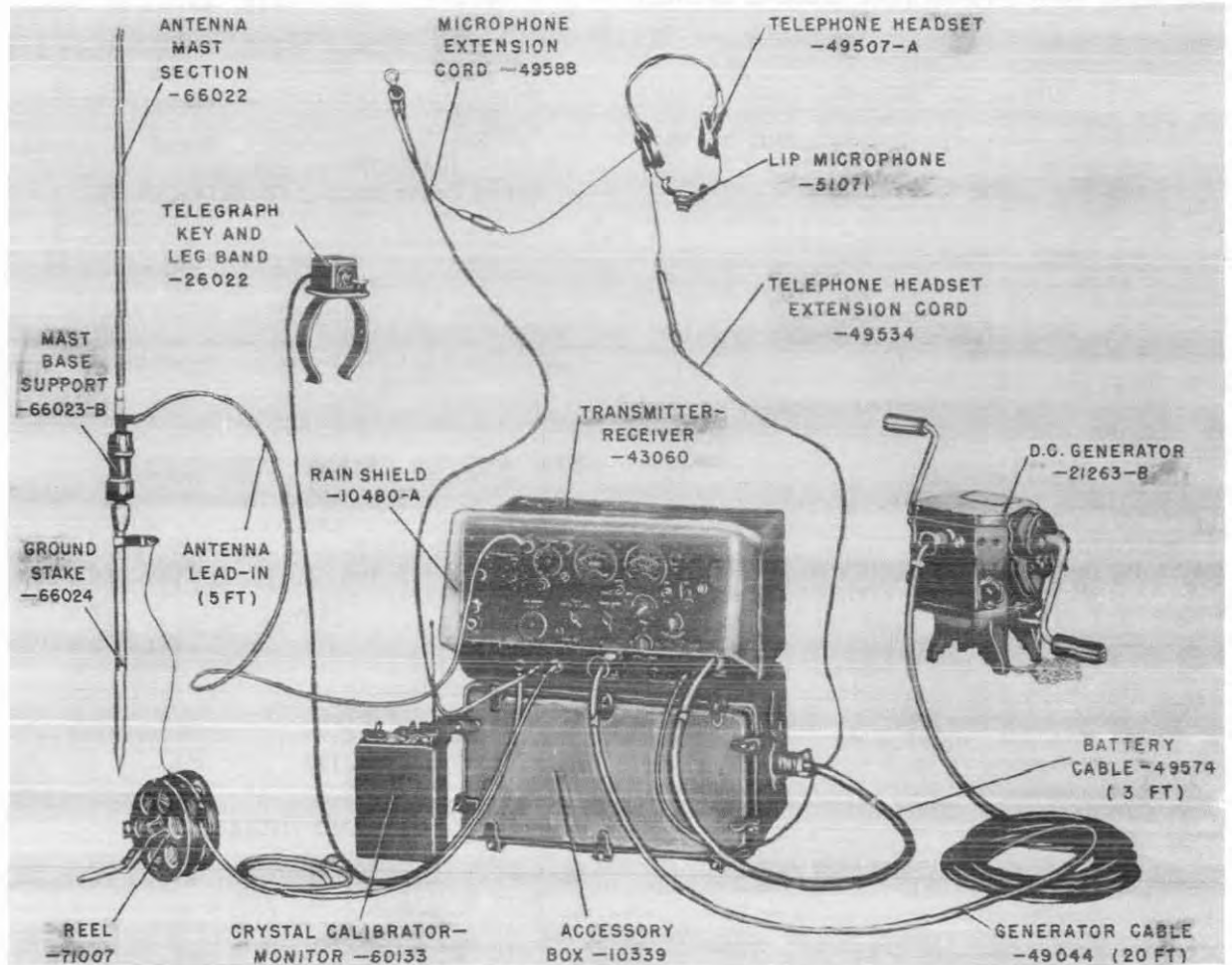


April 1958

## PORTABLE RADIO EQUIPMENT

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

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

## FUNCTIONAL DESCRIPTION

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

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

the earlier models of the series.

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

## RELATION TO OTHER EQUIPMENT

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

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

Radio-Transceivers

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

## PORTABLE RADIO EQUIPMENT

April 1958

## ELECTRICAL AND MECHANICAL CHARACTERISTICS

## FREQUENCY DATA

## TRANSMITTING

TBX, TBX-1, -2, -3, -4: 2000 to 4525  
kc.TBX-4a, -5, -6, -7, -8: 2000 to 5800  
kc.

RECEIVING: 2000 to 8000 kc.

## POWER OUTPUT

## CW

TBX, TBX-1 THRU-7: 9 W.

TBX-8: 8.5 W.

## VOICE

TBX, TBX-1 THRU-7: 3 W.

TBX-8: 2.5 W.

EMISSION: A1, A3.

FREQUENCY CONTROL: Master oscillator and  
crystal.

## RECEIVER DATA

TYPE: Superheterodyne.

RECEPTION: A1, A2, A3.

## POWER REQUIREMENTS

## STANDARD

## TRANSMITTING (HAND-DRIVEN GENERATOR)

NT-21263A: 500 v DC, 0.065 amps and  
12.6 v DC, 0.86 amps.NT-21263B: 550 v DC, 0.085 amps and  
12.6 v DC, 2 amps.

## RECEIVING (DRY BATTERIES)

TBX, TBX-1, THRU-7: (3) 45.0 v, (2)  
1.5 v, (2) 7.5 v.TBX-8: (2) 45.0 v, (2) 1.5 v, (1)  
7.5 v.

## OPTIONAL

## TRANSMITTING

EF SERIES: Self-contained.

EG SERIES: 115 v, 60 cps, single  
ph.

EH SERIES: 115 v DC.

EJ SERIES: 12 v DC.

## RECEIVING

EL SERIES: 115 v, 60 cps, single  
ph.

EM SERIES: 6 v DC.

EN SERIES: 12 v DC.

EO SERIES: 24 v DC.

EP SERIES: 32 v DC.

EQ SERIES: 110 v DC.

MODEL EAO: 115 v, 60 cps, single  
ph.

MODEL EAP: 12 v DC.

## TRANSMITTING-RECEIVING

NT-20337: 12 v DC.

Contract NOs-81118, dated 22 January  
1941 (TBX-2).Contract NXsr-35352, dated 30 July 1943  
(TBX-6, TBX-7).Hazeltine Electronics Corp., New York,  
N. Y.Contract NXss-18179, dated 19 November  
1942 (TBX-4, TBX-4a).

Gared Radio Corp., Brooklyn, N. Y.

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

## TUBE AND/OR CRYSTAL COMPLEMENT

TBX, TBX-1 Thru 7

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

Total Tubes: (6)

(2) NT-40024-A

Total Crystals: (2)

TBX-8

(1) 1A5GT (1) 2E22

(1) 1A7GT (3) 3A4

(3) 1N5GT (1) 5U4G

Total Tubes: (10)

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

Total Crystals: (12)

## REFERENCE DATA AND LITERATURE

Technical Manual for Portable Radio Equipment  
Navy Models TBX and TBX-1.Technical Manual for Portable Radio Equipment  
Navy Model TBX-2.Technical Manual for Navy Models TBX-4 and  
TBX-4a Portable Radio Equipment.NAVSHIPS 95297: Technical Manual for Navy  
Model TBX-5 Portable Radio Equipment.NAVSHIPS 95298: Technical Manual for Navy  
Models TBX-6 and TBX-7 Portable Radio E-  
quipment.NAVSHIPS 900706: Technical Manual for Navy  
Model TBX-8 Radio Transmitting and Re-  
ceiving Equipment.Technical Manual for Receiver Power Equip-  
ments Navy Models EL, EM, EN, EO, EP, and  
EQ.

## MANUFACTURER'S OR CONTRACTOR'S DATA

General Electric Company, Schenectady,  
N. Y.Contract NOs-65704, dated 16 March 1939  
(TBX, TBX-1).Contract NOs-71808, dated 15 February  
1940 (TBX, TBX-1).TYPE CLASSIFICATION  
DESIGN COGNIZANCE BUSHIPS  
PROCUREMENT COGNIZANCE  
STOCK NO.

April 1958

## PORTABLE RADIO EQUIPMENT

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

## SHIPPING DATA

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

## EQUIPMENT SUPPLIED DATA

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