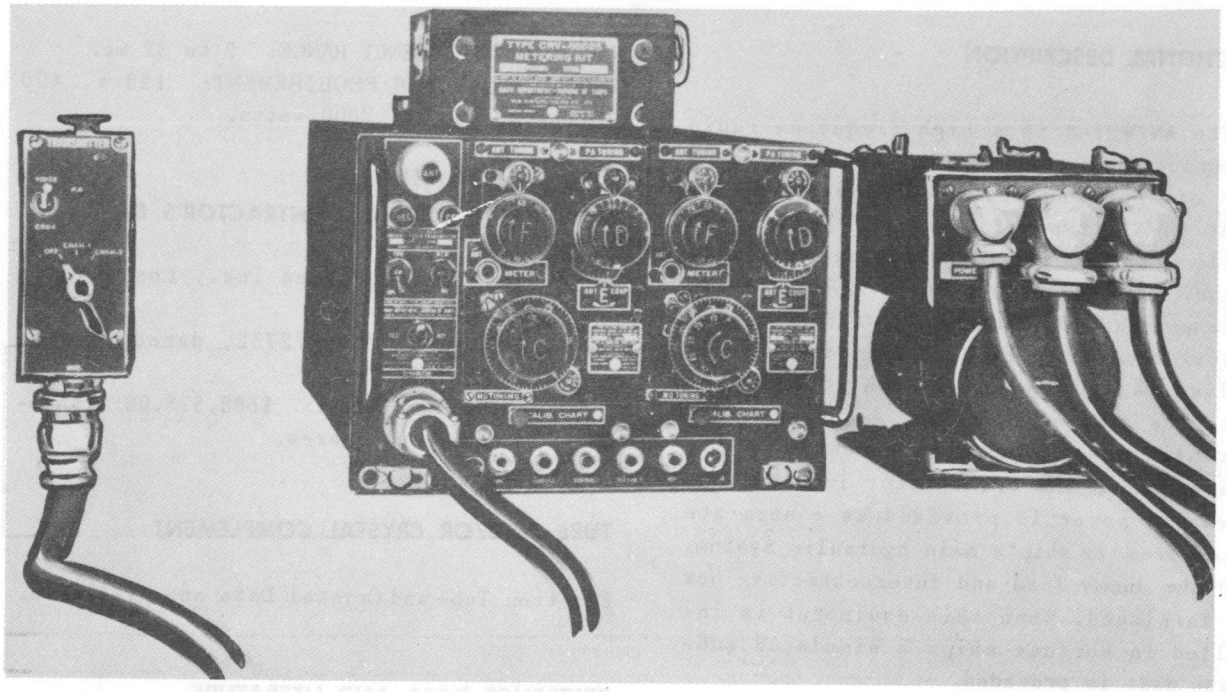
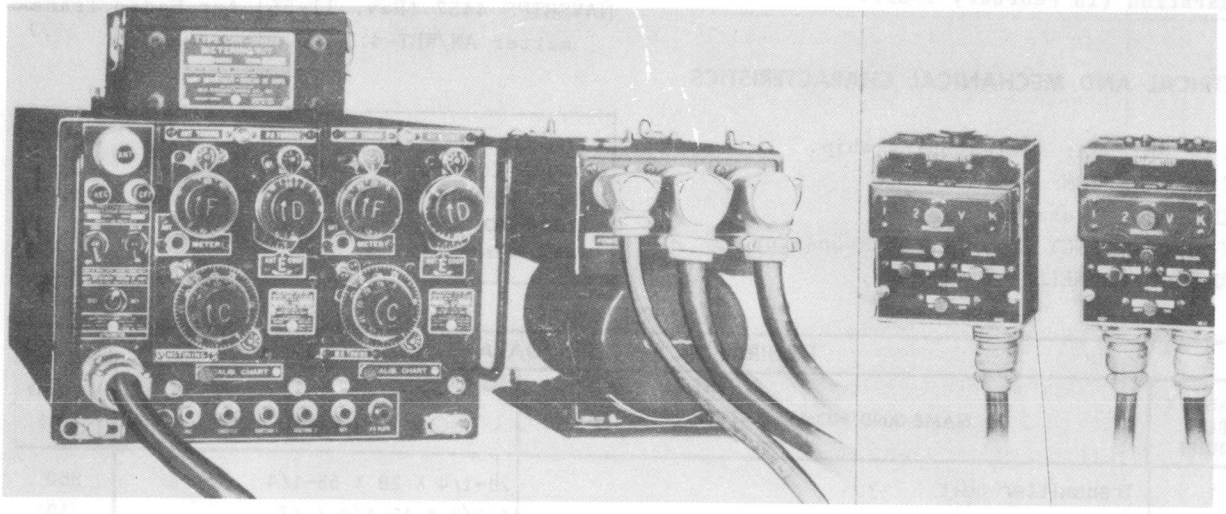
AIRCRAFT RADIO EQUIPMENT



Single Place Control



Dual Place Control
Aircraft Radio Equipment ATB

FUNCTIONAL DESCRIPTION

The ATB is supplied in two forms, for single place and for dual place operation. It is of compact design and is intended for either CW, MCW, or Voice Transmission.

No field changes in effect at time of preparation (31 October 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 2.3 to 9.05 mc.
TYPE EMISSION: CW, MCW, Voice.
POWER OUTPUT
CW: 3.5 W.
MCW: 2.8 W (carrier).
VOICE: 2.8 W (carrier).

Radio-Transmitters

ATB AIRCRAFT RADIO EQUIPMENT

DYNAMOTOR
INPUT: 27.5 v DC.
OUTPUT: 425 v DC, 0.320 amp.

MANUFACTURER'S OR CONTRACTOR'S DATA

RCA Victor Division Radio Corporation of America, Camden, New Jersey.
Contract NOs-98559, dated 23 February 1942.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 1625 (2) 815 (2) 6N7
(1) VR150-30
Total Tubes: (6)

REFERENCE DATA AND LITERATURE

NA 08-5Q-51: Technical Manual for Aircraft Radio Equipment ATB.

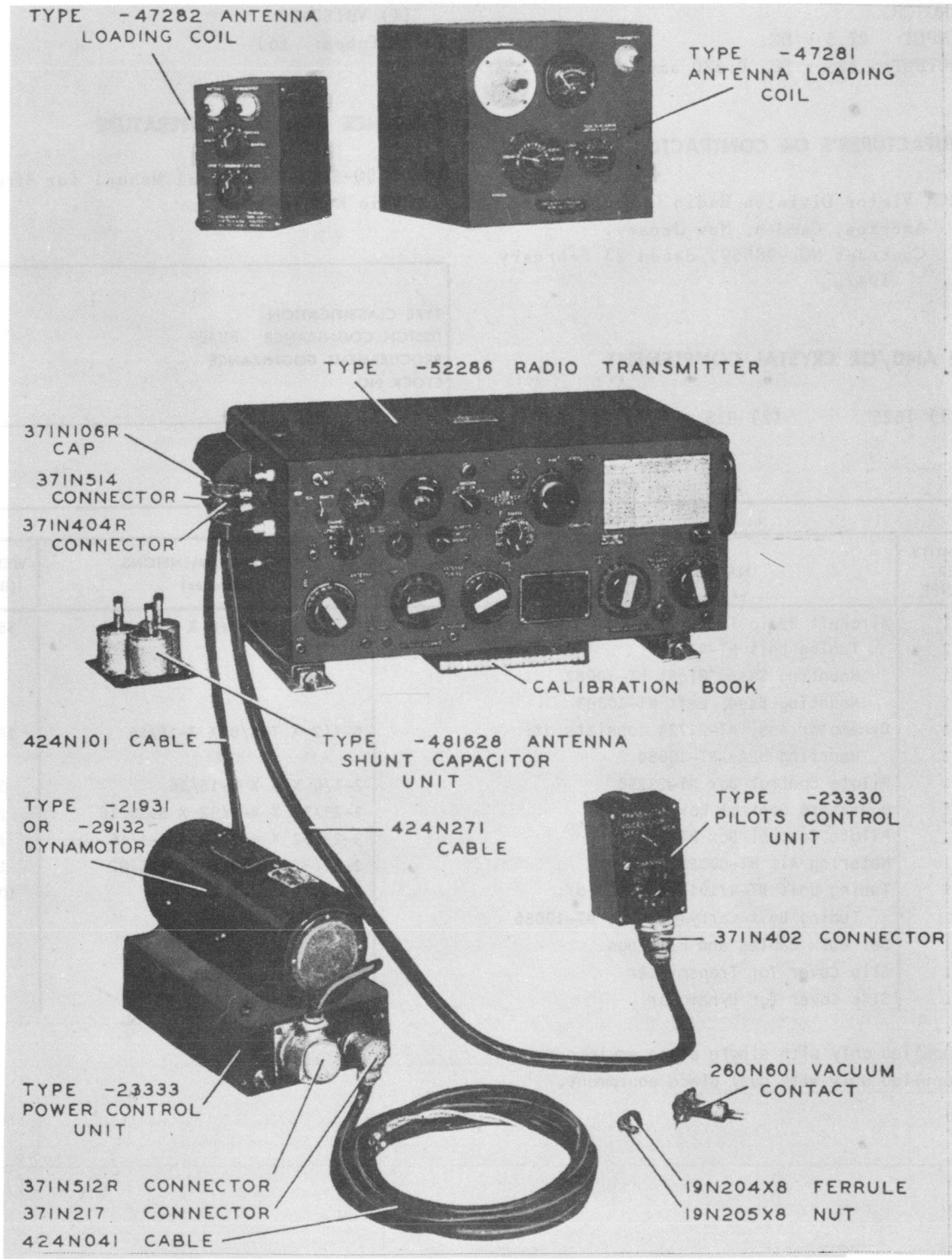
TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Aircraft Radio Transmitter NT-52233 consists of:	7-3/16 X 10-3/8 X 15-1/2	35.0
2	Tuning Unit NT-47192		
1	Mounting Base, Right NT-10082		
1	Mounting Base, Left NT-10083		
1	Dynamotor Assy NT-21724 consists of:	5-1/2 X 7-5/8 X 7-15/16	14.3
1	Mounting Base NT-10084		
* 1	Pilots Control Box NT-23258	2-1/4 X 3 X 5-15/16	0.7
** 1	Operators Control Box NT-23313	3-23/32 X 4-9/32 X 5-15/16	2.2
** 1	Pilots Control Box NT-23314	3-23/32 X 4-9/32 X 6-1/16	1.8
1	Metering Kit NT-60025	2-27/32 X 5-7/8 X 7-25/32	1.9
1	Tuning Unit NT-47191 consists of:	6 X 7-13/16 X 12-3/16	10.3
1	Tuning Unit Carrying Case NT-10085		
1	Set Bulk Cables and Fittings		
1	Slip Cover for Transmitter		
1	Slip Cover for Dynamotor		

* Supplied only with single place equipment.
** Supplied only with dual place equipment.

AIRCRAFT RADIO TRANSMITTING EQUIPMENT



Aircraft Radio Transmitting Equipment Model ATC

Radio-Transmitters

ATC AIRCRAFT RADIO TRANSMITTING EQUIPMENT

FUNCTIONAL DESCRIPTION

The Navy Model ATC is designed for installation in aircraft for the transmission of voice, continuous-wave, and modulated continuous-wave in the 200 to 1500 kilocycle and 2000 to 18,100 kilocycle frequency range. It has provisions to permit transmission on any one of eleven preset frequencies by means of an electrically controlled autotune system and 30 words per minute keying speeds may be used when operating with CW and MCW emission without objectionable chirp or distortion of the length of the keyed characters. It will operate at full power up to 25,000 feet altitude and at one-half power up to altitudes of 40,000 feet. The power is reduced to one-half power automatically by a pressure operated relay when an altitude of 25,000 feet is reached.

No field changes in effect at time of preparation (4 August 1958).

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Microphone, Carbon or Dynamic, (1) Telegraph Key, (1) Headphones, (1) Throttle Switch, (1) Microphone Cord.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 200 to 1500 kc and 2000 to 18100 kc.
POWER OUTPUT: 90 W max.
EMISSION: A1, A2, A3.
MODULATION CAPABILITY: 90%.
MICROPHONE INPUT (FOR 90% MODULATION)
DYNAMIC TYPE: 16 mv.
CARBON TYPE: 1.45 v.
AF RESPONSE: Uniform within 3 db from 300 to 4000 cps.
AF DISTORTION: Less than 15% rms at 1000 cps and 90% modulation.
POWER REQUIREMENTS: 28 v DC, 36 amps.

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Co, Cedar Rapids, Ia.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 12SJ7	(3) 1625	(2) 6V6GTY
(2) 811	(1) 813	(1) 837

Total Tubes: (12)

(1) NT-40127

Total Crystals: (1)

REFERENCE DATA AND LITERATURE

Technical Manual for Model ATC Aircraft Radio Transmitting Equipment.

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

EQUIPMENT SUPPLIED DATA

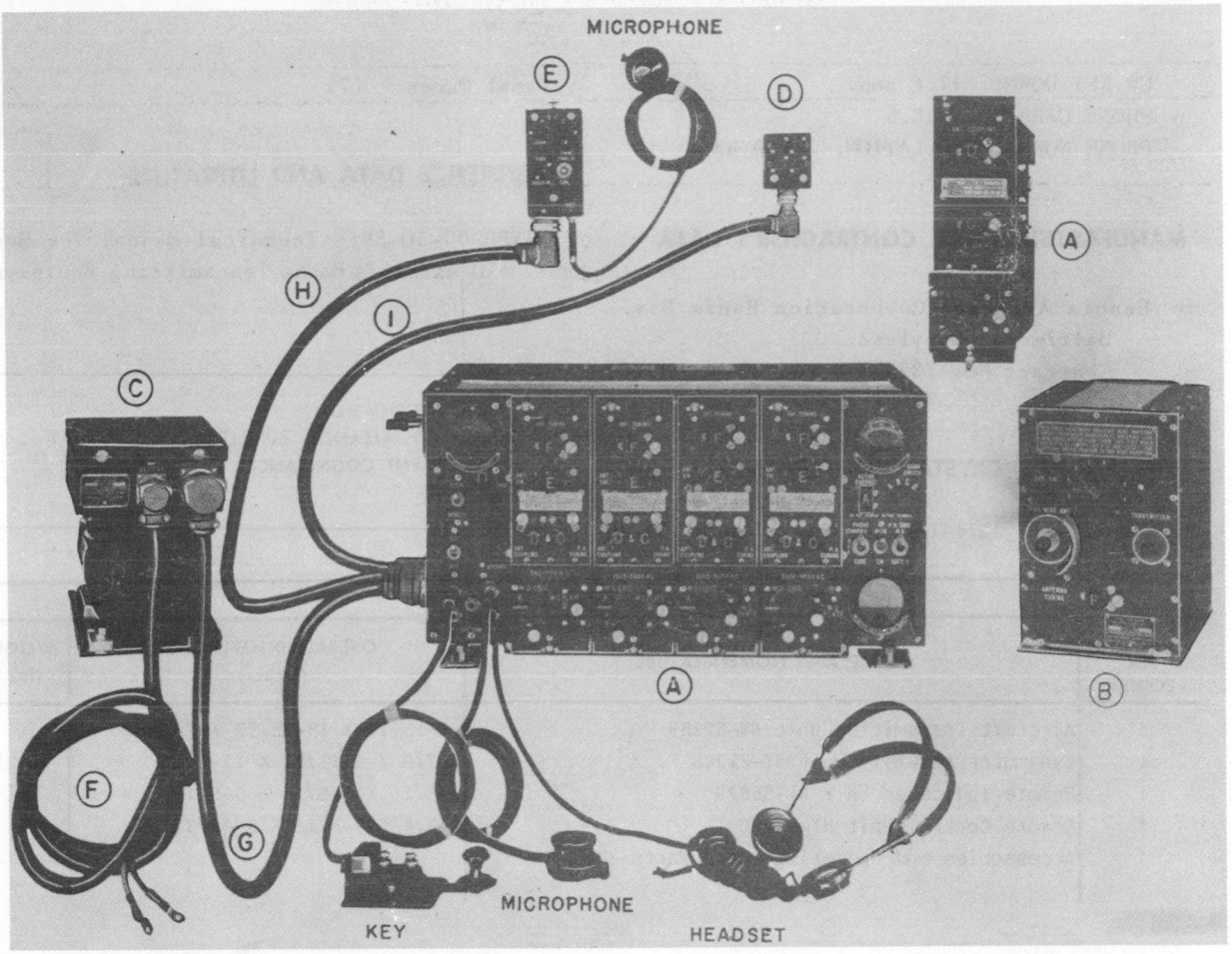
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Aircraft Radio Transmitter NT-52286	10-3/4 X 12-7/8 X 23-9/16	66.0
1	Power Control Unit NT-23333	3-1/4 X 6-7/8 X 11-7/8	8.5
1	Dynamotor NT-21931 or	5 dia X 12	21.5
	NT-21932	5 dia X 10-1/4	18.5

AIRCRAFT RADIO TRANSMITTING EQUIPMENT

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Pilot's Control Unit NT-23330	3-3/8 X 3-11/16 X 6-1/4	1.4
1	Antenna Loading Coil NT-47281 (200 to 600 kc)	9-3/8 X 10 X 11-3/4	9.7
1	Antenna Loading Coil NT-47282 (500 to 1500 kc)	4 X 7 X 7-3/4	3.4
1	Antenna Shunt Capacitor NT-481628	3-15/16 X 4-1/8 X 5	1.6
1	Calibrations Oscillator Crystal Unit NT-40127		0.1
1	Cable, 10 Conductor		
1	Cable, 27 Conductor		
1	Cable, 4 Conductor		
1	Set of Accessories		

AIRCRAFT RADIO TRANSMITTING EQUIP.



Aircraft Radio Transmitting Equipment

FUNCTIONAL DESCRIPTION

The ATD is a low power transmitter designed for use in single or double cockpit aircraft. The transmitter is designed for local or remote control operation. It is also sufficiently flexible for use on larger ships. All power for the equipment is supplied by the plane's primary battery supply.

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

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Power Supply; (1) Receiver; (2) Carbon Microphones, or (2) Mask Type Carbon Microphones, or (2) Mask Type Magnetic Microphones, or (2) Throat Microphones; (1) Telegraph Key; (1) Fixed Antenna; (1) Headset.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 540 to 9050 kc.
EMISSION: A1, A2, A3.
POWER OUTPUT: 50 W (A1), 40 W (A2, A3).
POWER INPUT: 28 v DC, 19 amp.
OPERATING CONDITION
PHONE STANDBY (DYNAMOTOR STOPPED): 5.0 amp.
CW TUNE-OPERATE SWITCH IN TUNE POSITION 11.0 amp.
CW KEY UP: 9.3 amp.

ATD AIRCRAFT RADIO TRANSMITTING EQUIP.

CW KEY DOWN: 17.6 amp.
PHONE CARRIER: 18.5
PHONE NORMAL MODULATION: 19.0 amp.

Total Tubes: (7)

MANUFACTURER'S OR CONTRACTOR'S DATA

B Bendix Aviation Corporation Radio Div.,
Baltimore, Maryland.
Contract NOs-73237, dated 20 May 1940.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 6L6G (1) 12SL7GT (1) 814 (1) VR150-30

REFERENCE DATA AND LITERATURE

NAVER 08-5Q-39: Technical Manual for Model ATD Aircraft Radio Transmitting Equipment.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

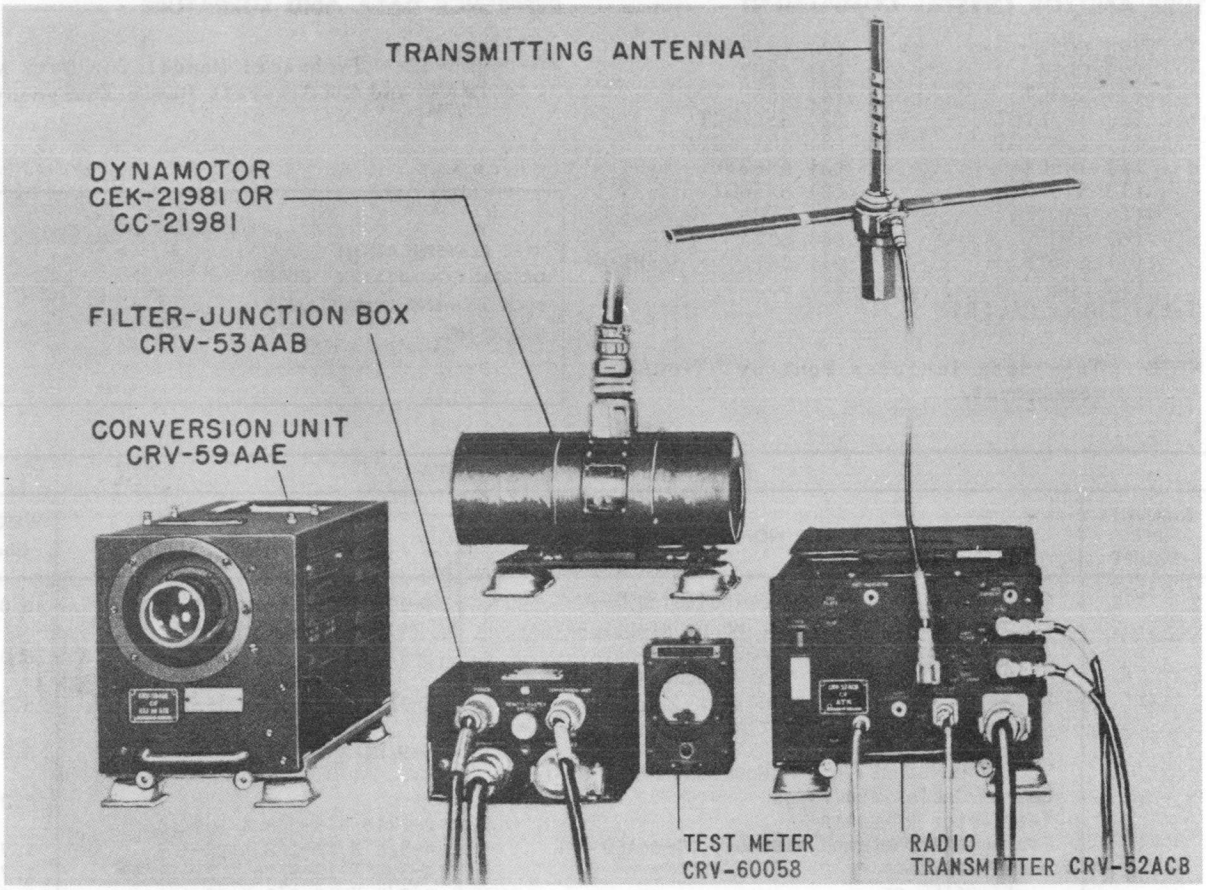
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Aircraft Transmitter Unit NT-52253	10-15/16 X 13-25/32 X 23-3/8	70
1	Dynamotor Assembly Unit NT-21748	6-7/8 X 8-13/32 X 11-7/16	24.1
1	Remote Indicator Unit NT-55079	2-3/16 X 2-5/16 X 3-5/16	0.75
1	Remote Control Unit NT-23280	2-3/4 X 3-1/16 X 5-27/32	1.06
1	Accessories and Operating Spare Parts		

April 1958

AIRCRAFT RADIO TRANSMITTING EQUIPMENT

ATK



Aircraft Radio Transmitting Equipment ATK

FUNCTIONAL DESCRIPTION

The Model ATK is an airborne radio television equipment designed to transmit scenes visible from the aircraft in which it is installed to an aircraft utilizing the Model ARK Receiver. The ATK Transmitter and ARK Receiver comprise a complete radio television system for use in and by aircraft. The Model ATK may be adjusted to operate on any one of ten different frequency channels, and up to ten separate sets of equipments may be operated simultaneously within the same general area. Under favorable operating conditions, scenes clearly visible at the transmitting aircraft may be reproduced in the receiving aircraft at a distance of at least ten miles.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 264 to 372 mc.
CHANNELS: 10.
POWER OUTPUT: 30 W.
EMISSION: Pulse.
OUTPUT IMPEDANCE: 70 ohms.
POWER REQUIREMENTS: 27 to 31 v DC, 25 amps, 29 amps with monitor unit.
ANTENNA DATA
TYPE: Ground plane.
INPUT IMPEDANCE: 50 ohms.

MANUFACTURER'S OR CONTRACTOR'S DATA

Radio Corporation of America, Victor Division, Camden, N. J.
Contract NXs-6722.

ATK

AIRCRAFT RADIO TRANSMITTING EQUIPMENT

April 1958

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 0C3W	(2) 6J6WA
(2) 0D3W	(2) 6SH7
(1) 1B3GT	(4) 6L6
(2) 12SL7GT	(2) 6SL7WGT
(11) 12SN7GT	(2) 6SN7WGTA
(1) 1850A	(1) 6V6GTY
(1) 5Y3WGTB	(2) 6X5WGT
(5) 6AC7WA	(1) 7CP1
(6) 6AG5	(4) 8025
(1) 6AG7Y	(1) 807
(1) 6H6	(1) 955

Total Tubes: (55)

NOTE: Tube data includes Monitor NT-60ABK complement.

REFERENCE DATA AND LITERATURE

AN-08-45-12: Technical Manual for Navy Models ATK and ARK Aircraft Radio Equipments.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

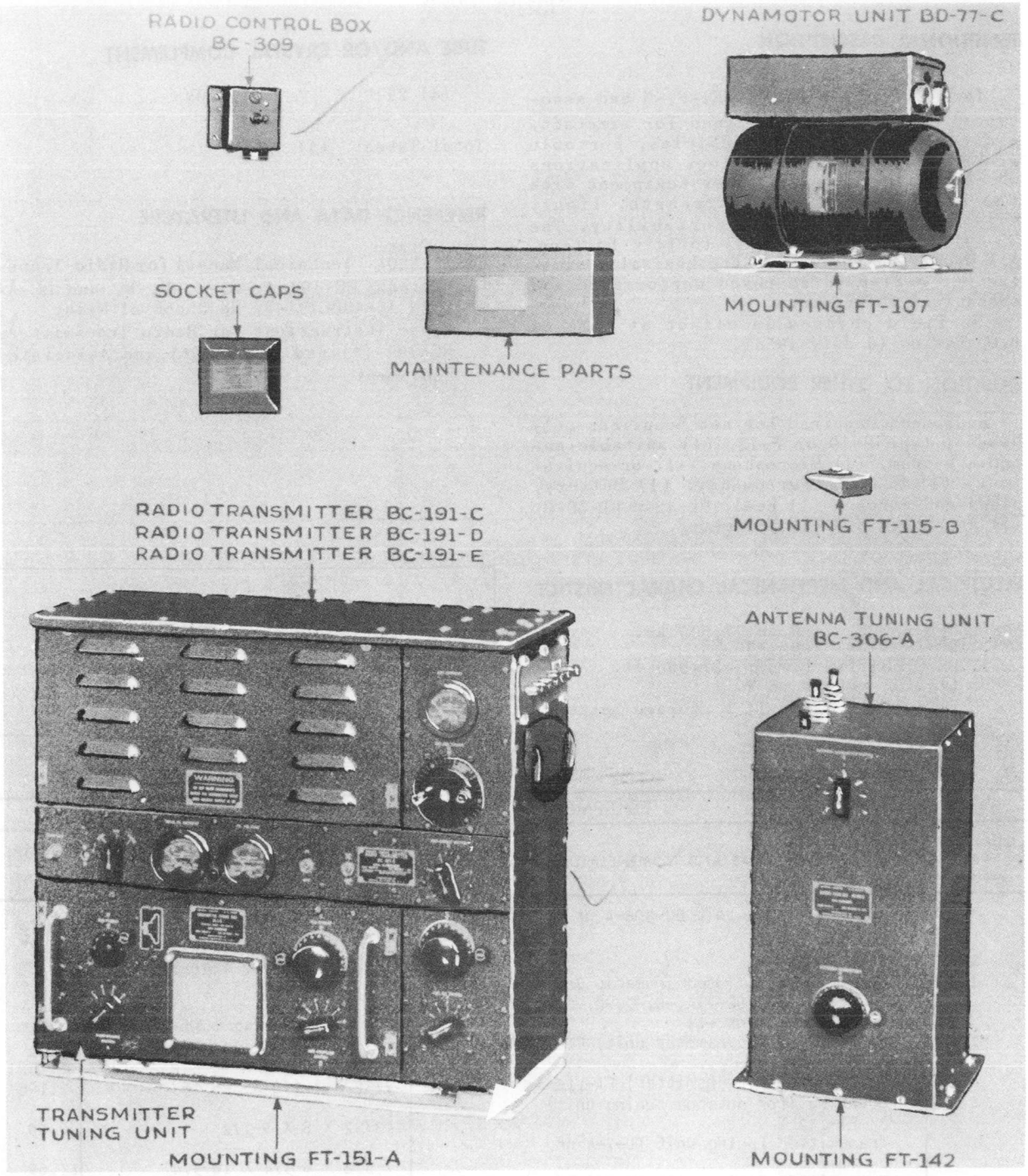
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Conversion Unit NT-59AAE including: conversion Unit Shock Mount NT-10168	9-13/32 X 11-3/4 X 23-15/32	36.0
1	Radio Transmitter NT-52ACB including: Radio Transmitter Shock Mount NT-10167	9-31/32 X 12-13/64 X 18-1/32	26.0
1	Dynamotor NT-21981 including: Dynamotor Shock Mount NT-10166	6-1/2 X 9-9/32 X 13-13/32	26.25
1	Filter-Junction Box NT-53AAB including: Filter-Junction Box Mounting Plate NT-10174	5-9/64 X 7-27/32 X 8-33/64	8.0
1	Set of Cables and Plugs		14.0
1*	Test Meter NT-60058	2-5/16 X 3-5/8 X 5-7/16	
1†	Transmitter Antenna Assembly NT-66AED or	4-3/4 X 13-1/8 X 22-3/8	1.7
	NT-66AEE or	4-3/4 X 12-9/16 X 21-13/32	1.7
	NT-66AEF or	4-3/4 X 12-5/8 X 20-1/2	1.7
	NT-66AEG or	4-3/4 X 12-5/16 X 19-11/16	1.7
	NT-66AEH or	4-3/4 X 12-7/16 X 18-15/16	1.7
	NT-66AFX or	5-5/8 X 13-1/16 X 22-3/8	2.2
	NT-66AFY or	5-3/8 X 12-9/16 X 21-7/16	2.1
	NT-66AFZ or	5-1/8 X 12-1/16 X 20-1/2	2.1
	NT-66AGA or	4-15/16 X 11-9/16 X 19-11/16	2.0
	NT-66AGB or	4-3/4 X 11-1/4 X 18-15/16	2.0
	NT-66AEJ or	4-9/16 X 11 X 18-1/4	1.9
	NT-66AEK or	4-3/8 X 10-1/2 X 17-9/16	1.8
	NT-66AEL or	4-1/4 X 9-31/32 X 17	1.8
	NT-66AEM or	4-1/8 X 9-23/32 X 16-13/32	1.8
	NT-66AEN	4 X 9-17/32 X 15-7/8	1.8
1°	Minitor Unit NT-60ABK including: Monitor Unit Shock Mount NT-10169 Monitor Unit Light Shield NT-10175	8-21/32 X 10-17/32 X 19-5/8	31.25

NOTE: *-Indicates not supplied with every equipment.
†-Indicates antenna supplied corresponds to frequency channel to which Transmitter is adjusted.
°-Indicates may be supplied with the ATK.

RADIO TRANSMITTERS

BC-191,191-A, -B,-C,-D,-E,-F,-N



Radio Transmitter BC-191-(*) and Associated Equipment

RADIO TRANSMITTERS

FUNCTIONAL DESCRIPTION

The BC-191-A,-B,-C,-D,-E,-F,-N and associated equipment are designed for aircraft, armored cars and other vehicles, portable ground stations, and various applications which require a medium power equipment with the characteristics of strength, light, weight, flexibility and portability. The BC-191 series employs a 12 to 14 v battery. All models in the series are basically similar but differ in improved performance and mechanical refinements.

No field changes in effect at time of preparation (3 July 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Headset type P-19 or P-13, (1) suitable antenna system, (1) Microphone T-17 or equivalent, (1) Hand Telegraph Key, (1) Battery, plugs and cordage (1) Reel, RL-42 or RL-30-B, (1) Wavemeter and (1) Voltmeter.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 150 to 12,500 kc.
EMISSION: Voice, Tone and CW.
ALTITUDE OPERATING LIMIT: 27,000 ft.
POWER OUTPUT: 40 to 75 W.
POWER REQUIRED: 12 to 14 v storage battery, or 110 to 220 v AC.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 211 (1) 10V

Total Tubes: (5)

REFERENCE DATA AND LITERATURE

TM-11-800: Technical Manual for Radio Transmitters BC-191-A,-B,-C,-D,-E, and BC-AA 191; AN 16-40BC191-3; Handbook of Maint nance Instructions for Radio Transmitters BC-191-(*) and BC-375-(*) and Associated Equipment.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE TASSA
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Antenna Tuning Unit BC-306-A or BC-306-B	9-1/8 X 9-1/2 X 17-3/4	9.06
1	Case CS-48	7-7/8 X 7-29/32 X 16-3/4	4.375
1	Dynamotor Unit (Used in Radio Set BC-191-(*) BD-77A(-B,-C,-D,-E,-H,-K -CM,-KM or -L)	7-1/2 X 10-29/32 X 11-1/6	37.25
1	Mounting (for dynamotor unit) FT-107 or FT-107-B	13/16 X 7-1/2 X 10-5/8	1.45
4	Mounting (for transmitter) FT-115-B	7/32 X 2-1/8 X 2-5/16	0.195
1	Mounting (for antenna tuning unit) FT-142	13/32 X 8 X 9-1/2	0.69
1	Transmitter Tuning Unit TU-7-A or TU-7-B	7-5/8 X 8-3/4 X 16-3/4	11.69
1	Transmitter Tuning Unit TU-8-A or TU-8-B	7-5/8 X 8-3/4 X 16-3/4	11.44
1	Transmitter Tuning Unit TU-10-A or TU-10-B	7-5/8 X 8-3/4 X 16-3/4	11.44
1	Transmitter Tuning Unit TU-22-B or TU-26-B	7-5/8 X 8-3/4 X 16-3/4	12.25
1	Set of Spare Parts	2-3/8 X 3-7/8 X 7-7/8	1.75
1	Set of Socket Caps	1-1/2 X 3-1/2 X 3-1/2	0.375

EQUIPMENT SUPPLIED DATA

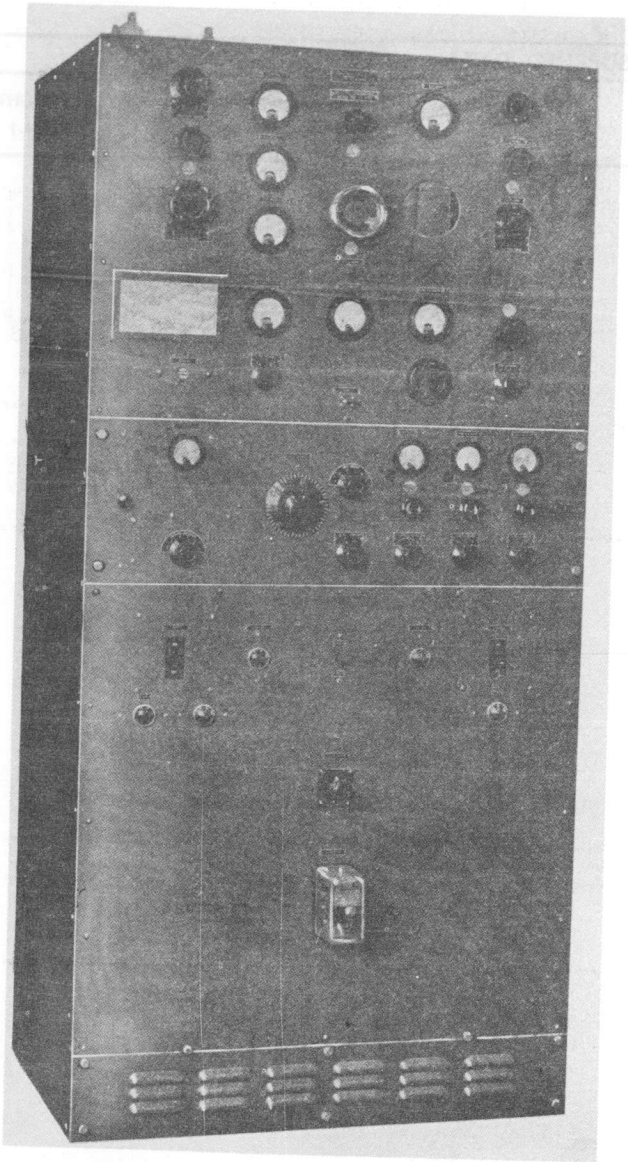
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
4	Set Screw Wrenches		
½ pt	Glyptal Varnish No. 1153		
1	Mounting (for Transmitter FT-151-A)	1-11/32 X 8 X 22	3.75
1	Mounting (for Transmitter) FT-151-B or FT-151-C	1-11/32 X 8 X 22	3.66
		2-7/32 X 3-1/2 X 2-7/32	0.418
1	Radio Control Box BC-309	9-5/16 X 21-21/32 X 23-1/8	51.25
1	Radio Transmitter BC-191-(*)		
1	Transmitter Tuning Unit (Used only with Radio transmitter BC-191-F) TU-3B or TU-3A	7-5/8 X 8-3/4 X 15-3/4	13.
1	Transmitter Tuning Unit TU-5-A or TU-5-B	7-5/8 X 8-3/4 X 16-3/4	14.44
1	Transmitter Tuning Unit TU-6-A or TU-6-B	7-5/8 X 8-3/4 X 16-3/4	12.44

April 1958

RADIO TRANSMITTER

Radio-Transmitters

BC-339,-A,-B,-C,-E thru -H, -J thru -O



Radio Transmitter BC-339-J

FUNCTIONAL DESCRIPTION

The BC-339, -A, -B, -C, -E thru -H, -J thru -0 are high frequency, fixed-station radio telegraph transmitters. The transmitters are designed for continuous-wave and frequency-shift keying transmission between 4 to 26.5 megacycles. An external frequency-shift exciter supplies FSK signals to the transmitter through a coaxial cable connected to the side of the transmitter. The transmitter output is then fed to a doublet or rhombic antenna for transmission.

Provision is made for remotely starting, stopping, and keying the transmitter through a two-wire telephone line at distances as great as 6 mi. Keying speeds up to 300 words per minute may be used.

The equipments may be operated independently as a 1 kw transmitters or may be used as a drivers for Amplifier Groups AN/FRA-2 to form 10 kw transmitting stations.

The BC-339, -A, -B and -C employ a seven position selector switch for selection of any one of six xtals or master oscillator operation. The BC-339-E, -F, -G, -H, -J, -K, -L, -M, -N and -O use a six-position crystal selector switch and in addition, a two-position "master oscillator-crystal" switch. Also, BC-339-E,-F, -G, -H, -J, -K, -L, -M, -N and -O are designed for 50 cps as well as 60 cps operation.

No field changes in effect at time of preparation (14 November 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: For transmitter BC-339-N. (1) Doublet or rhombic antenna, (1) freq-shift exciter for FSK operation.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQ RANGE: 4 to 26.5 mc.
FREQ CONTROL: Xtal or MO.
EMISSION: A1.
KEYING SPEED: 300 wpm.
POWER SOURCE REQUIRED
BC-339, -A, -B, -C, -F: 220 v, 60 cps, 3-ph.
BC-339-E, -G, -H, -J THRU -0: 220 v, 50 or 60 cps, 3 ph.
ANTENNA: Doublet or rhombic type.

TUBE AND/OR CRYSTAL COMPLEMENT

BC-339

(2) 833-A	(1) 813	(5) 837	(1) 5Z3
(2) 866A	(3) 872	(1) 83	

Total Tubes: (15)

BC-339-A,-B,-C

(1) 813	(2) 833-A	(5) 837	(2) 5Z3
(3) 872	(2) 866A		

Total Tubes: (15)

Radio-Transmitters

BC-339,-A,-B,-C,-E thru -H, -J thru -O

RADIO TRANSMITTER

April 1958

BC-339-E THRU-H,-J THRU-M

(2) 833-A	(1) 813	(4) 837	(2) 5Z3
(2) 866A	(1) 6F6GT	(3) 872A	

Total Tubes: (15)

BC-339-N,-O

(2) 833A	(1) 813	(4) 837	(2) 5Z3
(2) 3B28	(1) 6F6GT	(3) 4B32	

Total Tubes: (15)
No Crystals.

REFERENCE DATA AND LITERATURE

TM11-836: Technical Manual for Radio Transmitters BC-339, -A, -B, -C, -E thru -H, -J thru -O.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

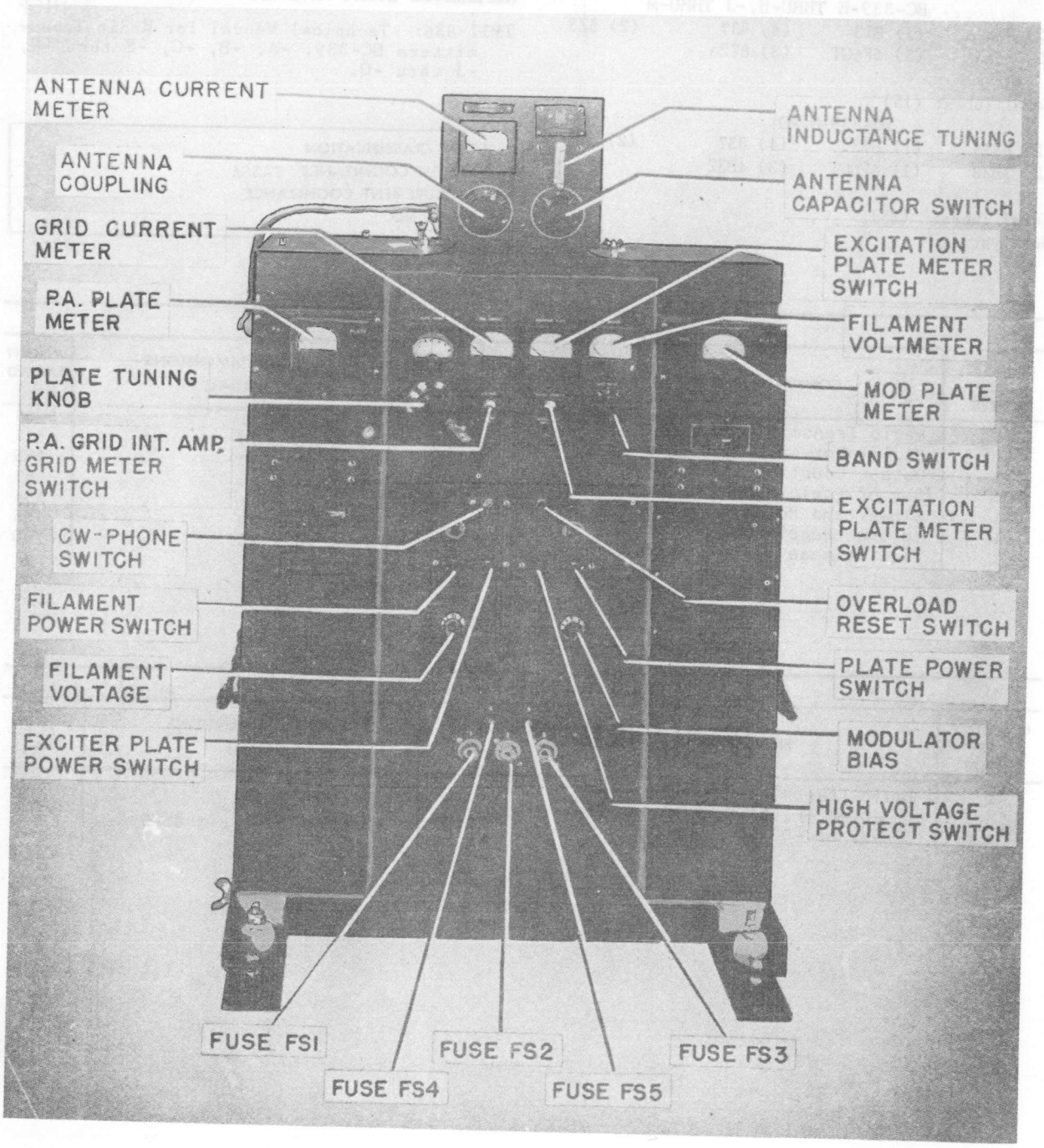
SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Transmitter Cabinet	105	41 x 48 x 84	1400
1	Oscillator-Amplifier Tray	23	25 x 32 x 50	325
1	Output Coupling Assembly	9.4	16 x 23 x 30	155
1	Set of Equip Spares	8.2	26 x 27 x 29	83
1	Blower and Motor Assembly	9.2	21 x 24 x 31	135
1	Voltage Regulator	5.0	15 x 18 x 30	125
1	High Voltage Plate Transformer	10.2	24 x 24 x 30	390

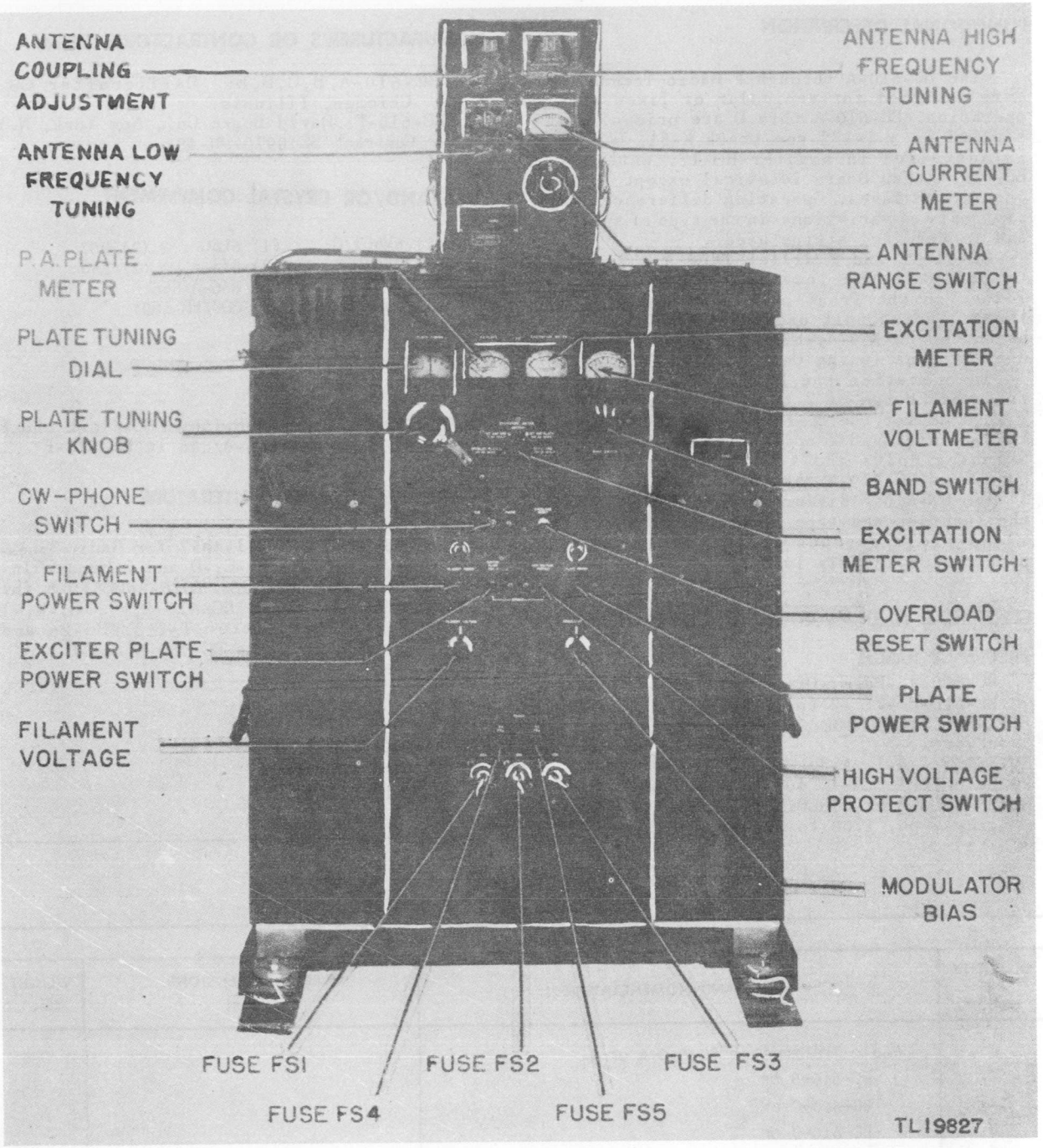
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter BC-339,-A,-B -C,-E,-F,-G,-H,-J,-K,-L,-M- -N, or -O	33-3/8 x 37-1/8 x 81-5/8	

RADIO TRANSMITTER BC-610 -A,-B,-C,-D,-E,-F



Radio Transmitter BC-610-A,-B,-C-D with Antenna Tuning Unit



Radio Transmitter BC-610-E,-F
with Antenna Tuning Unit

Radio Transmitter BC-610,-A-B-C-D-E-F

December 1956

RADIO TRANSMITTER BC-610-A,-B,-C,-D,-E,-F

FUNCTIONAL DESCRIPTION

The BC-610-A through F Radio Transmitters are designed for vehicular or fixed station operation. BC-610-A thru D are primarily installed in a 1-1/2 ton truck K-51, BC-610-E is installed in shelter HO-17. Externally BC-610-A thru D are identical except for the location of fuses. Operating differences consist only of variations in the type of switches and in terminal strips used.

BC-610-E and F differ from A thru D externally in the location and the type of meters on the front panel and the type antenna, tuning unit used, the BC-610-E and F using the BC-939-A while the BC-610-A thru D uses Antenna Tuning Unit BC-729 ( ).

In operation the BC-610-E and F have a frequency range of 2 to 18 mc as compared to 2 to 8 mc for the BC-610-A thru D and uses 8 tuning units and 7 coil units as compared to 6 tuning units and 4 coil units in the equipments BC-610-A thru D.

The BC-610-F differs from the BC-610-E in the function and type of component parts.

No field changes in effect at time of preparation (5 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE
BC-610-A,-B,-C,-D: 2 to 8 mc.
BC-610-E,-F: 2 to 18 mc.
FREQUENCY CONTROL: Master Oscillator or crystal.
EMISSION: A-1, A-3.
POWER OUTPUT: A-1, 400 W; A-3, 300 W.
POWER SOURCE REQUIRED: 115 v, 50 to 60 cps, single ph, 1700 to 2000 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

BC-610-A,B,C,D,E: Hallicrafter Co., Chicago, Illinois.
BC-610-F: David Bogen Co., New York, N.Y. Contract SC10970-PH-48.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 6V6GT/G	(1) 6L6G	(2) 807
(1) 250TH	(2) 5Z3	(2) 2A3
(2) 100TH	(2) 866-A/866	
(3) 003/VR-150	(3) OD3/VR-150*	
(2) 3B28 **		

Total Tubes: (16)

NOTE: *Replaces 003/VR-150 in BC-610-E and F
** Replaces 866-A/866 in BC-610-F

REFERENCE DATA AND LITERATURE

Technical Manual TM-11-4057 for Radio Transmitter BC-610-A,-B,-C,-D and E Repair Instructions; TM11-826, TO16-40BC610-6 for Radio Transmitters BC-610-E,-F,-G,-H,-I and Radio Transmitter T-213/GRC-26 and Antenna Tuning Units BC-939-A and-B.

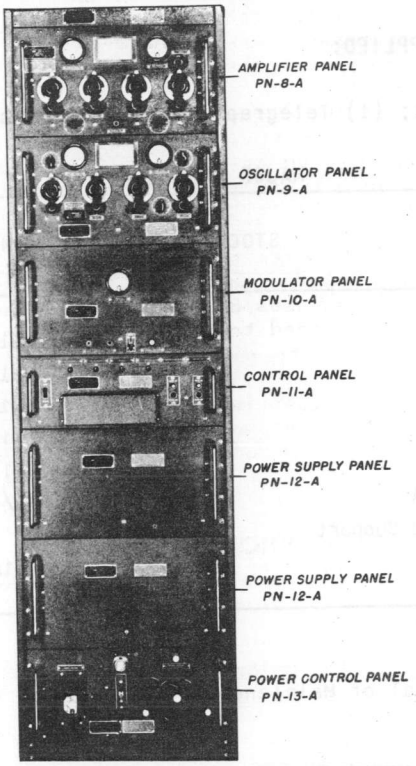
TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter BC-610-A or BC-610-B or BC-610-C or BC-610-D or BC-610-E or BC-610-F		
1	Antenna Unit BC-729-( ) Series or BC-939-A or BC-939-B		

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Bendix Radio Corporation.



Radio Transmitter BC-640

FUNCTIONAL DESCRIPTION:

The BC-640 is designed as a shore station for communicating with 100 to 156 megacycle (MC) aircraft receivers. It may be adapted for local or remote control operation.

No field changes in effect at time of preparation (27 May 1960).

TECHNICAL CHARACTERISTICS:

GROUND RANGE: 11.5 miles.
FREQUENCY RANGE: 105 to 156 mc.
TYPE OF EMISSION: A2, A3.
POWER OUTPUT: 100 mc, 51.5 W; 156 mc, 46 W.
KEYING: 30 wpm.
ANTENNA DATA
TYPE: 1/2 wave vertical.
FEED: 72 ohm coaxial transmission line.

BC-640 RADIO TRANSMITTER

POWER SOURCE REQUIRED: 110-125/220 v ac, 50 to 60 cps, single ph, 900 W.
AIRCRAFT RANGE: 135 miles.

RELATION TO OTHER EQUIPMENT:

The BC-640 is mechanically and electrically interchangeable with the BC-640-A, but differs in that the BC-640 has a ground range of 11.5 miles as compared to 26 miles for the BC-640-A; the aircraft range is 155 miles for the BC-640-A and 135 miles for the BC-640.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Microphone; (1) Headset; (1) Telegraph Key; (2) Crystal units.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Amplifier Panel PN-8-A		10-1/2 x 16-1/4 x 19	41.5
1	Oscillator Panel PN-9-A		10-1/2 x 16-1/4 x 19	41.5
1	Panel Modulator PN-10-A		10-1/2 x 16-1/4 x 19	39
1	Control Panel PN-11-A		6-31/32 x 8-5/8 x 19	27
2	Power Supply ~~Panel~~ PN-12-A		10-1/2 x 14-1/2 x 19	84
1	Power Control Panel PN-13-A		8-3/4 x 9 x 19	40
1	Power Input Transformer and Support			27.5
1	Cabinet CS-88-A		18-1/4 x 21-1/4 x 72-3/8	2105

REFERENCE DATA AND LITERATURE:

16-40BC-640-2: Technical Manual of Maintenance Instructions for Radio Transmitters BC-640-A, BC-640-B.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (5) HK-24-G (3) 1613 (8) 5Z3 (1) 807 (4) 6J5 (2) 811

CRYSTALS: (1) DC-11A/DC-16

SEMI-CONDUCTORS: None used.

SHIPPING DATA

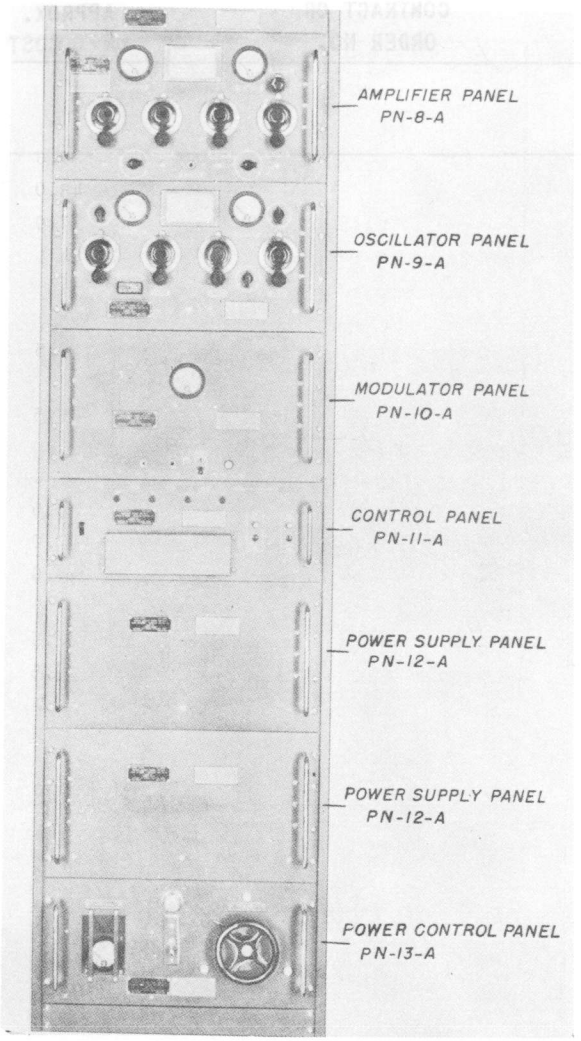
PKGS	VOLUME (CU FT)	WEIGHT (LBS)

PROCUREMENT DATA

PROCURING SERVICE: DESIGN COG: TASSA
SPEC &/OR DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Bendix Radio Corporation Model BC-640	Baltimore, Md.		

RADIO TRANSMITTER BC-640-A,-B



Radio Transmitter BC-640-A

FUNCTIONAL DESCRIPTION

The BC-640-A, -B are used at shore stations for communicating with 100 to 156 mc aircraft receivers. They may be adapted for local or remote control operation. The BC-640-B differs from the BC-640-A in that one meter on the Amplifier Panel PN-8-B of the BC-640-B makes possible thru a 5 position switch the elimination of all but 2 meters. Also the BC-640-B panel have dial locks.

No field changes in effect at time of preparation (2 May 1958).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Microphone, (1) Headset, (1) Telegraph Key, (1) Crystal Unit DC-11-A or (1) Crystal Unit DC-16 and Crystal Adapter M-366-A.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 100 to 156 mc.
EMISSION: A2, A3.
POWER OUTPUT: 51.5 W at 100 mc; 46 W at 156 mc.
MAXIMUM RELIABLE RANGE
  GROUND STATIONS: 26 mi.
  AIRCRAFT: 155 mi at 10,000 ft.
KEYING SPEED: 30 wpm.
POWER REQUIREMENTS: 115 or 230 v, 50 to 60 cps, single ph.
ANTENNA
  TYPE: 1/2 wave vertical antenna.
  FEED: 72 ohm coaxial transmission line.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio Corp, Baltimore, Md.
BC-640-A
  Order 1082-SCL-42.
  Order 2406-SCL-42.
  Order 11960-SCL-42.
BC-640-B
  Order 1658-SGGDL-42.
  Order 9338-SGGDL-43.
  Order 20-MPD-43.

TUBE AND/OR CRYSTAL COMPLEMENT

(5) 3C24	(8) 5Z3	(4) 6J5
(3) 1613	(1) 807	(2) 811

Total Tubes: (23)
(1) DC-11A/DC-16
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

AN16-40BC640-2: Handbook of Maintenance Instructions for Radio Transmitters BC-640-A, BC-640-B.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

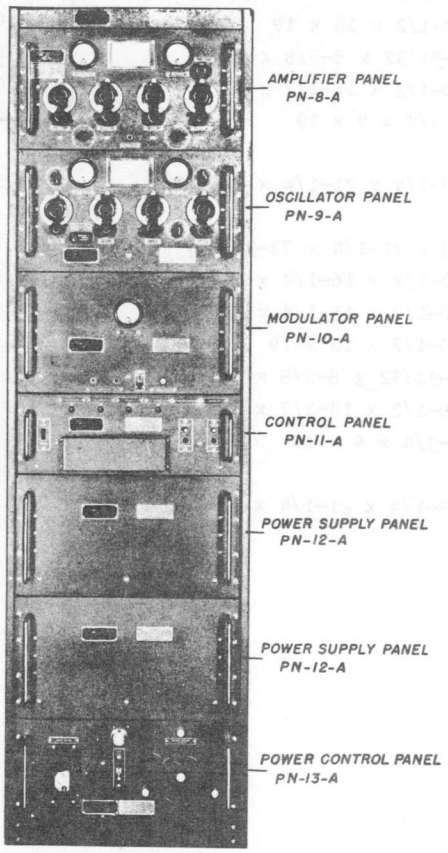
BC-640-A,-B RADIO TRANSMITTER

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	BC-640-A		
1	Radio Transmitter BC-640-A consisting of:	20 x 21-1/4 x 72-3/8	601.5
1	Amplifier Panel PN-8-A	10-1/2 x 16-1/4 x 19	41.5
1	Oscillator Panel PN-9-A	10-1/2 x 16-1/4 x 19	39.0
1	Modulator Panel PN-10-A	10-1/2 x 15 x 19	48.0
1	Control Panel PN-11-A	6-31/32 x 8-5/8 x 19	27.0
2	Power Supply Panel PN-12-A	10-1/2 x 14-1/2 x 19	84.0
1	Power Control Panel PN-13-A	8-3/4 x 9 x 19	40.0
1	Power Input Transformer and Support		27.0
1	Cabinet CS-88-A	18-1/4 x 21-1/4 x 72-3/8	210.5
	BC-640-B		
1	Radio Transmitter BC-640-B consisting of:	20 x 21-1/4 x 72-3/8	601.5
1	Amplifier Panel PN-8-B	10-1/2 x 16-1/4 x 19	41.5
1	Oscillator Panel PN-9-B	10-1/2 x 16-1/4 x 19	39.0
1	Modulator Panel PN-10-B	10-1/2 x 15 x 19	48.0
1	Control Panel PN-11-A	6-31/32 x 8-5/8 x 19	27.0
2	Power Supply Panel PN-12-A	10-1/2 x 14-1/2 x 19	84.0
1	Power Control Panel PN-13-B	8-3/4 x 9 x 19	40.0
1	Power Input Transformer and Support		27.5
1	Cabinet CS-88-A	18-1/4 x 21-1/4 x 72-3/8	210.5

RADIO TRANSMITTERS

BC-640-C



Radio-Transmitter BC-640-C

FUNCTIONAL DESCRIPTION

The BC-640-C is designed as a shore station for communicating with 100 to 156 megacycles (MC) air-craft receivers. It may be adapted for local or remote control operation.

No field changes in effect at time of preparation (27 May 1960).

RELATION TO OTHER EQUIPMENT

The BC-640-C is similar electrically and mechanically to the BC-640-A, BC-640-B except that the BC-640-C is equipped for wide band audio.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Microphone, (1) Headset, (1) Telegraph Key, (2) Crystal Units.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

AIRCRAFT RANGE: 155 miles.
GROUND RANGE: 26 miles.
FREQUENCY RANGE: 105 to 156 mc.
TYPE OF EMISSION: A2, A3.
POWER OUTPUT: 100 mc, 51.5 W; 156 mc, 46 W.
KEYING: 30 wpm.
ANTENNA DATA
TYPE: 1/2 wave vertical.
FEED: 72 ohms coaxial transmission line.
POWER SOURCE REQUIRED: 110-125/220 v ac, 50 to 60 cps, single ph, 900 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio Corporation, Baltimore, Md.

TUBE AND/OR CRYSTAL COMPLEMENT

(5) HK-24-G	(3) 1613
(8) 5Z3	(1) 807
(4) 6J5	(2) 811

Total Tubes: (23)

(1) DC-11A/DC-16
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

16-40BC-640-2: Technical Manual of Maintenance Instructions for Radio Transmitters BC-640-A, BC-640-B.

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

BC-640-C RADIO TRANSMITTERS

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Amplifier Panel PN-8-A	10-1/2 x 16-1/4 x 19	41.5
1	Oscillator Panel PN-9-A	10-1/2 x 16-1/4 x 19	39
1	Modulator Panel PN-10-A	10-1/2 x 15 x 19	48
1	Control Panel PN-11-A	6-31/32 x 8-5/8 x 19	27
2	Power Supply Panel PN-12-A	10-1/2 x 14-1/2 x 19	84
1	Power Control Panel PN-13A	8-3/4 x 9 x 19	40
1	Power Input Transformer and Support		27.5
1	Cabinet CS-88-A	18-1/4 x 21-1/4 x 72-3/8	210.5

TRANSMITTING SET CONTROL C-1420/SRT

FUNCTIONAL DESCRIPTION

The C-1420/SRT is designed to be used in conjunction with the SB-83/SRT Transmitter Transfer Switchboard that permits paralleling of up to five (5) transmitters with dissimilar control voltages for simultaneous operation.

No field changes in effect at time of preparation (9 July 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF CONTROL: Automatic.
OPERATING POWER REQUIREMENTS: 110 v AC, 60 cps, 1 ph.

TUBE AND/OR CRYSTAL COMPLEMENT

Electron Tube or Crystal data not available.

REFERENCE DATA AND LITERATURE

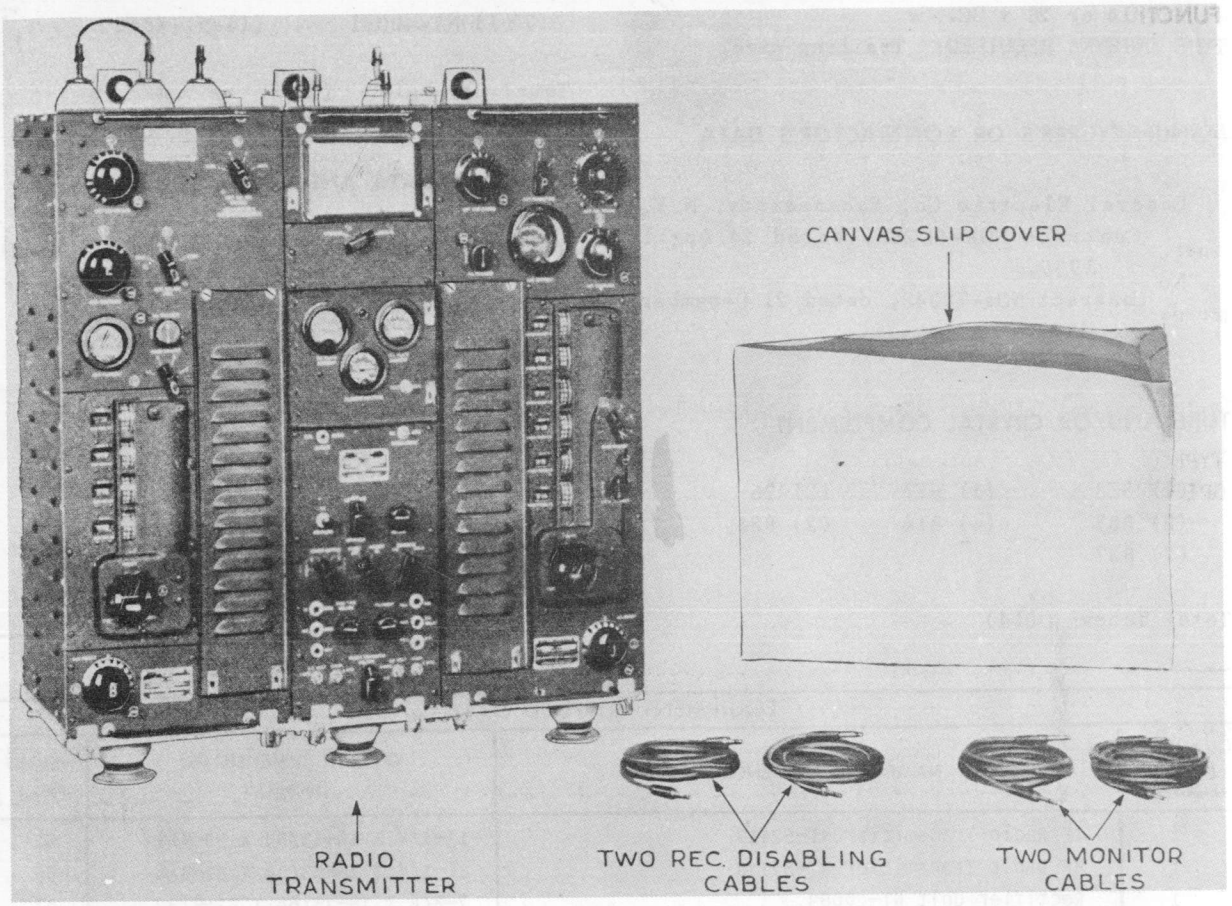
Nomenclature Card C-1420/SRT for Control Transmitting Set.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Control Transmitting Set C-1420/SRT	12 X 20 X 20	

AIRCRAFT RADIO TELEGRAPH TRANSMITTING EQUIPMENT



Models GO-5 and GO-6 Aircraft Radio Telegraph Transmitting Equipment, Principal Units

FUNCTIONAL DESCRIPTION

The Navy Models GO-5 and GO-6 are designed for use in Navy land and/or seaplanes of the patrol type for the transmission of telegraph communication in the 300 to 600 kilocycle and 3,000 to 26,500 kilocycle frequency ranges. All power required is supplied from Navy Type NEA-2 or NEB-1a except for the keying relay which is operated from the direct-current power supply of the aircraft.

The Navy Models GO-5 and GO-6 are the same, differing only in that the Navy Model GO-5 is for 14 volt direct-current operation while the Navy Model GO-6 is for 28 volt direct-current operation.

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

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Navy Type NEA-2 or NEB-1a Power Supply, (1) Antenna Reel with Antenna Wire, (1) Flameproof Telegraph Key with Cable and Plug, Radio Receivers as Required.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 300 to 600 kc and 3000 to 26500 kc.
POWER OUTPUT: 125 W nom.
EMISSION: A1, A2.
FREQUENCY CONTROL: Master oscillator.
MODULATION FREQUENCY: 1600 cps for HF Transmitter.
POWER REQUIREMENTS: 120 v, 600 to 800 cps

Radio-Transceivers
GO-5,-6

AIRCRAFT RADIO TELEGRAPH TRANSMITTING EQUIPMENT

and 14 or 28 v DC.
TYPE ANTENNA REQUIRED: Trailing wire.

(1) NT-40031 (1) NT-40032

Total Crystals: (2)

MANUFACTURER'S OR CONTRACTOR'S DATA

General Electric Co, Schenectady, N.Y.
Contract NOs-66283, dated 24 April 1939.
Contract NOs-70048, dated 21 December 1939.

REFERENCE DATA AND LITERATURE

NA08-5Q-90: Technical Manual for Navy Models GO-5 and GO-6 Aircraft Radio Telegraph Transmitting Equipment.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5Z3 (1) 6F7 (2) 76
(2) 807 (4) 814 (2) 836
(2) 837

Total Tubes: (14)

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

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	IF Radio Transmitter NT-52117	11-1/4 X 18-13/64 X 32-9/32	52
1	HF Radio Transmitter NT-52118	11-1/4 X 18-13/64 X 31-3/4	56
1	Rectifier Unit NT-20083	7-3/4 X 18-13/64 X 32-9/32	57
4	Shock Mounting		8
2	Monitoring Cable	120 lg	1.5
2	Receiver Disabling Cable	120 lg	1.5
1	Canvas Slip Cover		1.5
1	Set of Equipment Spares	12-3/4 X 15-3/4 X 30-3/8	

GO-9 AIRCRAFT RADIO TRANSMITTING EQUIPMENT

18100 kc.

POWER OUTPUT

BELOW 1500 FT

TRAILING WIRE ANTENNA

300 TO 600 KC: 100 W.

3000 TO 13000 KC: 125 W.

13000 TO 18100 KC: 100 W.

FIXED ANTENNA: 50 W.

ABOVE 15000 FT

TRAILING WIRE ANTENNA

300 to 600 KC: 70 W.

3000 TO 18100 KC: 100 W.

FIXED ANTENNA

300 TO 450 KC: 10 W.

450 TO 600 KC: 20 W.

3000 TO 18100 KC: 40 W.

EMISSION: A1, A2.

FREQUENCY CONTROL: Master oscillator.

POWER REQUIREMENTS: 120 v, 600 to 800 cps, and 12 to 14 v DC or 24 to 28 v DC.

MANUFACTURER'S OR CONTRACTOR'S DATA

Westinghouse Electric and Mfg Co, Baltimore, Md.

Contract NOs-71360, dated 31 December 1940.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1616	(1) 5Z3	(1) 801A
(2) 803	(1) 807	(2) 837

Total Tubes: (9)

No Crystals used.

REFERENCE DATA AND LITERATURE

NAO8-5Q-19: Technical Manual for Navy Model GO-9 Aircraft Radio Transmitting Equipment.

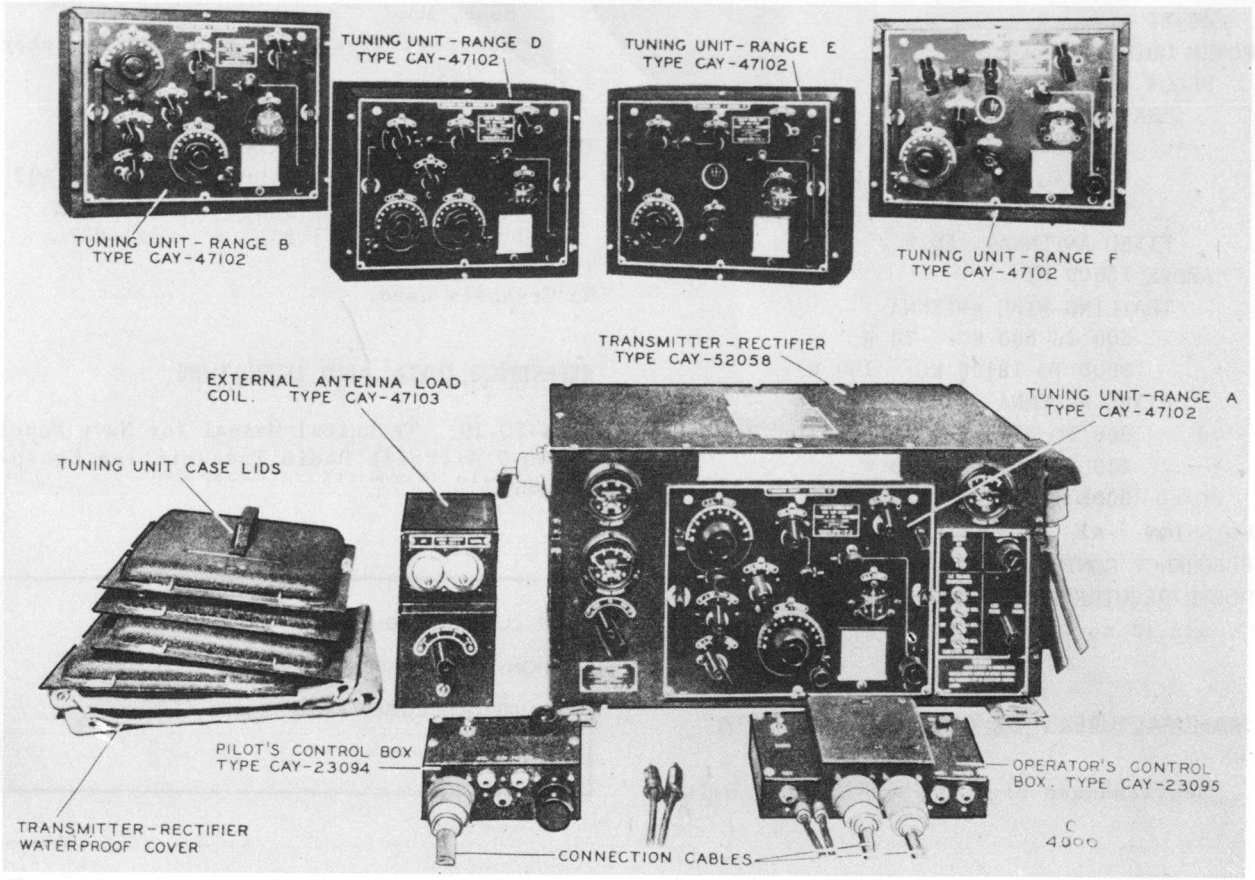
TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUAER
PROCUREMENT COGNIZANCE	
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	IF Transmitter NT-52192	10-1/2 X 16-3/8 X 33-31/32	44.0
1	HF Transmitter NT-52193	10-1/2 X 16-3/8 X 33-31/32	47.5
1	Rectifier Unit NT-20103	7-3/8 X 16-3/8 X 33-31/32	40.5
2	Receiver Monitor Cable	120 lg	1.25
1	Waterproof Cover		1.9
1	Set of Vacuum Tubes		2.5
1	Set of Equipment Spares	12 X 15-1/2 X 24	24.0

AIRCRAFT RADIO TRANSMITTING EQUIPMENT

GP-3



Navy Model GP-3 Transmitting Equipment

FUNCTIONAL DESCRIPTION

The Navy Model GP-3 is designed for installation in aircraft to provide long distance voice, continuous-wave, or modulated continuous-wave transmission in the 350 to 1500 kilocycle and 3000 to 9050 kilocycle frequency ranges.

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

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Power Supply Model NEA-2 or NEA-1 or NEB-1A, (1) Receiving Equipment Model RU-4 or equivalent, (1) Frequency Measuring Equipment Model LM Series, (1) Aircraft Microphone, (1) Helmet with Headphones, (1) Flame-proof Telegraph Key, (1) Fairlead with Antenna Length Counter, (1) Antenna Reel with 350 ft Model J Antenna Wire and Antenna Weight, (1) Fixed Antenna for use over 3000 kc as Required.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 350 to 1500 kc and 3000 to 9050 kc.

Radio-Transmitters

GP-3 AIRCRAFT RADIO TRANSMITTING EQUIPMENT

Contract NOs-47023, dated 26 February 1936.

POWER OUTPUT
- TRAILING WIRE ANTENNA
  - CW, MCW
    - 350 TO 800 KC: 85 W.
    - 800 TO 1500 KC: 100 W.
    - 3000 TO 9050 KC: 125 W.
  - VOICE CARRIER
    - 350 TO 800 KC: 30 W.
    - 800 TO 1500 KC: 35 W.
    - 3000 TO 9050 KC: 40 W.
- FIXED ANTENNA
  - CW, MCW: 50 W.
  - VOICE CARRIER: 12.5 W.

EMISSION: A1, A2, A3.

FREQUENCY CONTROL: Master oscillator.

POWER REQUIREMENTS: 120 v, 600 to 800 cps and 12 to 15 v DC.

TYPE ANTENNAS REQUIRED: Trailing wire and/or fixed.

MANUFACTURER'S OR CONTRACTOR'S DATA

Westinghouse Electric and Mfg Co, Chicopee Falls, Mass.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5Z3 (1) 801A (1) 803
(2) 836 (1) 843
Total Tubes: (6)

No Crystals used.

REFERENCE DATA AND LITERATURE

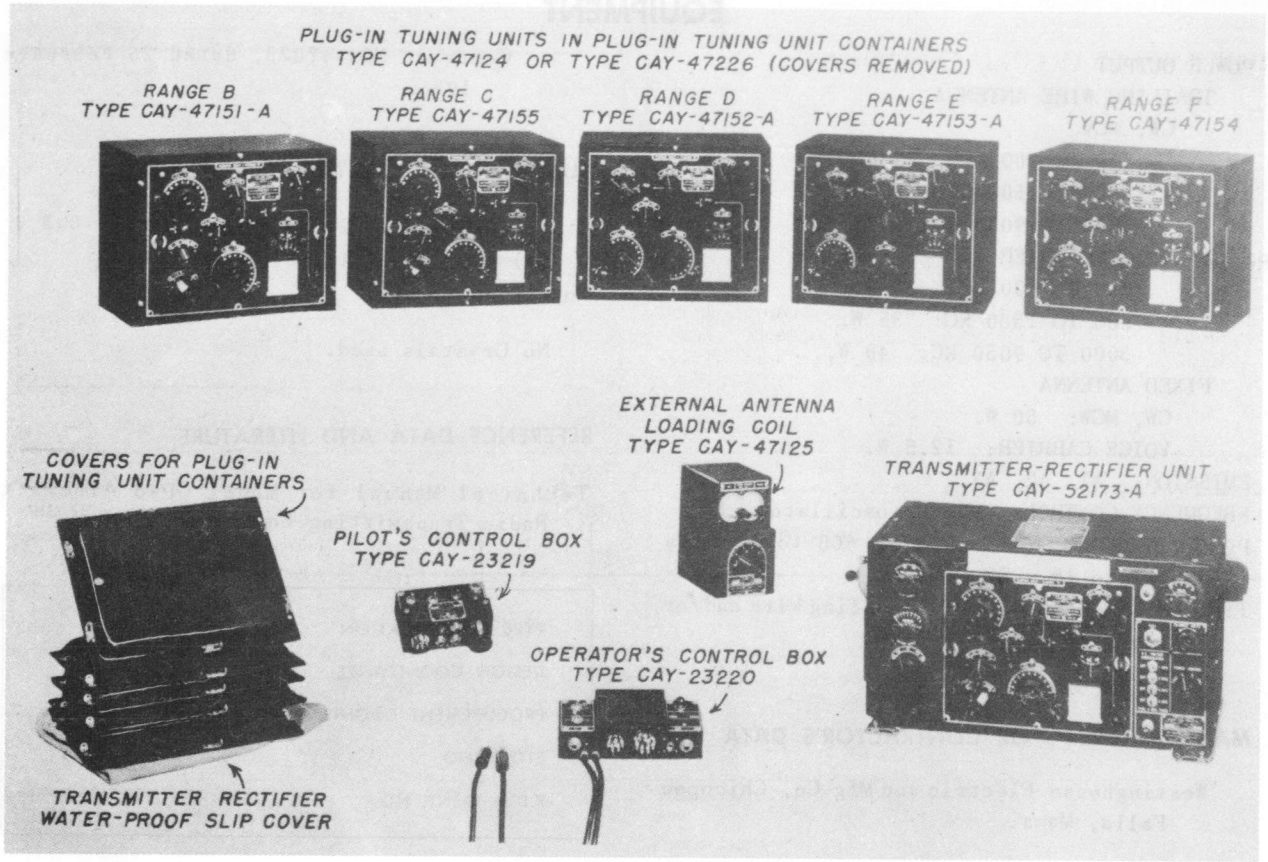
Technical Manual for Model GP-3 Aircraft Radio Transmitting Equipment.

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

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter-Rectifier Unit NT-52058	10-3/4 x 13 x 23-5/8	48
1	Tuning Unit NT-47102 (Range A)	8-1/2 x 9-1/2 x 10-13/16	15
1	Tuning Unit NT-47102 (Range B)	8-1/2 x 9-1/2 x 10-13/16	14
1	Tuning Unit NT-47102 (Range D)	8-1/2 x 9-1/2 x 10-13/16	14
1	Tuning Unit NT-47102 (Range E)	8-1/2 x 9-1/2 x 10-13/16	13
1	Tuning Unit NT-47102 (Range F)	8-1/2 x 9-1/2 x 10-13/16	14
1	External Antenna Loading Coil NT-47103	4 x 7 x 7-3/4	4
1	Pilot's Control Box NT-23094	2-9/32 x 4-1/16 x 5-1/2	1
1	Operator's Control Box NT-23095	2-11/32 x 4-1/32 x 8	3
4	Tuning Unit Container NT-47104	9-11/16 x 10-11/16 x 12	5
1	Power Cable	72 lg	1.42
1	Operator's Control Cable	53 lg	1.25
1	Pilot's Control Cable	96 lg	2.0
1	Waterproof Cover		0.75
1	Set of Vacuum Tubes		1.5

AIRCRAFT RADIO TRANSMITTING EQUIPMENT



Aircraft Radio Transmitting Equipment Gp-7

FUNCTIONAL DESCRIPTION

The Model GP-7 is an airborne, high frequency radio transmitter of CW, MCW and VOICE signal for long range communication over the frequency range of 350 to 9050 kc. The transmitter may be started or stopped from either the operator's or pilots position. The circuit is such that neither the operator or the pilot can lock out the other, that is, the equipment can be started at the radio operator's position and stopped at the pilot's position or vise versa.

No field changes in effect at time of preparation (16 July 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: Aircraft microphones, helmet with headphones, flameproof telegraph keys, fairlead with antenna length counter, antenna reel with 350 ft Model "J" antenna wire and antenna weight.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 350 to 9050 kc.
EMISSION: A1, A2, A3.
POWER OUTPUT
- 350 to 800 kc
  - CW and MCW: 85 W.
- 800 to 3000 kc
  - CW and MCW: 100 W.
  - VOICE: 35 W.
- 3000 to 9050 kc
  - CW and MCW: 125 W.
  - VOICE: 40 W.

POWER SOURCE REQUIRED: 12 to 14 v DC or 24 to 28 v DC.
DYNAMOTOR OUTPUT: 120 v, 600 to 800 cps.

MANUFACTURER'S OR CONTRACTOR'S DATA

Westinghouse Electric and Manufacturing Co., Baltimore, Md.
Contract Nos-74844, dated 27 June 1940.

GP-7 AIRCRAFT RADIO TRANSMITTING EQUIPMENT

December 1956

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5Z3 (1) 801
(1) 803 (1) 843
(2) 1616
Total Tubes: (6)

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE BUAER
STOCK NO.

REFERENCE DATA AND LITERATURE

Serial No-862, I.B 7243 Technical Manual for Model GP-7, Aircraft Radio Transmitting Equipment; Westinghouse Electric and Mfg. Co.

SHIPPING DATA

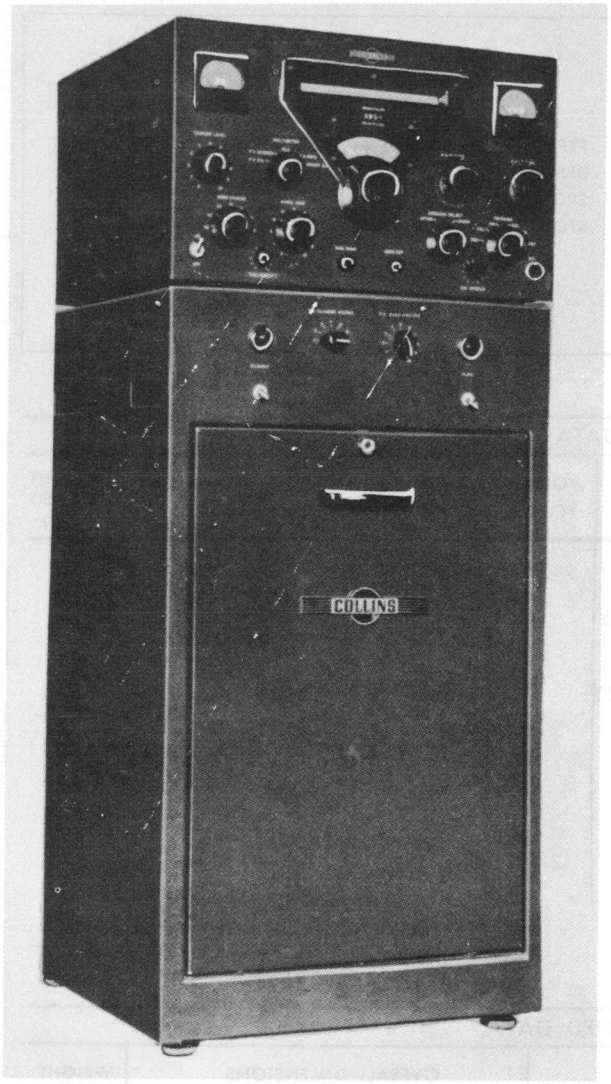
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Aircraft Radio Transmitting Equip-GP-7 consisting of: 1-Aircraft Radio Transmitter-NT-52173A 1-Set of Vacuum Tubes 6-Plug-in Tuning Units 1-External Antenna Loading Coil-NT-47125 1-Pilots Control Box-NT-23219 1-Operator's Control Box-NT-23220 1-Plug-in Tuning Container-NT-47124 1-Waterproof Cover 4-Plug-in Tuning Unit Containers NT-47226	24.06		335
1	Set Spare Parts Complete Set of Cables	2.91	15 X 16 X 21	65

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Aircraft Radio Transmitter NT-52173-A (Weight with mounting tracks, less tubes)	10-3/4 X 13 X 23-3/8	49-1/2
1	Range A Plug-in Tuning Unit NT-47150-A	8-1/4 X 9-1/2 X 10-13/16	15
1	Range B Plug-in Tuning Unit NT-47151-A	8-1/2 X 9-1/2 X 10-13/16	14
1	Range C plug-in Tuning Unit NT-47155	8 1/2 X 9-1/2 X 10-13/16	14
1	Range D Plug-in Tuning Unit NT-47152-A	8-1/2 X 9-1/2 X 10-13/16	14
1	Range E Plug-in Tuning Unit NT-47153-A	8-1/2 X 9-1/2 X 10-13/16	13
1	Range F Plug-in Tuning Unit NT-47154-A	8-1/2 X 9-1/2 X 10-13/16	15
1	External Ant. Loading Coil NT-47125	4 X 6-7/8 X 7	4
1	Pilot's Control Box NT-23219	2-9/32 X 4-1/2 X 5-1/2	1
1	Operator's Box NT-23220	2-5/16 X 4-1/2 X 8	3
1	Plug-in Tuning Unit Container NT47124 (Aluminum)	9-1/16 X 10-7/8 X 12	5
1	Plug-in Tuning Unit Containers NT-47226 (Steel)	9-1/16 X 10-7/8 X 12	6-1/4 (each 1/2
	Interconnection Cables (Bulk)		
1	Waterproof Slip Cover		
1	Set Spare Parts	15 X 16 X 21	45

Radio-Transmitters

TRANSMITTER KWS-1, KWS-1 (MOD)



Transmitter KWS-1, KWS-1 (MOD)

FUNCTIONAL DESCRIPTION

The KWS-1 and KWS-1 (MOD) (Collins Radio) are compact amateur transmitters designed for single sideband, CW and AM operation. They feature filter-type single sideband generation and use a mechanical filter for this purpose.

The Power Supply Cabinet is deck mounted, but can be rack mounted, if desired, while the Exciter and Power Amplifier may be table mounted, or may be mounted on top of the power supply cabinet alongside the operator's table.

The KWS-1 and KWS-1 (MOD) are similar except the frequency range and minor design changes have been made on the KWS-1 (MOD).

No field changes in effect at time of preparation (16 November 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: KWS-1: (1) Antenna, (1) Speaker Control, (1) Micromatch, Jones Model 263, (1) Telegraph Key, Test Equipment as Required, (1) Low-Pass Filter.

KWS-1 (MOD): (1) Antenna, (1) Speaker Control, (1) Microphone Assembly with Push-to-Talk Stand, (1) Microphone Assembly with Plain Stand, (1) Microwatch, Jones Model 263, (1) Telegraph Key, Test Equipment as Required.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE
- KWS-1: 3 to 30 mc.
- KWS-1 (MOD): 3 to 15 mc.

FREQUENCY BAND DATA
- KWS-1
  - BAND 1: 3.0 to 4.0 mc.
  - BAND 2: 7.0 to 7.3 mc.
  - BAND 3: 14.0 to 15.0 mc.
  - BAND 4: 21.0 to 22.0 mc.
  - BAND 5: 26.4 to 27.4 mc.
  - BAND 6: 28.0 to 29.0 mc.
  - BAND 7: 29.0 to 30.0 mc.
- KWS-1 (MOD): 3.0 to 6.0, 7.0 to 8.0 and 13.0 to 15.0 mc in 6 bands.

EMISSION: Single sideband, AM and FM.

PA PLATE POWER INPUT: 1000 W nom peak envelope power.

DISTORTION: Third order distortion down more than 35 db with tone frequencies of 900 and 2500 cps.

CALIBRATION: Direct reading in kc on linear scale.

DIAL ACCURACY: Within 200 cps.

AF RESPONSE: Within ±3 db from 200 to 2900 cps.

KWS-1,KWS-1 (MOD) TRANSMITTER

FREQUENCY STABILITY DATA
WARMUP
5 MINUTES: 1000 cps max.
10 MINUTES: 500 cps max.
NORMAL OPERATION
20 MINUTES: Within 300 cps of starting frequency.
30 MINUTES: Within 100 cps over 10 minute period.
CARRIER SUPPRESSION: Not less than 50 db.
UNDESIRED SIDEBAND SUPPRESSION: Not less than 50 db.
SPURIOUS RADIATION: At least 35 db down.
IMPEDANCE DATA
MICROPHONE INPUT: High impedance.
ANTENNA CONNECTION: 52 ohms.
PHONE PATCH CONNECTION: 600 ohms.
PHONE PATCH SIGNAL LEVEL: 0.1 v.
POWER REQUIREMENTS: 115 or 230 v, 50 to 60 cps, single phase, 1500 W max.

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Company, Cedar Rapids, Iowa.
Contract NObsr 71045, dated 26 September 1955 (KWS-1).
Contract NObsr 71287, dated 27 April 1956 (KWS-1).
Contract NObsr 71289, dated 27 April 1956 (KWS-1) (MOD).
Approximate Cost: $2823.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

KWS-1

(3) OB2	(1) 2D21
(1) 3TF4A	(2) 4X150A
(1) 5Y3GT	(1) 5U4GB
(1) 6AN5	(2) 6AL5
(1) 6AS7G	(1) 6AU6
(4) 6BA6	(2) 6CL6
(1) 6X4	(6) 12AT7
(1) 12AX7	(2) 866A
(1) 5749	

Total Tubes: (31)

KWS-1 (MOD)

(3) OB2	(1) 2D21
(1) 3TF4A	(2) 4X250B
(1) 5Y3GT	(1) 5U4GB
(1) 6AN5	(2) 6AL5
(1) 6AS7G	(1) 6AU6
(4) 6BA6	(2) 6CL6
(1) 6X4	(6) 12AT7
(1) 12AX7	(2) 866A
(1) 5749	

Total Tubes: (31)

KWS-1

(4) 1N67A	(2) 1N34A
(5) HC-6/U	(1) 251.65 KC
(1) 248.35 KC	(1) 13000 KC

Total Crystals: (14)

KWS-1 (MOD)

(4) 1N67A	(2) 1N34A
(5) HC 6/U	(1) 251.65 KC
(1) 248.35 KC	(1) 13000 KC

Total Crystals: (14)

REFERENCE DATA AND LITERATURE

NAVSHIPS 92787: Technical Manual for Collins KWS-1 Amateur Transmitter.

TYPE CLASSIFICATION
DESIGN COGNIZANCE COMMERCIAL
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

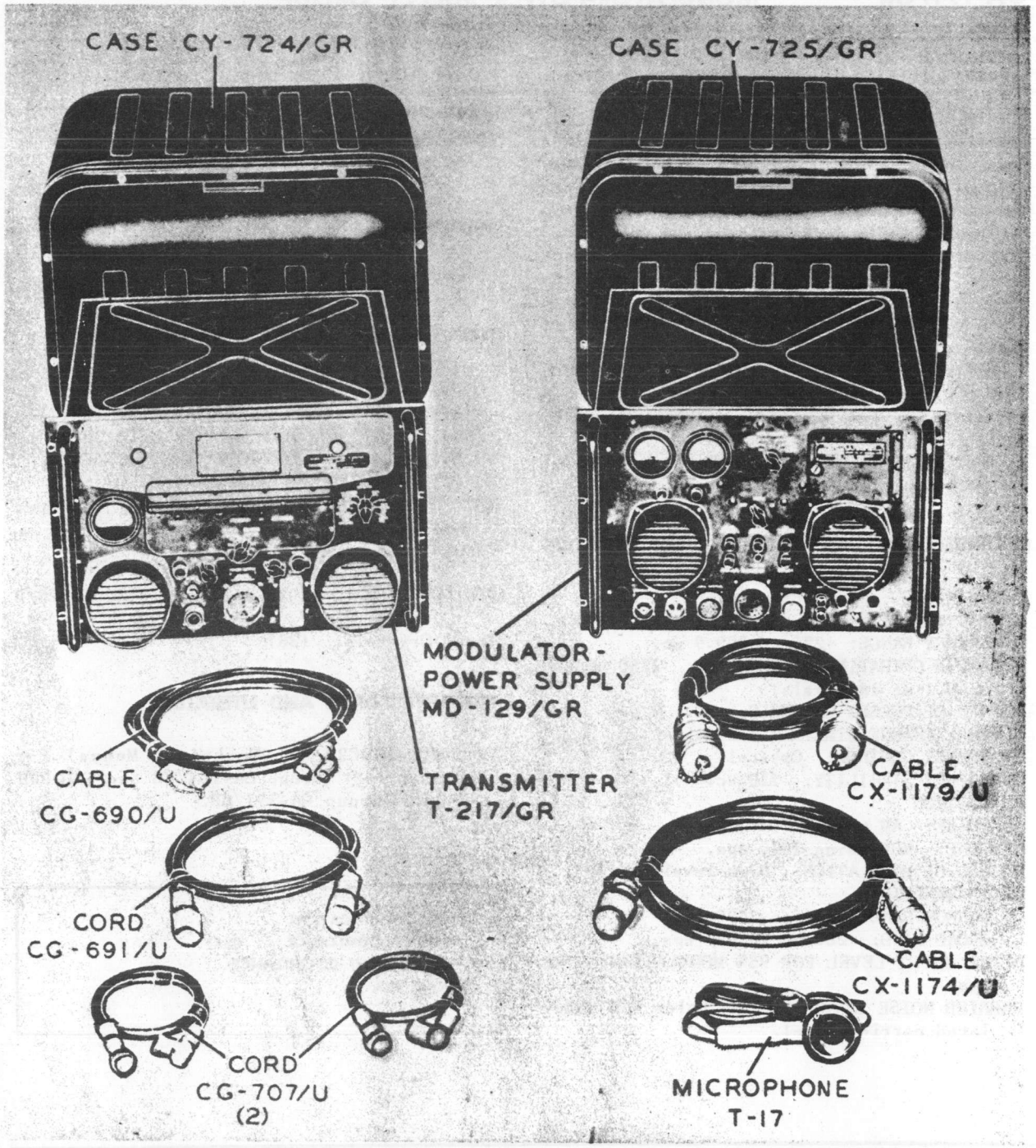
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	KWS-1		
1	Exciter and Power Amplifier	10-15/32 X 15-1/2 X 17-3/8	50
1	Power Supply	15-1/2 X 17-3/8 X 30	173
1	Set of Equipment Spare Parts		
2	Technical Manual		
1	Microphone Assembly, Push-to-Talk Stand		

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Microphone Assembly, Plain Stand		
1	Antenna Change-Over Relay		
1	Set of Connectors		
	KWS-1 (MOD)		
1	Exciter and Power Amplifier	10-15/32 X 15-1/2 X 17-3/8	50
1	Power Supply	15-1/2 X 17-3/8 X 30	173
1	Set of Equipment Spare Parts		
2	Technical Manual		
1	Low-Pass Filter		
1	Antenna Change-Over-Relay		
1	Plug UG-260/U		
1	Vibration Isolator, with Adapter Plates		

TRANSMITTER GROUP AND MODULATOR-POWER SUPPLY GROUP

OA-104/GR, OA-191/GR



Transmitter Group OA-104/GR and Modulator-Power Supply Group OA-191/GR

FUNCTIONAL DESCRIPTION

The OA-104/GR and OA-191/GR are composed principally of Radio Transmitter T-217/GR and Modulator-Power Supply with their associated cables and accessories. Radio Trans-

OA-104/GR, OA-191/GR TRANSMITTER GROUP AND MODULATOR-POWER SUPPLY GROUP

mitter T-217/GR and its associated Modulator-Power Supply MD-129/GR constitute a uhf radio transmitting installation which units are a part of Radio Sets AN/GRC-27, AN/GRC-29, or AN/TRC-32. This transmitter has a nominal power output of 100 watts and provides either voice or tone modulated transmission on any one of 1750 crystal controlled frequencies in the frequency range of 225 to 399.9 mc inclusive. Radio transmitter T-217/GR is designed to provide ground-to-ground or ground-to-air communication with other radio equipment in its frequency range such as Radio Sets AN/ARC-19, AN/ARC-27, AN/ARC-33 and other radio sets.

Radio Transmitter T-217/GR and Modulator-Power Supply MD-129/GR together form a transmitting installation and electrically must be considered as one unit.

No field changes in effect at time of preparation (24 April 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

POWER OUTPUT: 10 watts nominal.
DUTY CYCLE: 1 minute on, 5 minutes off.
FREQUENCY RANGE: 225 to 399.9 mc.
NUMBER OF OPERATING FREQUENCIES: 1750 spaced at 0.1 mc intervals.
NUMBER OF PRESET CHANNELS: 10.
CHANNEL CHANGE TIME: 7 sec max.
FREQUENCY CONTROL: Crystal.
FREQUENCY STABILITY: ±10 kc.
MODULATION
VOICE: AM to 95%.
TONE: MCW using 1020 cps.
METHOD OF MODULATION: High level plate.
AUDIO BANDWIDTH
NARROW BAND: 400 to 3000 cps.
BROAD BAND: 200 to 20,000 cps.
AUDIO INPUT LEVEL FOR 95% MODULATION: −45 dbm.
CARRIER NOISE LEVEL: 40 db below 95% modulated carrier level.
DISTORTION: 12%.
SPURIOUS RADIATION: 2nd and 3rd 40 db down, all others 60 db down.
WARM-UP PERIOD: 75 seconds.
OUTPUT IMPEDANCE: 52 ohms.
POWER SOURCE REQUIRED: 115 or 230 v, 50 to 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Corp., Cedar Rapids, Iowa.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 2C39A	(6) 6AK5W	(6) 6AQ5W
(5) 6J4	(2) 4X150A	(3) 12AT7
*(4) 12AU7	(4) 12AX7	(1) 3B22
(4) 3B2B	(2) 6AL5W	(1) 6C4
(2) 4-65A	(1) 991	

NOTE: *(1) 12AU7 changed to 12AY7 in later models.
Total Tubes: (44)

(18) CR-32/U (10) CR-18/U (10) CR-23/U

Total Crystals: (38)

REFERENCE DATA AND LITERATURE

To 31R2-2GRC27-42, Technical Manual for Transmitter Group OA-104/GR and MOD-PWR Supply Group OA-191/GR.

TYPE CLASSIFICATION
DESIGN COGNIZANCE USAF
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter T-217/GR	12-1/4 X 19 X 20	130

TRANSMITTER GROUP AND MODULATOR-POWER SUPPLY GROUP

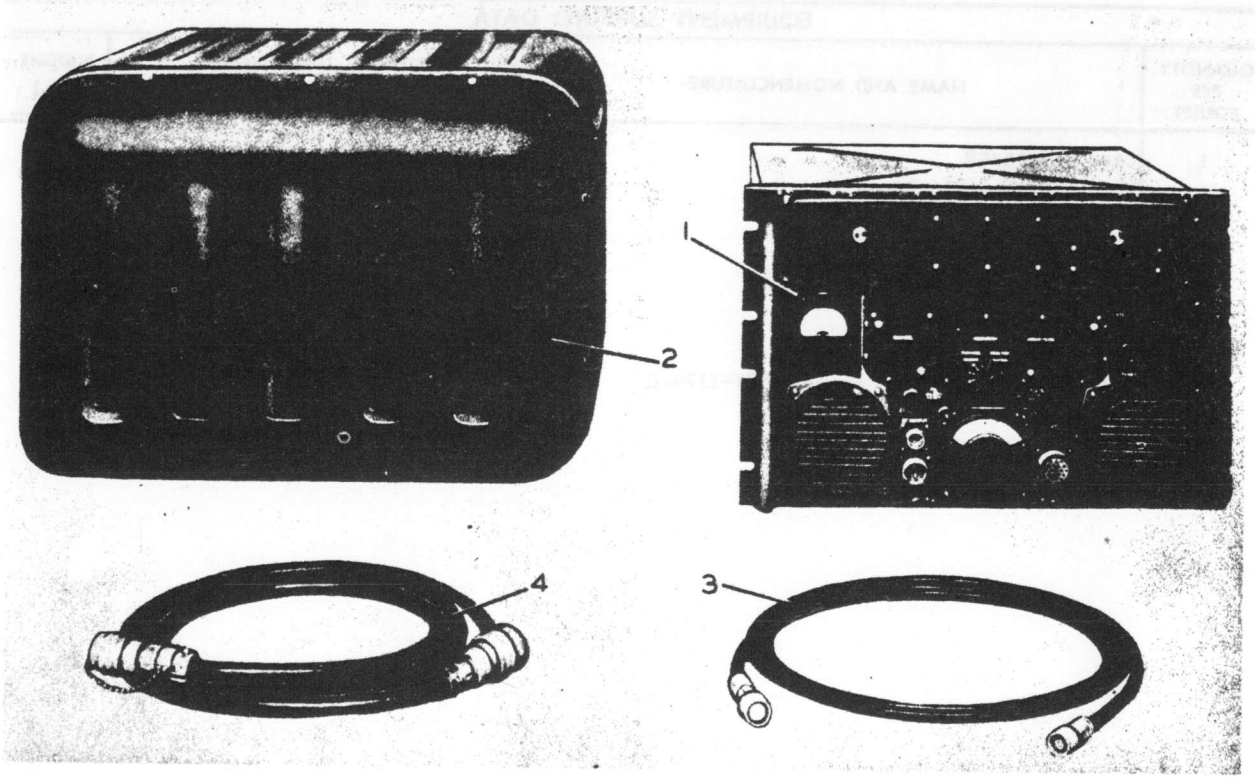
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Case CY-724/GR	17 X 19 X 23	66
1	RF Cable Assembly CG-691/U	6 ft lg	
1	RF Cable Assembly CG-690/U	10 ft lg	
2	RF Cable Assemblies CG-707/U	2 ft lg	
1	Modulator-Power Supply MD-129/GR	12-1/4 X 19 X 20	140
1	Case CY-725/GR	17 X 19 X 23	66
1	Power Cable Assembly CY-1174/U	10 ft lg	
1	Special Purpose Cable Assembly CY-1179/U	6 ft lg	
1	Microphone T-17		

October 1957

Radio-Transmitters

TRANSMITTER GROUP OA-229/GR



Transmitter Group OA-229/GR

FUNCTIONAL DESCRIPTION

The OA-229/GR is a crystal controlled target transmitter. The cables are mounted in a submersion-proof carrying case.

No field changes in effect at time of preparation (15 April 1957).

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Co., Cedar Rapids, Iowa
Contract AF33(038)-6135
AF33(038)13895

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 12AT7
(6) 6AK5W
(5) 6J4
(1) 6AL5W
Total Tubes: (23)

(2) 3B22
(1) 6AU6
(2) 12AU7
(2) 6AQ5
(1) 2C39A

(10) CR-18/U (10) CR-23/U (18) CR-32/U

Total Crystals: (38)

REFERENCE DATA AND LITERATURE

T.O. 16-350A229-4: Technical Manual for TRANSMITTER GROUP OA-229/GR.

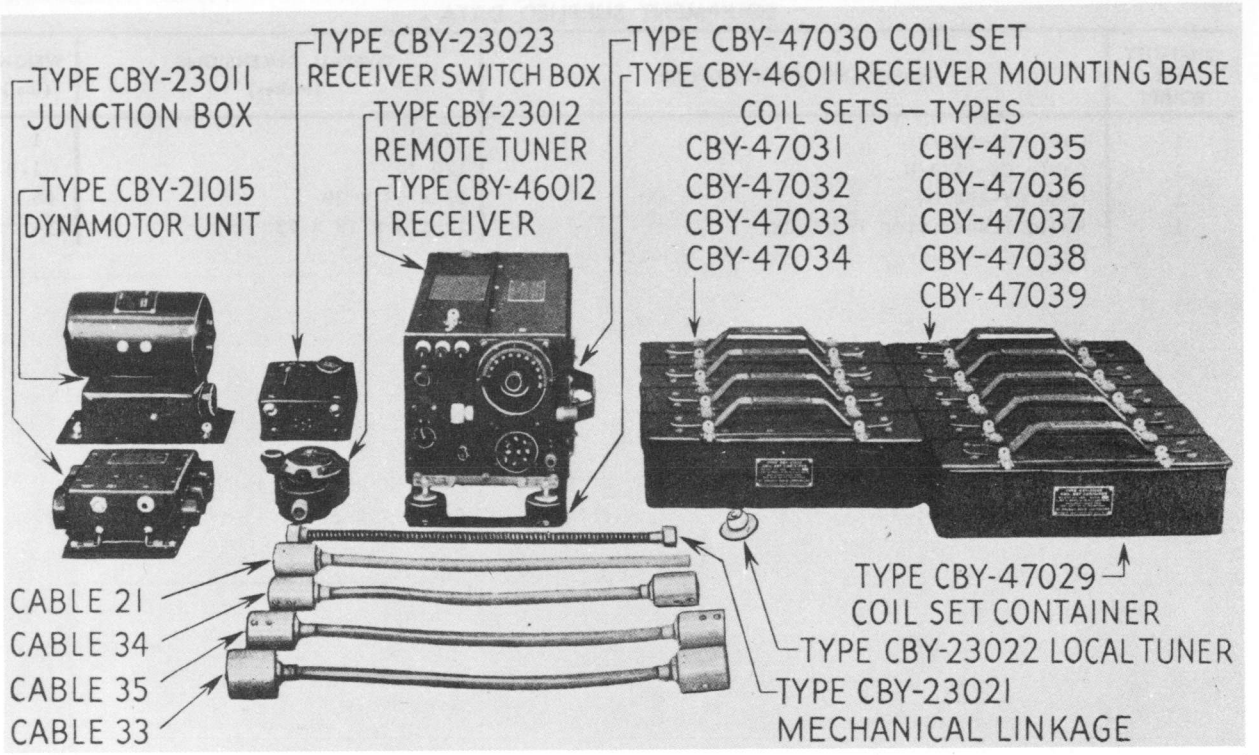
TYPE CLASSIFICATION
DESIGN COGNIZANCE USAF
PROCUREMENT COGNIZANCE
STOCK NO.

OA-229/GR TRANSMITTER GROUP

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Cable CG-553/U	72 lg	1
1	Cable CX-1174/U	120 lg	1.8
1	Case CY-894/GR	17 x 23 x 29	66
1	Radio Transmitter T-216/GR	12-1/4 x 19 x 23	134

RADIO RECEIVING EQUPMENT



Principal Units, Model RU-2 Equipment

FUNCTIONAL DESCRIPTION

The Navy Model RU-2 is a complete radio-receiving set designed for use on aircraft. It is adapted for installation and operation in airplanes of all types. It may be used to receive continuous wave (CW), modulated continuous wave (MCW) and damped wave signals within the frequency range of 224 to 12,500 kilocycles (KC).

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

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Direct current source of voltage between the limits of 12 and 15 v, (1) SE-1981-A or SE-1981-B Helmet, (1) CBY-61007 Lead-in Insulators, (1) CBY-61018 Strain Insulators.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

NUMBER OF BANDS: 1 band.
FREQUENCY RANGE
RECEIVER: 224 to 12,500 kc.
OPERATING POWER RQMT: 12 to 15 v DC battery.

MANUFACTURER'S OR CONTRACTOR'S DATA

Aircraft Radio Corp., Boonton, N.J.
Contract NOs 29086, dated 10 November 1932.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) CBY-38039 (2) CBY-38036
(1) CBY-38038

Total Tubes: (6)

Radio-Receivers

RU-2 RADIO RECEIVING EQUPMENT

No Crystals used.

TYPE CLASSIFICATION

DESIGN COGNIZANCE BUSHIPS

PROCUREMENT COGNIZANCE

STOCK NO.

R.D.B. IDENT. NO.

REFERENCE DATA AND LITERATURE

Technical Manual for Navy Model RU-2 Aircraft Radio Equipment.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Receiver NT-46012	7-1/4 X 7-5/8 X 15-11/16	
1	Coil Set NT-47030	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47031	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47032	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47033	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47034	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47035	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47036	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47037	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47038	3-5/8 X 4-5/8 X 11-1/2	
1	Coil Set NT-47039	3-5/8 X 4-5/8 X 11-1/2	
9	Coil Set Containers NT-47029	3-5/8 X 4-5/8 X 11-1/2	
1	Receiver Mounting Base NT-46011	1-3/4 X 5-7/8 X 14-7/8	
1	Receiver Switch Box NT-23023		
1	Junction Box NT-23011	2-1/8 X 4-3/8 X 7-3/8	
1	Receiver Remote Tuner NT-23012	2-5/8 X 3 X 5-5/8	
1	Remote Tuner Mechanical Linkage NT-23021		
1	Local Tuner NT-23022		

RADIO TRANSMITTING SET SCR-573

FUNCTIONAL DESCRIPTION

The SCR-573 is designed as a complete mobile radio transmitting station providing simultaneous transmission on two channels in the Very High Frequency (VHF) band. It consists of two transmitters and necessary equipment for either local or remote telephone or telegraph operation; including an antenna, monitoring equipment and a power. It is used in conjunction with Radio Sets SCR-574-A and SCR-575-A and Control Set SCR-572-A in the Control Net System SCS-3. The SCR-573 is used either as a local transmitting station located near the Control Set, or as the transmitter vehicle of the forward relay station of the system, located from 60 to 120 miles from the Control Set. The SCR-573 performs the same function as Radio Set SCR-643-A but is installed in a vehicle.

No field changes in effect at time of preparation (16 March 1960).

RELATION TO OTHER EQUIPMENT

The SCR-573 is used in conjunction with Radio Sets SCR-574-A and SCR-575-A, and Control Set SCR-572-A in the Control Net System SCS-3.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: A2 and A3.
RF POWER OUTPUT: 50 W for each transmitter.
OUTPUT IMPEDANCE: 72 ohms.
TYPE OF CONTROL: Crystal or master oscillator frequency control.
NUMBER OF BANDS: 1 band.
NUMBER OF CHANNELS: 2 channels.
PE-99-A POWER UNIT RATING: 7.5 kva at 110 v, 3 ph, 60 cps.
FREQUENCY RANGE: 100 to 156 mc.
OPERATING POWER RQMT: 115 v AC, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio Co.

TUBE AND/OR CRYSTAL COMPLEMENT

(6) 1613	(1) 3AP1	(10) 3C24
(2) 6C6	(8) 6J5	(16) 5Z3
(2) 6K6GT	(1) 6X5WGT	(2) 80
(2) 807	(1) 811A	(1) 884

Total Tubes: (54)

Crystal Data not available.

REFERENCE DATA AND LITERATURE

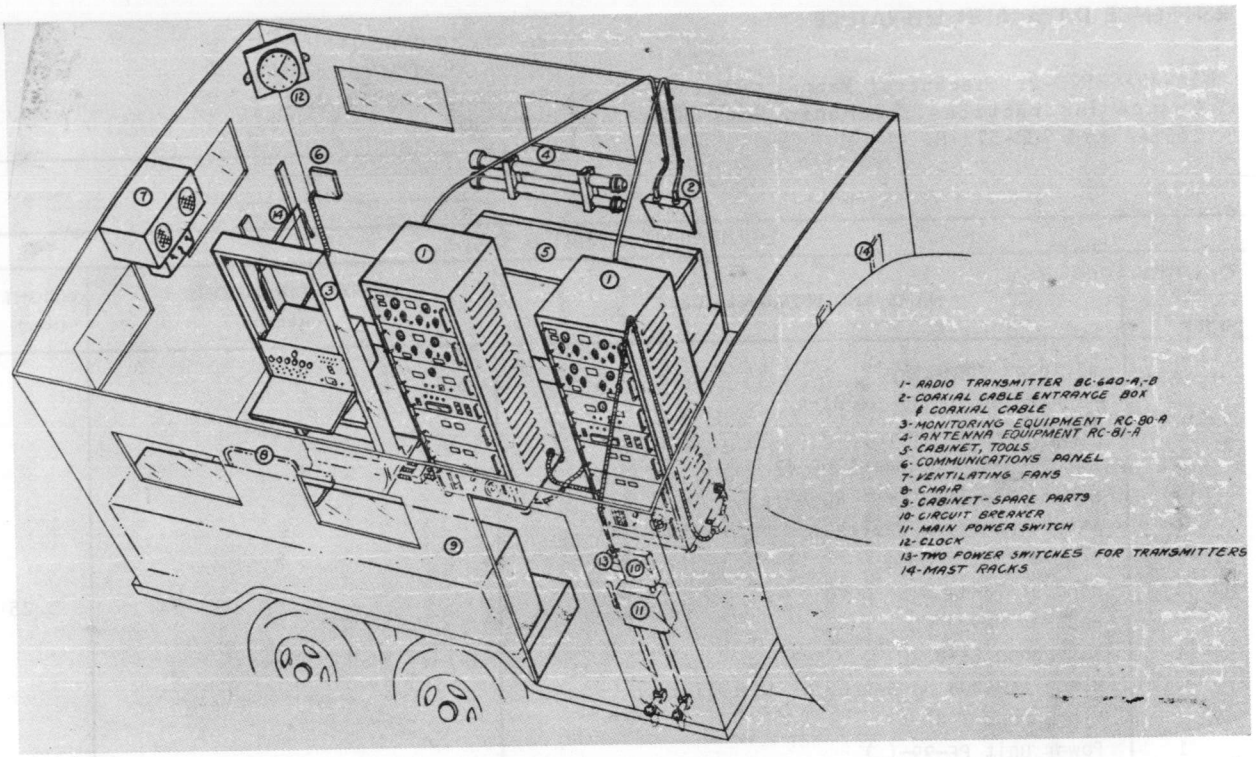
Nomenclature Card SCR-573 for Transmitting Set, Radio.
AN16-40 SCR-573-2: Technical Manual of Maintenance Instruction for Radio Sets SCR-573-A and SCR-573-B.

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

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
2	Radio Transmitter BC-640	20 X 21-1/4 X 72-3/8	
2	Antenna RC-81-A		
1	Antenna AN-86-A		
1	Power Unit PE-99-A		
1	Monitoring Equipment RC-80-A		

RADIO SET SCR-573-A



Radio Set SCR-573-A

FUNCTIONAL DESCRIPTION

The SCR-573-A is a complete mobile radio transmitting station providing simultaneous transmission on two channels in the VHF band. It consists of two transmitters and necessary equipment for either local or remote telephone or telegraph operation; including an antenna, monitoring equipment and a power unit. It is used in conjunction with Radio Sets SCR-574-A and SCR-575-A, and Control Set SCR-572-A in the Control Net System SCS-3. The SCR-573-A is used either as a local transmitting station located near the Control Set, or as the transmitter vehicle of the forward relay station of the system, located from 60 to 120 miles from the Control Set. The SCR-573-A performs the same functions as Radio Set SCR-643-A but is installed in a vehicle.

No field changes in effect at time of preparation (9 May 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 100 to 156 mc, with two crystal controlled frequency channels.

EMISSION: A2 and A3.
RF POWER OUTPUT: 50 W for each transmitter.
OUTPUT IMPEDANCE: 72 ohms.
PE-99-( ) POWER UNIT RATING: 7.5 kva at 110 v, 3 ph, 60 cps.
RANGE: 135 mi in planes at an altitude of 10,000 ft.
POWER SOURCE REQUIRED: 110-125 v, 1 ph, 50-60 cps, 2-1/2 kw. Electric heaters, if supplied, require an additional 3 kw.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio Company.
Order 2406-SCL-42.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 3AP1	(8) 6J5
(2) 80	(1) 884
(10) 3C24	(2) 6K6GT
(2) 807	(16) 5Z3
(1) 6X5WGT	(6) 1613
(2) 6C6	(2) HK24
(1) 811	

Total Tubes: (54)
No Crystal Data Available

SCR-573-A RADIO SET

REFERENCE DATA AND LITERATURE

AN16-40SCR573-2: Technical Manual of Maintenance Instructions for Radio Sets SCR-573-A and SCR-573-B.

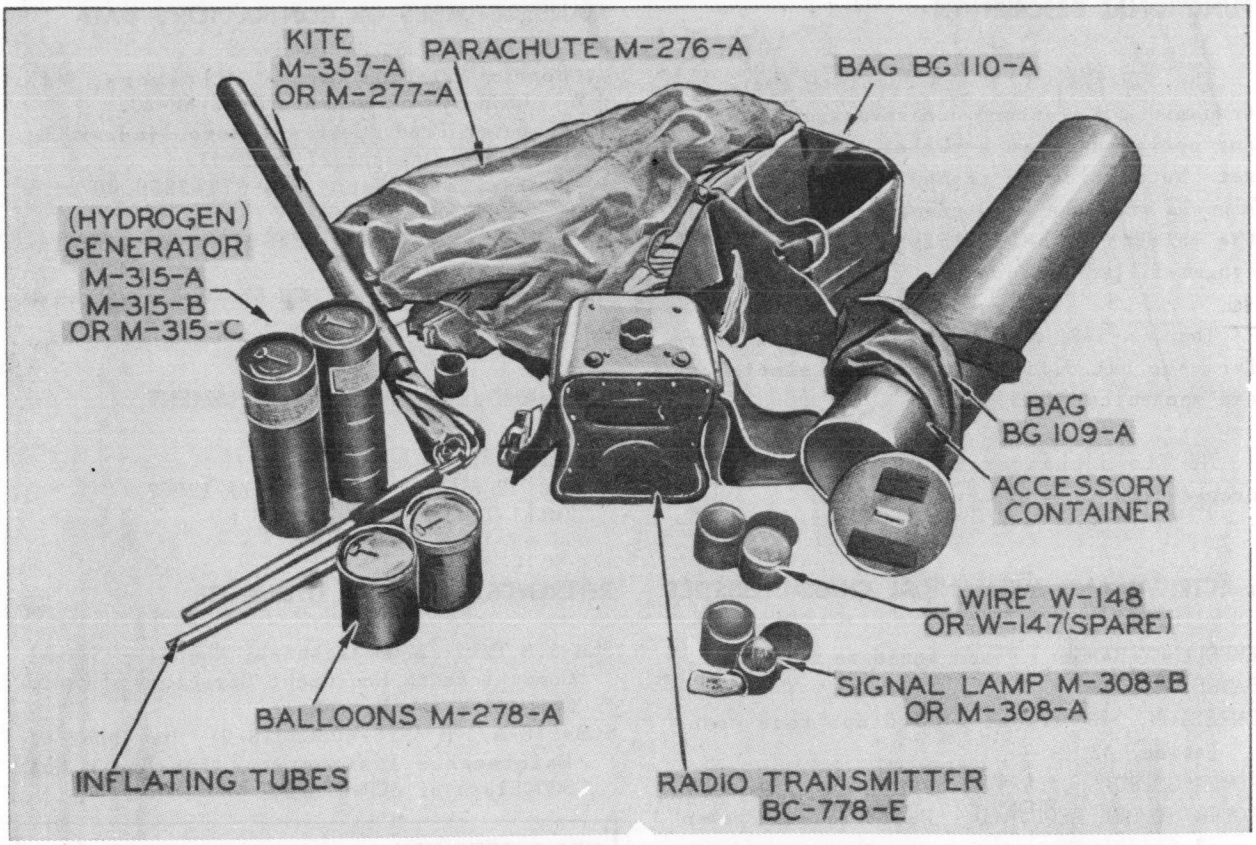
TYPE CLASSIFICATION
DESIGN COGNIZANCE BUAER
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

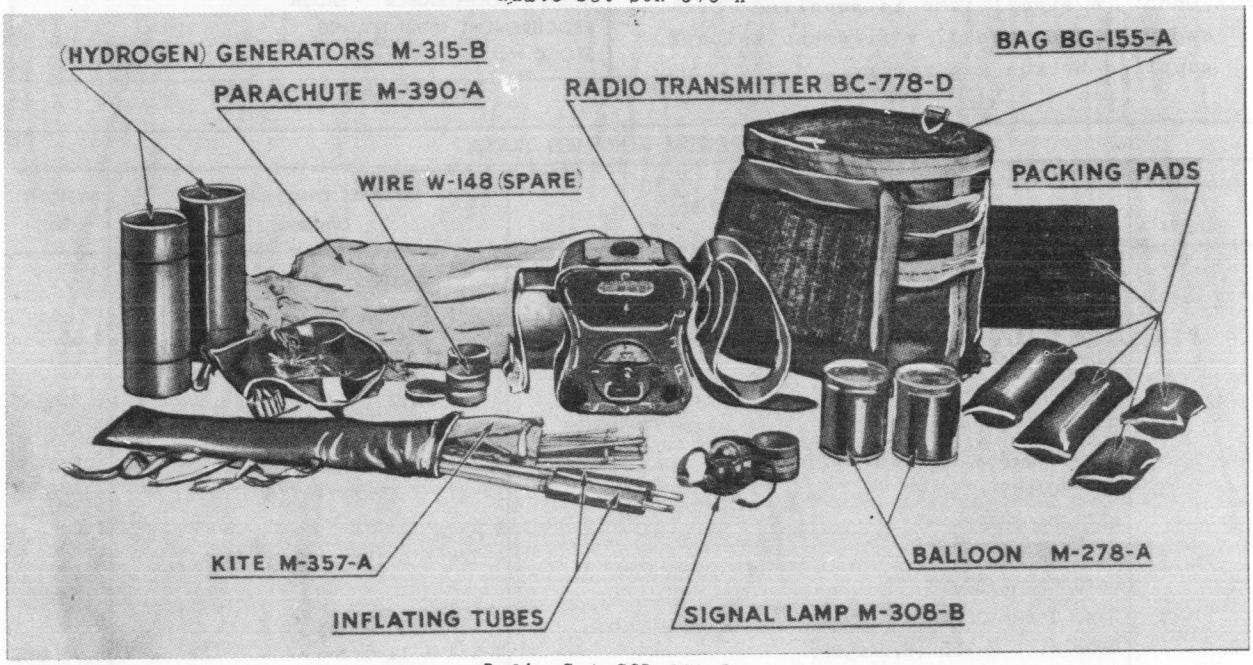
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	AC Input Equipment		
2	Antenna Equipment RC-81-A		
1	Antenna Mast MA-6	90 ft	
1	Maintenance Equipment ME-47		
1	Monitoring Equipment RC-80-A		
1	Interconnecting Cables		
4	Crystal Unit DC-11		
1	Handset TS-14 with Cord		
3	Headset HS-23		1.25
1	Telephone EE-8		
1	Miscellaneous Hardware for Installation		
2	Microphone T-48-A		
1	Power Unit PE-99-( )		
2	Radio Transmitter		
	BC-640-A	72-3/8 X 21-1/4 X 20	601.5
	or		
	BC-640-B	72-3/8 X 21-1/4 X 20	601.5
1	Reel DR-11	13-1/4 X 27 dia	
1	Tool Equipment TE-48		
1	Tool Equipment TE-94		
1	Truck K-53		
1	Accessory Components		
1	Set of Equipment Spares		

RADIO SET

SCR-578, A,B



Radio Set SCR-578-A



Radio Set SCR-578-B

SCR-578, A,B RADIO SET

FUNCTIONAL DESCRIPTION

The SCR-578, A, B are complete emergency transmitters of sturdy construction designed for operation from a rubber life raft. The sets automatically transmit coded distress signals when the hand crank is rotated, while the antenna is held aloft by a kite or hydrogen-filled balloon.

The SCR-578, A and B are similar in performance but differ slightly in electrical and mechanical design.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: Fixed tuned to 500 kc.
RANGE: 200 mi.
EMISSION: RF signal w/1000 cps tone modulation, A2.
POWER OUTPUT: 4.8 W.
POWER SOURCE REQUIRED: Built-in hand powered generator.
FEATURES: A signal lamp is supplied which operates from the 12 v filament voltage supplied by the generator.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Aviation Corp - Baltimore, Md. (SCR-578-A) Order - 5896-WF-43.
Kingston Prod. Corp - Kokomo, Ind. (SCR-578-B) Order 8127 - WF-43.
Approximate Cost: SCR-578, $350.00 with equipment spares.
Approximate Cost: SCR-578-A with Equipment spares.
Approximate Cost: SCR-578-B $350.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

SCR-578, -A, -B
(1) 12A6 (1) 12SC7
Total Tubes: (2)

REFERENCE DATA AND LITERATURE

SCR-578 TM11-227: Technical Manual - Signal Communication Equipment Directory of Radio Communication Equipment.
SCR-578-A, -B AN16-40SCR578-2: Handbook of Maintenance Instructions for Radio Set SCR-578-A or SCR-578-B.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

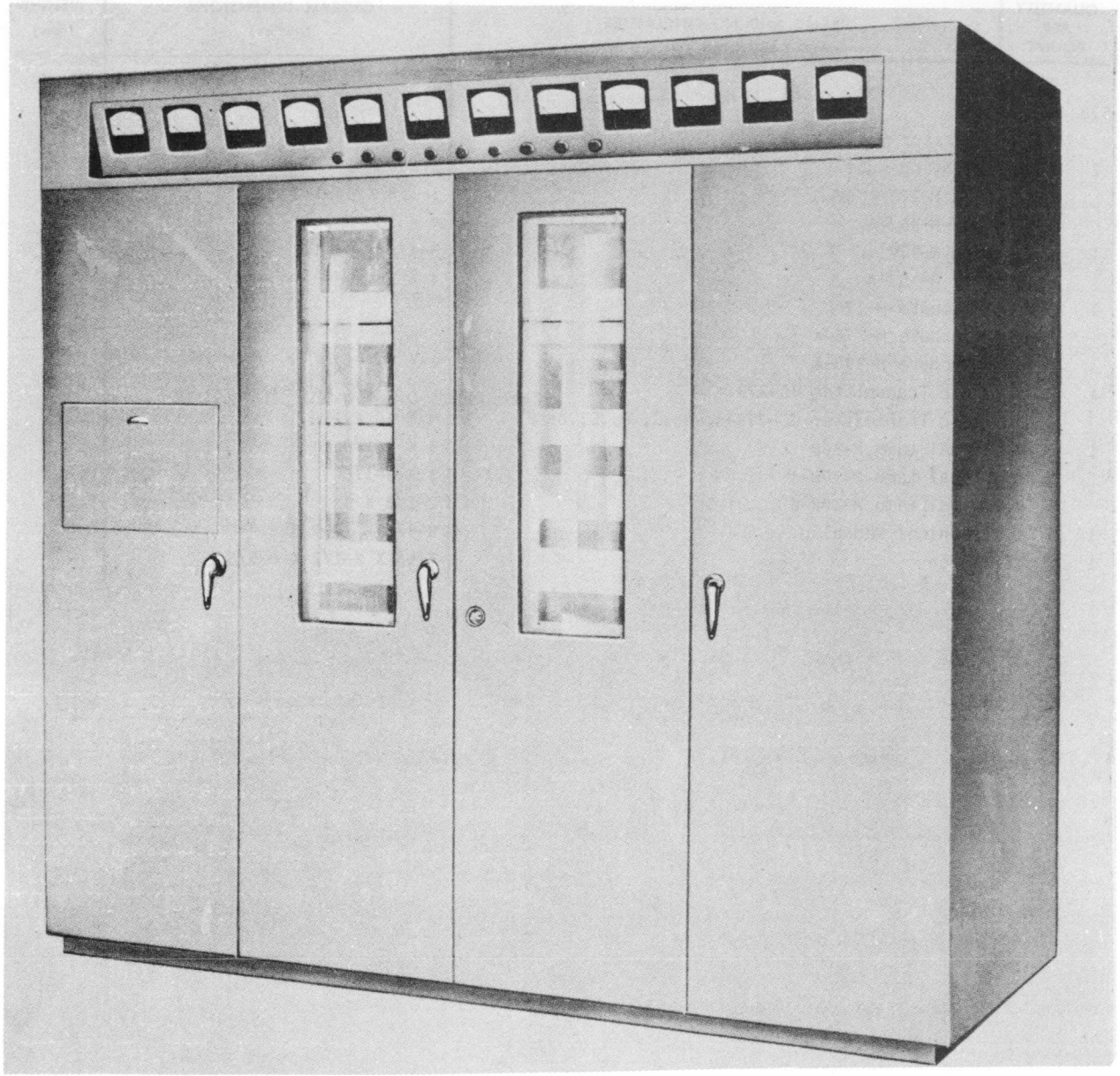
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
SCR-					
578	-A	-B			
2	1	1	Wire W-147 or W-148	300 ft.	0.55
	1		Bag BG-109-A (Accessory)	7 X 39-1/2	3.2
1			Bag BG-109	7 X 39-1/2	3.2
1			Bag BG-110	9 X 10-1/2 X 12-1/2	1.5
	1		Bag BG-110-A (Transmitter)	9 X 10-1/2 X 12-1/2	1.5
		1	Bag BG-155-A	14-1/2 X 17 X 20-1/4	7.0
2			Balloon M-728	4-1/4 X 5-1/8	1.2
	2	2	Balloon M-728-A	4-1/4 X 5-1/8	1.2
1			Hand Crank GC-18		0.45
	1	1	Hand Crank GC-18-A		0.45
2			Generator M-315 (Hydrogen)	4-1/4 X 11-5/8	2.75 ea.

RADIO SET SCR-578, A,B

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT			NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
	SCR-				
578	-A	-B			
	2	2	Generator M-315-A, B or C	4-1/4 X 11-5/8	2.75 ea
2	2	2	Inflating Tube	1-1/4 X 19	0.5
	1		Kite M-277-A or	3-1/8 X 36-1/2	1.45
			Kite M-357-A	4 X 18	1.5
1			Kite M-277	3-1/8 X 36-1/2	1.45
		1	Kite M-357-A	4 X 18	1.5
1			Parachute M-276		1.0
	1		Parachute M-276-A		1.0
		1	Parachute M-390-A	2 X 4 X 19	2.81
1			Radio Transmitter BC-778	9 X 9-1/2 X 10-1/2	15.1
	1	1	Radio Transmitter BC-778-A, B, C, D, E, or F	9 X 10 X 13	15.8
1			Signal Lamp M-308	3 X 3-1/8	0.2
	1		Signal Lamp M-308-A	3 X 3-1/8	0.2
		1	Signal Lamp M-308-B	2-1/8 X 3	0.2
1	1	1	Technical Manual	8-3/8 X 10-7/8	0.5
1	1	1	Wrench	7/16 X 2-1/2 X 6-5/8	



Radio Transmitter T-265/FRC-10 and T-409/FRC-30

FUNCTIONAL DESCRIPTION

The T-265/FRC-10 and T-409/FRC-30 is an amplitude-modulated, single side band, twin-channel, suppressed-carrier transmitter. It is designed for long range point-to-point communication, and operates in the frequency range of 4 to 23 mc for T-265/FRC-10 and 4.5 to 28 mc for T-409/FRC-30. Conventional double sideband transmission facilities are provided for use when a single sideband receiver is not available at the distant point.

Data on this sheet reflects the following field changes, FC1 (7 August 1956).

T-265/FRC-10, T-409/FRC-30

RADIO TRANSMITTERS

December 1956

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE MODULATION: Amplitude.
TYPE TRANSMISSION: A2 and A3.
FREQUENCY RANGE: 4 to 23 mc (T-265/FRC-10) 4.5 to 28 mc (T-409/FRC-30).
POWER OUTPUT
SINGLE SIDEBAND ENVELOPE OUTPUT: 4 kw.
DOUBLE SIDEBAND CARRIER OUTPUT: 1 kw.
SPURIOUS SIGNAL SUPPRESSION: 43 db below envelope power output.
TONE VOLUME
SPEECH INPUT TERMINALS: -13 to +20 dbm (+3 dbm normal).
TEST-TONE INPUT TERMINALS: 0 to +20 dbm (0 dbm normal).
VOICE-FREQUENCY INPUT IMPEDANCE: 600 ohms.
L-F OSCILLATOR FREQUENCY: 100 kc.
M-F OSCILLATOR FREQUENCY: 2700 kc.
H-F OSCILLATOR CRYSTAL FREQUENCY: 6.4 to 12.8 mc.
H-F CONVERSION FREQUENCY: 6.8 to 20.2 mc.
FREQUENCY ACCURACY
AT 4 MC: ±0.0011% or less.
AT 23 MC: ±0.0026% or less.
POWER SUPPLY: 230 v, 3 phase, 50 to 60 cps.
AUXILIARY POWER: 115 v, single phase, 1000 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Western Electric Company, New York, N.Y.
Contract TASSA Order 10279, Philadelphia, 49

Contract MIPR-R-51-880-19390, 19816.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 3X2500F3	(2) 4-400A	(2) 5749/6BA6W
(2) 2C51	(15) 5691	(1) 6W4GT
(3) 807	(11) 5591	(2) 6AG7Y
(2) 4E27	(10) 249C	(2) 6AS7G
(1) 6SJ7	(2) 336A	(2) 350B
		(1) 310A

Total Tubes: (59)

(1) 21EC (1) 5R (2) 1N69 (10) CR-27/U

Total Crystals: (14)

REFERENCE DATA AND LITERATURE

NAVSHIPS 92152 or TM11-814: Dept of Army-Technical Manual for Radio Transmitter-T-265/FRC-10 and T-409/FRC-30.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Transmitter T-265/FRC-10 or T-409/FRC-30	305.5	53-1/2 x 94-1/2 x 104-1/2	4911
1	Blower KS-15541	10.3	21-1/2 x 25 x 33	216
1	Front Door Assembly	15.9	14-1/2 x 25-1/2 x 74-1/2	231
1	Front Door Assembly	15.9	14-1/2 x 25-1/2 x 74-1/2	223
1	Rear Door Assembly	18.3	14-1/2 x 25-1/2 x 85-1/2	250
1	Rear Door Assembly	18.3	14-1/2 x 25-1/2 x 85-1/2	255
1	End Panel Assembly	27.0	12-1/2 x 43-1/2 x 85-1/2	358
1	Balance of Frame Housing and Flue Assembly	13.8	8 x 33-1/2 x 89	185
1	Miscellaneous Loose Vacuum Tubes	6.9	20 x 22 x 27	62
3	3 x 2500F3 Vacuum Tubes	5.5	17-1/2 x 12-1/2 x 31	87
1	Intake Hood	10.1	19 x 27 x 34	73
1	Capacitor NT-13889	4.5	17 x 20-1/2 x 22	175
3	Transformer NT-14279	3.2	14-1/2 x 18 x 21	196
1	Loose Parts for Transmitter	11.8	27 x 27 x 28	125
1	Transformer NT-14282 and NT-14282	4.3	16 x 20 x 23	109
1	Voltage Regulator	16.7	22 x 28 x 47	605
1	Miscellaneous Vacuum Tubes	6.9	20 x 22 x 47	76

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Miscellaneous Vacuum Tubes	6.9	20 x 22 x 27	60
1	Tools and Test Equipment	4.4	17 x 20 x 22	77
1	Carbon Tetrachloride	2.1	14 x 14 x 18	28
1	Tube Tester	2.8	11-1/2 x 14-1/2 x 25-1/2	48
1	Analyzer	2.1	14 x 14 x 18	38
1	Distortion Measuring Cabinet	39.3	27 x 28 x 90	740
1	Writing Shelf Assembly	9.3	20 x 26 x 36	115
1	Installation Material	7.1	20 x 22 x 28	77
1	Vacuum Tubes	4.3	16 x 20 x 24	44
1	Drawings and Publications	4.4	17 x 20 x 22	79

EQUIPMENT SUPPLIED DATA

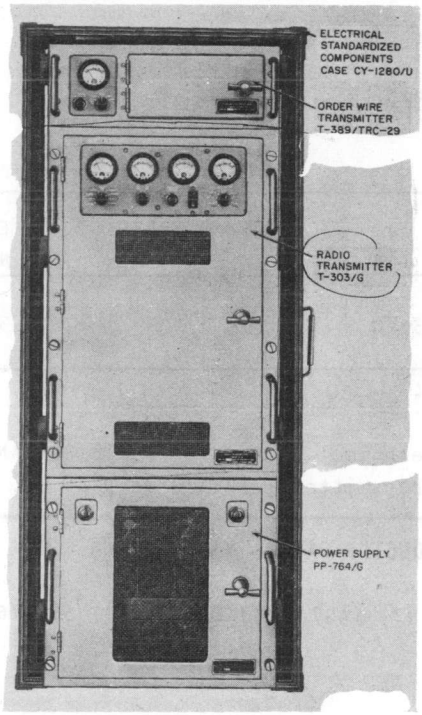
QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter T-265/FRC-10	42-1/2 x 84 x 84	
1	Superior Electric Co. Voltage Regulator EM6210Y or S344	18-5/8 x 23-1/4 x 39-3/8	
1	Distortion Measuring Equipment	17 x 22 x 84	
1	Generator - KS-5472-01	3-15/16 x 3-15/16 x 8	
1	Ammeter - Weston Model-425	2 x 2-3/4 x 3-1/4	
1	Tube Tester - I-177-B	5-1/4 x 8-1/2 x 15-1/2	
1	Multimeter - TS-352/U	6-1/4 x 8-3/4 x 11-1/4	
1	Voltmeter - Weston Model 433	3-1/2 x 5-1/16 x 6-1/32	
1	Headset - 1002C		
1	Variac-General Radio Co. V5HMT	4-15/16 x 5 x 6-7/8	
1	Test Set - 81AW	1-3/4 x 3-1/8 x 4-5/8	
	WECO Drawings and Circuit Descriptions Instruction Bulletins		

23 July 1962 RADIO TRANSMITTER T-303A/G

Cog Service: TASSA FSN: Functional Class:

USA	USN	USAF
TYPE CLASS: Used by	Used by	

MANUFACTURER'S NAME/CODE NUMBER: Radio Receptor Company, Incorporated, (77638).



Radio Transmitter T-303A/G

FUNCTIONAL DESCRIPTION:

The Radio Transmitter T-303A/G is designed to convert video signals in the 30 cps to 4.5 mc band to Frequency Modulation (FM) micro-wave carrier in the 1700 mc to 24 mc band.

No field changes in effect at time of preparation (12 January 1962).

TECHNICAL CHARACTERISTICS:

TYPE OF EMISSION: F9 type.
TYPE OF FREQUENCY CONTROL: Crystal.
POWER OUTPUT DATA
FIRST OUTPUT: 8 W at 1700 mc.
SECOND OUTPUT: 6 W at 2000 mc.
THIRD OUTPUT: 5 W at 2200 mc.
FOURTH OUTPUT: 4 W at 2400 mc.

T-303A/G RADIO TRANSMITTER

NUMBER OF CHANNELS: 27 channels.
NUMBER OF BANDS: 1 band.
OPERATING FREQUENCY RANGE: 1700 to 2400 mc.
OPERATING POWER RQMT: 115 v ac, 50 to 60 cps, single ph.

RELATION TO OTHER EQUIPMENT:

The T-303A/G is similar to and interchangeable with the T-303/G except for maintenance parts.

The T-303A/G is designed as part of AN/TRC-29.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Radio, Transmitter T-303A/G		19-3/8 x 21-5/8 x 29-3/4	

REFERENCE DATA AND LITERATURE:

TM11-689, T031R2-2TRC-151: Technical Manual for Radio Set AN/TRC-29 and Radio Repeater Set AN/TRC-39 of which Radio Transmitter T-303A/G is part of.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (1) SLR7 (9) 2C51 (7) 6AG7 (1) 829B (9) 5654/6AK5W (4) 6AL5W

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

SHIPPING DATA

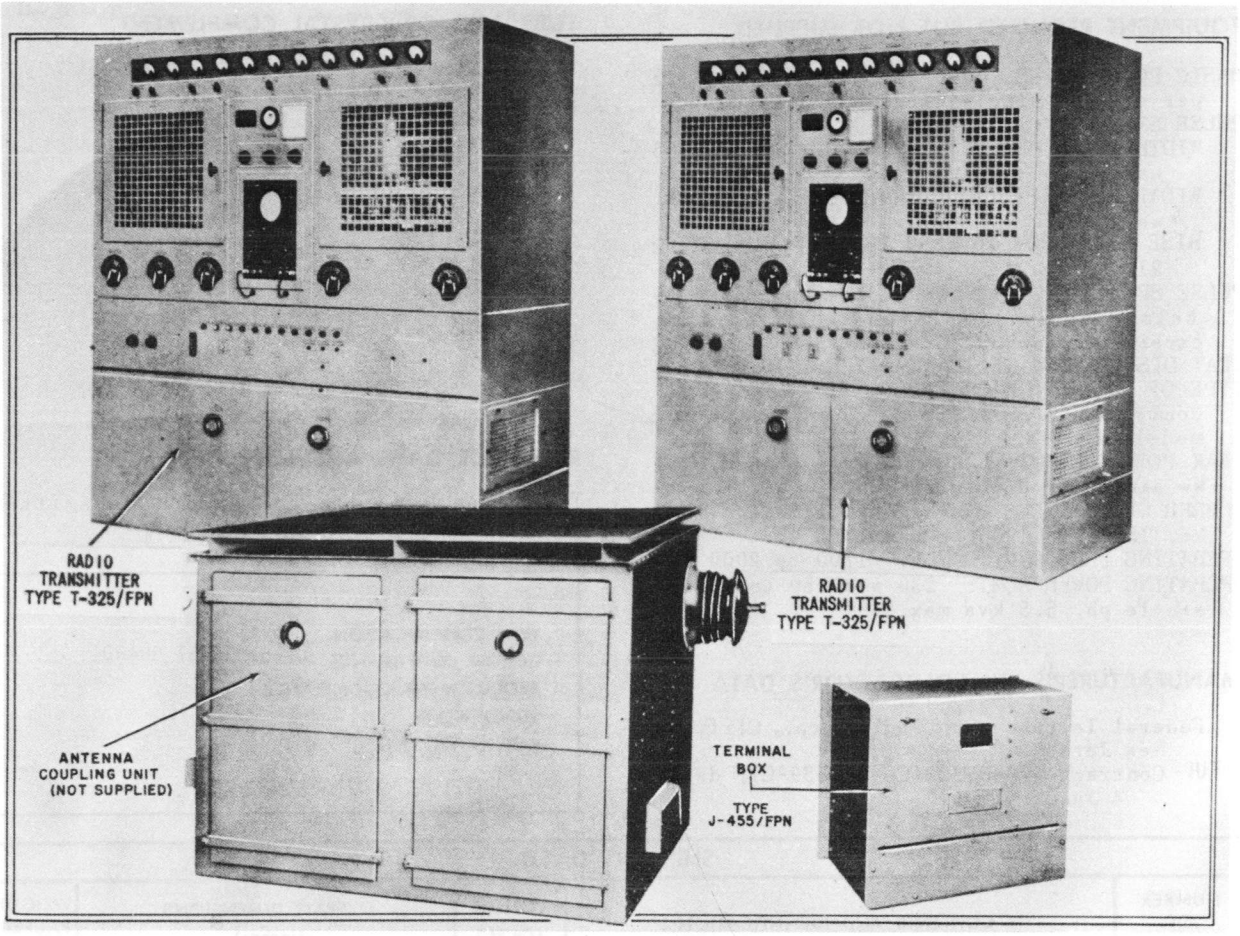
PKGS	VOLUME (CU FT)	WEIGHT (LBS)

PROCUREMENT DATA

PROCURING SERVICE: TASSA DESIGN COG: TASSA
SPEC &/OR DWG: MIL-R-13963 (Sig C)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Radio Receptor Co., Inc. Dwg no. SM-LP-202777	Brooklyn, New York	31238-PH-55-55	

RADIO TRANSMITTER T-325/FPN



Radio Transmitter Type T-325/FPN

FUNCTIONAL DESCRIPTION

The T-325/FPN is designed as one (1) of the basic units of a Loran Transmitting Station. The Transmitter produces high-powered Radio Frequencies (RF) pulses which when radiated, may be utilized by air craft and shipboard receiver-indicators to determine a line of position. Functionally, a transmitter consists of two (2) "exciters", two (2) IPA stages, and a PA stage, plus required accessory items such as power supplies, a monitoring oscilloscope, operating controls and indicating devices.

Data on this sheet reflects the following Field Changes: FC No. 1.

RELATION TO OTHER EQUIPMENT

The T-325/FPN is similar to but not the same as T-325A/FPN, T-325B/FPN and T-325C/FPN, but differ in equipment supplied.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Antenna Coupling Unit, (1) Loran Switching Equipment UM, 50 Ft - RG-19/U Cable, RG-8/U Cable (as required), (1) Loran Timer UE-1.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: P9d pulse type emission.

T-325/FPN RADIO TRANSMITTER

EQUIPMENT REQUIRED BUT NOT SUPPLIED

BASIC PULSE RATES: 20, 25, and 33-1/3 pulse per second, single or double pulsed.
PULSE SHAPE
WIDTH AT 10 PERCENT AMPLITUDE: Approx 65 us.
WIDTH AT 50 PERCENT AMPLITUDE: 40 us ±1 us.
RISE TIME FROM 10 TO 90 PERCENT AMPLITUDE: 21 us ±1 us.
PULSE SPECTRUM: Side bands are approx 60 db below carrier amplitude, 100 kc from carrier frequency.
HEAT DISSIPATION OF TRANSMITTER: 45 kw.
TYPE OF FREQUENCY CONTROL: 100 kc crystal controlled signal from Loran Timer Navy Model UE-1.
PEAK POWER OUTPUT: 160 kw single pulsed, 128 kw single or double pulsed.
NUMBER OF CHANNELS: 5 channels 1750 kc, 1800 kc, 1850 kc, 1900 kc and 1950 kc.
OPERATING FREQUENCY RANGE: 1700 to 2000 kc.
OPERATING POWER RQMT: 230 v AC, 50 to 60 cps, single ph, 5.5 kva max.

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telephone and Radio Corp., Clifton, New Jersey.
Contract TCG-38323(CG-18,359-C), dated 4 January 1951.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 2X2A	(9) 6SN7GT
(2) 4C35	(1) 5CP1A
(3) 5R4GY	(1) 5U4G
(1) 6AC7	(1) 6AG7
(1) 6AL5	(2) 6H6GT
(8) 6J5	(4) 6SA7
(2) 6SJ7	(2) 6SN7W
(4) 6V6GT/G	(4) 7C23
(2) 715C	(2) 807
(2) 2050	(4) 8020

Total Tubes: (59)

No Crystals used.

REFERENCE DATA AND LITERATURE

Technical Manual: For Radio Transmitter T-325/FPN.

TYPE CLASSIFICATION	(NAVY)
DESIGN COGNIZANCE	U. S. COAST GUARD
PROCUREMENT COGNIZANCE	
STOCK NO.	
R.D.B. IDENT. NO.	

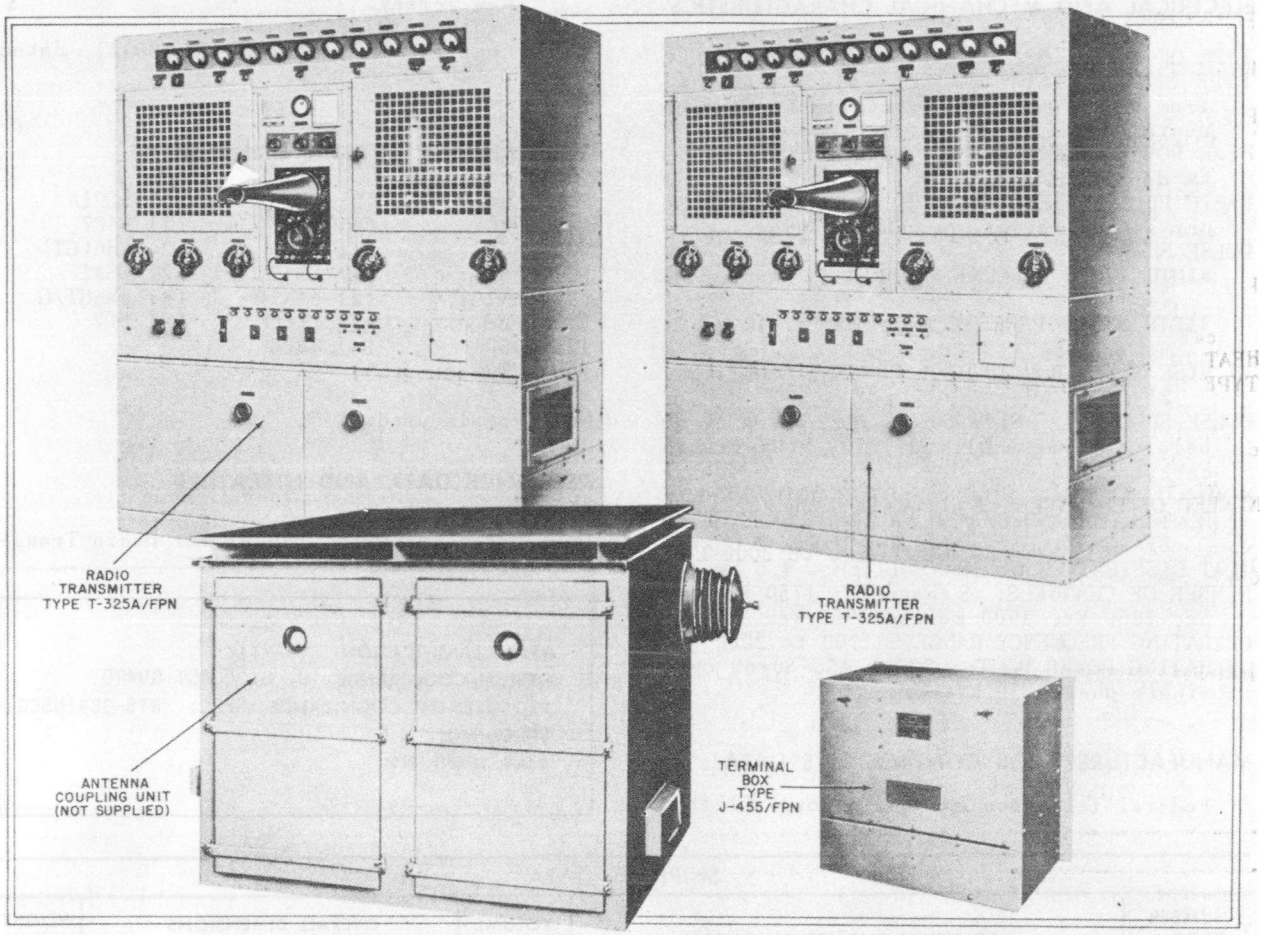
SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
2	Radio Transmitter T-325/FPN	284	53 X 93 X 100	4129
2	Set of Tubes for Radio Transmitter T-325/FPN (less tubes for Monitor Oscilloscope)	17	26 X 30 X 37	161
1	Terminal Box J-455/FPN	11	22 X 26 X 31	100
2	Reel RG-19/U Cable w/Special Coast Guard Armor (500 ft)	73	39 X 57 X 57	2315
1	Set of Equipment Spares	9	18 X 19 X 45-1/2	102
1	Set of Equipment Spares	9	18 X 19 X 45-1/2	119
1	Set of Equipment Spares	9	18 X 19 X 45-1/2	154
1	Set of Equipment Spares	9	18 X 19 X 45-1/2	156
1	Set of Equipment Spares	9	18 X 19 X 45-1/2	199
1	Set of Equipment Spares	9	18 X 19 X 45-1/2	268
1	Set of Equipment Spares	5	16-3/8 X 20-1/4 X 20-1/2	255

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
2	Radio Transmitter T-325/FPN	37-7/8 X 72-1/4 X 84-1/8	2971
1	Terminal Box J-455/FPN	11-1/2 X 16-11/16 X 20	45
2	Reel Type RG-19/U Cable w/Special Spiral Armor	39 X 54 X 54	1811
1	Set of Equipment Spares		

RADIO TRANSMITTER T-325A/FPN



Radio Transmitter T-325A/FPN

FUNCTIONAL DESCRIPTION

The T-325A/FPN is designed as one of the basic units of a Loran Transmitting Station. The transmitter produces high-powered Radio Frequency (RF) pulses which, when radiated, may be utilized by aircraft and shipboard receiver-indicators to determine a line of position. Functionally, a transmitter consists of two (2) "exciters", two (2) IPA stages, and a PA stage, plus required accessory items such as power supplies, a monitoring oscilloscope, operating controls, and indicating devices.

No Field changes in effect at time of preparation (30 December 1959).

RELATION TO OTHER EQUIPMENT

The T-325A/FPN is similar to but not the same as T-325B/FPN, T-325C/FPN. but differs in equipment supplied.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Loran Timer, (1) Loran Switching Equipment for use w/Radio Transmitter T-325A/FPN, 50 Ft. of RG-19/U Cable, RG-8/U Cable as required, RG-8/U Cable w/Special Cost Guard Armor, as required, (1) Antenna Coupling Unit.

T-325A/FPN RADIO TRANSMITTER

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: Pulse type PO emission.
TYPE OF FREQUENCY CONTROL: 100 kc signal from Loran Timer or crystal control from contained circuit.
PEAK POWER OUTPUT: 160 kw single pulsed, 128 kw double pulsed.
BASIC PULSE RATES: 20, 25, and 33-1/3 pulse per second, single or double pulsed.
PULSE SHAPE
WIDTH AT 10 PERCENT AMPLITUDE: Approx 65 us.
WIDTH AT 50 PERCENT AMPLITUDE: 40 us ±1 us.
RISE TIME FROM 10 TO 90 PERCENT AMPLITUDE: 21 us ±1 use
PULSE SPECTRUM: Side bands are approx 60 db below carrier amplitude, 100 kc from the carrier frequency.
NOMINAL WATTAGE POWER FACTOR AND CURRENT RQMT'S AT STAND-BY AND VARIOUS PULSE RATES
STAND-BY: 12 amps, 90% P.F., 2.6 kw.
HEAT DISSIPATION OF TRANSMITTER: 4.5 kw.
NUMBER OF CHANNELS: 5 channels; 1750 kc, 1800 kc, 1850 kc, 1900 kc and 1950 kc.
OPERATING FREQUENCY RANGE: 1700 to 2000 kc.
OPERATING POWER RQMT: 230 v AC, 50/60 cps, single phase, 55 kva max.

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telephone and Radio Corp, Clifton New Jersey.
Dwg No. FRJ-25256-14.
Contract TCG-38851(CG-22,199-A), dated 28 March 1952.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 2X2A	(2) 4C35	(1) 5CP1A
(3) 5R4GY	(1) 5U4G	(1) 6AC7
(1) 6AG7	(1) 6AL5	(2) 6H6(GT)
(8) 6J5	(4) 6SA7	(2) 6SJ7
(9) 6SN7GT	(2) 6SN7W	(4) 6V6GT/G
(4) 7C23	(2) 715C	(2) 807
(2) 2050	(4) 8020	

Total Tubes: (59)

No Crystals used.

REFERENCE DATA AND LITERATURE

CG-273-5: Technical Manual for Radio Transmitter T-325A/FPN.

TYPE CLASSIFICATION (NAVY)
DESIGN COGNIZANCE U. S. COAST GUARD
PROCUREMENT COGNIZANCE SPEC: RTS-383(USCG)
STOCK NO.
R.D.B. IDENT. NO.

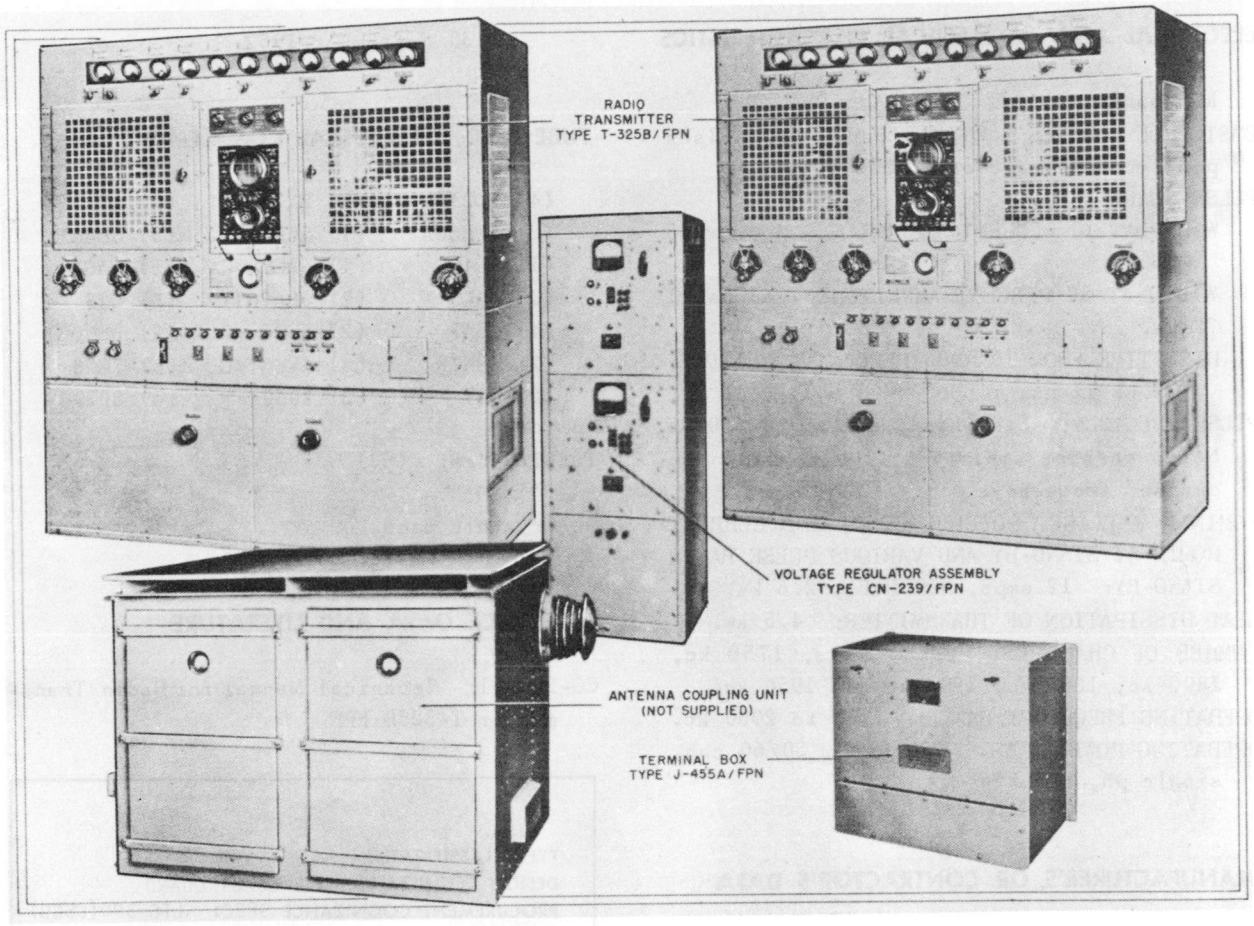
SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
2	Radio Transmitter T-325A/FPN	284	53 X 93 X 100	4129
2	Set of tubes for Radio Transmitter T-325A/FPN (less tubes for Monitoring Oscilloscope OS-101)	17	26 X 30 X 37	161
1	Terminal Box Type J-455/FPN	7.8	17-5/8 X 26-1/2 X 29-1/8	70
2	Set of Tube Spares (300%)	27	26 X 41 X 43	260
2	Set of Equipment Spares	9	18 X 19 X 45-1/2	189
2	Set of Equipment Spares	9	18 X 19 X 45-1/2	204
2	Set of Equipment Spares	9	18 X 19 X 45-1/2	218
2	Set of Equipment Spares	9	18 X 19 X 45-1/2	297
2	Set of Equipment Spares	5	16-1/4 X 20-1/2 X 21-3/4	261

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
2	Radio Transmitter T-325A/FPN	35-7/8 X 72-1/4 X 84-1/8	2971
1	Terminal Box J-455/FPN	11-1/2 X 16-11/16 X 20	29
4	Technical Manual T-325A/FPN	2 X 9 X 11-1/2	3-1/4
2	Set of Tube Spares (300%)	23-1/2 X 38-1/2 X 40	175
2	Set of Equipment Spares		

RADIO TRANSMITTER T-325B/FPN



Radio Transmitter Type T-325B/FPN

FUNCTIONAL DESCRIPTION

The T-352B/FPN is designed as one of the basic units of a Loran Transmitting Station. The transmitter produces high-powered Radio Frequency (R.F.) pulses which, when radiated, may be utilized by air-craft and shipboard receiver-indicators to determine a line of position. Functionally, a transmitter consists of two (2) "exciters", two IPA stages, and a PA stage, plus required accessory items such as power supplies, a monitoring oscilloscope, operating controls, and indicating devices.

Data on this sheet reflects the following Field Changes: F.C. No. 1.

RELATION TO OTHER EQUIPMENT

The T-325B/FPN is similar to but not the same as T-325/FPN, T-325A/FPN and T-325C/FPN; but differ in equipment supplied.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Loran Timer, (1) Loran Switching Equipment for use W/Radio Transmitter T-325B/FPN, RG-19/U Cable as required, RG-8/U Cable as required, RG-148/U Cable as required, RG-147/U or RG-148/U Cable as required, (1) Antenna Coupling Unit.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF FREQUENCY CONTROL: 100 kc signal from Loran Timer or crystal control from contained circuit.
TYPE OF EMISSION: Pulse type PO emission.
PEAK POWER OUTPUT: 160 kw single pulsed, 128

T-325B/FPN RADIO TRANSMITTER

ELECTRICAL AND MECHANICAL CHARACTERISTICS

kw double pulsed.

BASIC PULSE RATES: 20, 25, and 33-1/3 pulses per second single or double pulsed.

PULSE SHAPE

WIDTH AT 10 PERCENT AMPLITUDE: Approx 65 us.

WIDTH AT 50 PERCENT AMPLITUDE: 40 us ±1 us.

RISE TIME FROM 10 TO 90 PERCENT AMPLITUDE: 21 us ±1 us.

PULSE SPECTRUM: Side bands are approx 60 db below carrier amplitude, 100 kc from the carrier frequency.

NOMINAL WATTAGE, POWER FACTOR, AND CURRENT RQMTS AT STAND-BY AND VARIOUS PULSE RATES

STAND-BY: 12 amps, 90% P.F., 2.6 kw.

HEAT DISSIPATION OF TRANSMITTER: 4.5 kw.

NUMBER OF CHANNELS: 5 channels, 1750 kc, 1800 kc, 1850 kc, 1900 kc and 1950 kc.

OPERATING FREQUENCY RANGE: 1700 to 2000 kc.

OPERATING POWER RQMT: 230 v AC, 50/60 cps, single ph, 5.5 kva max.

MANUFACTURER'S OR CONTRACTOR'S DATA

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

Dwg No. D1023743.

Contract Tcg 39108(CG-24,984-A), dated 30 September 1952.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 2D21W	(4) 2X2A	(2) 4C35
(2) 4PR60A	(1) 5CP1A	(3) 5R4GY
(1) 5U4G	(1) 6AC7	(1) 6AG7
(1) 6AL5	(2) 6H6(GT)	(8) 6J5
(4) 6SA7	(2) 6SJ7	(9) 6SN7GT
(2) 6SN7W	(4) 6V6GT/G	(4) 7C23
(2) 807	(2) 2050	(4) 8020

Total Tubes: (63)

No Crystals used.

REFERENCE DATA AND LITERATURE

CG-273-11: Technical Manual for Radio Transmitter T-325B/FPN.

TYPE CLASSIFICATION (NAVY)
DESIGN COGNIZANCE U.S. COAST GUARD
PROCUREMENT COGNIZANCE SPEC: LTS-390(USCG)
STOCK NO.
R.D.B. IDENT. NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
2	Radio Transmitter T-325B/FPN	284	53-1/2 X 92 X 99-1/2	4100
2	Set of Tubes for Radio Transmitter T-325N/FPN (less Tubes for Monitor Oscilloscope OS101)	17	26 X 30 X 37	161
1	Voltage Regulator Ass'y CN-239/FPN	32	28 X 30 X 67-1/2	665
1	Terminal Box J-455A/FPN	7.8	17-5/8 X 26-1/2 X 29-1/8	70
2	Set of Spare Tubes (300%)	27	26 X 41 X 43	260
2	Set of Equipment Spares			

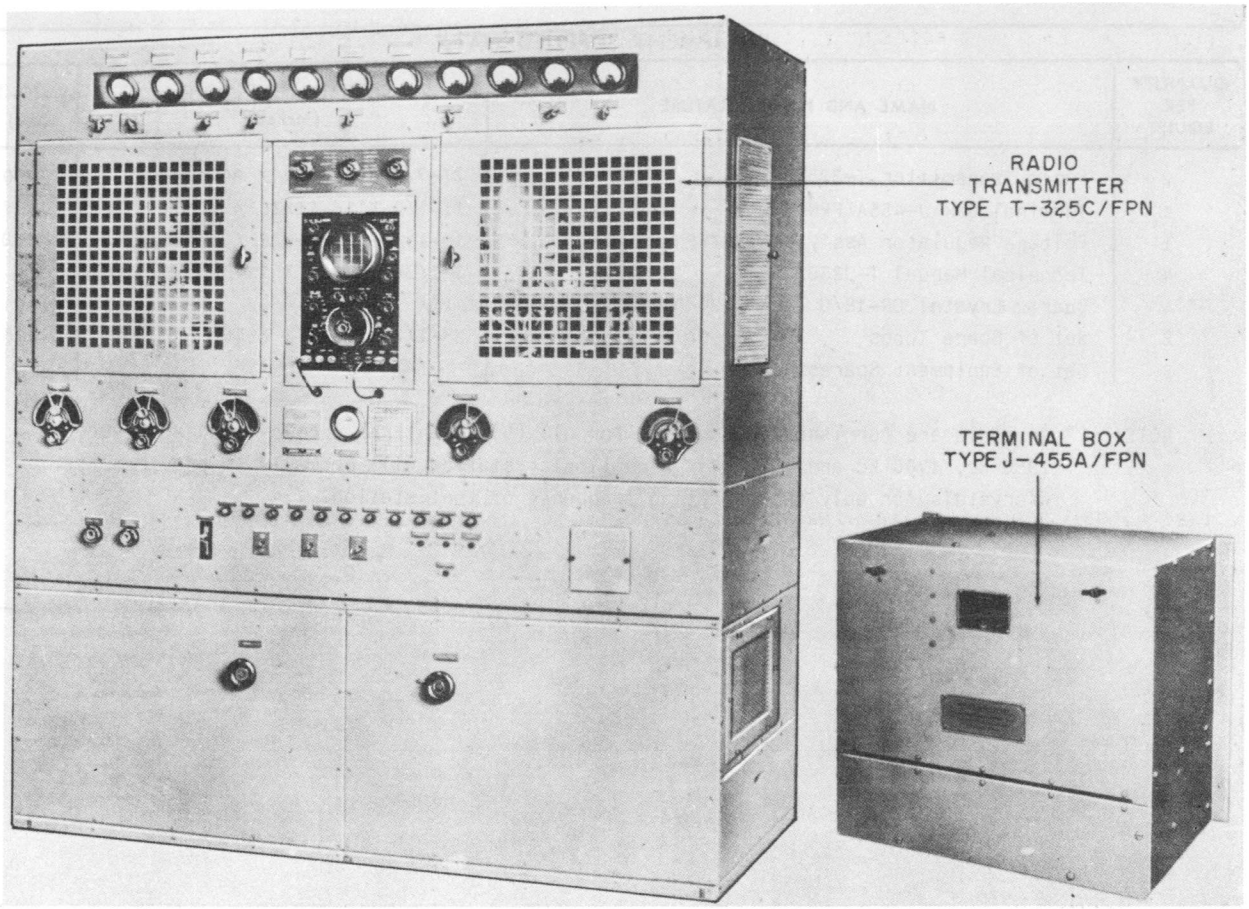
RADIO TRANSMITTER T-325B/FPN

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
2	Radio Transmitter T-325B/FPN	37-7/8 X 72-1/4 X 80-1/8	2950
1	Terminal Box J-455A/FPN	11-1/2 X 16-11/16 X 20	27
1	Voltage Regulator Ass'y CN-239/FPN	19-13/16 X 21-5/8 X 37-25/32	350
4	Technical Manual T-325B/FPN	1-1/2 X 8-3/4 X 11-3/4	
**4	Quartz Crystal CR-18/U		
2	Set of Spare Tubes	23-1/2 X 38-1/2 X 40	175
2	Set of Equipment Spares		

NOTE: ** Crystals are furnished on contract for all (5) Loran Frequencies (1750 kc, 1800 kc, 1850 kc, 1900 kc and 1950 kc). A particular station will normally be provided w/crystals for only the operating frequency of that station.

RADIO TRANSMITTER T-325C/FPN



Radio Transmitter T-325C(FPN)

FUNCTIONAL DESCRIPTION

The T-325C/FPN is designed as one of the basic units of a Loran Transmitting Station. The transmitter produces high-powered Radio Frequency (R.F.) pulses which, when radiated, may be utilized by aircraft and shipboard receiver-indicators to determine a line of position. Functionally, a transmitter consists of Two (2) "exciters", two (2) IPA stages, and a PA stage, plus required accessory item such as power supplies, a monitoring oscilloscope, operating controls, and indicating devices.

No field changes in effect at time of preparation (29 December 1959).

RELATION TO OTHER EQUIPMENT

The T-325C/FPN is similar to but not same as the T-325/FPN, T-325A/FPN and the T-325B/FPN but differ in equipment supplied.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) Loran Timer; (1) Loran Switching Equipment for use w/Radio Transmitter T-325C/FPN; RG-19/U Cable (as required); RG-8/U or RG-58/U Cable (as required); RG-148/U Cable as required; RG-147/U or RG-148 (as required); (1) Antenna Coupling Unit; (1) Standing Wave Indiçator AN/IM-105/U.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: Pulse type PO emission.
PEAK POWER OUTPUT: 160 kw single pulsed, 128 kw double pulsed.
BASIC PULSE RATES: 20, 25, and 33-1/3 pulse

T-325C/FPN RADIO TRANSMITTER

ELECTRICAL AND MECHANICAL CHARACTERISTICS

per second, single or double pulsed.

PULSE SHAPE

WIDTH AT 10 PERCENT AMPLITUDE: Approx 65 us.

WIDTH AT 50 PERCENT AMPLITUDE: 40 us ±1 us.

RISE TIME FROM 10 TO 90 PERCENT AMPLITUDE: 21 us ±1 us.

PULSE SPECTRUM: Side bands are approx 60 db below carrier amplitude, 100 kc from the carrier frequency.

NOMINAL WATTAGE, POWER FACTOR AND CURRENT RQMT'S AT STAND-BY AND VARIOUS PULSE RATES: Stand-by 12 amps, 90% P.F., 2.6 kw.

HEAT DISSIPATION OF TRANSMITTER: 4.5 kw.

NUMBER OF CHANNELS: 5 channels, 1750 kc, 1800 kc, 1850 kc, 1900 kc, and 1950 kc.

OPERATING FREQUENCY RANGE: 1700 to 2000 kc.

TYPE OF CONTROL: 100 kc signal from Loran Timer or crystal control from contained circuit.

OPERATING POWER RQMT: 230 v AC, 50/60 cps, single ph, 5.5 kva max.

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telephone and Radio Co., Clifton, New Jersey.
DWG No. D1040022.
Contract TCG-40111(CG-36,506A), dated 20 December 1955.

TUBE AND/OR CRYSTAL COMPLEMENT

(4) 2021W**	(4) 2X2A	(2) 4C35
(2) 4PR60A	(1) 5CP1A	(3) 5R4GY
(1) 5U4G	(1) 6AC7	(1) 6AG7
(1) 6AL5	(2) 6H6(GT)	(8) 6J5
(4) 6SA7	(2) 6SJ7	(9) 6SN7GT
(2) 6SN7W	(4) 6V6GT/G	(4) 7C23
(2) 807	(2) 2050	(4) 8020

Total Tubes: (63)

Note: ** The four (4) 2021 W type tubes are not supplied under this contract.

No Crystals used.

REFERENCE DATA AND LITERATURE

CG-273-36: Technical Manual for Radio Transmitter T-325C/FPN.

TYPE CLASSIFICATION (NAVY)
DESIGN COGNIZANCE U. S. COAST GUARD
PROCUREMENT COGNIZANCE SPEC: LTS-390(USCG)
STOCK NO.
R.D.B. IDENT. NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Transmitter T-325C/FPN	284	53-1/2 X 92 X 99-1/2	3246
1	Set of Tubes Radio Transmitter T-325C/FPN (Less tubes for Monitor Oscilloscope OS101)	17	26 X 30 X 37	161
1	Terminal Box J-455A/FPN	7.8	17-5/8 X 26-1/2 X 29-1/8	70
1	Cathode-Ray Oscilloscope (OS101)	7.7	17 X 23 X 34	157
1	Set of Tube Spares (300%)	27	26 X 41 X 43	260
1	Set of Equipment Spares			

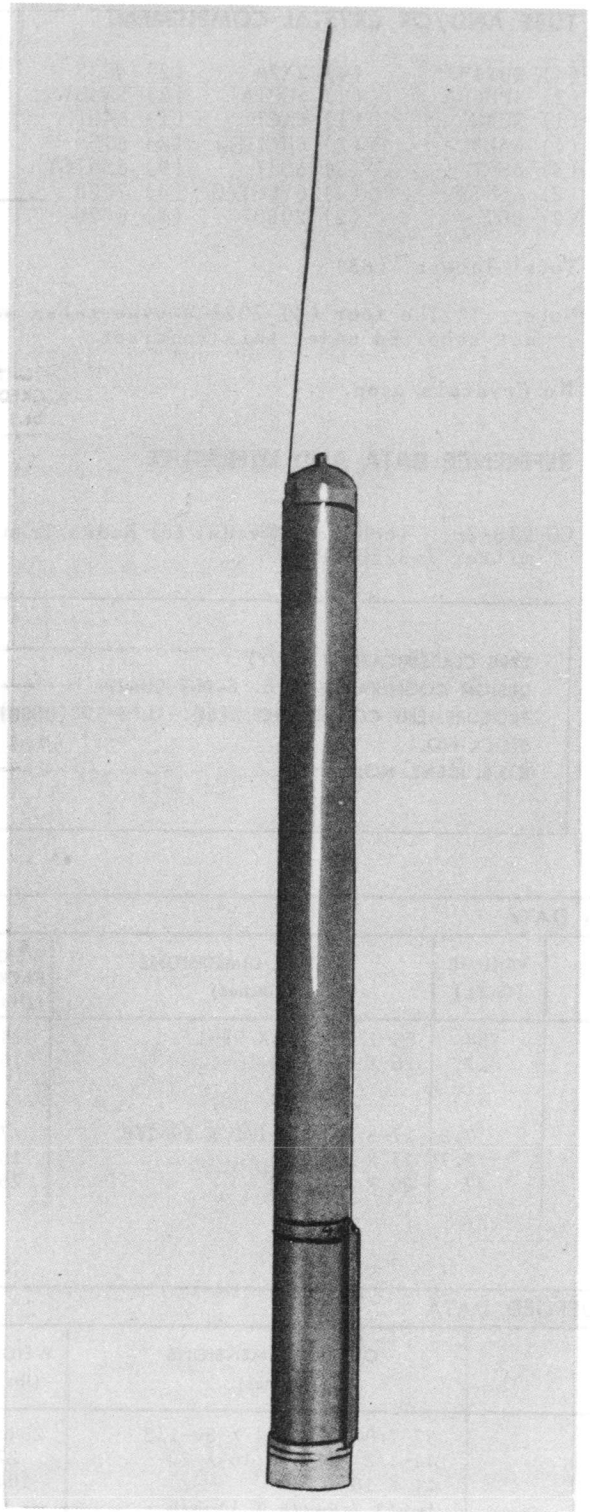
EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter T-325C/FPN	37-7/8 X 72-1/4 X 80-1/8	2846
1	Terminal Box J-455A/FPN	11-1/2 X 16-11/16 X 20	27
1	Cathode-Ray Oscilloscope (OS101)	11 X 16 X 26	104
2	Technical Manual CG-273-36	1-1/2 X 8-3/4 X 11-3/4	
1	Set of Spare Tubes (300%)	23-1/2 X 38-1/2 X 40	175
1	Set of Equipment Spares		

April 1958

RADIO TRANSMITTING BUOY

T-347/SRT



Radio Transmitting Buoy T-347/SRT

FUNCTIONAL DESCRIPTION

The T-347/SRT is a self-contained, low-power transmitter powered by a magnesium silver chloride battery which is an integral part of the equipment. It is designed for ejection from a sunken or submerged submarine. Its purpose is to transmit the message "SOS Sub Sunk SOS" and to act as a beacon locating the position of the sunken craft.

The complete transmitter is housed in a magnesium tubing, and an antenna consisting of a metal strip is attached to the top end of the tube. The antenna may be folded back on the tube to permit insertion of the buoy into the signal ejector tube located on the submarine. A Test harness for operating the equipment from an external battery is being separately supplied.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQ RANGE: 115 to 145 mc.
PRESET FREQ: 121.5 mc (international VHF emergency freq).
FREQ CONTROL: Free-running power oscillator.
TYPE OF EMISSION: A2, medium freq 1000 cps ±10%; mod percentage, 100.
FREQ STABILITY: ±0.025%.
POWER OUTPUT: 0.75 W (constant 1st 2 hr dropping to 0.3 W at 3 hr).
OPERATING LIFE: 3 hr, determined by batt output capabilities.
POWER SOURCE REQUIRED: 7.5 v, 270 amp, from self-contained magnesium silver chloride batt. Burgess Battery Co. #5MC270FL. This battery is activated by sea water acting as the electrolyte.

MANUFACTURER'S OR CONTRACTOR'S DATA

Servo Corp of America, New Hyde Park, Long Island, N.Y.
Contract NObsr-52237, dated 24 January 1951.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5654/6AK5W (1) 5718

Total Tubes: (2)

Radio-Transmitters

T-347/SRT RADIO TRANSMITTING BUOY

April 1958

No Crystals.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUSHIPS
PROCUREMENT COGNIZANCE	
STOCK NO.	

REFERENCE DATA AND LITERATURE

NAVSHIPS 91636: Technical Manual for Radio Transmitting Buoy T-347/SRT.

SHIPPING DATA

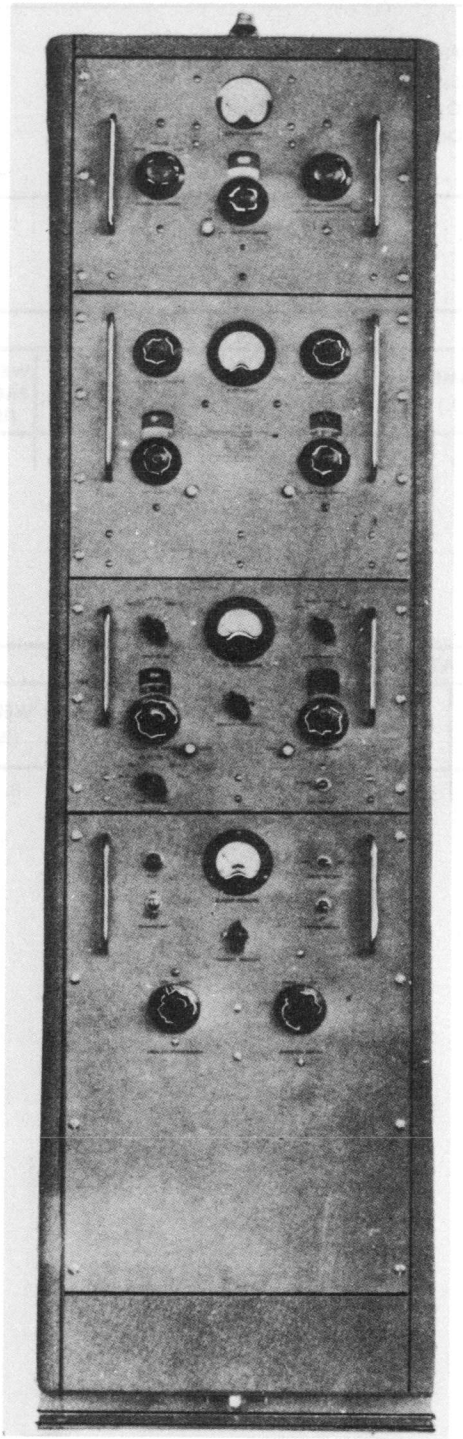
NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Transmitting Buoy T-347/SRT	704		11

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitting Buoy T-347/SRT	3 dia X 39.5	8

RADIO TELEPHONE and TELEGRAPH TRANSMITTER

T-350XM



Radio Telephone and Telegraph Transmitting Equipment T-350XM

FUNCTIONAL DESCRIPTION

The T-350XM is designed for either radiotelephone or radiotelegraph operation within the frequency range of 2000 to 20,000 kilocycles. Frequency control is by means of either quartz crystals or from a built-in master oscillator. It employs vacuum tube for automatic keying at speeds up to 100 words per minute and conventional relay for manual keying.

No field changes in effect at time of preparation (15 October 1958).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 2000 to 20,000 cps.
TYPE OF MODULATION: Amplitude class B, high level.
AUDIO INPUT IMPEDANCE: 500 ohms.
POWER OUTPUT
RADIOTELEPHONE: 250 W.
RADIOTELEGRAPH: 350 W.
PRIMARY POWER REQUIREMENTS: 210 to 250 v, 50 to 60 cps, single ph.
POWER CONSUMPTION
RADIOTELEPHONE: 1850 W (100% modulation).
RADIOTELEGRAPH: 1650 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Technical Radio Co., San Francisco, Calif.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 6SJ7	(1) 6SK7	(1) 6J5
(2) 807	(2) 805	(2) 813
(2) VR-105	(1) VR-150	(4) 866
(1) 6L6G	(2) 5Z3	

Total Tubes: (19)

(5) Quartz Crystals

Total Crystals: (5)

Radio-Transmitters

April 1959

T-350XM RADIO TELEPHONE and TELEGRAPH TRANSMITTER

REFERENCE DATA AND LITERATURE

Technical Manual for Radio Telephone and Telegraph Transmitter T-350XM.

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Telephone and Telegraph Transmitter T-350XM	16 X 24-1/2 X 58-1/2	690

23 July 1962

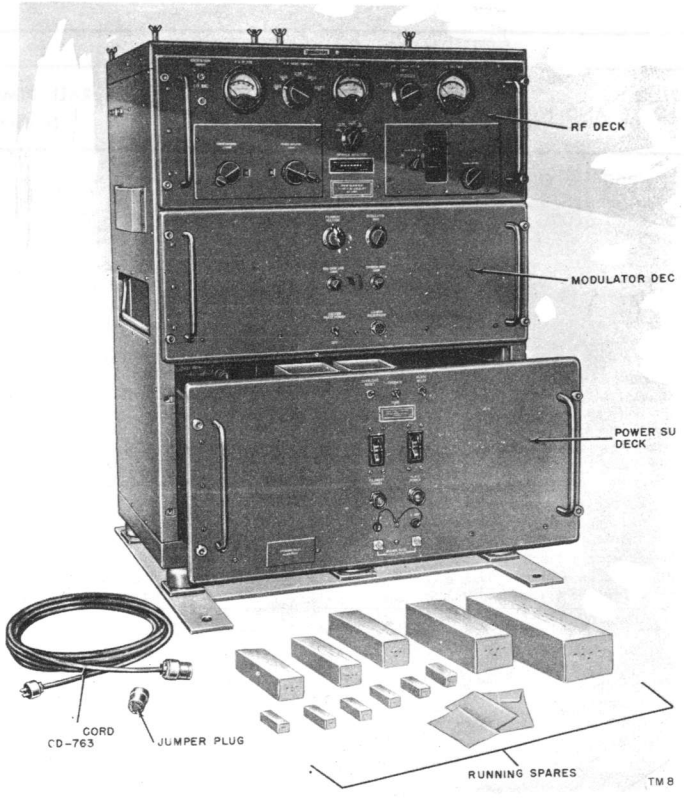
Cog Service: TASSA FSN: RADIO TRANSMITTER T-368B/URT

Functional Class:

USA	USN	USAF

TYPE CLASS: Used by Used by

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



Radio Transmitter T-368B/URT

FUNCTIONAL DESCRIPTION:

The Radio Transmitter T-368B/URT is designed as a medium power radio-frequency (RF) communication transmitter which transmits continuous wave (CW) and amplitude modulated (AM) signals over a distance of more than 100 miles. The frequency range of the transmitter is from 1.5 to 20 megacycles (MC).

The T-368B/URT is also used as a power amplifier of low-powered exciter units or as a driver for high-powered transmitters. When used as an amplifier, the transmitter is capable of transmitting frequency-shift keying (FSK) signals and other types of externally excited signals, such as narrow-band frequency modulated signals. For a fifth type of operation, the transmitter combines fsk and am to permit a single rf signal to be used for two types of communications.

No field changes in effect at time of preparation (2 January 1962).

T-368B/URT RADIO TRANSMITTER

TECHNICAL CHARACTERISTICS:

TYPE OF EMISSION: A0, A1 and A3 types.
TYPE OF CONTROL: Master oscillator.
FREQUENCY RANGE: 1.5 to 20 mc.
NUMBER OF BANDS: 5 bands.
DISTANCE RANGE: Over 100 miles.
OPERATING POWER RQMT: 115 v ac, 50 to 60 cps, single ph; (CW)-1570 W; (microphone) pf 91%.

RELATION TO OTHER EQUIPMENT:

The T-368B/URT is interchangeable with the T-368/URT except for maintenance parts.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Radio Transmitter T-368B/URT		31 x 32 x 41-1/2	650
1	Cord CD-763		156 lg	
1	Jumper Plug		1-1/2 dia x 2-1/2	
2	Technical Manual TM11-809		7/8 x 7-7/8 x 10-1/4	

REFERENCE DATA AND LITERATURE:

TM-11-809: Technical Manual for Radio Transmitter T-368B/URT and Antenna Tuning Unit BC-939-B.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (3) 6AH6 (1) 6000 (1) 4-400A (2) 5749 (2) 5814 (2) 6C4W (1) 5933
(1) 12AT7 (1) 4D21 (1) 3B28 (2) 5R4WGY (2) 0A2

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

SHIPPING DATA

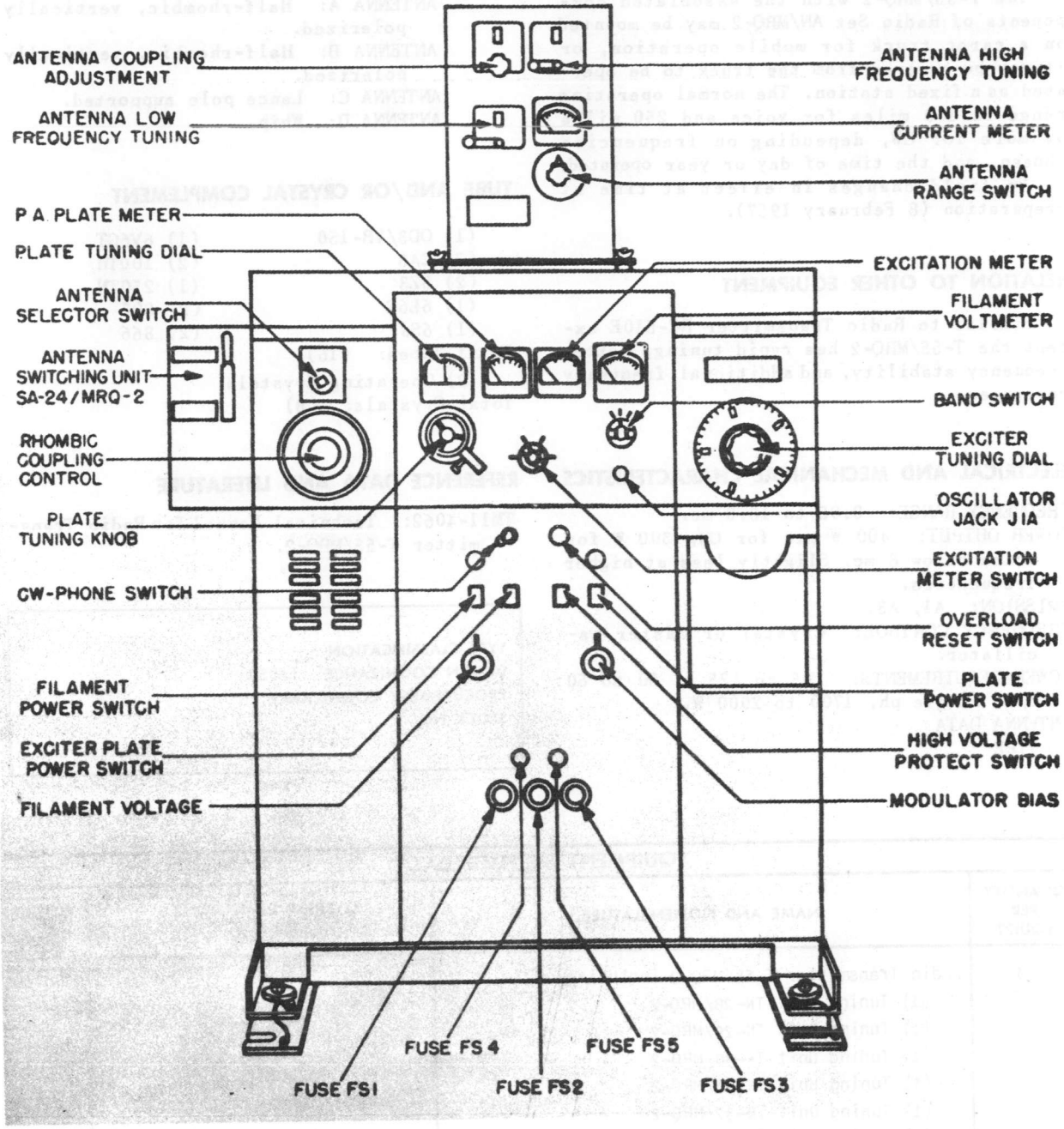
PKGS	VOLUME (CU FT)	WEIGHT (LBS)

PROCUREMENT DATA

PROCURING SERVICE: TASSA
SPEC &/OR DWG: MIL-T-11770 (Sig C)
DESIGN COG: TASSA

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Barker and Williamson Pt/Dwg no. 13000	Upper Darby, Pa.	33700-PH-55-55(31)	

RADIO TRANSMITTER



Radio Transmitter T-55/MRQ-2

FUNCTIONAL DESCRIPTION

The T-55/MRQ-2 is designed for continuous wave or voice transmission throughout a continuous frequency range of 0.95 to 18.0 megacycles. The frequency range is covered in eight bands, by means of plug-in tuning units and coil units, each of which covers a portion of the frequency range. Any one of three tuning units may be selected by a switch.

T-55/MRQ-2 RADIO TRANSMITTER

The T-55/MRQ-2 with the associated components of Radio Set AN/MRQ-2 may be mounted on a cargo truck for mobile operation, or it may be removed from the truck to be operated as a fixed station. The normal operating range is 100 miles for voice and 250 miles or more for CW, depending on frequencies chosen, and the time of day or year operated.

No field changes in effect at time of preparation (8 February 1957).

RELATION TO OTHER EQUIPMENT

Similar to Radio Transmitter BC-610E except the T-55/MRQ-2 has rapid tuning, better frequency stability, and additional frequency coverage.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 0.95 to 18.0 mc.
POWER OUTPUT: 400 W min for CW, 300 W for voice below 8 mc. Slightly less at higher frequencies.
EMISSION: A1, A3.
FREQUENCY CONTROL: Crystal or master oscillator.
POWER REQUIREMENTS: 105 to 125 v, 50 to 60 cps, single ph, 1700 to 2000 W.
ANTENNA DATA
TYPE
ANTENNA A: Half-rhombic, vertically polarized.
ANTENNA B: Half-rhombic, vertically polarized.
ANTENNA C: Lance pole supported.
ANTENNA D: Whip.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) OD3/VR-150
(3) 2A3
(2) 5Z3
(1) 6L6G
(1) 6SJ7
(1) 6V6GT
(2) 100TH
(1) 250TH
(2) 807
(2) 866
Total Tubes: (16)
(8) Operating Crystals
Total Crystals: (8)

REFERENCE DATA AND LITERATURE

TM11-4062: Technical Manual for Radio Transmitter T-55/MRQ-2.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter T-55/MRQ-2 including:		
	(1) Tuning Unit TN-28/MRQ-2		
	(1) Tuning Unit TN-29/MRQ-2		
	(1) Tuning Unit TN-30/MRQ-2		
	(1) Tuning Unit TN-31/MRQ-2		
	(1) Tuning Unit TN-32/MRQ-2		
	(1) Tuning Unit TN-33/MRQ-2		
	(1) Tuning Unit TN-34/MRQ-2		
	(1) Tuning Unit TN-36/MRQ-2		
	(1) Antenna Switching Unit SA-24/MRQ-2		
	(1) Antenna Tuning Unit BC-939-A		
	(1) Antenna Coupling Unit CU-45/MRQ-2		
1	Control Box C-110/MRQ-2		

RADIO TRANSMITTER T-55/MRQ-2

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Speech Amplifier BC-614-E		
1	Microphone T-50		
4	Antenna		
2	Key J-37		

September 1956

TRANSMITTER, RADIO

Radio Transmitter
T-597/TRC

FUNCTIONAL DESCRIPTION

The T-597/TRC is a general purpose transmitter for use in the frequency range 1.7 to 15.0 mc.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF EMISSION: A1, A3.
FREQUENCY RANGE: 1.7 to 15.0 mc (4 bands).
POWER OUTPUT: 10 W max.
FREQUENCY CONTROL: Crystal.
POWER SOURCE REQUIRED: 115 v, 60 cps, single ph.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes.

REFERENCE DATA AND LITERATURE

Nomenclature Card for TRANSMITTER, RADIO T-597/TRC.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	
PROCUREMENT COGNIZANCE	
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter Radio T-597/TRC	2-1/4 X 5 X 6-3/4	

RADIO TRANSMITTING BUOY T-616/SRT

FUNCTIONAL DESCRIPTION

The T-616/SRT is a self-contained, low-power transmitter powered by a magnesium silver chloride battery which is an integral part of the equipment. It is designed for ejection from a sunken or submerged submarine.

No field changes in effect at time of preparation (17 December 1956).

RELATION TO OTHER EQUIPMENT

Similar to T-347/SRT except for frequency coverage.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

PRESET FREQUENCY: 243 mc.

FREQUENCY CONTROL: Master oscillator.

TYPE EMISSION: A2, modulating frequency 1000 cps, ±10%.

POWER OUTPUT: 0.75 W.

POWER SOURCE REQUIRED: 7.5 v, from self-contained magnesium silver chloride battery.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes

REFERENCE DATA AND LITERATURE

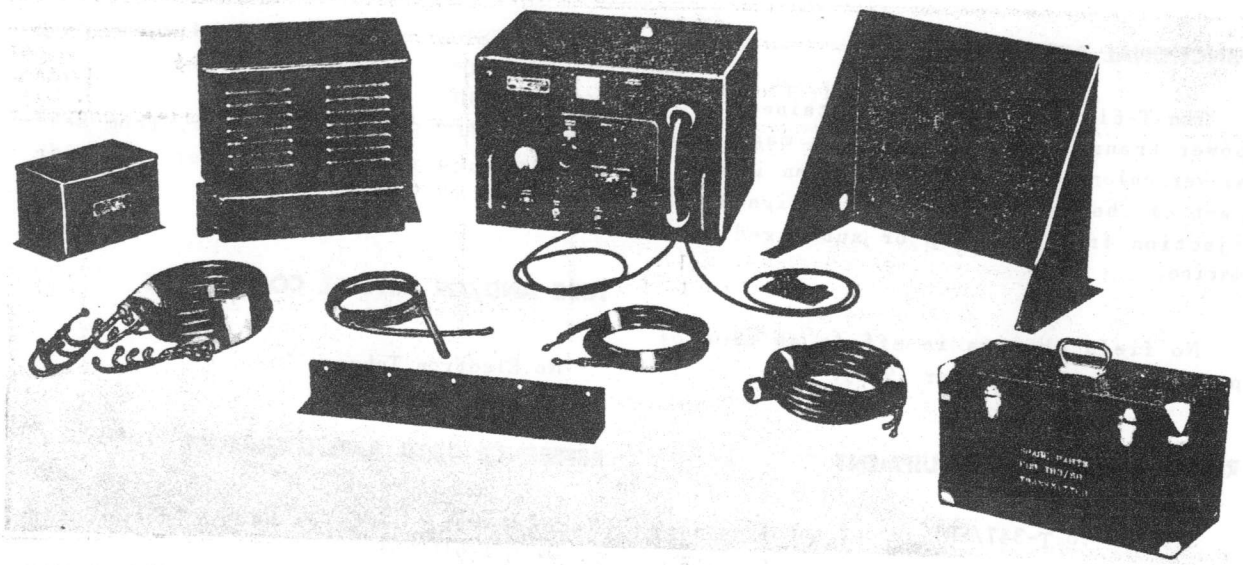
Nomenclature Card for Radio Transmitting Buoy T-616/SRT.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	BUSHIPS
PROCUREMENT COGNIZANCE	
STOCK NO.	

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitting Buoy T-616/SRT	3-1/4 dia x 39-3/4	

RADIO TRANSMITTER



Radio Transmitter T-83/SR

FUNCTIONAL DESCRIPTION

The T-83/SR is a 50 W telephone and telegraph radio transmitter designed for shipboard installation.

Either cw or phone type transmission is possible on any one of 5 channels in a frequency range between 1,700 to 8,700 kcps.

Provisions are made in this equipment to permit remote control operation. The three separate units that house the transmitter are the transmitter cabinet, converter starter box and the power supply cabinet.

No field changes in effect at time of preparation (10 August 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

BAND FREQUENCY RANGE
- BAND 1: 1.7 to 2.7 mc.
- BAND 2: 2.6 to 4.35 mc.
- BAND 3: 3.4 to 5.4 mc.
- BAND 4: 5.2 to 8.7 mc.

CONTROL: Crystal or MO.
POWER OUTPUT: 50 W.
EMISSION: A1, A3.
POWER SOURCE REQUIRED: 115 v AC, 50 to 60 cps, single ph, 460 vv.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 6AG7
(6) 807
(1) 6V6GT
(4) OD3/VR150
(4) 5T4

Total Tubes: (16)

(5) Crystals
Total Crystals: (5)

REFERENCE DATA AND LITERATURE

TM11-837 War Dept. Technical Manual for Radio Transmitter-T-83/SR.

TYPE CLASSIFICATION	
DESIGN COGNIZANCE	TASSA
PROCUREMENT COGNIZANCE	
STOCK NO.	

RADIO TRANSMITTER

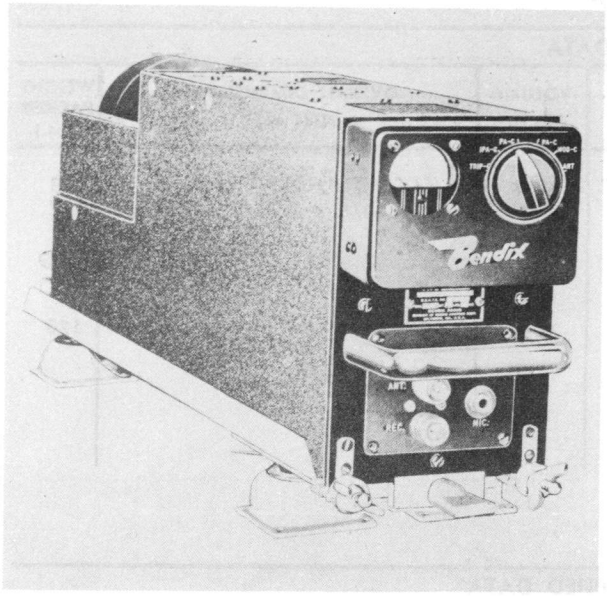
SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Radio Transmitter-TS-83/SR w/calibration Chart	6.66	18-1/2 x 24 x 26	173
1	Power Supply	5.28	20 x 20-3/4 x 22-1/2	177
1	1 Spare Parts Box 1 Converter Starter Box 1 Set Power and Interconnecting Cables 1 Set Bulkhead Mounting Brackets w/bolts, nuts, and lockwashers 1 Telegraph Key-J-47, 5-foot cable, and plug 1 Handset Book Assembly 1 Calibration Chart for Radio Transmitter T-83/SR	5.12	16-1/4 x 20-1/4 x 27	120

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Transmitter T-83/SR	13-1/2 x 16 x 21	118
1	Power Supply	13-3/8 x 15-1/4 x 18-1/8	127
1	Converter Starter Box	6 x 6-1/8 x 10-1/2	8-1/2
1	External Antenna Load Inductor (Supplied only when required)	7-1/4 x 7-3/8 x 13	11-1/2
1	Spare Parts Box	9 x 11 x 20	26

TRANSMITTER TA-20A



Transmitter TA-20A

FUNCTIONAL DESCRIPTION

The Bendix Type TA-20A is a small, high-performance communications equipment for amplitude-modulated transmissions in the 118 to 135.95 megacycle frequency range. It has 360 preset, crystal-controlled channels of 50 kilocycle spacing, and a nominal 25 watts of RF carrier power can be obtained on all channels.

It is designed for remote control with channel selection accomplished by finger-tip operation. Although primarily a voice communication equipment, it has provisions for use with an Air Traffic Control Signalling System. It may be operated in a double-channel duplex communications system. An automatic six-megacycle shift in transmitting frequency above the selected channel can be obtained in double-channel duplex operation, permitting simultaneous transmission and reception with the use of two antennas and an associated VHF Receiver.

Power supplies for the Type TA-20A include either a Bendix Type PSA-20A Power Supply that operates from 115 volts alternating current, 300 to 1000 cycles per second, or the Type DYA-20A that requires a 27.5 volt direct current primary power input.

No field changes in effect at time of preparation (8 July 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Junction Box, (1) Microphone, (1) Headset or Speakers, (1) Antenna, Cables as Required.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 118 to 135.95 mc.
POWER OUTPUT: 25 W, unmodulated into a 52 ohm load.
EMISSION: A3.
FREQUENCY CONTROL: (2) Crystal-saver oscillators.
CHANNELING TIME: 3 sec max at 27.5 v input.
FREQUENCY STABILITY
-40 to +70 DEG C: ±0.007%.
+10 to +70 DEG C: ±0.005%.
AUDIO INPUT: 100 ohm carbon-type microphone.
AUDIO RESPONSE: Within 6 db from 350 to 10000 cps.
DISTORTION: Less than 10% using 1000 cps at 90% modulation.
SIGNAL-PLUS-NOISE TO NOISE LEVEL: Down 40 db at 90% modulation.
OPERATING CONDITIONS
AMBIENT TEMPERATURE RANGE: -40 to +55 deg C.
AMBIENT HUMIDITY RANGE: 0 to 95% relative humidities.
ALTITUDE: Barometric pressures equivalent to 30,000 ft altitude.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio, Division of Bendix Aviation Corp., Baltimore, Maryland.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5814	(4) 5686
(2) 5881	(1) 5894
(4) 5654	

Total Tubes: (12)

(1) 1N34A	(38) HC-6

Total Crystals: (39)

REFERENCE DATA AND LITERATURE

I.B. 730A: Technical Manual for Type TA-20A VHF Transmitter.

TYPE CLASSIFICATION
DESIGN COGNIZANCE COMMERCIAL
PROCUREMENT COGNIZANCE
STOCK NO.

TA-20A TRANSMITTER

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Transmitter TA-20A including: (1) Power Supply DYA-20A or PSA-20A	5.032 X 7.844 X 22.034	27.5
1	Shockmount MTA-20A* or MTA-18A (Full ATR Mounting)	5.875 X 9.45 X 25.47	3.25
1	Frequency Selector SLA-18( )	2.67 X 2.79 X 5.85†	0.82
1	VHF Antenna ANA-18A	3.76 X 7.25 X 13.63	2.6
	NOTE: *-Indicates dimensions include transmitter mounted. †-Indicates length may vary according to model used.		