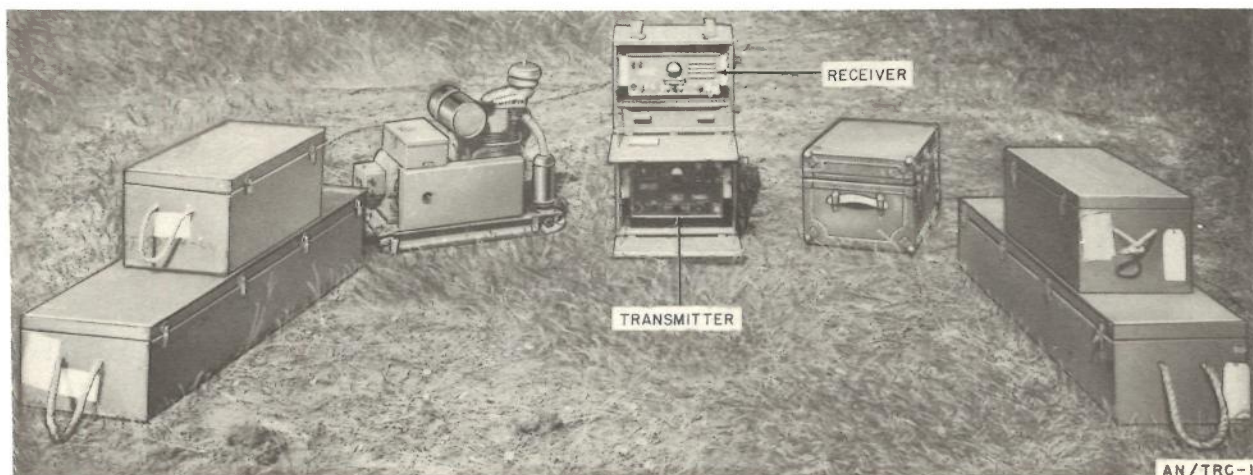
L/Std

STOCK NO:

2S5002-1

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**FUNCTIONAL DESCRIPTION:**

Radio Set AN/TRC-1() is a transportable, crystal-controlled, fm radio receiving and transmitting equipment for radio-relay or point-to-point communication in the vhf band. When operated as the terminal of a radio-relay link in a tactical communication system, it provides one-way or simultaneous two-way facilities.

With appropriate auxiliary equipment, four channels of voice signals can be accommodated. Multichannel radio-teletype signals or a facsimile signal can be accommodated with appropriate additional equipment.

The set can be operated from a distant control point on a two-wire or four-wire basis by means of Remote Control Equipment AN/TRC-2. Amplifier Equipment AN/TRC-1 can be added when necessary to increase transmitter power output. Antenna tower, dipole elements, power supply, and accessory items are included.

This equipment is intended for operation on an intermittent

or prescheduled basis only. It does not include spare operating components.

For continuous operation, Radio Terminal Set AN/TRC-3, composed essentially of two Radio Sets AN/TRC-1(), is available. In addition, two AN/TRC-1() sets (including necessary spares) operating back-to-back at an intermediate point in a system constitute Radio Relay Set AN/TRC-4.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70.0 to 99.9

Type Modulation: FM

Type of Signal: Voice, teletypewriter (with additional equipment)

Power Output:

High Power: 50 w

Low Power: 10 w

Power Requirements:

Transmitter: 250 w, 115-v 50/60-cycle ac

Receiver: 110 w, 115-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-1() RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna System AS-19/TRC-1	(FSN) 5985-221-9002	-----	470
1	Power Unit PE-75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
1	Radio Receiver R-19/TRC-1	(USA) 2C4180-19	22-1/2 x 16 x 17-3/4	95
1	Radio Transmitter T-14/ TRC-1	(FSN) 5820-164-7147	22-1/2 x 16 x 17-3/4	108

REFERENCE DATA AND LITERATURE:

TM 11-2601

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	78	2,000

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10174

DESIGN COG: USA, Sig C

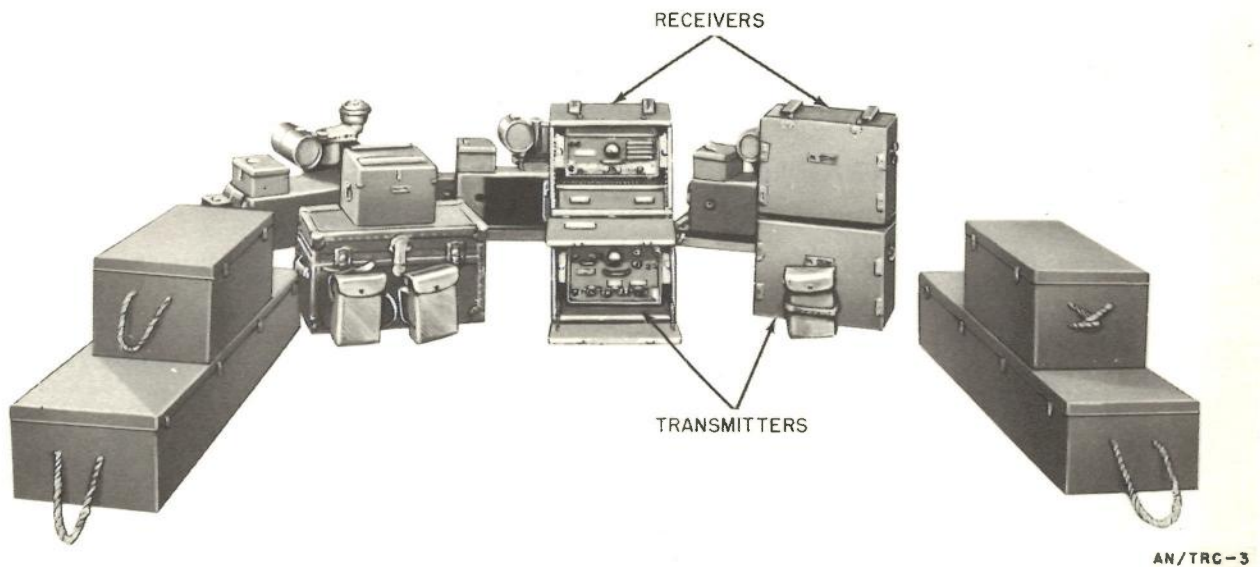
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	3333-P-52-06	\$1,464.00
Vulcan Steel Products Co., Inc.	----	21357-P-50-06	1,423.00

RADIO TERMINAL SET AN/TRC-3()

1 July 1958

Cognizant Serv: USA FSN: 5820-193-7107

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2S5002-3	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Terminal Set AN/TRC-3() is a transportable, crystal-controlled, FM, field, radio transmitting and receiving equipment that can be used in point-to-point, single or multi-channel communication or as the terminal or a radio relay system.

This equipment consists essentially of two Radio Sets AN/TRC-1, one of which is a spare, assuring continuous operation. It can be used in conjunction with telephone and telegraph equipment to provide various combinations of voice, telegraph or teletypewriter, and facsimile communication.

It can operate in a system in which the remote terminal consists of another Radio Terminal Set AN/TRC-3(), or Radio Set AN/TRC-1(), and in which Radio Relay Set AN/TRC-4() may be used as the intermediate repeater facility.

When it is necessary to increase power output of the transmitter, Amplifier Equipment AN/TRA-1 (not a component of this equipment) can be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70.0 to 99.9

Type Modulation: FM

Type of Signal: Voice, teletypewriter (with additional equipment)

Power Output: High power, 50 w; low power, 10 w

Power Requirements:

Commercial power source, Power Unit PE-75 or equivalent

Transmitter: 250 w, 115-v 50/60-cycle ac

Receiver: 100 w, 115-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-3() RADIO TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Antenna System AS-19/TRC-1	(FSN) 5985-221-9002	26-3/8 x 33-1/2 x 105-1/2	470
3	Power Unit PE-75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
2	Radio Receiver R-19/TRC-1	(FSN) 5820-164-6368	8 x 12-3/4 x 19-1/8	43
2	Radio Transmitter T-14/ TRC-1	(FSN) 5820-164-7147	10-3/4 x 12-3/4 x 19-1/8	66
3	Telephone EE-8	(USA) 4B5008	9-9/16 x 3-1/2 x 7-11/16	9.75

REFERENCE DATA AND LITERATURE:

TM 11-2601

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	132	3,150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3010

DESIGN COG: USA, Sig C

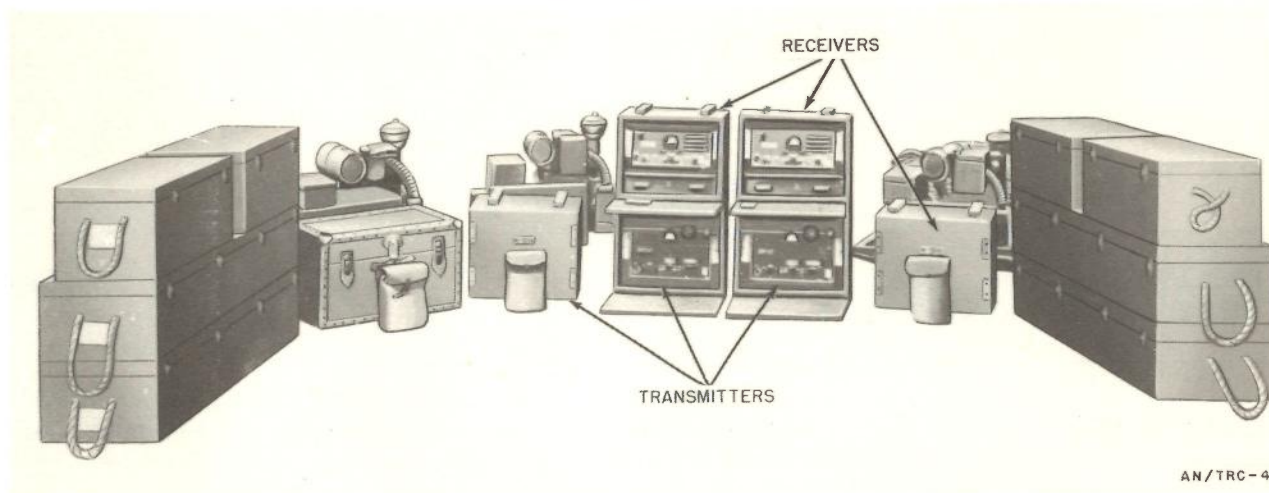
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co.	New York, N. Y.	25831-P-54-55	\$2,928.87
The Hallicrafter Co.	Chicago, Ill.	3466-P-52-06	3,706.56
Transmitter Equip. Mfg. Co. Inc.	New York, N. Y.	25639-P-53-36	3,133.94

RADIO RELAY SET AN/TRC-4 ()

1 July 1958

Cognizant Serv: USA FSN: 5820-186-9253

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2S5002-4	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Relay Set AN/TRC-4() is a transportable, crystal-controlled, FM, field, radio transmitting and receiving equipment that can be used in point-to-point single or multi-channel communication, but which is designed as the repeater facility of a radio-relay link of a system using Radio Terminal Set AN/TRC-3.

This equipment consists essentially of two Radio Sets AN/TRC-1, operating back-to-back at intermediate points of a radio-relay facility terminated by Radio Set AN/TRC-1 or Radio Terminal Set AN/TRC-3. It can accommodate various combinations of voice, telegraph, teletypewriter, and

facsimile channels. It includes spare operating components antenna, power, and accessory items.

Amplifier Equipment AN/TRA-1 may be used to increase the transmitter output power of this radio-relay set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70.0 to 99.9

Type Modulation: FM

Type of Signal: Voice, teletypewriter (with additional equipment)

Power Output: 10 w or 50 w

Power Requirements:

Transmitter: 250 w, 115-v 50/60-cycle ac

Receiver: 100 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
6	Antenna System AS-19/TRC-1	(FSN) 5985-221-9 02	26-3/8 x 33-1/2 x 105-1/2	470
4	Power Unit PE-75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
3	Radio Receiver R-19/TRC-1	(FSN) 5820-164-6368	8 x 12-3/4 x 19-1/8	43
3	Radio Transmitter T-14/ TRC-1	(FSN) 5820-164-7147	10-3/4 x 12-3/4 x 19-1/8	66

MIL-HDBK-161

AN/TRC-4() RADIO RELAY SET

REFERENCE DATA AND LITERATURE:
TM 11-2601

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	187	4,500

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3010

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co.	New York, N. Y.	25831-P-54-55	\$5,200.14
The Hallicrafters Co.	Chicago, Ill.	21886-P-50-06	4,677.20
Transmitter Equipment Mfg. Co., Inc.	New York, N. Y.	25639-P-53-36	5,512.56

RADIO SET AN/TRC-7, -7A, -7B

1 December 1958

Cognizant Serv: USAF FSN: 5820-537-4006

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Ltd-Std (all models)
STOCK NO:	AN/TRC-7, AN/TRC-7A: 2S5002-7 AN/TRC-7B: 2S5002-7B		



AN/TRC-7

FUNCTIONAL DESCRIPTION:

Radio Sets AN/TRC-7, AN/TRC-7A, and AN/TRC-7B are portable, low-power, two-way receiver-transmitter units used for ground-to-air and point-to-point communication. The radio sets are designed for short distance operation in the very high frequency range.

Normally, these equipments are controlled locally but can be controlled from remote point as far as 2 miles by means of Remote Control Equipment RC-261.

Power may be supplied either from a Battery BA-70 or from handcranked Generator G-3()/TRC-7, or both. Battery life is a minimum of 4 hours for continuous transmission, and 20 hours maximum for continuous reception.

These sets are basically similar, differing only in details of the various components.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156

Number of Channels: 561

Number of Preset Channels: 2

Type Modulation: AM

Type Emission and Reception: A3 (voice)

Frequency Control: Crystal controlled oscillator

Type Receiver: Superheterodyne

Power Output:

Transmitter: 0.4 to 1.5 w

Receiver: 60 mw

Antenna:

Type: Whip or ground plane conical

Polarization: vertical

Impedance: 50 ohms

Power Requirements:

Battery B-70 or Hand Generator G-3/TRC-7 or both:

Current drain 1.106 amp (max)

Battery Life: 20 to 25 hours on reception only; 4 to 5 hours continuous transmission

AN/TRC-7, -7A, -7B RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
<i>For Radio Set AN/TRC-7 and TRC-7A:</i>				
1	Antenna AT-59/TRC-7	2A203-59	27-11/16 x 5/32 dia	
1	Antenna Assembly AS-110/ TRC-7	2A264-110	30 ft high	
1	Antenna Base AB-37/TRC-7	2A282-37		
2	Bag CW-47/TRC-7	3H160-47	14-5/8 x 8-5/8 x 16	
2	Bag CW-48/TRC-7	2Z553-48	37 x 14 x 10	
2	Bag CW-49/TRC-7	3B295-49	12-5/8 x 6-5/8 x 14	
1	Battery BA-70	FSN: 6135-128-1633	10-5/16 x 4-1/2 x 8-1/4	
1	Control, Radio Set C-1200/ GRC	2C680-52 FSN: 5820-129-9306		
1	Control, Radio Set C-1201/ GRC	2C680-53 FSN: 5820-221-0204	3-1/2 x 4-3/16 x 7-1/2	
1	Generator G-3/TRC-7 or G-3A/TRC-7	3H2320-3	7-1/4 x 6-3/8 x 7-1/4	
1	Hand Set H-23C/U	2B620-23C FSN: 5805-223-4739	2-3/4 x 3-15/16 x 9-1/16	
1	Headset HS-30	2B830 FSN: 5965-164-7259		
1	Microphone T-45	FSN: 5965-164-7314		
1	Receiver-Transmitter RT-53/TRC-7	2C5130-53		
or				
	RT-53A/TRC-7	2C5130-53A		
<i>For Radio Set AN/TRC-7B:</i>				
1	Antenna AT-59/TRC-7	2A203-59	27-11/16 x 5/32 dia	
1	Antenna Assembly AS-110/ TRC-7	2A264-110	30 ft high	
1	Antenna Base AB-37/TRC-7	2A282-37		
2	Bag CW-47/TRC-7	3H160-47	14-5/8 x 8-5/8 x 16	
2	Bag CW-48/TRC-7	2Z553-48	37 x 14 x 10	
2	Bag CW-49/TRC-7	3B295-49	12-5/8 x 6-5/8 x 14	
1	Battery BA-70	FSN: 6135-128-1633	10-5/16 x 4-1/2 x 8-1/4	
1	Control, Radio Set C-1200/ GRC	2C680-52 FSN: 5820-129-9306		
1	Control, Radio Set C-1201/ TRC	2C680-53 FSN: 5820-221-0204	3-1/2 x 4-3/16 x 7-1/2	
1	Generator G-3B/TRC-7	3H2440-6	8-7/8 x 6-1/2 x 10	
1	Hand Set H-23C/U	2B620-23C FSN: 5805-223-4739	2-3/4 x 3-15/16 x 9-1/16	
1	Headset HS-30	2B830 FSN: 5965-164-7259		
1	Microphone T-45	FSN: 5965-164-7314		
1	Receiver-Transmitter RT-53B/ TRC-7	2C5130-53B		

RADIO SET **AN/TRC-7, -7A, -7B****REFERENCE DATA AND LITERATURE:**

AN/TRC-7, AN/TRC-7A: TM 11-617
AN/TRC-7B: TO 31R2-2TRC7-14
TO 16-30TRC7-3
TO 16-30TRC7-2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	9.4	157

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: 271-3103

DESIGN COG: USAF (RCUE)

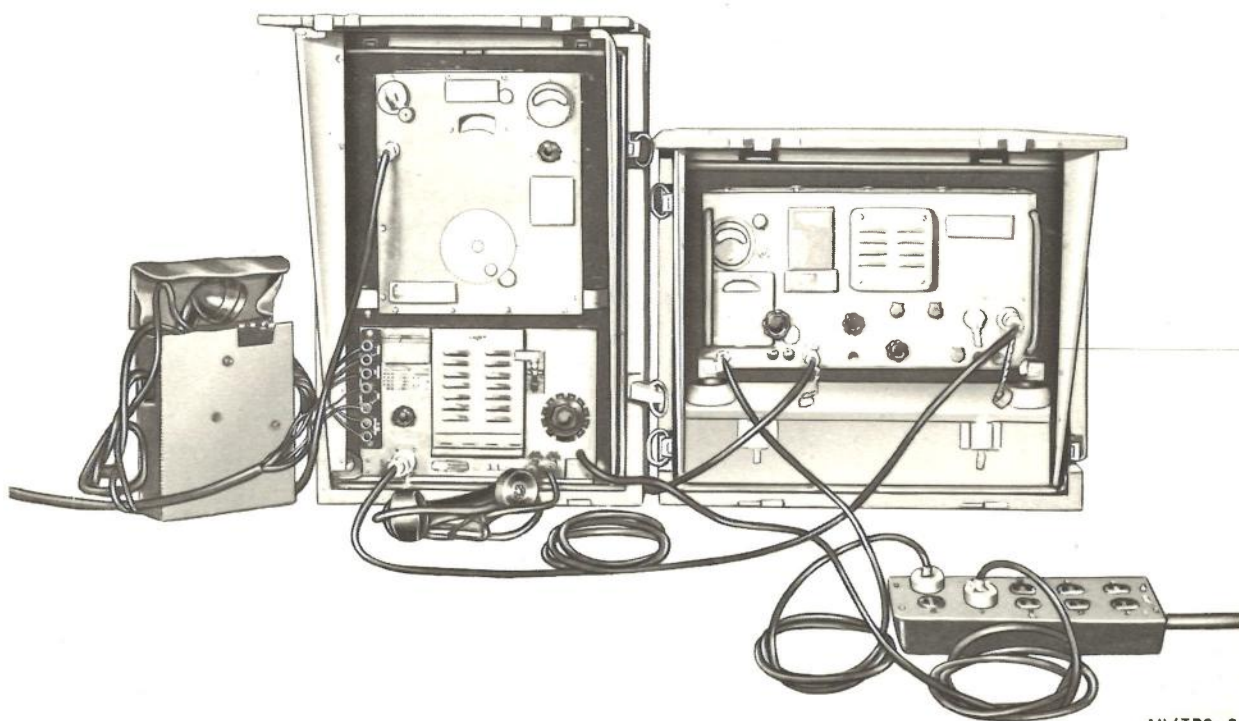
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp.	Long Island City, New York, N. Y.		

RADIO SET AN/TRC-8

1 July 1958

Cognizant Serv: USA FSN: 5820-193-7106

	USA	USN	USAF
TYPE CLASS:	S/Std	--	A/Std
STOCK NO:	2S5002-8.1	--	--



AN/TRC-8

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-8 is a transportable, vhf, FM, single-channel radio receiving and transmitting equipment used for point-to-point or radio relay applications.

This equipment consists of a radio transmitter, a radio receiver, an antenna, and power accessories but does not include spare operating components. It is intended for use on an intermittent or prescheduled basis. It is designed for communication by voice signals and, in conjunction with additional equipment, for radioteletype applications.

For continuous operation, spare operating components are added (constituting Radio Terminal Set AN/TRC-11). For radio relay use, the same primary operating components and the necessary spares (constituting Radio Relay Set AN/TRC-

12) are operated back-to-back at intermediate points of a system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250

Type Modulation: FM

Type of Signal: Voice, teletypewriter (with additional equipment)

Power Output: 5 w

Power Requirements: Commercial power source, Power Unit PE-75, or equivalent

Transmitter: 350 w, 115/230-v 50/60-cycle ac

Receiver: 120 w, 115/230-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-8 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Assembly AS-52/ TRC-8	(FSN) 5985-248-4277	33-1/2 x 14 x 24	110
1	Power Unit PE-75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
1	Radio Receiver R-48/TRC-8	(USA) 2C4180-48	23 x 16 x 19	126
1	Radio Transmitter T-30/ TRC-8	(USA) 2C6900-30-1	17-1/2 x 16 x 24-1/2	135

REFERENCE DATA AND LITERATURE:

TM 11-618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	48	1,250

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3244

DESIGN COG: USA, Sig C

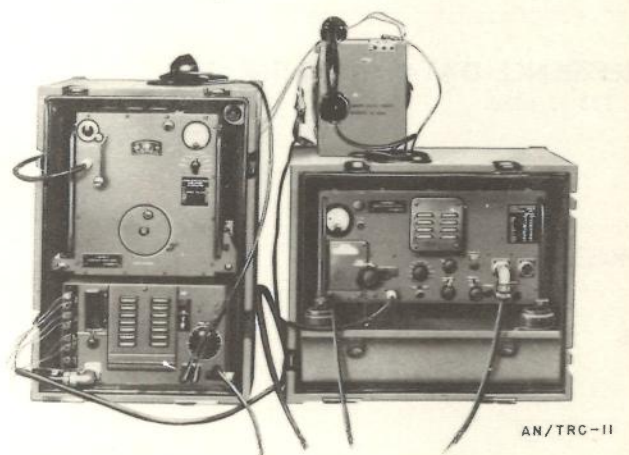
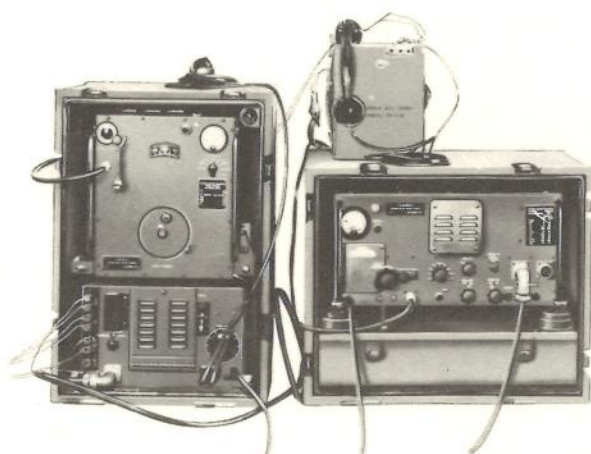
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Espey Mfg. Co., Inc.	New York, N. Y.	25456-P-49-61	\$4,083.55

RADIO TERMINAL SET AN/TRC-11()

1 July 1958

Cognizant Serv: USA FSN: AN/TRC-11, -11A: 5820-192-7149
 AN/TRC-11B: 5820-503-1717

	USA	USN	USAF
TYPE CLASS:	S/Std	--	L/Std
STOCK NO:	AN/TRC-11: 2S5002-11.1 AN/TRC-11B: 2S5002-11B	--	1760-04875050

**FUNCTIONAL DESCRIPTION:**

Radio Terminal Set AN/TRC-11() is a transportable, fm (voice), vhf, transmitting and receiving equipment used for single-channel, point-to-point communication or as the terminal of a radio relay system.

This equipment consists essentially of two receivers and two transmitters (one of each being a spare), antenna components, and power equipment. It is designed for continuous operation. It can be used in single-channel applications on a half-duplex basis or, with additional equipment, for full-duplex radioteletype communication as the terminal or a radio link in a wire or cable system.

It is designed primarily to operate continuously as the terminal of a radio relay system in which the opposite or remote terminal equipment consists of Radio Set AN/TRC-8, or another AN/TRC-11, and in which Radio Relay Set

AN/TRC-12 is used at intermediate points of the system as may be required to extend the distance range between terminals.

It requires 115/230 v ac operate and can be powered by its power unit component or an equivalent source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250

Type Modulation: Fm

Type of Signal: Voice; teletypewriter or composite (with additional equipment)

Power Output: 5 w

Power Requirements:

Transmitter: 350 w, 115/230-v 50/60-cycle ac

Receiver: 120 w, 115/230-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-11() RADIO TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
2	Antenna Assembly AS-52/ TRC-8	5985-248-4277	33-1/2 x 14 x 24	110
2	Power Unit PE-75	6115-228-5815	26-1/2 x 19-1/2 x 36	330
2	Radio Receiver R-48/TRC-8	5985-164-7182	23 x 16 x 19	126
2	Radio Transmitter T-30/ TRC-8	5820-194-0972	17-1/2 x 16 x 24-1/2	135

REFERENCE DATA AND LITERATURE:

TM 11-618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	76	2,300

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-12887

DESIGN COG: USA, Sig C

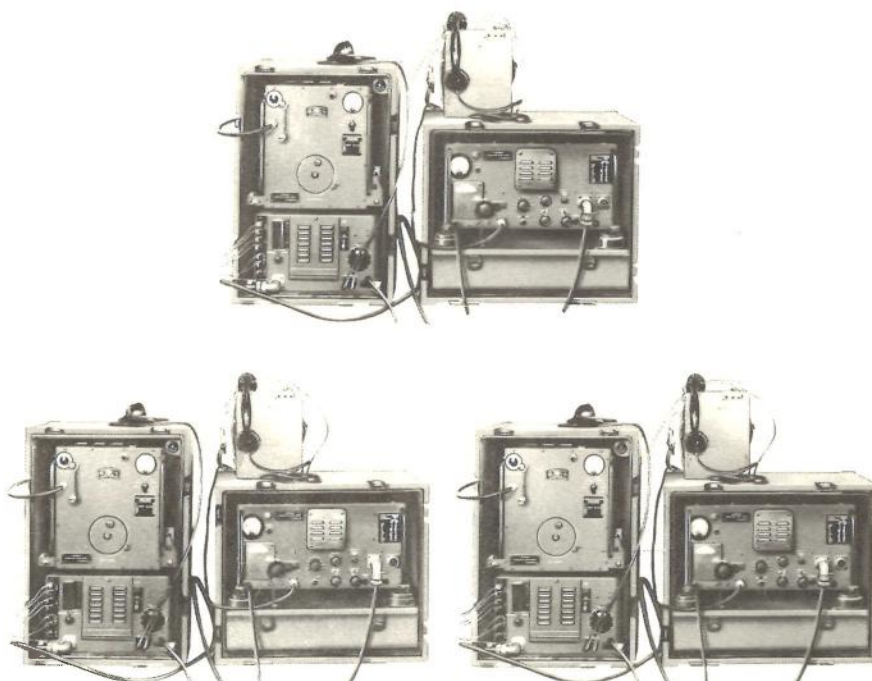
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Amer. Machine & Foundry Co., Electronics Division	New York, N. Y.	25833-P-54-55	\$3,704.72
Espey Mfg. Co.	New York, N. Y.	3478-P-52-06	5,400.00

RADIO RELAY SET AN/TRC-12()

1 July 1958

Cognizant Serv: USA FSN: 5820-192-7147

	USA	USN	USAF
TYPE CLASS:	S/Std	--	L/Std
STOCK NO:	2S5002-12.1	--	--



AN/TRC-12

FUNCTIONAL DESCRIPTION:

Radio Relay Set AN/TRC-12() is a transportable, fm (voice), vhf transmitting and receiving equipment used for single-channel, point-to-point communication or as a repeater station at intermediate points of a radio-relay system.

This equipment consists essentially of three or four radio transmitters and three or four radio receivers (two of each in operation), antenna components, and power equipment. It is designed to be used primarily on a continuous basis for half-duplex or full-duplex communication in a system terminated by Radio Set AN/TRC-8 or Radio Terminal Set

AN/TRC-11 or as a single-channel voice communication facility.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250

Type Modulation: Fm

Type of Signal: Voice, teletypewriter

Power Output: 5 w

Power Requirements:

Transmitter: 350 w, 115/230-v 50/60-cycle ac

Receiver: 120 w, 115/230-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-12() RADIO RELAY SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1 or 2	Accessory kits			
4 or 6	Antenna Assembly AS-52/ TRC-8	2A264-52.1	33-1/2 x 14 x 24	110
4 or 5	Antenna Support AB-33B/ TRC-1	2A248-33B		
2 or 3	Power Unit PE-75-()	3H4575	26-1/2 x 19-1/2 x 36	330
3 or 4	Radio Receiver R-48()/ TRC-8	2C4180-42-2	23 x 16 x 19	126
3 or 4	Radio Transmitter T-30()/ TRC-8	2C6900-30	17-1/2 x 16 x 24-1/2	135

* Quantities vary in different models and procurements. Refer to appropriate supply manual for exact quantities issued with specific models of this equipment.

REFERENCE DATA AND LITERATURE:

TM 11-618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
19	167.78	3,013

* Shipping data varies with different models and procurements. Data given here is for earliest model, first procurement order.

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-12887

DESIGN COG: USA, Sig C

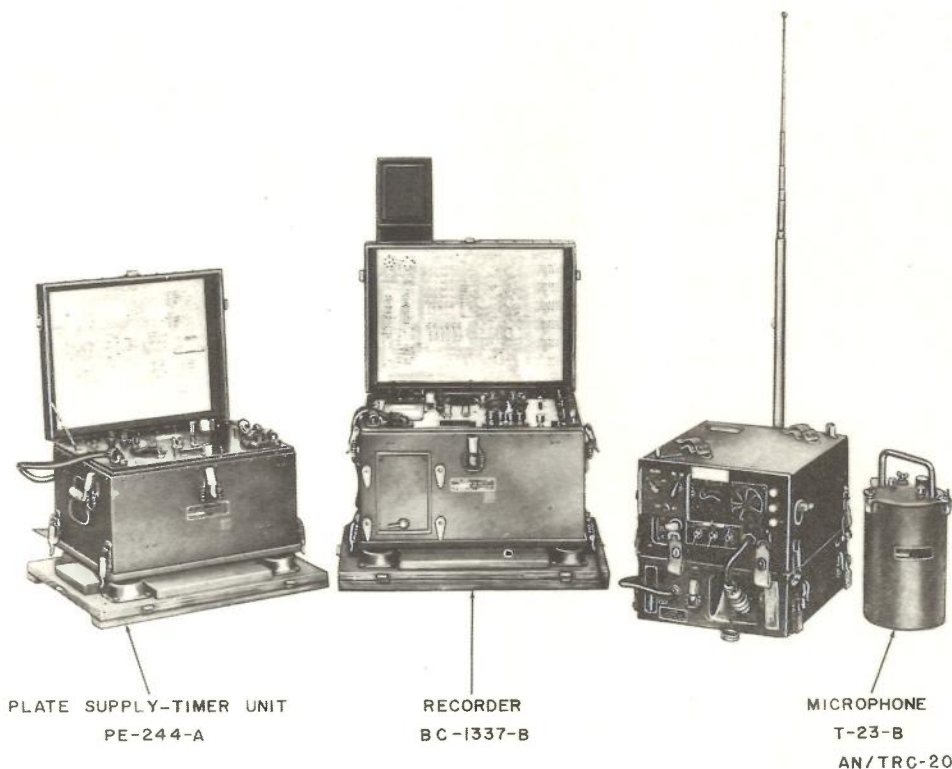
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co., Elec- tronics Division	New York, N. Y.	25833-P-54-55	\$5,833.86
Espey Mfg. Co., Inc.	New York, N. Y.	3478-P-52-06	8,150.00

RADIO SET **AN/TRC-20**

1 July 1958

Cognizant Serv: USA FSN: 5820-519-4106

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5002-20	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Set AN/TRC-20 is a low power, short-range, fm (voice), transmitting and receiving equipment. It is used as part of a sound ranging system to detect low-frequency artillery reports or shell explosions in the field, and to relay this information to a central location for plotting purposes.

This set consists of the basic components of Radio Set SCR-610-(), which have been modified for use in the AN/TRC-20. The modified components have been assigned

new type numbers (see MAJOR COMPONENTS), but are capable of performing the same functions as the SCR-610.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9

Type Modulation: Fm

Type of Signal: Voice

Power Output: 1.3 w

Power Requirements:

Transmitting: 2.0 amp, 24-v dc from storage battery

Receiving: 1.5 amp at 24-v dc from storage battery

MIL-HDBK-161

AN/TRC-20 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AN-29-C	2A229C	-----	2.0
1	Power Supply PP-1067/GR	3H4497-1067	8-7/8 x 16-1/2 x 18-7/8	33.8
1	Radio Receiver-Transmitter RT-111	2C5130-111	11-7/8 x 16-3/8 x 21-1/2	35.13

REFERENCE DATA AND LITERATURE:

TM 11-615, changes 2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG:

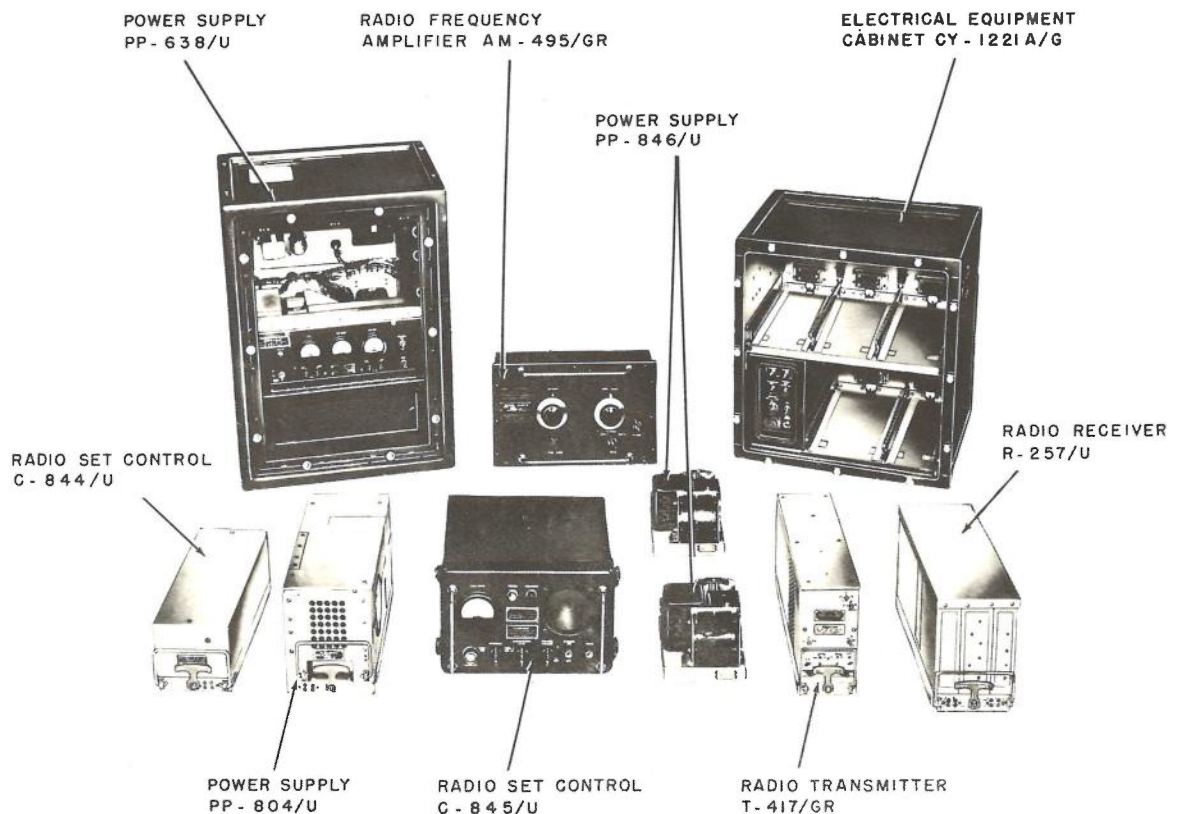
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO SET AN/TRC-22

1 July 1958

Cognizant Serv: USA FSN: 5820-503-1129

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5002-22	--	--



AN/TRC-22

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-22 is an fm (voice) vhf, crystal-controlled receiving and transmitting equipment, used by military police, guard, and security organizations.

This equipment consists of a radio transmitter, power amplifier, receiver, and auxiliary components.

It is normally operated on a simplex basis but can be arranged for duplex operation by the addition of another receiver and an extra antenna. It can also provide automatic retransmission service between two stations too distant from each other for direct communication.

Remote control with intercommunication between the local

and distant operating locations is provided by means of the radio set controls supplied.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50

Type Modulation: Fm

Type of Signal: Voice

Power Output: 45 w without amplifier; 250 w with amplifier

Power Requirements:

Power Supply PP-638/U: 660 w, 115/230-v 60-cycle ac

Power Supply PP-804/U: 230 va, 115/230-v 50/65-cycle ac

Power Supply PP-846/U: 46 va, 115/230-v 50/65-cycle ac

MIL-DHBK-161

AN/TRC-22 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS-612/U	2A249-612	11-1/2 x 41 x 5-1/4	30
1	Electrical Equipment Cabinet CY-1221/G	6F290-1221	21-1/4 x 16-7/8 x 20-1/2	58
1	Power Supply PP-638()/U	3H4497-638	26-3/4 x 16-1/2 x 20-1/4	187
1	Power Supply PP-804/U	3H4497-804	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP-846/U	3H4497-846	5-1/8 x 6-1/4 x 7-1/16	10.5
1	Radio Frequency Amplifier AM-495/GR	2C448A-495	9-3/4 x 9-1/2 x 15	13.5
1	Radio Receiver R-257/U	2C4180-257	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C-844/U	2C684-844	8-3/4 x 14-3/4 x 5-7/8	6.5
1	Radio Set Control C-845/U	2C684-845	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T-417/GR	2C6900-417	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11-691

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	30.7	618

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-11539

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661-P-52-51	\$2,642.94

RADIO SET AN/TRC-24()

1 July 1958

Cognizant Serv: USA FSN: 5820-503-1133

USA

USN

USAF

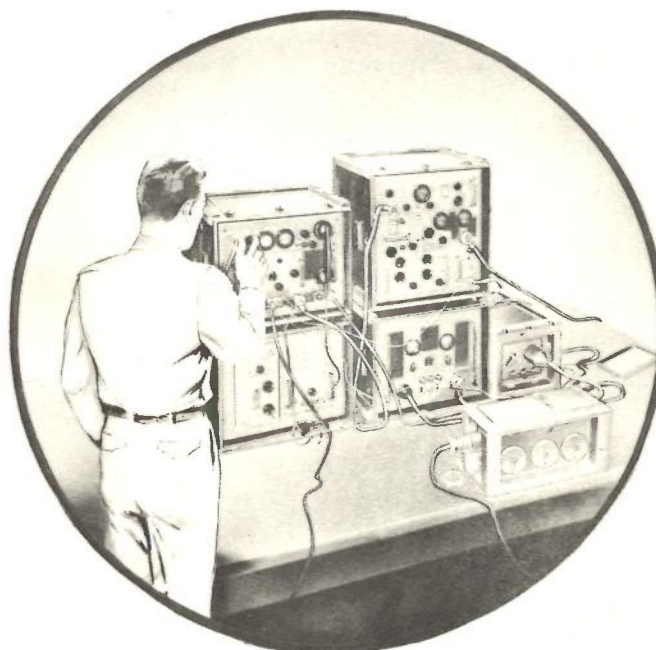
TYPE CLASS:

Std

Std

STOCK NO:

2S5002-24



AN/TRC-24,-35,-36

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-24() is the basic fm radio transmitting and receiving equipment used in Radio Terminal Set AN/TRC-35() and Radio Relay Set AN/TRC-36().

This basic set comprises all components necessary for simultaneous point-to-point transmission and reception of a maximum of 12 multiplexed telephone channels. The channel multiplexing equipment is not included in this equipment, which is designed to accommodate baseband signals generated by Telephone Terminal AN/TCC-7 or similar telephone carrier equipment.

Although designed to operate in one of four bands (A, B, C, or D) by selection of appropriate components, only two of these bands (B and C) are available as of this date.

TECHNICAL CHARACTERISTICS:*Frequency Range in Mc:*

Band A: 50 to 100 (not available)

Band B: 100 to 225

Band C: 225 to 400

Band D: 400 to 600 (not available)

Type Modulation: Fm*Type of Signal:* Voice (up to 12 channels with additional equipment)*Baseband Frequency Range:* 250 to 68,000 cps*Power Output:* 50 to 120 w*Power Requirements:*

Transmitter: 875 va, 115-v 50/60-cycle ac

Receiver: 185 w, 115-v 50/60-cycle ac

AN/TRC-24() RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Group OA-482/TRC	(FSN) 5985-264-7538		
1	Filter Kit MK-123/TRC	(USA) 3Z1894-34	18-1/4 x 12-1/4 x 20-1/2	
1	Filter Kit MK-124/TRC	(USA) 3Z1894-34.1	18-1/4 x 12-1/4 x 20-1/2	
1	Mast AB-235/G	(FSN) 5985-264-7472		
1	Power Accessories Kit MK-122/TRC	(USA) 3H4428-122		
1	Radio Set Group OA-483/TRC, consisting of 1 each of following major components:	(USA) 2C5137-483		
	Accessory Kit MK-133/TRC	(FSN) 5820-537-3782	18-5/8 x 20-5/8 x 21-1/2	94
	Amplifier-Converter AM-913/TRC	(USA) 2C448A-913		
	Amplifier-Converter AM-914/TRC	(USA) 2C448A-914		
	Autotransformer Fixed Power Transformer TF-167/TRC	(FSN) 5950-309-5334		
	Electrical Standardized Components Case CY-1338/TRC	-----	18-3/8 x 17-1/8 x 20-5/8	39
	Power Supply PP-685/TRC	(USA) 3H4497-685		
	Power Supply Case CY-1340/TRC	-----	17-1/8 x 18-3/8 x 20-5/8	115
	Radio Frequency Amplifier AM-912/TRC	(USA) 2C488-912		
	Radio Frequency Amplifier-Multiplier AM-915/TRC	(USA) 2C448A-915		
	Radio Receiver R-417/TRC	(USA) 2C4180-417		
	Radio Transmitter T-302/TRC	(USA) 2C6900-302		
	Receiver Case CY-1339/TRC	-----	17-1/8 x 18-1/4 x 20-5/8	96.5
	Transmitter Case CY-1341/TRC	-----	18-1/2 x 22 x 20-5/8	120.75
1	Supplementary accessory group consisting of two Gasoline Engine Generator Sets PU-286/G and various minor components			

* Weight in each instance includes weight of operating components or accessories normally mounted or stored in each case.

REFERENCE DATA AND LITERATURE:

TM 11-687, TO 31R2-2TRC24-11

RADIO SET **AN/TRC-24()**

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	140.1	2,561

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10616

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Radio Corp. Western Electric Co., Inc.	Philadelphia, Pa. New York, N. Y.	32146-P-51-93 08720-P-55-55	\$13,008.94 14,087.87

RADIO SET AN/TRC-28

1 July 1958

Cognizant Serv: USA FSN: 5820-503-1130

USA

USN

USAF

TYPE CLASS:

Std

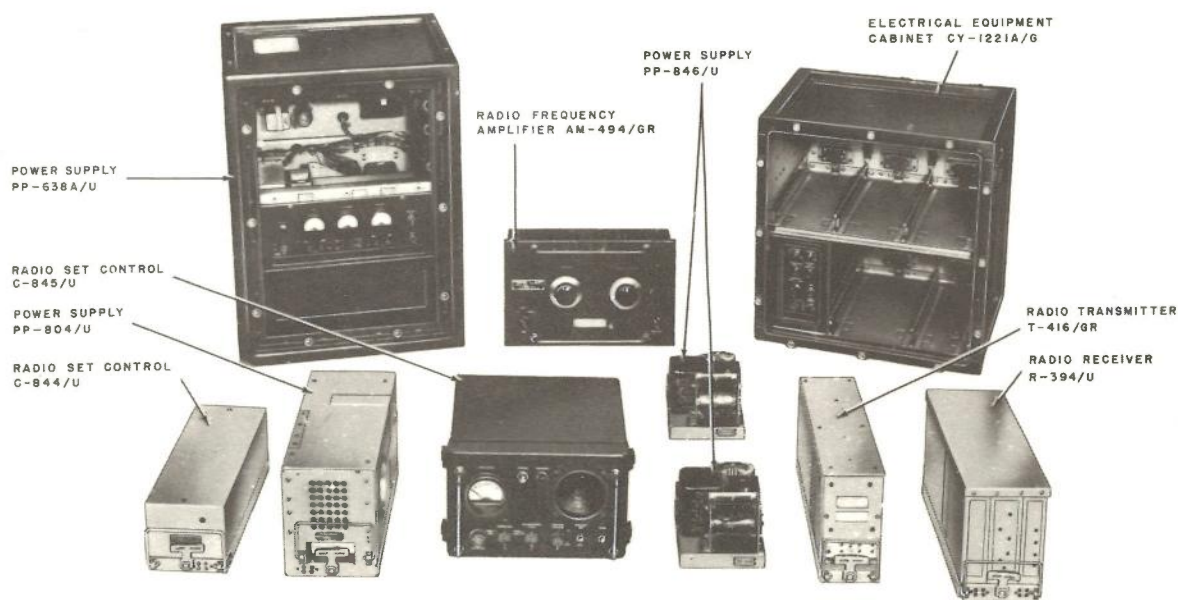
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Std

STOCK NO:

2S5002-28

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AN/TRC-28

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-28 is vhf, fm voice communication equipment designed for fixed-station operation, with remote control facilities up to 10 miles. It is used primarily by military police, guard and security organizations.

Operation is primarily simplex; duplex operation is possible with two frequency assignments and additional equipment.

This equipment may also be used as an automatic relay station (retransmission) to extend the distance between terminal stations.

Remote control with intercommunication between the local

and distant operating locations is provided; local start-stop operation must be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174

Type Modulation: Fm

Type of Signal: Voice

Power Output: 45 w without amplifier; 250 w with amplifier

Power Requirements:

Power Supply PP-638/U: 660 w, 115/230-v 60-cycle ac

Power Supply PP-804/U: 230 va, 115/230-v 50-65-cycle ac

Power Supply PP-846/U: 46 va, 115/230-v 50-65-cycle ac

MIL-HDBK-161

AN/TRC-28 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-438/GR	(FSN) 5985-264-7498	6-1/2 x 31 x 5-1/2	10
1	Electrical Equipment Cabinet CY-1221()/G	(USA) 6F290-1221	21-1/4 x 16-7/8 x 20-1/2	58
1	Power Supply PP-638()/U	(USA) 3H4497-638	26-3/4 x 16-1/2 x 20-1/4	187
1	Power Supply PP-804/U	(USA) 3H4497-804	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP-846/U	(USA) 3H4497-846	5-1/8 x 6-1/4 x 7-1/16	10
1	Radio Frequency Amplifier AM-494/GR	(USA) 2C448A-494	9-3/4 x 9-1/2 x 15	13.5
1	Radio Receiver R-394/U	(USA) 2C4180-394	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C-844/U	(USA) 2C684-844	8-3/4 x 14-3/4 x 5-7/8	10
1	Radio Set Control C-845/U	(USA) 2C684-845	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T-416/GR	(USA) 2C6900-416	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11-252

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	30	621

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-115399

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661-P-52-51	\$2,811.99

RADIO SET AN/TRC-29

1 July 1958

Cognizant Serv: USA FSN: 5820-503-2581

USA

USN

USAF

TYPE CLASS:

Std

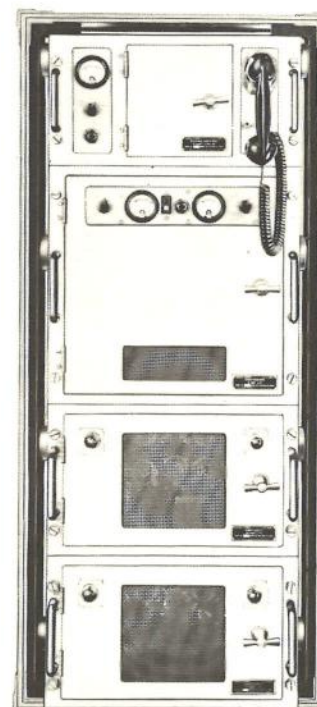
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Used by

STOCK NO:

2S5002-29

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AN/TRC-29

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-29 is a two-way, multichannel fm, microwave receiving and transmitting equipment used in radio-relay systems. Although normally used in a rear area radio-relay system, it is built to satisfy full field service handling requirements. It is contained in equipment transit cases and can be transported by suitable military vehicles, or it can be mounted in standard relay racks.

This equipment consists of receivers, transmitters, and associated components for handling multichannel telephone, facsimile, telegraph, radar data, or television signals. It can be arranged in a radio-relay system as a terminal or as repeater stations with additional equipment.

This set is designed to operate continuously for long periods

of time. It will provide communication trunk service over as many as 20 tandem hops to form circuits up to 600 miles in length.

This equipment is used as a major component of Radio Terminal Set AN/TRC-38 and Radio Repeater Sets AN/TRC-39 through -41.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 2,400

Type Modulation: Fm

Type of Signal: Fsk, voice, facsimile, TV, composite

Power Output: 4 to 10 w

Power Requirements: 2,300 w, 115/230-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-29 RADIO SET

MAJOR COMPONENT

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Fixed autotransformer power transformer	5950-568-4835	27-3/8 x 19-1/8 x 19-5/8	
1	Power Supply PP-689/G	5820-548-1671	21 x 19-3/8 x 21-1/4	
1	Power Supply PP-690/G	5820-548-1673	21-5/8 x 19-3/8 x 12-1/4	
1	Power Supply PP-764/G	5820-548-1674	21 x 19-3/8 x 17-1/2	
1	Radio Receiver R-418/G	5820-503-1401	21-5/8 x 19-3/8 x 19-1/4	
1	Radio Transmitter T-303/G	5820-503-13422	21 x 19-3/8 x 17-1/2	

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	226.6	3,682

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10615

DESIGN COG: USA, Sig C

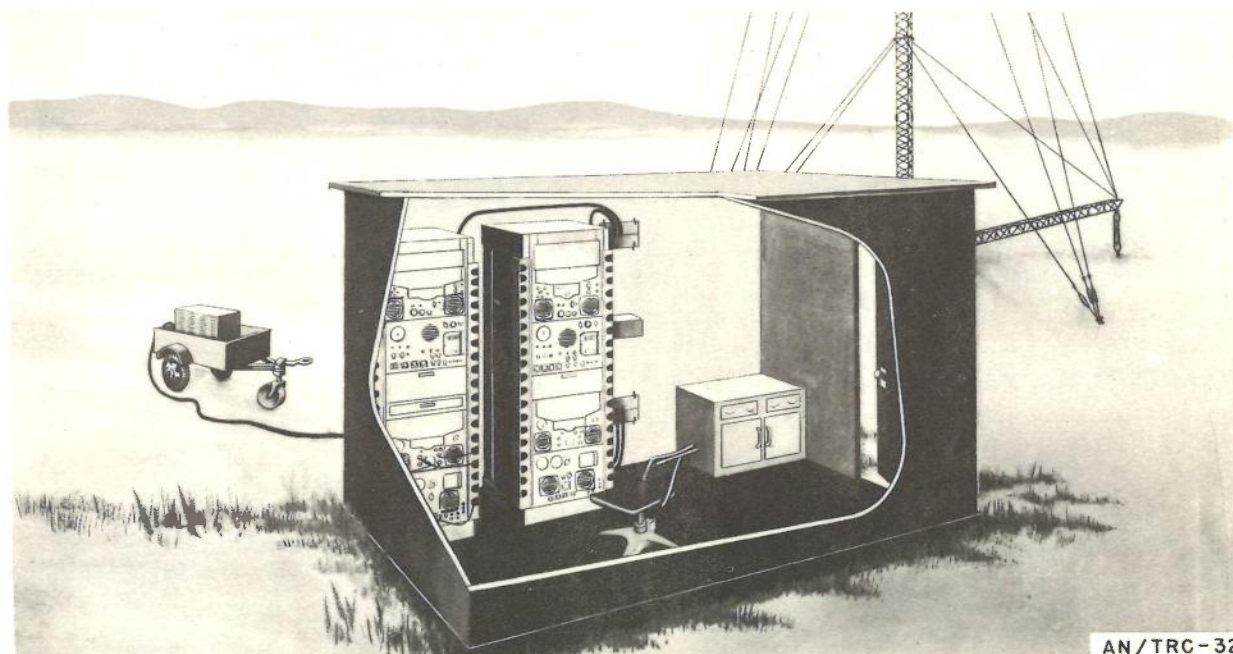
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Tel. & Radio Co. Div., International Tel. & Tel. Corp.	Clifton, N. J.	21765-P-56-55	\$5,487.40
Radio Receptor Co., Inc.	Cedar Rapids, Iowa	31238-P-55-55	7,597.74

RADIO SET **AN/TRC-32**

1 December 1958

Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Set AN/TRC-32 is a fixed, ground or mobile, ultra high frequency communication equipment designed for contact with aircraft equipped with Radio Sets AN/ARC-27, AN/ARC-33, AN/ARC-34, or similar units.

This equipment consists essentially of two transmitters, two receivers, and two units of all necessary items required in dual operation.

Radio Transmitter T-217/GR operates on any 10 preset channels between 225 and 399.9 megacycles. Radio Receiver R-278/GR operates on any 10 preset channels between 225 and 399.9 megacycles, including any two crystal-controlled guard frequencies in the 238 or 248 megacycle frequency range.

The set matches 53-ohm coaxial cable, such as RG-8/U. A total of three antennas are supplied as part of the set.

All equipment, with the essential operating accessories, is normally transported in 2-1/2 ton truck (modified K-53) and a 1/2 ton trailer for the power unit.

Remote control operation is possible for a maximum distance of 10 miles over a single field wire pair.

Radio Set AN/TRC-32 is intended to replace Radio Set AN/MRC-21.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9

Number of Channels: 1,750

Channel Separation: 100 kc

Range of Guard Frequency: 238 to 248 mc

Type Modulation: AM

Type Emission and Reception: Voice, cw, mcw

Power Output:

Transmitter: 100 w each

Receiver: 3 w each (maximum)

Power Requirements: 115- or 230-v, 50- to 60-cycle, 1-phase ac (commercial power) or power unit, approximately 4.5-kw

AN/TRC-32 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS-505/GR	-----	-----	60
2	Antenna AT-197/GR	-----	-----	6.5
1	Mast AB-158/GR	-----	-----	650
2	Modulator Power Supply MD-129/GR	-----	19 x 12-1/4 x 22-3/8	180
1	Power unit	-----	73 x 72 x 144	2,600
2	Radio Set Control C-565/GR	-----	19 x 12-1/4 x 11-1/2	90
2	Receiver R-278/GR	-----	19 x 12-1/4 x 22-3/8	144
2	Receiver-Transmitter Control Group OA-193/GR	-----	23 x 13-1/2 x 21	105
2	Transmitter T-217/GR	-----	19 x 12-1/4 x 22-3/8	150
1	Truck K-53 (Modified)	-----	130 x 96 x 256	11,575

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	2,270	16,750

PROCUREMENT DATA

PROCURING SERVICE: USAF
 SPEC &/or DWG: Eng-283 & 284

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRC-34()

1 July 1958

Cognizant Serv: USA FSN:

USA

USN

USAF

TYPE CLASS:

Std

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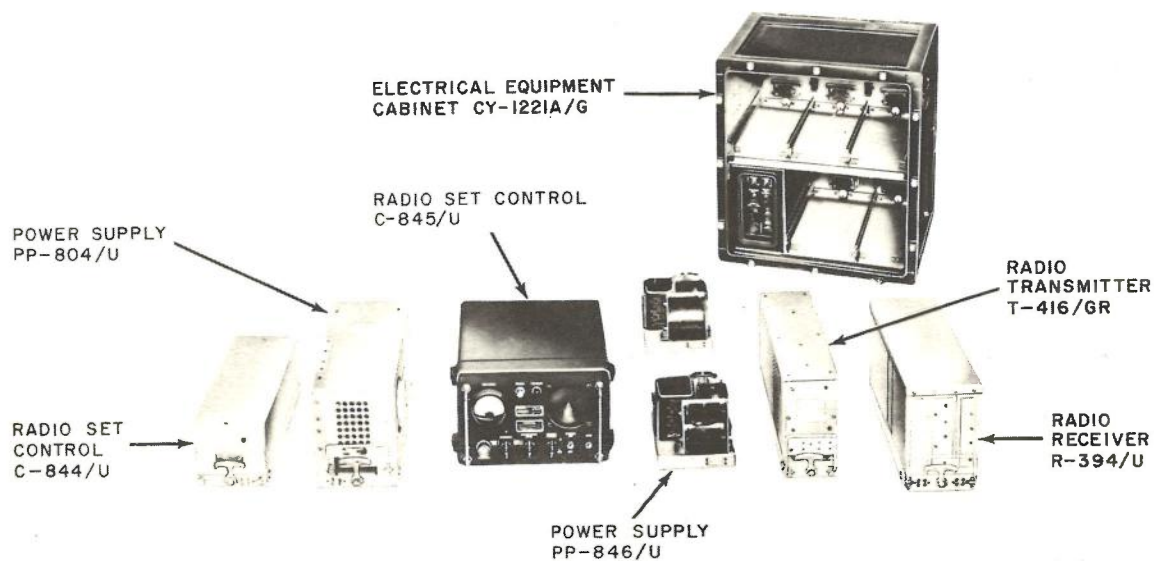
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STOCK NO:

2S5002-34

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AN/TRC-34

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-34() is a vhf, fm, low-powered radio receiving and transmitting equipment used in various communication applications. It is transportable; its fixed-plant counterpart is Radio Set AN/FRC-27.

This equipment consists of receiver and transmitter components, local- and remote-control units, equipment cabinet, power supplies, and accessories.

It can be operated in simplex, duplex, and retransmission applications. Push-to-talk operation over either of two preset frequency channels is provided either locally or at a maximum distance of 10 miles from the transmitter site. Duplex operation requires an additional antenna and can be conducted from the local operating site only. The remote

control unit can be used to transmit tone signals for signaling and for transmitter adjustment, to monitor reception, and to intercommunicate between the remote point and the set.

Radio Sets AN/TRC-34 and AN/TRC-27 are identical, except for a base stand supplied only with the latter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174

Type Modulation: F,

Type of Signal: Voice

Transmitter Power Output: 50 w

Power Requirements:

PP-804/U: 230 va, 115/230-v 50/60-cycle ac

PP-846/U: 46 va, 115/230-v 50/60-cycle ac

MIL-HDBK-161

AN/TRC-34() RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna A-438/GR	5985-264-7498		
1	Electrical Equipment Cabinet CY-1221/G	5820-503-0792		
1	Power Supply PP-804/U	5820-500-4421	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP-846/U	5820-500-4426	5-1/8 x 6-1/4 x 7-1/16	10
1	Radio Receiver R-394/U	5820-537-3950	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C-844/U	5820-503-0997	8-3/4 x 14-3/4 x 5-7/8	10
1	Radio Set Control C-845/U	5820-503-1004	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T-416/GR	5820-503-3304	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11-226

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	18.7	343

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG: MIL-N-11539

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Great American Industries, Inc.	Meriden, Conn.	32046-P-55-55	\$ 743.00
Motorola, Inc.	Chicago, Ill.	11661-P-52-51	1,644.00

RADIO TERMINAL SET AN/TRC-35()

1 July 1958

Cognizant Serv: USA FSN: 5820-503-2578

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5000-35	--	--

(See Illustration of AN/TRC-24(), p. 1489)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/TRC-35() is an fm radio transmitting and receiving equipment. It includes one complete Radio Set AN/TRC-24() plus additional spare com-

ponents in sufficient quantities to insure 24-hour-a-day radio terminal operation.

TECHNICAL CHARACTERISTICS:

For detailed description and technical characteristics, refer to Radio Set AN/TRC-24().

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Group OA-482/TRC	(FSN)5895-264-7538		
1	Filter Kit MK-123/TRC	(USA)3Z1894-34	18-1/4 x 12-1/4 x 20-1/2	
1	Filter Kit MK-124/TRC	(USA)3Z1894-34.1	18-1/4 x 12-1/4 x 20-1/2	
1	Mast AB-235/G	(FSN)5985-264-7472		
1	Power Accessories Kit MK-122/TRC	(USA)3H4428-122		
2	Radio Set Group OA-483/TRC*	(USA)2C5137-483		
1	Supplementary accessories group consisting of two Gasoline Engine Generator Sets PU-286/G and various minor components			

* Refer to Radio Set AN/TRC-24() for major components of this group.

REFERENCE DATA AND LITERATURE:

TM 11-687 TO 31R2-2TRC24-11

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
24	187.5	3,531

MIL-HDBK-161

AN/TRC-35() RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10616

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Phileo Radio Corp. Western Electric Co., Inc.	Philadelphia, Pa. New York, N. Y.	32146-P-51-93 08720-P-55-55	\$23,002.38

RADIO RELAY SET AN/TRC-36()

1 July 1958

Cognizant Serv: USA FSN: 5820-569-0031

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5000-36	--	--

(See Illustration of AN/TRC-24(), p. 1489)

FUNCTIONAL DESCRIPTION:

Radio Relay Set AN/TRC-36() is an fm radio repeater station used to extend the range of systems using Radio Terminal Set AN/TRC-35(). It includes one complete Radio Set AN/TRC-24() plus two additional sets of radio components and sufficient accessories to insure 24-hour-a-day, radio-relay operation. Two sets of radio transmitting and receiving equipment are in operation at all times, with the third group of equipment as standby.

Multiplexing equipment is not included as part of this equipment, but may be separately provided to permit partial channel dropoff at any of the relay points using this equipment.

TECHNICAL CHARACTERISTICS:

For detailed description and technical characteristics, refer to Radio Set AN/TRC-24().

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Group OA-482/TRC	(FSN)5895-264-7538		
2	Filter Kit MK-123/TRC	(USA)3Z1894-34	18-1/4 x 12-1/4 x 20-1/2	
2	Filter Kit MK-124/TRC	(USA)3Z1894-34.1	18-1/4 x 12-1/4 x 20-1/2	
2	Mast AB-235/G	(FSN)5985-264-7472		
1	Power Accessories Kit MK-522/TRC	(USA)3H4428-122		
3	Radio Set Groups OA-483/TRC*	(USA)2C5137-483		
1	Supplementary accessories group consisting of two Gasoline Engine Generator Sets PU-286/G and various minor components			

* See Radio Set AN/TRC-24() for major components of this group.

REFERENCE DATA AND LITERATURE:

TM 11-687/TO 31R2-2TRC24-11

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
40	310.0	5,814

MIL-HDBK-161

AN/TRC-36() RADIO RELAY SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10616

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Phileo Radio Corp. Western Electric Co., Inc.	Philadelphia, Pa. New York, N. Y.	32146-P-51-93 08720-P-55-55	\$35,783.33

RADIO TERMINAL SET **AN/TRC-38**

1 July 1958

Cognizant Serv: USA FSN: 5820-545-7292

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2S9012A-2	--	--

(See Illustrations of AN/TRC-29, p. 1495 and AN/TCC-13, p. 1357)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/TRC-38 consists of two Radio Sets AN/TRC-29 and one Multiplexer Set AN/TCC-13.

It provides microwave radio-relay terminal facilities for 23 voice channels.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entry under individual components.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Multiplexer Set AN/TCC-13	4B2135-13	60 x 64 x 26-1/2	1,284
2	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689
TM 11-2141

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
32	612.7	9,970

MIL-HDBK-161

AN/TRC-38 RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO REPEATER SET **AN/TRC-39**

1 July 1958
 Cognizant Serv: USA FSN: 5820-501-3618

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2C5347A-1	--	--

(See Illustration of AN/TRC-29, p. 1495)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRC-39 consists of three Radio Sets AN/TRC-29.
 It provides microwave radio-relay repeater facilities for the composite radio signals transmitted by Radio Terminal Set AN/TRC-38; Radio Repeater Set AN/TRC-40 or -41;

or another AN/TRC-39. No facilities are provided by this equipment for translation of the composite signal, which consists of 23 voice channels.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entry for Radio Set AN/TRC-29.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
3	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
39	679.8	11,046

MIL-HDBK-161

AN/TRC-39 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO REPEATER SET **AN/TRC-40**

1 July 1958

Cognizant Serv: **USA** FSN: 5820-646-4759

	USA	USN	USAF
TYPE CLASS:	Std		Used by
STOCK NO:	--		

(See Illustrations for AN/TRC-29, p. 1495 and AN/TRA-10, p. 1455)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRC-40 consists of three Radio Sets AN/TRC-29 and one Pulse Form Restorer Group AN/TRA-10.

It provides microwave radio-relay repeater facilities for the composite radio signals transmitted by Radio Terminal Set AN/TRC-38; Radio Repeater Set AN/TRC-39 or -41; or another Radio Repeater Set AN/TRC-40. It also provides facilities to reshape the 23- or 45-channel pulse train received from the radio receiver into a standard wave shape before

inserting the signal into the radio transmitter. This equipment (or Radio Repeater Set AN/TRC-41) is used once every four or five jumps throughout the system to increase the maximum number of jumps. In addition, this set provides for drop-out and reinsertion of channels 1 and 2 of the 23-channel composite signal.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entries for Radio Set AN/TRC-29 and Pulse Form Restorer AN/TRA-10.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Pulse Form Restorer Group AN/TRA-10	2C5615-10	26-1/2 x 27 x 60	810
3	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1.051

REFERENCE DATA AND LITERATURE:

TM 11-689
TM 11-2141

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
44	778.5	12,892

MIL-HDBK-161

AN/TRC-40 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO REPEATER SET **AN/TRC-41**

1 July 1958

Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	--	--	--

(See Illustrations of AN/TRC-29, p. 1495 and AN/TCA-1, p. 1333)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRC-41 consists of three Radio Sets AN/TRC-29 and one Multiplexer Group AN/TCA-1.

It provides microwave radio-relay repeater facilities for the composite radio signals transmitted by Radio Terminal Set AN/TRC-38; Radio Repeater Set AN/RTC-39 or AN/TRC-40; or another Radio Repeater Set AN/TRC-41.

It provides the same pulse restoration facilities as provided

by Pulse Form Restorer Group AN/TRA-10 in Radio Repeater Set AN/TRC-40. In addition, the AN/TRC-41 provides for dropout of channels 1 to 8 of the 23-channel composite signal.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entries for Radio Set AN/TRC-29 and Multiplexer Group AN/TCA-1.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
1	Multiplexer Group AN/TCA-1	2Z6823-2	60 x 64 x 26-1/2	
3	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689
TM 11-2141

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
45	839.3	13,622

MIL-HDBK-161

AN/TRC-41 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO SET AN/TRC-42()

1 July 1958

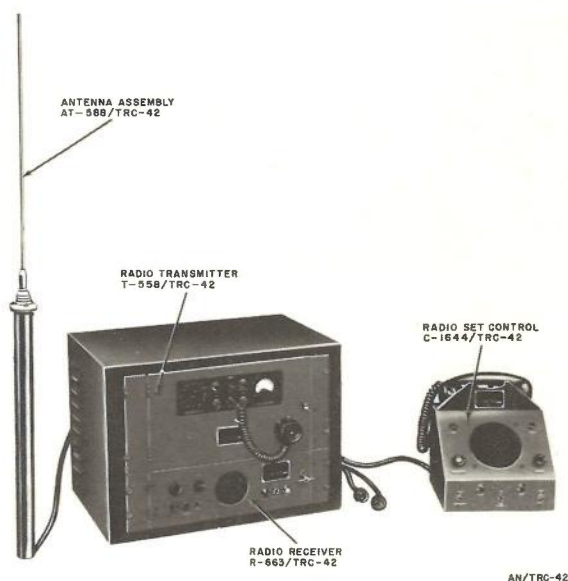
Cognizant Serv: USA FSN: 5820-503-2582

USA

USN

USAF

TYPE CLASS: S/Std
 STOCK NO: 2S5010-2



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-42() is a transportable vhf single-channel, two-way radio equipment used for ground-to-air communication.

This equipment consists of a radio receiver and a transmitter housed in a single cabinet, and includes a radio set control with handset and accessory items.

It may be operated in the cabinet supplied, or mounted on a standard 19-inch rack.

The radio set control enables operation of the radio equipment from a remote point.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 116 to 132

Type Modulation: Am

Type of Signal: Voice

Power Output: 10 w

Power Requirements: 350 w (max), 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
1	Antenna AT-588/TRC-42	2A288A-44		
1	Cabinet (transmitter and receiver)	6F207-133	16 x 22-3/4 x 14-3/4	
1	Radio Receiver R-663/TRC-42	2C4575-20	5-1/4 x 15-1/2 x 19	30
1	Radio Set Control C-1644/TRC-42	2C715-70	11-3/4 x 9-5/8 x 11	
1	Radio Transmitter T-558/TRC-42	2C6703-24	8-3/4 x 14-1/2 x 19	47

REFERENCE DATA AND LITERATURE:

TM 11-221

MIL-HDBK-161

AN/TRC-42() RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	8.16	140

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: RAC-1584B

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Varo Mfg. Co. Inc., Schuttig & Co. Div.	Garland, Tex.	7531-54-55	\$898.00

RADIO SET **AN/TRC-69**

1 December 1958

Cognizant Serv: USAF FSN:

USA

USN

USAF

TYPE CLASS: --

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Used by

STOCK NO: --

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(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-69 is an air and ground transportable transmitting and receiving equipment that provides two-way communication within its specified frequency range. It utilizes single sideband and/or a compatible amplitude modulated mode of transmission.

This equipment provides air-to-ground and ground-to-ground communications and allows duplex operation with 10 preset channels.

TECHNICAL CHARACTERISTICS:*Frequency Range in Mc:* 2 to 29.999*Number of Bands:* 4*Number of Channels:* 28,000*Channel Spacing:* 100 kc*Type Modulation:* Am*Type Emission and Reception:* A3*Transmitter Power Output:* 1,000 w nominal*Power Requirements:* 115-v, 400-cycle, 3-phase ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
1	Antenna Assembly			
1	Antenna Coupler Control Mounting MT-1962/TRC- 69()			
1	Antenna Coupler CU-523/ ARC-58()			
1	Antenna Coupler Control C-1940/ARC-58()			
1	Antenna Coupler Mounting MT-1959/TRC-69()			
1	Fan, Van, Axial HD-277/U()			
1	Filter, Band Pass F-355/UR()			
1	Helicopter hut			
1	Interconnecting Box J-934/ TRC-69()			
1	Motor Generator PU-419/ TRC-69()			
2	Mounting, Radio Receiver MT-1960/TRC-69()			
1	Mounting, Radio Transmitter MT-1961/TRC-69()			
2	Radio Receiver R-761/ARC- 58()			
1	Radio Transmitter T-605/ ARC-58()			

MIL-HDBK-161

AN/TRC-69 RADIO SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	AF30(635)-4504	

RADIO TRANSMITTER-RECEIVER AN/TRC-type

3 November 1958

Cognizant Serv: USN FSN:

25/FSTR

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

--

--



25/FSTR

The unit consists of a radio transmitter (Link Radio, Type 25-UFS, ed. 2), a radio receiver (Link Radio, Type 12-UF, ed. 6), and a speaker panel mounted in a cabinet. The cabinet is designed for rack mounting. A handset is provided for local control of the equipment.

TECHNICAL CHARACTERISTICS:*Frequency Range in Mc:* 30 to 40*Frequency Control:* Crystal*Type Signal:* Fm*System Audio Response:* ± 3 db at 300 to 3,000 cps*Power Consumption:*

Standby: 125 w

Transmitting: 230 w

Power Requirements: 115-v 50- to 60-cycle 1-phase ac*Transmitter:*Frequency Deviation: ± 15 kc

Type Transmission: Voice

Power Output: 25 w (nominal)

Output Impedance: Any—usually fed into 50- to 70-ohm concentric line

Power Input (From 115-v ac):

Standby: 60 w

Transmitting: 165 w

Receiver:

Frequency Range: 30 to 44 mc

Frequency Deviation: ± 15 kc

Type Reception: Voice

Audio Response: Sharp cut-off filter attenuates frequencies above 3,000 cps

Power Output: 1 w (approximately) into 500 ohms

Output Impedance: 500 ohms

Power Consumption: (From 115-v Ac): 65 w

FUNCTIONAL DESCRIPTION:

Radio Transmitter-Receiver 25/FSTR is a radio receiver and transmitter, complete with self-contained power supplies and accessories, used as an operating two-way communication system in a fixed station. It is designed for either coordinated local or remote control in the 30- to 40-mc range.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Cable			
1	Handset, local control			
1	Rack cabinet			
1	Radio Receiver, Type 12-UF, ed. 6			
1	Radio Transmitter, Type 25- UFS, ed. 2			
1	Speaker			

MIL-HDBK-161

AN/TRC-type RADIO TRANSMITTER-RECEIVER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91070

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.7	120

PROCUREMENT DATA

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

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.		

RADIO TRANSMITTER-RECEIVER AN/TRC-type

10 November 1958

Cognizant Serv: USN FSN: 5820-665-2353

1498

USA

USN

USAF

TYPE CLASS: --

Used by

STOCK NO: --



1498

FUNCTIONAL DESCRIPTION:

Radio Transmitter-Receiver 1498 is designed to provide radiotelephone communication over distances up to 100 miles when line-of-sight signaling is possible. The equipment utilizes the Armstrong frequency-modulation method of transmission and reception.

The transmitter-receiver is completely self-contained with the exception of the antenna assembly, the remote control unit, and the primary power source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70 to 100

Frequency Deviation: ± 15 kc

Type Signal: Fm

Type Transmission and Reception: Voice

Crystal Frequency Range: 2,187.5 to 3,125 kc

Audio Response: ± 2 db at 300 to 2,750 cps overall transmitter-receiver

Power Output: 500 w (maximum)

Output Impedance: 50 to 100 ohms into concentric line

Input Power: 3 amp at 6.3-v ac, 220 ma at 500-v dc

Power Requirements: 115-v 50- to 60-cycle ac

MIL-HDBK-161

AN/TRC-type RADIO TRANSMITTER-RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet, consisting of:			
1	Antenna Assembly 1509	-----	11 x 21 x 34-1/4	151
1	Radio Receiver 1498-R		100 feet long	
1	Radio Transmitter 1498-T			
1	Relay and Connection Panel 1498-C			
1	Remote Control Unit 1504	-----	9 x 11 x 15	35
	Transmitter Power Supply 1498-P			

REFERENCE DATA AND LITERATURE:

Technical manual for Radio Transmitter-Receiver 1498

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5		

PROCUREMENT DATA

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

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.		

RADIO SET AN/TRC-type

1 July 1958

Cognizant Serv: USA FSN: 5820-196-1737

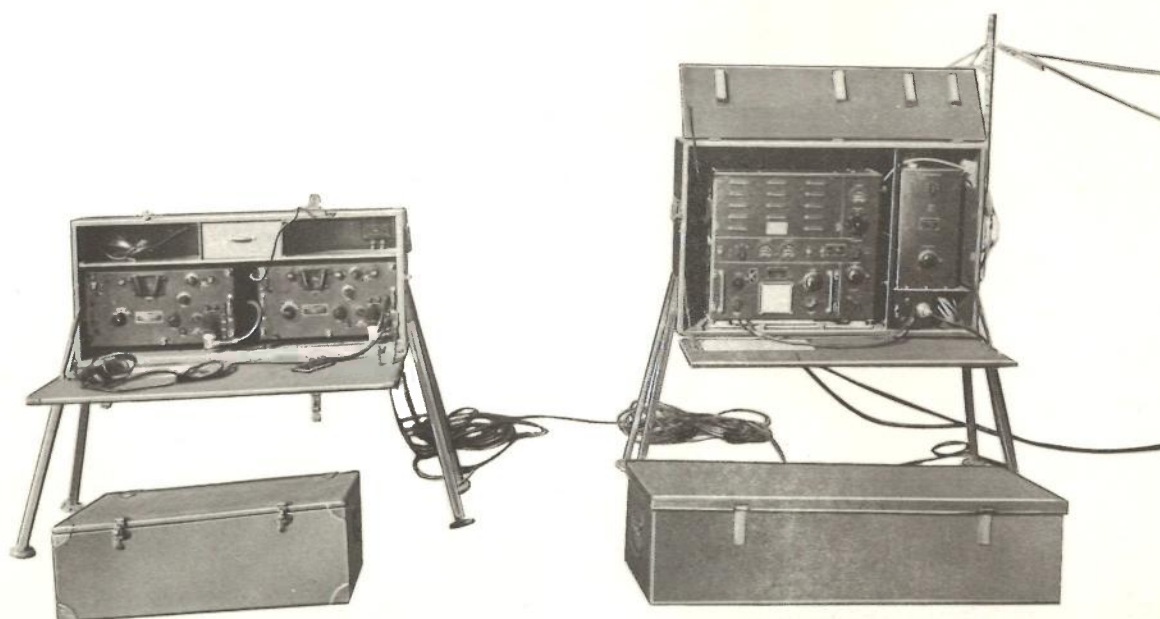
SCR-177()

USA

USN

USAF

TYPE CLASS: SCR-177-(): Std
 SCR-177-H: L/Std
 STOCK NO: 2S177()



SCR-177

FUNCTIONAL DESCRIPTION:

Radio Set SCR-177-() is a transportable, am (voice and cw) radio station providing communication in the low- and medium-frequency range for ground-to-air, point-to-point, and similar applications at division and higher headquarters, and at air fields.

This equipment consists of a transmitter, related transmitter-tuning units, two radio receivers, and associated components. It is packed in carrying cases and can be installed under shelter or in the open, and has been operated in aircraft.

This set uses appropriate types of antenna systems and has provision for automatic antenna changeover in the transmitter.

It is powered by a gasoline-engine-driven field power unit plus a 6-v storage battery.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Transmitting: 0.4 to 0.8 and 1.5 to 4.5

Receiving: 0.15 to 1.5 and 1.5 to 18.0

Type Modulation: Am

Type of Signal: Voice and cw

Power Output:

Voice: 25 w

Cw: 75 w

Power Requirements: 12-v dc from storage battery plus 350 ma at 1,000-v dc and 25 ma at 14.6-v dc from Power Unit PE-49

MIL-HDBK-161

AN/TRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE-49	3H4549	22 x 35 x 22	260
1	Radio Receiver BC-312	2C4312	10-3/4 x 18 x 9	49.5
1	Radio Receiver BC-314	2C4314	10-3/4 x 18 x 9	47.5
1	Radio Transmitter BC-191	2C6191	21-3/4 x 23-1/8 x 9-3/8	55
1	Tuning Unit BC-306 (in Chest CH-27)	2C616	17-3/4 x 9-1/2 x 9-1/8	59

REFERENCE DATA AND LITERATURE:

TM 11-232

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	40	1,265

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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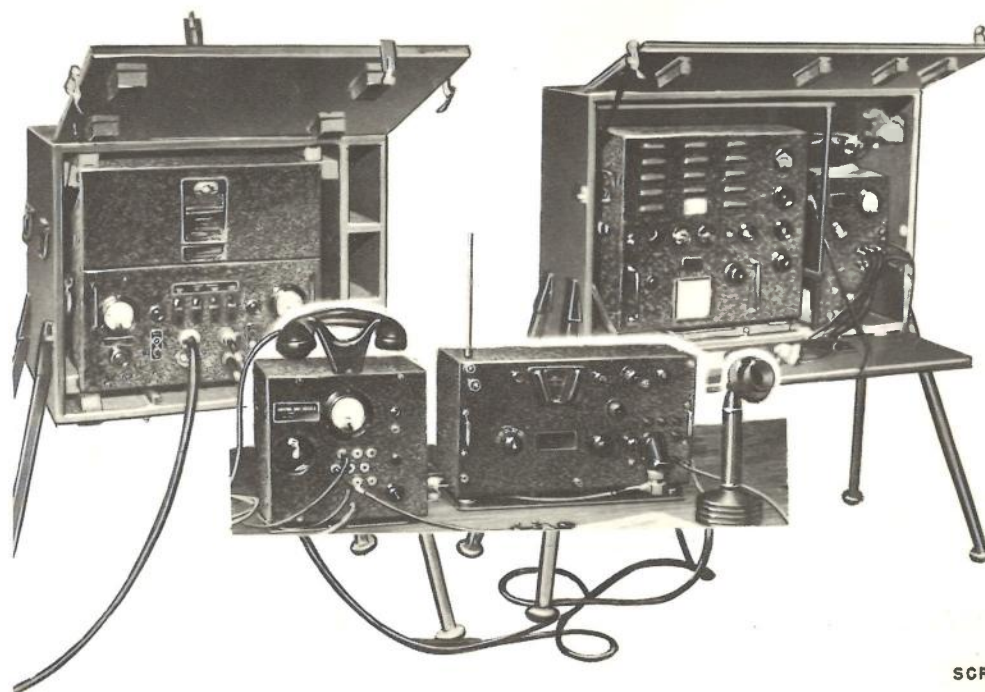
RADIO SET **AN/TRC-type**

1 July 1958

Cognizant Serv: USA FSN: SCR-188: 5820-196-1738
SCR-188A: 5820-393-1212

SCR-188-()

	USA	USN	USAF
TYPE CLASS:	SCR-188-() : Std SCR-188: L/Std	--	L/Std
STOCK NO:	2S188, 2S188A	--	--



SCR-188

FUNCTIONAL DESCRIPTION:

Radio Set SCR-188-() is a transportable, field, am (voice and cw) transmitting and receiving equipment used for air-ground, or point-to-point communication in the low- and medium-frequency bands.

This equipment consists essentially of a transmitter, provided with tuning units for the selection of operating frequencies; a receiver a field power unit; a remote control; and related items.

It can be used as a complete self-contained field tactical radio station and can be remotely controlled at distances of up to 5 miles over a field telephone pair, and up to 7-1/2 miles over facilities of higher quality

A vehicular version of this equipment is Radio Set SCR-193-().

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Transmitter: 1.5 to 12.5

Receiver: 1.5 to 18.0

Type Modulation: Am

Type of Signal: Voice, cw

Power Output:

Voice: 25 w

Cw: 75 w

Power Requirements: 115/230-v ac

MIL-HDBK-161

AN/TRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE-75-()	3H4575	36 x 9-1/2 x 26-1/2	290
1	Radio Receiver BC-342-()	2C4342	10 x 9 x 18	61.5
1	Radio Transmitter BC-191-()	2C6191.7	22-1/2 x 23-1/2 x 9-1/2	55
1	Rectifier RA-34	3H4674	-----	240
1	Remote Control Equipment RC-47	2S47	3-1/2 x 3-1/2 x 2-1/4	.42
6	Transmitting tuning unit	-----	7-5/8 x 16-3/4 x 8-3/4	72

REFERENCE DATA AND LITERATURE:

TM 11-233

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	100	2,018

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO SET **AN/TRC-type**

1 July 1958

Cognizant Serv: USA FSN: 5820-186-3550

SCR-499-()

USA

USN

USAF

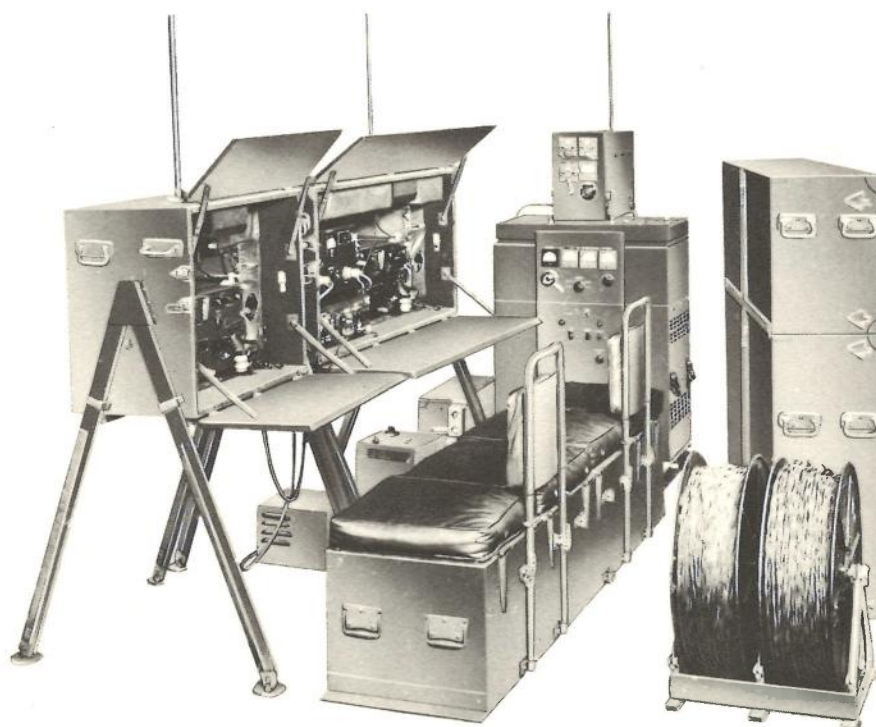
TYPE CLASS:

L/Std

Std

STOCK NO:

2S499B



SCR-499

FUNCTIONAL DESCRIPTION:

Radio Set SCR-499-() is the air transportable version of Radio Set SCR-399 and is a medium power, field radio station for AM (voice, tone, and cw) communication over intermediate and long distances in semipermanent or fixed station applications.

This equipment consists of radio receiving and transmitting components plus associated power and control accessories, and is designed for installation in a sheltered or semipermanent location.

By means of standard remote control equipment this radio set can be operated from a distance of about 2 miles over a field telephone pair.

It can be arranged to operate in the 1-mc range by the addition of Frequency Conversion Kit MC-509.

It uses a long-wire or doublet antenna and includes a 5-kw field power unit.

TECHNICAL CHARACTERISTICS:*Frequency Range in Mc:*

Transmitting: 2 to 18 (in 3 bands)

Receiving: 1.5 to 18 (in 6 bands)

Type Modulation: AM

Type of Signal: Voice, tone, or cw

Power Output:

Voice: 300 w

Cw: 400 w

Power Requirements: Power Unit PE-95 and 12-v storage battery; or 2,500 w (minimum), 115-v 60-cycle ac commercial power

AN/TRC-type RADIO SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
1	Power Unit PE-95	3H4595	75-1/2 x 28-1/2 x 38-1/2	1,545
1	Radio Receiver BC-312	2C4312	10 x 9-1/16 x 18-1/16	58
1	Radio Receiver BC-342	2C4342	10 x 9-1/16 x 18-1/16	61.5
1	Radio Transmitter BC-610	2C6500	32-5/8 x 21-3/8 x 39-7/8	452
1	Rectifier RA-63	3H4691-63E	13-1/2 x 9-1/2 x 7-1/2	29.25
1	Speech Amplifier BC-614	2C214	16 x 9-1/4 x 11	31

REFERENCE DATA AND LITERATURE:

TM 11-281

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	895	10,025

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG: (USA) 71-1683A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafter Co.	Chicago, Ill.	3167-P-51-06	\$7,511.72

RADIO TRANSMITTING AND RECEIVING EQUIPMENT **AN/TRC-type**

5 December 1958

Cognizant Serv: USN FSN:

TCS, TCS-1 thru -15

USA

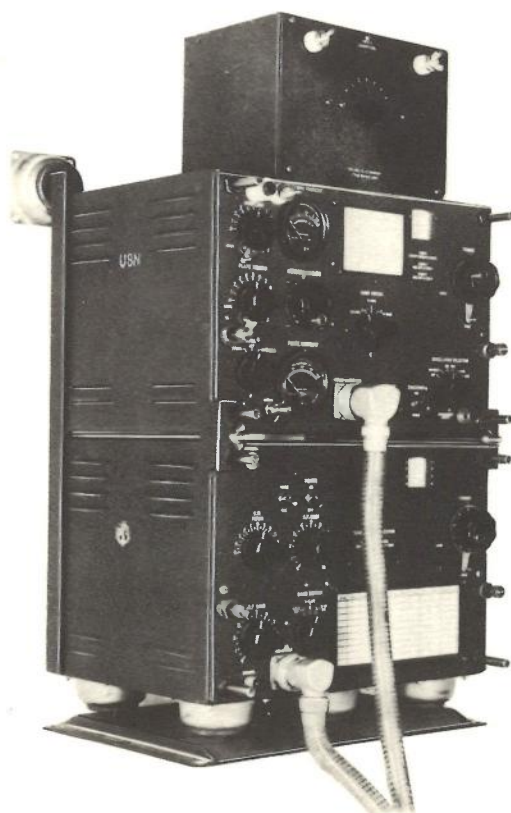
USN

USAF

TYPE CLASS: --
STOCK NO: --

Used by

--



TCS

FUNCTIONAL DESCRIPTION:

Radio Transceivers TCS, TCS-1 through -15 are semi-portable transmitting-receiving equipments that are designed for medium and high frequency telegraph and telephone operation. These equipments are used extensively on patrol and landing craft, reconnaissance vehicles, and similar purposes.

TECHNICAL CHARACTERISTICS:

For Transmitters 52245 and 52245-A:

Frequency Range: 1,500 to 12,000 kc

Frequency Response: ± 3 db (52245), ± 5 db (52245-A) from 300 to 3000 cps

Frequency Stability:

Line Voltage: Changes of $\pm 10\%$ from normal will not exceed 0.01% variation in frequency

Humidity: Increase from normal to 95% humidity will cause frequency variation of 0.10% max

Frequency Control: Crystal or master oscillator

Audio Frequency Distortion: Less than 10% rms measured with 90% modulation at 400 cps

Residual Noise Level (On Carrier): 40 db min (52245), 46 db min (52245-A) below the 100% modulation level

Audio Inputs: 0.86 v required to modulate the carrier 90% at 400 cps

Type of Signal: Cw, voice

Power Output:

52245:

Voice: 20 w

Cw: 40 w

52245-A:

Voice: 10 w

Cw: 25 w

For Receivers 46159 and 46159-A:

Frequency Range: 1,500 to 12,000 kc

Distortion: Less than 5% with the gain control set for 1 w audio output

Audio Output Circuit: Designed to work into a 500 ohm load

Maximum Audio Output: 1.5 w measured at output jack with a signal 30% modulated at 400 cps being fed into the receiver at the antenna terminal

Sensitivity: 6 mw audio power with less than 15 μ v input (on all bands).

Selectivity: 2 stages of if amplification

Type of Reception: Cw, mcw, voice

Antenna: 20-ft vertical whip or 20- to 75-ft single-wire

Power Supplies Available: Dynamotors—12 or 24 v dc; Motor Generator Sets—24, 32, 115 and 230 v dc—115, 60 cps, single phase ac; Rectifiers—115 or 230 v, 60 cps, single phase

AN/TRC-type RADIO TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Loading Coil NT- 23270, -A	-----	6 x 6-3/4 x 9-1/2	3.69
2	Carbon Microphones			
1	Dynamotor NT-21770 (12-v dc)	-----	6-5/8 x 7-15/16 x 13-1/32	28.5
	or			
1	Dynamotor NT-21881, -A, -B (12-v dc)	-----	7-1/4 x 7-5/8 x 12-3/4	27
	or			
1	Dynamotor NT-211035 (12-v dc)	-----	7-1/4 x 7-5/8 x 12-3/4	27
	or			
1	Dynamotor NT-211330, -A, -B (12 or 24-v dc)	-----	8-25/32 x 9-5/8 x 12-5/16	35
1	Filter Kit NT-10597	-----	4-7/32 x 7-23/32 x 9-25/32	
1	Set of Interconnecting Cables			
1	Motor Generator Set NT- 21774 (24-v dc)	-----	11-1/2 x 17-1/4 x 23	115
	or			
1	Motor Generator Set NT-21826 (24-v dc)	-----	11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT-21775 (32-v dc)	-----	11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT-21776 (115-v dc)	-----	11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT- 211100 (115-v dc)	-----	11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT- 21827, -A (230-v dc)	-----	11-1/2 x 17-1/2 x 23	115

RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/TRC-type

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator Set NT-21777 (115-v ac)	-----	11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT-21909 (115-v ac)	-----	11-1/2 x 17-1/2 x 23	115
1	Noise Limiter Adapter Unit NT-50159	-----	2-21/32 x 3 x 3-1/4	
1	Receivers NT-46159, -A	-----	11-11/16 x 11-13/16 x 13-3/4	36.81
1	Rectifier NT-20218 (115-v ac)	-----	10-5/16 x 16-1/4 x 16-1/4	91
	or			
1	Rectifier NT-20242 (230-v ac)	-----	10-5/16 x 16-1/4 x 16-1/4	91
	or			
1	Rectifier NT-20309 (115 or 230-v ac)	-----	10-1/8 x 16-1/4 x 17-1/4	93
1	Remote Control Unit NT- 47205	-----	6 x 6-3/4 x 9-1/2	3.69
1	Set of Spare Parts			
1	Telegraph Key Cord and Plug			
1	Transmitters NT-52245, -A	-----	11-11/16 x 11-13/16 x 13-3/4	41.81

REFERENCE DATA AND LITERATURE:

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

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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MIL-HDBK-161

AN/TRC-type RADIO TRANSMITTING AND RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		N5SR-8595, N5SR-10539, NOS-84440, NXSR-LL-36727, NXSR-38307, NXSR-38314, NXSR-48390, NXSR-86279, NXSR-91960, NXSS-LL-8142, NXSS-16730, NXSS-18844, NXSS-22666, NXSS-29815, NXSS-33361	\$200.00

RADIO CONTROL CENTRAL AN/TRQ-1

1 July 1958

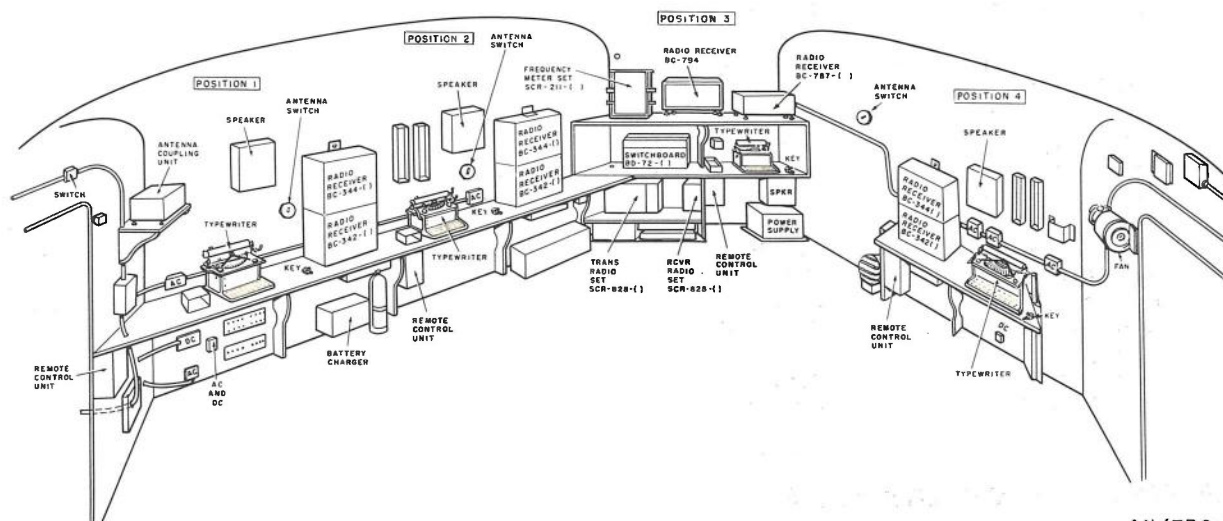
Cognizant Serv: USA FSN: 5820-243-3288

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 2S5004-1



AN/TRQ-1

FUNCTIONAL DESCRIPTION:

Radio Control Central AN/TRQ-1 is a transportable control station used for monitoring, intercept, and mobile communication applications in the mf, hf, and vhf bands.

This equipment consists of radio components, telephone switching equipment, test items and accessories installed in a field-type shelter that can be transported on a 2-1/2-ton 6 x 6, cargo truck. It includes necessary types of antenna equipment.

This set has four operating positions. At all positions coverage of medium and high frequencies is maintained, and provision is made for wire communication with, and remote control of, radio transmitters located at distances up to 1 mile from the control central. Position 3, in addition, communicates with similar control centrals by means of fm radio and a 12-line switchboard.

The equipment derives its power from a trailer-drawn power unit and includes a battery charger.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Positions 1, 2, and 4: 0.15 to 18.0

Position 3: 1.25 to 143.0; 27.0 to 38.9 (fm)

Type Modulation:

Positions 1, 2, and 4: AM

Position 3: AM and FM

Type of Signal: Voice, tone, and cw*Power Output (Radio Transmitter BC-924):* 30 to 35 w*Power Requirements:*

Ac: 10 kw, 115 v, 60 cycle from Power Unit PE-95 (-G or -H)

Dc: 12-v storage battery; 10 Batteries BA-30; and 6 Batteries BA-2

AN/TRQ-1 RADIO CONTROL CENTRAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Assembly AS-93/ MRQ-2	2A264-93		
1	Antenna Control Box C-109/ MRQ-2	2C1738		
1	Antenna Coupling Unit CU- 23/TRQ-1	3C472-23		
1	Frequency Meter Set SCR-211	2C1411	9-1/4 x 13-1/16 x 9	38
1	Power Supply Unit RA-84	3H4496-84		
1	Power Unit PE-95-G	3H4595G	72-1/2 x 28-1/2 x 38-1/2	1,545
3	Radio Receiver BC-342	2C4342	10 x 9-1/16 x 18-1/16	61.5
3	Radio Receiver BC-344	6C4344	10 x 9-1/16 x 18-1/16	61.5
1	Radio Receiver BC-794	2C4794	10-1/2 x 19 x 15-3/8	55
1	Radio Receiver S-36	2C4537-36.1		
1	Radio Set SCR-828-A	2S828A	-----	373.5
4	Remote Control Unit C-103/ TRQ-1	2C684-103		
1	Shelter HO-17	2Z1305-1		
1	Switchboard BD-72	4C9972	-----	72

REFERENCE DATA AND LITERATURE:

TM 11-2619

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	225	4,500

PROCUREMENT DATA

PROCURING SERVICE: USA
 SPEC &/or DWG: (USA) 271-3081

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		2140-MPD-44	

RADAR DATA TRANSFER SYSTEM AN/TRQ-10

1 December 1958

Cognizant Serv: USAF FSN:

USA

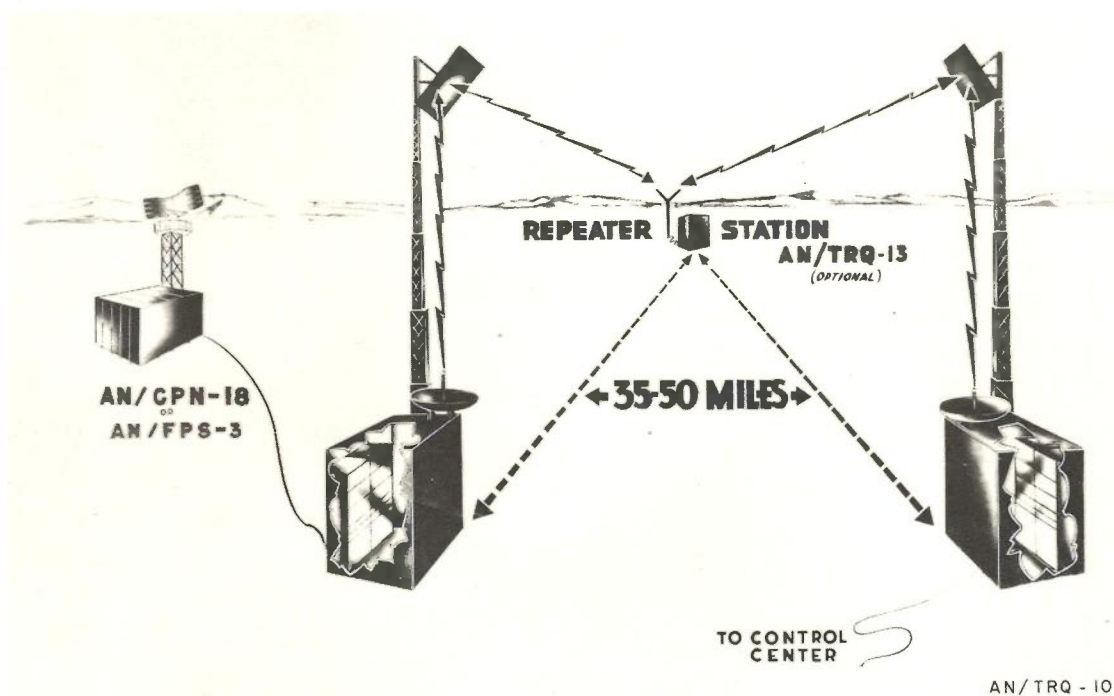
USN

USAF

TYPE CLASS:

Tent-Std

STOCK NO:

**FUNCTIONAL DESCRIPTION:**

Radar Data Transfer System AN/TRQ-10 provides radio communication facilities for transmitting radar data from such surveillance units as Radar Sets AN/CPN-18, AN/CPS-5, and AN/FPS-3, and from Radio Set AN/TPS-1, and for receiving such data at a remote control center.

This equipment consists of: a radio transmitting set at the radar site to transmit radar search data; a radio receiving set at the control center to receive this data.

Approximately 2.5 kilowatts are required to power each function. Towers and reflectors may be added if required.

The range of the system may be increased by using one or more Radio Repeater Sets AN/TRQ-13.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 7,125 to 8,000

Type Modulation: FM

Type Emission and Reception: F9

Operational Range: Line of sight (approximately 35 to 50 miles)

Power Output: 100 mw (each of 4 channels)

Power Requirements: 5 kw, 115-v 60-cycle 1-phase ac

MIL-HDBK-161

AN/TRQ-10 RADAR DATA TRANSFER SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Receiving Set, Radio AN/ TRR-9	-----	80 x 80 x 100	1,800
1	Transmitting Set, Radio AN/ TRT-4	-----	80 x 80 x 100	1,800

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	720 (net)	3,600 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC-2464

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.		

RADAR DATA TRANSFER SYSTEM AN/TRQ-11

1 December 1958

Cognizant Serv: USAF FSN:

USA

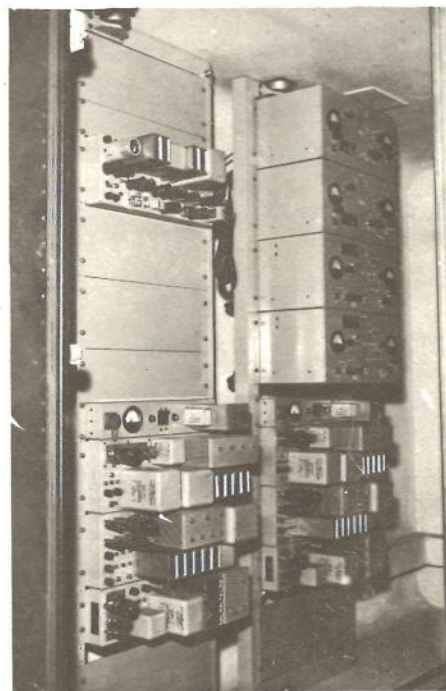
USN

USAF

TYPE CLASS: --

Tent-Std

STOCK NO: --

RADIO TRANSMITTING SET
AN/TRT-5RADIO RECEIVING SET
AN/TRR-10

AN/TRQ-11

FUNCTIONAL DESCRIPTION:

Radar Data Transfer System AN/TRQ-11 provides facilities for transmitting precision radar data by radio from a ground controlled radar set, and receiving of such data at a remote control center.

This equipment consists essentially of: a radio transmitting set in Electrical Equipment Shelter S-118/TR at the radar site to transmit the radar data; a radio receiving set in another Electrical Equipment Shelter S-118/TR near the control center to receive this data.

Radar Repeater Set AN/TRQ-13() is used with this system when distance or terrain require such procedure.

Approximately 2.5 kilowatts are required to power each function. Towers and reflectors may be added if required.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 7,125 to 8,500

Type Modulation: FM

Band: Single

Type Emission and Reception: F9

Operational Range: Line of sight (approximately 35 to 50 miles)

Overall Gain: 140 db

Can Transmit: Trigger, video, and synchro data

Receiver Threshold Sensitivity: -86 dbm

Power Output: 100 mw (each of four channels)

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

AN/TRQ-11 RADAR DATA TRANSFER SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS-830/GRA-33			
1	Antenna Support AB-444/GR			
1	Receiving Set, Radio AN/ TRR-10	-----	80 x 80 x 100	1,800
2	Shelter, Electrical Equipment S-118/GR			
1	Transmitting Set, Radio AN/ TRT-5	-----	80 x 80 x 100	1,800
1	Wave-Guide Assembly CG- 1396/U			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	720 (net)	3,600 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, RCUE

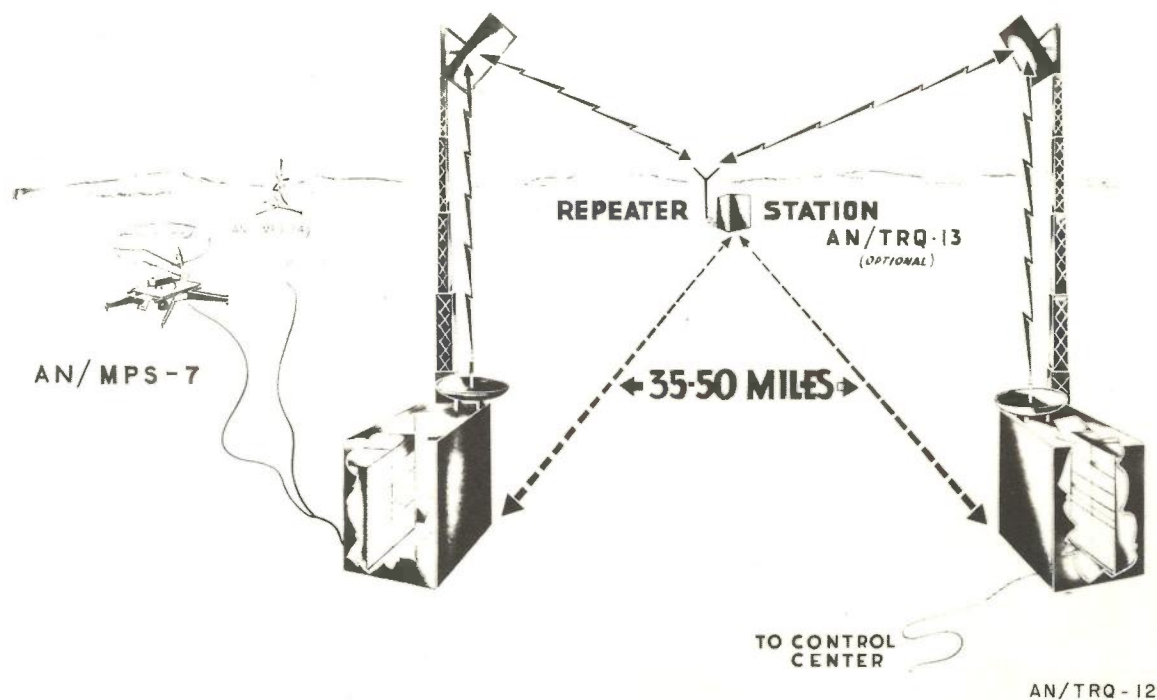
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.		

RADAR DATA TRANSFER SYSTEM **AN/TRQ-12**

1 December 1958

Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--

**FUNCTIONAL DESCRIPTION:**

Radar Data Transfer System AN/TRQ-12 provides radio facilities for transmitting radar and height finder data, respectively, from such equipment as Radar Sets AN/FPS-3 and AN/FPS-6 to a control center.

This equipment consists essentially of: a radio transmitting set housed in Electrical Equipment Shelter S-118/TR at the radar site to transmit radar search and height finding data by radio; a radio receiving set in another Electrical Equipment Shelter S-118/TR near the control center to receive this data.

Approximately 3 kilowatts are required to power each func-

tion. Towers and reflectors normally are not supplied but may be added if required

TECHNICAL CHARACTERISTICS.

Frequency Range in Mc: 7,125 to 8,000

Type Modulation: FM

Type Emission and Reception: F9

Operational Range: Line of sight (approximately 35 to 50 miles)

Number of Channels: 6

Power Output: 100 mw (each of six channels)

Power Requirements: 6 kw, 115-v 60-cycle 1-phase ac

MIL-HDBK-161

AN/TRQ-12 RADAR DATA TRANSFER SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Receiving set, radio	-----	80 x 80 x 100	1,800
1	Transmitting set, radio	-----	80 x 80 x 100	1,800

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	720 (net)	3,600 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC-1568

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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RADIO REPEATER SET **AN/TRQ-13**

1 December 1958

Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Repeater Set AN/TRQ-13 provides facilities for increasing the range of Radar Data Transfer Systems AN/TRQ-10 and AN/TRQ-11 so that radar data may be fed to a control center located as far as 500 miles from the radar site. The total distance of such a system depends on the number of radio repeater sets used.

This equipment is employed to overcome distance and terrain obstacles.

As many as 15 repeater sets may be applied to extend the range to a maximum of about 500 miles.

Towers and reflectors normally are not supplied but may be added if required.

TECHNICAL CHARACTERISTICS:

Frequency Range Mc: 7,125 to 8,000

Type Modulation: FM

Type Emission and Reception: F9

Operational Range: Line of sight

Number of Channels: 8

Power Output: 1 mw (each of eight channels)

Power Requirements: 2.5 kw, 115-v 60-cycle 1-phase ac

MIL-HDBK-161

AN/TRQ-13 RADIO REPEATER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Group AN/GRA-29	-----	-----	250
1	Radio Repeater Group OA- 1111/TRQ-13	-----	75 x 22 x 15	300
1	Receiver Group OA-997/ TRR-9	-----	75 x 22 x 15	300
1	Shelter, Electrical Equipment S-118/TR	-----	80 x 80 x 100	1,000
1	Transmitter Group OA-998/ TRT-4	-----	75 x 22 x 15	300

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	360 (net)	2,000 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC-1568

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
------------	----------	--------------------------	---------------------

RADIO SET AN/TRR-2

1 July 1958

Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--



AN/TRR-2

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRR-2 is a radio receiver used in conjunction with Radio Set AN/TRT-1 to comprise a remote detonating system for land and water mines.

This receiving set is connected to the detonating device and is left in operation. Selective detonating of any one, or group, of mines is available in this system by selection of coded signal combinations of radio frequency, audio tone signals, and pulse code groups. A total of 21,600 different code combinations is available.

This equipment is installed in a waterproof container, and the antenna can be mounted on a float and connected to the receiver through coaxial cable for underwater operation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 28 to 40 (25 channels 0.5 mc apart; presently available for operation on only 32.0, 31.5, 31.0, 30.5, 30.0, and 29.5 mc)

Type Modulation: AM

Type of Signal: Coded pulses of definite rf and audio frequency

Power Requirements: 570 mw from eight Batteries BA-2, one Battery BA-34, and two Batteries BA-35

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and float	-----	38	4
1	Radio receiver	-----	20.5 high x 9 dia	51

MIL-HDBK-161

AN/TRR-2 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-269

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.8	180

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 471-2118

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Submarine Signal Co.	Boston, Mass.	3102-P-45-08	

RADIO RECEIVING SET AN/TRR-5

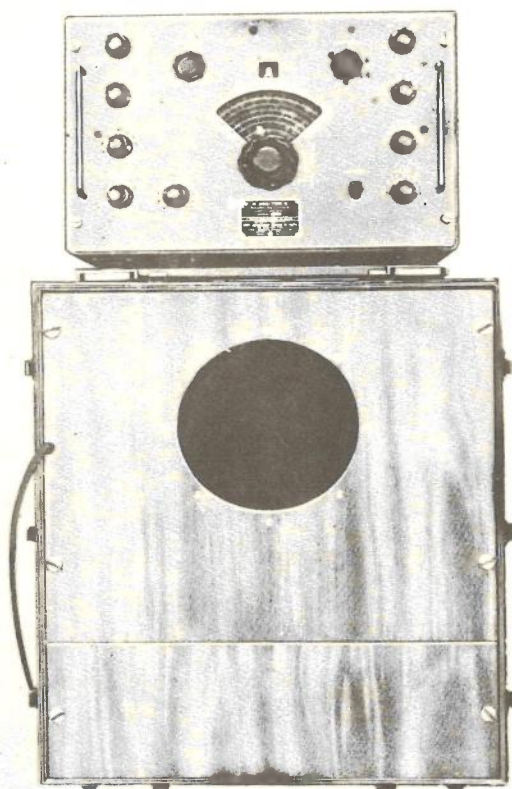
1 December 1958

Cognizant Serv: USN FSN: 5820-665-3411

USA

USN

USAF

TYPE CLASS: --
STOCK NO: --Used by --
F16-Q-120203-100 --

AN/TRR-5

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/TRR-5 is a general purpose communication and entertainment unit for use at shore stations under adverse weather conditions. It has tone, selectivity, continuous-wave oscillator, automatic gain, and standby controls.

This equipment is of rugged construction and can withstand hard use.

TECHNICAL CHARACTERISTICS:

Frequency Range: 540 kc to 30,000 kc

Number of Bands: 5

Type Modulation: AM

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

Audio Output: 5 w into 6-ohm loudspeaker or 600-ohm line terminals

Scanning Channel Output: 100 uv with respect to 70-ohm load at scanning output jack

Intermediate Frequency: 455 kc

Over-all Fidelity: Flat within ± 3 db between 100 and 5,000 cps, 1,000 cps reference

Sensitivity:

A1: 10 uv

A2, A3: 15 uv

Signal/Noise Ratio:

A1: 20 db

A2, A3: 10 db

Beat Frequency: 1,000 cps

Calibration Accuracy: $\pm 1\%$

Image Rejection: 25 db to 80 db

Power Requirements: 112 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adaptor E-301	-----	3/4 x 1-7/32 x 1-3/16	0.076
1	Case CY-851/TRR-5	-----	27-1/4 x 25 x 22-1/2	65.42
1	Clamp H-301	-----	1-5/64 x 15/16 dia	.029
1	Connector J-301	-----	2-15/16 x 13/16 dia	.207
1	Connector J-302	-----	1-21/32 x 11/16 dia	.05
1	Connector J-303	-----	1-7/16 x 1-1/8 dia	.056
1	Dynamic Loudspeaker	-----	4-11/16 x 10-3/16 dia	3.1
1 set	Maintenance parts	-----	6-3/4 x 3-1/2 x 15-1/4	2.2

MIL-HDBK-161

AN/TRR-5 RADIO RECEIVING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Cable Assembly W-102	-----	120 lg	1.39
1	Radio Receiver R-366/TRR-5	-----	14 x 19-3/4 x 19-3/8	83
1	Wire, field	-----	72 lg	.734

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91454

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	11.8	248

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

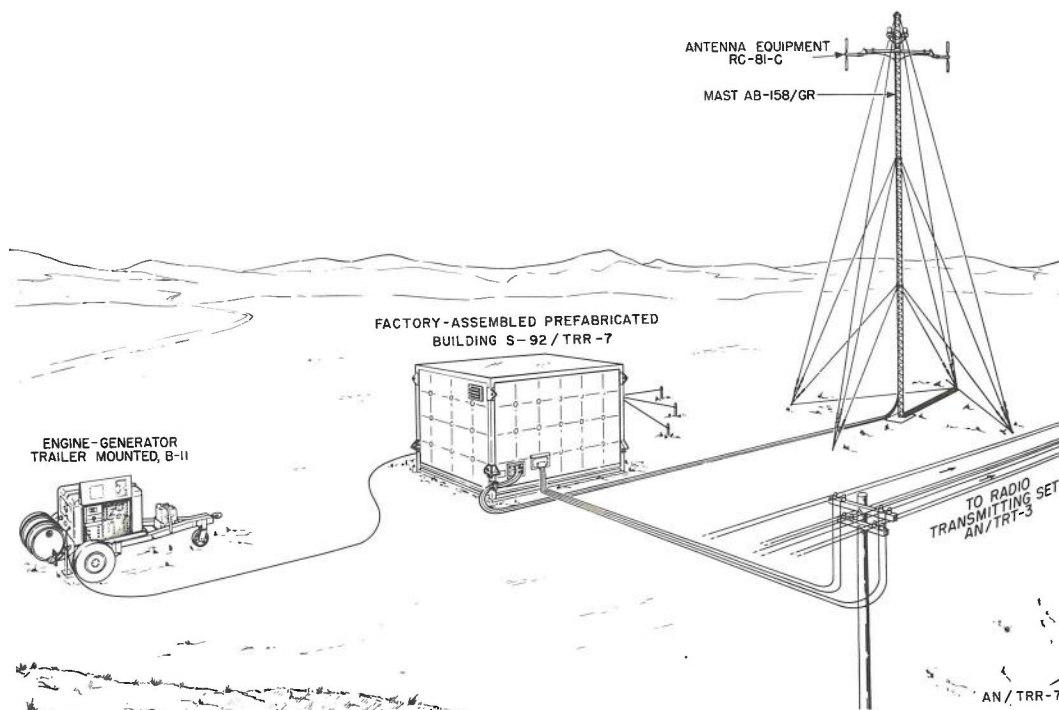
CONTRACTOR	LOCATION	CONTRACTOR ORDER NO.	APPROX UNIT COST
Espey Manufacturing Co., Inc.	New York, N. Y.	NObsr-43229, 15 March 1949	

RADIO RECEIVING SET **AN/TRR-7**

1 December 1958

Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Receiving Set AN/TRR-7 is a complete radio receiving station used for air-to-ground communication. It may also be employed to provide two-way ground-to-air communication when used with Radio Transmitting Set AN/TRT-3, which is a complete mobile radio transmitting station operable through remote control from the radio receiving site.

This equipment includes two radio receivers housed in a prefabricated building.

A trailer-mounted engine generator is provided to furnish

the necessary power when a suitable commercial power source is not available.

The set is intended to replace Radio Set SCR-574-A.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156

Type Modulation: AM

Type Reception: A1, A3 (cw, voice)

Power Output: 1.2 w

Power Requirements: 6.3 v, 3.5 amp ac; 115-v 1-phase ac (for lighting and ventilation blower motors); 60 ma dc at 210 v

MIL-HDBK-161

AN/TRR-7 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Equipment RC-81-C	-----	-----	6.75
1	Building, Prefabricated, Factory-Assembled S-92/TRR-7	-----	140-3/4 x 84 x 77	3,300
1	Engine-Generator Trailer Mounted B-11	-----	125 x 63 x 65	2,450
1	Receiver Group OA-582/TRR-7	-----	19 x 12-7/8 x 11	394
1	Receiver Group OA-583/TRR-7	-----	19 x 12-7/8 x 11	268

REFERENCE DATA AND LITERATURE:

TO 31R2-2TRR7-()

SHIPPING DATA

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

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: ENG-317

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PORTABLE RADIO RECEIVING EQUIPMENT AN/TRR-type

5 December 1958

Cognizant Serv: USN

FSN:

For RBM: 5820-669-9354

RBM, RMB-1, -2, -3, -4, -5

For RBM-1: 5820-665-2119

For RBM-2: 5820-665-2246

For RBM-3: 5820-665-3829

For RBM-4: 5820-665-3712

For RBM-5: 5820-665-3758

USA

USN

USAF

TYPE CLASS:
STOCK NO:

Used by

For RBM: F16-Q-252270-200

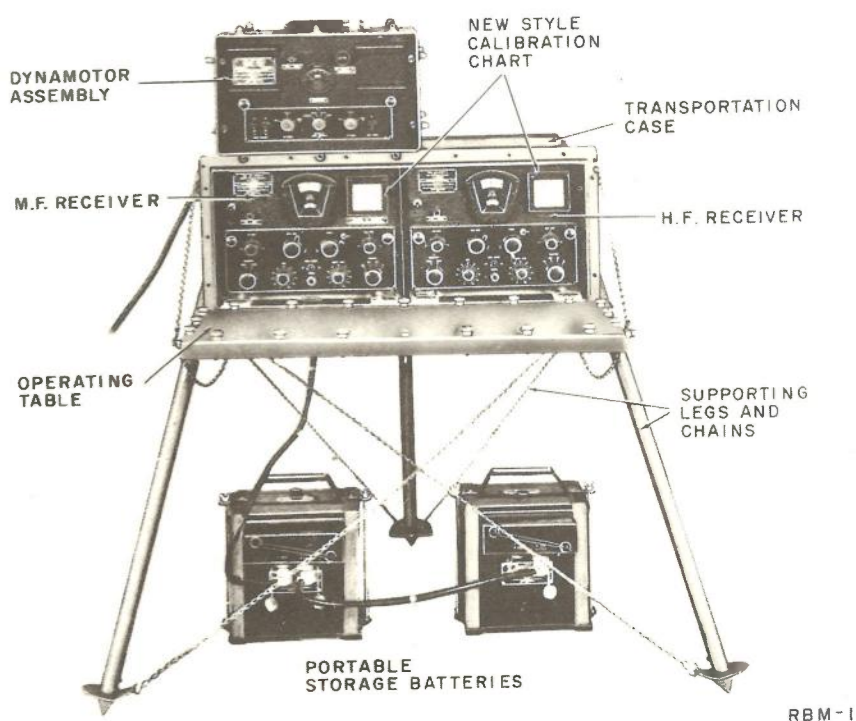
For RBM-1: F16-Q-252275-200

For RBM-2: F16-Q-252301-200

For RBM-3: F16-Q-252302-200

For RBM-4: F16-Q-252303-200

For RBM-5: F16-Q-252320-200



RBM-1

AN/TRR-type PORTABLE RADIO RECEIVING EQUIPMENT

FUNCTIONAL DESCRIPTION:

Portable Radio Receiving Equipments RBM, RBM-1, -2, -3, -4, and -5 are semiportable receivers intended for field service and for use with Portable Radio Transmitting Equipment TBW-series, or for use at Naval shore stations or on shipboard. They consist of two receivers which may be operated separately or together, permitting simultaneous reception in the medium-frequency and high-frequency range.

The RBM, RBM-1 through -5 are components of the Semi Portable Aircraft Radio Advance Base Station Equipment MM-series.

The following equipment is used with, but is not supplied with, Portable Radio Receiving Equipments RBM, RBM-1, -2, -3, -4, and -5: two Headsets NT-49015; frequency meas-

uring equipment; equipment for charging storage batteries or suitable line power supply; and antenna installation. In addition, suitable transmitting equipment must be supplied for transmitter-receiver operation.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 2,000 kc, 2,000 to 20,000 kc

Type Reception: A1, A2, A3

Output Impedance: 600 ohms

Sensitivity: 15 uv at 16 mw output

Power Requirements:

Field Operation: 12-v dc storage battery

Base Operation: 115-v, 25- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For RBM, RBM-2, RBM-3</i>				
1	Control Unit CCT-23277	-----	8-13/16 x 7 x 8	8
1	Control Unit CCT-23278	-----	8-13/16 x 7 x 8	8
1	Dynamotor Assembly CCT-21387	-----	10-7/16 x 16 x 12	30
1	Portable Storage Battery CES-19017	-----	12-1/2 x 11-3/4 x 8-3/4	41
1	Radio Receiver Assembly CCT-46078 consists of:	-----	12-7/16 x 29-1/16 x 19-7/16	95
1	Medium Frequency Receiver CCT-46076	-----	9-3/4 x 12-7/16 x 17-1/16	31
1	High Frequency Receiver CCT-46077	-----	9-3/4 x 12-7/16 x 17-1/16	31
1	Rectifier Power Unit CCT-20085	-----	9-11/16 x 7-7/8 x 14-3/16	25
1	Rectifier Power Unit CCT-20086	-----	9-11/16 x 7-7/8 x 14-3/16	31
<i>For RBM-1, -4</i>				
1	Control Unit CCT-23278	-----	8-13/16 x 7 x 8	8
1	Dynamotor Assembly CCT-21387	-----	10-7/16 x 16 x 12	30
1	Portable Storage Battery CES-19017	-----	12-1/2 x 11-3/4 x 8-3/4	41
1	Radio Receiver Assembly CCT-46078 consists of:	-----	12-7/16 x 29-1/16 x 19-7/16	95
1	Medium Frequency Receiver CCT-46076	-----	9-3/4 x 12-7/16 x 17-1/16	31
1	High Frequency Receiver CCT-46077	-----	9-3/4 x 12-7/16 x 17-1/16	31
1	Rectifier Power Unit CCT-20086	-----	9-11/16 x 7-7/8 x 14-3/16	31

PORTABLE RADIO RECEIVING EQUIPMENT **AN/TRR-type**

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For RBM-5</i>				
1	Control Unit CAY-23278A	-----	8-13/16 x 7 x 8	11
1	Dynamotor Assembly CAY 21387A	-----	10-7/16 x 16 x 12	30
1	Portable Storage Battery CES-19017	-----	12-1/2 x 11-3/4 x 8-3/4	41
1	Radio Receiver Assembly CAY-46078A consists of:	-----	12-7/16 x 29-1/16 x 19-5/16	95
1	Medium Frequency Re- ceiver CAY-46076A	-----	9-3/4 x 12-7/16 x 17-7/16	30
1	High Frequency Receiver CAY-46077A	-----	9-3/4 x 12-7/16 x 17-1/16	30
1	Rectifier Power Unit CAY- 20086A	-----	9-11/16 x 7-7/8 x 14-3/16	31

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,385

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	32.55	590

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: For RBM: RE13A610B
 For RBM-1: RE13A610B
 For RBM-2: RE13A610
 For RBM-3: RE13A610
 For RBM-4: EN28/1500-43SHIPS

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg-Carlson Co.	Rochester, N. Y.	<i>For RBM</i> NOs-65690, 16 March 1939	\$1,200.00 with spares

AN/TRR-type PORTABLE RADIO RECEIVING EQUIPMENT

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	<i>For RBM-1</i>	
		NOs-72056, 26 February 1940	
		<i>For RBM-2</i>	
		NOs-95095, 8 December 1941	
		<i>For RBM-4</i>	
		NXs-19329, 21 December 1942	
		<i>For RBM-5</i>	
		NXsr-38081, 28 Sep- tember 1943	
		NXsr-51520, 13 March 1944	

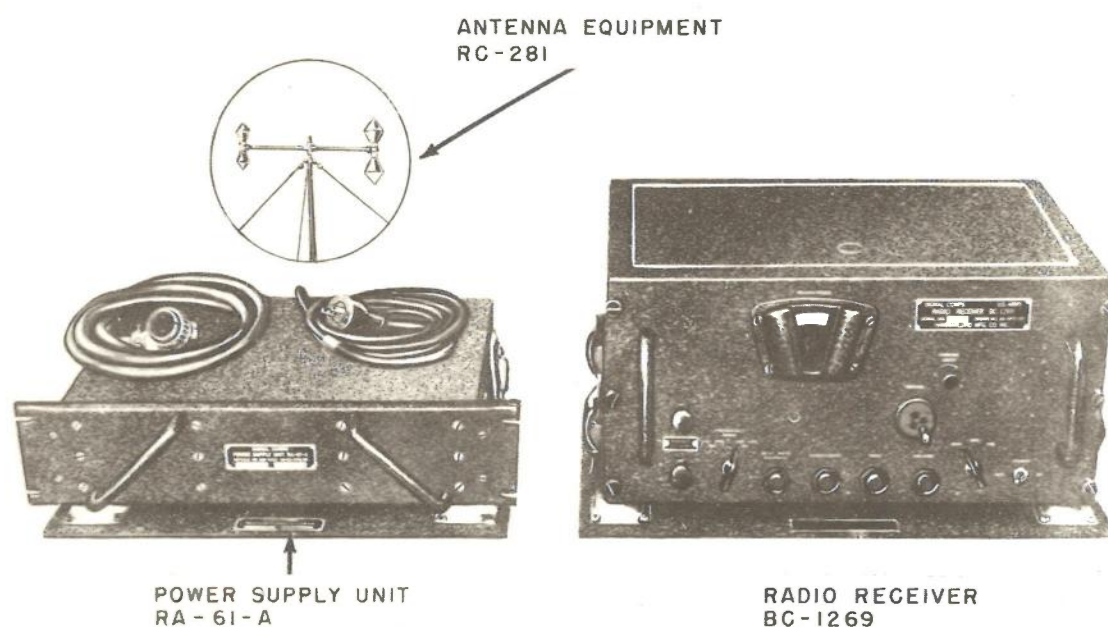
RADIO SET AN/TRR-type

1 July 1958

Cognizant Serv: USA FSN: 5820-164-8148

SCR-616

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S616	--	--



POWER SUPPLY UNIT
RA-61-A

RADIO RECEIVER
BC-1269

SCR-616

FUNCTIONAL DESCRIPTION:

Radio Set SCR-616 is a compact, transportable, AM and FM (voice, tone, and cw) radio receiving equipment for intercept, monitoring, or communication applications in the vhf and uhf ranges.

This equipment consists of a shock-mounted radio receiver and associated power-supply unit and includes a rotatable antenna array consisting of two center-fed biconical elements and accessories.

It can be operated from 110-volt or 230-volt ac power or from a 12-volt storage battery by substituting Power Supply Unit PE-223 for Power Supply Unit RA-61-A.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 145 to 600 in 2 bands

Type Modulation: AM, FM

Type of Signal: Voice, tone, cw

Power Requirements: 0.85 amp, 115-v 50/60-cycle ac; or 0.45 amp, 230-v 50/60-cycle ac

AN/TRR-type RADIO SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Equipment RC-281	2A289-281	-----	60
1	Power Supply Unit RA-61-A	3H4496-61	19 x 13-7/8 x 4	67
1	Radio Receiver BC-1269	2Z5927	19 x 16 x 8-3/4	44

REFERENCE DATA AND LITERATURE:

TM 11-260

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.05	250

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG: MIL-R-002250A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO	APPROX UNIT COST
Dubrow Development Co.	Burlington, N. J.	21762-P-56-55	\$1,625.00

RADIO SET AN/TRT-1

1 July 1958

Cognizant Serv: USA FSN: 5820-164-7144

USA

USN

USAF

TYPE CLASS:

Std

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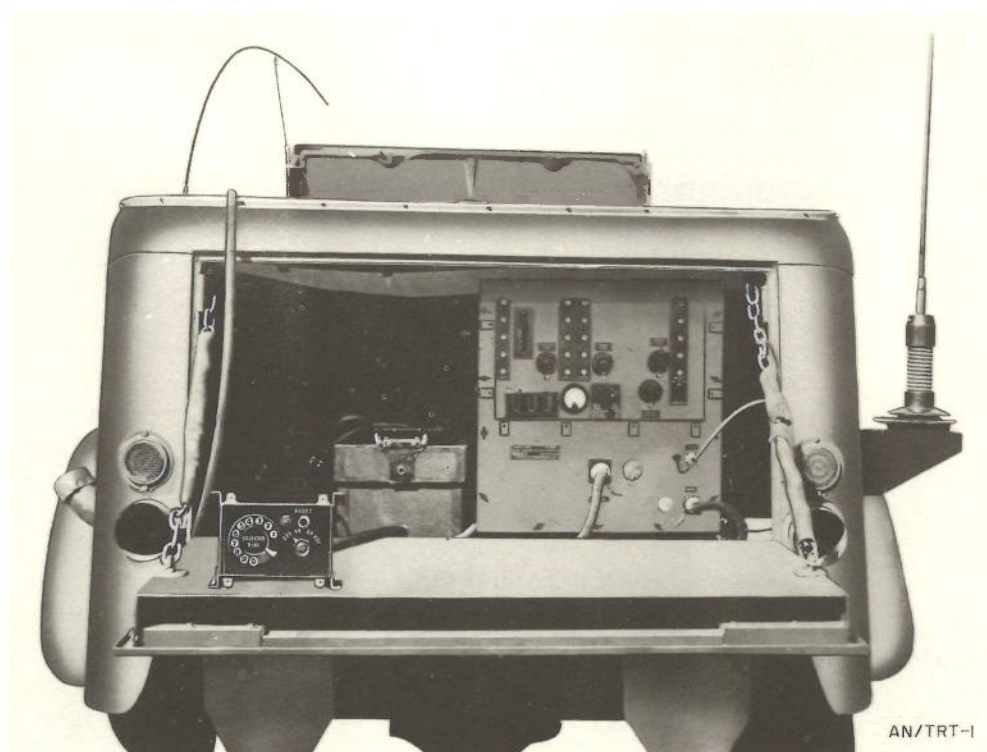
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STOCK NO:

2S5012-1

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**FUNCTIONAL DESCRIPTION:**

Radio Set AN/TRT-1 is a radio transmitter used in conjunction with Radio Set AN/TRR-2 to comprise a remote detonating system for land and water mines.

Selective detonation is available by adjustment of transmitter RF, audio frequency tone, and coded pulses to correspond with the preset code in the desired Radio Set AN/TRR-2. A total of 21,600 different code combinations are presently available.

This equipment can be installed in a vehicle, an aircraft or placed on the ground. An external source of 12- or 24-v dc power is required.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 28 to 40 (25 channels 0.5 mc apart; presently available for operation on only 32.0, 31.5, 31.0, 30.5, 30.0, and 29.5 mc)

Type Modulation: AM

Type of Signal: Coded pulses of definite RF and audio frequency

Power Output: 40 to 50 w

Distance Range: 8 miles over land, 12 to 20 miles over water, 40 miles from aircraft at 5,000 ft

Power Requirements: 456 w, 12/24-v storage battery

MIL-HDBK-161

AN/TRT-1 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly AS-149/ TRT-1	(USA) 2A264-149	-----	20
1	Control Box C-152/TRT-1	(USA) 2C666-152	5-1/2 x 7 x 5-1/2	4
2	Dynamotor DM-35-D	(USA) 3H-1635		
1	Radio Transmitter T-87/ TRT-1	(FSN) 5820-164-7150	24-1/2 x 14 x 23	99

REFERENCE DATA AND LITERATURE:

TM 11-269

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	17.1	400

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 471-2118

DESIGN COG: USA, Sig C

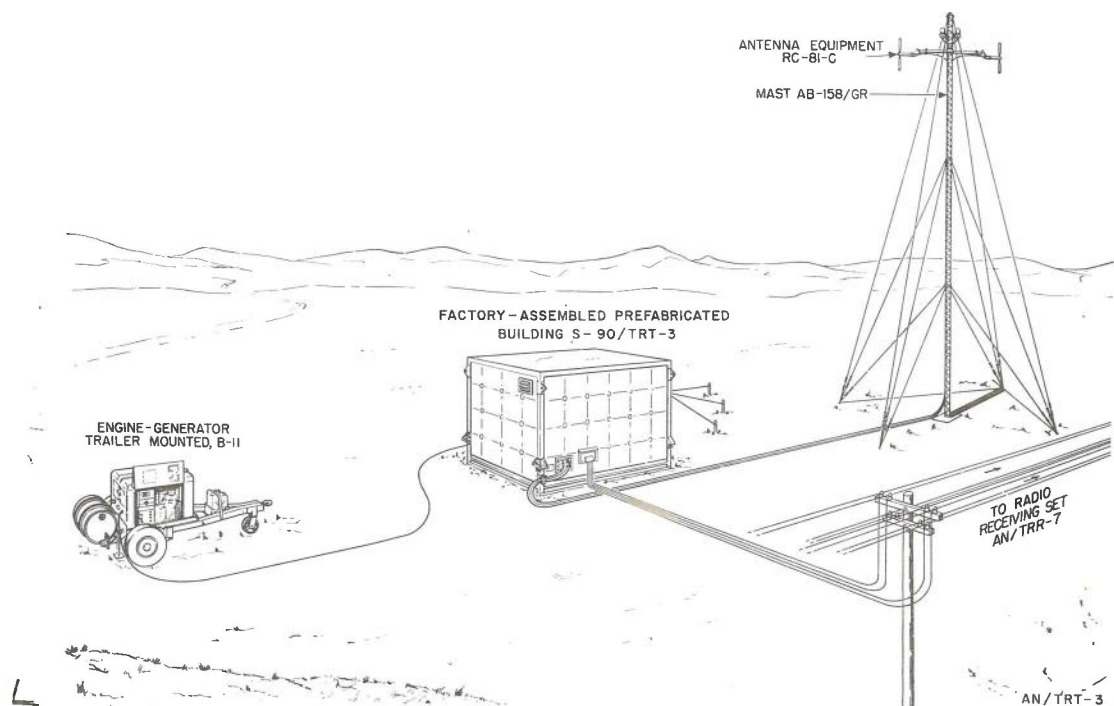
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Submarine Signal Co.	Boston, Mass.	3102-P-45-08	

RADIO TRANSMITTING SET **AN/TRT-3**

1 December 1958

Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--

**FUNCTIONAL DESCRIPTION:**

Radio Transmitting Set AN/TRT-3 is a complete mobile radio transmitting station equipped for local or remote radiotelephone and radiotelegraph operation in ground-to-air communication.

The set has two transmitters that can be operated simultaneously on any two desired channels. Operated in conjunction with Radio Receiving Set AN/TRR-7, two-way communication with aircraft or remote radiotelephone and radiotelegraph operation is possible.

This equipment consists essentially of two transmitters

housed in a prefabricated building. The building is equipped with alternating current power. Monitoring equipment provides facilities for local and remote operation of the transmitters, and also makes possible two-way telephone communication with as many as five mobile radio stations.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156

Type Modulation: AM

Type Emission: A2, A3 (tone, voice)

Power Output: 50 w

Power Requirements: 4.5 kw, 115- or 230-v, 50- to 60-cycle, 1-phase ac

AN/TRT-3 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Equipment RC-81-C	-----	-----	6.75
1	Building, Prefabricated, Factory-Assembled S-90/TRT-3	-----	140-3/4 x 84 x 77-3/4	3,300
1	Engine-Generator, Trailer Mounted B-11	-----	125 x 63 x 65	2,450
1	Monitoring Equipment RC-80-A	-----	72 x 20-1/2 x 3	163
2	Radio Transmitter BC-640-D	-----	21-1/4 x 20 x 72	601

REFERENCE DATA AND LITERATURE:

TO 31R2-2TRT3-()

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
 SPEC &/or DWG: ENG-322

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER **AN/TRT-type**

20 November 1958

Cognizant Serv: USA FSN: 5820-503-3422

T-303A/G

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Used by
STOCK NO:	--	--	--

(See Illustration AN/TRC-29, p. 1495)

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-303A/G is designed as the transmitting component of Radio Set AN/TRC-29. It converts a video signal output from the multiplexer unit (such as Multiplexer Set AN/TCC-13, used in Radio Terminal Set AN/TRC-38) into an FM microwave carrier. It is designed for rack mounting, and is not readily adaptable for general use without its companion components in Radio Set AN/TRC-29.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 2,400*Frequency Control:* Crystal*Type Emission:* Composite FM*Power Output:* 8 w at 1,700 mc; 6 w at 2,000 mc; 5 w at 2,200 mc; 4 w at 2,400 mc*Power Requirements:* 115/230-v 50-60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T-303A/G (Equipment consists of only one major component.)		19-3/8 x 21-5/8 x 29-3/4	

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

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

(Unit is shipped as part of Radio Set AN/TRC-29.)

MIL-HDBK-161

AN/TRT-type RADIO TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
------------	----------	--------------------------	---------------------

(See Radio Set AN/TRC-29.)

ORDER WIRE TRANSMITTER **AN/TRT-type**

20 November 1958

Cognizant Serv: USA FSN:

T-389A/TRC-29

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Used by
STOCK NO:	--	--	--

(See Illustration AN/TRC-29, p. 1495)

FUNCTIONAL DESCRIPTION:

Order Wire Transmitter T-389A/TRC-29 is the transmitting component of the separate order-wire facilities incorporated into Radio Set AN/TRC-29. This equipment provides low-quality voice facilities for transmission within the system of engineering and operational orders and information from one fixed installation to another fixed installation using certain microwave equipment.

It is designed for installation in the cabinet of the transmitting section of AN/TRC-29, and is not readily adaptable

for general use without its companion components in Radio Set AN/TRC-29.

TECHNICAL CHARACTERISTICS:

Transmitting Frequency Range in Mc: 5.5 to 6.5

Order-Wire Frequency Range: 300 to 3,450 cps

Keyed Carrier Signaling: 400 mc/500 ohms impedance power output

Power Requirements: 115-v 50-60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Order Wire Transmitter T-389A/TRC-29 (Equipment consists of only one major component.)	-----	7 x 19-3/8 x 21-5/8	

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

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

(Unit is shipped as part of Radio Set AN/TRC-29.)

MIL-HDBK-161

AN/TRT-type ORDER WIRE TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
------------	----------	--------------------------	---------------------

(See Radio Set AN/TRC-29.)

PORTABLE RADIO TRANSMITTING EQUIPMENT **AN/TRT-type**

4 December 1958

Cognizant Serv: USN FSN:

TBW

USA

USN

USAF

TYPE CLASS: --
STOCK NO: --Used by --
F-16-Q-316175-200 --**FUNCTIONAL DESCRIPTION:**

Portable Radio Transmitting Equipment TBW, when used in conjunction with suitable receiving equipment, provides a complete advanced base radio communications station. The transmitting equipment provides cw, m cw, and voice transmission in two frequency ranges. The equipment designed so that the entire system including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All equipments in the TBW series are functionally identical but differ electrically, principally in power source requirements.

The TBW, when used in conjunction with Portable Radio Receiving Equipment RBM, forms Semiportable Transmitting and Receiving Equipment MM.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc

Frequency Control: Master oscillator

Type of Signal: Cw, m cw, voice

Nominal Power Output:

Cw and m cw: 100 w

Voice: 25 w

TBW *Power Requirements:* 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise:			
	Bag 1	-----	60 x 12 dia	45
	Bag 2	-----	60 x 12 dia	45
	Gasoline Engine Generator	-----	17-3/8 x 21-1/4 x 26-1/4	168
	CDO-73004			
1	HF Transmitter Unit CAY-	-----	33-1/4 x 13-7/16 x 17-1/4	86.5
	52120			
1	MF Transmitter Unit CAY-	-----	33-1/4 x 13-7/16 x 17-1/4	56.5
	52119			
1	Motor Generator and Con-	-----	14-1/2 x 32-1/2 x 20-7/8	296
	troller CDO-21648 (115/ 230-v, 60-cycle ac)			

MIL-HDBK-161

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator and Controller CDO-21652 (115/230-v, 25-cycle ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-modulator	-----	33-1/4 x 10-7/8 x 17-1/4	71

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,246

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	86.11	1,445

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A625A

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore Md.	NOs-65690, 16 Mar 1939	\$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT **AN/TRT-type**

4 December 1958

Cognizant Serv: USN FSN:

TBW-1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW-1, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides for cw, mew or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally

identical but differ electrically, principally in the power source requirements.

The TBW-1, when used in conjunction with Portable Radio Receiving Equipment RBM-1 forms Semiportable Transmitting and Receiving Equipment MM-1.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc

Frequency Control: Master oscillator

Type of Signal: Cw, mew, voice

Nominal Power Output:

Cw and Mew: 100 w

Voice: 25 w

Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	-----	60 x 12 dia	45
	Bag 1	-----	60 x 12 dia	45
	Gasoline Engine Generator			
	CDO-73004	-----	17-3/8 x 21-1/4 x 26-1/4	168
1	HF Transmitter Unit CAY-52120	-----	33-1/4 x 13-7/16 x 17-1/4	86.5
1	MF Transmitter Unit CAY-52119	-----	33-1/4 x 13-7/16 x 17-1/4	56.5
1	Motor Generator and Controller CDO-21648 (115/230-v, 60-cycle ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO-21652 (115/230-v, 25-cycle ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-Modulator	-----	33-1/4 x 10-7/8 x 17-1/4	71

MIL-HDBK-161

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,246

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	86.11	1,445

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: RE13A625A, S-500-1257

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72056, 26 Feb 1940	\$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958

Cognizant Serv: USN FSN:

TBW-2

USA

USN

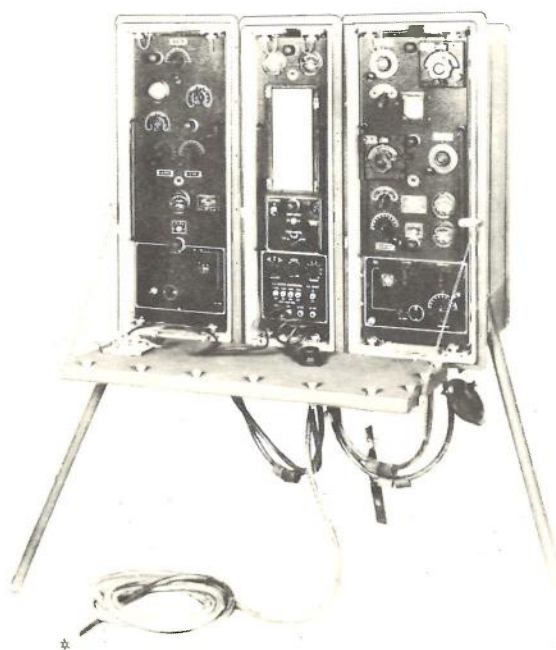
USAF

TYPE CLASS: --

Used by --

STOCK NO: --

F16-Q-316216-200 --



TBW-2

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW-2, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides for cw, mcw, or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW-2, when used in conjunction with Portable Radio Receiving Equipment RBM-2 forms Semiportable Transmitting and Receiving Equipment MM-2.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc

Frequency Control: Master oscillator

Type of Signal: Cw, mcw, voice

Nominal Power Output:

Cw and Mcw: 100 w

Voice: 25 w

Power Requirements: 115/230-v 25/60-cycle 1-phase ac;
220/330-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	-----	60 x 12 dia	45
	Bag 2	-----	60 x 12 dia	45
	Gasoline Engine Generator	-----	17-3/8 x 21-1/4 x 25-1/4	168
	CDO-73004			
1	HF Transmitter Unit CAY-52239	-----	33-1/4 x 13-5/8 x 17-1/4	84
1	MF Transmitter Unit CAY-52238	-----	33-1/4 x 13-5/8 x 17-1/4	76.5
1	Motor Generator and Controller CDO-21648 (115/230-v, ac, 60-cps ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator and Controller CDO-21652 (115/230-v, 25-cps, ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO-21737 (220/330-v, dc)	-----	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-modulator	-----	33-1/4 x 10-7/8 x 17-1/4	71

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/or DWG: RE13A625A, S-500-3448

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-88873, 30 Jun 4941	\$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT **AN/TRT-type**

4 December 1958

Cognizant Serv: USN FSN:

TBW-3

USA

USN

USAF

TYPE CLASS: --

Used by

STOCK NO: --

25 cps: F16-Q-316240-200 ----

60 cps: F16-Q-316243-200

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW-3, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides cw, mcw, and voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally

identical but differ electrically, principally in the power source requirements.

The TBW-3, when used in conjunction with Portable Radio Receiving Equipment RBM-3 forms Semiportable Transmitting and Receiving Equipment MM-3.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,000 kc

Frequency Control: Master oscillator

Type of Signal: Cw, mcw, voice

Nominal Power Output:

Cw and Mcw: 100 w

Voice: 25 w

Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	-----	60 x 12 dia	45
	Bag 2	-----	60 x 12 dia	45
	Gasoline Engine Generator	-----	17-3/8 x 21-1/4 x 26-1/4	168
	CDO-73004A			
1	HF Transmitter Unit CAY-52239	-----	33-1/4 x 13-5/8 x 17-1/4	84
1	MF Transmitter Unit CAY-52238	-----	33-1/4 x 13-5/8 x 17-1/4	76.5
1	Motor Generator and Controller CDO-21648 (115/230-v, 60-cycle ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO-21652 (115/230-v, 25-cycle ac)	-----	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-Modulator	-----	33-1/4 x 10-7/8 x 17-1/4	71

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:
NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A625

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXs-4744, 2 Jun 1942	\$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958

Cognizant Serv: USN FSN:

TBW-4

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	25 cps: F16-Q-316260-200	--
		60 cps: F16-Q-316280-200	

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW-4, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides cw, mcw, or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally

identical but differ electrically, principally in the power source requirements.

The TBW-4, when used in conjunction with Portable Radio Receiving Equipment RBM-4 forms Semiportable Transmitting and Receiving Equipment MM-4.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc

Frequency Control: Master oscillator

Type of Signal: Cw, mcw, voice

Nominal Power Output:

Cw and Mcw: 100 w

Voice: 25 w

Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	-----	60 x 12 dia	45
	Bag 2	-----	60 x 12 dia	45
	Gasoline Engine Generator	-----	17-3/8 x 21-1/4 x 26-1/4	168
	CDO-73004A			
1	HF Transmitter Unit CAY-	-----	33-1/4 x 13-5/8 x 17-1/4	84
	52239			
1	MF Transmitter Unit CAY-	-----	33-1/4 x 13-5/8 x 17-1/4	76.5
	52238			
1	Motor Generator and Con-	-----	14-1/2 x 32-1/2 x 20-7/8	296
	troller CDO-21648 (115/ 230-v, 60-cycle ac)			
	or			
1	Motor Generator and Con-	-----	14-1/2 x 32-1/2 x 20-7/8	296
	troller CDO-21652 (115/ 230-v, 25-cycle ac)			
1	Rectifier-Modulator	-----	33-1/4 x 10-7/8 x 17-1/4	71

MIL-HDBK-161

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: EN28/1500-43/SHIPS, EN28/1813-43/NSA

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsa-19329, 21 Dec 1942	\$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958

Cognizant Serv: USN FSN:

TBW-5

USA

USN

USAF

TYPE CLASS: --

Used by

STOCK NO: --

110-115 ac: F16-Q-316295-200

115/230 ac: F16-Q-316300-200

230 ac: F16-Q-316305-200

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW-5, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides cw, mew, or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW-5, when used in conjunction with Portable Radio Receiving Equipment RBM-5 forms Semiportable Transmitting and Receiving Equipment MM-5.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc

Type of Signal: Cw, mew, voice

Nominal Power Output:

Cw and Mew: 100 w

Voice: 25 w

Frequency Control: Master oscillator

Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	-----	60 x 12 dia	45
	Bag 2	-----	60 x 12 dia	45
	Gasoline Engine Generator	-----	17-3/8 x 21-1/4 x 26-1/4	168
	CDO-73004B			
1	HF Transmitter Unit CAY-	-----	33-1/4 x 13-5/8 x 17-1/4	84
	52239			
1	MF Transmitter Unit CAY-	-----	33-1/4 x 13-5/8 x 17-1/4	76.5
	52238			
1	Motor Generator and Con-	-----	14-1/2 x 32-1/2 x 20-7/8	296
	troller CDO-21648 (115/ 230-v, 60-cycle ac)			
	or			
1	Motor Generator and Con-	-----	14-1/2 x 32-1/2 x 20-7/8	296
	troller CDO-21652 (115/ 230-v, 25-cycle ac)			
1	Rectifier-Modulator	-----	33-1/4 x 10-7/8 x 17-1/4	71

MIL-HDBK-161

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsr-51520, 21 Mar 1944	\$3,595.00 including equipment spares

HIGH FREQUENCY RADIO TELEPHONE TRANSMITTER EQUIPMENT AN/TRT-type

5 December 1958

Cognizant Serv: USA FSN:

TDG, TDG-1

USA

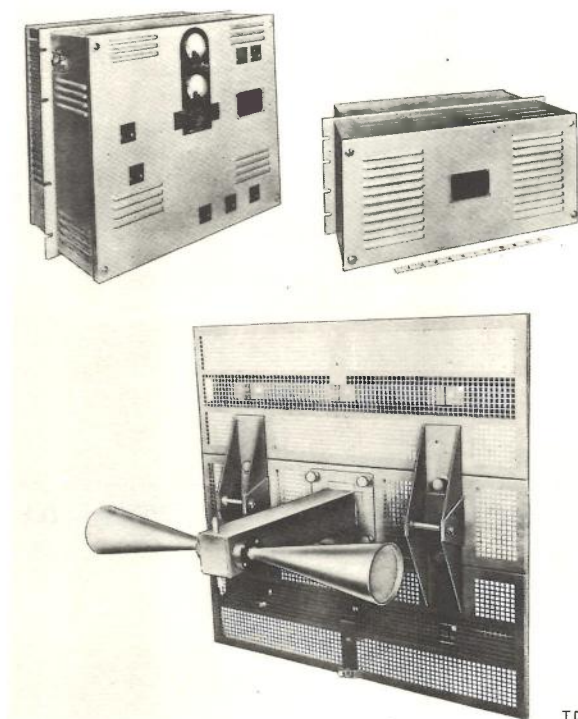
USN

USAF

TYPE CLASS: --

STOCK NO: --

16-Q-332907-200 (TDG)



FUNCTIONAL DESCRIPTION:

High Frequency Radio Telephone Transmitter Equipments TDG and TDG-1 are low-powered VHF radio transmitters suitable for short-distance point-to-point communication. The transmitters are suitable for multichannel telegraph transmission using voice-frequency tones for voice transmission, or for combinations of voice and telegraph transmissions that are derived from suitable subcarrier demodulation equipment. The equipments are designed to be located at a point close to their antenna systems and are connected to the system by a 7/8-inch nitrogen-filled, low-loss, concentric, transmission line.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156
Type of Emission: A2, A3
Power Supply Equipment: Rectifier power unit
Nominal Power Output: 12 w
Frequency Control: Crystal
Power Source Required: 390 w; 115-v $\pm 10\%$, 1-phase 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TDG</i>				
1	Heater Panel for Outdoor Cabinet	CW-634378	3-1/2 x 19 x 4-7/8	11
1	High-Gain Antenna, 9db	-----	124 x 41 x 64-1/2	40
1	Indoor Cabinet	CW-10604	84 x 26-3/4 x 17	200
1	Low-Gain Antenna, 3db	-----	20 x 41 x 64-1/2	12
1	Outdoor Cabinet	CW-10589	64-1/2 x 32 x 18	311
1	Radio Transmitter	CW-52255	15-3/4 x 19 x 10	43
1	Rectifier Power Unit	CW-20143	8-3/4 x 19 x 11-1/4	75
1	Spare Parts Panel	CW-10568	3-1/2 x 19 x 5	3

AN/TRT-type HIGH FREQUENCY RADIO TELEPHONE TRANSMITTER EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For TDG-1</i>				
1	Broad Band Portable Antenna	CW-66157	40 x 40 x 20	65
1	Heater Panel for Outdoor Cabinet	CW-634378	3-1/2 x 19 x 4-7/8	11
1	High-Gain Antenna, 9 db	-----	124 x 41 x 6-1/2	40
1	Indoor Cabinet	CW-10604	84 x 26-3/4 x 17	200
1	Low-Gain Antenna, 3 db	-----	20 x 41 x 64-1/2	12
1	Outdoor Cabinet	CW-10589	64-1/2 x 32 x 81	311
1	Radio Transmitter	CW-52255	15-3/4 x 19 x 10	43
1	Rectifier Power Unit	CW-20143	8-3/4 x 19 x 11-1/4	75
1	Spare Parts Panel	CW-10568	3-1/2 x 19 x 5	3

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95330

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/or DWG: RE13A641A

DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	Nxs-149, NXsr-83392	\$1,650.00

RADIO TRANSMITTING EQUIPMENT AN/TRT-type

16 October 1958

Cognizant Serv: USN FSN: 5820-665-2291 (with equipment spares)

TDT

USA

USN

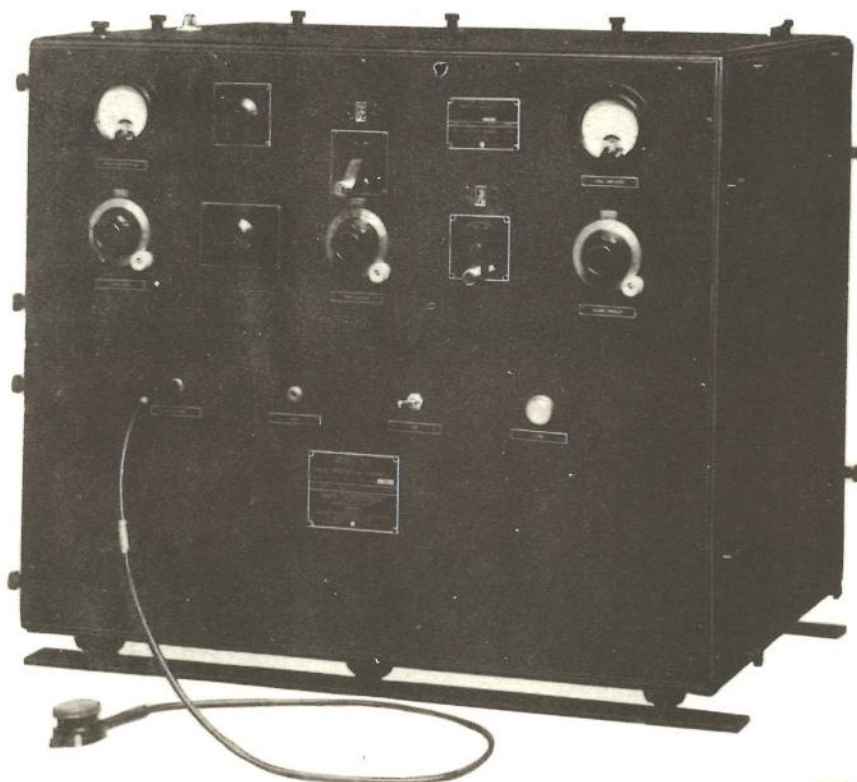
USAF

TYPE CLASS: --

Used by

STOCK NO: --

F16-Q-337285-200 --



TDT

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TDT is a general purpose, semiportable, vhf transmitting equipment designed for use at shore installations for point-to-point or ground-to-plane communication. It may be used to transmit either modulated-continuous-wave or voice signals on any one preset crystal oscillator controlled frequency within the range of the equipment.

The transmitter is used with Radio Receiving Equipments RBK and RCK. A telegraph key is required for operation.

The radio transmitter is self-contained except for the antenna and microphone. It is equipped with a shock-mounted base for table or bench mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156 on any one preset crystal frequency

Frequency Control: Crystal

Type Signal: AM

Type Transmission: Mcw, voice

Type Keying: Relay

Keying Speed: 40 wpm

Power Output: 35 w

Impedance: 50 ohms, unbalanced

Audio Response: ± 2 db from 200 to 4,000 cps

Antenna: One-quarter wave vertical with ground plane rods

Power Consumption: 750 w

Power Source Requirements: 110- to 120-v 50- to 60-cycle 1-phase ac

AN/TRT-type RADIO TRANSMITTING EQUIPMENT**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66091 with 100 feet of cable	-----	28-3/8 x 49-1/2 x 49-1/2	16.5
1 set	Equipment spares	-----	10-1/2 x 25-1/2 x 19-1/2	90
1	Microphone Assembly 51004C	-----		
1	Radio Transmitter 52322	-----	26-3/4 x 31-1/2 x 26-1/2	400

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95337

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	33	640

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
 SPEC &/or DWG: Spec No. 43014-NA

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Accessories Corp.	Kansas City, Kans.	NX _{ss} -30269 27 May 1943	\$1,500 with equipment spares

REMOTE CONTROL EQUIPMENT AN/TTA-type

1 July 1958

Cognizant Serv: USA FSN: 5820-240-0515

RC-290

USA

USN

USAF

TYPE CLASS:

L/Std

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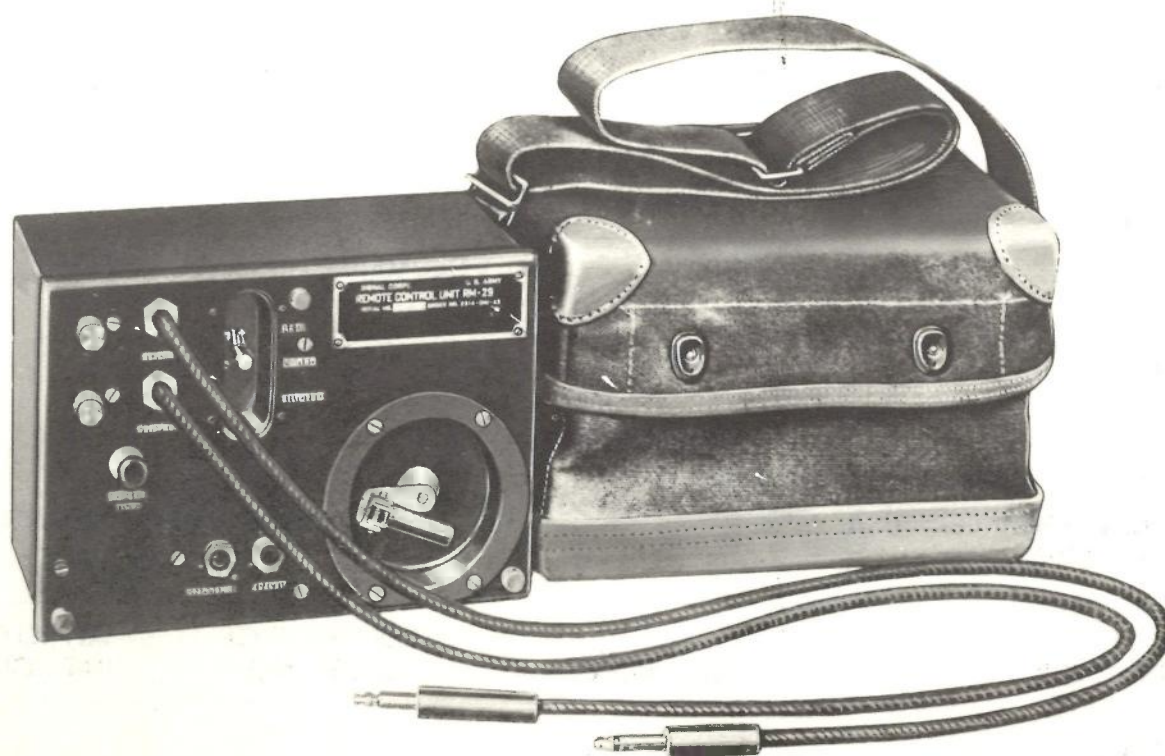
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STOCK NO:

2C7600-290

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RC-290

FUNCTIONAL DESCRIPTION:

Remote Control Equipment RC-290 is an assemblage of items enabling the erection of a local-battery telephone facility between a displaced operating and control position and the actual operating site of field radio equipment.

This equipment consists essentially of a steel case inclosed Telephone EE-8 used at the radio set and a standard field Telephone EE-8 used at the remote control point. The connecting facility is usually a conventional field telephone pair.

The modes of operation available are telephone communication between the remote point and the radio operator, the control of radio equipment from the remote Telephone EE-8,

voice circuit monitoring by the radio operator at the radio equipment, and operation of the radio set with monitoring at either the remote station or the radio set.

It is powered by dry batteries and uses the hand generator in the remote control unit or in a Telephone EE-8 for ringing.

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice

Type Communication Circuits: Conventional field telephone

Controls: Selection of operational positions: RADIO, THROUGH, TELEPHONE

Power Requirements: Battery BA-27

MIL-HDBK-161

AN/TTA-type REMOTE CONTROL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Remote Control Unit RM-29	2C7629	9-5/16 x 6 5/16 x 5-3/16	13.5
1	Telephone EE-8	4B5008	9-9/16 x 7-11/16 x 3-1/2	9.5

REFERENCE DATA AND LITERATURE:

TM 11-308

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

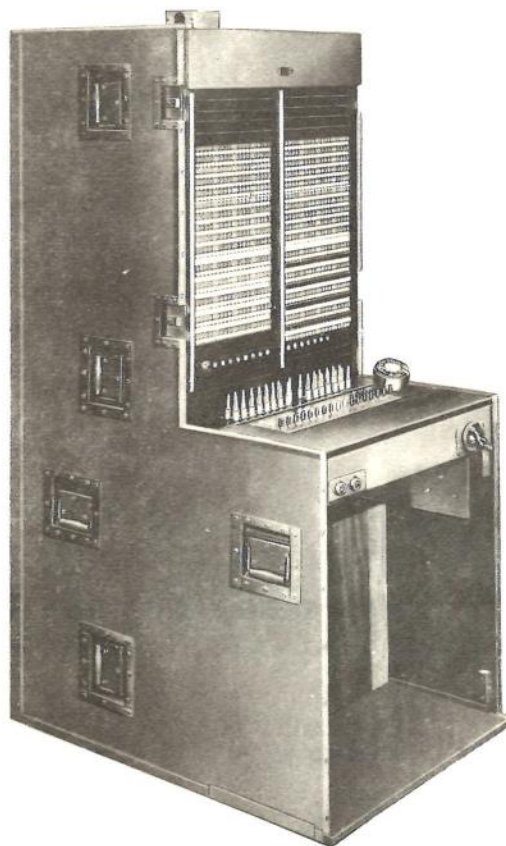
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Crosley Corp.	Cincinnati, Ohio		
Galvin Manufacturing Co.	Philadelphia, Pa.		
International Telephone & Radio Manufacturing Co.	East Newark, N. J.		
Zenith Radio Corp.	Chicago, Ill.		

MANUAL TELEPHONE CENTRAL OFFICE AN/TTC-7

1 July 1958

Cognizant Serv: USA FSN: 58205-503-1210

	USA	USN	USAF
TYPE CLASS:	S/Std	--	Std
STOCK NO:	4C27000-7	--	1790-431584030



AN/TTC-7

FUNCTIONAL DESCRIPTION:

Manual Telephone Central Office AN/TTC-7 is a complete, transportable, three-position multiple field telephone exchange designed for rapid installation. It can handle local or common battery lines.

This equipment consists essentially of three two-panel manual switchboards connected in multiple, each board with a maximum capacity of 200 lines and 20 trunks. It includes power and accessory components.

Each position is equipped with 15 cord circuits, thus giving a maximum capacity of 45 simultaneous calls. The face equipment of each position is wired to accommodate 500 lines and 80 trunks. For each additional 200 lines, three more switchboard positions are required.

To handle more than 400 lines, multiplying on a four-panel basis is recommended; in this manner, the exchange may be expanded to accommodate 1,000 lines and 160 trunks.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 3 minimum, expandable in multiples of 3 or 4

Number and Type of Circuits: 45 cord; 200 line; 20 trunk

Ringin: 20 cps at 90 v

Power Requirements: 110-v ac; 48-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Line-Relay Telephone Circuit TA-223/TTC	5805-503-3339	26-5/8 x 31-5/16 x 17	230

AN/TTC-7 MANUAL TELEPHONE CENTRAL OFFICE

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line Relay Telephone Circuit TA-224/TTC	5805-503-3340	26-5/8 x 31-5/16 x 17	275
3	Manual Telephone Switchboard SB-249/TTC	5805-503-2657	72 x 26-3/16 x 26-1/2	850
1	Telephone Main Distributing Frame TA-257/TTC	5805-503-1070	26-5/8 x 31-5/16 x 17	150

REFERENCE DATA AND LITERATURE:

TM 11-2146

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
30	413	6,117

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-C-14255

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg-Carlson Div., General Dynamics Corp.	Rochester, N. Y.	11659-P-52-93	

SWITCHBOARD **AN/TTC-type**

1 July 1958

Cognizant Serv: USA FSN: 5805-164-7084

BD-71

USA

USN

USAF

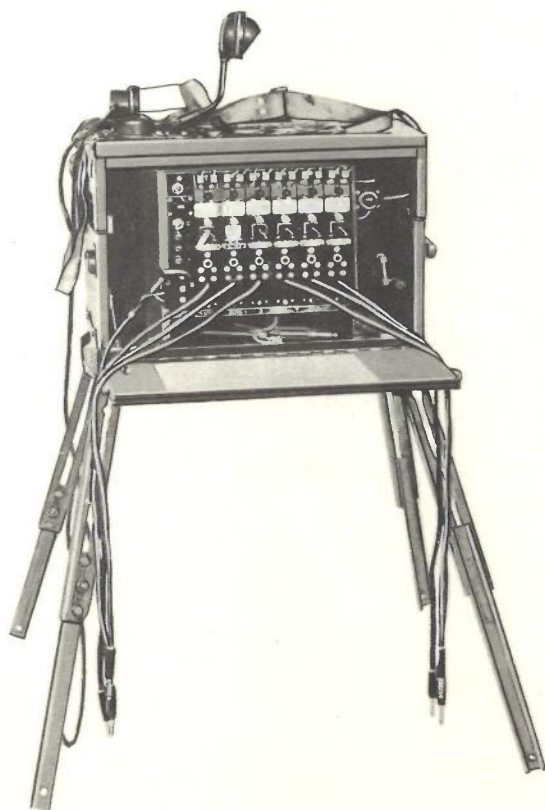
TYPE CLASS: L/Std
STOCK NO: 4C9971

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L/Std

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BD-71

FUNCTIONAL DESCRIPTION:

Switchboard BD-71 is a portable, monocord, magneto telephone switchboard used for terminating and switching tactical field wire circuits.

This equipment consists of all required apparatus, housed in a carrying case having adjustable legs, permitting a variety of installation arrangements. Repeating coils are permanently installed on two lines.

Two Switchboards BD-71 may be connected in parallel to accommodate additional lines.

The estimated range over nonloaded Wire W-110-B is from 14 to 22 miles.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1

Number and Type of Circuits: 6 cord; 6 line

Power Requirements: 6 batteries BA-30

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Chest Set H-18/GT	5965-164-8076		
1	Headset HS-30			
1	Switchboard BD-71 (bare unit)	5805-164-7084	18-1/2 x 10-1/4 x 15	48
6	Switchboard Unit EE-2			

MIL-HDBK-161

AN/TTC-type SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11-330

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.6	84

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		78-PHIBP-52-16	

SWITCHBOARD AN/TTC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-164-7088

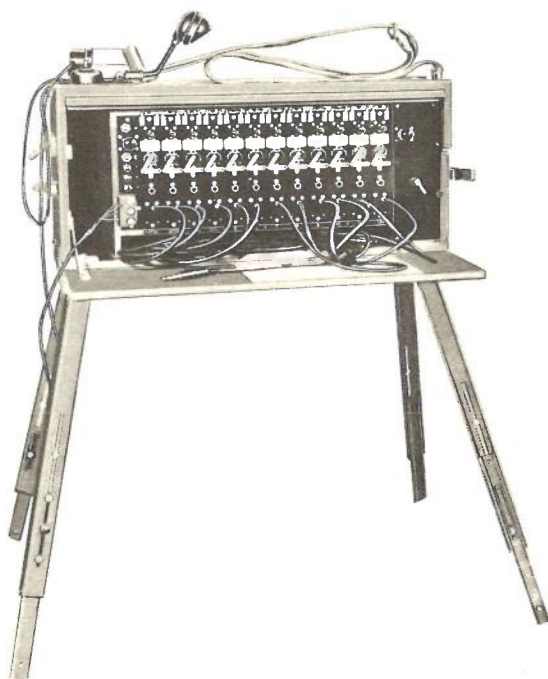
BD-72-()

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4C9972



BD-72

FUNCTIONAL DESCRIPTION:

Switchboard BD-72-() is a portable, monocord, magneto, manual, telephone switchboard used primarily in field wire systems.

This equipment consists of a switchboard fitted with all apparatus required, and arranged for transportation in the field in a carrying case. It has adjustable legs permitting different installation arrangements.

Repeating coils are permanently installed on four lines. Estimated range over Wire W-110-B (nonloaded) is from 14 to 22 miles. Two Switchboards BD-72-() may be used together, by trunking between them, to provide additional line capacity.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1

Number and Types of Circuits: 12 cord, 12 line

Power Requirements: Six Batteries BA-30

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Chest Set H-18/GT	5965-164-8076		
1	Headset HS-30	5965-164-7259		0.32
1	Switchboard BD-72 (bare unit)	5905-164-7088	27 x 10-1/4 x 15	72
1	Switchboard Unit EE-2	5805-222-4408		1.2

MIL-HDBK-161

AN/TTC-type SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11-330

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	137

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-686

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEPHONE REPEATER AN/TTC-type

1 July 1958

Cognizant Serv: USA FSN: 5805-164-8052

EE-89-()

USA

USN

USAF

TYPE CLASS:

Std

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STOCK NO:

4B3289A

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EE-89

FUNCTIONAL DESCRIPTION:

Telephone Repeater EE-89-() is a portable, two-wire repeater equipment installed at intermediate points of a tactical field wire system (at junctions of sections having similar characteristics) to extend the normal transmission range of facilities serving division and higher headquarters.

It may be used at the exact center of a loaded section but not at junctions of loaded and nonloaded sections. Two repeaters can be used in tandem in the same circuit.

This equipment consists of amplifier equipment and related control apparatus contained in a wooden field case fitted with carrying straps. The case has space for the necessary batteries.

Telephone EE-8 can be bridged across this equipment.

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities: Simplex telegraph, telephone, and 20-cps ringing, over two-wire system

Power Requirements: Self-contained Battery BA-40

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater EE-89 (Equipment consists of only one major component.)	5805-164-8052	8-1/2 x 9 x 7	6.5

REFERENCE DATA AND LITERATURE:

TM 11-2006

MIL-HDBK-161

AN/TTC-type TELEPHONE REPEATER

SHIPPING DATA

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

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-4-42

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Daven Co.	Livingston, N. J.	29390-P-44-23	\$60.41
Federal Telephone & Radio Co.	Clifton, N. J.	29391-P-44-23	57.30

TELEPHONE CENTRAL OFFICE SET **AN/TTC-type**

1 July 1958

Cognizant Serv: USA FSN: 5805-221-1137

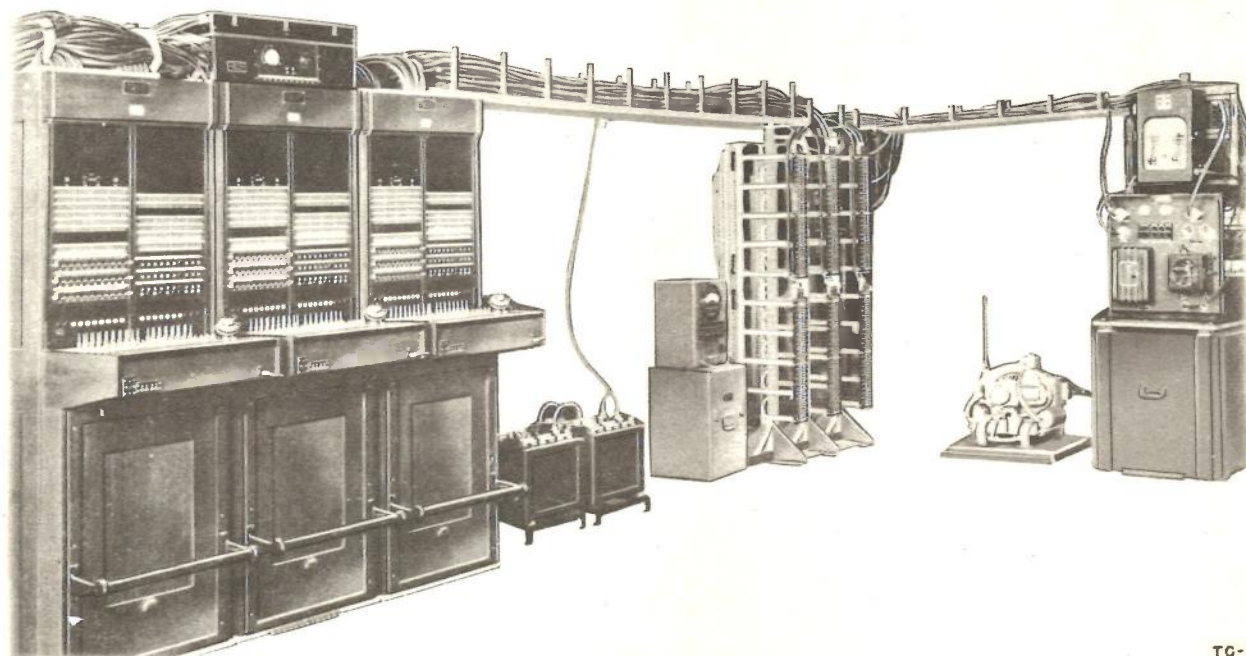
TC-1

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4C27001



TC-1

FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC-1 is a complete, transportable, manual, telephone exchange that serves both local and common-battery lines. It is capable of handling local traffic, as well as originating and terminating trunk and tie-line traffic. It is used as a telephone central of a tactical field wire or cable system.

This equipment consists essentially of a three-position switchboard, power equipment, and associated accessories.

Each switchboard section is a single-position, two-panel, manually operated unit arranged to serve magneto and common battery lines, as well as common battery manual and dial trunks.

Power is supplied by four Batteries BB-46, one Panel

BD-90 (which includes ringing equipment), a rectifier, and a gasoline engine-driven field power unit.

Traffic-handling capacity of this central office may be increased as required by alternating the corresponding position of two TC-1 equipments in the same lineup.

TECHNICAL CHARACTERISTICS:

Number of Positions: 3

Number and Type of Circuits: 45 universal cord (3 dial), 90 local-battery lines; 180 common-battery lines; 12 two-way dial or manual trunks

Power Supplied:

Power Unit PE-75: 2.5-kva, 115-v 60-cycle ac
 Rectifier RA-36: 12 amp at 0- to 65-v dc
 Battery BB-46: 90 ampere-hours, 40- to 56-v dc

AN/TTC-type TELEPHONE CENTRAL OFFICE SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
4	Battery BB-46	-----	15-1/2 x 6-1/2 x 14-9/16	119
1	Cabinet BE-70	3F2405	12 x 9 x 18	32
1	Cabinet BE-72	3H672	26-1/2 x 7 x 9-3/16	61
1	Cabinet BE-75	4E1175	13-1/3 x 4-5/8 x 9-3/4	25
3	Frame FM-19	4E2119	17-1/4 x 23 x 80	180
1	Panel BD-90	3H4090	35-1/2 x 25 x 26-1/4	230
1	Power Unit PE-75	3H4575	40 x 19 x 27-1/2	275
1	Rectifier RA-36	3H4676	-----	75
3	Switchboard BD-80	4C9980	37-7/8 x 26-3/8 x 77-9/16	739

REFERENCE DATA AND LITERATURE:

TM 11-335

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	543	10,596

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET **AN/TTC-type**

1 July 1958

Cognizant Serv: USA FSN: 5805-221-1136

TC-2-()

USA

USN

USAF

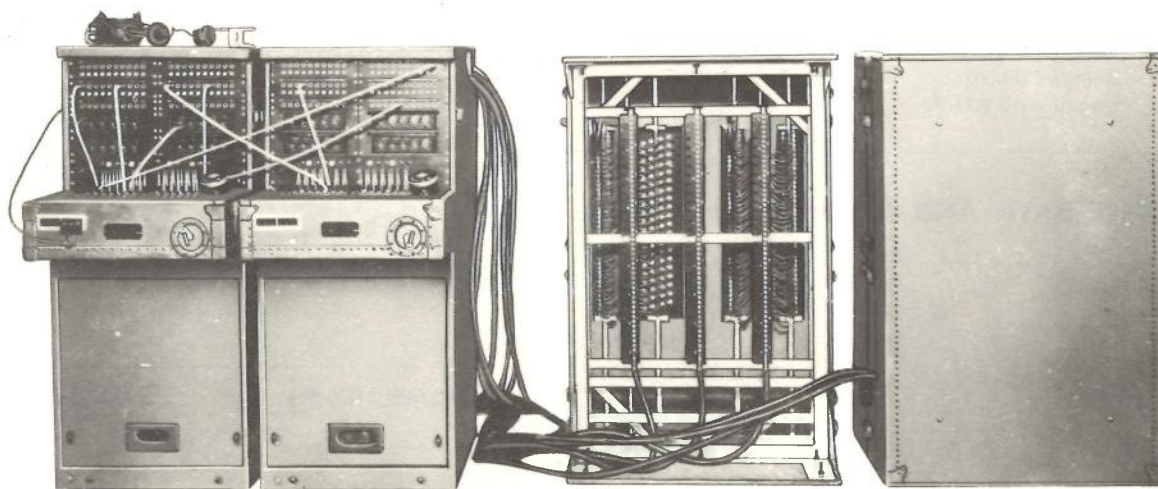
TYPE CLASS: L/Std
 STOCK NO: 4C27002

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TC-2

FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC-2-() is a complete, transportable, telephone exchange designed to handle local traffic and to originate and terminate trunk and tie-line calls in field wire systems.

This equipment consists essentially of a single-position, local- and common-battery, nonmultiple, two-panel, manual switchboard; main distributing frame; power panel; rectifier; power unit; and associated accessories.

Two Switchboards BD-89 (the principal component of this equipment) can be connected as illustrated above, and operated

by one operator. (The power panel and rectifier units are not shown in the illustration.)

TECHNICAL CHARACTERISTICS:

Number of Positions: 1

Number and Type of Circuits:

Model BD-89-A through -E: 13 universal cord (1 dial); 20 local-battery line; 37 common-battery line; 2 common-battery trunk; 1 dial trunk

Model BD-89-G: 13 universal cord (1 dial); 40 line; 4 trunk

Power Supplied:

Power Unit PE-75-(): 2,500 w, 115-v 60-cycle ac
 Rectifier RA-91 or RA-36: 2 to 12 amp at 6- to 48-v dc
 Battery BB-46: 90 ampere-hours, 40- to 56-v dc

MIL-HDBK-161

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cabinet BE-79	4E1179	40-1/2 x 23 x 18-1/2	300
1	Panel BD-98	3H4098	30 x 30 x 29	110
1	Power Unit PE-75	3H4575	32 x 25-1/2 x 24-1/2	275
1	Rectifier RA-36	3H4676	21 x 20 x 11-3/4	130
1	Rectifier RA-91	3H4699-91	21 x 20 x 11-3/4	130
1	Switchboard BD-89	4C9989	47-1/2 x 21 x 35	400

REFERENCE DATA AND LITERATURE:

TM 11-340

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	146	3,412

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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TELEPHONE CENTRAL OFFICE SET **AN/TTC-type**

1 July 1958

Cognizant Serv: USA FSN: 5805-221-1132

TC-4

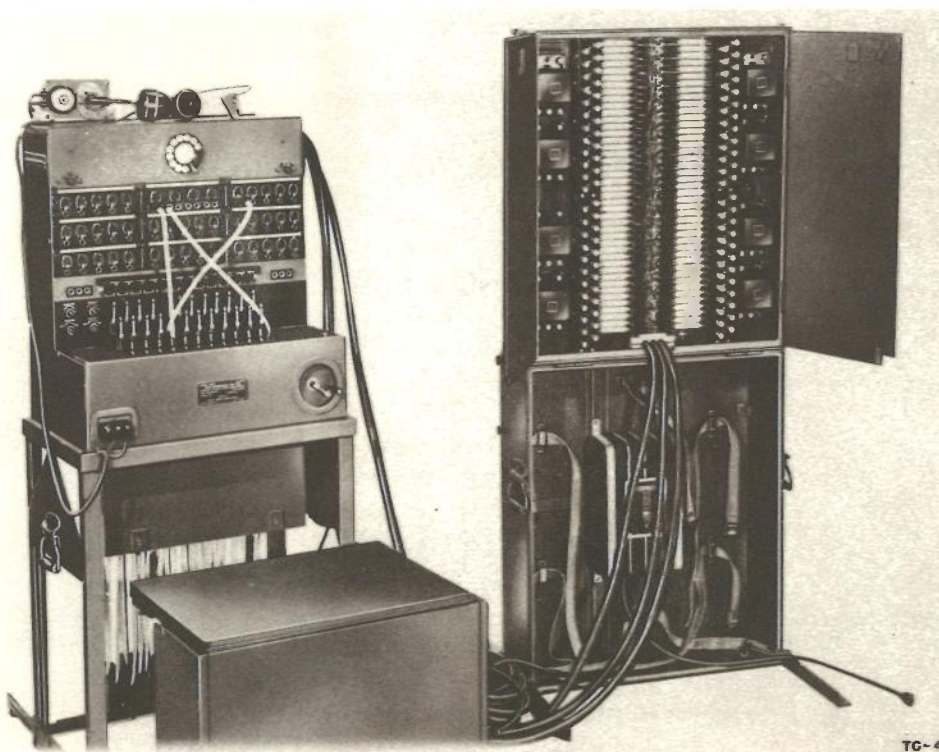
USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4C27004

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TC-4

FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC-4 is a complete, transportable, field telephone exchange for handling magneto line traffic, and for originating and terminating common battery trunk line and ring-down tie line traffic.

This equipment consists of a single-position, manual, non-multiple switchboard, a power converter, and associated accessories. Currently, this equipment includes Headset HS-30, Chest Set H-18/GT, and Microphone T-45, rather than the head and chest set illustrated. It can be installed in a cargo truck for mobile telephone central applications.

Two switchboards BD-96 (the principal component of this equipment) can be connected and operated by a single operator.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1

Number and Type of Circuit: 12 universal cord (a dial); 40 local battery line; 4 common battery manual or dial trunk

Power Requirements: Operator's Set Transmitter and Night Alarm: 6 Batteries BA-30

Converter M-222: 2 Batteries BA-23

MIL-HDBK-161

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Converter M-222	4F222	8 x 7 x 7	11
1	Panel BD-97	4E3697	27-1/2 x 24-1/2 x 11	150
1	Switchboard BD-96	4C9996.6	25 x 22 x 15	200

REFERENCE DATA AND LITERATURE:

TM 11-332

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	21	650

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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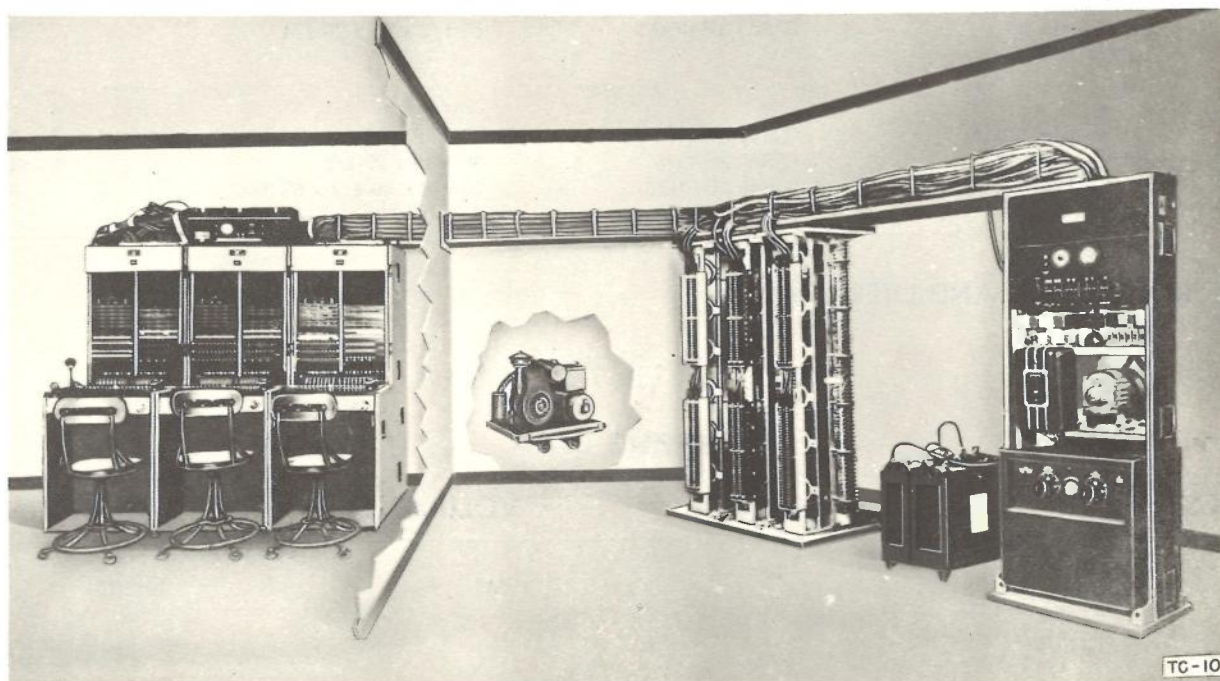
TELEPHONE CENTRAL OFFICE SET **AN/TTC-type**

1 July 1958

Cognizant Serv: USA FSN: 5805-356-2736

TC-10-()

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4C27010-1	--	--

**FUNCTIONAL DESCRIPTION:**

Telephone Central Office Set TC-10-() is a complete, transportable, 270-line manual telephone exchange. It serves both local battery and common battery lines, and is arranged for handling, originating, and terminating trunk and tie-line traffic.

It is used for establishing tactical communications from forward areas to rear echelons.

This equipment can be connected into an existing telephone system, either manual or automatic. A maximum of 45 conversations can be handled simultaneously. Local battery line

circuits also can be used for toll lines or two-way ring-down trunks. Trunks can be extended to manual or automatic exchanges.

TECHNICAL CHARACTERISTICS:

Number of Positions: 3

Number and Type of Circuits: 45 universal cord (3 dial), 270 line (180 common battery and 90 local battery), 12 two-way trunk

Power Requirements: 1,000 w, 110-120-v 50/60-cycle 1-phase ac

AN/TTC-type TELEPHONE CENTRAL OFFICE SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Battery BB-46	(FSN) 6140-126-1544	15-1/2 x 6-1/2 x 14-9/16	119
1	Cabinet BE-72	(FSN) 6625-241-7869	26-1/2 x 7 x 9-3/16	61
3	Frame FM-19	(FSN) 5805-171-1362	17-1/4 x 23 x 80	180
1	Panel BD-90	(USA) 3H4090	35-1/2 x 25 x 26-1/4	230
or				
1	Panel BD-132-A	(USA) 3H4100-132	26 x 18 x 58	625
2	Power Unit PE-75	(USA) 3H4575	40 x 19 x 27-1/2	324
3	Switchboard BD-110-A	(USA) 4C10110	26-1/4 x 36-1/2 x 63-3/4	850

REFERENCE DATA AND LITERATURE:

TM 11-338

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	543	10,593

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET **AN/TTC-type**

4 December 1958

Cognizant Serv: USA FSN: 5805-221-1138

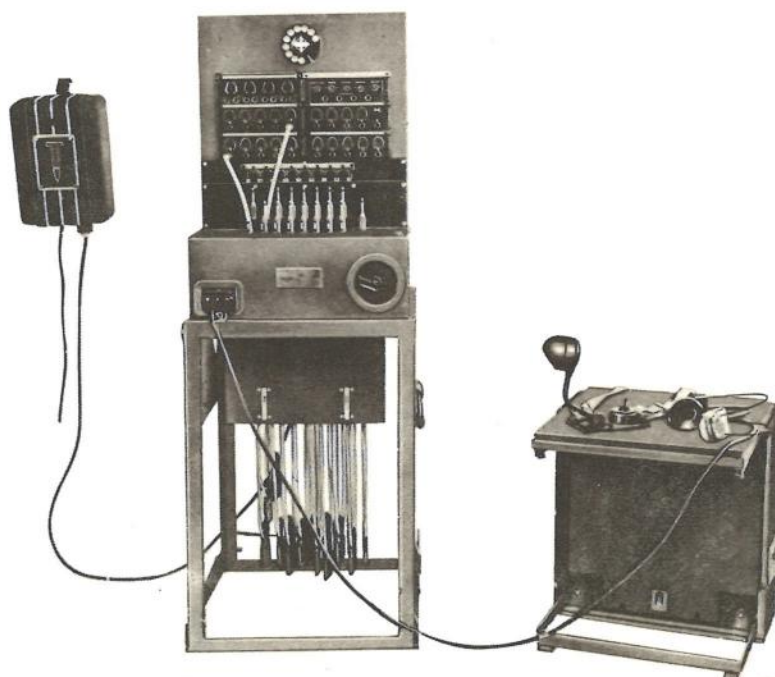
TC-12

USA

USN

USAF

TYPE CLASS: L/Std
 STOCK NO: 4C27012



TC-12

FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC-12 is a complete, transportable or mobile, tactical telephone exchange for handling, originating, and terminating trunk and tie line traffic and is used primarily in field wire and cable systems.

This equipment consists essentially of a single-position, nonmultiple, manually operated telephone switchboard and related components. Currently this equipment includes Headset HS-30, Chest Set H-18/GT, and Microphone T-45 rather than the head and chest set illustrated.

The TC-12 can be used for handling magneto line calls and for originating and terminating manual common battery, automatic (dial), and ring-down tie-line traffic.

Two Switchboard BD-91 equipments (equivalent to two

Telephone Central Office Set TC-12) can be connected and operated by one operator.

This central office is dry battery operated.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1

Number and Type of Circuits:

Cord: 8 universal; 1 dial

Line: 20 local battery

Trunk: 4 common battery, manual, and dial

Power Requirements: Six Battery BA-30, to furnish transmitter current for operator's telephone set and night alarm buzzer; and two Battery BA-23, to furnish power to Converter M-222

MIL-HDBK-161

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Switchboard BD-91	4C9991	25-1/2 x 19 x 17-1/2	215
1	Converter M-222	4F222	6-1/2 x 6-1/2 x 7-7/8	11

REFERENCE DATA AND LITERATURE:

TM 11-336

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	16.27	415.0

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

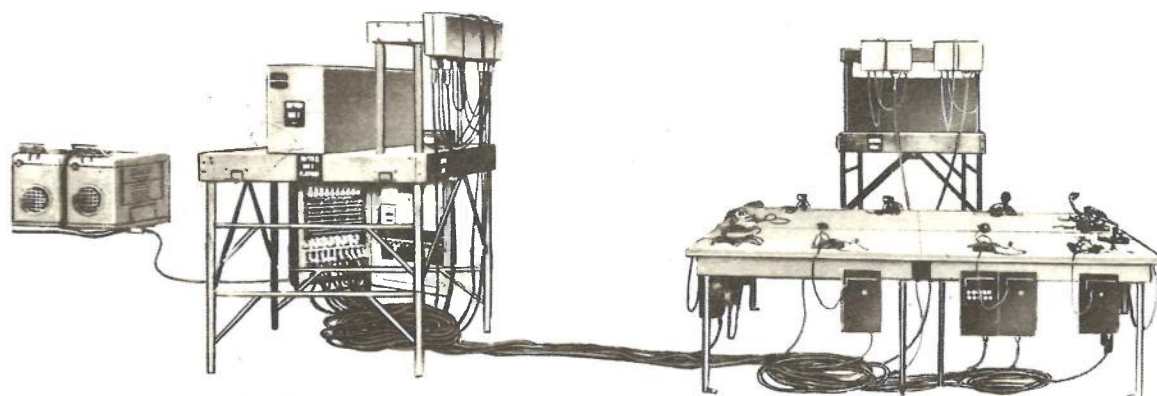
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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OPERATIONS CENTER AN/TTQ-2

1 July 1958

Cognizant Serv: USA FSN: 5895-171-2682

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C5990-2	--	--



AN/TTQ-2

FUNCTIONAL DESCRIPTION:

Operations Center AN/TTQ-2 is a complete, transportable assemblage of items that can be rapidly erected to serve as an antiaircraft operations room, an aircraft warning center or similar control center. It is designed to be used as the headquarters of an antiaircraft control system.

This equipment consists essentially of telephone, line switching, lighting, and plotting equipment and includes items of furniture, a power supply, control components, and supplies.

Communication between this center and other military

units or installations is maintained by radio and telephone facilities. Internal operational and administrative communication is conducted by means of an intercommunication system. Switchboard BD-95 is used to connect to incoming wire facilities and to switch internal telephones serving the center.

TECHNICAL CHARACTERISTICS:

Type Communication Circuits: Conventional wire and radio circuits

Controls: Eight radio channel control circuits

Power Requirements: 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(USA)				
14	Line Unit TA-10/TTQ	1C5577-10	4-1/2 x 5/8 x 9	
2	Power Unit PE-197	3H4600-197	44 x 31 x 22	790
1	Relay Unit RE-24()/TTQ-1	2Z7670-24	48 x 24 x 12	220
1	Telephone Power Unit SB-26/TTQ	3H5460-36	48 x 24 x 12	298
20	Telephone Unit TA-9/TTQ	4B7030-9	9 x 7-5/8 x 4-1/2	

MIL-HDBK-161

AN/TTQ-2 OPERATIONS CENTER

REFERENCE DATA AND LITERATURE:

TM 11-448

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	318.5	7,836

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3170

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	10302-P-50-7	

RADIO INTERCEPT CONTROL SET AN/TTQ-3

1 July 1958

Cognizant Serv: USA FSN: 5825-333-9687

USA

USN

USAF

TYPE CLASS:

Std

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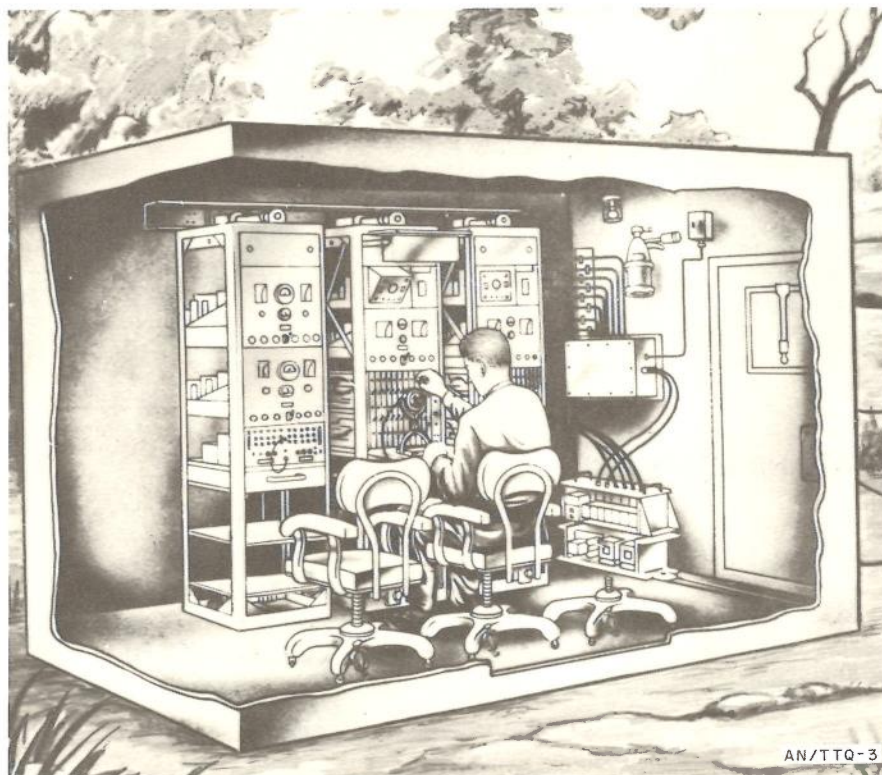
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STOCK NO:

2S5360-3

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AN/TTQ-3

FUNCTIONAL DESCRIPTION:

Radio Intercept Control Set AN/TTQ-3 provides facilities for the supervision and control of a number of such equipment as Radio Intercept Group OA-596/TTQ-3. In a complete radio intercept system, the AN/TTQ-3 can supervise and control eight such groups.

Operating in such a system, it provides monitoring of radio signals intercepted by the operating positions located at the remote groups; local monitoring of intercepted radio signals; wire communication with all operating positions; establishment of conference calls between all intercept operator positions that are connected through one control position; and coordination of direction-finding operations.

The components of this set are grouped into three operating positions. Two identical control operator positions provide communication and monitoring facilities for supervisory personnel. The third position provides similar facilities for the coordination of direction-finding operations. Wiring within the AN/TTQ-3 is such that each control operator position controls and supervises half the remote groups; the df tracker position can receive signals from all intercept operator positions.

TECHNICAL CHARACTERISTICS:

Power Requirements: 1,500 w, 115-v, 55-65-cycle ac

MIL-HDBK-161

AN/TTQ-3 RADIO INTERCEPT CONTROL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control, Power Supply Group OA-323/G	(USA) 3H1099-323	-----	128
2	Frequency Meter Set SCR- 211-A	(USA) 2C1411A	-----	-----
1	Generator Set PU-236/G	(FSN) 6130-245-9673	-----	-----
1	Holder, Antenna Coupler MT- 1032/GR	-----	24-1/2 x 10 x 17-1/2	19
1	Interconnecting Box	(USA) 2Z3105-40	-----	-----
2	Rectifier Power Unit RA-133-B	(FSN) 6130-245-9673	-----	-----
1	Shelter S-44/G	(FSN) 5410-356-2484	136 x 71 x 74	2,127
1	Switchboard, Direction Finder Control SB-214/TTQ-3	(USA) 4C9905-214	20-1/4 x 23-1/4 x 71-1/2	145
2	Switchboard, Radio Intercept Control SB-213/TTQ-3	-----	20-1/4 x 23-1/4 x 71-1/2	1,166
2	Test Set, Telephone TS-725/ TTQ-3	-----	-----	46

REFERENCE DATA AND LITERATURE:

TM 11-5067

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	445.8	6,000

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-I-10768

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Emerson Radio & Phonograph Corp.	Jersey City, N. J.	14195-51-93	-----

FREQUENCY SHIFT CONVERTER AN/TXA-type

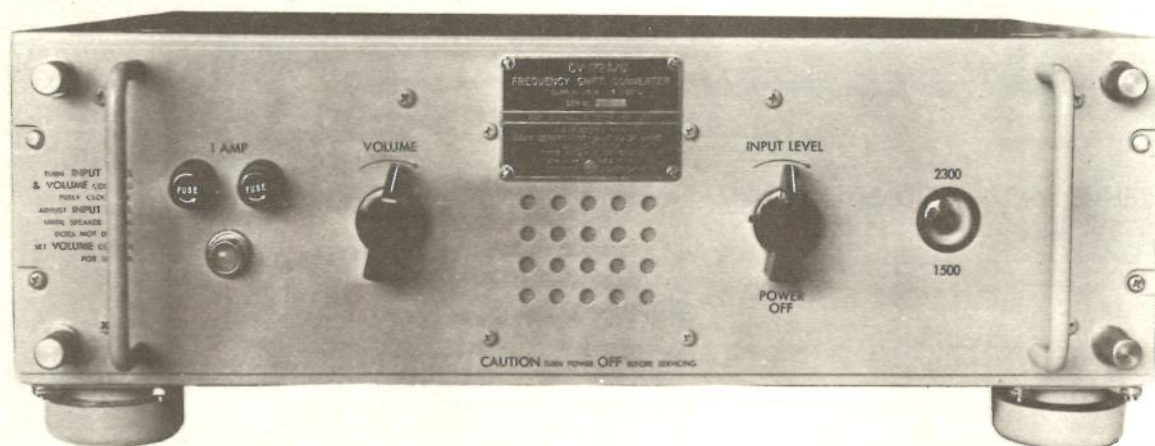
26 November 1958

Cognizant Serv: USN

FSN: CV-172/U: F5815-665-1995
 CV-172A/U: 5815-096-6992 (USA)
 F5815-665-1991 (USN)

CV-172/U, -172A/U

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Ltd-Std
STOCK NO:	CV-172A/U: 2C722A-172	--	--



CV-172A/U

FUNCTIONAL DESCRIPTION:

Frequency Shift Converters CV-172/U and CV-172A/U convert 1,500- and 2,300-cps audio-frequency-shift facsimile signals to amplitude-modulated signals for a facsimile recorder. Provisions are made for audible monitoring of the incoming signal and for visual checking of frequency limits.

The input signal is fed through an amplifier to a limiter and then through a frequency discriminator. A loudspeaker is connected to the output of the amplifier and has a separate volume control. The output of the limiter is also fed to two tuned circuits, resonated at 1,500 and 2,300 cycles per second respectively, to operate the tuning eye.

Frequency Shift Converters CV-172/U and CV-172A/U are used as part of terminal equipment at the receiving end of a radio facsimile circuit of the audio-frequency-shift or radio-frequency-shift type. The signal from the radio receiver with either system is an audio-frequency-shifted signal in which 1,500 cps represents maximum signal (black) and 2,300 cycles per second represents minimum signal output (white) from the facsimile transmitter at the sending terminal. The ampli-

tude of the signal to the converter may vary as much as 50 decibels due to transmission effects of the radio circuit.

These converters are used primarily with Facsimile Recorder RD-92/UX, and may be installed in shore or shipboard stations.

The CV-172/U and CV-172A/U are electrically and mechanically interchangeable but the CV-172A/U is an improved design.

TECHNICAL CHARACTERISTICS:

Frequency Range: 1,500 to 2,300 cps, frequency swing ± 400 cps

Input Data:

Impedance: 500 ohms, balanced

Facsimile Signal: 1,500 to 2,300 cps, frequency shift

Level: 0 to -40 dbm

Output Data:

Impedance: 500 ohms, balanced

Facsimile Signal: 1,500 cps at .25-v ac; 2,300 cps at 0.01-v ac

Power Requirements: 30 w 100-130-v 50-60-cycle ac

MIL-HDBK-161

AN/TXA-type FREQUENCY SHIFT CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Frequency Shift Converter CV-172/U	-----	5-5/8 x 16-1/2 x 19-3/16	
	or			
1	Frequency Shift Converter CV-172A/U	2C722A-172	6-3/4 x 16-1/2 x 19-1/8	56
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91394
TM 11-5105

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec: SHIPS-F-264; Dwg: 45C-00-00-00

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	<i>For CV-172/U</i> NObsr-52041, 10 Sep- tember 1951 <i>For CV-172A/U</i> NObsr-71329, 25 May 1956	\$590.00 with spares \$630.00 with spares

ADAPTER KEYER **AN/TXA-type**

25 November 1958

Cognizant Serv: USN

FSN: KY-44/FX: F5815-372-3043
 KY-44A/FX: F5820-642-8023
 KY-44B/FX: 5815-642-7470
 KY-44C/FX: F6625-643-2883

KY-44/FX, -44A/FX,
 -44B/FX, -44C/FX

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Std
STOCK NO:	<i>KY-44B/FX: 2C640-44B</i>	--	--



KY-44A/FX

FUNCTIONAL DESCRIPTION:

Adapter Keyers KY-44/FX, KY-44A/FX, KY-44B/FX, and KY-44C/FX are primarily used to convert facsimile signals to direct current. They simplify and rectify amplitude-modulated facsimile signals to provide a variable direct current voltage for the control of frequency-shift exciter units in radio transmitting equipment. They can also be used as unfiltered detectors of amplitude-modulated filters or as line amplifiers.

Meters are provided to monitor the input and output signals. Controls are available for adjusting the output level and for selecting the type of output signal.

The KY-44/FX, KY-44A/FX, KY-44B/FX, and KY-44C/FX are interchangeable with each other and are similar except for changes in design and component parts. They may be installed at shore or shipboard stations.

These equipments are used in conjunction with Keyers

KY-30/GRT, KY-58/GRT, KY-75/SRT; Frequency Shift Keyer Equipment FSA; Radio Transmitting Set AN/URT-2, AN/URT-3, AN/URT-4; and similar types of frequency-shift keyers.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 7,000 cps

Type Modulation: AM

Type Signal:

Input: Facsimile

Output: Keying signals, dc; detected signals, unfiltered; amplified signals

Signal Level:

Input: -20 to +6 dbm

Output: Linear within $\pm 5\%$ to 20 v dc or ac

Impedance: 600 ohms, balanced or unbalanced

Mounting Data: Table or 19-inch relay rack

Power Requirements: 40 w, 115- or 230-v 60-cycle 1-phase ac

MIL-HDBK-161

AN/TXA-type ADAPTER KEYER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer Adapter KY-44/FX, KY-44A/FX, KY-44B/FX, or KY-44C/FX	-----	6-1/2 x 15 x 19 3/4	40
1 set	Power cable Spare parts	-----	6-1/2 x 10-1/2 x 19-1/2	31

REFERENCE DATA AND LITERATURE:

For KY-44A/FX: NAVSHIPS 91441

For KY-44B/FX: NAVSHIPS 91877

For KY-44C/FX: NAVSHIPS 91627

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	3.801	111

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: For KY-44B/FX: NE-634-2810, NE-PO8-002

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For KY-44/FX Times Facsimile Corp.	New York, N. Y.	NObsr-43340, 15 March 1950	
For KY-44A/FX Times Facsimile Corp.	New York, N. Y.	NObsr-52102, 27 November 1950	\$436.00 with spares
For KY-44B/FX Northeastern Engineering, Inc.	Manchester, N. H.	NObsr-52137, 15 December 1950 NObsr-49167, 31 May 1950	\$279.00 with spares
For KY-44C/FX Times Facsimile Corp.	New York, N. Y.	NObsr-43340, 15 March 1950	

RADIO MODULATOR **AN/TXA-type**

4 December 1958

Cognizant Serv: USN FSN: 5815-219-9671

MD-168/UX

USA

USN

USAF

TYPE CLASS: Std Used by --
 STOCK NO: 2C2537-168 F16-M-44293-9801 --

**FUNCTIONAL DESCRIPTION:**

Radio Modulator MD-168/UX is a subcarrier frequency-shift unit for facsimile operation primarily with ultra-high and very-high-frequency transmission. It converts amplitude modulated facsimile signals to audio-frequency shift signals of 1,500 to 2,300 cycles per second and constant amplitude, which in turn are used to amplitude modulate a voice radio transmitter.

This equipment can be used with any facsimile transmitter having an output within the range of 1.5 to 10 kilocycles, and keying speeds up to 900 cycles per second.

Provision is made for audio monitoring and for visual indication of the correct shift frequencies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 10

Type of Modulation: FM

Type of Signal: Pulse (facsimile)

Input and Output Impedances: 500 ohms (balanced)

Power Output: 0 dbm to +10 dbm across 600-ohm load

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

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Modulator MD-168/UX	(USA) 2C2537-168 (USN) F16-M-42293-9801 (FSN) 5815-219-9671	5-5/8 x 14-3/4 x 19-1/8	56
(Equipment consists of only one major component.)				

MIL-HDBK-161

AN/TXA-type RADIO MODULATOR

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91629

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	2	139

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr-52604	

FACSIMILE SET AN/TXC-1()

1 July 1958

Cognizant Serv: USA FSN: 5815-356-3753

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	6C25-TXC1	--	--

FUNCTIONAL DESCRIPTION:

Facsimile Set AN/TXC-1(), is a transmitting and receiving equipment for communication of graphic material, such as documents, photographs, drawings, and charts, over conventional communication channels.

This equipment consists essentially of a rotating drum, an optical system, and related control mechanisms that can be synchronized with compatible transmitting or receiving facsimile sets operating on the same connecting facility.

This set can be used in wire lines by coupling directly to such facilities through input and output terminals provided on the equipment, or through a coil magnetically coupled to the receiver of a handset, or inductively to certain types of wire lines. It can also be used on radio circuits by using Converter CV-2()/TX to convert to subcarrier frequencies, and by means of one model of this converter (CV-2C/TX) in conjunction with Exciter Unit 0-5/FR to operate in frequency shift transmission.

TECHNICAL CHARACTERISTICS:

Page Size: 12 x 18-1/4 inches

Transmission Time: 20 minutes; 40 minutes at half speed

Scanning Lines Per Inch: 96

Keying Frequency: 900 cps

Carrier Frequency: 1,800 cps

Signal Band Required: 900 to 2,700 cps

Diametral Index of Cooperation: 576

Speed of Drum Rotation: 60 rpm; 30 rpm also available in AN/TXC-1D, -1E, and -1F

Power Requirements: 250 w, 100-130-v 50-65-cycle ac



AN/TXC-1

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Transceiver TT-1/ TXC-1	(USA) 6C310-1	10-3/4 x 17-5/8 x 34-5/8	85
1	Photographic Equipment PH- 549/TXC-1	-----	-----	83
1	Rectifier Power Unit PP-86/TXC-1	(FSN) 6130-225-0171	9 x 10 x 12	48
1	Table MT-252/TXC-1	(FSN) 5815-244-4359	32 x 22 x 37	86

MIL-HDBK-161

AN/TXC-1() FACSIMILE SET

REFERENCE DATA AND LITERATURE:

TM 11-489
TM 11-2258

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	39	783

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3107

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Espey Manufacturing Co., Inc.	New York, N. Y.	14644-P-49-2	\$3,565.00
Time Telephoto Equipment, Inc.	New York, N. Y.	6437-P-51-01	2,031.00

TRANSCIVER AN/TXC-type

5 December 1958

Cognizant Serv: USA FSN:

CNP

USA

USN

USAF

TYPE CLASS: Obs
STOCK NO: 6C305.1

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Acme Transceiver Model CNP (Facsimile Equipment TT-29/FX) is a facsimile equipment which is designed to transmit or receive photographs, printed material, drawings, etc., by means of electrical communication. The set contains a 100-rpm revolving drum designed to receive or transmit between machines of the same type, or between other equipments that employ an index of cooperation of 290.6.

It is designed to communicate by means of 1,500 to 2,500 cycles per second amplitude-modulated facsimile signals. Special accessory equipment is required to translate this amplitude-modulated signal to narrow band frequency modulated signals for transmission by radio; the reverse is necessary for reception of signals at the receiver.

Frequency-modulated transmission can also be obtained by using the direct current component of the modulation envelope, to swing the radio frequency carrier. Suitable means for detecting this swing are provided by the receiver.

TECHNICAL CHARACTERISTICS:*Carrier Frequency:* 1,920 cps*Copy Size:* 7 by 9 in. maximum*Drum Speed:* 100 rpm*Scanning Data:*

Lines: 100 per in.

Lateral Rate: 1 in. per minute

Transmission Speed: 7 minutes for 7 by 9 in. copy*Power Requirements:* 265 w, 2.3 amp nominal, 100 to 125 v, 60-cycle 1-phase ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Acme Tranceiver Model CNP	6C305.1	17-1/4 x 17-1/2 x 18	

REFERENCE DATA AND LITERATURE:**SHIPPING DATA**

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/TXC-type TRANSCEIVER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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Acme Newspictures, Inc.

Cleveland, Ohio

CONVERTER **AN/TXC-type**

1 July 1958

Cognizant Serv: USA FSN: CV-2/TX: 5815-243-4494
CV-2A/TX: 5815-498-8152

CV-2/TX, -2A/TX, -2B/TX

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	CV-2/TX: 6C24-2	--	--
	CV-2A/TX: 6C24-2A		
	CV-2B/TX: 6C24-2B		

(See Illustration of CV-2C/TX)

Note—Converters CV-2/TX, CV-2A/TX, and CV-2B/TX are similar in appearance to Converter CV-2C/TX, except that the positions of the front-panel controls were rearranged on the CV-2C/TX; also, an additional jack and an additional switch appear on the front panel of the CV-2C/TX.

FUNCTIONAL DESCRIPTION:

Converters CV-2/TX, CV-2A/TX, and CV-2B/TX are used with facsimile equipments to translate their normal am signal output into fm facsimile signals for use over radio systems, or to reconvert received FM signals into am signals to operate the facsimile receiver. These sets produce only one type of FM signal, ranging from 1,800 to 3,000 cps. They have no provisions for take-off of dc signals for operation of fsk radio transmitters.

TECHNICAL CHARACTERISTICS:

Type of Signal: FM to AM; AM to FM*Signal Frequency:*

AM: 1,800 cps

FM: 1,800 to 3,000 cps

Power Requirements: 100-130-v 54-65-cycle 1-phase ac; or 5.6-6.3-v dc (unlettered model only)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Converter CV-2/TX	5815-243-4494	9-1/2 x 11-9/16 x 13-5/8	35
	or			
	Converter CV-2A/TX	5815-498-8152	9-3/8 x 12-9/16 x 9-1/4	
	or			
	Converter CV-2B/TX			
	(Equipment consists of only one major operating component.)			

REFERENCE DATA AND LITERATURE:

TM 11-489, TM 11-2252

MIL-HDBK-161

AN/TXC-type CONVERTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.7	55

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3055; MIL-C-13928

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Rudolph Wurlitzer Co.	Tonawanda, N. Y.	6516-P-51-10	\$599.51

CONVERTER AN/TXC-type

1 July 1958
 Cognizant Serv: USA FSN: 5815-503-2598 CV-2C/TX
 USA USN USAF

TYPE CLASS: Std --
 STOCK NO: 6C24-2C --



CV-2C/TX

FUNCTIONAL DESCRIPTION:

Converter CV-2C/TX is similar to the earlier models, except that provisions have been included for a dc signal signal output, and a choice of FM signal frequencies is available.

TECHNICAL CHARACTERISTICS:

Type of Signal: FM to AM; AM to FM
 Signal Frequency:
 AM: 1,800 cps
 FM: 1,800 to 3,000 cps or 1,500 to 2,300 cps
 Power Requirements: 100-130-v 54-65-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Converter CV-2C/TX (Equipment consists of only one major component.)	5815-503-2598	9-1/2 x 11-9/16 x 13-5/8	35

MIL-HDBK-161

AN/TXC-type CONVERTER

REFERENCE DATA AND LITERATURE:

TM 11-489, TM 11-2252A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.7	55

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG: (USA)71-3055, MIL-C-13928

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wilcox-Gay Corp.	Charlotte, Mich.	2116-P-54-53	\$638.44

FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT **AN/TXC-type**

5 December 1958

Cognizant Serv: USN FSN:

FOA

USA

USN

USAF

TYPE CLASS: --

Used by

--

STOCK NO: --

--

--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Facsimile Transmitter-Receiver Equipment FOA is designed for transmission and reception of pictures to and from remote points. As a transmitter, it generates signals which may be carried by the telephone wires or by radio waves; as a receiver, it is capable of recording the signals on film for negative operation or on photographic paper for positive operation.

When negative reception is employed, the exposed film is handled like any other photographic negative from which any number of prints in any size may be made by projection

printing; or any number of prints of the same size may be made by contact printing.

The FOA is capable of receiving or transmitting 100 lines per inch. It is similar to Facsimile Transmitter-Receiver Equipment FOC except that the FOC receives or transmits 300 lines per inch.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cps: 1,500 to 2,500

Paper Accommodated: 7 in. by 9 in. sheet

Power Requirements: 110- or 220-v 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transceiver Unit FOA consists of:	-----	17-1/4 x 17-1/2 x 18	160
1	Bed plate	-----	5 x 16-3/8	
1	Front panel	-----	10-3/4 x 17	
1	Lamp supply drawer	-----	5 x 11 x 15-3/4	
1	Multivibrator drawer	-----	4 x 11 x 15-3/4	
1	Optical unit	-----	3-1/2 x 4-1/2 x 4-3/4	
1	Picture amplifier drawer	-----	3-1/8 x 11 x 15-3/4	
1	Power supply drawer	-----		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95004

NAVSHIPS 95005

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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MIL-HDBK-161

AN/TXC-type FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT

PROCUREMENT DATA

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	

FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT **AN/TXC-type**

5 December 1958

Cognizant Serv: USN FSN:

FOC

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Facsimile Transmitter-Receiver Equipment FOC is designed for transmission and reception of pictures to and from remote points. As a transmitter, it generates signals which may be carried by the telephone wires or by radio waves; as a receiver, it is capable of recording the signals on film for negative operation, or on photographic paper for positive operation.

When negative reception is employed, the exposed film is handled like any other photographic negative from which any size or number of prints may be made by projection printing,

any number of prints of the same size may be made by contact printing.

The FOC is capable of receiving or transmitting 300 lines per inch. It is similar to Facsimile Transmitter-Receiver Equipment FOA except that the FOA receives or transmits 100 lines per inch.

TECHNICAL CHARACTERISTICS:*Frequency Range in Cps:* 1,500 to 2,500*Paper Accommodated:* 7 in. by 9 in. sheet*Power Requirements:* 110- or 220-v, 50- to 60-cycle 1-phase ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transceiver Unit FOC consists of:	-----	17-1/4 x 17-1/2 x 18	160
1	Bedplate	-----	5 x 16-3/8	
1	Front panel	-----	10-3/4 x 17	
1	Lamp supply drawer	-----	5 x 11 x 15-3/4	
1	Multivibrator drawer	-----	4 x 11 x 15-3/4	
1	Optical unit	-----	3-1/2 x 4-1/2 x 4-3/4	
1	Picture amplifier drawer	-----	3-1/8 x 11 x 15-3/4	
1	Power supply drawer	-----		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95004

NAVSHIPS 95005

SHIPPING DATA

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

MIL-HDBK-161

AN/TXC-type FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT

PROCUREMENT DATA

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	

FACSIMILE TRANSCEIVER **AN/TXC-type**

26 November 1958

Cognizant Serv: USA

FSN:

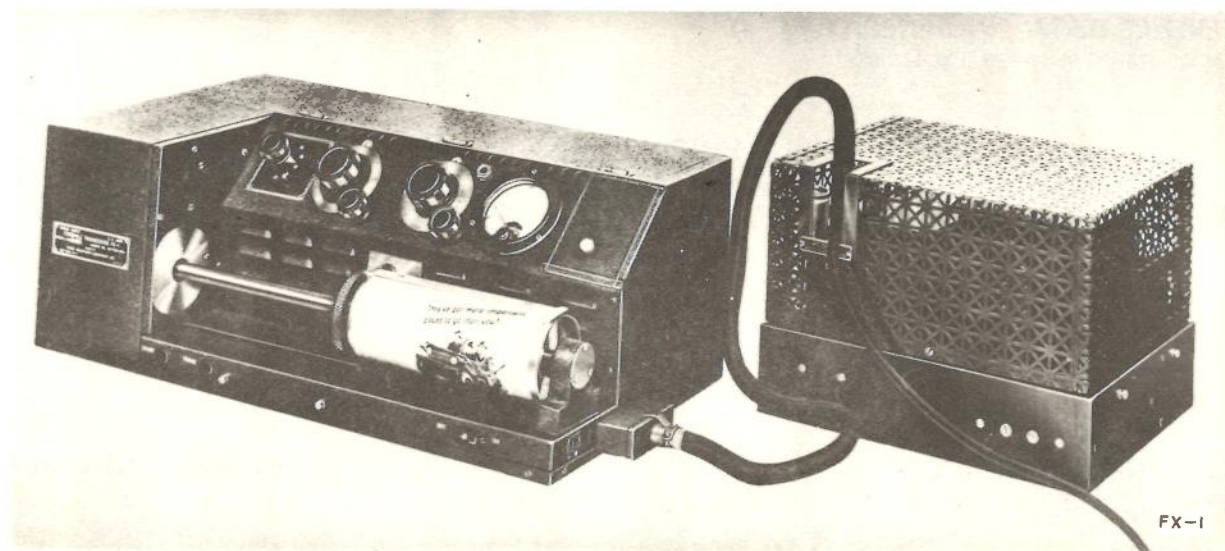
FX-1: 5815-501-3794

FX-1A: 5815-665-3140

FX-1B: 5815-665-1092

FX-1, -1A, -1B

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

**FUNCTIONAL DESCRIPTION:**

Facsimile Transceivers FX-1, FX-1A, and FX-1B are the basic operating components in corresponding Facsimile equipments RC-120, RC-120-A, and RC-120-B. With their power supplies and accessories, they provide for the transmission and reception of printed, written, drawn, or photographic copy over regular voice communication channels (radio or wire). Copy 7 by 7-3/8 inches can be transmitted in 7 minutes. The copy can be recorded on material requiring no further processing or on material that must be photographically processed.

Facsimile Transceivers FX-1, FX-1A, and FX-1B become Facsimile Equipment RC-120-() with addition of the following equipment: one Power Supply PE-140, PE-140-A,

PE-140-B, or PE-150; one Photographic Equipment PH-411; one Chest CH-117; one Chest CH-116; one Bag BG-124

TECHNICAL CHARACTERISTICS:

Keying Frequency: 900 cps

Carrier Frequency: 1,800 cps

Signal Band Required: 900 to 2,700 cps

Page Size: 7 x 8-5/8 inches

Transmission Time: 7.5 minutes

Scanning Lines per Inch: 96

Allowable Delay Distortion: ± 278 microseconds

Diametral Index of Cooperation: 264

Speed of Drum Rotation: 90 strokes per minute

Power Requirements: 250 w, 100-130-v 50-60-cycle 1-phase ac;
or 25 amp at 6-v dc

MIL-HDBK-161

AN/TXC-type FACSIMILE TRANSCEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Transceiver FX-1, FX-1A, or FX-1B (Equipment consists of only one major component.)	-----	10 x 12 x 22	60

REFERENCE DATA AND LITERATURE:

TM 11-375B, TM 11-489, TM 11-4038

SHIPPING DATA

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

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 71-1679

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Telephoto Equipment, Inc.	New York, N. Y.	NObsr-42035, 5 April 1944	\$3,250.00 with spares

FACSIMILE EQUIPMENT **AN/TXC-type**

1 July 1958

Cognizant Serv: USA FSN: 5815-164-7106

RC-120-()

USA

USN

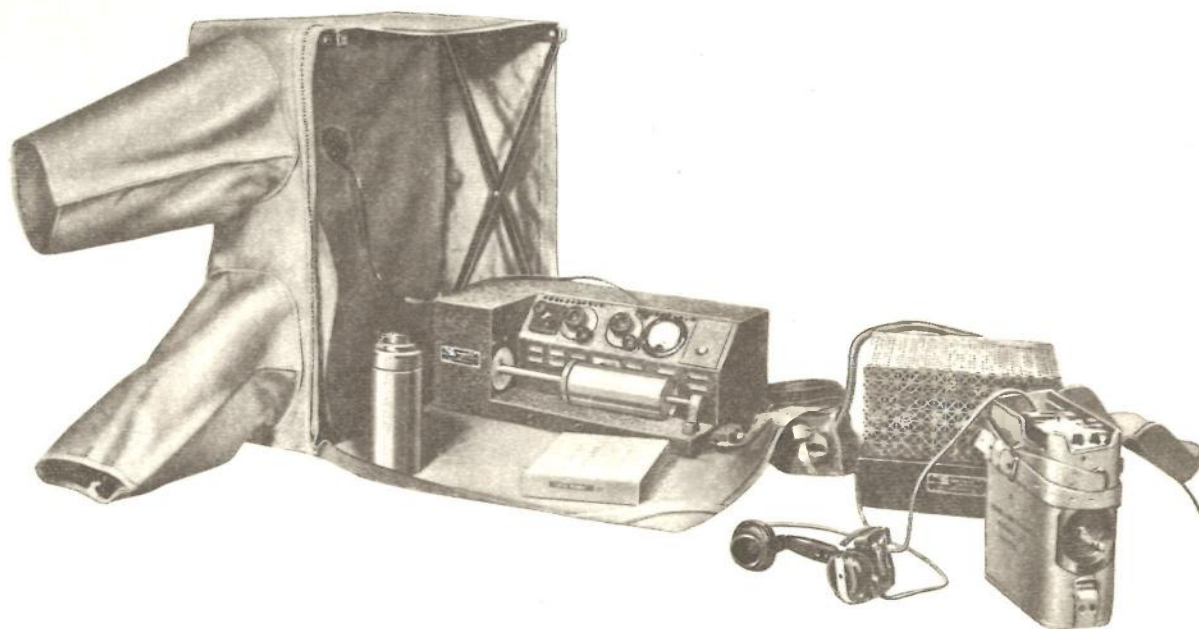
USAF

TYPE CLASS:

Std

STOCK NO:

6C25-120



RC-120

FUNCTIONAL DESCRIPTION:

Facsimile Equipment RC-120-() is a transmitting and receiving set used for communicating graphic copy. It will receive positive and negative photographs, printed or written copy, and similar material on film or direct on special papers. It is used in fixed or field stations.

This equipment consists of a receiver-transmitter unit, power supply, and associated accessories. A portable darkroom tent is included for field use.

TECHNICAL CHARACTERISTICS:

Maximum Page Size: 7 x 8-5/8 inches

Transmission Time: 7 minutes

Drum Speed: 90 rpm

Diametral Index of Cooperation: 264

Scanning Lines Per Inch: 96

Carrier Frequency: 1,800 cps

Power Requirements: 100-130-v 50-65-cycle ac

MIL-HDBK-161

AN/TXC-type FACSIMILE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Bag BG-140			
1	Facsimile Transceiver FX-1-()	-----	22 x 12 x 10	60
1	Photographic Equipment PH-411			
1	Power Supply PE-140-()	-----	10 x 12 x 12	50
1	Power Supply PE-150 (Sup- plied only with unlettered models)	-----	8-3/4 x 11 x 14	60

REFERENCE DATA AND LITERATURE:

TM 11-375B

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
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FACSIMILE TRANSCEIVER AN/TXC-type

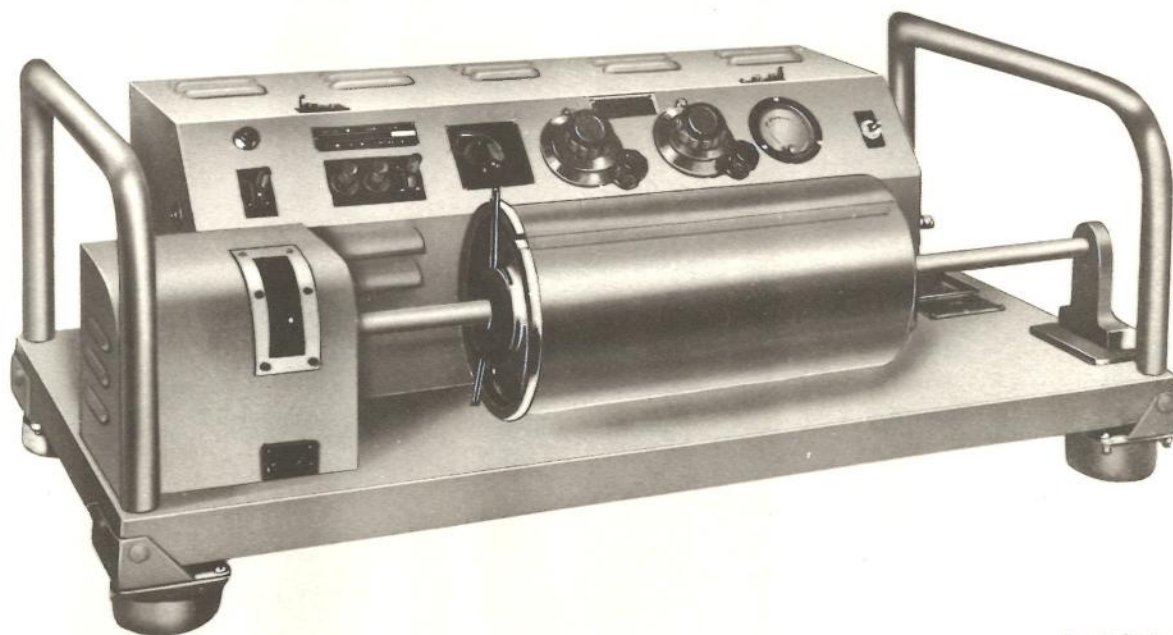
22 October 1958

Cognizant Serv: USN

FSN: TT-41/TXC-1B, 5815-669-9903
 TT-41A/TXC-1B, 5815-642-8047
 TT-41B/TXC-1B, 5815-642-8046

TT-41/TXC-1B,
 TT-41A/TXC-1B,
 TT-41B/TXC-1B

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Std
STOCK NO:	--	TT-40/TXC-1B: F16-F-12564-8221 TT-41A/TXC-1B: F16-F-12564-8223 TT-41B/TXC-1B: F16-F-12564-8243	--



TT-41B/TXC-1B

FUNCTIONAL DESCRIPTION:

Facsimile Transceivers TT-41/TXC-1B, TT-41A/TXC-1B, and TT-41B/TXC-1B are electromechanical-optical facsimile equipments of the revolving drum type. They are used for the transmission and reception of page copy in the form of photographs, sketches, or text between fixed stations over point-to-point voice communication channels, either wire or radio. They may be used in either ship or shore installations.

Received copy is recorded either directly on chemically treated paper or photographically in either positive or negative form. The transceivers can transmit or receive a 12- by 18-

inch page of copy in 20 minutes at regular speed. The TT-41A/TXC-1B and TT-41B/TXC-1B are capable of operating at half-speed. For interoperation, the same speed must be used for both transmitting and receiving.

Functionally, these equipments are interchangeable. The TT-41A/TXC-1B uses a vacuum tube in the first signal amplifier to eliminate the necessity of tube selection; in addition, it has a potentiometer to eliminate hum pattern. The TT-41B/TXC-1B has its power supply designed to eliminate radio interference.

When operated over wire lines, the facsimile transceivers can be connected directly to the line by any one of several

AN/TXC-type FACSIMILE TRANSCEIVER

input and output terminals of various impedances and levels. They can also be connected to the line by a coupling coil, either through the receiver of a conventional telephone headset or to certain types of lines that have no ringing or signaling circuits. When used on radio communication circuits for sub-carrier amplitude modulation, subcarrier frequency modulation, or frequency-shift modulation, additional equipment is required to connect the transceiver to the radio transmitter and receiver. Typical equipment includes Radio Modulator MD-168/UX, Frequency Shift Converter CV-172/U, Keyer Adapter KY-44/FX, and Frequency Shift Keyer KY-58/GRT or KY-75/SRT. For photographic reception, photographic supplies and darkroom facilities must be available.

Facsimile Transceivers TT-41/TXC-1B through TT-41B/TXC-1B will work in a system with Facsimile Transceivers TT-1/TXC-1 through TT-1F/TXC-1 (part of Facsimile Sets AN/TXC-1 through AN/TXC-1F). Except for the color of the finish, these transceivers are identical. The TT-41/TXC-1B, however, cannot be operated with the TT-1D/TXC-1, TT-1E/TXC-1, or TT-1F/TXC-1 at other than full-speed operation.

TECHNICAL CHARACTERISTICS:

Maximum Copy Size: 12 by 18-11/16 inches

Size of Scanning Spot: 0.01 by 0.01 inch

Drum Size:

Diameter: 6 inches

Length: 12 inches

Speed of Drum:

Rotation: 60 rpm, with option of 30 rpm in TT-41A/TXC-1B and TT-41B/TXC-1B

Lateral Movement: 12-1/2 inch in 20 minutes, with option of 12-1/2 inches in 40 minutes in TT-41A/TXC-1B and TT-41B/TXC-1B

Drum Speed Control: 1,800 cps fork oscillator

Scan: 96 lines per inch

Audio Carrier Frequency: 1,800 cps

Frequency Control: Tuning fork

Frequency Band Limits: 900 to 2,700 cps

Signal Levels:

Reception Input: -45 to 0 dmb

Transmission Output: 0 and/or +26 dbm

Power Requirements: 250 w, 100- to 130-v 50- to 60-cycle ac

Power Supply Equipment: PP-86D/TXC-1 (TT-41B/TXC-1B)

Unregulated Plate Supply: 270 ma at 450-v dc

Filament Supply: 6.25 and 1.75 amp at 6.3-v 60-cycle ac

Start Motor Supply: 2 amp at 115-v 60-cycle ac

Exciter Lamp Supply: 2.74 amp at 6-v (regulated ± 1 -v), 1,800-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Transceiver TT-41/TXC-1B	-----	22-1/2 x 35 x 18-1/2	85
	or			
	TT-41A/TXC-1B	-----		
	or			
	TT-41B/TXC-1B	-----	12-1/4 x 34-5/8 x 17-13/16	70
	including:			
1	Cord TFC-34-37-00-00	-----	10-1/2 ft lg	
1	Cord TFC-34-37-01-00	-----	10-1/2 ft lg	
1 set	Equipment spares	-----	30 x 15 x 9	80
1	Magnifying lens	-----	1/8 dia x 49/64	
1	Rectifier Power unit	-----	10-5/16 x 12 x 8	30
1	Spring Scale, TFC-34-44-00-00	-----	5-7/8 x 1 x 21/32	
1	Test Lead, TFC-34-37-03-00	-----	8-1/2 lg	
1	Test Lead, TFC-90-37-02-00	-----	6 ft lg	
10 pkg	Timefax ND	-----		7.5
1	Tube Puller, TFC-90-00-90-00	-----	7-1/4 x 1-1/16 x 3/16	

FACSIMILE TRANSCEIVER **AN/TXC-type****REFERENCE DATA AND LITERATURE:**

For TT-41/TXC-1B: NAVSHIPS 90168
 (TM 11-2258)
 (TM 11-489)
 For TT-41B/TXC-1B: NAVSHIPS 91068A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT-41/TXC-1B: 4	14.9	483
For TT-41B/TXC-1B 4	19.2	458

PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr-42445 (TT-41/TXC-1B) NObsr-52042 (TT- 41B/TXC-1B), 6 October 1950	

FACSIMILE RECORDER **AN/TXR-type**

20 November 1958

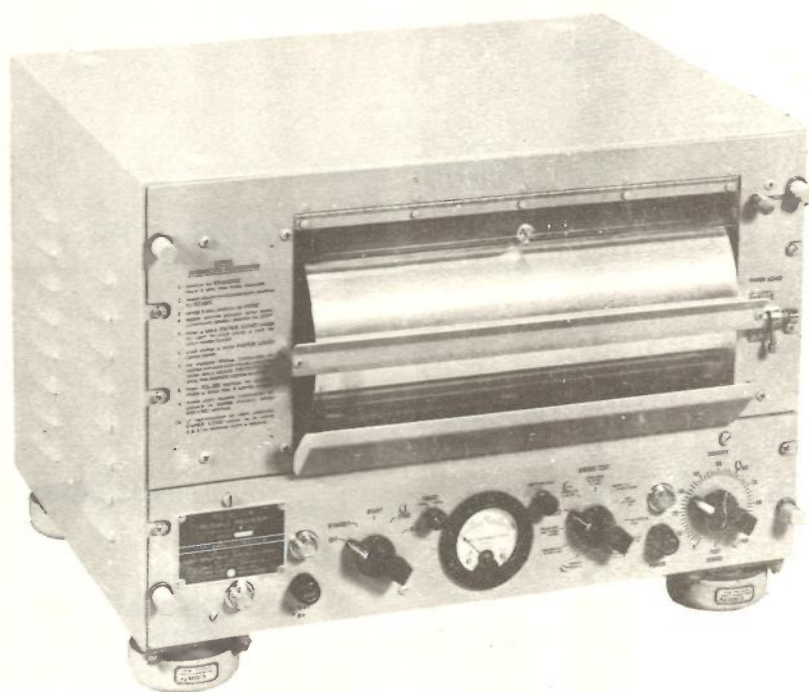
Cognizant Serv: USN FSN:

RD-92/UX

USA

USN

USAF

TYPE CLASS:
STOCK NO:Std
6C262-92Used by
F16-R-40501-1008--
--

RD-92/UX

FUNCTIONAL DESCRIPTION:

Facsimile Recorder RD-92/UX is designed to make direct capable recordings of copy transmitted by Facsimile Set AN/TXC-1. It is capable of recording facsimile signals either from wire or radio communication circuits. When used with wire lines, it can be connected directly to the line; when used without wire lines, it can be connected directly to an am. radio receiver having a 500-ohm output, provided that the signals are amplitude modulated. For subcarrier FM signals, Frequency Shift Converter CV-172/U or Converter CV-2C/TX is used in addition to the radio receiver.

TECHNICAL CHARACTERISTICS:

Type: Rotating drum
Input Frequency: 500 to 10,000 cps

Signal Level: 0 to -40 dbm

Size of Copy: 12 x 18-3/4 inches

Transmission Time: 20 min

Type Modulation: AM

Type Recording: Direct stylus

Lines per Inch: 96

Drum Speed: 60 rpm

Drum Diameter: 6 inches

Phasing Signal: Pulses, 1 per sec

Input Impedance: 1,600 ohms

Index of Cooperation: 576 (International Index)

Mounting: Self-contained unit for either table or bench mounting

Power Requirements: 150 w, 90-130-v 55-65-cycle 1-phase ac

MIL-HDBK-161

AN/TXR-type FACSIMILE RECORDER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Recorder RD-92/UX	(USA) 6C262-92 (USN) F16-R-40501-1008	14-1/2 x 20 x 16-1/2	71
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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PROCUREMENT DATA

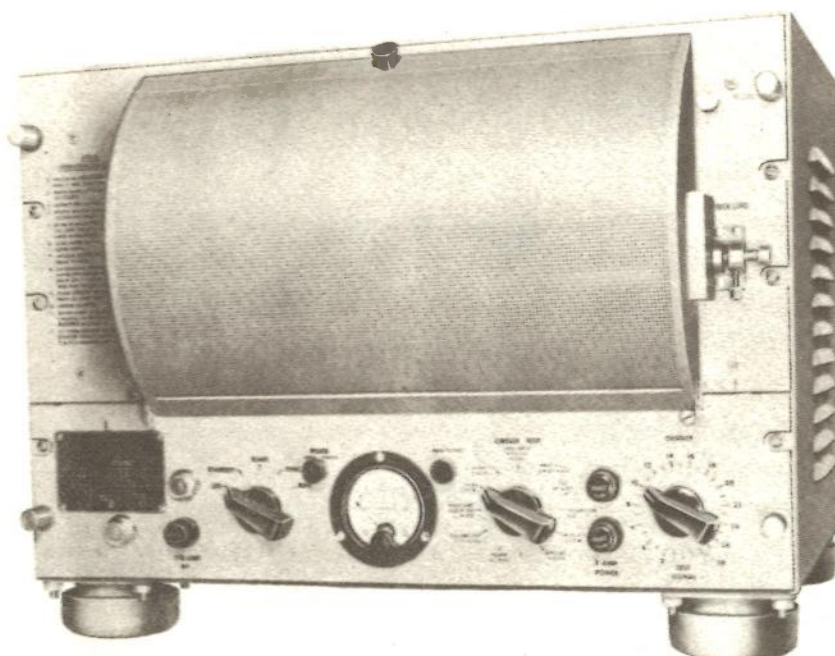
PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.		

FACSIMILE RECORDER **AN/TXR-type**

20 November 1958

Cognizant Serv: **USN** FSN: 5815-665-3146**RD-92A/UX****USA****USN****USAF**TYPE CLASS:
STOCK NO:--
6C262-92AUsed by
F16-Q-239754-200L/Std
--

RD-92A/UX

FUNCTIONAL DESCRIPTION:

Facsimile Recorder RD-92A/UX is similar to the unlettered model, the major difference being in the required input impedance. This equipment makes direct recordings of copy transmitted by Facsimile Set AN/TXC-1 or its equivalent. The recorded image may be pictures, maps, sketches, typewritten or printed text, or handwriting. When used with wire lines, the recorder is connected directly to the line. Or it may be connected to an AM receiver, provided that the received facsimile signal is amplitude modulated. Other types of modulation must be converted to amplitude-modulated facsimile signals by use of Frequency Shift Converter CV-172/U or Converter CV-2()/TX.

It is a self-contained unit which may be mounted on a standard 19-inch relay rack. The rack may be equipped with shock mounts for bench use or with rollers to permit use as a file drawer.

TECHNICAL CHARACTERISTICS:

Type: Rotating drum
Input Frequency: 500 to 10,000 cps
Signal Level: 0 to -40 dbm
Size of Copy: 12 x 18-3/4 inches
Transmission Time: 20 minutes
Type Modulation: AM
Type Recording: Direct stylus
Lines per Inch: 96
Drum Speed: 60 rpm
Drum Diameter: 6 inches
Phasing Signal: Pulses, 1 per sec
Input Impedance: 2,000 ohms
Index of Cooperation: 576 (International Index)
Mounting: Self-contained unit, suitable for rack or bench mounting
Power Requirements: 150 w, 90-130-v 55-65-cycle 1-phase ac

MIL-HDBK-161

AN/TXR-type FACSIMILE RECORDER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Recorder RD-92A/ UX	(FSN) 5815-665-3146 (USA) 6C262-92A (USN) F16-Q-239754-200	14 x 19-1/8 x 17-21/32	75
(This equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91630

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	10.4	280

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: (USN) F-262

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr-52050	

PROJECTION GROUP AN/UFA-3

1 December 1958

Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Projection Group AN/UFA-3 is a portable, still, silent projector unit with advance mechanism, amplifier, filter unit, and cabinet. A 70-cycle keying tone is received from a record player and amplified to operate the advance mechanism. Suitable filters make the keying tone inaudible; the keying tone is recorded on the sound disk which produces the proper

sounds to accompany the picture being projected on the screen.

TECHNICAL CHARACTERISTICS:

Type: Still, silent
 Film size: 35 mm
 Keying Tone Frequency: 70 cps
 Power Requirements: 115-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Projector Group AN/UFA-3	-----	16 x 24 x 37	124

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/UFA-3 PROJECTION GROUP

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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CARRIER TELEGRAPH RECEIVER AN/UGA-type

5 December 1958

Cognizant Serv: USN FSN: 5815-665-1997

R-466/UC

USA

USN

USAF

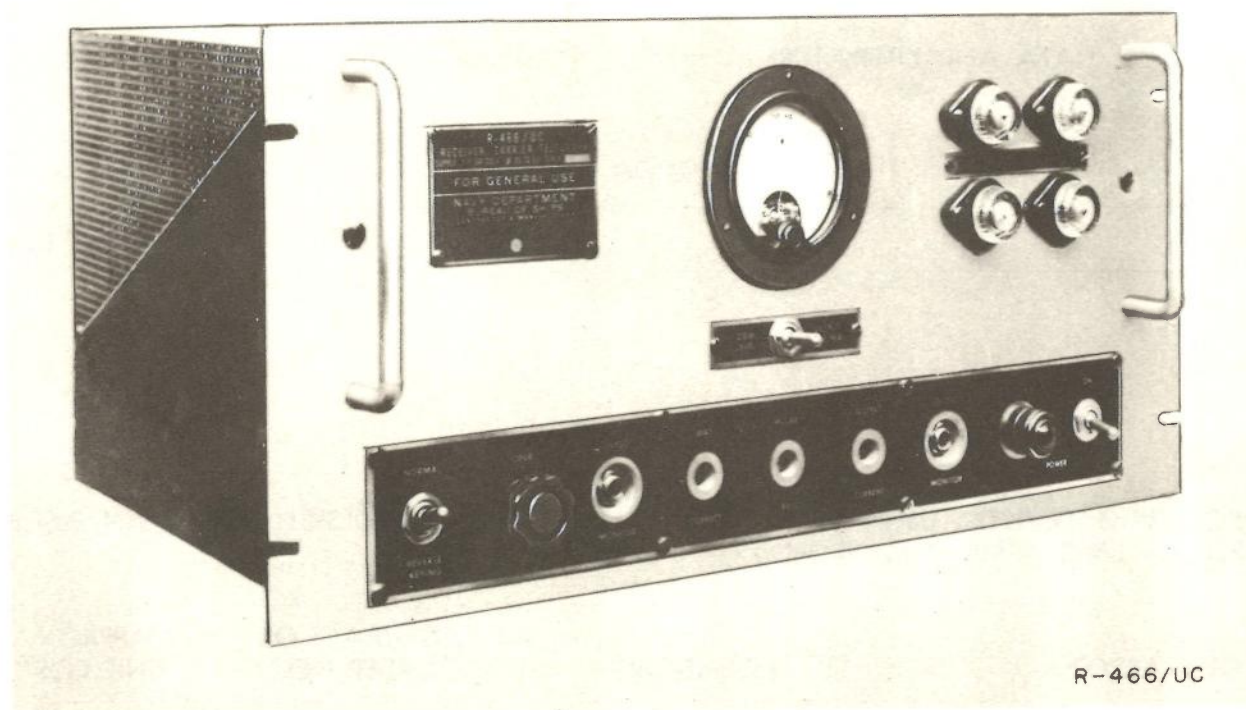
TYPE CLASS: --

Used by --

STOCK NO: --

--

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R-466/UC

FUNCTIONAL DESCRIPTION:

Carrier Telegraph Receiver R-466/UC is capable of accepting an on-off tone telegraph signal and emitting a corresponding direct-current signal.

This equipment can key a 20- to 60-ma neutral telegraph loop with battery supplied either from the receiver or the loop. It also may be used to key a 30-ma polar loop with battery supplied from the receiver.

The receiver functions as an individual unit with a self-contained power supply.

TECHNICAL CHARACTERISTICS:*Output Keying:*

Local Battery: 20 to 60 ma neutral; 30 ma polar
Remote Battery: 20 to 60 ma neutral

Output Distortion: Correction to zero for $\pm 20\%$ distortion (at input)

Input: 600 ohms balanced or unbalanced, for on-off tone 400 to 8,000 cps.

Input Level: The input circuit is capable of adjustment to signals at any level in the range from -24 to ± 10 dbm. Input level variations of ± 7.5 dbm will be tolerated during operation.

Input Keying Speed: 20 to 200 dot-cycles (equivalent to 60 to 600 wpm operation); higher keying speeds may be handled if input level variations are not over ± 5 dbm.

Input Tone Frequency: 400 to 8,000 cps (Tone frequencies above 2,000 cps are desirable to minimize fortuitous distortion. This is especially true of higher keying speeds.)

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

MIL-HDBK-161

AN/UGA-type CARRIER TELEGRAPH RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Telegraph Receiver R-466/UC	-----	8-23/32 x 14-3/8 x 19	36.5
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91612

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.25	94.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-15890 (Ships)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
CGS Laboratories, Inc.	Stamford, Conn.	NObsr-52314, 25 February 1952	\$620.00

TELEGRAPH CARRIER RECEIVER AN/UGA-type

5 December 1958

Cognizant Serv: USN FSN: 5805-347-9194

R-551/UC

USA

USN

USAF

TYPE CLASS: --

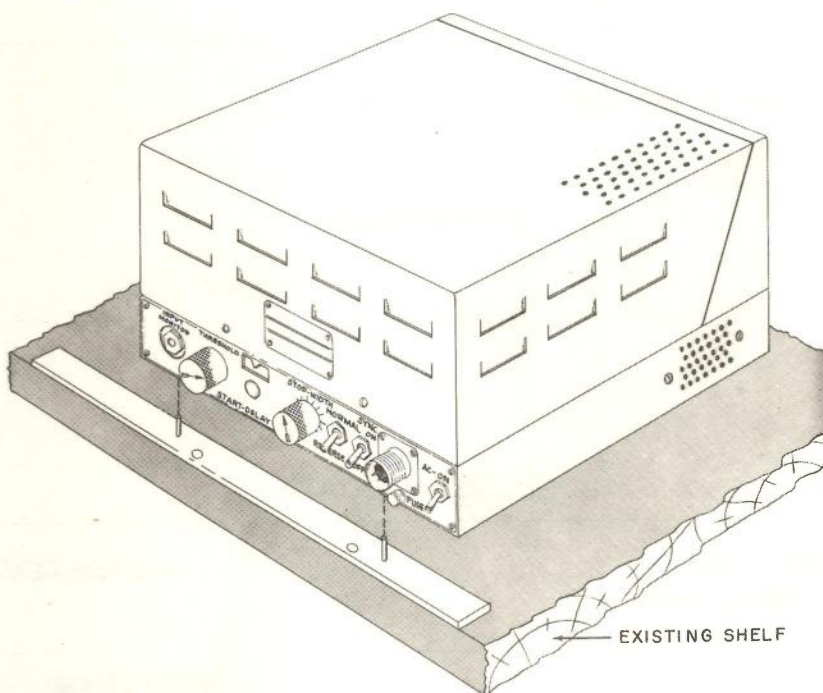
Used by

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STOCK NO: --

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R-551/UC

FUNCTIONAL DESCRIPTION:

Telegraph Carrier Receiver R-551/UC is designed to convert keyed audio tone teletypewriter signals to direct current on-off pulses suitable for operating a teletypewriter printer.

Provisions are included for generating teletypewriter synchronizing pulses of variable rate and duration when used with an appropriately equipped teletypewriter receiver.

TECHNICAL CHARACTERISTICS:*Impedance Data:*

Input: 600 ohms (nominal)

Output: 40 to 200 ohms

Input Frequency: 400 to 8,000 cps*Input Level:* 0.1 to 2 v rms*Output:* 60 ma*Power Requirements:* 100 w, 115-v 60-cycle 1-phase ac

MIL-HDBK-161

AN/UGA-type TELEGRAPH CARRIER RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Carrier Receiver R-551/UC	-----	8-1/2 x 12 x 13-1/2	33
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91907

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-D-16284

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Schuttig & Co. Inc.	Washington, D. C.	NObsr-52670	\$345.00

TELEGRAPH TERMINAL AN/UGC-2(XN-1)

1 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/UGC-2(XN-1) is designed to provide a two-channel radio circuit. Two synchronous or nonsynchronous telegraph transmissions modulate a single radio carrier wave that can be transmitted over one of four specific frequencies.

This equipment provides demultiplexing input frequencies of 1,955 cycles, 2,355 cycles, 2,755 cycles, and 3,155 cycles. The keying speed is 240 words per minute. The equipment is suitable for either single or dual diversity operation.

TECHNICAL CHARACTERISTICS:*Multiplexer TD-121(XN-1)/UGC-2:*

Keying Input: Positive, negative or polar dc and voltage pulses

Input Level: ± 10 -v dc minimum; 45 ma dc minimum

Keying Input Impedance:

De Voltage: 100,000 ohms

Direct Current: 220 ohms

Keying Speed: 240 wpm

Output Impedance: 10,000 ohms

Output Level:

Neutral: 0 to 25 v

Polar: +6 to -6 v

Power Requirements: 50 w, 110-v or 220-v, 50- to 60-cycle ac

Demultiplexer TD-122(XN-1)/UGC-2:

Input Impedance: 600 ohms, unbalanced

Input Level: +8 vu to -50 vu

Input Frequencies: 1,955, 2,355, 2,755, 3,155 cps

Input Frequency Shifts: 400 cps minimum; 1,200 cps maximum

Receiver Input: Single or dual diversity

Keying Speed: 100 dot cps (240 wpm)

Output: 2 floating outputs, isolated from each other, supply neutral dc pulses of 65 ma maximum into 2,000 ohms external load or to a teleprinter line with 2,000 ohms impedance

Power Requirements: 200 w; 110-v or 220-v, 50- to 60-cycle ac

Power Supply PP-1307(XN-1)/UGC-2:

Controls: Power on-off switch; regulated voltage adjustment

Indicators: Power on-off lamp

Power Requirements: 200 w; 110-v or 220-v, 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Demultiplexer TD-122(XN-1)/ UGC-2	-----	5-1/4 x 13-1/2 x 19	27
1	Interconnecting cable	-----	72 lg	
1	Multiplexer TD-121(XN-1)/ UGC-2	-----	3-1/2 x 10 x 19	15
1	Power cord	-----	23 lg	
1	Power Supply PP-1307(XN-1)/ UGC-2	-----	5-1/4 x 14 x 19	30

MIL-HDBK-161

AN/UGC-2(XN-1) TELEGRAPH TERMINAL

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92444

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
Northern Radio Co., Inc.	New York, N. Y.	NObsr-63201, 23 February 1953	\$4,000.00

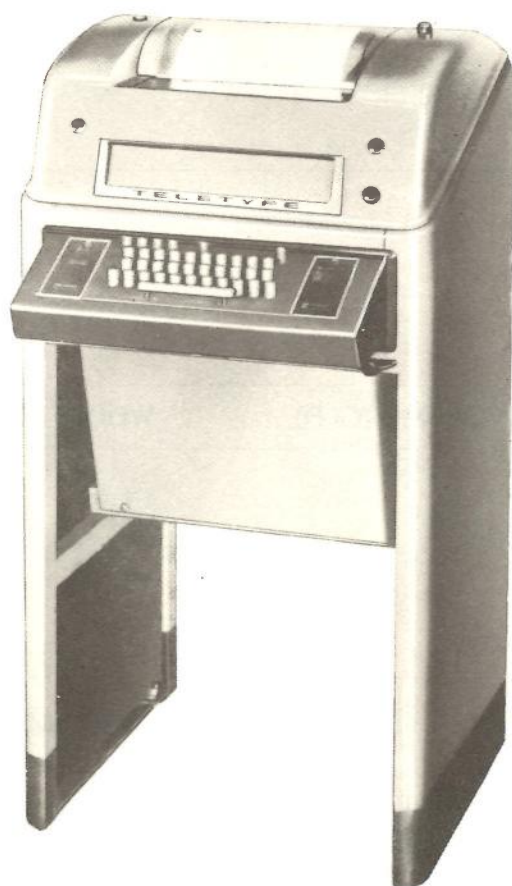
TELETYPEWRITER **AN/UGC-type**

23 October 1958

Cognizant Serv: USN FSN: TT-47/UG, 5815-370-0063
 5815-564-6789
 TT-48/UG, 5815-370-0059

TT-47/UG, TT-48/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	TT-47/UG: 4TTT47 TT-48/UG: NSN	TT-47/UG: F17-T-350013-319 TT-48/UG: F17-T-350013-309	--



TT-47/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-47/UG and TT-48/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. The signals transmitted

and received are of the open-and-closed dc type. The equipments are adjustable to speeds of 460 and 600 operations per minute in addition to their regular speed of 368 operations per minute.

The TT-47/UG and TT-48/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-47/UG is equipped with synchronous ac Motor PD-17/U; the TT-48/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriter TT-47/UG and TT-48/UG differ from the TT-47A/UG and TT-48A/UG in several respects. In addition to electrical and mechanical differences, the A models have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications

Characters Per Line: 72

Operating Speed:

368 opm, 60 wpm

460 opm, 75 wpm

600 opm, 100 wpm

Code: 5-unit, start-stop

Number of Channels: 2

Type Motor:

TT-47/UG: Synchronous (PD-17/U)

TT-48/UG: Series-governed (PD-18/U)

Current Rating:

TT-47/UG (PD-17/U):

Starting: 9 amp

Operating: 1.85 amp

TT-48/UG (PD-18/U):

Starting: 1.75 amp

Operating: 1 amp

Heat Dissipation:

TT-47/UG (PD-17/U): 50 w

TT-48/UG (PD-18/U): 75 w

Power Requirements:

TT-47/UG (PD-17/U): 65 w, 0.3 pf, 115-v $\pm 10\%$ 50- to 60-cycle ± 0.5 cycle 1-phase ac

TT-48/UG (PD-18/U): 95 w, 0.83 pf, 115-v $\pm 10\%$ 50- to 60-cycle 1-phase ac

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17/U for TT-47/UG	-----	4-3/8 x 8 x 4	8
	PD-18/U for TT-48/UG	-----	5-5/8 x 8-1/8 x 4	9
1	Automatic Keyer MX-1115/ UG	-----	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-870/UG	-----	39-1/2 x 20-1/2 x 18-1/4	81
1 set	Equipment spares			
	151681 for TT-47/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
	151682 for TT-48/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX-1114/UG	-----	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB-154/UG	-----	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91393

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1 For TT-47/UG	24.09	314
1 For TT-48/UG	24.09	315

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: Spec No. CS898

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-42434, 28 June 1948	\$1,500 with equipment spares

TELETYPEWRITER **AN/UGC-type**

23 October 1958

Cognizant Serv: USN FSN: TT-47A/UG, 5815-644-3407
TT-48A/UG, 5815-665-2070

TT-47A/UG, TT-48A/UG

USA

USN

USAF

TYPE CLASS:

Std.

Used by

--

STOCK NO:

TT-47A/UG: 4TT47

--

--

TT-48A/UG: NSN



TT-48A/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-47A/UG and TT-48A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-47A/UG and TT-48A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-47A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-48A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriters TT-47A/UG and TT-48A/UG differ from the TT-47/UG and TT-48/UG in several respects. In addition to electrical and mechanical differences, the later types have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

The TT-47A/UG and TT-48A/UG are identical with the TT-128A/UG and TT-129A/UG, respectively, except for their keyboards. The keyboards of the TT-128A/UG and TT-129A/UG have weather symbols instead of the standard communications keyboards on the TT-47A/UG and TT-48A/UG. The TT-47A/UG also is similar to Teletypewriter TT-171/UG except for the sending keyboard.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved communications
Characters Per Line: 85

AN/UGC-type TELETYPEWRITER*Operating Speed:*

368 opm, 60 wpm
 460 opm, 75 wpm
 600 opm, 100 wpm

Code: 5-unit, start-stop

Transmission Pattern: 7.42-unit

Signaling Frequency:

60 Wpm: 22.8 dot-cycles
 75 Wpm: 28.5 dot-cycles
 100 Wpm: 37.1 dot-cycles

Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity

Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity

Type Motor:

TT-47A/UG: Synchronous (PD-17A/U)

TT-48A/UG: Series-governed (PD-18/U)

Power Requirements:

TT-47A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v $\pm 10\%$, 60-cycle $\pm .5$ cycle, 1-phase ac

TT-48A/UG (PD-18/U): 95 w, 0.83 pf, 115-v $\pm 10\%$ 50- to 60-cycle 1-phase

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-47A/UG	-----	5-3/4 x 8-1/2 x 4	9
	PD-18/U for TT-48A/UG	-----	5-3/4 x 8-1/2 x 4	10
1	Automatic Typewriter MX-1115A/UG	-----	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-780/UG	-----	40-1/2 x 20-1/2 x 18-1/4	81
1 set	Equipment spares			
	152730 for TT-47A/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
	152731 for TT-48A/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060	-----	.	
1	Keyboard MX-1114A/UG	-----	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB-154A/UG	-----	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For TT-47A/UG:</i>		
1	24.09	316
<i>For TT-48A/UG:</i>		
1	24.09	315

TELETYPEWRITER **AN/UGC-type**

PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-52088, 4 December 1950	\$1,510 (TT-47A/UG) with equipment spares
		NObsr-52089, 7 December 1950	\$1,590 (TT-48A/UG) with equipment spares

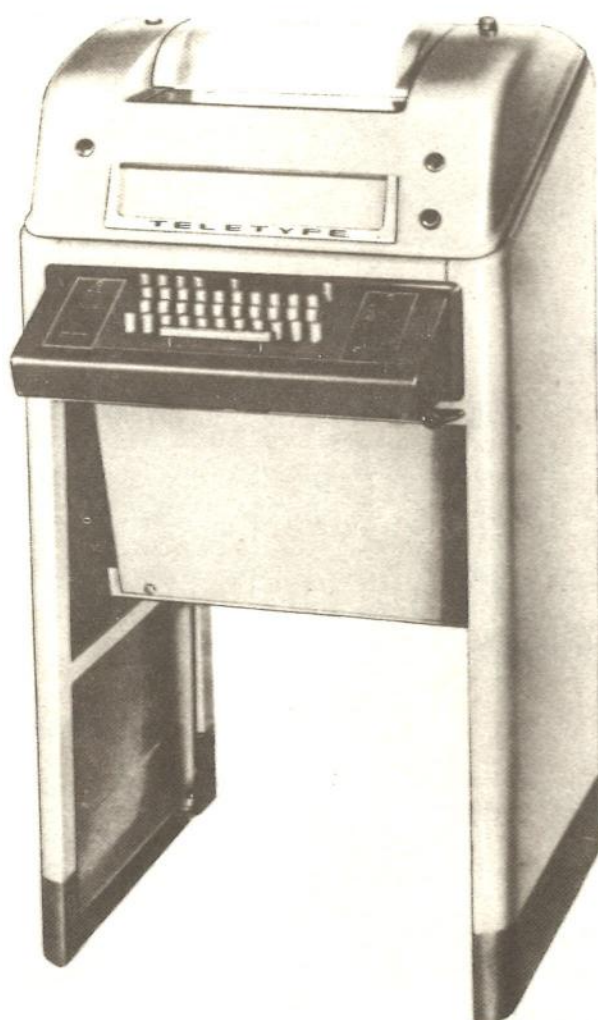
TELETYPEWRITER **AN/UGC-type**

24 October 1958

Cognizant Serv: USN FSN: TT-69/UG, 5815-370-0075
 5815-503-2766
 TT-70/UG, 5815-370-0074

TT-69/UG, TT-70/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	TT-69/UG: 4TTT-69 TT-70/UG: NSN	TT-69/UG: F17-T-350013-420 TT-69/UG: F17-T-350013-419	--



TT-69/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-69/UG and TT-70/UG are sending and receiving page-printing teletypewriter sets used for the

transmission and reception of teletypewriter messages over wire or radio communication circuits. The signals transmitted and received are of the open-and-closed dc type. The equipments are adjustable to speeds of 460 and 600 operations per minute in addition to their regular speed of 368 operations per minute.

The TT-69/UG and TT-70/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-69/UG is equipped with synchronous ac Motor PU-17/U; the TT-70/UG is equipped with series-governed ac Motor PU-18/U. The cabinet supplied with either unit is suitable for bulkhead mounting.

Teletypewriters TT-69/UG and TT-70/UG differ from the TT-69A/UG and TT-70A/UG in several respects. In addition to electrical and mechanical differences, the A models have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications

Characters Per Line: 72

Operating Speed:

368 opm, 60 wpm

460 opm, 75 wpm

600 opm, 100 wpm

Code: 5-unit, start-stop

Number of Channels: 2

Type Motor:

TT-69/UG: Synchronous (PD-17/U)

TT-70/UG: Series-governed (PD-18/U)

Current Rating:

TT-69/UG (PD-17/U):

Starting: 9 amp

Operating: 1.85 amp

TT-70/UG (PD-18/U):

Starting: 1.75 amp

Operating: 1 amp

Heat Dissipation:

TT-69/UG (PD-17/U): 50 w

TT-70/UG (PD-18/U): 75 w

Power Requirements:

TT-69/UG (PD-17/U): 65 w, 0.3 pf 115-v $\pm 10\%$ 60-cycle $\pm .5$ cycle, 1-phase ac

TT-70/UG (PD-18/U): 95 w, 0.83 pf, 115-v $\pm 10\%$ 50- to 60-cycle 1-phase ac

AN/UGC-type TELETYPEWRITER**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17/U for TT-69/UG	-----	4-3/8 x 8 x 4	8
	PD-18/U for TT-70/UG	-----	5-5/8 x 8-1/8 x 4	9
1	Automatic Keyer MX-1115/ UG	-----	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-871/UG	-----	15 x 20-1/2 x 18-1/4	70
1 set	Equipment spares			
	151681 for TT-69/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
	151682 for TT-70/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX-1114/UG	-----	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB-154/UG	-----	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91393

SHIPPING DATA

PKGS	VOLUME (Cu·Ft)	WEIGHT (Lbs)
<i>For TT-69/UG:</i>		
1	18.88	249
<i>For TT-70/UG:</i>		
1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: Spec No. CS-898

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-42434, 28 June 1948	\$1,100 (TT- 68/UG) with equipment spares \$1,075 (TT- 70/UG) with equipment spares

TELETYPEWRITER **AN/UGC-type**

28 October 1958

Cognizant Serv: USN FSN: TT-69A/UG, 5815-503-2766
 5815-644-4705
 TT-70A/UG, 5815-665-2068

TT-69A/UG, TT-70A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	TT-69A/UG: 4TTT-69 TT-70A/UG: NSN	TT-69A/UG: TT-70A/UG: F16-Q- 305165-100	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-69A/UG and TT-70A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-69A/UG and TT-70A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-69A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-70A/U is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for bulkhead mounting.

Teletypewriters TT-69A/UG and TT-70A/UG differ from the TT-69/UG and the TT-70/UG in several respects. In addition to electrical and mechanical differences, the later types have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

The TT-69A/UG and TT-70A/UG are identical with the TT-130A/UG and TT-131A/UG, respectively, except for their keyboards. The keyboards of the TT-130A/UG and TT-131A/UG have weather symbols instead of the standard communications keyboards on the TT-69A/UG and TT-70A/UG. The TT-69A/UG also is similar to Teletypewriter TT-171/UG except for the sending keyboard.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved communications*Characters Per Line:* 85*Operating Speed:*

368 opm, 60 wpm

460 opm, 75 wpm

600 opm, 100 wpm

Code: 5-unit, start-stop*Transmission Pattern:* 7.42-unit*Signaling Frequency:*

60 Wpm: 22.8 dot-cycles

75 Wpm: 28.5 dot-cycles

100 Wpm: 37.1 dot-cycles

Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity*Input Signal:* On-off dc, 0.06 amp nominal from external source, either positive or negative polarity*Type Motor:*

TT-69A/UG: Synchronous (PD-17A/U)

TT-70A/UG: Series-governed (PD-18/U)

*Power Requirements:*TT-69A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v $\pm 10\%$
60-cycles ± 5 cycles 1-phase acTT-80A/U (PD-18/U): 95 w, 115-v $\pm 10\%$ 50- to 60-cycle
1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-69A/UG	-----	5-3/4 x 8-1/2 x 4	9
	PD-18/U for TT-70A/UG	-----	5-3/4 x 8-1/2 x 4	10
1	Automatic Typer MX-1115A/ UG	-----	9-3/4 x 10-1/2 x 15-1/2	19

AN/UGC-type TELETYPEWRITER**MAJOR COMPONENTS—Continued**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY-781/UG	-----	16 x 20-1/2 x 18-1/4	70
1 set	Equipment Spares	-----		
	152730 for TT-69A/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
	152731 for TT-70A/UG	-----	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060	-----		
1	Keyboard MX-1114A/UG	-----	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB-154A/UG	-----	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For PP-69A/UG:</i> 1	18.88	249
<i>For PP-70A/UG:</i> 1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: Spec No. CS-989

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-52088, 4 Decem- ber 1950	\$1,310 (TT- 69A/UG) with equipment spares
		NObsr-52089, 7 Decem- ber 1950	\$1,570 (TT- 70A/UG) with equipment, spares

TELETYPEWRITER AN/UGC-type

28 October 1958

Cognizant Serv: USN FSN:

TT-128A/UG, TT-129A/UG

USA

USN

USAF

TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-128A/UG and TT-129A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of weather aerological information by teletypewriter over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears which are available as optional equipment.

The TT-128A/UG and TT-129A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-128A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-129A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriters TT-128A/UG and TT-129A/UG are identical to the TT-47A/UG and TT-48A/UG respectively, with the exception of their keyboards. The keyboards of the TT-128A/UG and TT-129A/UG have weather symbols instead of standard communications keyboards.

TECHNICAL CHARACTERISTICS:

Type Keyboards: Improved weather

Characters Per Line: 85

Operating Speed:

368 opm, 60 wpm

460 opm, 75 wpm

600 opm, 100 wpm

Code: 5-unit, start-stop

Transmission Pattern: 7.42-unit

Signaling Frequency:

60 Wpm: 22.8 dot-cycles

75 Wpm: 28.5 dot-cycles

100 Wpm: 37.1 dot-cycles

Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity

Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity

Type Motor:

TT-128A/UG: Synchronous (PD-17A/U)

TT-129A/UG: Series-governed (PD-18/U)

Current Rating:

TT-128A/UG (PD-17A/U):

Starting: 9 amp

Operating: 1.85 amp

TT-129A/UG (PD-18/U):

Starting: 1.75 amp

Operating: 1 amp

Heat Dissipation:

TT-128A/UG (PD-17A/U): 50 w

TT-129A/UG (PD-18/U): 75 w

Power Requirements:

TT-128A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v $\pm 10\%$ 60-cycle ± 5 cycle 1-phase acTT-129A/UG (PD-18/U): 95 w, 0.83 pf, 115-v $\pm 10\%$ 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-128A/UG	-----	4 x 5-3/4 x 8-1/2	9
	PD-18/U for TT-129A/UG	-----	4 x 5-3/4 x 8-1/2	10
1	Automatic Typewriter MX-1422A/UG	-----	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-870/UG	-----	18-1/4 x 20-1/2 x 40-1/2	81
1 set	Equipment spares			
	CTT-152730 for TT-128A/UG	-----	7-7/8 x 19-1/2 x 21-1/2	5
	CTT-152731 for TT-129A/UG	-----	7-7/8 x 19-1/2 x 12-1/2	5

MIL-HDBK-161

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Gears CTT-151060			
1	Keyboard MX-1421A/UG	-----	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB-154A/UG	-----	4-5/8 x 8-1/8 x 18	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713
NAVSHIPS 98350

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For TT-128/UG</i>		
1	24.09	314
<i>For TT-129A/UG</i>		
1	24.09	315

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-52088, 4 Dec 1950 NObsr-52089, 1 Dec 1950	

TELETYPEWRITER AN/UGC-type

28 October 1958

Cognizant Serv: USN FSN:

TT-130A/UG, TT-131A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-130A/UG and TT-131A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of weather aerological information by teletypewriter over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-130A/UG and TT-131A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-130A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-131A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for bulkhead shelf mounting.

Teletypewriters TT-130A/UG and TT-131A/UG are identical to the TT-69A/UG and TT-70A/UG, respectively, with the exception of their keyboards. The keyboards of the TT-130A/UG and TT-131A/UG have weather symbols instead of standard communications keyboards.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved weather

Characters Per Line: 85

Operating Speed:

368 opm, 60 wpm

460 opm, 75 wpm

60 opm, 100 wpm

Code: 5-unit, start-stop

Transmission Pattern: 7.42-unit

Signaling Frequency:

60 Wpm: 22.8 dot-cycles

75 Wpm: 28.5 dot-cycles

100 Wpm: 37.1 dot-cycles

Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity

Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity

Type Motor:

TT-130A/UG: Synchronous (PD-17A/U)

TT-131A/UG: Series-governed (PD-18/U)

Current Rating:

TT-130A/UG (PD-17A/U):

Starting: 9 amp

Operating: 1.85 amp

TT-131A/UG (PD-18/U):

Starting: 1.75 amp

Operating: 1 amp

Heat Dissipation:

TT-130A/UG (PD-17A/U): 50 w

TT-131A/UG (PD-18/U): 75 w

Power Requirements:

TT-130A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v $\pm 10\%$
60-cycle $\pm .5$ cycle 1-phase ac

TT-131A/UG (PD-18/U): 95 w, 0.83 pf 115-v $\pm 10\%$
50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor PD-17A/U for TT-130A/U	-----	4 x 5-3/4 x 8-1/2	9
	PD-18/U for TT-131A/U	-----	4 x 5-3/4 x 8-1/2	10
1	Automatic Typewriter MX-1422A/ UG	-----	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-871/UG	-----	18-1/4 x 20-1/2 x 16	70

AN/UGC-type TELETYPEWRITER**MAJOR COMPONENTS—Continued**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
	CTT-152730 for TT-130A/ UG	-----	7-7/8 x 19-1/2 x 21-1/2	5
	CTT-152731 for TT-131A/ UG	-----	7-7/8 x 19-1/2 x 12-1/2	5
1	Keyboard MX-1421A/UG	-----	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB-154A/UG	-----	4-5/8 x 8-1/8 x 18	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713
NAVSHIPS 98350

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT-130A/UG 1	18.88	249
For TT-131A/UG 1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-52088, 4 December 1950 NObsr-52089	

TELETYPEWRITER **AN/UGR-type**

28 October 1958

Cognizant Serv: USN FSN:

TT-171/UG

USA

USN

USAF

TYPE CLASS:

Std

Used by

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STOCK NO:

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(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-171/UG is a receiving only page-printing teletypewriter set used to receive typewritten messages over wire or radio telegraph circuits from equipment located at a ship or shore station. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-171/UG is similar to the TT-47A/UG and TT-69A/UG with the exception of the sending keyboard. The TT-171/UG is equipped with synchronous ac Motor PD-17A/U, and the cabinet supplied with the unit is suitable for deck mounting.

TECHNICAL CHARACTERISTICS:

Characters Per Line: 85

Operating Speed:

368 opm, 60 wpm

460 opm, 75 wpm

600 opm, 100 wpm

Code: 5-unit, start-stop**Transmission Pattern:** 7.42-unit**Signaling Frequency:**

60 Wpm: 22.8 dot-cycles

75 Wpm: 28.5 dot-cycles

100 Wpm: 37.1 dot-cycles

Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity**Type Motor:** Synchronous (PD-17A/U)**Current Rating:**

Starting: 9 amp

Operating: 1.85 amp

Heat Dissipation: 50 w**Power Requirements:** 65 w, 0.3 pf, 115-v $\pm 10\%$ 60-cycle ± 5 cycle 1-phase ac**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor PD-17A/U	-----	4 x 5-3/4 x 8-1/2	9
1	Automatic Typer MX-1115A/ UG	-----	9-3/4 x 10-1/2 x 15-1/2	19
1	Base NT-1443/UG	-----	4-5/8 x 14-1/2 x 15-1/2	6.5
1	Cabinet CY-870/UG	-----	18-1/4 x 20-1/2 x 40-1/2	81
1 set	Equipment spares CTT-152853	-----	7-7/8 x 19-1/2 x 21-1/2	5
1 set	Gears CTT-151060	-----		
1	Power Distribution Panel SB-154/UG	-----	4-5/8 x 8-1/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

MIL-HDBK-161

AN/UGR-type TELETYPEWRITER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	24.09	310

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-63205	

TELETYPEWRITER REPERFORATOR **AN/UGR-type**

30 October 1958

Cognizant Serv: USN FSN:

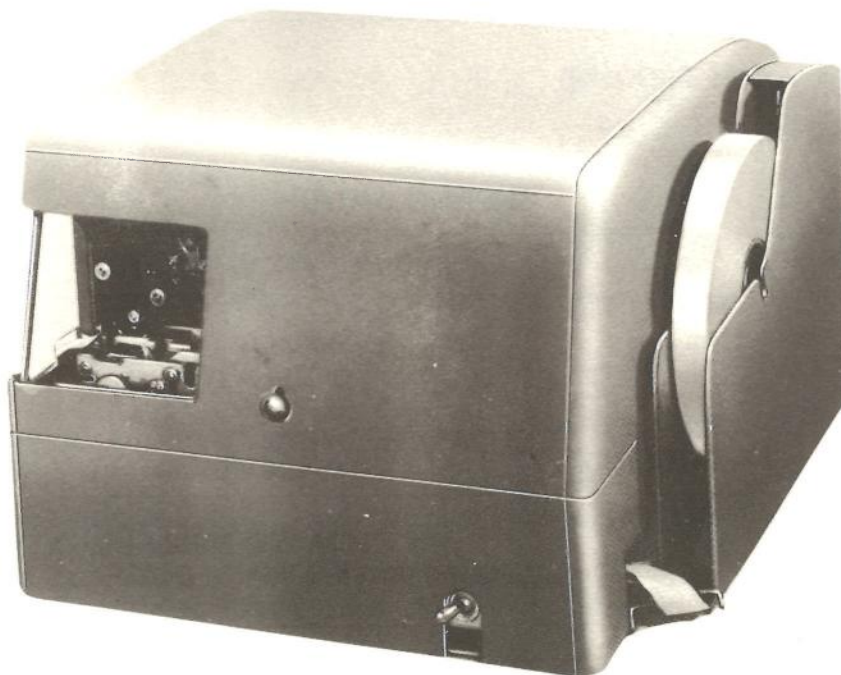
TT-192/UG

USA

USN

USAF

TYPE CLASS:
STOCK NO:--
--Used by

--

TT-192/UG

FUNCTIONAL DESCRIPTION:

Teletypewriter Reperforator TT-192/UG is a receiving only unit used to receive messages transmitted over wire or radio circuits and to record the message both in code perforations and typed characters on the same tape. It is used for relaying purposes in teletypewriter receiving and distributing center. Messages received by the typing reperforator may be retransmitted to one or more stations by a transmitter distributor. The printed characters simplify tape relay procedures by eliminating the necessity of reading the code perforations.

The typing reperforator may be used with five-unit code teletypewriter equipment geared for 368 operations per minute. The operating speed of 60 words per minute may be

increased to 100 words per minute by changing to other gear that are available as optional equipment.

TECHNICAL CHARACTERISTICS:*Type Tape:* Chadless*Operating Speed:* 368 opm, 60 wpm*Code:* 5-unit, start-stop*Signal Line Current:*

Series: 0.02 amp

Parallel: 0.06 amp

Type Motor: Synchronous*Motor Speed:* 3,600 rpm*Power Requirements:* 115-v $\pm 10\%$ 60-cycle $\pm .5$ cycle 1-phase ac

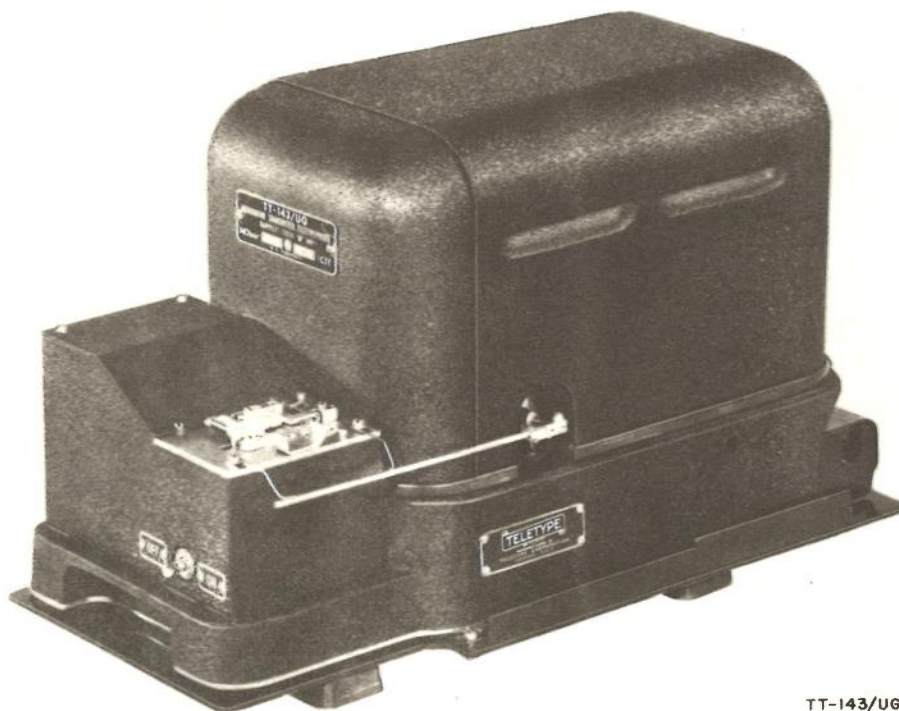
TELETYPEWRITER DISTRIBUTOR-TRANSMITTER **AN/UGT-type**

17 November 1958

Cognizant Serv: USN FSN:

TT-143/UG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TT-143/UG

FUNCTIONAL DESCRIPTION:

Teletypewriter Distributor-Transmitter TT-143/UG is an automatic transmitter distributor designed for use in transmitting or relaying stations where large amounts of traffic must be handled with minimum delay. The unit translates code impulses from fully perforated or chadless tape into electrical impulses and transmits these impulses, in the form of a five-unit, start-stop permutation code to one or more receiving stations.

The TT-143/UG consists principally of tape sensing and

tape feeding mechanisms, a distributor commutator, and a motor. The entire unit is housed in a metal case.

TECHNICAL CHARACTERISTICS:

Type Tape: Fully perforated or chadless

Operating Speed:

Type Signaling Code: 5-unit, start-stop

Type Motor: Synchronous

Motor Speed: 1,800 rpm

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

MIL-HDBK-161

AN/UGT-type TELETYPEWRITER DISTRIBUTOR-TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Teletypewriter Distributor- Transmitter TT-143/UG (Equipment consists of only one major component.)		7-7/8 x 9-1/2 x 15-1/2	33

REFERENCE DATA AND LITERATURE:

Teletype Manual 103MA

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	110

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.		

TELETYPEWRITER DISTRIBUTOR-TRANSMITTER **AN/UGT-type**

30 October 1958

Cognizant Serv: USN FSN:

TT-187/UG

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

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TT-187/UG

FUNCTIONAL DESCRIPTION:

Teletypewriter Distributor-Transmitter TT-187/UG is an automatic transmitter distributor designed for use in transmitting or relaying stations where large amounts of traffic must be handled with minimum delay. The unit translates code impulses from fully perforated or chadless tape into electrical impulses and transmits these impulses, in the form of a five-unit, start-stop permutation code to one or more receiving stations.

The TT-187/UG consists principally of tape sensing and tape feeding mechanisms, a distributor commutator, and a motor, all of which are housed in a metal cabinet. It has an all steel external expansion clutch, sensing pins with longer travel located in line with the axis of the feed wheel, and an increased number of feed pins engaging the feed holes in the tape.

TECHNICAL CHARACTERISTICS:

Type Tape: Chad (perforated) or chadless

Operating Speed:

368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm

Type Signaling Code: 5-unit, start-stop

Transmission Pattern: 7.42-unit

Signaling Frequency:

60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles

Type Motor: Synchronous

Motor Speed: 3,600 rpm

Current Rating:

Starting: 9 amp

Operating: 1.85 amp

Power Requirements: 65 w, 0.3 pf, 115-v $\pm 10\%$ 60-cycle
+75%, 1-phase ac

MIL-HDBK-161

AN/UGT-type TELETYPEWRITER DISTRIBUTOR-TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
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1	Transmitter Distributor TT- 187/UG (Equipment consists of only one major component.)			
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REFERENCE DATA AND LITERATURE:

NAVSHIPS 92733

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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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
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Western Electric Co.	Chicago, Ill.	NObsr-64214, 27 May 1954	\$1,320 with equipment spares
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INTERPHONE AMPLIFIER **AN/UIA-type**

7 November 1958

Cognizant Serv: USN FSN: 50128, 5820-253-1075
50128A, 5820-253-0174

50128, 50128A

USA

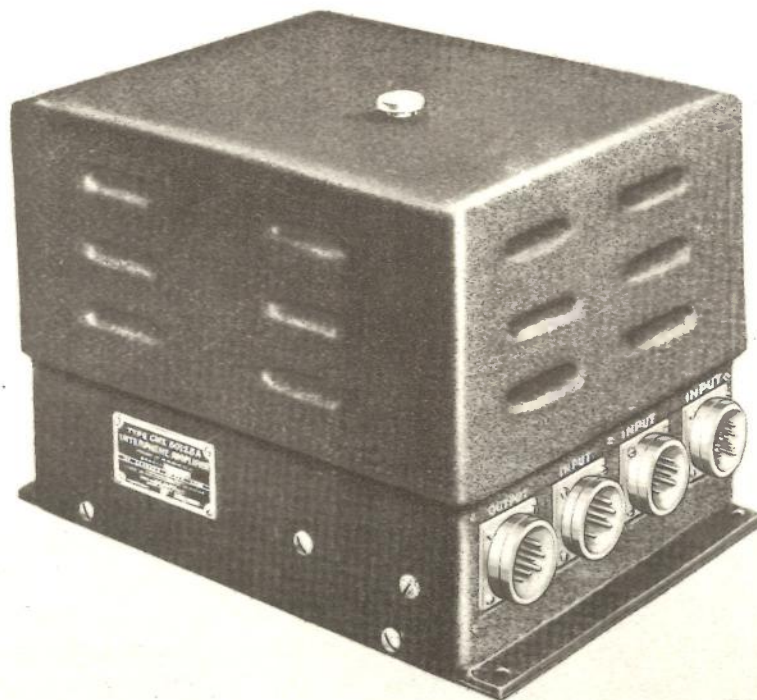
USN

USAF

TYPE CLASS:
STOCK NO:--
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Used by

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50128A

FUNCTIONAL DESCRIPTION:

Interphone Amplifier 50128 or 50128A is designed for use in vehicles and aircraft equipped with Radio Transmitting and Receiving Equipment TCS and carrying a two-to five-man crew. The amplifier permits two-way communication between crew members. It also permits control of the TCS transmitter and receiver by any crew member.

Equipment required for the operation of the interphone amplifier include Remote Control Unit 23355, 23366, or 23429, Radio Transmitting and Receiving Equipment TCS, and connecting cables.

TECHNICAL CHARACTERISTICS:

Power Requirements: 12- to 14-v dc

MIL-HDBK-161

AN/UIA-type INTERPHONE AMPLIFIER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Interphone Amplifier 50128 or 50128A	-----	7-1/8 x 7-9/16 x 10-3/8	17

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Technical manual for Interphone Amplifier 50128
NAVSHIPS 95623

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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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
The Magnovox Co.	Fort Wayne, Ind.	NXss-20701, 4 January 1943 NXss-24341, 1 March 1943 NXsr-49686, 19 February 1944 (50128A)	

AUDIO FREQUENCY AMPLIFIER **AN/UIA-type**

4 December 1958

Cognizant Serv: USN

FSN:

AM-215/U, AM-215A/U, AM-215B/U

USA

USN

USAF

TYPE CLASS: --

STOCK NO: --

Used by

AM-215/U: F16-A-

27990-9968

AM-215A/U, AM-

215B/U: F16-M-83-

259

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Audio Frequency Amplifiers AM-215/U, AM-215A/U, and AM-215B/U are multiple input, general purpose, audio frequency amplifiers. Any of five input channels may be used by means of a selector switch.

The equipments are similar and are interchangeable although components are not interchangeable between models.

Input Impedance: 600 ohms*Output Impedance:* 600 ohms center tapped at 15 ohms*Audio Input Power:* 2 w (maximum) each input; 6 mw (minimum) full power output*Power Gain:* 32.2 db*Power Output:* 10 w (maximum) at 10% total harmonic distortion*Mounting Data:* Wall, shelf, or table mounting*Power Requirements:* 55 w, 110- to 120-v 50 to 60-cycle ac, 1-phase with built-in rectifier power supply.

TECHNICAL CHARACTERISTICS:

Frequency Range: 250 to 4,000 cps

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For AM-215/U:</i>				
1	Audio Frequency Amplifier AM-215/U	-----	8-3/8 x 12 x 6-1/16	19
1 set	Equipment spares	-----	6-3/4 x 13-1/2 x 10-1/2	24
<i>For AM-215A/U, or AM-215B/U:</i>				
1	Audio Frequency Amplifier AM-215A/U, or AM/ 215B/U	-----	8-3/8 x 12 x 7	23.5
1 set	Equipment spares	-----	6-3/16 x 13-1/4 x 7-1/4	22

REFERENCE DATA AND LITERATURE:

For AM-215/U: NAVSHIPS 900-995*For AM-215A/U, or AM-215B/U:* NAVSHIPS 91078

MIL-HDBK-161

AN/UIA-type AUDIO FREQUENCY AMPLIFIER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
<i>For AM-215/U:</i> 2	2.48	70
<i>For AM-215A/U, or AM-215B/U:</i> 2	1.30	51.8

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For AM-215/U:</i> David Bogen Co. Inc.	New York, N. Y.	NObsr-39055, 23 October 1946	\$100.00 with spares
<i>For AM-215A/U:</i> Hoffman Radio Corp.	Los Angeles, Calif.	NObsr-39405, 30 June 1947	\$100.00 with spares
<i>For AM-215B/U:</i> Dynamic Electronics-N. Y., Inc.	Glendale, N. Y.	NObsr-52347	\$100.00 with spares

AUDIO AMPLIFIER AN/UIA-type

4 December 1958

Cognizant Serv: USN FSN:

AM-413/G, AM-413A/G

USA

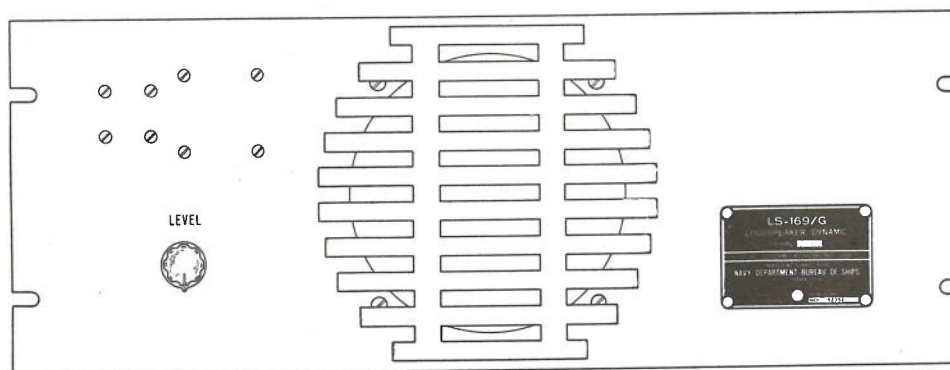
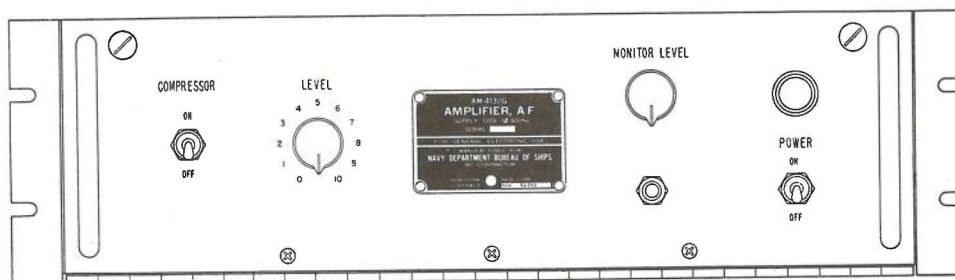
USN

USAF

TYPE CLASS:
STOCK NO:--
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Used by

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AM-413/G

FUNCTIONAL DESCRIPTION:

Audio Amplifiers AM-413/G and AM-413A/G are suitable for general communication purposes when operating in conjunction with naval radio receiving sets and associated equipment.

Each equipment consists of an audio amplifier and a volume compressor. Use of the volume compressor is optional and is controlled by a switch mounted on the front panel. The compressor keeps the signal output voltage constant regardless of the magnitude of the input signal.

TECHNICAL CHARACTERISTICS:

Frequency Response: ± 1 db from 200 to 5,000 cps
Input Impedance: 600 ohms
Input Level: 0.001 to 6 mw
Outputs: 2 w, 600 ohms, balanced; 6 mw, 600 ohms, balanced;
 1 mw, 600 ohms, unbalanced
Compression Range: 0.001 to 6 mw
Output Variation of Compressor: Not more than 3 db
Distortion: Not more than 7%
Signal Plus Noise to Noise Ratio: Not less than 50 db
Power Requirements: 50 w, 105-, 115-, or 125-v 50 to 60 cycle
 1-phase ac

MIL-HDBK-161

AN/UIA-type AUDIO AMPLIFIER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Amplifier AM-413/G or AM-413A/G	-----	5-1/4 x 8-3/4 x 19	15-1/2
1	AC Power Plug AN-3106- 14S-7S	-----	1-1/8 x 1-1/8 x 1-7/16	2 oz
2	Audio Input Plug AN-3106- 14S-2S	-----	1-1/8 x 1-1/8 x 1-7/16	2 oz
2	Audio Output Plug AN-3106- 14S-2P	-----	1-1/8 x 1-1/8 x 1-7/16	2 oz
1	Cable clamp with ferrule (MCOS-2 cable)	-----	7/8 x 7/8 x 1-5/64	1 oz
4	Cable clamp with ferrule (RG-108/U cable)	-----	7/8 x 7/8 x 1-5/64	1 oz

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91905

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.3	38

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

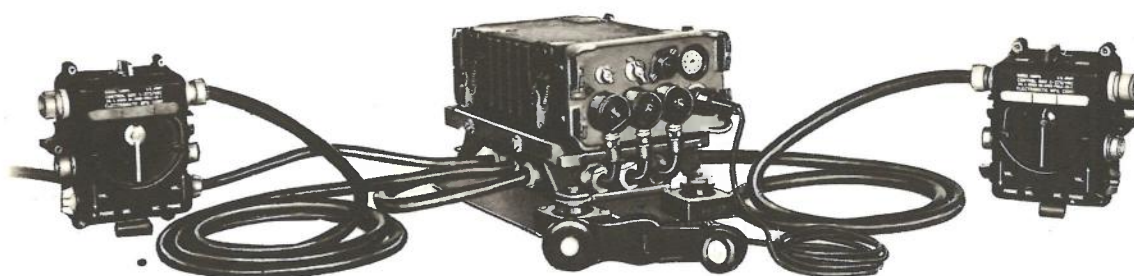
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
<i>For AM-413/G:</i> Harman-Kardon Inc.	New York, N. Y.	NObsr-52352, 22 March 1951	
<i>For AM-413A/G:</i> American Measuring Instrument Co.	Long Island City, N. Y.	NObsr-64107, 3 February 1954 NObsr-64833, 28 January 1955	

INTERCOMMUNICATION SET AN/UIC-1, -1X

1 December 1958

Cognizant Serv: USA FSN: 5830-030-0132

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4301-1/12-2	--	--



AN/UIC-1

FUNCTIONAL DESCRIPTION:

Intercommunication Sets AN/UIC-1 and AN/UIC-1X are vehicular interphone units used to provide two-way communication in inclosed or armored vehicles.

These equipments consist essentially of an audio power amplifier, two interphone control stations, and power components plus accessories, depending upon the type of vehicle in which the system is installed. An additional control box can be added to the system.

The sets provide control of one or two radio sets installed and operated within the vehicle equipped with the system. These radio sets are designed to be employed in conjunction with an integrated series of radio equipment.

Power is obtained from vehicular 12- or 24-volt storage batteries through appropriate power supply components.

Both models of this set are similar, with the exception of the power supply. Intercommunication Set AN/UIC-1 is furnished with a 12-volt power supply; the AN/UIC-1X is furnished with a 24-volt power supply.

TECHNICAL CHARACTERISTICS:*Signal Input Levels:*

- Channel 1: 5 v maximum
- Channel 2: 5 v maximum
- Channel 3: 0.25 v maximum

Signal Output Levels:

- Channel 1: 350 mw minimum
- Channel 2: 350 mw minimum
- Channel 3: 800 mw minimum; 1,800 mw minimum (5 v and .25 v signal into channel)

Input Impedance:

- Channel 1: 1,500 ohms
- Channel 2: 1,500 ohms
- Channel 3: 150 ohms

Output Impedance:

- Channel 1: 600 ohms
- Channel 2: 600 ohms
- Channel 3: 600 ohms

Af Response: Flat to within 4 db for frequencies between 400 and 2,500 cps; sharp cutoff beyond these limits

Distortion Due to Overload: 10% maximum each channel
Crosstalk Between Channels 1 and 2: 50 db down, minimum

Amplifier Power Requirements:

- Plates: 135 v at 35 ma
- Filaments; 12- or 24-v Operation: 12.6 va at 0.6 amp
- Relay: 6.3 v at 166 ma
- Microphone: 6.3 at 30 ma

Operating Temperature Range: -40°F to +149°F.

Power Requirements:

- AN/UIC-1: 3.85 amp at 12 v dc
- AN/UIC-1X: 2.4 amp at 24 v dc

AN/UIC-1, -1X INTERCOMMUNICATION SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Intercommunication Set AN/UIC-1:</i>				
1	AF Amplifier AM-65/GRC	2C449-65.1	4-1/4 x 12-7/8 x 7-7/8	10
2	Control Box C-375/VRC	5830-170-7868	6-13/16 x 7 x 3-1/4	3.25
1	Mounting MT-300/GR	5820-221-5515	3-1/16 x 13 x 8-5/16	10
1	Power Supply PP-281/GRC	3H4497-281.1	4-1/4 x 5-3/4 x 2-15/16	5.5
<i>For Intercommunication Set AN/UIC-1X:</i>				
1	AF Amplifier AM-65/GRC	2C449-65.1	4-1/4 x 12-7/8 x 7-7/8	10
2	Control Box C-375/VRC	5830-170-7868	6-13/16 x 7 x 3-1/4	3.25
1	Mounting MT-300/GR	5820-221-5515	3-1/16 x 13 x 8-5/16	10
1	Power Supply PP-282/GRC	3H4497-282.1	4-1/4 x 5-3/4 x 2-15/16	5.5

REFERENCE DATA AND LITERATURE:

TM 11-2643

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	1.72	71

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET **AN/UIQ-1, -1A, -1B**

1 December 1958

Cognizant Serv: USA FSN: 5830-164-6621

USA

USN

USAF

TYPE CLASS: Std
 STOCK NO: 6C200-1



AN/UIQ-1

FUNCTIONAL DESCRIPTION:

Public Address Sets AN/UIQ-1, AN/UIQ-1A, and AN/UIQ-1B are high-power, transportable, field, sound amplifying and projecting units capable of delivering com-

mands, instructions, and similar matter to distances as far as 2 miles. The units are used to direct landings, command ground operations from aircraft, issue instructions to enemy personnel under combat conditions, and similar applications.

This equipment consists essentially to two amplifiers, which operate in parallel, and loudspeaker equipment with accessories.

There are two general types of this equipment, one is equipped with a megaphone-type horn fitted to the loudspeaker face. This set is carried in watertight carrying cases which will permit the floating of the set ashore during amphibious operations. All of these items are generally similar, differing only in some component details.

Power is derived from the two field power units which are components of these equipments.

TECHNICAL CHARACTERISTICS:

Facilities: Single channel

Type Controls: Volume and power on-off switches

Frequency Response: 800 cps to 5,000 cps

Operating Range: 2 miles

Power Output:

Normal: 175 w ± 2.5 db from 800 to 5,000 cps

Peak: 350 w

Input Impedance: 200 ohms

Power Requirements:

Each Amplifier: 4.5 amp, 115-v 60-cycle, 1-phase ac

Each Power Unit: 2,500 w at 100% pf; 120-v, 60-cycle, 3-wire, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Amplifier Bogen Model MC-225 (AN/UIQ-1)	5830-164-7275	21 x 17-1/2 x 10-3/4	157
	or			
	Amplifier AM-76/UIQ-1 (AN/UIQ-1A)	5830-164-7275	21 x 17-1/2 x 10-3/4	123

MIL-HDBK-161

AN/UIQ-1, -1A, -1B PUBLIC ADDRESS SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Amplifier AM-76A/UIQ-1 (AN/UIQ-1B)	5830-164-7275	21 x 17-1/2 x 10-3/4	123
	Loudspeaker LS-111/UIQ-1 (AN/UIQ-1)	5965-170-5248	16-1/2 x 21 x 22	
	or			
2	Loudspeaker LS-111A/UIQ-1 (AN/UIQ-1A, -1B)	5965-170-5248	16-1/2 x 21 x 22	
	Power Unit PE-75	6115-288-5815	25-1/2 x 19-1/2 x 36	330

REFERENCE DATA AND LITERATURE:

TM 11-2505

SHIPPING DATA

PGKS	VOLUME (Cu Ft)	WEIGHT (Lb)
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PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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PUBLIC ADDRESS SET AN/UIQ-3

1 December 1958

Cognizant Serv: USA FSN: 5830-164-6623

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	Ltd-Std
STOCK NO:	6C199-3	--	--



AN/UIQ-3

FUNCTIONAL DESCRIPTION:

Public Address Set AN/UIQ-3 is a transportable, high-power, long-range, sound amplification and projecting unit used in direct landing, commanding ground operations, issuing orders under combat conditions, and similar operations.

This equipment consists essentially of corrosion-resistant components which are easily assembled, are watertight when container covers are closed, and can be floated ashore during amphibious operations. The set may be operated on power supplied by a field power unit.

The set is replaced by Public Address Set AN/TIP-2.

TECHNICAL CHARACTERISTICS:

Facilities: Single channel

Type Controls:

Power: On-off switch

Microphone: On-off switch

Power Output:

Normal: 175 w, 105 ohms, 800 to 5,000 cps

Peak: 350 w

Operational Range: 2 miles

Frequency Response: 800 to 5,000 cps

Power Requirements:

Rated Output: 440 w; 115-v to 127-v, 60-cycle, 1-phase ac

Peak Output: 520 w; 115-v to 127-v, 60-cycle, 1-phase ac

AN/UIQ-3 PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier MC-225	5830-164-7275	21 x 17-1/2 x 11-3/4	157
1	Microphone T-45			
1	Speaker AA-7	-----	24-1/2 x 18-1/4 x 23-1/4	205
1	Stand	-----	44 high	19

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	15.6	540

PROCUREMENT DATA

PROCURING SERVICE: USA
 SPEC &/or DWG: MIL-P-13108

DESIGN COG: USN, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET **AN/UIQ-6**

3 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS: --

Used by

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Public Address Set AN/UIQ-6 is a portable, high level, high gain, audio amplifying system intended for the transmission of sound. Three of these units forms a portable announcing system designed to be carried by three men. The system may be used on board ship as a semipermanent installation.

Harmonic Distortion: Less than 10%*Power Output:* 50 w*Output Impedance:* 5 ohms*Input Impedance:* 225 ohms*Amplifier Power Consumption:* 290 w*Battery Charger:*

Charging Rate: 4 to 8 amp

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

Power Consumption: 300 w

Power Requirements (Power Source): 12-v dc**TECHNICAL CHARACTERISTICS:***Frequency Range:* 500 cps to 3,000 cps**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, Audio Frequency AM-1329/PIC	-----	9-1/4 x 9-3/8 x 20-1/4	35
1	Battery Assembly BB-260/U	-----	6 x 10 x 21-7/8	48
1	Charger, Battery PP-1390/U	-----	14-1/8 x 26-3/8 x 30	115
1	Mount Reproducer Assembly Stromberg Carlson #43511	-----		
1	Public Address Group AN/ SIA-68	-----	9-1/2 x 14-1/4 x 21-1/2	47
1	Spare Battery Assembly BB- 260/U	-----	6 x 10 x 21-7/8	48
1 Box	Spare parts	-----	9-1/4 x 16 x 18-1/2	72
1 Box	Spare parts	-----	9-1/4 x 16 x 18-1/2	61

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365-0188

MIL-HDBK-161

AN/UIQ-6 PUBLIC ADDRESS SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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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
Stromberg Carlson Co.	Rochester, N. Y.	NObsr-20002	

SOUND RECORDER SET AN/UNH-6

3 December 1958

Cognizant Serv: USA FSN:

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder Set AN/UNH-6 is a general purpose unit designed for airborne requirements. It is lightweight and has a high fidelity dual track. The set functions as a recorder only.

This equipment has single speed only. It has two tracks for simultaneous recording of either voice or data with erasure head for clearing tape ahead of recording.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic*Number of Tracks:* 2*Tape:*

Type: Mylar base

Width: 1/4 in.

Feed: 7.5 in. per sec

Frequency Response: ± 2 db from 50 cps to 10,000 cps*Input Impedance (Each Channel):*

Microphone: 200 ohms

Data: 500 ohms

Recording Time: 45 minutes maximum; continuous*Power Requirements:* 108 to 121-v, 380 to 420 cps, 1-phase ac,

0.32 amp; 25- to 29-v dc, 6.0 amp

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting MT-2013/UNH-6			
1	Recorder, Sound RO-28/ UNH-6			
1	Set of cabling accessories			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/UNH-6 SOUND RECORDER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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AMPEX Corp.

VOICE RECORDING EQUIPMENT **AN/UNH-type**

5 December 1958

Cognizant Serv: USN FSN: 5835-347-9182

PD, PD-1

USA

USN

USAF

TYPE CLASS:
STOCK NO:--
--Used by

--**FUNCTIONAL DESCRIPTION:**

Voice Recording Equipment PD and PD-1 is a complete voice recording equipment for transcribing voice or other audio signals on discs and reproducing the signals from the discs.

The equipment is suitable for transcribing and reproducing cw or voice signals and may be monitored with headphones or reproduced through headphones or a loudspeaker. There are separate transcribing and reproducing amplifiers, so arranged as to permit reproduction of signals from the discs without interfering with the continuity of the recording process.

TECHNICAL CHARACTERISTICS:

Audio Frequency Range: 200 to 3000 cps

Input Impedance: 50, 600, or 5,000 ohms

Output Impedance: 4, 8, or 50 ohms

Transcriber Speed: 22 rpm

Reproducer Speed: 2-3/4 to 33 rpm

Power Output: 10 w (max)

Power Requirements: 110/115/120-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For PD:</i>				
1	Cabinet 10106	-----	16-3/4 x 20-1/4 x 37	96
1	Rectifier Power Unit 20150	-----	8 x 8-7/8 x 15	39
1	Transcriber-Reproducer Amplifier 50110	-----	11 x 16-1/4 x 20-1/8	65
1	Desk Microphone 51034	-----	4-1/4 x 5-3/4 x 11	3.5
1	Reproducer Unit 67006	-----	6-7/8 x 10 x 12-5/8	16
4	Transcriber-Reproducer Unit 67005	-----	6-7/8 x 10 x 12-1/4	72

MIL-HDBK-161

AN/UNH-type VOICE RECORDING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For PD-1:</i>				
1	Cabinet 10106	-----	16-3/4 x 20-1/4 x 37	96
1	Rectifier Power Unit 20150-A	-----	8 x 8-7/8 x 15	39
1	Stepback-Bracke Control 23345	-----	1-3/4 x 6 x 7-3/4	4.5
1	Transcriber-Reproducer Amplifier 50110-A	-----	11 x 16-1/4 x 20-1/8	65
1	Desk Microphone 51049	-----	4-1/4 x 5 x 11	3.5
1	Variable Speed Reproducer Unit 67002	-----	8-7/8 x 10 x 12-5/8	18
4	Transcriber-Reproducer Unit 67005-A	-----	6-7/8 x 10 x 12-1/4	75

REFERENCE DATA AND LITERATURE:

PD: NAVSHIPS 95203
PD-1: NAVSHIPS 95204

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
PD 3	---	658
PD-1 3	---	650

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Soundsciber Corp.	New Haven, Conn.	PD-NXs-3288; PD-1-NXss- 15306	\$600.00

VOICE RECORDING EQUIPMENT **AN/UNH-type**

5 December 1958

Cognizant Serv: USN FSN:

PE, PE-1

USA USN USAF

TYPE CLASS: -- Used by --
 STOCK NO: -- --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Voice Recording Equipment PE() is a complete voice recording equipment for transcribing voice or other audio signals on discs and for reproducing the signals from the discs.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps
Input Impedance: 500 to 5000 ohms
Transcriber Speed: 185 rpm
Reproducer Speed: 78 or 33-1/3 rpm
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For PE:</i>				
1	Cabinet 10122	-----	24-1/2 x 25-5/8 x 50-1/2	
1	Power Control Unit 23316			
1	Signal Input Panel 23317			
2	Transcriber-Reproducer Unit 67007			
1	Microphone			
<i>For PE-1:</i>				
1	Cabinet 10122	-----	24-1/2 x 25-5/8 x 50-1/2	
1	Power Control Unit 23316			
1	Signal Input Panel 23117			
2	Transcriber-Reproducer Unit 67010			
1	Desk Microphone 51051			

REFERENCE DATA AND LITERATURE:

PE: NAVSHIPS 95205
 PE-1: NAVSHIPS 96206

MIL-HDBK-161

AN/UNH-type VOICE RECORDING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
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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
Memovox Inc.	Beverly Hills, Calif.	NXs 3289 (PE); NXss 15073 (PE-1)	

SOUND REPRODUCING EQUIPMENT **AN/UNH-type**

5 December 1958

Cognizant Serv: USN FSN:

PH

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Reproducing Equipment PH is a complete sound reproducing equipment for reproducing voice or other audio signals at variable speeds from discs recorded on Sound Recording Equipment PJ, Voice Recording Equipment PD and PD-1, or other similar constant angular velocity recording equipment.

The equipment is suitable for reproducing cw or voice

signals. Headphones or the built-in loudspeaker may be used for listening.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps

Output Impedance: 600 ohms

Reproducer Speed: 33 rpm

Power Requirements: 0.51 amp, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Sound Reproducing Equipment PH (Equipment consists of only one major component.)	-----	11-1/2 x 13-1/4 x 18-1/2	150

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95208

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/UNH-type SOUND REPRODUCING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Soundcriber Corp.	New Haven, Conn.	NXss-16639	

SOUND RECORDING EQUIPMENT **AN/UNH-type**

5 December 1958

Cognizant Serv: USN FSN:

PJ

USA

USN

USAF

TYPE CLASS: --

Used by --

STOCK NO: --

(No Illustration Available)**FUNCTIONAL DESCRIPTION:**

Sound Recording Equipment PJ is a complete voice recording equipment for transcribing voice or other audio signals on discs and reproducing the signals from the discs.

The equipment is suitable for recording and reproducing

voice or cw signals. The signals may be monitored with headphones during the recording operations.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps

Power Requirements: 55 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transcriber-Reproducer Unit	-----	11 x 11-1/2 x 18-1/2	68
	67009			
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95209

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/UNH-type SOUND RECORDING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Soundscriber Corp.	New Haven, Conn.	NXss-16639	

SOUND RECORDING SET AN/UNQ-1, -1A, -1B

3 December 1958

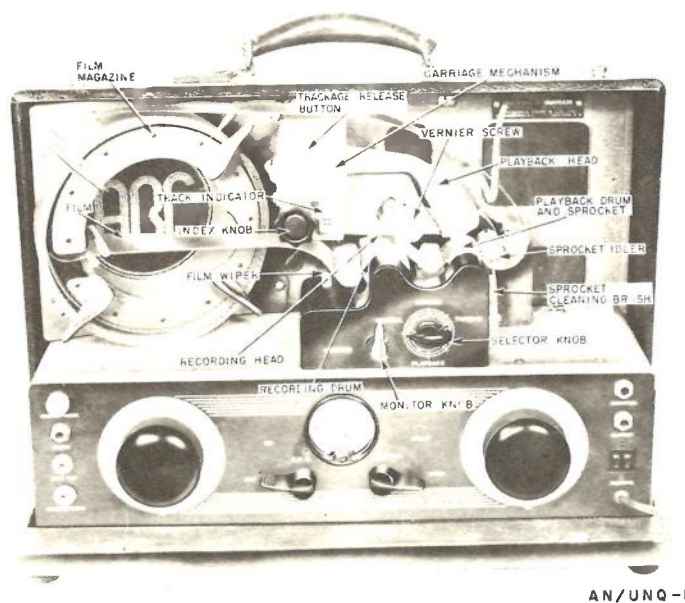
Cognizant Serv: USA FSN: 5835-241-7574

USA

USN

USAF

TYPE CLASS:	AN/UNQ-1: L/Std	Used by	--
	AN/UNQ-1A: L/Std		
	AN/UNQ-1B: L/Std		
STOCK NO:	6C274-1 (identical for all models)	--	--



AN/UNQ-1

FUNCTIONAL DESCRIPTION:

Sound Recording Sets AN/UNQ-1, AN/UNQ-1A, and AN/UNQ-1B are portable, compact, self-contained recording and playback units. Recordings are made on nonflammable, cellulose-acetate, 35-millimeter film. At normal operating speed, continuous recording is possible for approximately 1-1/2 hours. The recording may be played back immediately.

These equipments provide for the use of a booster transformer or amplifier; to further increase amplification, numerous loudspeakers or earphones may be connected to the recording set. The sets can be adapted for use on 110-volt direct current.

The various models of this equipment differ in some of their components; functionally, however, they are similar.

TECHNICAL CHARACTERISTICS:

Type: Electromechanical

Frequency Response: 150 cps to 4,000 cps at 60 fpm; narrower range at 40 fpm

Operating Period:

40 Fpm: 2 hr 23 minutes

60 Fpm: 1-1/2 hr

Power Output (Amplifier): 3 w

Gain:

Microphone Terminal: 114 db

Radio Input Terminal: 85 db

Earphone Impedance: 40,000 ohms at 500 cps (AN/UNQ-1, -1A); 600 ohms (AN/UNQ-1B)

Recording Head:

Type: Balanced-armature, magnetic

Impedance: 6 ohms at 1,000 cps

Frequency Range: 150 to 3,500 cps

Playback Head:

Type: High-impedance, magnetic

Impedance: 10,000 ohms at 1,000 cps

Frequency Range: 150 to 3,500 cps

Power Requirements: 125 w to 130 w; 110-v, 50- to 60-cycle 1-phase ac

AN/UNQ-1, -1A, -1B SOUND RECORDING SET**MAJOR COMPONENTS**

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
<i>For Sound Recording Set AN/UNQ-1, -1A:</i>				
1	Sound Recording Set AN/ UNQ-1 and AN/UNQ-1A including:	6C274-1 FSN: 5835-241-7574	9-7/8 x 18-1/2 x 13	53
1	Headset, electrical (40,000- ohm)	2B932 FSN: 5965-184-0849	1-1/2 x 7-1/2 x 7-1/2	.5
1	Microphone, magnetic (100,000-ohm)	2B1746-3 FSN: 5965-162-8267	5 x 7 x 9-1/2	2.35
1	Stylus, recording, sound	6C93-1 FSN: 7490-241-2678		
1	Stylus, reproducing	6C93 FSN: 5835-241-2676		
<i>For Sound Recording Set AN/UNQ-1B:</i>				
1	Sound Recording Set AN/ UNQ-1B including:	6C274-1 FNS: 5835-241-7574	9-7/8 x 18-1/2 x 13	53
1	Headset, electrical (600- ohm)	2B954-1 FSN: 5965-128-8756	1-1/2 x 7-1/2 x 7-1/2	.5
1	Microphone, dynamic (35- to 50-ohm)	2B1749 FSN: 5965-164-7318	5 x 7 x 9-1/2	2.35
1	Stylus, recording, sound	6C295-3 FSN: 7490-164-7254		
1	Stylus, reproducing	6C93 FSN: 5835-241-2676		

REFERENCE DATA AND LITERATURE:

TM 11-2522 (AN/UNQ-1, -1A)

TM 11-5501 (AN/UNQ-1B)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	14.2	192

SOUND RECORDING SET **AN/UNQ-1, -1A, -1B**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Amertype Recordograph Corp.	New York, N. Y.		

RECORDER-REPRODUCER SET AN/UNQ-2

3 December 1958

Cognizant Serv: USN FSN:

USA

USN

USAF

TYPE CLASS:
STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Recorder-Reproducer Set AN/UNQ-2 is an electromagnetic wire tape apparatus designed to record and reproduce sound signals.
This equipment is intended for general ground-type installations. Thirty spools of recording wire are included as part of the set.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Recording Medium:
Subject Recorded: Sound signals
Operation: Recording and reproducing

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set AN/UNQ-2			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

MIL-HDBK-161

AN/UNQ-2 RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
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General Electric Co.