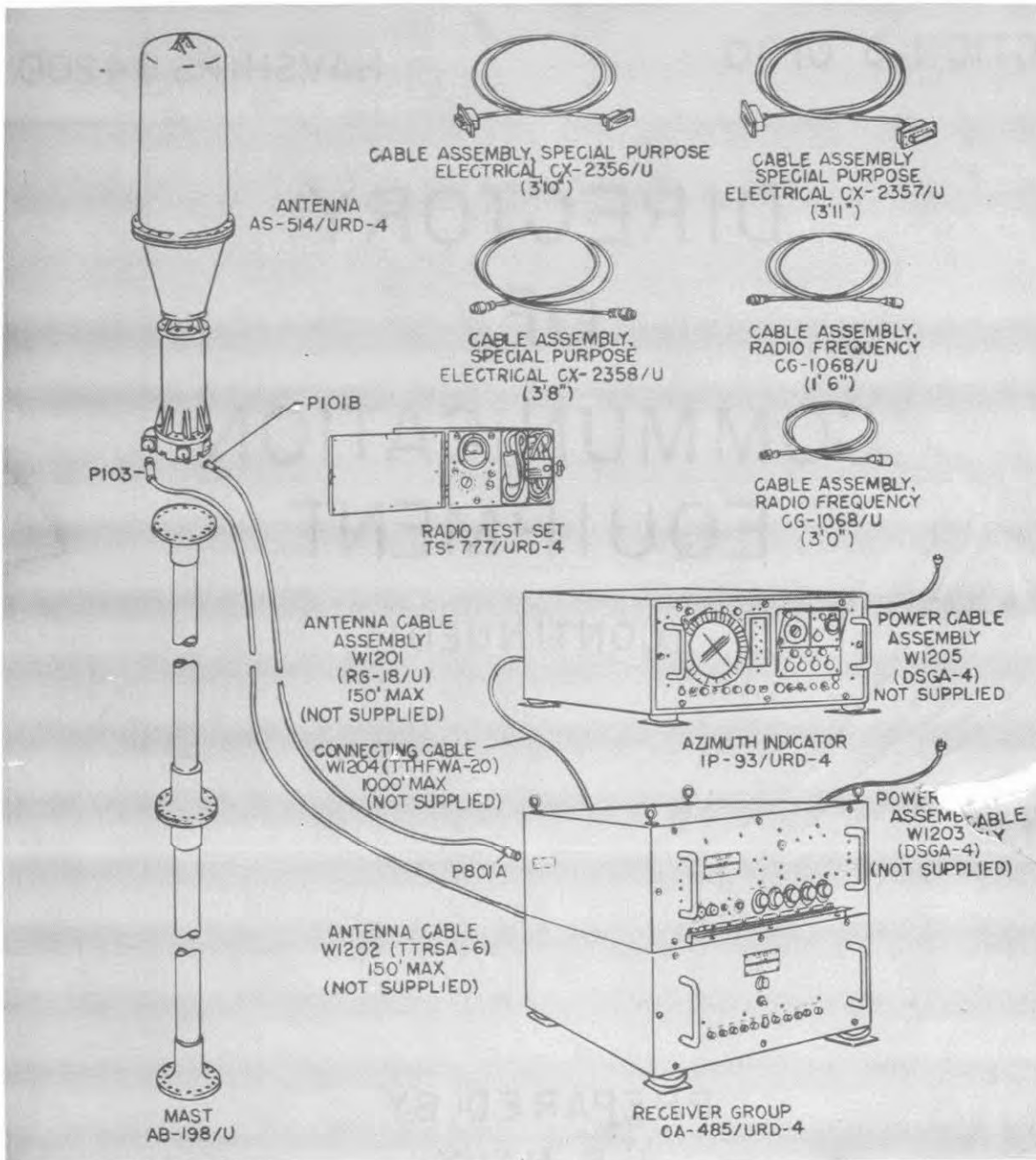


DIRECTION FINDER



Direction Finder AN/URD-4

FUNCTIONAL DESCRIPTION

The AN/URD-4 is designed for either ship or shore installation to provide instantaneous visual direction finding information from radio frequency signals. Tuning is accomplished by means of a remotely controlled device which selects any one of 20 pre-set

frequencies, while any one of 1750 channels can be selected manually.

It's antenna system is designed to accept only vertically polarized signals, however accurate direction finding information is provided from signals polarized as far as 45 degrees from vertical.

Direction finding information is presented

AN/URD-4

DIRECTION FINDER

visually on a cathode-ray tube, and provision is contained on the indicator cabinet for aural reception by means of headphones. Aural reception can be simultaneous with direction finding operation, but while aural reception is possible on AM or FM modulated signals only, direction finding information is displayed on received signals whether modulated or unmodulated.

Data on this sheet reflects the following field changes, FC-1, 2, 3, 4 (1 August 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Headset NT-49016 or equivalent, (1) Set of Guy Wires, (1) Target Transmitter, (1) Antenna Cable Assembly RG-18/U, (1) Antenna Cable TTRSA-6, (2) Power Cable Assembly DSGA-4, (1) Connecting Cable TTHFWA-20.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE: 225.0 to 399.9 mc in fixed channels spaced 0.1 mc.
 PRESET FREQUENCIES: 20.
 FREQUENCY CONTROL: Crystal.
 TYPE RECEIVER: Superheterodyne.
 SENSITIVITY: 10 uv for 10 db signal-to-noise ratio.
 BANDWIDTH: 50 kc min for 6 db attenuation.
 INTERMEDIATE FREQUENCIES: 15.325 and 2.8072 mc.
 RECEIVER AUDIO OUTPUT: 100 mw into 600 ohm impedance.
 TYPE RECEPTION
 VISUAL: AM, FM, or unmodulated signals.
 AURAL: AM only.
 PRESENTATION: 5 in. CR tube.
 IMPEDANCE
 ANTENNA: 52 ohms.
 RF INPUT: 52 ohms.
 HEADPHONES: 600 ohms.
 POWER REQUIREMENTS: 115 v, 55 to 65 cps, single ph.
 HEAT DISSIPATION
 RADIO RECEIVER: 262 W.
 AZIMUTH INDICATOR: 136 W.
 ANTENNA: 120 W.
 MAGNETIC VOLUMES
 ANTENNA: 127 cubic in.

RECEIVER: 785 cubic in.
 AZIMUTH INDICATOR: 363 cubic in.
 ANTENNA DATA
 TYPE: Rotatable Adcock Array.
 POLARIZATION: Vertical.
 CONSTRUCTION: Vertical dipole array.

MANUFACTURER'S OR CONTRACTOR'S DATA

Bendix Radio Division, Bendix Aviation Corp., Baltimore, Md.
 Contract NObsr-52513, dated 15 June 1951.
 Contract NObsr-57098, dated 28 November 1951.
 Contract NObsr-64563, dated 2 November 1954.
 Contract NObsr-71201, dated 10 February 1956.
 Approximate Cost: \$13165.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 1Z2	(1) 5CP12	(2) 5R4WGB
(17) 5725/6AS6W	(2) 6080WA	(3) 6F4
(1) 6L6WGB	(1) 6X4W	(1) 5651
(5) 5654/6AK5W	(19) 5670	(1) 5686
(5) 5726	(2) 6626/OA2WA	(1) OA3
(1) OC3W		
Total Tubes: (64)		
(3) 1N69	(1) CR-18/U	
(17) CR-27/U	(1) CR-28/U	
Total Crystals: (22)		

REFERENCE DATA AND LITERATURE

NAVSHIPS 91912(A): Technical Manual for Direction Finder Set AN/URD-4.
 NAVSHIPS 91912(A) Change 2: Technical Manual for Direction Finder Set AN/URD-4.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE MIL-D-16252A
STOCK NO.

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Antenna AS-514/URD-4	57.5	33 X 35 C 86	370
1	Receiver Group OA-485/URD-4 including: Cabinet CY-890/URD-4	25.5	33 X 35-1/2 X 37-1/2	392

DIRECTION FINDER

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Azimuth Indicator IP-93/URD-4 including: Electric Equipment Cabinet CY-1304/URD-4	9.1	19 X 27 X 36	205
1	Mast AB-198/U	22.0	13 X 23-1/2 X 124	200
1	Set of Miscellaneous Parts including: (2) Technical Manual NAVSHIPS 91912(A)	2.0	12-1/2 X 15-1/2 X 18	50
1	Set of Equipment Spares (NAVY) or Set of Equipment Spare (MARINE CORP)	6.0 5.0	14-1/2 X 21-1/2 X 32 15 X 16-1/2 X 25-1/2	150 85

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Antenna AS-514/URD-4	18-3/4 dia X 73-1/8	106
1	Mast AB-198/U	9-5/32 dia X 240	72
1	Receiver Group OA-485/URD-4 consisting of: Cabinet CY-890/URD-4 Power Supply PP-556/URD-4 Radio Receiver R-353/URD-4	21-3/4 X 23-3/8 X 26-1/8	182
1	Azimuth Indicator IP-93/URD-4 including: Cabinet CY-1304/URD-4	13-3/4 X 21 X 28-7/8	96
1	Radio Test Set TS-777/URD-4	3-1/2 X 6-1/2 X 8	4
1	Special Purpose Electrical Cable Assembly CX-2356/U	46 lg	
1	Special Purpose Electrical Cable Assembly CX-2357/U	47 lg	
2	Special Purpose Electrical Cable Assembly CX-2358/U	44 lg	
1	Radio Frequency Cable Assembly CG-1068/U	18 lg	
1	Radio Frequency Cable Assembly CG-1068/U	36 lg	
2	Technical Manual NAVSHIPS 91912(A)	1 X 8-3/4 X 11-1/2	
1	Set of Associated Hardware		
1	Set of Equipment Spares		