

AN IMPROVED CROSS-INDEX OF ARMY VT-NUMBERS AND COMMERCIAL IDENTIFIERS

Tube collectors and restorers of early military equipment have a continuing need among for a reference source on U. S. Army VT-numbered tubes. The listing below attempts to provide more depth of coverage than the usual cross-reference chart. It combines locally available references with material kindly supplied by Bro. Pat Dowd, W2GK; Bill Smith, N9TT; and John Walker. Three specific sources were MIL-HDBK-213A, Military Handbook - Electron Tubes - Cross Index and Type Identification, 1963; NavShips 900119, Cross Index of Electron Tube Types, 1946; and the RSGB Service Valve Equivalents, 1947. Comments have been added to identify some of the more obscure items. The list has been cross-checked for errors.

A few of these tubes, for example the "special" VT-155, -156, and -159, remain a mystery. Some of these must have been highly secret at the time, like the subminiature tubes in the then-classified variable-time (VT) artillery fuze, the one based on a small radar. Others may have simply been items that never went into substantial production. Yet other numbers (VT-32, for example) were cancelled. Reader inputs on the "special" VTs are welcome!

Receiving tubes with a "Y" suffix (e. g., VT-132/12K8Y) have low-loss base material. Full information on most of the items not otherwise explained can be found in the tube listings in any ARRL Radio Amateur's Handbook of 1945-52 vintage. For civilian equivalents of tubes having Navy 38xxx numbers, see the November 1989 OTB, p. 31.

The list includes, in italics, the British CV (Common Valve) numbers that were assigned to most of these items. A warning: CV-numbers are not unique: several such numbers may apply to a given tube. Also be warned that there were Royal Air Force VTs (Valve, Transmitting) that were totally unrelated to U. S. tubes of the same VT-numbers: the VT20, VT25, VT45 . . . up through VT510.

The informed observer can detect clusters of VT-numbers that must have been added to accommodate specific new sets of equipment: VT-65, -66, and 86-88, for the BC-312 receiver (in the SCR-177B and related sets); the VT-131 through 139, for the BC-45x (SCR-274N) aircraft gear, ca. 1940; the VT-171 through VT-174, for the BC-611 (SCR-536) handi-talkie and BC-745 (SCR-511) "pogo stick" transceiver. Other likely clusters: the VT-177 to -179, 182, 183, and 185, for the BC-620 (SCR-509 *et al.*) "jeep radio"; or

the VT-188 through -191, for the BC-645 (SCR-515) IFF set, ca. 1941. Some types are traceable to early Army radars of 1937-40 - see Don Helgeson's article in the November 1989 OTB.

A final note: the speed with which military electronics developed as WW II drew closer can be seen in this list. It took about 33 years (1917 to ca. 1940) for the first half of the list (VT-1 to VT-140, say) to develop. The second half required only about 2-1/2 years more (ca. 1940 to ca. 1943). At that point the Army gave up its special numbering system in favor of the Joint Army-Navy (JAN) prefix system for regular civilian type numbers. [LAS]

Some of the civilian type numbers for transmitting tubes reflect specific manufacturers. For reference purposes, letter prefixes used (over the time span of the VT-types and later) were as follows:

Amperex: A, CEP, HF, P, and ZB

Bomac Labs: BL (on experimental types)

Continental Electric: CE

Dumont: B, K (experimental)

Eitel-McCullough: RX, UH, and numbers like 100TH or 304TL

Electronic Enterprises: EE

Electrons Inc.: EL

Federal Telephone and Radio: F

General Electric: FA, FG, FJ, FP, FR, GL, NE, PJ, PR, and PT (Z, ZP, and ZG on experimentals)

Heintz and Kaufman: HK

Hytron: HY (D and HD on experimentals)

Machlett Labs: ML (EP on experimentals)

RCA: A, C, or R (on experimentals)

Raytheon: CK, RK, RKR, RM, and RX (QF, QG, QK, QL, QM, QMG, QT, and QY on experimentals, klystrons, etc.)

Sperry: SAC, SAL, SHC, SRL, and SRX (on experimentals and klystrons)

Sylvania: R (SB, SD, SN, and X on experimentals and special items)

Taylor: R, T, TT, TZ, and TW

Tung-Sol: DT (on experimentals)

United Electronics: BM, CV, CW, HV, UE, and UX (yes, UX!)

Varian Associates: VA (V on experimentals)

Western Electric: D, GA, and WE (XQ as a suffix on experimentals)

Westinghouse: DK1, DRJ, DRO, KU, KX, K1, RO, and WL (WX on experimentals)

VT-1 WE 203A (Navy CW-933)	Navy SE-4374; [CV750]]	VT-73 843 [CV639]	[CV836])
VT-2 WE 205B (Navy CW-931)	VT-31 31 [CV931]	VT-74 5Z4 [CV1864]	VT-112 6AC7/1852 [CV660]
VT-3 None (WE)	VT-33 33 [CV949]	VT-75 75 [CV614]	VT-114 5T4 [CV276]
VT-4A WE 211A (Navy CW-1818)	VT-34 207 [CG-1971]	VT-76 76 [CV615]	VT-115 6L6 [CV208]
VT-4B 211 (PR-11-A; WL-410; Navy CG-1984) and WE 211D (Navy CW-1818A; D80039)	VT-35 35/51 [CV1752]	VT-77 77 [CV616]	VT-115A 6L6G [CV1947]
	VT-36 36 [CV1775]	VT-78 78 [CV2544]	VT-116 6SJ7 [CV70]
	VT-37 37 [CV606]	VT-80 80 [CV617]	VT-116A 6SJ7GT [CV590]
	VT-38 38 [CV712]	VT-83 83 [CV1773]	VT-116B 6SJ7Y [CV866]
	VT-39 869 (PJ-26; Navy SE-3071)	VT-84 84/6Z4 [CV619]	VT-117 6SK7 [CV1981]
	VT-39A 869A [CV2723]	VT-86 6K7 [CV1942]	VT-117A 6SK7GT [CV1982]
VT-4C JAN 211 [CV620]	VT-40 40 [CV2501]	VT-86A 6K7G [CV1941]	VT-118 832 [CV634]
VT-5 WE 215A (D80-050; Navy CW-1344)	VT-41 851 (PR-51-A; Navy CG-2172; [CV-2671])	VT-86B 6K7GT [CV-1943]	(Also see VT-286.)
VT-6 WE 212A (Navy CW-1819)	VT-42 872 (FG-19; Navy SE-3070; [CV642])	VT-87 6L7 [CV1951]	VT-119 2X2/879 [CV-248]
VT-7 WX-12	VT-42A 872A, sp. fil.	VT-87A 6L7G [CV1951]	VT-120 954 (2A2; [CV1095])
VT-8 UV-204 (PR-4-A)	VT-43 845 (WL-412; [CV735])	VT-88 6R7 [CV1963]	VT-121 955 (HA2; [CV1059])
VT-10 GE "P" (prototype of UV-204), Navy CG-916	VT-44 32 [CV711]	VT-88A 6R7G [CV1962]	VT-122 WL-530 (GL-530) (water-cooled triode)
VT-11 GE "G," Navy CG-890 (early)	VT-45 45 [CV596]	VT-88B 6R7GT [CV-1964]	VT-123 A-5586 (replaced by VT-128)
VT-12 GE "T"	VT-46 866 (PJ-28; Navy SE-3069; [CV32])	VT-89 89 [CV833]	VT-124 1A5GT [CV756]
VT-13 GE "G" ruggedized (prototype of UV-201), Navy CG-890 (later version)	VT-46A 866A	VT-90 6H6 [CV1301]	VT-125 1C5GT [CV1805]
VT-14 GE "T" (prototype of UV-202), Navy CG- or CW-1162	VT-47 47 [CV1772]	VT-90A 6H6GT [CV-1931]	VT-126 6X5 [CV279]
VT-16 GE "T" ruggedized	VT-48 41 [CV608]	VT-91 6J7 [CV1074]	VT-126A 6X5G [CV572]
VT-17 860 (PT-860; WL-415 [CV640])	VT-49 39/44 [CV1771]	VT-91A 6J7GT [CV1937]	VT-126B 6X5GT [CV574]
VT-18 GE "U" (prototype of UV-203), Navy CG-1144	VT-50 50 [CV2533]	VT-92 6Q7 [CV588]	VT-127 100S
VT-19 861 (PR-861; WL-407; 3124A; [CV641])	VT-51 841	VT-92A 6Q7G [CV589]	VT-127A 100TS (WL-534, 534, 3-100D2)
VT-20 None (de Forest)	VT-52 45 Special (Navy 38142; 2C45) (fil. 7 V @ 1.18 A)	VT-93 6B8 [CV1894]	VT-128 1630 (A-5588A, 12H; [CV2715])
VT-21 None (de Forest)	VT-53 (repl. by VT-42A)	VT-93A 6B8G [CV1893]	VT-129 304TL (525; WL525; HK304TL; 3-300A2)
VT-22 204A (PR-4-B; Navy CG-1860A; [CV2563])	VT-54 34 [CV1751]	VT-94 6J5 [CV1067]	VT-130 250TL (806; HK454L; 3-250A2)
VT-24 864 (FR-300); [CV2675])	VT-55 865 (PJ-27; Navy SE-3294; 3394; [CV-2676])	VT-94A 6J5G [CV1932]	VT-131 12SK7 [CV543]
VT-25 10 (PT-10-A; [CV603])	VT-56 56 [CV611]	VT-94B 6J5 selected	VT-132 12K8Y [CV24]
VT-25A 10Y	VT-57 57 [CV612]	VT-94C 6J5G selected	VT-133 12SR7 [CV700]
VT-26 22	VT-58 58 [CV613]	VT-94D 6J5GT [CV1934]	VT-134 12A6 [CV525]
VT-27 30 (Navy SE-3872) [CV604]	VT-59 59 [CV2538]	VT-95 2A3 [CV1831]	VT-135 12J5GT [CV535]
VT-28 24, 24A [CV936]	VT-60 850	VT-96 6N7 [CV1957]	VT-135A 12J5 [CV534]
VT-29 27 [CV944]	VT-62 801, 801A [CV-621]	VT-97 5W4 [CV1849]	VT-136 1625 (12-V, 7-pin 807; [CV659])
VT-30 01A (PR-1-B;	VT-63 46 [CV2531]	VT-98 6U5/6G5 [CV504]	VT-137 1626 [CV1755]
	VT-64 800 (RK30; [CV2657])	VT-99 6F8G [CV1917]	(12-V triode intended for stable VFOs)
	VT-65 6C5 [CV582]	VT-100 807 (HY61, A4051; [CV124])	VT-138 1629 [CV1756]
	VT-65A 6C5G [CV581]	VT-100A 807 modified	(12-V octal 6E5)
	VT-66 6F6 [CV1186]	VT-101 837 (RK44, A4002B; [CV637])	VT-139 0D3/VR-150 [CV216]
	VT-66A 6F6G [CV-1911]	VT-103 6SQ7 [CV1990]	VT-140 1628 (Repl. by 8012A; see VT-228.)
	VT-67 30 (porcelain base)	VT-104 12SQ7 [CV546]	VT-141 WL-531 (vacuum rectifier)
	VT-68 6B7 [CV1891]	VT-105 6SC7 [CV1969]	
	VT-69 6D6 [CV1900]	VT-106 803 (RK28A, WE 322A; [CV623])	
	VT-70 6F7 [CV1915]	VT-107 6V6 [CV510]	
	VT-72 842	VT-107A 6V6GT [CV-511]	
		VT-107B 6V6G [CV509]	
		VT-108 450TH (WL-450, HK854H, 3-450A4)	
		VT-109 2051 (WL630; [CV1798])	
		VT-111 5BP4 (1802P4;	

VT-142 WE 39DY1 (doorknob triode)	VT-184 0B3/VR-90	VT-224 RK34 (2C34; [CV18])	3-300A3; WL535; HK-304TH; [CV2611])
VT-143 805 (WE 331A; RK57; [CV625])	VT-185 3D6/1299 [CV- 187]	VT-225 WE 307A (RK- 75; [CV2612])	VT-255 WE 705A (RK- 705A; WE 378A; D159780; 8021; [CV3587]) (rectifier)
VT-144 813 [CV26]	VT-187 575A (975A; UE975A; F375A; GL512A; WL575A; 512; 375A) (not WE 375A) (gas rectifier)	VT-226 3EP1 (1806P1; [CV817])	VT-256 GL-486 (ZP- 486; 3J26) (magne- tron)
VT-145 5Z3 [CV275]	VT-188 7E6 [CV891]	VT-227 7184 (KR7184) (pentode like 6V6)	VT-257 K-7 (2J30) (2.9- GHz magnetron)
VT-146 1N5GT [CV37]	VT-189 7F7 [CV893]	VT-228 8012 (A2139; [CV662]) (UHF tri- ode; also see VT-140.)	VT-259 829 [CV632]
VT-147 1A8GT [CV181]	VT-190 7H7 [CV75]	VT-229 6SL7GT [CV- 171]	VT-260 0A3/VR-75
VT-149 3A8GT	VT-191 WE 316A (ZP- 470) [CV683] door- knob triode	VT-230 WE 350A (RK- 49; T21; [CV2629])	VT-264 3Q4 [CV182]
VT-150 6SA7 [CV1966]	VT-192 7A4 [CV1770]	VT-231 6SN7GT [CV- 170]	VT-266 1616 (2B26; [CV2679])
VT-150A 6SA7GT [CV- 1967]	VT-193 7C7 [CV76]	VT-232 E-1148 (HY- E1148; [CV6]) (Brit- ish 3.5-W triode)	VT-267 WL-578 (578; 2-100A; 100R; 100A; 451; GL451; ZP451; 8020; R6174) (vac- uum xmtg rectifier)
VT-151 6A8G [CV16]	VT-194 7J7 [CV22]	VT-233 6SR7 [CV109]	VT-268 12SC7 [CV-540]
VT-151B 6A8GT [CV580]	VT-195 1005 (CK1005; QMG159; [CV2874])	VT-234 HY-114B [CV- 3505]	VT-269 WE 717A [CV- 3594]
VT-152 6K6GT [CV207]	VT-196 6W5G [CV279]	VT-235 HY-615 (615; [CV3506])	VT-277 417 (WL417; WL417A) (3-GHz klystron like SRL-7; not the WE 417A/ 5842)
VT-152A 6K6G [CV1938]	VT-197A 5Y3GT/G [CV1268]	VT-236 836 [CV636]	VT-279 GY-2 (D-161- 831; 1278-GY2) (thyatron)
VT-153 12C8Y [CV128]	VT-198A 6G6G [CV- 1926]	VT-237 957 [CV2700]	VT-280 C7063 (1P24; 936; 516; GL-516; ZP516; GL-564) (vac- uum phototube)
VT-154 814 (RK47; [CV629])	VT-199 6SS7 [CV70]	VT-238 956 [CV649]	VT-281 HY-145ZT (HY-115; 2E28) (sub- miniature pentode)
VT-155 to 157 "Special"	VT-200 0C3/VR-105 [CV686]	VT-239 1LE3	VT-282 ZG489 (thyra- tron)
VT-158 "Special" (Zahl 600-MHz oscillator)	VT-201 25L6 [CV220]	VT-240 WE 710A (8011; WL538; A2137; Brit. VT90; [CV46])	VT-283 QF-206/2E27 (subminiature pentode)
VT-159 to 160 "Special"	VT-201C 25L6GT [CV351]	VT-241 7E5/1201 [CV- 890]	VT-284 QF-197/2B24 (submin. filament- type diode)
VT-161 12SA7 [CV537]	VT-202 9002 [CV664]	VT-243 7C4/1203A [CV2705]	VT-285 QF-200C/2C27 (subminiature triode)
VT-162 12SJ7 [CV697]	VT-203 9003 [CV665]	VT-244 5U4G [CV276]	VT-286 832A [CV634] (Also see VT-118.)
VT-163 6C8G [CV1896]	VT-204 HK24G (3C24; 3-25D3; 25TG; [CV- 745])	VT-245 2050 [CV2565] (thyatron)	VT-287 815 [CV2663]
VT-164 1619 [CV723] (2.5-V filament-type version of 6L6)	VT-205 6ST7 [CV109]	VT-246 918 (CE-1; 59A3; [CV2692]) (gas phototube)	VT-288 12SH7 [CV922]
VT-165 1624 (A4154D) (2.5-V filament-type version of 807)	VT-206A 5V4G [CV729]	VT-247 6AG7 [CV207]	VT-289 12SL7GT [CV- 924]
VT-166 WE 371A (vac- uum rectifier)	VT-207 12AH7GT [CV529]	VT-248 3CP1 (1808P1; C7510)	
VT-167 6K8 [CV18]	VT-208 7B8 [CV22]	VT-249 1006/CK1006	
VT-167A 6K8G [CV1944]	VT-209 12SG7 [CV694]	VT-250 EF50 [CV78] (British 9-pin metal- can loktal-style pen- tode; also their VR91 and ARP35)	
VT-168A 6Y6G [CV205]	VT-210 15A [CV181]	VT-251 441 (GL-441) (phototube. Note: WL-441/2J32 is a magnetron.)	
VT-169 12C8 [CV128]	VT-211 6SG7 [CV1978]		
VT-170 1E5GP [CV45]	VT-212 958 [CV650]		
VT-171 1R5 [CV782]	VT-213A 6LSG [CV151]		
VT-171A (loktal version of 1R5)	VT-214 12H6 [CV916]		
VT-172 1S5 [CV124]	VT-215 6E5 [CV239]		
VT-173 1T4 [CV35]	VT-216 816 (866 Jr.; [CV724])		
VT-174 3S4 [CV183]	VT-217 811 [CV628]		
VT-175 1613 (HY- 6F6GX; [CV655]) (6F6, xmtg-rated)	VT-218 100TH (3- 100A4; [CV2552])		
VT-176 6AB7/1853 [CV66]	VT-220 250TH (3- 250A3; RK63; HK- 454H; [CV2589])		
VT-177 1LH4 [CV780]	VT-221 3Q5GT [CV185]		
VT-178 1LC6 [CV3]	VT-222 884 (6Q5G; RX884; [CV647])		
VT-179 1LN5 [CV781]	VT-223 1H5GT [CV104]		
VT-180 3LF4 [CV187]			
VT-181 7Z4 [CV252]			
VT-182 3B7/1291 [CV- 228]			
VT-183 1R4/1294 [CV- 91]			