



CATALOG of MATERIAL

BUREAU of SHIPS SECTION — Part II



ARMED FORCES CROSS-INDEX OF ELECTRON TUBE TYPES AND ALLIED DEVICES

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SUPERSEDURE NOTICE

Supersedes First Edition, August 1950, of both Armed Forces Cross Index of Electron Tube Types and Catalog of Navy Material, Bureau of Ships Section, Part II, Section 16-820, Electron Tube Types Cross-Index.

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~~CROSS~~ INDEX TUBE TYPES AND DEVICES

KEYWORD

INTRODUCTION

This publication provides a list of electron tubes and other devices whose performance functions are similar to those of electron tubes (e.g. crystal diodes, transistors, photoelectric cells, etc.). The list is cross-referenced to Navy stock numbers, current service designations, and other type numbers or designations. The information may be used as a guide to interchangeability, but is not authority to make any circuit or component modification to existing equipment.

There has been considerable misunderstanding throughout the Service as to the relationship among tubes marked G, GT, and GT/G. The GT/G group of tubes was manufactured primarily for equipment built for civilian use. Because of similarity in electrical characteristics of tubes of certain G and GT types, manufacturers discontinued the G types and thereafter branded the GT, GT/G. Tubes of the latter two types, (GT and GT/G) are identical electrically and mechanically, and so are interchangeable and can be stocked together. Their correct service designation is now GT. They are smaller than those of the G type, however, and may have other mechanical and electrical differences, so that replacement of G tubes by GT or GT/G tubes, while it may be possible, should first be approved by those responsible for the operation of the equipment.

The letter W immediately following the last number combination in a tube type designation indicates a tube equivalent in performance to prototype except that it is better suited to withstand shock and vibration. It can be used in the same socket but may be of different overall physical dimensions and may need different tube clamps.

Tubes having type approval of the Armed Services Electro Standards Agency (under specification JAN-1A) bear three-part numbers separated by dashes, each consisting of the letters JAN, an alphabetic manufacturer's code, and the commercial tube type number. For example, the num-

ber JAN-CYZ-6H6 indicates that the tube is type approved, has the commercial type number 6H6, and was procured under the JAN-1A specification from a manufacturer having the type approval code designation CYZ. (These codes are not indexed in this catalog). In the case of miniature, and other small tubes having type approval, the "JAN" is omitted from the number; for example, JXY-9002. All tubes procured from manufacturers not having type approval on a specific type of tube but otherwise meeting requirements are designated only "JAN" plus type number; for example, JAN 6H6.

CONTENTS OF SECTION

The section contains the following material:

MANUFACTURERS' TUBE TYPE NUMBER PREFIXES, Page 5

Some of the more common letter prefixes to tube type numbers are listed in this part, associated with the names of the manufacturers using them.

EXPLANATION OF COLUMNAR HEADINGS, Page 5

CROSS INDEX OF ELECTRON TUBE TYPES, Pages 6-

This part lists the tubes and other devices included in numeric-alphabetic sequence of tube type numbers, and includes a brief description of each item in addition to the cross-references previously mentioned. Tube types are listed in this sequence:

1. Tube type designations containing letters only are listed first and are in alphabetic sequence.
2. Tube type designations containing letters and numerals are listed next in numeric-alphabetic sequence.

a. All designations with "1" in the first position precede all with "2" which precede all with "3", etc. (Note: "10" follows "9" and precedes "11".)

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FOREWORD

CATALOG SECTIONS PREVIOUSLY PUBLISHED

| SECTION NO. | COMMODITY | DATE DISTRIBUTED | SECTION NO. | COMMODITY | DATE DISTRIBUTED |
|-------------|---|------------------|-------------|-----------------------------|------------------|
| 16-003 | Sig. Corps Stk. No. to SNSN Cross Index | 5-24-51 | 17-110 | Coils | 3-3-52 |
| 16-004 | SNSN Cross Index to AMC | 5-18-51 | 17-150 | Contacts | 6-6-51 |
| 16-100 | Capacitors, Fixed Mica | 12-18-50 | 17-300 | Gaskets | 10-23-51 |
| 16-101 | Capacitors, Fixed Paper | 6-7-51 | 17-405 | Insulators | 6-19-51 |
| 16-102 | Capacitors, Fixed Electrolytic | 1-12-51 | 17-600 | Motors | 6-19-51 |
| 16-103 | Capacitors, Fixed Ceramic | 12-18-50 | 17-716 | Relays | 8-8-51 |
| 16-110 | Coils R.F. & Misc. | 12-1-51 | 17-801 | Teletype | 3-18-52 |
| 16-559 | Mountings | 4-23-52 | 17-806 | Transformers, AF | 8-15-51 |
| 16-602 | Filter & Networks | 8-6-51 | 17-807 | Transformers, IF | 8-15-51 |
| 16-702 | Resistors, Fixed Comp. | 6-9-50 | 17-810 | Transformers, Discriminator | 10-23-51 |
| 16-703 | Resistors, Fixed WW | 8-10-50 | 17-811 | Transformers, R.F. Fixed | 8-15-51 |
| 16-704 | Resistors, Variable WW & Comp | 10-30-50 | 17-812 | Transformers, Variable | 3-3-52 |
| 16-705 | Resistors, Fixed Precision | 8-15-51 | 17-813 | Transformers, Assemblies | 3-18-52 |
| 16-706 | Resistors, Adjustable | 4-23-52 | 17-070 | Boards, Terminal | 8-15-51 |
| 16-820 | Tubes, Electron | 12-6-50 | 17-075 | Brushes | 3-3-52 |
| 17-050 | Batteries, Dry & Storage | 3-3-52 | 17-809 | Transformers, Pulse | 5-16-52 |
| | | | 16-140 | Crystals, Quartz | 7-23-52 |

MANUFACTURERS' TUBE TYPE NUMBER PREFIXES

Examples of the more common letter prefixes in use are tabulated below:

| Tube manufacturer | Prefix on commercial types | Prefix on experimental types |
|-----------------------------|--|----------------------------------|
| Amperex----- | ZB, HF, A, P, CEP----- | |
| Continental Electric----- | CE----- | |
| Eitel McCullough----- | UH, RX----- | |
| Electronic Enterprises----- | EE----- | |
| Electrons----- | EL----- | |
| Federal----- | F----- | |
| General Electric----- | GL, FG, NE, FP, FA, PJ, FJ, FR | ZP, ZG, Z. |
| Hytron----- | HY----- | D, HD. |
| Machlett----- | ML----- | EP. |
| RCA----- | | A, C, or R. |
| Raytheon----- | RK, RKR, CK, RX, RM----- | QF, QT, QM, QMG, QL, QG, QK, QY. |
| Sylvania----- | R----- | SD, SB, SN, X, R. |
| Taylor----- | T, TT, TZ, R, TW----- | |
| Tung Sol----- | | DT. |
| United Electrics----- | UE, BW, CV, UX, HV, CW----- | |
| Western Electric----- | D, WE----- | XQ. |
| Westinghouse----- | WL, KU, KI, DKI, RO, DRO, RJ, DRJ, KX----- | WX. |

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ARMED FORCES CROSS-INDEX OF ELECTRON TUBE TYPES AND ALLIED DEVICES

FOREWORD

b. Within a given numeric group, those designations with alphabetic prefixes come first and are listed in alphabetic order of the prefix. (Note: Within a prefix a "-" precedes any letter of the alphabet.) Example:

| | |
|-------|-----|
| BLI | TTI |
| BSI | VI |
| CEI | I |
| DI | A2 |
| GM-MI | BL2 |
| GMHMI | CE2 |
| NUI | ZA2 |
| OI | ZP2 |
| REI | 2 |

c. Within a given numeric group, whenever the number (or the number and prefix if both exist) is identical, the sequence is alphabetic according to the letters appearing next after the number. (Note: "-" or "/" precedes in sequence any letter of the alphabet.) Example:

| | |
|--------|------|
| BLI | NUIV |
| BSI | OI |
| CEI | REI |
| CEIA/B | TTI |
| CEIC | VI |
| DI | I |
| GM-MI | I-A |
| GM-MIM | IA |
| GMHMI | A2 |
| NUI | 2 |
| NUIRBL | |

d. When the alphabetic prefix, the numeral, and the first letter or letters following the numeral are the same, the further sequence is based upon the number next following, then the letter following that, etc. Example:

| | |
|---------------|-------|
| 6M-MIM2 | I |
| 6M-MIM20 | I-15 |
| 6MH-MKIMODI0 | IAI |
| 6MH-MKIMODI0A | IA5G |
| 6MH-MKIMODI0D | IA5GT |

| | |
|---------|------------|
| IA5GT/G | IB3GT |
| IAB5 | IB3GT/8016 |
| IBI | |

The first page of the CROSS INDEX contains a detailed explanation of how the characteristics are indicated for each columnar heading and should be read carefully before using this part of the Catalog section.

ARMY VT NUMBERS AND COMMERCIAL NUMBERS:
Listing by VT Numbers, Pages 368-370

A cross-index between Army VT numbers and commercial tube type designations is provided in this part.

TO ORDER MATERIAL

In ordering material from this catalog always specify the stock number including the complete prefix (Example: NI6-T-52001), or the complete tube type, if no stock number is given (Example: GL2H21). Even if the stock number is already known, it should be verified before ordering, by locating the tube type in the CROSS INDEX. (Stock numbers will be found to follow generally the same sequence, although that cannot be depended upon since stock numbers are no longer necessarily significant as to characteristics.) After verification, the item may be requisitioned by stock number, or tube type number if no stock number is available, except that if the requisition carries an A or B priority, the description should include the equipment application in addition to the stock number. (This assures against delay or possible error in filling priority requests for material.) The unit of issue of all items listed in this section is EACH, unless otherwise specified.

NOTE: INCLUSION OF A TUBE TYPE NUMBER IN THIS SECTION DOES NOT CONSTITUTE AUTHORITY FOR STOCKING THE TUBES IN SUPPLY ACTIVITIES.

ELECTRON TUBE TYPES

EXPLANATION OF COLUMNAR HEADINGS

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description | Other Number | Current Service Designation | Tube Type |
|-----------|----------------------------|---------------------|-------------------|--------------|-----------------------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1 Tube Type
All electron tube type numbers which are included in this Catalog Section have been arranged in numerical-alphabetical order; disregarding any prefix letters

1. The first number appearing in the type designation is the first criterion used to determine the location of the tube type in the list.

EX: CE1 precedes BS2; 5AP4 precedes C6A; 25A6 precedes HF100; 211 precedes 931A.

2. The prefix letters have the second priority in determining the location of the tube type. The tube types which bear prefix letters are placed in alphabetical order after the primary sort (Paragraph 1) has been determined.

EX: CE3D precedes 3-38A; FA6 precedes G6; K7T2 precedes WE7A.

3. A number again determines the next sequence; the second number appearing immediately after the first numeral designation has the third priority.

EX: 3-25A3/25T precedes 3AP11; 2-240 precedes 2-250A/250R; 5-4 precedes 5AP4.

4. The letters following the first number have the fourth priority.

EX: 2K34 precedes 2P22; 7H4 precedes 7Z4; 220B precedes 220CA.

5. The number following the first letter suffix has the fifth priority.

EX: 3B24 precedes 3B29; 5Y3GT precedes 5Y4GT; 7F7 precedes 7F8.

6. The letter following the second number bears the sixth preference.

EX: 1B4G precedes 1B4P/951; 3BP1A precedes 3BP1W.

7. The type number listing sequence which is used in this Catalog Section is identical to that which is used for the assignment of Standard Navy Stock Numbers; therefore, the stock numbers which appear in column two will also be found in numerical order.

2 Standard Navy Stock Number
This column provides the user of the Catalog Section with the Standard Navy Stock Number applicable to electron tube types in use in Naval electronic equipments. A Standard Navy Stock Number is a number assigned within the framework of the Navy classification system. Cognizance symbols are letter codes prefixed to the stock number in order to identify and designate the Bureau, Office or Supply Demand Control Point which exercises inventory control over the item. The cognizance symbol "N" denotes inventory control by the Electronic Supply Office, "E" denotes inventory control by the Bureau of Ships.

3 Navy Allowance Code
The Navy Allowance code number is for use by Naval activities to compute tube allowances in accordance with special instructions provided to Naval activities by the Bureau of Ships, Electronics Division.

4 Class Description
This column gives a brief description of the tube and its application, and will serve to identify the tube, as well as to differentiate between unlike types having the same number.

1- The description "Obsolete" does not imply that such a type is no longer used in Service equipment, but that it will not be manufactured.

2- The words "Similar To" denote those types which have similar electrical characteristics, but because of basing, heater voltage, physical size, etc., are not listed as "Nearest Equivalent".

3- "Equivalent To" indicates tube types which are mechanically interchangeable, and in most cases should serve as replacement without requiring any circuit change. However, metal tubes should not be used in place of glass tubes where the number one pin of the socket is used for purpose other than grounding.

4- "Nearest Equivalent" indicates the tube type which is the nearest of the "Equivalent To" tubes to the basic tube type listed.

5 Other Number
This column contains other designations by which the same type has been and/or is known, which are directly interchangeable.

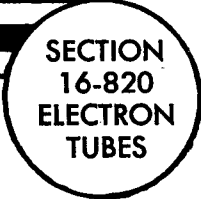
6 Current Service Designation
The approved service designation for tubes will be found listed in this column.

7 Tube Type
Same as column one (1). Repeated for alignment purposes only.

**CROSS-INDEX
OF
ELECTRON TUBE TYPES**

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description |
|-------------|----------------------------|---------------------|--|
| AD | | | See 1V. |
| AF | | | See 82. |
| AG | | | See 83. |
| AMP-VR | | | See 8H/8H/3. |
| BA | N16-T-50000 | | See 1009/BA. |
| * BH | N16-T-50010 | | Receiving duodiode gaseous rectifier. |
| * BR | N16-T-50020 | | Receiving diode gaseous rectifier (obsolete). |
| BUPX | | | See 1N30. |
| DX | | | Dry system oven. |
| FNH | | | Special type 6A3. |
| GL | | | See 1B32/532A. |
| K-0 | | | See 2J23-29. |
| LA | | | See 6A4/LA. |
| LVX | | | See 2J42. |
| Navy Type A | | | See C1A. |
| Navy Type B | | | See C5A. |
| Navy Type C | | | See C5A. |
| 00A | | | Receiving triode detector-Cesium vapor type (obsolete). |
| OSGLIM | | | See CV71. |
| PZ | | | See 47. |
| PZH | | | See 2A5. |
| SA | N16-T-50025 | | Gas switching tube. |
| SB | N16-T-50025-20 | | Gas switching tube. |
| SC | N16-T-50025-30 | | Gas switching tube. |
| XP | | | See CV74. |
| XXB | N16-T-50027 | | Receiving twin triode frequency converter. Obsolete. |
| XXD | N16-T-50030 | | See 14AF7. |
| XXFM | N16-T-50040 | | See 7X7/XXFM. |
| XXL | N16-T-50050 | | Receiving lock-in type triode (very similar to 7A4). Obsolete. |
| D1/2 | | | See 81. |
| BL1 | | | ATR tube. |
| BS1 | | 1 | See 5979/BS1. |
| C1A | N16-T-51030 | 6 | Thyratron. |
| C1B | | | See 3C31/C1B. |
| C1B/A | | | See 5664. |
| C1J | | | Thyratron. |
| C1J/A | | | See 5683. |
| C1K | N16-T-51030-50 | | Thyratron. |
| CE1 | | | Gas phototube, see CE1C, CE1D, CE1E, CE1V, and PG-94. |
| CE1A/B | | | Gas phototube. |
| CE1C | | | See 918. |
| CE1D | | | See 868. |
| CE1E | N16-T-51035 | | Obsolete. Use 868. |
| CE1RBL | | | See 1RBL. |
| CE1RBS | | | See 1RBS. |
| CE1V | | | Vacuum phototube. See PJ22. |
| CE1VC | | | See PJ22. |

* When stocks of asterisked tube types are exhausted, no additional procurements for these types will be made.



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| Other Number | Current Service Designation | Tube Type |
|---|-----------------------------|-------------|
| | 1V | AD |
| | 82 | AF |
| | 83 | AG |
| | 8H/8H/3 | AMP-VR |
| | 1009/BA | BA |
| | BH | BH |
| | BR | BR |
| | 1N30 | BUPX |
| | DX | DX |
| | 6A3 Special | FNH |
| | 1B32/532A | GL |
| | 2J23-29 | K-0 |
| | 6A4/LA | LA |
| | 2J42 | LVX |
| | C1A | Navy Type A |
| | C5A | Navy Type B |
| | C6A | Navy Type C |
| 200A | 00A | 00A |
| | CV71 | OSGLIM |
| | 47 | PZ |
| | 2A5 | PZH |
| | SA | SA |
| | SB | SB |
| | SC | SC |
| | CV74 | XP |
| | XXB | XXB |
| | 14AF7 | XXD |
| 7X7 | 7X7/XXFM | XXFM |
| | XXL | XXL |
| | 81 | D1/2 |
| | BL1 | BL1 |
| 150N, 1B80, 150NA, 62016 | 5979/BS1 | BS1 |
| CEC1A, ELC1A, GLC1A, Navy type A, WX 3169 | C1A | C1A |
| CE303, ELC1B | 3C31/C1B | C1B |
| | 5664 | C1B/A |
| | C1J | C1J |
| | 5683 | C1J/A |
| | C1K | C1K |
| | CE1A/B,C,D,E,V | CE1 |
| | CE1A/B | CE1A/B |
| | 918 | CE1C |
| | 868 | CE1D |
| | CE1E | CE1E |
| | 1RBL | CE1RBL |
| | 1RBS | CE1RBS |
| | CE1V | CE1V |
| | PJ22 | CE1VC |

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ELECTRON TUBE TYPES**

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description |
|----------------|----------------------------|---------------------|---|
| CEC1A | | | See C1A. |
| CV1V | | | See PG-94. |
| D1 | | | See VR78 (Br.). |
| DE1 | | | See 27. |
| EL1C | | | See 3B22. |
| ELC1A | | | See C1A. |
| ELC1B | | | See 3C31/C1B. |
| FE1 | | | Improved 1B42. |
| G1 | | | Gas phototube. |
| GC1-7 | N16-T-51036 | | Geiger-Mueller counter tube. |
| GL-1P29/401 | | | See 1P29. |
| GLC1A | | | See C1A. |
| GM-M1M2 | | | See MK1MOD2. |
| GM-M1M20 | | | See MK1MOD20. |
| GMH-MK1MOD10 | | | See MK1MOD10. |
| GMH-MK1MOD10A | | | See MK1MOD10A. |
| GMH-MK1MOD10D | | | See MK1MOD10D. |
| J1 | | | See 2J22. |
| J1RF | | | See 2J22. |
| KC1 | | | Special purpose diode vacuum rectifier. |
| LM1 | N16-T-51038-60 | | Lamp. |
| Mark 1 Mod 2 | | | See MK 1 MOD 2. |
| Mark 1 Mod 10 | | | See MK 1 MOD 10. |
| Mark 1 Mod 10A | | | See MK 1 MOD 10A. |
| Mark 1 Mod 10D | | | See MK 1 MOD 10D. |
| Mark 1 Mod 20 | | | See MK 1 MOD 20. |
| MK1MOD10 | N16-T-51038 | | Beta-Gamma counter tube (outdoor type). |
| MK1MOD10A | N16-T-51038-30 | | Beta-Gamma counter tube (indoor type). |
| MK1MOD10D | N16-T-51038-45 | | Geiger-Mueller counter tube. |
| MK1MOD2 | N16-T-51037 | | Geiger-Mueller counter tube. |
| MK1MOD20 | N16-T-51037-50 | | Geiger-Mueller counter tube. |
| ML1E | N16-T-51039 | | Rectifier (medical & surgical.) |
| ML1-K | N16-T-51040 | | X-ray tube. |
| NRC001M | | | See REL53. |
| NU1 | | | See CE1. |
| NU1RBL | | | See 1RBL. |
| NU1RBS | | | See 1RBS. |
| NU1V | | | See PJ22. |
| 01 | | | Receiving triode detector amplifier (obsolete). |
| *01A | N16-T-51050 | | Receiving triode detector amplifier (obsolete). See SE4374. Equivalent to 00A (obsolete) and 40 (obsolete). |
| PAX-1 | | | Packaged magnetron. |
| RE1 | | | See 80. |
| REL1 | | | See VT90 (Br.)/8011. |
| TGC1 | N16-T-51052 | | See 1B83. |
| TT1 | N16-T-51055 | | See R6212A. |
| V1 | | | Vacuum phototube. |
| 1 | | | Obsolete, superseded by 1V. |

* When stocks of asterisked tube types are exhausted, no additional procurements for these types will be made.

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ELECTRON TUBE TYPES**

| Other Number | Current Service Designation | Tube Type |
|--|-----------------------------|----------------|
| | C1A | CEC1A |
| | PG-94 | CV1V |
| | VR78(Br.) | D1 |
| | 27 | DE1 |
| CE222, 1C, 38405 | 3B22 | EL1C |
| | C1A | ELC1A |
| | 3C31/C1B | ELC1B |
| | FE1 | FE1 |
| | G1 | G1 |
| | GC1-7 | GC1-7 |
| | 1P29 | GL-1P29/401 |
| | C1A | GLC1A |
| | MK1MOD2 | GM-M1M2 |
| | MK1MOD20 | GM-M1M20 |
| | MK1MOD10 | GMH-MK1MOD10 |
| | MK1MOD10A | GMH-MK1MOD10A |
| | MK1MOD10D | GMH-MK1MOD10D |
| | 2J22 | J1 |
| J-1-714 | 2J22 | J1RF |
| | KC1 | KC1 |
| | LM1 | LM1 |
| GM-M1 M2 | MK1MOD2 | Mark 1 Mod 2 |
| GMH-MK1MOD10 | MK1MOD10 | Mark 1 Mod 10 |
| GMH-MK1MOD10A | MK1MOD10A | Mark 1 Mod 10A |
| GMH-MK1MOD10D | MK1MOD10D | Mark 1 Mod 10D |
| GM-M1M20 | MK1MOD20 | Mark 1 Mod 20 |
| GMH-MK1MOD10, Mark 1 Mod 10 | MK1MOD10 | MK1MOD10 |
| GMH-MK1MOD10A, Mark 1 Mod 10A | MK1MOD10A | MK1MOD10A |
| GMH-MK1MOD10D, Mark 1 Mod 10D | MK1MOD10D | MK1MOD10D |
| GM-M1M2, Mark 1 Mod 2 | MK1MOD2 | MK1MOD2 |
| GM-M1M20, Mark 1 Mod 20 | MK1MOD20 | MK1MOD20 |
| | ML1E | ML1E |
| | ML1-K | ML1-K |
| | REL53 | NRC001M |
| | CE1 | NU1 |
| | 1RBL | NU1RBL |
| | 1RBS | NU1RBS |
| 59AV, V9, CE1V, WL734 | PJ22 | NU1V |
| 20, 1301 | 01 | 01 |
| | 01A | 01A |
| 501A, UX201A, 38001, 301A, Deforest 401A | PAX-1 | PAX-1 |
| | 80 | RE1 |
| VT90(Br.), 10E/97, WL538, WE710A, 8011 | VT90(Br.)/8011 | REL1 |
| | 1B83 | TGC1 |
| | R6212A | TT1 |
| | V1 | V1 |
| | 1 | 1 |

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OF
ELECTRON TUBE TYPES**

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description |
|------------|----------------------------|---------------------|---|
| 1-15 | N16-T-51060 | | Ballast tube. |
| 1A1 | | | See 1A1/5E1. |
| 1A1/5E1 | N16-T-51075 | | Ballast tube. |
| 1A3 | N16-T-51100 | 6 | Miniature HF diode. |
| 1A4 | | | Receiving tetrode amplifier (replace with 1A4P). |
| 1A4P | N16-T-51110 | | Receiving pentode amplifier (nearest equivalent is 34). |
| 1A4T | N16-T-51115 | | Receiving tetrode amplifier. (obsolete, replace with 1A4P). |
| 1A5G | | | See 1A5GT - Replace with 1A5GT. |
| 1A5GT | N16-T-51125 | 6 | Receiving pentode power amplifier (similar to 1Q5GT, 1T5GT, 1C5GT). |
| 1A5GT/G | | | See 1A5GT. |
| 1A6 | N16-T-51130 | | Receiving pentagrid converter-Obsolete (similar to 1C6). |
| 1A7G | | | See 1A7GT -- Replace with 1A7GT. |
| 1A7GT | N16-T-51145 | 4 | Receiving pentagrid converter (similar to 1B7GT). |
| * 1A85 | N16-T-51150 | | Receiving lock in type pentode amplifier. |
| 1A86 | | | Miniature pentagrid converter (Dutch). |
| 1AC4 | | | Subminiature twin diode. |
| 1AC5 | | | Receiving subminiature pentode. |
| 1AC6 | | | Miniature pentagrid converter. (Dutch). |
| 1AD4 | N16-T-51152 | | Receiving subminiature pentode. |
| 1AD5 | | | Receiving subminiature pentode. |
| 1AE4 | N16-T-51153 | | Miniature pentode voltage amplifier. |
| 1AE5 | | | Receiving subminiature mixer. |
| 1AF4 | N16-T-51154 | | Miniature receiving pentode. |
| 1AF5 | N16-T-51154-10 | | Miniature receiving diode pentode. |
| 1AG4 | | | Subminiature pentode. |
| 1AG5 | | | Subminiature diode pentode. |
| 1AH4 | | | Subminiature pentode. |
| 1AH5 | | | Miniature diode pentode (Dutch). |
| 1AP5 | N16-T-51170 | | Cathode ray tube (similar to type 913 with P-5 screen). |
| 1AP5/P11 | | | Cathode ray tube. |
| 1AX2 | | | Miniature half wave rectifier (Similar to 1X2 and 1X2A). |
| * 1B1 | N16-T-51200 | 6 | Ballast tube. |
| 1B3GT | N16-T-51203 | | Transmitting diode vacuum rectifier (replaces 8016). |
| 1B3GT/8016 | | 4 | See 1B3GT. |
| 1B4 | | | Obsolete, see 1B4P. |
| 1B4G | | | Obsolete, see 1B4G. |
| * 1B4P | N16-T-51204 | | Receiving pentode amplifier (obsolete. Replace with 32; similar to 1E5GP, 1E5GT). |
| 1B4P/951 | | | See 1B4P |
| 1B4T | | | Obsolete, see 1B4P. |
| 1B5 | | | See 1B5/25S. |
| 1B5/25S | N16-T-51205 | | Receiving duodiode triode (obsolete). |
| * 1B7G | N16-T-51207 | | Obsolete; use 1B7GT. |
| 1B7GT | N16-T-51208 | | Receiving pentagrid converter. Obsolete (similar to 1A7GT). |
| 1B8GT | | | Receiving diode triode pentode. |
| 1B21 | | | See 471. |
| 1B21A | | | See 471A. |

* When stocks of asterisked tube types are exhausted, no additional procurements for these types will be made.

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SECOND EDITION

**CROSS-INDEX
OF
ELECTRON TUBE TYPES**

| Other Number | Current Service Designation | Tube Type |
|-----------------|-----------------------------|------------|
| | 1-15 | 1-15 |
| | 1A1/5E1 | 1A1 |
| 5E1, 1A1 | 1A1/5E1 | 1A1/5E1 |
| | 1A3 | 1A3 |
| | 1A4 | 1A4 |
| | 1A4P | 1A4P |
| | 1A4T | 1A4T |
| | 1A5G | 1A5G |
| | 1A5GT | 1A5GT |
| | 1A5GT | 1A5GT/G |
| | 1A6 | 1A6 |
| | 1A7G | 1A7G |
| | 1A7GT | 1A7GT |
| SD719 | 1AB5 | 1AB5 |
| | 1AB6 | 1AB6 |
| | 1AC4 | 1AC4 |
| | 1AC5 | 1AC5 |
| | 1AC6 | 1AC6 |
| QF408 | 1AD4 | 1AD4 |
| | 1AD5 | 1AD5 |
| | 1AE4 | 1AE4 |
| QF409 | 1AE5 | 1AE5 |
| | 1AF4 | 1AF4 |
| | 1AF5 | 1AF5 |
| | 1AG4 | 1AG4 |
| | 1AG5 | 1AG5 |
| | 1AH4 | 1AH4 |
| | 1AH5 | 1AH5 |
| | 1AP5 | 1AP5 |
| | 1AP5/P11 | 1AP5/P11 |
| | 1AX2 | 1AX2 |
| | 1B1 | 1B1 |
| 1B3, 1B3GT/8016 | 1B3GT | 1B3GT |
| | 1B3GT | 1B3GT/8016 |
| | 1B4 | 1B4 |
| | 1B4G | 1B4G |
| | 1B4P | 1B4P |
| 951, 1B4P/951 | 1B4P | 1B4P/951 |
| 951 | 1B4P | 1B4T |
| | 1B5/25S | 1B5 |
| 1B5, 25S | 1B5/25S | 1B5/25S |
| | 1B7G | 1B7G |
| | 1B7GT | 1B7GT |
| | 1B8GT | 1B8GT |
| GL471 | 471 | 1B21 |
| GL471A | 471A | 1B21A |

SECTION
16-820
ELECTRON
TUBES

**CROSS-INDEX
OF
ELECTRON TUBE TYPES**

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description |
|--------------|----------------------------|---------------------|--|
| 1B22 | N16-T-51222 | . | Spark gap diode modulator. |
| 1B23 (WECO) | N16-T-51223 | 2 | TR tube. Will replace 702B with modification kit. |
| 1B23 (Bomac) | N16-T-51223-10 | . | TR tube. |
| 1B24 | N16-T-51224 | 6 | TR tube. |
| 1B24A | N16-T-51224-10 | . | TR tube. |
| 1B25 | N16-T-51225 | 6 | Gas switching tube. |
| *1B26 | N16-T-51226 | 4 | TR tube. |
| 1B27 | N16-T-51227 | 1 | TR tube. |
| 1B28 | N16-T-51228 | . | Gas switching tube. |
| 1B29 | N16-T-51229 | . | Gas switching tube. |
| 1B30 | . | . | Gas switching tube. |
| 1B31 | N16-T-51231 | . | Gas switching tube. |
| 1B32 | . | . | See 1B32/532A. |
| 1B32/532A | N16-T-51233 | . | Diode gas discharge tube. |
| 1B33 | . | . | Gas switching tube. |
| 1B34 | N16-T-51234 | . | Spark gas diode modulator. Obsolete. |
| 1B35 | N16-T-51235 | 6 | ATR tube. Superseded by 1B35A. |
| 1B35A | N16-T-51235-10 | . | ATR tube. Replaces 1B35. |
| 1B36 | N16-T-51236 | . | ATR tube. |
| 1B37 | N16-T-51237 | 4 | ATR tube. |
| 1B37A | . | . | ATR tube. |
| 1B38 | N16-T-51238 | 1 | PRE - TR tube. |
| 1B39 | . | . | Gas switching tube. |
| 1B40 | N16-T-51240 | 3 | TR tube. |
| 1B41 | N16-T-51241 | . | Series spark gap diode modulator. |
| *1B42 | N16-T-51242 | 5 | Mercury cathode series gap. |
| 1B43 | N16-T-51243 | . | Gas switching tube. |
| 1B44 | N16-T-51244 | . | ATR tube. |
| 1B45 | N16-T-51245 | 2 | Gas switching tube. |
| 1B46 | N16-T-51246 | . | Miniature voltage regulator. |
| 1B46/R1160A | . | . | See 1B46. |
| 1B47 | N16-T-51247 | . | Miniature voltage regulator. |
| 1B48 | N16-T-51248 | . | Cold cathode miniature gas diode rectifier. Replace with 5517. |
| 1B49 | . | . | Gas switching tube. |
| 1B50 | N16-T-51250 | 5 | TR tube. |
| 1B51 | N16-T-51251 | 5 | ATR tube. |
| 1B52 | N16-T-51252 | . | ATR tube. |
| 1B53 | N16-T-51253 | 1 | ATR tube. |
| 1B54 | N16-T-51254 | 2 | Obsolete PRE - TR tube. |
| 1B55 | N16-T-51255 | . | TR tube. |
| 1B56 | N16-T-51256 | 4 | ATR tube. |
| 1B57 | N16-T-51257 | . | ATR tube. |
| 1B58 | N16-T-51258 | . | Gas switching tube. |
| 1B59 | . | . | See 1B59/R1130B. |
| 1B59/R1130B | N16-T-51259 | . | Cold cathode crater - glow modulator tube. |
| 1B60 | N16-T-51260 | . | Lightweight version of 1B24 (TR). |
| 1B62 | N16-T-51262 | . | Modified 721B (TR). |

* When stocks of asterisked tube types are exhausted, no additional procurements for these types will be made.

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OF
ELECTRON TUBE TYPES**

| Other Number | Current Service Designation | Tube Type |
|--|-----------------------------|--------------|
| WE1378X | 1B22 | 1B22 |
| 729A, WE729A | 1B23 | 1B23 (WECO) |
| | 1B23 | 1B23 (Bomac) |
| WX3199, X6011, REL30 | 1B24 | 1B24 |
| | 1B24A | 1B24A |
| S853 | 1B25 | 1B25 |
| X6010, WX3210 | 1B26 | 1B26 |
| X6013 | 1B27 | 1B27 |
| X6012 | 1B28 | 1B28 |
| 1437GT | 1B29 | 1B29 |
| ZG530 | 1B30 | 1B30 |
| 1391Z | 1B31 | 1B31 |
| | 1B32/532A | 1B32 |
| GA-4, GA5A, GA-5, GL532A, WL532A | 1B32/532A | 1B32/532A |
| | 1B33 | 1B33 |
| WX3226 | 1B34 | 1B34 |
| ZG626, X6031 | 1B35 | 1B35 |
| 6038 | 1B35A | 1B35A |
| ZG627, X6015 | 1B36 | 1B36 |
| ZG629 | 1B37 | 1B37 |
| | 1B37A | 1B37A |
| ZG645 | 1B38 | 1B38 |
| WL539A | 1B39 | 1B39 |
| SD847A | 1B40 | 1B40 |
| WX3240-D | 1B41 | 1B41 |
| D170135, 1438GT | 1B42 | 1B42 |
| SD829 | 1B43 | 1B43 |
| ZG610 | 1B44 | 1B44 |
| WX3240B | 1B45 | 1B45 |
| R1160A, 1B46/R1160A | 1B46 | 1B46 |
| | 1B46 | 1B46/R1160A |
| | 1B47 | 1B47 |
| CK1011A | 1B48 | 1B46 |
| WX3240G | 1B49 | 1B49 |
| X6032 | 1B50 | 1B50 |
| X6033 | 1B51 | 1B51 |
| | 1B52 | 1B52 |
| | 1B53 | 1B53 |
| X6036 | 1B54 | 1B54 |
| ZG625, X6034 | 1B55 | 1B55 |
| | 1B56 | 1B56 |
| | 1B57 | 1B57 |
| | 1B58 | 1B58 |
| | 1B59/R1130B | 1B59 |
| | 1B59/R1130B | 1B59/R1130B |
| | 1B60 | 1B60 |
| | 1B62 | 1B62 |

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16-820
ELECTRON
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**CROSS-INDEX
OF
ELECTRON TUBE TYPES**

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description |
|------------|----------------------------|---------------------|--|
| 1B63 | N16-T-51263 | 1 | TR tube. Replace with 1B63A. |
| 1B63A | N16-T-51263-10 | 1 | Improved 1B63. |
| 1B64 | N16-T-51264 | | Beta - Gamma counter tube. |
| 1B67 | | | Counter tube, Beta - Gamma. |
| 1B67/VG10A | | | See 1B67. |
| 1B68 | N16-T-51268 | | Beta - Gamma counter tube. Replace with MK 1 MOD 10 D. |
| 1B69 | | | Gamma counter tube. |
| 1B70 | | | Gamma counter tube. |
| 1B71 | | | Gamma counter tube. |
| 1B72 | | | Gamma counter tube. |
| 1B73 | | | Gamma counter tube. |
| 1B74 | | | Gamma counter tube. |
| 1B75 | | | See BS-6. |
| 1B76 | | | Beta counter tube. |
| 1B77 | | | Beta counter tube. |
| 1B78 | | | Beta-Gamma counter tube. |
| 1B79 | | | Beta-Gamma counter tube. |
| 1B80 | | | See 5979/BS1. |
| 1B81 | | | Alpha counter tube. |
| 1B83 | | | Beta-Gamma counter tube. |
| 1B84 | | | Beta-Gamma counter tube. |
| 1B85 | N16-T-51285 | | Beta-Gamma counter tube. |
| 1B86 | | | Gamma counter tube. |
| 1B87 | | | Miniature Gamma counter tube. |
| 1B88 | | | Gamma counter tube. |
| 1B89 | | | X-ray counter tube. |
| 1B90 | | | Beta-Gamma counter tube. |
| 1B97 | | | Counter tube. |
| 1B98 | | | Counter tube. |
| 1B99 | | | Counter tube. |
| 1B100 | | | Counter tube. |
| 1B102 | | | Thyrod-Beta counter tube. |
| 1B105 | | | Counter tube. |
| 1B106 | | | Thyrod-Beta counter tube. |
| 1B124 | | | Gamma counter tube. |
| 1B125 | | | Cosmic-ray counter tube. |
| 1B126 | | | Gamma counter tube. |
| 1C | | | See 3B22. |
| 1C3 | | | Receiving triode voltage amplifier. |
| 1C4 | N16-T-51302 | | Australian receiving pentode amplifier. Obsolete. Replace with 1A4P. |
| 1C5G | N16-T-51304 | | See 1C5GT/G-Replace with 1C5GT/G. |
| 1C5GT | N16-T-51305 | | Receiving pentode amplifier (similar to 1Q5GT, 1T5GT, 1A5GT). |
| 1C5GT/G | | | See 1C5GT. |
| 1C6 | N16-T-51306 | 5 | Receiving pentagrid converter (similar to 1A6). |
| 1C6A | N16-T-51306-15 | | Infra-red image tube. |
| 1C7G | N16-T-51307 | 5 | Receiving pentagrid converter (similar to 1D7G)(Type 1C6 characteristics). |

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OF
ELECTRON TUBE TYPES**

| Other Number | Current Service Designation | Tube Type |
|-------------------------|-----------------------------|------------|
| . | 1B63 | 1B63 |
| X6044 | 1B63A | 1B63A |
| . | 1B64 | 1B64 |
| 1B67/VG10A | 1B67 | 1B67 |
| . | 1B67 | 1B67/VG10A |
| VG-13, G-11, K-11 | 1B68 | 1B68 |
| 1E, 62005 | 1B69 | 1B69 |
| 1M, 62006 | 1B70 | 1B70 |
| 4E, 62007 | 1B71 | 1B71 |
| 4M, 62008 | 1B72 | 1B72 |
| 10E, 62009 | 1B73 | 1B73 |
| 10M, 62010 | 1B74 | 1B74 |
| 62011, BS-6, 100C | BS-6 | 1B75 |
| 100N, 62012 | 1B76 | 1B76 |
| 120C, 62013 | 1B77 | 1B77 |
| 150C, 62014 | 1B78 | 1B78 |
| 150M, 62015 | 1B79 | 1B79 |
| 150NA, 62016, BS1, 150N | 5979/BS1 | 1B80 |
| 200C, 62017 | 1B81 | 1B81 |
| TGC-1 | 1B83 | 1B83 |
| TGC-2 | 1B84 | 1B84 |
| . | 1B85 | 1B85 |
| . | 1B86 | 1B86 |
| VXG-11 | 1B87 | 1B87 |
| . | 1B88 | 1B88 |
| . | 1B89 | 1B89 |
| . | 1B90 | 1B90 |
| . | 1B97 | 1B97 |
| . | 1B98 | 1B98 |
| . | 1B99 | 1B99 |
| . | 1B100 | 1B100 |
| . | 1B102 | 1B102 |
| . | 1B105 | 1B105 |
| . | 1B106 | 1B106 |
| . | 1B124 | 1B124 |
| . | 1B125 | 1B125 |
| . | 1B126 | 1B126 |
| EL1C, 38405 | 3B22 | 1C |
| . | 1C3 | 1C3 |
| . | 1C4 | 1C4 |
| . | 1C5G | 1C5G |
| . | 1C5GT | 1C5GT |
| . | 1C5GT | 1C5GT/G |
| . | 1C6 | 1C6 |
| . | 1C6A | 1C6A |
| . | 1C7G | 1C7G |

**CROSS-INDEX
OF
ELECTRON TUBE TYPES**

| Tube Type | Standard Navy Stock Number | Navy Allowance Code | Class Description |
|------------|----------------------------|---------------------|---|
| 1C8 | N16-T-51308 | | Subminiature filamentary type triode heptode converter. |
| 1C21 | N16-T-51321 | | Cold cathode gas triode. |
| 1D1 | N16-T-51350 | | Ballast tube. |
| 1D2 | | | Receiving current regulator. |
| 1D3 | | | Subminiature triode. |
| 1D4G | | | Receiving RF pentode (Australian). |
| 1D4GT | | | Receiving RF pentode (Australian). |
| 1D5G | | | See 1D5GP. |
| 1D5GP | N16-T-51355 | 6 | Receiving pentode amplifier (nearest equivalent is 1D5G, similar to 1A4P and 1E5G). |
| 1D5GT | N16-T-51360 | 6 | Receiving tetrode amplifier (obsolete, replace with 1D5GP). |
| 1D7G | N16-T-51370 | | Receiving pentagrid converter. Obsolete. Replace with 1C7G. (type 1A6 characteristics). |
| 1D8GT | N16-T-51380 | 6 | Receiving diode triode pentode. |
| 1D21 | | | See 631P1. |
| 1D21/631P1 | | | See 631P1. |
| 1E | N16-T-51398 | | See 1B69. |
| 1E1 | N16-T-51400 | 6 | Ballast tube, supersedes 1P1. |
| 1E2 | | | Receiving current regulator. |
| 1E3 | | | Miniature UHF triode (Dutch). |
| 1E4G | N16-T-51404 | | Receiving triode amplifier (obsolete, similar to 1G4GT, 1H4G and 1E3). Use 1G4GT. |
| 1E5G | N16-T-51404-50 | | Receiving screen grid RF amplifier (similar to 1D5GP). Obsolete. |
| 1E5GP | N16-T-51405 | | Receiving pentode amplifier (type 1B4 characteristics). |
| 1E5GT | | | Replace with 1E5GP. |
| 1E7G | N16-T-51407 | 6 | Receiving twin pentode amplifier. |
| 1E7GT | | | Receiving twin pentode amplifier. |
| 1E8 | | | Subminiature converter. |
| 1F4 | N16-T-51440 | | Receiving pentode amplifier (type 1F5G characteristics). |
| 1F5G | N16-T-51450 | | Receiving pentode amplifier (type 1F4 characteristics). |
| 1F6 | N16-T-51460 | | Receiving duodiode pentode amplifier (obsolete). |
| 1F7G | N16-T-51470 | | Receiving duodiode pentode amplifier. Obsolete. (type 1F6 characteristics). |
| 1F7GH | | | Receiving duodiode pentode (replace with 1F7G). |
| 1F7GT | | | Receiving duodiode pentode (replace with 1F7G). |
| 1F7GV | N16-T-51475 | | Receiving duodiode pentode (replace with 1F7G). |
| 1F7GY | | | Receiving duodiode pentode (replace with 1F7G). |
| 1G1 | N16-T-51501 | | Receiving current regulator. |
| 1G4G | | | See 1G4GT/G—replace with 1G4GT/G. |
| 1G4GT | N16-T-51504 | 6 | Receiving triode detector amplifier (similar to 1E4G, 1H4G). |
| 1G4GT/G | | | See 1G4GT. |
| 1G5G | N16-T-51505 | | Receiving pentode power amplifier (obsolete, similar to 1J5G). |
| 1G6G | | | Obsolete. Replace with 1G6GT. |
| 1G6GT | N16-T-51506 | 6 | Receiving twin triode amplifier. |
| 1G6GT/G | | | See 1G6GT. |
| 1H4G | N16-T-51540 | 6 | Receiving triode detector amplifier (similar to 30, 1E4G, 1G4GT). |

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CROSS-INDEX OF ELECTRON TUBE TYPES

| Other Number | Current Service Designation | Tube Type |
|--------------|-----------------------------|------------|
| | 1C8 | 1C8 |
| RCA-R6160 | 1C21 | 1C21 |
| | 1D1 | 1D1 |
| | 1D2 | 1D2 |
| SD1066A | 1D3 | 1D3 |
| | 1D4G | 1D4G |
| | 1D4GT | 1D4GT |
| | 1D5GP | 1D5G |
| | 1D5GP | 1D5GP |
| | 1D5GT | 1D5GT |
| | 1D7G | 1D7G |
| | 1D8GT | 1D8GT |
| 1D21/631P1 | 631P1 | 1D21 |
| | 631P1 | 1D21/631P1 |
| 62005 | 1B69 | 1E |
| | 1E1 | 1E1 |
| | 1E2 | 1E2 |
| | 1E3 | 1E3 |
| | 1E4G | 1E4G |
| | 1E5G | 1E5G |
| | 1E5GP | 1E5GP |
| | 1E5GT | 1E5GT |
| | 1E7G | 1E7G |
| | 1E7GT | 1E7GT |
| | 1E8 | 1E8 |
| | 1F4 | 1F4 |
| | 1F5G | 1F5G |
| | 1F6 | 1F6 |
| | 1F7G | 1F7G |
| | 1F7GH | 1F7GH |
| | 1F7GT | 1F7GT |
| | 1F7GV | 1F7GV |
| | 1F7GY | 1F7GY |
| | 1G1 | 1G1 |
| | 1G4G | 1G4G |
| | 1G4GT | 1G4GT |
| | 1G4GT | 1G4GT/G |
| | 1G5G | 1G5G |
| | 1G6G | 1G6G |
| | 1G6GT | 1G6GT |
| | 1G6GT | 1G6GT/G |
| | 1H4G | 1H4G |