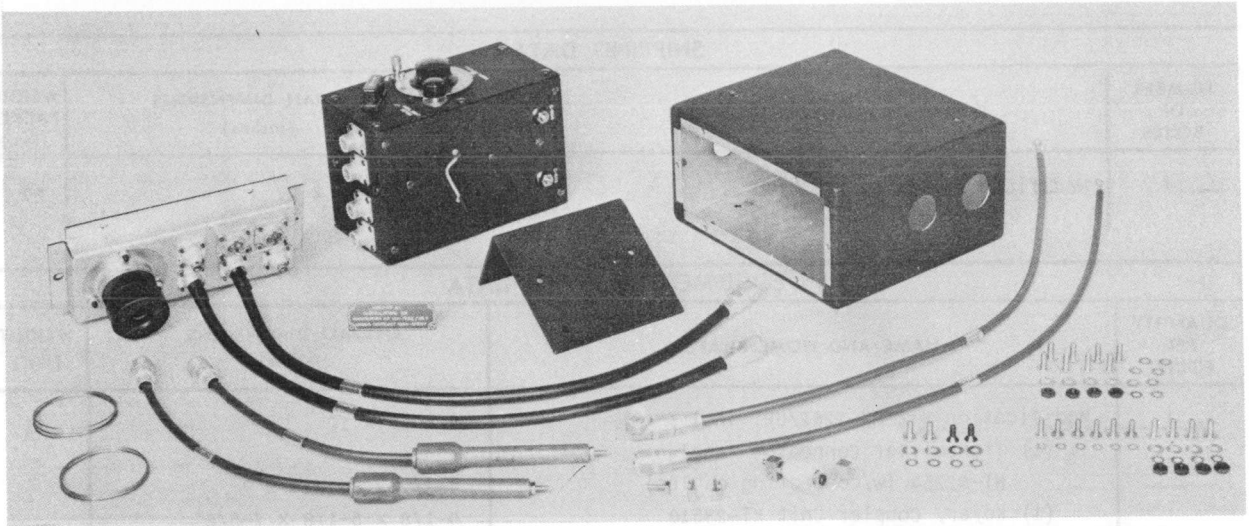


April 1958

MODIFICATION KIT**MX-1262/URT***Modification Kit MX-1262/URT***FUNCTIONAL DESCRIPTION**

The MX-1262/URT Kit contains everything necessary for modification of Navy Model TBL Series Radio Transmitting Equipment to permit connection of an external frequency shift keyer, for frequency shift keyed telegraph or facsimile transmission, without compromising the facilities originally designed in the transmitter for other modes of transmission. The NT-23510 coupler unit of the MX-1262/URT Kit consists of two sections completely shielded from each other. The first section is used to couple the transmitter master oscillator to the frequency Shift Keyer. The second section is used to couple the output of the frequency shift Keyer to the first IPA tubes in the transmitter.

The modified equipment may be restored to its original operating condition for other modes of transmission by means of a switch mounted on the front plate of the coupler unit. This switch functions to bypass the coupler, thus connecting the output of the transmitters master oscillator directly to the first IPA tube of the transmitter.

No field changes in effect at time of preparation (14 February 1958).

RELATION TO OTHER EQUIPMENT

Adapts TBL-4 thru 13 for use w/KY-75/SRT or similar frequency shift Keying equipments.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TUNING RANGE: 1.8 to 4.325 mc 1st section of coupler, 2.0 to 4.525 mc 2nd section.
INPUT AND OUTPUT IMPEDANCE: 75 ohms.

MANUFACTURER'S OR CONTRACTOR'S DATA

A. F. Smuckler and Co Inc, Brooklyn, N.Y.
Contract: NObsr-57597 dated 26 June 1952.

Approximate Cost: \$138.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals.

REFERENCE DATA AND LITERATURE

NAVSHIPS 91885, Technical Manual for Modification Kit MX-1262/URT for Radio Transmitters TBL-4, -5, -6, -7, -8, -9, -10, -11, -12, -13.

NAVSHIPS 98341, Field Change Bulletin.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE MIL-M-16142A (SHIPS)
STOCK NO.

MX-1262/URT

MODIFICATION KIT

April 1958

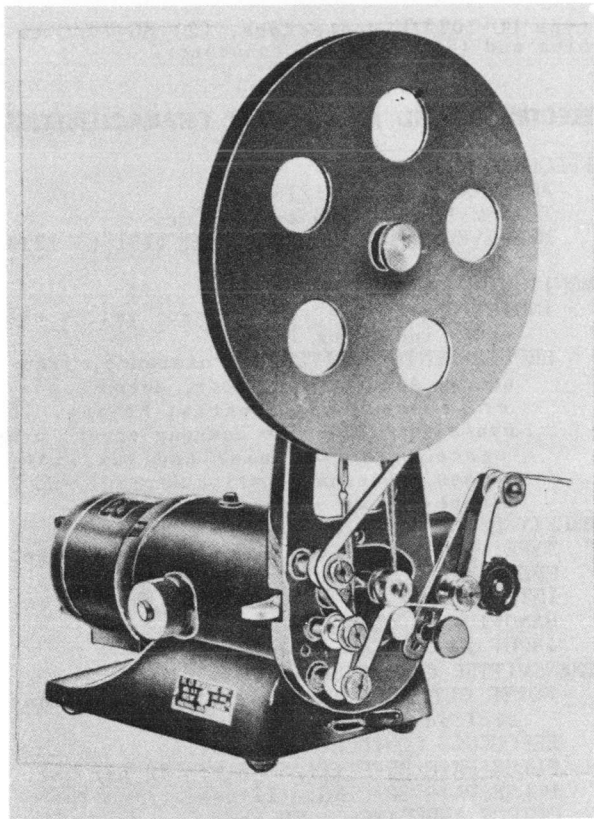
SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|------------------------------|-----------------|-----------------------------|----------------------|
| 1 | Modification Kit MX-1262/URT | 2.5 | 12 x 13 x 27 | 37 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---|---|---------------|
| 1 | Modification Kit MX-1262/URT incl (1) Transmitter Connector Panel NT-62254 (w/connecting cables) (1) Keyer, Coupler Unit NT-23510 (2) Cord CG-275/U (2' 1-1/2") (1) Cord CG-275/U (1' 5-1/2") (1) Cable Assembly, Radio Frequency CG-1088/U (1' 4") (1) Cable Assembly, Radio Frequency CG-1089/U (2' 1-1/2") (1) Cable Assembly, Radio Frequency CG-1096/U (2' 1-1/2") (1) Cable, Radio Frequency RG-8/U (1) Plug Connector NT-49190 Wire and Hardware | 9 x 10 x 10 4-1/2 x 8-1/16 x 9 4-1/8 x 5-1/8 x 7-5/8* | 11 |
| 2 | Technical Manuals NAVSHIPS 91885 | | |
| 2 | Field Change Bulletins NAVSHIPS 98341 | | |
| | NOTE: *dim. do not include terminations | | |

TAPE PULLER



Tape Puller with Rewinder Reel MX-1365/U

FUNCTIONAL DESCRIPTION

Tape Puller MX-1365/U is used to pull tape at any desired speed through an ink recorder or similar tape recording device, or across a tape bridge.

No field changes in effect at time of preparation (4 September 1959).

RELATION TO OTHER EQUIPMENT

This equipment is identical to H. O. Boehme type 8-F Series B.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

SPEED RANGE: 2 to 140 ft of tape per min.,
or 1 ft for 5 words, from 10 to 700 words
per min.

RECORDER TAPE: 3/8 in.

POWER REQUIREMENTS: 40 W, 110 v, 60 cy,
1/40 H. P., 1725 rpm.

MANUFACTURER'S OR CONTRACTOR'S DATA

H. O. Boehme Inc., New York, New York.
Approximate Cost: \$170.00 with equip-
ment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 95468: Technical Manual for Boehme
Vari-Speed Tape Puller Type 8F Series B.
(MX-1365/U).

| |
|--------------------------------|
| TYPE CLASSIFICATION (NAVY) |
| DESIGN COGNIZANCE USN, BUSHIPS |
| PROCUREMENT COGNIZANCE |
| STOCK NO. |

SHIPPING DATA

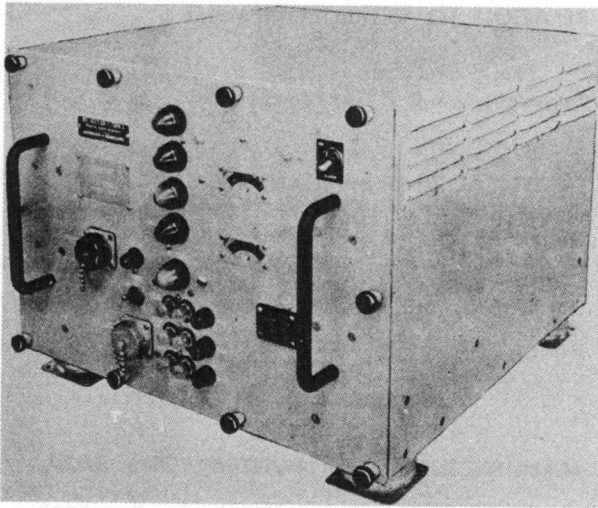
| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---------------------------------------|-----------------|-----------------------------|----------------------|
| 1 | Tape Puller w/Rewinder Reel MX-1365/U | 4.2 | 15-1/2 X 21 X 22-1/2 | 70 |

EQUIPMENT SUPPLIED DATA

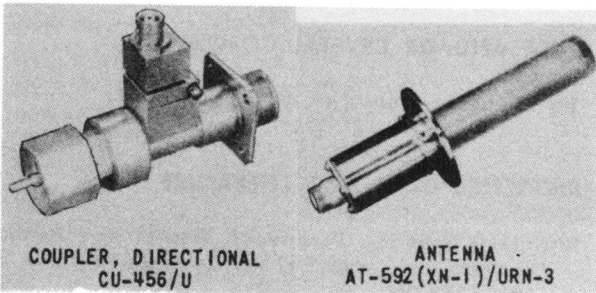
| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---------------------------------------|-----------------------------|---------------|
| 1 | Tape Puller w/Rewinder Reel MX-1365/U | 9 X 11 X 16 | 27 |

August 1957

RADIO FREQUENCY MONITOR

Radio-Auxiliary
MX-1627(XN-1)
/URN-3

Monitor, Radio Frequency

Radio Frequency Monitor
MX-1627(XN-1)/URN-3

type UG-707A/U connectors, (2) RG-74/U cables and (1) UG-204A/U connector.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE:

ANTENNA: 960 to 1215 mc.

TRANSMITTER: 1025 to 1150 mc.

RECEIVER: 962 to 1024, and 1151 to 1213 mc.

MONITORING DATA.

INDICATORS: blue, green, red, yellow and white indicator lights.

REQUIREMENTS MONITORED: distance, frequency, sensitivity, code, decode, power, count down, identity Keying, 15 cycle and 135 cycle bearing error, presence of North pulse and auxiliary pulses, antenna rotation (speed) and 2 minute excess of above defects.

RECEIVER CHARACTERISTICS.

TYPE: double conversion superheterodyne.

FREQUENCY CONTROL: crystal.

INTERMEDIATE FREQUENCIES: 63 and 7.4 mc.

BANDWIDTH: 0.6 mc.

INPUT IMPEDANCE: 50 ohms.

TRANSMITTER CHARACTERISTICS.

POWER OUTPUT: variable attenuator controlled ranging from ± 15 dbm.

FREQUENCY CONTROL: crystal.

PULSE PAIR REPETITION RATE: 30 per sec.

PULSE PAIR SPACING: 12 usec.

OUTPUT IMPEDANCE: 50 ohms.

ANTENNA CHARACTERISTICS.

IMPEDANCE: 50 ohms.

SYNCHRO CHARACTERISTICS.

INPUT REQUIREMENTS: 115 v \pm 10%, 60 cps, 1/4 amp on B and BB.

POWER SOURCE REQUIRED: 117 v, 60 cps, single ph, 200 W.

FUNCTIONAL DESCRIPTION

The MX-1627(XN-1)/URN-3 is a receiver-transmitter employed in both ship and shore installations to check the performance of Radio Set AN/URN-3. If Radio Set AN/URN-3 deviates from its proper performance the monitor provides a visual (and has provision for an external) alarm signal of such a deviation.

No field changes in effect at time of preparation (12 February 1957).

RELATION TO OTHER EQUIPMENT

Used for checking Radio Set AN/URN-3.

Equipment Required but not Supplied: (3)

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telecommunication Laboratories
Nutley, N.J.

Contract Nobsr-57427 dated 28 May 1952.

Approximate Cost: \$3,000.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

| | |
|----------------|----------------|
| (1) 6627-OB2WA | (1) 2C39A |
| (1) 5R4WGB | (2) 6AU6WA |
| (1) 6J4WA | (1) 6X4W4 |
| (7) 12AT7WA | (4) 5654-6AK5W |
| (3) 6670 | (1) 5686 |
| (7) 5725-6AS6W | (5) 5726-6AL5W |
| (5) 5751 | (6) 5814A |
| (1) 6080WA | |

Total Tubes: (46)

Radio-Auxiliary

**MX-1627(XN-1) RADIO FREQUENCY MONITOR
/URN-3**

(4) 1N69 (2) 1N21B (1) CR-23/U
Total Crystals: (7)

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

REFERENCE DATA AND LITERATURE

NAVSHIPS-92446: Technical Manual for Radio Frequency Monitor - MX-1627(SN-1)/URN-3.

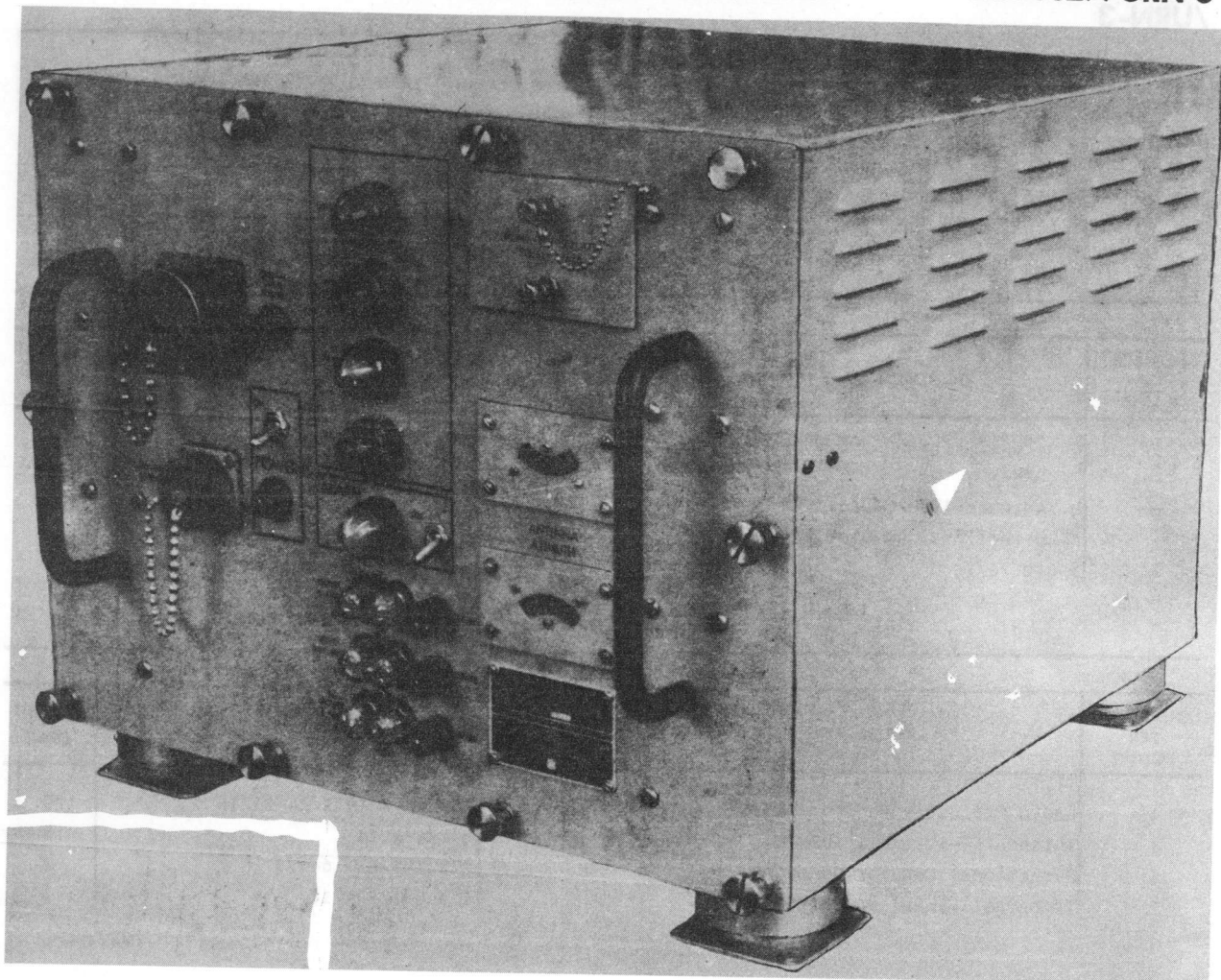
SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---|-----------------|-----------------------------|----------------------|
| 1 | a - Radio Frequency Monitor MX-1627(XN-1) URN-3 | 3-1/2 | 20 X 23 X 37 | 170 |
| | b. Antenna-AT592(XN-1)/URN-3 | 1.7 | 6-5/8 X 24 | 10 |
| | c. Directional Coupler CU-456/U | 0.3 | 2 X 3-1/2 X 5-1/2 | 2 |
| 1 | Spare Parts | 6.5 | 17 X 17 X 27 | 86 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---|-----------------------------|---------------|
| 1 | Radio Frequency Monitor MX-1627(XN-1)/URN-3 | 15-1/2 X 19 X 24-11/16 | 120 |
| 1 | Antenna AT-592(XN-1)/URN-3 | 6-5/8 X 24 | 5 |
| 1 | Directional Coupler CU-456/U | 2 X 3-7/8 X 6-1/8 | 2 |
| 2 | Technical Manual NAVSHIPS 92446 | 1 X 8-1/2 X 11 | 1 |

June 1961

MONITOR RADIO FREQUENCYRadio-Auxiliary
MX-1627/URN-3

Radio Frequency Monitor MX-1627/URN-3

FUNCTIONAL DESCRIPTION

The MX-1627/URN-3 is designed as a receiver-transmitter employed in both ship and shore installations to check the performance of Radio Set AN/URN-3. If Radio Set AN/URN-3 deviates from its proper performance the monitor provides a visual (and has provision for an external) alarm signal of such a deviation.

Data on this sheet reflects the following field changes: No. 1 thru No. 5.

RELATION TO OTHER EQUIPMENT

The MX-1627/URN-3 is designed as part of the AN/URN-3.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(3) Connectors type UG-707A/U, (2) Cables type RG-74/U, (1) Connector UG-204A/U.

ELECTRICAL AND MECHANICAL CHARACTERISTICS**FREQUENCY RANGE**

ANTENNA: 960 to 1215 mc.

TRANSMITTER: 1025 to 1150 mc.

RECEIVER: 962 to 1024 mc, and 1151 to 1213 mc.

MONITORING DATA

INDICATORS: Blue, green, red, yellow and white indicator lights.

RQMTS MONITORED: Distance, frequency, sensitivity, code, decode, power, count

June 1961

Radio-Auxiliary

MX-1627/URN-3**MONITOR RADIO FREQUENCY**

down, identity keying, 15 and 135 cycle bearing error, presence of North pulse and auxiliary pulses, antenna rotation (speed) and 2 minute excess of above defects.

RECEIVER CHARACTERISTICS

TYPE: Double conversion superheterodyne.
 FREQUENCY CONTROL: Crystal.
 INTERMEDIATE FREQUENCIES: 63 and 7.4 mc.
 BANDWIDTH: 0.6 mc.
 INPUT IMPEDANCE: 50 ohms.

TRANSMITTER CHARACTERISTICS

POWER OUTPUT: Variable attenuator controlled ranging from 15 dbm.
 FREQUENCY CONTROL: Crystal.
 PULSE PAIR REPETITION RATE: 30 pulse per sec.

PULSE PAIR SPACING: 12 usec.
 OUTPUT IMPEDANCE: 50 ohms.

ANTENNA CHARACTERISTICS

IMPEDANCE: 50 ohms.

SYNCHRO CHARACTERISTICS

INPUT RQMTS: 115 v porm 10%, 60 cps, 1/4 amps on "B" and "BB".

POWER SOURCE REQUIRED: 117 v, 60 cps, single ph, 200 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Olympic Radio & Television Inc., Long Island City, N.Y.
 Part/Dwg No. AS15341.
 Contract NObsr-64743, dated 9 April 1957.
 Contract NObsr-75245, dated 21 May 1959.
 Contract NObsr-75372.
 Contract NObsr-81236.

Contract NObsr-71539, dated 13 September 1956.

TUBE AND/OR CRYSTAL COMPLEMENT

| | |
|----------------|----------------|
| (1) 0B2WA | (1) 2C39A |
| (1) 5R4WGB | (2) 6AU6WA |
| (1) 6J4WA | (1) 6X4W |
| (7) 12AT7WA | (5) 5654/6AK5W |
| (3) 5670 | (1) 5686 |
| (6) 5725/6AS6W | (3) 5726/6AL5W |
| (7) 5751 | (5) 5814A |
| (1) 6080WA | |

Total Tubes: (45)

| | |
|------------|----------|
| (1) 1N21B | (1) 1N25 |
| (5) 1N458 | (4) 1N69 |
| (1) 1N1886 | |

Total Crystals: (12)

REFERENCE DATA AND LITERATURE

NAVSHIPS 92975(A): Technical Manual for Radio Frequency Monitor MX-1627/URN-3 and Antenna AT-592/URN-3.

| |
|------------------------------------|
| TYPE CLASSIFICATION (NAVY) |
| DESIGN COGNIZANCE NAVY BUSHIPS |
| PROCUREMENT COGNIZANCE MIL-M-18338 |
| 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 Frequency Monitor MX-1627/URN-3 Including: | 3.5 | 20 X 23 X 37 | 170 |
| 1 | Antenna AT-592(XN-1)/URN-3 | 1.7 | 6-5/8 dia X 24 | 10 |
| 1 | Directional Coupler CU-456/U | 0.3 | 2 X 3-1/2 X 5-1/2 | 2 |
| 1 | Set of Equipment Spares | 6.5 | 17 X 17 X 27 | 86 |

EQUIPMENT SUPPLIED DATA

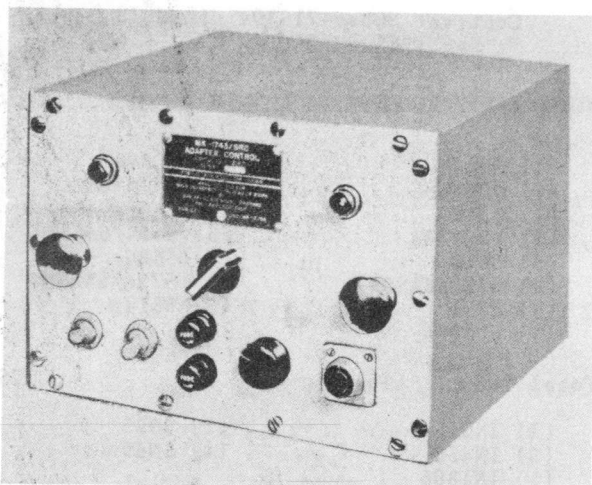
| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---------------------------------------|-----------------------------|---------------|
| 1 | Radio Frequency Monitor MX-1627/URN-3 | 15-1/2 X 19 X 24-11/16 | 120 |
| 1 | Antenna AT-592(XN-1)/URN-3 | 6-5/8 X 24 | 5 |
| 1 | Directional Coupler CU-456 | 2 X 3-7/8 X 6-1/8 | 2 |
| 2 | Technical Manual NAVSHIPS 92975(A) | 3/4 X 8-3/4 X 11-1/8 | |

January 1958

Radio-Auxiliary

MX-1743/SRC

ADAPTER, CONTROL



Adapter, Control MX-1743/SRC

FUNCTIONAL DESCRIPTION

The MX-1743/SRC is designed to allow interconnection of a TCS Transceiver with the standard Navy six-wire control system used aboard Naval vessels. It operates on 115 volts alternating current and provides 12 volts direct current for microphone and relay power. It is enclosed in an aluminum case and is designed for table mounting, but may be bulkhead mounted.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

OUTPUT (MICROPHONE AND RELAY POWER): 12 v DC.

INPUT IMPEDANCE

REMOTE POSITION: 600 ohms.

LOCAL POSITION: 35 ohms.

POWER REQUIREMENTS: 115 v, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

John R. Hollingsworth, Phoenixville, Pa.
Contract N126s-81281, dated 16 November 1956.

Approximate Cost: \$140.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals.

REFERENCE DATA AND LITERATURE

NAVSHIPS 93084: Technical Manual for MX-1743/SRC Adapter, Control.

TYPE CLASSIFICATION

DESIGN COGNIZANCE BUSHIPS

PROCUREMENT COGNIZANCE NAVY DWG RMHP-23-129A

STOCK NO.

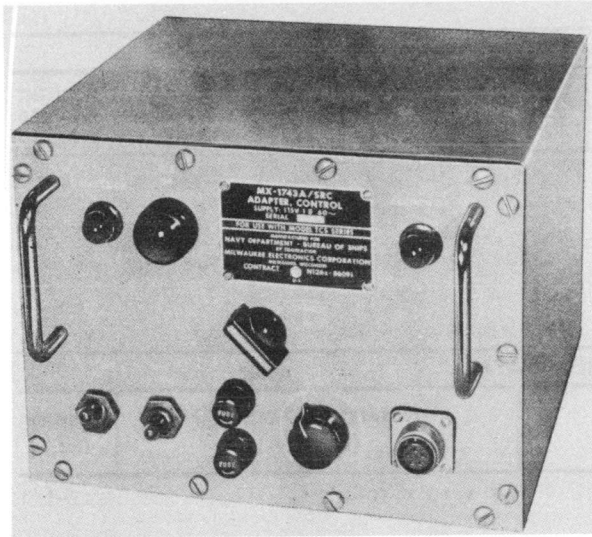
SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|------------------------------|-----------------|-----------------------------|----------------------|
| 1 | Adapter, Control MX-1743/SRC | 1.1 | 7-1/4 X 10-1/4 X 10-3/4 | 14.25 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---------------------------------|-----------------------------|---------------|
| 1 | Adapter, Control MX-1743/SRC | 7 X 10 X 10-1/2 | 12.25 |
| 2 | Technical Manual NAVSHIPS 93084 | | |

ADAPTER CONTROL



Adapter, Control MX-1743A/SRC

FUNCTIONAL DESCRIPTION

The MX-1743A/SRC consists of an enclosure with all the controls on the front panel. Two terminal boards are located inside the unit for external wiring. Knockouts are provided on the back and bottom for installation of stuffing tubes.

The MX-1743A/SRC is designed to allow the interconnection of a TCS Transmitter and Receiver with the standard Navy Six-wire control system. It accomplishes the following operations:

- (1) Allows remote or local operation of an associated TCS Transmitter and Receiver.
- (2) Turns power on or off for the TCS Transmitter and Receiver.
- (3) Provides a visual indication when the carrier is on.
- (4) Provides a visual indication when the TCS Transmitter and Receiver is on.
- (5) Permits use of a handset for transmission and reception of voice signals by provisions of a receptacle on the Adapter Control.
- (6) Permits keying of the Transmitter at the Adapter Control MX-1743A/SRC.
- (7) Provides 12 Volts (V) Direct Current (DC) for operation of the microphone and relay power.

No field changes in effect at time of preparation (9 February 1959).

RELATION TO OTHER EQUIPMENT

The MX-1743A/SRC is mechanically and electrically interchangeable with Adapter Control MX-1743/SRC except a "TCS ON" indicator lamp has been added, location of Indicator lamps and switch positions have been interchanged. Round panel knobs have been replaced with the "drawer pull" type handles.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

INPUT IMPEDANCE

REMOTE POSITION: 600 ohms.

LOCAL POSITION: 50 ohms.

OPERATING POWER REQUIREMENT: 115 v, 60 cps, single ph; provides 12 v DC for microphone and relay power.

MANUFACTURER'S OR CONTRACTOR'S DATA

Milwaukee Electronics Corp., Milwaukee 9, Wisconsin.

Contract N126s-86091, dated 21 October 1958.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 93237: Technical Manual for Adapter Control MX-1743A/SRC.

TYPE CLASSIFICATION

DESIGN COGNIZANCE BUSHIPS

PROCUREMENT COGNIZANCE

STOCK NO.

ADAPTER CONTROL

April 1959

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (C.u.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---------------------------------|------------------|-----------------------------|----------------------|
| 1 | Adapter Control MX-1743A/SRC | 0.46 | 7-1/4 X 10-1/4 X 10-3/4 | 14-1/4 |
| 1 | Technical Manual NAVSHIPS 93237 | 0.2 | 9 X 11-1/2 X 1/8 | |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|------------------------------|-----------------------------|---------------|
| 1 | Adapter Control MX-1743A/SRC | 7 X 10 X 10-1/2 | 12-1/4 |

11 January 1962

TELEVISION CAMERA AND TELEVISION CAMERA CONTROL MX-2885/GX w/C-2739/UX

Cog Service:

FSN:

Functional Class:

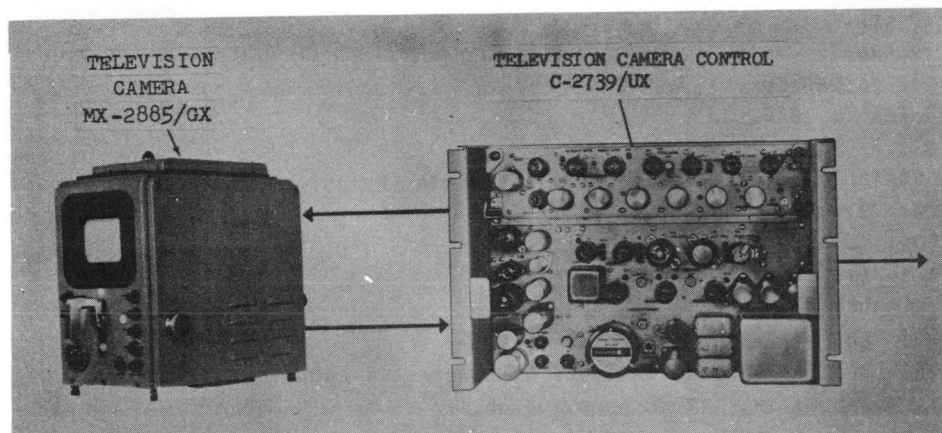
USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: General Precision Laboratory Inc.



Television Camera and Television Camera Control MX-2885/GX w/C-2739/UX

FUNCTIONAL DESCRIPTION:

Television Camera MX-2885/GX and Television Camera Control C-2739/UX converts the image viewed by the camera lens into a video output signal that is used to reproduce an identical image on the cathode ray tubes of the viewfinder portion of the camera and of television viewers used in the briefing function of Television System AN/GXQ-3(V). Certain operating conditions may be controlled at the viewfinder camera or may be switched to associated Video Indicator C-3084/GX located in the Camera Control Console OA-2575/GXQ-3. The remaining controls and other adjustments are also located at the video indicator.

No field changes in effect at time of preparation (22 June 1961).

TECHNICAL CHARACTERISTICS:

INPUT SIGNALS

MX-2885/GX w/C-2739/UX TELEVISION CAMERA AND TELEVISION CAMERA CONTROL

HORIZONTAL BLANKING PULSE: 4 v, peak-to-peak, across 75 ohms; neg polarity; pulse width 7 usec; pulse repetition rate 26,250 pps.

VERTICAL BLANKING PULSE: 4 v, peak-to-peak, across 75 ohms; neg polarity; pulse width 800 usec; pulse repetition rate 60 pps.

HORIZONTAL DRIVE: 4 v, peak-to-peak, across 75 ohms; neg polarity; width 4-1/2 usec; pulse repetition rate 26,250 pps; from J3 in the pulse generator through distribution amplifiers to J9 in camera control.

VERTICAL DRIVE: 4 v, peak-to-peak, across 75 ohms; neg polarity; width 575 usec; 60 pps; from jack J4 in the pulse generator, through distribution amplifiers, to jack J11 in the camera control.

OUTPUT SIGNALS: The video output signal is applied from the camera control to video amplifiers AM-2098/UX, across 75 ohms; 1 v peak; pos video pulses.

SCANNING RATES

FIELD: 60 cps.

FRAME: 30 cps.

LINE RATE: 26,250 cps.

LINES PER FRAME: 875.

ASPECT RATIO

CAMERA: Variable between limits of 1:1 and 3:4 (height to width).

VIEWFINDER: 3:4 only (height to width).

RESOLUTION FOR 3:4 ASPECT RATIO

HORIZONTAL: 875 lines per frame.

VERTICAL: 630 lines per picture height.

HORIZONTAL: 800 lines per picture width.

RESOLUTION: Greater than 1,000 lines at center and 600 lines in corners.

VIDEO AMPLIFIER BANDWIDTH: 17 mc porm 1.5 db.

PULSE WIDTHS

HORIZONTAL BLANKING: 6.0 usec.

HORIZONTAL DRIVE: 4.0 usec.

VERTICAL BLANKING: 21 horizontal lines.

VERTICAL DRIVE: 15 horizontal lines delayed 2-1/2 lines from leading edge of vertical blanking pulse.

POWER CONSUMPTION: 100 w.

CHARACTERISTICS OF CATHODE RAY TUBE: Electro-magnetic deflection, electrostatic focus, 50 deg deflection.

VIDEO AMPLIFIER FREQUENCY RESPONSE

CAMERA: Flat within porm 1 db to 17 mc and less than 3 db down at 30 mc.

VIEWFINDER: 12 MCS porm 1.5 db.

VIEWFINDER GAIN: 125.

RELATION TO OTHER EQUIPMENT: None.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

TELEVISION CAMERA AND TELEVISION CAMERA CONTROL MX-2885/GX w/C-2739/UX

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|-------------------------|-----------------|
| 1 | Television Camera MX-2885/GX | | 13-1/4 x 23 x 28-1/4 | 85 |
| 1 | Television Camera Control C-2739/UX | | 9-1/2 x 12-1/4 x 17-1/4 | 27 |

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93634: Technical Manual for Television Camera MX-2885/GX and Television Camera Control C-2739/UX.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (9) 6688A (6) 6922 (1) 1X2A (1) 6AU6WA (1) 6BL7 (1) 6BQ6GTB (6) 12AV7
(2) 12AT7WA (5) 6CL6 (1) 6V3A (1) 7ABP4 (2) OD3 (1) 5726/6AL5W (1) VXR900
(3) 5814A (1) 417A/5842 (1) 7038

CRYSTALS: None used.

SEMI-CONDUCTORS: (2) 1N483 (1) 1N485 (1) 1N488A (8) 1N38A (1) T8G (1) S9G

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

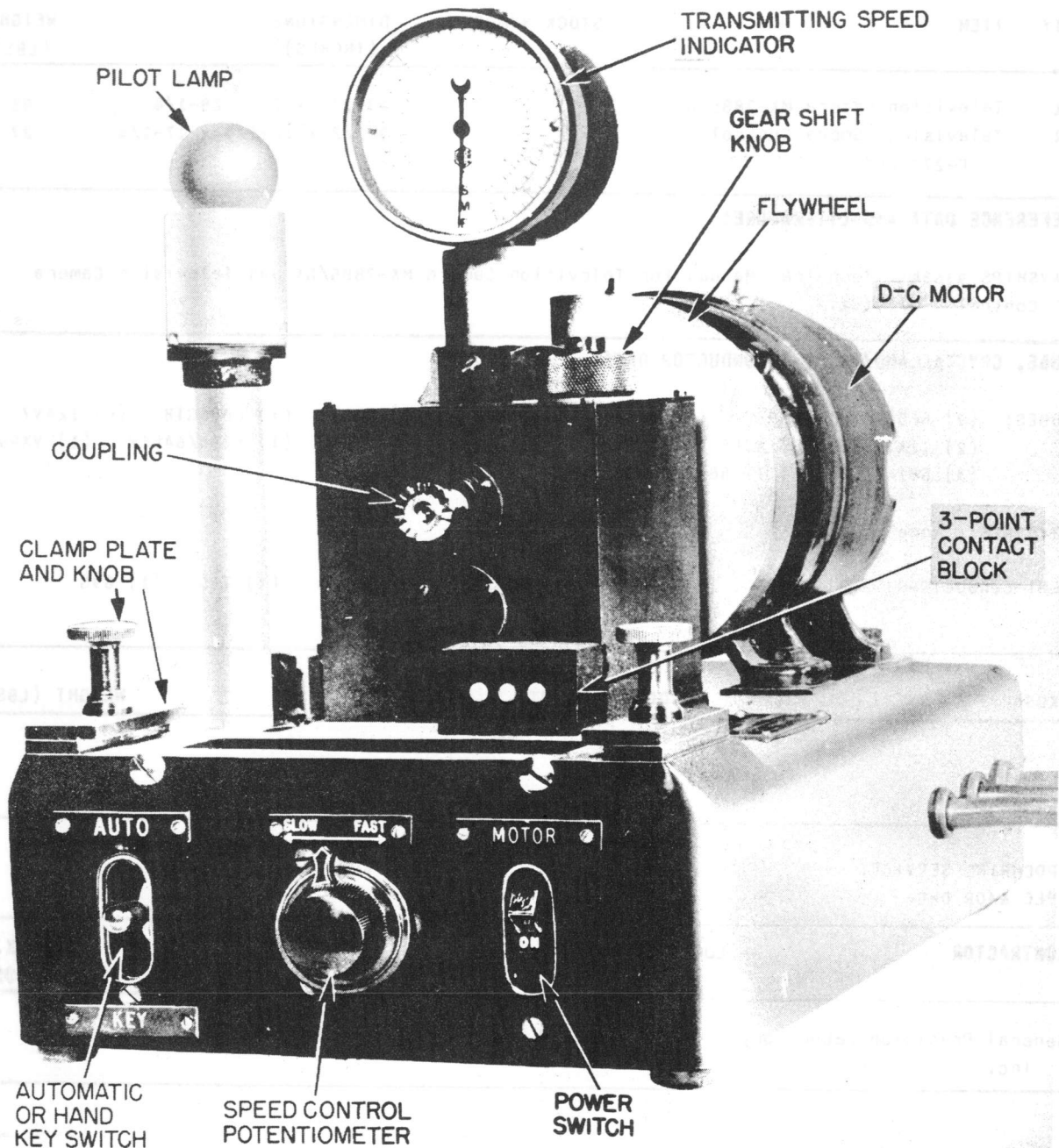
| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|--------------------------------------|----------------------|--------------------------|----------------------|
| General Precision Laboratory Inc. | Pleasantville, N. Y. | N0bsr-75369 | |

June 1961

Radio-Auxiliary

MX-439/U

KEYING HEAD DRIVE



Keying Head Drive MX-439/U

FUNCTIONAL DESCRIPTION

Keying Head Drive MX-439/U is designed to drive an automatic keying head through its entire speed range. The MX-439/U is used in conjunction with an associated mechanical keying head to provide high speed automatic

transmission of radio-telegraph signals in International Morse Code.

The MX-439/U is capable of driving the keying head at any desired speed between approximately 15 to 400 words per minute.

No field changes in effect at time of preparation (8 December 1960).

June 1961

Radio-Auxiliary

MX-439/U

KEYING HEAD DRIVE

ELECTRICAL AND MECHANICAL CHARACTERISTICS

KEYING HEAD DRIVE MOTOR

INPUT: 110 v dc.

TYPE: Shunt wound motor.

POWER DISSIPATION: 150 W.

HORSEPOWER: 1/12 hp at 1140 rpm.

SHAFT: Flywheel equipped.

DRIVE: Positive mesh sawtooth coupling.

ELECTRICAL CONNECTIONS: Connections between the keying head and the external circuit are made by three spring loaded contact pins, and three corresponding contact points on the keying head drive.

SIGNAL CURRENT: 75 ma dc (max).

KEYING SPEED RANGE: 15 to 400 words per minute (approx).

TRANSMITTING SPEED INDICATOR

CALIBRATED: Directly in "Words per Minute".

RANGES: 3 ranges; Slow, 15 to 65, Medium, 50 to 195, and Fast 150 to 585 wpm.

MANUFACTURER'S OR CONTRACTOR'S DATA

H. O. Boehme Inc., New York, N. Y.

Type 4D Series E.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 95464: Technical Manual for Keying Head Drive Boehme Type 4-D Series E.

TYPE CLASSIFICATION (NAVY)
DESIGN COGNIZANCE USN, BUSHIPS
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.) |
|-----------------|-----------------------------|-----------------|-----------------------------|----------------------|
| 1 | Keying Head Drive MX-439/U | 6.1 | 20 x 22 x 24 | 120 |

EQUIPMENT SUPPLIED DATA

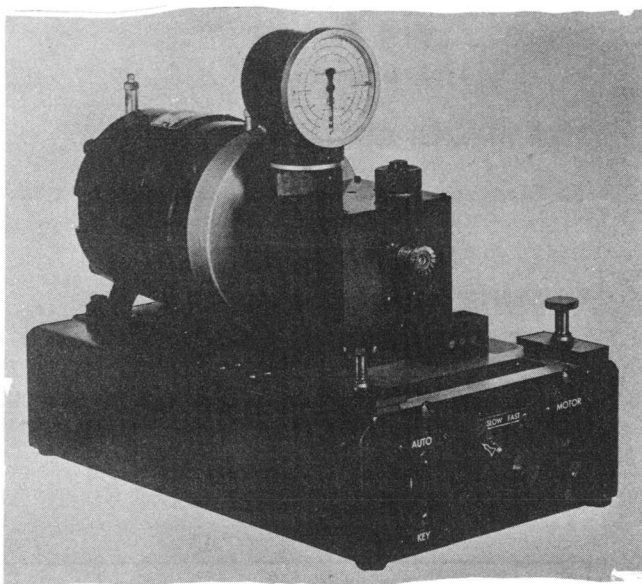
| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|----------------------------|-----------------------------|---------------|
| 1 | Keying Head Drive-MX-439/U | 11 x 13 x 18 | 50 |

June 1961

Radio-Auxiliary

MX-439 A/U

KEYING HEAD DRIVE



Boehme Keying Head Drive MX-439A/U

FUNCTIONAL DESCRIPTION

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

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

No field changes in effect at time of preparation (8 December 1960).

RELATION TO OTHER EQUIPMENT

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

KEYING HEAD DRIVE MOTOR

UNCLASSIFIED

INPUT: 115 v dc.
 TYPE: Compound wound continuous duty motor.
 POWER DISSIPATION: 150 W.
 HORSE POWER: 11/12 hp at 1140 rpm.
 AMBIENT TEMPERATURE: 40 deg C.
 SHAFT: Flywheel equipped.
 DRIVE: Positive mesh sawtooth coupling.
 ELECTRICAL CONNECTIONS: Connections between the keying head and the external circuit are made by three spring loaded contact pins, and three corresponding contact points on the keying head drive.
 SIGNAL CURRENT: 75 ma dc (max).
 KEYING SPEED RANGE: 20 to 400 words per minute.
 TRANSMITTING SPEED INDICATOR
 CALIBRATED: Directly in "Words per Minute".
 RANGES: 3 ranges; Slow, 15 to 60, Medium, 50 to 175, and Fast, 150 to 550 wpm.

MANUFACTURER'S OR CONTRACTOR'S DATA

H. O. Boehme, Inc., New York, New York.
 Type 4D Series J.
 Contract NObsr-63004, dated 24 July 1952.
 Approximate unit cost \$398.00.
 Contract NObsr-81318.
 Approximate unit cost \$400.00.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 92220: Technical Manual for Keying Head Drive MX-439A/U.

| |
|--------------------------------|
| TYPE CLASSIFICATION (NAVY) |
| DESIGN COGNIZANCE USN, BUSHIPS |
| PROCUREMENT COGNIZANCE |
| STOCK NO. |

June 1961

MX-439A /U

KEYING HEAD DRIVE

SHIPPING DATA

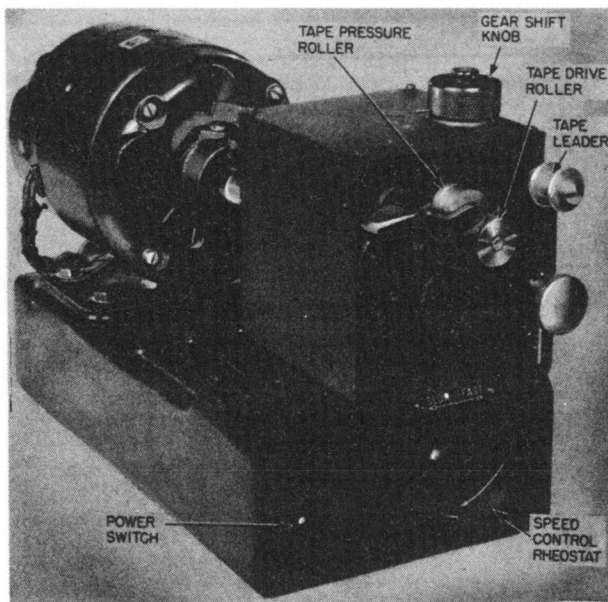
| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|-----------------------------|-----------------|-----------------------------|----------------------|
| 1 | Keying Head Drive MX-439A/U | 5.4 | 17 x 21 x 26 | 90 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-----------------------------|-----------------------------|---------------|
| 1 | Keying Head Drive MX-439A/U | 9 x 12-1/2 x 17-3/8 | 45 |

TAPE PULLER

MX-442/U



Tape Puller MX-442/U

used to pull the recorder tape across the tape bridge is equipped with the rewinder reel attachment which mechanically rolls up the transcribed tape.

No field changes in effect at time of preparation (11 December 1956).

RELATION TO OTHER EQUIPMENT

The MX-442/U is the same as Boehme Type 4-F, series E.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TAPE SIZE: 3/8 in. wide.

TAPE SPEED: 15 to 575 words per minute (3 to 115 ft per minute).

MOTOR DATA: 110 v DC, 1/20 hp, 1725 rpm.

MANUFACTURER'S OR CONTRACTOR'S DATA

H.O. Boehme, Inc., New York, N.Y.

Approximate Cost: \$100.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes:

REFERENCE DATA AND LITERATURE

TM11-377: Technical Manual for Boehme Automatic Keying and Recording Equipment.

| | |
|------------------------|-------|
| TYPE CLASSIFICATION | |
| DESIGN COGNIZANCE | TASSA |
| PROCUREMENT COGNIZANCE | |
| STOCK NO. | |

FUNCTIONAL DESCRIPTION

The MX-442/U is used with automatic high speed radio-telegraph signal recording and is used to pull the tape through the ink recorder or across the tape bridge. A three-position gear shift and a motor-speed-control rheostat permit operation over a wide speed range.

The MX-442/U is equipped with either a rewinder reel attachment or a magnetic release attachment. The tape puller used with the ink recorder is equipped with the magnet release attachment which permits the receiving operator to start or stop the movement of the tape from a remote point by controlling the movement of the pressure roller bracket assembly of the tape puller. The tape puller

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbr.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1 | Tape Puller MX-442/U including: (1) Connecting Cable Assembly (1) Set of Motor Brushes (1) Set of Equipment Spares (2) Technical Manual TM11-377 | 2.35 | 14 X 16 X 18 | 60 |

Radio-Auxiliary

MX-442/U

TAPE PULLER

EQUIPMENT SUPPLIED DATA

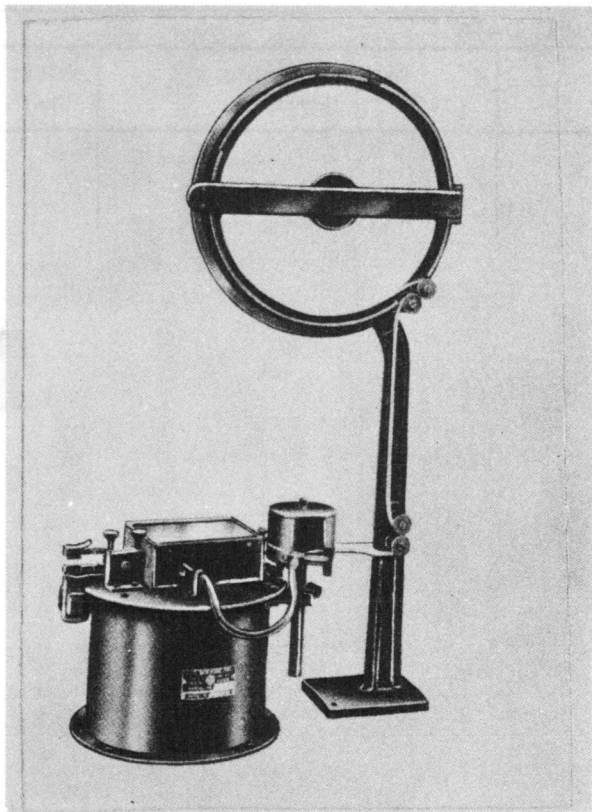
| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Tape Puller MX-442/U including: (1) Set of Equipment Spares (1) Connecting Cable Assembly (2) Technical Manual TM11-377 | 7 X 8 X 13 | 20 |

February 1960

Radio-Auxiliary

MX-480/U

TAPE REEL



Tape Reel, MX-480/U

FUNCTIONAL DESCRIPTION

Tape Reel MX-480/U is used to hold and supply paper tape used with an ink recorder or similar tape recording device.

No field changes in effect at time of preparation (4 September 1959).

RELATION TO OTHER EQUIPMENT

This equipment is identical to H. O.

Boehme type 7H Series B.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TYPE OF TAPE: Up to 8 in. in dia in the standard 3/8 in. W.

MANUFACTURER'S OR CONTRACTOR'S DATA

H. O. Boehme Inc., New York, New York.
Contract NObsr-63088, dated 29 October 1952.

Approximate Cost: \$40.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 95467: Technical Manual for Boehme TAPE REEL Type 7H Series B.

TYPE CLASSIFICATION (NAVY)

DESIGN COGNIZANCE USA, SIG C

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.) |
|-----------------|-----------------------------|-----------------|-----------------------------|----------------------|
| 1 | Tape Reel MX-480/U | 0.9 | 5 X 12 X 26 | 20 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-----------------------|-----------------------------|---------------|
| 1 | Tape Reel MX-480/U | 3-1/2 X 10-1/2 X 23 | 5 |

June 1961

Radio-Auxiliary

PERFORATOR, TAPE, TELEGRAPH**MX-491A/U**

Perforator, Tape, Telegraph MX-491A/U

FUNCTIONAL DESCRIPTION

Perforator, Tape, Telegraph MX-491A/U, with a typewriter-like keyboard, perforates 15/32 in. wide paper tape with three rows of holes in a dot-dash, Morse code sequence. The middle row is for movement of the tape, and the two outer rows comprise the Continental Morse code. The keyboard contains an SS arrangement of English communication characters. The perforations are fully punched.

No field changes in effect at time of preparation (7 December 1960).

RELATION TO OTHER EQUIPMENT

This equipment is similar to Perforator, Tape MX-491/U in function, except that the MX-491/U perforator punches Baudot type Morse code, the pulses of which actuate Teletype page printers, whereas the MX-491A/U punches Continental type Morse code. The pulses obtained from this tape actuate automatic telegraph transmitters.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

Paper Tape, 15/32 in. w by 8 in. max dia

of roll.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

The perforator is supplied with coil #18/1-SS to operate from a 110 v dc source. However, a selection of eight solenoid coils is available at the manufacturer, the choice depending on the power source to be used.

The following table lists H.O. Boehme's part numbers for the various coils and their electrical characteristics:

| Coil Pt. No. | For Voltage | |
|--------------|-------------|-------------------|
| | Source | Type Winding |
| 18/1-SS | 110 v dc | Double (parallel) |
| 18/2-SS | 220 v dc | Double (series) |
| 18/3-SS | 6 v dc | Double (parallel) |
| 18/4-SS | 50 v dc | Single (series) |
| 18/5-SS | 22 v dc | Single (series) |
| 18/7-SS | 32 v dc | Single (series) |
| 18/8-SS | 75 v dc | Single (series) |
| 18/9-SS | 100 v dc | Double (parallel) |

MANUFACTURER'S OR CONTRACTOR'S DATA

H. O. Boehme, Inc., New York, N. Y.
 Type No. WPE 18/ISS.
 Contract NObsr-81318(FBM).
 Approximate unit cost \$1,500.00.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

Technical Manual for Wheatstone Perforator
 Boehme Type WPE 18/ISS.

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

June 1961

Radio-Auxiliary

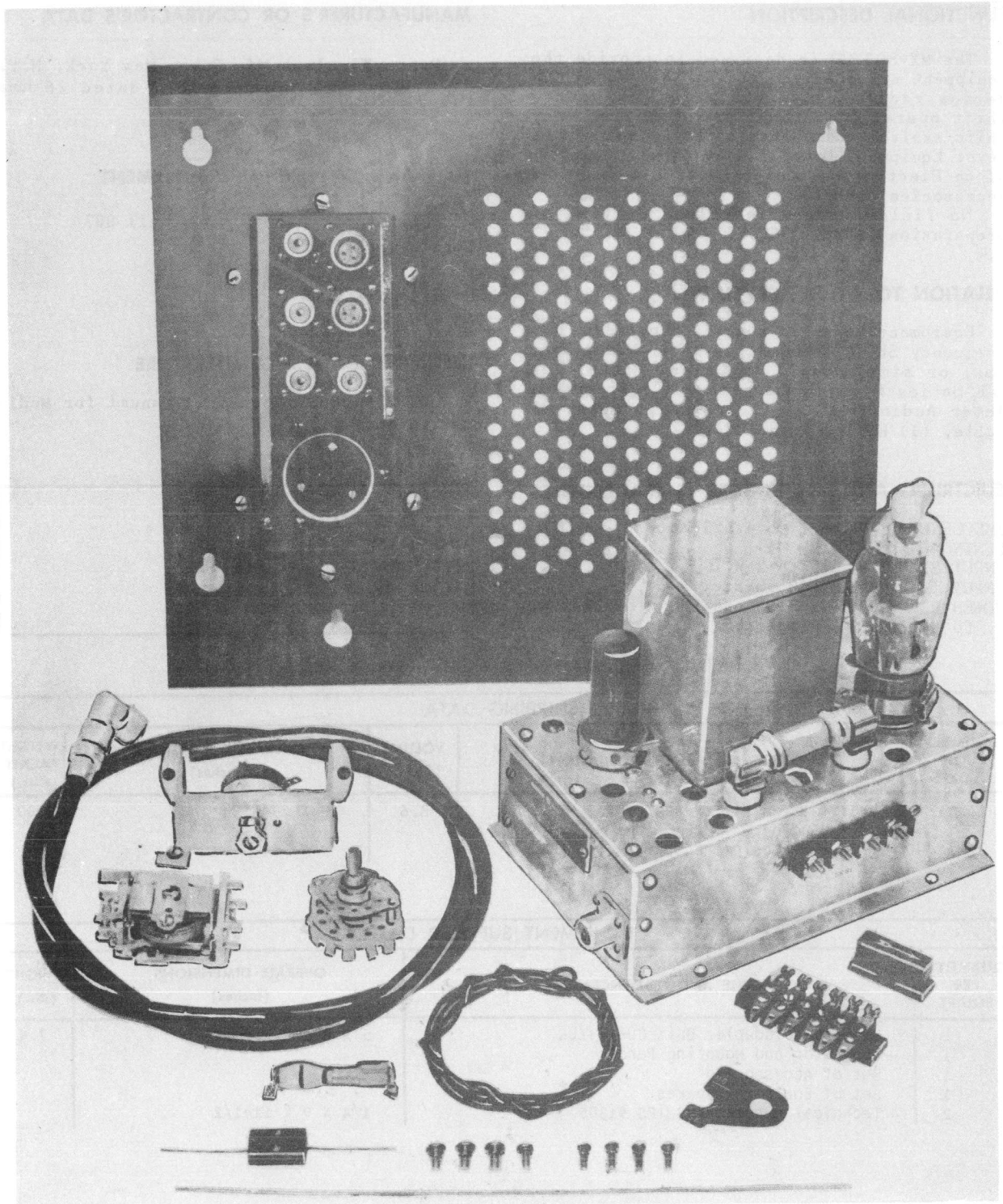
MX-491A/U

PERFORATOR, TAPE, TELEGRAPH

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------------|---------------------------------------|--------------------------------|------------------|
| 1 | Perforator, Tape, Telegraph MX-491A/U | 13-1/2 x 15 x 18-1/2 | 55 |

MODIFICATION KIT



Modification Kit MX-803/UR

Radio-Auxiliary
MX-803/UR

MODIFICATION KIT

FUNCTIONAL DESCRIPTION

The MX-803/UR is designed to provide the equipment necessary to modify Navy Model TCK series radio transmitters for frequency shift operation with an external frequency shift exciter unit, such as Frequency Shift Keyer Equipment Model FSA or RSB. It consists of an Electronic Coupler Unit CU-143/UR and accessories thereto.

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

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Frequency Shift Transmitter Keyer Model FSA, FSB, or similar, (1) Technical Manual for TCK Series Radio Transmitter, (1) Frequency Meter Audio Cable, (1) Frequency Meter RF Cable, (1) Keying Signal Cable.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 1 to 4.525 mc.
TUNING BANDS: 1.
INPUT SIGNAL: 0.5 to 2 W.
INPUT IMPEDANCE: 50 ohms.
POWER REQUIREMENTS: 50 and 500 v DC; 115 v, 50 to 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Press Wireless Mfg Corp, New York, N.Y.
Contract NObsr-30169, dated 26 June 1946.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 6AG7Y (1) 807
Total Tubes: (2)

No Crystals Used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 91305: Technical Manual for Modification Kit MX-803/UR.

| |
|---|
| TYPE CLASSIFICATION DESIGN COGNIZANCE BUSHIPS PROCUREMENT COGNIZANCE STOCK NO. |
|---|

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1 | Modification Kit MX-803/UR including: Set of Equipment Spares | 8.6 | 19 X 23 X 34 | 100 |

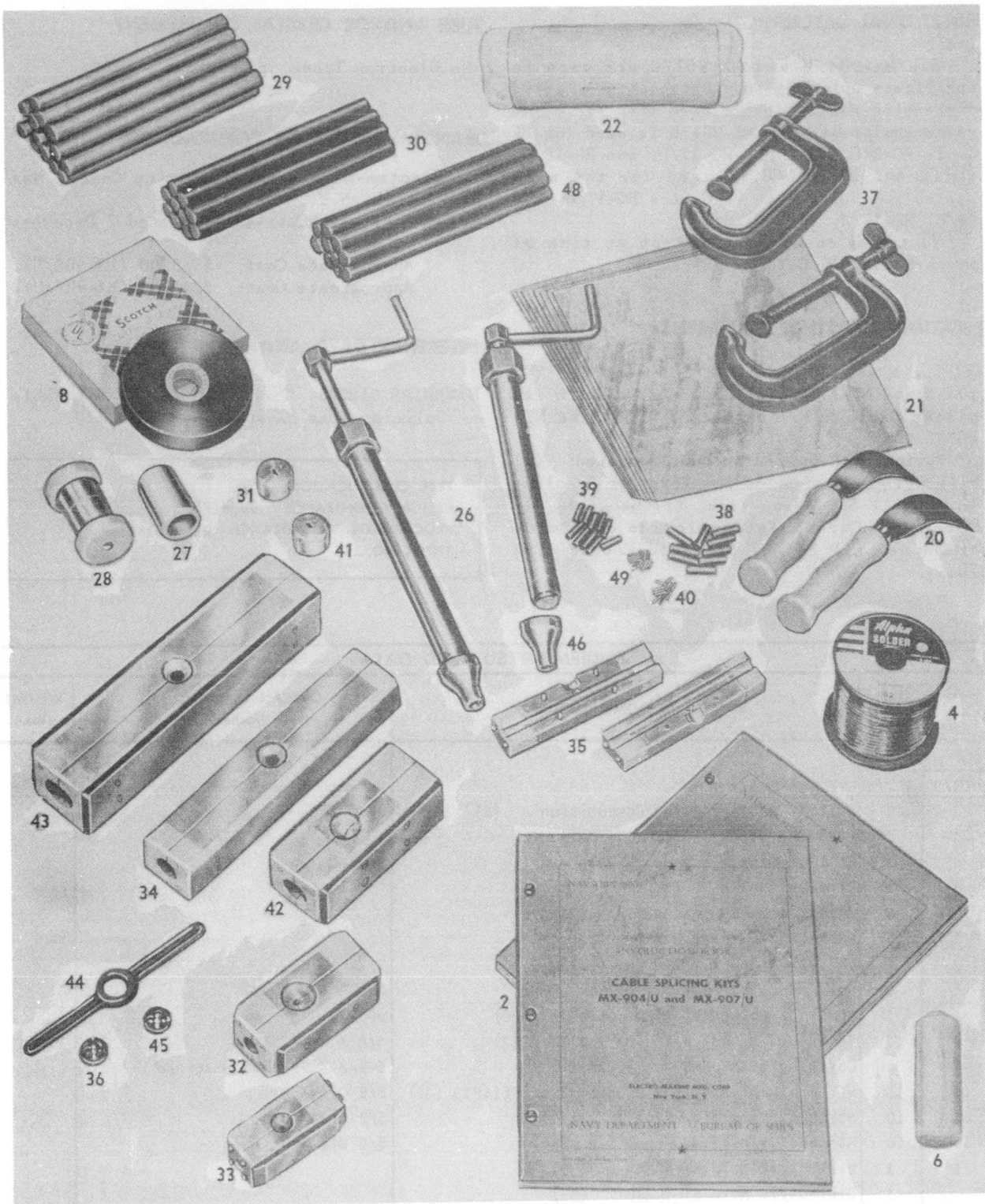
EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-----------------------------------|-----------------------------|---------------|
| 1 | Electronic Coupler Unit CU-143/UR | 5 X 8-1/2 X 9-1/4 | 7.4 |
| 1 | Connector and Mounting Panel | | |
| 1 | Set of Accessories | | |
| 1 | Set of Equipment Spares | | |
| 2 | Technical Manual NAVSHIPS 91305 | 1/4 X 9 X 11-1/2 | |

Apr 11 1958

CABLE SPLICING KIT

MX-904/U,907/U



Cable Splicing Kit MX-904/U,907/U

Radio-Auxiliary

MX-904/U,907/U

CABLE SPLICING KIT

April 1958

FUNCTIONAL DESCRIPTION

The MX-904/U and MX-907/U are used to facilitate splicing and installation of solid dielectric coaxial cable used with radio and radar equipment. The MX-904/U is used for RF Cable RG-8/U, RG-10/U, RG-11/U, and RG-12/U, while the MX-907/U is used for the same cables in addition to RF Cables RG-17/U, RG-18/U, RG-19/U, and RG-20/U.

No field changes in effect at time of preparation (18 October 1957).

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals.

MANUFACTURER'S OR CONTRACTOR'S DATA

Electro-Marine Manufacturing Corp., New York, N.Y.

Contract NObsr-43134, dated 7 December 1948.

Approximate Cost: \$160.00 (MX-904/U).

Approximate Cost: \$226.00 (MX-907/U).

RELATION TO OTHER EQUIPMENT

The MX-904/U replaces Splicing Kit NT-10353 and NT-10353-A, while the MX-907/U replaces Cable Splicing Kit NT-10351 and NT-10707.

Equipment Required but not Supplied: (1) File, (1) Pair of Soldering Tongs or Gasoline Torch, (1) Soldering Iron, (1) Hacksaw, (1) Bottle of Carbon Tetrachloride or Cyclohexanone, (1) Set of Standard Electrician Tools.

REFERENCE DATA AND LITERATURE

NAVSHIPS 91200: Technical Manual for Cable Splicing Kits MX-904/U and MX-907/U.

| |
|----------------------------------|
| TYPE CLASSIFICATION |
| DESIGN COGNIZANCE BUSHIPS |
| PROCUREMENT COGNIZANCE RE49F515B |
| STOCK NO. |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-------|---|-----------------------------|---------------|
| 904/U | 907/U | | | |
| 1 | 1 | Roll of Solder, 60-40 Composition (4) | 1/16 dia | 5 |
| 1 | 1 | Stearine Stick (6) | | |
| 3 | 3 | Roll of Vinylite Tape (8) | 3/4 wd | |
| 1 | 2 | Linoleum knife (20) | | |
| 8 | 8 | Sheet of Sandpaper No. 1 (21) | | |
| 1 | 1 | Package of Wiping Rags (22) | | |
| 2 | 2 | Injection Gun NT-10287 (26) | | |
| 1 | 1 | Roll of Copper Foil (27) | 0.004 X 2 X 120 | |
| 1 | 1 | Spool of Copper Wire No. 28AWG (28) | 600 lg | |
| 2 | 2 | Technical Manual NAVSHIPS 91200 (2) | 1/8 X 8-1/2 X 11 | |
| 1 | 1 | Carrying Case USMC No. 3027A | 5-3/8 X 9-15/16 X 16-5/8 | 0.5 |
| 15 | 15 | Stick of Polyethylene BUSHIPS Spec RE16P13 (29) | 5/8 dia X 8 | |
| 10 | 10 | Stick of Vinylite, Type I (30) | 5/8 dia X 8 | |
| 10 | 10 | Stick of Vinylite, Type II (48) | 5/8 dia X 8 | |
| 1 | 1 | Dielectric Mold NT-10354 (33) | | |
| | 1 | Dielectric Mold NT-10288 (32) | | |
| | 1 | Dielectric Trimmer BUSHIPS Spec RE10A345 (31) | | |

UNCLASSIFIED

April 1958

CABLE SPLICING KIT

Radio-Auxiliary
MX-904/U,907/U

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-------|--|-----------------------------|---------------|
| 904/U | 907/U | | | |
| 1 | 1 | Jacket Mold NT-10355 (35) | | |
| | 1 | Jacket Mold NT-10289 (34) | | |
| | 1 | Die 10-32 (36) | | |
| | 1 | Die 1/4-28 (45) | | |
| | 1 | Die Holder (44) | | |
| 6 | 6 | Clamp, C, 4 inch Medium Duty (37) | | |
| 50 | 50 | Inner Conductor Joiner for RG-8/U and RG-10/U BUSHIPS Spec RE10A393 (40) | | |
| 50 | 50 | Inner Conductor Joiner for RG-11/U and RG-12/U Buships Spec RE10A393 (49) | | |
| 2 | 1 | Injection Gun Adapter BUSHIPS Spec RE10A355 (46) | | |
| | 50 | Inner Conductor Joiner BUSHIPS Spec RE10A351 (38) | | |
| | 50 | Inner Conductor Joiner BUSHIPS Spec RE10A330 (39) | | |
| | 1 | Dielectric Trimmer BUSHIPS Spec RE10A394 (41) | | |
| | 1 | Dielectric Mold NT-10317 (42) | | |
| | 1 | Jacket Mold NT-10329 (43) | | |

NOTE: Numbers in brackets following nomenclature indicates item of illustration.

UNCLASSIFIED

1.2 MX-904/U: 3

CABLE SPLICING KIT



Cable Splicing Kit MX-906/U

FUNCTIONAL DESCRIPTION

The Model MX-906/U is designed as a Cable Splicing Kit to facilitate the splicing of

RG-84/U Lead covered and RG-85/U Armour covered coaxial cable.

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

Radio-Auxiliary
MX-906/U

CABLE SPlicing KIT

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(1) File, (1) Pair 10 ampere Soldering Tongs or Gasoline Torch, (1) Soldering Iron, (1) Hacksaw, (1) Bottle of Carbon Tetrachloride or Cyclohexanone Standard Electricians Tools.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 91199: Technical Manual for the Cable Splicing Kit MX-906/U.

MANUFACTURER'S OR CONTRACTOR'S DATA

Electro-Marine Mfg., Corporation, New York, New York.
 Contract NObsr 43134, dated 3 May 1944.

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

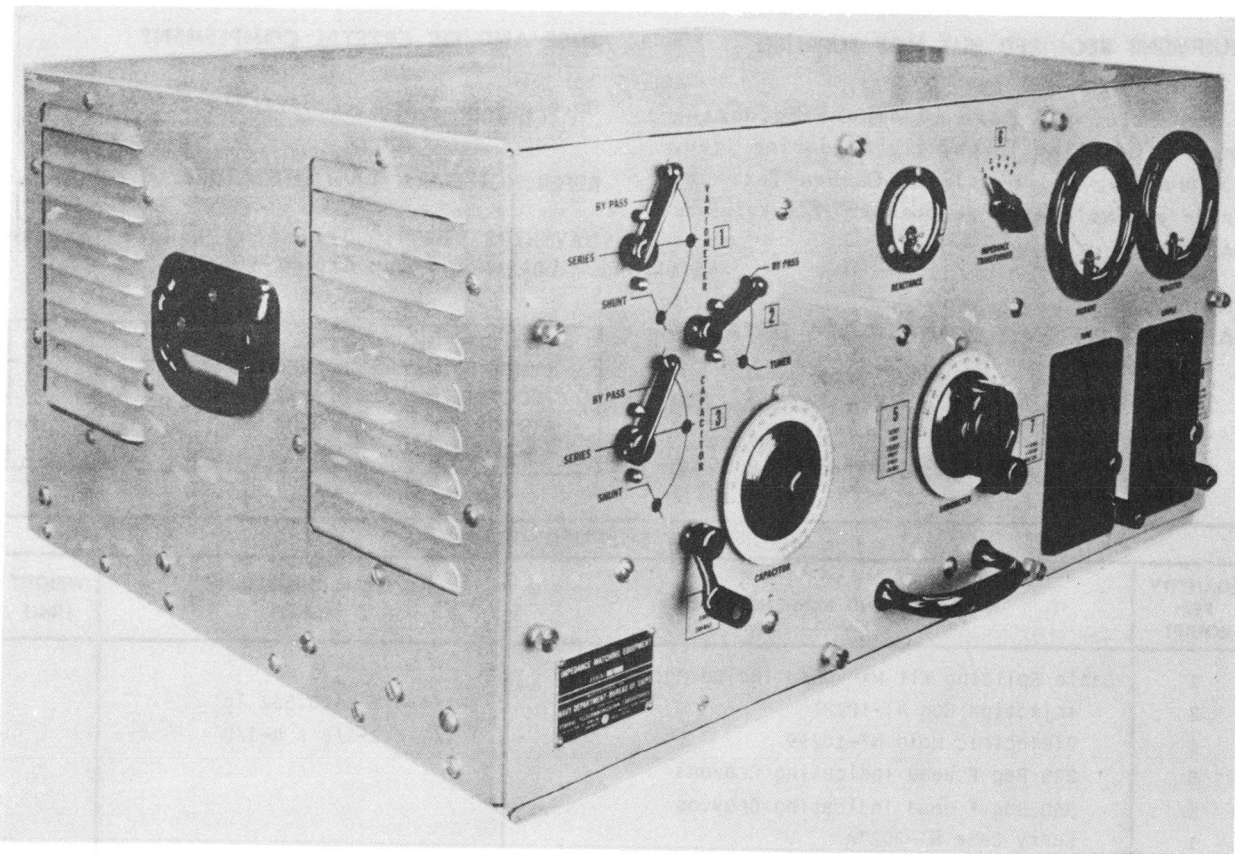
EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Cable Splicing Kit MX-906/U Including: | | |
| 2 | Injection Gun NT-10287 | 1-1/4 dia X 10.562 lg | |
| 1 | Dielectric Mold NT-10299 | 1-1/2 X 2-1/8 X 4-1/8 | |
| 5 | 225 Deg F Head Indicating Crayons | | |
| 5 | 350 Deg F Head Indicating Crayons | | |
| 1 | Carry Case NT-3027A | | |
| 1 | Set of Miscellaneous Tools and Solder Tape | | |

IMPEDANCE MATCHING EQUIPMENT

Radio-Auxiliary

NUS-3114



Impedance Matching Equipment NUS-3114

FUNCTIONAL DESCRIPTION

The NUS-3114 (Federal Telecommunication Labs) provides a group of manually adjustable tuning elements with necessary indicators to enable matching efficiently a wide range of loads to a 50 ohm line within 2.5 to 1 standing wave ratio over the frequency range of 0.3 to 26.0 megacycles. Various combinations of the tuning and matching elements may be selected by means of high-voltage, high-current R-F switches operated from the front panel.

No field changes in effect at time of preparation (11 October 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 0.3 to 26.0 mc.

POWER CAPACITY

0.3 to 2 MC RANGE: 100 W.

2 to 26 MC RANGE: 500 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telecommunication Laboratories,
Division of International Telephone
and Telegraph Corporation, Nutley, New
Jersey.

Contract NObsr 63345.

June 1957

Radio-Auxiliary

NUS-3114**IMPEDANCE MATCHING EQUIPMENT****TUBE AND/OR CRYSTAL COMPLEMENT**

(4) CK708
 Total Crystals: (4)

REFERENCE DATA AND LITERATURE

NAVSHIPS 92740: Technical Manual for Impedance Matching Equipment NUS-3114.

TYPE CLASSIFICATION
 DESIGN COGNIZANCE
 PROCUREMENT COGNIZANCE
 STOCK NO.

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------------|---------------------------------------|--------------------------------|------------------|
| 1 | Impedance Matching Equipment NUS-3114 | 16 X 28-1/2 X 32 | 145 |

18 December 1961

Cog Service:

FSN:

OSCILLATOR, RADIO FREQUENCY 0-167/UR

Functional Class:

USA

USN

USAF

TYPE CLASS:

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

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

The Oscillator, Radio Frequency 0-167/UR is designed to operate in the 18.75 to 34.88 megacycle (MC) frequency range. This range of frequencies covers the Radio Receiving Set AN/URR-13 and Radio Transmitter equipment TED oscillator frequencies permitting substitution of this unit for the type CR-24/U crystal units presently used in these equipments. The complete frequency range is covered in steps of 8.333 kilocycles (KC) permitting operation on 1937 channels spaced 100 KC upon multiplication (X12) by the associated transmitter or receiver. The stability, accuracy, and resetability is to within 833.3 cycles prior to multiplication or 10 kc at the channel frequencies of the transmitter and receiver.

No field changes in effect at time of preparation (13 July 1961).

TECHNICAL CHARACTERISTICS:

TYPE OF EMISSION: CW type.

TYPE OF FREQUENCY CONTROL: Crystal.

NUMBER OF CHANNELS: 1937 channels.

FREQUENCY RANGE: 18.75 to 34.88 mc.

POWER OUTPUT: 1/4 w porm 20%.

TYPE OF MOUNTING: Table or rack mounted.

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

RELATION TO OTHER EQUIPMENT:

The 0-167/UR is functionally and electrically interchangeable with the 0-167(XN-1)/UR, except that the 0-167/UR has a frequency coverage of 18.75 to 34.88 mc w/1937 channels; and the 0-167(XN-1)/UR has a frequency coverage of 18.75 to 34.88 mc w/1750 channels.

The 0-167/UR is designed to be used with, but not part of Radio Set TED Series, and Radio Receiving Set AN/URR-13.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--------------------------------------|---------------|------------------------|-----------------|
| 1 | Oscillator, Radio Frequency 0-167/UR | | 7 x 14 x 14 | |

0-167/UR OSCILLATOR, RADIO FREQUENCY

REFERENCE DATA AND LITERATURE:

Link Radio Corporation's Commercial Catalog for Radio Communication Equipment Oscillator,
Radio Frequency 0-167/UR.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Data not available.

CRYSTALS: Data not available.

SEMI-CONDUCTORS: Data not available.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE:

DESIGN COG: USN, BuShips

SPEC &/OR DWG: MIL-R-16357 (SHIPS)

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|------------|----------|--------------------------|----------------------|
|------------|----------|--------------------------|----------------------|

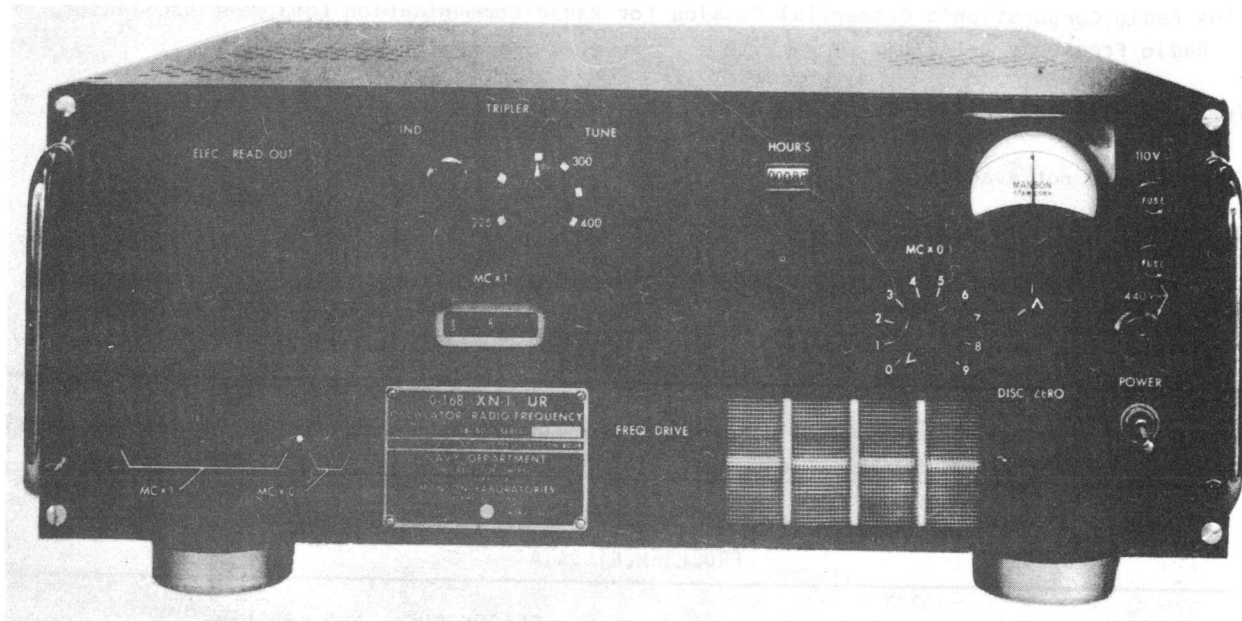
Link Radio Corporation

New York, N.Y.

NObsr-52570

RADIO FREQUENCY OSCILLATOR

O-168(XN-1)/UR



Radio-Frequency Oscillator O-168(XN-1)/UR

FUNCTIONAL DESCRIPTION

The O-168(XN-1)/UR is designed to have a VFO capable of crystal stability at discreet frequency points. These frequencies can then be used to drive a transmitter or function as a local oscillator, thus eliminating the need for some 1700 extals.

No field changes in effect at time of preparation (16 April 1957).

TUBE AND/OR CRYSTAL COMPLEMENT

- | | | | |
|----------|-----------|----------|----------|
| (2) 6U8 | (1) 6AU6 | (1) 6AL5 | (1) 5847 |
| (2) 0A2 | (1) 6AN5 | (1) 6C4 | (1) 6AU5 |
| (3) 6AH6 | (1) 5U4GB | (1) 6J6 | (2) 4174 |

Total Tubes: (17)

REFERENCE DATA AND LITERATURE

NAVSHIPS 92594: Technical Manual for OSCILLATOR, RADIO FREQUENCY O-168(XN-1)/UR.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

- FREQUENCY RANGE: 225 to 416 mc, 1 band.
- NUMBER INDIVIDUAL CHANNELS: 1800.
- FREQUENCY INDIVIDUAL CHANNELS: 225 to 416 mc in 100 kc steps.
- POWER OUTPUT: 300 mw.
- TYPE CONTROL: Crystal frequency control.
- OPERATING POWER: 117/440 v, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Manson Laboratories, Stamford, Conn.
Contract NObsr-64227.

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 Frequency Oscillator O-168(XN-1)/UR | 6-1/2 x 17-1/2 x 20-1/2 | |

0-212/FRT RADIO FREQUENCY OSCILLATOR

OPERATING POWER REQMT: 115 v ac, 50 to 60 cps, single ph, 20 va; 6.3 v ac, 50 to 60 cps, single ph, 8 amps; 150 v dc, 10 ma; 250 v dc, 220 ma.

RELATION TO OTHER EQUIPMENT:

The 0-212/FRT is designed as part of Radio Transmitting Sets AN/FRT-17 and AN/FRT-18.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|---|---------------|------------------------|-----------------|
| 1 | Radio Frequency Oscillator 0-212/FRT | | 10-1/2 x 13-1/8 x 19 | 35 |

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91963: Technical Manual for Radio Transmitting Set AN/FRT-17 of which Radio Frequency Oscillator 0-212/FRT is part of.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (5) 5686 (1) 6AS6 (7) 6AK5W (1) 6BA6W (4) 6BE6 (2) 6AL5W (2) 6SJ7
(8) 2C51 (1) 6E5.

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|--|----------------|-------------------------------|----------------------|
| Federal Telephone & Radio Co. Dwg no. C1014388 | Clifton, N. J. | N0bsr-57351, 30 April 1952 | |

September 1956

OSCILLATOR, AUDIO FREQUENCY**O-296/MS****FUNCTIONAL DESCRIPTION**

The O-296/MS generates at 4 kc sine wave carrier signal which is used to supply carrier reference and excitation voltages for the synchro resolvers employed in the acquisition indicator system.

No field changes in effect at time of preparation (30 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY: 4 kc.

OPERATING POWER: 6.3 v, 400 cps, 1 ph; 250 v DC.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes.

REFERENCE DATA AND LITERATURE

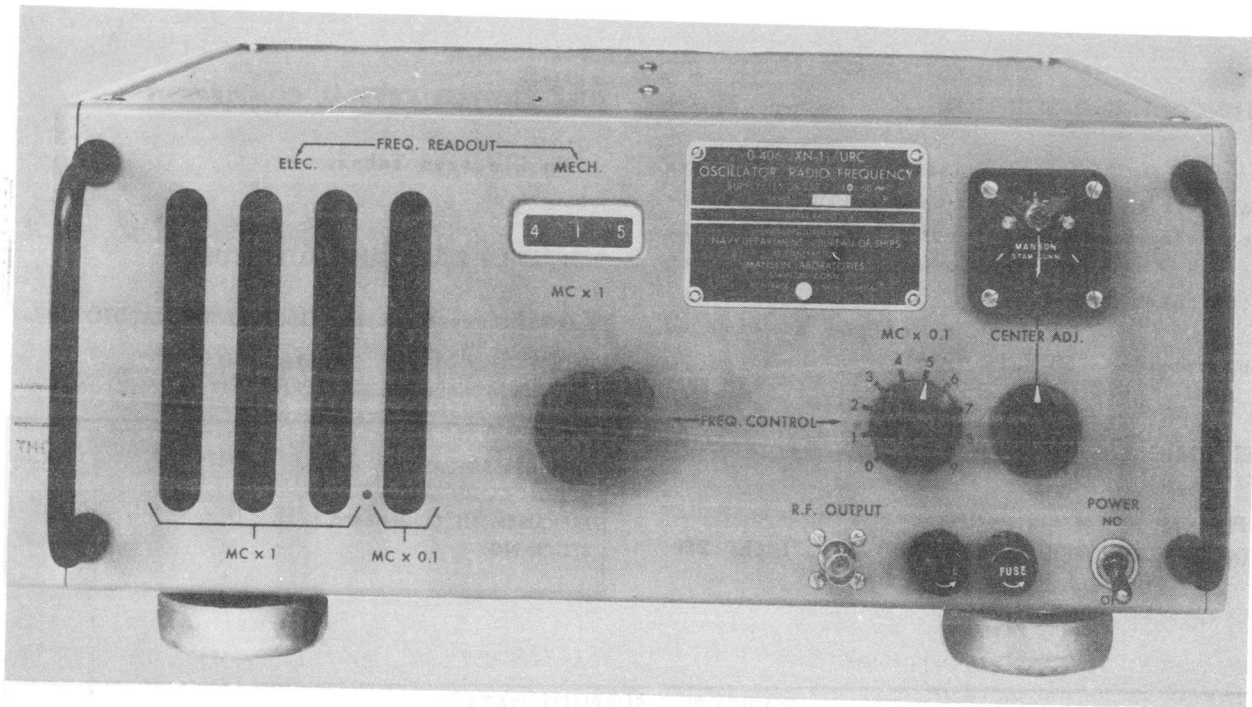
Nomenclature Card for OSCILLATOR, AUDIO FREQUENCY O-296/MS.

| |
|---|
| TYPE CLASSIFICATION DESIGN COGNIZANCE PROCUREMENT COGNIZANCE STOCK NO. |
|---|

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---|-----------------------------|---------------|
| 1 | Oscillator, Audio Frequency O-296/MS | 4 X 4 X 11-3/4 | |

OSCILLATOR, RADIO FREQUENCY O-406(XN-1)/URC



Oscillator Radio Frequency O-406(XN-1)/URC

FUNCTIONAL DESCRIPTION

The O-406 (XN-1)/URC is a radio frequency crystal synthesizer. It is basically intended to serve as an exciter for a transmitter or a high frequency oscillator for a receiver. In its function as an exciter or high frequency oscillator, it can replace a complete crystal kit numbering over 1750 individual crystals. It has both a mechanical and electrical readout. The electrical readout is primarily designed as a memory box for a remote control system, it also may serve as a modern, easily read, exact indicator of frequency. The original design of this equipment was directed to operate in conjunction with the Navy Model TED transmitter and the AN/URR-13 receiver. It should be noted that the frequency indicators of the equipment (electrical and mechanical) are not the output frequency of the synthesizer. As a crystal replacement kit for the TED, the synthesizer range must be 1/12 of that of the output frequency of the transmitter, also when used in place of a VFO or set of crystals for a receiver, the frequency of the synthesizer must be set to the incoming frequency plus or minus the IF frequency.

The O-406 (XN-1)/URC may be used with the transmitters of the AN/URT-7 or TED and the

receivers of the AN/URR-13 or AN/URR-28.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 225 to 400 mc.

TRANSMITTER SETTING: 1/12 of the output of the transmitter.

RECEIVER SETTING: To the incoming frequency \pm the IF frequency.

WARM UP TIME: 15 minutes to stabilize.

POWER REQUIREMENTS: 115 or 230 v, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Manson Laboratories, Stamford, Connecticut
Contract NObsr-64716, dated 28 April 1955.

Approximate Cost: \$3826.32.

TUBE AND/OR CRYSTAL COMPLEMENT

| | |
|------------|---------------|
| (2) 5703WA | (1) 5726/6BE6 |
| (1) 6CL6 | (2) 6U8 |
| (2) 6AU6WA | (1) 6AL5 |

(2) 5702WA (1) OB2WA
 (1) 5Y3WGT

Total Tubes: (13)

(2) Diode Crystals

Total Crystals: (2)

REFERENCE DATA AND LITERATURE

Technical Manual: for Oscillator, Radio
 Frequency O-406 (XN-1)/URC.

| |
|--|
| TYPE CLASSIFICATION DESIGN COGNIZANCE BUSHIPS PROCUREMENT COGNIZANCE SPEC. SHIPS-S-1807 STOCK NO. |
|--|

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1 | Oscillator, Radio Frequency O-406 consisting of: Replacement Crystal Door TED Coaxial Cable and Connectors Instruction Books (2) Power Cable | | 60 lg. | |
| 1 | Set of Spare Maintenance parts | | | |

EQUIPMENT SUPPLIED DATA

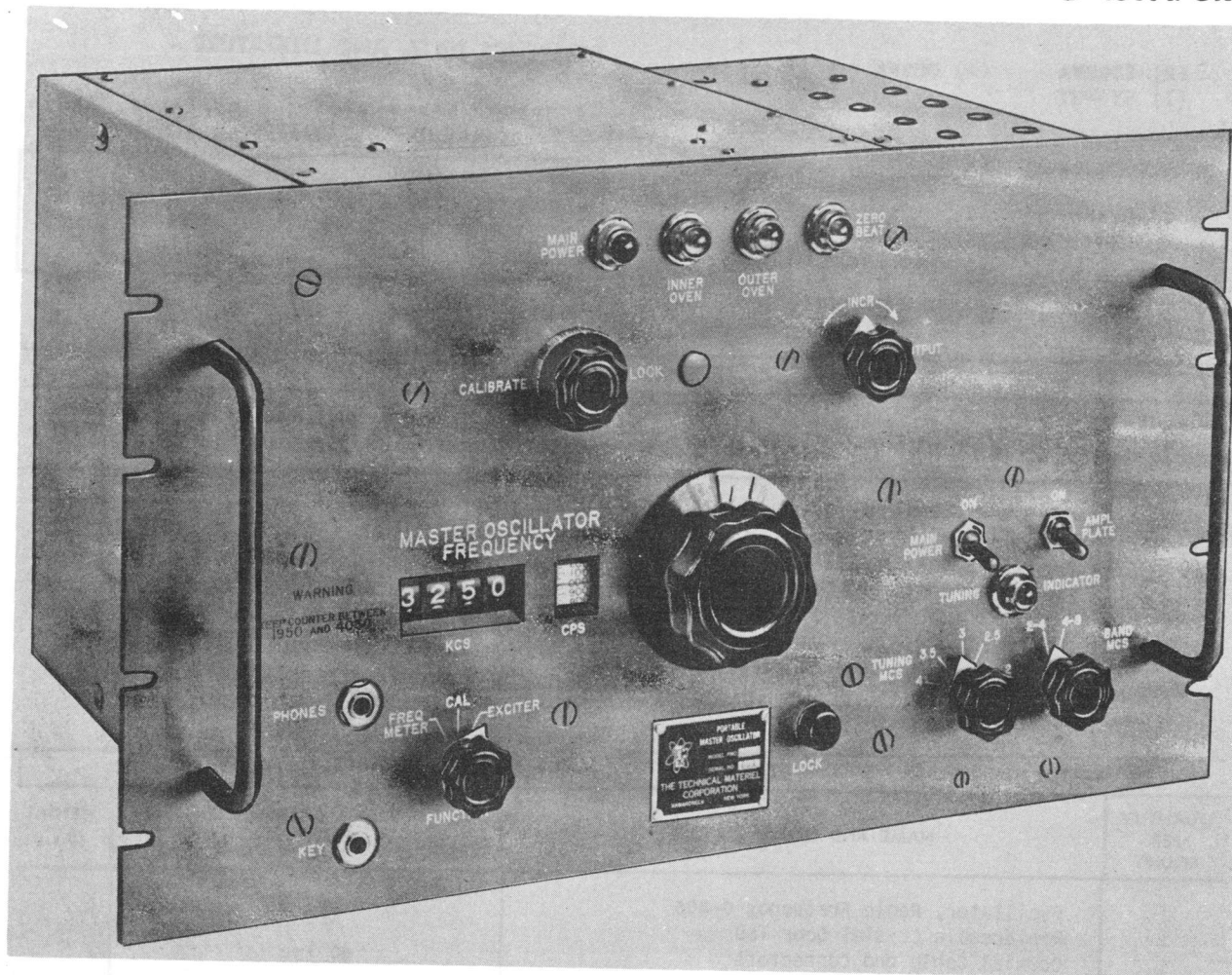
| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-----------------------------------|-----------------------------|---------------|
| 1 | Oscillator, Radio Frequency O-406 | | |
| 1 | Replaceable Crystal Door TED | | |
| 1 | Coaxial Cable and Connectors | 60 lg. | |
| 1 | Power Cable | | |
| 2 | Instruction Books | | |
| 1 | Set of Spare Maintenance Parts | | |

June 1961

RADIO FREQUENCY OSCILLATOR

Radio-Auxiliary

O-459A/URT



Radio Frequency Oscillator O-459A/URT

FUNCTIONAL DESCRIPTION

Radio Frequency Oscillator O-459A/URT is a precision, direct reading device which may be used as a transmitter exciter, frequency meter or receiver calibrator for field, fixed station or laboratory use.

No field changes in effect at time of preparation (17 January 1961).

RELATION TO OTHER EQUIPMENT

This equipment is mechanically and electrically interchangeable with O-459/URT, except for minor parts changes in the oscilla-

tor section and an improved plug on rear of chassis.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 2 to 8 mc, continuously variable in 2 bands.

OUTPUT IMPEDANCE: 70 ohms nominal.

OUTPUT POWER: Continuously adjustable to at least 3 W.

OUTPUT VOLTAGE: Sinusoidal.

STABILITY: 20 cycles per mc for a 30 deg change in ambient.

CALIBRATION: Direct reading in cycles, 2 to 4 mc.

June 1961

Radio-Auxiliary

O-459A/URT**RADIO FREQUENCY OSCILLATOR**

RESETTABILITY: 30 cycles per mc to a previously calibrated frequency.

CALIBRATE ADJUST: Against 50 kc check points.

KEYING INPUT: Provision for ON/OFF keying through front panel jack, or terminal board on rear panel.

LINE VOLTAGE CHANGE: Not more than 10 cps for porm 10% over the basic range of the unit.

POWER REQUIREMENTS: 115 or 230 v, 50 to 60 cyc, single ph, 80 W (average).

(1) 6AH6 (1) 6AQ5 (1) 6BE6

(2) 12AU7

Total Tubes: (8)

(1) CR-100

Total Crystals: (1)

REFERENCE DATA AND LITERATURE

NAVSHIPS 93400: Preliminary Data Sheet for Oscillator, Radio Frequency O-459A/URT.

MANUFACTURER'S OR CONTRACTOR'S DATA

The Technical Materiel Corp., Mamaroneck,
New York.

Model No. PMO-5.

Contract NObsr-75917.

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

TUBE AND/OR CRYSTAL COMPLEMENT

(1) OA2 (1) 6AB4 (1) 5Y3GT

SHIPPING DATA

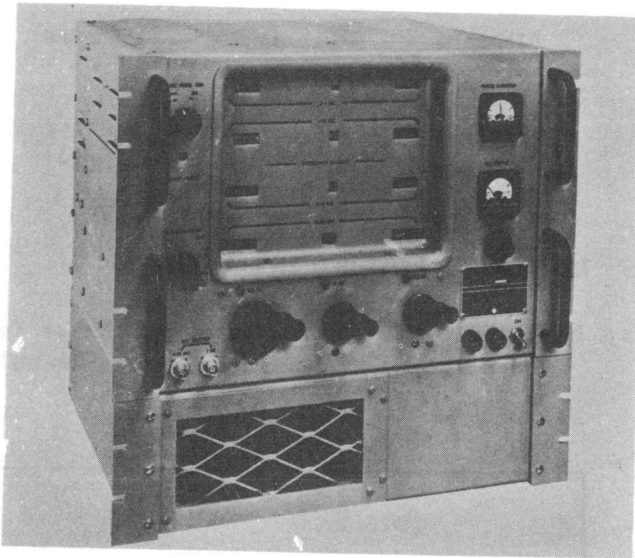
| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1 | Oscillator, Radio Frequency O-459A/URT | | 16 x 21 x 23 | 59 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Oscillator, Radio Frequency O-459A/URT | 10-1/2 x 13 x 19 | |

June 1961

Radio-Auxiliary

RADIO FREQUENCY SYNTHESIZER**O-463
(XN-1)/SRC***Radio Frequency O-463(XN-1) SRC***FUNCTIONAL DESCRIPTION**

Radio Frequency Synthesizer O-463(XN-1)/SRC, is a precision frequency source from 2 to 32 mc. Sixty-four thousand frequencies are available at the output jack of this instrument. Each frequency produced by this instrument is derived from a signal crystal frequency synthesizer. The stability achieved is 1 part in 10^8 or better. The instrument has considerable and varied applications in those fields where high stability frequencies are required. It may be usefully applied as a signal generator or transmitter exciter in a single sideband system.

No field changes in effect at time of preparation (16 January 1961).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

OUTPUT FREQUENCY RANGE: 2 to 4 mc in steps of 125 cyc; 4 to 8 mc in steps of 250 cyc; 8 to 16 mc in steps of 500 cyc; 16 to 32 mc in steps of 1000 cyc.

STABILITY: 1 part in 10^8 or better per day.
RESETTABILITY: 0 error.
ACCURACY: 1 part in 10^8 or better.
OUTPUT POWER: 100 mw.
OUTPUT IMPEDANCE: 50 ohms nominal unbalanced.
OUTPUT CONTROL: Adjustable to 100 mw.
POWER REQUIREMENTS: 105 to 125 or 210 to 250 v, 50 to 60 cyc, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Manson Laboratories, Stamford, Conn.
 Contract NObsr-72568.

TUBE AND/OR CRYSTAL COMPLEMENT

(7) 6AH6 (3) 6AL5W (1) 6AN5WA
 (2) 6AQ5W (4) 6AU6W (2) 6BE6W
 (1) 6U8A (2) 12AT7WA (11) CK5702WA
 (3) 5703WA (2) WL6954

Total Tubes: (38)
 (1) lmc

Total Crystals: (1)

SEMI-CONDUCTORS

(1) 1N54 (1) 1N255
 (3) 1N294 (5) 1N307

Total Semi-Conductors: (10)

REFERENCE DATA AND LITERATURE

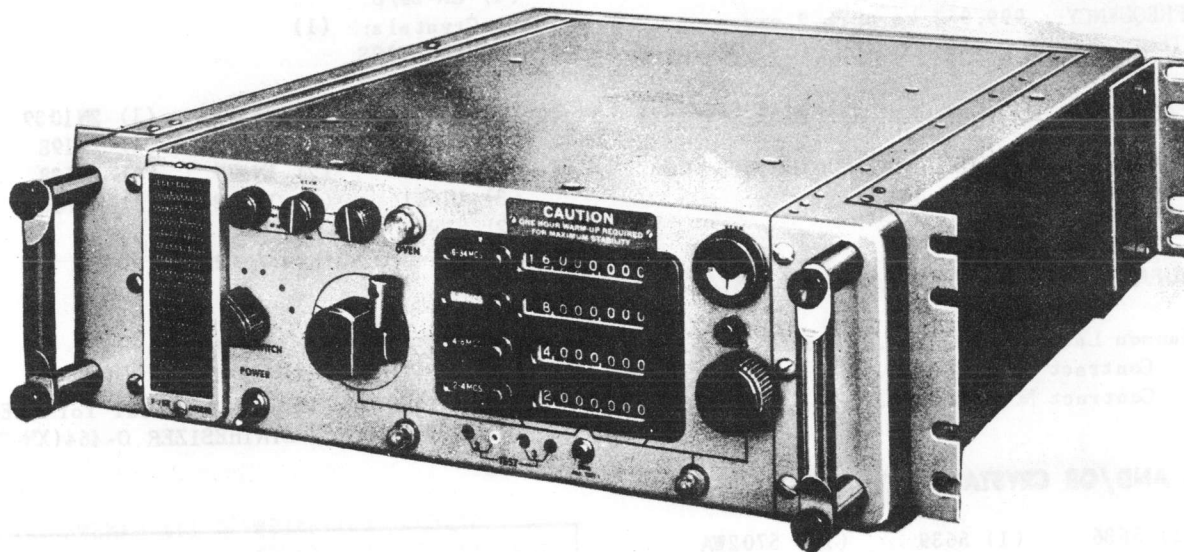
NAVSHIPS 93151: Technical Manual for Rad frequency Synthesizer O-463(XN-1)/SRC.

| |
|--|
| TYPE CLASSIFICATION (NAVY) |
| DESIGN COGNIZANCE USN, BUSHIPS |
| PROCUREMENT COGNIZANCE SPEC: SHIPS-S-2283A, |
| STOCK NO. Type 1 |
| R.D.B. IDENT. NO. |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIP | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|--------------------|---|-----------------------------|---------------|
| 1 | Radio Frequency Synthesizer O-463(XN-1)/SRC | 12-3/4 x 17-3/4 x 17-3/4 | 110 |

ELECTRICAL FREQUENCY SYNTHESIZER



Electrical Frequency Synthesizer O-464(XN-2)/SRC

FUNCTIONAL DESCRIPTION

Electrical Frequency Synthesizer O-464 (XN-2)/SRC is a precision frequency generator that produces more than 64,000 selectable frequencies in the range of 2 to 34 mc. Simultaneously, fixed output frequencies of 1.0 mc and 100 kc are also provided.

Using only one crystal as an internal frequency reference, each output frequency has a stability that equals that of the crystal. Provision is also made for the introduction of an external 1 mc standard frequency that can be used either to monitor the internal crystal-controlled reference or to give greater stability to the output frequencies. A 100 kc standard frequency can also be introduced (at the EXT 1 MC REF IN jack); however, the monitor circuit will not function under this condition.

No field changes in effect at time of preparation (16 January 1961).

EQUIPMENT REQUIRED BUT NOT SUPPLIED

- (1) Shock and Vibration Mount.

OUTPUT FREQUENCY RANGE: 2 to 34 mc.

NUMBER OF BANDS

BAND 1: 2.0 to 4.0 mc in 125 cycle steps.

BAND 2: 4.0 to 8.0 mc in 250 cycle steps.

BAND 3: 8.0 to 16.0 mc in 500 cycle steps.

BAND 4: 16.0 to 34.0 mc in 1000 cycle steps.

FREQUENCY SELECTION: Manual.

FREQUENCY STABILITY (WITH INTERNAL REFERENCE):
1 part in 10^8 per day.

RESETTABILITY ERROR: 0.

READABILITY ERROR: 0.

OPERATING AMBIENT TEMPERATURE: 0 deg to 50 deg C (32 deg to 122 deg F).

OUTPUT VOLTAGE

AT 2.0 TO 34.0 MC: Adjustable 1.0 to 2.5 v.

AT 1 MC OR AT 100 KC: 1 v.

1 MC OUTPUT IMPEDANCE: 50 ohms nominal, unbalanced.

100 KC OUTPUT IMPEDANCE: 500 ohms.

INPUT POWER: 105 to 125 v, 50 to 60 cyc, single ph, 1.7 amp.

CRYSTAL

June 1961

O-464 (XN-2) /SRC ELECTRICAL FREQUENCY SYNTHESIZER

DESIGNATION: CR-28/U.
 FREQUENCY: 999.967 kc porm 2 cps.
 TEMPERATURE COEFFICIENT: 0.25/M/deg C
 max.

OPERATING TEMPERATURE: 75 deg C (167 deg
 F).

FREQUENCY RANGE OF CRYSTAL CIRCUIT: 1 mc.

MOUNTING: Std rack or bench.

(1) CR-28/U
 Total Crystals: (1)
 SEMI-CONDUCTORS

(2) 2N478 (2) 2N495 (1) 2N1039
 (1) CTP-1150 (3) CTP-1500 (1) 1N198
 (4) 1N225 (2) 1N277 (5) 1N538
 (3) 1N661 (1) 1N1820A (2) HC7002
 (2) SV259

Total Semi-Conductors: (29)

MANUFACTURER'S OR CONTRACTOR'S DATA

Manson Laboratories Inc., Stamford, Conn.
 Contract NObsr-72568.
 Contract NObsr-72776.

REFERENCE DATA AND LITERATURE

NAVSHIPS 93463: Technical Manual for ELEC-
 TRICAL FREQUENCY SYNTHESIZER O-464 (XN-2) /
 SRC.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5636 (1) 5639 (.13) 5702WA
 (3) 5703WA (1) 5783WA (3) 5829WA
 (1) 5896 (3) 6021 (1) 6111
 (1) 6AH6 (1) 6AN5WA (3) 6AU6WA
 (1) 6BE6W (4) 12AT7WA

Total Tubes: (37)

TYPE CLASSIFICATION (NAVY)
 DESIGN COGNIZANCE USN, BUSHIPS
 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.) |
|-----------------|---|-----------------|-----------------------------|----------------------|
| 1 | Electrical Frequency Synthesizer O-464 (XN-2) /SRC | 10.42 | 15 x 30 x 40 | 175 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Electrical Frequency Synthesizer O-464 (XN-2) /SRC | 5-1/4 x 19 x 21-1/2 | 90 |
| 2 | Technical Manual NAVSHIPS 93463 | 3/4 x 8-1/2 x 11 | |
| 1 | Tool Kit includes: | | |
| 1 | Fuse, 2 amp | | |
| 2 | Fuse, 3 amp | | |
| 2 | Lamps | | |
| 2 | Aligning Tools | | |
| 2 | Screwdriver Adjusting Tools | | |
| 1 | Set Bristol Spline Keys (nos. 2, 4, 5, 6, 8) | | |
| 1 | Spline Key Holder | | |
| 1 | Tube-Pin Straightener | | |
| 3 | Lamps | | |
| 2 | Rear Supports for Case | | |
| 1 | Cable, Power | | |

18 July 1962

Cog Service: USN

FSN:

ELECTRICAL FREQUENCY SYNTHESIZER 0-464/SRC

Functional Class:

USA

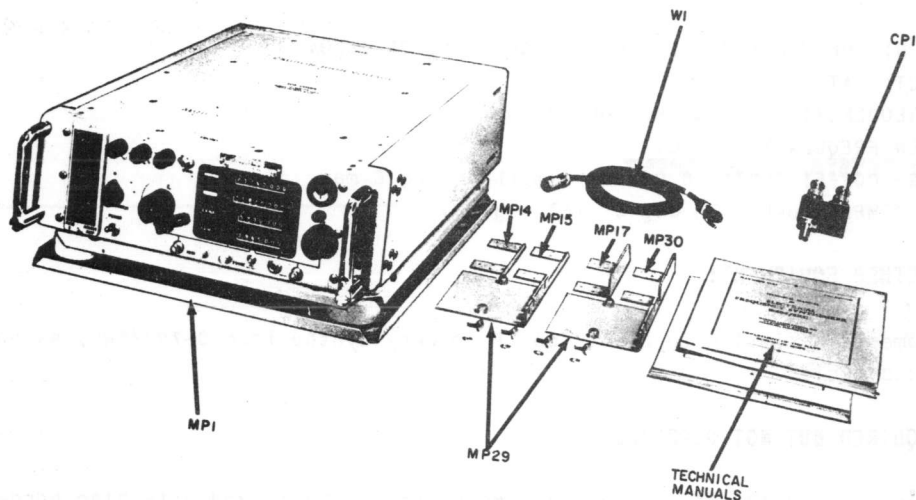
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Inc., (14465).



Electrical Frequency Synthesizer 0-464/SRC

FUNCTIONAL DESCRIPTION:

Electrical Frequency Synthesizer 0-464/SRC is a precision frequency generator that provides more than 64,000 different frequencies ranging from 2 to 34 mc, with each frequency having a stability of 1 part in 10^8 per day. An internal high-stability 1 mc reference frequency standard is used to discipline the synthesizer so that each of the output frequencies has a stability equal to that of the reference frequency.

No field changes in effect at time of preparation (24 July 1961).

TECHNICAL CHARACTERISTICS:

FREQUENCY RANGE: 2 to 34 mc.

TUNING BANDS

BAND 1: 2.0 to 4.25 mc in 125 cyc steps.

BAND 2: 4.0 to 8.50 mc in 250 cyc steps.

BAND 3: 8.0 to 17 mc in 500 cyc steps.

0-464/SRC ELECTRICAL FREQUENCY SYNTHESIZER

BAND 4: 16.0 to 34.0 mc in 1,000 cyc steps.
AUXILIARY OUTPUT FREQUENCIES: 1 mc and 100 kc.
OUTPUT LEVELS: Adjustable within 1.0 to 2.5 v at 2 to 34 mc; 1 v at 1 mc and 100 kc.
OUTPUT IMPEDANCE: 50 ohms at 2 to 34 mc and 1 mc; 500 ohms at 100 kc.
EXTERNAL AUXILIARY REFERENCE SOURCE
FREQUENCY: 1 mc or 100 kc.
SIGNAL LEVEL: 1 v.
OPERATING AMBIENT TEMPERATURE: 0 deg to 50 deg C (32 deg to 122 deg F).
READABILITY ERROR: Zero.
RESETTABILITY ERROR: Zero.
POWER REQUIREMENTS: 105 to 125 v, 50 to 60 cyc, single ph, 1.7 amps at 115 v.
MOUNTING: Bench or relay rack.
CRYSTAL
DESIGNATION: Manson MLS-33; MIL-C-3098B, type CR-28/U.
TYPE OF CUT: AT.
CRYSTAL FREQUENCY: 999,967 kc porm 2 cps.
OSCILLATION FREQUENCY: 1 mc.
TEMPERATURE COEFFICIENT: 0.25 parts/million/deg C max.
OPERATING TEMPERATURE: 75 deg C (167 deg F).

RELATION TO OTHER EQUIPMENT:

This equipment is similar to Electrical Frequency Synthesizer 0-792/SRC, except that it operates on 400 cycles.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Mounting MT-2431/U; (4) Relay-Rack, Mounting, Brackets and Attaching hardware.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|-------------------------|-----------------|
| 1 | Electrical Frequency Synthesizer 0-464/SRC | | 5-1/4 x 17-1/4 x 21-1/2 | 90 |
| 2 | Technical Manual NAVSHIPS 93797 | | 3/4 x 8-1/2 x 11 | |
| 1 | Adapter, Connector (CP1) | | | |
| 1 | Mounting MT-2431/U | | 2 x 17-3/4 x 20-1/4 | 15 |
| 4* | Relay Rack Mounting Brackets and Mounting Hardware | | | |
| 1 | Cable, Power | | 60 lg | |

* In most instances this item is not supplied.

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93797: Technical Manual for Electrical Frequency Synthesizer 0-464/SRC, 0-792/SRC.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (1) 5636 (1) 5639 (13) 5702WA (3) 5703WA (1) 5783WA (1) 5896 (4) 6021
 (1) 6832 (1) 6AH6 (1) 6AN5WA (3) 6AU6WA (1) 6BE6W (4) 12AT7WA

CRYSTALS: (1) CR-28/U

SEMI-CONDUCTORS: (2) 2N335 (2) 2N495 (1) 2N1039 (1) CTP1150 (3) CTP1500 (1) 1N198
 (4) 1N225 (2) 1N277 (6) 1N538 (7) 1N661 (1) 1N1820A (4) 1N3064
 (2) HC7002 (2) SV359

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
| 1 | 10.4 | 175 |
| 1 | 12.5 | 190 |

PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/OR DWG: SHIPS-R-3534

DESIGN COG: USN, BuShips

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|---|-----------------|-------------------------------|-------------------|
| Manson Laboratories Inc. Model no. 14465 | Stamford, Conn. | N0bsr-81340, 26 April 1960 | \$8,158.66 |

8 January 1962

OSCILLATOR, RADIO FREQUENCY 0-466(XN-1)/SRC

Cog Service:

FSN:

Functional Class:

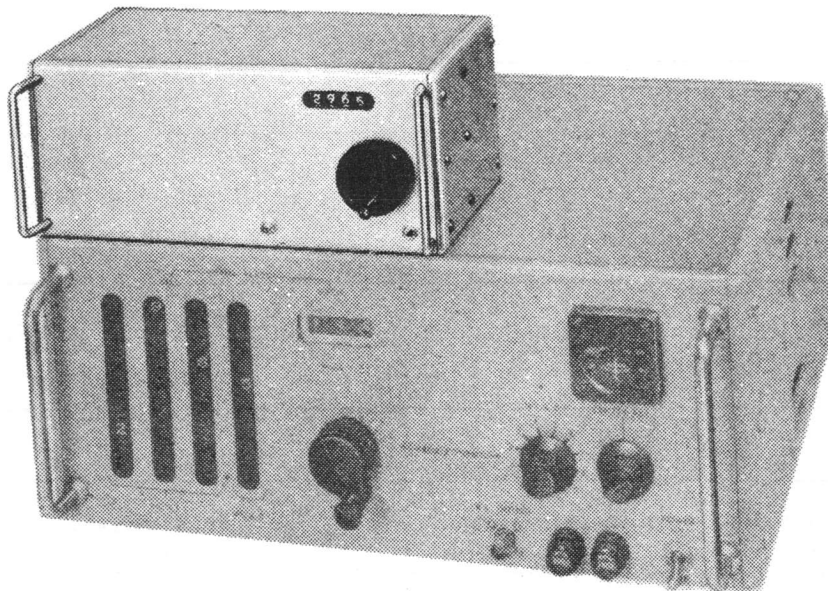
USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Incorporated.



Oscillator, Radio Frequency 0-466(XN-1)/SRC

FUNCTIONAL DESCRIPTION:

The Oscillator, Radio Frequency is subminiaturized and is designed for general purpose use with transmitters and receivers.

No field changes in effect at time of preparation (17 July 1961).

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: Table mounted.

NUMBER OF BANDS: 1 band.

NUMBER OF CHANNELS: 1750 channels.

OPERATING FREQUENCY RANGE: 18.75 to 34.88 mc.

FREQUENCY STABILITY: 1 part in 10^7 per day.

TUNING INCREMENTS: 8.33 kc.

ACCURACY: 0.0001%.

0-466(XN-1)/SRC OSCILLATOR, RADIO FREQUENCY

READABILITY ERROR: Zero.
RESETTABILITY ERROR: Zero.
SPURIOUS SIGNALS: Down 80 db, except for harmonies of the output.
OUTPUT IMPEDANCE: 90 ohms.
POWER OUTPUT: 100 mw.
OPERATING POWER RQMT: 115 v ac, 50 to 60 cps, single ph.

RELATION TO OTHER EQUIPMENT:

The 0-466(XN-1)/SRC is designed to be used with, but not a part of Radio Receiving Set AN/URR-13 series and Navy Model Radio Transmitting Equipment TED series.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|---|---------------|------------------------|-----------------|
| 1 | Oscillator, Radio Frequency 0-466(XN-1)/SRC w/o Power Supply | | 3-11/16 x 4-5/8 x 9 | 10 |
| 1 | Oscillator, Radio Frequency 0-466(XN-1)/SRC w/Power Supply | | 3-11/16 x 6-15/16 x 9 | 12 |

REFERENCE DATA AND LITERATURE:

Manson Laboratories Incorporated: Catalog for Oscillator, Radio Frequency 0-466(XN-1)/SR (Model N248).

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Data not available.

CRYSTALS: Data not available.

SEMI-CONDUCTORS: Data not available.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/OR DWG: SHIPS-S-2335

DESIGN COG: USN, BuShips

1.2 0-466(XN-1)/SRC: 2

OSCILLATOR, RADIO FREQUENCY 0-466(XN-1)/SRC

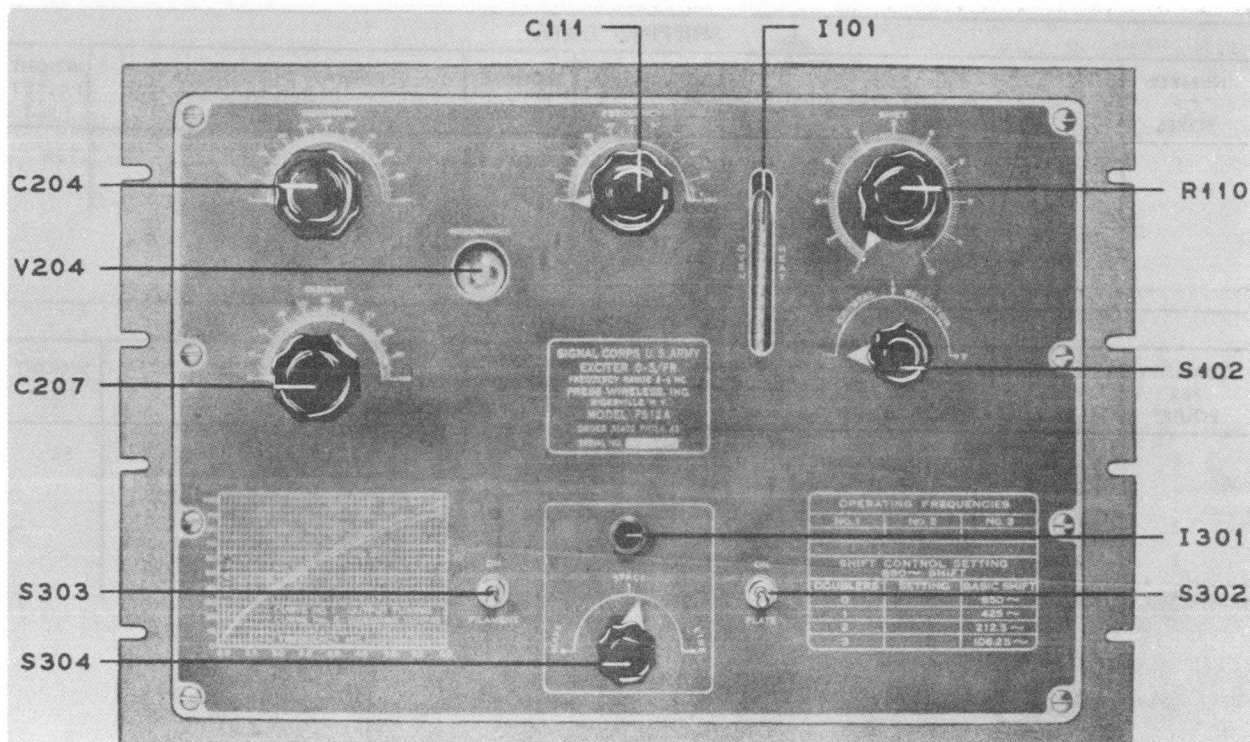
| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|---|-----------------|--------------------------------|----------------------|
| Manson Laboratories, Inc. Model N248 Dwg no. B-N248-106 | Stamford, Conn. | N0bsr-72587, 19 August 1958 | |

June 1957

Radio-Auxiliary

EXCITER UNIT

O-5/FR



Exciter Unit O-5/FR

FUNCTIONAL DESCRIPTION

The O-5/FR functions as a frequency shift Keying device. It generates a mark signal 425 cycles above an assigned frequency upon closing a standard telegraph Key and a space signal 425 cycles below the assigned frequency upon opening the Key.

Although designed primarily for radio teletype, the basic system of frequency shift Keying can be used on any radio telegraph system having similar Keyed signal requirements.

The equipment is designed for mounting on a table or in a standard 19 in. relay rack.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 2 to 6 mc.
 FREQUENCY SHIFT: 0 to 1000 cps positive.
 RF OUTPUT: 2 W variable.
 RF TERMINATION: Coaxial fitting.
 POWER SOURCE: 110 to 220 v, 50 to 60 cps, single ph, 125 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Press Wireless, Inc; Hicksville, N.Y.
 Order No. 31402 Phila 43-02.
 Order No. 31402-43 PP 2008.

TUBE AND/OR CRYSTAL COMPLEMENT

| | |
|-------------------|----------|
| (1)(1) OD3/VR-150 | (1) 6E5 |
| (1) 6J5 | (2) 6L7 |
| (1) 6N7 | (1) 6SJ7 |
| (1) 83V | (1) 807 |
| Total Tubes: (9) | |

REFERENCE DATA AND LITERATURE

TM 11-2205: Technical Manual for Exciter Unit O-5/FR.

| | |
|------------------------|-------|
| TYPE CLASSIFICATION | |
| DESIGN COGNIZANCE | TASSA |
| PROCUREMENT COGNIZANCE | |
| STOCK NO. | |

June 1957

Radio-Auxiliary

O-5/FR

EXCITER UNIT

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---|-----------------|-----------------------------|----------------------|
| 1 | Exciter Unit O-5/FR including (1) Set of Spare Parts | 8 | | 108 |

EQUIPMENT SUPPLIED DATA

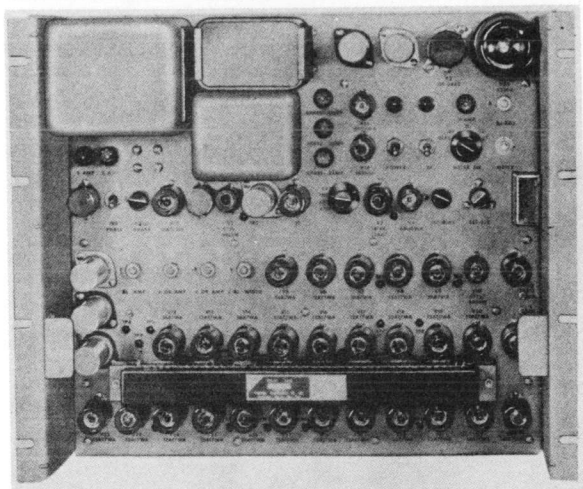
| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|------------------------------------|-----------------------------|---------------|
| 1 | Exciter Unit O-5/FR consisting of: | 12-1/4 X 12-1/2 X 19 | 81 |
| 1 | Oscillator | | |
| 1 | Amplifier Mixer | | |
| 1 | Power Supply | | |
| 1 | Set of Spare Parts | | |

February 1960

Radio-Auxiliary

O-577/UX

PULSE GENERATOR



Pulse Generator O-577/UX

FUNCTIONAL DESCRIPTION

Pulse Generator O-577/UX produces all the synchronizing waveforms necessary in the development of the complete video signal for the AN/SXQ-2(V) or AN/GXQ-3(V) Television systems. These are the horizontal and vertical drive pulses which are supplied to the camera scanning and associated circuits and viewer circuits; and the complete blanking waveform which is combined with the camera video to make-up the composite video signal. These three waveforms are delivered in negative polarity, at a level adjustable within the range of 3.5 to 4.5 v peak-to-peak. The output impedance of each of the three outputs is 75 ohms.

No field changes in effect at time of preparation (24 November 1959).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

MASTER OSCILLATOR FREQUENCY: 52.5 kc.
TYPE OF FREQUENCY CONTROL: AFC, LC, or crystal.

PULSE REPETITION RATE

HORIZONTAL DRIVE: 26.25 kc.
VERTICAL DRIVE: 60 pulses per sec.
VERTICAL BLANKING: 60 pulses per sec.
HORIZONTAL BLANKING: 26.25 kc.
FIELD RATE: 60 cps.
FRAME RATE: 30 cps.
LINES PER FRAME: 875.

PULSE OUTPUTS

HORIZONTAL DRIVE OUTPUT: 4 v peak-to-peak across 75 ohms, neg polarity; 4.5 usec in duration, from J3.

VERTICAL DRIVE OUTPUT: 4 v peak-to-peak across 75 ohms, neg polarity; 15 horizontal lines in duration, from J4.

MIXED BLANKING OUTPUT: 4 v peak-to-peak across 75 ohms, neg polarity; horizontal 7 usec in duration, vertical 21 horizontal lines in duration, from J5.

AMBIENT TEMPERATURE: 55° C (131° F).

POWER SUPPLY

INPUT: 105 to 125 v, 60 cps, ±10%.

OUTPUT: +200 v dc regulated.

-5.2 v dc unregulated.

MANUFACTURER'S OR CONTRACTOR'S DATA

General Precision Laboratory Inc., Pleasantville, New York.
Contract NObsr-75369.

TUBE AND/OR CRYSTAL COMPLEMENT

| | |
|-----------------|----------------|
| (2) 6AU6WA | (24) 12AT7WA |
| (1) 5651WA | (5) 5687WA |
| (1) 5725/6AS6W | (1) 5726/6AL5W |
| (1) 5814A/12AU7 | (1) 6336A |
| (9) 1N38A | (9) 1N540 |

Total Tubes: (54)

No Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 93372(A): Technical Manual for PULSE GENERATOR O-577/UX.

TYPE CLASSIFICATION (NAVY)

DESIGN COGNIZANCE USN, BUSHIPS

PROCUREMENT COGNIZANCE

STOCK NO.

R.D.B. IDENT. NO.

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIP | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|--------------------|--------------------------|-----------------------------|---------------|
| 1 | Pulse Generator O-577/UX | 8-5/8 X 15-3/4 X 17 | 45 |

3 April 1962
Cog Service:

SYNTHESIZER, ELECTRICAL FREQUENCY 0-728(XN-1)/SRC
Functional Class:

USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Incorporated.

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

The Synthesizer, Electrical Frequency 0-728(XN-1)/SRC is designed to combine fixed frequencies into a predetermined output frequency. It has integral coils and an integral power supply.

No field changes in effect at time of preparation (17 July 1961).

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: Table mounted, adapted for rack mtg.
TYPE OF FREQUENCY CONTROL: Crystal.
RESETTABILITY ERROR: Zero.
READABILITY ERROR: Zero.
SPURIOUS SIGNALS: Down a minimum of 80 db, except for harmonics of the output.
POWER OUTPUT: 100 mw.
OUTPUT IMPEDANCE: 50 ohms nominal, 50 ohms unbalanced.
OUTPUT ATTENUATION: Adjustable to 100 mw
NUMBER OF BANDS: 4 bands.
NUMBER OF CHANNELS: 1 channel.
OPERATING FREQUENCY RANGE: 2 to 34 mc.
OPERATING POWER RQMT: 105/125 v ac, 50 to 60 cps, single ph.

RELATION TO OTHER EQUIPMENT: None.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|------------------------|-----------------|
| 1 | Synthesizer, Electrical Frequency 0-728(XN-1)/SRC | | 5-1/8 x 14-3/4 x 20 | |

REFERENCE DATA AND LITERATURE:

Manson Laboratories Incorporated Catalog for Synthesizer, Electrical Frequency
0-728(XN-1)/SRC (Model N348).

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Data not available.

CRYSTALS: Data not available.

0-728(XN-1)/SRC SYNTHESIZER, ELECTRICAL FREQUENCY

SEMI-CONDUCTORS: Data not available.

SHIPPING DATA

PKGS

VOLUME (CU FT)

WEIGHT (LBS)

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/OR DWG:

DESIGN COG: Navy, BuShips

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|--|-----------------|-------------------------------|----------------------|
| Manson Laboratories Inc. Model N346 | Stamford, Conn. | NObsr-72776, 17 April 1958 | |

11 January 1962

Cog Service:

FSN:

SYNTHESIZER, ELECTRICAL FREQUENCY 0-730(XN-1)/SRC

Functional Class:

USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Incorporated.

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

The 0-730(XN-1)/SRC is designed to combine two (2) or more frequencies to form a predetermined output frequency. It has 1750 individual frequency channels available. The power supply of the 0-730(XN-1)/SRC is integral.

No field changes in effect at time of preparation (17 July 1961).

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: Rack mounted, adapted for table mtg.

TYPE OF FREQUENCY CONTROL: Crystal.

NUMBER OF BANDS: 1 band.

NUMBER OF CHANNELS: 1750 channels.

OPERATING FREQUENCY RANGE: 75 to 133.3 mc.

POWER OUTPUT: 100 mw.

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

RELATION TO OTHER EQUIPMENT: None.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|------------------------|-----------------|
| 1 | Synthesizer, Electrical Frequency 0-730(XN-1)/SRC | | 5-1/8 x 17 x 21-3/8 | |

REFERENCE DATA AND LITERATURE:

Manson Laboratories Incorporated Catalog for Synthesizer, Electrical Frequency 0-730(XN-1)/SRC (Model N273).

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Data not available.

CRYSTALS: Data not available.

0-730(XN-1)/SRC SYNTHESIZER, ELECTRICAL FREQUENCY

SEMI-CONDUCTORS: Data not available.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/OR DWG: Commercial

DESIGN COG: Navy, BuShips

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|--|-----------------|-------------------------------|----------------------|
| Manson Laboratories Inc. Model N273 | Stamford, Conn. | NObsr-72680, 29 March 1957 | |

30 August 1962

SYNTHESIZER, ELECTRICAL FREQUENCY 0-736(XN-1)/SRC

Cog Service:

FSN:

Functional Class:

USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Incorporated.

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

The Synthesizer, Electrical Frequency 0-736(XN-1)/SRC is designed to provide a multiplicity of discrete output signals harmonically related to a standard source frequency, that may be utilized in radio receivers, transmitters, test equipments, and the like. Such signals provide a high density of rapidly selectable individual communication channels within a comparatively limited radio frequency band-width. It is specifically designed to generate Radio Frequency (RF) energy.

No field changes in effect at time of preparation (17 May 1961).

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: Rack mounted.

DESIGN PURPOSE: To generate rf energy.

TYPE OF CONTROL: Crystal frequency control.

NUMBER OF BANDS: 4 bands.

NUMBER OF CHANNELS: 1 channel.

FREQUENCY RANGE: 2 to 34 mc.

OPERATING POWER RQMT: 105 to 125, 50 to 60 cps, single ph.

RELATION TO OTHER EQUIPMENT:

The 0-736(XN-1)/SRC is a transistorized version of synthesizer, Electrical Frequency 0-464()/SRC.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|------------------------|-----------------|
| 1 | Synthesizer, Electrical Frequency 0-736(XN-1)/SRC | | 2-1/2 x 17 x 21-3/8 | |

REFERENCE DATA AND LITERATURE:

Nomenclature Card for Synthesizer, Electrical Frequency 0.736(XN-1)/SRC.

0-736(XN-1)/SRC SYNTHESIZER, ELECTRICAL FREQUENCY

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: None used.

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

TRANSISTORS: Data not available.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

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

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|--------------------------|-----------------|-----------------------------|-------------------|
| Manson Laboratories Inc. | Stamford, Conn. | N0bsr-77601, 29 May 1959 | |

12 January 1962

Cog Service:

FSM:

SYNTHESIZER, ELECTRICAL FREQUENCY 0-792/SRC

Functional Class:

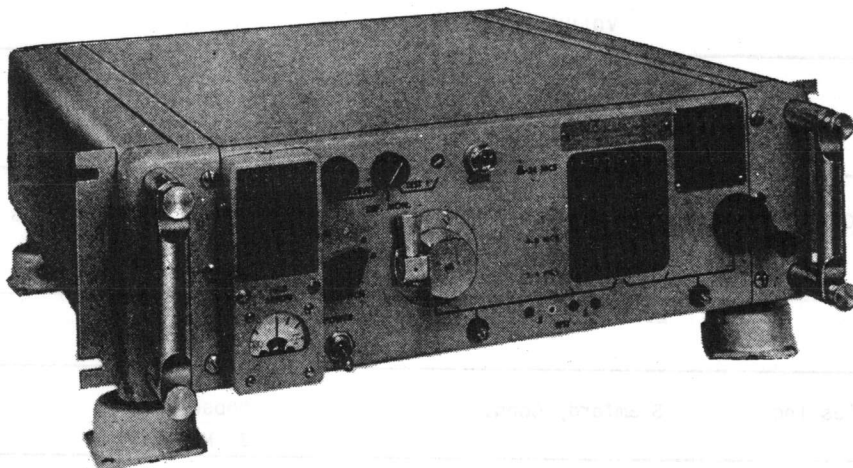
USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Incorporated.



Synthesizer, Electrical Frequency 0-792/SRC

FUNCTIONAL DESCRIPTION:

The Synthesizer, Electrical Frequency 0-792/SRC is a precision frequency generator operating in the range from 2 to 34 megacycles (mc), producing over 64,000 discrete frequencies. It employs a double superheterodyne circuitry to discipline three free-running variable frequency oscillators, each of which is electronically phase-locked, through a unique discriminator, to a highly stabilized 1-MC frequency standard.

No field changes in effect at time of preparation (18 May 1961).

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: For rack or bench use.

ACCURACY: 1 part in 10^8 .

RESETTABILITY ERROR: Zero.

0-792/SRC SYNTHESIZER, ELECTRICAL FREQUENCY

READABILITY ERROR: Zero.

SPURIOUS SIGNALS: Down a minimum of 80 db, except for harmonics of the output.

OPERATING AMBIENT TEMPERATURE: 40 deg C to P60 deg C.

OUTPUT POWER: 100 mw minimum.

OUTPUT IMPEDANCE: 50 ohm nominal, 50 ohms unbalanced.

OUTPUT ATTENUATION: Adjustable to 100 mw.

FREQUENCY STABILITY: 1 part in 10^8 per day. Five cycles absolute over a 3-month period.

(May also be locked to external 1 mc reference for higher stability.)

NUMBER OF CHANNELS: 1 channel.

NUMBER OF BANDS: 4 bands.

FREQUENCY RANGE: 2 to 34 mc.

BAND ONE: 2 to 4 mc in steps of 125 cycles.

BAND TWO: 4 to 8 mc in steps of 250 cycles.

BAND THREE: 8 to 16 mc in steps of 500 cycles.

BAND FOUR: 16 to 34 mc in steps of 1000 cycles.

AUXILIARY OUTPUTS: 100 kc and 1 mc.

OPERATING POWER REQUIREMENT: 105 to 125 v ac, 50 to 60 cps, single ph; 105 to 125 v ac, 400 cps, single ph.

RELATION TO OTHER EQUIPMENT:

The 0-792/SRC is the same as Manson Laboratories Commercial Model N317.

EQUIPMENT REQUIRED BUT NOT SUPPLIED: None.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|------------------------|-----------------|
| 1 | Synthesizer, Electrical Frequency P-792/SRC | | 5-1/4 x 17-3/4 x 20 | 80 |

REFERENCE DATA AND LITERATURE:

Manson Laboratories Incorporated Catalog ESO's Copy No. 03275 for Synthesizer, Electrical Frequency 0-792/SRC (Model N317).

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Data not available.

CRYSTALS: Data not available.

SEMI-CONDUCTORS: Data not available.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

1.2 0-792/SRC: 2

SYNTHESIZER, ELECTRICAL FREQUENCY 0-792/SRC

PROCUREMENT DATA

PROCURING SERVICE:

DESIGN COG: USN, BuShips

SPEC &/OR DWG: SHIPS-R-3534

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|---|-----------------|-----------------------|-------------------|
| Manson Laboratories Incorporated Model no. N317 | Stamford, Conn. | N0bsr-81340 | |

23 July 1962

Cog Service: USN

FSN:

RADIO FREQUENCY OSCILLATOR 0-91A/FRT-5

Functional Class:

USA

USN

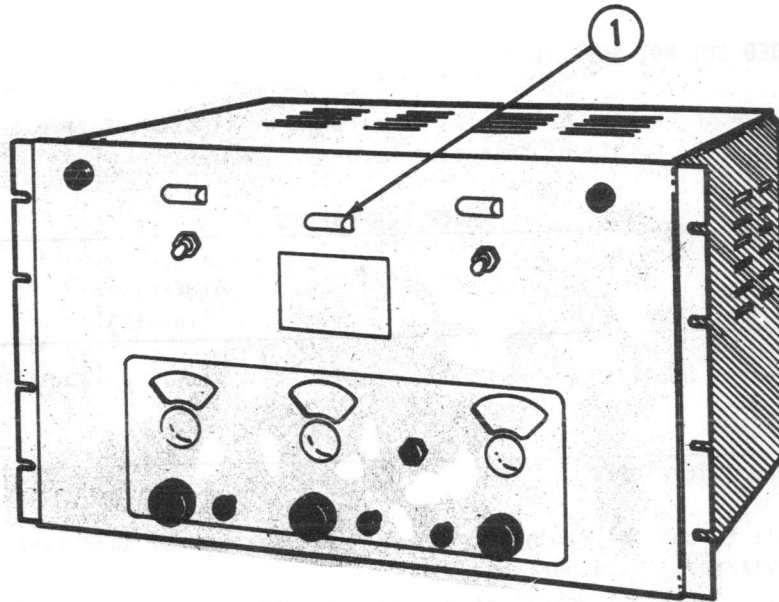
USAF

TYPE CLASS:

Used by

Used by

MANUFACTURER'S NAME/CODE NUMBER: Federal Telephone & Radio Corporation, (21964).



Radio Frequency Oscillator 0-91A/FRT-5

FUNCTIONAL DESCRIPTION:

The Radio Frequency Oscillator 0-91A/FRT-5 is designed as a stabilized Variable-Frequency Oscillator (VFO) which derives its stability from a 100 kilocycle (KC) crystal standard—utilizing a permeability tuned oscillator, it provides a frequency stabilized output in the range of 2 to 4.5 megacycle (MC).

No field changes in effect at time of preparation.

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: Rack mounted.
TYPE OF FREQUENCY CONTROL: Automatic.
TYPE OF OSCILLATOR: 100 kc crystal type.
FREQUENCY RANGE: 2 to 4.5 mc.
NUMBER OF CHANNELS: 10.

0-91A/FRT-5 RADIO FREQUENCY OSCILLATOR

POWER OUTPUT: 2 W.

INPUT: 250 v dc at 250 ma; 150 v dc at 25 ma and 6.3 v ac at 8.5 amps.

RELATION TO OTHER EQUIPMENT:

The 0-91A/FRT-5 is designed as part of Radio Transmitting Sets AN/FRT-5A, 6A and T-225/FRT-5.

The 0-91A/FRT-5 is the same as 0-91/FRT-5 except for changes in component parts and different manufacturer.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Frequency Meter FR-4/U Series; (1) Electronic Multimeter ME-25/U Series (OBQ Series, ME-26/U Series); (1) R. F. Signal Generator AN/URM-25 Series.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|---|---------------|------------------------|-----------------|
| 1 | Radio Frequency Oscillator 0-91A/FRT-5 | | 10-1/2 x 15-1/8 x 19 | 35 |

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91457(A): Technical Manual for Radio Transmitting Set AN/FRT-5A of which R. F. Oscillator 0-91A/FRT-5 is a part of.

NAVSHIPS 91457.41: Technical Manual of Maintenance Standards for R. F. Oscillator 0-91A/FRT-5.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (8) 2C51 (5) 5686 (1) 6AS6 (8) 6AK5 (4) 6BE6 (1) 6BA6 (2) 6AL5
(2) 6SJ7.

CRYSTALS: None used.

SEMI-CONDUCTORS: None used.

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

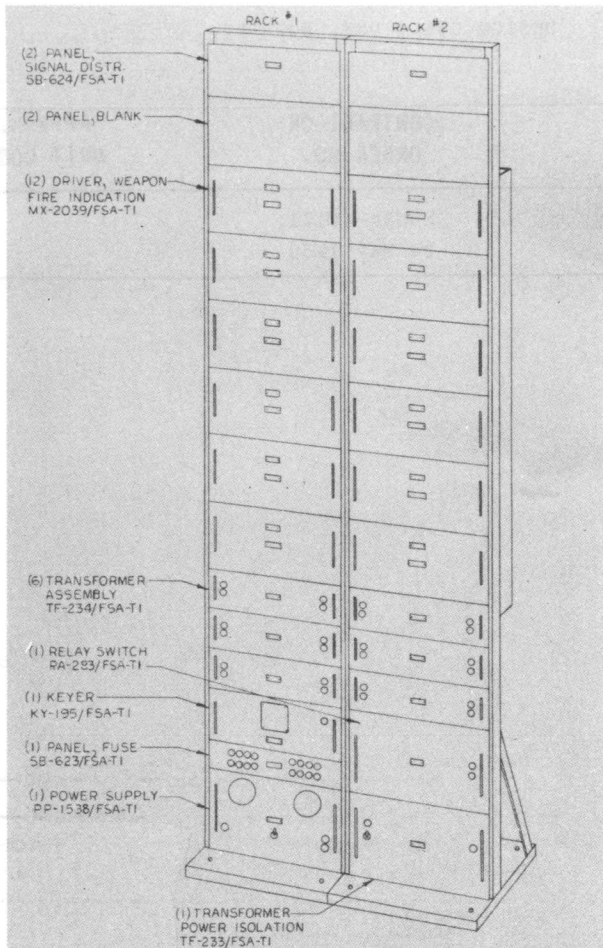
SPEC &/OR DWG: SHIPS-R-54 Add #1

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|--|---------------------|-----------------------------|----------------------|
| Federal Telephone & Radio Corporation | Clifton, New Jersey | N0bsr-49171, 24 May 1950 | |

January 1958

WEAPON FIRE INDICATION DRIVER GROUP

Radio Auxiliary
OA-1198/FSA-T1



*Weapon Fire Indication Driver
Group, Front View OA-1198/FSA-T1*

FUNCTIONAL DESCRIPTION

The OA-1198/FSA-T1 function is to create 25 second weapon fire indication outputs for each corresponding triggered weapon fire pulse. There are 192 such circuits in this group and each has been assigned to a particular vehicle and weapon.

Each such described circuit controls a relay which in turn controls its assigned lights in the Control Indicator, in the Umpire area and in the command centers.

No field changes in effect at time of preparation (11 April 1957).

RELATION TO OTHER EQUIPMENT

The OA-1198/FSA-T1 is part of damage computer AN/FSA-T1.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

SIGNAL DISTRIBUTION PANELS

MAIN LINE (FIL): 120 v AC.

MAIN LINE (PLATE): 120 v AC, 48 v DC, 120 v DC.

WEAPON FIRE INPUT PULSES: 85 ± 8 v DC.

SIGNAL POWER VOLTAGE: 120 v, 60 cps.

WEAPON FIRE INDICATION DRIVER: Heater supply 6.3 v AC; -210 v DC and -250 v DC; 120 v AC from the Isolation Transformer

FILAMENT TRANSFORMER ASSEMBLY

LINE INPUT: 120 v AC.

FOUR OUTPUTS: 6.3 v AC ea.

ISOLATION TRANSFORMER

LINE INPUT: 120 v AC.

OUTPUT: 115 to 143 v AC.

POWER SUPPLY

LINE INPUT: 120 v AC.

PLATE LINE INPUT: 120 v AC.

OUTPUT: 250 v DC.

KEYER

LINE INPUT: 120 v AC.

DC INPUT: -250 v.

SIGNAL POWER INPUT: 120 v AC.

OUTPUT DC: -210 v (3 lines)

KEYED OUTPUT SIGNAL POWER: 120 v AC (3 lines).

RELAY SWITCH

LINES: 48 v and 120 v DC.

INPUT SIGNAL SWITCHING: 85 ± 8 v DC.

MANUFACTURER'S OR CONTRACTOR'S DATA

The Ralph M. Parsons Co., Electronics Div.,
Pasadena, California.
Contract NObsr-71040.

TUBE AND/OR CRYSTAL COMPLEMENT

| | | |
|------------|------------|------------|
| (384) 5727 | (2) 5R4WGB | (1) 5814A |
| (1) 6336 | (1) 6AU6WA | (1) 5651WA |
| (1) 5751 | | |

Total Tubes: (391)

REFERENCE DATA AND LITERATURE

Technical Manual for Weapon Fire Indication Driver Group Navy Model OA-1198/FSA-T1, NAVSHIPS 92,684.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

January 1958

Radio-Auxiliary
OA-1198/FSA-T1WEAPON FIRE INDICATION
DRIVER GROUP

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---|-----------------|-----------------------------|----------------------|
| 1 | Weapon Fire Indication Driver Rack RAA-360E-4-550 (1) Signal Distribution Panel SB-624/FSA-T1 (6) WFI Driver MX-2031/FSA-T1 (3) Transformer Assemblies TF-2034/FSA-T1 (1) Keyer KY-195/FSA-T1 (1) Fuse Panel SB-623/FSA-T1 (1) Power Supply PP-1538/FSA-T1 | 61 | 2-1/2 X 2-1/2 X 9-3/4 | 504-1/2 |
| 1 | Weapon Fire Indicator Rack RAA-360E-4-550 (1) Signal Distribution Panel SB-624/FSA-T1 (6) WFI Driver MX-2039/FSA-T1 (3) Transformer Assembly TF-2034/FSA-T1 (1) Relay Switch RA-283/FSA-T1 (1) Power Isolation Transformer TF-233/FSA-T1 | 61 | 2-1/2 X 2-1/2 X 9-3/4 | 494 |
| 3 | (96) Plug-in Units NT-47085 | 48 | 3 X 4 X 4 | 320 ea |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 2 | Rack, RAA-360E-4-550 | 1-3/4 X 1-5/6 X 9 | 70 |
| 2 | Signal Distribution Panel SB-624/GSA-T1 | 6 X 7 X 19 | 5 |
| 12 | Driver, Weapon Fire Indication Group MX-2039/FSA-T1 | 7 X 11 X 19 | 26 |
| 6 | Transformer Assembly TF-234/FSA-T1 | 5 X 8 X 19 | 25-1/2 |
| 1 | Power Isolation Transformer TF-233/FSA-T1 | 4-1/2 X 10-1/2 X 19 | 21-1/2 |
| 1 | Keyer KY-195/FSA-T1 | 7 X 7 X 19 | 11-1/2 |
| 1 | Power Supply PP-1538/FSA-T1 | 8 X 10-1/2 X 19 | 37 |
| 1 | Fuse Panel SB-623/FSA-T1 | 2-1/2 X 3-1/2 X 19 | 2 |
| 1 | Relay Switch RA-283/FSA-T1 | 9 X 11 X 19 | 18 |

September 1956

ANTENNA GROUP

Radio Auxiliary
OA-1227/TPS

FUNCTIONAL DESCRIPTION

The PA-1227/TPS is designed identification, friend or foe operation in the frequency range of 1250 to 1350 mc.

It consists of 1, pedestal, 1, reflector, 1, control and cable assemblies.

It is used for early warning radar and is capable of long range and high angle coverage.

No field changes in effect at time of preparation (27 July 1956).

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes.

REFERENCE DATA AND LITERATURE

Nomenclature Card for ANTENNA GROUP OA-1227/TPS

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE
STOCK NO.

MANUFACTURER'S OR CONTRACTOR'S DATA

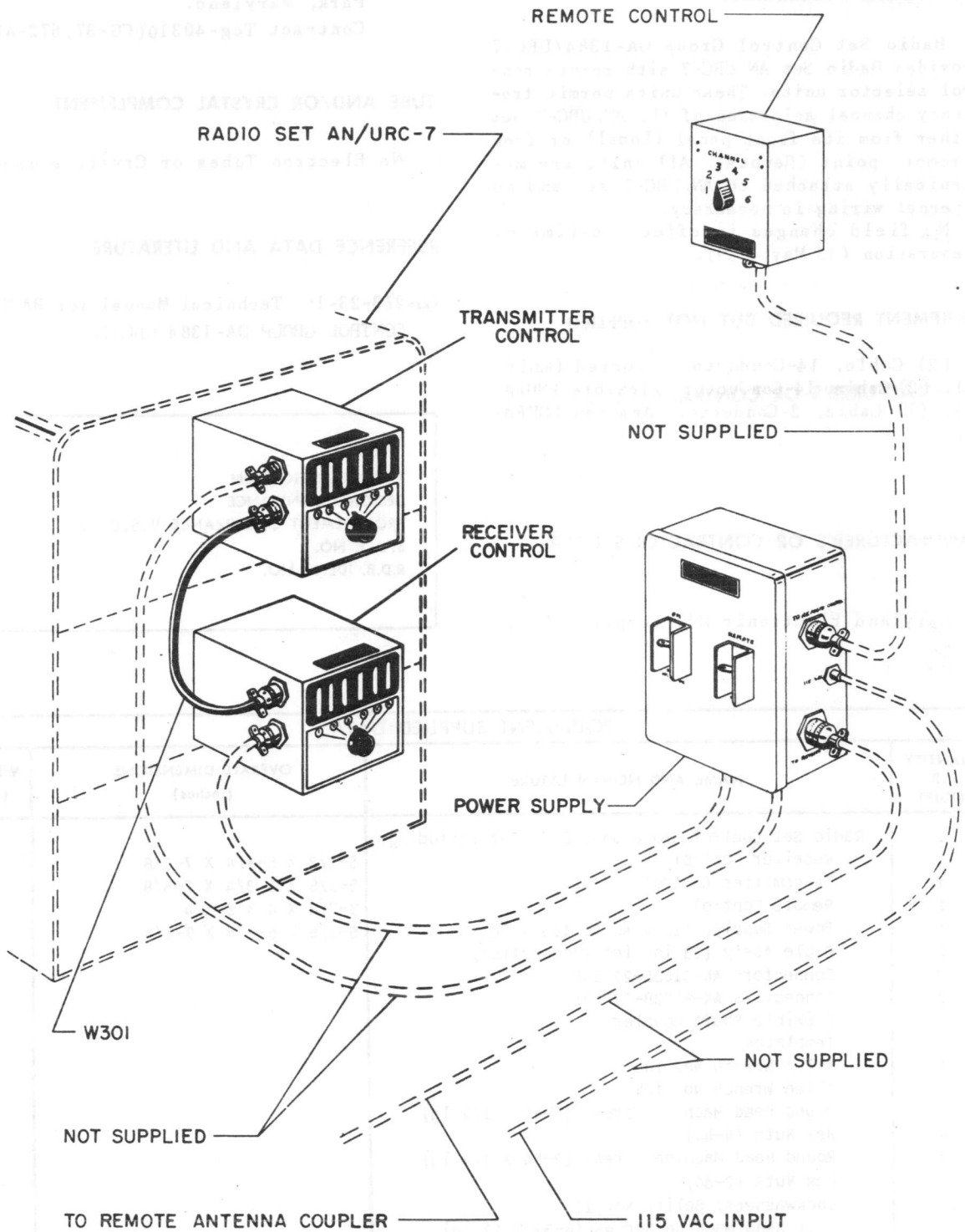
Raytheon Manufacturing Co. Waltham, Mass.

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------------|---------------------------|--------------------------------|------------------|
| 1 | Antenna Group OA-1227/TPS | | |

RADIO SET CONTROL GROUP

Radio-Auxiliary
OA-1384/URC-7



Radio Set Control Group OA-1384/URC-7

Radio-Auxiliary

OA-1384/URC-7

RADIO SET CONTROL GROUP

Park, Maryland.
Contract Tcg-40310(CG-37,672-A).

FUNCTIONAL DESCRIPTION

Radio Set Control Group OA-1384/URC-7 provides Radio Set AN/URC-7 with remote control selector units. These units permit frequency channel selection of the AN/URC-7 set either from its front panel (Local) or from a remote point (Remote). All units are mechanically attached to AN/URC-7 set and no internal wiring is necessary.

No field changes in effect at time of preparation (13 May 1959).

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

CG-273-23-1: Technical Manual for RADIO SET CONTROL GROUP OA-1384/URC-7.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

(2) Cable, 14-Conductor, Armored (MHFA-14), (2) Cable, 14-Conductor, Flexible (MHFA-14), (1) Cable, 2-Conductor, Armored (DHFA-3).

TYPE CLASSIFICATION
DESIGN COGNIZANCE
PROCUREMENT COGNIZANCE U.S.C.G.
STOCK NO.
R.D.B. IDENT. NO.

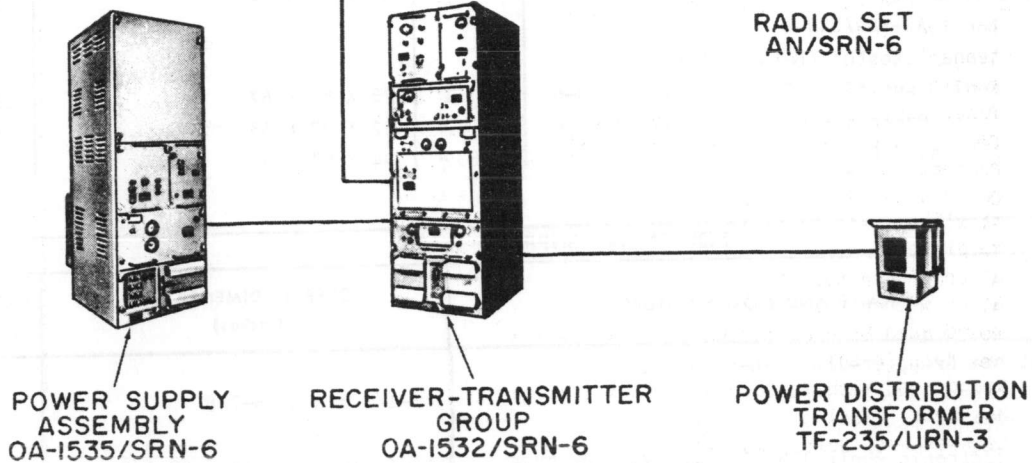
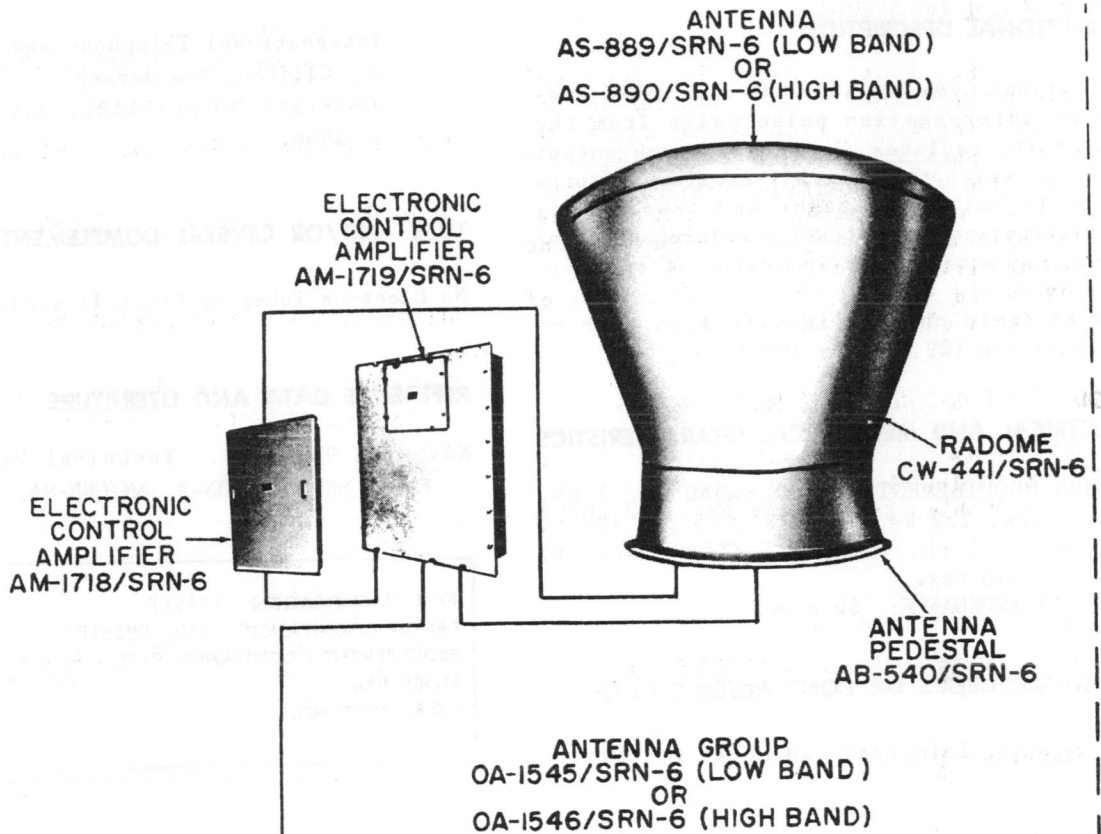
MANUFACTURER'S OR CONTRACTOR'S DATA

Maryland Electronic Mfg Corp., College

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Radio Set Control Group OA-1384/URC-7 Including: | | |
| 1 | Receiver Control | 5-1/8 X 5-3/4 X 7-5/8 | 7 |
| 1 | Transmitter Control | 5-1/8 X 5-3/4 X 7-5/8 | 7 |
| 1 | Remote Control | 3-7/8 X 4 X 5-1/4 | 1.5 |
| 1 | Power Supply, 115 v AC to 115 v DC | 5-1/8 X 6-3/4 X 9-3/4 | 4 |
| 1 | Cable Ass'y (28 in. interconnecting) | | |
| 2 | Connectors AN-3108B-22-19P | | |
| 2 | Connectors AN-3108B-22-19S | | |
| | Flexible Shaft Couplers | | |
| | Templates | | |
| 1 | Allen Wrench No. 10 | | |
| 1 | Allen Wrench No. 1/4 | | |
| 4 | Round Head Machine Screws (4-40 X 1/4 lg) | | |
| 4 | Hex Nuts (4-40) | | |
| 12 | Round Head Machine Screws (2-56 X 1/4 lg) | | |
| 12 | Hex Nuts (2-56) | | |
| 12 | Lockwashers, Split, No. 12 | | |
| 2 | Flat Head Machine Screws (8-32 X 12 lg) | | |

ANTENNA GROUP



Antenna Group OA-1545/SRN-6

September 1960

OA-1545/SRN-6

ANTENNA GROUP

FUNCTIONAL DESCRIPTION

Antenna Group OA-1545/SRN-6 receives distance interrogation pulse pairs from the aircraft; radiates the radio beacon output signals which the aircraft receive and process to obtain distance and bearing information; provides bearing reference pulses to trigger the coder-indicator at specific intervals.

No field changes in effect at time of preparation (29 January 1960).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

POWER REQUIREMENTS: 440 v, 60 cy, 3 ph, 3-wire, 1.2 kw, 2.4 kva, 0.5 pf; 120 v, 60 cy, 1 ph, 1.1 kw, 1.4 kva, 0.8 pf, 11.5 amp max.

ANTENNA IMPEDANCE: 50 ohms.

MANUFACTURER'S OR CONTRACTOR'S DATA

Federal Telephone and Radio Co, Div of

International Telephone and Telegraph Co, Clifton, New Jersey.

Contract NObsr-71385, dated 1 July 1956.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes or Crystals used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 92986(A): Technical Manual for RADIO SETS AN/GRN-9, AN/GRN-9A, AN/SRN-6.

| | |
|------------------------|-------------------|
| TYPE CLASSIFICATION | (NAVY) |
| DESIGN COGNIZANCE | USN, BUSHIPS |
| PROCUREMENT COGNIZANCE | SPEC: MIL-R-19390 |
| STOCK NO. | (SHIPS) |
| R.D.B. IDENT. NO. | |

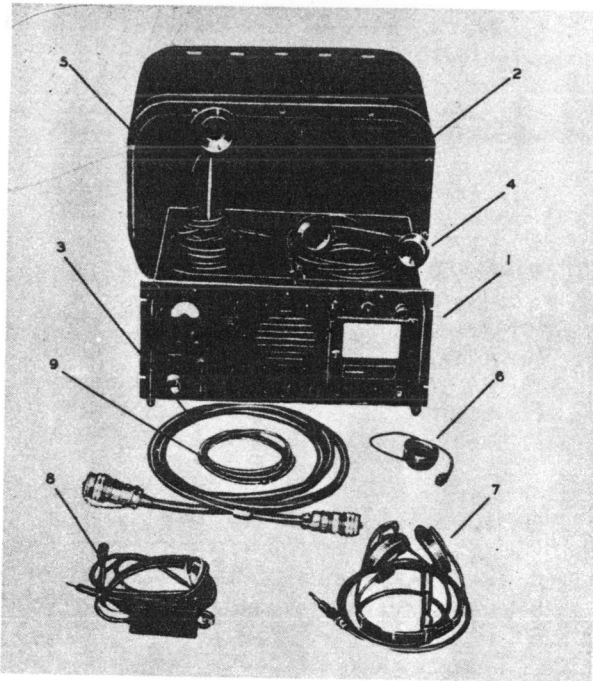
SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1 | Low Band C/O: Antenna AS-889/SRN-6 Antenna Pedestal AB-540/SRN-6 | 180 | 58 X 62 X 86 | 1150 |
| 1 | Electronic Control Amplifier AM-1719/SRN-6 | 51 | 25 X 52 X 67 | 1110 |
| 1 | Electronic Control Amplifier AM-1718/SRN-6 | 28 | 22 X 38 X 59 | 653 |
| 1 | Radome CW-441/SRN-6 | 539 | 94 X 97 X 99 | 520 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Antenna Group OA-1545/SRN-6 Includes: | | |
| 1 | Antenna AS-889/SRN-6 | 43-1/2 dia X 76-7/8 | 750 |
| 1 | Antenna Pedestal AB-540/SRN-6 | | |
| 1 | Electronic Control Amplifier AM-1718/SRN-6 | 11-13/16 X 29-1/4 X 49-1/2 | 450 |
| 1 | Electronic Control Amplifier AM-1719/SRN-6 | 15-1/2 X 38-1/4 X 56-1/2 | 733 |
| 1 | Radome CW-441/SRN-6 | 89-1/2 dia X 80-1/2 | 200 |

CONTROL GROUP



Control Group OA-193/GR

No field changes in effect at time of preparation (10 April 1957).

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Co., Cedar Rapids, Iowa.

TUBE AND/OR CRYSTAL COMPLEMENT

- | | |
|-----------|-----------|
| (9) 12AU7 | (1) 6AL5W |
| (1) 12AX7 | (4) 6X4W |
| (1) 6AQ5 | |

Total Tubes: (16)

REFERENCE DATA AND LITERATURE

T. O. 16-350A193-4: Technical Manual for Control Group OA-193/GR.

FUNCTIONAL DESCRIPTION

The OA-193/GR when connected to Transmitter Group OA-104/GR and Modulator-Power Supply Group OA-191/GR through Radio Set Control C-565/GR the following control functions may be performed; push-to-talk, side tone intercommunication, receives signals through Radio Set Control C-565/GR from Radio Receiver R-278/GR or relays audio from C-565/GR to Transmitter Group OA-104/GR and Modulator-Power Supply Group OA-191/GR, channel selection of ten preset channels.

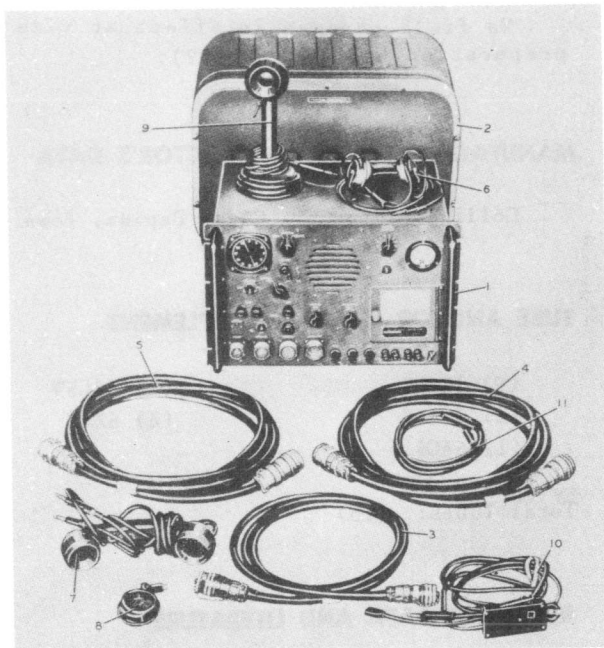
TYPE CLASSIFICATION
DESIGN COGNIZANCE USAF
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|----------------------------|-----------------------------|---------------|
| 1 | Radio Set Control C-566/GR | 8-3/4 x 14-5/8 x 19 | 56 |
| 1 | Microphone T-32 | 5-1/4 x 5-1/4 x 11-3/4 | 3.25 |
| 1 | Microphone M-19/W | 1-1/8 x 2-1/4 x 2-3/32 | 0.2 |
| 1 | Headset NT-49507 | 4 x 6-1/2 x 7 | 0.75 |
| 1 | Headset H-23/U | 2-5/8 x 3-15/16 x 9-1/16 | 1.75 |
| 1 | Cord CD-307 | 72 lg | 0.25 |
| 1 | Cord CD-318 | 90 lg | 0.6 |
| 1 | Case CY-727/GR | 13-7/32 x 15-9/16 x 23 | 37 |
| 1 | Cable CX-1174/U | 120 lg | 1.8 |

RECEIVER TRANSMITTER CONTROL GROUP

OA-208/GR



No field changes in effect at time of preparation (10 April 1957).

MANUFACTURER'S OR CONTRACTOR'S DATA

Collins Radio Co., Cedar Rapids, Iowa.

TUBE AND/OR CRYSTAL COMPLEMENT

| | |
|-------------------|------------|
| (7) 12AU7 | (5) 12AT7 |
| (1) 12AX7 | (1) 5R4GYW |
| (3) 6AL5W | (1) 6AQ5 |
| (1) 6C4 | (1) 6X4W |
| Total Tubes: (20) | |

REFERENCE DATA AND LITERATURE

T.O. 16-350A208-4: Technical Manual for Receiver Transmitter Control Group OA-208/GR.

Receiver Transmitter Control Group OA-208/GR

FUNCTIONAL DESCRIPTION

The OA-208/GR controls switching between directional and omnidirectional antennas, control of rotation of a directional broadband antenna, azimuth indicator for directional antenna, push-to-talk, sidetone or intercommunication to remote control, relays signals from Radio Receiver R-278/GR, and channel selection w/ten preset channels.

TYPE CLASSIFICATION
DESIGN COGNIZANCE USAF
PROCUREMENT COGNIZANCE
STOCK NO.

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|----------------------------|-----------------------------|---------------|
| 1 | Cable CX-1174/U | 120 lg | 1.8 |
| 1 | Cable CX-1175/U | 180 lg | 4 |
| 1 | Cable CX-1180/U | 180 lg | 5.8 |
| 1 | Case CY-726/GR | 16-11/16 X 23 X 24 | 46 |
| 1 | Cord CD-307 | 72 lg | 0.25 |
| 1 | Cord CD-318 | 90 lg | 0.6 |
| 1 | Handset H-23/U | 2-5/8 X 3-15/16 X 9-1/16 | 1.75 |
| 1 | Handset NT-49507 | 4 X 6-1/2 X 7 | 0.75 |
| 1 | Microphone M-19/U | 1-1/8 X 2-3/32 X 2-1/4 | 0.2 |
| 1 | Microphone T-32 | 5-1/4 X 5-1/4 X 11-3/4 | 3.25 |
| 1 | Radio Set Control C-565/GR | 12-7/32 X 14-5/8 X 19 | 73 |

8 January 1962

AMPLIFIER GROUP OA-2099(XN-1)/SRC-17

Cog Service: FSN:

Functional Class:

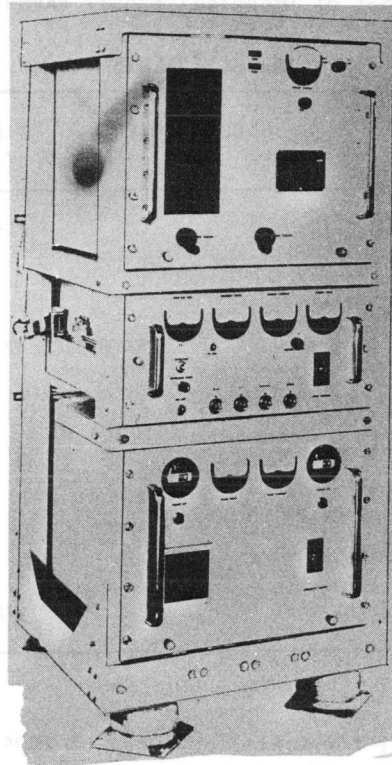
USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Manson Laboratories Incorporated.



Amplifier Group OA-2099(XN-1)/SRC-17

FUNCTIONAL DESCRIPTION:

The Amplifier Group OA-2099(XN-1)/SRC-17 is an R.F. Amplifier designed to amplify the 225 to 400 megacycle (MC) output of the radio set to a one (1)-kilowatt level.

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

TECHNICAL CHARACTERISTICS:

TYPE OF MOUNTING: Cabinet deck & bulkhead mounted.

INPUT IMPEDANCE: 50 ohms.

OUTPUT IMPEDANCE 50 ohms.

POWER INPUT: 100 W max.

POWER OUTPUT: 1000 W.

FREQUENCY RANGE: 225 to 400 mc.

OPERATING POWER RQMT: 440 v ac, 50 to 60 cps, 3 ph, 7.5 amps.

OA-2099(XN-1)/SRC-17 AMPLIFIER GROUP

RELATION TO OTHER EQUIPMENT:

The OA-2099(XN-1)/SRC-17 is designed to be used with, but not part of Radio Set AN/SRC-17.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Radio Set AN/SRC-17; (1) Set of Technical Manual NAVSHIPS () Radio Set.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|----------------------------|-----------------|
| 1 | Amplifier Group OA-2099(XN-1)/SRC-17 consists of: | | 21-7/8 x 24-3/16 x 48-9/16 | |
| 1 | Radio Frequency Amplifier (Unit 1 of OA-2099(XN-1)/SRC-17) | | | |
| 1 | Control Power Supply (Unit 2 of OA-2099(XN-1)/SRC-17) | | | |
| 1 | Power Supply (Unit 4 of OA-2099(XN-1)/SRC-17) | | | |
| 1 | Electrical Equipment Cabinet (Unit 3 of OA-2099(XN-1)/SRC-17) | | | |
| 1 | Set of Spare Fuse & Fuseholder (0.75 amps) | | | |
| 2 | Technical Manual NAVSHIPS 93604 | | 3/8 x 9-1/8 x 11-1/2 | |

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93604: Technical Manual for Amplifier Group OA-2099(XN-1)/SRC-17.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (2) 7213

CRYSTALS: None used.

SEMI-CONDUCTORS: (72) BY-404 (4) 1N540 (3) 1N1593 (4) 50M100Z10 (1) 10M10Z

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
| 3 | | |

PROCUREMENT DATA

PROCURING SERVICE:

DESIGN COG: USN, BuShips

SPEC &/OR DWG: SHIPS-M-2720 Addendum #3

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|-----------------------------|-----------------|------------------------------|-------------------|
| Manson Laboratories Incorp. | Stamford, Conn. | N0bsr-72730, 18 June 1957 | |

19 July 1962

INDICATOR GROUP OA-2179/ASB-1A

Cog Service: USN FSN:

Functional Class:

USA

USN

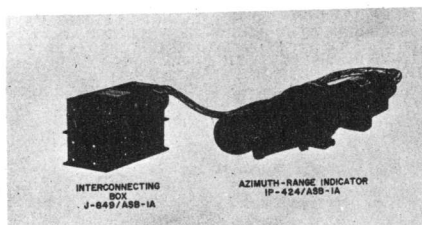
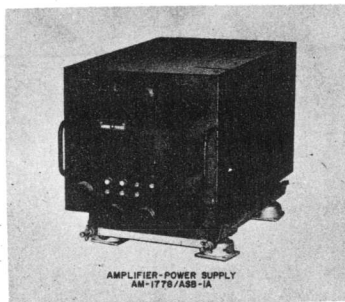
USAF

TYPE CLASS:

Used by

Used by

MANUFACTURER'S NAME/CODE NUMBER: The Norden Laboratories Corp., (99211).



Indicator Group OA-2179/ASB-1A

FUNCTIONAL DESCRIPTION:

The Indicator Group OA-2179/ASB-1A is designed to provide in-flight training for bombardier-navigators in the use of the Bomb Director Set AN/ASB-1A. The indicator group provides six (6) separate indicators, one (1) for each trainee, which present the same information as seen by the operator of the bomb director set.

No field changes in effect at time of preparation (29 March 1962).

TECHNICAL CHARACTERISTICS:

OPERATING POWER RQMT: 115 v rms, 12 va, 360 to 450 cps; and P28 v dc, regulated, 200 micro-amperes.

OA-2179/ASB-1A INDICATOR GROUP

RELATION TO OTHER EQUIPMENT:

The OA-2179/ASB-1A is designed to be used with, but not part of Bomb Director Set AN/ASB-1A.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Multimeter, Simpson Model #260 or Westor Model #790 or TS-352/U; (1) Oscilloscope, Tektronix 545; (1) Oscilloscope, Hewlett-Packard Model #650A; (1) Vacuum-Tube Voltmeter, Hewlett-Packard Model #410B, or TS-375/U.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|-------------------------|-----------------|
| 1 | Indicator Group OA-2179/ASB-1A consists of: | | | |
| 1 | Amplifier-Power Supply AM-1778/ASB-1A | | 12 x 12 x 21-7/8 | 75 |
| 6 | Interconnecting Box J-849/ASB-1A | | 5-1/4 x 6-1/4 x 10-3/4 | 10-1/2 |
| 6 | Azimuth-Range Indicator IP-424/ASB-1A | | 5-3/4 x 6-7/16 x 25-1/2 | 11-1/2 |
| 1 | Mounting Base for AM-1778/ASB-1A | | 1-5/8 x 11 x 18-13/16 | 3-1/2 |
| 6 | Mounting Base | | 3/32 x 5-1/16 x 9-3/8 | 1/2 |

REFERENCE DATA AND LITERATURE:

NAVWEPS 11-70FBE-1: Technical Manual for Indicator Group OA-2179/ASB-1A.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: (12) 5670 (7) 5654 (6) 5FP14A (1) 5651 (2) 0A2 (2) 6080

CRYSTALS: None used.

SEMI-CONDUCTORS: (2) V13HP (16) 1N1095 (12) 1N38A (3) 1N1824C

TRANSISTORS: (21) 2N326 (78) 2N1099

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
|------|----------------|--------------|

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/OR DWG:

DESIGN COG: USN, BuWeps

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|----------------------------------|----------------|--------------------------|----------------------|
| The Norden Laboratories Corp. | Milford, Conn. | N0as 57-406 | |

26 April 1962

Cog Service: USN FSN:

DISPLAY GENERATOR GROUP OA-2959(XN-1)/FYQ-1

Functional Class:

USA

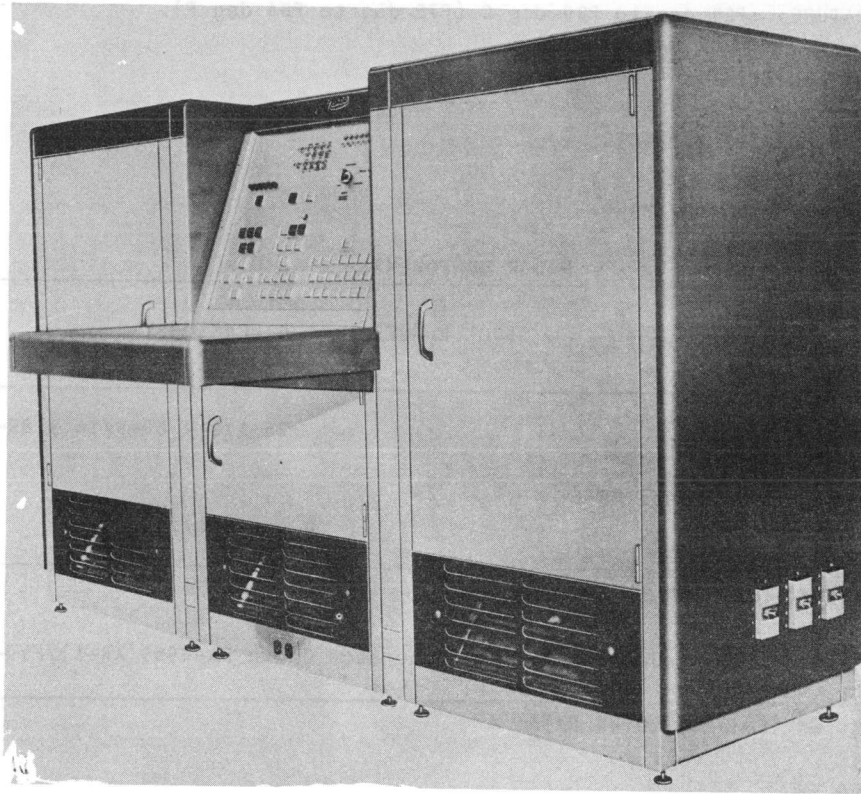
USN

USAF

Used by

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Maico Electronics Inc., (76101).



Display Generator Group OA-2959(XN-1)/FYQ-1

FUNCTIONAL DESCRIPTION:

Display Generator Group OA-2959(XN-1)/FYQ-1 is designed to accept binary coded data from an input signal source such as a digital computer. However, in this experimental system a Ferranti tape reader using punched tape serves as the input equipment. The binary data supplied completely describes a target and consists of twelve 6-bit information signals. Four of the 6-bit signals describe the target in alpha-numeric form, one describes the target vector, and one describes the target category. These six 6-bit signals are used by the Display Generator to generate the six-character target description displayed on the electro-luminescent ferroelectric panel. Of the remaining six 6-bit signals: two describe the origination of the target x-coordinate, two describe the origination of the target y-coordinate, and two describe the target number (memory address).

No field changes in effect at time of preparation (27 April 1961).

OA-2959(XN-1)/FYQ-1 DISPLAY GENERATOR GROUP

TECHNICAL CHARACTERISTICS:**POWER REQUIREMENTS**

VOLTAGE: 208 v.

FREQUENCY: 60 cyc, 3 ph.

CURRENT: 15 amps (max).

LINE REGULATION: Porm 5%.

OPERATING TEMPERATURE: P24 deg to P30 deg C (P75 deg to P86 deg F).

RELATION TO OTHER EQUIPMENT: None.**EQUIPMENT REQUIRED BUT NOT SUPPLIED:**

(2) Oscilloscope, Teletronix 545.

MAJOR COMPONENTS

| QTY | ITEM | STOCK NUMBERS | DIMENSIONS (INCHES) | WEIGHT (LBS) |
|-----|--|---------------|---------------------------|-----------------|
| 1 | Display Generator Group OA-2959(XN-1)/FYQ-1 | | 25-1/2 x 50-9/16 x 89-1/4 | 2,000 |
| 1 | Paper-Tape Reader Ferranti FR-5 | | | |
| 1 | Technical Manual | | 1 x 8-1/2 x 11 | 3 |

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93710: Technical Manual for Display Generator Group OA-2959(XN-1)/FYQ-1.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: None used.

CRYSTALS: None used.

SEMI-CONDUCTORS: (2) 1N248 (158) 1N698 (30) 1N2155 (1) 1N2155R (1) 2N95 (20) 2N123
(34) 2N173 (3) 2N242 (49) 2N393 (12) 2N580 (17) GTD31 (9) SG22
(4) SV11 (12) SV2007 (1) SV2017 (1) SV2019 (1) SV2020 (1) SV2044

SHIPPING DATA

| PKGS | VOLUME (CU FT) | WEIGHT (LBS) |
|------|----------------|--------------|
| 1 | 120 | 2,200 |
| 1 | | |
| 1 | | |

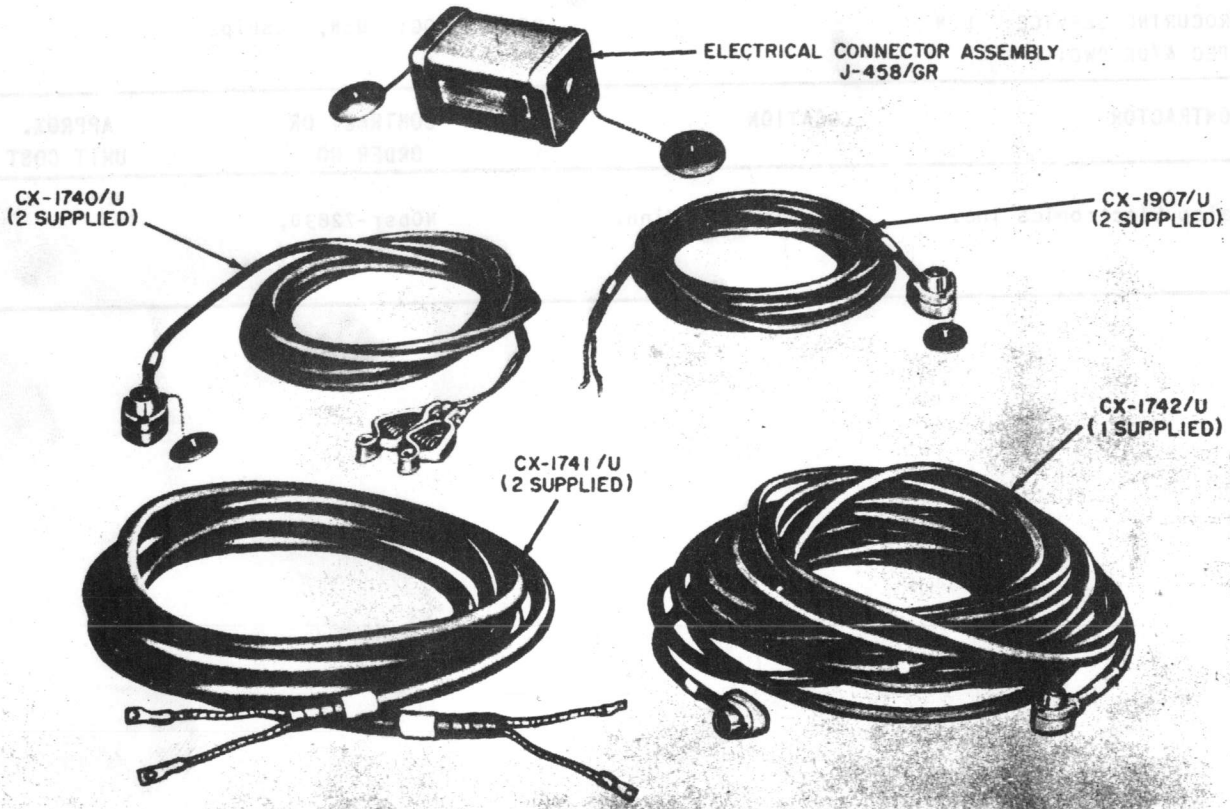
PROCUREMENT DATA

PROCURING SERVICE: USN
 SPEC &/OR DWG:

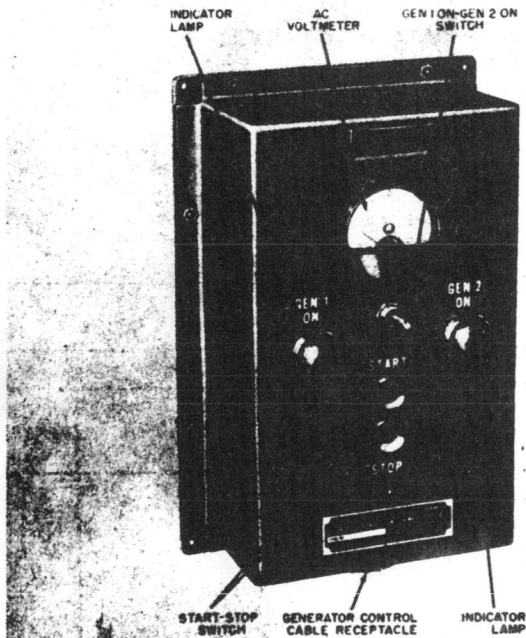
DESIGN COG: USN, BuShips

| CONTRACTOR | LOCATION | CONTRACT OR ORDER NO. | APPROX. UNIT COST |
|------------------------|--------------------|------------------------------|-------------------|
| Maico Electronics Inc. | Minneapolis, Minn. | N0bsr-72830, 24 June 1958 | |

CONTROL-POWER SUPPLY GROUP



Minor Components



Remote Switching Control C-987/G

FUNCTIONAL DESCRIPTION

The OA-323/G is designed to provide control equipment for power units with which it is used. It permits automatic or manual power unit selection and local or remote starting and stopping of the selected unit. It is designed to be used with Power Unit PU-58/G or Power Unit PE-95-() and is used to supply alternating current power to mobile equipment that requires a source of uninterrupted power. It is used with Radio Intercept Control Set AN/TTQ-3 or Radio Intercept Group OA-596/TTQ-3.

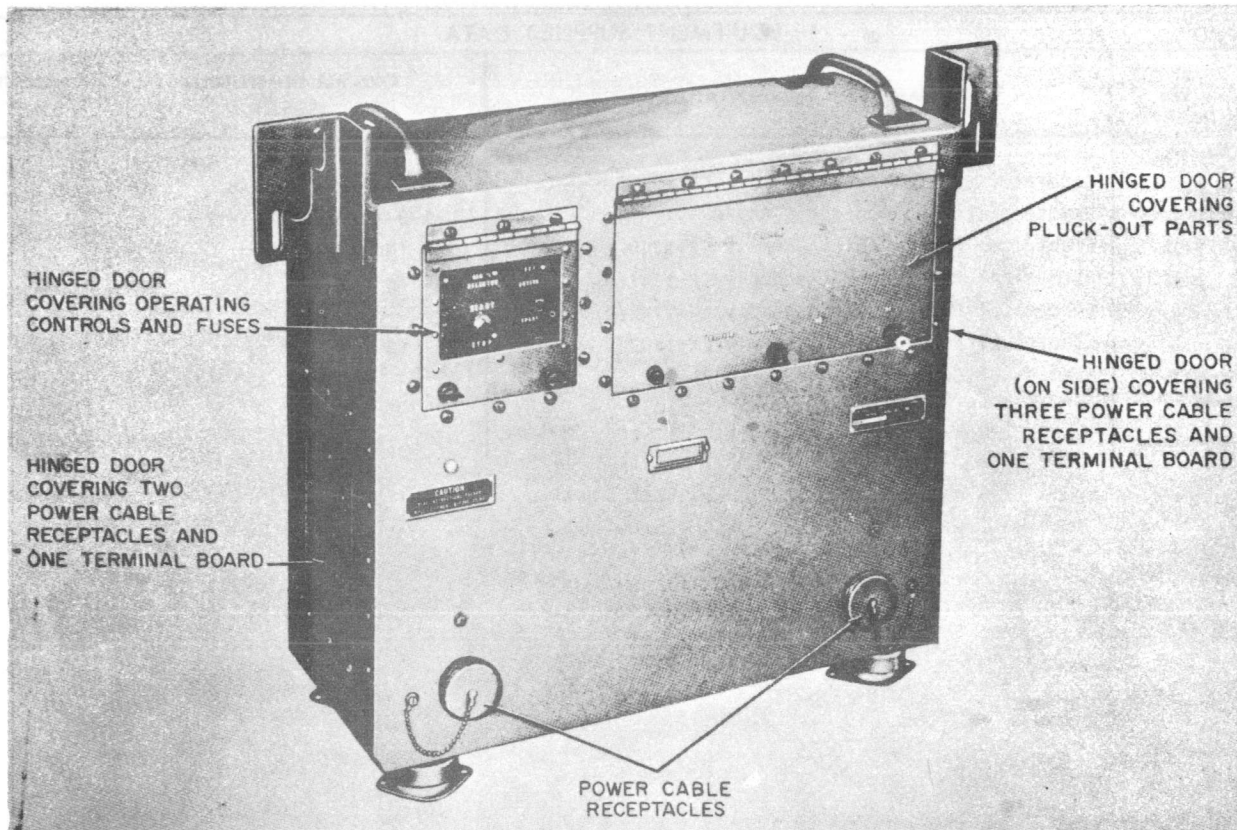
No field changes in effect at time of preparation (19 April 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

- POWER UNITS CONTROLLED: 2.
- CHANGEOVER CYCLE TIME: 15 sec max for manual or automatic.
- VOLTAGE DELIVERED
- GENERATOR TO CONTROL-POWER SUPPLY: 115 v AC and 6 v DC.

OA-323/G

CONTROL-POWER SUPPLY GROUP



Generator Control C-966/G

CONTROL-POWER SUPPLY TO LOAD: 115 v AC.
 AUTOMATIC CHANGEOVER VOLTAGE: Occurs when
 generator output is below 85 v.
 POWER CONSUMPTION: 5 W at 115 v AC, 3 W at
 6 v DC.

REFERENCE DATA AND LITERATURE

TM11-5068: Technical Manual for Control-
 Power Supply Group OA-323/G.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 5Y3WGT
 Total Tubes: (2)

TYPE CLASSIFICATION
 DESIGN COGNIZANCE TASSA
 PROCUREMENT COGNIZANCE
 STOCK NO.

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|---|-----------------|-----------------------------|----------------------|
| 1 | Generator Control C-966/G | 2.5 | 10-1/4 X 22 X 27-3/4 | 87 |
| 1 | Remote Switching Control C-967/G including: (1) Electrical Connector Assembly J-458/GR (1) Set of Running Spares (2) Technical Manual TM11-5068 | 1.5 | 8 X 17 X 19-1/2 | 17.5 |
| 1 | Set of Power Cable Assemblies | 1.5 | 8 X 17 X 19-1/2 | 56 |

October 1957

Radio-Auxiliary

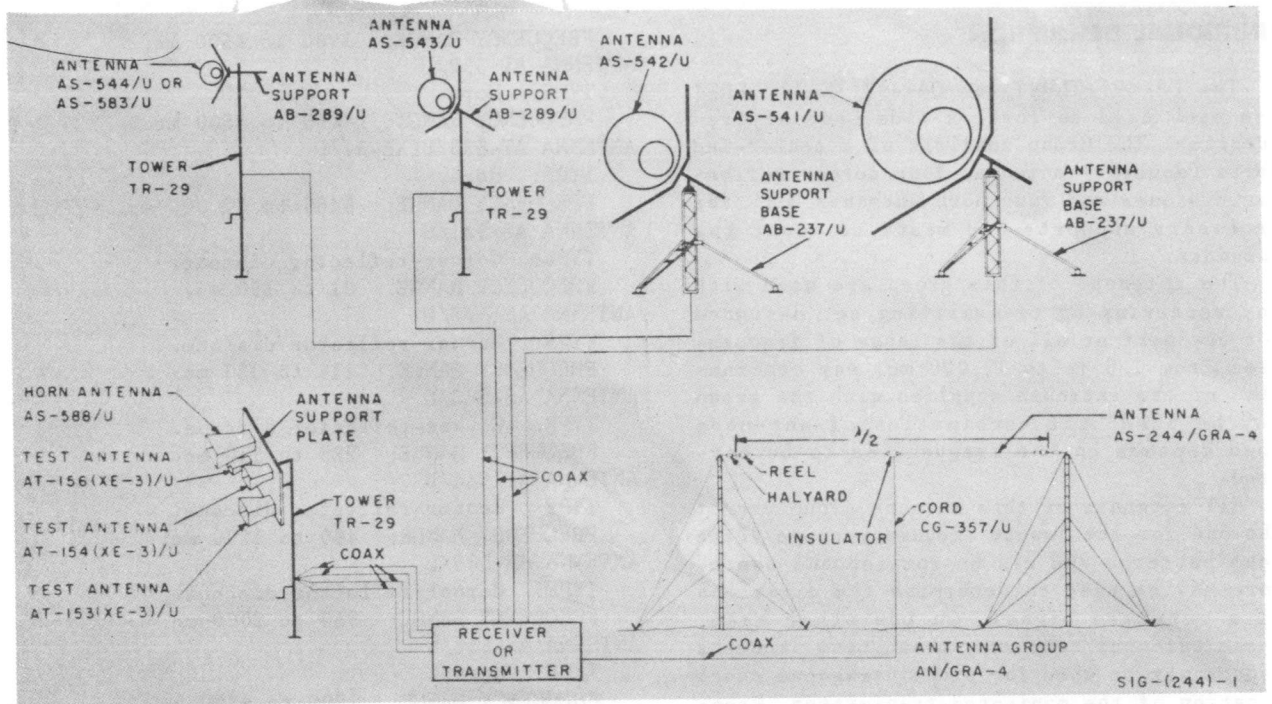
CONTROL-POWER SUPPLY GROUP

OA-323/G

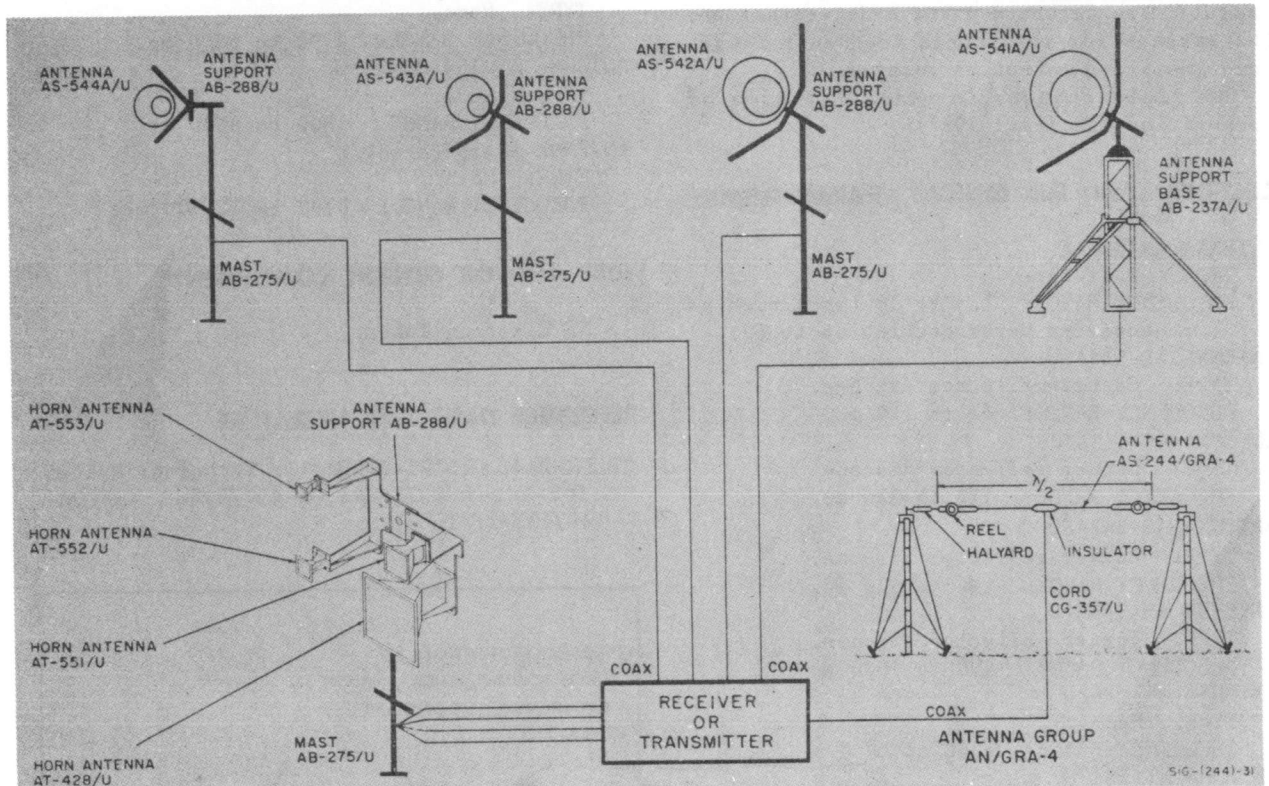
EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------------|---|--------------------------------|------------------|
| 1 | Generator Control C-966/G | 8 X 20-7/8 X 26-7/8 | 82.0 |
| 1 | Remote Switching Control C-967/G | 4-1/8 X 7-1/8 X 11-1/8 | 3.2 |
| 2 | Electrical Power Cable Assembly CX-1740/U | 240 lg | 2.5 |
| 2 | Electrical Power Cable Assembly CX-1741/U | 240 lg | 8.0 |
| 1 | Electrical Power Cable Assembly CX-1742/U | 2400 lg | 29.3 |
| 2 | Electrical Power Cable Assembly CX-1907/U | 240 lg | 2.0 |
| 1 | Electrical Connector Assembly J-458/GR | | 1.5 |
| 1 | Set of Running Spares | | |
| 2 | Technical Manual TM 11-5068 | | |

ANTENNA GROUPS



Antenna Group OA-497(XE-1)/TLR-1



Antenna Group OA497/TLR-1

Radio-Auxiliary
OA-497/TLR-1,
OA-497(XE-1)/TLR-1

ANTENNA GROUPS

FUNCTIONAL DESCRIPTION

The OA-497/TLR-1 and OA-497(XE-1)/TLR-1 are each used to cover a wide band of frequencies. The Group consists of a center-fed Hertz (doublet) antenna, four corner reflector discons and four horn antennas with the necessary supports and masts to mount the antennas.

The antennas of this group are used with any receiving or transmitting set designed for any part or all of the range of frequencies from 1.5 mc to 12,000 mc. Any combination of the antennas supplies with the group may be used; the combination of antennas used depends on the frequencies to be covered.

All antennas of this antenna group except the one for the lowest frequency range, have beam patterns and can be rotated and therefore may be used to determine the direction of a received signal. On the other hand, these antennas have very broad beam patterns and cannot be used for pinpointing the exact location of the monitored transmitter. Proper direction finding equipment should be used for more accurate azimuth determination. The antenna for the lowest frequency range, once installed cannot be rotated.

No field changes in effect at time of preparation (18 April 1957).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

- ANTENNA AN/GRA-4
TYPE: Half-wire.
FREQUENCY RANGE: 1.5 to 18 (when used as a centerfed Hertz doublet up to 62).
- ANTENNA AS-541A/U
TYPE: Corner-reflector discone.
FREQUENCY RANGE: 61 to 119 mc.
- ANTENNA AS-542A/U
TYPE: Corner reflector discone.
FREQUENCY RANGE: 118 to 245 mc.
- ANTENNA AS-543A/U
TYPE: Corner reflector discone.
FREQUENCY RANGE: 240 to 510 mc.
- ANTENNA AS-544A/U
TYPE: Corner reflector discone.
FREQUENCY RANGE: 490 to 1030 mc.
- ANTENNA AT-428/U
TYPE: Horn.
FREQUENCY RANGE: 1000 to 2000 mc.
- ANTENNA AT-551/U
TYPE: Horn.

- FREQUENCY RANGE: 1980 to 4500 mc.
ANTENNA AT-552/U
TYPE: Horn.
FREQUENCY RANGE: 4460 to 8500 mc.
ANTENNA AT-553/U(XE-3)/U
TYPE: Horn.
FREQUENCY RANGE: 8460 to 12,000 mc.
ANTENNA AS-541/U
TYPE: Corner-reflector discone.
FREQUENCY RANGE: 61 to 150 mc.
ANTENNA AS-542/U
TYPE: Corner-reflector discone.
FREQUENCY RANGE: 118 to 330 mc.
ANTENNA AS-543/U
TYPE: Corner-reflector discone.
FREQUENCY RANGE: 225 to 510 mc.
ANTENNA AS-544/U
TYPE: Corner-reflector discone.
FREQUENCY RANGE: 490 to 1200 mc.
ANTENNA AS-583/U
TYPE: Corner-reflector discone.
FREQUENCY RANGE: 950 to 2000 mc.
ANTENNA AS-588/U
TYPE: Horn.
FREQUENCY RANGE: 1900 to 4500 mc.
ANTENNA AT-153(XE-3)/U
TYPE: Horn.
FREQUENCY RANGE: 3900 to 6000 mc.
ANTENNA AT-154(XE-3)/U
TYPE: Horn.
FREQUENCY RANGE: 5800 to 8500 mc.
ANTENNA AT-156(XE-3)/U
TYPE: Horn.
FREQUENCY RANGE: 8100 to 12,100 mc.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes.

REFERENCE DATA AND LITERATURE

TB SIG 244, to 31P1-2TLR1-11, Technical Manual for Antenna Groups OA-497/TLR-1 and OA-497(XE-1)/TLR-1.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

ANTENNA GROUPS

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| | Antenna Group OA-497/TLR-1 | | | |
| 1 | Antenna Case CY-1445A/U C/O (1) Antenna AS-541A/U | 41 | 23-1/4 X 47-3/4 X 64-3/4 | 350 |
| 1 | Antenna Case CY-1450A/U C/O (1) Antenna AS-541A/U | 130 | 30 X 151-3/4 X 50-1/2 | 577 |
| 1 | Antenna Case CY-1679/U C/O (1) Antenna AS-541A/U | 48 | 18-1/2 X 30-3/4 X 149-3/4 | 372 |
| 1 | Antenna Case CY-1448A/U C/O (1) Antenna AS-542A/U | 67 | 18-3/4 X 79-1/2 X 79-1/2 | 415 |
| 1 | Antenna Case CY-1678/U C/O (1) Antenna AS-542A/U | 19.75 | 22-1/2 X 39 X 39 | 213 |
| 1 | Antenna Case CY-1677/U C/O (1) Antenna AS-543A/U | 48.25 | 32-1/4 X 50 X 52 | 270 |
| 1 | Antenna Case CY-1442A/U C/O (1) Antenna AS-544A/U | 12.5 | 18-1/2 X 27-1/4 X 42-3/4 | 140 |
| 1 | Antenna Case CY-1680/U C/O (1) Horn Antenna AT-428/U | 11.5 | 22 X 25-3/4 X 36 | 146 |
| 1 | Antenna Case CY-1676/U C/O (1) Horn Antenna AT-551/U (1) Horn Antenna AT-552/U (1) Horn Antenna AT-553/U | 5.8 | 20-1/2 X 22-3/8 X 23-1/8 | 88 |
| 1 | Antenna Case CY-1446A/U C/O (1) Antenna Support Base AB-237A/U | 54 | 25 X 26-1/4 X 145-3/4 | 481 |
| 6 | Box CY-1234A/U C/O (1) Mast AB-275/U | 11.75 | 12-3/4 X 20 X 75-1/4 | 217 |
| 6 | Box CY-1226/U C/O (1) Antenna Support AB-288/U | 3.15 | 15 X 18-1/4 X 19-3/4 | 76 |
| 1 | Antenna Case CY-1675/U C/O (1) Antenna Group AN/GRA-4 and Accessories for Antenna Group OA-497/TLR-1 | 14.5 | 20-3/4 X 21-1/2 X 57-1/4 | 375 |
| | ANTENNA GROUP OA-479(XE-1)/TRL-1 | | | |
| 1 | Antenna Case CY-1445/U C/O (1) Antenna AS-541/U | 44.5 | 24 X 49 X 66 | 319 |
| 1 | Antenna Case CY-1447/U C/O (1) Antenna AS-541/U, center screen section | 54 | 19 X 32 X 153 | 369 |
| 1 | Antenna Case CY-1450/U C/O Antenna AS-541/U components, (2) Middle Screen Sections (2) End Screen Sections (2) Screen Braces | 110 | 25 X 51 X 153 | 588 |
| 1 | Antenna Case CY-1444/U C/O Antenna AS-542/U components (2) Cone segments (1) Disk (2) Support Brackets All cable assemblies for Antenna AS-542/U | 35 | 36 X 41 X 41 | 192 |

January 1958

OA-497/TLR-1, OA-497
(XE-1)/TLR-1

ANTENNA GROUPS

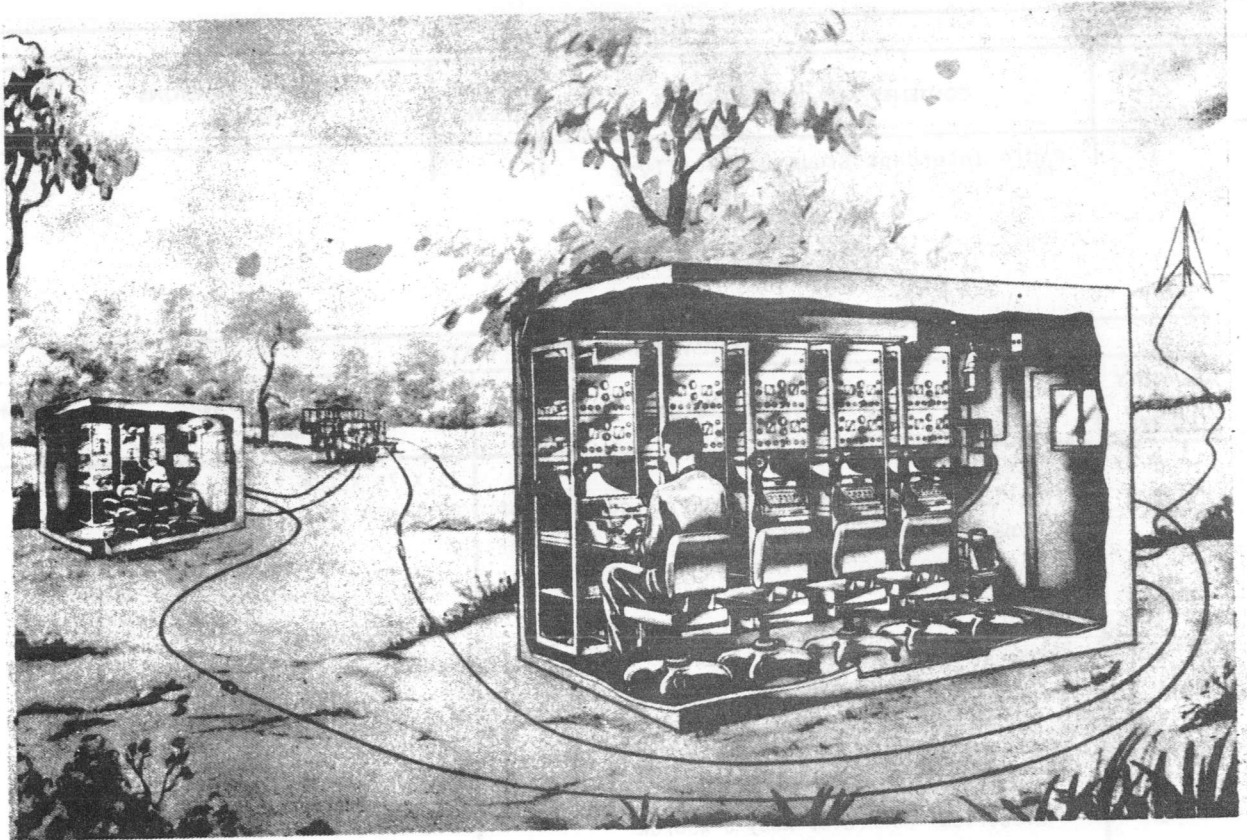
SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|--|-----------------|-----------------------------|----------------------|
| 1 | Antenna Case CY-1448/U C/O Antenna AS-542/U components Center Section and Wing Sections | 62 | 17 X 80 X 80 | 402 |
| 1 | Antenna Case CY-1443/U C/O (1) Antenna AS-543/U | 52 | 34 X 51 X 53 | 337 |
| 1 | Antenna Case CY-1442/U C/O (1) Antenna AS-544/U | 14.75 | 20 X 29 X 44 | 125 |
| 1 | Case C/O (1) Antenna AS-583/U | | | |
| 1 | Antenna Case CY-1323/U C/O (1) Horn Antenna AS-588/U (1) Test Antenna AT-156(XE-3)/U (1) Test Antenna AT-154(XE-3)/U (1) Test Antenna AT-153(XE-3)/U | | | |
| 2 | Antenna Case CY-1446/U C/O (1) Antenna Support Base AB-237/U | 62 | 26 X 27 X 153 | 479 |
| 3 | Case C/O (1) Tower TR-29 | 10 | 11-5/8 X 20-1/8 X 75-1/8 | 217 |
| 3 | Box CY-1226/U C/O (1) Antenna Support AB-289/U Brackets and plate for Horn Antennas | 3.1 | 14-7/8 X 17-7/8 X 19-5/8 | 75 |
| 1 | Antenna Case CY-1319/U (1) Antenna AN/GRA-4 | 17 | 22 X 23 X 59 | 375 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|----------------------------------|-----------------------------|---------------|
| | ANTENNA GROUP OA-497/TLR-1 | | |
| 1 | Antenna AN/GRA-4 | | 169 |
| 1 | Antenna AS-541A/U | | 310 |
| 1 | Antenna AS-542A/U | | 103 |
| 1 | Antenna AS-543A/U | | 35 |
| 1 | Antenna AS-544A/U | | 9 |
| 1 | Antenna AT-428/U | | 15 |
| 1 | Antenna AT-551/U | | 8.5 |
| 1 | Antenna AT-552/U | | 5.5 |
| 1 | Antenna AT-553(XE-3)/U | | 2.5 |
| | ANTENNA GROUP OA-497(XE-1)/TLR-1 | | |
| 1 | Antenna AN/GRA-4 | | 169 |
| 1 | Antenna AS-541/U | | 310 |
| 1 | Antenna AS-542/U | | 103 |
| 1 | Antenna AS-543/U | | 35 |
| 1 | Antenna AS-544/U | | 9 |
| 1 | Antenna AS-583/U | | 6 |
| 1 | Antenna AS-588/U | | 6 |
| 1 | Antenna AT-153(XE-3)/U | | 8-1/2 |
| 1 | Antenna AT-154(XE-3)/U | | 5-1/2 |
| 1 | Antenna AT-156(XE-3)/U | | 2-1/2 |

RADIO INTERCEPT GROUP



Radio Intercept Group OA-596/TTQ-3

FUNCTIONAL DESCRIPTION

The OA-596/TTQ-3 provides an operating shelter, intercommunication facilities for connection to a control position and mounting facilities for the radio intercept equipment required for monitoring radio signals. In addition, the intercept group provides the operating power for the radio intercept equipment.

No field changes in effect at time of preparation (17 April 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Antenna Assy AS-341/GR, (1) Antenna Coupler CU-52/URR, (5) Headsets, (10) Radio Receivers, (5) Typewriters.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

OPERATING POWER: 115 v, 55 to 65 cps, 1300 W.

TUBE AND/OR CRYSTAL COMPLEMENT

No Electron Tubes.

REFERENCE DATA AND LITERATURE

TM11-5066: Technical Manual for RADIO INTERCEPT GROUP OA-596/TTQ-3.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.

OA-596/TTQ-3

RADIO INTERCEPT GROUP

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|------------------------------------|-----------------|-----------------------------|----------------------|
| 1 | Radio Intercept Group OA-596/TTQ-3 | | | 6000 |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--|-----------------------------|---------------|
| 1 | Shelter S-44/G | | |
| 5 | Electrical Equipment Rack MT-1041/GR consists of | 71 X 74 X 136 | 2127 |
| 1 | Dynamic Microphone M-53/U | 20-1/4 X 23-1/4 X 71-1/2 | 162 |
| 1 | Microphone Transport Case | | |
| 1 | Rack Frame | | |
| 1 | Light Unit | | |
| 4 | Mounting Shelves | | |
| 1 | Paper Roll Holder | | |
| 1 | Typewriter Shelf and Service Tray Assy | | |
| 1 | Intercommunication Monitor Station TA-211/GR | | |
| 1 | Electrical Connector Assy J-456/GR | | |
| 1 | Power Cable Assy CX-1905/U | 72 lg | |
| 2 | Cord Assy CX-1739/U | 72 lg | |
| 1 | Control-Power Supply Group OA-323/G consist of: | | |
| 1 | Generator Control C-966/G | 8 X 20-7/8 X 26-7/8 | 82 |
| 1 | Remote Switching Control C-967/G | 4-1/8 X 7-1/8 X 11-1/8 | 3.2 |
| 2 | Power Cable Assy CX-1740/U | 240 lg | 2.5 |
| 2 | Power Cable Assy CX-1741/U | 240 lg | 8 |
| 1 | Power Cable Assy CX-1742/U | 1440 lg | 29.3 |
| 2 | Power Cable Assy CX-1907/U | 240 lg | 2 |
| 1 | Connector Assy J-458/GR | | 1.5 |
| 1 | Set Running Spares | | |
| 1 | Antenna Coupler Holder MT-1032/GR | 10 X 17-1/2 X 24-1/2 | 19 |
| 1 | Meter Holder MT-1377/U | | 7.5 |
| 1 | Cable Reel RC-412/G | 13-1/4 X 24 X 24 | 23 |
| 1 | Hand Cable Reeling Machine RL-176/G | 18-3/4 X 29-3/4 X 31-1/4 | 30 |
| 1 | Interconnecting Box J-460/GR | 11-1/4 X 15-1/2 X 21-1/2 | 14 |
| 1 | Electrical Connector Assy J-456/GR | 2 X 4-3/4 X 10-1/4 | 2.4 |
| 1 | Electrical Connector Assy J-457/GR | | 1.5 |
| 2 | Electrical Connector Assy J-459/GR | | 1.5 |
| 2 | Connector Wrench | | |
| 1 | Frequency Meter Set SCR-211 (*) | | |
| 1 | Rectifier Power Unit RA-133-B | | |

UNCLASSIFIED

October 1957

Radio-Auxiliary

RADIO INTERCEPT GROUP

OA-596/TTQ-3

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------------|--------------------------------|--------------------------------|------------------|
| 2 | Technical Manuals TM11-5066 | | 36.5 |
| 2 | Ground Rod Assy | | 47 |
| 1 | Key Spring Bender | | 2.5 |
| 1 | Wrench Set | | 3 |
| 5 | Intercept Operator Chair | | 2.27 |
| 1 | Power Cable Assy CX-1743/U | 1440 lg | 2 |
| 1 | Power Cable Assy CX-1744/U | 60 lg | 1.7 |
| 1 | Power Cable Assy CX-1905/U | 216 lg | 1.4 |
| 1 | Power Cable Assy CX-1905/U | 168 lg | 1 |
| 1 | Power Cable Assy CX-1905/U | 144 lg | 2 |
| 1 | Power Cable Assy CX-1905/U | 120 lg | 1.7 |
| 1 | Power Cable Assy CX-1905/U | 96 lg | 1.4 |
| 1 | Power Cable Assy CX-1905/U | 72 lg | 1 |
| 2 | RF Cable Assy CG-783/U | 216 lg | 2 |
| 2 | RF Cable Assy CG-783/U | 192 lg | 1.6 |
| 2 | RF Cable Assy CG-783/U | 168 lg | 1.4 |
| 2 | RF Cable Assy CG-783/U | 144 lg | 1.25 |
| 2 | RF Cable Assy CG-783/U | 120 lg | 1.1 |
| 1 | RF Cable Assy CG-783/U | 48 lg | 0.5 |
| 1 | RF Cable Assy CG-1079/U | 52 lg | 0.7 |
| 1 | Shelter Power Cable CX-1813/U | 36 lg | |
| 1 | Telephone Cable Assy CX-1813/U | 192 lg | 2.5 |
| 1 | Telephone Cable Assy CX-1813/U | 168 lg | 2.25 |
| 1 | Telephone Cable Assy CX-1813/U | 144 lg | 2 |
| 1 | Telephone Cable Assy CX-1813/U | 120 lg | 1.75 |
| 1 | Telephone Cable Assy CX-1813/U | 96 lg | 1.5 |
| 1 | Telephone Cable Assy CX-2652/U | 1440 lg | 33 |

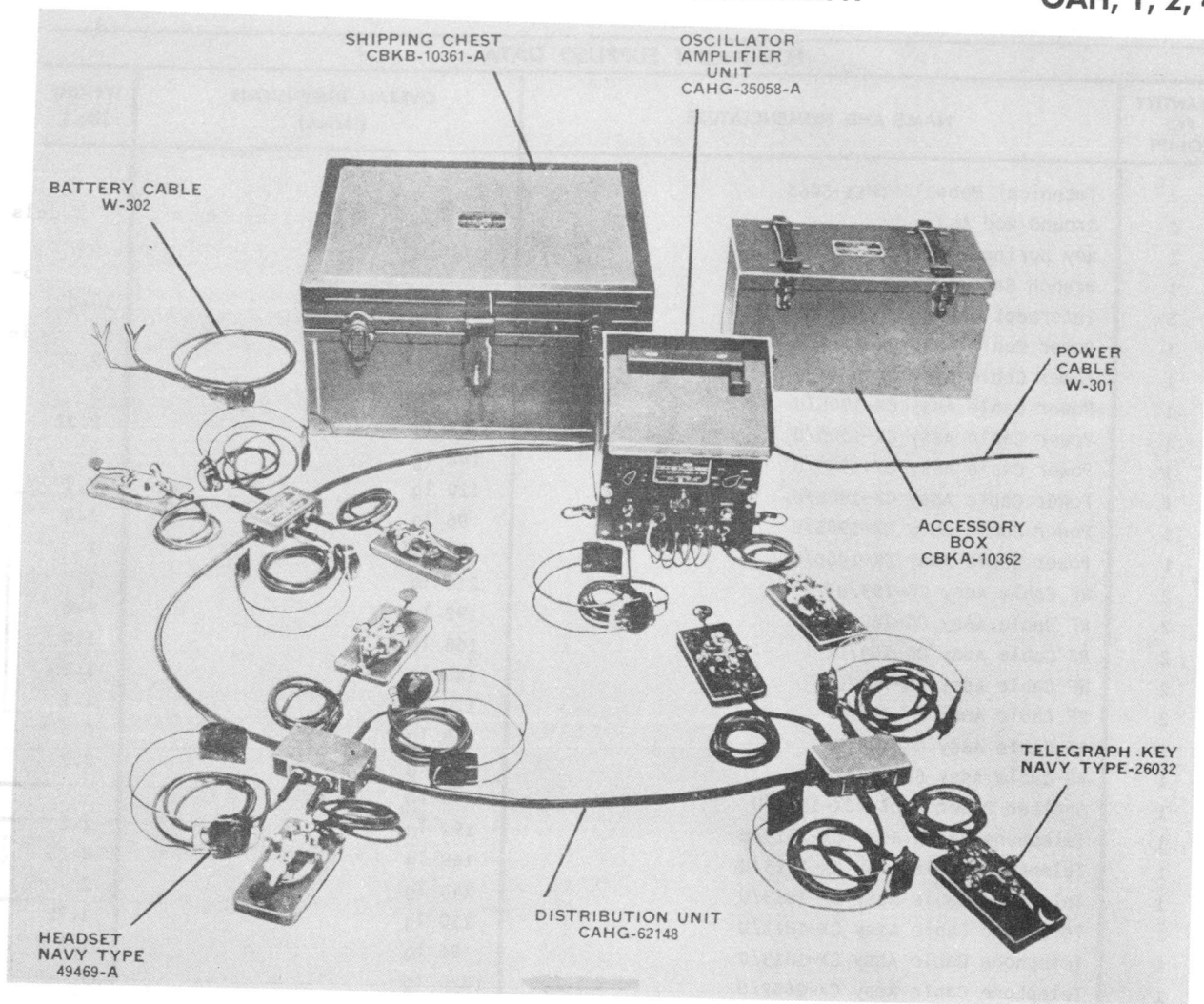
UNCLASSIFIED

1.2 OA-596/TTQ-3: 3

April 1958

Radio-Auxiliary
OAH, 1, 2, 4

CODE PRACTICE EQUIPMENT

*Code Practice Equipment Model OAH-4***FUNCTIONAL DESCRIPTION**

The OAH, OAH-1, OAH-2 and OAH-4 are used for training purposes in telegraph and radio telegraphy, for the purpose of maintaining and increasing the proficiency of personnel already trained as operators. For group instruction it is possible to teach from one to six students at one time. They may also be used for practice in the receiving of an external signal, or net operation. The OAH, OAH-1, OAH-2 and OAH-4 are electrically and mechanically interchangeable and may be operated on either AC or DC.

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

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (4) Batteries BA-23, (4) Batteries BA-36 or equivalent.

ELECTRICAL AND MECHANICAL CHARACTERISTICS**FREQUENCY RANGE**

OAH, OAH-1: 100 to 1000 cps.

OAH-2, OAH-4: 460 to 1500 cps.

FREQUENCY CONTROL: Continuously variable.

OUTPUT

OAH, OAH-1: 1 W.

OAH-2, OAH-4: 25 mw.

Radio-Auxiliary
OAH, 1, 2, 4

CODE PRACTICE EQUIPMENT

RECEIVING CIRCUITS: 1 instructor and 1 to 6 students. No Crystals Used.

SENDING CIRCUITS: 1 to 7 students.

NET OPERATION: 1, 2 or 3 nets.

POWER REQUIREMENTS: 110 v, 60 cps, single ph, or 110 v dc or 2 batteries 45 v in series, and 2 Batteries 1-1/2 v in series.

MANUFACTURER'S OR CONTRACTOR'S DATA

Automatic Signal Corp, East Norwalk, Conn.
Contract NXss 29645 (OAH, OAH-1).
U. S. Television Mfg Corp, New York, N.Y.
Contract NXsr 49707, dated 19 February 1944 (OAH-2).
Chatham Electronic Corp., Newark, N. J.
Contract NObsr 42044, dated 19 November 1947 (OAH-4).

REFERENCE DATA AND LITERATURE

NAVSHIPS 95159: Technical Manual for Models OAH and OAH-1 Code Practice Equipment.
NAVSHIPS 900,552: Technical Manual for Model OAH-2 Code Practice Equipment.
NAVSHIPS 91147: Technical Manual for Code Practice Equipment Navy Model OAH-4.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 1G4GT (1) 117Z6GT
(1) 1A5GT (1) 3Q5GT
Total Tubes: (4)

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|---|-----------------------------|-----------------|-----------------------------|----------------------|
| OAH | | | | |
| 2 | 4 | 5.78 | 16-1/4 X 23 X 26-3/4 | 124 |
| 1 | 1 | | | |
| Code Practice Equipment with Accessories and Spares | | | | |

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--------------------------------------|-----------------------------|---------------|
| OAH | | | |
| 1 | Oscillator-Amplifier Unit NT-35029 | 7-3/8 X 7-5/8 X 9-1/4 | 15 |
| 1 | Oscillator-Amplifier Unit NT-35058 | 7-3/8 X 7-7/8 X 9-3/8 | 15 |
| 1 | Oscillator-Amplifier Unit NT-35058-A | 7-3/8 X 7-7/8 X 9-3/8 | 15 |
| 1 | Distribution Unit NT-62077 | 80 lg | 3 |
| 1 | Distribution Unit NT-62148 | 80 lg | 3 |
| 1 | Accessory Box NT-20170 | 7-17/32 X 8-1/32 X 15-3/16 | 13.5 |
| 1 | Accessory Box NT-10362 | 8-3/8 X 8-7/8 X 15-1/2 | (empty) |
| 1 | Shipping Chest MCH-1 | | |

CODE PRACTICE EQUIPMENT

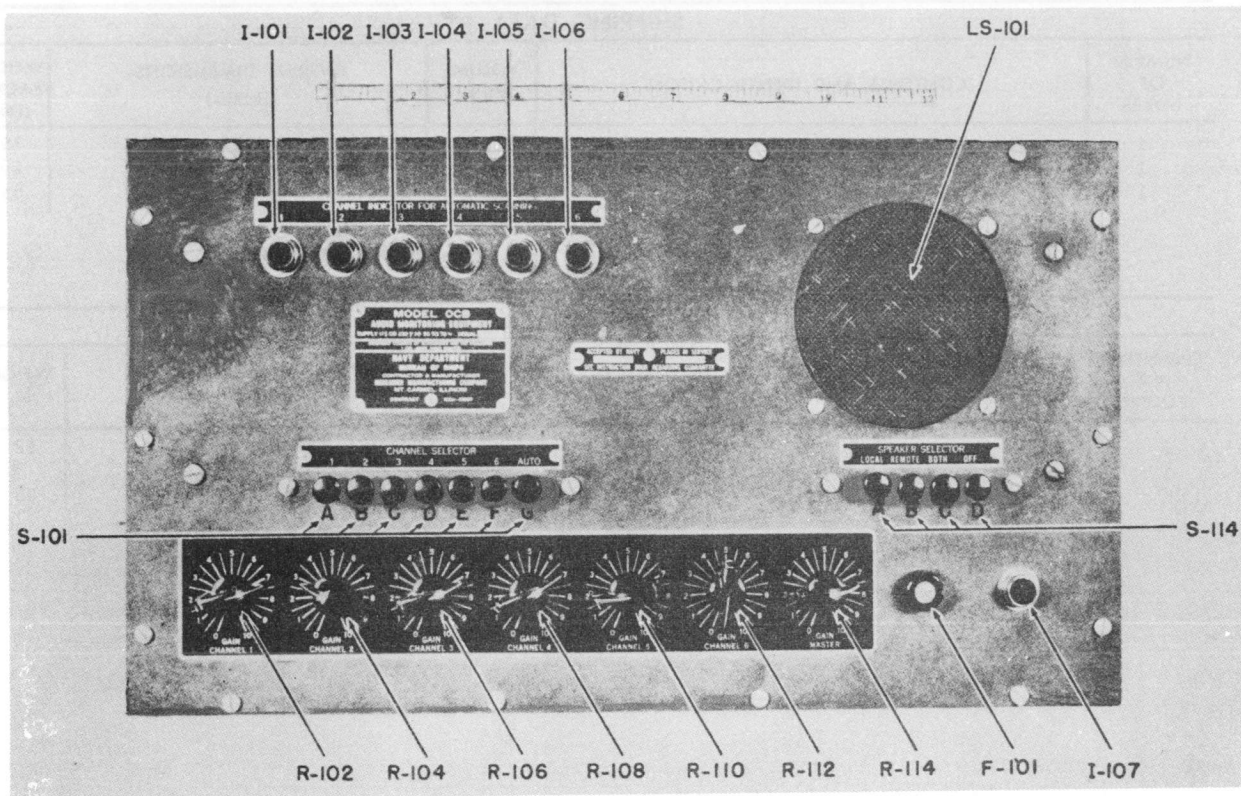
Radio-Auxiliary
 OAH, 1, 2, 4

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | | | | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|---|---|---|------------------------------|-----------------------------|---------------|
| OAH | 1 | 2 | 4 | | | |
| | | 1 | | Shipping Chest NT-10361 | 9-3/4 X 17-3/8 X 19-3/4 | 25 |
| | | | 1 | Shipping Chest NT-10361A | 10-3/8 X 19-1/8 X 20-3/8 | (empty) 25 |
| 7 | 7 | | | Key Assembly NT-49230 | | (empty) |
| | | 7 | | Key Assembly NT-26021 | | |
| | | | 7 | Key Assembly NT-26032 | | |
| 7 | 7 | | | Head Set Assembly NT-49230 | | |
| | | 7 | 7 | Head Set Assembly NT-49469-A | | |
| 1 | 1 | 1 | 1 | Power Cable | 10 ft lg | |
| 1 | 1 | 1 | 1 | Battery Cable | 72 lg | |
| 6 | 6 | 6 | 6 | Patch Cords | | |
| 1 | 1 | 1 | 1 | Set of Equipment Spares | | |

April 1958

THE AUDIO MONITORING EQUIPMENT



Audio Monitoring Equipment OCB

FUNCTIONAL DESCRIPTION

The Navy Model OCB is a self-contained unit designed to monitor any number of audio channels up to and including six. It has provisions for the selection of any individual channel or the selection of automatic scanning from the front panel.

It is designed to be operated at any desired location, and is supplied with a remote speaker which may be operated at a considerable distance from the equipment.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RESPONSE: Flat within 3 db between 100 and 5000 cps.

CHANNELS: 6.

OUTPUT: 2 W with 6 v sine wave input.

DISTORTION: Less than 10%.

IMPEDANCE

INPUT: 50000 to 150000 ohms.

OUTPUT: 500 ohms.

POWER REQUIREMENTS: 115 or 230 v, 50 to 70 cps, single ph, 45 W.

MANUFACTURER'S OR CONTRACTOR'S DATA

Meissner Mfg Company, Mt. Carmel, Ill.
Contract NXsr-49657, dated 11 February 1944.

Approximate Cost: \$900.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 6J5GT (1) 6Y6GT (1) 6X5WGT
Total Tubes: (4)

No Crystals Used.

REFERENCE DATA AND LITERATURE

NAVSHIPS 900500: Technical Manual for Navy Model OCB Audio Monitoring Equipment.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE RE13A859A
STOCK NO.

April 1958

OCB

AUDIO MONITORING EQUIPMENT

SHIPPING DATA

| NUMBER OF BOXES | CONTENTS AND IDENTIFICATION | VOLUME (C.u.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|-----------------------------|------------------|-----------------------------|----------------------|
| 1 | Audio Monitor NT-60105 | 2.3 | 11-1/2 x 16-1/2 x 20-3/4 | 75 |
| 1 | Remote Speaker | 0.7 | 7 x 10-1/2 x 16-1/2 | 10 |
| 1 | Set of Equipment Spares | 1.4 | 10-1/2 x 14 x 16-1/2 | 53 |

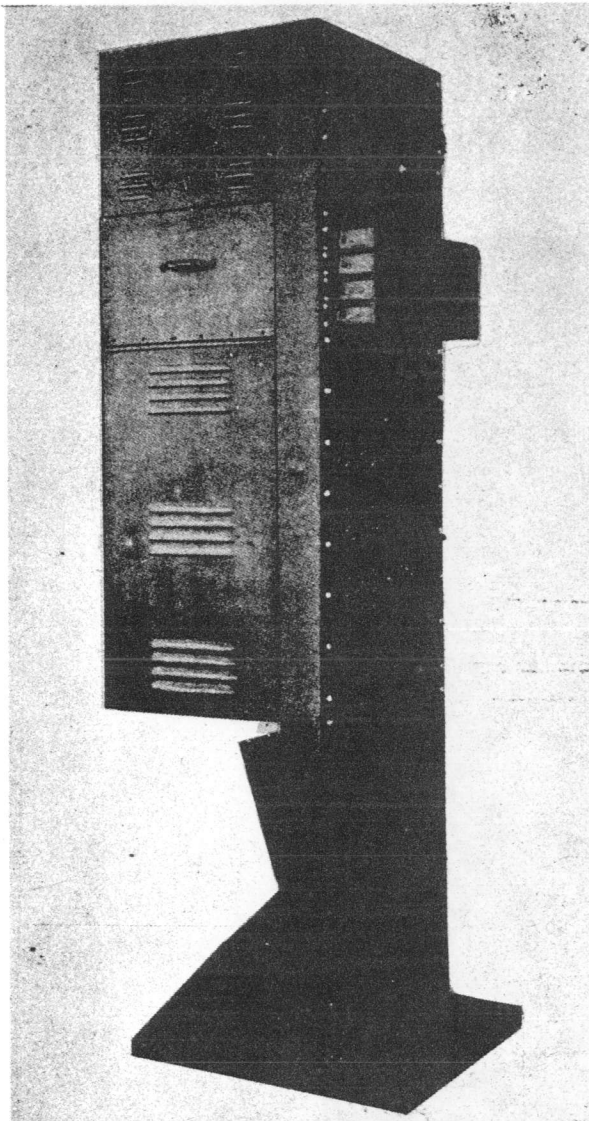
EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|-------------------------|-----------------------------|---------------|
| 1 | Audio Monitor NT-60105 | 10-3/4 x 14-1/2 x 19 | 62 |
| 1 | Remote Speaker | 6 x 6-1/2 x 9-1/4 | 7.5 |
| 1 | Set of Equipment Spares | 9 x 12 x 14 | 45 |

March 1957

CODE PRACTICE EQUIPMENT

OW-2



Code Practice Set, Mod OW-2

FUNCTIONAL DESCRIPTION

The OW-2 is used for training of radio telegraph operators. It is designed to accommodate 40 positions.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

AUDIO OSCILLATOR FREQUENCY: 100 to 1000 cps.

OPERATING POWER: 110 v, 60 cps, single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

United States Navy Yard, Washington, D.C.
Project Orders MB-381-43.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5Z3 (2) 56 (2) 2A3
Total Tubes: (5)

REFERENCE DATA AND LITERATURE

NAVSHIPS 95196: Installation and Operation
Instructions for Code Practice Equipment
Model OW-1 and 2.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.

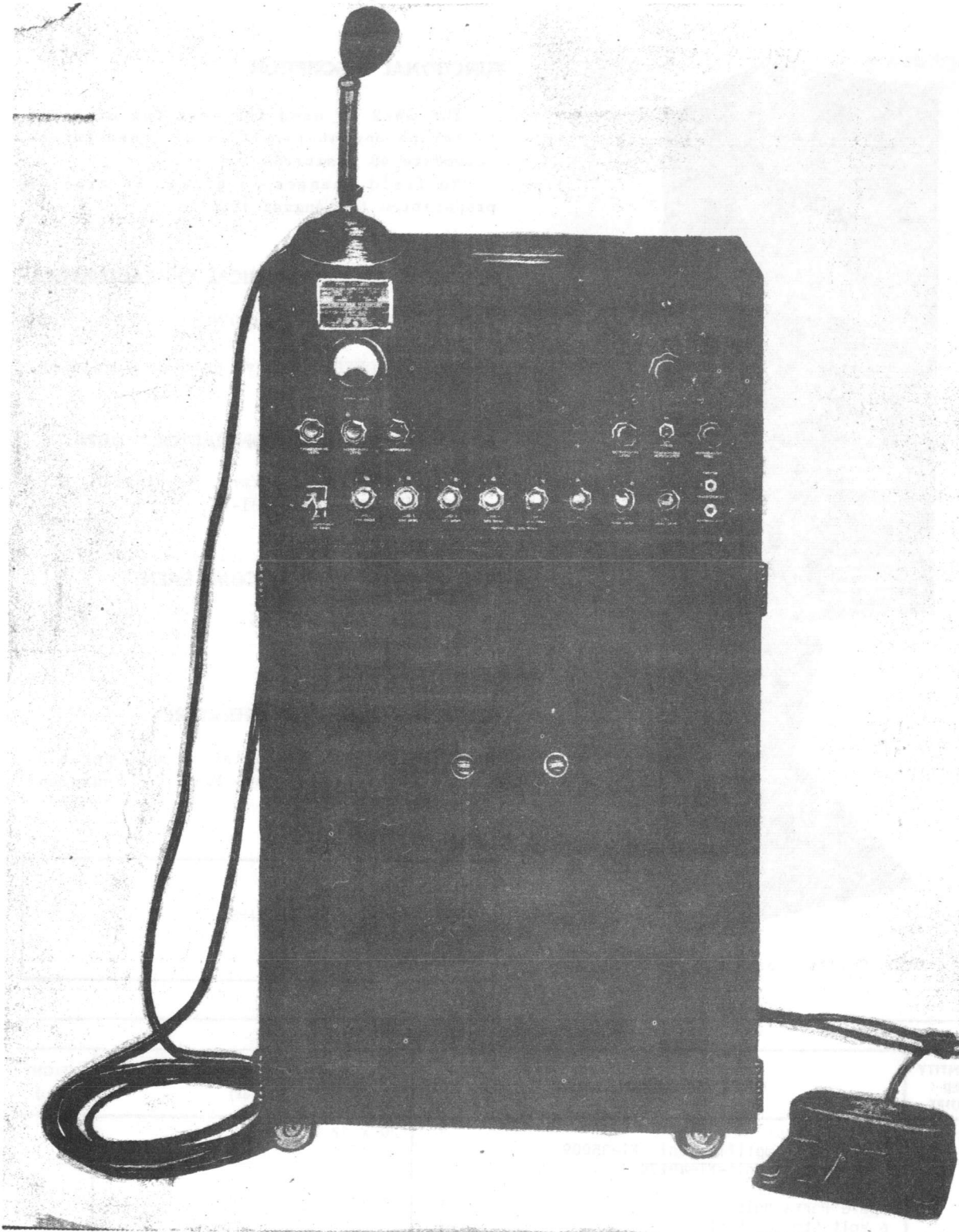
EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|------------------------------------|-----------------------------|---------------|
| 1 | Mounting Rack | 20 x 22 x 73-1/4 | |
| 1 | Oscillator-Amplifier Unit NT-35009 | | |
| 1 | Distribution Unit-NT-49174 | | |
| 1 | Accessory Unit | | |
| 1 | Spare Parts Unit | | |
| 1 | 6 Volt Storage Batteries | | |
| 40 | Headphones-NT-49016 | 24 lg | |
| 40 | Telegraph Keys-NT-26001 | | |
| 40 | Patch Cords | | |

VOICE RECORDING EQUIPMENT

Radio Auxiliary

PD,PD-1



Voice Recording Equipment PD

FUNCTIONAL DESCRIPTION

The PD, PD-1 is a complete voice recording equipment for transcribing voice or other audio signals on discs and reproducing the signals from the discs.

The equipments are suitable for transcribing and reproducing CW or voice signals and may be monitored with head phones, or reproduced through head phones, or reproduced through head or a loud speaker. There are separate transcribing and reproducing amplifiers, so arranged as to permit reproduction of signals from the discs without in any way interfering with the continuity of the recording process.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

- AUDIO FREQUENCY RANGE: 200 to 3000 cps.
- INPUT IMPEDANCE: 50, 600 or 5000 ohms.
- OUTPUT IMPEDANCE: 4, 8, 50 ohms.
- MAXIMUM OUTPUT: 10 W.
- TRANSCRIBER SPEED: 22 rpm.
- REPRODUCER SPEED: Variable 2-3/4 to 33 rpm.
- OPERATING POWER: 110/115/120 v, 1 phase, 60 cps.

MANUFACTURER'S OR CONTRACTOR'S DATA

The Soundsciber Corporation, New Haven, Connecticut.

Contract PD-1-NXss-15306, dated 14 October 1942.

Contract PD-NXs-3288, dated 20 April 1942.

Approximate Cost: \$600.00 with equipment spares. (PD-1)

TUBE AND/OR CRYSTAL COMPLEMENT

- (2) 5U4G (4) 6SL7GT
- (1) 6J5 (4) 6Y6G

Total Tubes: (11)

REFERENCE DATA AND LITERATURE

NAVSHIPS 95203: Instructions for Model PD Voice Recording Equipment.

NAVSHIPS 95204: Instructions for Model PD-1 Voice Recording Equipment.

TYPE CLASSIFICATION
 DESIGN COGNIZANCE BUSHIPS
 PROCUREMENT COGNIZANCE
 STOCK NO.

SHIPPING DATA

| NUMBER OF BOXES | | CONTENTS AND IDENTIFICATION | VOLUME (Cu.Ft.) | OVERALL DIMENSIONS (inches) | WEIGHT PACKED (lbs.) |
|-----------------|------|---|-----------------|-----------------------------|----------------------|
| 1 | PD-1 | | | | |
| | 1 | Voice Recording Equipment PD-1 | | | 449 |
| | 1 | Spare Parts, Stepback Control Unit NT-23395 Desk Microphone NT-51049 | | | 98 |
| | 1 | Spare Parts | | | 90 |
| | 1 | Discs | | | 103 |

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VOICE RECORDING EQUIPMENT

Radio Auxiliary

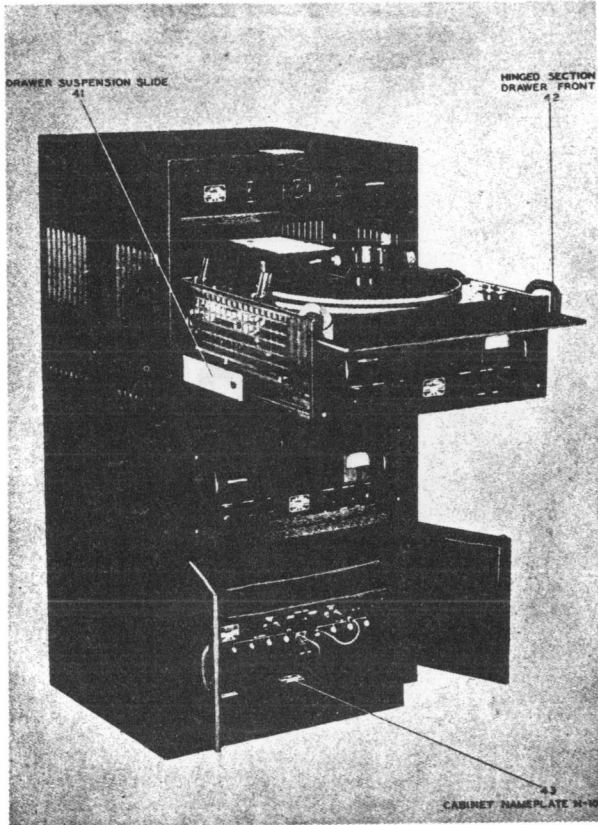
PD,PD-1

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|------|---|-----------------------------|---------------|
| PD | PD-1 | | | |
| 1 | 1 | Cabinet NT-10106 | 16-3/4 X 20-1/4 X 37 | 96 |
| 1 | | Rectifier Power Unit NT-20150 | 8 X 8-7/8 X 15 | 39 |
| | 1 | Rectifier Power Unit NT-20150-A | 8 X 8-7/8 X 15 | 39 |
| | 1 | Stepback-Bracke Control NT-23345 | 1-3/4 X 6 X 7-3/4 | 4.5 |
| 1 | | Transcriber-Reproducer Amplifier NT-50110 | 11 X 16-1/4 X 20-1/8 | 65 |
| | 1 | Transcriber-Reproducer Amplifier NT-50110-A | 11 X 16-1/4 X 20-1/8 | 65 |
| 1 | | Desk Microphone NT-51034 | 4-1/4 X 5-3/4 X 11 | 3.5 |
| | 1 | Desk Microphone NT-51049 | 4-1/4 X 5 X 11 | 3.5 |
| | 1 | Variable Speed Reproducer Unit NT-67002 | 8-7/8 X 10 X 12-5/8 | 18 |
| 1 | | Reproducer Unit NT-67006 | 6-7/8 X 10 X 12-5/8 | 16 |
| 4 | | Transcriber-Reproducer Unit NT-67005 | 6-7/8 X 10 X 12-1/4 | 72 |
| | 4 | Transcriber-Reproducer Unit NT-67005-A | 6-7/8 X 10 X 12-1/4 | 75 |
| 1 | 1 | Set Spare Parts | | |
| 1 | 1 | Set of Discs | | |

March 1957

VOICE RECORDING EQUIPMENT



Voice Recording Equipment PE, PE-1

FUNCTIONAL DESCRIPTION

The PE, PE-1 is a complete voice recording equipment for transcribing voice or other audio signals on discs and are reproducing the signals from the discs.

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

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 200 to 3000 cps.
 INPUT IMPEDANCE: 500 to 5000 ohms.
 TRANSCRIBER SPEED: 185 rpm.
 REPRODUCER SPEED: 78, 33-1/3 rpm.
 OPERATING POWER: 115v, 1 phase, 60 cps.

MANUFACTURER'S OR CONTRACTOR'S DATA

Memovox Inc., Beverly Hills, California
 Contract NXs 3289, dated 28 April 1942.
 (PE)
 Contract NXss 15073, dated 6 March 1943.
 (PE-1)

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 6SJ7GT (1) 5X3GT (2) 6V6GT
 Total Tubes: (6)
 (1) RC-20 (1) X-81-CH
 Total Crystals: (2)

REFERENCE DATA AND LITERATURE

NAVSHIPS 95205: Technical Manual for Voice Recording Equipment PE.
 NAVSHIPS 95206: Technical Manual for Voice Recording Equipment PE-1.

TYPE CLASSIFICATION
 DESIGN COGNIZANCE BUSHIPS
 PROCUREMENT COGNIZANCE
 STOCK NO.

EQUIPMENT SUPPLIED DATA

| QUANTITY PER EQUIPT | NAME AND NOMENCLATURE | OVERALL DIMENSIONS (inches) | WEIGHT (lbs.) |
|---------------------|--------------------------------------|-----------------------------|---------------|
| 1 | PE-1 Cabinet NT-101?? | 24-1/2 X 25-5/8 X 50-1/2 | |
| 1 | Power Control Unit NT-23316 | | |
| 1 | Signal Input Panel NT-23317 | | |
| 2 | Transcriber-Reproducer Unit NT-67007 | | |
| 1 | Transcriber-Reproducer Unit NT-67010 | | |
| 1 | Microphone | | |
| 1 | Deck Microphone NT-51051 | 6-3/4 X 12 X 15-3/4 | 27 |
| 1 | Box Spare Parts | 8-1/2 X 12 X 20-1/2 | 33 |
| 1 | Box Spare Parts and Accessories | | |
| 1 | Set Tools | | |
| 2 | Technical Manuals | | |