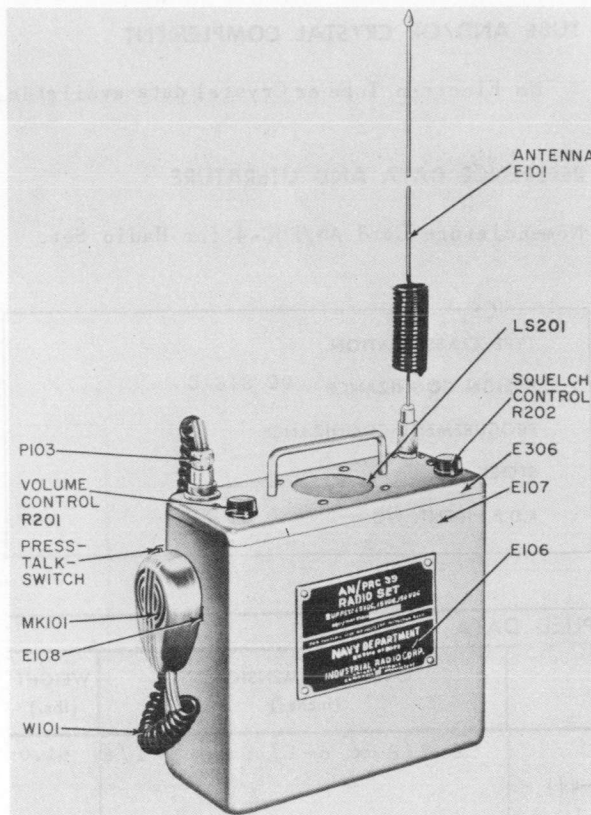


February 1960

Radio-Transceivers

RADIO SET**AN/PRC-39**

Radio Set AN/PRC-39

FUNCTIONAL DESCRIPTION

Radio Set AN/PRC-39 is a portable wide-band FM transmitter-receiver. It has an effective range of one to ten miles depending on environmental conditions.

No field changes in effect at time of preparation. (11 August 1959).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 30 to 42 mc.

TYPE OF CONTROL: Crystal.
 TYPE OF EMISSION: F3.
 RECEIVER OUTPUT: 300 mw, into a 3.2 ohm 3 in. speaker.
 IF FREQUENCY: 8.5 mc (high); 300 kc (low).
 FREQUENCY STABILITY: $\pm 0.0025\%$ (transmitter).
 TRANSMITTER OUTPUT: 1.5 W.
 ANTENNA: 1/4 wave whip type.
 POWER REQUIREMENTS: Batteries: (2) 75 v, (2) 7.5 v, (1) 1.5 v.

MANUFACTURER'S OR CONTRACTOR'S DATA

Industrial Radio Corp., Chicago, Illinois.
 Contract NObsr-71895.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 1AD4 (2) 6526

Total Tubes: (3)

No Crystal data available.

REFERENCE DATA AND LITERATURE

Manuscript Copy of RADIO SET AN/PRC-39.

TYPE CLASSIFICATION

DESIGN COGNIZANCE USN, BUSHIPS

PROCUREMENT COGNIZANCE SPEC MIL-R-19117
 REVA-TYPE I

STOCK NO.

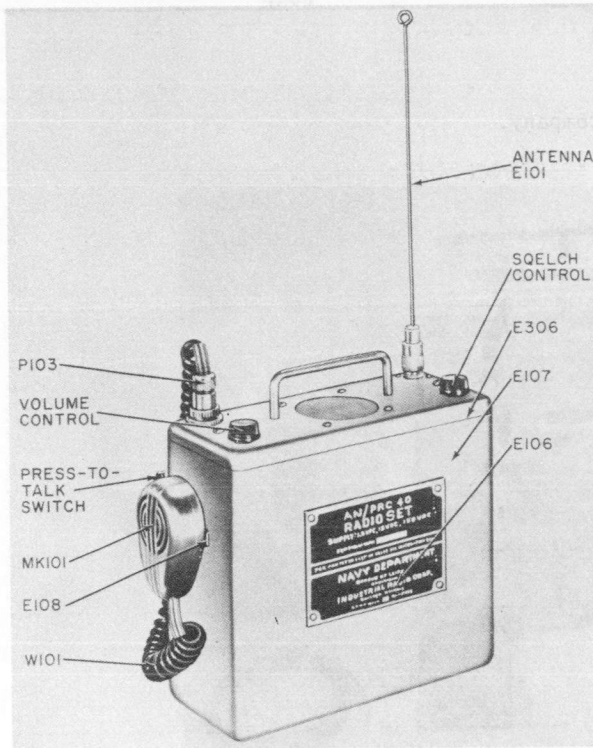
R.D.B. IDENT. NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set AN/PRC-39		

RADIO SET

AN/PRC-40



Radio Set AN/PRC-40

FUNCTIONAL DESCRIPTION

Radio Set AN/PRC-40 is a portable narrow-band FM transmitter-receiver. It has an effect range of one to ten miles depending on environmental conditions. Average operating conditions, however, permit voice communication at a distance of approx two miles between two portable Radio Sets.

No field changes in effect at time of preparation (14 August 1959).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 132 to 152 mc, 1 preset

frequency.
 TYPE OF CONTROL: Crystal.
 TYPE OF EMISSION: F3.
 POWER OUTPUT: 1 W max (transmitter).
 RECEIVER OUTPUT: 500 mw into a 3.2 ohm 3 inch speaker.
 IF FREQUENCY: 8.5 mc (high), 300 kc (low).
 OSCILLATOR CRYSTAL FREQUENCY
 HIGH: Determined by incoming signal.
 LOW: 8200.00 kc.
 TRANSMITTER STABILITY: $\pm 0.002\%$ at 25° C.
 TRANSMITTER CRYSTAL FREQUENCY: 1/12th of the carrier frequency.
 TRANSMITTER OUTPUT: 1 W.
 ANTENNA: 1/4 wave whip type.
 POWER REQUIREMENTS: Batteries (1) 1.5 v, (2) 7.5 v, (2) 75 v.

MANUFACTURER'S OR CONTRACTOR'S DATA

Industrial Radio Corp., Chicago, Ill.
 Contract NObsr-71895.

TUBE AND/OR CRYSTAL COMPLEMENT

(3) 6526

Total Tubes: (3)

No Crystals data Available.

REFERENCE DATA AND LITERATURE

Technical Manual for Radio Set AN/PRC-40.

TYPE CLASSIFICATION	(NAVY)
DESIGN COGNIZANCE	USN, BUSHIPS
PROCUREMENT COGNIZANCE	SPEC: MIL-R-19117 REV A TYPE II
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 Set AN/PRC-40			

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIP	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Radio Set AN/PRC-40		

16 July 1964

Cog Service: USN FSN: 2F5820-078-4282

RADIO SET AN/PRC-40AX

Functional Class:

USA

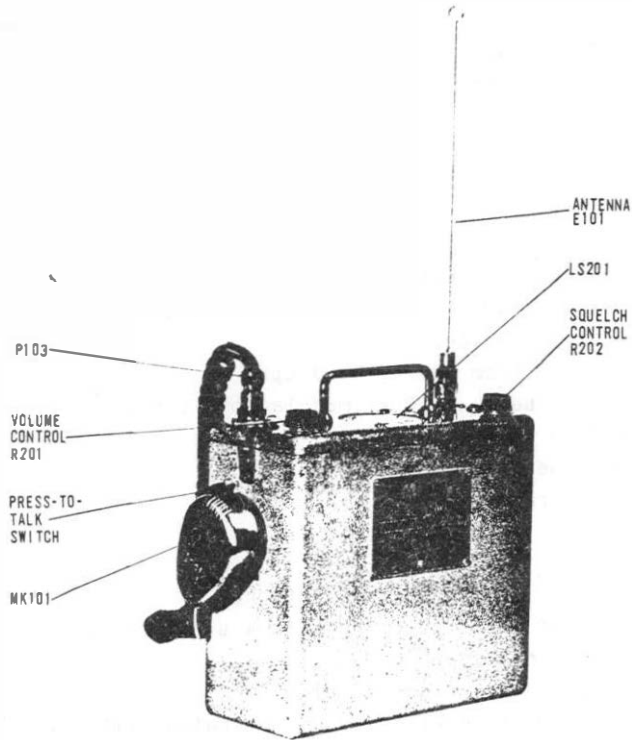
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Space Avionics Incorporated, (I4518).



RADIO SET AN/PRC-40AX

FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-40AX is a portable wide-band, (15 kc) FM transmitter-receiver. The receiver and transmitter are constructed on printed circuit boards which mount plug-in nodules. Transistors are used throughout both the receiver and transmitter. A self-contained battery supplies all operating power for the equipment.

The AN/PRC-40AX equipment may be tuned to transmit and receive any single frequency within the range of 132 to 152 mc. The equipment has an effective range of up to ten miles, depending on environment. Under average conditions, effective voice communication will be maintained between AN/PRC-40AX's within a distance of two miles.

No field changes in effect at time of preparation (16 June 1964).

AN/PRC-40AX RADIO SET

RELATION TO OTHER EQUIPMENT

The AN/PRC-40AX is remanufactured from Radio Set AN/PRC-40 and will operate with AN/PRC-40 units and with other wide-band FM transmitters and receivers utilizing a frequency within the range 132 to 152 mc.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Battery, Dry PN-301144; (1) Volt-Ohm-Milliammeter AN/PSM-4; (1) FM-AM Signal Generator 202-H Boonton Radio Co.; (1) RF Wattmeter AN/URM-43A; (1) Frequency Meter TS-186/UP; (1) Deviation Meter Mod AR1-A A.R.F. Products Inc.; (1) Crystal CR-18U; (1) Crystal CR-52/U.

TECHNICAL CHARACTERISTICS:**TRANSMITTER**

TYPE OF TRANSMISSION: FM.
FREQUENCY RANGE: 132 to 152 mc (by crystal selection).
POWER OUTPUT: 0.8 W at 132 and 142 mc, 0.7 W at 152 mc into a 50 ohm load.
MODULATION CAPABILITY: \pm kc deviation.
FREQUENCY RESPONSE: +1 - 3 db from 500 to 3000 cps.
NOISE LEVEL: At least -40 db below \pm 10 kc modulation level.
DISTORTION: Max of 8% at +10 kc modulation.
CRYSTAL FREQUENCY: 1/12 of operating freq.
AUDIO INPUT: Push-to-talk microphone.

RECEIVER

TYPE OF RECEPTION: FM.
FREQUENCY RANGE: 132 to 152 mc (by crystal selection).
SENSITIVITY: At least 20 db of noise quieting with 4 uv of cw signal.
AUDIO OUTPUT: Self-contained loudspeaker.
CRYSTAL FREQUENCY: $f = (\text{input freq in mc} - 8.5)/3$.
POWER SOURCE: Self-contained battery with 100 hrs operating life.

ANTENNA: 1/4 wave, whip type.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Radio Set AN/PRC-40AX includes:	2F5820-078-4282	5 x 10 x 11-1/2	11.5
1	Radio Receiver-Transmitter RT-507/PRC-40AX complete with microphone antenna, and battery cable			
1	Radio Set Case CY-2625/PRC			
1	Plug-in unit removal tool			
1	Technical Manual NAVSHIPS 95681			

1.7 AN/PRC-40AX: 2

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95681: Technical Manual for Radio Set AN/PRC-40AX.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Not required.

CRYSTALS: (1) CR-18U (1) CR-52/U

SEMI-CONDUCTORS: Not required.

SHIPPING DATA

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
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PROCUREMENT DATAPROCURING SERVICE: USN
SPEC &/OR DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Space Avionics Inc.	Alexandria, Virginia	N0bsr-B7270	