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ANTENNA CATALOG

Volume III

UNCLASSIFIED

SHIP ANTENNAS

(Title Unclassified)

October 1960

Prepared for

Electronics Research Directorate
AIR FORCE CAMBRIDGE RESEARCH LABORATORIES

Contract AF 19(604)-4101

by

GEORGIA INSTITUTE OF TECHNOLOGY
Engineering Experiment Station

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UNCLASSIFIED

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ANTENNA CATALOG

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October 1960

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TABLE OF CONTENTS

This catalog contains 219 pages.

INTRODUCTION

This publication is one of six catalogs produced in order to collect data on all types of military antennas in readily accessible form. The idea for such a collection originated with the Interservice Antenna Group (better known as ISAG). ISAG is an informal group from Air Force, Army, and Navy laboratories who meet periodically to discuss mutual antenna problems. With the endorsement of this group, funds were allocated by the Air Force and the Army, and the work was initiated under Air Force administration as Contract AF 19(604)-4101.

The specific responsibilities included the collection of electrical and mechanical data on all military antennas which had been assigned a Department of Defense nomenclature number. In addition, other antennas which were expected to receive a nomenclature number within a year were included along with selected industrial antennas.

The primary objective for the catalogs is to supply information which will facilitate the procurement of existing antennas and reduce duplication in antenna development. The design of duplicate antennas appears to be more widespread than would be expected. A review of these catalogs shows quite clearly that whips and other simple antennas have been redesigned repeatedly. Even the more complex antennas frequently duplicate earlier designs. Many factors influence the design, and many of the apparent duplications are unquestionably well justified. However, at least part of the time, redesign is a result of lack of knowledge about the existence of earlier models. It is hoped that these catalogs will greatly reduce the number of antenna duplications.

No matter how much information is given in a catalog, it will always be necessary to have additional data in order to determine the suitability of a particular antenna for a specific purpose. Thus, the catalogs will serve primarily as a guide to more complete reference material and to development agencies and manufacturers of antennas which may prove suitable for a new application.

The entire set of catalogs prepared under this contract is as follows:

Volume 1 - Missile Antennas (Secret): missile antennas of all types and all security classifications.

Volume 2 - Ground Antennas (Confidential)*: unclassified ground antennas.

Volume 3 - Ship Antennas - (Confidential)*: unclassified shipboard and buoy antennas.

Volume 4 - Aircraft Antennas (Confidential)*: unclassified airborne antennas.

Volume 5 - Confidential Ground, Ship, and Aircraft Antennas (Confidential): all confidential military antennas except those intended specifically for missile use.

Volume 6 - Secret Ground, Ship, and Aircraft Antennas (Secret): all secret military antennas except those intended specifically for missile use.

Antennas are listed as "ground", "ship", etc., according to available information about their installations. Hence, many antennas are listed in more than one volume. No attempt was made to make extra listings or cross references.

Antennas are identified by numbers or names. The most common identification number is the Joint Nomenclature System ("AN System"). It is explained in JANAP-196, and on the Communication-Electronic Nomenclature Subpanel's summary sheet A 56190. Many Navy antennas were assigned Navy numbers such as Mark 25, Mod 6A; 66010; 69001; and 66ABL. Navy Model designation is described in the Navy Stock List of the Electronics Supply Office, Bureau of Ships Section - Part III. The catalogs omit manufacturer identification letters which precede Navy numbers. A third major type of identification consists of manufacturers' designations. As a group, the manufacturers' identifications can be considered arbitrary. Manufacturers' antennas are grouped together at the back of the text.

Each catalog consists of a collection of data arranged in order of nomenclature number, and an appendix with five separate indexes. Indexes are provided for stock number, antenna type, associated equipment, function of associated equipment, and frequency. The antenna types and the functions of associated equipment are defined in the sections immediately following this introduction.

In both the text and the indexes the identifying numbers are arranged first of all in alphabetical order and secondly in numerical order. Thus, 66AWG precedes 66010, but both numbers are preceded by AS-307. The indexes were prepared by machine. Because of complications in programming the computer, ordering in the index is accomplished with the characters justified from the left. Thus, in the index the AS-3 is followed by the AS-355 before the AS-4 is given.

In the Department of Defense nomenclature system, many antennas are given a number as a simple antenna, but they are part of a more complex system. In most such cases, the antenna is cross-referenced from its basic number to the nomenclature number for the system with which it is associated, e.g., antenna AT-178/APS-42 is cross-referenced to the AS-428(*)/APS-42.

*The volumes of unclassified antennas are classified as "confidential" because they contain a large collection of data on defense systems. Consequently, although each page of Volumes 2, 3, and 4 (except in the indexes) is unclassified, the publications themselves are classified.

Several types of equipment have antenna-type nomenclature numbers even though they do not fit our definition of antennas. Most notably, sonar transducers and antenna simulators used in training devices have such numbers. Equipment of these types are not included in the catalogs.

Originally, it was planned to eliminate all "obsolete" antennas from these catalogs. However, as the work progressed it was found that some antennas which are declared obsolete in a publication from one military service are still in use in other services. In fact, some cases were observed in which it appeared that antennas were still being procured by one military service even though they were declared obsolete by another. Consequently, very little consideration was given to a statement that an antenna is obsolete. An additional reason for including such antennas is the fact that although an antenna may be obsolete for one purpose, all or part of it may be useful in another application.

The information recorded in these catalogs has come largely from Department of Defense publications. In some cases, reports or other authoritative information were unavailable on certain antennas and the Department of Defense nomenclature cards were used. Other information sources include military antenna catalogs, personal interviews with employees of the Department of Defense and correspondence with antenna manufacturers. Each of these sources have contributed substantially to the information recorded. The references cited at the end of each antenna section generally give sources of additional information about the antenna. An attempt was made to list the most authoritative sources of information used in compiling the data, as well as any documents which present conflicting data. If conflicting data could be resolved by logical considerations, no comment was made in the catalogs. When no reason for preference of one choice was obvious, the fact was noted.

No specific date can be set as the cut-off date for data included in these catalogs. In August 1960, a final survey was made of nomenclature cards which had been issued in the categories AS, AT, and OA. At the same time a review was also made of applications for nomenclature numbers in these same categories. Unfortunately, 100 confidential and 25 secret nomenclature cards were identified, but copies have not yet been forwarded to this project. Most information which was collected directly from manufacturers was supplied during the spring of 1960. A considerable portion of the missile information was obtained directly from development people concerned with the electronic equipment for the missiles. Much of this information was collected late in the summer of 1960.

The Department of Defense nomenclature cards have proved very helpful in the preparation of these catalogs. However, they have also proved to be the most frequent source of unclear descriptions and incorrect data. It seems extremely desirable for project officers who are responsible for the submission of the nomenclature applications to go to greater lengths to assure the correctness of the information. In many cases, it seems that the antenna nomenclature cards were written by individuals who were not familiar with antennas.

It should be noted that frequency, range, and some of the other data given for individual antennas actually represent characteristics of the associated equipment rather than characteristics of the antennas.

The information compiled on missile antennas is considerably less complete than that given in the other volumes. There are four main reasons. In the first place, because missile work is generally fluid and developmental in nature, there frequently is no assurance that the antenna cited is a production item rather than a development item. A further consequence of the fluid state of missile work is that documentation is often incomplete or nonexistent. In addition, missile antennas are usually an integral part of the missile itself. The performance of an antenna in one missile will be quite different from its performance in another missile. Finally, missile people are extremely reluctant to release information about their equipment.

A very large proportion of the information desired for review during the preparation of these catalogs was not available. Also, it is noted that a fairly large number of antennas -- probably about 200 -- are developed or modified each year. Thus, it would seem desirable for some organization to undertake the compilation of a catalog of antennas annually, while the information is still accessible. Such a compilation probably should show both antennas which have been developed and antennas which have gone into production. Apparently, there is little interest in military circles for such a compilation at the present time. However, the authors of these catalogs believe that such reports would reduce the time required for the acquisition of critical equipment, and they would provide current information regarding antennas under development.

Many individuals have made substantial contributions to the preparation of these catalogs. However, Mr. J. L. Allen and Mr. D. F. Eagle deserve to be singled out for their efforts in the preparation of this information. Other people who have made major contributions are P. T. Hutchison, S. T. Alford, E. N. Bone, A. P. Jensen, S. G. Baxter, D. T. Paris, J. G. Holey, T. A. Lewis, C. C. Boykin, J. J. Curtis, R. E. Moseley, M. E. Blair, F. W. Woodside, and J. T. Dawson. Also, Mr. R. L. Passow of H. R. B. Singer provided many illustrations and data. Finally, it is appropriate to extend special thanks to Mr. C. E. Ellis, CRRDM, Air Force Cambridge Development Division, who has been project officer for this project.

EQUIPMENT FUNCTION

Most antennas can be used with equipments which perform many different functions. Often, however, an antenna is best known in terms of the equipment with which it is associated. The functions of equipments used with the antennas listed in this catalog can be described by one or more of the terms defined below. These terms are used throughout the catalog and an equipment function index will be found in the appendices.

The coverage of this catalog is restricted to electronic equipment. Sonic, infrared, and optical devices are not included, even those with "antenna" nomenclature numbers.

Altimeter: A term for electronic devices that determine altitude by measuring the time required for radio energy to travel from an aircraft or space vehicle to the earth and back; both pulse techniques and frequency modulation are used.

Approach Control: This term includes the following types of landing systems:

A. Beam approach systems that usually consist of localizer and glidepath beams, and marker beacons, all of which operate independently of the aircraft. Approach information is analyzed on the aircraft. Pulse and CW techniques are used.

B. Surface-controlled approach systems that usually consist of a search radar system, a precision radar system (azimuth and elevation), and a communication system, all located on the surface. Approach data is analyzed on the surface and directions are relayed to the aircraft.

C. Beacon approach systems that usually consist of localizer and glide-path beams which operate only when interrogated by an aircraft.

Beacon: A generic term used when the term "IFF" or "Radar, Beacon" is not applicable and the device in question is not a part of a navigation system. The term, when used, refers to devices that radiate signals, which can be used to identify and/or locate the point from which the signal originated; e.g., a device aboard a pilotless carrier that transmits a signal to a remote installation to aid in tracking the pilotless carrier.

Bombing: A term for equipments used for locating targets, determining an appropriate course for the bomb run, and determining the bomb-release point.

Carrier Control Approach (CCA): See "Approach Control".

Combat Information Center (CIC): See "Search, Air", or "Search, Surface".

Communications: Self-descriptive.

Countermeasures: A generic term used only when one of the more specific terms for countermeasures functions cannot be used. The term refers to devices that in some manner deal with enemy signals.

Countermeasures, Deception: A term for devices used to mislead the enemy; e.g., a device that produces a spurious response in an enemy radar system.

Countermeasures, Direction Finding: A term for devices that determine the directions of arrival of enemy signals.

Countermeasures, Homing: See "Countermeasures, Direction Finding".

Countermeasures, Jamming: A term for devices used to jam enemy electronic equipment.

Countermeasures, Monitoring: A term for devices whose function is passive detection and/or intelligence monitoring of enemy signals.

Countermeasures, Search: A term for devices used to detect enemy signals, but not make bearing determination.

Direction Finding: A generic term used only when a more specific term ("Countermeasures, Direction Finding" or "Navigation, Direction Finding") cannot be used.

Dummy Load: Not included in the catalog. The term refers to circuit elements that are used to simulate the loading effect of an antenna.

Early Warning: See "Search, Air".

Fire Control: A term for devices used for gun laying and associated functions, including aircraft interception (AI).

Ground Control Approach (GCA): See "Approach Control".

Ground Control Intercept (GCI): See "Search, Surface" or "Search, Air" and "Height Finding".

Guidance: A generic term used only when a more specific term ("Guidance, Command" or "Guidance, Passive Homing", for instance) cannot be used. The term refers to devices that direct and regulate pilotless carriers.

Guidance, Active Homing: A term for the devices that comprise pilotless carrier homing systems for which the equipment for illuminating and perceiving targets and for computing the control signals are all located on the pilotless carrier.

Guidance, Beamrider: A term for the devices that comprise pilotless carrier guidance systems for which the equipment for illuminating, perceiving and tracking the target are externally located; i.e., surface installations or "mother" vehicles. The pilotless carrier detects its position relative to the radar beam tracking the target and computes control signals to keep itself centered in the beam.

EQUIPMENT FUNCTION (Continued)

Guidance, Command: A term for devices that comprise pilotless carrier guidance systems in which externally derived control signals are relayed to the pilotless carrier. See also "Guidance, Quasi-Active Homing".

Guidance, Passive Homing: A term for the devices that comprise homing systems for pilotless carriers that home on a source of energy originating at the target. The detection equipment and the control-signal computing equipment are located on the pilotless carrier.

Guidance, Quasi-Active Homing: A term for the devices that comprise pilotless carrier homing systems for which the equipment for illuminating the target is located on the pilotless carrier, and the equipment for perceiving the target and for computing control signals is externally located; i.e., surface installations or "mother" vehicles. The computed control signals are relayed to the pilotless carrier.

Guidance, Semi-Active Homing: A term for the devices that comprise pilotless carrier homing systems for which the equipment for illuminating the target is externally located; i.e., surface installations or "mother" vehicles, and the equipment for perceiving the target and computing the control signals is located on the pilotless carrier.

Guidance, Surface Reference: A term for the devices that comprise pilotless carrier guidance systems which utilize the technique of comparing the relative position of the pilotless carrier to a number of fixed surface transmitters; e.g., Loran guidance.

Gun Laying: See "Fire Control".

Height Finding: A term for radar systems that are used to determine the relative height of an airborne object with respect to the antenna for the system. If the height finder is a part of a surface-controlled approach system, see "Approach Control".

IFF ("Identification, friend or foe"): A term for systems utilizing coded-beacon techniques to distinguish between friendly and unfriendly units.

Meteorological Measurement: A term for devices used to measure meteorological parameters; e.g., wind velocity or temperature.

Navigation: A generic term used only when a more specific term ("Navigation, Direction Finding" or "Navigation, Surface Reference") cannot be used.

Navigation, Direction Finding: A term for direction finding devices that are used to determine the relative bearing of a transmitter from the vehicle on which the device is located.

Navigation, Glide Path: See "Approach Control".

Navigation, Homing: See "Navigation, Direction Finding" if the device is for use by a piloted carrier. If the device is for use by a pilotless carrier, see the guidance term which is applicable; e.g., "Guidance, Active Homing".

Navigation, Localizer: See "Approach Control".

Navigation, Loran: See "Navigation, Surface Reference" if the device is used by a piloted carrier See "Guidance, Surface Reference" if the device is used by a pilotless carrier.

Navigation, Marker Beacon: See "Approach Control" if the device is a part of a landing-control system; otherwise, see "Navigation, Surface Reference".

Navigation, Radio Range: See "Navigation, Surface Reference".

Navigation, Shoran: See "Navigation, Surface Reference" if the device is for use by a piloted carrier. See "Guidance, Surface Reference" if the device is for use by a pilotless carrier.

Navigation, Surface Reference: A term for the devices comprising navigational-aid systems in which reference signals are broadcast from surface installations to be utilized by properly equipped vehicles. Examples of this type of system are Loran, Shoran, VOR, TACAN, and marker beacons, when they are not used in "Approach Control" systems or in pilotless carrier guidance systems.

Navigation, TACAN: See "Navigation, Surface Reference".

Navigation, VOR: See "Navigation, Surface Reference".

Radar Beacon: A term for devices that, upon reception of suitable interrogating signals, automatically respond with another signal.

Radar, Fighter Intercept: See "Fire Control".

Radar, Final Approach: See "Approach Control".

Relay: See "Telemetering".

Remote Control: A term for devices used in controlling remote items of equipment. See "Guidance" or a subdivision of "Guidance" for devices used in pilotless carrier guidance systems.

Search: A generic term used only when "Search, Air" or "Search, Surface" cannot be used.

Search, Air: A term for devices used for airborne-target detection and location.

Search, Surface: A term for devices used for surface-target detection and location.

Sounding: See "Meteorological Measurement".

Speed Indicator: Self-descriptive.

EQUIPMENT FUNCTION (Continued)

Tail Warning: A term for devices used specifically to detect objects approaching an airborne vehicle from the rear.

Telemetering: A term for devices which involve measuring and/or processing and transmitting data to a remote point; e.g., a system that measures fuel consumption for a pilotless carrier and transmits the information to a remote installation for evaluation.

Television: Self-descriptive.

Test: Self-descriptive.

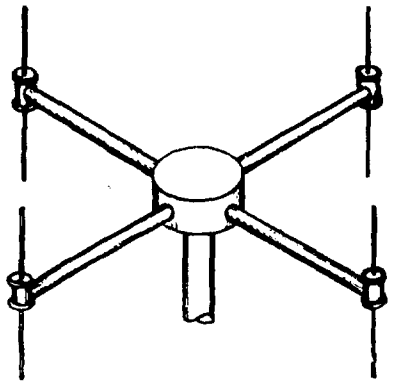
Tracking: A generic term used only when a more specific term; e.g., "Fire Control", cannot be used. The term, when used, refers to devices used for "continuously" determining the position of moving objects (usually missiles or satellites).

Training: Self-descriptive.

ANTENNA TYPES

The terminology used to identify various types of antennas is, to say the least, not standardized. To avoid confusion, the terms used in this catalog are listed and defined below. An index of antenna types will be found in the appendices.

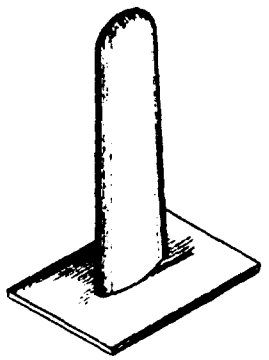
Adcock: The Adcock, in its simplest form, consists of a rotating assembly composed of a pair of vertical elements separated by one-half wavelength or less, and connected in phase opposition to produce a radiation pattern having the shape of a figure-of-eight. Variations of the basic Adcock technique include fixed crossed-Adcocks with goniometers and multielement Adcocks (4, 8, or even 16 vertical elements). The "sense" of the bearing may be resolved by an associated nondirectional antenna in the system.



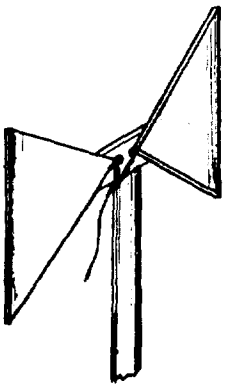
Amplitude Modulating: The amplitude modulating antenna is a narrow aperture antenna configuration consisting of a stationary, vertical element about which a reflector is rotated at high speed. The reflector may be either a multielement parasitic one or a continuous sheet. The rotating reflector amplitude modulates the received signal at the rotation frequency. The resulting rotating horizontal radiation pattern is essentially cardioid in shape.

Biconical: See "Conical".

Blade: A streamlined stub. See also "Stub".

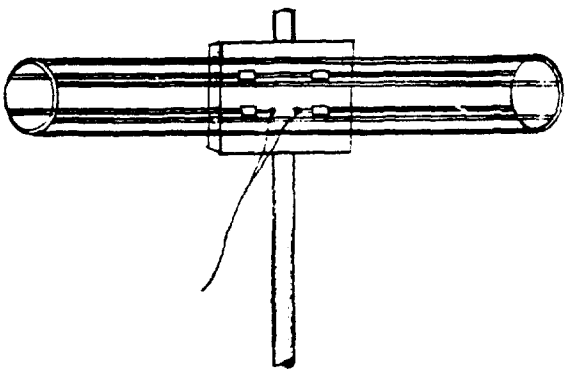


Bow Tie (or butterfly antenna): A dipole antenna having flat triangular-shaped radiating elements.

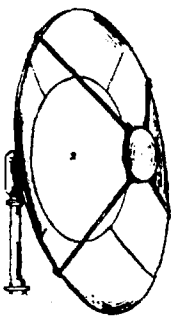


Broadside Array: An antenna array whose maximum radiation is approximately perpendicular to the axis or plane of the array.

Cage Dipole: A broadband dipole in which the radiating elements are arranged in a cylindrical fashion and connected at their ends (i.e., an extension of the folded dipole principle) with one of the elements fed at its center.



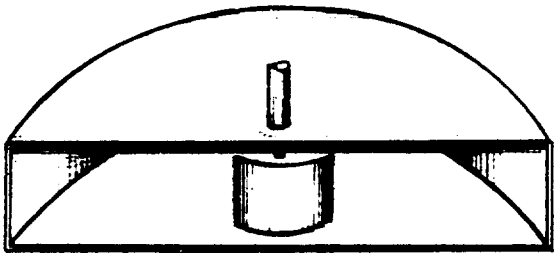
Cassegrainian: An antenna consisting of a small convex hyperboloidal reflector mounted in front of a large concave paraboloidal reflector with the primary feed located behind the paraboloidal reflector. This arrangement effectively increases the focal length of the paraboloidal reflector.



ANTENNA TYPES (Continued)

Cavity: Refers to a cavity-backed slot. See "Slot".

Cheese: A parabolic-cylinder reflector enclosed by two parallel plates mounted perpendicular to the cylinder and spaced so that propagation in more than one mode is possible in the desired direction of polarization. See also "Pillbox" antenna.

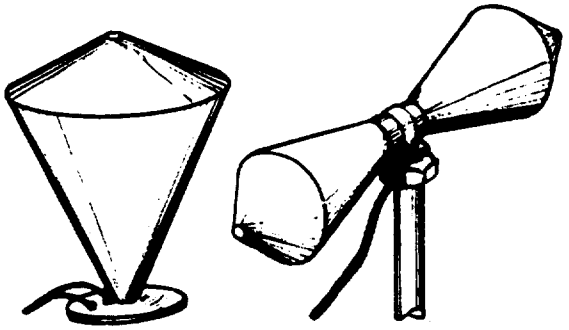


Circular Array: An antenna array composed of vertical radiators arranged in concentric circles. Directivity can be controlled by space phasing of the elements or by adjusting the phase of the excitation currents.

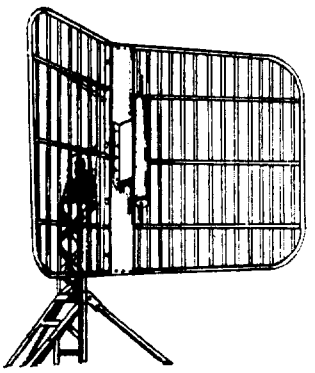
Coaxial Dipole: See dipole.

Collinear Array: An antenna array in which the elements of the array are arranged end-to-end along the same line.

Conical: A broadband antenna in which the driven element(s) is conical in shape. Many varieties of conical antennas exist; examples are discone, collinear biconical, and "V" biconical antennas.

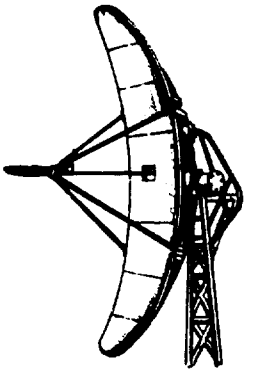


Corner Reflector: A reflector consisting of flat conducting sheets (or grids of parallel conductors) intersecting at an angle or corner. Dihedral corners are commonly used for transmitting and receiving; trihedral and tetrahedral corners are frequently used to increase radar cross sections.



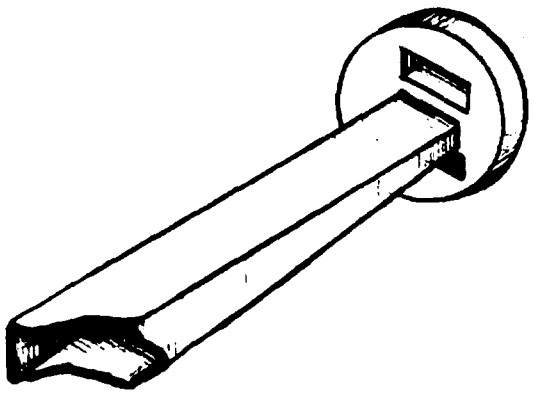
Counterpoise: A network of wires extending outward from the base of an antenna and suspended above and usually insulated from the earth. The antenna is "grounded" to the counterpoise (artificial ground) instead of the earth (used especially when the antenna is located over ground of poor conductivity). When soil of relatively good conductivity is available, a similar arrangement of wires is sometimes buried beneath the antenna to improve the ground connection.

Cut Paraboloidal Reflector: A reflector formed in the shape of a section cut from a paraboloid of revolution. The term "orange peel" is often applied to this type of reflector.

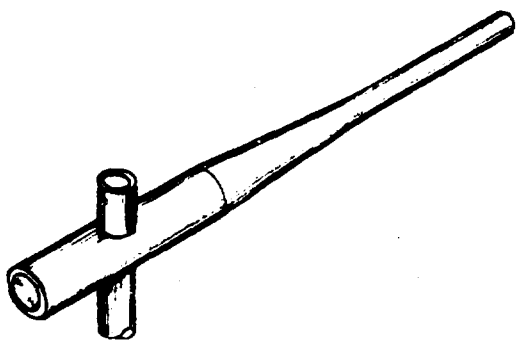


ANTENNA TYPES (Continued)

Cutler: The Cutler feed is a waveguide dual-aperture rear feed which essentially splits the energy in the waveguide into two branches that are folded back on themselves so that the energy is radiated towards the reflector from two slots.

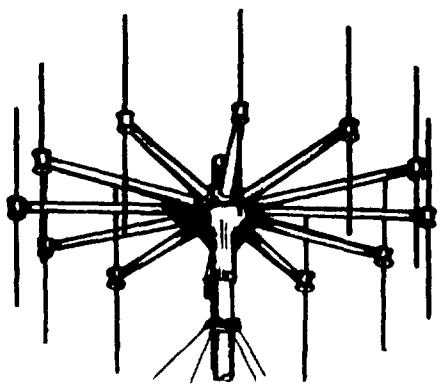


Dielectric Rod: An end-fire directional dielectric antenna consisting of a dielectric rod (usually tapered) fed from a section of waveguide.



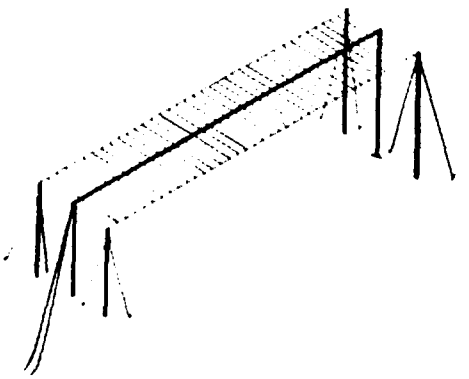
Dipole (or doublet): A linear radiator, usually fed at the center, producing a maximum of radiation in a plane normal to its axis.

Doppler: An antenna which possesses the equivalent of a moving antenna of some form of simulation of this antenna motion by the rapid sequential switching of fixed antenna elements. The Doppler is usually a medium aperture antenna (1 to 5λ).



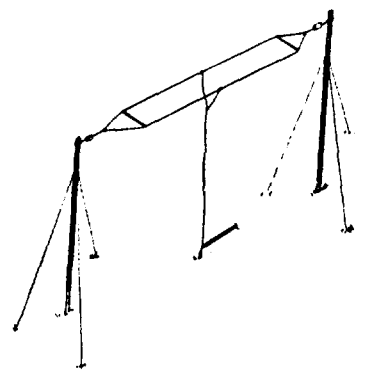
End-Fire Array: An antenna array whose maximum radiation is approximately along the axis of the array.

Fishbone: An antenna composed of a series of coplanar elements arranged in collinear pairs and loosely coupled to a balanced transmission line.



Flat-Screen Reflector: A flat reflecting surface; the surface may be of the continuous, slotted, or mesh type.

Flat Top: The flat-top antenna is a low-frequency antenna utilizing a folded top to increase the effective length of the vertical radiator from which the principle radiation occurs.

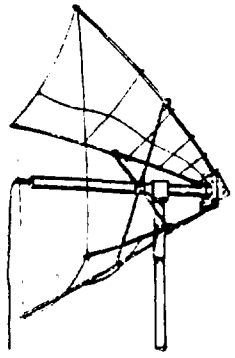


ANTENNA TYPES (Continued)

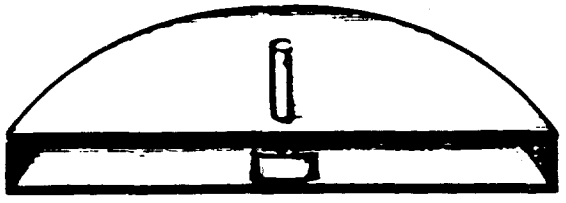
tion generated by the rotation of a parabola around its axis. The reflecting surface may be solid, perforated, mesh, or slatted.

Parasitic Array: An array consisting of a driven element(s) and an element(s) that, though not directly connected to the antenna feed line, affects the radiation pattern of the antenna.

Periodic Structure: Broadband (frequency range about 10 to 1 or greater) antenna structures for which the input impedance and radiation patterns vary periodically with frequency, and the variation of electrical characteristics is negligible over a single period. An example of this type is the logarithmic periodic antenna.



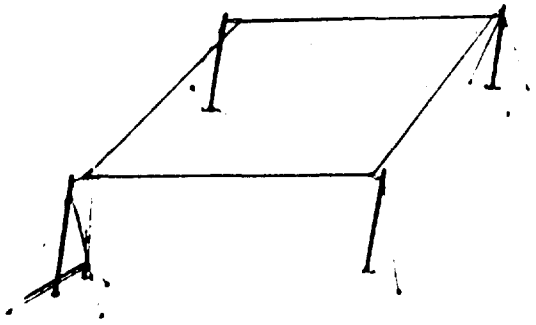
Pillbox: A parabolic-cylinder reflector enclosed by two parallel plates mounted perpendicular to the cylinder and spaced so that only one mode of propagation is possible in the desired direction of polarization. See also "Cheese" antenna.



Probe: An electrically small antenna used to explore radiation fields.

Rectangular Array: A directive array of vertical elements arranged in rectangular fashion.

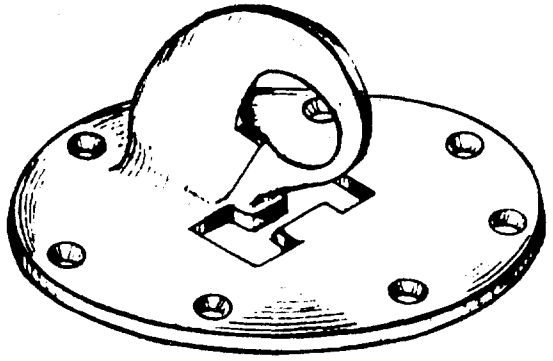
Rhombic: A long wire type antenna in which the radiating elements comprise the sides of a rhombus. The rhombic antenna may be properly terminated (nonresonant and unidirectional) or unterminated (resonant and bidirectional).



Rhombic, Multiwire: A rhombic antenna which instead of having a single conductor for each leg has several to improve impedance characteristics.

Rod: An electrically short radiating element (often 1/4 λ long), having a relatively large length-to-circumference ratio, that is designed to mount on an external ground plane.

Scimitar: A broadband antenna that looks like the blade of a scimitar.

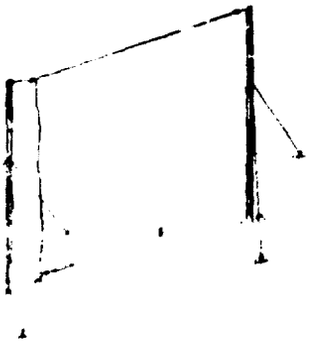


Sleeve Dipole: The sleeve dipole antenna is a balanced form of the stub sleeve antenna (i.e., the image of the antenna is replaced by a real antenna of identical configuration and the ground plane is removed). See also Stub Sleeve.

ANTENNA TYPES (Continued)

free space. The horn may be of a number of types; e.g., sectorial horn-flared in one plane, pyramidal horn-flared in both planes.

Inverted "L": An antenna, used primarily at low frequencies, that utilizes the technique of bending a portion of the radiating element into a horizontal position to keep the current maximum on the vertical portion as high as possible, which increases the radiation efficiency.

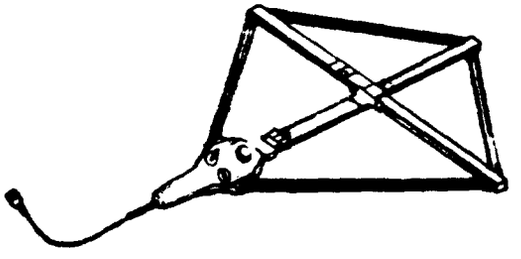


Inverted "U": A type of doublet antenna used primarily at low frequencies. The ends are folded down to increase the radiation efficiency. Primary radiation is from the horizontal portion of the doublet.

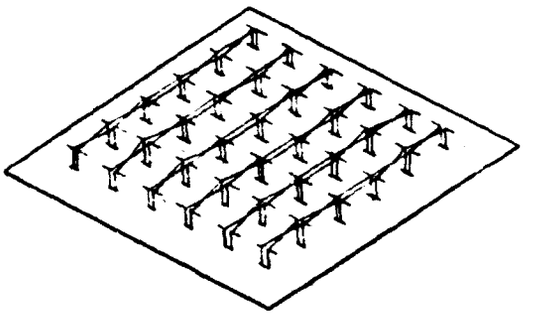
Lens: A microwave device that focuses electromagnetic energy by controlling the electrical path length of the energy through the lens. Lenses may take several forms; e.g., dielectric, artificial dielectric, metal plate, and geodesic lens.

Long Wire: A linear antenna of considerable length in comparison with the operating wavelength (e.g., fixed wire or trailing wire).

Loop: An antenna consisting of one or more complete turns of conductor that form a closed circuit in which a circulatory current flows. The loop may be wound in several shapes (e.g., circular, square, triangular) and may be shielded.



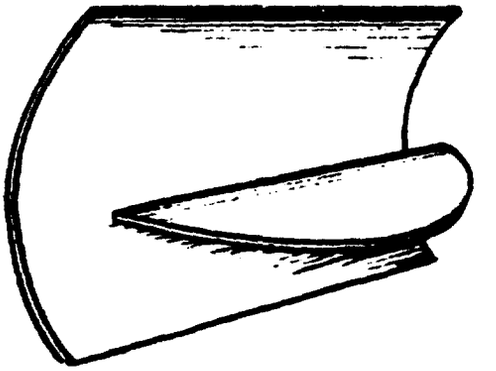
Mattress: A planar array of dipoles backed by a flat reflecting surface. The reflecting surface may be continuous or made up of discrete elements (e.g., slats, rods, or mesh). This type of antenna is sometimes called a billboard antenna or a bedspring array.



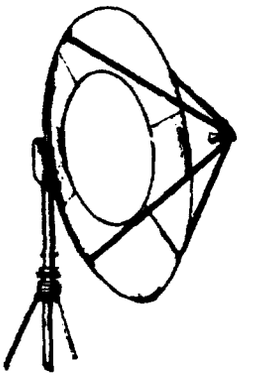
Monopole: A ground-plane analogy of a dipole. This term is assigned only when more specific identification (e.g., "Tower", "Whip", or "Rod") cannot be determined.

Orange Peel: See "Cut Paraboloidal".

Parabolic-Cylinder Reflector: A reflector whose reflecting surface is in the form of a portion of a surface generated by moving a parabola perpendicular to the plane in which it lies. The reflecting surface may be solid, perforated, mesh, or slatted.



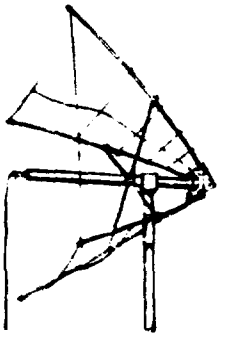
Paraboloidal Reflector: A reflector whose reflecting surface is in the form of a surface of revolu-



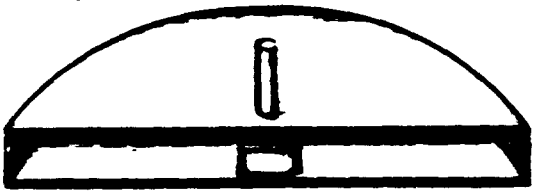
tion generated by the rotation of a parabola around its axis. The reflecting surface may be solid, perforated, mesh, or slatted.

Parasitic Array: An array consisting of a driven element(s) and an element(s) that, though not directly connected to the antenna feed line, affects the radiation pattern of the antenna.

Periodic Structure: Broadband (frequency range about 10 to 1 or greater) antenna structures for which the input impedance and radiation patterns vary periodically with frequency, and the variation of electrical characteristics is negligible over a single period. An example of this type is the logarithmic periodic antenna.



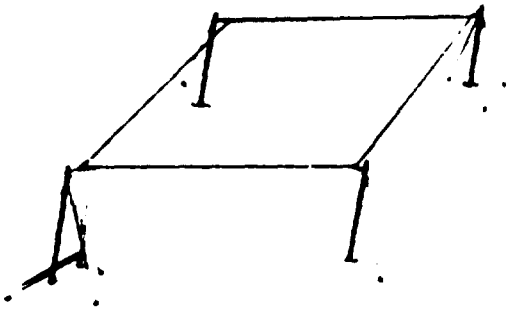
Pillbox: A parabolic-cylinder reflector enclosed by two parallel plates mounted perpendicular to the cylinder and spaced so that only one mode of propagation is possible in the desired direction of polarization. See also "Cheese" antenna.



Probe: An electrically small antenna used to explore radiation fields.

Rectangular Array: A directive array of vertical elements arranged in rectangular fashion.

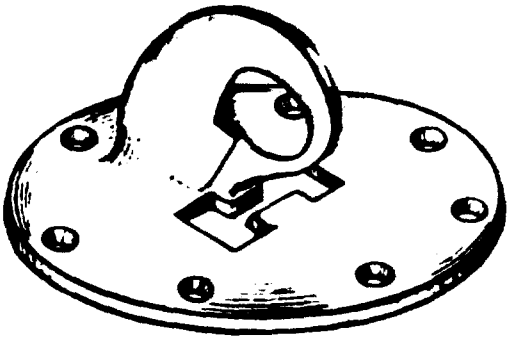
Rhombic: A long wire type antenna in which the radiating elements comprise the sides of a rhombus. The rhombic antenna may be properly terminated (nonresonant and unidirectional) or unterminated (resonant and bidirectional).



Rhombic, Multiwire: A rhombic antenna which instead of having a single conductor for each leg has several to improve impedance characteristics.

Rod: An electrically short radiating element (often 1/4 λ long), having a relatively large length-to-circumference ratio, that is designed to mount on an external ground plane.

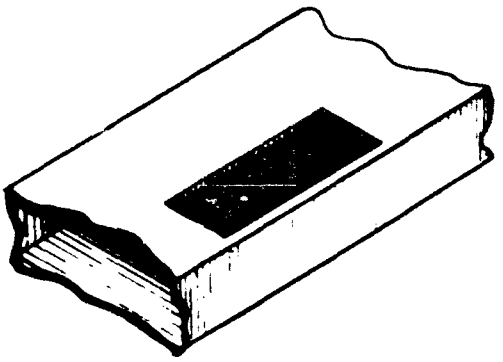
Scimitar: A broadband antenna that looks like the blade of a scimitar.



Sleeve Dipole: The sleeve dipole antenna is a balanced form of the stub sleeve antenna (i.e., the image of the antenna is replaced by a real antenna of identical configuration and the ground plane is removed). See also Stub Sleeve.

ANTENNA TYPES (Continued)

Slot: A radiating element formed by cutting a slot in a conducting surface.

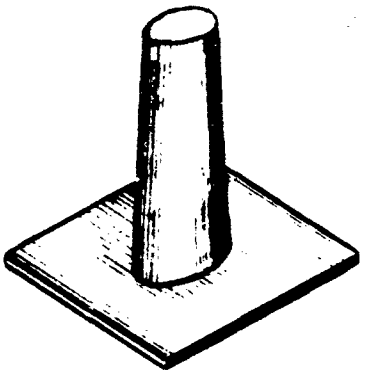


Spiral: A broadband (frequency range about 10 to 1 or greater) antenna named for its geometrical configuration.

Stacked Array: The term, stacked array, refers to the general category of antenna arrays where the radiating elements (e.g., slots, dipoles, turnstile, etc.) are stacked on or near but not collinearly along the axis of the array. The stacked array, in general, produces a beam that is omnidirectional in the plane perpendicular to the axis of the array.

Structural: An antenna which is an integral part of the structure of an aircraft; e.g., a section of the vertical stabilizer of an aircraft that is insulated from the remaining portion and fed by a coaxial cable.

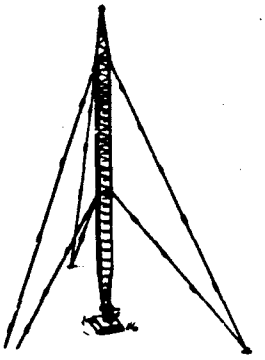
Stub: An electrically short radiating element (often 1/4 λ long), having a relatively small length to circumference ratio, that is designed to mount on an external ground plane (e.g., 1/4 λ stub mounted on an aircraft, using the skin of the aircraft as a ground plane).



Stub Sleeve: The stub sleeve antenna is a type of unbalanced antenna which mounts over a ground plane and incorporates a conducting collar on tube (i.e., the sleeve), the exterior of which is utilized as a radiating element and the interior as the outer conductor of the coaxial feed line. The length of the sleeve may be any portion of the total length of the antenna.

Tail Cap: See "Structural".

Tower: A low-frequency antenna constructed in the form of a tower. The tower itself is the radiating element.



Turnstile: An antenna consisting of two dipoles mounted perpendicular to each other with their axes intersecting at their mid-points. The dipoles are usually fed by currents that are equal in magnitude and in phase quadrature.

"V": An arrangement of conductors in the shape of a V with the two legs of the V being fed equal amounts of power of opposite phase. The "V" antenna may be properly terminated (nonresonant and unidirectional) or unterminated (resonant and bidirectional).

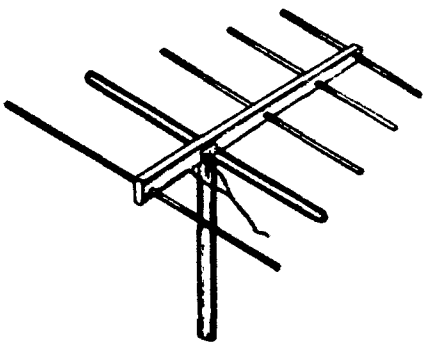
ANTENNA TYPES (Continued)

Whip: A simple (usually vertical) antenna consisting of a slender whip-like conductor, often made adjustable and/or retractable, mounted on an insulator and usually fed at or near its base.

Wing Cap: See "Structural".

Wullenweber Array: A multipurpose antenna in which the equivalent pattern of a mechanically rotating planar array of elements is obtained by means of properly phasing and switching a number of fixed antenna elements symmetrically arranged in a circle. The array includes a circle of discrete reflectors or a continuous reflector placed within the antenna ring. The Wullenweber array is usually a wide aperture (greater than 5 λ) antenna.

Yagi: A parasitic array consisting of a driven element and a number of parallel parasitic elements; normally the Yagi antenna consists of one reflector, one driven element, and one or more directors.



ANTENNA AB-871/U

FREQUENCY: VHF and UHF bands, 88 - 400 mc.

TYPE: Dipole.

BEAM DATA:
Polarization - Adjustable to any angle from horizontal to vertical.

TUNING/MATCHING DEVICES: The antenna has a balun with an adjustable shorting bar. A frequency-calibrated measuring tape is furnished for determining the lengths of dipole elements and the position of the shorting bar.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-47A. Equipment function - test.

MANUFACTURER: Stoddart Aircraft Radio Co., Inc.

REFERENCE:
NAVSHIPS 93147.

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ANTENNA for AN/SPN-2

FREQUENCY: UHF band, 1500 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna consists of a paraboloidal reflector 48 inches in diameter and 14 inches deep. The AN/SPN-2 uses two of these antennas. They are mounted at each end of the AN/SPN-3 antenna and 5 feet from it. The reflectors are oriented so that they point 10° to the right of dead astern and are elevated 5°.

BEAM DATA:
Half-power beamwidth - Vertical - 12°.
Horizontal - 17°.

INSTALLATION: Shipboard, aircraft carriers, mounted 5 feet below the flight deck.

ASSOCIATED EQUIPMENT: Radar set AN/SPN-2. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA for AN/SPS-16(XN-1)

FREQUENCY: UHF band, 1250 - 1350 mc.

TYPE: Cut paraboloidal reflector.

DESCRIPTION: This antenna is used for both radar and IFF transmission and reception. Its approximate overall dimensions are 193 by 101 by 108 inches.

BEAM DATA:
Half-power beamwidth - Vertical - 13°.
Horizontal - 4°.

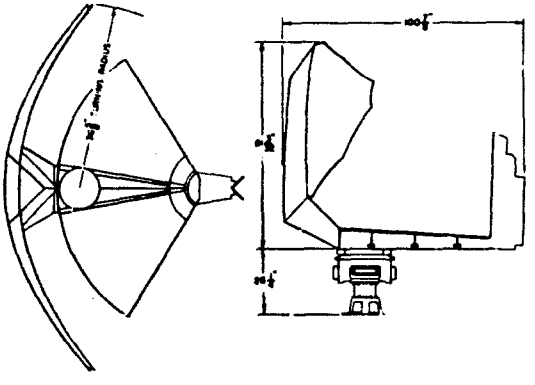
SCAN DATA: The antenna can be rotated either manually at 0 to 2-1/2 revolutions per minute or automatically at 5 to 15 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar set AN/SPS-16. Equipment function - search and IFF.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna for AN/SPS-16(XN-1)

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ANTENNA for AN/SPS-35

FREQUENCY: SHF band, 5500 - 5600 mc.

TYPE: Cut paraboloidal reflector.

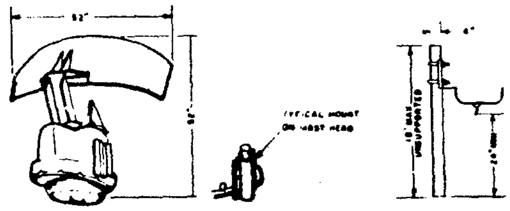
DESCRIPTION: The antenna, transmitter, and receiver of Radar Set AN/SPS-35 are an integral unit. The antenna consists of a cut paraboloidal reflector probably fed by a flared waveguide horn feed. The assembly is 52 inches high with a 52-inch swing circle. The total weight of the unit is 140 pounds.

INSTALLATION: Shipboard, small vessels.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPS-35 and AN/SPN-21. Equipment function - search, surface (navigation).

MISCELLANEOUS: Antenna-Receiver-Transmitter AS-923/SPS-35 is apparently another unit used with Radar Set AN/SPS-35.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna for AN/SPS-35

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ANTENNA GROUP AN/SRA-3

MAJOR COMPONENTS: Antenna AT-252/SR and Antenna Coupler CU-226/SR.

FREQUENCY: HF and VHF bands, 20-50 mc.

TYPE: Whip.

DESCRIPTION: AT-252/SR is a whip antenna used for receiving or transmitting. It is not separable or collapsible, but it may be cut to various lengths for use at particular frequencies. The antenna has an input impedance of 50 ohms and is fed by RG-8/U or RG-10/U coaxial cable. The antenna is mounted by means of holes through a circular base plate and is supported and insulated by a glazed ceramic bowl attached to the baseplate. The maximum diameter of the whip is about 1 inch. The antenna weighs 25 pounds.

TUNING/MATCHING DEVICES: The antenna length may be cut for a particular range of frequencies as follows: 20 - 28 mc ... 125 inches; 27 - 40 mc ... 89 inches; 39 - 50 mc ... 58 inches.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: RF Monitor AN/URM-50. Equipment function - probably test.
Radio Sets SCR-300, SCR-508, SCR-510, SCR-608, SCR-610, and SCR-628. Equipment function - communications.

MISCELLANEOUS: AT-252/SR is also a part of Antenna Group AN/SRA-17(XG-1).

COGNIZANT AGENCY: U. S. Navy.

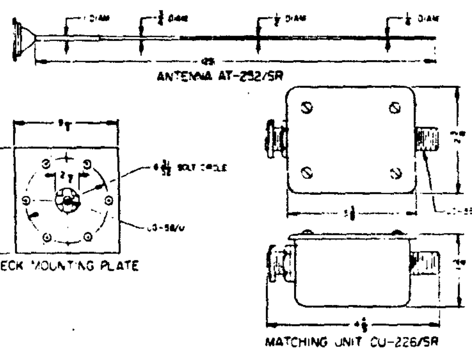
MANUFACTURERS: White Tuning Corporation, Navy contract NObsr-52582; Engineering and Research Corporation; National Company, Incorporated.

STOCK NUMBERS: AN/SRA-3 ... Federal Stock Number N 5985-254-7185; AT-252/SR ... Federal Stock Number N 5985-254-7184, and U. S. Navy N 16-A-54463-5150.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959) CONFIDENTIAL.

2) R. Fulper, Jr., et al., The Communication Antenna System on the USS Northampton (ECLC-1), Rpt. No. 4641. Washington, D.C.: Naval Research Laboratory, (Feb. 10, 1956). ASTIA Rpt. No. AD 88101. CONFIDENTIAL.

3) U. S. Department of Defense Nomenclature Card.



AN/SRA-3

ANTENNA AN/SRA-10 (XG-1)

FREQUENCY: HF band, 4 - 27 mc.

TYPE: Monopole.

DESCRIPTION: The antenna is a small, top-loaded monopole antenna supported by a standard NT-61475 twelve-inch deck insulator. The top-loading disk is 12 inches in diameter and mounts horizontally. An 18-inch ground plane is installed beneath the insulator when the antenna is mounted so that no natural ground plane, such as a metal deck, exists. The antenna is fed by RG-11/U transmission line. The antenna is 22 inches tall and 18 inches in diameter (including the ground plane). It weighs 61.5 pounds.

TUNING/MATCHING DEVICES: A remote tuner is connected between the antenna and the receiver. It is probably located at the operating position.

INSTALLATION: Shipboard.

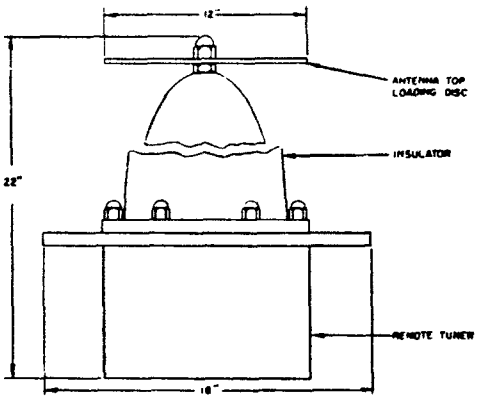
ASSOCIATED EQUIPMENT: The antenna is used with modified RBC receivers. Equipment function - communications.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) R. Fulper and others, The Communication Antenna System on the USS Northampton (ECLC-1), Report No. 4641. Washington, D. C.: Naval Research Laboratory, (Feb. 10, 1956), ASTIA Report No. AD 88101. CONFIDENTIAL.

3) U. S. Navy Bureau of Ships, Instruction Book for Miniature Receiving Antenna AN/SRA-10 (XG-1), NAVSHIPS 91555, (Nov. 1, 1951). UNCLASSIFIED.



AN/SRA-10(XG-1)

ANTENNA GROUP AN/SRA-17 (XG-1)

MAJOR COMPONENTS: Antenna AT-252/SR, antenna tuner, and antenna control group.

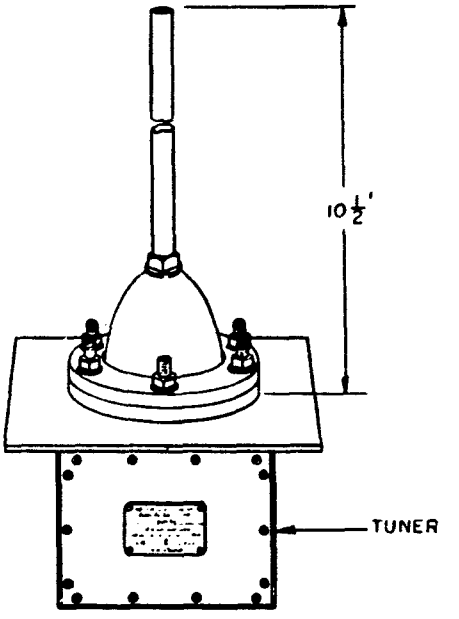
FREQUENCY: VLF, LF, and MF bands, 0.014 - 0.6 mc; HF and VHF bands, 20 - 50 mc. (See Miscellaneous).

TYPE: Whip.

DESCRIPTION: Antenna AT-252/SR is a 10-1/2-foot vertical, stainless-steel whip. (See Antenna Group AN/SRA-3). The antenna is fed by RG-12/U transmission line connected through the antenna tuner. It is advisable to keep the cable length less than 150 feet, but satisfactory performance will be obtained with lengths up to 300 feet. The total weight (including the tuner) is 22-1/2 pounds.

The antenna is mounted on a twelve-inch-square steel plate which forms the top of the r-f tuner housing. For optimum performance the antenna should be mounted in the clear near the top of a mast, king post, stack, or other vertical portion of the superstructure. The antenna control is mounted in the room with the radio receiver being used. This unit provides tuning of the antenna from the operating position.

TUNING/MATCHING DEVICES: An antenna tuner is part of the antenna equipment.



AN/SRA-17(XG-1)

INSTALLATION: Shipboard.

MISCELLANEOUS: At the lower band of frequencies listed above (0.014 - 0.6 mc) the antenna is a very small fraction of a wavelength. The lower band of frequencies may be in error, or as indicated by the nomenclature, this antenna group may be experimental in nature. The upper band of frequencies listed (20 - 50 mc) was taken from other references pertaining to AT-252/SR. This frequency range seems reasonable in view of the size of the antenna.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL

2) NAVSHIPS 92299.

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ANTENNA GROUP AN/UPA-22(*)

MAJOR COMPONENTS: 1 AT-352/UPA-22(*) antenna, 1 AB-447/UP antenna pedestal, 1 AM-1369/UP electronic control, 1 MX-1263/UPA test probe, 1 PU-343/U motor-generator, 1 F-300/UPA-22(*) low-pass filter, and 1 F-301/UPA-22(*) low-pass filter.

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Array of slots.

DESCRIPTION: Antenna AT-352/UPA-22(*) consists of an array of twelve slot radiators. It is 9-1/4 inches long and 2-57/64 inches wide. The antenna is made of aluminum and is enclosed in a watertight case and is mounted by means of four 3/8-inch, 24-thread holes on 6-1/2-inch by 2-1/8-inch mounting centers. It is used with a 52-ohm coaxial transmission line.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Various radar sets. Equipment function - IFF.

MISCELLANEOUS: AN/UPA-22(*) denotes AN/UPA-22 and AN/UPA-22A. The two models are interchangeable. AN/UPA-22A rotates at a higher speed than AN/UPA-22. AT-352/UPA-22 is also part of Antenna Group AN/GPA-3.

COGNIZANT AGENCY: U. S. Navy, code 820 and 823.

MANUFACTURER: AN/UPA-22 ... Hazeltine Electronics Corp., contract NObsr 59595; AT-352/UPA-22 ... Memco, contracts NObsr 49188 and NObsr 52331.

REFERENCES:

1) Memco Drawing AE1489J (AT-352/UPA-22).

2) BuShips Specification MIL-A-15673A (AN/UPA-22).

3) BuShips Specification A-46 (AT-352/UPA-22).

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AN/UPA-23(*)

MAJOR COMPONENTS: 1 AT-353(*)/UPA-23 antenna, 1 AB-447/UP antenna pedestal, 1 AM-1369/UP electronic control, 1 MX-1263/UPA test probe, 1 PU-343/U motor-generator, 1 F-299/UPA-23(*) filter and 1 F-301/UP filter.

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Array of slots.

DESCRIPTION: Antenna AT-353(*)/UPA-23 consists of an array of six slot radiators. It is 9-1/4 inches long and 2-57/64 inches wide. The antenna is made of aluminum and is enclosed in a watertight case. It is mounted by means of four 3/8-inch, 24-thread holes on 6-1/2-inch by 2-1/8-inch mounting centers. A 52-ohm coaxial line provides the feed.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Various radar sets. Equipment function - IFF.

MISCELLANEOUS: AN/UPA-23(*) denotes AN/UPA-23 and AN/UPA-23A. The two models are interchangeable. AN/UPA-23A rotates at a higher speed than AN/UPA-23.

COGNIZANT AGENCY: U. S. Navy, code 820.

MANUFACTURERS: AN/UPA-23 ... Hazeltine Electronics Corp., contract NObsr-59595; AT-353/UPA-23 ... Memco, contracts NObsr-49188 and NObsr-52331.

REFERENCES:

1) Memco Drawing AE1488E (AT-353/UPA-23).

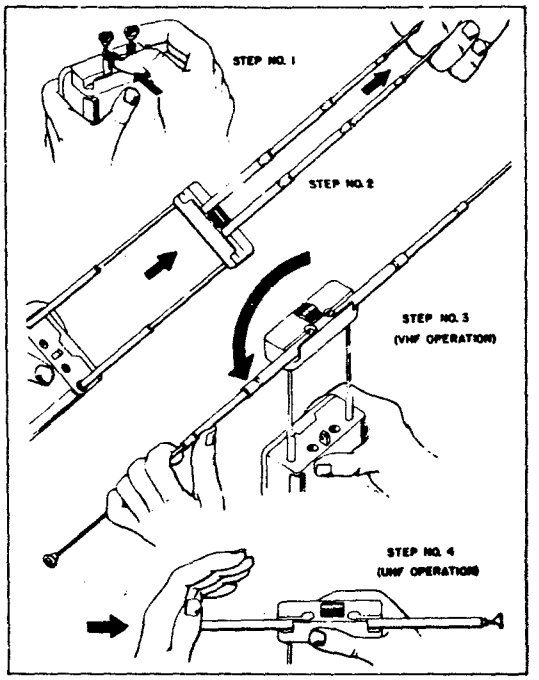
2) BuShips Specification MIL-A-15673A (AN/UPA-23).

3) BuShips Specification A-46 (AT-353/UPA-23).

4) U. S. Department of Defense Nomenclature Card.

ANTENNA for AN/URC-4

FREQUENCY: VHF band, 120 - 130 mc and 240 - 260 mc.



Antenna for AN/URC-4

TYPE: Dipole.

DESCRIPTION: The antenna is a telescopic dipole which is an integral part of Radio Set AN/URC-4.

ASSOCIATED EQUIPMENT: Radio Set AN/URC-4. Equipment function - communications for rescue operations.

REFERENCE:
U. S. Air Force, Handbook Operation and Service Instructions for Radio Set AN/URC-4, TO 12R2-2URC4-1, (Aug. 10, 1950 - revised Dec. 15, 1958). UNCLASSIFIED.

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ANTENNA for AN/URC-11

FREQUENCY: VHF band, 238 - 263 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a nine-section telescopic whip which is an integral part of Radio Set AN/URC-11.

ASSOCIATED EQUIPMENT: Radio Set AN/URC-11. Equipment function - communication for rescue operations.

REFERENCE:
U. S. Air Force, Operation Instructions for Radio Set AN/URC-11, Technical Manual, TO 12R2 2URC11-1, (Aug. 15, 1959). UNCLASSIFIED.

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ANTENNA AN-44-A

FREQUENCY: MF band, 1.7 to 2.75 mc.

TYPE: Vertical whip.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Set SCR-281-(). Equipment function - communication.

STOCK NUMBER: Probably Signal Corps 2A244A.

REFERENCES:
1) War Department, Radio Sets SCR-281-A,-B, and -D, Technical Manual, TM 11-244, (April 1945). UNCLASSIFIED.

2) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A TO 16-1A-2, (Aug. 1950). CONFIDENTIAL. MODIFIED HANDLING.

ANTENNA ASSEMBLY AN-154

FREQUENCY: Additional information is available in the confidential document listed below as Reference 1).

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a three-element array of vertical dipoles mounted in a horizontal line 18 inches in front of a flat reflector. The dipoles are spaced 36 inches apart. The reflector, which is 90 inches by 40 inches, is constructed of a tubular frame with vertical wires spaced 2-1/2 inches apart. Interconnecting cables, a junction box, and a matching section are mounted on the back of the reflector. The antenna weighs approximately 40 pounds.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Additional information is available in the confidential document listed below as Reference 1).

ASSOCIATED EQUIPMENT: Radio Equipments RC-184 and RC-145-A, and Radio Sets SCR-545-A and SCR-584. See Reference 1).

COGNIZANT AGENCY: CESL-1031.

STOCK NUMBER: Probably Signal Corps 2A275-154.

REFERENCES:
1) Department of the Army, Ground Rader and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-23/AP

MAJOR COMPONENTS: Dipole, parasitic reflector, connector, and mounting bracket.

FREQUENCY: UHF, SHF bands, 1500 - 5200 mc; VSWR < 5 from 2400 to 3400 mc on 51-ohm coaxial cable.

TYPE: Dipole, parasitic array.

DESCRIPTION: The array consists of a dipole, parasitic reflector, connector, and mounting bracket. The connector fits Navy Type 49268 r-f plug. The dipole is 1/2 wavelength long and has an input impedance of 51-ohms. Overall dimensions are approximately 3-13/16 inches by 2-3/16 inches by 1-1/8 inches.

BEAM DATA:
Polarization - Same as that of radar set under test (linear).

ASSOCIATED EQUIPMENT: Phantom Target TS-48/AP, Detector Amplifier Assembly AN/UPA-1A, Wavemeter Test Set TS-117/GP. Equipment function - test.

MISCELLANEOUS: Status - obsolete.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Marathon Co., procurement contract NXsa-2589; Hazeltine Electronics Corp, procurement contract NOsr-39332.

STOCK NUMBER: Federal Stock Number 5985-093-5619.

REFERENCES:
1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.
2) Signal Corps drawing SC-D-12021.
3) MIT Radiation Laboratory Specification and drawing B-2657A.

ANTENNA ASSEMBLY AS-37/SPT-4

FREQUENCY: UHF band, 340-400 mc (rated frequency, 375 mc); VSWR < 2 between 340 and 400 mc on a 50-ohm line.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a dipole attached to and fed by an unbalanced-to-balanced conversion unit. The mounting base is shaped so as to be easily fastened to a mast and at the same time to act as an untuned reflector. The thin dipole and unbalanced-to-balanced conversion unit produce a narrow frequency band and a somewhat unsymmetrical radiation pattern. The dipole is mounted with the radiating elements vertical so that vertical polarization results. The overall antenna is 19-1/2 inches high, 12-3/4 inches long, and 4-3/4 inches wide; it weighs 10-1/2 pounds.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPT-4. Equipment function - countermeasures, jamming.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Delco Radio Division, Navy contract NXs-29022.

STOCK NUMBER: Federal Stock Number N 5985-369-5390.

REFERENCES:

1) Andrew W. Alford, Antennas for RCM, 411-100. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Nov. 1, 1944). UNCLASSIFIED.

2) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

ANTENNA ASSEMBLY AS-45(*)/APR-6

FREQUENCY: SHF band, 3000 - 6000 mc; VSWR < 5.

TYPE: Dual waveguide horn.

DESCRIPTION: The antenna is a Y-shpaed antenna which is formed by the branching of a single waveguide into two sections. The two sections bend over large radii so that the horns on the ends of the waveguides point in opposite directions. Each horn is turned so it can receive vertical and horizontal polarization. The waveguide portion of the antenna feeding the horns is RG-49U. The antenna has an impedance-matching section in its base for adapting the RG-49U waveguides to the RG-48U waveguide feed system. The length of the RG-48U waveguide feed should not exceed 200 feet. The antenna is 68-1/2 inches wide and 36 inches high. It weighs 60 pounds.

BEAM DATA:
Gain - 15 db; front-to-back ratio: 20:1.
Polarization - Horizontal, vertical, or both.

INSTALLATION: Shipboard, remote from S-band radars.

ASSOCIATED EQUIPMENT: Radar Set AN/APR-6, Radar Receiver AN/SPR-2. Equipment function - countermeasures.

MISCELLANEOUS: AS-45(*)/APR-6 denotes both the unlettered and A models. The two models are similar except that the A model includes a removable horn and waveguide adaptor section. Several of these antennas were issued by Galvin with the nomenclature AS-45/SPR-2. According to Reference 1), AS-45/APR-6 is obsolete.

COGNIZANT AGENCY: ARL and U. S. Navy.

MANUFACTURERS: Galvin Manufacturing Corporation, Navy contracts NXss-27558, NXsr-84986, and NXsr-87790; American Brass Company, Army contract PR-44198.

STOCK NUMBERS: Signal Corps 21264-45, and Federal Stock Number F 5985-257-3211.

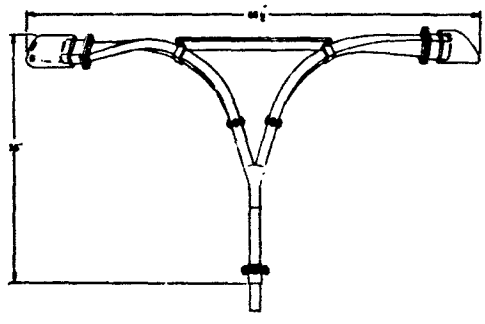
REFERENCES:

1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (Mar. 14, 1957). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

4) U. S. Department of Defense Nomenclature Card.



AS-45(*)/APR-6

ANTENNA ASSEMBLY AS-45/SPR-2

See AS-45(*)/APR-6.

ANTENNA ASSEMBLY AS-49/TPT-1

FREQUENCY: VHF band, 90-150 mc; VSWR<2 on 50-ohm coaxial cable.

TYPE: Dual corner reflector fed by a pair of cylindrical dipoles.

DESCRIPTION: The antenna is a dual corner reflecting W-shaped screen fed by two cylindrical dipoles. The dipoles may be moved with respect to the screen and clamped rigidly in any desired position. The overall reflector is approximately 72 inches high, 134 inches long, and 50 inches deep. The antenna weighs 208 pounds.

BEAM DATA:
Gain - 10 to 12 db over a half-wave dipole.
Half-power beamwidth - See beam patterns.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on the mounting position.

TUNING/MATCHING DEVICES: A balun is used for impedance matching.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: AN/TPT-1, AN/APT-1, AN/APT-3, and AN/ART-3. Equipment function - countermeasures, jamming; or communications.

MISCELLANEOUS: AS-49/TPT-1 is similar to AS-50/TPT-1.

COGNIZANT AGENCY: RRL, Harvard University.

MANUFACTURER: American Moninger, procurement contract 493-MPD-45.

REFERENCES:
1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-50/TPT-1

FREQUENCY: VHF band, 140 - 210 mc.

ASSOCIATED EQUIPMENT: AN/APT-1, AM-18/APT. Equipment function - communications; or countermeasures, jamming.

MISCELLANEOUS: The AS-50/TPT-1 is similar to AS-49/TPT-1 but is designed to operate at a higher frequency.

REFERENCES:
1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-56/SPR-1

FREQUENCY: VHF band, 75 - 300 mc; VSWR < 5 on 50-ohm line.

TYPE: Dipole.

DESCRIPTION: The antenna consists of two sheet-metal cylinders, separated electrically but joined mechanically by a wooden cylinder and clamped to a wooden block. The antenna is supported by a one-inch steel tube about 28 inches high. A balun conversion unit is used to match the balanced antenna to a 50-ohm unbalanced line. The antenna is 66 inches wide and 33-3/4 inches high. The diameter of the dipole elements is 4 inches. The assembly weighs 31 pounds.

BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1, AN/APR-4, SCR-587 or similar equipment. Equipment function - probably countermeasures, search.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Galvin Manufacturing Company, Navy contract number NXsa-27923 and NXsa-31230.

STOCK NUMBER: Federal Stock Number N5985-254-7128.

REFERENCES:
1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-57/SPR-1

FREQUENCY: VHF and UHF bands, 225 - 1000 mc; VSWR < 5 on 50-ohm line.

TYPE: Dipole.

DESCRIPTION: The antenna is a balanced-dipole receiving antenna. Each element of the dipole is in the form of two cones which are joined at their bases and the dipole is fed at the center (at the junction of two apexes). The elements are made of sheet metal and are held in place by a cylindrical plexiglass nacelle. The dipole is supported by a two-inch steel tube which is attached to a flat plate. A balun conversion unit is used to match the balanced antenna to a 50-ohm unbalanced line. The antenna is 20-7/8 inches high and 18 inches wide; it weighs 22-1/4 pounds.

BEAM DATA:
Beam type - Similar to typical dipole pattern.
Polarization - Linear, depends on orientation of antenna.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1, AN/APR-4, SCR-587, or similar equipment. Equipment function - probably countermeasures, search.

MISCELLANEOUS: AS-239/TPQ-1 is the same as AS-57/SPR-1 except for the mounting.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Galvin Manufacturing Company, Navy contract number NXsa-27923 and NXsa-31230.

REFERENCES:
1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-71/SPT-2

FREQUENCY: UHF band, 450 - 720 mc; VSWR < 2 on 50-ohm line.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The assembly consists of an adjustable-length dipole mounted in a corner reflector. The reflector is made of a number of parallel rods whose axes are parallel to the axis of the dipole. The dipole is fed by a balun to match the balanced antenna to an unbalanced line. The antenna is terminated in a type N connector. It is approximately 19 inches high, 23 inches long, and 25 inches deep. It weighs 15-1/2 pounds.

BEAM DATA:
Gain - 10 db above a half-wave dipole.
Polarization - Linear, depends on mounting position.

SCAN DATA: Does not scan but can be oriented so that the axis of dipole is vertical, horizontal, or at an angle of 45°. The antenna can be adjusted through 360° in the plane perpendicular to the dipole.

TUNING/MATCHING DEVICES: The lengths of the dipole elements are adjustable, and a balun is included.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Transmitters AN/SPT-6, AN/APT-5, and AN/APT-9. Equipment function - communications. Transmitting Equipment 52ADN(OCV-1). Equipment function - test.

MISCELLANEOUS: The antenna may be safely used with the transmitters mentioned as they have rated outputs of 5 to 20 watts. The antenna should not be used with CFXR, TDY, or AN/APT-4 equipment, which have rated powers of 150 watts.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Marine Radio Company and Radio Research Laboratory.

STOCK NUMBERS: Federal Stock Number N-5985-369-5394.

REFERENCES:
1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-82(*)/APQ-7

FREQUENCY: SHF band, 9280 - 9470 mc; VSWR < 2.0 on X-band waveguide.

TYPE: Collinear array of probe-fed dipoles.

DESCRIPTION: The antenna is a collinear array consisting of 250 dipoles which are probe-fed from the waveguide on which they are mounted. The waveguide is constructed so that its width can be periodically varied to produce electromechanical scanning of the beam. The beam is shifted due to the change in relative phase at the dipoles as the waveguide width is varied. By varying the waveguide width and by feeding the array at alternate ends, the beam can be made to sweep a 30-degree arc on each side of its center. The antenna is used on aircraft and on ships. The antenna is placed in a streamlined vane, Antenna Housing CW-23/APQ-7, and mounted below and transverse to the fuselage of heavy bombers when used with bombing equipment. The array is also used as a line feed for parabolic-cylinder reflectors in a CCA system in its shipboard use. The array is about 16 feet wide, 6 inches deep, and 3 inches high and weighs about 150 pounds.

BEAM DATA. (AS-82/APQ-7)
Gain - 32.5 db as a collinear array antenna, 38.0 db when used with a parabolic-cylinder reflector.
Half-power beamwidth - Horizontal - 0.4°.
Vertical - about 20° with the reflector.
Polarization - Horizontal.

SCAN DATA: The antenna has electromechanical scanning through an arc 30° on each side of the mechanical aim of the antenna at a rate of about 45° per second.

INSTALLATION: Shipboard or airborne.

ASSOCIATED EQUIPMENT: Radio Set AN/APQ-7.
Equipment function - bombing.
Radar Set AN/SPN-3. Equipment function - approach control.

MISCELLANEOUS: AS-82(*)APQ-7 denotes two models, AS-82/APQ-7, and AS-82A/APQ-7. The two models are mechanically and electrically interchangeable, but the A model has improvements in the r-f switch-block assembly, antenna drive-motor circuit, etc. The A model is also higher than the other; it is about 11 inches high instead of 3 inches for AS-82/APQ-7. The other dimensions are about the same.

COGNIZANT AGENCY: AS-82/APQ-7 ... ARL-3119, AS-82A/APQ-7 ... ARL-47-211.

MANUFACTURERS: Western Electric Company, PR 44-104, PR 44-2932, and PR 44-3046, 2034 DAY-45-RA.

STOCK NUMBER: Signal Corps 2A264-82 and 2A264-82A.

REFERENCES:

1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Co. (Apr. 1947). UNCLASSIFIED

2) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

3) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

4) Air Force Specification 471-5017.

5) Western Electric Specification X-66173B.

ANTENNA ASSEMBLY AS-118/CPN-6

FREQUENCY: SHF band, 9310 mc (transmitting antenna) and 9320 - 9430 mc (receiving antenna).

TYPE: Two arrays of slots.

DESCRIPTION: The antenna has separate receiver and transmitter sections. The receiver section is mounted on top of the transmitter section. Each section is composed of 2 rows of 7 probe-fed slots uniformly spaced around a cylindrical waveguide section. Both arrays are enclosed in a common plastic cylindrical housing.

BEAM DATA:
Gain - 4.8 db.
Half-power beamwidth - Vertical - 30°.
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

TUNING/MATCHING DEVICES: In the base of each antenna is a stub transformer which matches the cylindrical waveguide of the antenna to the rectangular waveguide feed.

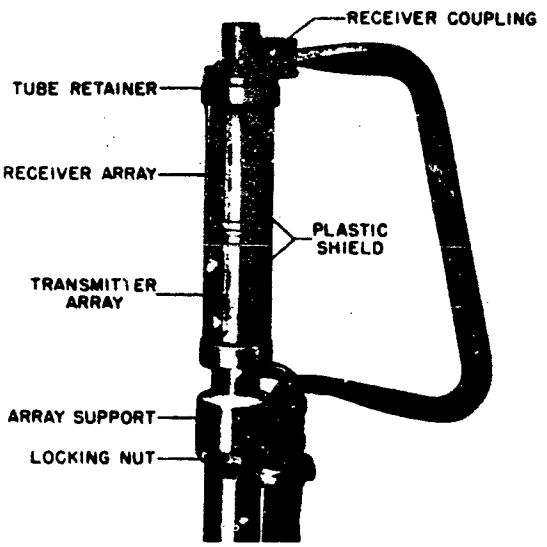
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/CPN-6.
Equipment function - navigation, surface reference.

MISCELLANEOUS: The nomenclature card states that the vertical beamwidth is 60°. Other references state that the vertical half-power beam width is 30°.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Galvin Mfg. Co., contract NObsr-65337, and Motorola, Inc.



AS-118/CPN-6

STOCK NUMBER: Federal Stock Number F 5985-369-5556.

REFERENCES:

1) U. S. Air Force and Bureau of Aeronautics, Handbook of Operation and Service Instructions, AN 16-30CPN6-1, T.O. 31P5-2CPN6-1 (Oct. 1, 1952). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-124/APR

FREQUENCY: VHF and UHF bands, 270 - 3000 mc; VSWR < 5 on 50-ohm coaxial cable.

TYPE: Conical.

AS-124/APR

DESCRIPTION: The antenna consists of a 60-degree cone surmounted by a 90-degree cap. The overall height of the assembly is 8 inches; it is 6-1/2 inches in diameter and weighs about 2-1/2 pounds. The assembly includes a mounting base and a type N connector. The antenna can be mounted with its axis vertical, horizontal, or at any intermediate angle depending upon the polarization and radiation pattern desired. When used aboard ships, the antenna is mounted above a ground plane of radial rods.

BEAM DATA:
Polarization - linear, depends on mounting position.

INSTALLATION: Airborne or shipboard.

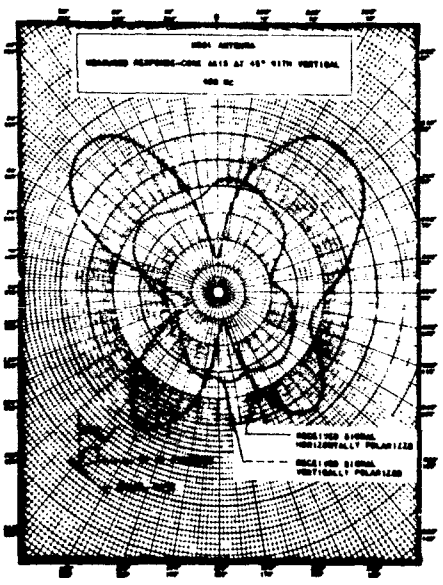
ASSOCIATED EQUIPMENT: Receiving Equipment RC-160, AN/APR-1, AN/APR-2, and AN/APR-4. Equipment function - countermeasures, search.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Developed by Harvard University Radio Research Laboratories (Antenna number M801).

STOCK NUMBERS: U. S. Navy - ASO R16AN-AS124APR, and U. S. Air Force 1660-202152396.

AS-124/APR with Ground Plane



AS-124/APR Response Pattern

REFERENCES:

1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-136/CPA-2

FREQUENCY: S band.

TYPE: Probably two arrays of slots.

DESCRIPTION: The only available information states that this antenna is similar to the AS-118/CPN-6. The antenna is designed for mast-mounting and has separate receiving and transmitting sections.

BEAM DATA:
Half-power beamwidth - Vertical - 60°.
Horizontal - 360°.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Conversion Kit AN/CPA-2( ).

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Galvin Mfg. Co., procurement contract NXsr-53341.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-145()/SPT-6

FREQUENCY: UHF band, 625 - 1250 mc; VSWR < 2.

TYPE: Corner reflector.

DESCRIPTION: The antenna consists of a corner reflector, composed of 21 spaced rods approximately 19 inches long fed by an adjustable half-wave dipole. The dipole support includes a quarter-wave balun for matching 50-ohm coaxial cable. Nomenclature card states that the antenna is 23 inches long and 25 inches deep. The antenna may be positioned vertically, horizontally, or at 45°.

BEAM DATA:
Gain - 12 db.
Polarization - Vertical, horizontal, or 45°.

TUNING/MATCHING DEVICES: Dipole is adjustable to following element lengths: 3.25 inches for 650 - 750 mc, 3.0 inches for 750 - 850 mc, and 2.75 inches for frequencies above 850 mc.

INSTALLATION: Shipboard and ground, mobile or fixed.

ASSOCIATED EQUIPMENT: Radar Transmitters AN/SPT-6, AN/APT-2, and AN/APT-5. Equipment function - countermeasures, jamming.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: Signal Corps 2A264-145.

REFERENCES:
1) Andrew W. Alford, Antennas for RCM, 411-100. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (November 1, 1944). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-149/TRT-1

MAJOR COMPONENTS: 1 Antenna Mast Section MS-49, 1 Antenna Mast Section MS-50, 1 Antenna Mast Section MS-51, 1 Antenna Mast Section MS-52, 1 Mast Base MP-37, and 1 Mast Bracket MP-50.

FREQUENCY: HF and VHF bands, 29.5 - 32 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a four-section whip 13-1/2 feet long and weighs 16 pounds.

BEAM DATA:
Beam type - Omnidirectional in the azimuth plane.
Polarization - Vertical.

INSTALLATION: Ground, vehicular; airborne; or shipboard.

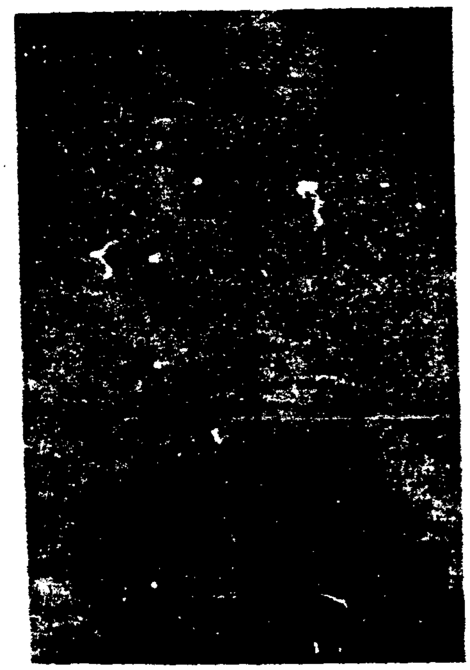
ASSOCIATED EQUIPMENT: Radio Set AN/TRT-1. Equipment function - remote control of AN/TRR-2 for detonating mines. Range when used with AN/TRR-2 - Up to 8 miles for ground location, 12 to 20 miles for shipboard location, up to 40 miles for airborne location (5,000 feet altitude).

COGNIZANT AGENCY: CESL.

STOCK NUMBER: Signal Corps 2A264-149.

REFERENCES:
1) U. S. Army, Radio Sets AN/TRT-1 and AN/TRR-2, Technical Manual, TM 11-269, (October 1949). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-149/TRT-1

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ANTENNA ASSEMBLY AS-176()/UPX

FREQUENCY: Additional information is available in the secret document listed below as Reference 1) and in Volume VI of this catalog series.

TYPE: Dipole array with rectangular reflector.

DESCRIPTION: Antenna assembly consists of two in-phase sets (two dipoles each) of vertically polarized end-to-end dipoles, with a common feed. The sets are mounted on opposite sides of a common rectangular reflector. The reflector is hollow so that it can contain the transmission lines.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground and shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPX-1 and AN/SPX-2, Radar Beacon AN/UPN-5, and Beacon Transmitter Receiver AN/TPN-4. Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: Signal Corps 2A264-176.

REFERENCES:
1) E. B. Soltwedel, A Radar Director, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-207/CRT-3

FREQUENCY: MF band, 0.5 - 0.8364 mc.

TYPE: Monopole.

DESCRIPTION: The antenna is 306 feet of wire which is erected by either a gas-filled balloon or a box-kite. It is the antenna for an emergency transmitting system designed for operation from a rubber life raft.

INSTALLATION: Shipboard (life raft).

ASSOCIATED EQUIPMENT: Radio Set AN/CRT-3. Equipment function - communications (transmitting only).

COGNIZANT AGENCY: ARL-4108.

MANUFACTURER: Unknown, procurement plan 44-5702.

STOCK NUMBERS: Federal Stock Numbers F 5820-567-8948, and 5821-149-0883.

REFERENCES:

1) U. S. Air Force and Bureau of Aeronautics, Handbook of Maintenance Instructions, Radio Set AN/CRT-3, AN 16-30CRT3-2, T.O. 12R5-2CRT-3 (Sept. 15, 1955). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-209/SPR

Cancelled, July 18, 1946 per nomenclature card. The antenna was never used.

ANTENNA ASSEMBLY AS-221/CPN-17

FREQUENCY: S-band. Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

TYPE: Stacked array of dipoles.

DESCRIPTION: Antenna is a stacked dipole array enclosed in a weatherproof pressurized housing. There are 3 bays of radiating elements, each one is probably several bent dipoles mounted to form a ring or loop and fed in phase. It mounts on either Mast Assembly AB-90/CPN-17 (ground) or Yardarm Antenna Mounting AB-112/CPN-17 (ship).

BEAM DATA:
Gain - Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.
Half-power beamwidth - Vertical - 30° to 40°.
Beam Type - Omnidirectional in horizontal plane.
Polarization - Horizontal.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Beacon AN/CPN-17, Equipment function - additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Galvin Manufacturing Co., Contract NXsr-53341.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-236(*)/SPT

FREQUENCY: UHF band, 350 - 1500 mc, VSWR < 2 on a 50-ohm line.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The AS-236(*)/SPT is a broad-band medium-gain transmitting or receiving antenna. It consists of a half-wave, adjustable dipole connected to a balun and mounted in a 75-degree, fixed-angle corner reflector. Two adjustable dipole-balun assemblies are used to cover the frequency range of the antenna, but only one is used at any one time. The antenna assembly mounts on a support shaft which is 53 inches high. This mount allows the antenna to be oriented horizontally, vertically, or at an intermediate position and also allows the assembly to be rotated to any position in azimuth. The dimensions of each side of the reflector are 18 by 20 inches. The reflector

consists of a number of rods which lie in planes parallel to the plane of the dipole. The maximum length of the low-frequency dipole is 15-3/4 inches and the maximum length of the high-frequency dipole is 5 inches. The dipoles are fed by 50-ohm coaxial cable. The total weight of the assembly, including support shaft, is approximately 85 pounds.

BEAM DATA:
Gain - 10 db.
Half-power beamwidth - Plane parallel to dipole - 30° to 80°. Plane perpendicular to dipole - 30° to 60°.
Polarization - Horizontal, vertical, or diagonal (45°) according to antenna orientation.

SCAN DATA: Does not scan, but can be manually positioned to any azimuth angle.

TUNING/MATCHING DEVICES: Dipole length is adjustable.

INSTALLATION: Ground or shipboard, fixed or mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/SPT-6() and AN/SPT-7(). Equipment function - countermeasures, jamming.

MISCELLANEOUS: AS-236(*)/SPT denotes models AS-236()/SPT and AS-236/SPT. No data is available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Marine Radio Company, Navy Contract NXsr-65335.

STOCK NUMBER: Federal Stock Number, N5985-369-5393.

REFERENCES:

1) Preliminary Handbook of Maintenance Instructions for the F4700 Antenna (AS-236/SPT), Report No. 411-1B-85. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (Aug. 7, 1945). UNCLASSIFIED.

2) Andrew W. Alford, Antennas for RCM, Report No. 411-100A. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-240/TRR-2

FREQUENCY: HF and VHF bands, 28 - 40 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a small whip used with a radio receiver for the remote detonation of land and water mines. The whip is 18 inches long and attaches directly to the receiver when used with land mines. When used with water mines, the whip mounts to a tapered oak block which keeps the antenna afloat. The oak block is weighted to keep the antenna upright. The antenna is connected to the submerged receiver by a length of coaxial cable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRR-2. Equipment function - remote control.

COGNIZANT AGENCY: CESL-2547.

MANUFACTURER: Submarine Signal Company, procurement order 3102-Ph-45-08.

REFERENCES:

1) U. S. Army, Radio Sets AN/TRT-1 and AN/TRR-2, Technical Manual, TM 11-269, (Oct., 1949). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-268/UPT

FREQUENCY: VHF and UHF bands, 175 - 550 mc; VSWR < 2 on 50-ohm line.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a half-wave, adjustable dipole connected to a balun and mounted in a 75-degree, fixed-angle corner reflector. The reflector is constructed of a number of metal rods which are parallel to the axis of the dipole. The assembly is mounted on a pedestal which permits the antenna to be oriented for the transmission of signals of either horizontal or vertical polarization. The pedestal also provides for rotation of the antenna about a vertical axis so that the signal may be beamed in any azimuth direction. The assembly has the following dimensions: reflector, 40 by 43 inches (each side); dipole and balun, 32 by 24 by 2 inches (overall); mounting pedestal, 49 by 10 by 8 inches (overall). The entire assembly weighs about 140 pounds.

BEAM DATA:
Gain - 14 db.
Half-power beamwidth -
In the plane of the dipole - 50°.
In a plane perpendicular to the dipole - 40°.
Polarization - Either vertical or horizontal depending on mounting.

SCAN DATA: This antenna does not scan, but it can be rotated manually through 360° in azimuth.

TUNING/MATCHING DEVICES: In order to obtain satisfactory performance of the antenna over its entire frequency range, it is necessary to adjust the dipole length, the balun length, and the dipole-to-reflector distance.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPT-4(), and AN/SPT-6, Transmitting Equipment AN/APQ-2, AN/APT-2, and AN/APT-5, and Radar Training Set AN/UPT-T4. Equipment function - countermeasures, jamming. Transmitting Equipment 52ADN(OCY-1). Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Development by Radio Research Laboratory, Harvard University.

STOCK NUMBERS: Signal Corps 2A264-263.

REFERENCES:

1) Preliminary Instructions for F3903 Antenna (AS-263/UPT), 411-IB-70. Radio Research Laboratory, Harvard University. (March 7, 1945). UNCLASSIFIED.

2) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (December 3, 1945). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-352/UR&()

TYPE: Whip.

DESCRIPTION: This antenna is a two-piece tilting whip made of steel tubing. Its overall length is 23.5 feet of which 5 feet is the mast base section and 18.5 feet is the whip assembly. The mast base section consists of a self-aligning base insulator assembly supported by a stand-off insulator assembly. It is mounted with four 5/16- by 4-inch bolts with 18 threads per inch.

INSTALLATION: Ground, mobile and small boats.

ASSOCIATED EQUIPMENT: Equipment function - communications.

MISCELLANEOUS: The AS-352/UR&() is similar to Coast Guard type MR-162.

COGNIZANT AGENCY: PEA-125, Project Group SPSCC. (Plant Engineering Agency is now Signal Engineering Agency.)

MANUFACTURER: Birnback Radio Company, type CG-RE-815-1-1; Snyder Manufacturing Company, procurement order, Signal Corps 23584-PH-43.

STOCK NUMBER: Signal Corps 2A295.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-353/FR&()

FREQUENCY: MF and HF bands, 1.7 - 14.4 mc.

TYPE: Telescopic whip.

DESCRIPTION: The antenna is a three-section telescopic whip made of seamless, drawn aluminum tubing. The whip is 6-1/2 feet long when collapsed and 18-1/4 feet long when fully extended. Its maximum diameter is 3/4 of an inch. The antenna mounting is a cast-iron housing 8 inches long, 8 inches wide, and 8 inches high. Within this housing are the coil and capacitor which provide efficient coupling for the frequency band used. The antenna mounting bracket is an L-shaped steel bracket, each leg of which is 8-1/4 inches long and 6 inches wide. The total weight of an assembled AS-353/FR is approximately 40 pounds.

TUNING/MATCHING DEVICE: The antenna coupling device consists of any of four interchangeable plug-in coils and a variable capacitor.

INSTALLATION: Ground, fixed; ground, mobile; small boats.

ASSOCIATED EQUIPMENT: Radio Receivers BC-779-A, BC-779-B; BC-794-A, BC-794-B; BC-1004-B, BC-1004-C, BC-1004-D. Equipment function - communications, receiving.

COGNIZANT AGENCY: SCL-6909, Project Group SIGGC-R.

MANUFACTURER: A. H. Quist, Jr., part No. AS-7903, Signal Corps procurement order 7797-PHILA-48-77.

STOCK NUMBER: Signal Corps 2A298-1; Federal Stock Number 5985-223-4646.

REFERENCES:
1) Department of the Army, Antenna Assembly AS-353/FR, TM 11-5013, (Jan. 1949). UNCLASSIFIED.
2) Signal drawing SC-D-51096.
3) Signal drawing ES-D-348E.

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ANTENNA ASSEMBLY AS-371(*)/S

FREQUENCY: UHF and SHF band, 1000 - 4000 mc.

TYPE: Conical.

DESCRIPTION: The antenna is an omnidirectional double-cone antenna designed to provide wide-band characteristics. The antenna is mounted above a ground-plane segment (120°) at an angle of 45° to receive either horizontally or vertically polarized signals. The input impedance is 50 ohms. The antenna is for use on submarines and is constructed of silver-plated monel metal. External surfaces are painted except for the cone radiator, which is coated with neoprene. The overall antenna is 9-1/2 inches high 6 inches deep, and 5-1/8 inches wide. It weighs about 10 pounds.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Receiving Sets AN/SPR-2 and AN/BLR-1. Equipment function - probably countermeasures, monitoring.

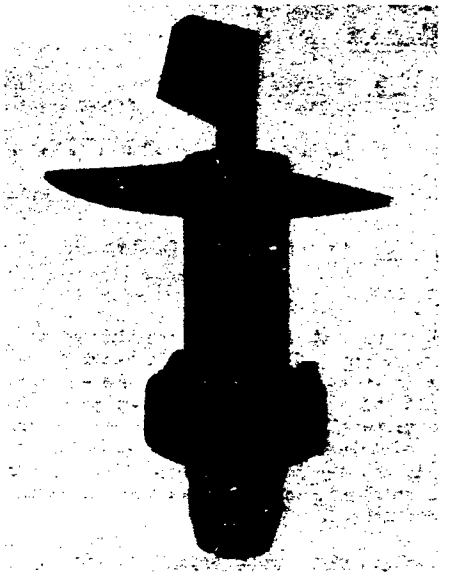
MISCELLANEOUS: AS-371(*)/S denotes AS-371/S, AS-371A/S, and AS-371B/S, which are interchangeable and differ only in component parts.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Barlow Engineering Company, Brach Manufactoring Company; Navy contracts NObsr-49116, NObsr-30065, NObsr-57215, and NObsr-57217.

STOCK NUMBERS: AS-371/S ... Federal Stock Number F 5985-669-6823, AS-371A/S ... Navy Stock Number F 16-A-45542-1101, and AS-371B/S ... Federal Stock Number F 5985-672-5965.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan.1, 1959). CONFIDENTIAL.
2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956).
3) Navy Specification Ships A-100.
4) Bureau of Ships, Instruction Book for Antenna Assembly AS-371A/S, NAVSHIPS 92416. UNCLASSIFIED.



AS-371(*)/S

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ANTENNA ASSEMBLY AS-372/BRC

FREQUENCY: VHF and UHF bands, 225 - 390 mc.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna is a sleeve dipole for submarine installations and is used for transmitting and receiving when the submarine is surfaced. It has an impedance of 50 ohms. It is constructed of cast aluminum with ceramic insulators and is finished with gray paint. It mounts vertically and is 32 inches long and 9 inches in diameter. It is built to withstand a hydrostatic pressure of 400 pounds per square inch.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: UHF communications equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Federal Telephone and Radio Company, Navy contract N5sr-11772(Sic).

STOCK NUMBER: Federal Stock Number N 5985-369-5525.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-376()/SRT

FREQUENCY: MF band, 0.5 mc.

TYPE: Monopole.

DESCRIPTION: The assembly is a single-wire antenna for emergency radio equipment in life rafts. It consists of 50 feet of rubber-covered copper wire, 20 feet of copper-braid ground wire, insulators, rope and clips. It is erected on a mast-type construction for boat emergency use.

INSTALLATION: Shipboard (life raft).

ASSOCIATED EQUIPMENT: Radio Transmitter Type 168-B. Equipment function - communications.

COGNIZANT AGENCY: PEA-508. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall, Va.)

MANUFACTURER: Federal Telephone and Radio Company.

REFERENCES:
1) Federal Telephone and Radio Drawing F-31966-1.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-377/U&()

FREQUENCY: MF band, 1.55 - 2.50 mc.

TYPE: Loop.

DESCRIPTION: This assembly consists of the loop proper and its pedestal, which plugs into a receptacle provided on the associated field-intensity meter. The loop mounts on the pedestal by means of two spring fasteners. The unit is 12 inches wide, 28-1/4 inches high, and 1-3/16 inches deep. Input leads are shielded, and the input inductance is 33 microhenries.

SCAN DATA: 360° manual azimuth rotation.

ASSOCIATED EQUIPMENT: Field Intensity Meter TS-318()/UP. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy, code 935.

MANUFACTURER: Washington Institute of Technology, U. S. Navy procurement contract NXsr-88850.

STOCK NUMBER: Federal Stock Number N5985-090-2624.

REFERENCES:
1) BuShips Specification RE-13A-1031A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-389/FMQ-2

FREQUENCY: UHF band, 390 - 410 mc.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna assembly consists of a stub-sleeve antenna (18 inches long) and a 100-foot cable of RG-8/U with a UG-21/BU connector. The stub is a silver-plated brass rod 5-37/64 inches long and 1/2 inch in diameter. The sleeve is a silver-plated brass tube 6-3/4 inches long and 2-1/2 inches in diameter. The antenna is mounted by a pipe-cap support with a stand-off insulator.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radiosonde Receptors AN/FMQ-2 and AN/FMQ-2A. Equipment function - meteorological measurement.

COGNIZANT AGENCY: U. S. Navy, code 851.

MANUFACTURER: National Co., Inc., contract NObsr-57468.

STOCK NUMBER: U. S. Navy R16AN-AS289FMQ2.

REFERENCES:
1) U. S. Navy, Bureau of Aeronautics, Instructions Book for Radiosonde Receptor AN/FMQ-2A, NA 16-30-FMQ2-501, (July 1952). UNCLASSIFIED.
2) Bendix-Freiz Drawing 515083-B.
3) U. S. Navy Specification MIL-R-15312.

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ANTENNA ASSEMBLY AS-390(*)/SRC

FREQUENCY: VHF and UHF bands, 220 - 400 mc; VSWR < 2.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna is an unbalanced, broadband, coaxial stub antenna for transmitting and receiving. It consists of a radiator and a ground plane. The radiator is 9-5/8 inches high and 2-1/4 inches in diameter The ground plane is 7-1/2-inch disk to which eight radial rods are attached. The ground-plane rods are bent downward 37 degrees below the horizontal. The assembly has an overall diameter of 23 inches and an overall height of 16 inches. The assembly mounts by means of a threaded stud protruding from the ground-plane mounting plate. The thread on the stud is 3/4-14 straight N.P.S. The antenna has an impedance of 52 ohms and terminates in a type-N connector. It weighs 3.6 pounds and is vertically polarized.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Sets AN/URR-13, TDZ-RDZ, MAR-RDR, and TED. Equipment function - communications.

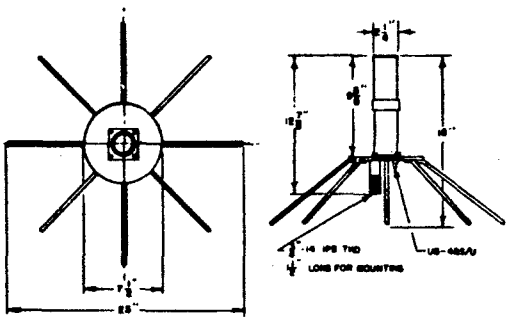
MISCELLANEOUS: AS-390(*)/SRC denotes two models, AS-390/SRC and AS-390A/SRC. The two models are interchangeable. They differ in that AS-390A/SRC uses Teflon insulation. The antenna will withstand an internal pressure of 50 pounds per square inch and can be operated in areas where the ambient temperature does not exceed 350°F.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Technical Appliance Corporation, Navy contract number NObsr-57304; Bird Electronic Corporation, Navy contract number NObsr-43272; Andrew Alford Consulting Engineers, Navy contract number NObsr-29053.

STOCK NUMBERS: Navy F16-A-53590-1001, Federal Stock Number F5985-519-9886.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



AS-390(*)/SRC

2) Private Correspondence.
3) U. S. Navy Bureau of Ships, Instruction Book for Antenna AT-150/SRC and Antenna Assembly AS-390/SRC, NAVSHIPS 91338, (Nov. 7, 1951). UNCLASSIFIED.

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ANTENNA AS-393(*)/BLR

FREQUENCY: UHF and SHF band, 1800 - 3600 mc, VSWR < 5.

TYPE: Dipole and stub..

DESCRIPTION: AS-393(*)/BLR is an omnidirectional antenna for receiving only an' is composed of two separate antennas. One antenna is a three-element loop (probably a tridipole), ringlike and sensitive to horizontally polarized waves. The other antenna is a stub and is sensitive to vertically polarized waves. Both elements are surrounded by petroleum jelly and are enclosed in a molded polyethylene dome. The assembly is mounted horizontally on top of the snorkel shield of submarines. The antenna has an impedance of 52 ohms and weighs 10 pounds. The overall dimensions are 5-1/2 inches high and 7-3/4 inches in diameter.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Countermeasures Receiving Sets AN/BLR-1, and AN/SPR-2. Equipment function - countermeasures, search.

MISCELLANEOUS: AS-393(*)/BLR denotes the (),

A and B models. They are interchangeable.

COGNIZANT AGENCY: U. S. Navy - 624.

MANUFACTURERS: Andrew Alford, and Mare Island Naval Shipyard, Navy contract NObsr-71568.

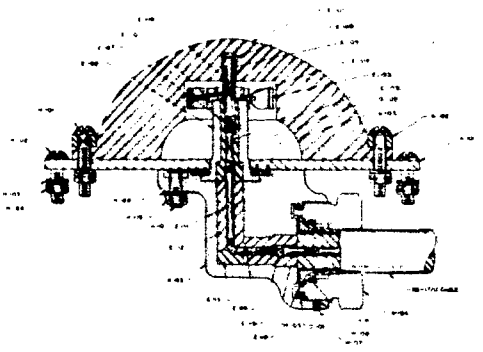
STOCK NUMBERS: Navy Stock Number ... F 16-A-55157-9371, Federal Stock Numbers F 5985-369-5551 and F 5985-543-1218.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Bureau of Ships, Instruction Book for Antenna Assembly AS-393/BLR, NAVSHIPS 91479. UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.



AS-393(*)/BLR

ANTENNA AS-402(*)/SPS-6

FREQUENCY: UHF band, 1250 - 1350 mc (radar), 950 - 1150 mc (IFF); VSWR < 1.1.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION: The assembly consists of a section of a paraboloid, a hoghorn feed assembly, a pedestal and supporting framework, and a wind balancing vane. The reflector is 4-1/2 feet high, 17-1/2 feet wide, and 5 feet deep; it weighs 212 pounds. The complete assembly weighs 809 pounds. The wind load at 90 knots is 1215 pounds.

BEAM DATA: (Radar)
Gain - 29 db.
Half-power beamwidth - Horizontal - 3.5°.
Vertical - 10°.
Polarization - Horizontal.

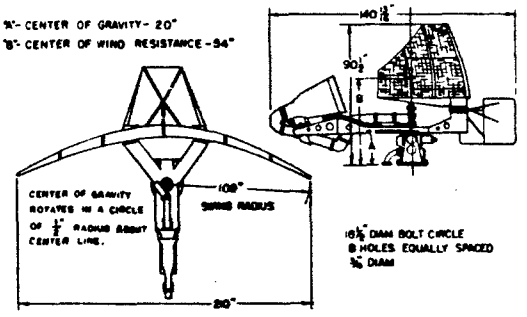
SCAN DATA: The antenna rotates through 360 degrees in azimuth at a rate between 5 and 15 revolutions per minute.

INSTALLATION: Shipboard (carrier).

ASSOCIATED EQUIPMENT: Radar Sets AN/SPS-6, and SR-3a. Equipment function - search, air. Range - 70 miles for aircraft with a 20-square-meter radar cross section.

MISCELLANEOUS: AS-402(*)/SPS-6 denotes two models: the unlettered and the A model. The two models are similar and are interchangeable, but the A model has IFF provisions. AS-402(*)/SPS-6 is similar to AS-429(*)/SPS-6A and AS-430(*)/SPS-6B.

COGNIZANT AGENCY: U. S. Navy.



AS-402(*)/SPS-6

MANUFACTURERS: Westinghouse Electric Corporation; Navy contract NObsr-39420.

STOCK NUMBERS: Federal Stock Number F 5985-296-2801.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A). (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipments Navy Models SR-3a, SR-3b, and SR-3c, NAVSHIPS 900,539(A), Feb. 15, 1952). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-404/SPN-4

FREQUENCY: SHF band, 3010 - 3100 mc.

TYPE: Cut paraboloidal reflector fed by waveguide.

DESCRIPTION: The antenna is a cut paraboloidal reflector which is mounted with its long dimension horizontal. It mounts on a rotating pedestal which houses the drive mechanism. R-f energy may be fed to or from the antenna by means of a coaxial cable or a waveguide. When the distance from the transmitter (or receiver) to the antenna is less than 20 feet, 51-ohm coaxial cable may be used. The antenna is 7 feet wide and 1 foot high. It weighs about 150 pounds.

BEAM DATA:
Half-power beamwidth - Vertical - 13.5°.
Horizontal - 3.5°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at 7 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPN-4. Equipment function - navigation.

MISCELLANEOUS: The nomenclature card lists the frequency range as 3020 to 3120 mc.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Raytheon Manufacturing Company, type CX-1003, Navy contract NObsr-42032.

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D.C.: Naval Research Laboratory (Nov.22, 1957). ASTIA Report No. AD-153211. SECRET.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-410(*)/URD-2

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Crossed Adcock with sense monopole.

DESCRIPTION: The antenna is a crossed Adcock made up of four vertical dipoles located at the corners of a square with a sense monopole located in the center. The assembly includes a goniometer with a crossarm bracket on top. The crossarm bracket is used for mounting the antenna elements.

BEAM DATA:
Beam type - Figure of eight.
Polarization - Vertical; however, the antenna is capable of receiving signals which are polarized as far as 45° from vertical.

SCAN DATA: Electromechanical scan of 360° in azimuth is accomplished by a capacitive goniometer.

TUNING/MATCHING DEVICES: A bazooka type of balance-to-unbalance transformer connects the balanced goniometer to the unbalanced coaxial cable which connects the antenna to the receiver.

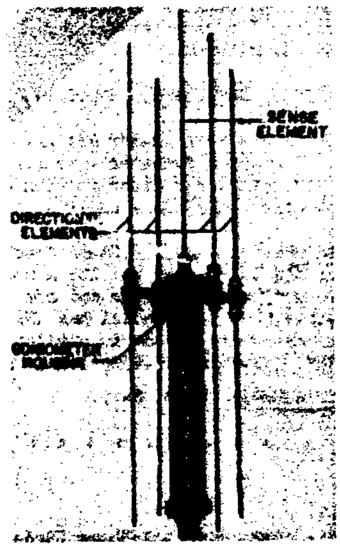
INSTALLATION: Ground and shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/URD-2. Equipment function - direction finding and communication reception.

MISCELLANEOUS: AS-410(*)/URD-2 denotes models AS-410/URD-2 and AS-410A/URD-2.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Corp., contract NObsr-39237.



AS-410(*)/URD-2

STOCK NUMBER: Federal Stock Number 5825-244-5401 (for AS-410/URD-2).

REFERENCES:
1) Departments of the Army and Air Force, Direction Finder Set AN/URD-2A, TO 31R4-2URD2-21, (Aug. 1951). UNCLASSIFIED.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

3) Bendix Drawing OR-200318-1.

4) U. S. Navy Specification CS-571A.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-429(*)/SPS-6A

FREQUENCY: UHF band, 1250 - 1350 mc (radar), and 950 - 1150 mc (IFF); VSWR < 1.1.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION: The assembly consists a section of a paraboloid, a hoghorn feed assembly, a pedestal and supporting framework, and a wind balancing vane. The reflector is about 6 feet high, 17 feet wide and 4 feet deep; it weighs 230 pounds. The complete assembly weighs 838 pounds. The wind load at 90 knots is 1475 pounds.

BEAM DATA: (Radar)
Gain - 27.4 db.
Half-power beamwidth - Horizontal - 3.5°.
Vertical - 20°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate between 5 and 15 revolutions per minute.

INSTALLATION: Shipboard, (carrier).

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-6A, and SR-3b. Equipment function - search, air. Range - 70 miles for aircraft with a 20-square-meter radar cross section. Also IFF.

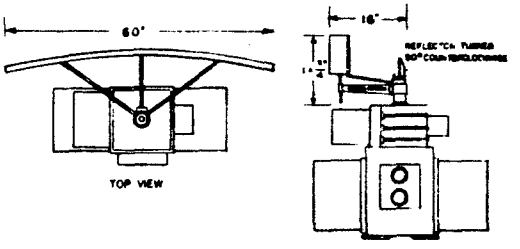
MISCELLANEOUS: AS-429(*)/SPS-6A denotes two models: the unlettered and the A model. The two models are similar and are interchangeable, but the A model has IFF provisions. AS-429(*)/SPS-6A is similar to AS-402(*)/SPS-6 and AS-430(*)/SPS-6B.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Westinghouse Electric Corporation, Navy contract NObsr-39420.

STOCK NUMBERS: Federal Stock Number F 5985-284-5974.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



AS-429(*)/SPS-6A

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipments Navy Models SR-3a, SR-3b, and SR-3c, NAVSHIPS 900,559(A), (Feb. 15, 1952). UNCLASSIFIED.

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ANTENNA ASSEMBLY AS-430(*)/SPS-6B

FREQUENCY: UHF, 1250 - 1350 mc (Radar), 950 - 1150 mc (IFF); VSWR < 1.1.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION: The assembly consists of a section of a paraboloid, a horn feed assembly (see miscellaneous), a pedestal and supporting framework, and a wind balancing vane. The reflector is 5 feet 9 inches high, 17 feet wide, and 5 feet 2 inches deep; it weighs 229 pounds. The complete assembly weighs 878 pounds.

BEAM DATA: (radar).
Gain - 27 db.
Half-power beamwidth - Horizontal - 3.5°.
Vertical - 30°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360 degrees in azimuth at a rate between 5 and 15 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-6B, and SR-3c. Equipment function - search, air. Range - 50 miles for aircraft with a 20-square-meter radar cross section.

MISCELLANEOUS: AS-430(*)/SPS-6B denotes three models: the unlettered model, the A model, and the B model. The unlettered and A models are similar and interchangeable except for the feed assemblies and IFF provisions. The feed assembly of AS-430/SPS-6B

is a waveguide-fed hoghorn; no provisions are made for IFF. AS-430A/SPS-6B uses a flared waveguide horn for the radar feed. The IFF feed is probably a small dipole or stub antenna assembly located at or near the mouth of the horn. AS-430B/SPS-6B is interchangeable with AS-430A/SPS-6B but not vice-versa. The two antennas are similar but have different types of windvane. AS-430(*)/SPS-6B is similar to AS-402(*)/SPS-6 and AS-429(*)/SPS-6A.

COGNIZANT AGENCY: U. S. Navy.

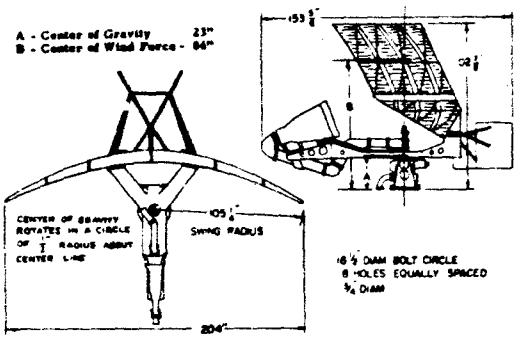
MANUFACTURERS: Westinghouse Electric Corporation, Navy contracts NObsr-39420 and NObsr-52204.

STOCK NUMBERS: AS-430/SPS-6B ... Federal Stock Number F 5985-296-2244, AS-430A/SPS-6B 6B ... Federal Stock Number F 5840-296-1286, AS-430B/SPS-6B ... Federal Stock Number F 5840-090-2654.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Navy Specification CS-757.



AS-430(*)/SPS-6B

3) U. S. Navy, Bureau of Ships, Instruction Book for Radar Equipments Navy Models SR-6a and SR-6b, NAVSHIPS 900,989(A), (Sept. 10, 1951). UNCLASSIFIED.

4) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipments Navy Models SR-3a, SR-3b, and SR-3c, NAVSHIPS 900539(A), (Feb. 15, 1952). UNCLASSIFIED.

ANTENNA AS-444/SPN-5

FREQUENCY: SHF band, 9320 - 9430 mc.

TYPE: Cut paraboloidal reflector fed by flared waveguide horn.

DESCRIPTION: The antenna is a cut paraboloidal reflector mounted with its long dimension horizontal. The surface of the reflector is made of a number of horizontal parabolic-shaped rods. The antenna is mounted to a rotating mounting base which is supported by the antenna pedestal. The waveguide horn is attached to and supported by a rigid waveguide section. Its opening is at or near the focal point of the reflector. The reflector is about 5 feet wide, 1-1/2 feet high, and 1-1/2 feet deep. The entire assembly weighs 225 pounds.

BEAM DATA:
Half-power beamwidth - Vertical - 19°.
Horizontal - 1.8°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at 10 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPN-5(). Equipment function - navigation.

MISCELLANEOUS: Reference 1) lists the polarization as vertical; it is obvious from construction that it is horizontal. There is some discrepancy between references on dimensions. The dimensions given seem to be accurate when compared to photographs.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Radiomarine Corporation of America, Navy contract NObsr-52358, and contract 6269-PH-51-02 (probably Signal Corps).

STOCK NUMBERS: Signal Corps 2A202AS-444, Federal Stock Number F 5985-284-6491.

AS-444/SPN-5

REFERENCES:
1) Department of the Army, Radar Set AN/SPN-5 Field and Depot Maintenance, TM 11-1501, (Dec. 1949). UNCLASSIFIED.

2) Department of the Army, Radar Set AN/SPN-5, TM11-1301, (August 1949). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-468()/B

FREQUENCY: VHF and UHF bands, 225 - 390 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a vertical dipole consisting of two brass cylinders mounted around a stainless-steel supporting tube. The lower cylinder, in addition to forming half of the dipole, serves as a balun. An isolating sleeve is located on the top of the assembly to prevent interference with the AS-522()/BPX antenna which is normally mounted there. The cylinders have a 45° taper at the center of the dipole. The overall assembly is 31 inches high and 7-3/4 inches in diameter (maximum). The antenna, including the isolating sleeve, is 23-7/16 inches long and is part of AS-523()/BPX and AS-525()/BPX antenna assemblies.

BEAM DATA:
Beam type - Omnidirection in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: AN/URR-35 UHF receiving equipment, AN/URR-13, TED; TDZ-RDZ. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

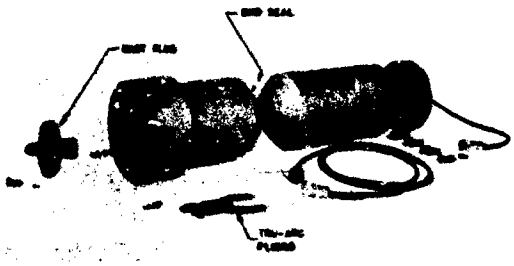
MANUFACTURERS: Watson Elevator Co.

STOCK NUMBERS: Federal Stock Number F 5985-369-5434.

REFERENCES:
1) Bureau of Ships, Instruction Book for Submarine Antennas AS-522/BPX, AS-468/B, AS-535/B and Antenna Assemblies AS-523/BPX, AS-524/BPX, AS-525/BPX. UNCLASSIFIED.

2) U. S. Navy, Summary of Antenna System Requirements for SS Submarines, NAVSHIPS 93547, Fort Trumbull, New London, Conn.: U. S. Navy Underwater Sound Laboratory (April 26, 1960). UNCLASSIFIED.

3) U. S. Navy, Submarine Antenna Systems Summary, SSK240 Class, Fort Trumbull, New London, Conn.: U. S. Navy Underwater Sound Laboratory (Feb. 19, 1958). UNCLASSIFIED.



AS-468()/B

ANTENNA ASSEMBLY AS-476/SMD

FREQUENCY: UHF band, 1660 - 1700 mc.

TYPE: Paraboloidal reflector with a feed consisting of a dipole and eccentric reflecting cup.

DESCRIPTION: The antenna is a 6-foot paraboloidal reflector with a feed consisting of a stationary dipole, mounted on the axis and near the focus of the reflector. A reflecting cup is designed to rotate off-center about the axis of the reflector to produce conical scanning. The antenna is fed by RG-59/U waveguide. It has a total weight of 1585 pounds.

SCAN DATA: The pedestal, which is part of the antenna assembly, permits movement of the antenna in three planes: cross level at a rate of 4 revolutions per minute, vertical from -32° to +87° at a rate of 5 revolutions per minute, and azimuth through 360° at a rate of 4 revolutions per minute. The eccentric hemispherical reflecting cup rotates at a rate of 30 revolutions per second. This off-center rotation causes the beam to rotate about the axis of the paraboloidal reflector and form a solid cone.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radiosonde Receptor AN/SMD-1. Equipment function - meteorological measurement.

MISCELLANEOUS: AS-476/SMD is similar to but not interchangeable with AS-462/SMD-1.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: General Electric Co., contract N5sr-11814.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) General Electric drawing W-9078478 G1.
3) U. S. Navy Specification CS-89.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-484(*)/SPS-8

FREQUENCY: SHF band, 3400 - 3600 mc.

TYPE: Cut paraboloidal reflector fed by a parallel-plate horn.

DESCRIPTION: The antenna, which is used with height-finding radars, is a cut paraboloidal reflector fed by a parallel-plate horn. Rapid scanning is produced by electromechanical means at the horn. The antenna is 5 feet wide by 15 feet high and is mounted with the long dimension vertical. The antenna, support structures, and wind vanes are mounted on a base about 10 feet high. For operation, the assembly requires a clearance of 19 feet 2 inches in height and 22 feet 6 inches in diameter. The weight of the entire assembly is 4068 pounds. The antenna is stabilized in roll and pitch for roll and pitch angles not exceeding 30 and 6 degrees, respectively.

BEAM DATA:
Gain - 37 db.
Half-power beamwidth - Horizontal - 3.5°.
Vertical - 1.1°.

SCAN DATA: The antenna has 360° scan in azimuth at 1, 2, 3, 5, or 10 revolutions per minute and a variable sector scan in azimuth from 30 to 210 degrees. It provides elevation scanning by electromechanical means in any 11° sector between 0 and 36°; elevation scan rate is 1200, 600, or 300 cycles per minute.

INSTALLATION: Shipboard, for use on DD and larger vessels.

ASSOCIATED EQUIPMENT: Radar Sets AN/APS-8, and AN/SPS-8. Equipment function - height finding.

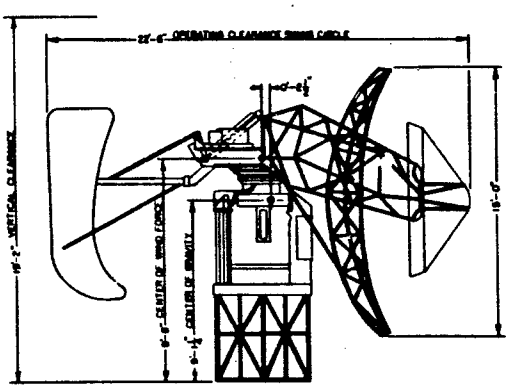
MISCELLANEOUS: The waveguide (RG-48/U or RG-75/U) between the antenna and the transmitter should not exceed 125 feet in length. AS-484(*)/SPS-8 denotes the unlettered, the A, and the B models. The available data indicate minor differences in dimensions, construction, etc., between the A and the unlettered model. The B model was cancelled by Navy Code 819G on 24 April 1957. It was never issued.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: American Machine and Foundry Company, General Electric Company (Contractor); Navy contracts NObsr-39406 and NObsr-52020.

STOCK NUMBERS: Federal Stock Numbers F 5985-365-5478 and F 5985-369-5476, Navy Stock Number F16-A-53094-3001.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) U. S. Department of Defense Nomenclature Card.



AS-484(*)/SPS-8

ANTENNA ASSEMBLY AS-493/U

MAJOR COMPONENTS: 1 Beacon antenna, 1 UHF antenna, and 1 AEW link antenna.

FREQUENCY: Beacon antenna, UHF band, 2880 mc; UHF antenna, UHF band, 465 - 510 mc; AEW link antenna, VHF and UHF band, 225 - 390 mc.

TYPE: Two dipoles and a stacked array of 3 tridipoles.

DESCRIPTION: The assembly is designed for installation aboard submarines and consists of three antennas built into one unit. The three antennas are stacked vertically on a mast which is about 2 inches in diameter. The top section, which is 2-1/2 inches in diameter and about 7 inches tall, is an S-band beacon antenna. It consists of three vertically-stacked aluminum tridipole elements enclosed in a molded polyethylene jacket. The center section, which is 5 inches in diameter and 17-1/4 inches long, is a vertical dipole whose radiating elements are two brass cylinders coaxial with the mast pole. This is an AEW link antenna. The bottom section is similar to the center section except for dimensions. It is the UHF communications antenna and is 7-3/4 inches in diameter and 27-3/16 inches tall. Each antenna is fed by a separate coaxial cable. The assembly weighs 120 pounds.

BEAM DATA: (all 3 antennas)
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal (Beacon), vertical (UHF and link).

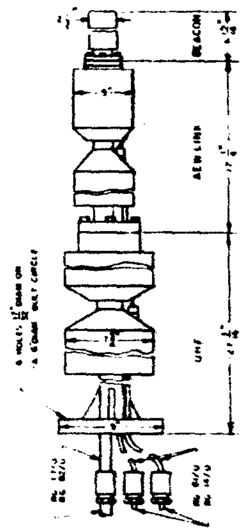
INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio Set AN/UPN-7.
Equipment function - beacon.
Radio Sets AN/SRR-4, TDZ, and RDZ.
Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Barlow Engineering Company.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959), CONFIDENTIAL.
2) NAVSHIPS 91569.
3) U. S. Department of Defense Nomenclature Card.



AS-493/U

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ANTENNA AS-495/SPS-10A

Cancelled November 5, 1952. This nomenclature was never used.

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ANTENNA AS-500/BPN

FREQUENCY: SHF band, 8900 - 9400 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a horn made of brass and Teflon and is used for transmitting or receiving. The overall antenna is 7 inches high, 5 inches wide, and 4 inches deep. It is fed by RG-52/U waveguide and will withstand water pressure up to 600 pounds per square inch.

BEAM DATA:
Beam type: Approximately hemispherical.
Polarization - Circular.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/UPN-8 and AN/UPN-11. Equipment function - navigation.

MISCELLANEOUS: This antenna is similar to Antenna AS-499/UPN except for its pressure-withstanding ability.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Probably Andrew Alford, Incorporated, which makes Antenna AS-499.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-501()/SPN

FREQUENCY: SHF band, 7250 - 10,750 mc, VSWR < 1.4 when used with AN/UPN-11.

TYPE: Biconical horn.

DESCRIPTION: AS-501()/SPN is a biconical horn antenna mounted in a cylindrical fiberglass radome. The overall dimensions of the antenna are 19-7/8 inches high by 13-5/8 inches in diameter. The antenna is fed by RG-52/U waveguide. The AN/UPN-11 radar beacon requires one of these antennas for receiving and one for transmitting.

BEAM DATA:
Half-power beamwidth - Vertical - 15°.
Beam type - Omnidirectional in azimuth with the direction of maximum radiation in the vertical plane at an angle of 7-1/2° above the horizontal.
Polarization - Horizontal.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Beacon AN/UPN-11. Equipment function - radar beacon.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Andrew Alford Consulting Engineers.

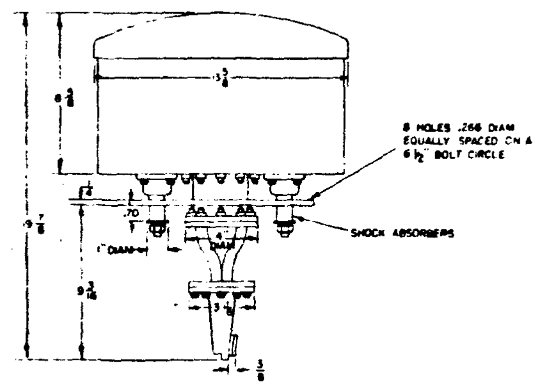
STOCK NUMBER: Federal Stock Number F 5825-369-5555.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Andrew Alford drawing number D-14211-600000D.

3) Bureau of Ships drawing number RE 65F-2227.

4) U. S. Navy Bureau of Ships, Antenna AS-501/SPN(XN-1) and Antenna AS-501/SPN, Instruction Book, NAVSHIPS 91950, (June 2, 1953). UNCLASSIFIED.



AS-501()/SPN

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ANTENNA ASSEMBLY AS-502/TPN&()

MAJOR COMPONENTS: 1 Antenna AT-538/TPN, 1 Antenna AT-539/TPN.

FREQUENCY: SHF band, 8900 - 9400 mc.

TYPE: Horn antenna.

DESCRIPTION:
A) AT-538/TPN is a horn-type antenna which is fed by a rectangular waveguide. The input impedance is 50 ohms. It is pedestal mounted.
B) AT-539/TPN is also a horn-type antenna with a rectangular waveguide feed, but it has an input impedance of 380 ohms. Both antennas are mounted on the same ground sheet.

BEAM DATA:
Polarization - Circular (AT-539/TPN).

ASSOCIATED EQUIPMENT: Radar Beacon AN/UPN-8. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Andrew Alford, Consulting Engineers, procurement contract NObsr 52245.

STOCK NUMBER: Federal Stock Number F5840-285-0511.

REFERENCES:
1) Andrew Alford Drawing D-24211-60-002A.
2) Andrew Alford Drawing B-24211-60-000A.
3) Andrew Alford Drawing B-24211-60-001A.
4) Military Specification MIL-A-15295.
5) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-505(*)/GR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is an array of 4 vertically stacked squirrel-cage dipole antennas. Each squirrel-cage dipole is 18 inches in diameter and 14 inches long. Overall, the array is 18 inches in diameter and 12 feet in length. The array consists of 4 aluminum sections which mount either to Mast AB-157/GR&() or to a class-2 telephone pole. The antenna is fed by a 52-ohm coaxial transmission line. Shipping weight is 85 pounds.

BEAM DATA:
Gain - 6 db.
Beam type - Omnidirectional in azimuth plane.
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Various UHF sets. Equipment function - communications.

MISCELLANEOUS: Antenna AS-505A/GR differs from AS-505/GR in that AS-505A/GR has a 4-1/2-foot mounting extension instead of the 3-foot one for AS-505/GR. Antenna AS-505B/GR is the only one of this series whose cognizant agency is RCAF 485; otherwise, it is similar to AS-505/GR. Antenna AS-505C/GR differs from AS-505/GR only in mechanical design.

COGNIZANT AGENCY: AS-505/GR ... WL-50-1093; AS-505A/GR ... WL-52-1894; AS-505B/GR ... RCAF 485; AS-505C/GR ... WL-58-1336.

MANUFACTURERS: Collins Radio Co., procurement contract AF 33(038)-6135.

STOCK NUMBERS: AS-505/GR ... Federal Stock Number F5985-217-1601; AS-505A/GR ... Federal Stock Numbers F5985-317-2518, and 5985-217-0505.

AS-505(*)/GR (NOTE: Dark line is a label on original diagram).

REFERENCES:
1) U. S. Air Force, Illustrated Parts Breakdown for Radio Set AN/GRC-27, TO 31R2-2GRC27-4, (April 1, 1958). UNCLASSIFIED.
2) U. S. Air Force Exhibit ENG-240.
3) Government Specification MIL-A-4852A.

ANTENNA AS-506/SPS-4

FREQUENCY: SHF band, 5450 - 5825 mc.

TYPE: One parabolic cylinder and one modified cut paraboloid with waveguide feed.

DESCRIPTION: The antenna assembly consists of two antennas, a surface search and a zenith search. The zenith search antenna consists of a clam-shell reflector, a modified cut paraboloid, fed by a horn. The surface search antenna is mounted in front of the zenith search antenna and consists of a slatted, parabolic-cylinder reflector and a hoghorn feed. A waveguide switch is used to alternate antennas to give coverage of essentially 0° to 90° in elevation. Dimensions are 26 inches high and 84 inches wide for the surface reflector and 59 inches high and 60 inches wide for the zenith reflector.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-4. Equipment function - search, air; and search, surface.

MISCELLANEOUS: Additional information is available in the confidential document listed below as Reference 3 and Volume 5 of this catalog series.

COGNIZANT AGENCY: U. S. Navy, development contract Navy BuShips SHIPS-R-34Y.

MANUFACTURERS: Raytheon Mfg. Co., Procurement contract NObsr-52274.

STOCK NUMBER: Federal Stock Number F 5840-296-3825.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Systems, Shipboard Antenna Details, Chapter 6, NAVSHIPS 900121(A). UNCLASSIFIED.

3) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL

4) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-511()/SPS-5

FREQUENCY: SHF band, 6275 - 6575 mc.

TYPE: Modified cut-paraboloidal reflector with hoghorn feed.

DESCRIPTION: The antenna consists of a slatted, modified, cut paraboloidal reflector and a hoghorn feed. The reflector is 34 inches high and 88 inches wide. RG-106/U waveguide is used. Overall dimensions are approximately 5 feet high, 7-1/2 feet wide, and 3-2/3 feet deep.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - Vertical - 15°, $\csc^2$ from 7-1/2° to 22°. Horizontal - 1.5°.
Polarization - Horizontal.

SCAN DATA: Reference 1) states that the antenna is rotated in the azimuth plane at 17 revolutions per minute and is manually tilted to 65°, giving 85° vertical coverage.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-5. Equipment function - search, air; and search, surface. Range - 15 miles.

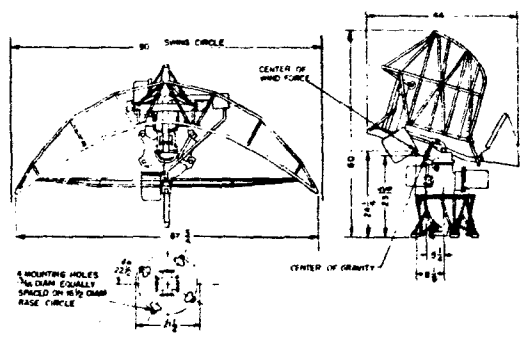
COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Raytheon Mfg. Co., procurement contract NObsr-42183.

STOCK NUMBER: Federal Stock Number F 5985-501-4829.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



AS-511()/SPS-5

2) Raytheon Drawing No. M-180A-W2.

3) BuShips Specification CS-854A.

4) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

5) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-514/URD-4&()

FREQUENCY: VHF and UHF bands, 225.0 - 399.9 mc.

TYPE: Adcock antenna.

DESCRIPTION: AS-514/URD&() is a rotating, twin-dipole, Adcock antenna array. Sense information is obtained by shifting the phase of a portion of the incoming signal before combining voltages from the antenna elements. The antenna system is designed for use with vertically polarized signals.

AS-514/URD-4

Accurate direction-finding information is provided, however, from signals polarized as much as 45 degrees from vertical. Input impedance is 52 ohms.

BEAM DATA:
Beam type - figure of eight or bent figure of eight in azimuth.
Polarization - Vertical.

SCAN DATA: 360° mechanical azimuth rotation at 825 revolutions per minute.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/URD-4. Equipment function - navigation, direction finding; and countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio Division, procurement contracts NObsr-52513 and NObsr-57098.

STOCK NUMBER: Federal Stock Number F5985-285-0795.

REFERENCES:
1) Bendix Radio Division Drawing OR650001-1.
2) U. S. Military Specification MIL-D-16252.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-515()/SPG

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Cutler feed.

DESCRIPTION: The antenna consists of the rotation and tilt mechanisms, the waveguide assembly, and the feed for a nutating antenna. The actual feed is a Cutler feed on a 14-inch section of rectangular waveguide. The reflector used with this antenna is the AT-194()/SPG, a 40-inch diameter paraboloid constructed of plastic and fiberglass. However, this reflector is not listed as part of AS-515/SPG. Overall dimensions are 11-7/8 inches wide, 14-1/2 inches high, and 35 inches long.

BEAM DATA:
Gain - 36 db.
Half-power beamwidth - Conical scan, 2.4°. Spiral scan, 12.4° (effective).

SCAN DATA: The antenna has either spiral or conical electromechanical scan. The spiral scan rate is 2 cycles per second and the conical nutation speed is 1735 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPG-34, AN/SPG-48, and Radar Equipment Mark 34 Mod 17. Equipment function - fire control. Range - 39,000 yards.

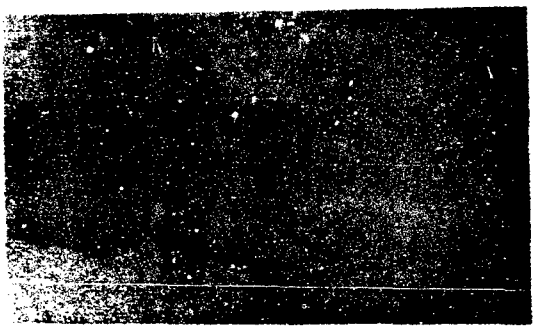
MISCELLANEOUS: AT-194/SPG will also accommodate Mark 16 Mod 2 antenna.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Western Electric Co., procurement contract NOrd-10746.

STOCK NUMBER: Feed Horn ... Navy Stock Number N 5985-333-2534.

REFERENCES:
1) U. S. Navy Bureau of Ordnance, Antenna AS-515/SPG, Maintenance Manual, NAVORD OD 10126, (Jan. 5, 1955). UNCLASSIFIED.



AS-515/SPG

2) U. S. Navy Bureau of Ordnance, Radar Set AN/SPG-34 Maintenance, NAVORD OP 2028, Volume 2, (June 25, 1953). UNCLASSIFIED.

ANTENNA AS-522(*)/BPX

FREQUENCY: UHF band, 960 - 1050 mc.

TYPE: Conical antenna.

DESCRIPTION: The antenna has a conical, vertical, quarter-wave radiating element and a small circular ground plane. It is enclosed in a sealed polyethylene dome and is constructed of aluminum with a brass support. RG-14/U coaxial cable is used outside the pressurized dome and housing; RG-74/U, inside. A type-N connector is attached to the bottom of the antenna. The antenna is designed for mast mounting, and is part of AS-523/BPX, AS-524/BPX, and AS-525/BPX antenna assemblies. Overall dimensions are 6-1/2 inches high and 4-3/4 inches maximum diameter.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

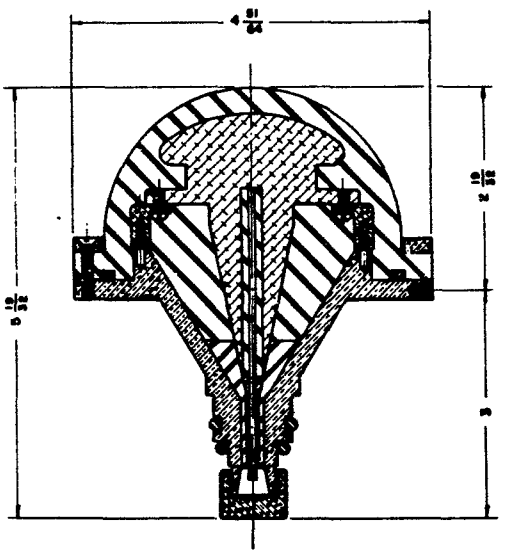
ASSOCIATED EQUIPMENT: AN/UPX-1, AN/UPX-5, and Mark 10 system. Equipment function - IFF.

MISCELLANEOUS: AS-522(*)/BPX denotes AS-522/BPX, AS-522A/BPX, and AS-522B/BPX.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Watson Elevator Co., Englewood, N. J., contracts NObsr-52282, NObsr-64546 and NObsr-71059.

STOCK NUMBERS: Federal Stock Numbers F 5985-665-2657 for AS-522/BPX, F 5985-296-5377 for AS-522A/BPX, and F 5985-508-0098 for AS-522B/BPX.



AS-522(*)/BPX

REFERENCES:

1) Bureau of Ships, Instruction Book for Submarine Antennas AS-522/BPX, AS-468/B, AS-535/B and Antenna Assemblies AS-523/BPX, AS-524/BPX, AS-525/BPX. UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959) CONFIDENTIAL.

3) BuShips drawing RE66D621B.

ANTENNA ASSEMBLY AS-523/BPX&()

MAJOR COMPONENTS: 1 AS-468/B antenna, 1 AS-522/BPX and 1 AB-234/B antenna support base.

FREQUENCY: VHF and UHF bands, 225 - 390 mc and 960 - 1050 mc.

TYPE: One conical antenna and one dipole.

DESCRIPTION: The antenna assembly consists of an AS-522/BPX antenna mounted on top of an AS-468/B antenna, which is mounted on an AB-234/B antenna support base.

BEAM DATA: (both antennas)
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio sets AN/URR-13, TED, and TDZ - RDZ. Equipment function - communications.
AN/UPX-1 and AN/UPX-5. Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: U. S. Navy Underwater Sound Laboratory.

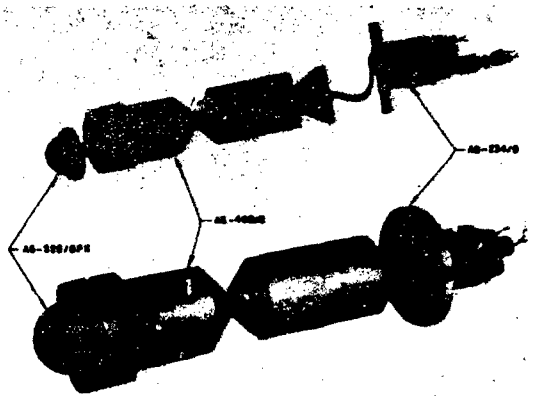
REFERENCES:

1) Bureau of Ships, Instruction Book for Submarine Antennas AS-522/BPX, AS-468/B, AS-535/B and Antenna Assemblies AS-523/BPX, AS-524/BPX, AS-525/BPX. UNCLASSIFIED.

2) BuShips drawing RE66D623.

3) U. S. Navy Bureau of Ships, Antenna Data Sheet, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL

4) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



AS-523/BPX&()

ANTENNA ASSEMBLY AS-524/BPX&()

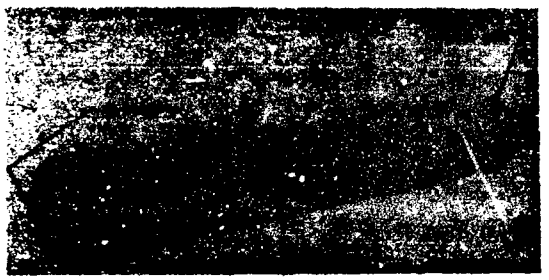
MAJOR COMPONENTS: 1 AS-522/BPX antenna, 1 AS-535/B antenna, and 1 AB-234/B antenna support base.

FREQUENCY: VHF and UHF bands, 110-156 mc and 960 - 1050 mc.

TYPE: One conical antenna and one dipole.

DESCRIPTION: The antenna assembly consists of an AS-522/BPX antenna mounted on an AS-535/B antenna, which is mounted on an AB-234/B antenna support base.

BEAM DATA: (both antennas)
Beam type - Omnidirectional in azimuth.



AS-524/BPX&()

Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio Sets SCR-624, AN/ARC-1, and TDQ-RCK. Equipment function - communications.
AN/UPX-1, AN/UPX-5, and Mark 10 System. Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: U. S. Navy Underwater Sound Laboratory.

REFERENCES:

1) Bureau of Ships, Instruction Book for Submarine Antennas AS-522/BPX, AS-468/B, AS-535/B and Antenna Assemblies AS-523/BPX, AS-524/BPX, AS-525/BPX. UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) BuShips drawing RE66D624.

4) U. S. Navy, Submarine Antenna Systems Summary, SSK240 Class, Fort Trumbull, New London, Conn.: U. S. Navy Underwater Sound Laboratory, (Feb. 19, 1958).

ANTENNA ASSEMBLY AS-525/BPX&()

MAJOR COMPONENTS: 1 AS-522/BPX antenna, 1 AS-468/B antenna, 1 AS-535/B antenna, and 1 AB-234/B antenna support base.

FREQUENCY: VHF and UHF bands, 110 - 156 mc, 225 - 390 mc, and 960 - 1050 mc.

TYPE: One conical antenna and two dipoles.

DESCRIPTION: The antenna assembly consists of three antennas stacked vertically, with an AS-535/B antenna on the bottom, an AS-468/B in the center, and an AS-522/BPX antenna on the top. The assembly is mounted on an AB-234/B antenna support base.

BEAM DATA: (all three antennas)
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio Sets AN/URR-13, TED, TDZ-RDZ, SCR-624, AN/ARC-1, and TDQ-RCK. Equipment function - communications.
AN/UPX-1, AN/UPX-5, and Mark 10 system. Equipment function - IFF.

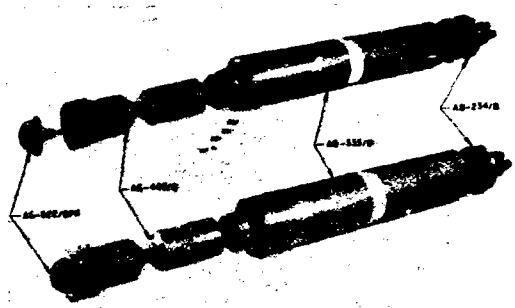
COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: U. S. Navy Underwater Sound Laboratory.

REFERENCES:
1) Bureau of Ships, Instruction Book for Submarine Antennas AS-522/BPX, AS-468/B, AS-535/B and Antenna Assemblies AS-523/BPX, AS-524/BPX, AS-525/BPX. UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) BuShips drawing RE66D625.



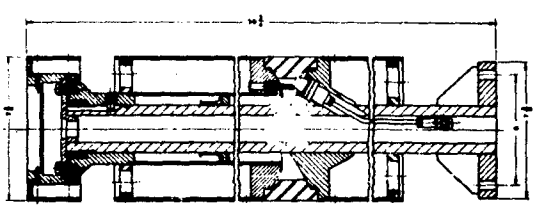
AS-525/BPX&()

ANTENNA AS-535/B&()

FREQUENCY: VHF band, 110 - 156 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of two brass cylinders mounted around a stainless-steel supporting tube to form a vertical dipole. The lower cylinder, in addition to forming half of the dipole, acts as a balun. The dipole is center fed by a length of RG-58/U coaxial cable which terminates on a UG-536/U connector located on the bottom of AB-234/B antenna support. An isolating sleeve is included and is bolted to the top of the antenna. Overall dimensions of the antenna are 51 inches high and 7-3/4 inches in diameter. The antenna is part of AS-524/BPX and AS-525/BPX antenna assemblies.



AS-535/B&()

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio Sets SCR-624, AN/ARC-1, and TDQ-RCK. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Watson Elevator Co.

STOCK NUMBER: Federal Stock Number F 5985-665-2654.

REFERENCES:
1) Bureau of Ships, Instruction Book for Submarine Antennas AS-522/BPX, AS-468/B, AS-535/B and Antenna Assemblies AS-523/BPX, AS-524/BPX, AS-525/BPX. UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959) CONFIDENTIAL

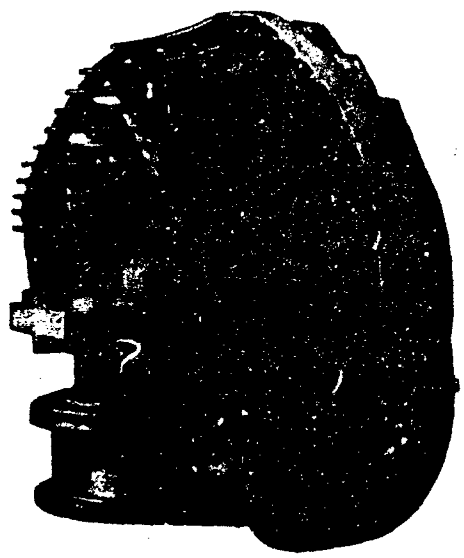
3) BuShips drawing RE66D622H.

ANTENNA AS-594()/BPS-4

FREQUENCY: SHF band, 3400 - 3700 mc.

TYPE: Modified cut-paraboloidal reflector with a dual horn feed.

DESCRIPTION: The antenna consists of slatted, modified, cut-paraboloidal reflector 48-5/16 inches wide and 32-1/2 inches high and a dual feed horn that provides both IFF and search feeds. RG-48/U rectangular waveguide feeds the search horn, and RG-8/U coaxial cable, which feeds a coaxial-line-to-waveguide transformer is used for the IFF horn. The overall height of the antenna is 37-1/2 inches, and overall depth is 26-29/32 inches. Construction is of cast and machined aluminum.



AS-594()/BPS-4.

BEAM DATA:
Gain - 23.5 db (search.) 11 db (IFF.)
Half-power beamwidth - Vertical - csc^2 type to 50°. Horizontal - 5.3° (search). 18° (IFF).
Polarization - horizontal (search). Vertical (IFF).

SCAN DATA: The antenna has 360° mechanical azimuth rotation at speeds from zero to six revolutions per minute.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Radar Set AN/BPS-4. Equipment function - search, air, search, surface, and IFF. Range - 30,000 yards to 10,000 feet.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Westinghouse Electric Corp., procurement contract NObsr-42988; Stavid Engineering, Inc., procurement contract NObsr-57068.

STOCK NUMBER: Navy Stock Number N16-52920-1001.

REFERENCES:
1) U. S. Navy Bureau of Ships, Instruction Book for Radar Set AN/BPS-4, NAVSHIPS 91621, (June 1952). UNCLASSIFIED.

2) Westinghouse drawing DL-7504247.

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ANTENNA AS-599()/SPN-11A()

FREQUENCY: SHF band, 9320 - 9430 mc.

TYPE: Parabolic cylinder with hoghorn feed.

DESCRIPTION: The antenna consists of a slatted parabolic-cylinder reflector, a hoghorn feed, and the pedestal assembly. The reflector is constructed of cast aluminum, is 50 inches wide and 13-3/8 inches high. The antenna is designed for use with RG-51/U rectangular waveguide. Overall dimensions are 33-3/4 inches high, 50 inches wide, and 22-1/2 inches deep.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - Vertical - 20°.
Horizontal - 1.9°.
Beam type - Fan.
Polarization - Horizontal.

SCAN DATA: 360° mechanical azimuth rotation at 17 revolutions per minute.

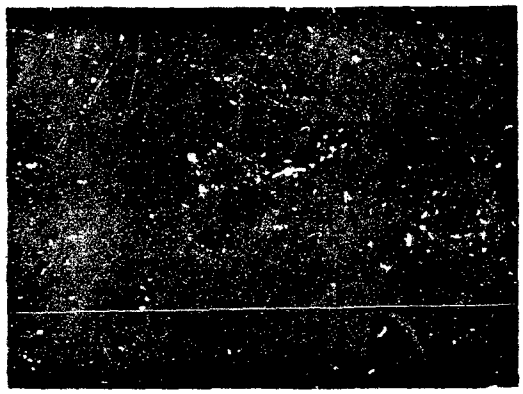
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPN-11A() Equipment function - search, surface. Range - 20 nautical miles.

COGNIZANT AGENCY: SCL-11351.

MANUFACTURERS: Radiomarine Corp. of America, Procurement contract order 6270-PHILA-51.

STOCK NUMBERS: Federal Stock Number 5985-240-0437. Reflector only ... Federal Stock Number F 5985-280-3492.



AS-599( )/SPN-11&( )

REFERENCES:
1) Department of the Army, Radar Sets AN/SPN-11X, AN/SPN-11Y and AN/SPN-11Z Installation and Operation, Technical Manual, TM 11-1335, (Oct. 1952). UNCLASSIFIED.

2) Manufacturer Part/Drawing No. KS-1670.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-601/SPN-1?

FREQUENCY: SHF band, 3030 - 3110 mc and 9335 - 9415 mc.

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The antenna consists of a slatted reflector with a dual-frequency horn feed. It mounts by 13/16-inch mounting holes on a 16-1/2-inch bolt circle.

BEAM DATA:
Polarization - Horizontal.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPN-13. Equipment function - navigation.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: General Electric Company.

REFERENCES:
1) General Electric drawing PL766841101.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-603/SPS-12

FREQUENCY: UHF band, 1250 - 1350 mc; VSWR < 1.5.

TYPE: Cut paraboloidal reflector with horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector with a stainless-steel-mesh reflecting surface, and a flared waveguide horn. The reflector is 91-1/2 inches high and 205 inches wide. The antenna mounts by 24 bolts through holes equally spaced on a 23-3/4-inch bolt circle. The feed horn connects to standard L-band waveguide. The total weight of the antenna is 1000 pounds.

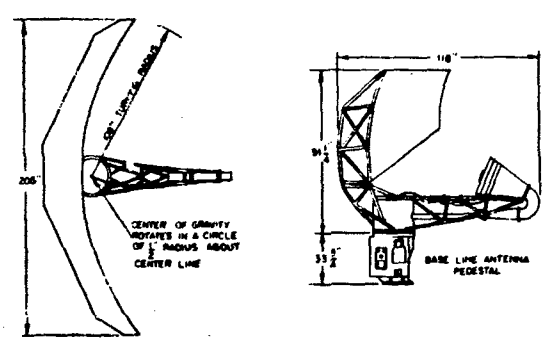
BEAM DATA:
Half-power beamwidth - Horizontal -3°.
Beam type - 30° $\csc^2$ coverage in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate that can be varied from 2-1/2 to 15 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-12. Equipment function - search, air. Range - 200 miles.

COGNIZANT AGENCY: U. S. Navy, code 821.



AS-603/SPS-12

MANUFACTURER: Radio Corporation of America, contract NObsr-49146.

STOCK NUMBER: Federal Stock Number F 5985-369-5470.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) RCA Outline Drawing 8-314158.
4) NAVSHIPS 91949A

ANTENNA AS-614/SRD-9

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Parasitic array.

DESCRIPTION: The antenna consists of an aluminum reflector and a parasitic array with two driven elements and two parasitic elements. The antenna is designed to be used with a 52-ohm coaxial transmission line.

BEAM DATA:
Beam type - Unidirectional (half of a figure eight).

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/SRD-9. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy, code 840.

MANUFACTURER: Federal Telecommunication Laboratories, contract NObsr 42410.

REFERENCES:
1) Federal Telecommunication Laboratories drawing RX-327277-2A.
2) U. S. Navy Specification CS-885.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-615/SPS-10

FREQUENCY: IFF ... UHF band, 1001.5 - 1038.5 mc and 1081.5 - 1118.5 mc; Radar ... SHF band, 5450 - 5825 mc.

TYPE: Parabolic-cylinder reflector with modified hoghorn radar feed and monopole IFF feed.

DESCRIPTION: The radar section of the antenna consists of a horizontally slatted parabolic cylinder fed by a hoghorn. The reflecting barrier of the hoghorn is a modified parabolic surface which produces a beam with $\csc^2$ distribution in the vertical plane. The reflector is 120 inches wide by 30 inches high, and has a focal length of 35-1/2 inches.

The IFF section of the antenna consists of a parabolic-cylinder reflector with a feed made up of a radiating element and six parasitic elements. The parabolic-cylinder reflector for the IFF section is made up of vertical rods located just behind the horizontal slats of the radar reflector. The IFF feed consists of an end-fed, full-wavelength radiating rod located in front of the mouth of the hoghorn. A corner reflector made up of six vertical rods, located three on each side of the hoghorn, directs the IFF energy to the parabolic-cylinder reflector. The total weight of the antenna is 313 pounds.

BEAM DATA:

	Radar	IFF
Gain -	30 db	16.75 db
Half-power beamwidth -		
Vertical -	12° to 16°	22°
Horizontal -	1.5°	6°
Beam type -	$\csc^2$ from +7° to 22°	fan
Polarization -	horizontal	vertical

SCAN DATA: The antenna rotates through 360° in azimuth at 16 revolutions per minute.

TUNING/MATCHING DEVICES: The IFF feed of the antenna has a matching section.

INSTALLATION: Usually shipboard, sometimes ground (shore).

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-10. Equipment function - search, surface; and IFF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Sylvania Electric Products, Inc., contracts NObsr 49015, NObsr 52166, and NObsr 52321.

STOCK NUMBER: Federal Stock Number F5985-328-7962.

REFERENCES:
1) Department of the Navy, Radar Set AN/SPS-10, Instruction Book, (May 4, 1953). UNCLASSIFIED.
2) Sylvania Drawing 89-82700-1.
3) Signal Corps Specification MIL-R-10109.

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ANTENNA AS-623/UP

FREQUENCY: SHF band, 9800 - 10,000 mc; VSWR < 1.3.

TYPE: Paraboloidal reflector with Cutler feed.

DESCRIPTION: The antenna consists of an 18-inch paraboloidal reflector with a focal length of 5.66 inches and a Cutler-type feed. The antenna mounts on a tripod by means of a clamp. The antenna is designed for an RG-67/U waveguide.

COGNIZANT AGENCY: SCLE-4156.

STOCK NUMBER: U. S. Navy R-16-PH-358-4324 for the reflector only.

REFERENCES:
1) Signal Corps Drawing ES-C-118135 for Cutler feed only.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-651/SPS-5B

FREQUENCY: SHF band, 6275 - 6575 mc.

TYPE: Parabolic-cylinder reflector with a hoghorn feed.

DESCRIPTION: The antenna consists of a slatted parabolic cylinder fed by a hoghorn. The reflector is 84 inches wide by 26 inches high. The antenna mounts by four 3/4-inch clearance holes equally spaced on a 16-1/2-inch bolt circle. The total weight of the antenna is 102 pounds.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - vertical - 15°.
Horizontal - 1.5°.
Beam type - The half-power points of the beam in the vertical plane are at -7.5° and +7.5°. The beam has $\csc^2$ coverage in the vertical plane from +7.5° to +22°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of 17 revolutions per minute. It is manually tiltable in elevation from 0° to 65°.

INSTALLATION: Shipboard, PT boats and other small craft.

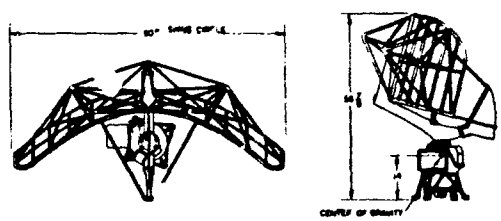
ASSOCIATED EQUIPMENT: Radar Set AN/SPS-5B.
Equipment function - Search. Range - 15 miles.

COGNIZANT AGENCY: U. S. Navy, code 831.

MANUFACTURER: Raytheon Manufacturing Co., contract NObsr-57072.

STOCK NUMBERS: Federal Stock Numbers F 5840-090-2660 without spares and F 5840-644-3066 with spares.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.
3) NAVSHIPS 91958.
4) Government Specification SHIPS-R-800.



AS-651/SPS-5B

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ANTENNA ASSEMBLY AS-658/BRD-3

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Adcock antenna.

DESCRIPTION: The antenna consists of a two-dipole, rotatable Adcock antenna array enclosed in a pressurized capsule 68 inches high and 17-5/8 inches in diameter. Also enclosed in the capsule are the antenna drive motor, the balun, the tone wheel and the motor which rotates the antenna inside the capsule. The total weight of the assembly is 300 pounds.

BEAM DATA:
Beam type - figure eight without sense antenna and cardioid with sense antenna.
Polarization - Vertical.

SCAN DATA: The antenna rotates in azimuth at a rate of 825 revolutions per minute.

INSTALLATION: Shipboard, submarines.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/BRD-3. Equipment function - direction finding.

MISCELLANEOUS: Antenna Assembly AS-658/BRD-3 is Antenna Assembly AS-514/URD-4 modified for use on submarines.

COGNIZANT AGENCY: U. S. Navy code 842.

MANUFACTURER: Bendix Radio Div., Towson, Md., contract NObsr 57426.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheet, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959) CONFIDENTIAL.
2) BuShips Specification MIL-D-16701.
3) BuShips drawing RE 36F2019.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-659/SPN-18

FREQUENCY: SHF band, 9320 - 9430 mc.

TYPE: Parabolic-cylinder reflector with a hoghorn feed.

DESCRIPTION: The antenna consists of a slatted, parabolic-cylinder reflector, a hoghorn feed, and a pedestal assembly. The reflector is constructed of cast aluminum. It is 50 inches wide and 13-3/8 inches high. The antenna is designed to be connected to RG-51/U rectangular waveguide. The overall assembly is 33-3/4 inches high, 50 inches wide, and 22-1/2 inches deep.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - Vertical - 20°.
Horizontal - 1.9°.
Beam type - Fan.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 9 revolutions per minute.

INSTALLATION: Shipboard.

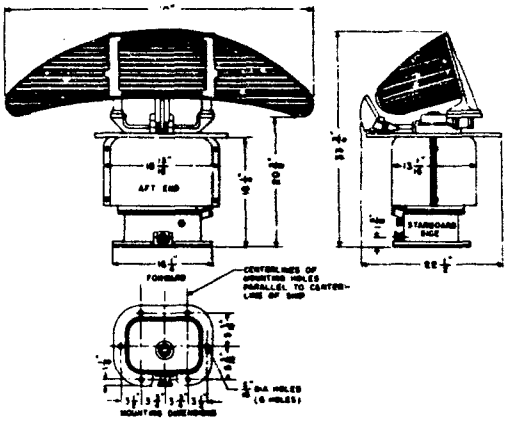
ASSOCIATED EQUIPMENT: Radar Sets AN/SPN-18 and AN/SPN-18X. Equipment function - navigation, direction finding; and search, surface.

MISCELLANEOUS: Antenna AS-659/SPN-18 in the same as AS-599/SPN-11, but it rotates at a slower speed.

COGNIZANT AGENCY: SCIM-7033.

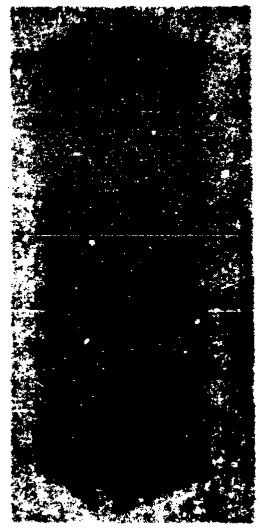
MANUFACTURER: Radiomarine Corporation of America, contract 3295-PH-52-02.

REFERENCES:
1) Department of the Army, Radar Sets AN/SPN-18 and -18X Installation and Operation, TM 11-1330, (Jan. 1955). UNCLASSIFIED.
2) Department of the Army, Radar Sets AN/SPN-18 and AN/SPN-18X, Technical Manual, TM 11-1530, (April 1955). UNCLASSIFIED.
3) Radiomarine drawing KS-2360.



AS-659/SPN-18

ANTENNA AS-668/SR



AS-668/SR

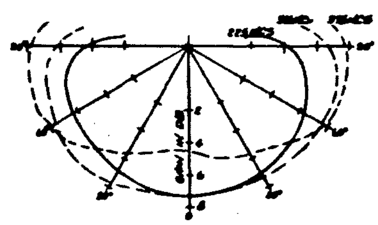
MAJOR COMPONENTS: 3 AT-150/SRC dipoles, 3 A-101 radomes, add 1 corner reflector.

FREQUENCY: VHF and UHF bands, 220 - 400 mc; VSWR < 3.

TYPE: Corner reflector with 3 collinear dipole feeds.

DESCRIPTION: The antenna consists of a corner reflector made of expanded metal and three AT-150/SRC vertical dipoles which are mounted in a vertical line about 11 inches in front of the apex of the reflector. The two sections of the reflector are bent back so that their reflecting surfaces form a 300° angle. Each of the dipoles is covered by a fiberglass radome. The dipoles are fed in phase by 50-ohm coaxial cables. The overall assembly is 122 inches high, 52 inches wide, and 54-1/4 inches deep.

BEAM DATA:
Gain - 7 db above a dipole at the center frequency.
Half-power beamwidth - Horizontal - Approximately 180° at the center frequency.
Polarization - Vertical.



TUNING/MATCHING DEVICES: A quarter wavelength impedance transformer, Z-101, matches the three dipole feed cables to a common 52-ohm cable.

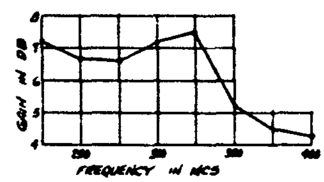
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communications, ship, air.

COGNIZANT AGENCY: U. S. Navy, code 838.

MANUFACTURER: Federal Telecommunications Laboratories, contract NObsr-52349.

STOCK NUMBER: Navy F16-A-51990-6101.



AS-668/SR Gain Over Dipole

REFERENCES:

1) U. S. Navy Bureau of Ships, Instruction Book for Transmitter Control C-1277/SR, Antenna AS-668/SR, and Relay Assembly RE-156/SR, NAVSHIPS 92195, (Mar. 31, 1954) UNCLASSIFIED.

2) Government Specification SHIPS-A-709.

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ANTENNA AS-677/URN-3

See OA-553/URN-3.

ANTENNA AS-678/URN-3

See OA-554/URN-3.

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ANTENNA AS-695/SPS

FREQUENCY: SHF band, 5450 - 5825 mc.

TYPE: Parabolic-cylinder reflector with a hoghorn feed.

DESCRIPTION: The antenna is a slatted parabolic cylinder, 31 inches wide and 84 inches long, with a hoghorn feed. The antenna is designed for connection to rectangular waveguide and for mast-head mounting by eight 3/4-inch bolts equally spaced on a 16-1/4-inch-diameter bolt circle.

SCAN DATA: The antenna tilts in elevation from -5° to +90° and rotates in azimuth through 360°. It has provision for automatic sector scan.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: A shipboard radar set similar to AN/APS-5. Equipment function - search, air; and search, surface.

MISCELLANEOUS: AS-695/SPS is the same as AS-696/SPS except for frequency range and size of input waveguide.

COGNIZANT AGENCY: U. S. Navy, code 821.

MANUFACTURER: Dalmo Victor Co., contract NObsr 57550.

REFERENCES:
1) BuShips Specification MIL-A-16681A.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-696/SPS

FREQUENCY: SHF band, 6275 - 6576 mc.

TYPE: Parabolic-cylinder reflector with a hoghorn feed.

DESCRIPTION: The antenna is a slatted parabolic cylinder, 31 inches wide by 84 inches long, with a hoghorn feed. The antenna is designed for connection to rectangular waveguide and for mast-head mounting by eight 3/4-inch bolts equally spaced on a 16-1/4-inch-diameter bolt circle.

SCAN DATA: The antenna tilts in elevation from -5° to +90° and rotates in azimuth through 360°. It has provision for automatic sector scan.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-5. Equipment function - search, air; and search, surface.

MISCELLANEOUS: AS-696/SPS is the same as AS-695/SPS except for frequency range and size of waveguide used.

COGNIZANT AGENCY: U. S. Navy, code 821.

MANUFACTURER: Dalmo Victor Co., contract NObsr 57550.

REFERENCES:
1) BuShips Specification MIL-A-16681A.

2) U. S. Department of Defense Nomenclature Card.

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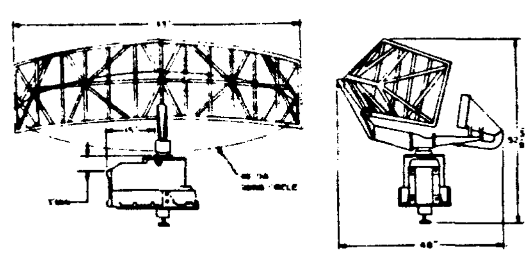
ANTENNA AS-710/SPS-21

FREQUENCY: SHF band, 5500 to 5600 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION: The antenna is a lightweight, slatted, cut paraboloidal reflector fed by a pyramidal horn. The reflector is 93 inches wide and 22 inches high. The horn is fed by type RG-49/U waveguide. This is a side-mounting antenna for use on a mast, deck house, or bulkhead; it may be used where the transmitter-receiver is mounted to the antenna assembly and the indicator is mounted in a remote location. It has four 9/16-inch mounting holes on 6-5/8-inch by 8-3/8-inch centers. The antenna is rotated by a General Electric number 5 KH33GG18 a-c drive motor. The assembly weighs 216 pounds.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - Vertical - 15°.
Horizontal - 2°.
Polarization - Horizontal.



AS-710/SPS-21

SCAN DATA: The antennas a mechanical motor-driven rotation through 360° in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-21. Equipment function - search.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Raytheon Manufacturing Company, Navy contract NObsr-63170.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959) CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card. AS-710/SPS-21

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ANTENNA AS-714/SRD-7

FREQUENCY: LF, MF and HF bands, .25 - 30 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a rotating loop housed in a radome along with a drive motor and a remotely controlled preamplifier. The antenna has an impedance of 95 ohms and is terminated for twin coexial feed using RG-111/U cable. The radome is 19-1/2 inches high and 16-1/2 inches in diameter at the base. The flange has eight 3/4-inch-diamter, tapped mounting holes spaced 45° apart on a circle whose radius is 4-1/2 inches. The antenna weighs 90 pounds.

BEAM DATA:
Beam type - Cardioid or figure eight.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 1800 revolutions per minute.

INSTALLATION: Shipbcard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/SRD-7. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stewart-Warner Corporation, part number G 165001, Navy contract NObsr-52218.

REFERENCES:
1) NAVSHIPS 92349.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-725/S&()

FREQUENCY: VHF and UHF bands, 225 - 390 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a cylindrical dipole 7-3/4 inches in diameter and 23-1/2 inches long. It is mounted on the mast of small boats by means of a 2-inch threaded pipe. Provisions are made for mounting a range light on top of the antenna.

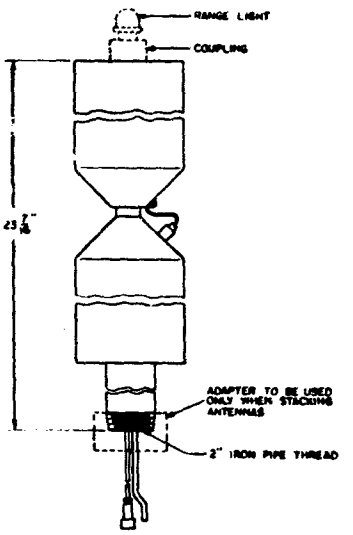
BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard, small boats.

ASSOCIATED EQUIPMENT: Radio Set AN/URR-13 and various other UHF radio sets. Equipment function - communications.

MISCELLANEOUS: The nomenclature card gives the overall length of the antenna as 31 inches, but other references give it as 23-1/2 inches. The antenna is electrically similar to but not interchangeable with Antenna AS-468/B.

COGNIZANT AGENCY: U. S. Navy.



AS-725/S&()

MANUFACTURER: Watson Elevator Co., Inc. drawing number 1563, contract NObsr 71758.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) BuShips drawing RE 66F 2096A.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNAS AS-744/SPS-23, AS-745/SPS-23X, AS-746/SPS-23Y, AS-747/SPS-23Z, AS-748/SPS-23XX

FREQUENCY: SHF band, 9300 - 9500 mc.

TYPE: Parabolic cylinder reflector.

DESCRIPTION: Antennas AS-744/SPS-23 and AS-748/SPS-23XX consist of a reflector and an RF-87/U tuned cavity. These antennas also include a horn deicing unit and magnetic clutches to permit sector-scan operation. The other three antennas probably have these same features; however, the available information does not so indicate. All five antennas can be rotated mechanically.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: AS-744/SPS-23 ... Radar Set AN/SPS-23; AS-745/SPS-23X ... Radar set AN/SPS-23X; AS-746/SPS-23Y ... Radar set AN/SPS-23Y; AS-747/SPS-23Z ... Radar set AN/SPS-23Z; AS-748/SPS-23XX ... Radar set AN/SPS-23XX. Equipment function - search.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Radiomarine Corporation of America.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-750/SMD-1A

FREQUENCY: UHF band, 1660 - 1700 mc.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: The antenna is a paraboloidal reflector fed by a dipole. In front of the dipole is an offset hemispherical reflector which is rotated for lobing. The dipole is 3 inches long, the hemisphere is 6-3/4 inches in diameter, and the paraboloid is 6 feet in diameter. The antenna rotates in azimuth and tilts in elevation and cross-level. It is used in tracking and receiving signals from Radiosonde AN/AMT-4 or AN/AMT-9.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 4 revolutions per minute, mechanical elevation tilt from -40° to +97° at 5 revolutions per minute, electrical elevation tilt from -35° to +93.5°, and cross-level tilt at 4 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radiosonde Receiver AN/SMD-1A. Equipment function - meteorological measurement.

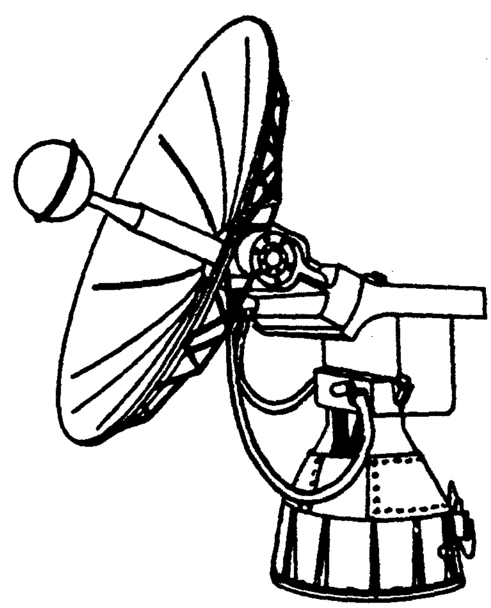
COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: A. D. Cardwell Manufacturing Corporation.

REFERENCES:
1) Military Specification MIL-R-17110.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) U. S. Department of Defense Nomenclature Card.



AS-750/SMD-1A

ANTENNA AS-762/MPN-5

MAJOR COMPONENTS: 1 Antenna Reflector AT-262/MPN-5&() and 1 Antenna Horn AT-409/MPN-5.

FREQUENCY: SHF band, 9000 - 9130 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:

A) Antenna Reflector AT-262/MPN-5 &() is a cut paraboloid 96 inches wide, 37 inches high, and 24 inches deep. The antenna is of one-piece construction using laminated glass cloth with a wire-screen reflecting surface.

B) Antenna Horn AT-409/MPN-5 is used to feed the above reflector. The inside of the horn is 0.900 inch square at the throat and 1.050 inches long by 0.866 inch wide at the mouth. The horn is fed by a waveguide.

BEAM DATA:
Half-power beamwidth - 0.95° in azimuth.
Beam type - Modified beavertail, 4° in elevation.
Polarization - The antenna can be manually set for either linear or circular polarization.

SCAN DATA: The scanning range is plus or minus 10 degrees in azimuth.

TUNING/MATCHING DEVICES: A manually operated waveguide polarizing unit permits either linear or circular polarization. Components are matched at electrical tests to insure proper realignment if disassembled.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPN-5 and AN/FPN-28. Equipment function - approach control, used to beam azimuth signal.

MISCELLANEOUS: Apparently the only difference between models of this antenna is that the early models had to have the feed matched to the reflector, whereas later models did not have to be matched.

COGNIZANT AGENCY: U. S. Navy.

REFERENCES:

1) Private Correspondence.

2) Military Specification CS-972.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-763/MPN-5

MAJOR COMPONENTS: Antenna Reflector AT-263/MPN-5&() and Antenna Horn AT-410/MPN-5&().

FREQUENCY: SHF band, 9000 - 9180 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:

A) Antenna Reflector AT-263/MPN-5&() - The reflector is a cut paraboloid 126 inches high, 36.96 inches wide, and 29 inches deep. It is constructed of two wing sections and a center section. Prior to 1957, the antenna reflector was constructed of laminated glass cloth with a wire-screen reflecting surface. After 1957, it was constructed of sheet metal, and used removable sheet-metal beam-shaping plates.
B) Antenna Horn AT-410/MPN-5&() - The horn is used to feed AT-263/MPN-5 reflector. The outside of the horn is 1 inch long by 0.5 inch wide at the throat and 3.35 inches long by 0.855 inch wide at the mouth. The inside of the horn is 0.9 inch long by 0.4 inch wide at the throat and 3.25 inches long by 0.755 inch wide at the mouth. Prior to 1957, the horn and reflector had to be matched; after 1957, matching was no longer required.

BEAM DATA:
Half-power beamwidth - 0.55° in the vertical plane.
Beam type - Csc^2 in azimuth plane.
Polarization - Either linear or circular, depending on the polarizing-unit setting.

SCAN DATA: The antenna nods 7° in elevation.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPN-5&() and AN/MPN-28&(). Equipment function - approach control, used to beam elevation signal.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio, procurement contracts NObsr-43011, NObsr-64729, and NObsr-63427.

STOCK NUMBERS: AS-763/MPN-5 ... Federal Stock Number F5985-636-3078; AT-263/MPN-5&() ... Federal Stock Number F5985-369-5645; AT-410/MPN-5 ... Federal Stock Number F5985-538-7089.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private Correspondence.

3) Military Specifications: AS-763/MPN-5 ... CS-972; AT-263/MPN-5&() ... CS-972D, R-1081A; AT-410/MPN-5 ... CS-972D.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-764/MPN-5

MAJOR COMPONENTS: Antenna Reflector AT-265/MPN-5 and Antenna Horn AT-268/MPN-5.

FREQUENCY: UHF band, 2740 - 2900 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:
A) Antenna Reflector AT-265/MPN-5&() - The reflector is a cut paraboloid 5.58 feet deep, 9.53 feet wide, and 10.25 feet high. It is constructed of aluminum mesh with a tubular-aluminum supporting structure. The horn feed must be matched to the reflector. When used with Radar Set AN/FPN-28, this reflector will mount to Antenna Pedestal AB-392/FPN-28; however, when it is used with Radar Set AN/MPN-5, it will mount to Pedestal AB-184/MPN-5.
B) Antenna Horn AT-268/MPN-5&() - The overall dimensions of the horn are 3.34 inches long by 1.5 inches wide at the throat and 4.4 inches long by 3.55 inches wide at the mouth. The inside of the horn is 2.84 inches long by 1.34 inches wide at the throat and 3.9 inches long by 3.39 inches wide at the mouth. The overall length of the horn assembly is 57.88 inches. The horn is constructed of aluminum alloy and is fed by a waveguide.

BEAM DATA:
Half-power beamwidth - 2.2° in azimuth plane.
Beam type - $\csc^2$ from about 2° to 25° in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna scans through 360° in azimuth.

TUNING/MATCHING DEVICES: The horn has 3 soldered tuning cores.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPN-28 and AN/MPN-5. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio, procurement contract NObsr-63427 and NObsr-43011.

STOCK NUMBER: AT-265/MPN-5 ... Federal Stock Number N5985-296-2395; AT-268/MPN-5 ... Federal Stock Number F5985-369-5465.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) Military Specifications: AS-764/MPN-5 ... CS-972; AS-265/MPN-5&() ... R-1081A; AS-268/MPN-5&() ... R-1081A.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-765/MPN-5

MAJOR COMPONENTS: Antenna Reflector AT-265/MPN-5 and Antenna Horn AT-411/MPN-5.

FREQUENCY: UHF band, 2740 - 2900 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:
A) Antenna Reflector AT-265/MPN-5 - The reflector is a cut paraboloid 5.58 feet deep, 9.53 feet wide, and 10.25 feet long. It is constructed of aluminum mesh with a tubular-aluminum supporting structure. The feed horn must be matched to the reflector. When used with Radar Set AN/FPN-28, this reflector will mount to Antenna Pedestal AB-392/FPN-28; however, when it is used with Radar Set AN/MPN-5, it will mount to Pedestal AB-184/MPN-5.
B) Antenna Horn AT-411/MPN-5&() - The overall dimensions of the horn are 3.34 inches long by 1.507 inches wide at the mouth and 4.04 inches long by 3.557 inches wide at the throat. The inside of the horn is 2.84 inches long by 1.34 inches wide at the throat, and 3.545 inches long by 3.39 inches wide at the mouth. The horn assembly is 56.53 inches long overall. It is constructed of aluminum alloy and is fed by a waveguide.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna scans 360° in azimuth.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPN-28 and AN/MPN-5. Equipment function - approach control.

MISCELLANEOUS: AS-765/MPN-5 uses the same reflector as AS-764, but it uses AT-411/MPN-5 horn instead of AT-268/MPN-5 to produce a vertically polarized beam.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio, procurement contracts NObsr-43011 and NObsr-63427.

STOCK NUMBER: AT-265/MPN-5 ... Federal Stock Number F5985-296-2395.

REFERENCES:
1) Private Correspondence.

2) Military Specification: AS-765/MPN-5 ... CX-972; AT-265/MPN-5 ... R-1081A; AT-411/MPN-5 ... R-1081A.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-777/URN-3

See OA-878(*)/URN-3.

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ANTENNA AS-782/SPG-49

FREQUENCY: SHF band, 5400 - 5900 mc.

TYPE: Foster scanner with folded reflector.

DESCRIPTION: The antenna consists of a Foster scanner feeding a folded reflector. The scanner consists of two concentric truncated cones with the space between the cones forming the E-plane dimension of a curved waveguide. The outer cone contains two longitudinal slots for the input and output of the scanner. The inner cone rotates, and, by means of two reflecting surfaces between the cones, the distance a wave travels is linearly increased, producing a sawtooth-type scan. Overall dimensions of the antenna, including the reflector and horn, are 64 inches in width, 52 inches in length, and 34 inches in depth. The antenna mounts on two brackets, each with four holes paired on 12-inch centers.

INSTALLATION: Probably shipborne.

ASSOCIATED EQUIPMENT: Radar Set AN/SPG-49. Equipment function - probably fire control.

COGNIZANT AGENCY: U. S. Navy 5-327.

MANUFACTURER: Sperry Gyroscope Co.

REFERENCES:
1) Government Specification MIL-R-18669 (NORD).

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-826/SPN-22

FREQUENCY: SHF band, 9320 - 9430 mc.

TYPE: Parabolic-cylinder reflector with waveguide feed.

DESCRIPTION: The assembly consists of a parabolic-cylinder reflector, some type of waveguide feed, a drive mechanism, and probably the transmitter and receiver. The reflector is approximately 1 foot high and 4.17 feet wide.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - Vertical - 20°.
Horizontal - 1.9°.
Side-lobe attenuation - 25 db.

SCAN DATA: The antenna has 360° mechanical azimuth rotation, at 20 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar set AN/SPN-22 and AN/SPN-22X. Equipment function - search, surface (for navigation). Range - about 8 miles.

COGNIZANT AGENCY: 105B-2.

MANUFACTURERS: Radiomarine Corporation of America, procurement contract NObsr-64670.

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-828(*)/SPS

FREQUENCY: SHF band, 3430 - 3570 mc.

TYPE: Cut paraboloidal reflector with organ-pipe feed.

DESCRIPTION: The antenna consists of a slatted, cut paraboloidal reflector which is fed by an organ-pipe feed. The reflector is approximately 12 feet high and 15 feet

wide. The antenna weighs 4700 pounds, is 25 feet high overall, and requires a 16-foot turning radius.

BEAM DATA:
Gain - 41 db.
Half-power beamwidth - Vertical - 1.3°.
Horizontal - 1.6°.
Side-lobe attenuation - 19 db.
Beam type - Pencil.
Polarization - Vertical.

SCAN DATA: AS-828/SPS has 360° manual or mechanical azimuth rotation at 2, 3, 5, or 10 revolutions per minute. It has an electromechanical elevation scan of any 12° sector between 0° and 36° at 360, 720, or 970 scans per minute.
AS-828A/SPS has 360° manual or mechanical azimuth rotation at 2, 3, 5, or 10 revolutions per minute. It has an electromechanical elevation scan of any 12° sector between 0° and 36° at 480, 720, 1200, or 2400 scans per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar sets AN/SPS-8, AN/SPS-8B, AN/SPS-8C, and AN/SPS-8D, and AN/SPS-30. Equipment function - height finding; search, air; and search, surface.

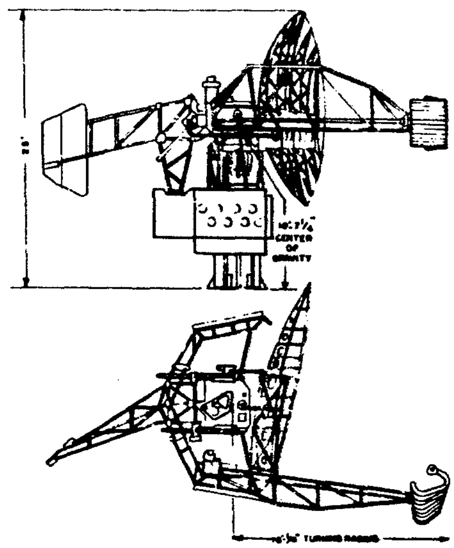
MISCELLANEOUS: AS-828(*)/SPS designates two models, AS-828/SPS which is used with the AN/SPS-8B, and AS-828A/SPS which is used with the AN/SPS-8C and AN/SPS-8D. Differences are shown above in Scan Data.

COGNIZANT AGENCY: U. S. Navy 660 and U. S. Navy 785.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959) CONFIDENTIAL.

2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

3) U. S. Department of Defense Nomenclature Card.



AS-828(*)/SPS

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ANTENNA AS-889/SRN-6

See Antenna Group OA-1545/SRN-6.

ANTENNA AS-890/SRN-6

See Antenna Group OA-1546/SRN-6.

ANTENNA AS-891/URN

See Antenna Group OA-1547/URN.

ANTENNA AS-892/URN

See Antenna Group OA-1548/URN.

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ANTENNA AS-904()/UPX

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Modified, folded pill-box antenna.

DESCRIPTION: The antenna is a modified, folded pill-box 60 inches wide, 27 inches deep, and 18 inches high. The antenna weighs 26 pounds,

and the input impedance is 51 ohms. Coaxial transmission line is used. The antenna is used for transmitting and receiving Mark X IFF signals in conjunction with any ground or shipboard-based IFF interrogator.

BEAM DATA:
Gain - 7 db.

SCAN DATA: The antenna has 360° mechanical azimuth rotation.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Various IFF equipment. Equipment function - IFF.

COGNIZANT AGENCY: USN-57-b-946.

MANUFACTURERS: U. S. Naval Electronics Laboratory, procurement contract NE 041215-23.

REFERENCES:
1) Manufacturer Drawing No. RAA66F-43179.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-905/UPX

FREQUENCY: UHF band, 1010-1110 mc.

TYPE: Folded pill-box antenna.

DESCRIPTION: The antenna is a Fox-type, modified folded pill-box. The overall dimensions are 180 inches wide, 58 inches deep, and 23 inches high. It is designed for a 51-ohm coaxial transmission line. The total weight is 165 pounds.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Additional information is available in the confidential document listed below as Reference 1.
Polarization - Vertical.

SCAN DATA: The antenna is normally mounted on a motor-driven pedestal which rotates through 360° in azimuth.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Any Mark X Interrogator Equipment. Equipment function - IFF.

COGNIZANT AGENCY: USN-57-b-947.

MANUFACTURER: U. S. Naval Electronic Laboratory, contract NEO 41215-23.1.

REFERENCES:
1) U. S. Navy, Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA-RECEIVER-TRANSMITTER AS-923/SPS-35

MAJOR COMPONENTS: 1 antenna and 1 transmitter-receiver subassembly.

FREQUENCY: SHF band, 9335 - 9405 mc.

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The assembly is 42-7/16 inches high with a swing circle 49 inches in diameter. No information is available on the feed for this reflector.

BEAM DATA:
Half-power beamwidth - Vertical - 15°.
Horizontal - 2°.

SCAN DATA: The antenna rotates in azimuth at 20 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar set AN/SPS-35. Equipment function - search, surface.

MISCELLANEOUS: The antenna described for Radar set AN/SPS-35 (AN/SPN-21) in reference 1) does not fit AS-923/SPS-35 and is described in this catalog under Antenna for AN/SPS-35.

COGNIZANT AGENCY: U. S. Navy 57-T-1433.

MANUFACTURER: Raytheon Mfg. Co., contract NObsr 71692 (serials 1-133).

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA-RECEIVER-TRANSMITTER AS-925/SPS-36

MAJOR COMPONENTS: 1 Ede 26100 antenna assembly, 1 Ede 26094 receiver-transmitter assembly and 1 Ede 26070 scanner drive.

TYPE: Collinear array of slots.

DESCRIPTION: The antenna consists of a length of leaky waveguide imbedded in Lock-Foam. The overall unit is 38-3/8 inches high by 57-1/64 inches wide. It weighs a total of 260 pounds.

BEAM DATA:
Half-power beamwidth - Vertical - 25°.
Horizontal - 1.8°.

SCAN DATA: The antenna rotates through 360° in azimuth at 15 revolutions per minute.

INSTALLATION: Shipboard.

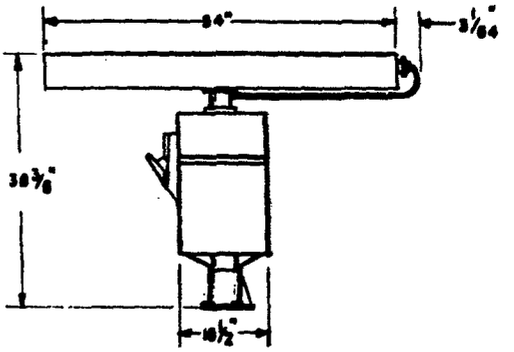
ASSOCIATED EQUIPMENT: Radar sets AN/SPS-36 and AN/SPN-23. Equipment function - search, surface (navigation). Range - 20 miles.

COGNIZANT AGENCY: U. S. Navy 57-T-1694.

MANUFACTURER: Ede Corp., part number 26123, contract NObsr 71891.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Department of Defense Nomenclature Card.



AS-925/SPS-36

ANTENNA AS-932/SPS-17A

MAJOR COMPONENTS: 20 dipole elements and 1 double corner reflector.

FREQUENCY: VHF band, 215 - 225 mc.

TYPE: Double corner-reflector antenna fed by two dipole arrays.

DESCRIPTION: The antenna is a double corner reflector that is fed by two dipole arrays. Each array consists of 5 dipoles fed by a branching system of coaxial transmission lines. The references do not define a double corner reflector but it probably is the type whose cross section is the shape of a "W".

SCAN DATA: The antenna rotates in the azimuth plane.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-17A. Equipment function - search.

COGNIZANT AGENCY: USN-58-b-65.

MANUFACTURER: I-T-E Circuit Breaker Co., procurement contract NObsr-71627.

REFERENCES:
1) Military Specification SHIPS-F-2415.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-933/SR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Corner reflector with stacked dipole feed.

DESCRIPTION: The antenna consists of a corner reflector and three dipoles 17-1/4 inches long. The two sections of the reflector are bent back so that their reflecting surfaces form an angle greater than 180°.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communications.

MISCELLANEOUS: Antenna AS-933/SR is a lightweight version of Antenna AS-668/SR. However, the two are not interchangeable.

COGNIZANT AGENCY: USN-58-Y-136.

MANUFACTURER: Philadelphia Naval Shipyard.

REFERENCES:

1) BuShips Drawing RE 66F 2117A.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-936/SPS-10B

FREQUENCY: IFF...UHF band, 1001.5 - 1038.5 mc and 1081.5 - 1118.5 mc; Radar ... SHF band, 5450 - 5825 mc.

TYPE: Parabolic-cylinder reflector with modified hoghorn radar feed and monopole IFF feed.

DESCRIPTION: The radar section of the antenna consists of a horizontally slatted parabolic cylinder fed by a hoghorn. The reflecting barrier of the hoghorn is a modified parabolic surface which produces a beam with csc^2 distribution in the vertical plane. The reflector is 120 inches wide by 30 inches high and has a focal length of 35-1/2 inches.
The IFF section of the antenna consists of a parabolic-cylinder reflector with a feed made up of a radiating element and six parasitic elements. The parabolic-cylinder reflector for the IFF section is made up of vertical rods located just behind the horizontal slats of the radar reflector. The IFF feed consists of an end-fed, full-wave-length radiating rod located in front of the mouth of the hoghorn. A corner reflector made up of six vertical rods, located three on each side of the hoghorn, directs the IFF energy to the parabolic cylinder reflector. The total weight of the antenna is 313 pounds.

BEAM DATA:

	Radar	IFF
Gain -	30 db	16.75 db
Half-power beamwidth -		
Vertical -	12° to 16°	22°
Horizontal -	1.5°	6°
Beam type -	csc^2 from +7° to 22°	fan
Polarization -	horizontal	vertical

SCAN DATA: The antenna rotates through 360° in azimuth at 16 revolutions per minute.

TUNING/MATCHING DEVICES: The IFF feed of the antenna has a matching section.

INSTALLATION: Usually shipboard, sometimes ground (shore).

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-10B. Equipment function - search, surface; and IFF.

MISCELLANEOUS: Antenna AS-936/SPS-10B is a modified Antenna AS-615/SPS-10. The original antenna pedestal is replaced by Antenna Pedestal AB-561/SPS-10B, and a mast switch is added.

COGNIZANT AGENCY: USN-58-b-168.

MANUFACTURER: Sylvania Electric Co., contract NObsr 71817.

REFERENCES:

1) Sylvania Drawing 89-82700-1.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-949/BPX

MAJOR COMPONENTS: 1 AT-497/U antenna, 1 VHF antenna, and 1 IFF antenna.

FREQUENCY: AT-497/U ... MF and HF bands, 2 - 30 mc, VHF antenna ... [illegible] and UHF bands, 30 - 400 mc, IFF antenn[illegible] UHF band, 950 - 1200 mc.

TYPE: AT-497/U ... Whip.

DESCRIPTION: The antenna assembly consists of three individual antennas mounted on a retractable mast. One of the antennas is Antenna AT-497/U, a 12-foot whip. No description of the other two antennas was available.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communications and IFF.

COGNIZANT AGENCY: USN-58-y-709.

MANUFACTURER: U. S. Naval Underwater Sound Laboratory, order I-850-01-00.

REFERENCES:

1) U. S. Naval Underwater Sound Laboratory Drawing SK-33046.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-977/SRD-13

FREQUENCY: LF, MF, and HF bands, 0.275 - 3.5 mc.

TYPE: Loop antenna.

DESCRIPTION: The antenna is described on its nomenclature card as a loop-frame type which is style 7 of Reference Drawing Group 11. It is a square loop having a multiple-turn coil wound on a square frame.

SCAN DATA: The antenna has motor-driven azimuth rotation through 360 degrees.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Automatic Direction Finder Set AN/SRD-13. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy, USCG.

MANUFACTURER: Control Electronics Co., Inc., part number 32-304, procurement contract Tcg-40709 (CG-42,102-A).

REFERENCES:
1) Military Specification USCG EEE-9-58.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-979/UKR

FREQUENCY: VHF band, 225 - 260 mc; VSWR < 1.3 over any 20-mc portion of the band from 225 to 260 mc (SIC).

TYPE: Helical antenna.

DESCRIPTION: AS-979/UKR is a helical antenna with a ground plane. The helix is enclosed in a weatherproof housing. (See drawing.) The antenna will withstand rugged, shipboard environment.

BEAM DATA:
Half-power beamwidth - Horizontal - 70°.
Vertical - 70°.
Beam type - Conical. The peak of the beam is along the axis of the helix.
Polarization - Circular.

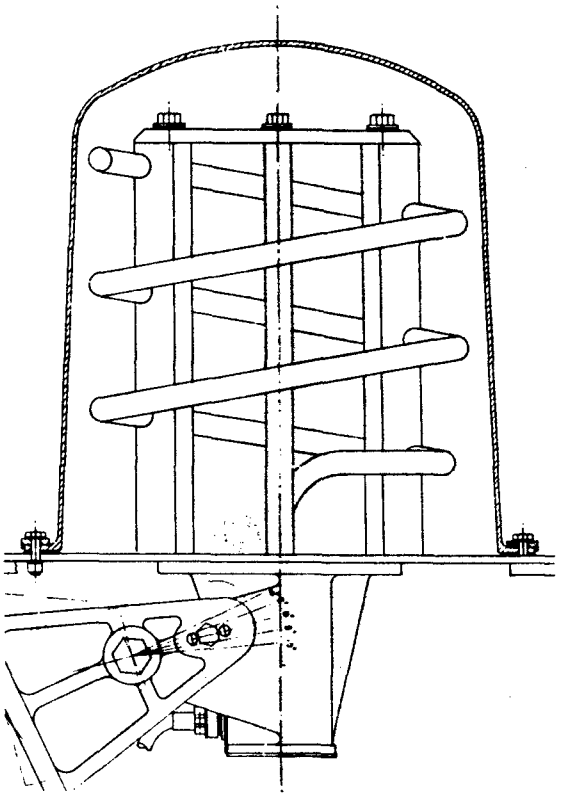
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: AN/UKR-8, -10, and others, Equipment function - telemetering.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Aircraft Armaments, Inc.

REFERENCES:
1) Private Correspondence.
2) Request for Nomenclature.



As-979/UKR (Courtesy of Aircraft Armaments, Inc.)

ANTENNA AS-996/BPS-9A

MAJOR COMPONENTS: 1 AT-294/BPS-1 antenna horn, 1 CW-10AFX torque-tube drive assembly, 1 CW-10723 motor-drive gear unit, and 1 CW-21ADF-1 synchro unit.

FREQUENCY: SHF band, 8740 - 8890 mc.

TYPE: Horn antenna.

DESCRIPTION: Additional information is available in Volume V of this catalog series.

SCAN DATA: The antenna has a reversible motor-driven rotating mechanism.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Radar Set AN/BPS-9A. Equipment function - search.

MISCELLANEOUS: AS-996/BPS-9A is similar to 66AKX-2 but uses AT-294/BPS-1, and 66AKX-2 uses 66AXW.

COGNIZANT AGENCY: USN-59-b-79.

MANUFACTURER: Western Electric Co., contract NObsr 71746.

REFERENCES:
1) Western Electric Specification CS-15381-L2.

2) Request for Nomenclature Sheet.

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ANTENNA AS-997/SRC

FREQUENCY: VHF and UHF bands, 225 - 400 mc; VSWR < 2.5 on a 50-ohm line.

TYPE: Stacked array of vertical dipoles mounted around a hollow mast and a parasitic array consisting of a horizontal dipole and rod reflector mounted on top of the mast.

DESCRIPTION: The antenna consists of three broadband vertical dipoles mounted at different heights and 120 degrees apart around a hollow mast and a horizontal dipole and reflector mounted on top of the mast. The three broadband dipoles are phased to provide concentration of energy at relatively low angles. Phasing of the three collinear dipoles is accomplished by the length of RG-8/U transmission line connected between the antenna elements and the matching transformer. The beam-tilt angle is approximately 6 degrees measured from the horizontal. The horizontal dipole and rod reflector (a Yagi) provide zenith coverage.

BEAM DATA:
Beam type - Approximately omnidirectional in the horizontal plane.
Polarization - Primarily vertical at low angles and horizontal at high angles.

TUNING/MATCHING DEVICES: An impedance matching transformer and lengths of transmission line are used for matching and phasing.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: The AS-997/SRC antenna is for use with radio equipment in the 225- to 400-mc range for ship-to-air communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Contract NE090600-9-1.1 (NEL B1-26).

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA AS-1002/SPS-5C

FREQUENCY: SHF band, 5450 - 5825 mc.

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The reference listed below states that AS-1002/SPS-5C is similar to AS-651/SPS-5B. The mounting facilities are mechanically the same. Existing interconnecting cables may be used, but they will terminate at different points. The switch-box unit used to disengage the antenna is now a separate and removable unit. The waveguide system is designed to accept the new frequency range, and new operational features are provided.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-5C and AN/SPS-5D. Equipment function - search.

MISCELLANEOUS: AS-1002/SPS-5C is similar to AS-651/SPS-5B.

COGNIZANT AGENCY: U. S. Navy (N-59-b-407).

MANUFACTURER: Raytheon Manufacturing Co., contract NObsr-75415.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1004/SPS-41

FREQUENCY: SHF band, 9345 - 10,005 mc.

TYPE: Parabolic-cylinder reflector fed by a horn.

DESCRIPTION: The antenna is a pedestal-mounted, parabolic-cylinder reflector fed by a horn. A modulator is an integral part of the assembly.

SCAN DATA: The antenna has an azimuth scan at a constant rotational speed.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-41. Equipment function - search, surface.

COGNIZANT AGENCY: U. S. Navy (USN-59-T-1413).

MANUFACTURER: Bendix-Pacific Division, Bendix Aviation Corporation; contract NObsr-75168.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1011/SPG-55

FREQUENCY: SHF band, 4500 - 5900 mc.

TYPE: Paraboloidal reflector.

SCAN DATA: The assembly is a paraboloidal reflector with a nutating feed. No information is available on the feed. The antenna also has a motor-driven rotating and tilting mechanism.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Missile Guidance and Tracking Set AN/SPG-55. Equipment function - guidance.

COGNIZANT AGENCY: N-9-751.

MANUFACTURER: Sperry Gyroscope Co., part number 1002340, BuOrd part number 1847796, contract NOrd 17690.

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA AS-1012/SPG-55

FREQUENCY: SHF band, 5400 - 5900 mc.

TYPE: Cassegrainian antenna.

SCAN DATA: The antenna has provisions for conical scanning. It also has a motor-driven rotating and tilting mechanism.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Missile Guidance and Tracking Set AN/SPG-55. Equipment function - guidance.

COGNIZANT AGENCY: N-9-750.

MANUFACTURER: Sperry Gyroscope Co., part number 2375190, BuOrd part number 1848392, contract NOrd 17690.

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA ASSEMBLY-BUOY AS-1014/B

FREQUENCY: MF, HF and UHF bands (Communications), UHF band, 965 - 1060 mc (IFF).

DESCRIPTION: The antenna assembly consists of several antennas covering various frequency ranges. The antennas are mounted on top of a stainless-steel, teardrop buoy hull. A 200-foot coaxial cable connects the buoy to a submarine.

INSTALLATION: Shipboard, submarine, buoy-mounted.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communication and IFF.

COGNIZANT AGENCY: USN-59-y-1214.

MANUFACTURER: Granite State Co., contract NObsr 75639.

REFERENCES:
1) NRL drawings RA-10D-1779 and RA-66F-484.

2) Request for Nomenclature Sheet.

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ANTENNA AS-1018()/URC

FREQUENCY: VHF and UHF bands, 225 - 400 mc; VSWR < 2 on 50-ohm coaxial cable.

TYPE: Stacked array of vertical, cylindrical dipoles.

DESCRIPTION: The antenna is a mast-mounted stacked array of vertical, cylindrical dipoles fed by 50-ohm coaxial cable. The entire antenna structure is enclosed in a rugged fiberglass tube providing weather protection under adverse conditions. The structure has negligible deflection under winds as high as 120 miles per hour. A d-c ground system is provided for lightning protection. The overall antenna with the fibergl , be in place is 7 feet high and 9 inches in ster. The approximate weight is 100 pounds. Maximum power handling capability is 2 kilowatts.

BEAM DATA:

Beam type - Approximately omnidirectional in azimuth.
Half-power beamwidth - Vertical - 32°-36°.
Polarization - Vertical.

INSTALLATION: Shipboard or ground.

COGNIZANT AGENCY: U. S. Navy (USN-59-1824).

MANUFACTURER: GHU Associates, contract NI 23(953)22448A.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1065/UPX&()

FREQUENCY: UHF band, 970 - 1150 mc.

TYPE: Folded dipole, pillbox type.

DESCRIPTION: Reference 1) indicates that the antenna is of the folded-dipole, pillbox type and is pedestal mounted. One of the dimensions of the antenna is 10 feet. The radiation pattern has very low back lobes.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Various IFF equipment.

Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy, (N-59-b-2608).

MANUFACTURER: I-T-E Circuit Breaker Co., contract NObsr-75746.

REFERENCES:
1) Military Specification MIL-A-21327 (SHIPS).

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1066/SPS-46

FREQUENCY: SHF band, 9345 - 9405 mc.

TYPE: Cut paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: The antenna is pedestal mounted.

SCAN DATA: The antenna mechanically scans through 360° in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-46.

Equipment function - probably search.

COGNIZANT AGENCY: U. S. Navy (USN-59-b-2636).

MANUFACTURER: Lavoie Laboratories, Inc., contract NObsr 75774.

REFERENCES:
1) Military Specification SHIPS-R-3244.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1067/SPS-46X

FREQUENCY: SHF band, 9345 - 9405 mc.

TYPE: Cut paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: The antenna is pedestal mounted.

SCAN DATA: The antenna mechanically scans through 360° in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-46X. Equipment function - pr..ably search.

MISCELLANEOUS: Antenna AS-1067/SPS-46X is apparently the same as AS-1066/SPS-46 except for the replacement of the 400-cycle drive motor by a 60-cycle motor.

COGNIZANT AGENCY: U. S. Navy (USN-59-b-2636).

MANUFACTURER: Lavoie Laboratories, Inc., contract NObsr 75774.

REFERENCES:
1) Military Specification SHIPS-R-3244.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1068/SPA-52

FREQUENCY: VHF band, 215 - 225 mc.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna is pedestal mounted.

SCAN DATA: The antenna mechanically scans through 360° in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: AN/SPA-52.

COGNIZANT AGENCY: N-59-ac-2630.

MANUFACTURER: I-T-E Circuit Breaker Co., contract TCG-40942 (CG-44,132-A).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1075/SRN-6

FREQUENCY: UHF band, 960 - 1087 mc.

TYPE: Amplitude modulating antenna.

DESCRIPTION: Antenna AS-1075/SRN-6 consists of two vertically stacked dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cycles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of 9 parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses in pulser coils that remain fixed with respect to true north so that true north can be identified at the receiving equipment. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating, scalloped, cardioid pattern.

INSTALLATION: Shipboard.

COGNIZANT AGENCY: U. S. Navy, N-60-b-250.

MANUFACTURER: ITT Federal Division, contract NObsr-75355.

REFERENCES:
1) Military Specifications MIL-E-16400B and MIL-A-21212.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-5011/UR

FREQUENCY: VHF band, 115 - 156 mc; VSWR < 3.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a 1/4-wavelength radiating element (enclosed in a dielectric radome) and 4 aluminum-tube ground rods mounted on a cast aluminum base. The antenna is terminated with a UG-680/U connector for use with a 50-ohm transmission line.

INSTALLATION: Probably ground and shipboard.

ASSOCIATED EQUIPMENT: Radio Equipment AN/URT-7, AN/URR-21A, TDQ, and RCK. Equipment function - communications.

COGNIZANT AGENCY: Canada, 99.

MANUFACTURER: Sinclair Radio Laboratories, Ltd.

REFERENCES:
1) Sinclair Type Numbers D.AD-138 and AL-138.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-15/SWR-1

Cancelled 29 September 1943.

ANTENNA AT-48/UP

FREQUENCY: SHF band, 5000 - 11,000 mc.

TYPE: Horn.

DESCRIPTION: AT-48/UP is a portable, horn-type general-purpose antenna capable of receiving or transmitting r-f energy in the X-band. The horn, which utilizes a type N connector, is a means of coupling test sets to X-band radars. It is constructed of sheet brass and weighs one-half pound. It is 2-1/2 inches wide, 2 inches high, and 5-1/2 inches long.

SCAN DATA: The antenna does not scan but may be mounted in a vertical or horizontal position.

ASSOCIATED EQUIPMENT: Radio Frequency Test Set TS-13/AP and Detector-Amplifier Assembly AN/UPA-1A. Equipment function - test.

MISCELLANEOUS: The antenna has no support other than the type N connector.

COGNIZANT AGENCY: U. S. Navy, contract NObsr 39332.

MANUFACTURERS: General Electronic Industries, Model 710, and Hazeltine Electronics Corporation.

STOCK NUMBERS: Federal Stock Numbers 5841-524-4553; 5985-038-3462; Navy Stock Number (ASO) R16H8150.

REFERENCES:

1) Department of the Navy, AT-48/UP Test Antenna, NAVAER 20-55Al-4, (January 1, 1958). UNCLASSIFIED.

2) NavAer 08-55-78.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-50/U

FREQUENCY: VHF band, 170 - 180 mc; VSWR<2.0.

TYPE: Dipole.

DESCRIPTION: The antenna is a brass, half-wave dipole 32-1/2 inches long. It mounts at right angles to a steel tube 20-3/4 inches long. Provisions are made for mounting the tube either on a flat surface or on a rail. The support tube houses the concentric-line section which matches the radiator to the transmission line. A 50-ohm coaxial-cable feed is required at the input to the matching section. The antenna transmits an r-f signal to a YJ radar beacon or similar equipment and receives the response signal.

INSTALLATION: Ground, fixed, or shipboard.

ASSOCIATED EQUIPMENT: Radar Maintenance Equipment AN/UPM-1A and AN/UPM-1B. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

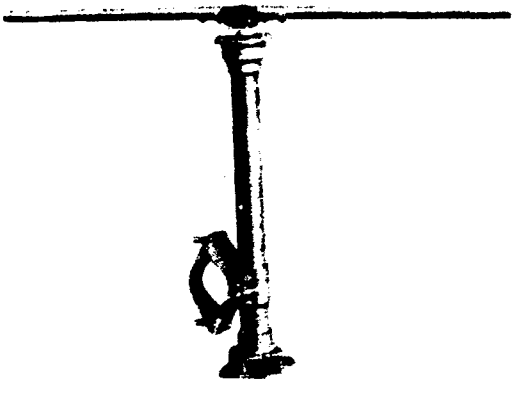
MANUFACTURERS: Hamilton Radio Corporation.

STOCK NUMBERS: Federal Stock Numbers 5985-156-6642 and 5985-284-9506.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Department of the Air Force and the Bureau of Aeronautics, Radar Maintenance Equipment AN/UPM-1, AN/UPM-1A, and AN/UPM-1B, Handbook Maintenance Instructions, AN 16-30UPM1-3, (February 15, 1946 - revised November 1949). UNCLASSIFIED.



AT-50/U

ANTENNA AT-51/U

FREQUENCY: UHF band, 500 - 520 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a half-wave dipole 12-1/2 inches long and 1/2 inch in outside diameter. It mounts at right angles to a steel tube 20-3/4 inches long. Provisions are made for mounting the tube either on a flat surface or on 2-1/4- to 3-1/4-inch rails. The antenna is fed by 50-ohm coaxial cable. A concentric-line section for matching the antenna to the 50-ohm lead-in is housed in the steel support tube. The antenna transmits an r-f signal to a YJ radar beacon or similar equipment and receives the response signal.

INSTALLATION: Ground, fixed, or shipboard.

ASSOCIATED EQUIPMENT: Radar Maintenance Equipment AN/UPM-1A and AN/UPM-1B. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

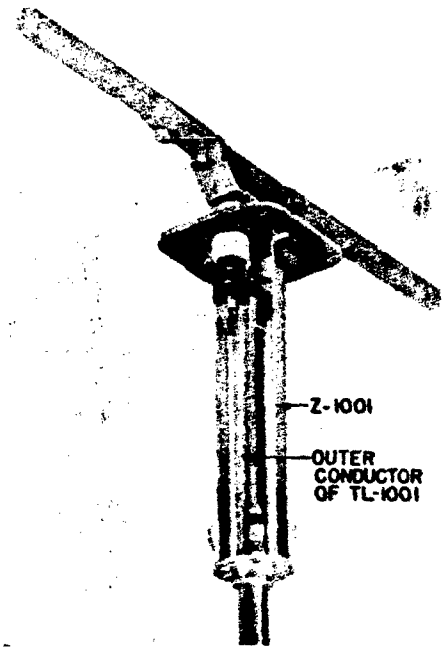
MANUFACTURER: Hamilton Radio Corporation per Hazeltine Drawing A-3426.

STOCK NUMBERS: Federal stock numbers N5985-636-4718 and 6625-295-9157.

REFERENCES:

1) Department of the Air Force and the Bureau of Aeronautics, Radar Maintenance Equipment AN/UPM-1, AN/UPM-1A, and AN/UPM-1B, Handbook Maintenance Instructions, AN 16-30UPM1-3, (Feb. 15, 1946 - revised Nov. 1949). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



AT-51/U

ANTENNA AT-150(*)/SRC

FREQUENCY: VHF and UHF bands, 220 - 570 mc; VSWR < 2.1 between 220 and 400 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a broadband dipole, 2-1/4 inches in diameter and 17-3/8 inches long. It is constructed of aluminum and weighs 4-1/2 pounds. It is designed to be mounted on a yardarm or horizontal bracket. The cable connection to the antenna is usually made by an RG-18/U cable with a UG-982/U connector. As an alternative, an RG-10/U cable with a UG-941A/U connector can be used.

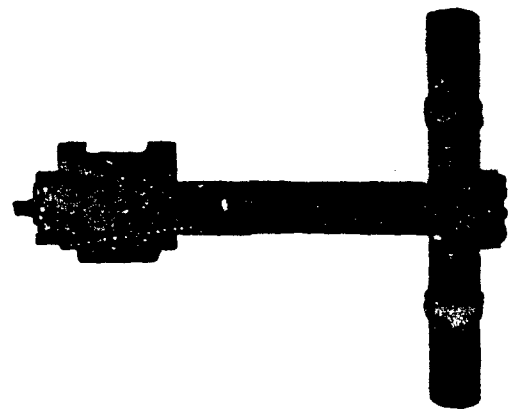
BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Sets TDZ-RDZ, MAR-RDR, TED, AN/SRD-9, AN/URC-35(*), AN/URR-13, and other communications equipment. Equipment function - communications.

MISCELLANEOUS: AT-150( )/SRC denotes AT-150/SRC, AT-150(SN-11)/SRC, and AT-150A/SRC.

COGNIZANT AGENCY: U. S. Navy, code 838.



AT-150/SRC

MANUFACTURERS: Alden Products Co., Bird Electronics Corp., and Technical Appliance Corp., contracts NObsr-64775, NObsr-52115, and NObsr-52595.

STOCK NUMBER: Federal Stock Number F5985-665-3648 and Navy F16-A-51990-1201.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy Bureau of Ships, Antenna AT-150/SRC and Antenna Assembly AS-390/SRC, Instruction Book, NAVSHIPS 91338, (June 29, 1950). UNCLASSIFIED.

ANTENNA AT-151/UPT

FREQUENCY: SHF band, 3800 - 5000 mc.

TYPE: Horn.

DESCRIPTION: The antenna is brass plated and painted on the outside. The horn is of one-piece construction and has a detachable mounting bracket of cast aluminum which is anodized and painted. The overall dimensions are 7 inches long, 4 inches wide, and 6-3/8 inches high. The antenna weighs approximately 2 pounds and is fed by a 50-ohm coaxial cable.

BEAM DATA:
Gain - 6 db.
Half-power beamwidth - 60° (probably in both planes).
Polarization - Linear, manually adjustable in three steps.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Target Transmitter Set AN/SPM-1, which is used to calibrate Direction Finder DBM-1. Equipment function - test.

MISCELLANEOUS: AS-151/UPT is a Submarine Signal Company type 1412, drawing number 61233.

COGNIZANT AGENCY: U. S. Navy, code 837.

MANUFACTURERS: Submarine Signal Company, U.S. Navy contract NObsr-42417.

STOCK NUMBERS: Federal Stock Number F5985-369-5400.

REFFRENCES:
1) U. S Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Specification Number CS-873.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-163/U

FREQUENCY: UHF and SHF bands, 1650 - 5200 mc.

TYPE: Probe.

DESCRIPTION: AT-163/U is an r-f probe constructed of silver-plated brass, 1-17/32 inches long and 5/8 inch in diameter. One end has a 5/8-24 thread and the other a 1/2-inch silver-plated clamp nut. The nomenclature card states that the probe has a "round female contact with loop at the rear of plug". It is used as a coupling connection for oscillator cavity output.

INSTALLATION: Probably shipboard or ground.

ASSOCIATED EQUIPMENT: Test equipment for Radar Sets SO-7M, SO-7N, and SO-8. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Raytheon Manufacturing Company, procurement contract NXss-30264.

STOCK NUMBER: Federal Stock Number N6625-252-3433.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Raytheon Manufacturing Company Drawings No. L6-5152 and E-202200-L1.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-165(*)/UKR

FREQUENCY: VHF band, 215 - 235 mc.

TYPE: Helical.

DESCRIPTION: The antenna consists of a copper helix with an aluminum ground plane. The helix has a constant diameter of 17 inches

and consists of approximately 2-1/2 turns of copper tubing. The distance between adjacent turns (i.e., the pitch) of the helix is 5.375 inches. The ground plane is a solid disk 30 inches in diameter with extendible arms for increasing the ground plane to a maximum diameter of 53 inches. The overall antenna is 53 inches in diameter and 27 inches in depth and weighs 48.5 pounds. The antenna mounts on a mast with the axis of the helix horizontal. The antenna is fed by a 52-ohm coaxial cable.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - Vertical - 70°.
Horizontal - 70°.
Front-to-back ratio - 15 db.
Polarization - Right-hand circular.

INSTALLATION: Ground, fixed; or shipboard.

ASSOCIATED EQUIPMENT: Telemeter Receiving Set AN/UKR-5(). Equipment function-telemetering.

MISCELLANEOUS: AT-165(*)/UKR denotes models AT-165/UKR and AT-165()/UKR. The nomenclature card indicates that AT-165()/UKR has a frequency range of 215-222 mc and a gain of 6 db. Otherwise, they seem to be identical.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Tele-Dynamics Incorporated (formerly Raymond Rosen Engineering Products), Navy procurement contract NOa(s)-10225 (for AT-165/UKR). Melpar Incorporated, Navy procurement contract NOa(s)-9139 (for AT-165()/UKR).

REFERENCES:
1) U. S. Air Force, AN/UKR-5 and AN/UKR-5A Telemeter Receiving Set, Handbook Maintenance Instructions, AN 16-30UKR5-7, (Mar. 1, 1954 - revised April 15, 1955). UNCLASSIFIED.
2) U. S. Air Force, AN/UKR-5B Telemeter Receiving Set, Handbook Maintenance Instructions, AN 16-30UKR5-7, (July 1, 1954). (Supplement to Reference 1.) UNCLASSIFIED.
3) Private Correspondence.
4) Military Specification R-16R103(Aer) for AT-165/UKR and XEL-12(BuAer) for AT-165 ()/ UKR.
5) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-193(*)/U

FREQUENCY: VHF band, 80 - 170 mc.

TYPE: Dipole, with flat-screen reflector.

DESCRIPTION: The antenna is constructed of brass and finished with gray enamel. The dipole is used with a two-piece, adjustable, reflector screen. The dipole and housing are 52 inches long and 6 inches in diameter. The 2-piece, adjustable reflector is 72 inches long and 11-3/4 inches wide and is probably constructed of 3/4-inch tubing. The dipole is fed by a 50-ohm coaxial cable. When used with the antenna support of AS-236/SPT, the antenna can be tilted and rotated.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Target Transmitter OCY-1 and Radar Transmitter 52ADW. Equipment function - direction finding and training.

MISCELLANEOUS: AT-193(*)/U denotes models AT-193()/U and AT-193/U. No data are available on differences, if any, between models. AT-193(*)/U is similar to 66AKJ. Reference 1 gives the length of the dipole and housing as 52 inches; the nomenclature card gives 30 inches.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: International Industrial Development Company, contract NObsr-42503.

STOCK NUMBERS: Federal Stock Number N5985-249-4395.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Navy Specifications CS-1045.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-194()/SPG

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a paraboloid, 40 inches in diameter, constructed of plastic and fiberglass. The reflector is used with the AS-515()/SPG antenna, which includes a Cutler feed.

INSTALLATION: Shipboard.

AS-515/SPG Radar Antenna with AT-194A/SPG Antenna Reflector

ASSOCIATED EQUIPMENT: Radar Sets AN/SPG-34, AN/SPG-48, and Radar Equipment Mark 34 Mod 17. Equipment function - fire control.

MISCELLANEOUS: Antenna AT-194A/SPG will also accomodate the Mark 16 Mod 2 antenna.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Western Electric Co., procurement contract NOrd-10746,13224.

REFERENCES:

1) U. S. Navy Bureau of Ordnance, Radar Set AN/SPG-34, Maintenance, NAVORD OP 2028, Volume 2, (June 25, 1953). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-236()/GRD

FREQUENCY: VHF band, 40 - 48 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a diamond-shaped wooden frame carrying two parallel conductors spaced 1/8 inch apart. The antenna is collapsible and measures 22-3/4 by 17-5/8 by 3 inches extended and 15 by 6 by 5 inches collapsed. A switch and capacitor in the base of the loop provide for sensing and tuning. A matching transformer, and attenuator (mounted on the antenna posts of the radio set), and a connecting cable are supplied. The antenna can be rotated on its base.

INSTALLATION: Ground or shipboard, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-300-().

COGNIZANT AGENCY: SCL-7394.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-252/SR

See Antenna Group AN/SRA-3.

ANTENNA REFLECTOR AT-262/MPN-58()

See Antenna AS-762/MPN-5.

ANTENNA REFLECTOR AT-263/MPN-58()

See Antenna AS-763/MPN-5.

ANTENNA REFLECTOR AT-265/MPN-58()

Part of Antenna AS-764/MPN-5.

ANTENNA HORN AT-268/MPN-58()

See Antenna AS-764/MPN-5 and Antenna AS-765/MPN-5.

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ANTENNA AT-274/BRR

FREQUENCY: VLF and LF bands, 0.0146 - 0.038 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a low-frequency underwater, single-plane loop antenna designed for installation aboard submarines. It consists of a single-plane loop inductor of 500 microhenries enclosed in a tear-drop-shaped polyethylene housing. The entire housing has a 1/4-inch rubber sheathing for additional protection against leakage. The antenna has an input impedance of 50 ohms and is fed by RG-57/U coaxial cable. It weighs 70 pounds and is 24-1/2 inches long, 8-1/2 inches wide, and 13-1/4 inches high. It is used only for receiving and is designed to be mounted in a fixed location or on a retractable mast aboard submarines.

BEAM DATA:
Beam type - Figure eight.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio Receivers RBA and RAK. Equipment function - communications.

MISCELLANEOUS: The polyethylene housing is pressurized to 600 pounds per square inch.

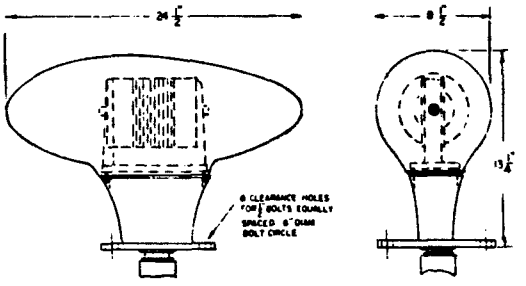
COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: American Phenolic Corporation, Navy contract NObsr-30171.

STOCK NUMBERS: Navy F16-A-45795-2421, Federal Stock Number N5985-369-5346.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Department of Defense Nomenclature Card.



AT-274/BRR

ANTENNA REFLECTOR AT-276/SPG

TYPE: Paraboloidal reflector fed by a horn.

DESCRIPTION: The reflector is a paraboloid 60 inches in diameter. It is made of fiberglass with a metalized reflecting surface. The antenna is flange mounted and has a 12-1/4-inch bolt circle of 12 mounting studs at the hub of the reflector to provide for the attachment of an antenna horn.

ASSOCIATED EQUIPMENT: Radar Set AN/SPG-48. Equipment function - fire control.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-317(*)/BRR

FREQUENCY: VLF and LF bands, 0.0146 - 0.038 mc.

TYPE: Crossed loops.

DESCRIPTION: The antenna consists of two 500-microhenry loops wound at right angles to each other and imbedded in a polyethylene, tear-drop housing. It weighs 126 pounds and is mounted on the submarine hull with eight 1/2-inch bolts on a 6-inch bolt circle. A switching arrangement is included so that either or both of the loops may be used. The antenna has a 75-foot, RG-160/U cable supplied with it.

BEAM DATA:
Beam type - When only one loop is used, the pattern is a figure of eight with maximum radiation either in the fore-aft directions or the port-starboard directions depending on which loop is used. When both loops are used, the pattern is nondirectional.
Polarization - Vertical.

TUNING/MATCHING DEVICES: A matching transformer, tuning capacitor, and phasing network are supplied.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radio Receiving Equipments Model RAK, RBA, and AN/SRR-11. Equipment function - communications.

MISCELLANEOUS: AT-317(*)/BRR denotes AT-317/BRR and AT-317A/BRR.

COGNIZANT AGENCY: U. S. Navy, code 838.

MANUFACTURER: American Phenolic Corp., part number 142-002.

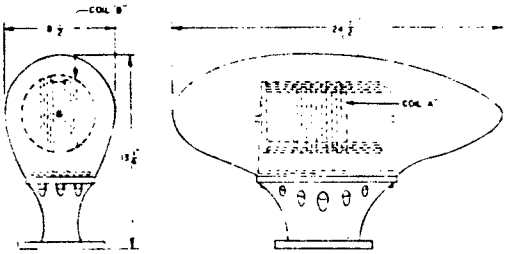
REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Bureau of Ships Specification MIL-A-15900.

3) U. S. Navy Bureau of Ships, Navy Mod. AT-317/BRR VLF Loop Antenna System for Use with Models RAK, RBA, AN/SRR-11 Radio Receiving Equipments, NAVSHIPS 92182, UNCLASSIFIED.

4) NAVSHIPS 92084.



AT-317(*)/BRR

ANTENNA AT-343()/URC

FREQUENCY: MF and HF bands, 2 - 26 mc.

TYPE: Whip

DESCRIPTION: The antenna is a motor-driven, retractable whip for general purpose use. It consists of one fixed section 9 feet long and 4 telescoping sections, each 5 feet long. Each section is made of a copper-wire radiator inside a piece of plastic tubing. The antenna is equipped with a 1/4-horsepower, reversible 110-volt a-c motor. The assembly mounts to a flat plate 12 inches by 16 inches. The antenna forms a pressure seal in the retracted position and is drip-proof in the erected position.

INSTALLATION: Ground, fixed or vehicular; or shipboard (submarine).

ASSOCIATED EQUIPMENT: General purpose use. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bergen Engineering and Development Corporation, Paramus, New Jersey, contract NObsr-43103.

REFERENCES:

1) Department of the Navy and the Bureau of Ships, Instruction Book for Automatic Retractable Antenna AT-343 (XN-1)/URC, NAVSHIPS-91494. UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-350(*)/BRC

MAJOR COMPONENTS: 1 AT-497/U antenna and 1 three-section antenna support.

FREQUENCY: MF and HF bands, 2 - 30 mc.

TYPE: Whip.

DESCRIPTION: Antenna AT-497/U is a whip, 12 feet long with a maximum diameter of 0.300 inch tapering to 0.100 inch at the top. The AT-350/BRC antenna assembly includes, in addition to the whip antenna, a 3-section streamlined antenna support. Each section is a 6-foot-long, corrosion-resistant, steel tube with a rotatable plastic fairing. A Teflon insulator section, 6-3/16 inches long, separates the whip from the antenna support. The antenna is designed for connection to an RG-17/U cable.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Various radio sets. Equipment furction - communications.

MISCELLANEOUS: AT-350(*)/BRC denotes AT-350/BRC and AT-350A/BRC.

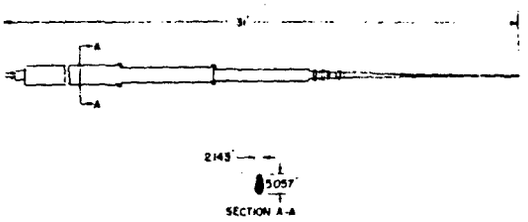
COGNIZANT AGENCY: U. S. Navy, BuShips, code 838.

MANUFACTURER: Premax Products Division of Chrisholm Ryder Co., contracts NObsr 52602 and NObsr 71275.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



AT-350/BRC

3) Bureau of Ships Drawing RE 66F 627.

4) NAVSHIPS - Manuscript Technical Manual for Streamlined Mid-fed Whip Antenna AT-350/BRC.

5) U. S. Navy Bureau of Ships, Antenna AT-350A/BRC, Technical Manual, NAVSHIPS 93215. UNCLASSIFIED.

ANTENNA AT-365(*)/BL

MAJOR COMPONENTS: 1 stub, 1 type 61277 insulator, and 1 base casting.

FREQUENCY: VHF and UHF bands, 30 - 1000 mc.

TYPE: Stub.

DESCRIPTION: The antenna is a stub, 20 inches long. It is mounted by 12 equally spaced 1/2-inch holes on a 6-13/16-inch-diameter bolt circle. The antenna is designed for connection to a 50-ohm cable, RG-8/U.

BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1 and Countermeasures Receiving Set AN/BLR-1. Equipment function - countermeasures.

MISCELLANEOUS: AT-365(*)/BL denotes AT-365/BL and AT-365A/BL.

COGNIZANT AGENCY: U. S. Navy, code 833.

MANUFACTURER: Various Naval Shipyards.

REFERENCES:

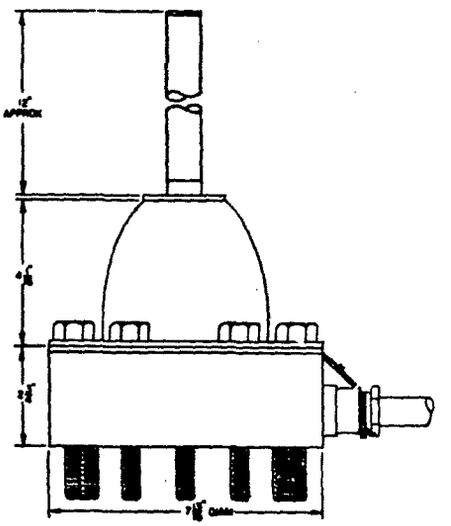
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) BuShips Drawings RE 66F 570 and RE 61F 259 (AT-365/BL).

3) BuShips Drawing REB66000 (AT-365A/BL).

4) U. S. Navy, SSJ240 Class, Submarine Antenna Systems Summary, (Feb. 19, 1958). UNCLASSIFIED.

5) U. S. Department of Defense Nomenclature Card.



AT-365A/BL

ANTENNA AT-372/UKR

MAJOR COMPONENTS: 1 helix, 1 ground plane.

FREQUENCY: VHF band, 215 - 230 mc; VSWR < 1.3.

TYPE: Helical antenna.

DESCRIPTION: The antenna consists of a helix enclosed in a radome and a flat-plate ground plane with radial rod extensions. The helix is made of copper tubing and is 20 inches in diameter with 3 turns in a 17-inch length. The ground plane consists of a 30-inch-diameter plate with eight radial, aluminum channel extensions. The overall diameter of the ground plane is 53 inches. The antenna mounts by six 5/8-inch bolts on pedestal AB-238/UPA at the base of IFF antenna AN/UPA-22 or AN/UPA-23. The antenna is designed for connection to a 52-ohm coaxial cable, RG-14/U or RG-74/U.

BEAM DATA:
Polarization - Circular.

ASSOCIATED EQUIPMENT: Telemetric Data Receiving Set AN/UKR-8. Equipment function - telemetering.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: J. P. Seeburg Corporation, Chicago, Illinois, contract NOrd-11878.

REFERENCES:
1) J. P. Seeburg Corporation Drawings 9250-1701 and 9250-134.
2) U. S. Navy Specification KLX-PE-2A.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-388/SPS-12

FREQUENCY: UHF band, 1000 - 1120 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a dipole, 5-1/2 inches long with a 5/8-inch diameter. The feed is mounted in a vertical position, centered in the mouth of the feedhorn of Antenna AS-603/SPS-12. Dipole AT-388/SPS-12 and the reflector of Antenna AS-603/SPS-12 make up the IFF antenna for Radar Set AN/SPS-12.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-12 and AN/UPX equipments. Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy, code 821.

MANUFACTURER: Radio Corporation of America, Victor Division.

REFERENCES:
1) RCA drawing D-631536-1 rev 0.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-409/MPN-5

See Antenna AS-762/MPN-5.

ANTENNA HORN AT-410/MPN-5&()

See Antenna AS-763/MPN-5.

ANTENNA HORN AT-411/MPN-5&()

See Antenna AS-765/MPN-5.

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ANTENNA AT-422()/URD-1X&()

FREQUENCY: LF and MF bands, 0.225 - 0.550 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a rotatable loop consisting of 18 turns of 14 AWG wire. It has a mean diameter of 28-1/2 inches and is enclosed by a metal loop cover. It is designed to use shielded transmission line.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radio Set AN/URD-1()X. Equipment function - direction finding.

COGNIZANT AGENCY: SCIE-4315.

MANUFACTURER: Mackay Radio & Telegraph Co., procurement contract 2936-PHILA-52.

REFERENCES:
1) Manufacturer's Drawing No. F-4308-14.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-437()/SPS-12

FREQUENCY: UHF band, 1250 - 1350 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a dipole 4-7/8 inches long and is constructed of silver-plated brass. The mounting flange has four 0.238-inch-diameter mounting holes on a 1-5/8-inch-diameter bolt circle. The dipole is used as a test antenna.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Test equipment for Radar Set AN/SPS-12. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy

MANUFACTURER: RCA Victor Division.

REFERENCES:
1) RCA drawing C-748145 rev 0.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-458/SR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Slot antenna.

DESCRIPTION: The antenna is a flush mounted annular slot 31-1/2 inches in diameter constructed of aluminum and fiberglass. Coaxial transmission line is used to feed the slot. The antenna is mounted by means of 24-1/2-inch holes spaced on a 14-13/16-inch-radius circle.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Various UHF equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Federal Telecommunication Lab., procurement contract NObsr 52349

REFERENCES:
1) FTL drawing NL-62398-1B.
2) Government Specification SHIPS-A-709.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-477/U

FREQUENCY: HF and VHF bands, 20 - 88 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a dipole head and 14 dipole elements which can be used in various combinations to cover the 20- to 88- mc frequency range. A variable inductance is incorporated in the antenna to permit tuning to the operating frequency. The antenna has an input impedance of 50 ohms and is fed by coaxial cable. A 20-inch wooden mast is provided for mounting, probably to Antenna Mast AB-363/U. The antenna may be tilted. It is finished with fungicidal varnish.

TUNING/MATCHING DEVICES: The antenna has adjustable-length dipole elements and a variable inductance for tuning.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-47(). Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy

MANUFACTURER: Stoddart Aircraft Radio Company.

STOCK NUMBER: Federal Stock Number 5985-295-7102.

REFERENCES:
1) NAVSHIPS 93147.
2) Private Correspondence.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-497/U

See AT-350/BRC.

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ANTENNA AT-521/URM-42

FREQUENCY: SHF band, 5200 - 11,000 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna is a flared waveguide horn. The antenna is 5-17/32 inches long and 2 inches high without the mounting bracket. The horn is 3-29/32 inches high overall including the bracket. The horn is terminated with a type N connector for connection to a 52-ohm coaxial cable. The antenna is mounted on a mast by means of a bracket 1-7/8 inches long by 7/8 inch in diameter. The horn can be rotated.

INSTALLATION: Ground, shipboard, or airborne.

ASSOCIATED EQUIPMENT: Radio Interference Monitoring Set AN/URM-42. Equipment function - test.

MISCELLANEOUS: The antenna is an AT-48/UP modified by adding a mounting bracket.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Co., Inc., Hollywood, California, part number 91026-1, contract NObsr-63341.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-522/URM-42

FREQUENCY: UHF and SHF bands, 300 - 4000 mc.

TYPE: Conical antenna, discone type.

DESCRIPTION: The antenna is a discone which is connected to a 52-ohm coaxial cable. The dimensions are 7-1/2 inches high without the mounting bracket and connector, 10-13/16 inches high overall, 12 inches maximum diameter, and 6-15/16 inches minimum diameter. The antenna mounts on a mast by means of a mounting bracket 1-7/8 inches long by 7/8 inch in diameter.

INSTALLATION: Ground, shipboard, or airborne.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-42. Equipment function - test.

MISCELLANEOUS: The antenna is an AT-49A/APR-4 modified by adding a mounting bracket.

COGNIZANT AGENCY: U. S. Navy

MANUFACTURER: Stoddart Aircraft Radio Co., Inc., Hollywood, California, order NObsr-63341.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-557/SMD-1A

FREQUENCY: UHF band, 1600-1700 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a paraboloidal reflector constructed of expanded aluminum and aluminum tubing. Overall dimensions are 72 inches in diameter and 17 inches in depth. The reflector has a focal length of 27.4 inches. The reflector mounts by means of twelve 3/8-16 screws equally spaced on a 6-1/8-inch-radius bolt circle. It is used with "Rawin" set.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radiosonde Receptor, AN/SMD-1A. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: A. D. Cardwell Mfg. Co., procurement contract NOas 54-433.

REFERENCES:
1) Government Specification MIL-R-17110.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-592/URN-3

FREQUENCY: UHF band, 960-1250 mc; VSWR < 2.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is a vertical stub, 4-1/4 inches long with a horizontal, plate-type ground plane, 12-1/2 inches square and 1/8 inch thick. The stub is made of silver-plated brass, and the ground plane, of anodized aluminum. The antenna is designed for a 50-ohm coaxial cable with a type N connector. The antenna has spraytight construction with a rexolite cover for the vertical stub. The antenna weighs 2-1/2 pounds.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Frequency Monitor MX-1627/URN-3. Equipment function-test.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Federal Telecommunications Laboratories, Belleville, New Jersey, and Olympic Radio and Television Inc., Long Island City, New York, contract NObsr 64743.

REFERENCES:

1) Federal Telecommunications drawing number CBX-336947.
2) Olympic drawing numbers MS15292, SA15293, and AS15324.
3) Technical Manual for Radio Frequency Monitor MX-1627/URN-3.

AT-592/URN-3

ANTENNA AT-609/SRC-8()

FREQUENCY: MF and HF bands, 2 - 3.5 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a 9-foot whip mounted on a 14-foot mast and probably includes a loading coil mounted at the base of the whip. The base of the mast has a universal swivel joint to facilitate lowering. The antenna is probably shunt fed from a high impedance tank circuit.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

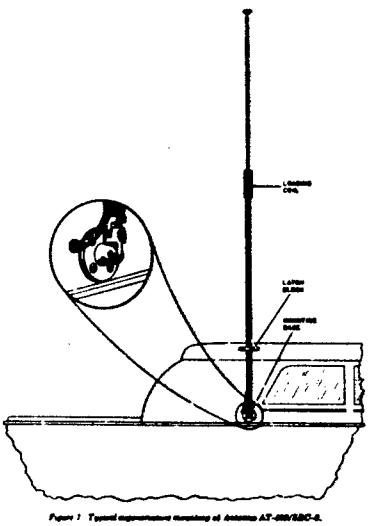
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Sets AN/SRC-8, -8AZ and -8XX. Equipment function - communications.

COGNIZANT AGENCY: SCLM - 7678.

MANUFACTURER: Munston Mfg. and Service, Inc., part number MRA-23, procurement contract 28589-PH-55-55(31).

REFERENCE:
Departments of the Army and the Air Force, Radio Sets AN/SRC-8, AN/SRC-8AZ and AN/SRC-8XX, TM 11-253, TO 31R2-2SRC8-11, (May 1957). UNCLASSIFIED.



AT-609( )/SRC-8

ANTENNA AT-627/SRD-12

FREQUENCY: LF, MF, and HF bands, 0.275 - 3.5 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a two-section whip 10 feet 2-1/4 inches long. The sections are 58-1/2 inches and 68 inches in length and 1/2 inch (maximum) in diameter. The whip is designed for mast mounting with four 3/8-inch mounting holes on a 3-inch diameter bolt circle. The whip terminates in a transformer, probably a loading coil, and uses 75-ohm coaxial cable.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/SRD-12. Equipment function - direction finding.

MISCELLANEOUS: AT-627/SRD-12 is probably the sense antenna for AT-628/SRD-12.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Raytheon Mfg. Co., part number 2395.

REFERENCES:
1) USCG Specification RDF-319.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-628/SRD-12

FREQUENCY: LF, MF, and HF bands, 0.275 - 3.5 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop consisting of wire wound on a frame which is 11-5/16 inches diagonally and 1 inch wide. The loop is designed to use RG-111/U coaxial cable and mounts by means of eight 5/8-inch mounting holes on an 8-1/2-inch-diameter bolt circle. It is designed for use in a radome for weatherproofing and is motor-driven

BEAM DATA:
Beam type - Figure eight.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/SRD-12. Equipment function - direction finding.

MISCELLANEOUS: This antenna probably uses AT-627/SRD-12 antenna as a sense element.

COGNIZANT AGENCY: U. S. Navy

MANUFACTURER: Raytheon Mfg. Co., part number 2394.

REFERENCES:
1) USCG Specification RDF-319.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-629/SRC

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Broadband dipole.

DESCRIPTION: The center-fed dipole consists of two cylinders, each made of 6 rods 8 inches long. The cylinders are concentric about a mast. The rods of each cylinder are connected in parallel at the ends by means of two 16-inch-diameter rings. The mast is 4-1/2 inches in diameter, 3 feet long, and equipped with a mounting flange on either end, each of which has eight 5/8-inch mounting holes spaced on a 7-inch-diameter bolt circle. One to four of the dipoles may be stacked to form a collinear array.

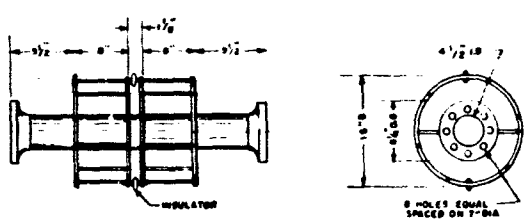
BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: Federal Stock Number F5985-605-4342.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) BuShips drawing FS/S6709/B/1,819,562.
3) U. S. Department of Defense Nomenclature Card.



AT-629/SRC

ANTENNA AT-636/SPG-49

FREQUENCY: SHF band, 5400 - 5900 mc.

TYPE: Probably a flat-screen reflector.

DESCRIPTION: The antenna is probably a flat-screen reflector with a vertically polarized reflecting screen constructed of aluminum and stainless steel. The surface of the reflector is passivated. The antenna is 88 inches long, 22 inches wide, and 62 inches high. The reflector mounts on two 1-1/2-inch-diameter shafts.

INSTALLATION: Probably shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPG-49. Equipment function - probably fire control.

COGNIZANT AGENCY: U. S. Navy 5-328.

MANUFACTURER: Sperry Gyroscope Co., part number 613541, procurement contract NOrd-15924.

REFERENCES:
1) U. S. Navy Specification MIL-R-18669. (NORD).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-639()/URH-2

FREQUENCY: Probably HF band, 14 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of 3 mast sections; the base section includes an impedance-matching network and housing. It is tripod mounted, has an input impedance of 50 ohms, and terminates in a type N connector.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: AN/URH-2.

MISCELLANEOUS: The nomenclature card lists the frequency range as 14 kc to 30 mc. Both frequencies probably should be in the same units (i.e., kc or mc) but no data are available to determine which is correct. The type N connector is usually used only at high frequencies, so the frequency is probably 14 to 30 mc.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Pickard and Burns, Incorporated, Needham, Mass., Navy contract NObsr-57422.

REFERENCES:
1) Military Specification MIL-E-16132(ships).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-693/BLR

FREQUENCY: VHF and UHF bands, 30 - 1000 mc.

TYPE: Stub.

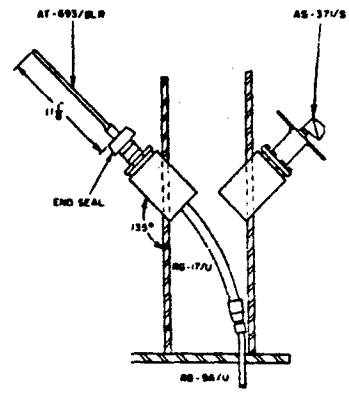
DESCRIPTION: The antenna consists of a stub 11-1/8 inches long mast mounted at an angle of 45° and presumably a short distance from a horizontal ground plane. RG-17/U and RG-9A/U coaxial transmission lines are used. Overall length is 20 inches, and overall diameter is 4 inches.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Countermeasures receiving Set AN/BLR-1. Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy 1885.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) BuShips drawing SS-338-86709-1046732B.



AT-693/BLR

ANTENNA AT-774()/UR

FREQUENCY: MF and HF bands, 2 - 30 mc.

TYPE: Whip.

DESCRIPTION: The assembly is a portable, emergency, whip antenna designed primarily for use on submarines. In an emergency, the antenna can be installed quickly and easily for use with communications equipment. The antenna is held in place by a C-clamp located at the base. The antenna can be tilted, within limits, to increase its effectiveness.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Unknown. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Polytronic Research, Incorporated, Navy contract NObsr-75241.

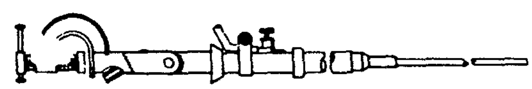
STOCK NUMBER: Federal Stock Number F5985-615-5296.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) BuShips drawing REC-66003.

3) U. S. Navy Underwater Sound Laboratory Sketch No. 27222.

4) Bureau of Ships, NAVSHIPS 93206A, page 1, (Sept. 25, 1958). UNCLASSIFIED.



AT-774()/UR

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ANTENNA AT-775/SMQ-1

FREQUENCY: UHF band, 390 - 410 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a stub antenna mounted above a plate-type ground plane. The stub is 1/4 inch in diameter and 5-37/64 inches in length. The antenna mounts on tubing which is about 1-1/4 inches in diameter. It has an input impedance of 50 ohms and is fed by RG-10A/U coaxial cable. It is used for receiving.

INSTALLATION: Shipboard.

COGNIZANT AGENCY: U. S. Navy-57-0-638.

MANUFACTURER: Barth Engineering and Manufacturing Company.

REFERENCES:
1) Specification MIL-R-18657 (Aer).

2) Manufacturer's drawing 50075.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-818/BRC

FREQUENCY: MF and HF bands, 2 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a fixed whip which can be tilted; it is used for transmitting or receiving. It mounts to a retractable mast or fairwater mounting. It uses an AT-497 snorkel whip mounted atop a CRES solid steel mast 20 feet long. The antenna is for general use on submarines.

INSTALLATION: Shipboard (submarine).

ASSOCIATED EQUIPMENT: Unknown. Equipment function - communications.

MISCELLANEOUS: This antenna is similar to and replaces Navy type 66053 whip antenna.

COGNIZANT AGENCY: U. S. Navy-57-X-2043.

STOCK NUMBER: Federal Stock Number FL5985-L00-7504(PNSY only).

REFERENCES:
1) BuShips drawing REC-66004.

2) Summary of Antenna System Requirements for SS Submarines, NAVSHIPS 93547. New London, Conn.: Fort Trumbull, U. S. Navy Underwater Sound Laboratory, (April 26, 1960). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-828/SP

TYPE: Lens

DESCRIPTION: The antenna is a lens constructed of resin-impregnated fiberglass with silver-plated plastic cells and metallic loading elements. The lens is octagonally shaped and the overall dimensions are 110 inches high, 110 inches wide, and 31 inches deep.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPG-49 and AN/SPA-5A.

MISCELLANEOUS: This antenna is similar to but not mechanically interchangeable with antenna AT-484/SPG-5.

COGNIZANT AGENCY: N-58-d-306.

MANUFACTURERS: Sperry Piedmont Co., procurement contracts NOrd 16770 and NOrd 17091.

REFERENCES:
1) Manufacturing Drawing 631737.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-883/SRD-13

FREQUENCY: LF, MF, and HF bands, 0.275 - 3.5 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a fixed, pedestal-mounted whip. It acts as a nondirective antenna for monitoring when the receiver of AN/SRD-13 is not used with a direction-finding antenna.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/SRD-13. Equipment function - communications.

COGNIZANT AGENCY: USN-58-ac-1887.

MANUFACTURER: Control Electronics Company, part number 32-304, code number 95924.

REFERENCES:
1) Specification USCG EEE-9-58.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-894/URM-117

FREQUENCY: VHF band, 162.25 - 173.50 mc.

TYPE: Whip.

DESCRIPTION: The antenna contains a spring at the base to allow for whip action. It is mounted by a UG-260/U plug to the output of a signal generator.

ASSOCIATED EQUIPMENT: Signal Generator SG-344/URM-117. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy, BuAer.

MANUFACTURER: Jowil Electronics, Inc., part number AL-B-17166, order N600(A)46311.

REFERENCES:
1) Government Specification MIL-G-19660, Amendment 1.
2) Request for Nomenclature Sheet.

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ANTENNA AT-924/SR

FREQUENCY: HF, VHF and UHF bands, 15 - 600 mc.

TYPE: Probably a whip.

DESCRIPTION: Antenna AT-924/SR is the same as Antenna AT-252/SR without the 10 by 10-inch mounting. The mounting for Antenna AT-924/SR is a part of the housing of the TN-334/SRA-17 r-f tuner.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: AN/SRA-17.

COGNIZANT AGENCY: N-59-Y-2254 (Navy).

MANUFACTURER: Polytronic Research, Inc., contracts NObsr-75149 and NObsr-75177.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-946()/SPX-9

FREQUENCY: SHF band, 9280 - 9320 mc.

TYPE: Corner reflector.

DESCRIPTION: Antenna AT-946()/SPX-9 is a corner-reflector antenna which mounts to an associated waveguide feed which in turn is mounted to the ships mast. The antenna is protected by a plastic radome.

BEAM DATA:
Polarization - Horizontal and vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: AN/SPX-9(). Equipment function - IFF.

COGNIZANT AGENCY: WL-59-2294.

MANUFACTURER: Hazeltine Electronic Div., contract AF19(604)-2033.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-948/U

FREQUENCY: UHF band, 400 - 500 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: Antenna AT-948/U is a vertical collinear array of dipoles enclosed in a fiberglass cylinder 4 feet long by 5 inches in diameter. Apparently some provision is also made for zenith coverage. The antenna is fed by RG-17/U cable. The BuShips testing laboratory indicates that the antenna is suitable for shipboard use under all weather conditions including wind and ice.

BEAM DATA:
Beam type-Approximately omnidirectional in azimuth.
Half-power beamwidth - Vertical 20° to 40°.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

COGNIZANT AGENCY: N-60-Q-108.

MANUFACTURER: Chu Associates.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-5002/SRC-501

TYPE: Whip.

DESCRIPTION: The antenna consists of a telescoping whip approximately 19 feet long when fully extended and 7 feet long when collapsed.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/SRC-501. Equipment function - communications.

COGNIZANT AGENCY: Royal Canadian Navy (RCN-37).

MANUFACTURER: Chisholm Ryder Co.

REFERENCE: U.S. Dept. Defense Nomenclature Card.

FC

, see Antenna for Mark 3 and FC Radar Equipment.

ANTENNA MARK III

FREQUENCY: SHF band, approximately 3025 - 3125 mc; VSWR < 1.2.

TYPE: Probably a paraboloidal reflector fed by an asymmetrical feed horn.

DESCRIPTION: The antenna consists of a reflector (probably paraboloidal) and an asymmetrical feed horn. The waveguide feeding the horn is at an angle of 22.5 degrees above the horizontal, but the mouth of the horn is vertical. Thus the top edge of the horn is longer than the bottom edge.

BEAM DATA:
Beam width - 4.9°.
Side-lobe attenuation - 28 db within 25° of peak, and 36 db near ± 70°.

ASSOCIATED EQUIPMENT: Navy Model SG-1 Radar Equipment. Equipment function - search.

MANUFACTURER: Developed by Radiation Laboratory.

REFERENCES:
1) S. J. Mason, SG-1 Mark III Antenna, Report No. 1044. Cambridge, Mass.: Radiation Laboratory, Massachusetts Institute of Technology, (Mar. 5, 1946). UNCLASSIFIED.
2) Radiation Laboratory Report No. 639.
3) Radiation Laboratory Report No. 690.

ANTENNA for Mark 3 and FC Radar Equipment

FREQUENCY: UHF band, 680 - 720 mc.

TYPE: Parabolic-cylinder reflector fed by a collinear array of dipoles.

DESCRIPTION: The antenna consists of a parabolic-cylinder reflector, 6 feet by 6 feet, constructed of perforated sheet metal and fed by a horizontal collinear array of four dipoles.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 14°.
Horizontal - 12°.
Polarization - Horizontal.

SCAN DATA: The antenna employs horizontal lobe switching. The beam is shifted ±3° in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models Mark 2, Mark 3 Mod 0, and FC Radar Equipment. Equipment function - fire control (surface targets).

MISCELLANEOUS: The antenna described is probably Navy Model 66AAE.

MANUFACTURER: Western Electric Co.

REFERENCES:
1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA for Mark 3 Radar Equipment

FREQUENCY: UHF band, 680 - 720 mc.

TYPE: Parabolic-cylinder reflector fed by a collinear array of dipoles.

DESCRIPTION: The antenna consists of a parabolic-cylinder reflector, 3 feet high by 12 feet long. It is constructed of perforated sheet metal and is fed by a horizontal collinear array of eight dipoles.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 30°
Horizontal - 6°.
Polarization - Horizontal.

SCAN DATA: The antenna employs horizontal lobe switching. The beam is shifted ±1.5° in azimuth.

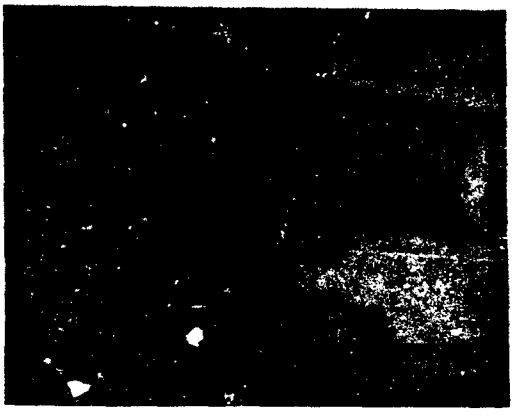
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models Mark 2 and Mark 3 Radar Equipment. Equipment function - fire control (surface targets).

MISCELLANEOUS: The antenna described is probably Navy Model 66AAF.

MANUFACTURER: Western Electric Co.

REFERENCES:
1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna for Mark 3 Radar Equipment

ANTENNA EQUIPMENT Mark 4, Mod 0

See 66AJB.

ANTENNA Mark 4, Mod 1

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna consists of a cast paraboloidal reflector. The feed may be of the cutler type and is attached to a section of waveguide which is nutated to produce scanning.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 34, Mod 2, Mark 34, Mod 6, and Mark 4, Mod 16. Equipment function - probably fire control.

MISCELLANEOUS: See 66AKU.

REFERENCE:
U. S. Navy Bureau of Ordnance, Maintenance Manual for Radar Equipment Mark 34 Mods 2, 6, and 16, NAVORD OD 7686, (April 21, 1953). UNCLASSIFIED.

ANTENNA EQUIPMENT Mark 5, Mod 0

See 66AMK

ANTENNA Mark 5, Mod 2

See 66AND.

ANTENNA Mark 6 Corner Reflector

FREQUENCY: VHF band, 100 - 150 mc.

TYPE: Corner reflector.

DESCRIPTION: The antenna consists of a corner reflector, which is constructed from vertical rods, fed by a dipole. The dipole elements are made from sheet aluminum alloy tapered to increase the bandwidth and formed to increase their longitudinal strength. The elements are supported at the center by stud extensions of the balun and also by a bracket and insulator at a fairly low impedance point. With the exception of the UG-352/U connector, the antenna is constructed of aluminum alloy with stainless steel fastenings. The insulating material is a fiberglass-base melamine plastic. Neoprene gaskets are used at every opening for waterproofing. RG-17/U or RG-18/U cable, fitted with a UG-154/U connector, is used to feed the dipole. The antenna is 86-1/4 inches wide, 71-7/8 inches high, and 42-3/4 inches deep.

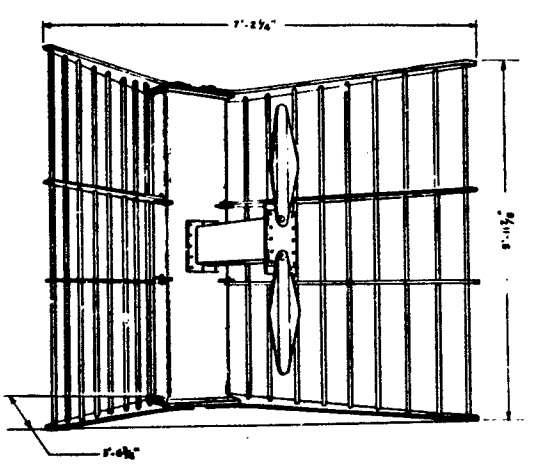
BEAM DATA:
Half-power beamwidth - Horizontal - 40°.
Polarization - Linear, parallel to the axis of the dipole.

TUNING/MATCHING DEVICES: A balun is housed in the dipole support structure.

INSTALLATION: Shipboard. The antennas were designed to be mounted near the bow on the superstructure where there is a clear view forward and to the sides. It is recommended that the antennas be mounted, one on each side of the ship's superstructure or mast, with the axes of the dipole supports turned outward approximately 20° from the ship's centerline. Horizontal separation between the antennas is immaterial if they have a clear view. However, both should be mounted at the same height so that target bearing information will not be confused by the different signal levels encountered at different heights. The antennas should be mounted as high as possible.

ASSOCIATED EQUIPMENT: Receivers R-728A and Nems-Clarke Model 1302.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) NRL Drawing Number 5436MK-VI.



Mark 6 Corner Reflector

ANTENNA Mark 6, Mod 0

See 66AKY.

ANTENNA Mark 17, Mod 0

See 66AFF.

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ANTENNA Mark 18, Mod 0

TYPE: Dipole array.

DESCRIPTION: The antenna consists of three vertical dipoles and three vertical reflectors. The antenna utilizes lobe switching to provide identification information.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 32, Mod 1 and Fire Control Radar Mark 25, Mod 2. Equipment function - IFF and fire control.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
U. S. Navy Request for Nomenclature Sheets.

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ANTENNA for Mark 19 Radar Equipment

FREQUENCY: UHF band, 300 mc.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna consists of a 24-inch spun steel paraboloidal reflector fed by a spinning half dipole.

BEAM DATA:
Gain - 21 db.
Half-power beamwidth - Vertical - 11°.
Horizontal - 11°.
Side-lobe attenuation - 17 db.

SCAN DATA: The antenna has conical scanning with a beam shift of 8.5° and a scan rate of 30 cycles per second. It also rotates in azimuth and tilts in elevation with the Mark 49 Antiaircraft Gun Director on which it is mounted.

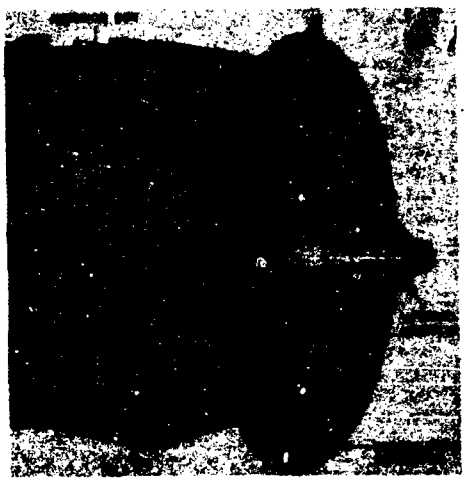
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 19 Radar Equipment. Equipment function - fire control.

MANUFACTURER: Western Electric Co.

REFERENCES:

1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (Apr. 1947). UNCLASSIFIED.
2) Private Correspondence.



ANTENNA for Mark 19 Radar Equipment

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RADAR ANTENNA Mark 21 Mod 1, Unit 1A

See Antenna Group for Radar Equipment Mark 25 Mod 6A.

RADAR ANTENNA Mark 22 Mod 0, Unit 1D

See Antenna Group for Radar Equipment Mark 25 Mod 6A.

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RADAR ANTENNA Mark 23 Mod 0, Unit 1G

See Antenna Group for Radar Equipment Mark 25 Mod 6A.

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ANTENNA GROUP for Radar Equipment Mark 25 Mod 6A

MAJOR COMPONENTS: Radar Antenna Mark 21 Mod 1, Unit 1A; Radar Antenna Mark 22 Mod 0, Unit 1D; and Radar Antenna Mark 23 Mod 0, Unit 1G.

FREQUENCY:

Radar Antenna	SHF Band
Mark 21 Mod 1, Unit 1A	8500 - 9600 mc
Mark 22 Mod 0, Unit 1D	9200 - 9400 mc
Mark 23 Mod 0, Unit 1G	8500 - 9600 mc

TYPE:

Radar Antenna	Type
Mark 21 Mod 1, Unit 1A...	nutating horn
Mark 22 Mod 0, Unit 1D...	metal-plate lens
Mark 23 Mod 0, Unit 1G...	paraboloidal reflector

DESCRIPTION: Radar Equipment Mark 25 Mod 6A is a missile-guidance and gunfire-control radar system. It consists of two essentially self-contained transmission systems: a primary radar and a capture radar. The primary radar tracks the target and guides the beam-riding missile towards it; the capture radar guides the missile into the primary radar beam at the beginning of its flight.

A. Radar Antenna Mark 21 Mod 1, Unit 1A- This horn antenna radiates the primary beam which is focused by the lens antenna Mark 22 Mod 0, Unit 1D. The horn has a nutating pattern which can be controlled to produce either conical scanning or spiral scanning. A housing with a dielectric front cover completely encloses the antenna and the equipment which produces the nutating movement.

B. Radar Antenna Mark 22 Mod 0, Unit 1D- This antenna is a stepped or zoned metal-plate lens. It is 7-1/2 feet in diameter and is mounted in front of the horn antenna. It focuses the energy radiated by the horn into a narrow beam.

C. Radar Antenna Mark 23 Mod 0, Unit 1G- This antenna is a paraboloidal reflector, 18 inches in diameter. It is fed by a stationary feed (probably a waveguide horn) near the focal point of the reflector. The reflector is set at an angle with respect to the feed and is rotated to produce conical scanning. The antenna produces the capture beam which illuminates the missile during the early part of its flight. It is enclosed by a radome of dielectric material and is mounted at the side of the metal-plate lens.

The three antennas described are mounted on a metal platform which has the nomenclature Gun Director Mark 37.

BEAM DATA:
Gain - 39 db for primary beam, 20 db for capture beam.
Half-power beamwidth - E and H planes - 1° for primary beam, 5° for capture beam.
Side-lobe attenuation - 25 db for primary beam.
Beam type - Pencil (both beams).
Polarization - Vertical (both beams).

SCAN DATA:
Primary beam - conical scanning at 30 cycles per second; spiral scanning, 14 minutes to 3 degrees at 2.4 cycles per second.
Capture beam - conical scanning, adjustable between 0° and 3°, at 30 cycles per second.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 25 Mod 6A. Equipment function - search, air; fire control; and guidance, beamrider.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Reeves Instrument Corporation.

REFERENCE:
U. S. Navy, Bureau of Naval Weapons, Radar Equipment Mark 25, Model 6A, Description, Operation and Maintenance Instructions, OD9381, (July 1954). UNCLASSIFIED.

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ANTENNA KIT MK-89/URN-5

FREQUENCY: MF band, 0.2 - 0.8 mc.

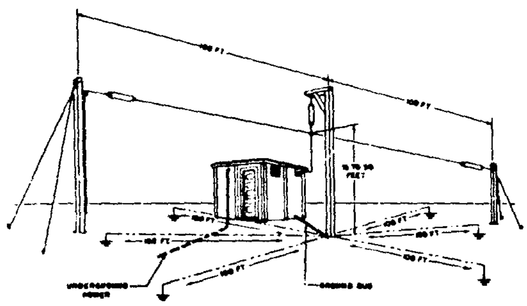
TYPE: Single-wire flat-top antenna.

DESCRIPTION: The antenna kit contains the equipment necessary to construct a flat-top antenna with a single-wire flat top and a vertical down-lead between 15 and 50 feet high. The kit does not include supporting masts.

BEAM DATA:
Beam type - Approximately omnidirectional in azimuth.
Polarization - Primarily vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Beacon AN/URN-5. Equipment function - navigation, surface reference; and communications.



MK-89/URN-5

MANUFACTURER: Gates Radio Co.

STOCK NUMBERS: U. S. Navy F17-W-350001-108 and Air Force 1700-015088405.

REFERENCE:
1) U. S. Air Force and Bureau of Ships, Radio Beacon Communication Set AN/URN-5, Handbook Operation and Service Instructions with Parts Lists, TO 31R4-2URN5-11 and NAVSHIPS 91766, (Mar. 30, 1955). UNCLASSIFIED.

2) Department of the Army, Radio Beacon AN/URN-5, TM 11-5075, (April 1958). UNCLASSIFIED.

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ANTENNA for Navy Model MN-4

FREQUENCY: VHF band, 30 - 42 mc.

DESCRIPTION: The antenna is probably a whip weighing 2 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Model MN-4 FM Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, contract NXso-32191.

REFERENCES:
1) NAVSHIPS 95142: Instruction Book for Navy Model MN-4 Radio Transmitting and Receiving Equipment.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA KIT MX-766()/SR

MAJOR COMPONENTS:
50 feet of 7-strand No. 16AWG tinned wire,
1 Lapp No. 11896 deck insulator,
1 10-by 1-1/2-inch ground strap, and necessary hardware.

FREQUENCY: MF band, 0.5 mc.

TYPE: Half rhombic.

DESCRIPTION: The kit contains the material necessary to construct an antenna on a lifeboat. It is used to provide communication with rescue vessels.

INSTALLATION: Shipboard, lifeboat.

ASSOCIATED EQUIPMENT: Radio Set AN/SRC-3(). Equipment function - communications.

COGNIZANT AGENCY: PEA-189. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall, Virginia.)

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-553/URN-3

MAJOR COMPONENTS: 1 AS-677/URN-3 antenna, 1 AB-346/URN-3 antenna base, 1 CW-320/URN-3 radome, 1 C-1322/URN-3 antenna control, and 1 SA-469/U Motor Starter.

FREQUENCY: UHF band, 962 - 1024 mc when used for transmitting and 1025 - 1087 mc when used for receiving.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: Antenna AS-677/URN-3 is an amplitude-modulating antenna consisting of a central radiating array surrounded by two cylinders containing parasitic elements. The central array is a stack of seven biconical dipoles mounted within a supporting fiberglass cylinder. The cylinder is approximately 4 inches in diameter and 48 inches long. The array is stationary and is at the center of two concentric rotating cylinders. Each of these cylinders contains parasitic reflector wires. The inner cylinder, which is approximately 5 inches in diameter, contains one reflecting element. The outer cylinder, which is approximately 41 inches in diameter, contains nine equally spaced reflecting ele-

ments. The two cylinders are held rigidly together and rotate as a unit at 15 revolutions per second. This rotation produces simultaneous amplitude modulations of 15 cycles per second and 135 cyles per second. The revolving cylinders are protected by a stationary fiberglass cover.

BEAM DATA:
Beam type - Rotating scalloped cardiod.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/URN-3. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: Navy, code 822.

MANUFACTURERS: Federal Telephone and Radio Corporation, contract NObsr 49248; and Federal Telecommunication Laboratories, contract NObsr 57103.

STOCK NUMBERS:
OA-553/URN-3...Navy F16-A-64151-1050-2
AS-677/URN-3...Navy F16-A-52014-4638-2
Federal Stock Number 5985-549-0367(without spares)
Federal Stock Number 5985-665-2658(with spares)

REFERENCES:
1) U. S. Navy Bureau of Ships, Instruction Book for Radio Set AN/URN-3, Associated Antenna Groups and Accessories, NAVSHIPS 92348(A), (June 8, 1955). UNCLASSIFIED.
2) CBTL Drawings A-9151512-2, D-2152670 and A-9151532B/M.
3) BuShips Specification MIL-R-15223B.
4) NAVSHIPS 92139.

ANTENNA GROUP OA-554/URN-3

MAJOR COMPONENTS: 1 AS-678/URN-3 antenna, 1 AB-346/URN-3 antenna base, 1 CW-320/URN-3 radome, and 1 C-1322/URN-3 antenna control.

FREQUENCY: UHF band, 1088 - 1150-mc when used for receiving and 1151 - 1213 mc when used for transmitting.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: Antenna AS-678/URN-3 is an amplitude-modulating antenna consisting of a central radiating array surrounded by two cylinders containing parasitic elements. The central array is a stack of seven biconical dipoles mounted within a supporting fiberglass cylinder. The cylinder is approximately 4 inches in diameter and 48 inches long. The array is stationary and is at the center of two concentric rotating cylinders. Each of these cylinders contains parasitic reflector wires. The inner cylinder, which is approximately 5 inches in diameter, contains one reflecting element. The outer cylinder, which is approximately 35 inches in diameter, contains nine equally spaced reflecting elements. The two cylinders are held rigidly together and rotate as a unit at 15 revolutions per second. This rotation produces simultaneous amplitude modulations of 15 cycles per second and 135 cycles per second. The revolving cylinders are protected by a stationary fiberglass cover.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/URN-3. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: Navy, code 822.

MANUFACTURER: Federal Telephone and Radio Corp. contract NObsr 49248, and Federal Telecommunications Laboratories, contract NObsr 57103.

STOCK NUMBERS:
OA-554/URN-3...Navy F16-A-64151-1051-2
AS-678/URN-3...Navy F16-A-52016-1409-2
Federal Stock Number 5985-549-0369(without spares)
Federal Stock Number 5985-665-2661(with spares)

REFERENCES:
1) U. S. Navy Bureau of Ships, Instruction Book for Radio Set AN/URN-3, Associated Antenna Groups and Accessories, NAVSHIPS 92348(A), (June 8, 1955). UNCLASSIFIED.
2) CBTL Drawings A-9151512-1, D-2152670 and A-9151532B/M.
3) BuShips Specification MIL-R-5223B.
4) NAVSHIPS 92139.

ANTENNA GROUP OA-878(*)/URN-3

MAJOR COMPONENTS: AS-777/URN-3, Antenna Base AB-479/URN-3, Antenna Control C-1700/URN-3, Antenna Control C-1992(*)/URN-3, Radome CW-320/URN-3.

FREQUENCY: UHF band, 961.5 - 1,087.5 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION:

A. Reflector: There are two reflectors which are part of this antenna. One is a single parasitic element imbedded in a fiberglass cylinder approximately 5 inches in diameter. The other consists of 9 equally spaced parasitic elements imbedded in a fiberglass cylinder about 41 inches in diameter. The two cylinders are rigidly connected and concentrically mounted and rotate at 900 revolutions per minute. The result is a 15-cycle-per-second amplitude modulation of the signal from the inner reflector and a 135-cycle-per-second modulation from the outer reflector. An induction motor and a tachometer drive the rotating assembly. A magnetic-amplifier speed control in Antenna Control C-1700/URN-3 keeps the antenna-rotation speed constant at the speed essential to the maintenance of proper output frequencies.

B. Feed: The primary radiation is a vertical stack of seven biconical dipoles, each 4-3/8 inches long and 3 inches in diameter, enclosed in a fiberglass cylinder approximately 4 inches in diameter and 48 inches long. The input impedance is 50 ohms.

BEAM DATA:

Beam type: Rotating scalloped cardioid.
Polarization: Vertical

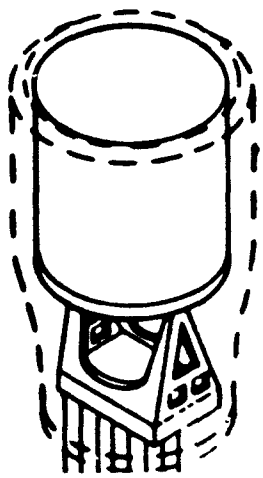
INSTALLATION: Shipboard

ASSOCIATED EQUIPMENT: Radio Set AN/URN-3. Equipment function - navigation, surface reference: both bearing and distance information is provided to aircraft when this equipment is used in conjunction with airborne Radio Set AN/ARN-21.

MISCELLANEOUS: OA-878(*)URN-3 is similar to Antenna Group OA-553/URN-3. OA-878A/URN-3 differs from OA-878/URN-3 only in the replacement of Antenna Control C-1992/URN-3 by C-1992A/URN-3. The only difference in these two antenna controls is the arrangement of the magnetic amplifiers - a difference due merely to their being manufactured by two different companies.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURERS: Federal Telephone and Radio Company, and Federal Telecommunication Labo-



AS-777/URN-3 of Antenna Group OA-878(*)/URN-3

DIMENSIONS OF OA-878(*)/URN-3

Component	Height (inches)	Width (inches)	Depth (inches)	Weight* (pounds)
AS-777/URN-3 (with base AB-479/URN-3)	95-13/16	44-7/8		750
CW-320/URN-3	100	76-23/32		250
C-1992(*)/URN-3	56-1/2	38-1/4	12-1/2	733
C-1700/URN-3	49-1/8	29-1/4	11-13/16	450

* The total weight of the assembly is 2183 pounds.

SHIPPING DATA FOR OA-878(*)/URN-3

Component	Height (inches)	Width (inches)	Depth (inches)	Volume (cu. ft.)	Weight (pounds)
AS-777/URN-3 (with AB-479/URN-3)	108	59	59	220	1600
CW-320/URN-3	116	85	87	440	1540
C-1992(*)/URN-3	25	52	67	51	1110
C-1700/URN-3	22	38	59	28	653

ratories. Procurement contract NObsr-57103.

STOCK NUMBERS:
OA-878/URN-3...Federal Stock Number 5820-284-8271 and Navy F16-A-064151-1061.
OA-878/URN-3(with spares)...Federal Stock Number 5985-518-1736
OA-878A/URN-3...Federal Stock Number 5985-569-9705
AS-777/URN-3...Navy F16-A-052015-2795

REFERENCES:

1) U. S. Navy Bureau of Ships, Instruction Book for Radio Set AN/URN-3, Associated Antenna Groups and Accessories, NAVSHIPS 92348(A), (June 8, 1955). UNCLASSIFIED.

2) Military Specifications Ships R-1402 and MIL-S-125.

3) U. S. Department of Defense Nomenclature Cards for OA-878/URN-3, OA-878A/URN-3, AS-777/URN-3.

ANTENNA GROUP OA-1545/SRN-6

MAJOR COMPONENTS: AM-1718/SRN-6, AM-1719/SRN-6, AB-540/SRN-6, AS-889/SRN-6, CW-441/SRN-6.

FREQUENCY: UHF band, 962 - 1024 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: This antenna consists of a vertical stack of biconical dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays, which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cycles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of nine parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses. True north can be identified at the receiving equipment since the transmitting antenna is positioned so that a coded pulse train is generated as the major peak of the cardioid radiation pattern is pointing at true north. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/SRN-6.
Equipment function - navigation, surface reference.

MISCELLANEOUS: The AS-889/SRN-6 antenna is probably the same as the AS-891/URN and similar to the AS-890/SRN-6 and the AS-892/URN except for frequency range. The antenna is similar to AS-677/URN-3, AS-678/URN-3, and AS-777/URN-3 except for the number of dipoles.

COGNIZANT AGENCY: USN-408.

MANUFACTURER: Federal Telephone and Radio Co., part number NUS 3745, drawing B2061556-2, procurement contract NObsr-71385.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-1546/SRN-6

MAJOR COMPONENTS: AS-890/SRN-6, AM-1718/SRN-6, AM-1719/SRN-6, AB-540/SRN-6, and CW-441/SRN-6.

FREQUENCY: UHF band, 1151 - 1213 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: This antenna consists of a vertical stack of biconical dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays, which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cyles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of nine parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses. True north can be identified at the receiving equipment since the transmitting antenna is positioned so that a coded pulse train is generated as the major peak of the cardioid radiation pattern is pointing at true north. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/SRN-6.
Equipment function - navigation, surface reference.

MISCELLANEOUS: This antenna is probably the same as AS-892/URN. It is similar to AS-889/SRN-6 and AS-891/URN except for frequency range and is similar to AS-677/URN-3, AS-678/URN-3, and AS-777/URN-3 except for the number of dipoles.

COGNIZANT AGENCY: U. S. Navy, USN-409.

MANUFACTURERS: Federal Telephone and Radio Co., part number NUS 3523, drawing B2061556-1 procurement contract NObsr-71385.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-1547/URN

MAJOR COMPONENTS: AS-891/URN, AB-541/URN, and AM-1720/URN.

FREQUENCY: UHF band, 962 - 1024 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: This antenna consists of a vertical stack of biconical dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays, which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cycles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of nine parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses. True north can be identified at the receiving equipment since the transmitting antenna is positioned so that a coded pulse train is generated as the major peak of the cardioid radiation pattern is pointing at true north. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/GRN-9 & 9A.
Equipment function - navigation, surface reference.

MISCELLANEOUS: AS-891/URN is probably the same as AS-889/SRN-6. It is similar to AS-890/SRN-6 and AS-892/URN except for frequency range and is similar to AS-677/URN-3, AS-678/URN-3, and AS-777/URN-3 except for the number of dipoles.

COGNIZANT AGENCY: U. S. Navy, USN-416.

MANUFACTURERS: Federal Telephone and Radio Corp., procurement contract NObsr-71385.

REFERENCES:
1) Federal Telephone and Radio Corporation outline drawing B2061557-1.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-1548/URN

MAJOR COMPONENTS: AS-892/URN, AB-541/URN, and AM-1720/URN.

FREQUENCY: UHF band, 1151 - 1213 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: This antenna consists of a vertical stack of biconical dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays, which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cycles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of nine parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses. True north can be identified at the receiving equipment since the transmitting antenna is positioned so that a coded pulse train is generated as the major peak of the cardioid radiation pattern is pointing at true north. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/GRN-9.
Equipment function - navigation, surface reference.

MISCELLANEOUS: AS-892/URN is probably the same as AS-890/SRN-6. It is similar to AS-889/SRN-6 and AS-891/URN except for frequency and is similar to AS-677/URN-3, AS-678/URN-3, and AS-777/URN-3 except for number of dipoles.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Federal Telephone and Radio Corp., procurement contract NObsr 71385.

STOCK NUMBER: AS-892/URN ... Federal Stock Number 5825-626-8932.

REFERENCES:
1) Federal Telephone and Radio Corporation outline drawing B2061557-2.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-251S/BPS-10

Cancelled 7 January 1960.

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ANTENNA GROUP OA-265S/UPS-1

DESCRIPTION: The antenna consists of three reflector sections plus a horn. Provisions for rotation of the antenna are included.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/UPS-1. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-218 (Navy).

MANUFACTURER: Radio Corporation of America, procurement contract NObsr-75577.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

♦ ♦

LENS RF-60/SPG-49

TYPE: Metal-plate lens.

DESCRIPTION: RF-60/SPG-49 is a dual-focusing lens made of aluminum with outside edges painted gray. It has a fiberglass radome. The overall dimensions are 107-9/16 inches high by 107-9/16 inches wide by 9 inches thick. The lens is octagonal and is mounted by eighty 5/16-inch-diameter bolts spaced evenly around the circumference.

BEAM DATA: Lens is designed to focus both horizontally and vertically polarized waves.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPG-49. Equipment function - fire control.

COGNIZANT AGENCY: U. S. Navy 5-352.

MANUFACTURER: Sperry Gyroscope Co., part number 616792, order NOrd-15924.

REFERENCES:
1) Government Bureau of Ordnance Specification MIL-R-18669.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA MONITOR JUNCTION BOX 62ABJ

FREQUENCY: VHF and UHF bands, 90 - 850 mc.

TYPE: Rod.

DESCRIPTION: The antenna monitor junction box consists of a small watertight box containing a diode detector and a load resistor, and a small Duraluminum rod antenna projecting through the top. The assembly weighs 2 pounds.

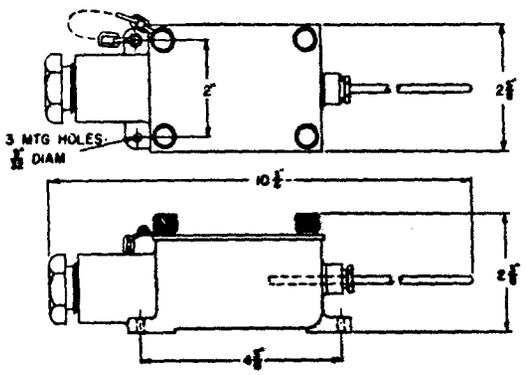
BEAM DATA:
Polarization - Horizontal or vertical depending upon mounting position.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model TDY and TDY-1 Countermeasures Jamming Equipment. Equipment function - test.

STOCK NUMBER: U. S. Navy F17-T-29379-5781.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) NAVSHIPS 900,342(A).
3) BuShips drawing RE 100F 167.



Antenna Monitor Junction Box 62ABJ

ANTENNA 66AAA

FREQUENCY: UHF band, 500 - 700 mc.

TYPE: Parabolic-cylinder reflector fed by a collinear array of dipoles.

DESCRIPTION: The antenna consists of a parabolic-cylinder reflector, 6 feet by 6 feet, constructed of perforated sheet metal and fed by a horizontal collinear array of four dipoles.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 14°.
Horizontal - 12°.

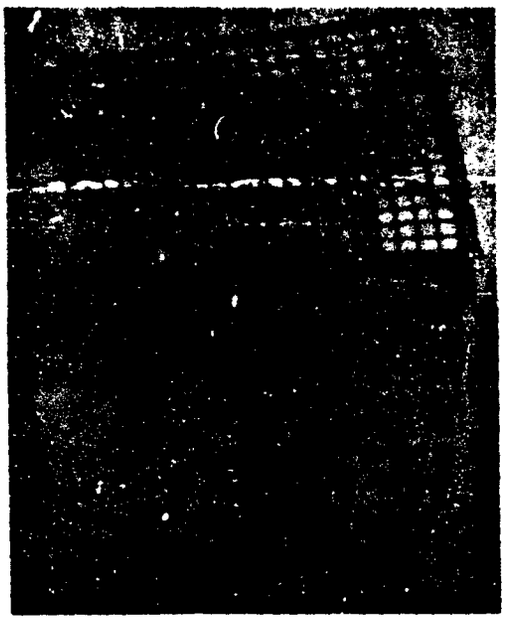
Polarization - Horizontal.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 1 Radar Equipment. Equipment function - fire control (surface targets).

MANUFACTURER: Western Electric Co.

REFERENCES:
1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66AAA

ANTENNA 66AAB, 66AAC, 66AAD

ASSOCIATED EQUIPMENT: Navy Model BE and BF Equipment. Equipment function - IFF.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AAE

See Antenna for Mark 3 and FC Radar Equipment.

ANTENNA 66AAF

See Antenna for Mark 3 Radar Set.

ANTENNA 66AAG

ASSOCIATED EQUIPMENT: Navy Models SD and SD-a Radar Equipment. Equipment function - search.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AAH

FREQUENCY: UHF band, 680 - 720 mc.

TYPE: Dual parabolic-cylinder reflector fed by two arrays of collinear dipoles.

DESCRIPTION: The antenna consists of a dual parabolic-cylinder reflector that is fed by two arrays of collinear dipoles. The dual reflector is made up of two parabolic cylinders constructed of perforated sheet metal and mounted one above the other so that the bottom edge of one coincides with the top edge of the other. The two sections of the reflector face the same direction. Each of the parabolic cylinders is fed by a horizontal collinear array of four dipoles. The overall dimensions of the dual reflector are 6 feet by 7 feet.

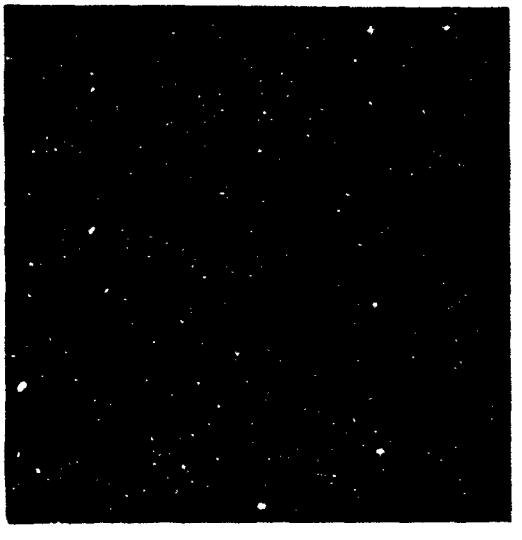
BEAM DATA:
Gain - 22.5 db.
Half-power beamwidth - Vertical - 12°.
Horizontal - 12°.
Polarization - Horizontal.

SCAN DATA: The antenna employs horizontal and vertical lobe switching. The beam is shifted ±3° in azimuth and in elevation.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models Mark 4 and FD Radar Equipment. Equipment function - fire control (both air and surface targets).

MANUFACTURER: Western Electric Co.



Antenna 66AAH

REFERENCES:
1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AAJ and 66AAK

FREQUENCY: VHF band, 175 - 225 mc.

TYPE: Mattress antenna.

DESCRIPTION: Antennas 66AAJ and 66AAK are similar antennas. The ways in which they differ are not available. Each of these antennas consists of a flat-screen reflector with 12 dipoles mounted in front of it. The overall antennas are 8-1/2 feet wide by 9 feet high by 2 feet deep. The antenna assembly bolts to the masthead by eight 13/16-inch bolts equally spaced on a 16-1/2-inch bolt circle. The dipoles are fed by coaxial cables.

BEAM DATA:
Polarization - Horizontal.

SCAN DATA: The antennas have a motor-driven rotating mechanism.

INSTALLATION: Shipboard, destroyers and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SC Radar Equipment. Equipment function - air search.

MANUFACTURER: General Electric Co., contract NOs-84613.

STOCK NUMBERS: Federal Stock Numbers F5985-249-4391 (for 66AAJ) and F5985-249-4390 (for 66AAK).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) ENG 125: Preliminary Instruction Book for Navy Model SC Radar Equipment.
3) General Electric Drawing M-7465661.

ANTENNA 66AAM

ASSOCIATED EQUIPMENT: Navy Models BH, BI, and BI-1 Equipment. Equipment function - IFF.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AAN

FREQUENCY: UHF band, 390 - 465 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat-screen reflector with 16 dipoles. The overall dimensions are 6 feet wide by 8-1/2 feet high by 3-1/2 feet deep. It mounts on top of the Mark 37 gun direction with eight 3/4-inch bolts equally spaced on a 2-1/2-foot bolt circle.

SCAN DATA: The antenna has a motor-driven rotating and tilting mechanism.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 5 Radar Equipment. Equipment function - fire control.

MANUFACTURER: General Electric Co., part numbers ML-7350998, ML-7351065-3, ML-7351057-1, and DL-3888492.

STOCK NUMBER: Federal Stock Number N5984-369-5436.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric Drawing P-7764335 rev 1.

ANTENNA 66AAP

FREQUENCY: UHF and SHF bands, 2965 - 3019 mc.

TYPE: Cut paraboloidal reflector with two waveguide horns.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, 30 inches wide by 10 inches high, fed by two waveguide horns mounted side by side on either side of the focal point of the reflector. The reflecting surface is formed from a solid sheet of aluminum alloy. The waveguide horns are made from a manganese-bronze casting. The two horns are used so that lobe switching can be employed.

BEAM DATA:
Gain - 19 db.
Half-power beamwidth - Vertical - 18°.
Horizontal - 8°.
Beam type - Fan, pointed somewhat upward in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna employs lobe switching in azimuth. The lobe-switching beam separation is approximately 5° and the gain reduction at the beam crossover is less than 1 db. The antenna also has a motor-driven rotating mechanism.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Model SJ Radar Equipment. Equipment function - fire control.

MANUFACTURER: Western Electric Co., part number D-150312.

STOCK NUMBER: Federal Stock Number F5985-248-4374.

REFERENCES:

1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Western Electric Drawing ESX-748094.

Antenna 66AAP

ANTENNA 66AAQ

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Cut paraboloidal reflector with two waveguide horns.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, 30 inches wide by 20 inches high, fed by two waveguide horns mounted side by side on either side of the focal point of the reflector providing horizontal lobe switching. The antenna mounts on an 18-inch-diameter masthead with eight 3/4-inch bolts.

BEAM DATA:
Gain - 21 db.
Half-power beamwidth - Vertical - 12°.
Horizontal - 7.5°.
Polarization - Horizontal.

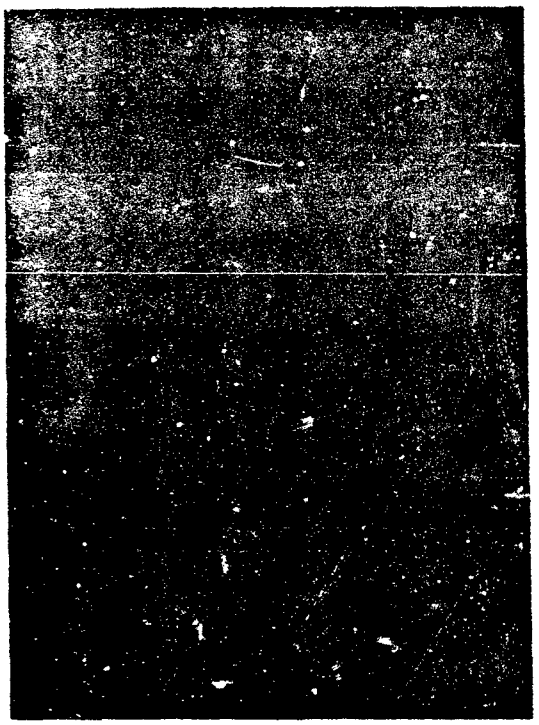
SCAN DATA: For search, the antenna rotates in azimuth through 360° at 30 revolutions per second. For fire control, it rotates in azimuth through 360° at 1 revolution per minute and employs horizontal lobe switching. The lobe-switching beam separation is approximately 5°, and the gain at the crossover point is down 1 db from the peak gain.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SH Radar Equipment. Equipment function - search and fire control.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number F5985-369-5478.



ANTENNA 66AAQ

REFERENCES:

1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Western Electric Drawing ESXX 748138.

ANTENNA 66AAR-(*)

FREQUENCY: VHF band, 111, 114 and 117 mc.

TYPE: Swept-back dipole.

DESCRIPTION: The antenna is a swept-back or U-type dipole consisting of a yoke approximately 1/2 wavelength long and the three sets of dipole elements needed to cover the frequencies given above.

BEAM DATA:
Beam type - Approximately nondirectional in azimuth.
Polarization - Horizontal.

ASSOCIATED EQUIPMENT: Navy Models SD-a, SD-1, and SD-2 Radar Equipment. Equipment function - search (the antenna is probably either a communication or an IFF antenna for this equipment).

MISCELLANEOUS: The nomenclature 66AAR-(*) denotes 66AAR and 66AAR-1.

MANUFACTURER: Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-249-4329.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA Drawing W-305138 sub 0.

ANTENNA 66AAS

FREQUENCY: SHF band, 3047 - 3071 mc.

TYPE: Broadside array of dielectric rods.

DESCRIPTION: The array is made up of 42 tapered polystyrene rods, each 3 feet long, arranged in 14 sections. Each section is a vertical array of 3 rods. The rods are fed by waveguide. The overall array is 43 inches high by 126 inches wide by 82 inches deep. It mounts on top of Navy Model Mark 34 or Mark 38 Gun Director.

SCAN DATA: The antenna employs electromechanical scanning in azimuth. Thirteen rotating phase shifters cause the beam to scan.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models Mark 8 Mod 0; Mark 8 Mod 1; and FH Radar Equipment. Equipment function - fire control.

MISCELLANEOUS: This antenna is called "The Polyrod Fire Control Antenna" by Bell Laboratories.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number N5985-369-5520.

REFERENCES:

1) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, N.Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Western Electric Drawing XX748093.

ANTENNA 66AAX

FREQUENCY: VHF and UHF bands, 70 - 1000 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a chrome-molybdenum steel rod, 2 feet long and 3/8 inch in diameter. It connects to a 78-ohm, 25-foot-long coaxial cable.

ASSOCIATED EQUIPMENT: Navy Model ARC Equipment. Equipment function - probably communications.

MANUFACTURER: Philco Corporation.

STOCK NUMBER: Federal Stock Number N5820-090-2627.

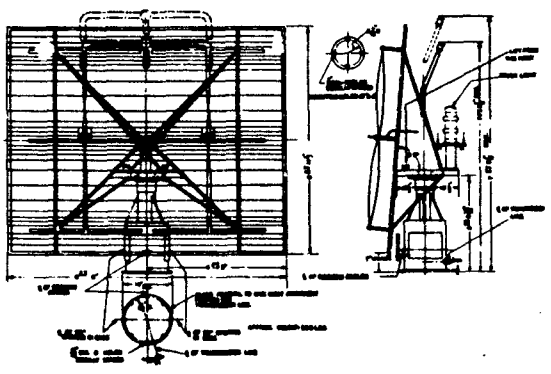
REFERENCE:

U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66AAY, 66AAZ, 66ABA, 66ABB, 66ABC, 66ABD, 66ABE, and 66ABF

FREQUENCY: VHF band; 175 - 185 mc for 66AAY and 66ABC, 185 - 195 mc for 66AAZ and 66ABD, 195 - 205 mc for 66ABA and 66ABE, and 215 - 225 mc for 66ABB and 66ABF.

TYPE: Mattress antenna.



Antenna Assemblies 66AAY, 66AAZ, 66ABA, 66ABB, 66ABC, 66ABD, 66ABE, and 66ABF

DESCRIPTION: Each of these eight antennas is a mattress antenna consisting of a flat-screen reflector and six center-fed, full-wave dipoles. The flat-screen reflector is made up of horizontal copper-covered steel rods. The dipoles are mounted in front of the reflector in two vertical rows. Each row is made up of three horizontally-mounted dipoles. The overall dimensions are 7-1/2 feet high by 8-1/2 feet wide by 2 feet deep. Antennas 66AAY, 66AAZ, 66ABA, and 66ABB are designed for use with a 5G synchro unit, B502. Antennas 66ABC, 66ABD, 66ABE, and 66ABF are designed for use with a 7G synchro unit, B504. In addition, these antennas have slightly different dipole lengths and spacing for optimum performance at their design frequency.

BEAM DATA:
Polarization - Horizontal.

SCAN DATA: Each antenna rotates in azimuth.

TUNING/MATCHING DEVICES: Each antenna includes a means of matching the open, two-wire, dipole feed to a coaxial cable with a 5/8-inch inner conductor and a 1-1/2-inch outer conductor.

INSTALLATION: Shipboard, destroyers and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SC-1 Radar Equipment. Equipment function - search.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: General Electric Co., contracts NOs-84613 and NXss-30836.

STOCK NUMBERS: Federal Stock Numbers
66AAY.....F5985-369-5424
66AAZ.....F5985-636-3643
66ABA.....N5985-284-9069
66ABB.....F5985-369-5432
66ABD.....F5985-636-2384
66ABE.....F5985-369-5430
66ABF.....F5985-090-2643

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Instruction Book for Navy Model SC-1, Radar Equipment and SC-1 Adaptor, NAVSHIPS 900,382, NAVSHIPS 916.8, (Aug. 11, 1945). UNCLASSIFIED.

ANTENNA 66ABG

ASSOCIATED EQUIPMENT: Navy Model BL Equipment. Equipment function - IFF.

STOCK NUMBER: Federal Stock Number N5840-314-0964.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ABH

FREQUENCY: VHF band, 177 - 187 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat wire-mesh reflector with a tubular steel frame and an array of dipoles. The antenna includes provision for Mark 3 and Mark 4 IFF. The radar section connects to an RG-18/U coaxial cable and the IFF to an RG-10/U cable.

BEAM DATA:
Gain - probably 18.6 db for radar.
Half-power beamwidth - Vertical - 17° for radar.
Horizontal - Probably 22° for radar.
Polarization - Horizontal for radar.
Vertical for IFF.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of 5 revolutions per minute.

INSTALLATION: Shipboard, CL and larger vessels.

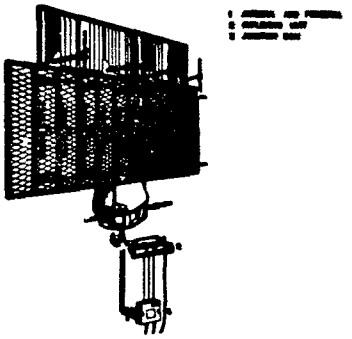
ASSOCIATED EQUIPMENT: Navy Model SK Radar Equipment. Equipment function - search, air.

MISCELLANEOUS: The gain and horizontal beamwidth shown above are listed in Reference 1) as characteristic of the SK-2 antenna, Navy Model 66AFR, not the SK antenna, Navy Model 66ABH. However, the apertures of the two antennas indicate that the data for the SK and SK-2 antennas were erroneously entered.

MANUFACTURER: General Electric Co.

STOCK NUMBER: Federal Stock Number F5985-254-7161.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) General Electric Drawing W7351292.
4) ENG 189: Preliminary Instruction Book for Navy Model SK Radar Equipment, Volume II.
5) NAVSHIPS 900116.



Antenna 66ABH

ANTENNA 66ABJ-(*)

FREQUENCY: SHF band, 3000 - 3100 mc; VSWR < 2.25.

TYPE: Cut paraboloidal reflector.

DESCRIPTION: The antenna is an aluminum cut paraboloidal reflector, 48 inches wide by 15 inches high with a focal length of 12 inches, fed by a waveguide horn with an aperture, 1-1/2 inches by 3 inches. The overall antenna is 44 inches high by 49-1/2 inches wide by 34 inches deep. The antenna has eight 13/16-inch holes on a 16-1/2-inch bolt circle for mounting. It is designed for connection to a coaxial cable.

BEAM DATA:
Gain - 23.4 db.
Half-power beamwidth - Vertical - 15°.
Horizontal - 5°.
Side-lobe attenuation - Vertical - 2%.
Horizontal - 1%.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of either 8 or 16 revolutions per minute.

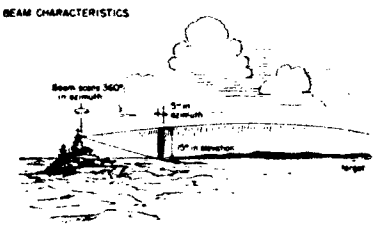
ASSOCIATED EQUIPMENT: Navy Model SG Radar Equipment uses 66ABJ and Navy Models SG-1, SG-a, SG-b, and SG-1b Radar Equipments use 66ABJ-1. Equipment function - search, surface.

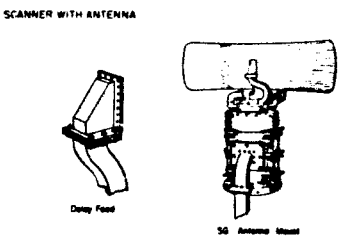
MISCELLANEOUS: The nomenclature 66ABJ-(*) denotes 66ABJ and 66ABJ-1.

MANUFACTURER: Raytheon Mfg. Co.

STOCK NUMBERS: Federal Stock Number
66ABJ without spares....F5985-470-7416
66ABJ with spares.....F5985-538-2836
66ABJ-1 without spares..F5985-470-7407

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Raytheon Drawing DXG-74-5037 sub 0 (66ABJ).
3) Raytheon Drawing DXG-91-5041-2 (66ABJ-1).
4) NAVSHIPS 900531: Instruction Book, Radar Equipments SG-a, SG-b, SG-1b, SG-2s.





Antenna 66ABJ

ANTENNA 66ABL

FREQUENCY: UHF band, 680 - 720 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a probe dipole connected to a coaxial cable. It mounts between the radar dipoles and reflector by four 0.164-32 screws with 1/2-inch by 2-inch mounting centers.

ASSOCIATED EQUIPMENT: Navy Model LW Radar Test Equipment. Equipment function - test.

MANUFACTURER: Western Electric Co., part number D-150565.

STOCK NUMBER: Federal Stock Number F5985-257-3206.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66ABM

ASSOCIATED EQUIPMENT: Navy Models BL-1, BL-2, BL-3, BL-4 and BL-5 Equipment. Equipment function - IFF.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ABO

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc; VSWR < 2.

TYPE: Cut paraboloidal reflector with a circular horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, 42 inches wide by 20 inches high, fed by a circular waveguide horn, 2.9 inches in diameter. The horn is fed by rectangular waveguide. The antenna is enclosed in a cylindrical plexiglass cover. It mounts by eight 3/4-inch holes on a 16-1/2 inch bolt circle

BEAM DATA:
Gain - 25 db.
Half-power beamwidth - Vertical - 12°.
Horizontal - 6°.

SCAN DATA: The antenna is rotated in azimuth by a hand-operated mechanical drive.

INSTALLATION: Shipboard, PT boats, landing craft and other small vessels.

ASSOCIATED EQUIPMENT: Navy Model SE Radar Equipment. Equipment function - search.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co., contract NXs-3150.

STOCK NUMBER: Federal Stock Number F5985-369-5483.

REFERENCES:
1) H.T. Friis, W.D. Lewis, Radar Antennas, Bell System Technical Journal, 26, No. 2. New York, N.Y.: American Telephone and Telegraph Co. (Apr. 1947). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Western Electric Drawing ESXX-682565 sub 3.

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ANTENNA 66ABP

FREQUENCY: VHF band, 175 - 225 mc.

TYPE: Dipole.

DESCRIPTION: The antenna assembly is a Navy monitor antenna assembly consisting of a dipole antenna and a vacuum thermocouple. Its overall dimensions are 29-13/16 inches long by 6-3/8 inches high by 2-31/32 inches wide. The antenna is mounted on a box containing the thermocouple unit.

ASSOCIATED EQUIPMENT: Test equipment for Navy Models SA and SA-1 Radar Equipment. Equipment function - test.

MANUFACTURER: Radio Corporation of America, part number P-720953-501.

STOCK NUMBER: Federal Stock Number F5985-257-3208.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA drawing W-422421 sub 0.

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ANTENNA 66ABQ

FREQUENCY: VHF band, 175 - 225 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna is a mattress consisting of a flat reflecting screen in front of which are mounted six horizontal dipoles for the radar signal, two vertical dipoles for the BL IFF signal, and eight collinear vertical dipoles for the BG recognition signal. The screen is 104 inches wide by 60 inches high. The overall antenna is 104 inches wide by 103-3/4 inches high by 26-3/4 inches deep.

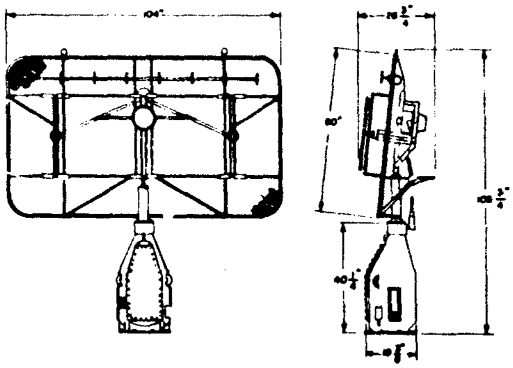
BEAM DATA:
Gain - 21 db.
Half-power beamwidth - Vertical - 52° for radar signal.
Horizontal - 30° for radar signal.
Polarization - Horizontal for radar signal.
Vertical for IFF signal.

SCAN DATA: The antenna has azimuth lobe-switching and can also be rotated in azimuth at a rate of 5 revolutions per minute.

ASSOCIATED EQUIPMENT: Navy Models SA and SC Radar Equipments. Equipment function - search.

MANUFACTURER: Radio Corporation of America, contract NObsr-63207.

STOCK NUMBER: Federal Stock Number F5985-470-7458.



Antenna 66ABQ

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Technical Manual for Radar Equipment SA, SA-2 and SA-3, NAVSHIPS 92179, (June 3, 1954). UNCLASSIFIED.
3) RCA Drawing W-305147.

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ANTENNA 66ABR

FREQUENCY: VHF band, 177 - 187 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat-screen reflector with four dipoles mounted in front of it. The dipoles are fed by 70-ohm coaxial cable. The overall antenna is 72 inches wide by 60 inches high by 29-1/2 inches deep and weighs 65 pounds. It mounts on Antenna Pedestal NT 10AAE.

SCAN DATA: The antenna is rotated in azimuth by a mechanical drive.

ASSOCIATED EQUIPMENT: Navy Model SA-1 Radar Equipment. Equipment function - search.

MANUFACTURER: Radio Corporation of America.

STOCK NUMBER: Federal Stock Number F5985-470-7379.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Navy Drawing RE 66F361-B.
3) RCA Drawing W-305132-1.

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ANTENNA 66ABS

FREQUENCY: VHF band, 170 - 180 mc.

TYPE: Dipole (U-type).

DESCRIPTION: The antenna is a sweptback or U-type, copper dipole fed by a 50-ohm coaxial cable. The overall dimensions are approximately 30-3/4 inches long by 15 inches wide. The equipment furnished includes a 20-foot mast made in 5 sections.

BEAM DATA:
Beam type - Approximately omnidirectional in azimuth.
Polarization - Horizontal.

ASSOCIATED EQUIPMENT: Navy Model YH Navigation Equipment. Equipment function - radar beacon.

MANUFACTURER: Howard Radio.

STOCK NUMBER: Federal Stock Number F5985-249-4330.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66ABU

FREQUENCY: S-band.

TYPE: Cut paraboloidal reflector

DESCRIPTION: The antenna is a cut paraboloidal reflector, 24 inches high by 48 inches wide, fed by a half-wave radiator. The primary radiator is fed by a 50-ohm coaxial cable. The antenna weighs 175 pounds.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna rotates in azimuth at a rate of 24 revolutions per minute. There is provision for either manual or motor-driven rotation.

INSTALLATION: Ground or shipboard, landing barges and beachheads.

ASSOCIATED EQUIPMENT: Navy Model SN Radar Equipment. Equipment function - surface search. Range - 300 yards to 25 nautical miles.

MISCELLANEOUS: Navy Model SN Radar Equipment has been replaced by Navy Model SQ Radar Equipment.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: General Electric Co., contract NXss-4753.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) SHIPS 257: Instruction Book for Navy Models SN and CXBR Radar Equipment.

ANTENNA 66ABX

FREQUENCY: VHF band, 135 mc.

TYPE: Coaxial dipole.

DESCRIPTION: The antenna is a coaxial dipole approximately 92-25/32 inches high by 2 inches in diameter. It mounts by a standard 1/2-inch threaded stud and connects to a 50-ohm coaxial cable. The equipment includes a bracket for mounting the dipole to a mast or yardarm and a 200-foot coaxial cable.

INSTALLATION: Ground or shipboard.

MANUFACTURER: Philco Corporation

STOCK NUMBER: Federal Stock Number F5985-369-5327.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Philco drawing EAP-2255 rev 0.

ANTENNA 66ABY

ASSOCIATED EQUIPMENT: Navy Model CXBS Equipment.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ACB, 66ACC, 66ACD, and 66ACE

FREQUENCY: 66ACB...VHF band, 175 - 185 mc; 66ACC...VHF band, 185 - 195 mc; 66ACD...VHF band, 195 - 205 mc; 66ACE...VHF band, 215 - 225 mc.

TYPE: Mattress antenna.

DESCRIPTION: These four antennas are identical, but each is designed to operate at a slightly different radar frequency. Each antenna consists of a flat rectangular reflector with three sets of dipoles mounted in front of it. One set of dipoles consists of 6 horizontal dipoles for the radar, another set consists of 4 vertical dipoles for Navy Model BL IFF equipment, and the third set consists of 12 vertical dipoles for Navy Model BG receiving identification equipment. This assembly is mounted on a pedestal containing a motorized drive unit, synchro units and a rotary joint. Each of the four antennas is approximately 15 feet wide by 8 feet high by 43-1/2 inches deep and weighs 556 pounds. Each antenna is mounted by eight 13/16-inch bolts equally spaced on a 16-1/2-inch bolt circle. The antennas are designed for connection to a double concentric line, 7/8 inch in diameter and with an impedance of 70 ohms.

SCAN DATA: The antennas have a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Model SC-2 Radar Equipment. Equipment function - search.

MANUFACTURER: General Electric Co.

STOCK NUMBERS: 66ACB...Federal Stock Number F5840-699-3603; 66ACC...Federal Stock Number F5985-369-5589; 66ACD...Federal Stock Number F5985-349-4902; 66ACE...Federal Stock Number F5985-349-4909.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric Drawing P-7764747 rev. 2.

ANTENNA 66ACF

FREQUENCY: VHF band, 157 - 187 mc

DESCRIPTION: Reference 1) below describes the antenna as a "stovepipe" type consisting of two stovepipe sections joined with a ceramic insulator and mounted on a sub-base assembly. The antenna is 6 feet long 6 inches in diameter at the top, 12-3/4 inches in diameter at the base, and weighs 49 pounds. It is designed for connection to a 50-ohm cable (RG-10/U) with an NT-49195 plug assembly.

BEAM DATA:
Beam type - Approximately nondirectional in azimuth with most of the energy directed toward the horizon.
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Navy Model BM Equipment. Equipment function - IFF.

MANUFACTURER: Hazeltine Electric Co.

STOCK NUMBER: Federal Stock Number N5985-408-8708.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Hazeltine Drawing MA-1015.
3) Navy Drawing 66F385D.

ANTENNA 66ACG

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical steel rod, 15-1/2 inches long and 1 inch in diameter, and a wheel-type ground plane made up of a 19-inch-diameter steel ring with four equally spaced radial steel spokes. The antenna weighs 5 pounds. The base of the antenna is tapped to receive a 1-inch pipe with a standard straight pipe thread. This mounting pipe, which is not supplied, should be approximately 25 inches long from the top of the pipe to its nearest point of support. The antenna is fed by RG-10/U coaxial cable.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard (small and medium vessels where space aloft is limited).

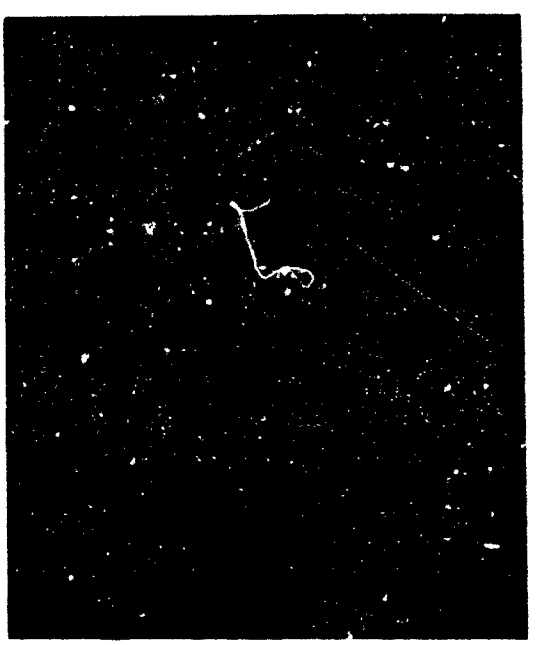
ASSOCIATED EQUIPMENT: Navy Model BL, BM, and BN series equipment. Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Hazeltine Service Corp., contract NXss-23137.

STOCK NUMBER: Navy F16-A-52285-7781.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) NAVSHIPS 95439, Preliminary Installation Instructions on Model CTZ-66ACG Antenna Assembly.



Antenna 66ACG

ANTENNA 66ACM

FREQUENCY: UHF band, 600 mc.

TYPE: Probably parabolic-cylinder reflector.

DESCRIPTION: The antenna is a highly directive antenna of the parabolic type and employs lobe switching. It weighs 310 pounds and is gimbal mounted. The primary radiator is designed to be fed by a 50-ohm transmission line.

SCAN DATA: The antenna rotates in azimuth and employs lobe switching.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 6 and CXBF Radar Equipment. Equipment function - fire control.

MANUFACTURER: Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-409-0951.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA Drawing TX-263330.

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ANTENNA 66ADA

ASSOCIATED EQUIPMENT: Navy Model BA Equipment. Equipment function - IFF.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66ADB

ASSOCIATED EQUIPMENT: Navy Model SD-3(2) Radar Equipment. Equipment function - search.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66ADC

ASSOCIATED EQUIPMENT: Navy Model SD-3(2) Radar Equipment. Equipment function - search. Navy Model OAF Equipment. Equipment function - probably training.

REFERENCE:
U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66ADE

ASSOCIATED EQUIPMENT: Navy Model XBD Experimental Equipment.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66ADG

ASSOCIATED EQUIPMENT: Navy Model YH-1 Equipment. Equipment function - navigation.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66ADH

FREQUENCY: SHF band, 3071 - 3100 mc.

TYPE: Cut paraboloidal reflector with two waveguide horns.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, 30 inches wide by 10 inches high, fed by two waveguide horns mounted side by side on either side of the focal point of the reflector. The reflecting surface is formed from a solid sheet of aluminum alloy. The waveguide horns are made from a manganese-bronze casting. The two horns are used so that lobe switching can be employed.

BEAM DATA:
Gain - 19 db.
Half-power beamwidth - Vertical - 18°.
Horizontal - 8°.
Beam type - Fan, pointed somewhat upward in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna employs lobe switching in azimuth. The lobe-switching beam separation is approximately 5°, and the gain reduction at the beam crossover is less than 1 db. The antenna also has a motor-driven azimuth rotating mechanism.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Model SJ Radar Equipment. Equipment function - fire control.

MISCELLANEOUS: Antenna 66ADH is the same as 56AAP, but it has a different swinging arc.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number F5985-470-7418.

REFERENCES:
1) H.T. Friis, W.D. Lewis, Radar Antennas, Bell System Technical Journal, 26. No. 2. New York, N.Y.: American Telephone and Telegraph Co. (Apr. 1947). UNCLASSIFIED.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) Western Electric Drawings ESR-679593 issue 9, ESR-688771 issue 1, and ESR-688972 issue 1.

ANTENNA 66ADH

FREQUENCY: SHF band, 9000 mc.

ASSOCIATED EQUIPMENT: Navy Model CXBQ Experimental Radar Equipment. Equipment function - search.

MANUFACTURER: Western Electric Co.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ADJ

FREQUENCY: SHF band, 9000 mc.

TYPE: Probably a cut paraboloidal reflector.

DESCRIPTION: The antenna consists of a reflector that is probably a cut paraboloid, two dipoles with parasitic reflectors, and a dome-shaped protective cover. The overall dimensions without the cover are 42 inches wide by 57-1/2 inches long by 37-1/2 inches deep. The dome-shaped cover is 66 inches high by 66 inches in diameter. The antenna is mounted by eight 17/32-inch bolts.

BEAM DATA:
Beam type - Directional.

SCAN DATA: The antenna has a motor-driven rotating and tilting mechanism.

ASSOCIATED EQUIPMENT: Navy Model CXBQ Experimental Radar Equipment. Equipment function - search.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number N5985-331-0101.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Western Electric Drawing T-7609436 sub 0.

ANTENNA 66ADK

FREQUENCY: SHF band, 3000 mc; VSWR < 1.5.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector, 2 feet in diameter with a focal length of 8 inches, a dipole feed, an echo-box assembly, and a dome-shaped protective cover. The antenna assembly is 34-1/2 inches high by 30-1/4 inches in diameter. It is mounted by eight threaded studs, 3/4 inch in diameter and 1-3/4 inches long, equally spaced on a 16-1/2-inch bolt circle. The dipole is fed by a coaxial cable.

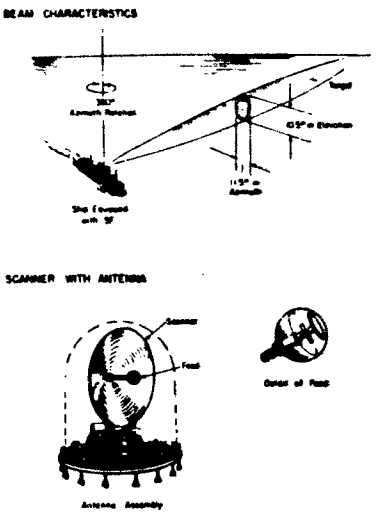
BEAM DATA:
Gain - 13 db.
Half-power beamwidth - Vertical - 10.5°.
Horizontal - 11.5°.
Side-lobe attenuation - Vertical - 20 db.
Horizontal - 21 db.
Polarization - Horizontal.

SCAN DATA: The antenna has a motor-driven rotating and tilting mechanism. It rotates through 360° in azimuth.

ASSOCIATED EQUIPMENT: Navy Model SF Radar Equipment. Equipment function - search, surface.

MISCELLANEOUS: The 66ADK is similar to the 66AEX. The 66ADK has a different rotating mechanism and some changes in the protective cover and the way in which the dipole is mounted.

MANUFACTURER: Submarine Signal Co.



Antenna 66ADK

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Antenna Catalog, Report No. 1330. Cambridge, Mass.: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

ANTENNA 66ADN

FREQUENCY: S-band.

ASSOCIATED EQUIPMENT: Navy Models SO, SO-a, and CXHX Radar Equipment. Equipment function - search.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ADO

FREQUENCY: S-band.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a dipole and a length of coaxial cable. It is part of an echo box that is used with radar antennas MT 66ADM and MT 66AFK. The antenna assembly is 2-1/2 inches high by 2-1/4 inches wide and is clamped by two screws to an antenna bracket.

ASSOCIATED EQUIPMENT: Navy Model SO, SO-a, and CXCH Radar Equipment. Equipment function - test.

MANUFACTURER: Raytheon Mfg. Co.

STOCK NUMBER: Federal Stock Number F5985-470-7393.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Raytheon Drawing M-3A11-U147 sub A.

ANTENNA 66ADP

ASSOCIATED EQUIPMENT: Navy Model MX-11 Radio Equipment. Equipment function - communications.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ADR

ASSOCIATED EQUIPMENT: Navy Model SB Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ADS

FREQUENCY: Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

BEAM DATA: See Reference 1) or Volume VI.

ASSOCIATED EQUIPMENT: Navy Model BM Equipment. Equipment function - IFF.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AEP-(*)

FREQUENCY: UHF band, 2915 - 2967 mc.

TYPE: Cut paraboloidal reflector with circular waveguide horn.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, 20 inches high by 42 inches wide, fed by a circular waveguide horn. The assembly is enclosed in a dome-shaped protective cover. It is mounted by eight 13/16-inch bolts equally spaced on a 16-1/2 inch bolt circle.

BEAM DATA:
Gain - Approximately 22 db.
Half-power beamwidth - Vertical - 12°.
Horizontal - 6°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth at a rate of 18 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models SL, SL-a, and SL-1 Radar Equipment. Equipment function - search, surface.

MISCELLANEOUS: The nomenclature 66AEP-(*) denotes 66AEP, 66AEP-1, and 66AEP-2.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co.

STOCK NUMBERS: 66AEP...Federal Stock Number F5985-246-4506; 66AEP-1...Federal Stock Number F5985-246-4507; 66AEP-2...Federal Stock Number F5985-246-4518.

Antenna 66AEP-(*)

REFERENCES:
1) H.T. Friis, W.D. Lewis, Radar Antennas, Bell System Technical Journal, 26, No. 2. New York, N.Y.: American Telephone and Telegraph Co. (Apr. 1947). UNCLASSIFIED.

2) Western Electric Drawings ESXX-654068 issues 3 and 6 and ESXX-687515.

3) ENG 193: Instruction Book for Model SL Radar Equipment.

4) SHIPS 255: Instruction Book for Radar Equipment SL-a.

5) SHIPS 249: Instruction Book for Radar Equipment SL-1.

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ANTENNA 66AEQ

ASSOCIATED EQUIPMENT: Navy Model SN-1 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AER

ASSOCIATED EQUIPMENT: Navy Model SC-3 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AES

ASSOCIATED EQUIPMENT: Navy Model SC-3 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AET-(*)

FREQUENCY: VHF band, 195 - 205 mc (radar frequency).

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat rectangular reflector with three sets of dipoles mounted in front of it. One set of dipoles consists of 6 horizontal dipoles for the radar, another set consists of 4 vertical dipoles for Navy Model BL IFF equipment, and the third set consists of 12 vertical dipoles for Navy Model BG identification receiver. This assembly is mounted on a pedestal containing a motorized drive unit and three synchro units. The antenna is approximately 15 feet wide by 7-1/2 feet high by 3-2/3 feet deep and weighs approximately 550 pounds. The antenna is mounted by eight 13/16-inch bolts equally spaced on a 16-1/2-inch bolt circle. The antenna is designed for connection to a double concentric line, RG-18/U and RG-10/U.

BEAM DATA: (Radar section)
Gain - 13.5 db.
Half-power beamwidth - Vertical - 60°.
Horizontal - Approximately 20°.
Polarization - Horizontal.

SCAN DATA: The antenna is rotated through 360° in azimuth by a motor-driven mechanism at 5 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SC-3 and SC-4 Radar Equipment. Equipment function - search, air.
Navy Model BL Equipment and Navy Model BG Equipment. Equipment function - IFF.

MISCELLANEOUS: The nomenclature 66AET-(*) denotes 66AET and 66AET-1. The 66AET weighs somewhat more than 66AET-1, and 66AET-1 is used only with Navy Model SC-4.

MANUFACTURER: General Electric Co.

STOCK NUMBERS: 66AET...Federal Stock Number F5985-349-4905; 66AET-1...Federal Stock Number F5840-369-5590 and Navy (ESO) F16-RA-3991.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) General Electric Drawing P-7765337 rev 0 and 1.

ANTENNA 66AEU-(*)

FREQUENCY: VHF band, 215 - 225 mc (radar frequency).

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat rectangular reflector with three sets of dipoles mounted in front of it. One set of dipoles consists of 6 horizontal dipoles for the radar, another set consists of 4 vertical dipoles for Navy Model BL IFF equipment, and the third set consists of 12 vertical dipoles for Navy Model BG identification receiver. This assembly is mounted on a pedestal containing a motor-drive unit and three synchro units. The antenna is approximately 15 feet wide by 7-1/2 feet high by 3-2/3 feet deep. It is mounted by eight 13/16-inch holes equally spaced on a 16-1/2-inch bolt circle. The antenna is designed for connection to two r-f cables, one RG-18/U and one RG-10/U.

BEAM DATA: (Radar section)
Gain - 13.5 db.
Half-power beamwidth - Vertical - 60°.
Horizontal - Approximately 20°.
Polarization - Horizontal.

SCAN DATA: The antenna is rotated through 360° in azimuth by a motor-driven mechanism at 5 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SC-3 and SC-4 Radar Equipment. Equipment function - search, air.
Navy Model BL Equipment and Navy Model BG Equipment. Equipment function - IFF.

MISCELLANEOUS: The nomenclature 66AEU-(*) denotes 66AEU and 66AEU-1. The two models use different synchro units.

MANUFACTURER: General Electric Co.

STOCK NUMBERS: Federal Stock Numbers F5985-349-4973 (66AEU), and F5985-470-7460 (66AEU-1).

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66AEW

FREQUENCY: VHF band, 215 - 225 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna is a mattress consisting of a flat reflecting screen. Mounted in front of the reflector are six horizontal dipoles for the radar signal, two vertical dipoles for the BL IFF signal, and eight collinear vertical dipoles for BG recognition signal. The reflector is 104 inches wide by 63-1/2 inches high. The total weight of the antenna is 228 pounds. It is mounted by ten 3/8 inch-16 thread steel bolts equally spaced on a 6-1/4-inch bolt circle.

BEAM DATA:
Gain - 21 db.
Half-power beamwidth - Vertical - 52° for radar signal.
Horizontal - 30° for radar signal.
Polarization - Horizontal for radar signal and vertical for IFF signal.

SCAN DATA: The antenna has azimuth lobe-switching and can also be rotated in azimuth at a rate of 5 revolutions per minute.

ASSOCIATED EQUIPMENT: Navy Models SA-2 and SA-3 Radar Equipment. Equipment function - search.

MANUFACTURER: Radio Corporation of America, contract NObsr-63207.

STOCK NUMBER: Federal Stock Number F5985-470-7459.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Technical Manual for Radar Equipment SA, SA-2 and SA-3, NAVSHIPS 92179, (June 3, 1954). UNCLASSIFIED.
3) RCA Drawing T-621106 sub. 0.

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ANTENNA 66AEX

FREQUENCY: SHF band, 3000 mc.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna consists of paraboloidal reflector with a dipole feed, an echo-box assembly, and a dome-shaped protective cover. The antenna assembly is 34-1/2 inches high by 30-1/4 inches in diameter. It is mounted by eight threaded studs, 3/4 inch in diameter and 1-3/4 inches long, equally spaced on a 16-1/2-inch bolt circle. The antenna is fed by a coaxial cable.

SCAN DATA: The antenna has a motor-driven rotating and tilting mechanism.

ASSOCIATED EQUIPMENT: Navy Model SF Radar Equipment. Equipment function - search, surface.

MISCELLANEOUS: The 66AEX is similar to the 66ADK. The 66AEX has a different rotating mechanism and some changes in the protective cover and in the way in which the dipole is mounted.

MANUFACTURER: Submarine Signal Co.

STOCK NUMBER: Federal Stock Number F5985-246-4511.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Submarine Signal Drawing SK-5360 alt. 2.

ANTENNA 66AEZ-(*)

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna consists of an 8-foot paraboloidal reflector, 66AHA, and a feed assembly. No information is available on the feed assembly except that the antenna includes a 6-element folded-dipole array for IFF.

ASSOCIATED EQUIPMENT: Navy Models SM and SM-1 Radar Equipment. Equipment function - search and IFF.

MISCELLANEOUS: The nomenclature 66AEZ-(*) denotes 66AEZ and 66AEZ-1. The 66AHA is part of 66AEZ-1.

MANUFACTURER: W-J-L Products Co.

STOCK NUMBER: Federal Stock Number F5985-369-5568 (66AHA).

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) Navy Drawing RE 13A9142A (66AHA).

ANTENNA 66AFA and 66AFB

ASSOCIATED EQUIPMENT: Navy Model Mark 35 Radar Equipment. Equipment function - fire control.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFC

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Cut paraboloidal reflector with two waveguide horns.

DESCRIPTION: The antenna consists of a reflector, which is an offset section of a paraboloid, fed by two waveguide horns mounted side by side on either side of the focal point of the reflector. The reflector is 30 inches wide by 10 inches high and in constructed of horizontal, aluminum alloy slats. The waveguide horn assembly is 11-5/8 inches high by 20-11/16 inches wide by 14-1/2 inches long and is made from a manganese-bronze casting. Two horns are used so that lobe switching can be employed.

BEAM DATA:
Gain - 20 db.
Half-power beamwidth - Vertical - 17°.
Horizontal - 8°.
Beam type - Fan, pointed somewhat upward in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna employs lobe switching in azimuth at a rate of 1720 cycles per minute. The lobe-switching beam separation is approximately 5°, and the gain at the crossover point is less than 1 db down from the peak gain. The antenna also has a motor-driven mechanism that rotates the antenna in azimuth at a constant speed of any value up to 12 revolutions per minute.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Model SJ-1 Radar Equipment. Equipment function - search and fire control.

MISCELLANEOUS: Antenna 66AFC is the same as antenna 66AGK. The 66AFC is used with submarine radar and the 66AGK is used with radar for surface vessels.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number F5985-470-7414.

REFERENCES:

1) H.T. Friis, W.D. Lewis, Radar Antennas, Bell System Technical Journal, 26, No. 2, New York, N.Y.: American Telephone and Telegraph Co. (Apr. 1947). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66AFD

FREQUENCY: SHF band, about 3000 mc.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Model SJ-a Radar Equipment. Equipment function - search and fire control.

MISCELLANEOUS: The 66AFD is probably similar to 66ADH, 66AFC, and 66AGK and may be the same as 66AFC.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFE

ASSOCIATED EQUIPMENT: Navy Models SD-2, SD-4, and SD-5 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFF

MAJOR COMPONENTS: 2 four-foot parabolic-cylinder reflectors, 1 two-foot parabolic-cylinder reflector, and 18 dipole feeds.

FREQUENCY: UHF band, 920 - 970 mc.

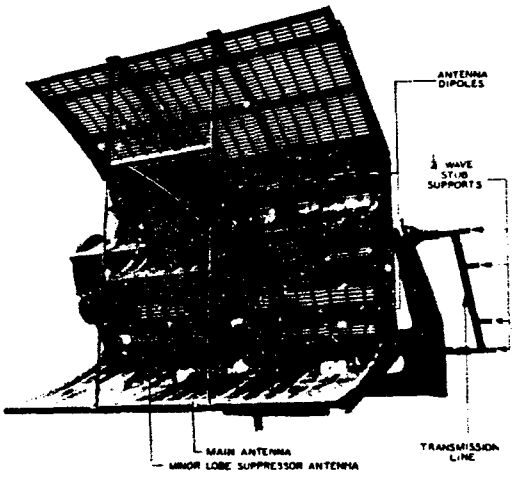
TYPE: Parabolic-cylinder reflector with a dipole feed.

DESCRIPTION: The antenna has two main parabolic-cylinder reflectors mounted one on top of the other with their focal lines horizontal and in the same vertical plane when the antenna is aimed at the horizon. These reflectors are each 4 feet long by 2 feet high with a focal length of approximately 1/4 wavelength. Each reflector is fed by 8 dipoles mounted with their axes coincident in a horizontal line along the focal line of the reflector. The sixteen dipoles are electrically connected in four groups of four dipoles. These groups are connected to a lobe switch to position the beam in one of four positions.

Mounted centrally on the front of the antenna at the junction of the two parabolic reflectors in a smaller antenna consisting of a parabolic cylinder, 2 feet by 2 feet, fed by two dipoles. This antenna is used to suppress the side lobes of the main antenna.

BEAM DATA:
Gain - 22 db.

Half-power beamwidth - Vertical - 10°.
Horizontal - 10°.
Beam type - Pencil.
Polarization - Horizontal.



66AFF

SCAN DATA: The antenna is rotated and tilted manually when tracking. Accurate tracking is accomplished by lobing. A capacitor which rotates at 60 cycles per second causes a phase shift in the currents in the dipole feeds This causes the main lobe of the radiation pattern to be shifted off the axis of the antenna by approximately 2-1/2°. As the capacitor makes one revolution, the lobe is shifted first up, then to the right, then down, and finally to the left. Thus, there are four positions of the main lobe. When the signal return for all four positions is equal, the antenna is pointed directly at the target. The auxilliary antenna beam is not lobe switched.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 12, Mod 1. Equipment function - fire control. Range - air, 400 to 45,000 yards, surface, 400 to 40,000 yards.

MISCELLANEOUS: The 66AFF is the same as Antenna Mark 17, Mod 0.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Western Electric Co., contracts NOrd 4496 and NOrd 5358.

STOCK NUMBER: Federal Stock Number N5985-470-7456.

REFERENCES:

1) U. S. Navy Bureau of Ordnance, Instruction Book for Radar Equipment Mark 12, Mod 1, NAVORD OP 1772, (Oct. 1944). UNCLASSIFIED.

2) U. S. Navy Bureau of Ordnance, Radar Equipment Mark 12, Model 0, NAVORD OP 1076, (April 1944). UNCLASSIFIED.

ANTENNA 66AFG

ASSOCIATED EQUIPMENT: Navy Models SQ and CXBR-1 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFJ

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical radiating rod, 9-7/8 inches long by 2 inches in diameter, and a "steering-wheel" or "doughnut" ground plane that is made up of a 20-inch-diameter ring supported by three radial spokes. The overall antenna is 18 inches high and weighs 8 pounds. The antenna has a jack to receive a cable assembly that is made up of an MT 49195 plug and a length of 50-ohm coaxial cable, RG-10/U. The antenna base is tapped with a standard straight pipe thread to receive a standard 1-inch iron mounting pipe, at least 15 inches long.

BEAM DATA:
Beam type - Omnidirectional in azimuth with a low-angle vertical beam.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models BL-1, BL-2, BL-4, BL-5, BL-6, BM-1, BM-2, BN-2, BQ, SO-7M, SO-7N, SO-12M, SO-12N, and YJ-2 Equipment. Equipment function - IFF.

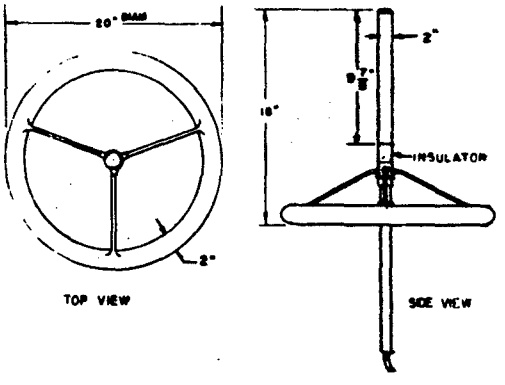
MANUFACTURERS: Technical Appliance Corp. and Hazeltine Electronics Div.

STOCK NUMBERS: Federal Stock Number N5985-318-7007, Navy F16-A-52285-7805.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66AFJ

3) Hazeltine Drawing MA-1167-1.

4) NAVSHIPS 918.8.

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ANTENNA 66AFK-(*)

FREQUENCY: S-band.

TYPE: Probably a cut paraboloidal reflector with a waveguide feed.

DESCRIPTION: The antenna is a parabolic-type reflector fed by a waveguide. The overall assembly is 49 inches high and 26-1/4 inches in diameter. It is mounted by four 7/16-inch bolts equally spaced on a 13-inch bolt circle.

SCAN DATA: The antenna has a motor-driven azimuth-rotating mechanism. Model 66AFK-1 also tilts in elevation from 0° to +90°.

ASSOCIATED EQUIPMENT: Navy Models SO, SO-a, SO-3, and SO-13 Radar Equipment. Equipment function - search.

MISCELLANEOUS: The nomenclature 66AFK-(*) denotes 66AFK and 66AFK-1. The 66AFK-1 is a 66AFK which has been modified in the field to provide the antenna with a hydraulic tilting mechanism.

MANUFACTURER: Raytheon Mfg. Co.

STOCK NUMBER: Federal Stock Number F5985-246-4501 (66AFK-1).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Raytheon Drawing M-87A-U2 sub 0.

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ANTENNA 66AFL

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Cut paraboloidal reflector with a waveguide horn feed.

DESCRIPTION: The antenna is a cut paraboloidal reflector with a "nozzle" type waveguide feed horn. The overall assembly is 43 inches high by 48 inches in diameter.

ASSOCIATED EQUIPMENT: Navy Model SO-1 Radar Equipment. Equipment function - search.

MANUFACTURER: Raytheon Mfg. Co.

STOCK NUMBER: Federal Stock Number F5840-369-5481.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Raytheon Drawing M-12A1-V111 sub 0.

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ANTENNA 66AFM

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc.

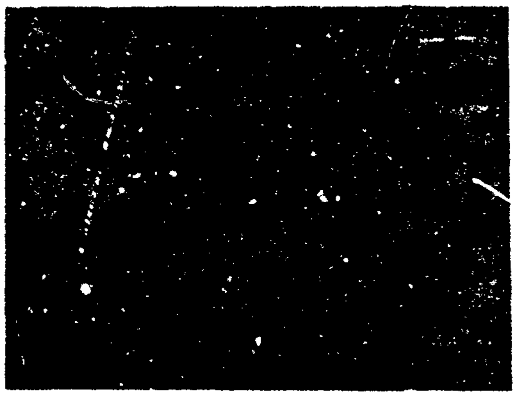
TYPE: Cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, a "nozzle" type waveguide feed horn, a turret-type protective cover, and a pedestal with a rotating mechanism and a synchro system. The overall assembly is 38 inches high by 33-1/4 inches in diameter. The antenna is mounted by eight 11/16-inch bolts equally spaced on a 11-1/2-inch bolt circle.

BEAM DATA:
Half-power beamwidth - Vertical - 22.5°.
Horizontal - 10°.
Polarization - Horizontal.

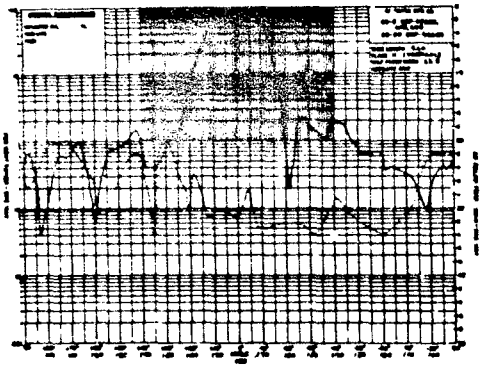
SCAN DATA: The antenna rotates in azimuth in either direction at 10-1/2 revolutions per minute.

INSTALLATION: Shipboard.

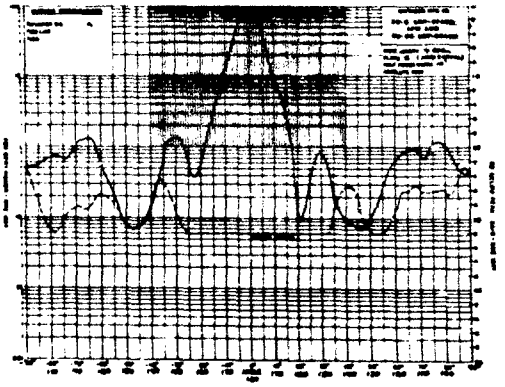


66AFM Antenna Assembly, Interior Details

ASSOCIATED EQUIPMENT: Navy Model SO-8 Radar Equipment. Equipment function - surface search.



66AFM Vertical Radiation Pattern



66AFM Horizontal Radiation Pattern

MISCELLANEOUS: Antenna 66AFM is similar to and interchangeable with 66AGD, 66AGN, and 66AGO. The 66AFM is the 66AGD modified for step-motor, differential-type, true bearing indication.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Mfg. Co., contracts NXsr-41008 and NXss-26786.

STOCK NUMBER: Federal Stock Number F5985-369-5480.

REFERENCES:

1) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipment Navy Model SO-8, NAVSHIPS 91219, (Aug. 9, 1949). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

4) Raytheon Drawing I-23A-U1 sub A.

ANTENNA 66AFN

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Probably a cut paraboloidal reflector.

DESCRIPTION: The antenna consists of a parabolic reflector fed by a rotating primary radiator. It includes a drive motor, 5 synchro units, and a pickup dipole (probably an echo-box antenna). The overall assembly is 39 inches high by 35 inches in diameter. Its total weight is 93 pounds. The antenna is mounted by eight 13/16-inch bolts equally spaced on a 16-1/2-inch bolt circle. The antenna is fed by rectangular waveguide.

ASSOCIATED EQUIPMENT: Navy Model SO-2 Radar Equipment. Equipment function - search.

MANUFACTURER: Raytheon Manufacturing Company.

STOCK NUMBER: Federal Stock Number F5985-470-7415.

REFERENCE:

U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66AFP

ASSOCIATED EQUIPMENT: Navy Model SM-1 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFQ-(*)

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna consists of an 8-foot paraboloidal reflector (66AHA), and a feed assembly. No information is available on the feed assembly except that the antenna includes a 6-element folded dipole array for IFF.

ASSOCIATED EQUIPMENT: Navy Model SM-1 Radar Equipment. Equipment function - search and IFF.

MISCELLANEOUS: The nomenclature 66AFQ-(*) denotes 66AFQ and 66AFQ-1. The 66AHA is part of 66AFQ-1.

MANUFACTURER: W-J-L Products Co.

STOCK NUMBER: Federal Stock Number F5985-369-5568 (66AHA).

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Navy Drawing RE 13A9142A (66AHA).

ANTENNA 66AFR

FREQUENCY: VHF band, 212.5 - 222.5 mc.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector, 17 feet in diameter with a mesh reflecting surface and two feed assemblies. Each feed assembly consists of a dipole and a reflector rod. The IFF feed is mounted with the dipole vertical; the radar feed is mounted with the dipole horizontal. The total weight of the assembly is approximately 1600 pounds. The antenna is mounted by twelve 13/16-inch bolts equally spaced on a 38-inch bolt circle. The radar section is fed by an RG-18/U cable; the IFF, by an RG-10/U cable.

BEAM DATA: (For radar signal)
Gain - 18.6 db.
Half-power beamwidth - Vertical - 17°.
Horizontal - 22°.
Polarization - Horizontal (for radar signal).
Vertical (for IFF signal).

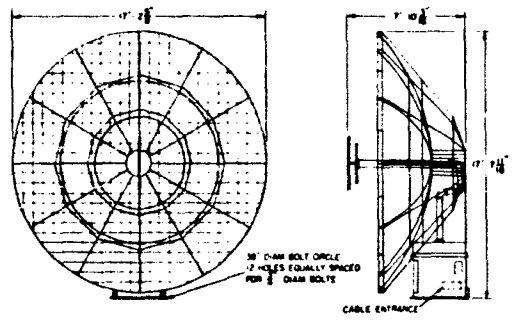
SCAN DATA: The antenna rotates in azimuth through 360° at a variable rate up to 5 revolutions per minute.

INSTALLATION: Shipboard, CL and larger vessels.

ASSOCIATED EQUIPMENT: Navy Models SK-2 and SK-3 Radar Equipment. Equipment function - search. Range - minimum: 1200 yards. Maximum: bombers - 30 miles at 500 feet, 130 miles at 30,000 feet; fighters - 80 miles at 10,000 feet; battleships - 20 miles; destroyers - 18 miles; surfaced submarines - 5 miles.

MISCELLANEOUS: Reference 1) states that Antenna 66AFR is used with SK-2 and SK-3; however, reference 2) states that SK-2 and SK-3 are similar except for the antenna.

COGNIZANT AGENCY: U. S. Navy, BuShips.



Antenna 66AFR

MANUFACTURER: General Electric Co., contracts NXs-1837 and NXss-18731.

STOCK NUMBER: Federal Stock Number F5985-470-7454.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

4) NAVSHIPS 900,116.

5) SHIPS 222.

ANTENNA 66AFS

ASSOCIATED EQUIPMENT: Navy Model Mark 1 Mod 3 Radar Equipment. Equipment function - fire control.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFT-(*)

FREQUENCY: UHF and SHF bands, 2965 - 3019 mc.

TYPE: Parabolidal reflector.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Models SF and SF-1 Radar Equipment. Equipment function - search.

MISCELLANEOUS: The nomenclature 66AFT-(*) denotes 66AFT and 66AFT-1.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBERS: Federal Stock Numbers F5985-246-4516 (66AFT); F5985-246-4517 (66AFT-1).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AFU-(*)

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical radiating rod supported by a leaf spring above a flat, metal ground plane. The overall assembly is 22-7/8 inches high by 20 inches wide, and the total weight is approximately 55 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard, submarine.

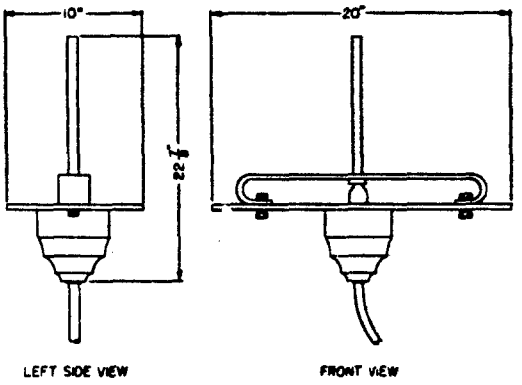
ASSOCIATED EQUIPMENT: Navy Model BN Equipment. Equipment function - IFF.

MISCELLANEOUS: The nomenclature 66AFU-(*) denotes 66AFU and 66AFU-1.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Ray Jefferson, Inc., Hazeltine Electronics Corp., contract NXsr-53309.

STOCK NUMBERS: 66AFU-1...Navy N16-A-52285-7831; 66AFU...Federal Stock Number F5985-246-4494.



Antenna 66AFU

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA EQUIPMENT 66AFV

FREQUENCY: Additional information is available in the secret document listed below as Reference 1.

TYPE: Cut paraboloidal reflector with dipole feed.

DESCRIPTION: The reflector is a cut paraboloid approximately 3 feet wide by 2-1/4 feet high. The feed is a dipole with a small reflecting disk.

BEAM DATA: See Reference 1).

SCAN DATA: Antenna is manually rotated and tilted.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 26 Mod 3 and Mark 26 Mod 4. Equipment function - fire control (range only). Range - 700 to 12,000 yards for small aircraft at an altitude of 1000 feet and up to 25,000 yards for ships.

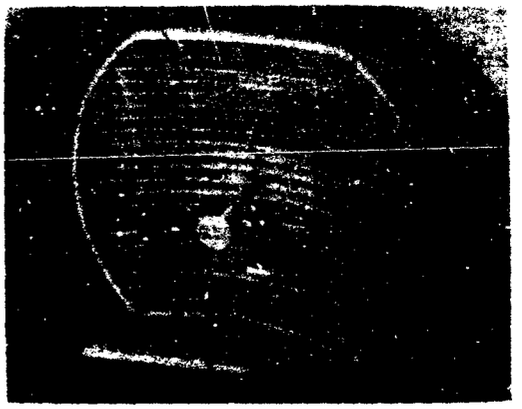
COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURERS: RCA Victor (Mark 26 Mod 3) and General Electric Co. (Mark 26 Mod 4).

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Navy Bureau of Ordnance, Radar Equipment Mark 26 Models 3 and 4, NAVORD OP 1154, (Aug. 1944). UNCLASSIFIED.



ANTENNA EQUIPMENT 66AFV

ANTENNA 66AGD

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc.

TYPE: Cut paraboloidal reflector with a waveguide horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, a "nozzle" type waveguide feed horn, a turret-type protective cover, and a pedestal with a rotating mechanism and a synchro system. The overall assembly is 37-1/2 inches high by 34-1/2 inches in diameter. The antenna is mounted by eight 11/16-inch bolts equally spaced on a 11-1/2-inch bolt circle. The antenna weighs 93 pounds.

BEAM DATA:
Half-power beamwidth - Vertical - 22.5°.
Horizontal - 10°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth in either direction at a rate of 10-1/2 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SO-8 Radar Equipment. Equipment function - search, surface.

MISCELLANEOUS: Antenna 66AGD is similar to and interchangeable with 66AFM, 66AGM and 66AGO. The 66AGD is the original antenna furnished with Navy Model SO-8 Radar Equipment. It has no provision for true bearing indication.

COGNIZANT AGENCY: U. S. Navy, Bureau of Ships.

MANUFACTURER: Raytheon Mfg. Co., contracts NXsr-41008 and NXss-26786.

STOCK NUMBER: Federal Stock Number F5985-246-4513.

REFERENCES:

1) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipment Navy Model SO-8, NAVSHIPS 91219, (Aug. 9, 1949). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

4) Raytheon Drawing M-23A-U1 sub A.

ANTENNA 66AGE

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Cut paraboloidal reflector with a waveguide horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector fed by a "nozzle" type waveguide horn. The overall assembly is 39-1/2 inches high by 51 inches in diameter.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Models SO-1 and SO-2 Radar Equipment. Equipment function - search.

MANUFACTURER: Raytheon Mfg. Co.

STOCK NUMBER: Federal Stock Number F5985-369-5479.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AGF

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Cut paraboloidal reflector with a waveguide horn feed.

DESCRIPTION: The antenna consists of a slatted, cut paraboloidal reflector, 6 inches high by 26 inches wide, with a "nozzle" type waveguide feed horn. The horn is fed by RG-51/U waveguide. It is mounted on a retractable tripod base. The antenna is 47 inches high by 30 inches in diameter, and the tripod is 115 inches high. The antenna weighs 125 pounds, and the entire assembly weighs 217 pounds. It is mounted by four 13/32-inch bolts equally spaced on a 13-inch bolt circle.

BEAM DATA:
Gain - 30 db.
Half-power beamwidth - Vertical - 9°.
Horizontal - 3.2°.
Polarizatoon - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth.

INSTALLATION: Shipboard, PT boats and other light craft.

ASSOCIATED EQUIPMENT: Navy Model SO-3 Radar Equipment. Equipment function - search, surface.

MANUFACTURER: Taft-Pierce Manufacturing Co., Inc.

STOCK NUMBER: Federal Stock Number F5985-470-7427.

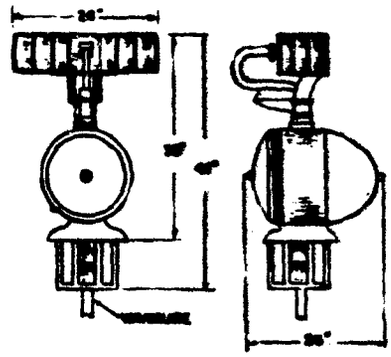
REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) SHIPS 260.

4) BuShips Drawing HE 43F435.

5) Taft-Pierce Drawing M-5A2-W2 sub B.



Antenna 66AGF

ANTENNA 66AGH

FREQUENCY: VHF band, 110 - 165 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical radiating rod, 13-5/8 inches long by 2 inches in diameter, and a "steering-wheel" or "doughnut" type ground plane that is made up of a 20-inch-diameter ring supported by three radial spokes. The overall height of the antenna is 22-1/32 inches, and the weight is 8 pounds. A cable assembly that is made up of a MT 49195 plug and a length of 50-ohm coaxial cable is supplied. The antenna base is tapped with a standard straight pipe thread to receive a 1-inch iron mounting pipe.

BEAM DATA:
Beam type - Omnidirectional in azimuth with a low-angle vertical beam.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model BQ Equipment. Equipment function - IFF.

MISCELLANEOUS: The 66AGH is the same as the

66AFJ except for the length of the radiating element and frequency band.

MANUFACTURERS: Technical Appliance Corp. and Hazeltine Electronics Div.

STOCK NUMBER: Federal Stock Number N5985-249-4379.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Hazeltine Drawing MA-1167-2.

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ANTENNA 66AGJ

FREQUENCY: VHF band.

ASSOCIATED EQUIPMENT: Navy Model BQ Equipment. Equipment function - IFF.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AGK

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Cut paraboloid reflector with two waveguide horns.

DESCRIPTION: The antenna consists of a reflector, which is an offset section of a paraboloid, fed by two waveguide horns mounted side by side on either side of the focal point of the reflector. The reflector is constructed of horizontal, aluminum alloy slats, and the waveguide horn assembly is made from a manganese-bronze casting. Two horns are used so that lobe switching can be employed.

BEAM DATA:
Gain - 20 db.
Half-power beamwidth - Vertical - 17°.
Horizontal - 8°.
Beam type - Fan, pointed somewhat upward in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna employs lobe switching in azimuth at a rate of 1720 cycles per minute. The lobe-switching beam separation is approximately 5° and the gain at the crossover point is less than 1 db down from the peak gain. The antenna also has a motor-driven mechanism that rotates the antenna in azimuth at a constant speed of any value up to 12 revolutions per minute.

INSTALLATION: Shipboard, surface vessels.

ASSOCIATED EQUIPMENT: Navy Model Mark 27 Radar Equipment. Equipment function - search, surface; and fire control.

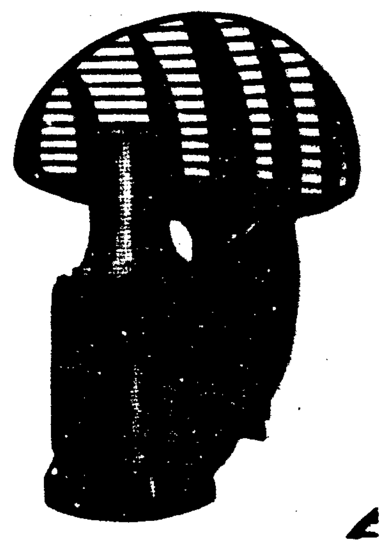
MISCELLANEOUS: The 66AGK is the same as 66AFC. The 66AGK is used with radar for surface vessels and 66AFC is used with submarine radar.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Western Electric Co.

REFERENCES:
1) U. S. Navy Bureau of Ordnance, Radar Equipment Mark 27, NAVORD OP 1155, (Aug. 1944). UNCLASSIFIED.

2) H.T. Friis, W.D. Lewis, Radar Antennas, Bell System Technical Journal, 26, No. 2. New York, N.Y.: American Telephone and Telegraph Co., (Apr. 1947). UNCLASSIFIED.



Antenna 66AGK

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ANTENNA 66AGL

ASSOCIATED EQUIPMENT: Navy Models BR and BR-1 Equipment. Equipment function - IFF.

REFERENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AGM

FREQUENCY: UHF band, 510 - 725 mc.

TYPE: Parabolic-cylinder reflector fed by a dipole array.

DESCRIPTION: Reference 1) states that the antenna consists of four pairs of dipole radiators and a double parabolic reflector, two pairs of lobe-suppressor dipoles and a small double parabolic reflector, a lobe-switch, and a square wave generator. The antenna assembly is 75 inches high by 46-1/2 inches long by 43 inches wide. It is mounted on Antenna Drive Unit NT 21ACK and is fed by a 53-ohm coaxial cable.

SCAN DATA: The antenna is rotated and tilted by Antenna Drive Unit NT 21ACK.

ASSOCIATED EQUIPMENT: Navy Models Mark 20 and Mark 20 Mod 0 Radar Equipment. Equipment function - fire control.

MISCELLANEOUS: Antenna 66AGM is probably similar to Antenna 66AFT.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number N5985-369-5443.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Western Electric Drawing ESL-662703 issue 1.

ANTENNA 66AGN

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc.

TYPE: Cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, a "nozzle" type waveguide feed horn, a turret-type protective cover, and a pedestal with a rotating mechanism and a synchro system. The assembly is 30 inches high by 35-1/2 inches in diameter, and its weight is 93 pounds. It is designed to be mounted on Navy Antenna Tripod NT 10207.

BEAM DATA:
Half-power beamwidth - Vertical - 22.5°.
Horizontal - 10°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth in either direction at a rate of 10-1/2 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SO-8a Radar Equipment. Equipment function - search, surface.

MISCELLANEOUS: The 66AGN is similar to and interchangeable with 66AFM, 66AGD, and 66AGO. The 66AGN is 66AGD modified for mounting on a retractable tripod.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Manufacturing Company, contracts NXar-41008 and NXss-26786.

STOCK NUMBERS: Federal Stock Number F5985-246-4512, Navy F16-A-59694-1686.

REFERENCES:
1) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipment Navy Model SO-8, NAVSHIPS 91219, (Aug. 9, 1949). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
4) Raytheon Drawing M-394-M1 sub A.

ANTENNA 66AGO

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc.

TYPE: Cut paraboloidal reflector with a waveguide horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector, a "nozzle" type waveguide feed horn, a turret-type protective cover, and a pedestal with a rotating mechanism and a synchro system.

BEAM DATA:
Half-power beamwidth - Vertical - 22.5°.
Horizontal - 10°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth in either direction at a rate of 10-1/2 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SO-8 Radar Equipment. Equipment function - search, surface.

MISCELLANEOUS: The 66AGO is similar to and interchangeable with 66AFM, 66AGD, and 66AGN. The 66AGO is 66AGD modified for torgue-unit, differential-type, true bearing indication.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Manufacturing Company, contracts NXsr-41008 and NXss-26786.

STOCK NUMBER: Federal Stock Number F5985-246-4514.

REFERENCES:
1) U. S. Navy Bureau of Ships, Instruction Book for Radar Equipment Navy Model SO-8, NAVSHIPS 91219, (Aug. 9, 1949). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AGO-1

FREQUENCY: VHF and UHF bands, 100 - 1000 mc.

TYPE: Two dipoles with a convex, cylindrical reflector.

DESCRIPTION: The antenna consists of a hyperbolic-cylinder reflector with a large horizontal dipole and a small vertical dipole mounted in front of the convex side of the reflector. The overall assembly is 25-3/4 inches by 37-7/8 inches by 83 inches. The total weight of the assembly is approximately 275 pounds. Two antenna assemblies, one port and one starboard, are used for each installation.

BEAM DATA:
Polarization - Horizontal and vertical.

INSTALLATION: Shipboard, submarine observation bridge.

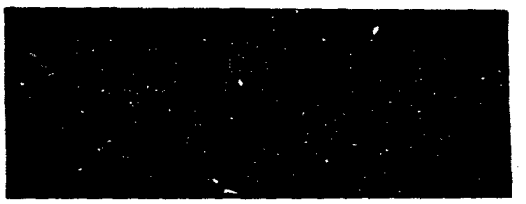
ASSOCIATED EQUIPMENT: Navy Model DXA Direction Finder Assembly. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: L. S. Brach Manufacturing Corp., contracts NXsr-81465 and NXsr-85042.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) SHIPS 384: Technical Manual for Model DXA Direction Finder Assembly.



Antenna 66AGO-1

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ANTENNA 66AGP

FREQUENCY: UHF and SHF bands, 3000 mc; VSWR < 1.3.

TYPE: Modified paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna consists of a shaped paraboloidal reflector, 4 feet in diameter and 9 inches deep, a bowl-shaped shield covering the lower half of the reflector, and a rectangular waveguide horn with an aperture 4 inches by 8 inches. The feed horn, which projects through the shield, is tilted upward 33° from horizontal.

BEAM DATA:
Gain - 23 db.
Half-power beamwidth - Horizontal - 5-1/2°.

Side lobe attenuation - Horizontal - 0.99%.
Beam type - Csc^2 from 24° to 72° in azimuth with the maximum gain on the horizon 40 db below the peak gain.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 12 revolutions per minute.

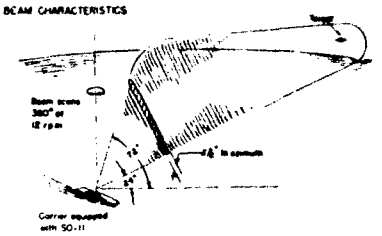
INSTALLATION: Shipboard.

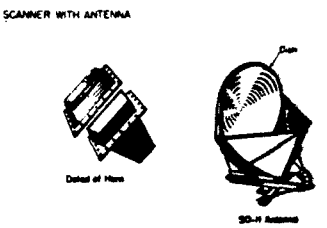
ASSOCIATED EQUIPMENT: Navy Model SO-11 Radar Equipment. Equipment function - search, air.

MANUFACTURER: Raytheon Manufacturing Co.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Antenna Catalog, Report No. 1330. Cambridge, Mass.: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.





Antenna 66AGP

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ANTENNA 66AGQ

FREQUENCY: UHF and SHF bands, 3000 mc.

TYPE: Paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: The antenna consists of a paraboloidal reflector with a "nozzle" type waveguide feed horn. The assembly is approximately 43 inches high by 48 inches wide by 48 inches deep. It is mounted on a pedestal and fed by waveguide.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Model SO-1a Radar Equipment. Equipment function - search.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5840-567-8832.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Raytheon Drawing M-12A1-V111 sub D.

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ANTENNA 66AGR-(*)

ASSOCIATED EQUIPMENT: Navy Models SO-a and SO-13 Radar Equipment. Equipment function - search.

MISCELLANEOUS: The nomenclature 66AGR-(*) denotes 66AGR and 66AGR-1. The 66AGR-1 is not normally used with Navy Model SO-a Radar Equipment.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AGS

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Cut paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: The antenna consists of a slatted, cut paraboloidal reflector, 5 inches high by 48 inches wide, with a "nozzle" waveguide feed.

BEAM DATA:
Gain - 32 db.
Half-power beamwidth - Vertical - 13°.
Horizontal - 1.5°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of approximately 6 revolutions per minute.

INSTALLATION: Shipboard, PC boats and other light craft.

ASSOCIATED EQUIPMENT: Navy Model SO-4 Radar Equipment. Equipment function - search, surface.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-470-7428

REFERENCES:

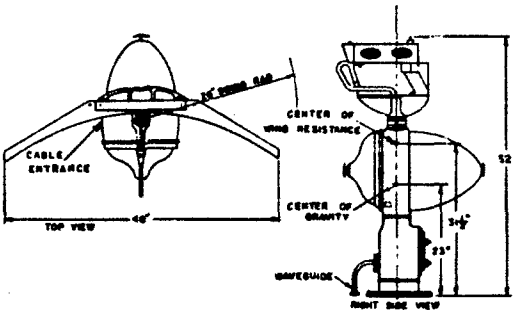
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 900,321(A).

4) BuShips Drawing RE 43F362.

5) Raytheon Drawing PA-9A-U17, M-9A-X9 sub A.



Antenna 66AGS

ANTENNA EQUIPMENT 66AGT

FREQUENCY: SHF band, X-band.

TYPE: Cut paraboloidal reflector with a horn feed.

DESCRIPTION: The reflector is an elliptically shaped, cut paraboloid of open-grate construction. It is 6 feet high by 1-1/2 feet wide by 2-1/2 feet deep. The feed is a waveguide horn mounted at the focal point of the reflector. The antenna weighs 95 pounds.

BEAM DATA:
Gain - 37 db.
Half-power beamwidth - Vertical - 1.2°.
Horizontal - 4.5°.
Side lobe attenuation - At least 20 db.
Beam type - Beavertail.
Polarization - Vertical.

SCAN DATA: The antenna mechanically scans in the vertical plane over an angle of 12° at a rate of 2 scans per second. The azimuth position is also changed mechanically.

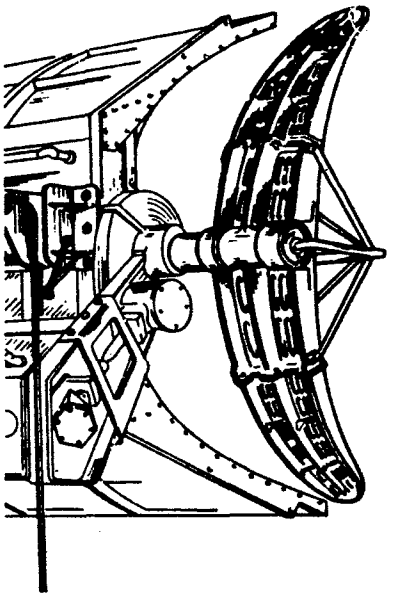
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 22 Mod 1. Equipment function - fire control.

MISCELLANEOUS: Radar Equipment Mark 22 Mod 1 is auxiliary equipment used in conjunction with Radar Equipment Mark 12. It furnishes elevation and range information on low-angle targets.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Western Electric Co., contract NOrd-9385.



Antenna 66AGT

REFERENCES:

1) Bureau of Ordnance, Instruction Book for Radar Equipment Mark 22 Model 1, OP 1775, (May 1946). UNCLASSIFIED.

2) Western Electric Specification D-15-1711.

3) Western Electric Assembly Drawing EXX-35491.

ANTENNA 66AGU-(*)

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc.

TYPE: Paraboloidal reflector.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Models SO, SO-a, and SO-13 Radar Equipment. Equipment function - search.

MISCELLANEOUS: The nomenclature 66AGU-(*) denotes 66AGU and 66AGU-1. The 66AGU-1 is normally used with Navy Model SO-a Radar Equipment.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number N5840-246-4505 (66AGU-1).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Raytheon Drawing M-87A-20 sub 0.

ANTENNA 66AGW

FREQUENCY: VHF band.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector fed by a dipole. The antenna is mounted on a welded steel pedestal. The antenna is fed by an RG-8/U cable for IFF and an RG-19/U cable for radar.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Model SK-1M Radar Equipment. Equipment function - search and IFF.

MISCELLANEOUS: The 66AGW is the same as 66AGX except for frequency.

MANUFACTURER: General Electric Company.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AGX

FREQUENCY: VHF band, 195 - 205 mc.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector fed by a dipole. The antenna is mounted on a welded steel pedestal. The overall assembly is 5 feet high by 15 feet long by 4 feet 4-1/4 inches wide. The antenna is fed by an RG-8/U cable for IFF and an RG-19/U cable for radar.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Model SK-1M Radar Equipment. Equipment function - search and IFF.

MISCELLANEOUS: The 66AGX is the same as 66AGW except for frequency.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5985-369-5580.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric Drawing T-7662873 rev 0.

ANTENNA 66AGY-(*)

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna is a paraboloidal reflector with a feed assembly consisting of a waveguide-fed dipole. The reflector is 24 inches in diameter. The antenna is enclosed in a plastic radome, 31-1/8 inches in diameter, and is mounted by 8 holes for 3/8-inch bolts equally spaced on a 16-1/2-inch bolt circle.

BEAM DATA:
Gain - 33.5 db.
Half-power beamwidth - Vertical - 3.8°.
Horizontal - 3.8°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of 6 revolutions per minute.

INSTALLATION: Shipboard, DE and larger vessels.

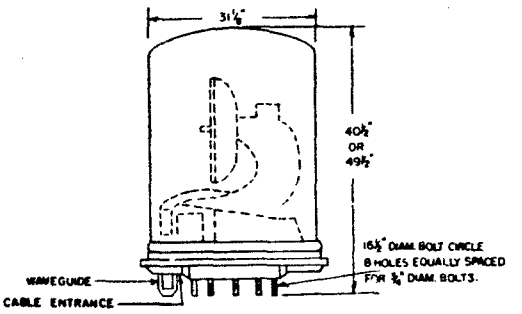
ASSOCIATED EQUIPMENT: Navy Models SU and SU-1 Radar Equipment. Equipment function - search, surface. Range - maximum, 15 miles for 2200-ton DD; minimum, 400 yards.

MISCELLANEOUS: The nomenclature 66AGY-(*) denotes 66AGY and 66AGY-1. The two models are the same except for the height of the radome. The 66AGY radome is 40-1/2 inches high and the 66AGY-1 radome is 49-1/2 inches high.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Submarine Signal Co., contracts NXss-26593 and NXss-33744.

STOCK NUMBERS: Federal Stock Number F5985-408-8696 (66AGY) and Federal Stock Number F5985-408-8697 (66AGY-1).



Antenna 66AGY

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) SHIPS 313: Instruction Book for Radar Equipment Navy Model SU.
4) NAVSHIPS 900,882: Instruction Book for Radar Equipment Navy Model SU-1.

ANTENNA 66AGZ-(*)

FREQUENCY: VHF and UHF bands, 175 - 770 mc.

TYPE: Conical antenna.

DESCRIPTION: The antenna is a modified conical dipole and is fed by a 52-ohm coaxial cable. The equipment includes an r-f monitoring unit.

BEAM DATA:
Polarization - Vertical, 45°, or horizontal, depending upon mounting poisiton.

ASSOCIATED EQUIPMENT: Navy Models TDY and X-TDY Radio Transmitting Equipment. Equipment function - probably communications.

MISCELLANEOUS: The nomenclature 66AGZ-(*) denotes 66AGZ and 66AGZ-1. The 66AGZ is 26-1/2 inches wide by 31 inches high and is mounted by means of four 9/16-inch holes located in the corners of a 6-1/2-inch square; 66AGZ-1 is 28-1/2 inches in diameter by 38 inches high and is mounted on a 2-3/8-inch pipe with 2 inches of 11-1/2 thread (American Standard).

MANUFACTURER: General Electric Company.

STOCK NUMBERS: Federal Stock Number F5985-369-5380 (66AGZ) and Federal Stock Number F5985-369-5381 (66AGZ-1).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric Drawing T-7663456 rev 2, (66AGZ).
3) General Electric Drawing SK-69083-12-1 rev 0, (66AGZ-1).
4) U. S. Navy Specification RE 13A5540 and RE 9256.

ANTENNA 66AHA

This antenna is part of 66AEZ-1 and 66AFQ-1.

ANTENNA 66AHE

FREQUENCY: VHF band, 215 - 225 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of 12 dipoles mounted in front of a flat-screen reflector. The antenna is 69 inches high by 152 inches wide by 31-11/16 inches deep. It has a turning radius of 80-1/8 inches. It weighs 251 pounds and mounts on NT 21ACP antenna pedestal which weighs 428 pounds.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 50°.
Horizontal - 20°
Polarization - Horizontal.

SCAN DATA: The antenna rotates 360° in azimuth at a rate of either 1-1/4 or 7 revolutions per minute.

TUNING/MATCHING DEVICES: Bazookas are used to match the antenna to a 52-ohm cable.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Models SR and SR-a Radar Equipment. Equipment function - search, air. Range - maximum, 8 miles for 2200-ton DD and 50 miles for 20-square meter aircraft; minimum, 750 yards.

MANUFACTURERS: Daunt Manufacturing Co., and Westinghouse Electric Corporation.

STOCK NUMBER: Federal Stock Number F5985-369-5431.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Westinghouse Drawing 7611790.

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ANTENNA 66AHF

FREQUENCY: VHF band, 175 - 205 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of 12 dipoles mounted in front of a flat-screen reflector. The antenna is 72 inches high by 180 inches wide by 32-13/16 inches deep and has a turning radius of 90-1/2 inches. It weighs 272 pounds and mounts on NT 21ACP antenna pedestal which weighs 428 pounds.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 50°.
Horizontal - 20°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates 360° in azimuth at a rate of either 1-1/4 or 7 revolutions per minute.

TUNING/MATCHING DEVICES: Bazookas are used to match the antenna to a 52-ohm cable.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Models SR and SR-a Radar Equipment. Equipment function - search, air. Range - maximum, 8 miles for 2200-ton DD and 50 miles for 20-square-meter aircraft; minimum, 750 yards.

MANUFACTURERS: Daunt Manufacturing Co., and Westinghouse Electric Corporation.

STOCK NUMBER: Federal Stock Number F5985-296-1042.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Westinghouse Drawing 7611790.

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ANTENNA GROUP 66AHG

MAJOR COMPONENTS: 1 66AHG-LE antenna section, 1 66AHG-LC antenna section, 1 66AHG-RC antenna section, and 1 66AHG-RE antenna section.

FREQUENCY: VHF band, 175 - 205 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is made up of four sections, 66AHG-LE, 66AHG-LC, 66AHG-RC, and 66AHG-RE. Each section consists of a dipole, a mounting plate, a matching transformer, and insulating bushings. The four sections are mounted on the SR radar antenna.

TUNING/MATCHING DEVICES: Bazookas are used to match the antenna to a 52-ohm cable.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Mark 3 IFF Equipment. Equipment function - IFF.

MANUFACTURERS: Daunt Manufacturing Co., and Westinghouse Electric Corporation.

STOCK NUMBERS: 66AHG...Federal Stock Number N5985-470-7471; 66AHG-LE...Federal Stock Number N5985-244-5404; 66AHG-LC...Federal Stock Number N5985-244-5407; 66AHG-RC... Federal Stock Number N5985-244-5405; 66AHG-RE...Federal Stock Number N5985-244-5403.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Westinghouse Drawings T-7611790-4 sub 3, T-7611519 sub 2, and T-7611520 sub 2.

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ANTENNA KIT 66AHH

MAJOR COMPONENTS: 1 66AHH-LE antenna section, 1 66AHH-LC antenna section, 1 66AHH-RC antenna section, and 1 66AHH-RE antenna section.

FREQUENCY: Orange band, Mark 3.

TYPE: Array of dipoles.

DESCRIPTION: The antenna is made up of four sections, 66AHH-LE, 66AHH-LC, 66AHH-RC, and 66AHH-RE. Each section consists of two dipoles, a mounting plate, a matching transformer, and insulating bushings. The four sections are mounted on the SR radar antenna.

TUNING/MATCHING DEVICES: Bazookas are used to match the antenna to a 52-ohm cable.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Mark 3 IFF Equipment. Equipment function - IFF.

MANUFACTURERS: Daunt Manufacturing Co., and Westinghouse Electric Corporation.

STOCK NUMBER: Federal Stock Number N5985-369-5634.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Westinghouse Drawings T-7611790 sub 3, T-7611519 sub 2, and T-7611520 sub 2.

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ANTENNA GROUP 66AHJ

MAJOR COMPONENTS: 1 66AHJ-LE antenna section, 1 66AHJ-LC antenna section, 1 66AHJ-RC antenna section, and 1 66AHJ-RE antenna section.

TYPE: Array of dipoles.

DESCRIPTION: The antenna is made up of four sections, 66AHJ-LE, 66AHJ-LC, 66AHJ-RC, and 66AHJ-RE. Each section consists of three dipoles, a mounting plate, a matching transformer, and insulating bushings. The four sections are mounted on the SR radar antenna.

TUNING/MATCHING DEVICES: Bazookas are used to match the antenna to a 52-ohm cable.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Mark 4 IFF Equipment. Equipment function - IFF

MISCELLANEOUS: The information in Reference 1) is incomplete and disorganized. The description above is believed to be correct.

MANUFACTURERS: Daunt Manufacturing Co., and Westinghouse Electric Corporation.

STOCK NUMBERS: 66AHJ...Federal Stock Number N5985-369-5628; 66AHJ-LC...Federal Stock Number N5985-507-9559; 66AHJ-RC...Federal Stock Number N5985-369-5439; 66AHJ-RE... Federal Stock Number N5985-695-4315.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Westinghouse Drawings 7611791, T-7611495-G2, T-761145-G1, and T-7611486-G1.

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ANTENNA 66AHK

FREQUENCY: VHF band, 175 - 225 mc.

TYPE: Coaxial dipole.

DESCRIPTION: The antenna is a coaxial dipole formed from a length of RG-8/U cable for folding back the outer conductor to expose one-quarter wavelength of the inner conductor which then functions as the upper half of the dipole. The outer conductor is connected to a quarter-wavelength coaxial sleeve which functions as the lower half of the dipole. The overall length of the antenna is 46-3/8 inches.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SR Radar Equipment. Equipment function - test (echo box).

MANUFACTURER: Westinghouse Electric Corporation.

STOCK NUMBER: Federal Stock Number F5985-254-7130.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Westinghouse Drawing T-7613639 sub 0.

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ANTENNA 66AHL

FREQUENCY: VHF band, 175 - 225 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of four dipoles mounted in front of a flat-screen reflector. The antenna is 48 inches high by 102 inches wide. It is mounted on the SC or SC-1 radar antenna. A 52-ohm RC-10/U cable is used to feed the antenna.

TUNING/MATCHING DEVICES: A tuning stub is used in conjunction with the feed line.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models SC and SC-1 Radar Equipment. Equipment function - IFF.

MANUFACTURER: Pratt Industries, Inc.

STOCK NUMBER: Federal Stock Number F5985-369-5329.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Drawings RA 66F258 and RE 13A751.

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ANTENNA 66AHM

FREQUENCY: UHF band, 350 - 615 mc.

TYPE: Probably a sleeve dipole with a flat-screen reflector.

DESCRIPTION: The antenna is 12 inches high by 18 inches wide by 5-1/8 inches deep. It can be mounted with the dipole horizontal, at a 45° angle, or vertical. The feed is a 50-ohm transmission line.

BEAM DATA:
Polarization - Vertical, horizontal, or 45° depending on mounting position.

INSTALLATION: Shipboard,

ASSOCIATED EQUIPMENT: Navy Models CXFR and TDY Radio Transmitting Equipment.

MISCELLANEOUS: The 66AHM and 66AHN are similar but are designed for different frequency ranges.

STOCK NUMBER: Federal Stock Number N5985-369-5391.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66AHN

FREQUENCY: UHF band, 615 - 800 mc.

TYPE: Probably a sleeve dipole with a flat-screen reflector.

DESCRIPTION: The antenna is 10-1/2 inches high by 14 inches wide by 5-1/8 inches deep. It can be mounted with the dipole horizontal, at a 45° angle, or vertical. The feed is a 50-ohm transmission line.

BEAM DATA:
Polarization - Vertical, horizontal, or 45° depending on mounting position.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model CXFR and TDY Radio Transmitting Equipment.

MISCELLANEOUS: The 66AHN and 66AHM are similar but are designed for different frequency ranges.

MANUFACTURER: Diamond Instrument Co.

STOCK NUMBER: Federal Stock Number N5985-408-8657.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Specification RE 9402.

3) Diamond Instrument Drawing M-2902 sub 0.

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ANTENNA 66AHP

FREQUENCY: UHF band, 2800 mc.

TYPE: Paraboloidal reflector with waveguide feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector, 8 feet in diameter with a focal length of 27.5 inches, fed by a two-dipole, waveguide-fed, nutating feed assembly. The antenna is mounted by twelve 1-1/16-inch bolts. The overall assembly is 136 inches high by 106 inches wide by 106 inches deep, and the total weight is 2200 pounds.

BEAM DATA:
Gain - 34.6 db.
Half-power beamwidth - Vertical - 2.7°.
Horizontal - 2.7°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° in either direction at a rate of 6 revolutions per minute. The feed nutates in a circle, 1 inch in diameter and forms a conical scan with a cone angle of 2°.

INSTALLATION: Shipboard, surface vessels.

ASSOCIATED EQUIPMENT: Navy Model SP Radar Equipment. Equipment function - search, surface; and fire control.

MANUFACTURER: General Electric Company.

STOCK NUMBERS: Federal Stock Number F5977-369-5563 (without spares), and Federal Stock Number F5985-665-0533 (with spares).

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) General Electric Drawing 8009537 rev 0.

3) NAVSHIPS 900,534: Instruction Book for Navy Model SP Radar Equipment.

4) Antenna Catalog, Report No. 1330. Cambridge, Mass.: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

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ANTENNA 66AHQ-(*)

FREQUENCY: UHF band, 2800 mc.

TYPE: Paraboloidal reflector with waveguide feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector, 6 feet in diameter, fed by a waveguide assembly. The reflector has an open mesh surface. The antenna is mounted by twelve 1-1/16-inch bolts. The overall assembly is 115 inches high by 73 inches wide by 73 inches deep, and the total weight is 1790 pounds.

BEAM DATA:
Gain - 29.5 db.
Half-power beamwidth - Vertical - 3.6°.
Horizontal - 3.6°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° in either direction at 6 revolutions per minute.

INSTALLATION: Shipboard, surface vessels.

Antenna 66AHQ

ASSOCIATED EQUIPMENT: Navy Model SP Radar Equipment. Equipment function - search, surface; and fire control.

MISCELLANEOUS: The nomenclature 66AHQ-(*) denotes 66AHQ and 66AHQ-1.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5840-295-9552 (66AHQ-1).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) NAVSHIPS 900,534: Instruction Book for Navy Model SP Radar Equipment.

ANTENNA 66AHR

ASSOCIATED EQUIPMENT: Navy Model SO-9 Radar Equipment. Equipment function - search.

REFERENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AHS

FREQUENCY: S-band.

TYPE: Probably a paraboloidal reflector.

DESCRIPTION: Reference 1) states that the antenna is of the parabolic type and includes a projector with a reflector, and that the antenna is approximately 39-1/2 inches high and 55 inches wide with a turning radius of 25-1/2 inches. The antenna has eight 11/16-inch mounting holes and an adaptor with eight 13/16 inch mounting holes. The equipment includes a torque motor; synchro unit, and echo-box antenna.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Navy Model SO-1 Radar Equipment. Equipment function - search.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-642-7121.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Western Electric Drawing BCX-21562.

ANTENNA EQUIPMENT 66AHU

FREQUENCY: SHF band, 8740 - 8890 mc.

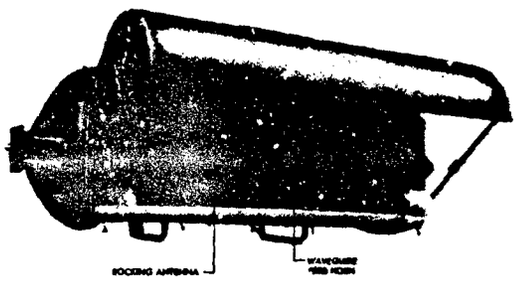
TYPE: Cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna is a reflector made of perforated aluminum. It is an elliptical section of a paraboloid fed by a waveguide horn mounted at the focal point of the cut paraboloid. The entire antenna is enclosed in a hinged cover.

BEAM DATA:
Half-power beamwidth - Vertical - 3.6°.
Horizontal - 0.9°.
Beam type - fan.

SCAN DATA: The antenna oscillates in the horizontal plane over a sector of 11.6° at a rate of 10 scans per second. It is manually rotated and tilted.

INSTALLATION: Shipboard.



Antenna 66AHU

ASSOCIATED EQUIPMENT: Radar Equipment Mark 8 Mod 3 and Mark 13 Mod 0. Equipment function - surface search, and fire control. Range - 40,000 yards.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Western Electric Co., contract NOrd4748.

STOCK NUMBER: Federal Stock Number 5985-369-5498.

REFERENCES:

1) U. S. Navy, BuOrd., Radar Equipment, Mark 13 Mod 0 Instruction Book, OP 1773 (Nov. 1944). UNCLASSIFIED.

2) U. S. Navy, BuOrd., Radar Equipment Mark 8 Mod 3, OP 1298, (Aug. 1945). UNCLASSIFIED.

3) Western Electric Drawing BKX-21562.

4) Western Electric Specification D-152163.

ANTENNA 66AHW

FREQUENCY: UHF band, 510 - 725 mc.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector with a nutating dipole feed. The overall assembly is 83-3/4 inches high by 81-1/2 inches wide by 45 inches deep. It has six 9/16-inch mounting holes. It is fed by a 50-ohm coaxial cable.

SCAN DATA: The antenna has a conical scan generated by the nutating feed. It also has a motor-driven mechanism that rotates the antenna in azimuth.

ASSOCIATED EQUIPMENT: Navy Model Mark 20 Mod 1 Radar Equipment. Equipment function - fire control (searchlight control).

MISCELLANEOUS: Reference 1) lists Radar Equipment Mark 30 Mod 1 as obsolete; however, Antenna 66AHW is listed as current equipment in Reference 2).

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number N5985-36-5442.

REFERENCES:

1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D.C. Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Western Electric Drawing BL-417559 issue 1.

ANTENNA 66AHY

FREQUENCY: SHF band, 3000 - 3100 mc.

TYPE: Broadside array of dielectric rods.

DESCRIPTION: The array is made up of 42 tapered polystyrene rods, each 3 feet long, arranged in 14 sections. Each section is a vertical array of 3 rods fed by waveguide. The overall array is 43 inches high by 126 inches wide by 82 inches deep. It mounts on top of Navy Model Mark 34 or Mark 38 Gun Director.

BEAM DATA:
Half-power beamwidth - Vertical - 6°.
Horizontal - 2°.

SCAN DATA: The antenna employs electromechanical scanning in azimuth. Thirteen rotating phase shifters cause the beam to scan in azimuth through 29° at a rate of 10 cycles per second.

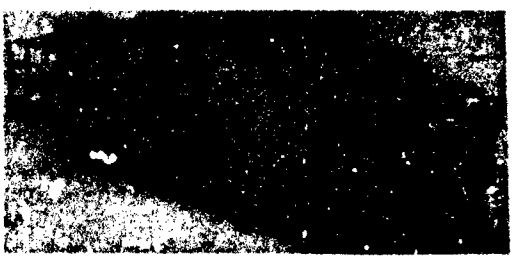
INSTALLATION: Shipboard, CL and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model Mark 8 Mod 2 Radar Equipment. Equipment function - fire control. Maximum range - 30 miles. Minimum range - 450 yards.

MISCELLANEOUS: This antenna is called "The Polyrod Fire Control Antenna" by Bell Laboratories.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number N5985-470-7435.



Antenna 66AHY

REFERENCES:
1) H. T. Friis and W. D. Lewis, Radar Antennas The Bell System Technical Journal, Volume 26, No. 2. New York, N. Y.: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4925. Washington, D.C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

4) Western Electric Drawing EK-20439 issue 5.

ANTENNA 66AHZ

FREQUENCY: Probably SHF band, probably 3000 - 3100 mc.

INSTALLATION: Shipboard, CL and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model Mark 8 Mod 2 Radar Equipment. Equipment function - fire control.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AJA

FREQUENCY: UHF band, 343 - 700 mc; VSWR < 2.4.

TYPE: Sleeve dipole with a small bent reflector.

DESCRIPTION: The antenna consists of a sleeve dipole fed by coaxial cable through a type III balun and mounted in front of a small reflector constructed of sheet metal. The upper and lower thirds of the reflector are bent back about 45° to broaden the pattern in the E-plane while maintaining a good front-to-back ratio. The dipole is about 15 inches long, and the reflector is 18 inches long and about 6 inches high. The antenna is provided with a connector for RG-18/U coaxial cable.

BEAM DATA:
Half-power beamwidth - E-plane - Approximately 50°.
H-plane - Approximately 160°.
Polarization - Vertical or horizontal, depending on antenna orientation.

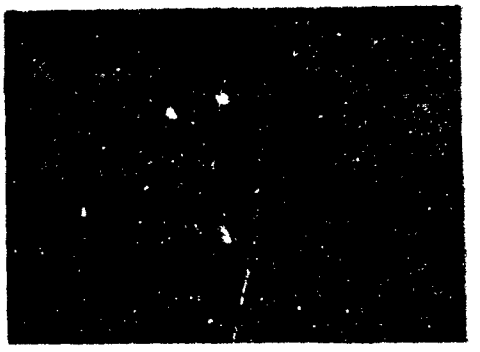
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: Federal Stock Number N5985-369-5392.

REFERENCES:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



Antenna 66AJA

ANTENNA 66AJB

FREQUENCY: UHF band, 645 - 800 mc; VSWR < 2.

TYPE: Sleeve dipole with a small bent reflector.

DESCRIPTION: The antenna consists of a sleeve dipole fed by a coaxial cable through a type III balun and mounted in front of a small reflector constructed of sheet metal. The upper and lower thirds of the reflector are bent back about 45° to broaden the radiation pattern in the E-plane while maintaining a good front-to-back ratio. The dipole and reflector are about 14 inches long. Earlier models were equipped with a 5-foot length of RG-18/U cable, but later models have a connector for RG-18/U cable which is not furnished. The

later models are equipped with a plastic nacelle for weather protection.

BEAM DATA:
Half-power beamwidth - E-plane - approximately 50°.
H-plane - approximately 160°.
Polarization - Vertical or horizontal depending on antenna orientation.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: Federal Stock Number N5985-369-5397.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

Antenna 66AJB

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ANTENNA 66AJC

FREQUENCY: X-band.

TYPE: Probably a cut paraboloidal reflector.

DESCRIPTION: The antenna consists of a radiator and a 38-inch by 86-inch reflector. The overall assembly is 73-1/8 inches high by 86 inches wide by 35-1/4 inches deep. The antenna mounts on three equally spaced mounting pads. It is fed by a waveguide.

ASSOCIATED EQUIPMENT: Navy Model Mark 33 Radar Equipment. Equipment function - fire control.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number N5985-369-5493.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) GE drawing W-8677252 rev. 1.
3) U. S. Navy Specification RE9472.

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ANTENNA 66AJE and 66AJF

FREQUENCY: VHF band, 195 - 205 mc (66AJE, radar section); 215 - 225 mc (66AJF, radar section).

TYPE: Mattress antenna.

DESCRIPTION: The two antennas are identical except for frequency. Each antenna consists of a flat, rectangular reflector with three sets of dipoles mounted in front of it. One set of dipoles consists of 6 horizontal dipoles for the radar, another set consists of 4 vertical dipoles for Navy Model ML IFF equipment, and the third set consists of 12 vertical dipoles for a Navy Model BG identification receiver. This assembly is mounted on a pedestal containing a motor drive unit and three synchro units. The antenna is approximately 15 feet wide by 7-1/2 feet high by 3-2/3 feet deep. It has eight 13/16-inch mounting holes equally spaced on a 16-1/2-inch bolt circle. The antenna is designed for connection to two r-f cables, one RG-18/U and one RG-10/U

BEAM DATA: (Radar section)
Gain - 13.5 db.
Half-power beamwidth - Vertical - 60°.
Horizontal - Approximately 20°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 5 revolutions per minute.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SC-5 Radar Equipment. Equipment function - search, air. Navy Models BG and ML Equipment. Equipment function - IFF.

MISCELLANEOUS: Reference 1) states that the horizontal beamwidth is 17°, while Reference 2) states that it is 22°.

MANUFACTURER: General Electric Company.

STOCK NUMBERS: 66AJE ... Federal Stock Number F5985-349-4906, 66AJF ... Federal Stock Number F5985-510-0003.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) GE drawing P-7765337 rev. 3.

ANTENNA 66AJH

ASSOCIATED EQUIPMENT: Navy Mark 4 IFF Equipment. Equipment function - IFF.

MANUFACTURER: Contract NXsr-60028.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA EQUIPMENT 66AJJ

FREQUENCY: SHF band, X-band.

TYPE: Paraboloidal reflector with a waveguide, double-dipole feed.

DESCRIPTION: The reflector is a smooth paraboloidal dish with a focal length of 10.6 inches. It is 30 inches in diameter and 5.3 inches deep. The feed consists of a section of waveguide with a double dipole mounted at the end to radiate the energy to the reflector.

BEAM DATA:
Half-power beamwidth - Vertical - 2.5°.
Horizontal - 2.5°.
Side-lobe attenuation - 40 db.
Beam type - Pencil.
Polarization - Vertical.

SCAN DATA: The feed is nutated at 30 cycles per second. The peak of the resulting beam is 1-1/4° from and rotates about the axis of the parabolic reflector.

INSTALLATION: Shipboard.

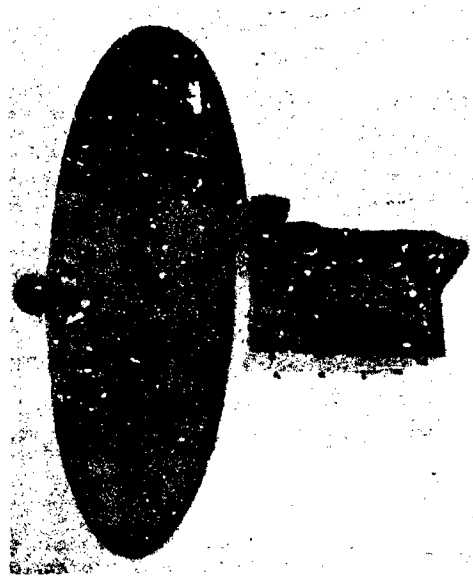
ASSOCIATED EQUIPMENT: Radar Equipment Mark 29 Mod 2. Equipment function - fire control. Range - 15,000 yards for aircraft, 30,000 yards for large surface targets.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Wilmotte Manufacturing Company.

STOCK NUMBER: Federal Stock Numbers - N5985-369-3503 and N5985-503-3085.

REFERENCE:
Bureau of Ordnance, Final Instruction Book for Radar Equipment Mark 29 Model 2, OP 1783, (Dec. 1944). UNCLASSIFIED.



Antenna 66AJJ

ANTENNA 66AJK and 66AJL

FREQUENCY: VHF band, 171 - 182.5 mc, UHF band, 505 - 535 mc.

TYPE: One ground-plane antenna and one folded dipole.

DESCRIPTION: The antenna equipment for Navy Model YJ-2 Equipment consists of a low-frequency antenna made up of a vertical radiator with a "steering-wheel" ground plane, and a high-frequency antenna made up of a horizontal folded dipole. The two antennas are mounted on a Navy Model 10AEU antenna mount.

BEAM DATA:
Polarization - Vertical (low-frequency antenna) and horizontal (high-frequency antenna).

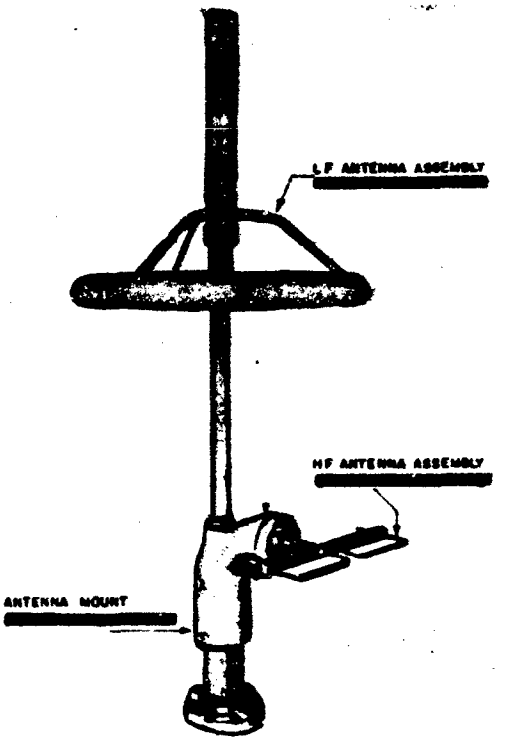
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model YJ-2 Radio Equipment. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Hazeltine Electronics Corp., contract NXsr-42129.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
3) SHIPS 299: Technical Manual for Navy Model YJ-2 Radio Equipment.



Antennas 66AJK and 66AJL

ANTENNA 66AJM

FREQUENCY: VHF and UHF bands, 175 - 350 mc; VSWR<2.

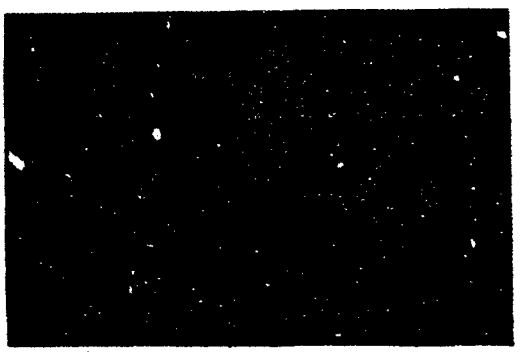
TYPE: Sleeve dipole with a small flat screen reflector.

DESCRIPTION: The antenna is a sleeve dipole, about 29 inches long, fed by RG-18/U coaxial cable through a type III balun and positioned 15 inches in front of a flat reflector 36 inches long and about 6 inches high. The spacing between the reflector and dipole is adjustable to cover the frequency range. The reflector is removable. Later models are provided with a plastic nacelle for weather protection.

BEAM DATA:
Half-power beamwidth - E-plane - Approximately 65°.
H-plane - Approximately 185°.
Polarization - Vertical or horizontal, depending on antenna orientation.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.



Antenna 66AJM

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5985-369-5426.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

ANTENNA 66AJN

FREQUENCY: VHF band, 85 - 175 mc; VSWR < 2.

TYPE: Sleeve dipole with flat-screen reflector.

DESCRIPTION: The antenna consists of a sleeve dipole fed by RG-18/U through a type III balun and positioned in front of a reflector composed of three parallel, metal rods. The reflector is 6 feet long, and the dipole is somewhat shorter. The overall depth of the antenna is 37-1/2 inches. The reflector may be removed from the antenna if desired.

BEAM DATA:
Half-power beamwidth - E-plane - approximately 70°.
H-plane - approximately 180°.
Polarization - Vertical or horizontal, depending on antenna orientation.

INSTALLATION: Shipboard.

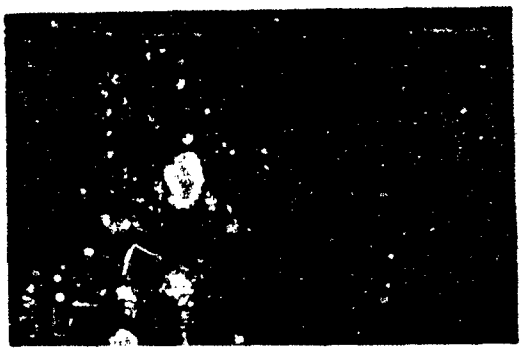
ASSOCIATED EQUIPMENT: TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: General Electric Company and Diamond Instrument Company.

STOCK NUMBER: Federal Stock Number N5985-369-5382.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



Antenna 66AJN

ANTENNA 66AJO

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AJO-1

INSTALLATION: Airborne and shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1 and AN/APR-1.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AJP

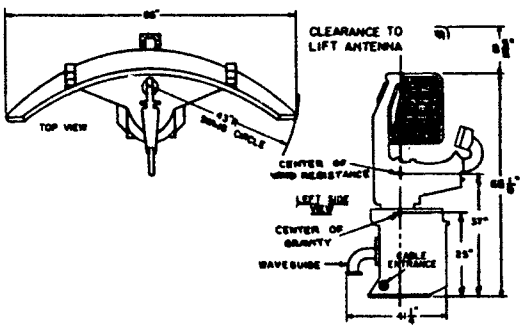
FREQUENCY: SHF band, 3500 mc.

TYPE: Cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of an offset paraboloidal section of slat-type construction with a "nozzle" waveguide feed. The reflector is 1-1/2 feet high and 7 feet wide. It has eight 13/16-inch mounting holes on a 16-1/2-inch bolt circle.

BEAM DATA:
Gain - 30 db.
Half-power beamwidth - Vertical - 13°.
Horizontal - 3°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of either 2-1/2 or 5 revolutions per minute. It is also tiltable through 10° in elevation.



Antenna 66AJP

INSTALLATION: Shipboard, CL and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SG-3 Radar Equipment. Equipment function - search, surface. Maximum range - 20 miles for 2200-ton DD or 20-square-meter aircraft. Minimum range - 200 yards.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-470-7420.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D.C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

4) Raytheon drawing M-38A-W2 sub A.

ANTENNA 66AJQ

FREQUENCY: S-band.

TYPE: Paraboloidal reflector with a dipole feed.

DESCRIPTION: Antenna is a perforated-metal paraboloidal reflector 45 inches in diameter with a rotating dipole feed. The feed is enclosed in a weatherproof plastic cover.

BEAM DATA:
Gain - 26 db.
Half-power beamwidth - Vertical - 6.8°.
Horizontal - 6.8°.
Side-lobe attenuation - 17 db (one way).

SCAN DATA: A conical scan is produced by rotating the dipole feed about the axis of the reflector at a rate of 30 cycles per second. The peak of the beam rotates about and is 2.25° from the axis of the paraboloid. The resulting conical scan makes the half-power points of the moving beam cover an angle of 11.3° in both the azimuth and elevation planes.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 28 Mod 0, Mark 28 Mod 2, Mark 28 Mod 3. Equipment function - fire control. Range - 60,000 yards.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

REFERENCES:
1) Bureau of Ordnance, Radar Equipment for Mark 28 Model 2, OP 1238, (Dec. 1944). UNCLASSIFIED.

2) Bureau of Ordnance, Radar Equipment for Mark 28 Model 0, Model 3, OP 1156, (Oct. 1944). UNCLASSIFIED.

3) H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, 26, No. 2. New York, N. Y.: American Telephone and Telegraph Co. (April 1947). UNCLASSIFIED.

ANTENNA 66AJR

FREQUENCY: UHF band, 850 - 1250 mc.

TYPE: Corner reflector with a sleeve dipole feed.

DESCRIPTION: The antenna consists of a sleeve dipole with a shield and a corner reflector. It has four equally spaced mounting holes in the corners of a square base plate. The dipole is fed by a 50-ohm coaxial cable.

BEAM DATA:
Half-power beamwidth - Vertical - 60°.
Horizontal - 60°.
Polarization - Vertical or horizontal.

SCAN DATA: The antenna can be rotated.

ASSOCIATED EQUIPMENT: Navy Models TDY and TDY-1 Radio Transmitting Equipment. Equipment function - countermeasures, jamming.

MANUFACTURER: Diamond Instrument Co., and General Electric Company.

STOCK NUMBER: Federal Stock Number N5985-249-4315.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA EQUIPMENT 66AJS

FREQUENCY: SHF band, X-band.

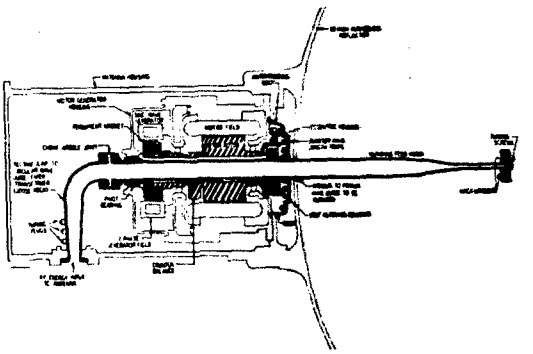
TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a paraboloid 3 feet in diameter with a focal length of 10.6 inches. The antenna has a Cutler type of nutating waveguide feed.

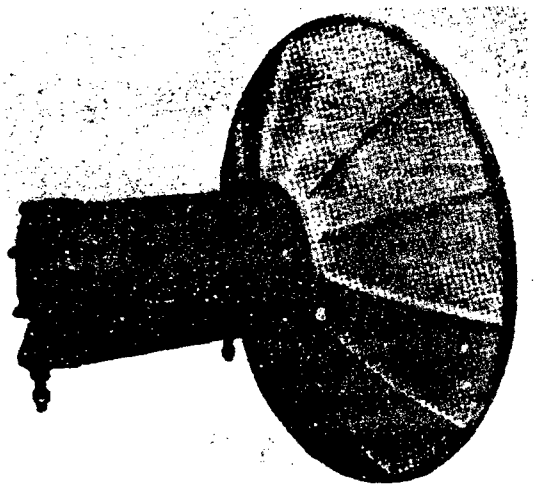
BEAM DATA:
Gain - 33 db.
Half-power beamwidth - Vertical - 3-1/4°.
Horizontal - 3-1/4°.
Side-lobe attenuation - 25 db.
Beam type - Pencil.

SCAN DATA: Conical scan is produced by nutating the feed about the axis of the reflector at 29 cycles per second. The peak of the beam is 3/4° from and rotates about the axis of the paraboloidal reflector. The antenna can be rotated through ±370° in azimuth from the director's zero line; it can be tilted vertically from +90° to -15° from an artificial horizon established by the director's gyroscopic controls.

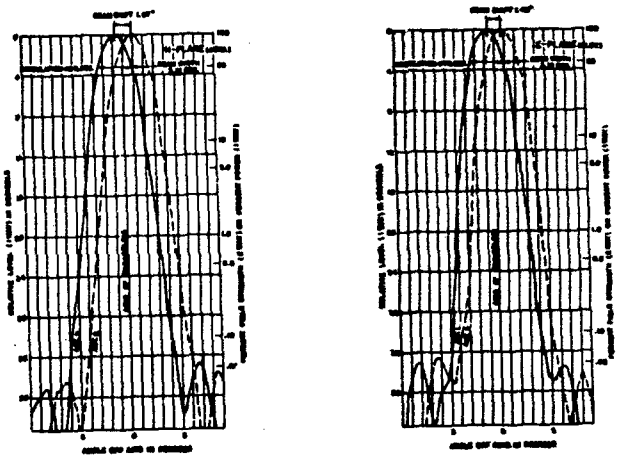
INSTALLATION: Shipboard.



Antenna 66AJS Constructional Diagram



Antenna 66AJS



Antenna 66AJS Azimuth (left) and Elevation (right) Radiation Patterns

ASSOCIATED EQUIPMENT: Radar Equipment Mark 34 Mod 11. Equipment function - fire control. Range - 75,000 yards.

MISCELLANEOUS: Antenna Equipment 66AJS is identical with Antenna Equipment Mark 4 Mod 0.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Western Electric Co., contracts NOrd 6699 and NOrd 6789.

REFERENCES:
1) Bureau of Ordnance, Instruction Book for Radar Equipment Mark 34 Model 11, OP 1787, (Mar. 1946). UNCLASSIFIED.
2) Western Electric drawing EXX-24610.
3) Western Electric Specification D-152465.

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ANTENNA 66AJT

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models TDY and TDY-1 Radio Transmitting Equipment. Equipment function - countermeasures, jamming.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AJU

ASSOCIATED EQUIPMENT: Navy Models Mark 3 and Mark 4 Radar Equipment. Equipment function - fire control.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AJV-(*)

FREQUENCY: SHF band, 3400 - 3700 mc.

TYPE: Modified cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of a slatted, cut paraboloidal reflector, 2 feet high by 4 feet long, with a waveguide horn feed. The reflector is made of aluminum, the feed of cast bronze. The antenna mounts on a retractable torque tube which has two operating positions, 3 feet and 12 feet above the stowed position. The total weight is approximately 400 pounds. The antenna horn is fed by RG-48/U waveguide.

BEAM DATA:
Gain - 30 db.
Half-power beamwidth - Vertical - 60°.
Horizontal - 5.5°.
Beam type - Csc^2 in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate that can be varied between 0 and 6 revolutions per minute.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Models SV, SV-1, and SV-3 Radar Equipment. Equipment function - search, air.
Navy Model SV-4 Radar Equipment. Equipment function - tracking.

MISCELLANEOUS: The nomenclature 66AJV-(*) denotes 66AJV and 66AJV-1. The 66AJV-1 will withstand a static pressure of 500 pounds, and 66AJV will withstand 300 pounds.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co., contract NXsr-66745.

STOCK NUMBERS: Federal Stock Number F5985-369-5490 (66AJV), and Federal Stock Number F5985-470-7419 (66AJV-1).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
3) NAVSHIPS 900548(A): Instruction Book for Radar Equipment Navy Model SV.
4) SHIPS 341: Instruction Book for Radar Equipment Navy Model SV-1.
5) NAVSHIPS 91163.
6) NAVSHIPS 91325(A).

ANTENNA 66AJX

FREQUENCY: VHF and UHF bands, 275 - 500 mc.

TYPE: Corner reflector with a sleeve dipole feed.

DESCRIPTION: The antenna consists of a copper dipole with a shield and a corner reflector. The overall assembly is 33 inches by 18 inches by 18 inches. The dipole is fed by a 50-ohm cable.

BEAM DATA:
Half-power beamwidth - Vertical - 60°.
Horizontal - 60°.
Polarization - Vertical or horizontal.

SCAN DATA: The antenna rotates in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 Radio Transmitting Equipment. Equipment function - countermeasures, jamming.

MANUFACTURER: Diamond Instrument Co., and General Electric Company.

STOCK NUMBER: Federal Stock Number N5985-254-7155.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66AJY

FREQUENCY: UHF band, 500 - 650 mc.

TYPE: Corner reflector with a sleeve dipole.

DESCRIPTION: The antenna consists of a copper dipole with a shield and a corner reflector. The overall dimensions are 28 inches by 24 inches by 18-1/8 inches, and the total weight is 25 pounds. The dipole is fed by a 50-ohm coaxial cable. The antenna mounts on Navy Type 10AFJ antenna pedestal.

BEAM DATA:
Half-power beamwidth - Vertical - 60°.
Horizontal - 60°.
Polarization - Vertical or horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of 4 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 Radio Transmitting Equipment. Equipment function - countermeasures, jamming.

MISCELLANEOUS: The 66AJY is mechanically interchangeable with 66AKJ, 66AKL, and 66AKM. Each of these antennas covers a different part of the frequency band covered by Navy Model TDY-1 equipment.

MANUFACTURER: Diamond Instrument Company.

STOCK NUMBERS: Federal Stock Number N5985-369-5395. Navy 16-A-48599-4201.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
3) NAVSHIPS 900342(A).
4) BuShips drawing RE100F167.
5) Diamond Instrument drawing T-7663534.

ANTENNA 66AJZ

FREQUENCY: VHF band, 205 - 215 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical radiator with a "steering-wheel" or "doughnut" ground plane. The overall assembly is 15-5/16 inches high by 16-5/8 inches in diameter. The antenna is fed by either RG-9/U or RG-10/U cable.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models YQ and PO Equipment. Equipment function - search, air.

MISCELLANEOUS: The 66AJZ is the same as the 66AFJ except for the frequency band.

MANUFACTURER: Radar Beacon Equipments, Inc.

STOCK NUMBER: Federal Stock Number F5985-246-4496.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66AKB

FREQUENCY: UHF band, 550 - 660 mc.

TYPE: Cut paraboloidal reflector with a dipole feed.

DESCRIPTION: The antenna is a cut paraboloidal reflector, 6 feet high by 15 feet wide, fed by a dipole. The antenna includes provision for Mark 3 and Mark 4 IFF antennas. The overall assembly is approximately 7-1/2 feet high by 16 feet wide by 7 feet deep, and the total weight is 825 pounds.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 22°.
Horizontal - 7.5°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of either 1-1/4 or 5 revolutions per minute.

INSTALLATION: Shipboard, CL and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SR-2 Radar Equipment. Equipment function - search, air. Maximum range - 8 miles for 2200-ton DD and 50 miles for 20-square-meter aircraft. Minimum range - 600 yards.

MANUFACTURER: Radio Corporation of America.

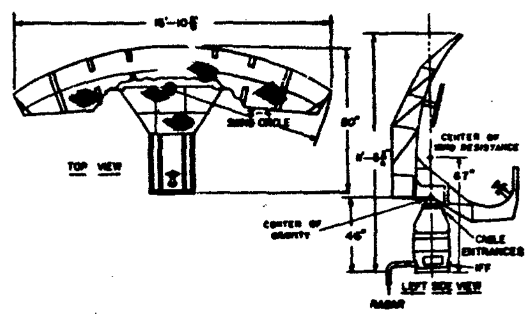
STOCK NUMBER: Federal Stock Number F5985-470-7457.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 900,577.

4) BuShips drawing RE43F545.



Antenna 66AKB

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ANTENNA 66AKC

INSTALLATION: Shipboard, CL and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SR-2 Radar Equipment. Equipment function - search, air.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AKD

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Corner reflector with a dipole feed.

DESCRIPTION: The antenna consists of a dipole assembly, a corner reflector, and a pedestal. The overall antenna is 64 inches high by 89 inches wide by 44 inches deep.

SCAN DATA: The antenna rotates in azimuth by a motor drive. It turns at rates up to 3-1/2 revolutions per minute.

ASSOCIATED EQUIPMENT: Navy Model SP-1M Radar Equipment. Equipment function - search.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5985-470-7377.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) General Electric Drawing T-8673975 rev.0.

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ANTENNA 66AKE

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Corner reflector with a dipole feed.

DESCRIPTION: The antenna consists of a dipole assembly and a corner reflector mounted on a turntable. The overall antenna is 50-5/8 inches high by 88-3/16 inches wide by 44 inches deep. The antenna includes provision for Mark 3 and Mark 4 IFF antennas.

SCAN DATA: The antenna rotates in azimuth by means of a manual drive.

ASSOCIATED EQUIPMENT: Navy Model Mark 33 Radar Equipment. Equipment function - fire control.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5985-470-7375.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66AKG

FREQUENCY: UHF and SHF bands, 2700 - 3300 mc.

TYPE: Reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of a reflector and a waveguide horn enclosed in a fiberglass radome and mounted on a pedestal. The overall assembly is 69 inches high by 33-3/8 inches in diameter, and the total weight is 290 pounds. It has eight 13/16-inch mounting holes equally spaced on a 16-1/2-inch bolt circle. The horn is fed by rectangular waveguide.

BEAM DATA:
Half-power beamwidth - Vertical - 33°.
Horizontal - 25°.
Polarization - Circular.

SCAN DATA: The reflector rotates.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model TDY-a and TDY-1a Radio Transmitting Equipment. Equipment function - countermeasures, jamming.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number N5985-470-7396.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) Raytheon drawing M-79A-7 sub. 0.

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ANTENNA 66AKH

FREQUENCY: UHF band, 2860 mc.

TYPE: Stacked array of tri-dipoles.

DESCRIPTION: The antenna is an array of three tridipoles mounted one above the other on a section of 7/8-inch coaxial line. This coaxial section is coupled to a waveguide by a doorknob transition. The array is enclosed in a fiberglass radome. The overall assembly is 12-1/2 inches high by 5-3/4 inches wide by 6-3/8 inches long. The antenna has four mounting slots, 9/16 inches by 7/16 inches, on 4-5/8- by 1-9/16-inch mounting centers.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

ASSOCIATED EQUIPMENT: Navy Model YQ Radar Beacon Equipment. Equipment function - navigation, surface reference.

MANUFACTURER: Warren F. Collins.

STOCK NUMBER: Federal Stock Number N5985-408-8614.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Collins drawing A12005.

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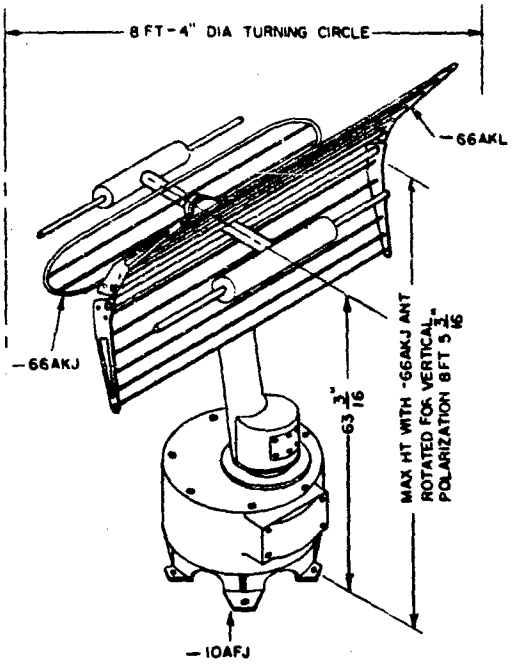
ANTENNA 66AKJ

FREQUENCY: VHF band, 90 - 175 mc.

TYPE: Flat-screen reflector fed by dipole.

DESCRIPTION: The antenna consists of a flat reflector with a dipole feed. The dipole is fed through a type III balun by RG-18/U coaxial cable. The overall antenna is 12 inches high, 72 inches wide and 36-1/2 inches deep.



Antenna 66AKJ

BEAM DATA:
Half-power beamwidth - E-plane - 55°.
H-plane - 180°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 4 revolutions per minute.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency range and dimensions and are all used with TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back.

COGNIZANT AGENCY: U. S. Navy

STOCK NUMBER: U. S. Navy 16-A-48584-9201.

REFERENCE:
U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AKK

ASSOCIATED EQUIPMENT: Navy Model Mark 32 Mod 1 Radar Equipment. Equipment function - fire control.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AKL

FREQUENCY: VHF band, 146 - 275 mc; VSWR < 2.2.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a corner reflector with a dipole feed. The dipole is fed by RG-18/U coaxial cable through a type III balun. The reflector is constructed in two sections, with seven metal rods per section forming the reflecting surface. The two sections of the reflector form an angle of 135°. Each reflector section is 59 inches high and 25 inches wide, and the dipole is 34 inches long. Overall dimensions are 56 inches high, 58-1/2 inches wide, and 28-1/4 inches deep.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 70° to 90°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 4 revolutions per minute.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency range and dimensions and are all used with TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back. The 66AKL is the same as Harvard RRL antenna number M2906.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: U. S. Navy 16-A-48587-5621.

REFERENCE:

Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory. Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66AKM

FREQUENCY: VHF and UHF bands, 265 - 530 mc; VSWR < 2.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a corner reflector and a dipole feed. The dipole is fed by an air-dielectric coaxial line through a type III balun. The reflector is constructed in two sections, with seven metal rods per section forming the reflecting surface. The two sections of the reflector form an angle of 135°. Each reflector section is 40 inches high and 33 inches wide, and the dipole is 18-1/2 inches long. Overall dimensions are 35 inches high, 33 inches wide, and 17-3/4 inches deep.

BEAM DATA:
Gain - 9db
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 60° to 80°.

Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency range and dimensions and are all used with TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back. The 66AKM is the same as Harvard RRL number M2907, type I.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: U. S. Navy 16-A-48591-8?71.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66AKN

ASSOCIATED EQUIPMENT: Navy Model BT Equipment. Equipment function - IFF.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AKO

FREQUENCY: UHF band, 680 - 720 mc.

TYPE: Array of dipoles.

DESCRIPTION: The antenna is an array of three dipoles enclosed in a fiberglass radome. The overall antenna is 34-5/16 inches high by 5-5/64 inches in diameter. It mounts by a single pipe stud and is fed by a 50-ohm transmission line.

ASSOCIATED EQUIPMENT: Navy Model BT Transponder Equipment. Equipment function - IFF.

MANUFACTURER: Harvey Radio Laboratories, Inc.

STOCK NUMBER: Federal Stock Number N5840-296-1296.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Harvey drawing 1256.

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ANTENNA 66AKP

FREQUENCY: SHF band, 3400 - 3700 mc.

TYPE: Parabolic-type reflector.

DESCRIPTION: The antenna is a parabolic-type reflector with a feed assembly which connects to a waveguide. The reflector is 36 inches

by 84 inches. The antenna has eight 3/4-inch mounting holes on a 16-1/2-inch bolt circle.

SCAN DATA: The antenna rotates in azimuth at a normal rate of 5 revolutions per minute, but it is capable of speeds up to 9 revolutions per minute.

ASSOCIATED EQUIPMENT: Navy Model SG-4 Radar Equipment. Equipment function - search.

MANUFACTURER: Raytheon Manufacturing Company.

STOCK NUMBER: Federal Stock Number F5985-369-5405.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Raytheon drawing A9994 sub. 1.

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ANTENNA 66AKQ

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a quarter-wavelength rod with a small ground plane housed in a polystyrene radome. The assembly is approximately 5-1/2 inches wide by 6 inches long by 4 inches deep.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model REF Radio Equipment.

MISCELLANEOUS: The 66AJQ is the same as the 66AMA except for frequency range and cable adapter.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AKT

ASSOCIATED EQUIPMENT: Navy Model SO-11 Radar Equipment. Equipment function - search.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA EQUIPMENT 66AKU

FREQUENCY: SHF band, 8500 - 9000 mc.

TYPE: Paraboloidal reflector with waveguide feed.

DESCRIPTION: The antenna consists of a 2-1/2-foot paraboloidal dish with a nutating waveguide feed. Total weight is 115 pounds.

BEAM DATA:
Gain - 32 db.
Half-power beamwidth - Vertical - 3°.
Horizontal - 3°.
Beam type - Pencil.
Polarization - Either vertical (with MK19 mount) or horizontal (with MK2[illegible] mount).

SCAN DATA: The antenna uses a nutating feed which produces a conical scan. The peak of the beam is 1/2° from and rotates about the axis of the paraboloidal reflector. In the search position, the antenna tilts from +15° to -15° or from +5° to -5° depending on the switch position. In the search position, the antenna is also rotated and tilted manually. In the tracking position, the antenna continues its conical scanning and is automatically held on target in azimuth and elevation.

INSTALLATION: Shipboard.

Antenna 66AKU

ASSOCIATED EQUIPMENT: Radar Equipment Mark 34, Mod 2; Mark 34, Mod 6; Mark 34, Mod 16. Equipment function - fire control. Range - 60,000 yards.

MISCELLANEOUS: Radar Equipment Mark 34 is no longer manufactured for U. S. Navy use. Antenna Equipment 66AKU is identical with Antenna Equipment Mark 4 Mod 1.

COGNIZANT AGENCY: Navy, BuOrd.

MANUFACTURER: Western Electric Company.

REFERENCES:

1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

2) U. S. Navy Bureau of Ordnance, Radar Equipment Mark 34, Models 2, 6, and 16, Maintenance Manual, OD 7686, (Apr. 1953). UNCLASSIFIED.

3) U. S. Navy Bureau of Ordnance, Radar Equipment Mark 34, Models 2, 6, and 16. Description, Operation, and Maintenance, OP 1513, (July 1954). UNCLASSIFIED.

ANTENNA 66AKW

See 66AKX-(*)

ANTENNA 66AKX-(*)

MAJOR COMPONENTS: 1 Navy Model 66AKW, 1 set of waveguide parts, 1 torque-tube drive assembly, 1 motor-driven gear unit, and 1 synchro unit.

FREQUENCY: SHF band, 8740 - 8890 mc.

TYPE: Cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: Navy Model 66AKW antenna is a cut paraboloidal reflector, 8 inches high by 30 inches wide, with a waveguide horn feed.

BEAM DATA:
Gain - 26 db.
Half-power beamwidth - Vertical - 16°.
Horizontal - 2.6°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates in azimuth through 360° at rates up to 8 revolutions per minute.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Models SS, SS-1, and SS-2 Radar Equipment. Equipment function - search, surface; fire control; search, air; and communications. Maximum range - 12 miles for 2200-ton DD. Minimum range - 300 yards.

MISCELLANEOUS: The nomenclature 66AKX-(*) denotes 66AKX-1, and 66AKX-2. All models use 66AKW antennas. The 66AKX and 66AKX-1 are made by different manufacturers; 66AKX-2 uses an improved synchro unit with antibacklash gears.

MANUFACTURERS:

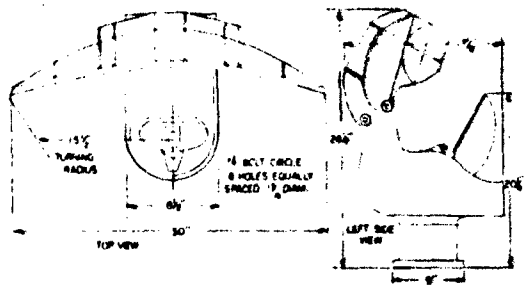
66AKX and 66AKX-2	... Western Electric Co.
66AKX-1	... Westinghouse Electric Co.
66AKW	... Westinghouse Electric Co.

STOCK NUMBER: 66AKW ... Federal Stock Number F5985-038-2457, 66AKX ... Federal Stock Number F5985-470-7423, 66AKX-1 ... Federal Stock Number F5985-470-7424, 66AKX-2 ... Federal Stock Number F5985-369-5496.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 2, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna Projector 66AKW

ANTENNA 66AKY

FREQUENCY: X-band.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector and a feed assembly consisting of a dipole fed by rectangular, X-band waveguide. The antenna is 28-3/4 inches deep by 30 inches in diameter. It mounts on Navy Model Mark 57 stand.

BEAM DATA:
Polarization - Linear, fixed.

SCAN DATA: The feed nutates at a rate of 30 cycles per second and produces a conical scan with the axis of the radiated beam 1-1/4 degrees from the axis of the reflector.

ASSOCIATED EQUIPMENT: Navy Models Mark 39 Mod 0 and Mark 39 Mod 1 Radar Equipment. Equipment function - fire control.

MISCELLANEOUS: The 66AKY is the same as Radar Antenna Mark 6 Mod 0.

MANUFACTURER: Submarine Signal Co.

STOCK NUMBER: Federal Stock Number N5985-369-5494.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66AKZ

FREQUENCY: SHF band, 3000 - 3100 mc.

TYPE: Cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of a cut paraboloidal reflector with a waveguide nozzle-type feed. The overall antenna is 49-1/2 inches long by 34 inches wide by 44 inches high. The baseplate of the assembly has eight holes equally spaced on a 16-1/2 inch bolt circle.

BEAM DATA:
Half-power beamwidth - Horizontal - 5.5°.

SCAN DATA: The antenna rotates in azimuth through 360° at any rate between 8 and 16 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models SG-c, SG-d, SG-1c, and SG-1d Radar Equipment. Equipment function - search, air.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-408-8666.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66ALA and 66ALB

FREQUENCY: VHF band, 66ALA ... 215 - 225 mc, 66ALB ... 195 - 205 mc.

TYPE: Cut paraboloidal reflector with a Yagi-type feed.

DESCRIPTION: Antennas 66ALA and 66ALB are the same except for slight differences in the dimensions of the feed assemblies. Each antenna consists of a cut paraboloidal reflector with two feed assemblies. Each feed assembly consists of a coaxial-cable-fed dipole with a rod reflector. One of the feed assemblies connects to the radar; the other, to the Mark 3 IFF. The overall assembly is approximately 12 feet high by 17-1/2 feet wide by 8 feet deep, and the total weight is 735 pounds. The antenna has eight 13/16-inch holes equally spaced on a 16-1/2-inch bolt circle.

BEAM DATA:
Half-power beamwidth - Vertical - 40°.
Horizontal - 22°.
Polarization - Horizontal (radar).

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of 5 revolutions per minute.

INSTALLATION: Shipboard.

Antennas 66ALA and 66ALB

ASSOCIATED EQUIPMENT: Navy Models SC and SK Radar Equipment. Equipment function - search, air.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Manufacturing Co., contracts NObsr 39138 and NXsr 87763.

STOCK NUMBER: Federal Stock Number F5985-644-3306 (66ALA), Federal Stock Number F5985-369-5581 (66ALB).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) NAVSHIPS 900731: Technical Manual for Antenna Assembly Navy Types CRP-66ALA and CRP-66ALB.

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ANTENNA 66ALC

FREQUENCY: VHF band, 158 - 175 mc.

SCAN DATA: The antenna can be rotated and tilted.

ASSOCIATED EQUIPMENT: Navy Models Mark 11 and Mark 12 Radar Equipment. Equipment function - fire control.

MANUFACTURER: Contract NOrd-6137.

STOCK NUMBER: Federal Stock Number F5985-369-5423 (66ALC without spares), Federal Stock Number F5985-347-9039 (66ALC with spares).

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66ALD

ASSOCIATED EQUIPMENT: Navy Model Mark 32 Mod 1 Radar Equipment. Equipment function - fire control.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66ALE

FREQUENCY: UHF and SHF bands, 2500 - 3500 mc.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model MBE Radio Equipment. Equipment function - countermeasures, jamming; countermeasures, deception; and countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Hewlett-Packard Co., contract NXsr 79933.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) SHIPS 389: Technical Manual for Radio Transmitting and Receiving Equipment Navy Model MBE.

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ANTENNA 66ALF and 66ALG

ASSOCIATED EQUIPMENT: Navy Model SK Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA ASSEMBLY 66ALH

MAJOR COMPONENTS: 1 early-warning antenna, 1 height-finding antenna, and 1 antenna pedestal.

FREQUENCY: UHF band, 2700 - 2900 mc (early-warning antenna), SHF band, 3400 - 3700 mc (height-finding antenna).

TYPE: Two cut paraboloidal reflectors, each fed by a waveguide horn assembly.

DESCRIPTION: The antenna assembly consists of two antennas mounted on a single pedestal. One antenna is used for early-warning search; and the other, for height finding. The early-warning antenna consists of a cut paraboloidal reflector, 4 feet high by 14 feet wide, with a focal length of 5 feet fed by a waveguide horn assembly. The waveguide horn assembly is made up of three horns fed by a single S-band rectangular waveguide. The height-finding antenna consists of a bifocal, cut paraboloidal reflector, 15 feet high by 5 feet wide with focal lengths of 9 feet and 5 feet, fed by a Robinson scanner. A Robinson scanner is a parallel-plate device rolled in such a way that it can be fed by a rotating horn.

BEAM DATA:

Early-Warning Search Antenna:

Gain - 34 db.

Half-power beamwidth - Horizontal - 1.6°.

Beam type - $\csc^2$ up to 18° in elevation.

Polarization - Vertical.

Height-Finding Antenna:

Gain - 37 db.

Half-power beamwidth - Horizontal - 3.5°. Vertical - 1.2°.

Polarization - Horizontal.

SCAN DATA: Both antennas rotate together through 360° in azimuth at a rate of 4 revolutions per minute. In addition, the height-finding antenna scans by electromechanical means through 11° in elevation at a rate of 10 scans per second.

INSTALLATION: Shipboard, aircraft carrier.

ASSOCIATED EQUIPMENT: Navy Model SX and SCI Radar Equipment. Equipment function - search and height finding.

MISCELLANEOUS: The information given under Beam Data and Scan Data was compiled by combining information from references 1), 2), 3), and 4). There is some discrepancy in the information from the different sources. Reference 7) states that Navy Model SX is out of the fleet and scrapped.

MANUFACTURER: American Machine and Foundry Co. and General Electric Company.

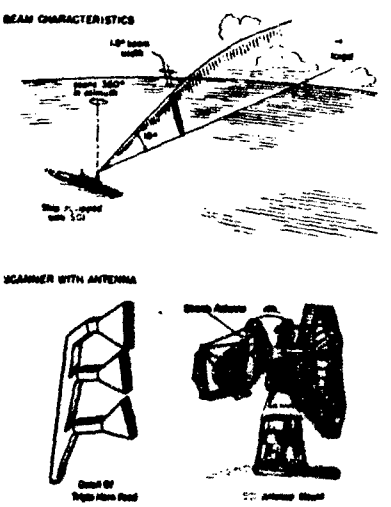
STOCK NUMBER: Federal Stock Number F5985-408-8735.

REFERENCES:

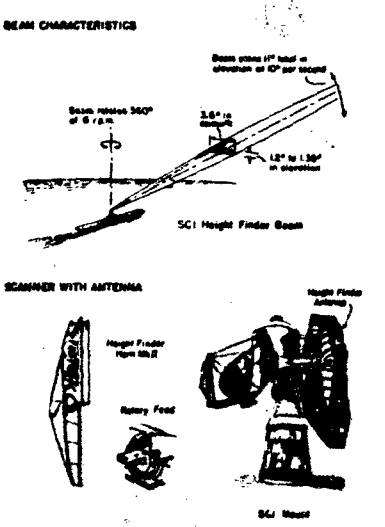
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.



66ALH Search Antenna Feed and Beam Pattern



66ALH Height Finder Feed and Beam Pattern

4) Louis N. Ridenour, Radar System Engineering. Cambridge, Mass.: Massachusetts Institute of Technology Radiation Laboratory. (1947). UNCLASSIFIED.

5) NAVSHIPS 91375.

6) BuShips drawings RE10J2070, RE65H2080, and RE13A1085A.

7) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

ANTENNA 66ALK

REQUENCY: UHF and SHF band, 2700 - 3300 mc.

YPE: Horn radiator with a reflector.

ESCRIPTION: The antenna consists of a horn and a reflector enclosed in a dome-shaped radome. The overall antenna is 55 inches high and 24 inches in diameter. It has eight mounting holes located on a 16-1/2-inch bolt circle. The antenna is connected to the receiver by a length of RG-18/U cable.

EAM DATA:
Polarization - Probably 45°.

CAN DATA: The antenna can be rotated in azimuth.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models TDY-a and TDY-1a Radio Transmitting Equipment. Equipment function - countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number N5985-470-7328.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66ALM

REQUENCY: VHF and UHF bands, 264 - 372 mc.

YPE: Double-dipole with a reflector.

ESCRIPTION: The overall antenna is 47-3/16 inches high by 12-1/2 inches wide by 4 inches deep. The total weight is 44 pounds.

EAM DATA:
Half-power beamwidth - Horizontal - 180°.
Polarization - Vertical.

NSTALLATION: Shipboard.

SSOCIATED EQUIPMENT: Navy Model PO Radar Relay Equipment.

MISCELLANEOUS: Navy Model PO Radar Relay Equipment is used to receive signals from Radio Set AN/ART-22. It is part of an aircraft early-warning system.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) NAVSHIPS 900,602: Instruction Book for Shipboard Components of Airborne Early Warning Sytem, Comprising Navy Models PO and YQ.

ANTENNA 66ALN

REQUENCY: UHF band, 1244 - 1350 mc.

YPE: Collinear array of dipoles with a corner reflector.

66ALN and 66AMD

DESCRIPTION: The antenna consists of a collinear array of dipoles, mounted on and probe-fed from a 17-1/2-foot section of rectangular waveguide. A V-shaped section of perforated, stainless steel is mounted on the waveguide section to form a corner reflector behind the dipole array. Each dipole is enclosed in a protective cover.

BEAM DATA:
Gain - 24 db.
Half-power beamwidth - Vertical - 30°.
Horizontal - 4°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of either 2.5 or 5 revolutions per minute. The antenna may also be rotated manually.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SR-3 Radar Equipment. Equipment function - search, air; and search, surface.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Industrial Electronics Division of Westinghouse Electric Corporation, contract NXsr-86343.

STOCK NUMBER: Navy F16-A-52016-1991.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5. NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) NAVSHIPS 900539: Instruction Book for Shipboard Search Radar Navy Model SR-3.

ANTENNA 66ALQ

FREQUENCY: UHF band, 1220 - 1380 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a test dipole 4-13/16 inches long. It is connected to an echo box by a length of 52-ohm cable, RG-8/U.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SR-3 Radar Equipment. Equipment function - test.

MANUFACTURER: Westinghouse Electric Corporation.

STOCK NUMBER: Federal Stock Number F5985-257-3207.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Radar Equipments Navy Models SR-6a and SR-6b, Instruction Book, NAVSHIPS 900,989(A), (Sept. 10, 1951). UNCLASSIFIED.

3) Westinghouse drawing P-7716218 sub. 0.

Antenna 66ALQ

ANTENNA 66ALQ

FREQUENCY: VHF band, 75 - 195 mc; VSWR < 2.

TYPE: Sleeve dipole with small, flat-screen reflector.

DESCRIPTION: The antenna consists of a sleeve dipole, 37-1/2 inches long, having a T-section on each end for capacitive loading. It is fed by coaxial cable through a type III balun and is positioned in front of a small, flat-screen reflector. The reflector is made of four parallel metal rods and is 6 feet long and 13 inches high.

BEAM DATA:

Gain - 5 db
Half-power beamwidth - E-plane - 70° to 80°.
H-plane - 140° to 200°.
Polarization - Vertical or horizontal, depending on antenna orientation.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: The 66ALQ antenna is the same as the Harvard M2924 antenna.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A.
Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66ALR

FREQUENCY: VHF and UHF bands, 145 - 310 mc; VSWR < 2.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna is a corner reflector fed by a dipole. The reflector is constructed of two planar sections joined at an angle of 135°. Each section is semicircular in shape with a radius of 29-1/2 inches and is made of parallel metal rods. The dipole is fed by a coaxial cable through a type III balun. Overall length of the dipole is 34 inches.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 55° to 70°, depending on frequency.
H-plane - 70° to 95°.

Polarization - Horizontal, vertical, or 45° depending on antenna orientation.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: The 66ALR antenna is the same as the Harvard M2926 antenna.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory. Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66ALS

FREQUENCY: VHF and UHF bands, 265 - 530 mc.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a corner reflector and a dipole feed. The dipole is fed by RG-18/U coaxial cable through probably a type II balun. The reflector is constructed in two sections, with about seven metal rods per section forming the reflecting surface. The two sections of the reflector form an angle of 135°. Each reflector section is 40 inches high and 33 inches wide, and the dipole is 18-1/2 inches long.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 60° to 80°.
Beam type - unidirectional.
Polarization - Vertical, horizontal, or 45°, depending on antenna orientation.

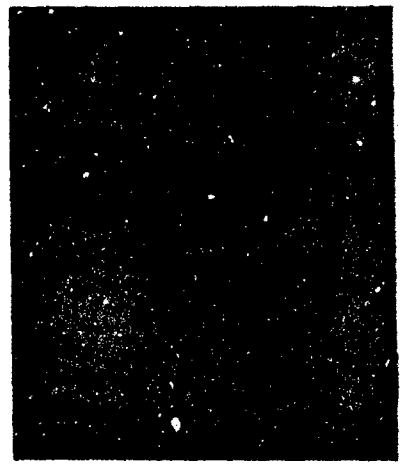
INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: The 66ALS is similar to 66AKM antenna, and is identical to the Harvard M2907 antenna.

COGNIZANT AGENCY: U. S. Navy

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



66ALS

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ANTENNA 66ALT

FREQUENCY: UHF Band, 445 - 820 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna is a corner reflector with a dipole feed. The dipole is fed by RG-18/U coaxial cable through what is probably a type II balun. The reflector is constructed in two sections with about nine rods per section forming the reflecting surfaces. The two sections of the reflector form an angle of 135°. Each reflector section is 20 inches by 24 inches, and the dipole is 11 inches long.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 65° to 80°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-2 Radio Transmitting Equipment. Equipment function-countermeasures, jamming.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66ALU

FREQUENCY: UHF band, 810 - 1385 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna consists of a corner reflector fed by a dipole. The reflector is constructed of sheet metal, and each side is 6 inches wide and 11 inches high. The two sections form an angle of 135°. The dipole is fed by RG-18/U coaxial cable through a type II balun and is 6-11/16 inches long.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E plane - 60° to 70°, depending on frequency.
H-plane - 65° to 80°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna is identical to Harvard RRL type M2910 antenna except for mounting provisions.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66ALV

FREQUENCY: VHF and UHF bands, 100 - 1200 mc.

TYPE: Dipole.

DESCRIPTION: The antenna assembly consists of a set of dipoles and a rectifier unit enclosed in a weatherproof box. The assembly is 6-3/8 inches high by 16-7/8 inches wide by 2-9/16 inches deep. The base has four 9/32-inch holes on 2-inch by 4-3/8 inch mounting centers.

INSTALLATION: Normally shipboard.

ASSOCIATED EQUIPMENT: Navy Model TDY-2 Radio Transmitting Equipment. Equipment function - test.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number N5985-470-7317.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric drawing M-7476633 rev 0.

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ANTENNA 66ALX and 66ALY

ASSOCIATED EQUIPMENT: Navy Model DXB Equipment. Equipment function - direction finding.

REFERENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ALZ

FREQUENCY: SHF band, 6275 - 6575 mc.

TYPE: Modified cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna consists of a reflector with a horn feed. The reflector is a slatted, cut paraboloid, 13 inches high by 48 inches wide, modified to give 12° of csc^2 coverage. The antenna has a total weight of 160 pounds.

BEAM DATA:
Gain - 26 db.
Half-power beamwidth - Vertical - 17° with an additional 12° csc^2 coverage; Horizontal - 2.7°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 15 revolutions per minute.

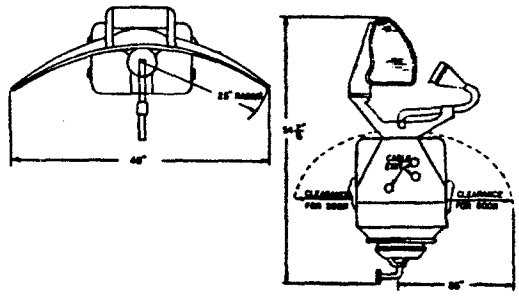
INSTALLATION: Shipboard, PT and other light craft.

ASSOCIATED EQUIPMENT: Navy Model SO-5 Radar Equipment. Equipment function - search, surface.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-470-7421.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66ALZ

ANTENNA 66AMA

FREQUENCY: UHF band, 1000 - 3000 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a quarter-wavelength rod with a small ground plane housed in a polystyrene radome. The assembly is 5-5/8 inches wide by 5-3/4 inches long by 4-1/4 inches deep. It has two 5/16-inch mounting holes spaced 5 inches center to center. It has an adaptor for a 52-ohm cable.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-2.

MANUFACTURER: Galvin Manufacturing Co. and Air-Track.

STOCK NUMBER: Federal Stock Number N5985-408-8612.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Air-Track drawing C1843 rev. 0.

ANTENNA 66AMB

FREQUENCY: UHF and SHF bands, 800 - 3800 mc.

TYPE: Conical antenna.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-2.

STOCK NUMBER: Federal Stock Number N5985-257-3204.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66AMC

FREQUENCY: L-band.

ASSOCIATED EQUIPMENT: Navy Model Mark 20 Mod 2 Radar Equipment. Equipment function - fire control (searchlight control).

MISCELLANEOUS: Reference 1) lists Mark 20 Mod 2 Radar Equipment as obsolete.

COGNIZANT AGENCY: U. S. Navy, BuShips, Code 825.

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMD

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat screen reflector with a horizontal row of four dipoles mounted in front of it. The overall antenna is 120-1/4 inches wide by 36 inches high by 16-3/4 inches deep. The total weight is 193 pounds.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 3 IFF Equipment. Equipment function - IFF.

MISCELLANEOUS: The 66AMD is the Mark 3 IFF antenna normally used with Navy Model SR-3 Radar Equipment.

REFERENCES:
1) U. S. Navy,,Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AME

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat screen reflector with a horizontal row of eight dipoles mounted in front of it. The overall antenna is 21-3/4 inches high by 66 inches wide by 9-3/8 inches deep. The total weight is 43 pounds.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 4 IFF Equipment. Equipment function - IFF.

MISCELLANEOUS: The 66AME is the Mark 4 IFF antenna normally used with Navy Models SR-3 and SR-6 Radar Equipment.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMF

ASSOCIATED EQUIPMENT: Navy Model Mark 13 Mod 2 Radar Equipment. Equipment function - fire control.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AMH

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models DBM and DBM-1 Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: Navy Model DBM-1 Equipment covers a frequency band from 90 to 5000 mc.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA EQUIPMENT 66AMK

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Paraboloidal reflector with a waveguide feed.

DESCRIPTION: The antenna consists of a perforated metal reflector, 2-1/2 feet in diameter with nutating waveguide feed. Focal length of the reflector is 10.6 inches.

BEAM DATA:
Half-power beamwidth - Vertical - 3°.
Horizontal - 3°.
Beam type - Pencil.
Polarization - Vertical.

SCAN DATA: The antenna can be tilted from -15° to +85°. In the search mode of operation, the peak of the beam nutates about the axis of the paraboloidal reflector so that the half-power points of the moving beam cover a 5° angle in the azimuth plane and a 19° angle in the elevation plane. In the tracking mode of operation, the peak of the beam nutates about and is 1/2° degree from the axis of the reflector. The resulting conical scan makes the half-power points of the moving beam cover an angle of 5° in both planes. The nutation rate is 30 cycles per second.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 39 Mod 3. Equipment function - fire control. Range - 300 to 30,000 yards.

MISCELLANEOUS: Antenna Equipment 66AMK is identical with Antenna Equipment Mark 5 Mod 0.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

MANUFACTURER: Palmer-Bee Co., type number 1126.

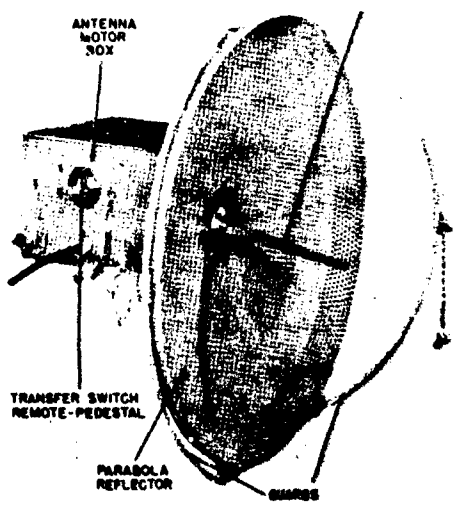
STOCK NUMBER: Federal Stock Number F5985-369-5501.

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

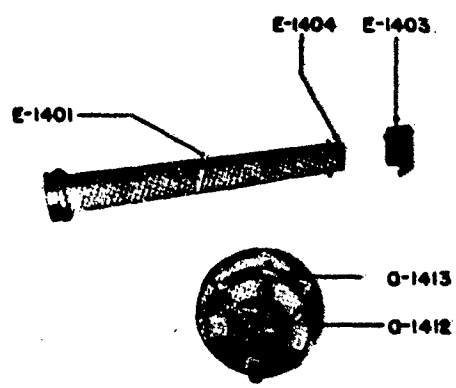
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Navy Bureau of Ordnance, Radar Equipment Mark 39 Model 3, Instruction Book, OP 1748, (July, 1948). UNCLASSIFIED.

4) Palmer-Bee drawing 607044 Rev. B.



Antenna 66AMK



Antenna 66AMK Feed Components

ANTENNA 66AML

ASSOCIATED EQUIPMENT: Navy Model SG-4 Radar Equipment. Equipment function - search.

MANUFACTURER: Procurement contract NXsr-44598.

REFERENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMN and 66AMO

ASSOCIATED EQUIPMENT: Navy Model X-MBT Radio Transmitting and Receiving Equipment.

REFERENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMP

FREQUENCY: SHF band, 6275 - 6575 mc.

TYPE: Modified cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna consists of a slatted, cut paraboloidal reflector, 13-1/2 inches high by 48 inches wide, fed by a pyramidal waveguide horn. The horn is fed by RG-50/U waveguide. The assembly has eight 13/16-inch mounting holes on a 16-1/2-inch bolt circle.

BEAM DATA:
Gain - 28 db.
Half-power beamwidth - Vertical - 17° (plus 12° csc^2).
Horizontal - 2.7°
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 15 revolutions per minute.

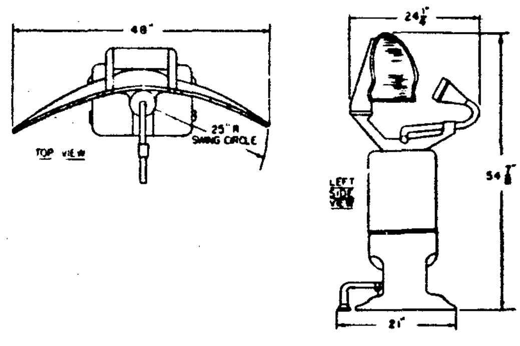
INSTALLATION: Shipboard, PC and other small craft.

ASSOCIATED EQUIPMENT: Navy Models SO-6 and SO-10 Radar Equipment. Equipment function - search, surface. Maximum range - 13 miles for 2200-ton DD. Minimum range - 150 yards.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-470-7422.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



Antenna 66AMP

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ANTENNA ASSEMBLY 66AMQ-(*)

FREQUENCY: SHF band, 6275 - 6574 mc.

TYPE: Two cut paraboloidal reflectors, each with a horn feed.

DESCRIPTION: The antenna assembly consists of two antennas fed by waveguides from a selector switch. One antenna is used for surface search; and the other, for air search. The surface-search antenna consists of a slatted, cut paraboloidal reflector, 18 inches high by 60 inches wide, fed by a waveguide horn. The air-search antenna consists of a modified cut paraboloidal reflector, 50 inches high by 53 inches wide, fed by a waveguide horn. The surface-search antenna of the 66AMQ-2 antenna assembly has been redesigned and probably has dimensions different from those given above.

BEAM DATA:

	Surface-search Antenna	Air-search Antenna
Gain - 66AMQ and 66AMQ-1	28 db	28 db
66AMQ-2	29 db	25 db
Half-power beamwidth -		
Vertical - 66AMQ and 66AMQ-1	16°	---
66AMQ-2	14.5°	---
Horizontal - 66AMQ and 66AMQ-1	2.4°	2.4°
66AMQ-2	1.6°	2.75°
Beam type -	fan	csc^2 in elevation
Polarization -	horizontal	horizontal

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of either 5 or 15 revolutions per minute.

INSTALLATION: Shipboard, DD and larger vessels.

ASSOCIATED EQUIPMENT: 66AMQ, Navy Model SG-6 Radar Equipment; 66AMQ-1, Navy Model SG-6a Radar Equipment; and 66AMQ-2, Navy Model SG-6b Radar Equipment. Equipment function - search, air; and search, surface. Maximum range - 15 miles for 2200-ton DD and 12 miles for 12-square-meter aircraft.

MISCELLANEOUS: The nomenclature 66AMQ-(*) denotes 66AMQ, 66AMQ-1, and 66AMQ-2. The 66AMQ has components that operate on 60-cycle a-c power. 66AMQ-1 has components that operate on 400-cycle a-c power. The surface-search antenna for 66AMQ-2 has a redesigned reflector and feed.

MANUFACTURER: Raytheon Manufacturing Co., contract NObsr-43263 (66AMQ-2).

STOCK NUMBER:

66AMQ ... Federal Stock Number F5985-369-5578

66AMQ-1 ... Federal Stock Number F5985-408-8721

66AMQ-2 ... Federal Stock Number F5985-408-8720

Navy Stock Number F16-A-55158-6655

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

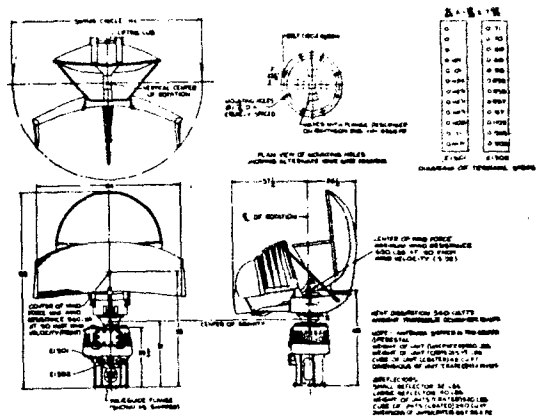
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) NAVSHIPS 900,861(A).

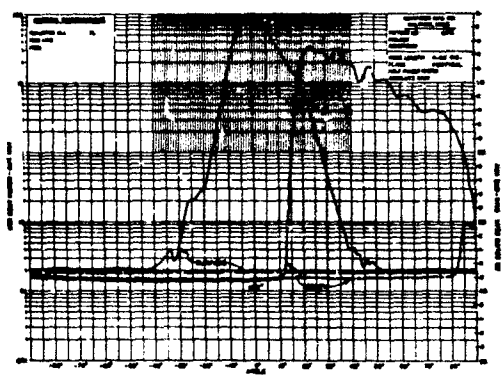
4) BuShips drawing RE62F178.

5) Department of the Navy Bureau of Ships, Radar Equipment Navy Model SG-6a, Complementary Instruction Book, NAVSHIPS 91491, (July 20, 1951). UNCLASSIFIED.

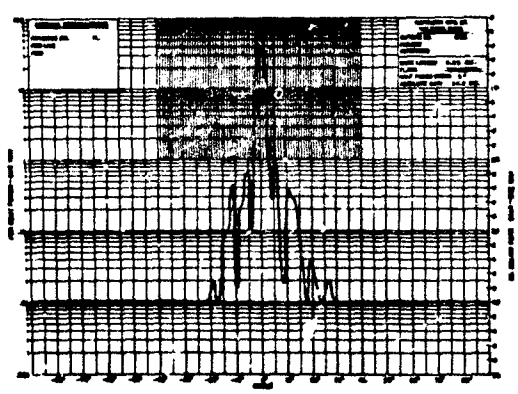
6) Department of the Navy, Radar Equipment Navy Model SG-6b, Instruction Book, NAVSHIPS 91384, (March 1955). UNCLASSIFIED.



Antenna 66AMQ-2



Antenna 66AMQ-2 Vertical Radiation Pattern for Zenith Reflector



Antenna 66AMQ-2 Horizontal Radiation Pattern for Zenith Reflector

ANTENNA 66AMR

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna consists of a slatted, cut paraboloidal reflector, 2 feet high by 4-1/2 feet wide, with a horn feed. The horn is fed by RG-51/U waveguide. The antenna has a total weight of 180 pounds.

BEAM DATA:
Gain - 36 db.
Half-power beamwidth - Vertical - 3.7°.
Horizontal - 1.8°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 6 revolutions per minute.

INSTALLATION: Shipboard, DE and larger vessels.

ASSOCIATED EQUIPMENT: Navy Model SU-2 Radar Equipment. Equipment function - search, surface. Maximum range - 20 miles for 2200-ton DD. Minimum range - 100 yards.

MANUFACTURER: Submarine Signal Co.

STOCK NUMBER: Federal Stock Number F5985-470-7426.

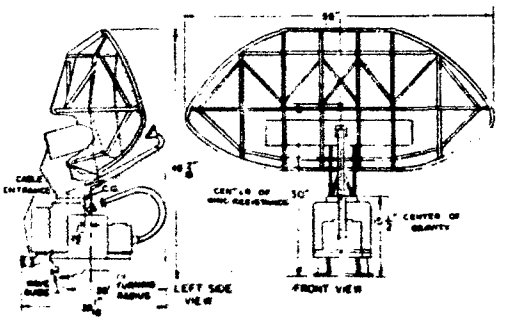
REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheet , Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 900,831(A).

4) Submarine Signal drawing 60560 alt 1.



Antenna 66AMR

ANTENNA 66AMS

FREQUENCY: SHF band, 3019 - 3100 mc.

TYPE: Cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna is a slatted, cut paraboloidal reflector, 1-3/4 feet high by 5 feet wide, with a horn feed. The horn is fed by rectangular waveguide. The total weight of the antenna is 346 pounds.

BEAM DATA:
Gain - 23 db.
Half-power beamwidth - Vertical - 11°.
Horizontal - 5°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 4, 8, or 16 revolutions per minute.

INSTALLATION: Shipboard, DD and larger ships.

ASSOCIATED EQUIPMENT: Navy Models SG-16, SG-e, SG-1e Radar Equipment. Equipment function - search, surface. Maximum range - 15 miles for 2200-ton DD and 10 miles for 20-square-meter aircraft. Minimum range - 500 yards.

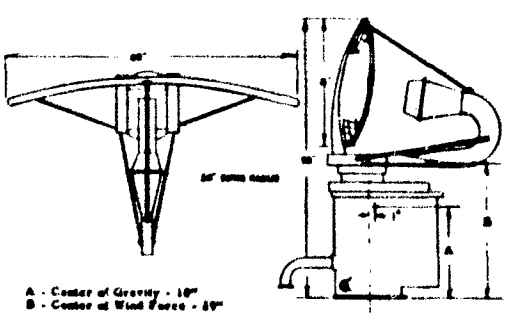
MISCELLANEOUS: Reference 1) states that the vertical half-power beamwidth is 5° and the horizontal half-power beamwidth is 2.5°. However, the size of the reflector and the antenna gain fit the beamwidths given here and in Reference 2). Reference 1) states in one section that the frequency band is 2700 to 3300 mc; another section of Reference 1) states that it is 3000 to 3100 mc; Reference 2) states that it is 3019 to 3100 mc.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number F5985-369-5404.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



Antenna 66AMS

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

NAVSHIPS 900,531: Instruction Book, Radar Equipment SG-a, SG-b, SG-1b, and SG-25.

4) NAVSHIPS 98206.

5) Raytheon Drawings M-88A-3 sub 1 and M-88B-3 sub 1.

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ANTENNA 66AMT

CIATED EQUIPMENT: Navy Model CXJN Equipnt.

RENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMU

)CIATED EQUIPMENT: Navy Model MBR Radio ransmitting and Receiving Equipment.

ERENCE: U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMV-(*)

QUENCY: UHF band, 1244 - 1350 mc.

E: Collinear array of dipoles with a corner eflector.

CRIPTION: The antenna consists of a collinear of 12 dipoles mounted on and probe fed by a section of rectangular waveguide approximately 9-1/2 feet long. A V-shaped section with a mesh reflecting surface is mounted on the waveguide section to form a corner reflector behind the dipole array. Each dipole is enclosed in a protective cover. The overall antenna is 19-5/8 inches high by 112-3/16 inches long by 23 inches deep, and the total weight is 80 pounds.

AM DATA:
Gain - 21 db.
Half-power beamwidth - Vertical - 30°.
Horizontal - 8°.
Polarization - Horizontal.

AN DATA: The antenna rotates through 360° in azimuth at a rate that can be varied between 5 and 15 revolutions per minute.

STALLATION: Shipboard, DD and larger ships.

SOCIATED EQUIPMENT: Navy Model SR-6 Radar Equipment. Equipment function - search, air; and search, surface. Maximum range - 20 miles for 2200-ton DD and 25 miles for 20-square-meter aircraft. Minimum range - 800 yards.

SCELLANEOUS: The nomenclature 66AMV-(*) denotes 66AMV and 66AMV-1. The 66AMV covers only the frequency range from 1244 to 1300 mc.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Industrial Electronics Division of Westinghouse Electric Corporation, contract N5sr-8674.

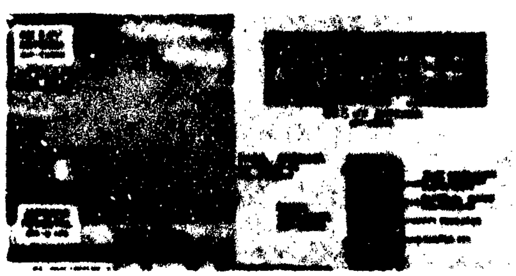
STOCK NUMBERS: Navy F16-A-52016-2099 (66AMV), Navy F16-A-48616-5940 (66AMV-1).

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) NAVSHIPS 900,989: Instruction Book for Radar Equipment Navy Model SR-6.



Antennas 66AME, 66AMV, and 66AMW

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ANTENNA 66AMW

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a horizontal row of four vertical dipoles mounted in front of a flat, rectangular reflector made up of vertical rods. The overall antenna is 38-3/4 inches high by 96 inches long by 17-3/4 inches deep, and the total weight is 53 pounds.

INSTALLATION: Shipboard, DD and larger ships.

ASSOCIATED EQUIPMENT: Navy Model Mark 3 IFF Equipment. Equipment function - IFF.

MISCELLANEOUS: The 66AMW is the Mark 3 IFF antenna used with Navy Model SR-6 Radar Equipment.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Industrial Electronics Division of Westinghouse Electric Corporation, contract N5sr-8674.

STOCK NUMBER: Federal Stock Number N5310-261-7750.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMY-(*)

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 25 Mod 2 Radar Equipment (66AMY) and AN/SPG-48(XN-1) Radar Set (66AMY-1). Equipment function - fire control.

MISCELLANEOUS: The nomenclature 66AMY-(*) denotes 66AMY and 66AMY-1. Additional information is available in the confidential document listed below as Reference 2 and in Volume V of this catalog series.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy Bureau of Ordnance, Mark and Mod. Assignment, Request, NAVORD Form 848, (Approved July 23, 1945). CONFIDENTIAL.

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ANTENNA 66AMZ

ASSOCIATED EQUIPMENT: Navy Model X-SC-7 Radar Equipment. Equipment function - search.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AND

FREQUENCY: SHF band, probably 8740 - 8890 mc.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model Mark 34 Mod 13 Radar Equipment. Equipment function - fire control (antiaircraft).

MISCELLANEOUS: Navy Models Mark 34 Models 3, 4, and 7 through 14 have been modified and redesignated Navy Model Mark 34 Mod 16. Antenna 66AND is the same as Antenna Mark 5 Mod 2.

COGNIZANT AGENCY: U. S. Navy BuOrd (Re84-c).

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
3) U. S. Navy Bureau of Ordnance, Mark and Mod. Assignment, Request, NAVORD Form 848, (Approved July 23, 1945). CONFIDENTIAL.

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ANTENNA 66ANF

ASSOCIATED EQUIPMENT: Navy Model SP-2 Radar Equipment. Equipment function - height finding.

MISCELLANEOUS: Reference 1) states that Navy Model SP-2 Radar Equipment was never approved.

COGNIZANT AGENCY: U. S. Navy, BuShips (code 823).

REFERENCES:

1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 9, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA ASSEMBLY 66ANJ

MAJOR COMPONENTS: 1 early-warning antenna, 1 height-finding antenna, 1 IFF dipole, and 1 antenna pedestal.

FREQUENCY: SHF band, 3450 - 3550 mc (Height-finding antenna), UHF band, 2700 - 2900 mc (Early-warning antenna), VHF band, 157 - 187 mc (IFF antenna).

TYPE: Two cut paraboloidal reflectors each fed by a waveguide horn assembly.

DESCRIPTION: The antenna assembly consists of two antennas mounted on a single pedestal. One antenna is used for early-warning search; and the other, for height finding. The early-warning antenna is a cut paraboloidal reflector, 4 feet high by 14 feet wide, fed by a waveguide horn assembly. It includes an IFF dipole. The height-finding antenna is a bifocal, cut paraboloidal reflector, 15 feet high by 5 feet wide, probably fed by a Robinson scanner.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model SX-2 Radar Equipment. Equipment function - air search; sight finding; and IFF.

MISCELLANEOUS: Reference 1) states that 66ANJ is the same as 66ALH, but the height-finding antenna of 66ANJ scans through 20° instead of 11°.

COGNIZANT AGENCY: U. S. Navy, BuShips (code 823).

MANUFACTURER: American Machine and Foundry Co.

STOCK NUMBER: Federal Stock Number F5985-408-8737.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

3) American Machine and Foundry drawing 59-126-5002.

ANTENNA 66015

FREQUENCY: VHF band, 60 - 80 mc.

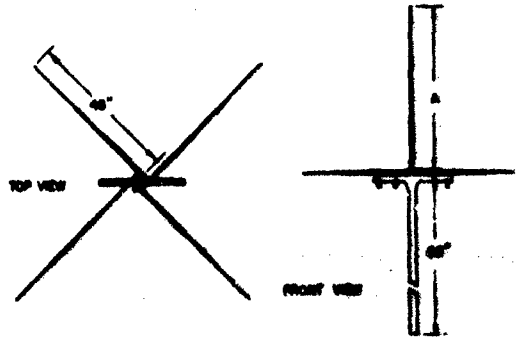
TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical radiator, a ground plane made up of four rods mounted horizontally 90° apart, and a matching section. Three interchangeable steel rods, 33, 38-3/8, and 44 inches long, are furnished to serve as vertical radiators. The total weight of the antenna is 46 pounds.

BEAM DATA:
Polarization - Vertical.

TUNING/MATCHING DEVICES: A matching section, located at the base of the antenna, matches the 70-ohm input impedance of the antenna to a 50-ohm coaxial transmission line.

INSTALLATION: Shipboard, surface vessels.



Antenna 66015

ASSOCIATED EQUIPMENT: Navy Model TBS Radio Equipment. Equipment function - communications.

MANUFACTURER: Radio Corporation of America, Victor Division.

STOCK NUMBER: Federal Stock Number N5985-254-7172.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 900,590.

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ANTENNA 66016

FREQUENCY: VHF band, 60 - 80 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a matching section, a ground-plane rod, and three interchangeable, vertical radiating rods 41-7/8, 34-3/4, and 28-1/4 inches long. The total weight of the antenna is 57 pounds.

BEAM DATA:
Polarization - Vertical.

TUNING/MATCHING DEVICES: A matching section, located at the base of the antenna, matches the 70-ohm input impedance of the antenna to a 50-ohm coaxial transmission line.

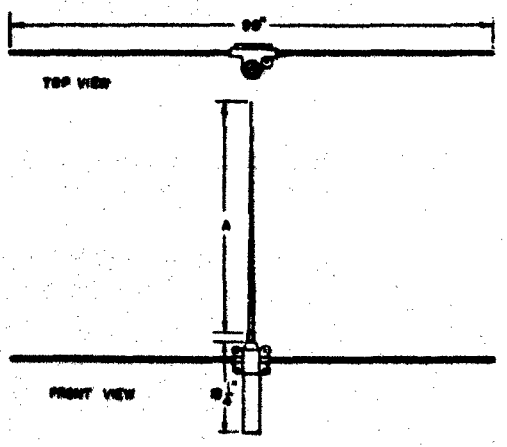
INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Model TBS Radio Equipment. Equipment function - communications.

STOCK NUMBER: Federal Stock Number N5985-470-7432.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) NAVSHIPS 900,590.



Antenna 66016

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ANTENNA 66025

FREQUENCY: VHF band, 28 - 68 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TBP Radio Transmitting and Receiving Equipment. Equipment function - communications.

MANUFACTURER: Winters and Crampton Corporation.

STOCK NUMBER: Federal Stock Number N5985-249-4382.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66025-A

FREQUENCY: VHF band, 28 - 80 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TBY-1 Radio Transmitting and Receiving Equipment. Equipment function - communications.

STOCK NUMBER: Federal Stock Number F5985-249-4381.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66026

FREQUENCY: VHF band, 132 - 156 mc.

TYPE: Dipole.

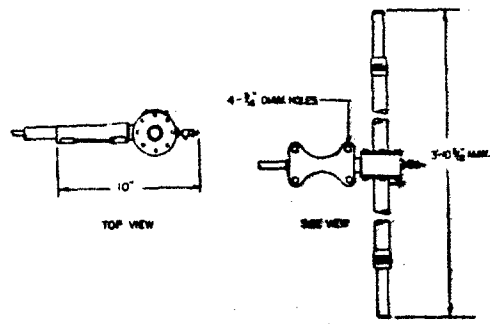
BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models RAR and TCD Radio Equipment. Equipment function - communications.

STOCK NUMBER: Federal Stock Number F5985-408-8684.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) Instruction Book, GEI-12387A.



Antenna 66026.

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ANTENNA 66028

FREQUENCY: MF and HF bands, 2 - 9.05 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TCQ Radio Transmitting and Receiving Equipment. Equipment function - communications.

STOCK NUMBER: Federal Stock Number N5985-249-4342.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66029

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TCL-1 Radio Transmitting and Receiving Equipment. Equipment function - communications.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number N5985-249-4369.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric drawing K-7882913 rev. 0.

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ANTENNA 66036

FREQUENCY: VHF band, 200 - 250 mc.

TYPE: Parabolic-cylinder reflector with a ground-plane feed.

DESCRIPTION: The antenna consists of a parabolic-cylinder reflector, a feed assembly consisting of a vertical radiator and four horizontal radial ground rods, an antenna drive unit, and an antenna drive shaft. The reflector assembly weighs 105 pounds.

BEAM DATA:
Half-power beamwidth - Horizontal - 30°.
Polarization - Vertical.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 2 revolutions per minute.

INSTALLATION: Shipboard or ground, normally aircraft carrier.

ASSOCIATED EQUIPMENT: Navy Models YE-1, YE-2, and YE-3 Radio Homing Beacon Equipment. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Radio Corporation of America,

Victor Division, Camden, N. J., contracts NOs-93372, NXss-15437, NXsr-38316.

STOCK NUMBER: Federal Stock Number F5985-284-8810.

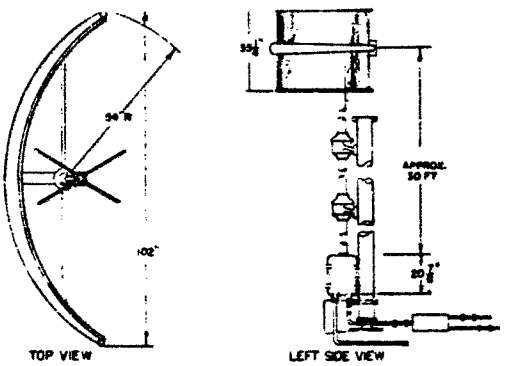
REFERENCES:

1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan.1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 95361: Instruction Book for Navy Model YE-1 Homing Deacon Equipment.

4) NAVSHIPS 900,502: Instruction Book for Navy Models YE-2 and YE-3 Homing Beacon Equipment.



Antenna 66036

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ANTENNA ASSEMBLY 66037

FREQUENCY: VHF band, 241 - 251 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat reflector, approximately 4 feet square, two vertically-mounted dipoles, and a pedestal. The reflector is made up of 15 vertical steel rods welded to a steel frame.

BEAM DATA:
Half-power beamwidth - Horizontal - 45°.
Polarization - Vertical.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 2 revolutions per minute.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Models YG, YG-1, and YG-2 Radio Homing Beacon Equipment. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Radio Corporation of America, Victor Division, Camden, N. J., contracts NXss - 33086, NXs-820, and NXsr-42143. Stewart-Warner Corp., Chicago, Ill., contracts NXss-19219 and NXsr-60004.

STOCK NUMBER: Federal Stock Number F5985-369-5388.

REFERENCES:

1) U. S. Navy and Bureau of Ships, Instruction Book for Homing Beacon Equipment Models YG-1 and YG-2 with Radio Frequency Monitor CWS-60047 and True Bearing Control Unit CAIH-23408, NAVSHIPS 900, 252,IB, (July 21, 1944). UNCLASSIFIED.

2) U. S. Navy and Bureau of Ships, Instruction Book for Homing Beacon Equipment Navy Model YG and Radio Frequency Monitor Navy Type CRV-60047, NAVSHIPS 900,510, (Mar. 28, 1945). UNCLASSIFIED.

3) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66040

FREQUENCY: MF and HF bands, 1.5 - 12 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TCS Radio Equipment. Equipment function - communications.

STOCK NUMBER: Federal Stock Number N5820-254-7183.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA ASSEMBLY 66042

FREQUENCY: VHF band, 70 - 90 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna assembly consists of a telescoping vertical whip, an octagonal-wheel ground-plane of steel tubing, and a supporting tower. The assembly weighs 71 pounds.

BEAM DATA:
Polarization - Vertical.

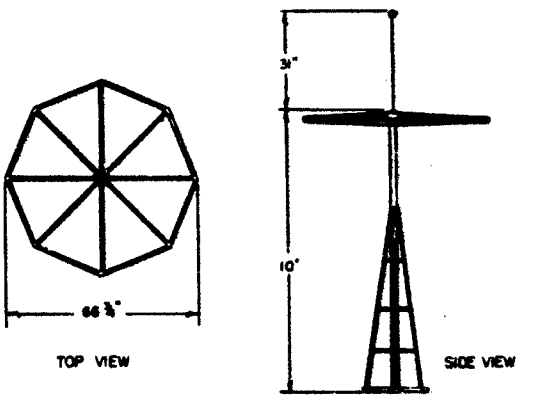
INSTALLATION: Buoy mounted. The antenna assembly is mounted on a Sono-Radio Buoy Model JM-4 anchored offshore.

ASSOCIATED EQUIPMENT: Transmitter of Sono-Radio Buoy Model JM-4. Equipment function - countermeasures, monitoring.

MANUFACTURER: Airplane and Marine Instruments Co.

STOCK NUMBER: Federal Stock Number F5985-249-4317.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) NAVSHIPS 900,011-IB.



Antenna 66042

ANTENNA 66043

FREQUENCY: VHF band, 40.1 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TCL-2 Radio Equipment. Equipment function - communications.

MANUFACTURER: Doolittle Radio, Inc.

STOCK NUMBER: Federal Stock Number N5985-249-4376.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Doolittle drawing A-1004 rev. 0.

ANTENNA 66044(*)

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a 6-foot tapered whip, a spring mounting base, and a mounting bracket. The whip is made of cadmium-plated vanadium steel and has at its lower end a screw fitting for fastening to the spring mounting base. This base consists of a stainless steel, tapered helical spring clamped in place by two molded bakelite fittings. It is attached to the mounting bracket by six bolts. The antenna weighs 20 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Models MN, MN-1, MN-2, MN-3, MN-4, and MN-5 Radio Transmitting and Receiving Equipment. Equipment function - communications.
Radio Equipments RBK-14, RBR-14, and RDC-1.

MISCELLANEOUS: Antenna 66044(*) denotes Antenna 66044 and 66044A. Antenna 66044A is the same as Antenna 66044, but it does not have the mounting spring at its base.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, contracts NXs-3834, NXss-14291, NXss-20219, NXss-30781, NXso-32191, NXsr-41011, and NXsr-49343.

STOCK NUMBERS:
66044 .... Federal Stock Number N5985-249-4365; Navy Stock Number F16-A-54466-6141.
66044A ... Federal Stock Number N5985-249-4364; Navy Stock Number F16-A-54466-6121.

REFERENCES:
1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66046

FREQUENCY: MF and HF bands, 0.5 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 28-foot nontelescoping whip made up of four aluminum sections, one 2-1/2 inches in diameter and 7-1/2 feet long, one 2 inches in diameter and 7-1/2 feet long, one 1-1/2 inches in diameter and 7-1/4 feet long, and one 1 inch in diameter and 7 feet long. The total weight of the antenna is approximately 55 pounds.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models RAO-9, RDG, and similar radio equipment. Equipment function - communications.

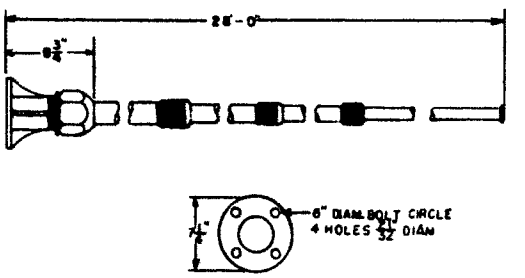
MANUFACTURER: Premax Products Division, Chisholm Co., Inc. and Kings Electronics Co., Inc.

STOCK NUMBER: Federal Stock Number N5985-369-5530.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66046

ANTENNA 66047

FREQUENCY: MF and HF band, 0.3 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 35-foot nontelescoping whip made up of five aluminum sections, one 3 inches in diameter and 7-3/4 feet long, one 2-1/2 inches in diameter and 7-1/2 feet long, one 2 inches in diameter and 7-1/2 feet long, one 1-1/2 inches in diameter and 7-1/4 feet long, and one 1 inch in diameter and 7 feet long. The total weight of the antenna is 70 pounds.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model TCK, AN/URT-4, and similar radio equipment. Equipment function - communications.

MANUFACTURER: Premax Products Division, Chisholm Co., Inc. and Kings Electronics Co., Inc.

STOCK NUMBER: Federal Stock Number N5985-349-5340.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66049

FREQUENCY: VHF band, 70 - 90 mc.

TYPE: Ground-plane antenna with plate-type ground plane.

INSTALLATION: Buoy mounted.

ASSOCIATED EQUIPMENT: Navy Model UM-2 Sono-Radio Buoy Transmitter. Equipment function - countermeasures, monitoring.

STOCK NUMBER: Federal Stock Number F5985-249-4318.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66050

FREQUENCY: VHF band, 56 - 85 mc.

TYPE: Dipole.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Navy Model RAU-2 Radiosonde Receiving Equipment. Equipment function - meteorological measurement.

MANUFACTURER: Friez Instrument Division, Bendix Aviation Corp., Baltimore, Md., contract NOa-81206.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66053

FREQUENCY: HF band, 9.35 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 25-foot nontelescoping whip made up of three sections which screw together.

INSTALLATION: Shipboard, surface and submarine.

MANUFACTURER: Z and W Machine Products, Inc.

STOCK NUMBER: Federal Stock Number N5985-665-0437.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66064

FREQUENCY: MF and HF bands, 1.6 - 18.2 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescoping whip, 57 inches long extended and 14-1/2 inches long collapsed. The upper section is made of stainless steel, and the lower section is made of nickel-plated, chrome-finished, brass tubing. The antenna mounts by a CAG 674P jumbo plug into a socket on the top of the DAG series receiver and is used as a sense antenna.

ASSOCIATED EQUIPMENT: Navy Models DAG, DAG-1, and DAG-2 Portable Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Airplane and Marine Instruments, Inc., Clearfield, Pa., contracts NOa-98284, NXss-19775, and NXss-31234.

STOCK NUMBER: Federal Stock Number N5985-642-8405.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66068

FREQUENCY: MF band, 2.436 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MU Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number F5985-249-4347.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66069

FREQUENCY: MF band, 2.772 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MU Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number F5985-249-4348.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66070

FREQUENCY: HF band, 3.035 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MV Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4351.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66071

FREQUENCY: HF band, 3.155 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MV Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4352.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66072

FREQUENCY: HF band, 3.585 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MW Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4353.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66073

FREQUENCY: HF band, 3.725 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MW Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4354.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66074

FREQUENCY: HF band, 3.865 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MW Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4355.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66075

FREQUENCY: HF band, 3.995 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MX Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4356.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66076

FREQUENCY: HF band, 4.105 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MX Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4357.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66077

FREQUENCY: HF band, 4.435 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MX Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4358.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA ASSEMBLY 66080

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a six-section telescopic whip. Its extended length is 83 inches, and its collapsed length is 18 inches. It weighs 0.5 pound. The base of the antenna is terminated with a fitting which mates with the antenna base mounted on the case of the associated equipment.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Models MN-1, MN-2, and MN-3 Radio Transmitting and Receiving Equipment. Equipment function - communications.

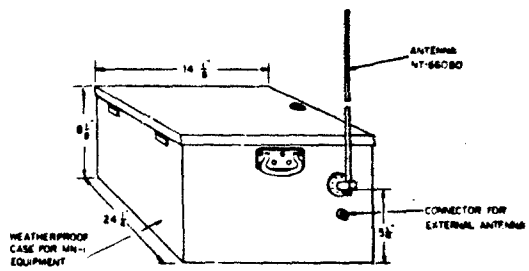
COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, contracts NXss-14291, NXss-20219, and NXss-30781.

STOCK NUMBER: Federal Stock Number N5985-249-4366.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) NAVSHIPS 95139, 95140, and 95141: Instruction Books for Navy Models MN-1, MN-2, and MN-3 Radio Transmitting and Receiving Equipment.



Antenna 66080

ANTENNA 66081-(*)

FREQUENCY: MF and HF bands, 2.3 - 4.5 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip, 85 inches long extended and 15-1/8 inches long collapsed. It weighs 1 pound.

ASSOCIATED EQUIPMENT: Navy Models MAB-1 and DAV-2 Equipment. Equipment function - communications.

MISCELLANEOUS: The nomenclature 66081-(*) denotes 66081 and 66081-A. The 66081-A has a frequency range from 2.15 to 4.95 mc and consequently may have slightly different dimensions from those given above.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Communications Co., Inc., Coral Gables, Fla., contract NXsr-59061.

STOCK NUMBERS: Federal Stock Number N5985-249-4345 (66081), Federal Stock Number N5985-249-4344 (66081-A).

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66082

FREQUENCY: LF and MF bands, 0.2 - 2.0 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model OAN Test Oscillator Equipment. Equipment function - test.

STOCK NUMBER: Federal Stock Number N6625-296-5107.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66086

FREQUENCY: MF and HF bands, 1.5 - 30 mc.

TYPE: Whip.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Models TDV and MZ Radio Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4339.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Installation and Calibration of Direction Finders, Shipboard Antenna Details, Chapter 7, NAVSHIPS 900121(A), (Jan. 1, 1959). UNCLASSIFIED.

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ANTENNA 66087

FREQUENCY: HF and VHF bands, 28 - 80 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TBY-6 Ultra Portable Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4361.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66088

FREQUENCY: VHF band, 241 - 251 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat rectangular reflector, 52 inches high and 80 inches wide, with four vertical dipoles mounted in a horizontal row in front of the reflector.

BEAM DATA:
Beam type - The antenna has a lobe switch which switches the transmitted beam first to the left and then to the right. The switch timing is such that the beam is directed to the right for a long and then a short period of time corresponding to the Morse-code letter "A", and to left for a short, then a long period of time corresponding to the letter "N". The left and right lobes overlap and the "A" and "N" signals combine to produce a continuous dash. This "on course" signal is 0.6° wide at 7 nautical miles and 1° wide at 9 nautical miles.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model YL Radio Beacon Equipment. Equipment function - navigation, surface reference. The equipment is used to guide landing craft from the transport vessel to the beach where landing operations are to take place.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Federal Telephone and Radio Corporation, Newark, N. J., contract NXss-27344.

STOCK NUMBER: Navy F16-A-48590-9900.

REFERENCES:

1) Department of the Navy Bureau of Ships, Navy Model YL Radio Beacon Equipment, Instruction Book, NAVSHIPS 900, 249-IB, (April 10, 1943). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

Antenna 66088 Front View

Antenna 66088 Side View

ANTENNA ASSEMBLY 66089

FREQUENCY: VHF band, 72.5 mc.

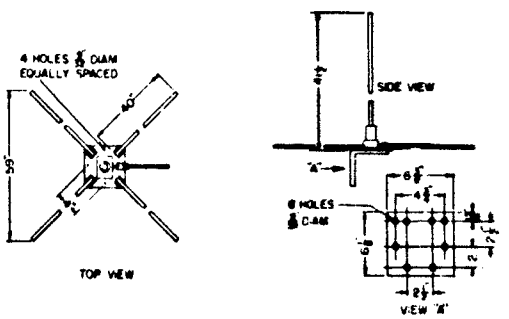
TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical quarter-wavelength hollow brass rod and a ground plane made up of four radial hollow brass rods. It is fed by an RG-8/U transmission line.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models TBY, TBS, and MBF Radio Equipment.



Antenna Assembly 66089

STOCK NUMBER: Federal Stock Number N5985-470-7395.

REFERENCE:

U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66091

FREQUENCY: VHF band, 115 - 156 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical telescoping rod and a ground plane made up of four equally-spaced radial rods. The length of the vertical element can be adjusted and locked in position for optimum performance at a given frequency. The antenna is fed by a 50-ohm coaxial cable.

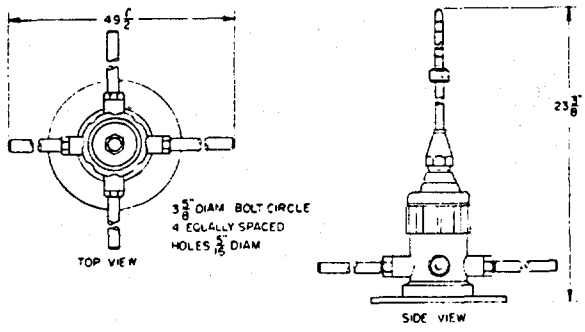
ASSOCIATED EQUIPMENT: Navy Models TDT and TDQ Radio Transmitting Equipment and Radio Set AN/ARC-1.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Aircraft Accessories Corp., Kansas City, Mo., contract NXss-30269.

STOCK NUMBER: Federal Stock Number N5985-090-2634.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66091

ANTENNA 66093

FREQUENCY: LF and MF bands, 0.25 - 1.5 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 25-foot vertical whip consisting of three stainless steel sections mounted on a cast aluminum base. An insulator supports the whip 3 feet above the base. The antenna weighs 43 pounds and is fed by an RG-24/U cable.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models DAK-2 and DAK-3 Radio Direction Finding Equipment. Equipment function - direction finding (sense antenna).

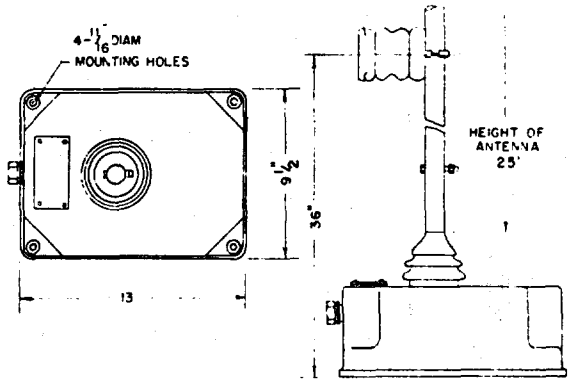
COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Federal Telephone and Radio Corporation, Newark, N. J., contract NXss-33628.

STOCK NUMBER: Federal Stock Number F5985-243-8418.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66093

ANTENNA 66095

FREQUENCY: VHF band, 135 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a fixed, half-wave dipole constructed of brass tubing and weighing 17 pounds.

BEAM DATA:
Polarization - Vertical.

TUNING/MATCHING DEVICES: The antenna has a concentric, two-step matching section to couple to a 50-ohm coaxial cable.

INSTALLATION: Shipboard.

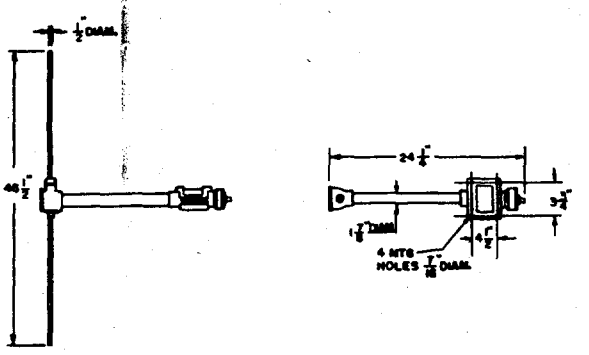
ASSOCIATED EQUIPMENT: Navy Models TDQ, RCK, and other radio equipment.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Granite State Machine Co., Inc., Manchester, N. H., contract NObsr-71604.

STOCK NUMBER: Federal Stock Number F5985-254-7154.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
3) NAVSHIPS 92940: Technical Manual for Antenna Assembly NT-66095.



Antenna 66095

ANTENNA ASSEMBLY 66096

MAJOR COMPONENTS: 1 66097 loop antenna, 1 47367 loop coupling unit, and 50 feet of 325K cable.

MISCELLANEOUS: Antenna Assembly 66096 is obsolete because Loop Coupling Unit 47367 is no longer used. See Loop Antenna 66097.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

LOOP ANTENNA 66097

FREQUENCY: VLF and LF band, 0.015 - 0.0775 mc.

TYPE: Loop antenna.

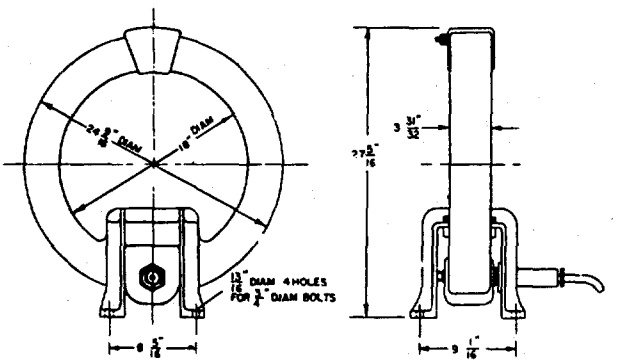
DESCRIPTION: The antenna is an electrostatically shielded loop housed in a rubber-covered bronze casting. A 50-foot, two-conductor, shielded, rubber-covered cable is permanently attached to the loop. The antenna and cable weigh 143 pounds.

BEAM DATA:
Beam type - Figure eight.
Polarization - Vertical.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Model RAK Radio Receiving Equipment.

STOCK NUMBER: Federal Stock Number F5985-470-7329.



Loop Antenna 66097

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) NAVSHIPS 900,505.

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ANTENNA 66102

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Navy Model MAH Radio Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co., New York, N. Y., contract NXsr-65292.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) NAVSHIPS 900420-1B: Technical Manual for Radio Transmitting and Receiving Equipment Model MAH.

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ANTENNA ASSEMBLY 66109, 66110, 66111, 66112, 66113, and 66114

FREQUENCY: VHF band, 90 - 300 mc (66111 and 66112); UHF band, 300 - 1000 mc (66109 and 66110); UHF band, 1000 - 3000 mc (66113 and 66114).

TYPE: Probably a cut paraboloidal reflector fed by two dipoles.

DESCRIPTION: Each antenna consists of two dipoles mounted in front of a reflector.

BEAM DATA:
Beam type - Two main lobes with a null point between them.
Polarization - Horizontal (66109, 66111, and 66113).
Vertical (66110, 66112 and 66114).

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Model DBB Portable Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MANUFACTURER: Federal Telephone and Radio Corporation, contract NXsr-53339.

STOCK NUMBERS: Federal Stock Numbers F5985-408-8723 (66112) and F5985-408-8725 (66114).

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA ASSEMBLY 66115, 66116, and 66117

FREQUENCY: VHF band, 90 - 300 mc (66115); UHF band, 300 - 1000 mc (66116); UHF band, 1000 - 3000 mc (66117).

TYPE: Probably cut paraboloidal reflector fed by two dipoles.

DESCRIPTION: Each antenna consists of two dipoles mounted in front of a reflector.

BEAM DATA:
Beam type - Two main lobes with a null point between them.
Polarization - Horizontal, vertical, or any angle between.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Model DBB-1 Portable Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MANUFACTURER: Federal Telephone and Radio Corporation, contract NXsr-53339.

REFERENCE:
Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

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ANTENNA 66118

FREQUENCY: MF and HF bands, 1.5 - 12 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MZ-2 Mobile Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number F5985-090-2668.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66119

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 75-inch whip weighing 3 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Model MN-5 Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, New York, N. Y., contracts NXsr-41011, NXsr-48343.

STOCK NUMBER: Federal Stock Number N5985-249-4363.

REFERENCES:
1) NAVSHIPS 95143: Preliminary Instruction Book for Navy Model MN-5 Radio Transmitting and Receiving Equipment.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66120

FREQUENCY: VHF band, 30 - 40 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 78-inch whip weighing 3-1/3 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Model MN-5 Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, New York, N. Y., Contracts NXsr-41011 and NXsr-48343.

STOCK NUMBER: Federal Stock Number N5985-249-4362.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) NAVSHIPS 95143: Preliminary Instruction Book for Navy Model MN-5 Radio Transmitting and Receiving Equipment.

ANTENNA 66121 and 66122

FREQUENCY: UHF band, 300 - 310 mc.

TYPE: Dipole.

ASSOCIATED EQUIPMENT: Navy Model MAE-1 Radio Transmitting and Receiving Equipment.

MANUFACTURER: Aireon Manufacturing Corp.

STOCK NUMBER: Federal Stock Number N5985-249-4398 (66121), Federal Stock Number N5985-249-4389 (66122).

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Aireon drawings L-21418 rev.0 and L-21419 rev.0.

ANTENNA 66127

FREQUENCY: SHF band, 3813 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MN-7 FM Radio Transmitting and Receiving Equipment. Equipment function - communications.

MANUFACTURER: Link Radio Corp.

STOCK NUMBER: Federal Stock Number N5820-249-4370.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Link Radio drawing 1620-32 alt. 0.

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ANTENNA ASSEMBLY 66128

FREQUENCY: VHF band, 100 - 160 mc.

TYPE: Crossed-U Adcock array of four ground-plane antennas.

DESCRIPTION: The assembly is a fixed Adcock array with cross-over and sense circuits located in the base. The assembly is constructed of corrosion-resisting aluminum alloy and weighs 25 pounds.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model DBF Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

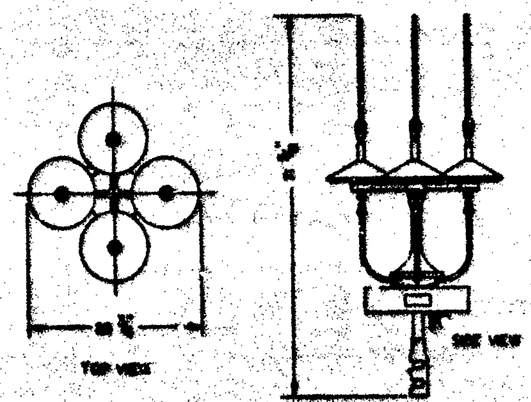
MISCELLANEOUS: Reference 2) states that Navy Model DBF Equipment is obsolete and replaced by AN/URD-2.

STOCK NUMBER: Navy F16-A-44968-1501.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.



Antenna Assembly 66128

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ANTENNA ASSEMBLY 66131

FREQUENCY: UHF and SHF bands, 300 - 3300 mc; VSWR < 5.

TYPE: Conical antenna with a ground plane.

DESCRIPTION: The assembly is a cone-type, fixed antenna enclosed in a plastic housing. A fan-shaped ground plane consisting of a metal plate, 3-1/2 inches in radius, and seven rods, 14-1/2 inches long, equally spaced about 25° apart, is attached to the bottom. The antenna weighs 12 pounds and is fed by an RG-18/U cable. Two of the antenna assemblies mounted with the cone at a 45° angle are normally used for each installation.

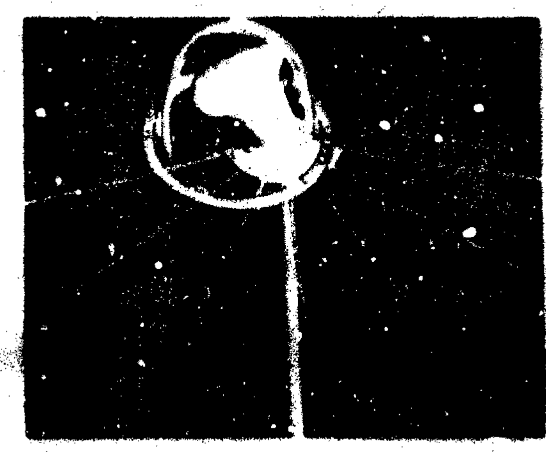
BEAM DATA:
Polarization - Horizontal or vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model RDO Radio Receiving Equipment and Radar Sets AN/SPR-2 and AN/SPR-2A. Equipment function - countermeasures.

MISCELLANEOUS: Reference 2) states that AN/SPR-2, AN/SPR-2A and RDO Equipments are obsolete.

COGNIZANT AGENCY: U. S. Navy, BuShips.



Antenna Assembly 66131

MANUFACTURER: Camfield Manufacturing Co., Grand Haven, Mich., contract NXsr-83365.

STOCK NUMBER: Federal Stock Number N5985-507-9557, Navy F16-A-45495-440.

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

ANTENNA ASSEMBLY 66132-(*)

FREQUENCY: VHF and UHF bands, 70 - 400 mc; VSWR < 2.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a stub with a fan-shaped ground plane. The stub is constructed of phenolic-impregnated maple covered with a conducting material. The ground plane is composed of metal rods covering a 145° arc. The antenna weighs 30 pounds and is fed by an RG-10/U cable.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model RDO Radio Receiving Equipment. Equipment function - countermeasures, monitoring and countermeasures, search.

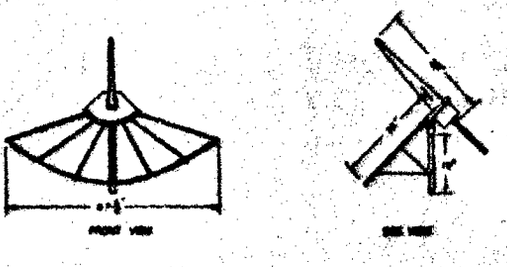
MISCELLANEOUS: Reference 3) states that RDO Equipment is obsolete. The nomenclature 66132-(*) denotes 66132 and 66132A. The 66132A uses a different radiating stub.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Camfield Manufacturing Co., Grand Haven, Mich., contracts NXsr-83365 and NXsr-29985.

STOCK NUMBER: Federal Stock Number N5985-257-3209 (for 66132), Navy N16-A-45468-7501 (for 66132), and Federal Stock Number N5985-324-2065 (for 66132A).

REFERENCES:
1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.



Antenna 66132

ANTENNA ASSEMBLY 66134-(*)

FREQUENCY: VHF band, 110 - 156 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is an inverted "T" consisting of a vertical radiator supported by a metal-spring bridge above a flat metal ground plate. It weighs 56 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard, submarine.

ASSOCIATED EQUIPMENT: Navy Models TDQ and RCK Radio Equipment and Radio Sets AN/ARC-1 and SCR-624A and similar radio sets. Equipment function - communications.

MISCELLANEOUS: The nomenclature 66134(*) denotes 66134 and 66134A. The 66134A is the 66134 modified to provide more efficient operation over the entire VHF band. The vertical radiator of 66134A is enclosed in a molded neoprene fairing to permit operation at higher submerged speeds.

COGNIZANT AGENCY: U. S. Navy, BuShips.

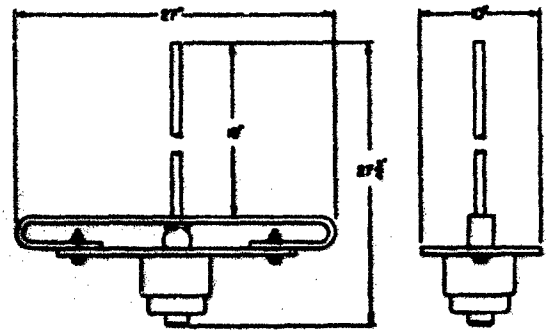
MANUFACTURER: Hazeltine Electronics Corp., New York, N. Y., contract NXsr-79883.

STOCK NUMBERS: 66134 ... Federal Stock Number N5985-408-3686, Navy F16-A-52284-700; 66134A ... Federal Stock Number N5985-369-5460, Navy N16-A-52282-700.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets. Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) NAVSHIPS 900,524: Instruction Book for Type CAGQ-66134 Antenna Assembly for General Radio Use.



Antenna 66134-(*)

ANTENNA 66135

FREQUENCY: HF and VHF bands, 20 - 39 mc.

TYPE: Dipole.

COGNIZANT AGENCY: U. S. Navy, BuShips.

STOCK NUMBER: Federal Stock Number N5985-665-0440.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) BuShips drawing RA66-F282B.

ANTENNA 66136

FREQUENCY: Probably VHF and UHF bands, 90 - 1200 mc.

TYPE: Probably two cut paraboloidal reflectors with a dipole feed.

BEAM DATA:
Beam type - Unidirectional.
Polarization - Horizontal and vertical.

SCAN DATA: The antenna rotates in azimuth at a rate that can be varied by the operator.

ASSOCIATED EQUIPMENT: Navy Model DBM Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: Navy Model DBM is a pre-production model of Navy Model DBM-1. Antenna 66136 is probably a pre-production model of Antenna Group 66141.

COGNIZANT AGENCY: U. S. Navy, BuShips.

STOCK NUMBER: Federal Stock Number N5985-408-8722.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66137

FREQUENCY: Probably UHF and SHF bands, 1000 - 5000 mc.

TYPE: Probably two cut paraboloidal reflectors each fed by a dipole assembly.

BEAM DATA:
Beam type - Unidirectional.
Polarization - Horizontal and vertical.

SCAN DATA: The antenna rotates in azimuth at a rate that can be varied by the operator.

ASSOCIATED EQUIPMENT: Navy Model DBM Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: Navy Model DBM is a pre-production model of Navy Model DBM-1. Antenna 66137 is probably a pre-production model of Antenna Group 66141.

COGNIZANT AGENCY: U. S. Navy, BuShips.

STOCK NUMBER: Federal Stock Number N5985-470-[illegible].

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66139

See Antenna Group 66141.

ANTENNA 66140

See Antenna Group 66142.

ANTENNA GROUP 66141

MAJOR COMPONENTS: One 66139 antenna, one 211427 antenna drive unit, and one 10468 antenna housing.

FREQUENCY: VHF and UHF bands, 90 - 1200 mc.

TYPE: One modified cut paraboloidal reflector fed by a horizontal dipole and one cut paraboloidal reflector fed by a vertical dipole.

DESCRIPTION: Antenna 66139 consists of two antennas mounted back-to-back. One antenna is a snowplow-shaped reflector fed by a horizontal V-dipole. The other antenna is a cut paraboloidal reflector fed by a vertical sleeve dipole. A switch enables the operator to select the proper antenna. The antenna group is 33-3/4 inches high and 28-1/2 inches in diameter. It weighs 132 pounds.

BEAM DATA:
Beam type - Unidirectional.
Polarization - Horizontal and vertical.

SCAN DATA: The antenna rotates in azimuth at a rate between 0 and 150 revolutions per minute. The speed can be varied by the operator.

TUNING/MATCHING DEVICES: The dipoles are connected by cable to a balun transformer (bazooka).

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model DBM-1 Radio and Radar Direction Finding Equipment. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Submarine Signal Co., Boston, Mass., contract NObsr-90024.

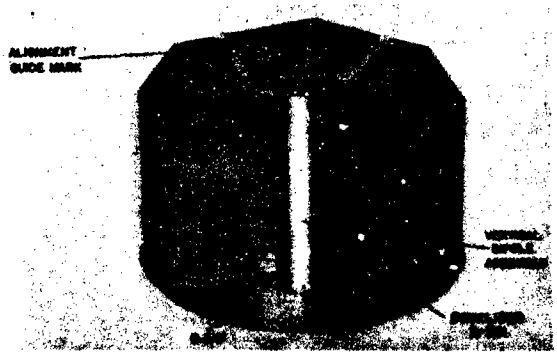
STOCK NUMBER: Federal Stock Number F5985-408-8728 (66141).

REFERENCES:

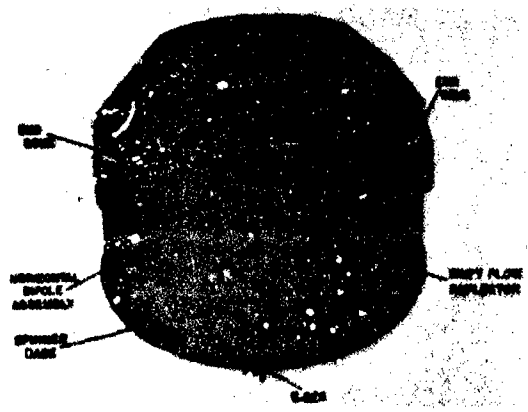
1) Department of the Navy Bureau of Ships, Radar Direction Finder Equipment Navy Model DBM-1, Instruction Book, NAVSHIPS 900,587(A), (Oct. 17, 1945). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66141 Vertical Element



Antenna 66141 Horizontal Element

ANTENNA GROUP 66142

MAJOR COMPONENTS: One 66140 antenna, one 211-427A antenna drive unit, and one antenna housing.

FREQUENCY: UHF and SHF bands, 1000 - 5000 mc.

TYPE: Two cut paraboloidal reflectors, each fed by a dipole assembly.

DESCRIPTION: Antenna 66140 consists of two antennas mounted back-to-back. Each antenna is a cut paraboloidal reflector fed by a sleeve dipole with a reflector rod. The two antennas are identical, but the dipole and reflector rod are horizontal in one antenna and vertical in the other. A switch enables the operator to select the proper antenna. The antenna group is 33-3/4 inches high and 28-1/2 inches in diameter. It weighs 124 pounds.

BEAM DATA:
Beam type - Unidirectional.
Polarization - Horizontal and vertical.

SCAN DATA: The antenna rotates in azimuth at a rate between 0 and 150 revolutions per minute. The speed can be varied by the operator.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model DBM-1 Radio and Radar Direction Finding Equipment. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Submarine Signal Co., Boston, Mass., contract NXsr-80024.

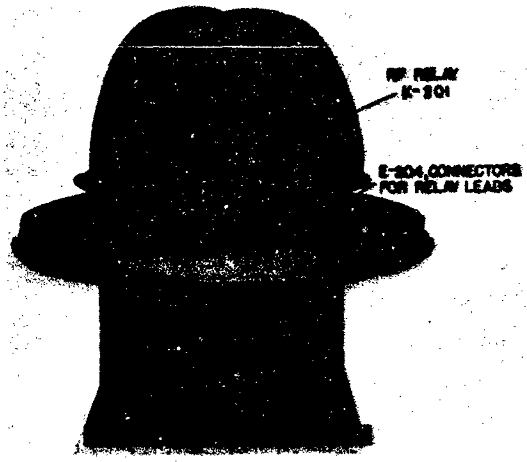
STOCK NUMBER: Federal Stock Number F5985-408-8734 (66142).

REFERENCES:

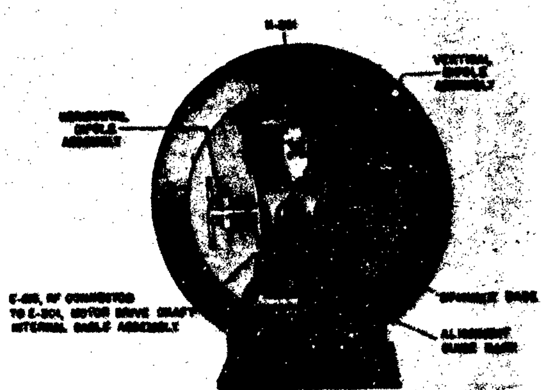
1) U. S. Navy Bureau of Ships, Radar Direction Finder Equipment Navy Model DBM-1, Instruction Book, NAVSHIPS 900,587(A), (Oct. 17, 1945). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66142 Side View



Antenna 66142 Top View

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ANTENNA 66148

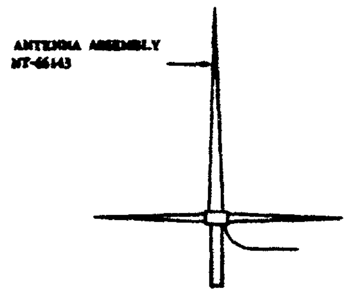
FREQUENCY: VHF band, probably 60 - 80 mc.

TYPE: Ground-plane antenna.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model MBF Radio Transmitting and Receiving Equipment.

STOCK NUMBERS: Navy F16-A-52279-2501, Federal Stock Number N5985-470-7384.



Antenna 66143

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Systems, Shipboard Antenna Details, Chapter 6, NAVSHIPS 900121(A), (Jan. 1, 1959). UNCLASSIFIED.

2) NAVSHIPS 900,590.

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ANTENNA 66145-A

FREQUENCY: MF band, 1.7 - 2.0 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model 60069-B Signal Generator. Equipment function - test.

MANUFACTURER: Midwest Engineering and Development Co.

STOCK NUMBER: Federal Stock Number N5985-254-7125.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Midwest drawing B-101682.

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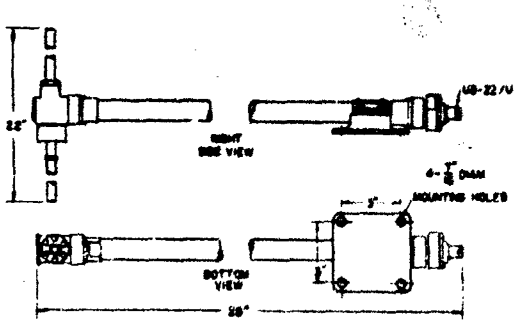
ANTENNA ASSEMBLY 66147

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is an aluminum center-fed dipole weighing 3-1/2 pounds. It is fed by a 50-ohm RG-18/U cable.



Antenna 66147

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models TDZ, RDZ, MAR, RDR, TED, and other similar radio transmitting and receiving equipments. Equipment function - communications.

STOCK NUMBER: Federal Stock Number N5985-254-7162.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) NAVSHIPS 91357.

3) NAVSHIPS 91328.

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ANTENNA 66148(*)

FREQUENCY: VHF band, 100 - 150 mc.

TYPE: Crossed Adcock antenna with sense element.

DESCRIPTION: The antenna consists of two pairs of fixed, crossed, half-wave Adcock antennas, an open-ended vertical sense antenna, and a goniometer assembly. The antenna elements are aluminum. The entire assembly weighs 30 pounds.

BEAM DATA:
Beam type - Without sense, double figure eight; with sense, cardioid.
Polarization - Vertical.

INSTALLATION: Ground and shipboard.

ASSOCIATED EQUIPMENT: Navy Models DBF-1 (66148) and DAZ (66148A) Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: The nomenclature 66148(*) denotes 66148 and 66148A. The 66148A is used with jeep-mounted, mobile equipment.

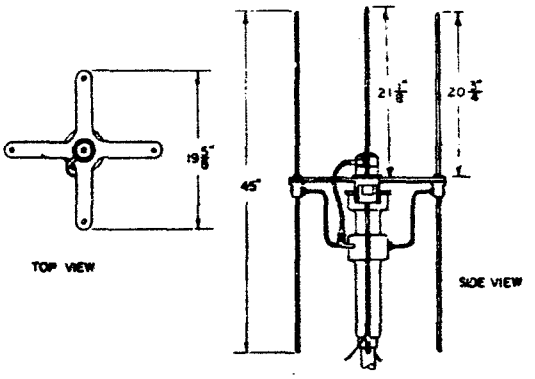
STOCK NUMBER: U. S. Navy F16-A-55186-2387.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

3) NAVSHIPS 900,959.



Antenna 66148

ANTENNA 66157

FREQUENCY: VHF band, 132 - 156 mc.

TYPE: Flat screen reflector with conical dipole feed.

ASSOCIATED EQUIPMENT: Navy Model RBQ-1 Radio Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co., Inc., New York, N. Y., contract NXsr-83392.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) NAVSHIPS 900,621: Instruction Book for Radio Receiving Equipment Navy Model RBQ-1.

Antenna 66157

ANTENNA 66168

FREQUENCY: VHF band, 100 - 160 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model DBF Radio Direction Finding Equipment.

MANUFACTURER: Federal Telephone and Radio Corporation.

STOCK NUMBER: Federal Stock Number N5985-249-4324.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Federal Telephone and Radio drawing NL-46339-PT2 rev. C.

ANTENNA ASSEMBLY 66164

FREQUENCY: LF, MF, and HF bands, 0.25 - 30 mc.

TYPE: Crossed loop antenna with sense element.

DESCRIPTION: The antenna assembly consists of two loops mounted at right angles to each other, a whip-type sense antenna 72 inches long, and a counterpoise of four 72-inch rods mounted 90° apart radially about the base. The antenna, exclusive of the counterpoise, is 18-1/2 inches high and 16-1/2 inches in diameter.

SCAN DATA: The crossed loops rotate in azimuth at 1200 revolutions per minute.

ASSOCIATED EQUIPMENT: Navy Model X-DBH Radio Direction Finding Equipment. Equipment function - direction finding.

MANUFACTURER: Majestic Radio and Television Corporation.

STOCK NUMBER: Federal Stock Number F5985-408-8733.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Majestic drawing 1740D1267.

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ANTENNA 69AAA

FREQUENCY: MF and HF bands, 2 - 15 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a shielded loop, 16 inches in diameter, constructed of copper wire. It is mounted in a cast aluminum housing.

ASSOCIATED EQUIPMENT: Navy Model CXC Equipment.

MANUFACTURER: Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-369-5366.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 69001

FREQUENCY: LF and MF bands, 0.2 - 1.5 mc.

TYPE: Loop.

SCAN DATA: The antenna can be rotated in azimuth.

STOCK NUMBER: Federal Stock Number N5985-369-5356.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 69005

FREQUENCY: VHF and UHF bands, 100 - 1500 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop antenna with a single-wire sense element. The loop is 24 inches in diameter, weighs 14.75 pounds, and is mounted on Pedestal Assembly 69005.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Model DO Radio Direction Finder Equipment. Equipment function - navigation, direction finding.

COGNIZANT AGENCY: U. S. Navy, Bureau of Ships.

MANUFACTURER: Radio Corporation of America, Victor Division, Camden, N. J., contract NOs-31569.

Antenna 69003.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Technical Manual for Model DO Radio Direction Finder Equipment.

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ANTENNA 69006-A

FREQUENCY: LF and MF bands, 0.1 - 1.5 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a pancake-wound loop which mounts on a pedestal.

SCAN DATA: The antenna can be rotated in azimuth.

ASSOCIATED EQUIPMENT: Navy Model DP-4 Radio Direction Finding Equipment. Equipment function - direction finding.

MANUFACTURER: RCA Victor Division of Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-254-7136.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA drawing T-601567-501.

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ANTENNA 69046

FREQUENCY: LF and MF bands, 0.1 - 1.5 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop, with a copper-wire winding, 22-1/2 inches in diameter enclosed in an oval-shaped housing.

BEAM DATA:
Beam type - Figure eight (without sense antenna) or cardioid (with sense antenna).

SCAN DATA: The antenna can be rotated manually in azimuth.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Models DP-9, DP-12, DP-13, DP-18 and DP-19 Direction Finder Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: Reference 1) states that Navy Models DP-12, DP-13, DP-18, and DP-19 are obsolete and are replaced by AN/SRD-6.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Radio Corporation of America, contract NOs-70837.

STOCK NUMBER: Federal Stock Number N5985-408-8621.

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 95086: Instructions for Models DP-12 and DP-13 Radio Direction Finder Equipment.

ANTENNA ASSEMBLY 69074

FREQUENCY: LF and MF bands, 0.24 - 2.00 mc.

TYPE: Loop.

DESCRIPTION: The assembly consists of a loop antenna, a drive unit, an azimuth scale, a handwheel, and a deck bearing. The center-tapped loop is made up of 14 turns of copper wire supported on a bakelite form. The loop is enclosed in a ring of copper tubing with a brass casting to attach the loop to the drive assembly. The assembly weighs 35 pounds.

SCAN DATA: The antenna is rotated in azimuth by a handwheel attached to the lower end of the drive shaft.

INSTALLATION: Shipboard, small craft.

ASSOCIATED EQUIPMENT: Navy Models DAE and DAE-1 Radio Direction Finding Equipment. Equipment function - direction finding.

MISCELLANEOUS: The 69074 is the same as the 69092 except for mounting provisions.

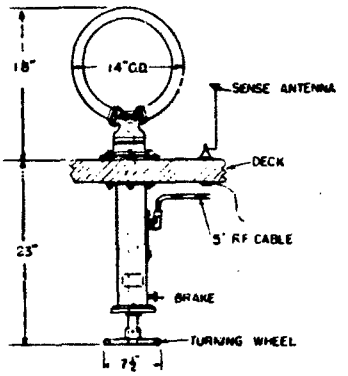
STOCK NUMBER: Federal Stock Number N5985-254-7140.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Instruction Book for Models DAE and DAE-1.



Antenna 69074.

ANTENNA 69077

FREQUENCY: MF and HF bands, 1.5 - 18.2 mc.

TYPE: Loop.

DESCRIPTION: The antenna consists of a one-piece copper loop enclosed in 5/8-inch diameter aluminum tubing. It mounts by three banana plugs to a socket on top of the equipment receiver case.

BEAM DATA:

Beam type - Figure eight (cardioid when used with Antenna 66054).

SCAN DATA: The antenna can be rotated in azimuth.

INSTALLATION: Shipboard and ground, portable.

ASSOCIATED EQUIPMENT: Navy Models DAG, DAG-1, and DAG-2 Radio Direction Finding Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Airplane and Marine Instruments Corporation, Clearfield, Pa., contracts NOs-98284, NYss-19755, and NObsr-44558.

STOCK NUMBER: Federal Stock Number N5985-665-0432.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond, and Brown, Inc., (Oct. 31, 1956). SECRET.

3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

4) NAVSHIPS 95075: Instruction Book for Model DAG Portable Direction Finder Equipment.

5) NAVSHIPS 95076: Instruction Book for Models DAG-1 and DAG-2 Portable Direction Finder Equipment.

ANTENNA 69079

FREQUENCY: LF, MF, and HF bands, 0.08 - 3.50 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop, 16 inches in diameter. It plugs into the top of the equipment receiver case.

INSTALLATION: Shipboard, small wooden-hulled craft.

ASSOCIATED EQUIPMENT: Navy Model DAF Radio Direction Finder Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

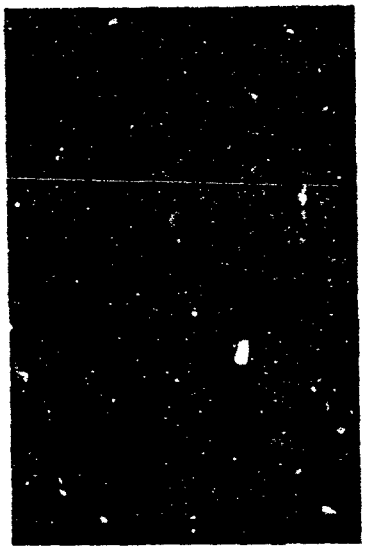
MANUFACTURER: E. M. Sargent Co., Oakland, California contract NOs-99789.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Government Specification EN/28/2359-42/ Ships.

3) NAVSHIPS 900,272: Model DAF Radio Direction Finder Instruction Book.



Antenna 69079

ANTENNA 69083-(*)

FREQUENCY: MF and HF bands, 1.5 - 30.0 mc.

TYPE: Crossed loops with a ground-plane sense antenna.

DESCRIPTION: The antenna consists of two diamond-shaped loops mounted at right angles to each other and a ground-plane antenna made up of a vertical rod and four radial ground rods. The ground-plane antenna is mounted on top of the crossed loops. Each loop is made of a single turn of shielded, coaxial cable supported on a rigid framework of metal tubing.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models DAQ and DAU Radio Direction Finder Equipment. Equipment function - direction finding.

MISCELLANEOUS: The nomenclature 69083(*) denotes 69083, 69083A, and 69083B.

COGNIZANT AGENCY: U. S. Navy, BuShips.

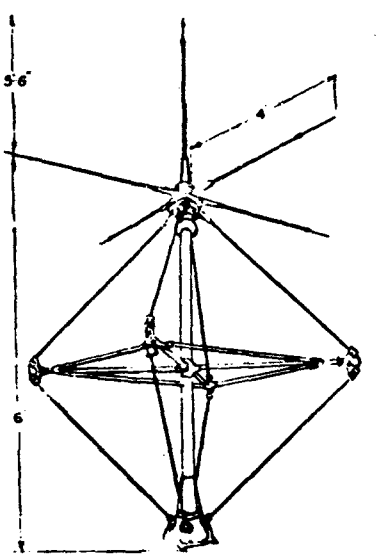
MANUFACTURER: Federal Telephone and Radio Corporation, contracts NXs-11058 and NXsr-41007.

STOCK NUMBERS:

69083 .... Federal Stock Number F5985-408-8726

69083A ... Federal Stock Number F5985-665-0436

69083B ... Federal Stock Number F5985-470-7452



Antenna 69083-B

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

3) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

4) NAVSHIPS 900,907.

5) Federal Telephone and Radio drawings NIA-42737 issue F, NIA-44435-26, and RF-4826-14.

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ANTENNA 69084

FREQUENCY: VHF and UHF bands, 250 - 1500 mc.

TYPE: Crossed loop antenna with a sense element.

DESCRIPTION: The overall antenna assembly is 68-3/4 inches high, 23 inches wide, and 23 inches deep, and the weight is 73 pounds.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models DAK and DAK-1 Radio Direction Finder Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Federal Telephone and Radio Corporation, Newark, N. J., contract NXs-1748.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Prelimary Instruction Book for Model DAK-1 Radio Direction Finding Equipment.

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ANTENNA 69085

FREQUENCY: LF and MF bands, 0.29 - 0.55 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop 15 inches in diameter. It mounts on top of the equipment case.

INSTALLATION: Shipboard, small wooden-hulled craft.

ASSOCIATED EQUIPMENT: Navy Model DAP Radio Direction Finder Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Garod Radio Corp., Brooklyn, N. Y., contract NXs-4522.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) NAVSHIPS 95077: Instruction Book for Navy Model DAP Radio Direction Finder Equipment.

Antenna 69085

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ANTENNA 69089

FREQUENCY: LF and MF bands, 0.25 - 1.50 mc.

TYPE: Crossed loops.

DESCRIPTION: The antenna consists of two loops mounted at right angles to each other. Each loop consists of 5 turns of insulated, stranded, tinned copper wire on a bakelite form. The loops are electrostatically shielded by 3-inch formed aluminum tubing. The loops are insulated from each other and are electrically matched. The antenna has a cast aluminum base.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Navy Models DAK-2 and DAK-3 Radio Direction Finder Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Federal Telephone and Radio Corporation, Newark, N. J., contract NXss-33628.

STOCK NUMBER: Federal Stock Number N5985-254-7141.

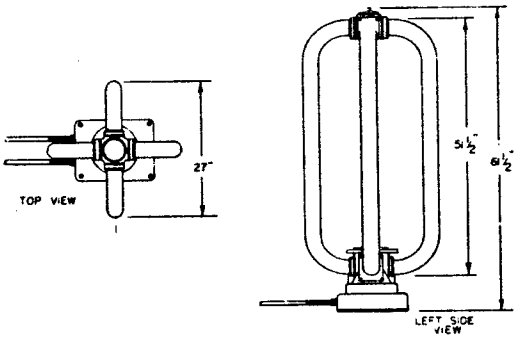
REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 900,277: Instruction Book for Model DAK-2 Radio Direction Finder Equipment.

4) NAVSHIPS 900,264A: Instruction Book for Model DAK-3 Radio Direction Finder Equipment.



Antenna 69089

ANTENNA 69092

FREQUENCY: LF and MF bands, 0.24 - 2.00 mc.

TYPE: Loop.

DESCRIPTION: The assembly consists of a loop antenna, a drive unit, an azimuth scale, a handwheel, and a pedestal. The center-tapped loop consists of 14 turns of copper wire supported on a bakelite form. The loop is enclosed in a ring of copper tubing with a brass casting to attach the loop to the drive assembly. A one-piece steel pedestal with a ball bearing and a deck mounting flange is used to support the loop and house the loop drive shaft.

SCAN DATA: The antenna is rotated in azimuth by a handwheel attached to the lower end of the driveshaft.

INSTALLATION: Shipboard, small craft.

ASSOCIATED EQUIPMENT: Navy Models DAE-2 Radio Direction Finding Equipment. Equipment function - direction finding.

MISCELLANEOUS: The 69092 is the same as the 69074 except for mounting provisions.

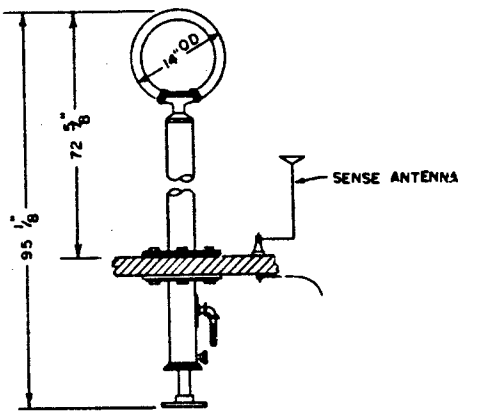
STOCK NUMBER: Federal Stock Number N5985-369-5359.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Instruction Book for Model DAE-2.



Antenna 69092

ANTENNA REFLECTOR A-3A6-W7, Rev 9 (Raytheon Manufacturing Co.)

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is of the parabolic type and is 25 inches in diameter and 5 inches deep. The antenna is mounted by means of four 5/16-inch holes on 2-1/2 by 2-1/2 inch mounting centers.

ASSOCIATED EQUIPMENT: Radar Equipment SO-13.

MANUFACTURER: Raytheon Manufacturing Co.

STOCK NUMBER: Federal Stock Number N5985-295-9797.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA ASSEMBLY A12005 (Operadio Mfg. Co.)

DESCRIPTION: The reference lists the following information: "3 antennas, 5 band frequency range, fixed type; pedestal mounted; mfr Operadio Mfg. Co; P/O Radar Beacon Equipment YQ."

ASSOCIATED EQUIPMENT: Radar Beacon Equipment YQ.

MANUFACTURER: Operadio Manufacturing Company.

STOCK NUMBER: Federal Stock Number F5985-295-9171.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA DF-2076 (Bludworth, Inc.)

FREQUENCY: LF and MF bands, 0.280 - 0.520 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a rotatable loop.

DF-2076, Bludworth, Inc.

BEAM DATA:
Beam type - Figure eight.
Polarization - Vertical.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radio Direction Finder Bludworth Models DF-1011 and DF-1016. Equipment function - direction finding.

COGNIZANT AGENCY: U.S. Army and U.S. Air Force.

MANUFACTURER: Bludworth, Inc.

STOCK NUMBER: Signal Corps 2Z8877.44.

REFERENCE:
Departments of the Air Force and the Army, Radio Direction Finder DF-1011 and DF-1016, Signal Supply Catalog and Fixed Plant Maintenance List, TO 31R4-4-4-2, SIG 10-319, (Feb. 28, 1945). UNCLASSIFIED.

ANTENNA REFLECTOR DL 129L504 GP1 (General Electric Company)

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The antenna is a parabolic-cylinder reflector 180 inches long, 63-1/2 inches wide, and 50-1/2 inches deep.

ASSOCIATED EQUIPMENT: Radar Set AN/APS-8.
Equipment function - height finding.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5985-284-5973.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA F3903 (Harvard University)

FREQUENCY: VHF and UHF bands, 175 - 550 mc; VSWR < 2.

TYPE: Corner reflector.

DESCRIPTION: The antenna consists of a corner reflector with a dipole radiator and a balun. The aperture of the reflector is 40 inches high and 48 inches wide. The antenna is 32 inches deep and weighs 80 pounds. The dipole length, balun, and distance of the dipole from the vertex of the reflector are adjustable in steps to cover the frequency range.

BEAM DATA:
Gain - 12 db above a dipole.
Polarization - Vertical or horizontal depending on mounting position.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/APQ-2 and AN/SPT-4.

MANUFACTURER: Havard University Radio Research Laboratory.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Nov. 1, 1944). UNCLASSIFIED.

ANTENNA M2414 (Harvard Radio Research Laboratories)

FREQUENCY: UHF band, 870 - 3000 mc; VSWR < 5.

TYPE: Biconical antenna.

DESCRIPTION: This is a biconical antenna with the two 60° sheet-metal cones held in place by a plexiglass cylinder. The antenna is supported by a two-foot-long steel tube that mounts on a terminal box. The antenna is 5-5/8 inches long and is normally used for receiving. The supporting tube contains a balun.

BEAM DATA:
Gain - 2 db.
Beam type - Omnidirectional in one plane, figure of eight in one plane.
Polarization - Vertical or horizontal depending on antenna position.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: AN/SPR-1, AN/APR-1, AN/APR-4, and AN/APR-5 receivers. Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

ANTENNA M2909 (Harvard Radio Research Laboratories)

FREQUENCY: UHF band, 790 - 1420 mc.

TYPE: Horn.

DESCRIPTION: The antenna consists of a horn fed by a short section of rectangular waveguide which in turn is fed by RG-18/U coaxial cable. The horn has an overall length, including the waveguide section, of 41 inches, and the aperture is 13 inches by 19-1/2 inches.

BEAM DATA:
Gain - 12.2 db at 300 mc, 16.6 db at 1400 mc.
Half-power beamwidth - E-plane - 54° at 800 mc, 32° at 1400 mc.
H-plane - 46° at 800 mc, 28° at 1400 mc.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on orientation of the horn.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: TDY jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna has been replaced by the M2910 antenna for use with the TDY transmitter.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

ANTENNA M2912 (Harvard Radio Research Laboratories)

FREQUENCY: UHF band, 1375 - 2440 mc; VSWR < 2.

TYPE: Horn.

DESCRIPTION: The antenna consists of a horn fed by a short section of rectangular waveguide which in turn is fed by RG-14/U coaxial cable. The horn has an overall length of 22 inches, and the aperture is 7-1/4 inches by 10-1/2 inches.

BEAM DATA:
Gain - 11.9 db at 1400 mc, 16.9 db at 2500 mc.
Half-power beamwidth (at 1800 mc) -
E-plane - About 45°.
H-plane - About 40°.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on orientation of the antenna.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: AN/APT-9 (AN/SPT-7) jamming transmitter. Equipment function - countermeasures, jamming.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA M2913 (Harvard Radio Research Laboratories)

FREQUENCY: UHF band, 810 - 1385 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna consists of a corner reflector fed by a dipole. The reflector is constructed of sheet metal, and each side is 6 inches wide and 11 inches high. The two sections form an angle of 135°. The dipole is fed by RG-18/U coaxial cable through a type II balun and is 6-11/16 inches long.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°, depending on frequency.
H-plane - 65° to 80°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: AN/APT-9 (Navy AN/SPT-7) jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna is the same as 66AIU antenna except for mounting provisions.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA M2915 (Harvard Radio Research Laboratories)

FREQUENCY: UHF band, 1375 - 2440 mc; VSWR < 2.

TYPE: Horn.

DESCRIPTION: The antenna consists of a horn fed by a short section of rectangular waveguide which in turn is fed by RG-14/U coaxial cable. The horn has an overall length of 22 inches, and the aperture is 7-1/4 inches by 10-1/2 inches.

BEAM DATA:
Gain - 11.9 db at 1400 mc, 16.9 db at 2500 mc.
Half-power beamwidth (at 1800 mc) -
E-plane - About 45°.
H-plane - About 40°.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on orientation of the antenna.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna is the same as M2912 antenna except for mounting provisions.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA ASSEMBLY M4101 (Harvard Radio Research Laboratories)

FREQUENCY: VHF and UHF bands, 200 - 1000 mc.

TYPE: Stub sleeve and V-type sleeve dipole.

DESCRIPTION: The antenna consists of a vertical stub-sleeve antenna and a horizontal V-type sleeve dipole with an included angle of 120 degrees. The two antennas are mounted back-to-back on a circular plate and separated by a sheet metal reflector shaped approximately

like a vertical parabolic cylinder. The vertical antenna is mounted in front of the open end of the parabolic cylinder and the horizontal antenna is mounted directly opposite it at the rear of the cylinder. Both antennas are fed through an antenna selector relay fed by [illegible] coaxial cable. A length of [illegible] cable of impedance matching is inserted between the [illegible] line and the horizontal antenna. The vertical antenna is fed at its base and the horizontal antenna is fed at its center. The assembly weighs 11 pounds and is about 20 inches in diameter and 16 inches in height.

BEAM DATA:
Beam type - The antenna is designed to have a beam pattern which changes with frequency and which is different for the vertical and horizontal antennas. In this way the CRT display of the associated equipment, which is similar to the radiation pattern, characterizes the type of signal being received. A number of typical CRT displays are illustrated following page 17 of the reference listed below.
Polarization - Horizontal and vertical.

SCAN DATA: The assembly rotates at a speed which is variable between 40 and 300 revolutions per minute.

TUNING/MATCHING DEVICES: A length of 90-ohm coaxial cable acts as a matching transformer between the 50-ohm feed cable and the horizontal antenna.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: M-100 Direction Finder (Navy DRM). Equipment function - countermeasures, direction finding.

MISCELLANEOUS: This antenna is similar to Antennas AS-108/APA-17, AS-108A/APA-17, and AS-108B/APA-17 which were also developed by Harvard Radio Research Laboratories.

SPONSORING AGENCY: U. S. Navy.

REFERENCE:
Andrew Alford, et al., Preliminary Investigations for M-100 Direction Finder (Navy - DRM), Report No. 411-TR-54, Cambridge, Mass., Radio Research Laboratory, Harvard University, (Dec. 14, 1944). UNCLASSIFIED.

M-101, Harvard Radio Research Laboratories

ANTENNA ASSEMBLY M-450B (Harvard Radio Research Laboratories)

FREQUENCY: UHF and SHF bands, 1000 - 3000 mc.

TYPE: Two cut paraboloidal reflectors with ground plane, fed by two Yagi arrays.

DESCRIPTION: The antenna assembly consists of two antennas, one vertically polarized and one horizontally polarized, mounted back-to-back on a metal base plate. An r-f relay switches the antennas alternately. Each antenna consists of a cut paraboloidal reflector fed by a two-element Yagi array. The driven elements are fed by coaxial cable through a balun. The antennas are identical except for the polarization of the arrays.

BEAM DATA:
Beam type - Each beam is unidirectional.
Polarization - Vertical and horizontal.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 40 to 300 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: M-100 Direction Finder (Navy DRM). Equipment function - countermeasures, direction finding.

M-450, Harvard Radio Research Laboratories

like a vertical parabolic cylinder. The vertical antenna is mounted in front of the open end of the "parabolic cylinder" and the horizontal antenna is mounted directly opposite it at the rear of the cylinder. Both antennas are fed through an antenna selector relay fed by 50-ohm coaxial cable. A length of 90-ohm cable for impedance matching is inserted between the 50-ohm line and the horizontal antenna. The vertical antenna is fed at its base and the horizontal antenna is fed at its center. The assembly weighs 11 pounds and is about 20 inches in diameter and 16 inches in height.

BEAM DATA:
Beam type - The antenna is designed to have a beam pattern which changes with frequency and which is different for the vertical and horizontal antennas. In this way the CRT display of the associated equipment, which is similar to the radiation pattern, characterizes the type of signal being received. A number of typical CRT displays are illustrated following page 17 of the reference listed below.
Polarization - Horizontal and vertical.

SCAN DATA: The assembly rotates at a speed which is variable between 40 and 300 revolutions per minute.

TUNING/MATCHING DEVICES: A length of 90-ohm coaxial cable acts as a matching transformer between the 50-ohm feed cable and the horizontal antenna.

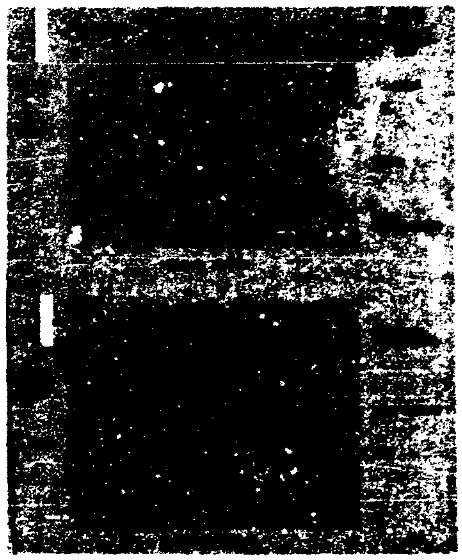
INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: M4100 Direction Finder (Navy DBM). Equipment function - countermeasures, direction finding.

MISCELLANEOUS: This antenna is similar to Antennas AS-108/APA-17, AS-108A/APA-17, and AS-108B/APA-17 which were also developed by Harvard Radio Research Laboratories.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew Alford, et al., Preliminary Instructions for M4100 Direction Finder (Navy - DBM) Report No. 411-IB-54. Cambridge, Mass.: Radio Research Laboratory, Harvard University (Dec. 14, 1944). UNCLASSIFIED.



M4101, Harvard Radio Research Laboratories

ANTENNA ASSEMBLY M4503 (Harvard Radio Research Laboratories)

FREQUENCY: UHF and SHF bands, 1000 - 5000 mc.

TYPE: Two cut paraboloidal reflectors with ground plane, fed by two Yagi arrays.

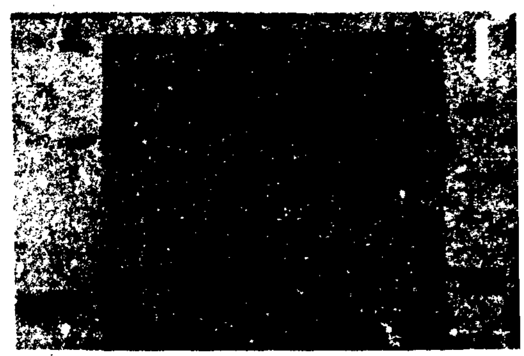
DESCRIPTION: The antenna assembly consists of two antennas, one vertically polarized and one horizontally polarized, mounted bact-to-back on a metal base plate. An r-f relay switches the antennas alternately. Each antenna consists of a cut paraboloidal reflector fed by a two-element Yagi array. The driven elements are fed by coaxial cable through a balun. The antennas are identical except for the polarization of the arrays.

BEAM DATA:
Beam type - Each beam is unidirectional.
Polarization - Vertical and horizontal.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 40 to 300 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: M4100 Direction Finder (Navy DBM). Equipment function - countermeasures, direction finding.



M4503, Harvard Radio Research Laboratories

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew Alford, et al., Preliminary Instructions for M4100 Direction Finder (Navy - DBM), Report No. 411-IB-54. Cambridge, Mass.: Radio Research Laboratory, Harvard University. (Dec. 14, 1944). UNCLASSIFIED.

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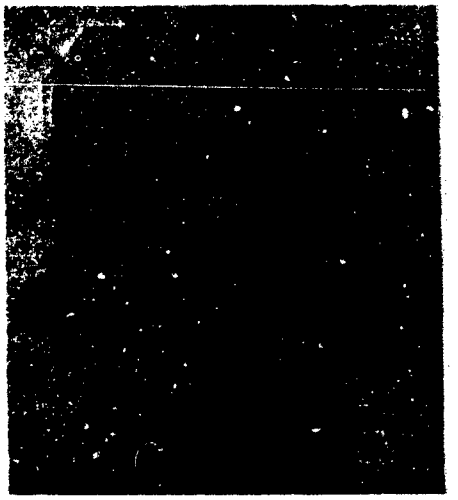
ANTENNA ASSEMBLY M6120 (Harvard Radio Research Laboratories)

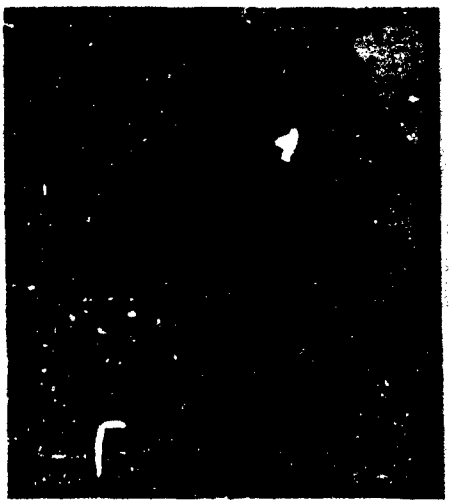
FREQUENCY: VHF and UHF bands, 90 - 1400 mc.

TYPE: Stub-sleeve dipole with reflector and an end-fed V-type dipole with reflector.

DESCRIPTION: The antenna assembly consists of two antennas, one vertically polarized and one horizontally polarized, mounted back-to-back on a metal base plate. An r-f relay alternately switches the receiver from one antenna to the other. The vertical antenna is a stub-sleeve dipole mounted in front of a reflector that provides focusing the the horizontal plane. The horizontal antenna consists of an end-fed V-antenna positioned 4 inches in front of a sheet-metal reflector, Both the V-antenna and reflector have an internal angle of 100°. The reflector is shaped to approximate a parabolic surface in the vertical plane. The dipole elements are 9-7/8 inches in length and 3 inches in diameter. The vertical stub sleeve is approximately 3 inches in diameter and 18-3/8 inches high. The radiating elements of the antenna assembly are constructed of thin-walled brass tubing, and the reflecting surfaces are formed with 0.010-inch stainless-steel sheet metal. Coaxial cable is used to feed both antennas. A type III balun is used to match the horizontally polarized antenna.



M6120 Horizontal Antenna



M6120 Vertical Antenna

BEAM DATA:
Polarization - Vertical and horizontal, alternately.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 40 to 300 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: M4100 Direction Finder (Navy - DBM). Equipment function - countermeasures, direction finding.

MISCELLANEOUS: DBM equipment includes M4503 and M6120 antennas.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
J. D. Kraus, et al., The M6120 Broad-band Antenna Spinner for the M4100 (DBM) Direction Finding System, Report No. 411-233. Cambridge, Mass.: Radio Research Laboratory, Harvard University. (Sept. 8, 1945). UNCLASSIFIED.

• •

ANTENNA M6302 (Harvard Radio Research Laboratories)

FREQUENCY: VHF and UHF bands, 275 - 325 mc; VSWR < 2.

TYPE: Stub-sleeve antenna.

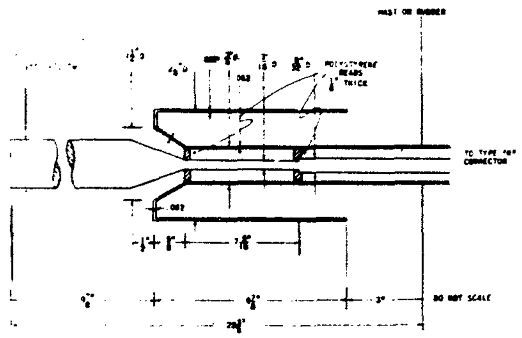
DESCRIPTION: The antenna is 19-3/4 inches long, The inner conductor expands to a diameter of 1 inch and the sleeve is 2-1/4 inches in diameter.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Shipboard and airborne.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
J. A. Nelson, M6302 Skirted-stub Antenna, Report No. 411-120. Cambridge, Mass.: Radio Research Laboratory, Harvard University. (Sept. 28, 1945). UNCLASSIFIED.



M6302, Harvard Radio Research Laboratories

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ANTENNA M6700 (Harvard Radio Research Laboratories)

FREQUENCY: SHF band, 5000 - 12,000 mc; VSWR < 1.7.

TYPE: Parabolic-cylinder reflector with a horn feed.

DESCRIPTION: The antenna consists of a rotating parabolic-cylinder reflector positioned at an angle of 45° above a stationary circularly polarized horn. The horn is fed by a waveguide through a transition section and a phasing section.
The inside of the horn is 1-7/16 inches square. The antenna is equipped with a radome and has overall dimensions of 30 inches in height and 15 inches in diameter.

BEAM DATA:
Half-power beamwidth - Vertical - 30°.
Horizontal - 5°.
Beam type - Fan.
Polarization - Circular.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at a maximum speed of 400 revolutions per minute.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Direction Finders DBM and DBM-1. Equipment function - probably countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
G. Stavis, M6700 Shipborne DF Antenna, Report No. 411-243. Cambridge, Mass.: Radio Research Laboratory, Harvard University. (Sept. 11, 1945). UNCLASSIFIED.

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ANTENNA M9001 (Harvard Radio Research Laboratories)

FREQUENCY: UHF and SHF bands, 2100 - 4000 mc.

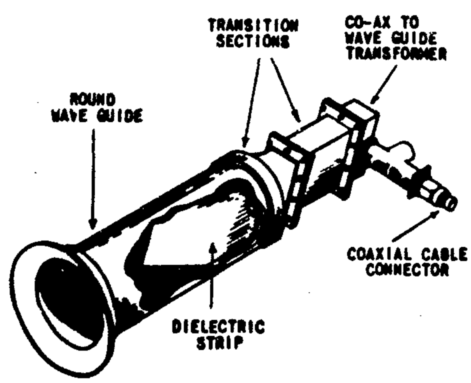
TYPE: Horn.

DESCRIPTION: The antenna consists of a circular horn fed through a section of circular waveguide by a probe-excited rectangular waveguide. A transition section is included between the circular and rectangular sections of waveguide, and a dielectric strip within the circular waveguide is used to produce circular polarization.

BEAM DATA:
Half-power beamwidth - 40°.
Beam type - Conical.
Polarization - Circular.

INSTALLATION: Shipboard and airborne.

REFERENCE:
R. M. Hatch and C. C. Loomis, Circularly Polarized Search Antennas for the Band 2100 to 4000 mc, Report No. 411-283. Cambridge, Mass.: Radio Research Laboratory, Harvard University. (Oct. 31, 1945). UNCLASSIFIED.



M9001, Harvard Radio Research Laboratories

ANTENNA OR200789 Change E (Bendix)

TYPE: Cut paraboloidal reflector.

DESCRIPTION: The antenna is an aluminum cut paraboloidal reflector 29 inches long by 61-1/4 inches wide by 20-1/2 inches high. It has four 0.257-inch mounting holes on 7.547-inch by 4.312-inch mounting centers.

INSTALLATION: Shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPN-8 and AN/SPN-8A. Equipment function - navigation.

MANUFACTURER: Bendix Radio Div., Bendix Aviation Corp.

STOCK NUMBER: Federal Stock Number N5985-049-8327.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 519E467G1 (General Electric Company)

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is an aluminum paraboloidal reflector, 15-9/16 inches long by 6-3/8 inches wide by 42-1/4 inches high.

ASSOCIATED EQUIPMENT: Navy Model SP-6 Radar Equipment. Equipment function - search.

MANUFACTURER: General Electric Company.

STOCK NUMBER: Federal Stock Number F5985-351-2380.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

INDEX

Nomenclatures and stock numbers are ordered in a left-justified alpha-numeric arrangement as explained in the preface. In addition, certain keys are employed to aid identification. An asterisk preceding an antenna nomenclature denotes a manufacturer's designation. A single dot denotes an unnomenclatured antenna that has been named, either by the developing agency or by one of the catalogers. Sometimes these names were too long to fit in the space allotted on the IBM cards. In these cases, the names were abbreviated and do not exactly correspond to the names appearing in the text. However, no difficulty in matching should be encountered. Two dots preceding a nomenclature indicate that it applies to the associated equipment rather than the antenna. In the indexes antenna designations containing these keys are listed ahead of the JAN antenna nomenclatures.

ANTENNA TYPE INDEX

Adcock

AS-410(*)/URD-2 ..... VHF
AS-514/URD-4(+1) ..... VHF, UHF
AS-658/BRD-5 ..... VHF, UHF
66128 ..... VHF
66148(*) ..... VHF

Amplitude Modulating

AS-1075/SRN-6 ..... UHF
AS-677/URN-3 ..... UHF
AS-678/URN-3 ..... UHF
AS-889/SRN-6 ..... UHF
AS-890/SRN-6 ..... UHF
AS-891/URN ..... UHF
AS-892/URN ..... UHF
OA-553/URN-3 ..... UHF
OA-554/URN-3 ..... UHF

Broadside Array

66AAS ..... SHF
66AHY ..... SHF

Conregration

AS-1012/SPG-55 ..... SHF

Collinear Array

AS-505(*)/GR ..... VHF, UHF
AS-82(*)/APQ-7 ..... SHF
AS-925/SPS-96 .....
AT-948/U ..... UHF
66AHG ..... VHF
66ALN ..... UHF
66AMV-(*) ..... UHF

Control

*M2414 ..... UHF
AS-124/APR ..... VHF, UHF
AS-371(*)/S ..... UHF, SHF
AS-501(1)/SPN ..... SHF
AS-522(*)/BPX ..... UHF
AS-523/BPX-(1) ..... VHF, UHF
AS-526/BPX-(1) ..... VHF, UHF
AS-525/BPX-(1) ..... VHF, UHF
AS-777/URN-3 ..... UHF
AT-522/URM-42 ..... UHF
OA-878(*)/URN-3 ..... UHF
66AGZ-(*) ..... VHF, UHF
66AMB ..... UHF, SHF
66131 ..... UHF, SHF

Corner Reflector

*MARK 6 CORNER ..... VHF
*F3903 ..... VHF, UHF
AS-1068/SPA-92 ..... VHF
AS-1491(1)/SPT-6 ..... UHF
AS-236(*)/SPT ..... UHF
AS-263/UPT ..... VHF, UHF
AS-49/TPT-1 ..... VHF
AS-668/SR ..... VHF, UHF
AS-71/SPT-2 ..... UHF
AS-932/SPS-17A ..... VHF
AS-933/SP ..... VHF, UHF
AT-946(1)/SPX-9 ..... SHF
66AJR ..... UHF
66AJX ..... VHF, UHF
66AJY ..... UHF
66AKD ..... VHF
66AKE ..... VHF
66AKL ..... VHF
66AKM ..... VHF, UHF
66ALN ..... UHF
66ALR ..... VHF, UHF
66ALS ..... VHF, UHF
66ALT ..... UHF
66ALU ..... UHF
66AMV-(*) ..... UHF

Cut Paraboloidal Reflector

*AN/SPS-16(XN-1) ..... UHF
*AN/SPS-95 ..... SHF

Cut Paraboloidal Reflector (continued)

*M4503 ..... UHF, SHF
*OR200789 CHANGE E .....
AS-1066/SPS-46 ..... SHF
AS-1067/SPS-46X ..... SHF
AS-402(1)/SPS-6 ..... UHF
AS-404/SPN-4 ..... SHF
AS-429(*)/SPS-6A ..... UHF
AS-430(*)/SPS-6B ..... UHF
AS-444/SPN-5 ..... SHF
AS-484(*)/SPS-8 ..... SHF
AS-508/SPS-4 ..... SHF
AS-511(1)/SPS-5 ..... SHF
AS-594(1)/BPS-4 ..... SHF
AS-603/SPS-12 ..... UHF
AS-710/SPS-21 ..... SHF
AS-762/MPN-5 ..... SHF
AS-763/MPN-5 ..... SHF
AS-764/MPN-5 ..... UHF
AS-765/MPN-5 ..... UHF
AS-828(*)/SPS ..... SHF
AT-262/MPN-5+(1) ..... SHF
AT-263/MPN-5+(1) ..... SHF
AT-265/MPN-5+(1) ..... UHF
66AAP ..... UHF, SHF
66AAQ ..... UHF, SHF
66ABJ-(*) ..... SHF
66ABO ..... UHF, SHF
66ABU .....
66ADM ..... SHF
66ADJ ..... SHF
66AEP-(*) ..... UHF
66AFC ..... UHF, SHF
66AFK-(*) .....
66AFL ..... UHF, SHF
66AFM ..... UHF, SHF
66AFN ..... UHF, SHF
66AFV .....
66AGD ..... UHF, SHF
66AGE ..... UHF, SHF
66AGF ..... SHF
66AGK ..... UHF, SHF
66AGN ..... UHF, SHF
66AGO ..... UHF, SHF
66AGS ..... SHF
66AGT ..... SHF
66AHU ..... SHF
66AJC .....
66AJP ..... SHF
66AJV-(*) ..... SHF
66AKA ..... UHF
66AKW ..... SHF
66AKY-(*) ..... SHF
66AKZ ..... SHF
66ALA ..... VHF
66ALB ..... VHF
66ALM ..... UHF, SHF
66ALT ..... SHF
66AMP ..... SHF
66AMQ-(*) ..... SHF
66AMR ..... SHF
66AMS ..... SHF
66ANJ ..... VHF, UHF, SHF
66109 ..... UHF
66110 ..... UHF
66111 ..... VHF
66112 ..... VHF
66113 ..... UHF
66114 ..... UHF
66115 ..... VHF
66116 ..... UHF
66117 ..... UHF
66136 ..... VHF, UHF
66137 ..... UHF, SHF
66139 ..... VHF, UHF
66140 ..... UHF, SHF
66141 ..... VHF, UHF
66142 ..... UHF, SHF

Cusler

AS-919(1)/SPG ..... SHF
66AMY-(*) ..... SHF

Loop (continued)

Mattress

Monopole

Parabolic-Cylinder Reflector

Paraboloidal Reflector

Paraboloidal Reflector (continued)

Parasitic Array

Pillbox

Probe

Rod

Sleeve Dipole

Slot

Stacked Array

ANTENNA TYPE INDEX (continued)

ASSOCIATED EQUIPMENT INDEX

ASSOCIATED EQUIPMENT INDEX (continued)

EQUIPMENT FUNCTION INDEX

Approach Control

Beacon

Bombing

Communications

Communications (continued)

Countermeasures

Countermeasures, Deception

Countermeasures, Direction Finding

Countermeasures, Jamming

Countermeasures, Jamming (continued)

66AJT
66AJX ... VHF, UHF
66AJY ... UHF
66AKG ... UHF, SHF
66AKJ ... VHF
66AKL ... VHF
66AKM ... VHF, UHF
66ALE ... UHF, SHF
66ALQ ... VHF
66ALR ... VHF, UHF
66ALS ... VHF, UHF
66ALT ... UHF
66ALU ... UHF

Countermeasures, Monitoring

*M2414 ... UHF
AS-371(*)/S ... UHF, SHF
AT-477/U ... HF, VHF
AT-693/BLR ... VHF, UHF
66ALE ... UHF, SHF
66ALK ... UHF, SHF
66042 ... VHF
66049 ... VHF
66132-(*) ... VHF, UHF

Countermeasures, Search

AS-124/APR ... VHF, UHF
AS-393(*)/BLR ... UHF, SHF
AS-56/SPR-1 ... VHF
AS-57/SPR-1 ... VHF, UHF
66132-(*) ... VHF, UHF

Direction Finding

*DF-2076 ... LF, MF
AS-410(*)/URD-2 ... VHF
AS-614/SRD-9 ... VHF, UHF
AS-658/BRD-3 ... VHF, UHF
AS-714/SRD-7 ... LF, MF, HF
AT-193(*)/U ... VHF
AT-422()/URD-1X+() ... LF, MF
AT-557/SMD-1A ... UHF
AT-627/SRD-12 ... LF, MF, HF
AT-628/SRD-12 ... LF, MF, HF
66ALX
66ALY
66093 ... LF, MF
6616A ... LF, MF, HF
69006-A ... LF, MF
69074 ... LF, MF
69077 ... MF, HF
69079 ... LF, MF, HF
69083(*) ... MF, HF
6908A ... VHF, UHF
69085 ... LF, MF
69089 ... LF, MF
69092 ... LF, MF

Fire Control

•MARK 4, MOD 1
••FC ... UHF
••MARK 19 ... VHF, UHF
••MARK 25, MOD 6A ... SHF
••MARK 3 ... UHF
AS-515()/SPG ... SHF
AS-782/SPG-49 ... SHF
AT-194()/SPG ... SHF
AT-276/SPG
AT-636/SPG-49 ... SHF
MARK 18, MOD 0
MARK 21•MOD 1•UNIT 1A ... SHF
MARK 22•MOD 0•UNIT 1D ... SHF
MARK 23•MOD 0•UNIT 1G ... SHF
RF-60/SPG-49
66AAA ... UHF
66AAM ... UHF
66AAN ... UHF
66AAP ... UHF, SHF
66AAQ ... UHF, SHF
66AAS ... SHF
66ACM ... UHF
66ADM ... SHF

Fire Control (continued)

66AFA
66AFB
66AFC ... UHF, SHF
66AFD ... SHF
66AFF ... UHF
66AFS
66AFV
66AGK ... UHF, SHF
66AGM ... UHF
66AGT ... SHF
66AHP ... UHF
66AHQ-(*) ... UHF
66AHU ... SHF
66AHW ... UHF
66AHY ... SHF
66AHZ ... SHF
66AJC
66AJJ ... SHF
66AJQ
66AJS ... SHF
66AJU
66AKE ... VHF
66AKK
66AKU ... SHF
66AKW ... SHF
66AKX-(*) ... SHF
66AKY
66ALC ... VHF
66ALD
66AMC
66AMF
66AMK ... SHF
66AMY-(*) ... SHF
66AND ... SHF

Guidance

AS-1011/SPG-55 ... SHF
AS-1012/SPG-55 ... SHF

Guidance, Beamrider

••MARK 25, MOD 6A ... SHF
MARK 21•MOD 1•UNIT 1A ... SHF
MARK 22•MOD 0•UNIT 1D ... SHF
MARK 23•MOD 0•UNIT 1G ... SHF

Height Finding

*DL129L506GP1
AS-484(*)/SPS-8 ... SHF
AS-828(*)/SPS ... SHF
66ALH ... UHF, SHF
66ANF
66ANJ ... VHF, UHF, SHF

IFF ("Identification, friend or foe")

••AN/SPS-16(XN-1) ... UHF
AN/UPA-22(*) ... UHF
AN/UPA-23(*) ... UHF
AS-1014/B ... MF, HF, UHF
AS-1065/UPX+() ... UHF
AS-429(*)/SPS-6A ... UHF
AS-522(*)/BPX ... UHF
AS-523/BPX+() ... VHF, UHF
AS-524/BPX+() ... VHF, UHF
AS-525/BPX+() ... VHF, UHF
AS-594()/SPS-4 ... SHF
AS-615/SPS-10 ... UHF, SHF
AS-904()/UPX ... UHF
AS-905/UPX ... UHF
AS-936/SPS-10 ... UHF, SHF
AS-949/BPX ... MF, HF, VHF, UHF
AT-352/UPA-22(*) ... UHF
AT-946()/SPX-9 ... SHF
MARK 18, MOD 0
66AAB
66AAC
66AAD
66AAM
66ABG
66ABM

IFF ("Identification, friend or foe") (continued)

66ACF.....VHF
66ACG.....VHF
66ADA.....
66ADS.....VHF
66AET-(*).....VHF
66AEU-(*).....VHF
66AEZ-(*).....UHF
66AFJ.....VHF
66AFQ-(*).....UHF
66AFU-(*).....VHF
66AGH.....VHF
66AGJ.....VHF
66AGL.....
66AGW.....VHF
66AGX.....VHF
66AHA.....UHF
66AHG.....VHF
66AHM.....
66AHJ.....
66AHL.....VHF
66AJE.....VHF
66AJF.....VHF
66AJH.....
66AKN.....
66AKO.....UHF
66AMD.....
66AME.....
66AMW.....
66AMJ.....VHF,UHF,SHF

Meteorological Measurement

AS-389/FMQ-2.....UHF
AS-476/SMD.....UHF
AS-750/SMD-1A.....UHF
66050.....VHF

Navigation

*OR200789 CHANGE E.....
AS-221/CPN-17.....SHF
AS-404/SPN-4.....SHF
AS-444/SPN-5.....SHF
AS-500/BPN.....SHF
AS-601/SPN-13.....SHF
66ADG.....

Navigation, Direction Finding

AS-514/URD-4+( ).....VHF,UHF
AS-659/SPN-18.....SHF
AT-236( )/GRD.....VHF
69003.....VHF

Navigation, Surface Reference

AS-118/CPN-6.....SHF
AS-502/TPN+( ).....SHF
AS-677/URN-3.....UHF
AS-678/URN-3.....UHF
AS-777/URN-3.....UHF
AS-889/SRN-6.....UHF
AS-890/SRN-6.....UHF
AS-891/URN.....UHF
AS-892/URN.....UHF
MK-89/URN-5.....MF
OA-553/URN-3.....UHF
OA-554/URN-3.....UHF
OA-878(*)/URN-3.....UHF
66AJK.....VHF,UHF
66AJL.....VHF,UHF
66AKM.....UHF
66036.....VHF
66037.....VHF
66088.....VHF

Radar Beacon

AS-501( )/SPN.....SHF
66ABS.....VHF

Remote Control

AS-149/TRT-1.....HF,VHF
AS-240/TRR-2.....HF,VHF

Search

*MARK III.....SHF
**AN/SPS-16(XN-1).....UHF
*519E467G1.....
AS-1002/SPS-5C.....SHF
AS-1066/SPS-46.....SHF
AS-1067/SPS-46X.....SHF
AS-651/SPS-5B.....SHF
AS-710/SPS-21.....SHF
AS-744/SPS-23.....SHF
AS-745/SPS-23X.....SHF
AS-746/SPS-23Y.....SHF
AS-747/SPS-23Z.....SHF
AS-748/SPS-23XX.....SHF
AS-932/SPS-17A.....VHF
AS-996/BPS-9A.....SHF
66AAG.....
66AAQ.....UHF,SHF
66AAY.....VHF
66AAZ.....VHF
66ABA.....VHF
66ABB.....VHF
66ABC.....VHF
66ABD.....VHF
66ABE.....VHF
66ABF.....VHF
66ABO.....UHF,SHF
66ABQ.....VHF
66ABR.....VHF
66ACB.....VHF
66ACC.....VHF
66ACD.....VHF
66ACE.....VHF
66ADB.....
66ADC.....
66ADI.....ShF
66ADJ.....SHF
66ADN.....
66ADR.....
66AEQ.....
66AER.....
66AES.....
66AEW.....VHF
66AEZ-(*).....UHF
66AFC.....UHF,SHF
66AFD.....SHF
66AFE.....
66AFG.....
66AFK-(*).....
66AFL.....UHF,SHF
66AFM.....UHF,SHF
66AFP.....
66AFQ-(*).....UHF
66AFP.....VHF
66AFT-(*).....UHF,SHF
66AGF.....UHF,SHF
66AGQ.....UHF,SHF
66AGR-(*).....
66AGU-(*).....UHF,SHF
66AGW.....VHF
66AGX.....VHF
66AHA.....UHF
66AHR.....
66AHS.....
66AKD.....VHF
66AKP.....SHF
66AKT.....
66ALF.....
66ALG.....
66ALM.....UHF,SHF
66AML.....
66AMZ.....

Search, Air

**MARK 25, MOD 6A.....SHF
AS-402(*)/SPS-6.....UHF
AS-429(*)/SPS-6A.....UHF

EQUIPMENT FUNCTION INDEX (continued)

Search, Air (continued)

AS-430(*)/SPS-68 ..... UHF
AS-508/SPS-4 ..... SHF
AS-511(*)/SPS-5 ..... SHF
AS-594(*)/SPS-4 ..... SHF
AS-603/SPS-12 ..... UHF
AS-695/SPS ..... SHF
AS-696/SPS ..... SHF
AS-828(*)/SPS ..... SHF
MARK 21,MOD 1,UNIT 1A ..... SHF
MARK 22,MOD 0,UNIT 1D ..... SHF
MARK 23,MOD 0,UNIT 1G ..... SHF
OA-2653/UPS-1 .....
66AAJ ..... VHF
66AAK ..... VHF
66ABH ..... VHF
66AET-(*) ..... VHF
66AEU-(*) ..... VHF
66AGP ..... UHF,SHF
66AHE ..... VHF
66AHF ..... VHF
66AJE ..... VHF
66AJF ..... VHF
66AJV-(*) ..... SHF
66AJZ ..... VHF
66AKB ..... UHF
66AKC .....
66AKW ..... SHF
66AKX-(*) ..... SHF
66AKZ ..... SHF
66ALA ..... VHF
66ALB ..... VHF
66ALN ..... UHF
66AMQ-(*) ..... SHF
66AMV-(*) ..... UHF
66ANJ ..... VHF,UHF,SHF

Search, Surface

..AN/SPS-35 ..... SHF
AS-1004/SPS-41 ..... SHF
AS-508/SPS-4 ..... SHF
AS-511(*)/SPS-5 ..... SHF
AS-594(*)/SPS-4 ..... SHF
AS-599(*)/SPN-11(*) ..... SHF
AS-615/SPS-10 ..... UHF,SHF
AS-659/SPN-18 ..... SHF
AS-695/SPS .....
AS-696/SPS ..... SHF
AS-826/SPN-22 ..... SHF
AS-828(*)/SPS ..... SHF
AS-923/SPS-35 ..... SHF
AS-925/SPS-36 .....
AS-936/SPS-10B ..... UHF,SHF
66ABJ-(*) ..... SHF
66ABU .....
66ADK ..... SHF
66AEP-(*) ..... UHF
66AEX ..... SHF
66AFM ..... UHF,SHF
66AGD ..... UHF,SHF
66AGF ..... SHF
66AGK ..... UHF,SHF
66AGN ..... UHF,SHF
66AGO ..... UHF,SHF
66AGS ..... SHF
66AGY-(*) ..... SHF
66AHP ..... UHF
66AHQ-(*) ..... UHF
66AHU ..... SHF
66AJP ..... SHF
66AKW ..... SHF
66AKX-(*) ..... SHF
66ALN ..... UHF
66ALZ ..... SHF
66AMP ..... SHF
66AMQ-(*) ..... SHF
66AMR ..... SHF
66AMS ..... SHF
66AMV-(*) ..... UHF

Telemetering

AS-979/UKR ..... VHF
AT-165(*)/UKR ..... VHF
AT-373/UKR ..... VHF

Test

AB-371/U ..... VHF,UHF
AN/SRA-3 ..... HF,VHF
AS-23/AP ..... UHF,SHF
AS-377/U(*) ..... MF
AS-71/SPT-2 ..... UHF
AT-151/UPT ..... SHF
AT-163/U ..... UHF,SHF
AT-252/SR ..... HF,VHF
AT-437(*)/SPS-12 ..... UHF
AT-48/UP ..... SHF
AT-50/U ..... VHF
AT-51/U ..... UHF
AT-521/URM-42 ..... SHF
AT-522/URM-42 ..... UHF
AT-592/URM-3 ..... UHF
AT-894/URM-117 ..... VHF
62ABJ ..... VHF,UHF
66ABL ..... UHF
66ADQ .....
66AHK ..... VHF
66ALQ ..... UHF
66ALV ..... VHF,UHF
66D82 ..... LF,MF
66145-A ..... MF

Tracking

66AJV-(*) ..... SHF

Training

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66ADC .....

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(Megacycles)

VLF

VF

VF (continued)

[redacted]

VF (continued)

MF

HF

HF (continued)

VHF

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VHF (continued)

111-117	66AAR-(*)
115-156	AS-5011/UR
115-156	66091
120-190	AN/URC-4
132-156	66026
132-156	66157
135-	66ABX
135-	66095
140-210	AS-50/TPT-1
145-310	66ALR
146-275	66AKL
157-187	66ACF
157-187	66ACG
157-187	66AFJ
157-187	66AFU-(*)
157-187	66AKD
157-187	66AKE
157-187	66ANJ
158-175	66ALC
162.25-173.5	AT-894/URM-117
170-180	AT-50/U
170-180	66ABS
171-182.5	66AJK
171-182.5	66AJL
175-185	66AAY
175-185	66ABC
175-185	66ACB
175-205	66AHF
175-225	66AAJ
175-225	66AAK
175-225	66ABQ
175-225	66AHG
175-225	66AHK
175-225	66AHL
175-350	66AJM
175-550	*F3903
175-550	AS-263/UPT
175-770	66AGZ-(*)
177-187	66ABH
177-187	66ABR
185-195	66AAZ
185-195	66ABD
185-195	66ACC
195-205	66ABA
195-205	66ABE
195-205	66ACD
195-205	66AET-(*)
195-205	66AGX
195-205	66AJE
195-205	66ALB
200-250	66036
200-1000	*M4101
205-215	66AJZ
212.5-222.5	66AFR
215-225	AS-1068/SPA-52
215-225	AS-932/SPS-17A
215-225	66ABB
215-225	66ABF
215-225	66ACE
215-225	66AEU-(*)
215-225	66AEW
215-225	66AHE
215-225	66AJF
215-225	66ALA
215-290	AT-373/UKR
215-295	AT-165(*)/UKR
220-400	AS-390(*)/SRC
220-400	AS-668/SR
220-570	AT-150(*)/SRC
225-260	AS-979/UKR
225-390	AS-372/BRC
225-390	AS-468()/B
225-390	AS-493/U
225-390	AS-523/BPX+()
225-390	AS-525/BPX+()
225-390	AS-725/S+()
225-399.9	AS-514/URD-4+()
225-400	AS-1018()/URC
225-400	AS-505(*)/GR
225-400	AS-614/SRD-9
225-400	AS-658/BRD-3
225-400	AS-933/SR
225-400	AS-997/SRC
225-400	AT-458/SR
225-400	AT-629/SRC
225-400	66147
225-1000	AS-57/SPR-1
230-263	AN/URC-11
240-260	AN/URC-4
241-251	66037
241-251	66089
250-1500	69084
264-372	66ALM
265-530	66AKM
265-530	66ALS
270-3000	AS-124/APR
275-325	*M6302
275-500	66AJX
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	AS-1014/B
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15-600	AT-924/SR
30-1000	AT-365(*)/BL
30-1000	AT-693/BLR
70-400	66132-(*)
70-1000	66AAX
85-400	AB-371/U
90-850	62ABJ
90-1200	66136
90-1200	66139
90-1200	66141
90-1400	*M6120
100-1000	66AGO-1
100-1200	66ALV
100-1500	69003
145-310	66ALR
175-350	66AJM
175-550	*F3903
175-550	AS-263/UPT
175-770	66AGZ-(*)
200-1000	*M4101
220-400	AS-390(*)/SRC
220-400	AS-668/SR
220-570	AT-150(*)/SRC
225-390	AS-372/BRC
225-390	AS-468()/B
225-390	AS-493/U
225-390	AS-523/BPX+()
225-390	AS-525/BPX+()
225-390	AS-725/S+()
225-399.9	AS-514/URD-4+()
225-400	AS-1018()/URC
225-400	AS-505(*)/CR
225-400	AS-614/SRD-9
225-400	AS-658/BRD-3
225-400	AS-933/SR
225-400	AS-997/SRC
225-400	AT-458/SR
225-400	AT-629/SRC
225-400	66147
225-1000	AS-57/SPR-1
250-1500	69084
264-372	66ALM
265-530	66AKM
265-530	66ALS
270-3000	AS-124/APR
275-325	*M6302
275-500	66AJX
300-	MARK 19
300-310	66121
300-310	66122
300-1000	66109
300-1000	66110
300-1000	66116
300-3300	66131
300-4000	AT-522/URM-42
340-400	AS-37/SPT-4
345-700	66AJA
340-615	66AHM
350-1500	AS-236(*)/SPT
390-410	AS-389/FMQ-2
390-410	AT-775/SMQ-1
390-465	66AAN
400-500	AT-945/U
445-820	66ALT
450-720	AS-71/SPT-2
465-510	AS-493/U

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500-820 ..... AT-51/U
500-700 ..... 66AAA
500-850 ..... 66AJY
505-535 ..... 66AJK
505-535 ..... 66AJL
510-725 ..... 66AGM
510-725 ..... 66AHW
550-660 ..... 66AKB
600- 66ACH
615-800 ..... 66AHM
625-1250 ..... AS-145(*)/SPT-6
645-800 ..... 66AJB
680-720 ..... FC
680-720 ..... MAR 2
680-720 ..... 66AAH
680-720 ..... 66ABL
680-720 ..... 66AKC
790-1420 ..... *M2909
800-3800 ..... 66AMB
810-1385 ..... 66ALU
850-1250 ..... 66AJR
870-3000 ..... *M2414
920-970 ..... 66AFF
950-1150 ..... AS-429(*)/SPS-6A
950-1200 ..... AS-949/BPX
950-1350 ..... AS-402(*)/SPS-6
950-1350 ..... AS-430(*)/SPS-6B
960-1050 ..... AS-522(*)/BPX
960-1050 ..... AS-523/BPX+(*)
960-1050 ..... AS-524/BPX+(*)
960-1050 ..... AS-525/BPX+(*)
960-1087 ..... AS-1075/SRN-6
960-1250 ..... AT-592/URN-3
961.5-1087.5 ..... AS-777/URN-3
961.5-1087.5 ..... OA-878(*)/URN-3
962-1024 ..... AS-889/SRN-6
962-1024 ..... AS-891/URN
962-1087 ..... AS-677/URN-3
962-1087 ..... OA-553/URN-3
965-1060 ..... AS-1014/B
970-1150 ..... AS-1065/UPX+(*)
1000-1120 ..... AT-388/SPS-12
1000-3000 ..... 66AMA
1000-3000 66113
1000-3000 66114
1000-3000 66117
1000-4000 ..... AS-371(*)/S
1000-5000 ..... *M4503
1000-5000 66137
1000-5000 66140
1000-5000 66142
1001.5-1038.5 ..... AS-615/SPS-10
1001.5-1038.5 ..... AS-936/SPS-10B
1010-1110 ..... AN/UPA-22(*)
1010-1110 ..... AN/UPA-23(*)
1010-1110 ..... AS-904(*)/UPX
1010-1110 ..... AS-905/UPX
1081.5-1118.5 ..... AS-615/SPS-10
1081.5-1118.5 ..... AS-936/SPS-10B
1088-1213 ..... AS-678/URN-3
1088-1213 ..... OA-554/URN-3
1151-1213 ..... AS-890/SRN-6
1151-1213 ..... AS-892/URN
1220-1380 ..... 66ALQ
1244-1350 ..... 66ALN
1244-1350 ..... 66AMV-(*)
1250-1350 ..... AN/SPS-16(XN-1)
1250-1350 ..... AS-429(*)/SPS-6A
1250-1350 ..... AS-603/SPS-12
1250-1350 ..... AT-437(*)/SPS-12
1375-2440 ..... *M2912
1375-2440 ..... *M2915
1500- AN/SPN-2
1550-5200 ..... AS-23/AP
1600-1700 ..... AT-557/SMD-1A
1650-5200 ..... AT-163/U
1660-1700 ..... AS-476/SMD
1660-1700 ..... AS-750/SMD-1A
1800-3600 ..... AS-993(*)/BLR
2100-4000 ..... *M9001
2500-3500 ..... 66ALE
2700-2900 ..... 66AEZ-(*)
2700-2900 ..... 66AFQ-(*)
2700-2900 ..... 66AHA

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2700-2900 ..... 66ALH
2700-2900 ..... 66ANJ
2700-3300 ..... 66AKG
2700-3300 ..... 66ALK
2740-2900 ..... AS-764/MPN-5
2740-2900 ..... AS-765/MPN-5
2740-2900 ..... AT-265/MPN-5+(*)
2740-2900 ..... AT-268/MPN-5+(*)
2740-2900 ..... AT-411/MPN-5+(*)
2800- 66AHP
2800- ..... 66AHQ-(*)
2860- 66AKH
2880- AS-492/U
2900-3100 ..... 66ABQ
2900-3100 ..... 66AFM
2900-3100 ..... 66AGD
2900-3100 ..... 66AGN
2900-3100 ..... 66AGQ
2900-3100 ..... 66AGU-(*)
2915-2967 ..... 66AEP-(*)
2965-3019 ..... 66AAP
2965-3019 ..... 66AFT-(*)
3000- 66AAQ
3000- 66AFC
3000- 66AFL
3000- 66AFN
3000- 66AGE
3000- 66AGK
3000- 66AGP
3000- 66AGQ

SHF

..... 66AGT
..... 66AJJ
..... 66AJS
300-3300 66131
800-3800 ..... 66AMB
1000-4000 ..... AS-371(*)/S
1000-5000 ..... *M4503
1000-5000 66137
1000-5000 66140
1000-5000 66142
1550-5200 ..... AS-23/AP
1650-5200 ..... AT-163/U
1800-3600 ..... AS-393(*)/BLR
2100-4000 ..... *M9001
2500-3500 ..... 66ALE
2700-3100 ..... 66AGD
2700-3300 ..... 66AKG
2700-3300 ..... 66ALK
2900-3100 ..... 66ABQ
2900-3100 ..... 66AFM
2900-3100 ..... 66AGN
2900-3100 ..... 66AGQ
2900-3100 ..... 66AGU-(*)
2965-3019 ..... 66AAP
2965-3019 ..... 66AFT-(*)
3000- 66AAQ
3000- 66ADK
3000- 66AEX
3000- 66AFC
3000- 66AFD
3000- 66AFL
3000- 66AFN
3000- 66AGE
3000- 66AGK
3000- 66AGP
3000- 66AGQ
3000-3100 ..... 66ABJ-(*)
3000-3100 ..... 66AHY
3000-3100 ..... 66AHZ
3000-3100 ..... 66AKZ
3000-6000 ..... AS-45(*)/APR-6
3010-3100 ..... AS-404/SPN-4
3019-3100 ..... 66AMS
3025-3125 ..... MARK III
3030-3110 ..... AS-601/SPN-13
3047-3071 ..... 66AAS
3071-3100 ..... 66ADH
3256-3333 ..... AS-221/CPN-17
3400-3600 ..... AS-484(*)/SPS-8
3400-3700 ..... AS-594(*)/BPS-4
3400-3700 ..... 66AJV-(*)

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3400-3700 ..... 66AKP
3400-3700 ..... 66ALH
3430-3570 ..... AS-828(*)/SPS
3450-3550 ..... 66ANJ
3500- 66AJP
3800-9000 ..... AT-151/UPT
3813- 66127
4500-5900 ..... AS-1011/SPG-55
5000-11000 ..... AT-48/UP
5000-12000 ..... *M6700
5200-11000 ..... AT-521/URM-42
5400-5900 ..... AS-1012/SPG-55
5400-5900 ..... AS-782/SPG-49
5400-5900 ..... AT-636/SPG-49
5450-5825 ..... AS-1002/SPS-9C
5450-5825 ..... AS-509/SPS-4
5450-5825 ..... AS-619/SPS-10
5450-5825 ..... AS-695/SPS
5450-5825 ..... AS-936/SPS-10B
5500-5600 ..... AN/SPS-35
5500-5600 ..... AS-710/SPS-21
6275-6574 ..... 66AMQ-(*)
6275-6575 ..... AS-511(*)/SPS-5
6275-6575 ..... AS-691/SPS-5B
6275-6575 ..... 66ALZ
6275-6575 ..... 66AMP
6275-6576 ..... AS-695/SPS
7250-10750 ..... AS-501(*)/SPN
8500-9000 ..... 66AKU
8500-9600 ..... MARK 25, MOD 6A
8500-9600 ..... AS-915(*)/SPG
8500-9600 ..... AT-194(*)/SPG
8500-9600 ..... MARK 21,MOD 1;UNIT 1A
8500-9600 ..... MARK 23,MOD 0;UNIT 1G
8740-8890 ..... AS-996/BPS-9A
8740-8890 ..... 66AHU
8740-8890 ..... 66AKW
8740-8890 ..... 66AKX-(*)

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8740-8890 ..... 66AND
8900-9400 ..... AS-500/BPN
8900-9400 ..... AS-502/TPN-(*)
9000- 66ADI
9000- 66ADJ
9000-9130 ..... AS-762/MPN-5
9000-9130 ..... AT-262/MPN-5+(*)
9000-9130 ..... AT-409/MPN-5
9000-9160 ..... 66AGF
9000-9160 ..... 66AGS
9000-9160 ..... 66AGY-(*)
9000-9160 ..... 66APK
9000-9160 ..... 66AMR
9000-9180 ..... AS-763/MPN-5
9000-9180 ..... AT-263/MPN-5+(*)
9000-9180 ..... AT-410/MPN-5+(*)
9200-9400 ..... MARK 22,MOD 0;UNIT 1D
9280-9320 ..... AT-946(*)/SPX-9
9280-9470 ..... AS-82(*)/APQ-7
9300-9500 ..... AS-744/SPS-23
9300-9500 ..... AS-745/SPS-23X
9300-9500 ..... AS-746/SPS-23Y
9300-9500 ..... AS-747/SPS-23Z
9300-9500 ..... AS-748/SPS-23XX
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9320-9430 ..... AS-118/CPN-6
9320-9430 ..... AS-444/SPN-5
9320-9430 ..... AS-599(*)/SPN-11+(*)
9320-9430 ..... AS-659/SPN-18
9320-9430 ..... AS-826/SPN-22
9335-9405 ..... AS-923/SPS-35
9335-9415 ..... AS-601/SPN-13
9345-9405 ..... AS-1066/SPS-46
9345-9405 ..... AS-1067/SPS-46X
9345-10005 ..... AS-1004/SPS-41