Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 1 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
1B22	S	Spark gap modulator tube. Used in Navy radars which have now been superseded. Not stocked.		
1B23	S	Double-gap, gas filled tube for use in pulsed systems employing a common antenna. Used in Navy radars (superseded) and IFF equipment.	Raytheon	
1B29	S	Spark gap modulator tube. Used in superseded Navy radar.		
1B42	M	Spark gap modulator tube with a mercury sponge cathode. Used in high powered Navy radars.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 2 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
IN21B	S	Silicon crystal rectifier, used in radar receivers and some test equipment.	Sylvania	IN21B
IN23A&B	S	Silicon crystal rectifier, used in radar receivers and some test equipment.	Sylvania	IN23A&B
IN25	S	Silicon crystal rectifier, used in radar receivers and some test equipment..	Sylvania	IN25
IN26	S	Silicon crystal rectifier, used in radar receivers and some test equipment.	Sylvania	IN26
IN28	S	Silicon crystal rectifier, used in radar receivers and some test equipment.	Sylvania	IN28
IN31	S	Silicon crystal rectifier, used in radar receivers and some test equipment.	Sylvania	IN31

(S) Small Value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 3 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
2A21	S	Ballast lamp for 2K45 and 2K50 oscillator tubes. See the general bulletin.		
2C51/396A	S	Nine pin miniature double triode having separate indirectly heated cathodes. Amplifier, mixer, oscillator multivibrator and clamp circuits. Specially applicable at high frequencies. Designed for the Boston - New York link.		
2J51	L	Magnetron. Tunable, with self contained magnet. Radar applications.	Raytheon	2J51
2K22	M.D.	Local oscillator for special communication gear. S & X bands.		
2K23	M.D.	Klystron. Transmitting or local oscillator. Communication and other applications. S band. Never produced in quantities. Superseded by 2K54 and 2K55.		
2K24	M	Klystron. Local oscillator.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 4 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
2K25	M	Local oscillator, U.H.F. X band. Supersedes 723A/B tube.	Raytheon	2K25
2K26	M.D.	Local oscillator for special radar test gear. X band. Never produced in large quantities.		
2K29	M	Reflex local oscillator (Klystron). Radar receivers and test equipment.	Raytheon	2K29
2K45	L	Thermal tuned reflex oscillator (Klystron). May be used with AFC in radar receivers. Same frequency coverage in X band as 2K25.		
2K48	L	Velocity modulated oscillator, wide band. Search receivers and test equipment. X band.	Raytheon	2K48
2K49	M.D.	Similar to 2K48. Originally intended to cover a portion of the same band. Discontinued.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 5 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
2K50	L	Thermal tuned reflex oscillator (Klystron) AFC in radar receivers.	Raytheon	2K50
2K54	M	Transmitting Klystron for special communication gear. S band. Never produced in large quantities.		
2K55	M.D.	Transmitting Klystron for special communication gear. S band.		
2K56	M	Velocity modulated local oscillator and transmitting tube designed for the 4000 MC Radio Relay System (Boston - N. Y. link).		
3B24W	S	High vacuum diode used as rectifier in high voltage circuits. Rugged. Previously coded 732A and 3B24.	Raytheon Lewis Elec. Continental	3B24 3B24W CE-230
4A	S	Ballast lamp.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 6 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
4B	S	Ballast lamp - see the general bulletin.		
4B35	M.D.	Not our code number. This is a Military Service designation for a diode gas rectifier which we had coded 327A (M.D.)	G. E.	4B35
4J 21 to 4J 30		Transmitting UHF oscillators - magnetrons. All replaced by tunable magnetron 5J26 covering the same band.		
4J42	L	Tunable magnetron, replaces 700A, B, C & D for Navy radar applications. Further use restricted because of higher frequency radars.		
4J45 4J46 4J47		Magnetrons, superseded the 720AY, BY, and CY. Different codes are in adjacent frequency bands.		
4J51		Magnetron, tunable type, replaced the 728AY/GY.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 7 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
5A&B	S	Ballast lamp - see the general bulletin.		
5D21	M	Special purpose tetrode. Used in hard tube pulsers in airborne radar. Demand reduced by 715C.	Raytheon	715C
5J21 to 5J25	M.D.	High powered magnetrons for Navy radar. Different codes are in adjacent frequency bands.		
6AJ5	S	Sharp cut-off miniature pentode. Operation at plate and screen voltages in the order of 28 volts in low power applications at high and ultra high frequencies. Airborne communication receivers.	Tungsol R. C. A. Raytheon Sylvania	6AJ5 9000 Series
6AK5	S	Sharp cut-off miniature pentode. Operation at plate and screen voltages from 120 to 180 volts in low power applications at high and ultra high frequencies. Used in radio receivers - radar IF amplifiers - Mobile radio. Superseded the 731A.	Tungsol R. C. A. Hytron Nat'l Union Sylvania	6AK5 6AG5 6AK5 6AK5 6AK5

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 8 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
6AR6	M.D.	Beam power tetrode designed as a power output tube for sweep circuit amplifiers for cathode ray oscilloscopes. Used in radar indicators.	R. C. A. Raytheon Hytron Tungsol	6AR6 6AR6 6AR6
6AS6	S	Miniature pentode. The usual control grid and the suppressor grid can be used as independent control elements. Suitable for use in gated amplifiers, gain control amplifiers, delay circuits and mixers. Used in radar receivers, test equipment, and similar applications.		
6B	S	Current regulator - ballast.		
7A		Ballast lamp - see the general bulletin.		
7C22	M.D.	Transmitting twin triode UHF oscillator. Made in small quantities only.		
8A		Ballast lamp - see the general bulletin.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 9 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
101-D	S	Low power filamentary triode used in carrier and voice frequency equipment. (Merchandise control.)		
101-F	S	Low power filamentary triode used in carrier and voice frequency equipment. (Merchandise control.)		
101-FA	S	Similar to 101-F, except for modifications designed to obtain higher gain. (Merchandise control.)		
101-H	M.D.	Three element filament type tube. Used in submarine cable terminal equipment. Similar in characteristics to 101-D tube.		
101-L	S	Low power filamentary triode used in voice and carrier frequency equipment. (Merchandise control.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 10 of 86 pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
101-M	S	Low power filamentary triode used in voice frequency equipment where quick heating of the filament is required. (Merchandise control.)		
102-D	S	Filamentary voltage amplifier triode used in voice and carrier frequency equipment. (Merchandise control.)	Sylvania	102-D
102-F	S	Filamentary voltage amplifier triode used in voice and carrier frequency equipment. (Merchandise control.)		
102-H	M.D.	Three element filament type tube. Used in submarine cable terminal equipment.		
102-L	S	Filamentary voltage amplifier triode used in voice and carrier frequency equipment. (Merchandise control.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 11 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
104-D	S	Filamentary power amplifier triode used in voice and carrier frequency equipments requiring greater power outputs than can be obtained from 101-D or 101-F.		
CK-108		Manufactured by Raytheon. We use it in 100 type loudspeakers. Kearny Telephone Merchandise maintains stock.	Raytheon	
111-A		Ballast lamp - see the general bulletin.		
112-A		Ballast lamp.		
113-A		Ballast lamp.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 12 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
115-A		Ballast lamp.		
117-A		Ballast lamp - see the general bulletin.		
119-A		Ballast lamp - see the general bulletin.		
120-A		Ballast lamp - see the general bulletin.		
121-A		Ballast lamp - see the general bulletin.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
122-A		Ballast lamp - see the general bulletin.		
123-A		Ballast lamp - see the general bulletin.		
124-A		Ballast lamp - see the general bulletin.		
125-A		Ballast lamp - see the general bulletin.		
126-A		Ballast lamp - see the general bulletin.		
127-A		Ballast lamp - see the general bulletin.		
201-A & B	M.D.	Triode, replaced by 102-D.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
203-A	-	Code number in our series but not our tube at present. Our 203-A (M.D. years ago) was the VT-1.	Amperex United Elec.	
204-A	-	Code number in our series but not our tube.	Field	
205-F	S	Moderate power filamentary triode. Replaces previous 205 types. Used as an amplifier, oscillator or modulator; 13-C, 25-B, 25-D, 32-A, 34-A, 34-B, 35-A, 40-A, 42-A, 45-A, 46-C, 46-D, 8-C, 9-A, 11-A, 17-B, 18-B, 25-C, 51-A, 60-A, 70-A, 79-A, D-92080 and D-85808 Amplifiers; 1-B, 3-A, 3-B, 4-A, 6-B, 8-A, 8-B, 9-A, 9-B, 9-C, 11-A, and 13-A Transmitters; 308-A R.T.E., 9-A Oscillators; 6035-A and B, 6040-A, 6041-A Audiphones; 208-C and 209-A Radio Tel. Equipments; 700-A, 700-B, 701-A, 706-A and 708-A Control Cabinets; D-90873 Oscillator; D-90684 Oscillator Amplifier, 50 K.W. Equipments, 9-A Speech Input Equipments. Also used by E.R.P. and Telephone Co.	Sylvania Amperex R. C. A.	1602
208-A	M.D.	Triode, replaced by 205-F.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 15 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
208-C	M.D.	Triode, replaced by 101-D.		
209-A	M. D.	Triode.		
210-A	M.D.	Triode, replaced by 104-D.		
211 Type	M.D.	Transmitting filamentary triode 65 watts. Used in old radio transmission circuits as an oscillator, amplifier, or modulator. Replaced by 242-A in 1938. Now substitute 242-C, 284-D or 295-A. 211-D covers an Amperex tube.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 16 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
212-E	M	Transmitting filamentary triode. Replaces 212-D, 5-C, 6-B, 7-A and 306-A Transmitters. Also used 12-B Radio Transmitters (301-B, 302-B, 303-B and 304-B Equipments) in place of 270-A. (D-98653 Oscillator Modulator unit - modified 12-B Transmitter.) 50 K.W. Trans. (1) D-156000 Radio Transmitter Transoceanic, also used by Long Lines. We had JAN type approval and so did Federal.	Federal Amperex Rogers-Electronic (Toronto) R.C.A. Westinghouse United Elec.	212-E 212-E AR-300 849* WL-849* 312-E
214-E	M.D.	Half wave high vacuum rectifier. D-86771, D-86823, D-87910, D-88823 Panels. Train Dispatching Equipment. 60-B Vacuum Tube Rectifier. Use 242-C after strapping terminals P and G of the 60-B Rectifier; then 214-E or 242-C can be used interchangeably.	R.C.A.	217-A
215-A	S	Small filamentary triode. A. T. & T. uses in 23-A Amplifier. Old Navy number was 38015.		
216-A	M.D.	Amplifier or oscillator. Train Dispatching Equipment. 7-A Amplifier. Old 12-A Loudspeaking outfit (still some in use on Mexican Government Railway System). Recommend 101-D even though it will not have the long life; it is cheaper in the long run.		

(S) Small tube. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
217-A	M.D.	Rectifier to supply plate potential for amplifiers. The JAN-217-A is not our tube (RCA and Lewis Electronics) but it is identical with our old 214-E (replaced by 242-C).		
217-C	-	Half-wave high vacuum rectifier, described in Spec. JAN-217-C not our tube (Amperex, G.E., RCA, Lewis Electronics & Westinghouse).		
219-A&D	M.D.	Rectifier.		
220-B	M.D.	Filamentary water cooled triode tube used in 5-C Radio Transmitter. Water cooled Broadcasting Tube 10 KW. D-96847 R.T.E. (Replacing 5-C.) Circuits have been changed to use either 220-C or 343-A.	Federal	320-B
220-C	L	Filamentary water cooled triode 10 KW. Replaces 220-B. Used in old 5 KW types R.T.E. up to (and optional in) 405-A-1 and 2 R.T.E.	Amperex Federal R.C.A.	 F-320-B 892*
220-CA	L	Air cooled 220-C, 405-B-1 and 405-B-2 R.T.E. (optional along with 343-AA).	Amperex?	

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
221-D	M.D.	Triode.		
222-A	L	Half wave, water cooled Rectifier, 25 KV, 5-C Radio Transmitter using same water jacket as 233-A and 237-A tubes.	Federal Amperex	322-A 222-A*
222-B	M.D.	Replaced by 222-A. Half wave, high voltage, water cooled rectifier tube. 5 KW R.T.E. Rated manufacture discontinued in 1944. Had round terminals rather than blade type which means that the connectors must be changed before using the 222-A. If 233-B is in manufacture, it can be used interchangeably.	Federal Amperex	F-322-A 222-A
223 -A	M.D.	Triode.		
224-A, B & C	M.D.	Cathode ray tubes. Replaced by 325-A, B, and C and 326-A, B and C tubes, all of which were discontinued prior to 1942.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 19 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
225-A	M.D.	Triode.		
226-A	M.D.	Rectifier.		
227-A		Code number in our series but not our tube. Listed in the W.P.B. pamphlet "Scheduled Producers of Electron Tubes" with Eitel McCullagh as manufacturer.	Eitel McCullagh	
228-A	L	Filamentary water cooled triode 5 KW three element broadcasting tube. 6-B Transmitter and its predecessors. About 40 sockets in use 4/1/45. Government says use in place of Federal F-328-A - 2/1/45.	Amperex Federal	328-A
229-D	M.D.	Triode.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 20 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
230-D	M.D.	Same as 231-D except for base, which is old UV type.		
231-D	S	Small, filamentary triode with low filament power consumption. 309-A Police Radio Transmitting Equipment. 32-A and 55-A Amplifiers, 6044-A Test Sets, 4-A P.A. System, 11-A and 12-A Oscillator, 20-A Control Unit; 701-A Oscillator in 276-A Panel. (Merchandise Control.)		UX-199 (obsolete)
232-A	L	Water cooled triode. 7-A and 306-A Transmitters. Replaced by 232-B but since conversions are not being made smoothly, consider as A & M only.		
232-B	L	Filamentary water cooled triode 25 KW. Redesigned 232-A. Replaces 232-A but connectors have to be changed as follows: One Det. 5-A ES0-602410 in D-85491 and D-95289 Second Power Amplifier Units of the 7-A Transmitter; one Det. 7 ES0-602079 in 306-A Equipments; two Det. 3-A ES0-608894 in 306-B Equipments; and six Det. 1-A ES0-608894 in the D-85493 and D-95290 Third Power Amplifier Tube Units of the 7-A Transmitters and 306-A and 306-B - 50 KW Equipments. Still used in 50 KW Equipments. 342-A can replace this tube in existing sockets. Optional in place of 342-A tubes in 406 and 407 types R.T.E.	Federal R.C.A.	F-332-C 893*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 21 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
232-BA	L	Standards of good Engineering Practice lists this number for a 232-B with fins for air cooling. H.E. Mendenhall reserved the code number in 1941 when we were active on a 10 KW air cooled AM Transmitter but the only work done by Mr. West was procuring a tool for fins somewhat longer than the fins used on other tubes. No tubes manufactured to date -3/23/46.		
233-B	L	Half wave water cooled rectifier 50 KV. Rocky Point Transoceanic (non-stock). Uses same water jacket as 222-A and 237-A.	Federal	F-333-A
234-A	M.D.	Rectifier tube for 7-A Radio Transmitter. Since old KSL Transmitter was sold to Government and converted to use the 249-B tube, KMOX has the last one in operation (1/21/45). Told Graybar, St. Louis to convince KMOX to convert (1/26/45).		
235-D	M.D.	Used in the D-88000 Amplifier.	R.C.A.	201

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 22 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
236-A	L	Filamentary water cooled triode 20 KW. A. T. & T. Co. (Merchandise control).		
237-A	M.D.	Half-wave, high voltage, water cooled rectifier. 7-A Transmitter. 237-A replaced by 344-A tube. Uses same water jacket as 222-A and 233-A.	Federal	F-337-A F-237-A
238-A	M.D.	Alkali metal photoelectric cell gas filled for use in film reproduction equipment. Coded 4-A PEC - also Manufacture discontinued.		
239-A	M.D.	For use in 710-A Control Cabinet. Replaced by 264-C.		
240-B	L	Filamentary water cooled triode 10 KW. Replaces 240-A. Long Lines, Short Wave, Transoceanic and Ship-to-Shore Radio Transmitter.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company,
Radio Division
Department 9715

September 10, 1946
Page 23 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
241-B	M	Filamentary air cooled triode 275 W. Long Lines - D-90643 Short Wave Transmitter. (A replaced by B.) 405 and 407 Trans. Eqpts. Replaced by 357-B in new RTE's.	G. E. Westinghouse	GL-849* WL-849*
242-C	S	Filamentary air cooled triode 100 W. Replaces A and B and also 211-D. Has Molybdenum plate originally designed for sound pictures and amateur use. Used in D-90684 Broadcast Amplifier, 5-C, 6-B, 7-A Transmitters and 309-A (Police) Radio Transmitting Equipment. 20-A and 23-A Radio Transmitter. (D-98653 Oscillator Modulator unit modified 12-B Transmitter. Used in short wave stations. 450-A1 and 451-A1 (100 and 250 W) RTE. Substitute for 214-E after strapping plate and grid terminals in 60-B Rectifier socket. Altec uses 1500 yearly (8/23/45).	G. E. R. C. A. Westinghouse	GL-242-C 211* WL-211*
243-A	M.D.	Triode.		
244-A	S	Low power triode with indirectly heated cathode. Used in 9-A, 9-B, 9-D, 11-A, 11-B, 11-C, 12-A, 13-A and D-94207 Receivers. D-93315 Transoceanic Receiver. 60-A, 78-A, 78-B, 83-A, 83-B, 83-C, 84-A and 85-A Amplifiers. 256-A and 257-A Panels. B-2 Privacy Equipment; Component Part Apparatus - 75-A 77-A, 75-B, 77-B Amplifiers. 20-A Radio Transmitters. D-156000 Radio Transmitter. Station WMIN reported long life in the feedback rectifier circuit operated at .8 ma.	R. C. A.	56

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 24 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
245-A	S	Voltage amplifier tetrode with indirectly heated cathode. Used in 9-A, 9-B, 9-D, 13-A Receivers. 83-A, 83-B, 83-C, 83-D, 83-E and 83-F Amplifiers. D-93315 Transoceanic Receiver.	R. C. A.	24-A*
246-A	S	Voltage amplifier filamentary tetrode. Used in D-90303, D-90848 and D-91719 Transoceanic Receivers. Short wave receiving sets. (Merchandise control.)	R. C. A.	22
247-A	S	Low power triode with indirectly heated cathode. Used in 10-A Receiver. 15-A, 16-A and 23-A Radio Transmitters. 61-A Amplifier. 242-A, 243-A and D-96662 Panels. 20-A Radio Transmitters. 702-A Oscillator. New 405 and 407 Trans. Equipments. 443-A1 (1 KW) R.T.E. 451 Type R.T.E.		
248-A	M.D.	Triode.		
249-B	S	Half wave mercury vapor rectifier. Replaces 249-A tube. 15-A and 16-A Transmitters, Navy Aircraft Radio Transmitting Equipment. 71-B, 87-A, B and D, 88-A and 90-A Amplifiers. 309-A Police R.T.E. 2-A, 2-B, 4-A, 9-A and 9-B Rectifier. D-96959 Panel. 20-A and 23-A Radio Transmitters. 50 KW Equipment. 405 and 407 Trans. Eqpts. used by E.R.P. 443-A1 (1 kw) R.T.E. 430-B1 (100 Watt) R.T.E. FM Transmitters. (Our tube compares unfavorably with competition). The same tube with a two prong base is coded 258-B.	Field Taylor	866* 249-B

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
249-C	S	D-96656 R.T.E. Navy. Navy using Raytheon on Plane Jobs. D-97502 Rectifier. D-97500 General Announcing systems. Same size envelope as 249-B but larger anode cap. D-97600 Flight Deck Announcing System (40 each) C0-118487 reduces size to permit aeroplane use - 6/3/35. 14-A Rectifier. 99-A and 100-A Amplifier.	Taylor	
251-A	L	Filamentary air cooled triode 1KW. 9-A, 9-B, 14-A Transmitters. D-94723 Transoceanic Transmitter. 71-A & B, 88-A, 90-A Amplifiers (500 Watt); 303-A R.T.E.	G. E. Westinghouse	GL-851* WL-851*
252-A	S	Moderate power, filamentary triode. Used in 57-A, 59-A, 59-B and 67-A Amplifiers. 10-A, 11-A, 15-A and 16-A Radio Transmitters. D-96656 R.T.E. Navy, 309-A Police R.T.E. D-96662 Panel.		
253-A	S	Half wave, mercury vapor rectifier. Used in 57-A 59-A, 59-B, 67-A, 71-A and 6071-A Amplifiers; 10-A Transmitters; 10-A Rectifier; 223-A and D-87587 Panels; 9-A Speech Input Equipment; 302-A, 303-A, 304-A, 308-A Radio Trans. Equipments. Sound Picture Equipment. Also used with adapters in 6000-A Rectifier in place of 211 Tube.	Westinghouse	WL-866A/866
254-A	M	Filamentary air cooled tetrode. Used in 10-A (Aviation) and D-93258 Radio Transmitter.	Westinghouse	WL-865*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
254-B	M	Filamentary air cooled tetrode. Does not replace 254-A Tube. (7-1/2 volt instead of 5 volt, etc.) Used in D-93258 and D-94723 Transoceanic Transmitters. Airport Transmitters.	R. C. A. G. E. Westinghouse	8001* GL-865* WL-865*
255-B	M	High voltage 20 KV air cooled half wave mercury vapor rectifier. Replaces 255-A Tube. Transoceanic Transmitters, D-96847 (5000 Watt) Amplifier (six tubes per). 407-A Radio Trans. Eqpt. (6 each). (6) D-158974 Amp. Transoceanic. (6) 50 KW FM Transmitter.	G. E. Westinghouse R. C. A. Federal	GL-869-B* 869-B* 869* F-369-A*
256-A	S	Three element thyratron with indirectly heated cathode. 1-A Photomatic Equipment. (We are out of business on this equipment.) Flight Deck Announcing System. D-91818 Oscillograph 209-A Radio Telephone Equipment.	R. C. A.	885*
257-A	S	Small filamentary triode used extensively by Bell System. Low filament power consumption. Double-ended 231-D.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 27 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
258-B	S	Half wave, mercury vapor rectifier. Used in 12-A Radio Transmitters; 302-A, 303-A, 304-A and 306-A Radio Transmitting Equipment; D-94723 Transoceanic Transmitter; 6071-A and 71-A Amplifier; D-87587 Panel. (D-98653 Oscillator Modulator unit modified 12-B Transmitter.) Same as 249-B except has two prong base.	G. E. Taylor	866-A/866* 258-B
259-A	S	Voltage amplifier, tetrode with indirectly heated cathode. Used in 10-A, 11-A, 11-B, 11-C, 12-A, D-94207 Receivers; 234-A and 236-A Panels; 1-A and B Frequency Monitoring Unit; Component part apparatus 75-A, 75-B, 77-A and 78-B Amplifiers. 2-A Phase Monitor. D-156000 Radio Transmitter. Partially replaced by 283-A. Has Higher trans-conductance than R.C.A. 24-A or W.E. 245-A.	R. C. A.	35-A
259-B	S	Voltage amplifier tetrode with indirectly heated cathode. Does not replace 259-A Tube. Exceptionally low noise. Laboratory, college and experimental uses.		
260-A	M.D.	Filamentary air cooled tetrode. D-93259 and D-94723 Transoceanic Transmitters. Ship-to-Shore. We have used R.C.A. tubes since 1939.	R. C. A. G. E. Westinghouse	860 GL-860 WL-860

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 28 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
261-A	M.D.	Filamentary air cooled triode. Used in 8-A, 8-B, 9-A, 9-B and 9-C Transmitters. Replaced by 276-A. (242-C would be overloaded.)	G. E. Westinghouse R. C. A.	GL-835* WL-680* 211*
262-B	S	Low power triode with indirectly heated cathode. Replaces 262-A Tube (if heater-cathode exceeds 30 volts, use R.C.A. 1603), which was called a quiet tube for amplification of small low frequency signals (SPD-4) until R.C.A. brought out their 1603 which is really quiet. Used in 59-A, 59-B, 62-A, 63-A, 67-A, 69-A, 70-A, 80-A, 80-B, 81-A, 82-A, 86-B, 86-D, 92-D, D-94531, D-95159 & D-95508 Amplifiers. D-96656 R.T.E. Navy. Navy Precision Clock. 309-A Police R.T.E. IG & 700-A Volume Indicator. 15-A & 23-A Transmitter. 249-A Panel. 9-A & 15-A Speech Input Equipment. D-97600 Flight Deck Announcing System (10 each). 703-A Oscillator. D-99015 Recording-Reproducing System. For use with 105-A, 106-A & 104-A Amplifiers (Speech Input) used by E.R.P. (about 5500 yearly). (6) D-99945 Transoceanic Receiver. D-156000 Transmitter.	R. C. A.	1603

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 29 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
263-B	S	Full wave thermionic mercury vapor rectifier. Replaces 263-A Tube. D-94723 Transoceanic Transmitter and 5-A Current Supply Set. Used in Rectifiers in Aircraft Radio Transmitters. (United Air Lines). Holdaway says the Electron Co. EL6CF or 4B25 can be used as substitutes with a base change - 7/25/45. ERP West Coast has 20 sockets in operation requiring 100 tubes annually. M.D. rating is under consideration 1/1/46.	Electron Continental " Westinghouse	EL6CF* 4B25* CE-221* WL-670A*
264-C	S	Small low noise filamentary triode. Replaces 264-A and B. ERP use most of our production in 47-C, 47-D, 48-B, 49-C, 53-C, 53-D Amplifiers. 710-B Central Cabinet. D-90191 Panel. 70-B1 Telephoto System.	Amperex R. C. A.	264-B 864
265-A	M.D.	Triode.		
266-B	L	Half wave mercury vapor rectifier 22 KV. Replaces 266-A. 306-A Radio Transmitting Equipment.	Westinghouse G. E. Amperex Federal	WL-266-B GL-266-B 266-B F-266-A
266-C	L	Same as B, except that the terminals correspond to those of our competitors. Originally intended for sale to composite stations.	Westinghouse G. E. Amperex	WL-857-B GL-857-B

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 30 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
267-B	S	Half wave mercury vapor rectifier. Replaces 267-A. 443-A1 (1 kw) R.T.E. D-158974 Amplifier Transoceanic (6) D-156000 SSB R. Trans. D-94723 Transoceanic Transmitter. D-95857 Set of Parts. (See 319-A for 4 prong instead of 2 prong based tube.) D-95858 Rectifier.	Westinghouse G. E.	872-A/872* GL-872-A*
268-A	M	Filamentary air cooled triode 25W. 10A Transmitter (old airport job).		
269-A	S	Three element filamentary thyratron. Mdse. Control.		
270-A	L	Filamentary air cooled triode 350 W. 71-A and B, 90-A and 6071-A Amplifier. (250 Watt.) 302-A R.T.E. 212-E has been substituted in practically all 71 Type amplifiers.	Amperex. G. E.	 GL-849*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 31 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
271-A	S	Moderate power triode with indirectly heated cathode. Used in 700-A and B Oscillators. 12-A, 15-A, 20-A and 23-A Radio Transmitters. 306-A and 309-A Police Radio Transmitting Eqpt. 78-A, 78-B and 82-A Amplifiers. 1-A and B Frequency Monitoring Unit. 233-A and 234-A Panels. D-94768, D-94996, D-94997, D-94998, D-95001, D-95006 and D-95007 Sets of Parts. 302-A, 303-A and 304-A R.T.E. 15-A Speech Input Equipment. Modified 42 type amplifier in Sound Picture Recording.	R. C. A.	801* 843*
272-A	S	Low power triode with indirectly heated cathode. 14-B Radio Transmitting Equipment. 74-A and D-93679 Amplifiers. 9-A and B Rectifier. Navy Precision Clock - 16-A Radio Receiver. 6001-A Radio Compass. D-97600 Flight Deck Announcing System (8) each). 282-A Panel. (1) D-99945 Transoceanic Receiver.		
273-A	-	Command Set. Program Distribution. Tel. Companies (Demand small). Apparently no sockets in the field and shop prefers not to make.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 32 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
274-A	S	Full wave filamentary high vacuum rectifier. 1-A Frequency Monitoring Unit. 11-A, 11-B, 11-C, 13-A and D-94207 Receivers. 5-A, 6-A, 7-A, 7-B, 7-C, 8-A and D-97503 Rectifiers. 78-A, 78-B, 85-A, 86-A, 86-B, 86-D, 91-A, 92-A, 100-A, D-94531, D-95159 and D-95508 Amplifiers. 309-A Police R.T.E. 15-A Speech Input Equipment. D-97500 General Announcing Systems (2 each). D-97600 Flight Deck Announcing System (24 each). 20-A and 21 Type Police Radio Transmitters. 280-A Panel. 282-A Panel. 703-A Oscillator. 405 and 407 Trans. Eqpt. 2-A Phase Monitors. Used by ERP. (6) D-99945 Transoceanic Receiver (3) D-156000 Radio Transmitters. If load is not over 120 mils., R.C.A. 80 can be used interchangeably.	R. C. A.	80* 5Z3*
274-B	S	Same as 274-A except 274B has an octal base. Designed for use in 124-A Amplifier (1). Approximately 9935 sockets in Gov't. Radio & Radar gear of W.E. mfr. - 5/1/45.	R.C.A. Sylvania	5Y3G*
275-A	S	Moderate power filamentary triode. 11-A, 11-B, 11-C, 13-A and D-94207 Receivers. 85-A, D-94531 and D-95036 (S.P.), D-95159, D-95508 Amplifiers. 7-A, 7-B, 7-C Rectifiers. D-96656 R.T.E. Navy. D-97600 Flight Deck Announcing System (4) each. 280-A Panel. 282-A Panel. About 20 sockets in Gov't. Radio & Radar gear of W.E. mfr. - 5/1/45. (House control)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
276-A	S	Filamentary air cooled triode 100 W. 306-A Radio Transmitting Equipment. D-96656 R.T.E. Navy. Replaces 261-A and 248-A Tubes. Used in Aircraft Transmitter in place of 211-D and E.	G. E. R. C. A.	GL-276-A 211*
277-A	S	Three element thyratron with indirectly heated cathode. 12-A Radio Transmitter. 302- A, 303-A, 304-A and 306-A Radio Transmitting Eqpt. 1-A Frequency Monitoring Unit. All sets of parts listed under 271-A. Entirely replaced by 287-A, except special use by B.T.L. If equipment now uses 277-A, customer will need a D-95076 Adapter to convert to 287-A if he hasn't done so already.		
278-A	M.D.	Filamentary air cooled tetrode. Screen grid 251-A. Used by B.T.L. and A.T. & T. for experiments, also at Rugby Eng. - Transoceanic. Not stocked. Made only in BTL and abandoned about 1935. Use 379-A or 251-A and neutralize.		
279-A	L	Filamentary air cooled triode 1200 W. 71-A and B, 90-A and 6071-A Amplifiers. (1000 Watt). 304-A Radio Transmitting Equipment. D-96847 Amplifier. (2) D-156000 Radio Trans. Replaced by 379-A Tube in all but D-156000 R.T. About 220 sockets in field to maintain - 1/15/46.	Westinghouse G.E.	WL-851* GL-851*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
280-A	M.D.	Half wave thermionic mercury vapor rectifier. D-94704, D-94706 and D-94887 General Announcing Systems. Amplifier failed - now has no specific use. (Stock junked in 1938.)		
281-A	S	Moderate power filamentary coplanar-grid tetrode. 1-A Telephotographic Equipment. (Assoc. Press).		
282-A	M	Filamentary air cooled tetrode 70 W. 308-A and 309-A (Special in 16-A). Police R.T.E. 208-C and 209-A Radio Telephone Equipment. Airlines are purchasing tubes from other sources. (Taylor) Replaces 282-B since modified.	Taylor	282-A
282-B	M.D.	Filamentary air cooled tetrode. 282-A with isolantite base, heavier filament, better support. Slightly different characteristics which show up in Airplane Circuits. D-96656 R.T.E. Navy. Patrol Planes. Observation and Scout Planes. Replaced by 282-A Tube since modified.		
283-A	S	Variable-mu voltage amplifier, tetrode with indirectly heated cathode. Partially replaces 259-A. 9, 10, 11 and 12 Type Receivers. D-96530 Receivers. 208-C Radio Telephone Equipment. 2-A Phase Monitor.		

(S) Small value. (M) Medium Value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company,
Radio Division
Department 9715

September 10, 1946
Page 35 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
284-D	S	Filamentary air cooled triode 85 W. Replaces 284-A, B & C. 9-A and B Rectifier. Replaces 280-A in General Announcing Systems. 16-A Police Radio Transmitter. D-96662 Panel. D-97600 Flight Deck Announcing System. (16 each) U. S. Navy. D-97501 Amplifier. D-97500 General Announcing System (4 each). 87-A, B and D and 99-A Amplifier. About 500 yearly used by E.R.P.	Westinghouse G. E. R. C. A.	WL-845* GL-845* 845*
285-A	S	Lower power pentode with indirectly heated cathode. 12 Type Radio Receiver. D-96530 Receiver. 208-C Radio Telephone Equipment.	R.C.A.	38* 41*
286-A	S	Variable-mu, voltage amplifier, pentode with indirectly heated cathode. 13-A and B Radio Receiver DSB (256-A Panel). Navy Direction Finder. 82-A, 83-A, 83-B, 83-C and 84-A Amplifiers. Trucksess estimates 2000 for regulated rectifiers in 1947 - 3/31/46.		
287-A	S	Three element thyratron. Replaces (partially) the 277-A by using D-95076 Adapter. 1-A Telephotographic Equipment. 12-A Radio Transmitter. D-97600 Flight Deck Announcing System (8 each). Used with all 700 Type Oscillators (about 600 sockets). (D-98653 Oscillator Modulator Unit modified 12-B Transmitter). Long Life Tube. Not used in 400 series of R.T.E.	Continental	302

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 36 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
288-A	M.D.	Half wave, tungsten filament, argon filled rectifier. To replace GE Tungar Rectifier Bulb 189048.	G. E.	189048 4B28
289-A	M.D.	Half wave tungsten filament argon filled rectifier. To replace GE Tungar Rectifier Bulb 189049 for Telephone Plant Work. Merchandise Control. Current Army - Navy #4B26.	G. E. R. C. A. Westinghouse Allen Continental JAN	189049 2000 289416-D F-60 CE-226 4B26
290-A	A&M	Variable-mu Pentode with indirectly heated cathode. 12-B, 12-C, 14-A, 16-A Radio Receiver with 6001-A Radio Compass. 208-C and 209-A Radio Telephone Equipment. 280-A Panel. E.R.P. uses. Test sets in Works and Transoceanic Telephone. (Merchandise Control).		
291-A	A&M	Pentagrid converter with indirectly heated cathode. 12-B, 12-C, 14-A, 16-A Radio Receiver with 6001-A Radio Compass. 208-C and 209-A Radio Telephone Equipment. Used in Tel. Test Sets. (6-A-7 can be rebased to make equivalent of 291-A.) (Merchandise Control.)	R. C. A.	6-A-7*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
292-A	M.D.	Duplex-Diode Triode with indirectly heated cathode. Replaced by 352-A. 12-B, 12-C, 14-A, 16-A Radio Receiver with 6001-A Radio Compass. 208-C and 209-A Radio Telephone Equipment. E.R.P. uses. Suggest substitute 352-A; only difference is in diode plate 1P, 292-A limits are 3.7 - 6.7 and 352-A limits are 4.4 - 8.0, but Stafford says 99% of 352-A production is also within limits of 292-A (6/22/44).		
293-A	S	Pentode with indirectly heated cathode. 12-B, 12-C, 13-A, 14-A, 16-A Radio Receiver with 6001-A Radio Compass. Navy Precision Clock. 208-C and 209-A Radio Telephone Equipment. 20-A Radio Transmitter. 280-A Broadcasting Panel. D-99945 SSB Radio Receiver.		
294-A	A&M	Power Amplifier Pentode. Radio or Audio Frequency for Navy. Used by E.R.P. in recorders. 100-A Recorder. Tube Shop can't meet test and there is no known substitute (1/1/45).		
295-A	S	Filamentary air cooled triode 100W. Competitive in composite Broadcasting Stations. 405-A Radio Equipment Feedback Circuit. D-99762 Conversion Parts (9 sets sold). 355-E1 R.T.E.	R.C.A. Westinghouse G. E. Continental	203-A WL-203-A GL-203-A C-203-A

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
296-A	M.D.	Comparable to R.C.A. 849 (Carbon plate 270). Cancelled.	R. C. A.	849
297-A	S	Three element filamentary Thyratron. Used for testing protection circuit of 1-A Thermostat (Aviation) also in test circuits in B.T.L. considered as a telephone tube. (Merchandise Control.)		
298-A	L	Water cooled triode 100 KW used as an oscillator modulator or amplifier at high power levels. Four KS-8080 Gaskets with each tube. 50 KW Non-Western and W. E. Co. 407-A (50 KW) Trans.	Federal Amperex G. E. R. C. A.	298-A 220-C* 862* 862*
298-B	L	Similar to 298A except for higher amplification factor. Used in electronic heating applications.	G. E.	862*
299-A	-	Rectifier goes with 320-A. (None authorized to date)	R. C. A.	870*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 39 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
300-A	S	Moderate power filamentary triode. Used in ten frequency 27-A Trans. 86-A, 86-B, 86-D, 87-A, 91-A and 92-A Amplifiers. Also D-95036 Amplifiers converted by E.R.P. D-97600 Flight Deck Announcing System (8 each). Teleflash, Amateur use. Replaced by 300-B.	R. C. A.	250*
300-B	S	Same as 300-A Tube except for location of bayonet pin in base. For use by E.R.P. in 42 and 46 Type Amplifiers. Replaces some 205-D and all 300-A Tubes. Bayonet pin was changed so the 300-B could be used in old 205-D sockets. Since the 300-A was always used in wafer sockets, the 300-B is interchangeable. About 3481 sockets in Gov't Radio and Radar gear of W. E. manufacture - 5/1/45.	R. C. A.	2A3*
301-A	S	Full wave mercury vapor Rectifier. 71-B and 90-A Amplifiers. 12-A Rectifier. 280-A Panel. 443-A1 R.T.E. New 1-3-10-50 KW FM Transmitters.	R. C. A. R. C. A. G. E.	2866-A* 83* GL-2866-A*
302-A	M.D.	Oscillograph. Direction Finder, U.S. Navy. Replaced by 324-A Tube.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 40 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
303-A	S	Duo diode triode with indirectly heated cathode. Similar to 292-A. D-96530 (modified 12-D) Receiver. 13-R Receiver (SSB). 208-C Radio Telephone Equipment.		
304-A	M. D.	Filamentary air cooled triode. Short wave. Carbon plate. Westinghouse used in short wave transmitters. Also amateur field. Replaced by 304-B.	Federal G. E. Westinghouse	204-A GL-204-A WL-204-A
304-B	M.D.	Filamentary air cooled triode. Used at full rating at frequencies up to 100 mc. and at reduced power to 300 mc. (Molybdenum plate 304.) Replaces 304-A. Government use. (2) D-158974 Amplifiers. Manufacture discontinued in 1941. (316-A more or less took its place in any new developments.)	R. C. A. Raytheon G. E.	834 RK-32 GL-834
305-A	S	Filamentary tetrode 60 W. Navy Direction Finder. Remote Radio Key Equipment, Navy. 16-A Police Radio Transmitter. D-96657 Panel. Amateur use.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
306-A	S	Moderate power filamentary pentode. 16, 17, 18 and 21 Types Police Radio Transmitters. D-96657 Panel. (Amateur use.) (Subcontracted to National Union in 1944 but they will make only substantial quantities.)	National Union	306-A
307-A	S	Moderate power filamentary pentode for use in 19-A Radio Transmitter. (Itinerant Flyer.) 20-A Radio Transmitter. Amateur use. Special 14 Type Transmitter for Signal Corps. Ten frequency 27-A Radio Transmitter (Aviation).	Raytheon Sylvania Ken-Rad Nat'l. Union	75* 307-A
308-B	M	Filamentary air cooled triode. 250 W. D-97600 Flight Deck Announcing System (32 each). For use in high power audio frequency amplifier in announcing system.		
309-A	S	Voltage amplifier variable mu pentode with indirect heating cathode. For use in RA - 150 Amplifier (ERP) (4 each). (Merchandise control.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
310-A	S	Voltage amplifier cathode type pentode. Inexpensive Theatre Equipment. Coaxial Cable Job - 91-A, 92-A Amplifier. "J" & "K" Carrier Systems at regulated battery offices. A1 Noise Reducer. 405, 406 and 407 & 355-EI-R.T.E. (1) D-99945 Radio Receiver. Transoceanic (SSB). D-99762 Conversion Parts. (Merchandise Control.)		
310-B	S	Voltage amplifier pentode with indirectly heated cathode. Used in Speech Input Equipments. Used by E.R.P. Supposed to be extremely free of noise but has proven inferior to R.C.A. 1603 in meeting FM noise requirements.	R. C. A.	1603
311-A	S	Low power cathode type pentode. Carrier Telephone Systems. D-156000 Radio Trans. (Merchandise Control.)	R. C. A.	6K6
312-A	M	Filamentary air cooled pentode 50 W. G01 and G02 and GN Equipment. V-2-A in 451-A R.T.E. Used in 450-A R.T.E.	General Electronics R. C. A. Raytheon G. E.	38412 804* RK-20-A* GL-813/814

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
313-C	S	Three element cold cathode. Subset of the four battery selective ringing, Chicago. 50 KW Eqpt. 405 and 407 Radio Receiver. (SSB) Replaces 313-A Tube. About 1700 sockets in Gov't. Radio & Radar gear of W.E. mfr. - 5/1/45. (Merchandise Control.)	United Elec.	CV-75*
313-CA	S	Three element cold cathode. Replaces 313-AA. Specially selected 313-CC tubes. The 313-CC can be substituted for all known uses except socket GD of A-1 vogad. (SSB). Gov't. Contract Service estimates about 5100 sockets in special Gov't. gear - 5/1/45. (Merchandise Control).		
313-CB	S	Three element cold cathode. Same as 313-C except has higher main-gap voltage. Used in telephone equipment. (Merchandise Control.)		
313-CC	S	Three element cold cathode. Used in D-99945 Receiver (SSB) also R-1 and R-2 of A-1 Vogad. (SSB). About 1200 sockets in special Gov't. gear - 5/1/45.		
313-CD	S	Three element cold cathode. Used as indicator in test circuit for X-66031 Repeater. Has paint removed from an area at the end of the bulb for observation.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
314-A	S	Full wave mercury vapor rectifier. Inexpensive theatre equipment. 12-A and B Rectifier. 101-A Amplifier.	G. E.	
315-A	M	Half-wave mercury vapor rectifier 12.5 KV. D-96847 R.T.E. 405 Radio Trans. Equipment.	Federal G. E. Amperex	315-A
316-A	S	Filamentary air-cooled triode (door knob). Amateur use. Frequency limit of 750 mc. Leads are designated TP-5157 (4 required). Boeing adopted for their transmitter in the Clippers about 1943. Used by Alaska Communications. General Radio uses in frequency meter.	Tungsol G. E.	GL-316-A
318-A	S	Heater type pentode. Originally designed for 50 KW equipment but R.C.A. 837 being used in present circuits. D-99110 (100 W.) Transmitter and 23-A Transmitter.	G. E. R. C. A.	GL-837

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Elec c Company
Radio Division
Department 9715

October 14, 1946
Page 45 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
319-A	S	Half wave mercury vapor rectifier similar to 267-B except for four prong instead of two prong base. Composite stations.	Westinghouse G. E. R. C. A. Federal Raytheon	WL-872-A/872* GL-872-A 872-A 353-A* 872-A
320-A	L	Water cooled triode. 250 KW. For 500 KW Transmitters.		
321-A	M	Half wave mercury vapor rectifier similar to 315-A except four prong instead of two prong base. Composite and competitive stations. The 321-A has higher inverse peak than competitive tubes.	(See 319-A)	
322-A	M	Filamentary air cooled pentode. 125 W. for use in ten frequency 27-A and 27-AA Radio Transmitters.	Westinghouse G. E. R. C. A. Raytheon	WL-803 GL-803 803 28-A*
323-B	S	Three element thyratron. Entirely replaces 323-A. Has somewhat higher ratings and uses two more standard parts. Used for charging P.B.X. and Central Office batteries. See 393-A. B. T. L. estimates (5/31/46) 4200 will be needed in 1947 for regulated rectifiers. (Merchandise Control.)	Continental	

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 46 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
324-A	M.D.	Two element half wave rectifier for use with 325, 326 and 330 type oscillograph tubes for high voltage low current. Designed to replace D-96413 Tube and 302-A Tube. Discontinued 3/13/24.		
325-A, B-C	M.D.	High vacuum cathode ray Oscillograph tube. Replaces 224-C Tube. (A-Green fluorescent screen of about 4-1/2" diameter, medium persistence) (B-Long persistence screen of high fluorescent intensity) (C-Blue fluorescent screen of highly actinic quality). (See 326-A, B, C below).		
326-A, B-C	M.D.	High vacuum cathode ray Oscillograph tube. Replaces 224-C Tube. (A-Medium persistence screen of green fluorescent) (B-Long persistence screen) (C-Blue fluorescent screen highly actinic). Discontinued at the beginning of the War. Navy got Allan B. Dumont Lab. in Passaic to manufacture under our number as a stop gap.		
327-A	M.D.	Two element Argon filled rectifier tube having a tungsten filament for charging battery equipment in telephone plants. Replaced by GE Cat. 12X825 tungar. (Merchandise control.)	JAN G.E. Westinghouse Eitel McCullogh	4B35 12X825 WL-966626

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 47 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
328-A	S	Voltage amplifier pentode with indirectly heated cathode used in carrier repeaters and audio frequency amplifiers. (Merchandise control.)	Federal	328-A
329-A	S	Lower power cathode type pentode. Power output tube used in connection with carrier telephone systems in non-regulated battery offices. (Merchandise control.)		
330-A B-C	M.D.	Three trace Oscillograph tubes developed for college use. 330-A Green fluorescent screen of medium persistence 330-B long persistence screen of high fluorescent intensity 330-C blue fluorescent screen of high actinic quality.		
331-A	S	Filamentary air cooled triode. 125 W. To be used in last audio stage of aircraft radio transmitter. 443-A1 (1 kw) R.T.E. 430-B1 (100 watt) R.T.E. About 864 sockets in Special Gov't. gear 5/1/45.	G. E. Westinghouse R. C. A. United Elec. Raytheon	GL-805 WL-805 805 905 57

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 48 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which	Competition	Code
332-A	M	Filamentary air cooled pentode. It is intended for use in single side band and multiple steering antenna radio system. D-156000 Radio Transmitter. Similar to 322-A Tube.	G. E. Westinghouse	GL-803* WL-803*
333-A	S	Three element cold cathode used in subscriber sets and is the same electrically as the 313-C Tube. (Merchandise Control.)		
334-A	M.D.	Mercury vapor thyratron. Rectifier in battery charging equipment in telephone plants. Replaced by 354-A in most cases. (Merchandise Control.)		
335-A	M.D.	Same as 334-A except with argon gas in addition to mercury vapor. Same use as 334-A. Replaced by 354-A Tube. (Merchandise control.)		
336-A	S	Power amplifier pentode. Audio amplifiers and Speech Input Equipments. Used by E.R.P. 106 Amplifier (1 each).		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 49 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
337-A	S	Variable MU pentode with indirectly heated cathode. For use in new single side band and MUSA Receivers. D-99945 Radio Rec. (SSB) D-156000 Radio Transmitter. (Merchandise Control.)		
338-A	S	Three element thyratron with indirectly heated cathode for use in carrier telephone systems. (Merchandise control.)	R. C. A. Westinghouse	885* WL-629*
339-A	S	Filamentary pentode. Designed for use in 24-A Radio Transmitter. 221-A R.T.E. (emergency set for A.T. & T.) and 224-C R.T.E. (Ship to shore). Used by Coast Guard, Signal Corps (Alaska link) A.T. & T. and Harborcraft.		
340-A	L	Three element water cooled tube designed for use as an oscillator modulator or amplifier at the higher power levels. Short wave broadcasting equipment and also transmitters developed for the A. T. & T. Co. Long Lines Dept. Similar to 342-A tube except designed for use at higher frequencies. (4) D-158974 Amplifier Transoceanic.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 50 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
341-A		Water cooled triode primarily used in second power amplifier of transmitters already in the field. Same as 232-B except that it operates at a filament current of 40 amperes instead of 60 amperes.		
341-AA	L	Previously known as Spl. Low Mu. 343-AA - designed for use in Transmitter of WQXR and other composite 5 or 10 kw Radio Transmitting Eqpts. as an audio frequency amplifier and modulator at the higher power levels. Forced air cooled 3 element tube, filament voltage 21.5 V. Filament current 57.5 amp. Made 10 for WQXR. Extremely long life. WQXR returned one of original five for fin credit after 22,000 hours of service.	G. E. Westinghouse	GL-891-R WL-891-R
342-A	L	Water cooled triode similar to 232-B except that it employs a filament operating at 70 amperes instead of 60 amperes to improve the tube life. Supersedes the 232-B for new applications. Used in the third power amp. of the 407-A1 (50 KW) Trans. Works better than Federal F-332-C (says Navy). Inherently noisier than the 232-B and is unsatisfactory as a replacement in 50 KW Transmitters.	Federal Amperex R. C. A.	332-C 232-CH* 893*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 51 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
343-A	L	Water cooled triode similar to 220-B and C except that it operates at a filament current of 60 amperes instead of 40 amperes (to increase the tube life) and is inherently noisier. Supersedes the 220-B and 220-C tubes used in 405-A2 (5 KW) Transmitter but do not substitute for 220 tubes in prior models. "Super-duper" is D-170924.	Federal R. C. A. G. E. Westinghouse	343-A 892* GL-892* WL-892*
343-AA	L	Same as 343-A except equipped with fins for air blast cooling. Used in 405-B1 and B2 R.T.E.	R. C. A. G. E. Westinghouse	892-R* GL-892-R* WL-892-R*
344-A	M.D.	Water cooled rectifier similar to the 237-A tube except that it employs a filament which operates at 73 amperes instead of 60 amperes which gives the tube increased life. Designed to replace the 237-A. None manufactured.		
345-A	S	Full wave high vacuum rectifier tube intended for use with coaxial cable rectifiers and for feedback in radio broadcast transmitters. Can be used where R.C.A. 84 or 6Z4 is specified. D-99110 OSC Amp. 405-A1 and B1. 406-A and B, 407-A1, A2, A3 and A4. Radio Transmitters. Similar to 351-A Tube. Do not use competitive tubes if load is over 60 mils.	R. C. A. R. C. A.	84 6Z4

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 52 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
346-B	S	Three element cold cathode gas filled tube for use as a relay, voltage regulator or rectifier. For use in district selector circuits, remote control zone registration. (Merchandise Control)		
347-A	S	This tube is similar in design to 262-B tube except that it employs a 6.3 volt, .5 amperes heater and is equipped with a small octal base. For use in public address equipments. 120-A and 121-A Amplifiers. (The 1603 is quieter and will meet the FM noise requirements.)	R. C. A.	1603
348-A	S	This tube is similar in design to the 310-B tube except that it employs a 6.3 volt, .5 ampere heater and is equipped with an octal base. For use in public address equipment. 430-B1 (100 watt) R.T.E., 120-A and 121-A Amplifiers. 124 type Amplifier (2) 503 FM R.T.E. (which has been changed to call for 6J7 and 6J5 Tubes). About 12 sockets in special Government gear 5/1/45.	R. C. A.	6J7 6C6* 6J5* 1603* 1620*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
349-A	S	Suppressor Grid Pentode having indirectly heated cathode intended as audio frequency power amp. This tube is similar in design to the 336-A except that it employs a 6.3 volt, 1.0 ampere heater and is equipped with an octal base. Initial use in 121-A Amplifier. (443-A1) R.T.E. 1-5-50 KW Pre-war FM Transmitter. About 1600 sockets in special Government gear 5/1/45.	R. C. A.	6F6*
350-A	S	A beam power tube similar to R.C.A. 807. Used in 443-A1 R.T.E. Amplifiers and Marine Sets. 430-A1 R.T.E. 24AA Radio Transmitter. 503-A1 Pre-war FM Equipment. About 1000 sockets in special Government gear 5/1/45.	G. E. Westinghouse Nat'l Union R. C. A. Taylor Raytheon	807* 807* 1625* 807* T-21 RK-40
350-B	S	Beam power tube similar to 6L6. Designed for use in 124 Amplifier. 2 used with each set. 443-A (250 w) R.T.E. (5 in each). 503-A1 Pre-war FM Equipment. (Converted to use Eimac 4-125 during 1946). Proposed using in new side band equipment 5/1/46. About 10,000 sockets in special Government gear 5/1/45.	National Eimac	6L6* 4-125

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
351-A	S	A full-wave high vacuum rectifier similar in design to 345A tube for use in amplifiers and public address equipment. (443-A1 (1 kw) R.T.E. 430-A1 (100 Watt) R.T.E.) 451A (250 w) R.T.E. Can be replaced by 6X5 if not over 70 mils load. Used by E.R.P.	R. C. A.	6X5
352-A	S	A duo diode triode for use in 1,000 cycle ringer circuit SD-64419-01. Similar to 292A tube. (Merchandise control.)		
353-A	S	A three element cold cathode gas filled tube for use in 745 P.B.X. for generating audible ringing tone. Similar to 313C except for base. (Merchandise control)		
353-B	S	Same as 353A except that the main breakdown voltage limit is 165 to 225 volts DC. For use in AC operated message register circuit with #5 cross-bar system starting in April 1947. (Merchandise control.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 55 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
354-A	M	A mercury vapor filamentary type thyratron for use in J-862070 regulated rectifier for battery charging equipment in telephone plant. Estimated requirement for 6000 in 1947. Replaces 334A for new designs only. About 42 sockets in special Government gear 5/1/45. Heinz & Kaufmann use the codes 354-A, B, C, D, E, and F for transmitting triodes which are not comparable to our 354A. (Merchandise control.)		
355-A	M	A mercury vapor and argon filled filamentary thyratron for use in J-86207E and J rectifiers for battery charging equipment in telephone plant. Estimated demand for 7500 in 1947. About 34 sockets in special Government gear 5/1/45. (Merchandise control.)		
356-A	M.D.	A three element transmitting tube for high frequency use. Up to 100 mc at full power and 250 mc at reduced power. For use in 430A and B1 - 100 watt high frequency radio transmitter. Somewhat similar to the 304B tube. 1, 3, 10 & 50 KW Pre-war FM transmitters. Replaced by 356B. Station WHIO converted their 1 KW FM equipment to use Eimac 4-125.	R. C. A. Eimac	808* 4-125*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 56 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
356-B	M	Replaces 356A. Zirconium plate and different grid treatment - 10 watt higher rating. New line of AM Transmitters. Frequency doublers (4 sockets) on the Norfolk, Cape Charles job.	R.C.A. Eimac	808* 4-125*
357-A	M	A high frequency 350 watt air-cooled triode. Can be substituted for 241-B with an adapter or possibly a socket replacement. 430-B1 (100 Watt) R.T.E. and 443-A1 (1 kw) R.T.E. Equipment. 1, 3, 10 & 50 KW Pre-war FM Transmitter.	G. E. R. C. A.	GL-833-A* 833*
357-B	M	A high frequency 350 watt air cooled triode same as 357-A except that it has a Zirconium plate. Must be used in FM sockets and may be used in AM sockets after stocks of 357A's are exhausted.	G. E. R. C. A.	GL-833-A* 833*
358-A	S	A two element cold cathode discharge tube. This tube designed for associate use in equipment to give visual signal to the subscriber to replace the audible signal of the ringer. (Merchandise control.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 57 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
359-A	S	Cold cathode three element, filled with a mixture of rare gases principally neon. Telephone type for use in small secretarial system - known as 103A Key Equipment. (Merchandise control.)		
360-A	M.D.	Tube for Ortho-tronic hearing aid. Discontinued. Use Raytheon tube. (See D-164696)	Raytheon	
361-A	M.D.	Small tube for use in Ortho-tronic type audiphone. Intended primarily for resistance coupled voltage amplification or other uses within the limitations imposed by its very low current filament. It has a low microphonic level for a tube of comparable rating. Out of the hearing aid - 1942. Substitute Raytheon.	Raytheon	
362-A	M.D.	Small tube for use in Ortho-tronic type audiphone. Out of the hearing aid 1942.	Raytheon	507AX
363-A	L	Filamentary pentode designed for use in Radio Communication Project for Virginia Capes. 350 watts.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 58 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
364-A	M	Filamentary triode primarily required for use in Radio Communication Project for Virginia Capes.		
365-A	M.D.	Full wave rectifier. Developed for Virginia Capes Project. Only five made in B.T.L. Discontinued - never incorporated in any equipment.		
366-A	M.D.	Pentode developed for Virginia Capes Project but never used therein.		
367-A	M	Beam power amplifier. Developed for use in Virginia Capes Project. Local Video amplifiers. Can be replaced by 350-B in some cases. (Merchandise control.)	National Union Field	6L6* 807*
368-A	M	Filamentary air cooled triode intended for high frequency oscillator and amplifier applications of approximately 1.5 to 3 watts peak output. Similar to D-159764.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 59 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
368-AS	M.D.	Same as 368A except that it is a "single ender". Similar to 703A.	Tungsol	368AS
369-A		Water cooled triode approximately 25 kw. Developed for use in Composite Stations. Never manufactured.	Federal	
370-A	M.D.	Triode with filamentary type cathode. Class C operation - 3 & 50 KW Pre-war FM aircooled. Discontinued because new FM allocations required a different tube.		
371-B	M.D.	Rectifier tube developed for use as component of Rectifier being used in Pre-war Government Project. More rigid that 371A which it replaced.	Nat'l Union Electronic-Enterprises United Electronics G. E.	 271* GL-8020*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 60 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
372-A	S	Three element cold cathode gas filled tube. May be used as a relay, voltage regulator or rectifier. Intended primarily for use in the H5 telephone set mounting, as used in 306 type telephone sets. Tube is same as 333A except length of flexible leads are shorter and screw omitted from base. (Merchandise control.)		
373-A	S	Pentode voltage amplifier designed for K2 Carrier System. (Merchandise control.)		
374-A	S	Pentode power amplifier designed for K2 Carrier System. Partially superseded by 398A tube. (Merchandise control.)		
375-A	S	Cathode type beam tetrode. For use at audio frequencies. Primarily intended for general use in Central Office battery supply. Limited to 48 volts. (Merchandise control.)		
376-A	M.D.	Three element cold cathode tube. (Merchandise control.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 61 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
376-B	S	Three element cold cathode tube. Replaces 376-A and has a higher current rating. Initially used in the 1-C-1 Common Carrier Terminal Equipment. Radio power line carrier, a companion tube of the 398-A, 399-A, 400-A, and 401-A tubes. Might possibly be used in the AC Key Pulsing Senders and Receivers for the #4 and #5 cross-bar equipment. Estimated demand 1947 - 25,000.	R. C. A.	Specially heated 0A4G
378-A	M.D.	Never manufactured, but 705A is identical.		
379-A	L	An improved 279A Vacuum tube with grid connection in different location. A.T. & T. unable to use account grid connection and will continue to use 279A. 71A and B, 90A and 6071A Amplifiers (1000 watts) 304A Radio Transmitting Equipment. D-96847 Amplifiers.	Heinz & Kaufmann	2054-A
380-A	S	Cathode type diode - high frequency applications, type "L" Coaxial Systems and 1A Altimeter (Receiver and test set). Replaces D-157653. No base.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 62 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
381-A	S	Same as 380-A except that interelectrode capacitance plate to heater and cathode is 1.4 mmf (rather than 1.1) and has octal base.		
382-A	S	Triode with an indirectly heated cathode intended for miscellaneous low power applications through audio and high frequencies. No base. Originally developed for use in coaxial cable. Used in condenser transmitter amplifier.RA-1095. Replaces D-157591.		
383-A	S	Same as 382-A except has octal base. Originally designed for use in short wave multiplex type K carrier, UHF 12 channel job.		
384-A	M	Pentode with an indirectly heated cathode. Audio and high frequency applications. Unbased. Used on L carrier amplifier, large requirements. (Consider using the 6AK5 instead.)	Heinz & Kaufmann	HQ-201*
385-A	S	Same as 384A except has octal base. Slight difference in plate resistance. 156 sockets in the model RBQ receiver and 302 sockets in the 42A1 carrier repeater. (12/20/44). Consider 6AK5 for any new applications.	Heinz & Kaufmann	HQ-201*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 63 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
386-A	M	Pentode with indirectly heated cathode. Unbased - low power applications - audio and high frequencies. Used on L carrier amplifiers. New York to Philadelphia coaxial. Large requirements. (Merchandise control.)		
387	M	Same as 386-A except has octal base and top cap - slight differences in amplification factor, plate resistance and transconductance. Replaces D-159512.		
388-A	M.D.	Filamentary air cooled triode. Unbased. High frequency oscillator and amplifier. AN/APQ-2 Equipments made by Delco. Transmitter of 1A Altimeter - formerly D-156548.		
389-AA	L	Filamentary forced-air cooled triode. 10 KW Pre-war FM Transmitter. Will use at Station WHAS after change to new frequencies.	G. E.	889-R*

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 64 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
393-A	S	Filamentary thyratron containing both argon and mercury vapor. About 14,000 sockets in special Government gear 5/1/45. Will probably replace the 323-A tube in D, J, G, H, K, and 2067-F rectifiers used in KS-15123 rectifier (Railroad job.)	Continental G. E.	CE-393-A 393-A 3-C-23*
394-A	S	Filamentary thyratron, argon and mercury vapor filled. Power supply tube for the J-86207-G and H rectifiers for carrier telegraph and the J-86207-N rectifier inverter. About 3970 sockets in special Government gear 5/1/45. Also used in X-61680-B regulated tube (package C carrier) rectifier (2 each) in telephone work. Probable post-war use in regulation of industrial power supplies. Both Mackay and RCA Communications bought surplus Government Radio TWX equipments which use 394-A tubes. Trucksess is assigning a J number so that X-61680-B rectifiers will be recognized as regular telephone plant when the purchase of Government Package C Carriers is completed. C.E. Budd estimates 10,000 operating sockets in spiral four 5/1/46.	Kuthe' Chatham Electric	

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 65 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
395-A	S	Three element, double gap, cold cathode gas filled tube for use as a relay, rectifier or voltage regulator. Designed to take mechanical shock. Unbased. Mine detection devices and other Government applications. About 92,000 sockets in special Government gear 5/1/45, practically none of which will ever require replacement. X TFDC devices (A.B. Kowenhoven). Has advantages over 727-A tube.		
396-A	S	Same as 2C51. Bell System code number assigned at A. T. & T. request.		
397-A	M	Same as 2K56 velocity modulated local oscillator and transmitting tube designed for the 4000 MC Radio Relay System (Boston - New York Link).		
398-A	S	Filamentary power pentode similar to the 374-A. One socket in each J-98701 A Carrier Tel. Terminal (Subset) and J-98701B (Terminal Equipment). Companion tubes are 376B, 399A, 400A and 401A.		
399-A	S	Filamentary miniature pentode similar to RMA code IT4. One socket in each J-98701A Carrier Tel. Terminal (Subset) and two sockets in each J-98701B (Terminal Equipment). Companion tubes are 376B, 398A, 400A and 401A.	Field	IT4

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 66 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
400-A	S	Filamentary miniature pentagrid converter tube similar to the RMA Code 1R5. One socket in each J-98701A Carrier Tel. Terminal (Subset) and J-98701B (Terminal Equipment). A companion tube to 376B, 398A, 399A and 401A.	Field	IR5
400-A&B		Also covers germanium crystal rectifiers used in radar receivers and test equipment. Formerly coded D-172925.	Sylvania	IN34
401-A	S	Indirectly heated cathode miniature pentode similar to RMA-6AJ5 (but has longer life.) One socket in each J-98701A Carrier Tel. Terminal (Subset) and two sockets in each J-98701B (Terminal Equipment). A companion tube to 376B, 398A, 399A & 400A.	W.E. R. C. A.	6AJ5 9001
402-A	S	Microwave velocity variation power amplifier tube designed for operation in the 3840 to 4460 mc wave band. Used in radio telephone relay links. Production about 100 monthly starting August 1946. (Development number is 1436. Engineer on equipment is G.N. Thayer.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company,
Radio Division
Department 9715

October 14, 1946
Page 67 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
403-A	S	Bell System coding 6AK5.	Tungsol R. C. A.	6AK5 6AG5
403-B	S	Bell System coding on 6AK5 with low heater. Similar to the 6AK5/403-A except that the heater is replaced by the heater of the 401-A. Designed for lower heater power and a larger thermonic life than its predecessors. Used in mobile radio equipment by Bell System.	R. C. A. Tungsol	6AG5 6AK5
700-A,B, C & D	Obsolete	Magnetrons which operate at fixed frequencies. Original tube for Navy radars. Replaced by 4J42.		
701-A	Obsolete	Special purpose tetrode with indirectly heated cathode. High power code for hard tube pulsers.		
702-A	Obsolete	Three element gas discharge tube. Gas switching tube in radar receivers.	Sylvania	702-A
703-A	M	Single ended, filamentary, radiation cooled, negative grid triode intended for converter, amplifier and oscillator at frequencies in and below 1000 megacycles region. No base provided. 703A = 368AS ∕ rigid cut-off test. Formerly D-159764.	Tungsol	

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 68 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
704-A	Obsolete	(Peanut) indirectly heated cathode - type diode. Intended for ultra high frequency applications (not restricted). Formerly D-159765. Will probably disappear, with crystals being used instead.		
705-A	M	High vacuum filamentary air cooled diode - rectifier in high voltage circuits. Electrodes supported directly from hard glass envelope (adequate cooling of all seals) and elimination of internal insulators insures satisfactory performance under high voltage conditions. Ingram says identical tube is 378A. Navy radars. Could be used in small radio transmitters.	Raytheon Tungsol G. E.	705-A 8021 GL-8021
706AY & GY	Obsolete	Modernized 700 type tubes. Westinghouse made them all.	Westinghouse	706AY/GY
707-B	Obsolete	External cavity tuned Klystron used in radar receivers and test sets.	Raytheon	707-B
708-A		Negative grid radiation-cooled triode used as converter or RF amplifier at centimeter wavelengths.	Tungsol	708-A
709-A	Obsolete	Gas switching tube in Navy radar.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 69 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
713-A	Obsolete	Pentode with an indirectly heated cathode. (Mush-room) low power applications at audio, high and ultra high frequencies. (Not restricted.) Re-placed by 6AK5.		
714-AY	Obsolete	Further modernization of the 700 type magnatrons. We made a few but Westinghouse made them in quantity.	Westinghouse	714-AY
715-B&C	M	Special purpose tetrode. Used in hard tube pulsers in airborne radar. Demand reduced by 5D21.	Raytheon	715-B
717-A	S	Pentode with an indirectly heated cathode. (Mush-room) low power applications at audio, high and ultra high frequencies - not restricted. Should not be used in new designs because the 6AK5 will do the same job better and cheaper. Fairly large demand for replacement purposes in Government equipment in which the 6AK5 cannot be substituted without extensive changes - 7/26/45.	Raytheon	717-A
718AY/EY	Obsolete	Further modernization of the 700 type magnatrons. We made a few but Westinghouse made them in quantity.	Westinghouse	718AY/EY

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 70 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
719A	M	Special purpose diode. Used as a "clipper" in radar applications. Not recommended as a rectifier.		
720AY-EY	Obsolete	Magnetrons. AY, BY, CY replaced by 4J45, 4J46, 4J47 respectively.		
721-A	Obsolete	Gas switching tube. Replaced by 721-B.	Sylvania Raytheon	
721-B	S	Gas switching tube.		
722-A	Obsolete	Three element thyratron.	Continental	CE-302
723-A	Obsolete	Local oscillator. Replaced by 723A/B	Raytheon Kenrad	
723-A/B	Obsolete	Local oscillator. Replaced by 2K25.	Raytheon Kenrad	
724-A	Obsolete	Gas switching tube. Replaced by 724-B.	Sylvania	

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 71 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
724-B	S	Gas switching tube	Sylvania	
725-A	L	Magnetron.	Raytheon	
726-A,B,C	M	Local oscillators. A, B and C identical except for frequency.		
727-A	Obsolete	Cold cathode gas triode. Replaced by 395-A.		
728AY/GY	Obsolete	Magnetrons. Replaced by tunable type 4J51.		
729-A	Obsolete	Recoded 1B23.		
730-A	L	Magnetron.		
731-A	Obsolete	Recoded 6AK5.		
732-A	Obsolete	Recoded 3B24.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10,1946
Page 72 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
5530		3 KW FM transmitting tubes. Forced air cooled. Thoriated tungsten filament.	Eimac R. C. A. Westinghouse	3X-2500* 7C24 WL-478R
5531		10 KW AM transmitting tube. Forced air cooled. Thoriated tungsten filament.		
5541		10 KW FM transmitting tube. Forced air cooled. Thoriated tungsten filament.	Westinghouse G. E.	WL-479R GL-9C24
5542		5 KW AM transmitting tube. Forced air cooled. Thoriated tungsten filament.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 73 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-79509	M.D.	Similar to the 205 type tube except equipped with a base to fit into a D-79513 socket and has a glass tube 6" long connected to the top of the bulb. Used in ionization manometers in colleges and laboratories. Not manufactured for years because all users prefer unbased tubes D-79510.		
D-79510	S	Similar to the 205 type tube except unbased and has a glass tube 6" long connected to the top of the bulb. Used in ionization manometers in colleges and laboratories.		
D-79511	M.D.	Same as D-79509 except bulb is made of Pyrex. Not manufactured for years because all users prefer unbased tubes D-79512.		
D-79512	M	Same as D-79510 except bulb is made of Pyrex glass.		
D-80039	M.D.	Coded 215A Vacuum Tube.		
D-80777		A special ballast lamp partially replaced by 4A and 5A types. Used in Alaskan Communications System. (5A elements in 4A bulbs.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 74 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-86326	S	Specially selected 101D Vacuum Tube. Used in Alaskan Communications System. (Mdse. control).		
D-86327		Specially selected 104D Vacuum Tube. Used in Alaskan Communications System. (Mdse. control.)		
D-90278	M.D.	Coded 269-A.		
D-90279		Special three element argon filled gas discharge tube. Coded 256A.		
D-91143	S	101F Tube with a push type base, silver plated prongs and pear shaped bulb. Used in the Edmonton link of the Alaskan Communications System (experimental model).		
D-91144	S	102F with a push type base, silver plated prongs and pear shaped bulb. Used in the Edmonton link of the Alaskan Communications System (experimental model).		
D-92437		Receiving triode amplifier.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 75 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-94044		Specially selected 264A Tube. Originally used in the 54B amplifier which, upon final design, used the 264A Tube.		
D-94230		Specially selected 231D Tube. Originally used in the 55A amplifier which, upon final design, used the regular 231D Tube.		
D-94341		A variation of the 224C Cathode Ray Tube.		
D-95954		The so-called "Aeo-lite" used by Movietone News.		
D-96034		Special design for use in the D-95887 amplifier.		
D-96412		Pentode tube for oscillograph work. Specially designed for the Navy direction finder (about 1936) but never used. The 294A Tube was adopted instead.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 76 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-96413		High voltage rectifier. Direction finder and experimental uses in colleges and laboratories. Superseded by 324A and 294A Tubes.		
D-96475	M	The Electrometer tube. Used by colleges and laboratories. We went out of production and out of stock at the beginning of the war because the General Electric FP-54 Tube could serve as a war substitute. Have no plans for resuming production because tool expense would require a prohibitive price.	G. E.	FP-54
D-96820		A transmitting triode subsequently coded CW-38111A by the Navy.		
D-96987		Transmitting a-f power amplifier, modulator-triode. Subsequently coded CW-38145 by the Navy. Now known as the 845.	Field	845
D-97004		Stroboscopic lamp for use on motor generators used in voice frequency carrier telegraph systems.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-97014		Thermostat to control temperature of D-96865 Tuning Fork Unit. (Navy Synchronous Clock). One thermostat to each T.F. Unit, one each of D-96868 Rack Assembly, two each to Clock System.		
D-97822	S	Specially selected 205 type for aviation use (not more than 10% of 205 production) 8 and 9 Types Radio Receivers.		
D-99022		Cold cathode ray type tube for use in connection with carrier telegraph systems.		
D-156547	M.D.	Acorn tube. Replaced by D-157653 which in turn was coded 380A.		
D-156548	M.D.	Altimeter. Filamentary air cooled triode for ultra-hi-frequency use. 5-20 watts depending on frequency. 30A Radio Transmitter which is part of 1A Altimeter. Coded 388A which is now M.D.		
D-156734	S	Spl. 205F Tube with push type base and silver plated prongs. For use in detector and amplifier in connection with the 3A Privacy System. (Cut over from basic 205D to 205F early in 1944.)		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-157653	M.D.	Spl. acorn tube used in carrier cable systems and in the 1A Altimeter. Coded 380A early in 1941.		
D-157654	M.D.	Pentode tube used in Type L Carrier Telephone. Replaced by 384A Tube.		
D-158643	M.D.	Discontinued, covered by D-157654.		
D-158796	M.D.	Now coded 386A Vacuum Tube.		
D-159076		Six stage electron multiplier tube (called a Photo-electric cell). None made during the war, and not interested in producing at present. Would have to be made in B.T.L. (5/22/45).		
D-159508	M.D.	Now coded 381A Vacuum Tube.		
D-159509	M.D.	Now coded 382A Vacuum Tube.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 79 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-159511	M	Voltage amplifier, carrier and radio telephone. Similar to the 366A except grid on top.		
D-159512	M.D.	Acorn now coded 387A.		
D-159764		Single ended. Used in Spl. Eqpt. for U.S. Government. Similar to 368A (Filamentary air cooled triode 3 to 1.5 watts; has no base.) Replace with 368AS or 703A.		
D-159765	M.D.	Very small UHF diode. Used in Spl. Eqpt. for U.S. Government. Subsequently coded 704-A.		
D-159769		Used in Spl. Eqpt. for U.S. Government (pre-war). Specially selected 388A Tube having narrow limits.		
D-159778	S	Minute thyratron used in conjunction with D-155023 Photoelectric cell in the study of terrestrial magnetism.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 80 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-159780		(W.E. 356A less grid). Used in Spl. Eqpt. for U.S. Government (pre-war). Coded 378A but never manufactured. Recoded 705A.		
D-159781	M.D.	Used in Spl. Eqpt. for U.S. Government (pre-war). Coded 356A.		
D-160052		For sale to National Research Council. To be sold to colleges.		
D-160127		Triode similar to 708A. Tube shop has great difficulty in making. Used almost exclusively by B. T. L.		
D-160206	M.D.	Special purpose UHF triode similar to D-160127. Finally coded 708A.		
D-160573		Transmitting UHF oscillator.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 81 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-161145		Transmitting UHF oscillator.		
D-161714		Grid controlled gas rectifier.		
D-161831		Grid controlled gas rectifier subsequently coded GY-2 and manufactured by others.		
D-162836		Silicon crystal rectifier, superseded by IN21.		
D-163366	M.D.	Coded IN21, subsequently IN21B, silicon crystal rectifier.	R. C. A.	R-7011
D-163876		Grid controlled gas rectifier.		
D-164389	M.D.	Coded IN22, subsequently replaced by IN21B silicon crystal rectifier.		
D-164694	M.D.	Velocity variation UHF oscillator, coded 2K40 but apparently never manufactured.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 82 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-164696		Modified 360A Tube, developed for the purpose of increasing the mechanical strength of the 360A.		
D-164713		Transmitting triode UHF oscillator.		
D-164714		Transmitting twin triode UHF oscillator. Subsequently coded 7C22 which was manufactured in small quantities only.		
D-167158		UHF oscillator.		
D-168030	M.D.	Coded IN28, silicon crystal rectifier.		
D-168355	M.D.	Coded IN21A, subsequently IN21B, silicon crystal rectifier.		
D-168356	M.D.	Coded IN23, subsequently IN23B, silicon crystal rectifier.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

September 10, 1946
Page 83 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-168535		Cold cathode gas triode rectifier relay regulator.		
D-168707	M.D.	Coded IN26, silicon crystal rectifier.		
D-169113	M.D.	Coded IN21B, silicon crystal rectifier.	Sylvania	IN21B
D-169304	M.D.	Coded IN23A, silicon crystal rectifier.	Sylvania	IN23A
D-169305	M.D.	Coded IN23B, silicon crystal rectifier.	Sylvania	IN23B
D-170135		Coded 1B42 spark gap multiplier tube.		
D-170247	M.D.	Coded IN25, silicon crystal rectifier.		
D-170924		Modified 343A Tube having a spiral filament. Developed in an effort to obtain longer life. Made in BTL, not released to V.T. Shop.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 84 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-171089	M.D.	Similar to 7C22 but shorter.		
D-171612		Crystal rectifier for AN/APS-3A.		

(S) Small Value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
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Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 85 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-171936	M.D.	Coded 1N31, silicon crystal rectifier.		

(S) Small value. (M) Medium value. (M.D.) Manufacture discont[illegible]. (L) Large value.
(*) With modifications.

Western Electric Company
Radio Division
Department 9715

October 14, 1946
Page 86 of 86 Pages

Bell & Commercial Electron Tubes

Code Number	Price Category	Description & Material in Which Used	Competition	Code
D-172925		Germanium crystal rectifier (to be replaced shortly by 400 A&B crystal rectifiers) Radar receivers and test equipment. Lower frequency applications.	Sylvania	1N34
D-175045	M	Low power pentode with indirectly heated cathode. Shop made 100 in September 1946 for B.T.L. Used in Bell System terminal equipment which has been superseded. New equipment will not use this tube.		

(S) Small Value. (M) Medium value. (M.D.) Manufacture discontinued. (L) Large value.
(*) With modifications.

CHARACTERISTIC DATA

Code	Name	Cathode Htr. or Fil.			Normal Operating Conditions							Max. Plate Dissipation Watts	Average Characteristics—Class A Operation					Maximum Dimensions Inches		Socket	Tube Symbol and Base Connections Fig.	Remarks	Code No.
		Type	Volts	Amps.	Class of Operation	Plate Potential Volts	Plate Current Amperes	Control-Grid Bias Volts	Screen-Grid Potential Volts	Max. R-F Grid Current Amperes	Power Output Watts		Plate Potential Volts	Plate Current Amps.	Amplification Factor	Plate Resistance Ohms	Transconductance Micromhos	Height	Dia.				
101D	Triode	O-F	4.5	1.0	A Audio	130	0.0075	−9			0.065		130	0.0077	6.2	5800	1070	4½	1 13/16	100L 100R	1		101D
101F	"	O-F	4.15	0.50	A "	130	0.0068	−8			0.060		130	0.0068	6.5	5800	1120	4½	1 13/16	100L 100R	1		101F
101FA	"	O-F	4.15	0.50	A "	130	0.0044	−8			0.094		130	0.0044	8.9	6100	1460	4½	1 13/16	100L 100R	1		101FA
102D	"	O-F	2.1	1.0	A "	130	0.0008	−1.5			20 Peak Volts		130	0.0008	29.6	58000	510	4½	1 13/16	100L 100R	1		102D
102F	"	O-F	2.1	0.50	A "	130	0.00085	−1.5			22 Peak Volts		130	0.00085	31	50000	620	4½	1 13/16	100L 100R	1		102F
104D	"	O-F	4.5	1.0	A "	130	0.025	−20			0.160		130	0.025	2.5	2100	1180	4½	1 13/16	100L 100R	1		104D
205D	"	O-F	4.5	1.6	A "	350	0.029	−22.5			0.875		350	0.029	7.3	3800	1940	4½	2 3/8	100M 115B	7		205D
205E	"	O-F	4.5	1.6	A "	350	0.029	−22.5			0.875		350	0.029	7.3	3800	1940	4½	2 3/8	100M 115B	7		205E
212E	"	T-F	14.0	6.0	B R-F Ampl.	2000	0.200	−120		5	150	275	2000	0.165	16	1900	8500	13 5/8	3 5/8	147A	4		212E
215A	"	O-F	1.0	0.25	A Audio	60	0.002	−3			0.0029		60	0.002	5.7	13500	420	2 11/16	1 1/16	125B	1		215A
220C	"	W-F	21.5	41.0	B R-F Ampl.	11000	0.75	−250		20	2750	10000	10000	0.64	40	8000	5000	20 7/8	6 3/32	132A 133A	50	Water Cooled	220C
228A	"	W-F	21.5	41.0	B " "	5000	0.65	−325		20	1100	5000	5000	0.9	16	2500	6500	18	3½	126A	48	Water Cooled	228A
231D	"	O-F	3.1	0.060	A Audio	90	0.0021	−3			0.0045		90	0.0021	8.4	16300	510	4	1 5/32	143B	2A		231D
232B	"	W-F	20.0	60.0	B R-F Ampl.	17500	1.5	−500		40	9000	25000	15000	1.35	40	6150	6500	21 15/16	6	132A 133A	50	Water Cooled	232B
236A	"	W-F	21.5	41.0	B " "	15000	1.0	−375		25	5000	20000	15000	1.0	40	6200	6450	30	3¾	132A 133A	50	Water Cooled	236A
240B	"	W-F	21.5	41.0	B " "	12000	1.0	−250		60	4000	10000	10000	0.64	40	8000	5000	25 11/32	6 3/32	Spl. Mtg.	50	Water Cooled	240B
241B	"	T-F	14.0	6.0	B " "	2000	0.200	−120		5	150	275	2000	0.165	16	1900	8500	14½	3 5/8		5		241B
242C	"	T-F	10.0	3.25	B " "	1250	0.120	−90		5	50	100	1250	0.068	12.5	3500	3600	7 5/16	2 5/16	145A	3		242C
244A	"	H	2.0	1.6	A Audio	135	0.0055	−6			0.049		135	0.0055	10.1	10000	1010	4 7/8	1 13/16	141A	26		244A
245A	Tetrode	H	2.0	1.6	A R-F Ampl.	135	0.0048	−1.5	45				135	0.0048	135	180000	750	5¼	1 13/16	141A	27		245A
246A	"	O-F	3.3	0.100	A " "	135	0.0015	−1.5	45				135	0.0015	285	725000	390	5¼	1 13/16	143B	10		246A
247A	Triode	H	2.0	1.6	A Audio	135	0.0032	−4.5			0.037		135	0.0032	15.2	16000	940	4 7/8	1 13/16	141A	26A		247A
251A	"	T-F	10.0	16.0	B R-F Ampl.	3000	0.400	−300		15	400	1000	2500	0.240	10.5	2750	3800	21 11/16	6	142A	50		251A
252A	"	O-F	5.0	2.0	A Audio	450	0.060	−60			7.0		450	0.060	5.1	1500	3450	6¾	2 1/16	143B	2		252A
254A	Tetrode	T-F	5.0	3.25	B R-F Ampl.	750	0.040	−40	175	5	10	20	750	0.027	80	80000	1000	6 15/16	2 7/16	143B	12		254A
254B	"	T-F	7.5	3.25	B " "	750	0.050	−70	150	5	12.5	25	750	0.033	100	86000	1160	6 15/16	2 7/16	143B	12		254B
257A	Triode	O-F	3.1	0.060	A Audio	90	0.0021	−3			0.0045		90	0.0021	8.4	16300	510	4 5/16	1 5/32	143B	13		257A
259A	Tetrode	H	2.0	1.6	A R-F Ampl.	180	0.0055	−1.5	75				180	0.0055	550	400000	1380	5¼	1 13/16	141A	27		259A
259B	"	H	2.0	1.6	A " "	180	0.0055	−1.5	75				180	0.0055	550	400000	1380	5¼	1 13/16	141A	27		259B
261A	Triode	T-F	10.0	3.25	B R-F Ampl.	1250	0.125	−100		5	50	100	1250	0.068	12	3000	4000	7 15/16	2 5/16	145A	3		261A
262B	"	H	10.0	0.32	A Audio	135	0.0028	−4.5			0.035		135	0.0028	15.7	17500	900	4¾	1 9/16	143B	14		262B
264C	"	O-F	1.5	0.300	A "	100	0.0021	−8			0.033		100	0.0021	7.2	12400	580	4	1 3/16	143B	2A		264C
268A	"	T-F	5.0	3.25	B R-F Ampl.	750	0.050	−165		3	12.5	25	750	0.025	5	6250	800	6 15/16	2 7/16	143B	17		268A
270A	"	T-F	10.0	9.75	B " "	3000	0.175	−180		10	175	350	2500	0.120	16	2800	5700	17	4	Spl. Mtg.	48		270A
271A	"	H	5.0	2.0	A Audio	400	0.0375	−30			2.8		400	0.0375	8.3	2830	2920	6¾	2 7/16	141A	26A		271A
272A	"	H	10.0	0.32	A "	140	0.0054	−15			0.12		140	0.0054	5.6	7400	760	4 7/8	1 13/16	141A	26		272A
275A	"	O-F	5.0	1.2	A "	200	0.047	−45			1.9	17	200	0.047	2.8	1030	2770	5 5/8	2 3/16	143B	2		275A
276A	"	T-F	10.0	3.0	B R-F Ampl.	1250	0.125	−100		5	50	100	1250	0.068	12	3000	4000	7 15/16	2 5/16	145A	3		276A
278A	Tetrode	T-F	10.0	15.6	B " "	3000	0.400	−110	500	15	400	800	3000	0.200	400	105000	3800	21 11/16	6	142A	54		278A
279A	Triode	T-F	10.0	21.0	B " "	3000	0.600	−325		15	600	1200	2500	0.300	10	2000	5000	21 11/16	6	142A	50		279A
281A	Coplanar Tetrode	O-F	5.0	1.6	A Audio	130	0.035	−60	72		2.2		130	0.035	5	3400	1470	6¾	2 1/16	141A	25		281A
282A	Tetrode	T-F	10.0	3.0	B R-F Ampl.	1000	0.100	−90	150	5	33	70	1000	0.070	100	70000	1430	6 15/16	2 7/16	143B	12		282A
282B	"	T-F	10.0	3.0	B " "	1000	0.100	−90	150	5	33	70	1000	0.070	100	70000	1430	6 15/16	2 7/16	143B	12		282B
283A	"	H	2.0	1.6	A R-F Ampl.	180	0.0059	−1.5	75				180	0.0059	585	430000	1360	5¼	1 13/16	141A	27	Variable Mu	283A
284D	Triode	T-F	10.0	3.25	A Audio	1250	0.064	−220			40	85	1250	0.064	4.8	1900	2500	7 15/16	2 5/16	145A	3		284D
285A	Pentode	H	2.0	1.6	A "	180	0.0088	−12	150		0.65		180	0.0088	135	153000	880	5¼	1 13/16	141A	28		285A
X 286A	"	H	2.0	1.6	A R-F Ampl.	180	0.0062	−1.5	75				180	0.0062	850	700000	1200	5¼	1 13/16	144B	37	Variable Mu	286A
X 290A	"	H	10.0	0.32	A " "	180	0.0054	−1.5	75				180	0.0054	1160	950000	1220	5¼	1 13/16	144B	37	Variable Mu	290A
X 291A	Pentagrid Converter	H	10.0	0.32	Osc. Mod.	180 (Osc.) 180 (Mod.)	0.0045 0.0031	−7.5 (Osc. Grid) −3.0 (Mod. Grid)	75				180	0.0045 0.0031	65 275	100000 400000	650 690	5¼	1 13/16	Med. 7-Pin	34	Screen Grid Current—.0036 Amp.	291A

KEY TO DESIGNATIONS

Ar—Argon Gas Con.—Converter El.—Element F—Filament Type Cathode G—Gas Filled H—Heater Type Cathode Hg—Mercury Mod.—Modulator O—Oxide Coated Osc.—Oscillator PM.—Plate Modulated Rf—Full Wave Rh—Half Wave Sect.—Section SGM.—Suppressor Grid Modulated T—Thoriated Tungsten V—High Vacuum W—Tungsten X—Rated "A&M Only" *—See Remarks Column.

CHARACTERISTIC DATA

Code No.	Name	Cathode Htr. or Fil.			Normal Operating Conditions						Max. Plate Dissipation Watts	Average Characteristics—Class A Operation					Maximum Dimensions Inches		Socket	Tube Symbol and Base Connections Fig.	Remarks	Code No.
		Type	Volts	Amps.	Class of Operation	Plate Potential Volts	Plate Current Amperes	Control-Grid Bias Volts	Screen-Grid Potential Volts	Max. R-F Grid Current Amperes	Power Output Watts		Plate Potential Volts	Plate Current Amps.	Amplification Factor	Plate Resistance Ohms	Transconductance Micromhos	Height	Dia.			
X 292A	Duodiode Triode	H	10.0	0.32	A Audio (Triode Sect.)	135	0.0021	−6			0.041		135	0.0021	13.3	20000	665	5¼	1 13/16	144B	31	Each Diode, E_b=9V, I_b=0.0022 Amp.	292A
X 293A	Pentode	H	10.0	0.32	A Audio	180	0.0145	−18	180		1.2		180	0.0115	105	100000	1050	4¾	1 13/16	144B	33		293A
X 294A	"	H	10.0	0.32	A "	180	0.0145	−18	180		1.2		180	0.0145	105	100000	1050	5¼	1 13/16	141A	28A		294A
295A	Triode	T-F	10.0	3.25	B R-F Ampl.	1250	0.105	−45		7.5	42.5	100	1250	0.080	25	6000	4200	7 13/16	2 5/16	145A	3		295A
298A	"	W-F	27.0	225	B " "	18000	4.2	−500		75	25000	100000	18000	4.2	32	1450	22000	5 1/8	9 5/16	146A	50	Water Cooled	298A
300B	"	O-F	5.0	1.2	A "	300	0.060	−61			6	40	300	0.060	3.8	700	5400	6½	2 7/16	100M or 143B	58	For either Bayonet or Push Type Socket	300B
X 303A	Duodiode Triode	H	2.0	1.6	A " (Triode Sect.)	135	0.002	−6			0.040		135	0.002	13.5	21000	640	5¼	1 13/16	144B	31	Each Diode, E_b=9V I_b=0.0021 Amp.	303A
304B	Triode	T-F	7.5	3.25	B R-F Ampl.	1250	0.060	−110		6	25	50	1250	0.040	11	2000	5500	6 1/16	2 7/16	143B	19		304B
305A	Tetrode	T-F	10.0	3.1	B " "	1000	0.090	−135	200	5	30	60	1000	0.060	56	40000	1400	7 5/16	2 7/16	143B	20	Max. Screen Dissipation 6 Watts	305A
306A	Pentode	O-F	2.75	2.0	C R-F Ampl. (PM)	300	0.036	−50 (Approx.)	Res. 8000 ω−180 (Approx.)		7	15	250	0.043	250	62000	4050	6 1/16	2 1/16	141A	30	Max. Screen Dissipation 6 Watts	306A
307A	"	O-F	5.5	1.0	C R-F Ampl. (SGM)	500	0.040	−35 (Approx.)	Res. 14000 ω−200 (Approx.)		6	15	250	0.050	120	30000	4000	6 1/16	2 1/16	141A	35	Max. Screen Dissipation 6 Watts	307A
308B	Triode	T-F	14.0	6.0	B R-F Ampl.	1750	0.215	−230		5	125	250	1500	0.167	8	1070	7500	13 5/8	3 5/8	147A	4		308B
309A	Pentode	H	10.0	0.32	A Audio or R-F Ampl.	180	0.0048	−1.5	75				180	0.0048	1100	1000000	1100	4 29/32	1 5/16	141A	28A	Variable Mu	309A
310A	"	H	10.0	0.32	A " " " "	135	0.0055	−3	135		0.25		135	0.0055	1350	750000	1800	4 29/32	1 5/16	144B	37		310A
310B	"	H	10.0	0.32	A " " " "	135	0.0055	−3	135		0.25		135	0.0055	1200	650000	1800	4 29/32	1 5/16	144B	37	Low Hum	310B
311A	"	H	10.0	0.64	A " " " "	135	0.030	−15	135		2		135	0.030	122	43000	2800	4 29/32	1 5/16	141A	28A		311A
312A	"	T-F	10.0	2.8	C R-F Ampl. (SGM)	1250	0.050	−50 (Approx.)	Res. 22000 ω−300 (Approx.)	5	23	50	1000	0.050	1100	290000	3800	7¾	2 5/16	144B	38		312A
316A	Triode	T-F	2.0	3.65	R-F (PM)	400	0.080	Adjust (−17)			6.5	30	450	0.067	6.5	2700	2400	2 25/32	2 1/16	Spl. Mtg.	52		316A
320A	"	W-F	35.0	435	B R-F Ampl.	18000	12.5	−500			75000	150000	18000	8.0	30	965	31100	94	10½	Spl. Mtg.	51	Water Cooled	320A
322A	Pentode	T-F	10.0	5.0	C R-F Ampl. (SGM)	2000	0.080	−85 (Approx.)	Res. 35000 ω−400 (Approx.)	5	53	125	2000	0.0625	1400	350000	4000	9 3/8	2 5/16		53		322A
328A	"	H	7.5	0.425	A Audio or R-F Ampl.	135	0.0055	−3	135		0.25		135	0.0055	1350	750000	1800	4 29/32	1 5/16	144B	37		328A
329A	"	H	7.5	0.85	A " " " "	135	0.030	−15	135		2		135	0.030	122	43000	2800	4 29/32	1 5/16	141A	28A		329A
331A	Triode	T-F	10.0	3.25	B " 2 Tubes	1500	(Max. Sig.) 0.400	−20			370	125	1500	0.085	40	8900	4500	8½	2 5/16	145A	55		331A
332A	Pentode	T-F	10.0	5.0	B R-F Ampl.	2000	0.064	−40	600	5	53	125	2000	0.0625	1400	350000	4000	9 3/8	2 5/16		39		332A
336A	"	H	10.0	0.64	A Audio	250	0.030	−14	250		3.5		250	0.030	336	80000	4200	4 7/16	1 5/16	144B	33		336A
337A	"	H	10.0	0.32	A Audio or R-F Ampl.	135	0.0063	−3	135				135	0.006	1070	650000	1650	4 29/32	1 5/16	144B	37	Variable Mu	337A
339A	"	O-F	5.0	1.2	B " " " "	400	0.120	−90	400		30	35	400	0.073	96	20000	4800	7 1/16	2 1/16	141A	35A	Max. Screen Dissipation 12 Watts	339A
340A	Triode	W-F	20.0	72.0	B R-F Ampl.	18000	1.1	−450		60	9000	25000	15000	1.3	40	5860	6820	21 13/16	6 3/32	132A 133A	50	Water Cooled	340A
342A	"	W-F	20.0	67.0	B " "	18000	1.4	−450		40	8500	25000	15000	1.3	40	5860	6820	21 13/16	6 3/32	132A 133A	50	Water Cooled	342A
343A	"	W-F	21.5	57.5	B " "	15000	0.70	−350		20	3500	10000	10000	0.64	40	5920	6750	20 7/8	6 3/32	132A 133A	50	Water Cooled	343A
343AA	"	W-F	21.5	57.5	B " "	12500	0.66	−300		20	2750	5000	10000	0.50	40	5920	6750	21 3/16	7 1/32	154A	50	Air Cooled	343AA
347A	"	H	6.3	0.5	A Audio	135	0.0028	−4.5			0.035		135	0.0028	15.7	17500	900	4¾	1 5/16	Octal	42		347A
348A	Pentode	H	6.3	0.5	A Audio or R-F Ampl.	135	0.0055	−3	135		0.25		135	0.0055	1200	650000	1800	4 29/32	1 5/16	Octal	43	Low Hum	348A
349A	"	H	6.3	1.0	A Audio Ampl.	250	0.030	−14	250		3.5		250	0.030	336	80000	4200	4 7/16	1 5/16	Octal	44		349A
350A	Tetrode	H	6.3	1.6	B, A Audio or R-F Ampl.	500	.085	−20	250		24	30	500	0.055	430	67000	6400	5 31/32	2 1/16	141A	41	Max. Screen Dissipation 4 Watts	350A
350B	"	H	6.3	1.6	B, A Audio Ampl.	400	.085	−20	250		20.	25	400	0.053	400	64000	6250	5 7/16	2 1/16	Octal	36	Max. Screen Dissipation 4 Watts	350B
352A	Duodiode Triode	H	10.0	0.32	A Audio (Triode Sect.)	135	0.0021	−6			0.042		135	0.0021	13.3	20500	650	4¾	1 5/16	144B	31	Each Diode, E_b=9V I_b=0.0031 Amp.	352A
356A	Triode	T-F	5.0	5.0	C R-F Ampl. (PM)	1250	0.100	−100		6	85	50		0.100	50	13000	3800	5	2 5/16	152A	24		356A
357A	"	T-F	10.0	10.0	C " " "	3000	0.240	−270			550	350		0.500	30	3300	9000	8	5 1/8	153A	48		357A
361A	Pentode	F	1.4	0.020	Audio	45	0.0004		36				36	0.0004	160	640000	250	1 5/16	5/16	None	62	Audiphone	361A
362A	"	F	1.4	0.050	Audio	45	0.00126		45		0.009		45	0.00125	160	280000	570	1 5/16	5/16	None	62	Audiphone	362A
363A	"	T-F	10.0	10.0	C R-F Amp.*	3000	0.450	−250	750		1000	350	700	0.500	300	25000	12000	8	5 1/8	Spl. Mtg.	60	Unmodulated—For Frequency Mod. Use	363A
364A	Triode	T-F	5.0	5.0	C R-F Amp. (PM)	1250	0.100	−100		6	85	50		0.100	50	11000	4500	3 3/8	2 5/8	A5A	61		364A
366A	Pentode	H	6.3	.65	A R-F Ampl.	200	0.016	−2	200			6.5	200	0.016	2790	270000	10300	3	1 3/8	Octal		Not in production	366A
367A	Tetrode	H	6.3	1.6	B, A R-F	400	0.085	−20	250		20	25	400	0.053	400	64000	6250	4 5/16	2 1/16	Octal	63		367A
368A	Triode	T-F	1.0	4.5	Osc.	300	0.075				3*	20	300	0.060	9	4500	2000	2 5/32	2 5/64		64	Below 1000 MC.	368A
370A	"	F	10.0	32.0	C*	3500	1.40	−300		20	3000	1750	3000	0.500	23	2500	10000	16	6	153A	48	Frequency Modulated	370A

KEY TO DESIGNATIONS

Ar—Argon Gas; Con.—Converter; El.—Element; F—Filament Type Cathode; G—Gas Filled; H—Heater Type Cathode; Hg—Mercury; Mod.—Modulator; O—Oxide Coated; Osc.—Oscillator; PM.—Plate Modulated; Rf—Full Wave; Rh—Half Wave; Sect.—Section; SGM.—Suppressor Grid Modulated; T—Thoriated Tungsten; V—High Vacuum; W—Tungsten; X—Rated "A&M Only"; *—See Remarks Column

RECTIFIERS

Code No.	Classification	Cooling	Cathode			Maximum Dimensions Inches		Max. Peak Inverse Anode Voltage Volts	Max. Peak Anode Current Amperes	Maximum Instantaneous Anode Current Amperes		Maximum Average Anode Current Amperes		Maximum Time of Averaging Anode Current Seconds	Maximum Ambient Temperature Range Degrees C.	Socket	Tube Symbol and Base Connections Figure	Code No.
			Type	Volts a-c	Amperes	Height	Diameter			In Phase Operation	Quadrature Operation	In Phase Operation	Quadrature Operation					
214E	Rh-V	Air	W-F	10.0	3.25	7 15/16	2 1/16	3,500	0.600							145A	6	214E
222A	Rh-V	Water	W-F	21.5	41	18	3 9/16	25,000	5							132A } 133A }	8	222A
233B	Rh-V	"	W-F	21.5	41	20 7/8	4 5/16	50,000	5							132A } 133A }	8	233B
237A	Rh-V	"	W-F	20.0	61	23 1/4	4 3/16	50,000	8							132A } 133A }	8	237A
249B	Rh-Hg	Air	O-F	2.5	7.5	7 5/8	2 11/16	7,500		2.5	—	0.64	—	5	0-50	143B	15	249B
253A	Rh-Hg	"	O-F	2.5	3.0	6 13/16	2 5/16	3,500		1.0	—	0.25	—	5	10-50	138B } 139A }	8	253A
255B	Rh-Hg	"	O-F	5.0	19	19 1/16	5 5/16	20,000		8	16	2	4	30	15-30	Spl. Mtg.	8	255B
								10,000		8	16	2	4	30	15-40			
258B	Rh-Hg	"	O-F	2.5	7.5	7 15/16	2 11/16	7,500		2.5	—	0.64	—	5	0-50	138B } 139A }	8	258B
263A	Rf-Ar	"	O-F	2.5	15	10 3/4	3 1/4	100		12.5	—	3.2	—	15	−20-+60	280A Plug & 139A	9	263A
263B	Rf-Hg	"	O-F	2.5	15	10 3/4	3 1/4	100		20	—	5	—	15	10-50	280A Plug & 139A	9	263B
266B	Rh-Hg	"	O-F	5.0	42	21 3/4	7	20,000		20	40	5	10	60	{ 15-30 (30-40 Forced Air) }	Spl. Mtg.	57	266B
267B	Rh-Hg	"	O-F	5.0	6.75	8 13/16	2 5/16	7,500		4	8	1	2	15	10-50	138B } 139A }	8	267B
274A	Rf-V	"	O-F	5.0	2.0	5 5/8	2 3/16	1,500	0.8	{ Max. R-M-S Voltage per Anode 660 Volts }						143B	11	274A
274B	Rf-V	"	O-F	5.0	2.0	5 7/16	2 1/16	1,500	0.8	{ Max. Rectified Current 160 Milliamperes }						Octal	32	274B
288A	Rh-Ar	"	W-F	2.2	18	6 13/16	3 1/8	300		24	—	6.0	—	—	—	Mogul	56	288A
289A	Rh-Ar	"	W-F	2.2	18	6 13/16	3 1/8	375		24	—	6.0	—	—	—	Mogul	56	289A
301A	Rf-Hg	"	O-F	5.0	3.0	6 1/2	2 7/16	1,800		2 per Anode	—	0.5 per Anode	—	5	0-50	143B	11	301A
314A	Rf-Hg	"	O-F	5.0	5.0	6 1/2	2 7/16	300		5 per Anode	—	1.25 per Anode	—	5	0-50	143B	11A	314A
315A	Rh-Hg	"	O-F	5.0	10.0	12 1/4	3 7/8	12,500		4	8	1	2	15	10-40	138B } 139A }	8	315A
								7,500		4	8	1	2	15	10-50			
319A	Rh-Hg	"	O-F	5.0	6.75	8 1/2	2 5/16	7,500		4	8	1	2	15	10-50	148A	21	319A
321A	Rh-Hg	"	O-F	5.0	10.0	11 7/8	3 7/8	12,500		4	8	1	2	15	10-40	148A	21	321A
								7,500		4	8	1	2	15	10-50			
324A	Rh-V	"	W-F	5.0	3.0	5 5/16	1 3/16	12,000	0.020	Max. R-M-S Anode Voltage 5000 Volts Max. Rectified Current 4.0 Milliamperes						143B	18	324A
327A	Rh-Ar	"	W-F	2.0	12	4 7/16	2 1/4	275		8	—	2	—	—	—	Gen. Elec. 278768	56	327A
345A	Rf-V	"	H	6.3	1.0	4 1/4	1 9/16	1,000	0.500 }	R-M-S Alternating Voltage per Anode— Choke Input Filter 400 Volts Condenser Input Filter 350 Volts				Max. Rectified Current—100 Milliamperes		141A	40	345A
351A	Rf-V	"	H	6.3	1.0	4 1/4	1 9/16	1,000	0.500 }							Octal	47	351A

KEY TO DESIGNATIONS

Ar—Argon Gas
Con.—Converter
El.—Element
F—Filament Type Cathode
G—Gas Filled
H—Heater Type Cathode
Hg—Mercury
Mod.—Modulator
O—Oxide Coated
Osc.—Oscillator
PM.—Plate Modulated
Rf—Full Wave
Rh—Half Wave
Sect.—Section
SGM.—Suppressor Grid Modulated
T—Thoriated Tungsten
V—High Vacuum
W—Tungsten
X—Rated "A&M Only"

THYRATRONS

Code No.	Gas	Cathode			Maximum Dimensions, Inches		Max. Instantaneous Anode Current Amperes	Average Anode Current Amperes	Max. Time of Averaging Anode Current Seconds	Max. Peak Voltage Between Anode and Grid Volts	Operating Ambient Temperature Range Degrees C.	Operating Condensed Mercury Temperature Range Degrees C.	Nominal Deionization Time Microseconds	Socket	Tube Symbol and Base Connections Figure	Code No.
		Type	Volts	Amps.	Height	Diameter										
256A	Ar	H	2.3	1.7	4 7/8	1 13/16	0.075	0.075	—	325	−20 to +50	—	1000	141A	26A	256A
269A	Ar	O-F	2.2	0.55	4 9/16	2 3/8	0.120	0.020	0.5	275	−20 to +50	—	100	143B	2A	269A
277A	Ar	H	5.0	2.8	6 3/4	2 11/16	0.500	0.500	—	350	−20 to +50	—	100	141A	26A	277A
287A	Hg	O-F	2.5	7.0	6 9/16	2 3/16	2.5	0.64	5	2500	—	+30 to +80	1000	141A	29	287A
							6.0	1.5	5	500	—	+30 to +80	1000			
297A	Ar	O-F	1.75	0.350	4	1 3/16	0.060	0.010	0.5	250	−20 to +50	—	100	143B	2A	297A
323A	Ar&Hg	O-F	2.5	7.0	6 9/16	2 3/16	6.0	1.5	5	500	—	−20 to +90	1000	141A	29	323A
338A	Ar	H	10.0	0.5	4 7/16	1 3/16	0.600	0.100	5	325	−20 to +50	—	1000	141A	26A	338A
354A	Hg	O-F	2.5	16.0	9 1/2	3 3/16	16.0	4.0	15	1500	—	+30 to +70	1000	Westinghouse	16	354A
355A	Ar&Hg	O-F	2.5	16.0	9 1/2	3 3/16	16.0	4.0	15	350	—	−20 to +80	1000	S #793202	16	355A

COLD CATHODE TUBES

Code No.	Classification	Maximum Dimensions, Inches		Nominal Control-Gap Breakdown Voltage Volts, D-C	Nominal Control-Gap Sustaining Voltage Volts, D-C	Minimum Main-Gap Breakdown Voltage Volts, D-C	Nominal Main-Gap Sustaining Voltage Volts, D-C	Maximum Transfer Current with Anode at 130 Volts Microamperes	Direct Forward Current Rating For Life of Hours as Noted Milliamperes			Peak Reverse Current	Nominal Deionization Time Milliseconds		Socket	Tube Symbol Tube & Base Connections Fig.	Code No.
		Height	Diameter						100 Hrs.	1000 Hrs.	5000 Hrs.		Main Gap	Control Gap			
313C	3 El.-G	3 13/32	1 3/16	70	60	150	75	5	35	20	15	5	10	3	143B	22	313C
313CA	3 El.-G	3 13/32	1 3/16	72	60	200	75	5	18	10	8	5	10	3	143B	22	313CA
313CB	3 El.-G	3 13/32	1 3/16	70	60	185	76	5	18	10	8	5	10	3	143B	22	313CB
333A	3 El.-G	3 3/32	1 3/16	70	60	150	75	5	35	20	15	5	10	3	Bkt. Mtg.	23A	333A
346A	3 El.-G	3 15/32	1 3/16	70	60	225	80	200 (at 110 V.)	35	20	15	5	10	3	" "	23	346A
353A	3 El.-G	3 3/32	1 3/16	70	60	150	75	5	35	20	15	5	10	3	" "	23	353A
358A	2 El.-G	1 13/16	3/4	70	60				18	10	7.5				Clip Mtg.	49	358A
359A	3 El.-G	2 21/32	31/64	75	65	180	80	100	18	10	8	1	10	3	" "	59	359A

CATHODE RAY TUBES

Code No.	Application	Cathode			Maximum Length Inches	Maximum Screen Diameter Inches	Fluorescent Characteristic	Potential on Focussing Electrode E_1 Volts Max.	Potential on Accelerating Electrode E_2 Volts Max.	Ratio $\frac{E_1}{E_2}$ to Produce Focus	Potential on Modulating Electrode Em	Ratio $\frac{Em}{E_2}$ to Extinguish Spot	Potential Across One Pair of Plates for 1 Inch Deflection of Spot	Socket	Tube Symbol and Base Connection Fig.	Code No.
		Type	Volts	Amps.												
325A-B-C	Note 1	H	5.0	0.55	16 1/2	4 5/8	Note 1	1500	5000	0.2-0.3	Variable Negative	0.012-0.020	$E_2/15$	141A 151A	46	325A-B-C
326A-B-C	Note 1	H	5.0	0.55	22	7 1/8	Note 1	1500	5000	0.2-0.3	Variable Negative	0.012-0.020	$E_2/25$	141A 151A	46	326A-B-C
330A-B-C	Note 1	H	5.0	1.65	23 1/16	7 1/8	Note 1	1500	5000	0.2-0.3	Variable Negative	0.012-0.025	$E_2/25$	Spl. & Octal	45	330A-B-C

Note 1: Application and Fluorescent Characteristics for Types A, B and C

CODE NO.	APPLICATION	FLUORESCENT CHARACTERISTICS
325A, 326A, 330A	Visual Observation and Photography with Green-Sensitive Film	Green, Medium Resistance
325B, 326B, 330B	Observation and Photography of Non-recurrent and Low Frequency Phenomena	Blue-Green, Long Persistance
325C, 326C, 330C	Photography with Blue-Sensitive Film	Blue, Highly Actinic

KEY TO DESIGNATIONS

Ar—Argon Gas; Con.—Converter; El.—Element; F—Filament Type Cathode; G—Gas Filled; H—Heater Type Cathode; Hg—Mercury; Mod.—Modulator; O—Oxide Coated; Osc.—Oscillator; PM.—Plated Modulated; Rf—Full Wave; Rh—Half Wave; Sect.—Section; SGM.—Suppressor Grid Modulated; T—Thoriated Tungsten; V—High Vacuum; W—Tungsten; X—Rated "A&M Only"

1. General

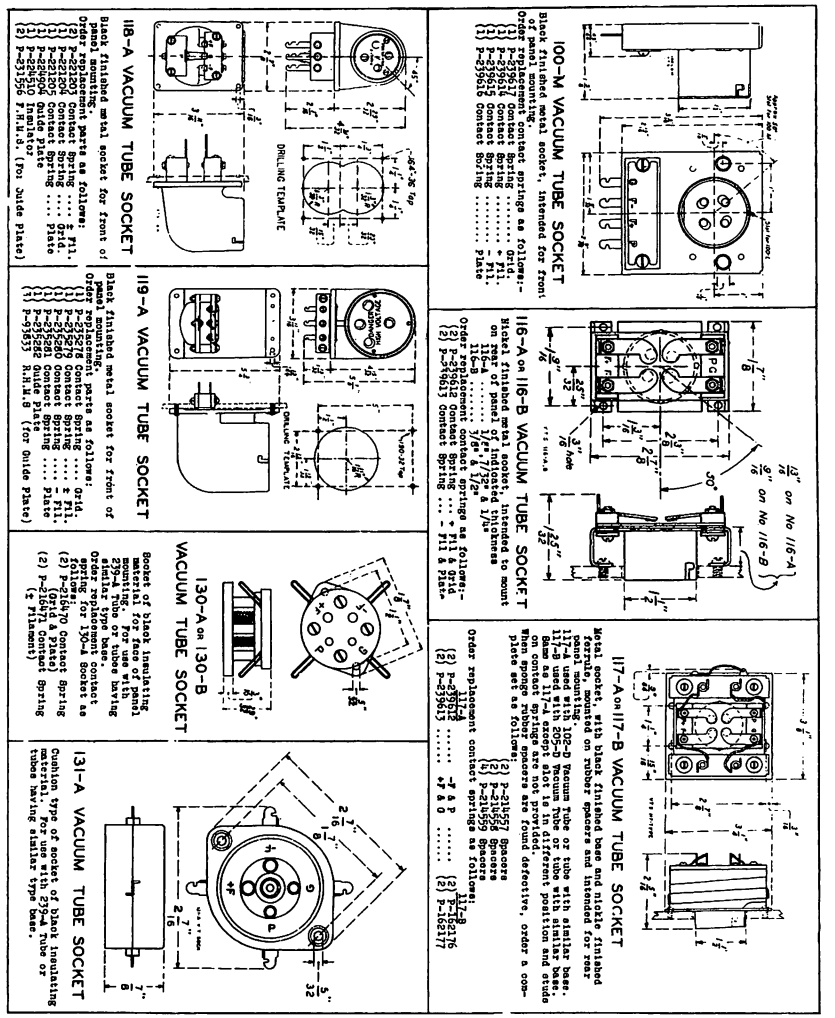
1.1 The following list shows all vacuum tube sockets in use, with equipment of which they are components and the tubes which they are intended to mount. Due to changes from time to time, two or more sockets may be listed for the same use in a given type of equipment. Refer to the wiring diagram of the equipment item in question, for additional information.

SOCKET	TUBE	EQUIPMENT
*100-M.....	205-D.....	46 & D-88446 Type Amplifiers 700,701,706 & 708 Type Control Cabinets
*100-R.....	102-D.....	203 Type Panels
112-A.....	-	Weston 561 Test Set
115-B.....	205-D.....	25,34 & 51 Type Amplifiers
*116-A.....	205-D.....	8,9,42,60 & 70 Type Amplifiers
116-B.....	205-D.....	8 Type Amplifiers;Weston 561 Test Set
*117-A.....	102-D (102-G)..	8 Type Amplifiers
*117-B.....	205-D.....	8 Type Amplifiers
*118-A.....	211-E (242-A)..	10 & 43 Type Amplifiers
"	242-A.....	TA-7248 Amplifier
*119-A.....	219-D.....	520 Type Panels
120-A.....	102-D.....	518 Type Panels
125-A.....	215-A.....	34 Type Amplifiers
*129-B.....	102-G & 205-D..	8 Type Amplifiers
*130-A.....	264-A (239-A)..	41,46,50,D-85943,D-86729 & D-88446 Type Amplifiers; 51-A Test Set
"	231-D.....	32 Type Amplifiers
130-B.....	252-A.....	57,59 Type Amplifiers
*131-A.....	264-A (239-A)..	46,47,48 & 49 Type Amplifiers
"	D-94044.....	54 Type Amplifiers
"	262-A.....	59,62,63 & TA-7246 Type amplifiers
*136-A.....	264-A (239-A)..	41 Type Amplifiers
138-A.....	253-A.....	57 Type Amplifiers
139-A.....	253-A.....	59 Type Amplifiers
"	258-A.....	D-94836 (Mod.520-A) Panel & TA-7249 Rectifier
"	263-A.....	5 Type Current Supply Sets
D-89340.....	264-A (239-A)..	53 Type Amplifiers
*E-6-Mogul...	-	TA-4033,TA-4035,TA-4036,TA-4038 & TA-4144 Type Power Units
Eby-4A-27UX.	262-A.....	80,D-94531 & D-95036 Type Amplifiers
" " "	274-A.....	D-94531 & D-95036 Amplifiers
" " "	275-A.....	D-94531 & D-95036 Amplifiers
Eby-4UY-11..	259-A.....	10 Type Radio Receivers
" " "	247-A.....	10 Type Radio Receivers
Eby-6-11.... 4 Contact	262-A.....	69 & 70 Type Amplifiers
Eby-6-27....	244-A.....	60 Type Amplifiers
" " "	247-A.....	61 Type Amplifiers
Eby-226-4-11	274-A.....	5 Type Rectifiers
P-218267....	205-D.....	25 Type Amplifiers
UX (Weston).	-	Weston 561 Test Set

* Denotes items in Stores Division Stock.

1.2 **MAINTENANCE:** Imperfect contact due to dirt, corrosion, etc. between socket springs and vacuum tube prongs introduces noise in the system and may cause unbalanced tube operation. To obviate this, burnish the contact surfaces of the tube prongs and socket springs at least every three months, by rubbing with a pencil eraser or by moving an old vacuum tube in and out of the socket, depending upon whether the socket has flat or coiled contact springs respectively. Poor contact is sometimes caused by the loss of spring tension or the loosening of the contact spring retaining screws; a check of these conditions and an occasional retensioning of the springs or tightening of the retaining screws will do much to prevent such trouble.

1.3 **MERCHANDISING:** Vacuum tube sockets are to be ordered by code or part number (see above Chart). Immediate shipment cannot be made on items not carried in stock. The sketches on Page 2 show some of the more commonly used sockets and certain of their replaceable component parts most subject to wear or deterioration.



1. ABSTRACT

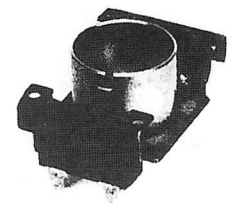
1.1 This addendum points out that regular inspection and maintenance of 113-A and 119-A Vacuum Tube Sockets are necessary. Supplementary information on spring replacement and use of TA-7258 Solder is included.

2. MAINTENANCE OF 113-A AND 119-A VACUUM TUBE SOCKETS

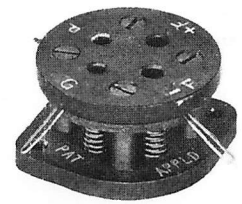
2.1 Contact springs in the 113-A and 119-A Vacuum Tube Sockets should be inspected, cleaned, and if necessary, retensioned, every month. Pitted contact surfaces should be polished with crocus cloth or with the ASP-844 Tool. When springs are replaced, the old springs should be installed as reenforcement under the new ones. Troublesome contact surfaces may be recoated with TA-7258 Solder.

121-A VACUUM TUBE SOCKET
For 215-A (Type N) Tube

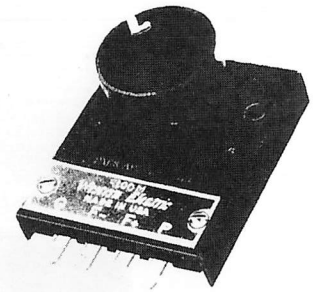
100-L VACUUM TUBE SOCKET
For 203-D, 102-D, 101-D and 104-D Tubes



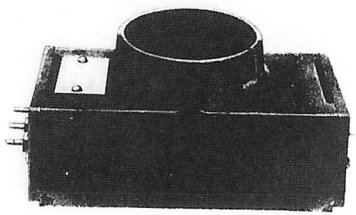
100-R VACUUM TUBE SOCKET
(For Panel Mounting)
For 203-D, 102-D, 101-D and 104-D Tubes



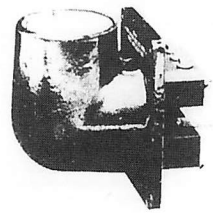
130-A VACUUM TUBE SOCKET
FOR 231-D TUBE



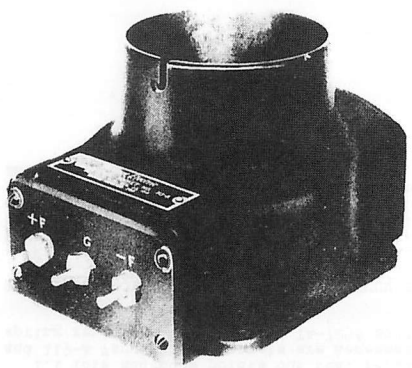
100-M VACUUM TUBE SOCKET
For 205-D (Type E) Tubes



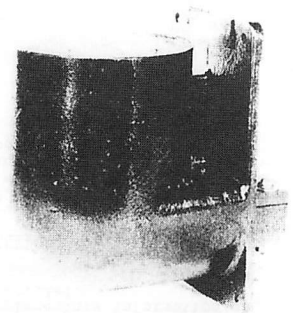
112-A VACUUM TUBE SOCKET
For 211-D (Type G) Tube



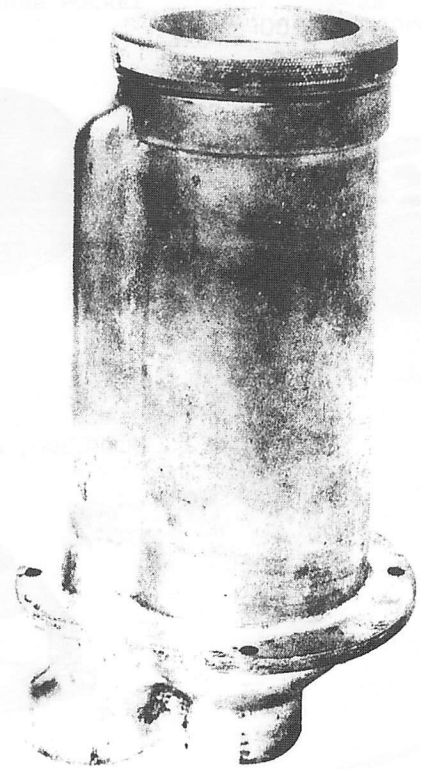
118-A VACUUM TUBE SOCKET
For 211-D (Type G) Tube



113-A VACUUM TUBE SOCKET
For 212-D (Type I) Tube



119-A VACUUM TUBE SOCKET
For 212-D (Type I) Tube



124-A VACUUM TUBE SOCKET

For 220-B (Watercooled) Vacuum Tube.
This socket supports the tube and provides the waterjacket for the anode.