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MILITARY STANDARD

JOINT ELECTRONICS

TYPE DESIGNATION SYSTEM



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OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON 25, D. C.

Supply and Logistics
Joint Electronics Type Designation System
MIL-STD-196A

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1. This standard has been approved by the Department of Defense for use by the Departments of the Army, the Navy, and the Air Force, and, in accordance with international agreement, by the Canadian Department of National Defense.
2. In accordance with established procedure, the Signal Corps, Bureau of Ships, and Air Force, have been designated as Army-Navy-Air Force custodians of this standard.
3. This standard is mandatory for use effective 16 September 1960 by the Departments of the Army, the Navy, and the Air Force.
4. Recommended corrections, additions, or deletions should be addressed to the Armed Forces Supply Support Center, Washington 25, D. C.

FOREWORD

The purpose of this standard is to establish procedures within the Department of Defense for Standardization of identification for design control of electronic material and associated equipment as defined herein.

History. The Joint Electronics Type Designation System (formerly the Joint Army-Navy Nomenclature System) was adopted 16 February 1943 by the Joint Communications Board for Joint Army-Navy use, and approved by the Combined Communications Board on 17 February 1943 for all new U. S. Army, and all new U. S. Navy airborne, radio, and radar equipment. Further, on 26 November 1943, the Joint Communications Board approved the extension of the scope of the system to include equipment designed by the Navy specifically for Marine Corps and amphibious use. On 1 August 1946, the Bureau of Ships, Department of the Navy, adopted the system for use of ship, submarine, and ground electronic equipment. Similar action was taken by the Bureau of Ordnance, Department of the Navy, on 18 October 1946, to cover the electronic portions of its fire-control systems. The U. S. Air Force, upon its establishment as a separate Department, continued the use of the system for electronic equipment. On 16 January 1950, the U. S. Coast Guard adopted the system to identify any electronic equipment which it may develop or adopt. On 16 August 1951, the Joint Communications-Electronics Committee of the Joint Chiefs of Staff, approved Canadian integration with the AN nomenclature system. On approximately 8 June 1953, the Office of the Chief of Ordnance, Department of the Army, adopted the system for its use.

Organization. The AN system is operated in accordance with basic policies of the Office of the Assistant Secretary of Defense for Supply and Logistics, and those established herein, and is approved and administered by the issuing authority as a joint standardization procedure.

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1. GENERAL

1.1 SCOPE. The Joint Electronics Type Designation System and procedures are mandatory for use in the assignment of AN type nomenclature to all electronic material as defined herein (sec 1.1.1 and 3.1). The military departments may use this system for allied classes of material where such usage is in accordance with standard Department of Defense procedures. AN type designations must be assigned to at least the following equipment types:

1.1.1 Equipment types. Electromagnetic radiating and nonradiating equipment, except that radiating in the visible spectrum, such as:

1.1.1.1 Radio (including television, relay, telemetering, and terminal equipment).

1.1.1.2 Radar (including identification and recognition equipment).

1.1.1.3 Electronic and electromechanical computers.

1.1.1.4 Flight control and aids to aircraft control and navigation (including automatic flight control equipment, automatic pilots, and air data computers which may be tied into a fire-control set, an instrument landing set, a navigation set, and data link set).

1.1.1.5 Weapon control systems (including evaluation and scoring of gun, missile, bomb, and underwater weapon control excluding certain systems or devices to which electronics control is only incidental).

1.1.1.6 Electronic countermeasures (including electronic deception and electronic jamming).

1.1.1.7 Radiac (nuclear radiation, detection, indicating, and computing devices).

1.1.1.8 Infrared.

1.1.1.9 Meteorological.

1.1.1.10 Magnetic amplifier and detection equipment.

1.1.1.11 Control of nuclear power.

1.1.1.12 Equipment for transmission of reception of intelligence by wire or cables (including recorders, reproducers, telephone, telegraph, teletype, facsimile, television, interphone, public address, and telemetering).

1.1.1.13 Equipment for the detection of noise and interference in the radio frequency spectrum.

1.1.1.14 Underwater sound radiating and nonradiating equipment including those for listening, ranging, sounding, communication, object location.

1.1.1.15 Training and instruction equipment for any of the above.

1.1.1.16 Equipment auxiliary and accessory to the preceding kinds of times, such as antennas, connectors, dynamotors, headsets, microphones, radomes, servo-amplifiers, test equipment, waveguides, cooling, heating, and pressurizing equipment, vehicles, special tools, positioning and time devices, simulators, synchronizers, and plotting equipment, etc.

1.2 OBJECTIVES. The Joint Electronics Type Designation System, hereinafter referred to as the AN System, shall fulfill the following objectives:

1.2.1 Serve as a tool for simplification of identification of electronic material as defined in paragraph 3 below.

1.2.2 Be sufficiently descriptive to identify similar material and at the same time aid in the distinguishing of significant differences from a user's point of view by use of indicators for designed usage and purpose.

1.2.3 Be definitive as to classes of material for which applicable.

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1.2.4 Be flexible and sufficiently broad in scope to cover present types of equipment, and the new types and uses of equipment that will be developed in the future.

1.2.5 Avoid conflict with single-service type designations now assigned to Air Force, Army, and Navy equipment.

1.2.6 Provide adequate identification on identification plates, shipping crates, etc., without the use of the item name portion of the nomenclature.

1.2.7 Provide a ready means of identifying equipment in correspondence and other means of communication in the clear.

1.3 GENERAL APPLICATION.

1.3.1 AN type designations shall be assigned to:

1.3.1.1 Complete sets, systems, centrals, groups, major units, and subassemblies, of military design either definitive or variable in configuration.

1.3.1.2 Groups of articles, of either commercial or military design, which are grouped for a military purpose.

1.3.1.3 Major articles of military design which are not part of, or used with, a set.

1.3.1.4 Commercial articles to facilitate military identification or procedures.

1.3.2 AN type designations will not be assigned to:

1.3.2.1 Articles cataloged commercially, except in accordance with subparagraph 1.3.1.4.

1.3.2.2 Parts such as capacitors, electron tubes, and resistors, except if required to facilitate military identification or procedures.

1.3.2.3 Articles having other adequate identification in coordinated (joint) military specifications.

1.4 COORDINATION.

1.4.1 AN type designation assignments, when a joint military interest has been determined, shall require the prior concurrence of the services, as applicable.

1.5 WORD NAMES AND SEQUENCE.

1.5.1 Names used in nomenclature assignments will be consistent with the policies of the Federal Cataloging Program as promulgated by the Office of the Assistant Secretary of Defense, Supply and Logistics, (OASD, S&L).

1.5.1.1 Names used in nomenclature assignments shall be in the same format as promulgated by OASD, (S&L).

1.5.1.2 Nomenclature assignments using the word sequences prescribed by OASD, (S&L), will be applied to the equipments or units under procurement when assigning suffix letters.

1.5.1.3 Nomenclature assignments using word sequence in the manner prescribed by OASD, S&L, may be applied retroactively to equipments or units.

1.6 SECURITY CLASSIFICATION.

1.6.1 All AN nomenclature assignments shall be unclassified in order to provide a ready means of identification, in correspondence and other means of communication, in the clear.

1.6.2 The security classification of nomenclature descriptions shall be in accordance with the content of the description and with military security requirements. DD Form 61 for classified items which result in an unclassified description will however be stamped "UNCLASSIFIED" on the top and bottom of the form.

1.6.3 The security classification of the item described shall be indicated on the nomenclature request and the resulting nomenclature card.

1.6.4 Regrading of DD Form 61 and nomenclature cards will be accomplished through the submission of appropriate notification by the cognizant department. Such notification will

identify the DD Form 61 to be reclassified by the appropriate source request numbers and the subsequent nomenclature cards. The appropriate shipment numbers for the cards shall be included if known.

1.7 CANCELLATIONS.

1.7.1 AN type designation may be cancelled upon request by the originating service when:

1.7.1.1 There has been no procurement of the item.

1.7.1.2 No experimental models are in field use.

1.7.1.3 No further use of the type designation is required for developmental purposes.

1.7.2 Cancelled AN type designations will not be reactivated except upon request or ap-

proval of the Department that had originally cancelled the type designation.

1.8 DESCRIPTIONS.

1.8.1 Each type designation assignment shall be justified on the basis of a description that contains sufficient electrical, mechanical, and reference data to distinguish the item described from all other items. The selection of the type designation elements shall be determined by the technical characteristics of the item and not necessarily by its chosen name.

1.8.2 The same type designation assignment shall not be used to identify items which differ in operational, electrical, or mechanical characteristics.

1.8.3 When the description of the item is no longer technically correct it is the obligation of the requesting service, or agency, to revise the description of such item.

2. REFERENCED DOCUMENTS

2.1 Documents referenced in this standard are of the issue in effect on the date of invitation for bids and are listed below:

MIL-STD-243—Types and Definitions of
Models for Communica-
tions—Electronics Equip-
ment.

H6-1 —Federal Item Identification
Guides for Supply Cata-
loging, Part 1 (Indexes).

3. DEFINITIONS

3.1 DEFINITIONS. For the purpose of this standard, the following definitions apply:

3.1.1 Nomenclature. Nomenclature in the Joint Electronics Type Designation System is defined as the combination of an authorized item name and a type designation. These are defined as follows:

3.1.1.1 Type designation. A type designation is a combination of letters and numerals arranged in a specific sequence to provide a short significant method of identification.

3.1.1.2 Item name. The item name is a name published in the Federal Cataloging Handbook H6-1, or that name developed and subsequently approved for use by the cataloging division of the Armed Forces Supply Support Center, or that name selected by the requesting department as being consistent with Federal cataloging policies.

3.1.2 Electronics. Electronics is the science and technology which is concerned with devices involving the emission, behavior, and effect of electrons in vacuums, gases, and semiconductors. Technically, electronics is a broad term extending into divergent fields, and it is necessary to define the scope covered by electronics in terms of "electronic material."

3.1.3 Electronic material. Electronic material, from a military point of view, generally includes those electronics devices employed in the field of detection and tracking (underwater, sea, land, air, and space), recognition and identification, communications, aids to navigation, weapons control and evaluation, flight control, and electronics countermeasures. In every case, electronic devices are understood to include peculiar non-electronic units required to complete their individual operational function, such as power supplies, hoist mechanism, antennas, etc., but to exclude associated nonelectronic equipment in certain overall systems.

3.1.4 Models. The following list of types of models is descriptive of the stages which may be

involved in the overall process of research, development, and production. All of the listed types are not necessarily produced.

3.1.4.1 Breadboard model (see MIL-STD-243).

3.1.4.2 Experimental model (see MIL-STD-243).

3.1.4.3 Developmental model (see MIL-STD-243).

3.1.4.4 Service test model (see MIL-STD-243).

3.1.4.5 Prototype (preproduction) model (see MIL-STD-243).

3.1.4.6 Production model (see MIL-STD-243).

3.1.5 Sets.

3.1.5.1 Set. A set is defined as: a grouping of items having the same basic name for use in connection with, or for performance of closely related operations; or a number of groups, units, or a combination thereof, not all having the same basic name, which are required for the performance of an operational function. May exclude certain operating units supplied separately or already present at the point of usage. In some cases a set may be a single major unit capable of performing an operational function.

3.1.5.2 Definitive set. A definitive set is one consisting of a fixed number of groups, units, assemblies, or combinations thereof.

3.1.5.3 Variable set. A variable set is an assemblage of groups, units, assemblies, or combinations thereof, existing under at least one of the following conditions:

3.1.5.3.1 Those assemblages described as capable of performing more than one function, with the functions being performed, being dependent

upon readily exchangeable groups, units and/or accessories chosen for that installation on a particular occasion. Installations may differ by configuration or function but each installation must be capable of easy and ready conversion to the same function as any other installation. A majority of the groups, units, and/or accessories must be common to all installations.

3.1.5.3.2 Those assemblages, all of which perform the same function, but which differ between installations due to configuration differences of items and may include changes in the number or use of minor items having no important bearing in the operations or functions of the assemblages, such as interconnecting boxes, mountings, or controls. All such assemblages, though physically different must be functionally and electrically interchangeable.

3.1.5.3.3 Those assemblages whose capabilities within a given function may be extended or contracted through the addition or deletion of units, sets, or groups.

3.1.6 Groups.

3.1.6.1 Group. A group is a collection of items, two or more being major units, which is not capable of performing a complete operational function by itself. A group may be a subdivision of a complete electronic set, or may be designed to be added to, or used in conjunction with, an electronic set to extend its function(s) or add additional facilities to the electronic set. A group does not include one or more electronic sets.

3.1.6.2 Definitive group. A definitive group is one consisting of a fixed number of units.

3.1.6.3 Variable group. A variable group is an assemblage of units existing under at least one of the following conditions:

3.1.6.3.1 Those assemblages described as capable of performing more than one function, with the functions being performed, being dependent upon readily exchangeable units chosen for the installation on a particular occasion. Installations may differ by configuration or function, but

each installation must be capable of easy and ready conversion to the same function as any other installation. A majority of the units and/or accessories must be common to all installations.

3.1.6.3.2 Those assemblages which differ between installations due to configuration differences of items and may include changes in the number or use of minor items having no important bearing on the operations or functions of the assemblages, such as interconnecting boxes, mountings, or controls. All such assemblages, though physically different must be functionally and electrically interchangeable.

3.1.6.3.3 Those assemblages whose capabilities with a given function may be extended or contracted through the addition or deletion of units and/or accessories.

3.1.7 Accessory. An accessory is an assemblage of a group of parts, or a unit, which is not always required for the operation of the set or unit as originally designed (i.e., a headset for a set or unit which is supplied with a loudspeaker; a vibrator power supply for use with a unit having a built-in power supply; transit case; special cable assemblies; etc.). An accessory item is considered as used with but not part of the item to which it is an accessory. (See definition for "used with but not part of".)

3.1.8 Unit (component). A unit is a group of parts, or subassemblies, electrically or mechanically connected to perform a specific function. (*Examples:* Radio Receiver Radio Transmitter, Sonar Transducer, Modulator.)

Note. This term shall only be used to refer to major units and shall not be used with reference to minor parts or subassemblies. See *Part*, par. 3.1.10 and *Subassembly*, par. 3.1.9.

3.1.9 Subassembly. A subassembly is a commonly mounted grouping of two or more different parts which are physically or electrically combined to perform a specific function within a unit, but which will not perform that function until connected to related subassemblies, or parts, which comprise the complete unit.

3.1.10 Part. A part is any item not normally subject to further disassembly. (*Examples:* resistor, gear, knob, insulator, electron tube.)

3.1.11 Interchangeability. One-way interchangeability of units, as used in the Joint Electronics Type Designation System, denotes the capability of a new article to replace an existing article. The new article must be equal or superior to the existing article, and have the same dimensions, weight, performance, and dynamic characteristics within allowable tolerances. The new interchangeable article shall be capable of being installed and operated in lieu of the existing article without additional tools, modification to the existing associated article or mounting facilities, or special instructions. Two-way interchangeability denotes the mutual capability of the new article and the old article to be used indiscriminately in each other's place.

3.1.11.1 By electrical interchangeability is meant the new article's capability of operation equal to the old article without requiring any modifications to the existing power facilities, change to, or rewiring of connectors, etc.

3.1.11.2 By mechanical interchangeability is meant the new article's capability of being physically installed and operated in the position previously occupied by the old article without requiring any modifications as to mounting holes, cabling, isolators, etc. Switches, meters, indicators, connectors, etc., shall be located as on the previous model, within allowable tolerances. The center of gravity of the new article shall be the same as in the old article, within allowable tolerances.

3.1.11.3 By functional interchangeability is meant the new article's capability of performing, without additional assistance, all the operational capabilities covered by the previous article.

3.1.11.4 By maintenance (repair) parts interchangeability is meant the ability of a maintenance part on one article of being installed and operated in lieu of a like item in existing equipment without the use of additional tools or modi-

fications to the existing article or mounting facilities and with no appreciable effect on performance or ratings either electrical or mechanical.

3.1.12 Part of. An item which is required to enable an equipment to fulfil its assigned function is part of that equipment. An item which is physically attached to and essential to the operation of another item is considered part of the item to which it is attached. In either event, the item must be issued automatically and in all instances with the equipment or item of which it is a part of.

3.1.13 Used with but not part of.

3.1.13.1 An item which extends the use of an equipment beyond its assigned functions and is issued for use with that equipment only under special circumstances is considered as used with but not part of that equipment.

3.1.13.2 An item which may be essential to the operation of another item but is not an integral part thereof and not permanently attached thereto is considered as used with but not part of the second item and is part of the equipment in which both items are used.

3.1.14 Definitive system. A definitive system consists of two or more definitive sets or centrals located at two or more points, each being interdependent and having interrelated operations for the accomplishment of a specific function. A system may include equipment other than and in addition to sets.

3.1.15 Definitive central. A definitive central is a specific grouping of definitive sets, units, or combinations thereof, operated conjunctively in the same location for a common specific function. It may provide facilities for controlling, switching, monitoring, etc., electronic and electrical equipment from one central point (location).

3.1.16 Variable systems or centrals.

3.1.16.1 A variable system or central is an

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assemblage of sets or units, existing under at least one of the following conditions:

3.1.16.1.1 Those assemblages described as capable of performing more than one function, with the functions being performed being dependent upon readily exchangeable sets or units, or combinations thereof, chosen for that installation on a particular occasion. Installations may differ by configuration or function, but each installation must be capable of easy and ready conversion to the same function as any other installation. A majority of the sets or units, or combinations thereof must be common to all installations.

3.1.16.1.2 Those assemblages which differ between installations due to configuration differences of items and may include changes in the number or use of minor items having no important bearing on the operations or functions of

the assemblages, such as interconnecting boxes, mountings, or controls. All such assemblages, though physically different, must be functionally and electrically interchangeable.

3.1.16.1.3 Those assemblages whose scope or function may be extended or contracted through the addition or deletion of sets or units, or combinations thereof.

3.1.17 *Suffix letter.* A suffix letter is a letter assigned in alphabetical sequence starting with the letter A to show a modification where interchangeability has been maintained to the extent defined herein. *Example:* Receiver, Radio R-250A/ARC is an improved version of the R-250/ARC and still interchangeable therewith.

3.1.18 *Preparing activity.* As used herein, the preparing activity means the Department of the Army (SigC); administrators of the AN nomenclature system.

4. GENERAL REQUIREMENTS

4.1 AN system operation.

4.1.1 Operations. The AN system of type designations is applicable to breadboard, experimental, developmental, service test, preproduction, and production models of systems, sets, equipments, groups, assemblies, and subassemblies of equipments for military use. A type designation assigned is definitive in itself in that it will never be duplicated. Although the name portion may change for subsequent suffix letter assignments, to comply with the Federal Cataloging Program, the basic numeral and family-indicator letters will always apply to one specific article or any subsequent improvements thereto, that may be made, as indicated by the suffix letter.

4.2 APPLICATION OF TYPE DESIGNATIONS FOR DEFINITIVE SETS, CENTRALS, AND SYSTEMS. A type designation assignment for a definitive set, central, or system, shall consist of an AN, a solidus (slant bar), a series of three letters, a dash, and a number. *Example:* AN/APS-2 (see chart No. 1 for explanation). Thus,

AN/	A	P	S	-2
A major equipment.	Airborne (col. 1).	Radar (col. 2).	Search (col. 3).	The second equipment in this category to which AN designation has been assigned.

The type designation AN/APS-2 represents a radar search set designed to be installed in aircraft. Other equipments in the same category include the AN/APS-4 and AN/APS-6. Another set in a different category is the AN/SRC-1 which, as indicated by the chart is a radio communications set designed for installation aboard ship.

4.3 APPLICATION OF TYPE DESIGNATIONS FOR GROUPS, ACCESSORIES, UNITS (COMPONENTS) OR SUBASSEMBLIES.

4.3.1 The type designation shall consist of an indicator letter which tells the type of equipment (see chart II), a number, a slant bar, and the designation of the equipment for which it is a part or with which it is used. For example, the receiver of the AN/APS-2 would be identified as follows:

R	7	/APS-2
Receiver (Chart II)	The seventh receiver to which an AN designation has been assigned.	Set it is used with or part of.

Thus the R-7/APS-2 is a receiver used with, or part of, airborne radar search set number two. Another receiver such as the R-8/ARN-8 would be, as indicated by the charts, a receiver that is used with, or part of, airborne radio navigation set number eight.

4.3.2 To maintain its original identity, a subsequent model of these items must be functionally, electrically, and mechanically interchangeable with its previous model. This applies, in so far as is practicable, to all its maintenance parts.

4.3.3 Units that are part of or used with two or more sets or that are not part of or used with any specific set, are identified as in 4.3.1 except after the slant bar there will appear only those indicators that are appropriate. *Examples:* A modulator that is part of or used with the AN/APS-2 and the AN/APS-6 would be identified as MD-8/APS. A modulator part of or used with the AN/APS-2 and the AN/ARM-5 would be MD-9/A.

4.4 SELECTION OF INDICATOR LETTERS.

4.4.1 The selection of the indicator letters for

a fixed or variable set, central, or system shall be based upon the design characteristics rather than upon its name or its possible uses. *Example:* Radar Set designed to track a meteorological balloon would be identified by the indicator P for radar, rather than M for meteorological.

4.4.2 Selection of a unit indicator (see chart II) for an item will be based on its primary function and its technical characteristics. The first name of a dual name (e.g., indicator-power supply) will normally be the guide for determining the unit indicator except where an indicator exists which covers the dual name, such as RT and PU.

4.5 APPLICATION OF TYPE DESIGNATIONS TO VARIABLE SETS, CENTRALS, SYSTEMS, GROUPS, OR UNITS.

4.5.1 Systems, sets, centrals, groups or units with variable parts lists will be assigned type designations in the same manner as for definitive systems, sets, centrals, groups or units except that the parenthetical V, (V), will be added to the type designation (e.g., AN/FSG-1(V), OA-1957-(V)/APQ-73(V), RT-2001(V)/GRC-98(V)).

4.5.2 Assemblages differing only in the primary power requirements will not be assigned a (V), but will be identified by X, Y, and Z (see par. 4.12).

4.5.3 Redesign for better reliability, durability, miniaturization, pressurization, partial installation of a multifunctioning definitive set or the use of transistors will not be considered justification for the assignment of (V).

4.5.4 New assignments may be made to definitive equipment configurations falling within the (V). The relationship to the (V) should be cited in the application for nomenclature assignment. The converse is also permitted.

4.5.5 Groups, sets, centrals, or systems comprised of variable groups or units (i.e., a (V) assignments must also be assigned a (V).

4.6 APPLICATION OF TYPE DESIGNATIONS TO UNITS OF "PLUG-IN" DESIGN.

4.6.1 Units of "plug-in" design which permit the interchange of plug-ins for other than maintenance purposes may be identified with a parenthesis P, (P), immediately preceding the slant bar. Plug-ins which may change the function, frequency, or characteristics of a type designated unit are not part of the type designated unit. Units utilizing plug-ins of this nature should be described as requiring but not including the plug-ins. The (P) denotes a unit which may easily be changed by a plug-in which is not normally visible or readily detected.

4.7 APPLICATION OF TYPE DESIGNATIONS FOR SETS OR EQUIPMENTS DESIGNED FOR TRAINING PURPOSES.

4.7.1 A set designed to provide training in the operation of a specific set will be assigned the specific set type designation followed by a dash, the letter T, and a number. *Example:* Radio Training Set AN/ARC-6A-T1 would be the first training set for Radio Set AN/ARC-6A (see col. 6 of chart I).

4.7.2 A set designed to provide training in the operation of various types of sets with the same indicator letters will be assigned set indicator letters based on the equipment it will be used to train for, followed by a dash, the letter T, and a number. *Example:* Radio Training Set AN/ARC-T1 would be the first training set for general airborne radio communications sets.

4.7.3 A set designed to provide training in the operation of various types of sets with different indicator letters will be assigned general indicator letters as appropriate. *Example:* Radio Training Set AN/URC-T1 could be the first training set for both an airborne radio communications set (AN/ARC-27) and a ground radio communications set (AN/GRC-32).

4.8 APPLICATION OF TYPE DESIGNATIONS FOR SETS, GROUPS, OR UNITS DESIGNED FOR TESTING OR MAINTENANCE PURPOSES.

4.8.1 Maintenance and test equipments which consist of one or more major units plus accessories

such as cases, cords, probes, adapters, etc., and are produced as a separate equipment are considered as sets and will be assigned set nomenclature in accordance with the following: Maintenance and test sets which by purpose are intended for use with certain installation classes and types of basic sets (prime equipments) will be assigned "Installation" and "Type of Equipment" indicators corresponding to the associated class and type, followed by the letter M as the "Purpose" indicator. *Examples:* Test Set, Radar AN/MPM-8 may be a test set for Radar Set AN/MPG-5, AN/MPS-12, AN/MPN-9; and the Test Set Radio AN/URM-20 may be for Radio Sets AN/TRC-7 and AN/ARC-2. Maintenance and test units which are an integral part of a basic set or equipment will not be assigned type designation in accordance with this paragraph but will be considered as a part of such basic set and will be assigned a type designation in accordance with the policy and procedures established herein for units (see par. 4.3).

4.9 TYPE DESIGNATIONS FOR SYSTEMS, SETS, CENTRALS, AND AUXILIARY ASSEMBLAGES.

4.9.1 Installation Indicators.

4.9.1.1 P-pack or portable (animal or man) use: Will be used only when the request for nomenclature states that the normal means of transportation in usage will be by animals or men. A statement that no part of the equipment shall be too large or heavy for transportation by animals or men will not in itself be sufficient to warrant the assignment of P. Equipment must be capable of operation while being transported.

4.9.1.2 T-ground, transportable use: Will be used for ground equipment that is normally moved from place to place and is not covered by equipment indicators M, V, P, or U.

4.9.1.3 M-ground, mobile (installed as an operating unit in a vehicle which has no function other than transporting the equipment) use: Will be used only when the request for nomenclature states that the vehicle(s) transporting all of the components is a part of the system, set, central,

or auxiliary assembly. A statement that the equipment is mounted in a shelter that may or is capable of being mounted in or transported by a vehicle, will not be sufficient to warrant the assignment of M.

4.9.1.4 V-ground, vehicular (installed in a vehicle designed for functions other than carrying electronic equipment, etc., such as tanks, weapons carriers) use: Will be used only when the request states that the equipment is capable of operation while the vehicle is in motion. M will be used when the vehicle is part of the equipment.

4.9.1.5 U-general utility (includes two or more general installation classes, such as airborne, shipboard, and ground) use: Will be used for equipment capable of being used in airborne and/or shipboard and/or ground. It will also be utilized to identify a combination of two or more general installation classes (air, sea, ground) within any one system. The use of this specific concept is confined to systems and only to those systems in which a portion is installed and operated in one medium (i.e., air) while another portion of that same system is installed and operated in another medium (i.e., water). The U will be used as an installation indicator for such systems irrespective as to whether the major portion is air, sea, or ground installed. Thus an airborne drone surveillance system which includes an airborne drone and ground installed control equipment would qualify for a U indicator. A similar airborne surveillance system but one which differs from the preceding example in that the control equipment is mounted in another airborne vehicle and in having no ground or sea installed system components, would require the assignment of an A installation indicator.

4.9.1.6 D-pilotless carrier use: Will be used for pilotless planes, drones, and guided or ballistic missile type of installations. Balloon or parachute type of installations will be identified with A.

4.9.2 Type of equipment indicators.

4.9.2.1 P-radar use: Will be used for the following types of equipment:

4.9.2.1.1 Radar equipment based on the radar definition of equipment which transmits radio energy and receives a reflected signal of this same energy from the target. The time interval between the transmission and reception of such signal is measured and translated into range.

4.9.2.1.2 Beacons which function with radar equipment.

4.9.2.1.3 Electronic recognition and identification systems.

4.9.2.1.4 Pulse-type navigational equipment.

4.9.2.2 R-radio use: Will be used for all radio equipment except that for which a more specific indicator applies, see also equipment indicators K and P.

4.9.3 Purpose Indicators.

4.9.3.1 A-auxiliary assemblies use: Will be used for groups of items which when assembled will perform a function if associated with other equipment but which will not operate independently.

4.9.3.2 C-communications (receiving and transmitting) use: Will be used for combinations of transmitting and receiving equipment, where the purpose is communications or communications relay.

4.10 APPLICATION OF SUFFIX LETTERS.

4.10.1 Suffix letters shall be assigned to AN/... or OA.../... type designation for modifications of fixed groups, sets, centrals, or systems, when functional and electrical interchangeability has been maintained with previous assignments in the same series. Interchangeability of an AN/... for sets, centrals, or systems requires the frequency range of the latest assignment to encompass that of previous assignments.

4.10.2 Suffix letters shall be assigned to type designations for modifications of accessories, units, or subassemblies, to indicate electrical, mechanical, and functional interchangeability.

To maintain the same type designation, a subsequent model must be electrically, mechanically, and functionally interchangeable with all its previous models, including, as far as is practicable, its maintenance parts. When a model is modified so that it is not electrically, mechanically, or functionally interchangeable with any of its previous models, a new type designation will be assigned. The assignment of this new type designation number will be reflected by a suffix letter assignment to the next higher type designation position, provided this next position is electrically, mechanically, and functionally interchangeable with previous models of that position. *Example:* A type designated plug-in unit of a receiver may be modified and require a new type designation. If the resulting receiver is still interchangeable with its previous receivers, a suffix letter will be assigned thereto. This order of progression may continue as high as is necessary for proper identification of modified units.

4.10.3 Suffix letters shall be assigned to type designations for variable sets, centrals, systems, and groups; or for units, etc., designed for various plug-ins; in the same manner as for those items that are fixed, paragraphs 4.9.1 and 4.9.2 except that the suffix letter shall immediately precede the (V) or (P) as applicable.

4.10.4 A variable item that has been described and delivered to the Government as such, shall not have additional functions added thereto without a change in its type designation. If additional functions are the only changes incurred, the assignment of a suffix letter, together with its new functional descriptions, shall be applied. The existence of new items to fulfil installation requirements only, and not changing electrical or functional characteristics, will not require a change in the type designation at the next higher level.

4.10.5 An item of a variable assemblage, modified and improved to the extent that it requires a new type designation, shall have this modification reflected at the next higher level of nomenclature and in the same manner as for a fixed assemblage, paragraph 4.10.2.

4.11 IDENTIFICATION OF A SERIES OF ITEMS. A series of a basic item, i.e., all production versions and/or all nonproduction versions may be identified by a type designation which contains an empty parenthesis, commonly called a "basic" or "generic" assignment. *Example:* AN/APS-25() or R-275()/APS-25. The use of such an assignment is a specific reference to the AN/APS-25 or the R-274/APS-25 series but not to any specific version within the series. To be specific would be the AN/APS-25B or the R-275A/APS-25.

4.12 IDENTIFICATION OF SETS, CENTRALS, OR SYSTEMS WITH MODIFIED POWER REQUIREMENTS. A set modified to the extent of changing the power input voltage, phase, or frequency will be identified by the addition of the letters, X, Y, or Z to the basic nomenclature, e.g., Radio Set AN/TRC-100 modified to permit its operation on 24-volt dc rather than 110-volt ac would be identified as Radio Set AN/TRC-100X. Further modifications other than power input will be identified as AN/TRC-100AX. Simultaneous modifications providing improvements as well as power change will be identified by the suffix letter A, B, or C, etc., as applicable, to show product improvement and suffix letter X, Y, or Z, as applicable, to show power input change. The first change in power input would be identified by the letter X, the second by the letter Y, the third by the letter Z, the fourth by XX, etc. New nomenclature will be applied to groups or units rather than applying the X, Y, or Z as above.

4.13 APPLICATION OF TYPE DESIGNATIONS TO BREADBOARD, EXPERIMENTAL, DEVELOPMENTAL, OR SERVICE TEST EQUIPMENT.

4.13.1 To identify a specific breadboard, experimental, developmental, or service test equipment, a development organization indicator, selected from chart III and followed by a numeral, are inserted in the parenthesis. Successive versions are identified by progressive numerals, for example (XN-1), (XN-2), (XN-3), etc.

4.13.2 When a developmental organization indicator is included by such use of the parenthesis but is not followed by a specific numeral, broad identification of all such breadboard, experimental, developmental, and service test versions are thus intended. For example, AN/SPS-100(XG) identifies all breadboard, experimental, developmental, or service test versions of AN/SPS-100 of the U. S. Navy Electronics Laboratory, San Diego, Calif.

4.13.3 The assignment and recordings of specific experimental indicators and numerals, after an experimental indicator within the parenthesis of a type designation will be the responsibility of the developing service.

4.14 SECURITY OF NOMENCLATURED ITEMS. When a nomenclatured item is modified to such an extent that a higher security classification is justified, a new type designation will be assigned rather than a suffix letter.

5. DETAIL REQUIREMENTS

5.1 Requests for nomenclature assignments will be submitted on DD Form 61 or other acceptable forms and prepared in accordance with item names and description patterns promulgated in the Federal Cataloging Program. The forms shall be submitted as follows:

5.1.1 For Department of the Air Force: All requests to Wright Air Development Division, Directorate of Engineering Standards, ATTN: WWDXDN, Wright-Patterson AFB, Ohio.

5.1.2 For Department of the Army: All requests to Commanding Officer U. S. Army Signal Materiel Support Agency, ATTN: SIGMSL. PS. I-4, Fort Monmouth, N. J.

5.1.3 For Department of the Navy: All requests to Chief, Bureau of Ships, Department of the Navy, Washington 25, D. C.

5.1.4 Each of the Department control points will submit these requests to the Department of the Army, U. S. Army Signal Materiel Support Agency, Fort Monmouth, N. J. This activity is responsible for the assignment of type designation numbers within this system. Where possible, the description required by the DD Form 61, will be as prescribed by the Federal Item Identification Guides for Supply Cataloging. Such descriptions will be used as the nomenclature descriptions, which are distributed to military agencies having need thereof. Final action on such requests will be taken at the U. S. Army Signal Equipment Support Agency.

5.2 All department will use the official nomenclature strictly as assigned with respect to both names and type designations. Assignments may be changed upon the request of the initiating activity provided that such a change is not contrary to established policy. Where necessary, names may be omitted from identification markings on equipments at the discretion of the responsible department.

5.3 REPLACEMENT. Air Force, Army, or Navy nomenclature may be replaced by AN nomenclature upon:

5.3.1 Request of the responsible service.

5.3.2 Request of the using service, with the concurrence of the responsible service.

5.4 PARENTHESIS. The use of parenthetical information after the type designation will be avoided. An exception permitted to this rule is on cable assemblies, waveguides, cords, and guys where the overall length may be shown, telephone cables where the numbered pairs may be shown and crystals where the frequency may be shown (see also pars. 4.13.1 and 4.13.2).

5.5 NUMBERING. The skipping of numbers in assignments will be avoided; consecutive numbering is required. Reservation of blocks of numbers will not, normally be permitted. An exception to these standards will be permitted on primary and secondary type batteries assigned under the unit indicators BA and BB, sets, centrals, or systems with modified power requirements and Canadian assignments (see pars. 4.12, 5.12.8, 6.8, and 6.9).

5.6 SPECIAL SUFFIXES. The use of special suffix letters other than as stated in paragraph 4.12 is not authorized.

5.7 COORDINATION.

5.7.1 Requests by a service for suffix letter assignments or confirmation of existing nomenclature of items which have been assigned a type designation at the request of another service will be coordinated by the preparing activity with the origination service for concurrence before making the assignment or confirmation. Radio frequency bulk cable, batteries, and crystals will be coordinated with all of the departments immediately after assignment of nomenclature.

5.7.2 *Coordination with Armed Services Electro Standards Agency.* The following agreements have been established in coordinating nomenclature with Armed Services Electro Standards Agency:

5.7.2.1 Armed Service Electro Standards

Agency will coordinate all nomenclature actions directly with the nomenclature control unit of the service having design cognizance or a primary interest in the item concerned.

5.7.2.2 Armed Services Electro Standards Agency will not disseminate or use AN nomenclature prior to its authentication by the preparing activity. Nomenclature will be used exactly as assigned.

5.7.2.3 Nomenclature cards will reflect joint Armed Services Electro Standards Agency and departmental cognizance by means of an appropriate symbol in the "original lab" block.

5.7.2.4 All participating activities will prepare one additional copy of all nomenclature requests bearing the indicators, CG, RG, UG, CR, and HC, for transmittal to Armed Services Electro Standards Agency.

5.7.2.5 Production nomenclature assignments without procurement information for RF cables, connectors, adapters and waveguides may be made.

5.8 ITEM NAMES. Item names listed in the Federal Item Identification Guides for Supply Cataloging or names consistent therewith, will be used in the assignment of nomenclature. The assignment of type designation portion of the nomenclature will however be based on the technical characteristics of the item rather than by the name chosen by the requesting department.

5.9 COMMERCIAL TEST EQUIPMENT. AN type designation will not normally be assigned to commercial test equipment which is procured for purposes of research and development (see pars. 1.3.1.4 and 1.3.2.1).

5.10 SUFFIX LETTERS.

5.10.1 In addition to other pertinent notes in the description, suffix letter assignments will include either one of the following:

5.10.1.1 "One-way interchangeability, except for maintenance parts."

5.10.1.2 "Two-way interchangeability, except for maintenance parts."

5.10.2 Major differences between equipments will be listed in all requests for suffix letter assignments when available.

5.10.3 Neither I nor O will be assigned as suffix letters.

5.11 DESCRIPTIONS OF SETS OR UNITS.

5.11.1 After an appropriate item name and description pattern have been selected by the requestor from the Federal Item Identification Guides for Supply Cataloging, a description for the set or unit will be included the request for nomenclature. This description shall be as complete as possible, in accordance with the Federal Item Identification Guides for Supply Cataloging.

5.11.2 The contract or purchase order number, and functional description of the set or unit, shall also be included in the nomenclature request form when this information is not required in the appropriate description pattern of the Federal Item Identification Guides.

5.11.3 The description of the set or unit should support the choice of the item name.

5.12 UNIT ASSIGNMENT.

5.12.1 *Servo amplifiers.* Servo amplifiers of electronic type (nonrotating) will be assigned the unit indicator AM. The rotating type will be assigned PU.

5.12.2 *Cable assemblies, waveguides, etc.,* (i.e., CG and CX assignments). Type designations which include (ft.-in.) and are assigned CG or CX indicators, will not be assigned a specific set indicator after the slant bar (e.g., /TPG-2) but will have a more general indicator such as /U. In each case, the description must contain the phrase "length to be specified."

5.12.3 *Plotting equipment.* Unit indicator ML will be used for meteorological plotting equipment; for other plotting equipment, unit indicator PT will be used.

5.12.4 Unit of multiple sets. A unit that will be part of more than one set will be assigned a more general type designation, such as AB-55/U, R-120/GR, etc., with as many of the general set indicator letters after the slant bar as apply rather than the set indicator letters of a specific set (i.e., model indicator letter and numerals).

5.12.5 Groups and assemblies. Unit indicator OA may be used for grouping of units mounted together on a common rack, or mounting, and also for units not mounted together, but associated as a group.

5.12.5.1 The indicator OA will be used whenever a group of equipment is used with, or part of, one set or set series.

5.12.5.2 The indicator AN/...A will be used whenever the group of equipment is used with, or part of, more than one set or set series.

5.12.5.3 Although a grouping of units may comprise another unit, or an item to which a unit name may apply, it will be identified by the indicator OA rather than a unit indicator (e.g., a radio frequency amplifier, oscillator, and power supply which constitute a radio transmitter would be identified by the indicator OA rather than a unit indicator T). Unit assignment procedure will apply in the use of OA.

5.12.6 Application of unit indicators, PD, PU, and TG.

5.12.6.1 Unit indicators PD, PU, and TG will be applied as follows:

5.12.6.2 PD-motors, synchros, and engines of all types. (May or may not include accessories and gear case.)

5.12.6.3 PU-rotating power units consisting of a prime driver plus a generator. (May or may not be an integral unit. Does not include dynamotors. See DY in chart II.)

5.12.6.4 TG-motor and a gear case with an additional item, or items, connected to the gear case. For positioning devices only.

5.12.7 Maps for Training Equipment.

5.12.7.1 Maps for training equipment will be assigned type designations as follows:

5.12.7.1.1 The supersonic map, and associated plotting map, will be assigned in consecutive order in pairs, with the supersonic map being assigned an odd number that is smaller than the even number for the associated plotting map.

Example: PT-49/APQ-T for the supersonic map and PT-50/APQ-T for the associated plotting map.

5.12.7.1.2 In addition to the above, suffix letters will be assigned for supersonic and plotting maps made of different material in accordance with the following:

Supersonic maps (odd No.)	
<i>Suffix letter</i>	<i>Material</i>
None	Glass base.
A	Flexible plastic.
B	Rigid plastic.
C	Elastomeric material.

Plotting maps (even No.)	
<i>Suffix letter</i>	<i>Material</i>
None	Glass base.
A	Flexible plastic.
B	Rigid plastic.

5.12.7.1.3 Exceptions are made to paragraphs 5.12.7.1.1 and 5.12.7.1.2 above when more than two PT numbers are required for a specific area in that such plotting maps will be assigned consecutively rather than in pairs.

5.12.8 Batteries.

5.12.8.1 Assignments for dry batteries will be made in several numerical blocks, under the type indicator BA, as follows: BA-1 to 1,000 conventional types; 1,001 to 2,000 RM types; 2,001 to 3,000 low temperature types:

Within the numerical block 1 to 1,000 the subgroup starting with number 401 is that of the standardized conventional type; the subgroup within the numerical block 400 to 499 the wet or dry cell primary type. Within the numerical block 2,001 to 3,000, the subgroup starting at 2,400 is that of the standardized low temperature type.

<i>Basic primary batteries</i>	<i>RM batteries</i>	<i>Low temperature</i>
BA-1	BA-1001/U	BA-2001/U
"Standardized"	"Standardized"	"Standardized"
BA-401/U	BA-1401/U	BA-2401/U

5.12.8.2 Secondary-type batteries will be assigned in several numerical blocks, under the type indicator BB in a manner similar to that used for dry batteries.

<i>Basic secondary batteries</i>	<i>Alkaline electrolyte</i>	<i>Low temperature</i>
BB-1/U	BB-401/U	BB-2001/U

5.12.9 *Indicators OS and SG.*

5.12.9.1 Type designations will be assigned, under the unit indicator OS only for oscilloscopes used for general test purposes. For operational applications such as azimuth, elevation, or panoramic, etc., the indicator IP will be assigned.

5.12.9.2 Type designations will be assigned

under the unit indicator SG for testing application; for operational applications such as jamming, marker generators, etc., the indicator O will be assigned.

5.12.10 *Crystals.* Type designations which include (freq) and assigned to crystals, will not be assigned to specific set indicator after the slant bar (e.g., /GRC-49) but will have a more general indicator such as /U. In each case, the description must contain the phrase "frequency to be specified."

5.12.11 *Kits.* With the exception of crystal kits (CK) and tool kits (TK), all kits will be designated under the unit indicator MK.

5.12.12 *Subassembly indicator.* Subassemblies will be identified by the indicator MX, rather than the indicator of the item of which it is a part.

6. CANADIAN INTEGRATION

6.1 NOMENCLATURE ASSIGNMENTS. Canadian requests for nomenclature are assigned and registered by the Canadian Military Electronic Standards Agency (CAMESA), Department of National Defense, Canada, in conformance with the AN System policies.

6.2 NOTIFICATION. CAMESA notifies the preparing activity of all assignments and that body confirms such assignments. Where an American assignment has previously been made, the Canadian assignment is cancelled in favor of such previous assignment.

6.3 DISTRIBUTION. CAMESA transmits to the preparing activity copies of the descriptive details of each Canadian unclassified and Canadian restricted nomenclature assignment on the Canadian form equivalent of DD Form 61. This information is published and distributed on the 5 inch by 8 inch nomenclature cards by the Department of the Army (Signal Corps), the preparing activity.

6.4 MODIFICATIONS.

6.4.1 Requests by United States agencies for suffix letter assignments to Canadian equipment will be coordinated with CAMESA and assigned from the Canadian register.

6.4.2 Requests by Canadian agencies for suf-

fix letter assignments to United States equipment will be coordinated by the preparing activity with the responsible agency and assigned from the United States register.

6.5 NOMENCLATURE CARD DISTRIBUTION. CAMESA is on the official distribution list for the unclassified 5 inch by 8 inch nomenclature cards.

6.6 CONFIDENTIAL AND SECRET ITEMS. Nomenclature assignments for confidential and secret items are made known, but descriptive details are passed only upon approval of requests on an individual item basis.

6.7 COPIES OF NOMENCLATURE CARDS. CAMESA is furnished the required number of copies of each shipment of unclassified nomenclature cards for distribution within the Canadian Department of National Defense.

6.8 SET NUMBERS. The block of model numbers from 500 to 600 is used by CAMESA in the assignment of equipment (set) nomenclature.

6.9 UNIT NUMBERS. The block of unit numbers from 5,000 to 6,000 is used by CAMESA in the assignment of unit nomenclature, except for dry and storage batteries which are assigned from the official register.

7. NOTES

When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication of otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

(Copies of specifications, standards, drawings, and publications required by contractors in connection with

specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

(Copies of this standard for military use may be obtained as indicated in the forward (p. ii) or general provision of the Index of Military Specifications and Standards.)

(Copies of this standard may be obtained for other than official use by individuals, firms, and contractors from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.)

(Both the title and identifying symbol number should be stipulated when requesting copies of Military standards.)

Custodians:

Army—SigC

Navy—BuShips

Air Force

International Interest (see sec. 6).

Preparing activity:

Signal Corps

CHART I

1	2	3	4	5	6
Table of set or equipment indicator letters					
1st letter (designed installation classes)	2d letter (type of equipment)	3d letter (purpose)	Model No.	Modifi- cation letter	Miscellaneous identification
<p>Installation</p> <p>A—Airborne (installed and operated in aircraft). B—Underwater mobile, submarine. C—Air transportable (inactivated, do not use). D—Pilotless carrier. F—Fixed. G—Ground, general ground use (include two or more ground-type installations). K—Amphibious. M—Ground, mobile (installed as operating unit in a vehicle which has no function other than transporting the equipment). P—Pack or portable (animal or man). S—Water surface craft. T—Ground, transportable. U—General utility (includes two or more general installation classes, airborne, shipboard, and ground). V—Ground, vehicular (installed in vehicle designed for functions other than carrying electronic equipment, etc., such as tanks). W—Water surface and underwater.</p>	<p>Type of Equipment</p> <p>A—Invisible light, heat radiation. B—Pigeon. C—Carrier. D—Radiac. E—Nupac. F—Photographic.¹ G—Telegraph or teletype. I—Interphone and public address. J—Electromechanical or Inertial wire covered. K—Telemetry. L—Countermeasures. M—Meteorological. N—Sound in air. P—Radar. Q—Sonar and underwater sound. R—Radio. S—Special types, magnetic, etc., or combinations of types. T—Telephone (wire). V—Visual and visible light. W—Armament (peculiar to armament, not otherwise covered). X—Facsimile or television. Y—Data processing.</p>	<p>Purpose</p> <p>A—Auxiliary assemblies (not complete operating sets used with or part of two or more sets or sets series). B—Bombing. C—Communications (receiving and transmitting). D—Direction finder, reconnaissance, and/or surveillance. E—Ejection and/or release. G—Fire-control or searchlight directing. H—Recording and/or reproducing (graphic meteorological and sound). K—Computing. L—Searchlight control (inactivated, use G). M—Maintenance and test assemblies (including tools). N—Navigational aids (including altimeters, beacons, compasses, racons, depth sounding, approach, and landing). P—Reproducing (inactivated, do not use). Q—Special, or combination of purposes. R—Receiving, passive detecting. S—Detecting and/or range and bearing, search. T—Transmitting. W—Automatic flight or remote control. X—Identification and recognition.</p>	<p>1 2 3 4, etc.</p>	<p>A B C D, etc.</p>	<p>X—Changes in. Y—Voltage. Z—Phase, or frequency. T—Training. (V)—Variable grouping.</p>

¹ Not for U.S. use except for assigning suffix letters to previously nomenclatured items.

CHART II. Table of component indicators

Comp. Ind.	Family name	Examples of use (not to be construed as limiting the application of the component indicator).
AB	Supports, antenna	Antenna mounts, mast bases, mast sections, towers, etc.
AM	Amplifiers	Power, audio, interphone, radio frequency, video, electronic control, etc.
AS	Antennae, complex	Arrays, parabolic type, masthead, etc.
AT	Antennae, simple	Whip or telescopic loop, dipole, reflector, etc.
BA	Battery, primary type.....	B batteries, battery packs, etc.
BB	Battery, secondary type.....	Storage batteries, battery packs, etc.
BZ	Signal devices, audible.....	Buzzers, gongs, horns, etc.
C	Controls	Control box, remote tuning control, etc.
CA	Commutator assemblies, sonar.....	Peculiar to sonar equipment.
CB	Capacitor bank	Used as a power supply.
CG	Cable assemblies, RF.....	RF cables, waveguides, transmission lines, etc., with terminals.
CK	Crystal kits	A kit of crystals with holders.
CM	Comparators	Compares two or more input signals.
CN	Compensators	Electrical and/or mechanical compensating regulating or attenuating apparatus.
CP	Computers	A mechanical and/or electronic mathematical calculating device.
CR	Crystals	Crystal in crystal holder.
CU	Couplers	Impedance coupling devices, directional couplers, etc.
CV	Converters (electronic)	Electronic apparatus for changing the phase, frequency, or from "one" medium to "another."
CW	Covers	Cover, bag, roll, cap, radome, nacelle, etc.
CX	Cable assemblies, nonRF.....	NonRF cables with terminals, test leads, also composite cables of RF and nonRF conductors.
CY	Cases and cabinets.....	Rigid and semirigid structure for enclosing or carrying equipment.
D	Dispensers	Chaff dispensers.
DA	Load, dummy	RF and nonRF test loads.
DT	Detecting heads	Magnetic pickup device, search coil, hydrophone, etc. (see RF).
DY	Dynamotors	Dynamotor power supply.
E	Hoists	Sonar hoist assembly, etc.
F	Filters	Band-pass, noise, telephone, wave traps, etc.
FN	Furniture	Chairs, desks, tables, etc.
FR	Frequency measuring devices.....	Frequency meters, tuned cavity, etc.
G	Generators, power	Electrical power generators without prime movers (see PU & PD).
GO	Goniometers	Goniometers of all types.
GP	Ground rods	Ground rods, stakes, etc.
H	Head, hand, and chest sets.....	Includes earphone.
HC	Crystal holder	Crystal holder less crystal.
HD	Air-conditioning apparatus	Heating, cooling, dehumidifying, pressure, vacuum devices, etc.
ID	Indicators, noncathode-ray tube.....	Calibrated dials and meters, indicating lights, etc. (see IP).
IL	Insulators	Strain, standoff, feed-through, etc.
IM	Intensity measuring devices.....	Includes SWR gear, field intensity and noise meters, slotted lines, etc.
IP	Indicators, cathode ray tube.....	Azimuth, elevation, panoramic, etc.
J	Junction devices	Junction, jack and terminal boxes, etc.
KY	Keying devices	Mechanical, electrical and electronic keyers, coders, interrupters, etc.
LC	Tools, line construction.....	Includes special apparatus such as cable plows, etc.
LS	Loudspeakers	Separately housed loudspeakers, intercommunication station.

CHART II. Table of component indicators—Continued

Comp. Ind.	Family name	Examples of use (not to be construed as limiting the application of the component indicator).
M	Microphones	Radio, telephone, throat, hand, etc.
MA	Magazines	Magnetic tape or wire, etc.
MD	Modulators	Device for varying amplitude, frequency or phase.
ME	Meters	Multimeters, volt-ohm-milliammeters, vacuum tube volt-meters, power meters, etc.
MF	Magnets or magnetic field generators.....	Magnetic tape or wire eraser, electromagnet, permanent magnet, etc.
MK	Miscellaneous kits	Maintenance, modification, etc., except tool and crystal (see CK, TK).
ML	Meteorological devices	Barometer, hygrometer, thermometer, scales, etc.
MT	Mountings	Mountings, racks, frames, stands, etc.
MX	Miscellaneous	Equipment not otherwise classified, includes subassemblies. Do not use if better indicator is available.
MU	Memory units	Memory units.
O	Oscillators	Master frequency, blocking, multivibrators, etc. (for test oscillators, see SG).
OA	Operating assemblies	Assembly of operating units not otherwise covered, used with or part of one set or set series.
OC	Oceanographic devices	Bathythermographs, etc.
OS	Oscilloscope, test	Test oscilloscopes for general test purposes.
PD	Prime drivers	Gasoline engines, electric motors, Diesel motors, etc.
PF	Fittings, pole	Cable hanger, clamp, protectors, etc.
PG	Pigeon articles	Container, loft, vest, etc.
*PH	Photographic articles	Camera, projector, sensitometer, etc.
PP	Power supplies	Nonrotating machine type such as vibrator pack, rectifier, thermoelectric, etc.
PT	Plotting equipments	Except meteorological. Boards, maps, plotting table, etc.
PU	Power equipments	Rotating power equipment except dynamotors, motor-generator, etc.
R	Receivers	Receivers, all types except telephone.
RC	Reels	Reel cable (see RI).
RD	Recorder-reproducers	Sound, graphic, tape, wire, film, disc, facsimile, magnetic, mechanical, etc.
RE	Relay assemblies	Electrical, electronic, etc.
RF	Radio frequency component.....	Composite component of RF circuits. Do not use if better indicator is available.
RG	Cables, RF, Bulk.....	RF cable, waveguides, transmission lines, etc., without terminals.
RL	Reeling machines	Mechanisms for dispensing and rewinding antenna or field wire, recording wire or tape, etc.
RO	Recorders	Sound, graphic, tape, wire, film, disc, facsimile, magnetic, mechanical, etc.
RP	Reproducers	Sound, graphic, tape, wire, film, disc, facsimile, magnetic, mechanical, etc.
RR	Reflectors	Target, confusion, etc. Except antenna reflectors (see AT).
RT	Receiver and transmitter.....	Radio and radar transceivers, composite transmitter and receiver, etc.
S	Shelters	House, tent, protective shelter, etc.
SA	Switching devices	Manual, impact, motor driven, pressure operated, etc.
SB	Switchboards	Telephone, fire control, power, panel, etc.
SG	Generators, signal	Test oscillators, noise generators, etc. (see O).
SM	Simulators	Flight, aircraft, target, signal, etc.
SN	Synchronizers	Equipment to coordinate two or more functions.
ST	Straps	Harness, straps, etc.

CHART II. Table of component indicators—Continued

Comp. Ind.	Family name	Examples of use (not to be construed as limiting the application of the component indicator).
SU	Optical device	Telescopes, periscopes, projectors, and boresighting scopes.
T	Transmitters	Transmitters, all types, except telephone.
TA	Telephone apparatus	Miscellaneous telephone equipment.
TB	Towed body	Towed underwater body or fish, paravance, etc.
TC	Towed cable	Articulated towing strut, faired cable, etc.
TD	Timing devices	Mechanical and electronic timing devices, range device, multiplexers, electronic gates, etc.
TF	Transformers	Transformers when used as separate items.
TG	Positioning devices	Tilt and/or train assemblies.
TH	Telegraph apparatus	Miscellaneous telegraph apparatus.
TK	Tool kits	Miscellaneous tool assemblies.
TL	Tools	All types except line construction (see LC).
TN	Tuning units	Receiver, transmitter, antenna, tuning units, etc.
TR	Transducers	Magnetic heads, phonopickups, sonar transducers, vibration pickups, etc. (see H, LS, and M).
TS	Test items	Test and measuring equipment not otherwise included; boresighting and alignment equipment.
TT	Teletypewriter and facsimile apparatus.....	Miscellaneous tape, teletype, facsimile equipment, etc.
TV	Tester, tube	Electronic tube tester.
TW	Tapes and recording wires.....	Recording tape and wire, splicing, electrical insulating tape, etc.
U	Connectors, audio and power.....	Unions, plugs, sockets, adapters, etc.
UG	Connectors, RF	Unions, plugs sockets, choke couplings, adapters, elbows, flanges, etc.
V	Vehicles	Carts, dollies, trucks, trailers, etc.
VS	Signaling equipment, visual.....	Flag sets, serial panels, signal lamp equipment, etc.
WD	Cables, two conductor.....	NonRF wire, cable and cordage in bulk (see RG).
WF	Cables, four conductor.....	NonRF wire, cable and cordage in bulk (see RG).
WM	Cables, multiple conductor.....	NonRF wire, cable and cordage in bulk (see RG).
WS	Cables, single conductor.....	NonRF wire, cable and cordage in bulk (see RG).
WT	Cables, three conductor.....	NonRF wire, cable and cordage in bulk (see RG).
ZM	Impedance measuring devices.....	Used for measuring Q, C, L, R, or PF, etc.

CHART III. *Developmental indicators*

- XA—Communication-Navigation Laboratory, WADC, Dayton, Ohio.
- XB—Naval Research Laboratory, Washington, D. C.
- XC—U. S. Army Signal Engineering Laboratories, The Hexagon, Fort Monmouth, N. J. (inactivated, use XE).
- XD—Cambridge Research Center, L. G. Hanscom Field, Bedford, Mass.
- XE—U. S. Army Signal Research and Development Laboratory, Fort Monmouth, N. J.
- XF—Frankford Arsenal, Philadelphia, Pa.
- XG—U. S. N. Electronics Laboratory, San Diego, Calif.
- XH—Aerial Reconnaissance Laboratory, WADC, WPAFB, Ohio.
- XI—Air Force Armament Center, Eglin Air Force Base, Fla.
- XJ—Naval Air Development Center, Johnsville, Pa.
- XK—Flight Control Laboratory, WADC, WPAFB, Ohio.
- XL—U. S. Army Signal Electronics Research Unit, Mountain View, Calif.
- XM—U. S. Army Signal Engineering Laboratories, The Hexagon, Fort Monmouth, N. J. (inactivated, use XE).
- XN—Department of the Navy, Washington, D. C.
- XO—Redstone Arsenal, Huntsville, Ala.
- XP—Canadian Department of National Defense, Ottawa, Canada.
- XQ—Aeronautical Accessories Laboratory, WADC, WPAFB, Ohio.
- XR—National Security Agency, Fort George Meade, Md.
- XS—Electronic Components Laboratory, WADC, WPAFB, Ohio.
- XT—Army Security Agency.
- XU—U. S. N. Underwater Sound Laboratory, Fort Trumbell, New London, Conn.
- XV—Air Force Special Weapons Center, Kirtland AFB, Albuquerque, New Mex.
- XW—Rome Air Development Center, Rome, N. Y.
- XY—Weapons Guidance Laboratory, WADC, WPAFB, Ohio.
- XZ—U. S. N. Bureau of Ordnance Activities.
- XAA—Air Force Ballistic Missile Division, ARDC, Inglewood, Calif.
- XAE—U. S. Army Electronic Proving Ground, Fort Huachuca, Ariz.
- XAN—Naval Air Facility, Indianapolis, Ind.
- XBB—U. S. Army Signal Materiel Support Agency, Fort Monmouth, N. J.
- XCC—Air Force Missile Test Center, Patrick AFB, Fla.
- XDD—U. S. Army Signal Air Defense Engineering Agency, Fort George Meade, Md.
- XPM—U. S. Army, Project Michigan, Ypsilanti, Mich.

