

7 October 1966

COUPLER ANTENNA CU-656A/U

Cog Service: USN

FSN:

Functional Class:

USA

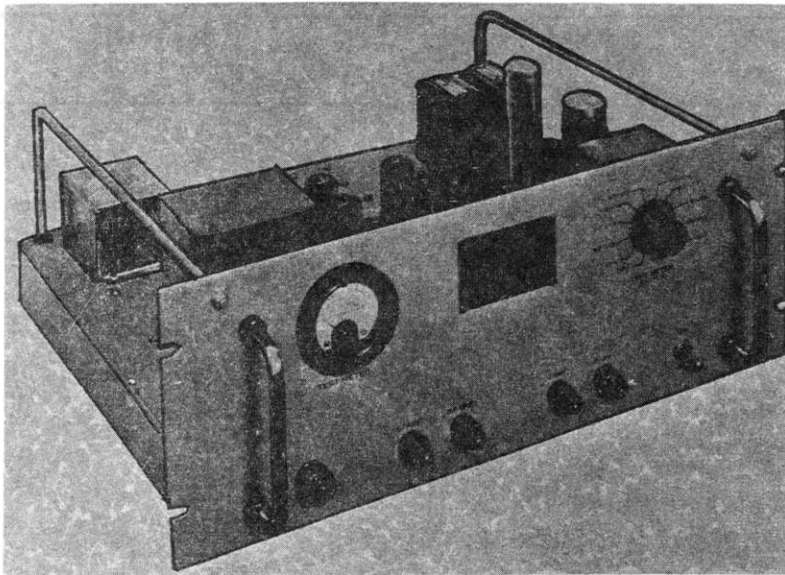
USN

USAF

TYPE CLASS:

Used by

MANUFACTURER'S NAME/CODE NUMBER: Voron Electronics Corporation, (94518).



COUPLER ANTENNA CU-656A/U

FUNCTIONAL DESCRIPTION:

The Coupler Antenna CU-656A/U provides optimum coupling between a single antenna and as many as eight receivers. Design considerations include selection of circuits and choice of components providing a low voltage standing wave ratio, a wide frequency range (2.0 mc through 32 mc), a high attenuation of out of band frequencies, a minimum noise figure, minimum intermodulation, a high degree of isolation between individual outputs, on overall power gain and high reliability.

No field changes in effect at time of preparation (20 May 1966).

RELATION TO OTHER EQUIPMENT:

The CU-656A and the CU-656/U, CU-873/U, 874/U are electrically similar. Antenna Coupler CU-656A, CU-656/U and CU-873/U have a 70 ohm input. However, Antenna Coupler CU-874/U has a 150 ohm balanced input. The units are physically similar except that Antenna Coupler CU-656A/U and CU-656/U utilize type-c input connectors and output connectors while Antenna

COUPLER ANTENNA CU-656A/U

Coupler CU-873/U and CU-874/U utilize type-N input connectors and output connectors.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Adapter, UG-566/U; (1) Adapter, UG-107B/U; (1) RF Signal Generator Set AN/URM-25 (Series); (1) Multimeter, AN/USM-116 Series or AN/USM-34; (1) Technical Manual NAVSHIPS 91283; (1) Technical Manual; (1) Radio Interference Measuring Set, AN/URM-47 Series; (1) Technical Manual, NAVSHIPS 92147; (8) Radio Receivers; (1) Antenna.

TECHNICAL CHARACTERISTICS:

FREQUENCY RANGE: 2.0 mc to 32 mc.

INPUT IMPEDANCE: 70 ohms, a single type "C" connector located at the rear of the unit provides for the antenna input connection.

OUTPUT IMPEDANCE: 70 ohms, eight type "C" connectors located at the rear of the unit provide for output connections.

NUMBER OF OUTPUTS: Eight outputs are provided for at the rear of the unit.

INTERMODULATION: The intermodulation products of two 0.25 volt signals applied at the input are down 60 db.

ISOLATION OF OUTPUTS: Minimum isolation between any two outputs is 40 db.

GAIN: 0 to 3 db, to each output.

ANTENNA CHARACTERISTICS: The antenna (GFM) should have a VSWR of less than 3 to 1 over the band of 2.0 to 32 mc for best performance.

AMBIENT TEMPERATURE LIMITATIONS: - 40 deg C (- 40 deg F) to + 50 deg C (+ 122 deg F).

POWER REQUIREMENT: 115 to 230 v, 50 to 60 cycles ac single, ph 125 watts approx.

NOISE FIGURE: 6 db or better.

CASCADE OPERATION: Additional antenna connections may be obtained by connecting the antenna couplers in cascade with a resultant increase in signal gain of 0 to 3 db. The effective noise figure of two cascaded antenna couplers will be 7.7 db or better.

MAJOR COMPONENTS

QTY	ITEM	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Coupler Antenna CU-656A/U includes:	6-31/32 x 16-1/2 x 19	33
9	Connectors, UG-573B/U	3/4 x 3/4 x 1-31/64	
1	Connector, AN3106A-145S-7S	1-1/8 x 1-1/8 x 1-7/16	
1	Technical Manual NAVSHIPS 93804(B)	9 x 11-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93804(B): Technical Manual for Antenna Coupler CU-656 U, CU-656A/U, CU-873/U, CU-874/U.

SHIPPING DATA

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
1	2.3	40
	1.2 CU-656A/U: 2	

COUPLER ANTENNA CU-656A/U

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/OR DWG: SHIPS-C-3913

DESIGN COG: USN, NavShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Voron Electronics Corp.	Philadelphia, Pa.	N0bsr-87369	