

The
Wireless
World

VALVE DATA

(Reprinted from MAY 1940 issue)

Operating Condition and Base
Connections of the Principal
Types and Makes

PRICE **2/-** NET

ILIFFE & SONS LTD.
DORSET HOUSE, STAMFORD STREET, LONDON, S.E.1

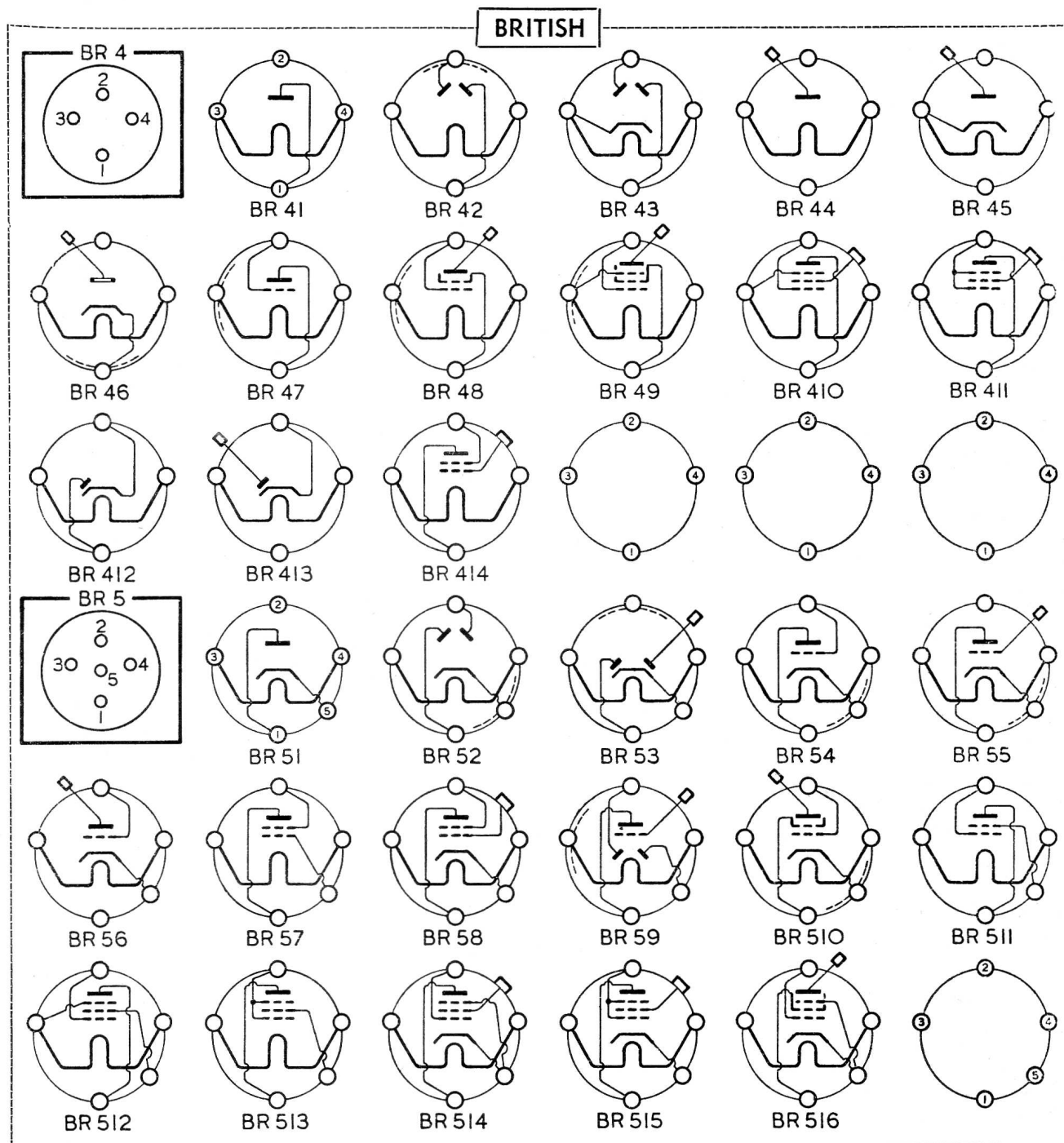
"The Wireless World" Valve Data, 1940

KEY TO VALVE BASE CONNECTIONS

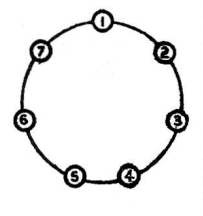
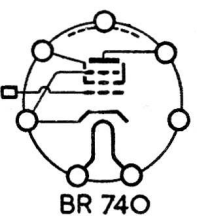
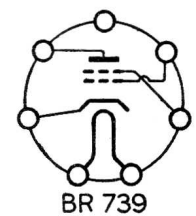
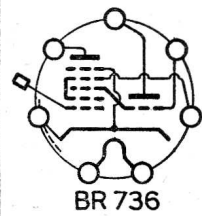
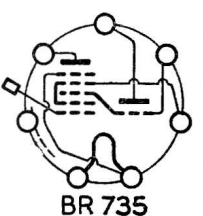
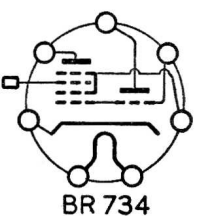
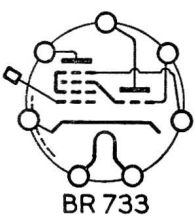
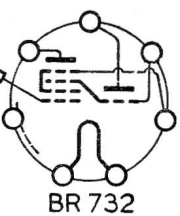
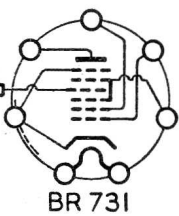
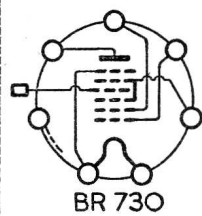
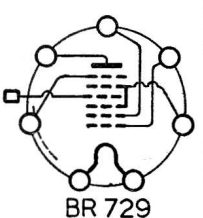
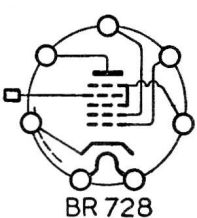
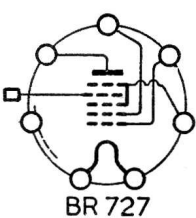
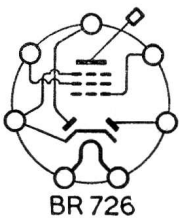
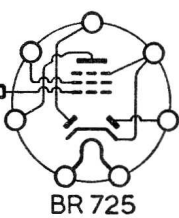
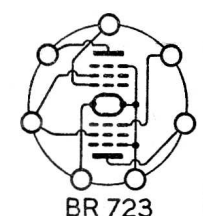
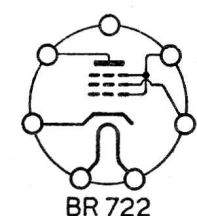
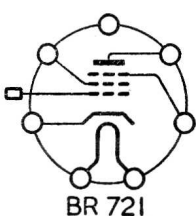
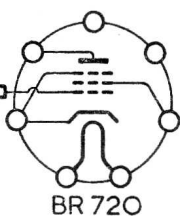
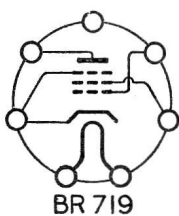
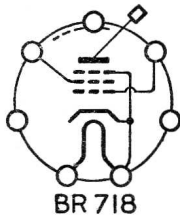
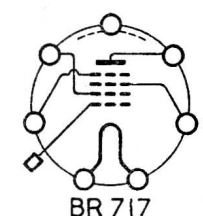
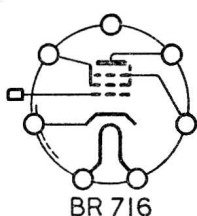
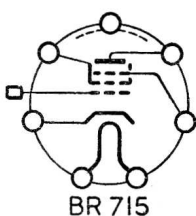
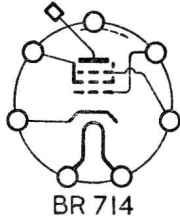
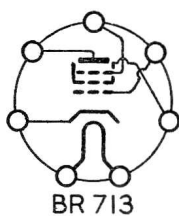
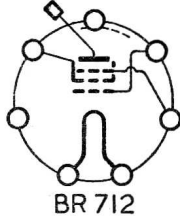
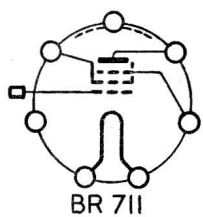
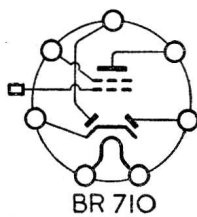
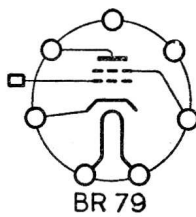
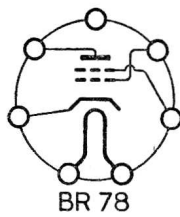
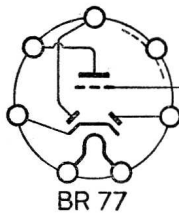
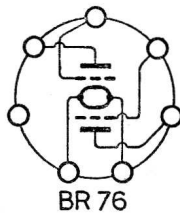
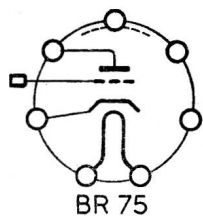
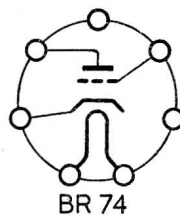
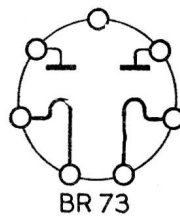
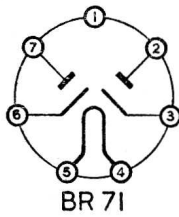
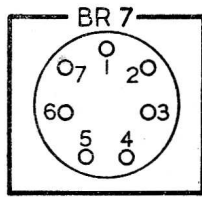
THE pin connections of all the valves listed in this issue are drawn as they would appear when the base or its holder are viewed from the underside of the chassis. The code numbers used for cross reference which appear in the valve data columns headed "Wireless World Base No." are preceded by letters indicating the type, and the first digit indicates the number of sockets in the valve holder. The succeeding figures merely give the order of appearance in the particular section to which the valve belongs. In a few cases, e.g., where

a valve is available in both metallised and clear bulbs, or with special internal screening, a single base diagram covers both types and the connections which may or may not be present are shown dotted. Elsewhere only those electrodes which have independent external connections are shown; thus, in the case of some tetrodes, the beam-forming electrodes may be omitted.

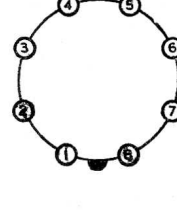
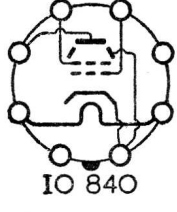
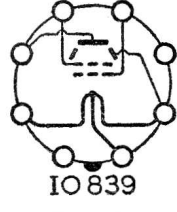
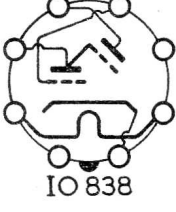
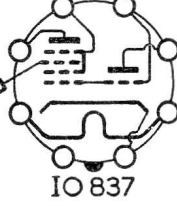
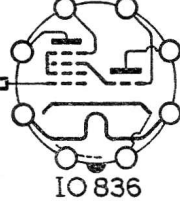
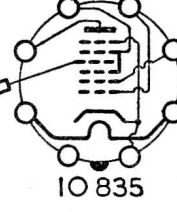
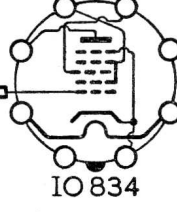
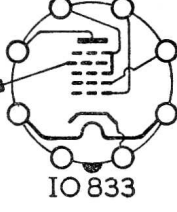
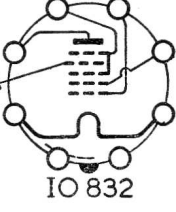
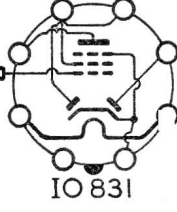
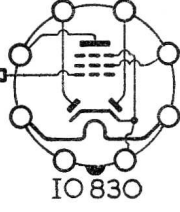
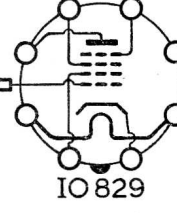
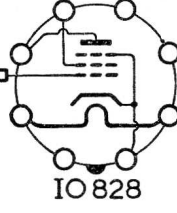
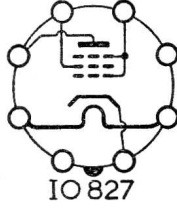
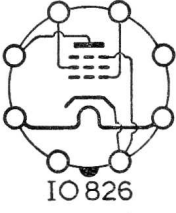
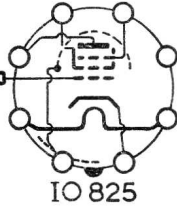
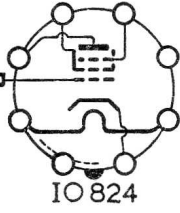
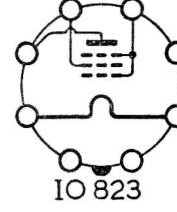
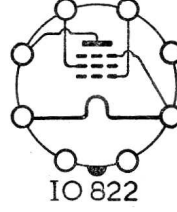
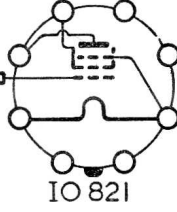
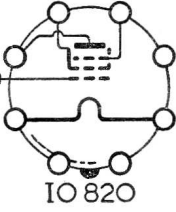
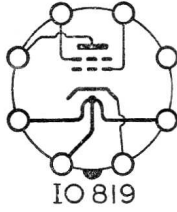
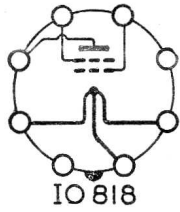
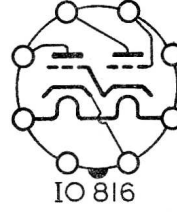
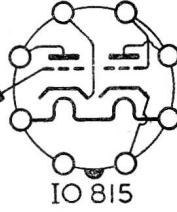
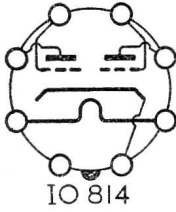
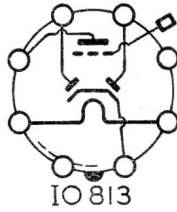
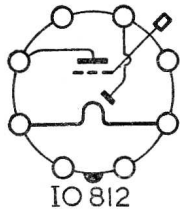
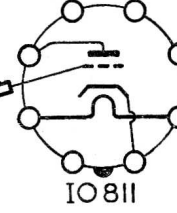
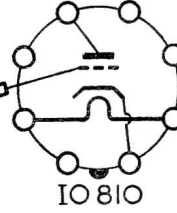
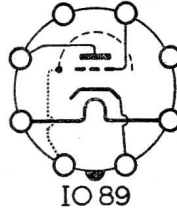
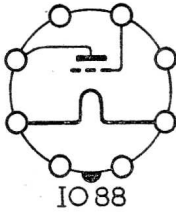
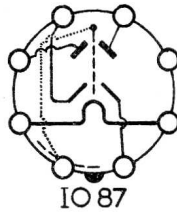
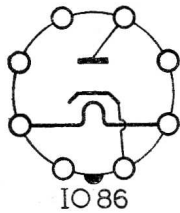
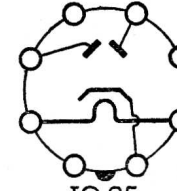
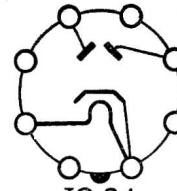
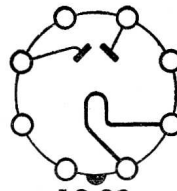
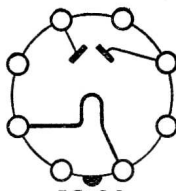
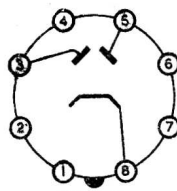
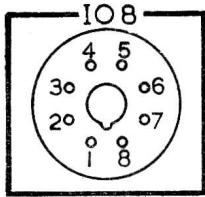
Each section is preceded by a sketch (not necessarily to scale) showing the arrangement of the pins in each type.



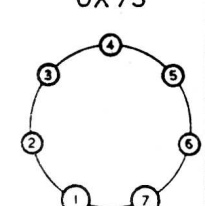
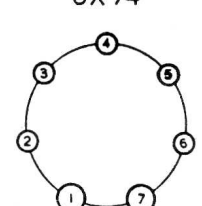
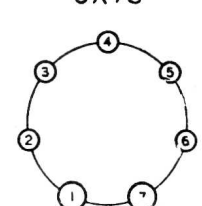
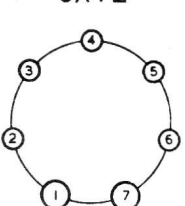
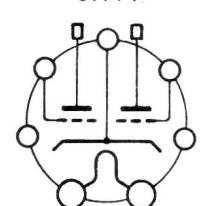
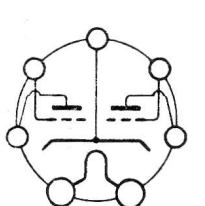
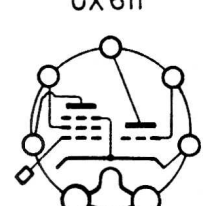
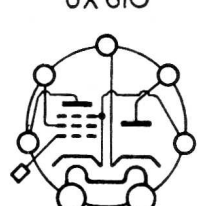
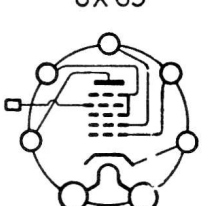
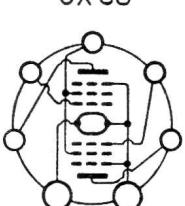
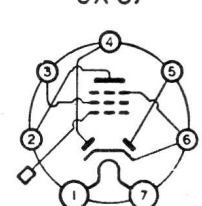
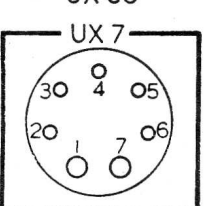
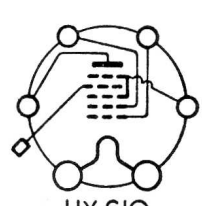
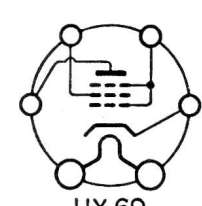
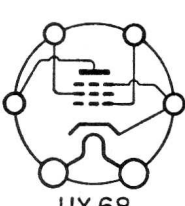
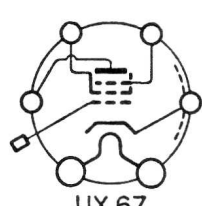
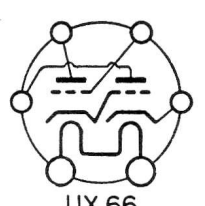
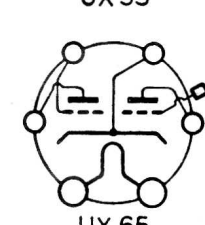
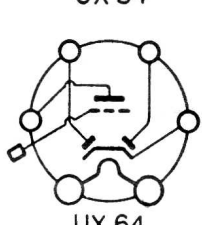
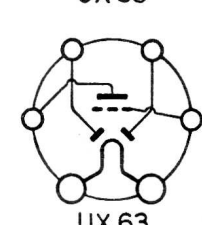
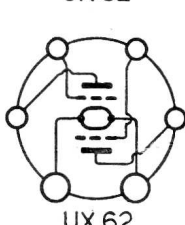
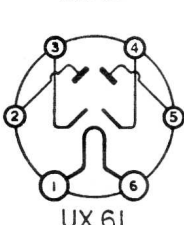
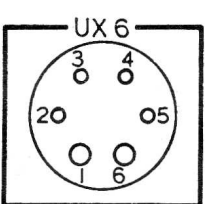
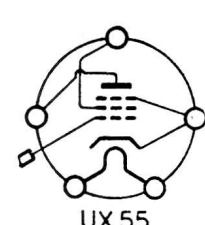
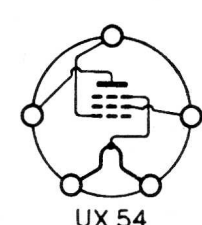
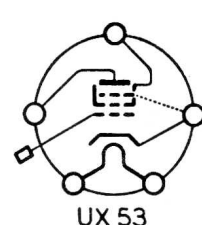
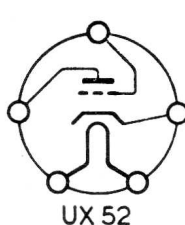
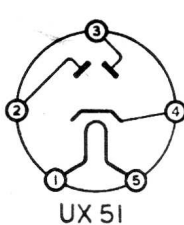
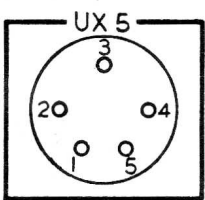
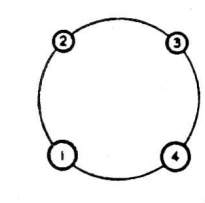
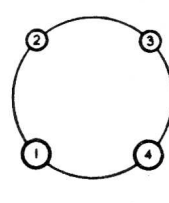
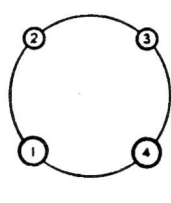
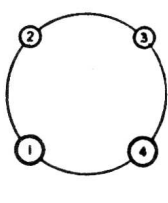
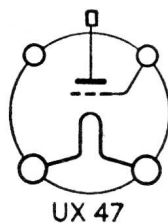
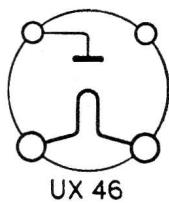
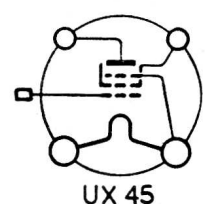
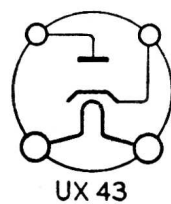
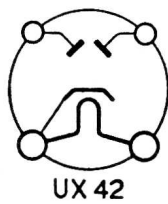
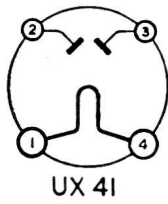
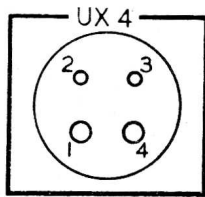
BRITISH



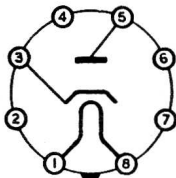
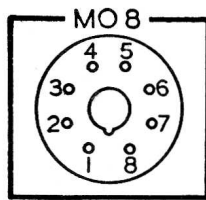
INTERNATIONAL OCTAL



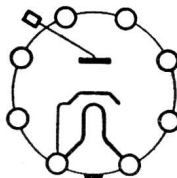
AMERICAN UX



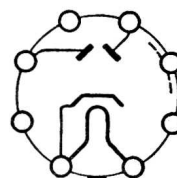
MAZDA OCTAL



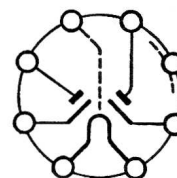
MO 81



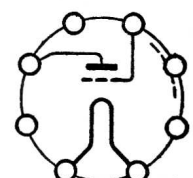
MO 82



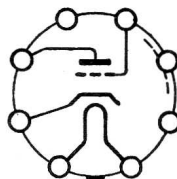
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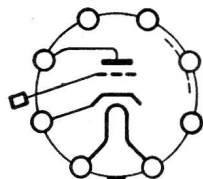
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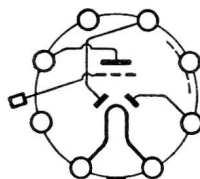
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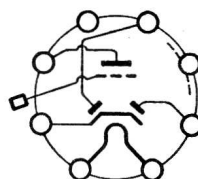
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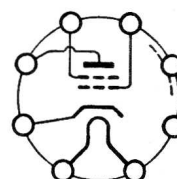
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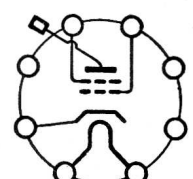
MO 88



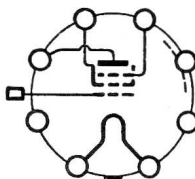
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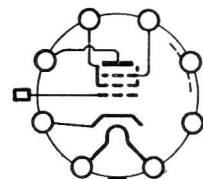
MO 810



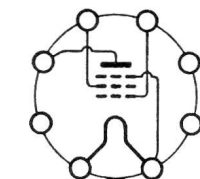
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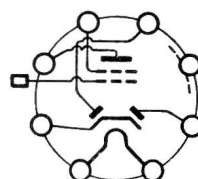
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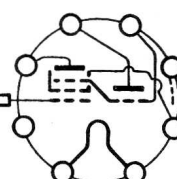
MO 813



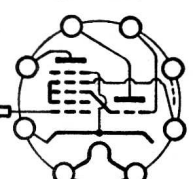
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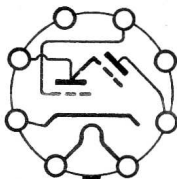
MO 815



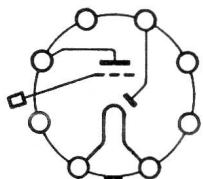
MO 816



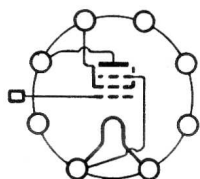
MO 817



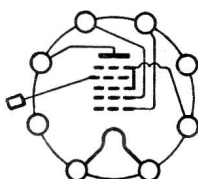
MO 818



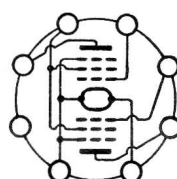
MO 819



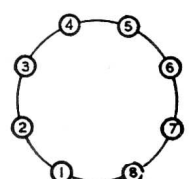
MO 820



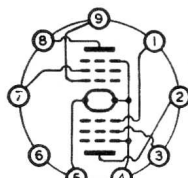
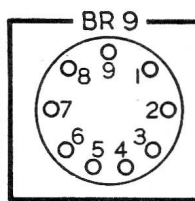
MO 821



MO 822



MISCELLANEOUS



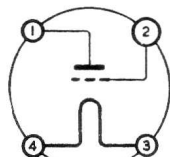
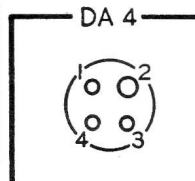
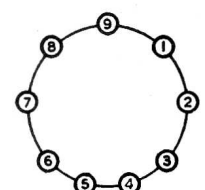
BR 91



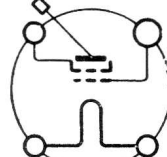
BR 92



BR 93



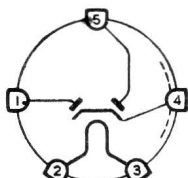
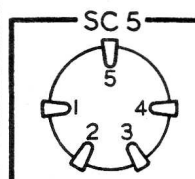
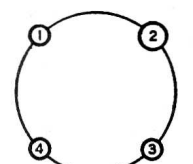
DA 41



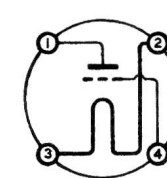
DA 42



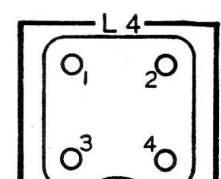
DA 43



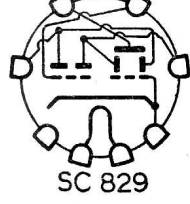
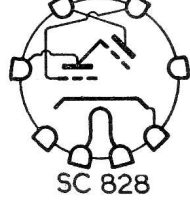
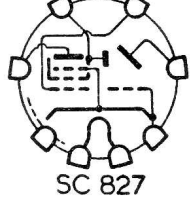
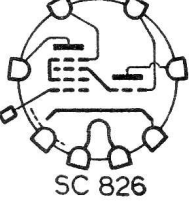
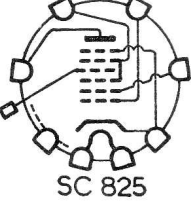
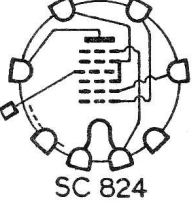
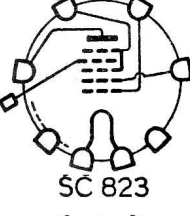
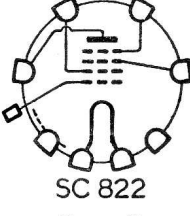
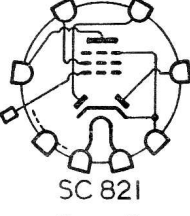
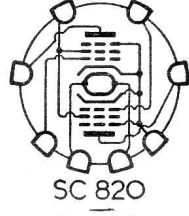
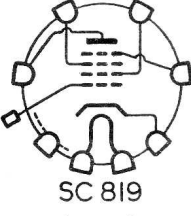
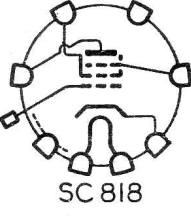
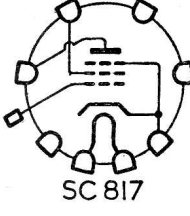
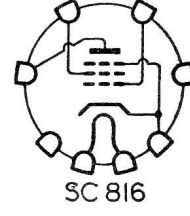
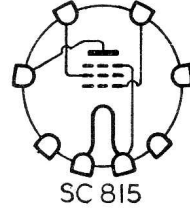
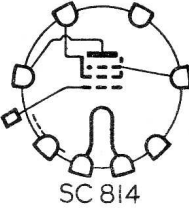
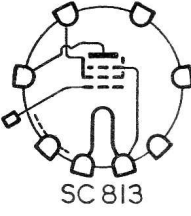
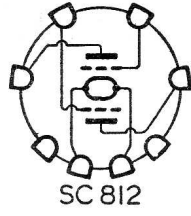
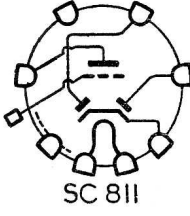
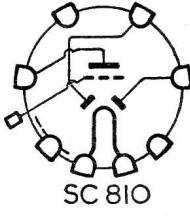
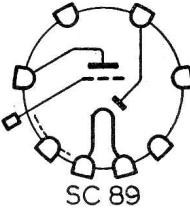
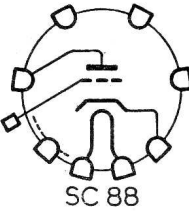
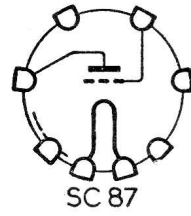
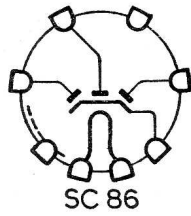
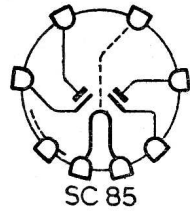
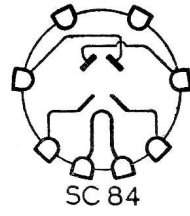
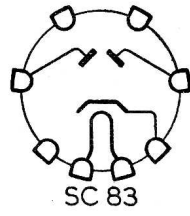
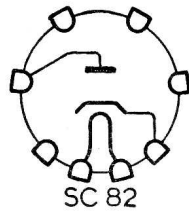
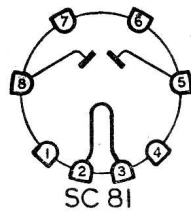
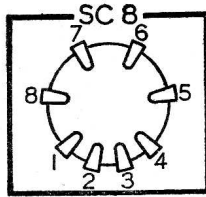
SC 51



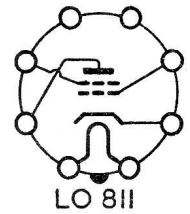
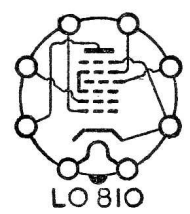
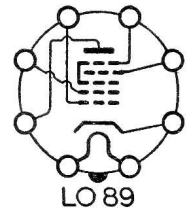
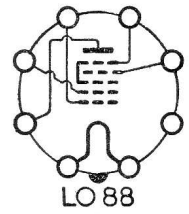
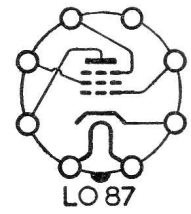
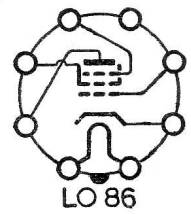
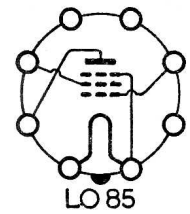
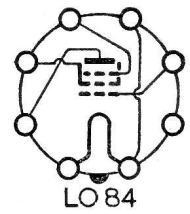
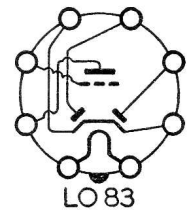
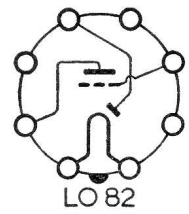
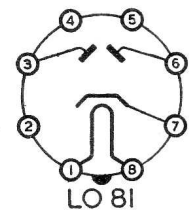
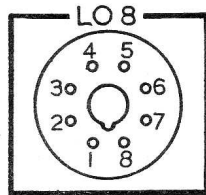
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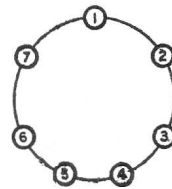
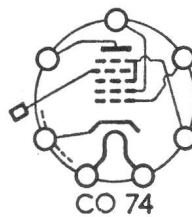
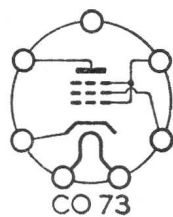
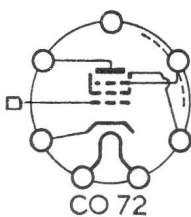
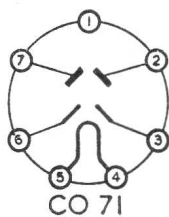
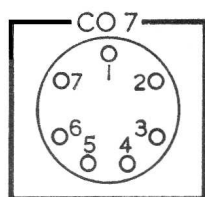
SIDE CONTACT



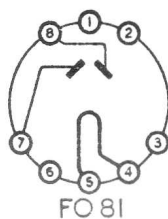
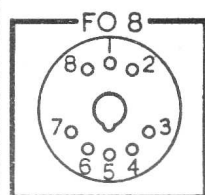
LOCTAL



CONTINENTAL



FOOTLESS



BRIMAR VALVES

AMERICAN U.X. TYPES

Type Number	Application	Heater		Anode Voltage Normal	Screen Voltage Normal	Grid Voltage Normal	Anode Current mA	Screen Current mA	Amplification Factor	Impedance Ohms	Mutual Conductance mA/V	Optimum Load Ohms	Auto Bias Resistor	Power Output in Watts	Wireless World Base Number	Price	
		Volts	Amps														
1A4E	Battery H.F. Pentode	2.0	0.06	180	67.5	-3/-15	2.3	0.8	750	1.0 Meg.	0.75	—	—	—	UX45	9/-	
1A6	Battery Heptode F.C.	2.0	0.06	180	67.5	-3/-22.5	1.3	2.4	—	0.5 Meg.	300†	—	—	—	UX610	10/6	
1C6	Battery Heptode F.C.	2.0	0.12	180	67.5	-3/-14	1.5	2.0	—	0.75 Meg.	325†	—	—	—	UX610	10/6	
5Z3	A.C. Rectifier ..	5.0	3.0	Max. A.C. Voltage per		Anode 500 R.M.S.		Max. Rectified Current 250 mA.								UX41	15/-
6A3	Power Triode ..	6.3	1.0	250	—	-45	60.0	—	4.2	800	5.25	2,500	—	3.2	—	UX44	9/6
6A7	Frequency Changer ..	6.3	0.3	250	100	-3/-40	3.5	2.2	—	360,000	550†	—	300	—	—	UX73	11/6
6A7E	Frequency Changer ..	6.3	0.3	250	100	-3/-40	3.3	2.0	—	300,000	500†	—	300	—	—	UX73	11/6
6B5	Double Output Triode	6.3	0.8	300	—	—	43.0	8.0	54	24,000	2.25	7,000	0	5.0	—	UX66	15/-
6B7	Double Diode Pentode	6.3	0.3	250	125	-3	9.0	2.3	730	650,000	1.10	—	250	—	—	UX71	12/6
6B7E	Double Diode Pentode	6.3	0.3	250	125	-3	7.5	2.1	700	650,000	1.1	—	250	—	—	UX71	12/6
6C6	H.F. Pentode ..	6.3	0.3	250	100	-3	2.0	0.5	1,900	1.5 Meg.	1.25	—	600	—	—	UX67	10/6
6D6	Vari-Mu H.F. Pentode	6.3	0.3	250	100	-3/-40	8.2	2.0	1,280	800,000	1.6	—	300	—	—	UX67	10/6
6F7B	Triode Pentode ..	6.3	0.3	250	100	-3/-35	6.5	1.5	900	850,000	1.1	—	500	—	—	UX75	11/6
6U5/6G5	Magic Eye (Tuning In.)	6.3	0.3	250	—	0/-22	—	—	—	—	—	—	—	—	—	UX611	8/6
12A7	Pentode Rectifier ..	12.6	0.3	135	135	-13.5	9.0	2.5	100	102,000	0.975	13,500	1,250	0.55	—	UX74	12/6
12Z3	A.C. or A.C./D.C. Rect.	12.6	0.3	Max. A.C. Voltage per		Anode 250 R.M.S.		Max. Rectified Current 60 mA.								UX43	9/-
15E	Battery H.F. Pentode	2.0	0.22	135	67.5	-1.5	1.85	0.3	600	800,000	0.75	—	—	—	—	UX53	9/-
18	Power Pentode ..	14.0	0.3	250	250	-16.5	34.0	6.5	190	80,000	2.35	7,000	410	3.5	—	UX68	10/6
18E	Power Pentode ..	14.0	0.3	250	250	-16.5	32.0	6.2	180	80,000	2.25	7,000	410	3.5	—	UX69	10/6
19	Battery Class "B" Amp.	2.0	0.26	135	—	0	—	—	—	—	—	10,000§	—	2.1	—	UX62	9/6
24A	Screened Tetrode ..	2.5	1.75	250	90	-3.0	4.0	1.7	630	600,000	1.05	—	500	—	—	UX53	10/6
24E	Screened Tetrode ..	2.5	1.75	250	90	-3.0	4.0	1.7	600	600,000	1.0	—	500	—	—	UX53	10/6
25RE	A.C./D.C. Rectifier ..	25.0	0.3	Max. A.C. Voltage 250 R.M.S.		Max. Rectified Current 80 mA.										UX61	9/-
25Y5	A.C./D.C. Rectifier ..	25.0	0.3	Max. A.C. Voltage 250 R.M.S.		Max. Rectified Current 80 mA.										UX61	9/-
25Z5	A.C./D.C. Rectifier ..	25.0	0.3	Max. A.C. Voltage 250 R.M.S.		Max. Rectified Current 75 mA.										UX61	9/-
27	G.P. Triode ..	2.5	1.75	250	—	-21	5.2	—	9	9,250	0.97	—	—	—	—	UX52	7/6
30	Battery Triode ..	2.0	0.06	180	—	-13.5	3.1	—	9.3	10,300	0.9	—	—	—	—	UX44	6/-
32E	Battery H.F. Tetrode	2.0	0.06	180	67.5	-3	1.7	0.4	780	1.2 Meg.	0.65	—	—	—	—	UX45	9/-
34E	Battery H.F. Pentode	2.0	0.06	180	67.5	-3/-22.5	2.8	1.0	620	1.0 Meg.	0.62	—	—	—	—	UX45	9/-
35RE	A.C./D.C. Rectifier ..	35.0	0.3	Max. A.C. Voltage 250 R.M.S.		Max. Rectified Current 120 mA.										UX61	9/-
36	Screened Tetrode ..	6.3	0.3	250	90	-3.0	3.2	1.0	595	550,000	1.08	—	850	—	—	UX53	10/6
36E	Screened Tetrode ..	6.3	0.3	250	90	-3.0	3.2	1.0	550	550,000	1.0	—	850	—	—	UX53	10/6
37	G.P. Triode ..	6.3	0.3	250	—	-18	7.5	—	9.2	8,400	1.1	—	—	—	—	UX52	7/6
39/44	H.F. Pentode ..	6.3	0.3	250	90	-3.0	5.8	1.4	1,050	1,000,000	1.05	—	400	—	—	UX53	10/6
39/44E	H.F. Pentode ..	6.3	0.3	250	90	-3.0	5.8	1.4	1,000	1,000,000	1.0	—	400	—	—	UX53	10/6
41E	A.C. & Car Radio Power Pentode ..	6.3	0.4	250	250	-18.0	32.0	5.5	150	68,000	2.2	7,600	480	3.4	—	UX69	10/6
42	Power Pentode ..	6.3	0.7	250	250	-16.5	34.0	6.5	190	80,000	2.35	7,000	410	3.5	—	UX68	10/6
42E	Power Pentode ..	6.3	0.7	250	250	-16.5	32.0	6.2	180	80,000	2.25	7,000	410	3.5	—	UX69	10/6
43	Power Pentode ..	25.0	0.3	180	135	-20	38.0	7.5	100	40,000	2.5	5,000	440	2.75	—	UX68	10/6
43E	Power Pentode ..	25.0	0.3	180	135	-20	38.0	7.5	90	40,000	2.25	5,000	440	2.75	—	UX69	10/6
45	Power Triode ..	2.5	1.5	250	—	-50	34.0	—	3.5	1,600	2.17	3,900	—	1.6	—	UX44	9/6
47	Power Pentode ..	2.5	1.75	250	250	-16.5	31.0	6.0	150	60,000	2.5	7,000	450	2.7	—	UX54	10/6
47E	Power Pentode ..	2.5	1.75	250	250	-16.5	31.0	6.0	140	60,000	2.3	7,000	450	2.7	—	UX54	10/6
71A	Power Triode ..	5.0	0.25	180	—	-40.5	20.0	—	3	1,750	1.7	4,800	—	0.79	—	UX44	9/6
75	Double Diode Triode..	6.3	0.3	250	—	-2.0	0.9	—	100	90,000	1.10	—	5,000	—	—	UX64	9/6
76	G.P. Triode ..	6.3	0.3	250	—	-13.5	5.0	—	13.8	9,500	1.45	—	2,500	—	—	UX52	7/6
77	H.F. Pentode ..	6.3	0.3	250	100	-3.0	2.3	0.5	1,500	1.5 Meg.	1.25	—	1,000	—	—	UX67	10/6
77E	H.F. Pentode ..	6.3	0.3	250	100	-3.0	2.3	0.5	1,500	—	1.0	—	1,000	—	—	UX67	10/6
78	Vari-Mu H.F. Pentode	6.3	0.3	250	125	-3/-40	10.5	2.6	1,000	600,000	1.65	—	200	—	—	UX67	10/6
78E	Vari-Mu H.F. Pentode	6.3	0.3	250	100	-3	10.5	2.6	1,000	700,000	1.40	—	300	—	—	UX67	10/6
79	A.C. Class "B" Amp...	6.3	0.6	250	—	0	—	—	—	—	—	14,000§	—	8.0	—	UX65	15/-
80	A.C. Rectifier ..	5.0	2.0	Max. A.C. Voltage per		Anode 350 R.M.S.		Max. Rectified Current 125 Milliamps.								UX42	9/-
84	A.C. & Car Radio Rect.	6.3	0.5	Max. A.C. Voltage per		Anode 350 R.M.S.		Max. Rectified Current 50 Milliamps.								UX51	9/-
85	Double Diode Triode..	6.3	0.3	250	—	-20	8.0	—	8.3	7,500	1.1	20,000	2,500	0.35	—	UX64	9/6
2101	Battery Power Pent.	2.0	0.12	135	135	-4.5	8.0	2.6	340	200,000	1.7	16,000	—	0.45	—	UX54	9/-
2102	Battery Double Diode Triode ..	2.0	0.12	135	—	-1.5	2.1	—	30	23,000	1.3	—	—	—	—	UX63	7/6
2103	Battery Double Pent.	2.0	0.26	135	135	-7.5	4.0	1.2	350	—	1.6	24,000§	—	0.6	—	UX72	12/6
2151	Power Pentode ..	14.0	0.3	250	250	-31	47.0	11.6	120	50,000	2.4	—	—	6.0	—	UX69	12/-

‡ Available with 5 or 7 pin base. † Conversion Conductance in Micromhos. § Anode to Anode Load.

|| Available with 5 pin and side terminal or 7 pin base.

NOTE.—The Brimar Type Numbers in the U.X. and Octal Ranges correspond exactly with existing American Type Numbers, i.e. The Brimar 6A7 will replace any 6A7 of American manufacture.

Advertisement of Standard Telephones and Cables, Limited, Foots Cray, Sidcup, Kent.

BRIMAR VALVES

ENGLISH TYPES

Type Number	Application	Heater		Anode Voltage Normal	Screen Voltage Normal	Grid Voltage Normal	Anode Current mA	Screen Current mA	Amplification Factor	Impedance Ohms	Mutual Conductance mA/V	Optimum Load Ohms	Auto Bias Resistor	Power Output in Watts	Wireless World Base Number	Price	
		Volts	Amps														
20A1	Triode Hexode F.C. ..	4.0	1.2	250	80	-1.5/-30	2.2	3.0	—	750,000	650*	—	300	—	BR733	11/6	
20D2	Triode Hexode F.C. ..	13.0	0.15	250	100	-3/-30	2.5	4.5	—	1,000,000	350*	—	300	—	BR734	11/6	
15D1	Frequency Changer ..	13.0	0.2	250	100	-3/-40	3.5	2.2	—	360,000	550*	—	300	—	BR728	11/6	
15D2	Frequency Changer ..	13.0	0.15	250	100	-3/-40	3.5	2.2	—	360,000	550*	—	300	—	BR728	11/6	
9D2	Vari-Mu H.F. Pentode	13.0	0.2	250	125	-3/-40	10.0	2.6	1,000	600,000	1.65	—	200	—	BR721	10/6	
11D3	Double Diode Triode..	13.0	0.2	250	—	—	2	0.9	—	100	90,000	1.10	—	5,000	—	BR77	9/6
11D5	Double Diode Triode..	13.0	0.15	250	—	—	3	3.8	—	40	26,700	1.5	—	750	—	BR77	9/6
10D1	Double Diode..	13.0	0.2	—	—	—	—	—	—	—	—	—	—	—	—	BR52	5/6
4D1	Triode ..	13.0	0.2	200	—	—	3	5.0	—	40	10,000	4.0	—	800	—	BR75	7/6
7D6	Power Pentode ..	40.0	0.2	250	250	—	6	32.0	6.0	600	60,000	10.0	8,500	150	3.75	BR719	10/6
7D8	Power Pentode ..	13.0	0.65	250	250	—	6	32.0	6.0	600	60,000	10.0	8,500	150	3.75	BR719	10/6
7A3	Power Pentode ..	4.0	2.0	250	250	—	6	32.0	6.0	600	60,000	10.0	8,500	150	3.75	BR719	10/6
7D3	Power Pentode ..	40.0	0.2	180 135	135	-20	38.0 37.0	7.5 8.0	100 100	40,000 40,000	2.5 2.5	5,000 5,000	440 440	2.75 2.0	} BR719	10/6	
7D5	Power Pentode ..	13.0	0.315	250	250	—	16.5	34.0	6.5	190	80,000	2.35	7,000	410		3.0	10/6
1D5	A.C./D.C. Rectifier ..	40.0	0.2	Max. A.C. Voltage 250 R.M.S. Max. Rectified Current 75 Milliamps.												BR51	9/-
R2	A.C. Rectifier ..	4.0	2.5	Max. A.C. Voltage per Anode 350 R.M.S. Max. Rectified Current 120 Milliamps.												BR43	9/-

INTERNATIONAL OCTAL TYPES

0Z4	Full Wave Rectifier ..	—	—	Max. A.C. Volts per Anode 300 R.M.S.						D.C. Output 75 mA Max., 30 mA Min.						IO81	12/6
1A5G	Battery Power Pent.	1.4	0.05	90	90	-4.5	4.0	0.8	255	300,000	0.85	25,000	—	0.115	IO822	9/-	
1A7EG	Battery F.C. ..	1.4	0.05	90	45	0/-3	1.2	0.6	—	600,000	250*	—	—	—	IO832	10/6	
1C5G	Battery Power Pent.	1.4	0.10	90	90	-7.5	7.5	1.6	180	115,000	1.55	8,000	—	0.24	IO822	9/-	
1H5G	Battery Diode Triode	1.4	0.05	90	—	0	0.14	—	65	240,000	0.275	—	—	—	IO821	7/6	
1N5EG	Battery H.F. Pentode	1.4	0.05	90	90	0/-4	1.2	0.3	1,160	1.5 Meg.	0.75	—	—	—	IO820	9/-	
1Q5G	Battery Power Pent.	1.4	0.1	90	90	-4.5	9.5	1.6	—	—	2.1	8,000	—	0.27	IO840†	9/-	
3Q5G	Battery Power Pent.	3.0	0.05	90	90	-4.5	9.5	1.6	—	—	2.1	8,000	—	0.27	IO839	9/-	
5U4G	A.C. Rectifier ..	5.0	3.0	Max. A.C. Voltage per Anode 500 R.M.S.						Max. Rectified Current 250 Milliamps						IO82	15/-
5V4G	A.C. Rectifier ..	5.0	2.0	Max. A.C. Voltage per Anode 400 R.M.S.						Max. Rectified Current 200 Milliamps.						IO84	9/-
5X4G	A.C. Rectifier ..	5.0	3.0	Max. A.C. Voltage per Anode 500 R.M.S.						Max. Rectified Current 250 Milliamps.						IO83	15/-
5Y3G	A.C. Rectifier ..	5.0	2.0	Max. A.C. Voltage per Anode 350 R.M.S.						Max. Rectified Current 125 Milliamps.						IO82	9/-
5Y4G	A.C. Rectifier ..	5.0	2.0	Max. A.C. Voltage per Anode 350 R.M.S.						Max. Rectified Current 125 Milliamps.						IO83	9/-
5Z4G	A.C. Rectifier ..	5.0	2.0	Max. A.C. Voltage per Anode 350 R.M.S.						Max. Rectified Current 125 Milliamps.						IO84	9/-
6A6G	Power Pentode ..	6.3	1.2	250	250	—	6	32.0	6.0	600	60,000	10.0	8,500	150	3.75	IO826	10/6
6A8G	Frequency Changer ..	6.3	0.3	250	100	-3/-40	3.5	2.2	—	360,000	550*	—	300	—	IO833	11/6	
6A8EG	Frequency Changer ..	6.3	0.3	250	100	-3/-40	3.3	2.0	—	300,000	500*	—	300	—	IO833	11/6	
6B4G	Power Triode ..	6.3	1.0	250	—	—	45	60.0	—	4.2	800	5.25	2,500	—	3.2	IO88	9/6
6B6G	Double Diode Triode..	6.3	0.3	250	—	—	2.0	0.9	—	100	90,000	1.10	—	5,000	—	IO813	9/6
6B8G	Double Diode Pentode	6.3	0.3	250	125	—	3	9.0	2.3	800	600,000	1.35	—	—	—	IO830	12/6
6B8EG	Double Diode Pentode	6.3	0.3	250	125	—	3	7.5	2.1	750	550,000	1.3	—	—	—	IO830	12/6
6B8SG	Db. Diode V-Mu Pen.	6.3	0.3	250	100	-3/-30	6.5	1.4	800	800,000	1.0	—	—	—	—	IO830	12/6
6C5G	Triode ..	6.3	0.3	250	—	—	8	8.0	—	20	10,000	2.0	—	1,000	—	IO89	7/6
6F5G	Triode ..	6.3	0.3	250	—	—	2	0.9	—	100	66,000	1.5	—	2,000	—	IO810	7/6
6F6G	Power Pentode ..	6.3	0.7	250	250	-16.5	34.0	6.5	190	80,000	2.35	7,000	410	3.5	IO826	10/6	
6F6EG	Power Pentode ..	6.3	0.7	250	250	-16.5	32.0	6.2	180	80,000	2.25	7,000	410	3.5	IO827	10/6	
6H6G	Double Diode..	6.3	0.3	—	—	—	—	—	—	—	—	—	—	—	—	IO87	5/6
6J5G	Triode ..	6.3	0.3	250	—	—	8	9.0	—	20	7,700	2.6	—	—	—	IO89	7/6
6J7G	H.F. Pentode ..	6.3	0.3	250	100	—	3	2.0	0.5	1,900	1,500,000	1.25	—	600	—	IO825	10/6
6K5G	Triode ..	6.3	0.3	250	—	—	3	1.1	—	70	50,000	1.4	—	3,000	—	IO811	7/6
6K7G	Vari-Mu H.F. Pentode	6.3	0.3	250	125	—	3	10.5	2.6	1,000	600,000	1.65	—	200	—	IO824	10/6
6K7EG	Vari-Mu H.F. Pentode	6.3	0.3	250	100	—	3	10.5	2.6	1,000	700,000	1.40	—	300	—	IO824	10/6
6K8G	Triode Hexode F.C. ..	6.3	0.3	250	100	-3/-30	2.5	4.5	—	1,000,000	350*	—	300	—	IO837	11/6	
6L6G	Power Tetrode ..	6.3	0.9	250	250	-14	72.0	5.0	135	22,500	6.0	2,500	170	6.5	IO840	15/-	
6L7G	Mixer-Amplifier ..	6.3	0.3	250	150	—	3	3.3	8.3	—	1,000,000	350*	—	260	—	IO834	10/6
6N6G	Double Output Triode	6.3	0.8	300	—	0	43.0	8.0	54	24,000	2.25	7,000	0	5.0	IO816	15/-	
6N7G	Double Triode ..	6.3	0.8	300	—	0	—	—	35	—	—	10,000†	0	10.0	IO814	15/-	
6P8G	Triode Hexode F.C. ..	6.3	0.8	250	80	-1.5/-30	2.2	3.0	—	750,000	650*	—	300	—	IO836	11/6	
6Q7G	Double Diode Triode..	6.3	0.3	250	—	—	3	1.1	—	70	58,000	1.2	—	4,000	—	IO813	9/6
6R7G	Double Diode Triode..	6.3	0.3	250	—	—	9.0	9.5	—	16	8,500	1.9	—	1,000	—	IO813	9/6
6U7G	Vari-Mu H.F. Pentode	6.3	0.3	250	100	-3/-40	8.2	2.0	1,280	800,000	1.6	—	300	—	IO824	10/6	
6V6G	Power Tetrode ..	6.3	0.45	250	250	-12.5	45.0	4.5	218	52,000	4.1	5,000	240	4.25	IO840	10/6	
6X5	Car Radio Rectifier ..	6.3	0.6	Max. A.C. Voltage per Anode 350 R.M.S.										Max. Rectified Current 75 mA.		IO85	9/-
6ZY5G	A.C. Rectifier ..	6.3	0.3	Max. A.C. Voltage per Anode 350 R.M.S.										Max. Rectified Current 35 mA.		IO85	9/-
25A6G	Power Pentode ..	25.0	0.3	180	135	-20	38.0	7.5	100	40,000	2.5	5,000	440	2.75	IO826	10/6	
				135	135	—	37.0	8.0	—	—	—	—	—	2.00			
				110	110	-7.5	49.0	4.0	82	10,000	8.2	2,000	140	2.2	IO840	10/6	
25L6G	Power Tetrode ..	25.0	0.3	Max. A.C. Voltage 250 R.M.S.										Max. Rectified Current 75 Milliamps.		IO87	9/-
25Z6G	A.C./D.C. Rectifier ..	25.0	0.3														

* Conversion Conductance in Micromhos.

† Anode to Anode Load.

†† Without cathode.

BRIMAR VALVES

LOCTAL TYPES

Type Number	Application	Heater		Anode Voltage Normal	Screen Voltage Normal	Grid Voltage Normal	Anode Current mA	Screen Cur- rent mA	Amplification Factor	Im- pedance Ohms	Mutual Conductance mA/V	Optimum Load Ohms	Auto Bias Resistor	Power Output in Watts	Wireless World Base Number	Price	
		Volts	Amps														
1LA4E	Battery Power Pent.	1.4	0.05	90	90	- 4.5	4.0	0.8	255	300,000	0.85	25,000	—	0.115	L085	9/-	
1LA6E	Battery Freq. Changer	1.4	0.05	90	45	0/-3	1.2	0.6	—	600,000	250†	—	—	—	L083	10/6	
1LH4	Battery Diode Triode	1.4	0.05	90	—	0	0.14	—	65	240,000	0.275	—	—	—	L082	7/6	
1LN5E	Battery H.F. Pentode	1.4	0.05	90	90	0	1.6	0.35	880	1.1 Meg.	0.3	—	—	—	L084	9/-	
7A7E	Vari-Mu H.F. Pentode	6.3	0.3	250	100	-3/-35	8.6	2.0	1,600	0.8 Meg.	2.0	—	300	—	L086	10/6	
7A8E	Frequency Changer ..	6.3	0.15	250	100	-3/-35	3.0	2.8	—	0.7 Meg.	600†	—	300	—	L0810	11/6	
7B5E	Power Pentode ..	6.3	0.4	250	250	-18	32.0	5.5	150	68,000	2.2	7,600	500	3.4	L087	10/6	
7B6	Double Diode Triode..	6.3	0.3	250	—	- 2	1.0	—	100	91,000	1.1	—	2,000	—	L083	9/6	
7B7E	Vari-Mu H.F. Pentode	6.3	0.15	250	100	- 3	8.5	2.0	1,200	0.7 Meg.	1.7	—	300	—	L086	10/6	
7B8	Frequency Changer ..	6.3	0.3	250	100	- 3	3.5	2.7	—	0.36 Meg.	550†	—	300	—	L089	11/6	
7C5	Power Pentode ..	6.3	0.45	250	250	-12.5	45.0	4.5	218	52,000	4.1	5,000	240	4.25	L0811	10/6	
7C6	Double Diode Triode..	6.3	0.15	250	—	- 1	1.3	—	100	0.1 Meg.	1.0	—	—	—	L083	9/6	
7C7E	H.F. Pentode ..	6.3	0.15	250	100	- 3	2.0	0.5	1,850	1.5 Meg.	1.2	—	1,200	—	L086	10/6	
7Y4	A.C. Rectifier ..	6.3	0.5	Max. A.C. Voltage per Anode 350 R.M.S. Max. D.C. Output 60 mA.												L081	9/-

ENGLISH REPLACEMENT TYPES

Pen B1	Battery Power Pent.	2.0	0.2	150	150	— 4.5	8.0	1.6	—	—	2.5	18,000	—	—	BR512	9/-	
HLA2	A.C. G.P. Triode ..	4.0	1.0	200	—	— 2	8.0	—	50	9,000	5.5	—	400	—	BR54	12/6	
PA1	A.C. High Slope Out- put Triode ..	4.0	1.0	200	—	— 9	50.0	—	12.6	1,050	12.0	4,000	260	—	BR54	12/6	
15A2	A.C. Freq. Changer ..	4.0	0.65	250	100	-3/-40	3.5	2.2	—	360,000	550†	—	300	—	BR728	11/6	
9A1¶	A.C. Vari-Mu H.F. Pent	4.0	1.0	200	80	-1.5/-30	5.0	1.0	2,500	600,000	4.25	—	200	—	{ BR516 } { BR714 }	10/6	
8A1¶	A.C. H.F. Pentode ..	4.0	1.0	200	80	— 1.5	3.5	0.7	2,400	600,000	4.0	—	200	—	{ BR516 } { BR714 }	10/6	
11A2	A.C. Dble. Diode Triod ^e	4.0	1.0	200	—	— 2	3.0	—	50	18,000	2.8	—	—	—	BR77	9/6	
7A2	A.C. Power Pentode ..	4.0	1.2	250	250	-17.5	32.0	6.5	—	—	3.2	8,000	330	3.5	{ BR514 } { BR719 }	10/6	
Pen A1	A.C. Power Pentode ..	4.0	1.0	250	250	-16.5	32.0	6.5	—	—	3.0	8,000	450	2.7	BR512	10/6	
R1	A.C. Rectifier ..	4.0	1.0	Max. A.C. Voltage per Anode 250 R.M.S. Max. D.C. Current 60 Milliamps.												BR43	9/-
R3	A.C. Rectifier ..	4.0	2.5	Max. A.C. Voltage per Anode 500 R.M.S. Max. Rectified Current 120 Milliamps.												BR43	9/-
4215A	Battery G.P. Triode ..	1.0	0.25	45	—	— 3	0.8	—	6	25,000	0.24	—	—	—	—	10/-	
8D2	A.C./D.C. H.F. Pent.	13.0	0.2	250	100	— 3	2.6	0.5	1,500	1.1 Meg.	1.35	—	1,000	—	BR721	10/6	

† Conversion Conductance in Micromhos. † Available with 5 or 7 pin base. || Available with 5 pin and side terminal or 7 pin base.

BRIMAR VALVES

CAN BE OBTAINED FROM ANY PROGRESSIVE DEALER

Catalogues upon request from

Standard Telephones and Cables Limited

BRIMAR VALVE WORKS, FOOTSCRAY, KENT

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—COSSOR VALVES—

EFFICIENT

CONSISTENT

RELIABLE

Built throughout to laboratory standards
by an organisation with unparalleled
resources.

Note: The Valves with heaters rated at 6.3 volts may in most cases be used for either A.C. or A.C./D.C. operation, particularly in the case of the "O.M." series. The 16 volt .25 amp. valves are primarily designed for D.C. mains working.

BATTERY TYPES.

FREQUENCY CHANGERS

Type	Description	Base	Bulb	Nominal Rating					Typical Operating Conditions					Wireless World Base Number	Price
				Fil. or Heater		Max. Anode Volts	Max. Screen Volts	Max. Osc. Anode Volts	Anode Volts	Screen Volts	Grid Bias Volts	†Total Space Current mA.	Conver- sion Con- ductance mA/V.		
				Volts	Amps										
1A7G	Pentagrid	Octal	Clear	1.4	.05	90	90	90	90	45	0	2.3	.25	IO832	10/6
1A7VG	Var-mu Pentagrid	Octal	Met.	1.4	.05	90	90	90	90	45	0	2.3	.2	IO832	10/6
210 D.G.†	Bigrid	5-pin	Clear	2	.1	150	—	—	100	—	0	2.75	.19*	BR57	20/-
1A6E	Pentagrid	6-pin UX	Clear	2	.06	150	67.5	150	135	67.5	3	6.0	.275	UX610	10/6
210 P.G.	Pentagrid	7-pin	Met.	2	.1	150	80	150	120	40	0	1.9	.45	BR727	10/6
210 S.P.G.	Screened Pentagrid	7-pin	Met.	2	.1	150	80	150	120	40	0	1.9	.45	BR727	10/6
210 P.G.A.	Pentagrid	7-pin	Met.	2	.1	150	80	150	120	40	0	1.9	.45	BR727	10/6
1C6E	Pentagrid	6-pin UX	Clear	2	.12	150	67.5	150	135	67.5	3	4.1	.3	UX610	10/6
220 T.H.	Triode Hep.	7-pin	Met.	2	.2	150	150	100	120	4.5	0	2.6	.2	BR735	10/6

MAINS TYPES

41 M.D.G.†	Bigrid	5-pin	Clear/Met.	4	1.0	200	—	—	150	—	0	3.7	.25*	BR58	19/-
41 M.P.G.	Pentagrid	7-pin	Met.	4	1.0	250	100	100	200	100	1.5	10.0	1.3	BR728	11/6
41 S.T.H.	Triode Hex.	7-pin	Met.	4	1.0	250	100	100	200	60	1.5	9.0	.6	BR733	11/6
4 T.H.A.	Triode Hex.	7-pin	Clear/Met.	4	1.5	250	100	100	250	100	2	11.0	.85	BR733	11/6
OM8	Octode	Octal	Met.	6.3	.2	250	50	200	250	50	2	4.0	.55	IO833	11/6
OM10	Triode Hex.	Octal	Met.	6.3	.2	250	100	250	250	100	2	8.5	.7	IO836	11/6
6A7E	Pentagrid	7-pin UX	Clear	6.3	.3	250	100	200	250	100	3	11.7	.52	UX73	11/6
6A8EG	Pentagrid	Octal	Clear	6.3	.3	250	100	200	250	100	3	10.5	.5	IO833	11/6
6F7B	Triode Pen.	7-pin UX	Clear	6.3	.3	250	100	100	250	100	3	3.4	.3	UX75	11/6
13 P.G.A.	Pentagrid	7-pin	Clear	13	.2	250	100	200	250	100	3	11.7	.52	BR728	11/6
202 M.P.G.	Pentagrid	7-pin	Met.	20	.2	250	100	100	200	100	1.5	10.0	1.3	BR728	11/6
202 S.T.H.	Triode Hex.	7-pin	Met.	20	.2	250	100	100	200	60	1.5	9.0	.6	BR733	11/6
302 T.H.A.	Triode Hex.	7-pin	Met.	30	.2	250	100	100	250	100	2	11.0	.85	BR733	11/6

† May be used as Triode detector.

‡ At Max. Osc. Anode Volts.

* Mutual Conductance.

BATTERY TYPES

SCREEN-GRID VALVES

Type	V.M. = Var- mu	Base	Bulb	Nominal Rating				Typical Operating Conditions							Wireless World Base Number	Price
				Fil. or Heater		Max. Anode Volts	Max. Screen Volts	Anode Volts	Screen Volts	Grid Bias Volts	Anode Cur- rent mA.	Mutual Cond. mA/V.	Im- pedance Ohms	Ampli- fication Factor		
				Volts	Amps											
32E	—	4-pin UX	Clear	2	.06	150	67.5	135	67.5	3	1.7	.64	950,000	610	UX45	9/-
215 S.G.	—	4-pin	Clear/Met.	2	.15	150	80	120	60	1	1.25	1.1	300,000	330	BR48	9/-
220 S.G.	—	4-pin	Clear/Met.	2	.2	150	80	120	60	1	1.4	1.6	200,000	320	BR48	9/-
220 V.S.G	V.M.	4-pin	Clear/Met.	2	.2	150	80	120	60	2.5	2.25	1.6	110,000	—	BR48	9/-
220 V.S.	V.M.	4-pin	Clear/Met.	2	.2	150	80	120	60	2.5	1.0	1.6	400,000	—	BR48	9/-

MAINS TYPES

24E	—	5-pin UX	Clear	2.5	1.75	250	90	180	90	3	4.0	1.0	400,000	400	UX53	10/6
M.S.G./H.A.	—	5-pin	Clear/Met.	4	1.0	200	100	150	80	1.5	2.1	2.0	500,000	1,000	BR510	12/6
41 M.S.G.	—	5-pin	Clear/Met.	4	1.0	200	80	130	60	1.5	0.8	2.5	400,000	1,000	BR510	17/6
M.S.G./L.A.	—	5-pin	Clear/Met.	4	1.0	200	100	150	80	1.5	5.2	3.75	200,000	750	BR510	12/6
M.V.S.G.	V.M.	5-pin	Clear/Met.	4	1.0	200	100	200	80	1.5	7.8	2.5	200,000	—	BR510	10/6
36E	—	5-pin UX	Clear	6.3	.3	250	90	180	90	3	3.1	1.05	500,000	525	UX53	10/6
D.V.S.G.	V.M.	5-pin	Met.	16	.25	200	100	200	80	1.5	7.5	2.5	—	—	BR510	17/6

COSSOR VALVES

BATTERY TYPES

H.F. PENTODES

Type	V.M. = Var- mu	Base	Bulb	Nominal Rating				Typical Operating Conditions						Wireless World Base Number	Price
				Fil. or Heater		Max. Anode Volts	Max. Screen Volts	Anode Volts	Screen Volts	Grid Bias Volts	Anode Current mA.	Mutual Cond. mA/V.	Im- pedance Ohms		
				Volts	Amps										
1N5G	—	Octal	Clear	1.4	.05	90	90	90	90	0	1.2	.75	1,500,000	IO821	9/-
1N5VG	V.M.	Octal	Met.	1.4	.05	90	90	90	90	0	1.6	.65	1,000,000	IO821	9/-
1A4E	V.M.	4-pin UX	Clear	2	.06	150	67.5	150	67.5	3	2.3	.75	1,000,000	UX45	9/-
34E	V.M.	4-pin UX	Clear	2	.06	150	67.5	135	67.5	3	2.8	.6	600,000	UX45	9/-
210 V.P.T.	V.M.	4-pin	Met.	2	.1	150	80	150	60	1.5	2.9	1.1	600,000	BR49	9/-
210 V.P.A.	V.M.	7-pin	Clear/Met.	2	.1	150	150	120	90	3	2.2	1.1	600,000	BR712	9/-
210 S.P.T.	—	4-pin	Met.	2	.1	150	80	150	60	1.5	1.2	1.3	600,000	BR49	9/-
220 I.P.T.*†	—	7-pin	Clear/Met.	2	.2	150	80	150	60	1.5	2.5	1.0	—	BR712	9/-
15*	—	5-pin UX	Met.	2	.22	135	67.5	135	67.5	1.5	1.85	.75	800,000	BR718	9/-
			Clear	2	.22	135	67.5	135	67.5	1.5	1.85	.75	800,000	UX55	9/-

MAINS TYPES

M.S./PEN	—	5-pin	Clear/Met.	4	1.0	200	100	200	100	1.5	5.0	2.8	800,000	BR516	10/6
1N5VG	V.M.	7-pin	Clear/Met.	4	1.0	200	100	200	100	1.5	4.3	2.2	600,000	BR714	10/6
M.V.S./PEN	—	5- or 7-pin	Met.	4	1.0	200	100	200	100	1.5	5.0	2.8	800,000	BR516/714	10/6
M.S./PEN-B	—	7-pin	Clear/Met.	4	1.0	200	100	200	100	1.5	5.0	2.8	800,000	BR715	10/6
M.V.S./PEN-B	V.M.	7-pin	Met.	4	1.0	200	100	200	100	1.5	4.3	2.2	600,000	BR715	10/6
OM5	—	Octal	Met.	6.3	.2	250	100	250	100	2	3.0	1.8	2,500,000	IO824	10/6
OM6	V.M.	Octal	Met.	6.3	.2	250	100	250	100	2.5	6.0	2.2	1,200,000	IO824	10/6
6J7G	—	Octal	Clear	6.3	.3	250	100	250	100	3	2.0	1.225	1,500,000	IO824	10/6
78E	V.M.	6-pin UX	Clear	6.3	.3	250	125	180	75	3	4.0	1.1	1,000,000	UX67	10/6
39/44E	V.M.	5-pin UX	Clear	6.3	.3	250	90	180	90	3	5.8	1.0	750,000	UX55	10/6
6K7G	V.M.	Octal	Clear	6.3	.3	250	125	180	75	3	4.0	1.1	1,000,000	IO824	10/6
77E	—	6-pin UX	Clear	6.3	.3	250	100	250	100	3	2.3	1.25	1,500,000	UX67	10/6
13 V.P.A.	V.M.	7-pin	Clear/Met.	13	.2	200	100	200	100	3	7.0	1.8	800,000	BR715	10/6
13 S.P.A.	—	7-pin	Clear/Met.	13	.2	200	100	200	100	3	2.3	1.25	1,000,000	BR715	10/6
D.S./PEN	—	5-pin	Clear/Met.	16	.25	200	100	200	100	1.5	4.7	2.3	—	BR516	17/6
D.V.S./PEN	V.M.	5-pin	Met.	16	.25	200	100	200	100	1.5	5.5	2.0	—	BR516	17/6
202 V.P.	V.M.	7-pin	Met.	20	.2	250	100	250	100	1.5	4.3	2.2	600,000	BR714	10/6
202 V.P.B.	V.M.	7-pin	Met.	20	.2	250	100	250	100	1.5	4.3	2.2	600,000	BR715	10/6
202 S.P.B.	—	7-pin	Met.	20	.2	250	100	250	100	1.5	4.8	2.8	800,000	BR715	10/6

* Indirectly heated. † Detector Pentode.

BATTERY TYPES. DIODES, DIODE TRIODES AND DIODE PENTODES

Type§	Base	Bulb	Nominal Rating				Typical Operating Conditions						Wireless World Base Number	Price
			Fil. or Heater		Max. Anode Volts	Max. Screen Volts	Anode Volts	Grid Bias Volts	Anode Current mA.	Mutual Cond. mA/V.	Im- pedance Ohms	Ampli- fication Factor		
			Volts	Amps										
1H5G DT	Octal	Clear	1.4	.05	90	—	90	0	0.15	0.275	240,000	65	IO812	7/6
210 D.D.T. DDT	5-pin	Met.	2	.1	150	—	100	0	2.3	1.1	25,000	27.5	BR59	7/6
2102 DDT	6-pin UX	Clear	2	.12	150	—	100	0	2.5	1.3	23,000	30	UX63	7/6
220 D.D.* DD	5-pin	Clear	2	.2	—	—	—	—	—	—	—	—	BR52	5/6

MAINS TYPES

D.D.4 DD	5-pin	Clear	4	.75	—	—	—	—	—	—	—	—	BR52	5/6
D.D.T. DDT	7-pin	Met.	4	1.0	200	—	200	3	—	—	—	—	BR77	9/6
D.D./PEN DDP	7-pin	Met.	4	1.0	250	200	200	2.5	3.4	2.4	17,000	41	BR726	20/-
6B8EG DDP	Octal	Clear	6.3	.3	250	125	250	3	±5.0	2.7	—	—	IO830	12/6
OM3† DD	Octal	Met.	6.3	.2	—	—	—	—	±10.0	1.325	600,000	800	IO87	5/6
OM4 DDT	Octal	Met.	6.3	.2	250	—	200	4.5	4.0	2.0	15,000	30	IO813	9/6
6B7E DDP	7-pin UX	Clear	6.3	.3	250	125	250	3	±9.0	1.125	650,000	730	UX71	12/6
6H6G† DD	Octal	Clear	6.3	.3	—	—	—	—	—	—	—	—	IO87	5/6
6R7G DDT	Octal	Clear	6.3	.3	250	—	250	9	9.5	1.9	8,500	16	IO813	9/6
6Q7G DDT	Octal	Clear	6.3	.3	250	—	250	3	1.1	1.2	58,000	70	IO813	9/6
75 DDT	6-pin UX	Clear	6.3	.3	250	—	250	2	0.8	1.1	91,000	100	UX64	9/6
85 DDT	6-pin UX	Clear	6.3	.3	250	—	250	20	8.0	1.1	7,500	8.3	UX64	9/6
13D.H.A. DDT	7-pin	Clear	13	.2	250	—	250	1.5	1.0	1.5	83,300	125	BR77	9/6
D.D.T.16 DDT	7-pin	Met.	16	.25	200	—	200	3	5.0	2.5	16,000	40	BR77	15/6
202 D.D.T. DDT	7-pin	Met.	20	.2	200	—	200	3	3.5	2.4	17,000	41	BR77	9/6

§ DT = Diode Triode; DDT = Double Diode Triode; DD = Double Diode; DDP = Double Diode Pentode.

† Separate Cathodes.

‡ At Screen volts 100.

* Indirectly heated.

COSSOR VALVES

BATTERY TYPES

TRIODES

Type	Base	Bulb	Nominal Rating						Typical Operating Conditions			Wireless World Base Number	Price
			Fil. or Heater		Max. Anode Volts	Im-pedance Ohms	Mutual Cond. mA/V.	Amplification Factor	Anode Volts	Grid Bias Volts	Anode Current mA.		
			Volts	Amps.									
30	4-pin UX	Clear	2	.06	150	7,500	1.25	9.4	135	9	3.0	UX44	6/-
210 R.C.	4-pin	Clear	2	.1	150	50,000	.8	40	125	1.5	0.45	BR47	4/9
210 H.L.	4-pin	Clear/Met.	2	.1	150	22,000	1.1	24	125	1.5	2.0	BR47	4/9
210 H.F.	4-pin	Clear/Met.	2	.1	150	15,800	1.5	24	125	1.5	2.25	BR47	4/9
210 DET.	4-pin	Clear/Met.	2	.1	150	13,000	1.15	15	125	1.5	4.5	BR47	4/9
210 L.F.	4-pin	Clear/Met.	2	.1	150	10,000	1.4	14	125	3	4.5	BR47	4/9

MAINS TYPES

27†	5-pin UX	Clear	2.5	1.75	250	9,250	.975	9	180	13.5	5.0	UX52	7/6
41 M.R.C.	5-pin	Clear	4	1.0	200	19,500	2.6	50	150	1	2.5	BR54	14/-
41 M.H.	5-pin	Clear/Met.	4	1.0	200	18,000	4.0	72	150	1.5	1.5	BR54	7/6
41 M.H.F.	5-pin	Clear	4	1.0	200	14,500	2.8	41	150	2	2.5	BR54	14/-
41 M.H.L.	5-pin	Clear/Met.	4	1.0	200	11,500	4.5	52	200	3	4.0	BR54	7/6
41 M.L.F.	5-pin	Clear	4	1.0	180	7,900	1.9	15	160	4.5	7.5	BR54	14/-
76†	5-pin UX	Clear	6.3	.3	250	9,500	1.45	13.8	250	13.5	5.0	UX52	7/6
37†	5-pin UX	Clear	6.3	.3	250	8,400	1.1	9.2	250	18	7.5	UX52	7/6
6K5G	Octal	Clear	6.3	.3	250	42,000	1.65	70	100	1.5	0.35	IO811	7/6
D.H.L.	5-pin	Met.	16	.25	200	13,000	4.5	58	150	1.5	3.8	BR54	13/6

† General Purpose types.

AT YOUR SERVICE

If you should experience any difficulty or doubt in selecting the correct Cossor valves for your set—write to A. C. Cossor, Ltd., Technical Service Dept., Highbury Grove, London, N.5. They will gladly advise you as to the correct types which should be used

BATTERY TYPES

OUTPUT PENTODES AND TETRODES

Type§	Base	Nominal Rating					Typical Operating Conditions					Wireless World Base Number	Price	
		Fil. or Heater		Max. Anode Volts	Max. Screen Volts	Mutual Cond. mA/V.	Anode Volts	Screen Volts	Grid Bias Volts	Anode Current mA.	Optimum Load Ohms			
		Volts	Amps.											
1C5G	P	Octal	1.4	.1	90	90	1.55	90	90	7.5	7.5	8,000	IO822	9/-
2101	P	5-pin UX	2	.12	150	150	1.8	150	150	6	8.5	15,000	UX54	9/-
220 P.T.	P	4/5-pin	2	.2	150	150	2.5	120	120	7.5	13.5	8,000	BR410/512	13/6
220 H.P.T.	P	4/5-pin	2	.2	150	150	2.5	120	120	3	6.5	20,000	BR410/512	9/-
220 O.T.	T	5-pin	2	.2	150	150	2.5	120	120	4.5	4.3	20,000	BR511	9/-
230 P.T.	P	4/5-pin	2	.3	150	150	2.0	150	150	15	14.0	10,000	BR410/512	16/6

MAINS TYPES

47E*	P	5-pin UX	2.5	1.75	250	250	2.5	250	250	16.5	31.0	7,000	UX54	10/6
P.T.41*	P	5-pin	4	1.0	250	200	3.0	250	200	12.5	30.0	8,000	BR512	10/6
P.T.41 B*	P	5-pin	4	1.0	400	300	2.25	400	250	33	26.0	8,000	BR512	22/6
M.P./PEN.	P	5/7-pin	4	1.0	250	250	3.5	250	250	16	30.0	10,000	BR514/719	13/6
42 M.P./PEN.	P	7-pin	4	2.0	250	250	7.0	250	250	5.5	32.0	8,000	BR719	10/6
P.T.10	P	7-pin	4	2.0	250	250	9.0	250	250	7.5	40.0	5,000	BR719	10/6
42 O.T.	T	7-pin	4	2.0	250	250	7.0	250	250	5.5	34.0	6,500	BR78	10/6
42 O.T.D.D.†	T	7-pin	4	2.0	250	250	7.0	250	250	5.5	34.0	6,500	BR710	12/6
OM9	P	Octal	6.3	.2	250	250	2.8	250	250	18	32.0	8,000	IO828	10/6
38E	P	5-pin UX	6.3	.3	250	250	1.2	250	250	25	22.0	10,000	UX55	10/6
6K6G	P	Octal	6.3	.4	250	250	2.2	250	250	18	32.0	7,600	IO826	10/6
41E	P	6-pin UX	6.3	.4	250	250	2.2	180	180	13.5	18.5	9,000	UX68	10/6
42E	P	6-pin UX	6.3	.7	250	250	2.35	250	250	16.5	34.0	7,000	UX68	10/6
6F6EG	P	Octal	6.3	.7	250	250	2.5	250	250	16.5	34.0	7,000	IO826	10/6
2151	P	6-pin UX	14	.3	250	250	2.3	250	250	30	48.0	4,000	UX68	12/-
18E	P	6-pin UX	14	.3	250	250	2.5	250	250	16	35.0	7,000	UX68	10/6
D.P./PEN.	P	7-pin	16	.25	250	250	3.5	200	200	10	31.0	10,000	BR719	18/6
43E	P	6-pin UX	25	.3	180	135	2.5	180	135	20	38.0	5,000	UX68	10/6
40 P.P.A.	P	7-pin	40	.2	150	150	4.0	150	150	25	36.0	4,000	BR719	10/6
402 PEN.	P	7-pin	40	.2	250	250	7.0	200	200	6.7	40.0	5,500	BR720	10/6
402 PEN/A.	P	7-pin	40	.2	150	150	8.0	150	150	9	56.0	2,500	BR720	10/6
402 O.T.	T	7-pin	40	.2	250	250	7.0	200	200	6.6	40.0	5,500	BR79	10/6

§ P = Pentode; T = Tetrode. * Directly heated. † Double-diode Tetrode.

COSSOR VALVES

OUTPUT TRIODES

BATTERY TYPES

Type	Base	Nominal Rating						Typical Operating Conditions				Wireless World Base Number	Price
		Fil. or Heater		Max. Anode Volts	Mutual Cond. mA/V.	Im- pedance Ohms	Ampli- fication Factor	Anode Volts	Grid Bias Volts	Anode Current mA.	Optimum Load Ohms		
		Volts	Amps.										
215 P.	4-pin	2	.15	150	2.25	4,000	9	150	7.5	10.0	9,000	BR47	6/-
220 P.	4-pin	2	.2	150	2.25	4,000	9	150	7.5	11.0	9,000	BR47	6/-
220 P.A.	4-pin	2	.2	150	4.0	4,000	16	150	4.5	10.0	9,000	BR47	6/-
230 X.P.	4-pin	2	.3	150	3.0	1,500	4.5	150	18	22.0	3,500	BR47	10/-

MAINS TYPES													
2 P.*	4-pin	2	2.0	250	7.0	1,150	8	250	22	40.0	3,000	BR47	9/6
2 X.P.*	4-pin	2	2.0	300	7.0	900	6.3	300	36	50.0	4,000	BR47	9/6
45*	4-pin UX	2.5	1.5	275	2.05	1,700	3.5	250	50	34.0	3,900	UX44	9/6
41 M.P.	5-pin	4	1.0	200	7.5	2,500	18.7	200	7.5	24.0	3,000	BR54	7/6
41 M.X.P.	5-pin	4	1.0	200	7.5	1,500	11.2	200	12.5	40.0	2,000	BR54	9/6
4 X.P.*	4-pin	4	1.0	250	7.0	900	6.3	250	28.5	48.0	3,000	BR47	9/6
6J5G	Octal	6.3	.3	250	2.6	7,700	20	250	8	9.0	7,000	IO89	7/6
6B4G*	Octal	6.3	1.0	250	5.25	800	4.2	250	45	60.0	2,500	IO88	9/6
6A3*	4-pin UX	6.3	1.0	250	5.25	800	4.2	250	45	60.0	2,500	UX44	9/6
D.P.	5-pin	16	.25	200	6.0	2,800	17	200	7.5	25.0	3,500	BR54	14/-
402 P.	7-pin	40	.2	200	7.5	1,330	10	150	9.5	30.0	2,500	BR75	9/6

MAINS TYPES

2 P.*	4-pin	2	2.0	250	7.0	1,150	8	250	22	40.0	3,000	BR47	9/6
2 X.P.*	4-pin	2	2.0	300	7.0	900	6.3	300	36	50.0	4,000	BR47	9/6
46*	4-pin UX	2.5	1.5	275	2.05	1,700	3.5	250	50	34.0	3,900	UX44	9/6
41 M.P.	5-pin	4	1.0	200	7.5	2,500	18.7	200	7.5	24.0	3,000	BR54	7/6
41 M.X.P.	5-pin	4	1.0	200	7.5	1,500	11.2	200	12.5	40.0	2,000	BR54	9/6
4 X.P.*	4-pin	4	1.0	250	7.0	900	6.3	250	28.5	48.0	3,000	BR47	9/6
6J5G	Octal	6.3	.3	250	2.6	7,700	20	250	8	9.0	7,000	IO89	7/6
6B4G*	Octal	6.3	1.0	250	5.25	800	4.2	250	45	60.0	2,500	IO88	9/6
6A3*	4-pin UX	6.3	1.0	250	5.25	800	4.2	250	45	60.0	2,500	UX44	9/6
D.P.	5-pin	16	.25	200	6.0	2,800	17	200	7.5	25.0	3,500	BR54	14/-
402 P.	7-pin	40	.2	200	7.5	1,330	10	150	9.5	30.0	2,500	BR75	9/6

* Directly heated.

QUIESCENT OUTPUT TRIODES AND PENTODES

Type	Description	Base	Nominal Rating			Typical Operating Conditions					Wireless World Base Number	Price
			Fil. or Heater		Mutual Cond. mA/V.	Anode Volts	Screen Volts	Grid Bias Volts	†Anode Current mA.	Optimum Load Ohms		
			Volts	Amps.								
220 B	Battery Class B Double Triode	7-pin	2	.2	—	120	—	0	2.5	12,000	BR76	9/6
19	Battery Class B Double Triode	6-pin UX	2	.26	—	135	—	0	5.0	10,000	UX62	9/6
240 B	Battery Class B Double Triode	7-pin	2	.4	—	120	—	0	4.0	8,000	BR76	9/6
2103	Battery Q.P.P. Double Pentode	7-pin UX	2	.26	1.6	150	150	10.5	4.0	35,000	UX72	12/6
240 Q.P.	Battery Q.P.P. Double Pentode	7-pin	2	.4	2.5	120	120	9	3.5	24,000	BR723	12/6
79	Mains Class B Double Triode	6-pin UX	6.3	.6	—	250	—	0	10.6	14,000	UX65	15/-
6N7G	Mains Class B Double Triode	Octal	6.3	.8	—	300	—	0	35.0	10,000	IO814	15/-

† Total Quiescent current.

RECTIFIERS

Type	Description	Base	Heater or Filament		Max. Volts per Anode	Max. Rectified Current mA.	Wireless World Base Number	Price
			Volts	Amps.				
225 D.U.	Voltage Doubler ..	7-pin	†2	†.5	750	20	BR73	20/-
506 B.U.	Full Wave ..	4-pin	4	1.0	250	60	BR42	9/-
442 B.U.	Full Wave ..	4-pin	4	2.5	350	120	BR42	9/-
460 B.U.	Full Wave ..	4-pin	4	2.5	500	120	BR42	9/-
43 I.U.*	Full Wave ..	4-pin	4	2.5	350	120	BR43	9/-
44 I.U.*	Full Wave ..	4-pin	4	2.5	500	120	BR43	9/-
80*	Full Wave ..	4-pin UX	5	2.0	350	120	UX42	9/-
5Y4G	Full Wave ..	Octal	5	2.0	350	120	IO83	9/-
5X4G	Full Wave ..	Octal	5	3.0	500	250	IO83	15/-
5Z3	Full Wave ..	4-pin UX	5	3.0	500	250	UX41	15/-
6ZY5G*	Full Wave ..	Octal	6.3	.3	350	35	IO85	9/-
84*	Full Wave ..	5-pin UX	6.3	.5	350	60	UX51	9/-
25RE*	Multiple ..	6-pin UX	25	.3	250	80	UX61	9/-
25Z5*	Multiple ..	6-pin UX	25	.3	250	80	UX61	9/-
35RE*	Multiple ..	6-pin UX	35	.3	250	120	UX61	9/-
40 S.U.A.*	Half Wave ..	5-pin	40	.2	250	75	BR51	9/-

EB /TSD

* Indirectly heated. † Each filament.

Telephone:
Canonbury 1234 (30 lines)

Prices are subject to alteration without notice.

Telegrams:
Amplifiers, 'Phone, London

A. C. COSSOR LTD., COSSOR HOUSE, Highbury Grove, London, N.5.

MAZDA RADIO VALVES

BATTERY TYPES.

H.F. SCREENED PENTODES

Type	Rating					Typical Operating Conditions						Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Max. Screen Volts	Mutual Conduct- ance	Anode Volts	Screen Volts	Grid Bias	Anode Current (mA.)	Mutual Conduct- ance	Anode A.C. Resist. (megs)		
SP 141	1.4	0.05	90	90	0.9	82	82	0	1.8	0.8	0.6	MO820	9/-
SP 210	2	0.1	150	150	1.7	120	120	1.0	1.1	1.2	2.0	BR712	9/-
VP 210	2	0.1	150	150	1.4	120	60	1.5	1.2	0.8	1.3	BR712	9/-
SP 22	2	0.1	150	150	1.7	120	120	1.0	1.1	1.2	1.35	MO812	9/-
VP 22	2	0.1	150	150	1.4	120	60	1.5	1.2	0.8	1.3	MO812	9/-
VP 23	2	0.05	150	150	1.3	120	60	1.5	1.45	1.08	1.45	MO812	9/-
A.C. MAINS TYPES.													
AC/SP1	4	1.0	250	250	2.7	200	200	3.0	4.9	2.65	—	BR714	10/6
AC/SP3	4	1.0	250	250	7.5	250	100	1.7	7.9	7.0	0.55	BR715	15/-
AC/VP1	4	0.65	250	250	3.0	250	200	2.8	7.5	2.0	1.0	BR714	10/6
AC/VP2	4	0.65	250	250	3.0	250	200	2.8	7.5	2.0	1.0	BR715	10/6
VP 41	4	0.65	250	250	3.0	250	200	2.7	7.7	2.0	1.3	MO813	10/6
SP 41	4	0.95	250	250	8.5	200	200	1.5	10.9	8.5	0.7	MO813	10/6
SP 42	4	0.95	200	200	9.0	200	115	1.25	20.0	—	—	MO813	10/6
A.C./D.C. TYPES.													
VP 1321	13	0.2	250	250	3.0	200	200	2.8	7.4	2.0	1.0	BR714	10/6
VP 1322	13	0.2	250	250	3.0	200	200	2.8	7.4	2.0	1.0	BR715	10/6
VP 133	13	0.2	200	200	3.1	150	150	2.7	8.0	2.1	0.7	MO813	10/6

BATTERY TYPES.

FREQUENCY CHANGERS

Type	Rating						Typical Operating Conditions						Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Max. Screen Volts	Mutual Conduct- ance	Ampli- fication Factor	Anode Volts	Screen Volts	Grid Bias	Anode Current	Conversion Conduct'ce (mA/V)	Anode A.C. Resis. (Megs)		
FC 141	1.4	0.05	90	90	{ Osc. 0.55 Tet. 0.6 }	—	{ 75 82 }	—	—	{ 1.2 0.55 }	0.25	0.6	MO821	10/6
TP 22	2	0.25	150	150	{ T. 1.4 P. 1.3 }	34	{ 100 120 }	—	—	{ 0.8 1.2 }	0.45	{ 0.035 1.6 }	BR92	10/6
TP 23	2	0.25	150	150	{ T. 2.1 P. 1.2 }	20	{ 80 120 }	—	—	{ 2.5 0.55 }	0.25	{ 0.012 1.6 }	BR732	10/6
TP 25	2	0.2	150	150	{ T. 1.7 P. 1.06 }	18	{ 80 120 }	—	—	{ 2.5 0.53 }	0.26	{ 0.013 1.3 }	MO816	10/6
TP 26	2	0.2	150	150	{ T. 1.3 P. 1.55 }	28	{ 65 103 }	—	—	{ 0.9 1.2 }	0.55	{ 0.03 1.4 }	MO816	10/6
A.C. MAINS TYPES.														
AC/TP	4	1.25	250	250	{ T. 1.4 P. 3.4 }	30	{ 150 250 }	—	—	{ 1.5 6.5 }	0.7	{ 0.025 0.9 }	BR93	11/6
AC/TH1	4	1.3	250	250	{ T. 5.3 H. 3.1 }	16	{ 80 250 }	200	5.0	{ 4.5 3.0 }	0.75	{ 0.007 1.6 }	BR736	11/6
TH 41	4	1.3	250	250	{ T. 5.3 H. 3.1 }	16	{ 80 250 }	100	3.0	{ 4.5 3.0 }	0.75	{ 0.007 1.6 }	MO817	11/6
A.C./D.C. TYPES.														
TP 2620	26	0.2	250	250	{ T. 1.4 P. 3.4 }	30	{ 150 200 }	—	—	{ 1.5 6.5 }	0.65	{ 0.025 0.7 }	BR93	11/6
TH 2320	23	0.2	250	250	{ T. 5.3 H. 3.0 }	16	{ 100 250 }	200	5.0	{ 4.0 3.0 }	0.75	{ 0.007 1.2 }	BR736	11/6
TH 2321	23	0.2	250	250	{ T. 5.3 H. 3.0 }	16	{ 100 175 }	—	—	{ 4.0 3.0 }	0.65	{ 0.007 1.0 }	BR736	11/6
TH 233	23	0.2	250	250	{ T. 5.3 H. 3.0 }	16	{ 100 175 }	100	3.0	{ 4.0 2.6 }	0.65	{ 0.007 1.3 }	MO817	11/6

TUNING INDICATORS

Type	Rating				Typical Operating Conditions				For Use on :	Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Max. Target Volts	Anode Volts	Anode Current	Target Current	Bias for Zero Angle			
ME41	4	0.5	250	250	250	0.25	1.2	22.5	A.C. Mains	MO818	8/6
ME920	9	0.2	200	200	175	0.16	2.7	19.0	AC/DC Mains	BR737	8/6
ME91	9	0.2	200	200	175	0.16	2.7	19.0	AC/DC Mains	MO818	8/6

MAZDA VALVE DATA—continued

DIODES

Type	Fil. Volts	Fil. Current	Specification	Wireless World Base Number	Price
V914	4	0.3	A.C. Mains Double Diode	BR52	9/-
DD41	4	0.5	A.C. Mains Double Diode (separate Cathodes)	MO84	9/-
DD620	6	0.2	AC/DC Double Diode	BR52	9/-
DD207	2	0.075	Battery Double Diode	BR42	9/-

DIODE TRIODE

Type	Rating						Typical Operating Conditions				Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Mutual Conductance	Amp. Factor	Anode A.C. Resist. (ohms)	H.T. Volts	Grid Bias	Anode Current	Load Resistance		
H.141D	1.4	0.05	90	0.48	65	135,000	82	0	0.065	500,000	MO819	7/6
BATTERY TYPES												
DOUBLE-DIODE TRIODES												
HL21/DD	2	0.15	150	1.5	32	21,000	120	1.5	0.5	50,000	BR59	7/6
L21/DD	2	0.1	150	1.9	19	10,000	120	3.0	0.8	50,000	BR59	7/6
L22DD	2	0.1	150	1.9	19	10,000	120	3.0	0.8	50,000	MO88	7/6
HL23DD	2	0.05	150	1.2	25	21,000	120	1.5	0.6	50,000	MO88	7/6
A.C. MAINS TYPES												
AC/HLDD	4	1.0	250	2.6	36	13,800	250	2.7	2.0	50,000	BR77	9/6
HL41DD	4	0.65	250	2.5	30	12,000	250	3.1	2.2	50,000	MO89	9/6
HL42DD	4	0.65	250	2.9	23	8,000	200	1.25	2.8	50,000	MO89	9/6
A.C./D.C. TYPES												
HL/DD1320	13	0.2	250	2.0	30	15,000	250	2.7	2.0	50,000	BR77	9/6
HL133DD	13	0.2	250	2.5	32	12,800	150	2.2	1.25	50,000	MO89	9/6

BATTERY TYPES.

TRIODES

Type	Rating						Typical Operating Conditions				Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Mutual Conductance	Amplification Factor	Impedance	H.T. Volts	Grid Bias	Anode Current	Load Resistance		
HL2	2	0.1	150	1.5	32	21,000	120	1.5	0.4	75,000	BR47	4/9
L2	2	0.1	150	1.9	19	10,000	120	1.5	1.0	50,000	BR47	4/9
HL22	2	0.1	150	1.5	32	21,000	120	1.5	0.4	75,000	MO85	4/9
HL23	2	0.05	150	1.5	32	21,000	120	1.5	0.5	50,000	MO85	4/9
A.C. MAINS TYPES.												
AC/HL	4	1.0	200	3.0	35	11,700	250	3.4	2.0	50,000	BR54	7/6
AC/2HL	4	1.0	200	6.5	75	11,500	250	1.2	2.5	50,000	BR54	7/6
HL41	4	0.65	250	3.5	36	10,300	250	3.1	2.2	50,000	MO86	7/6
AC/P	4	1.0	200	3.75	10	2,650	200	15.0	5.0	8,000	BR54	7/6
AC/P1	4	1.0	200	3.7	5.4	1,450	200	27.5	25.0	10,000	BR54	9/6
AC/P4	4	1.0	700	7.0	20	2,860					BR56	17/6
P41	4	0.95	250	8.0	17	2,120					MO86	9/6
V312	4	0.65	200	2.5	30	12,000					BR55	25/-
A.C./D.C. TYPES.												
HL1320	13	0.2	250	3.0	30	10,000	200	2.0	1.8	50,000	BR75	7/6
HL133	13	0.2	250	3.4	36	10,600	165	1.9	1.5	50,000	MO87	7/6

A.C. MAINS TYPES (Directly Heated)

OUTPUT TRIODES

Type	Rating						Typical Operating Conditions					Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Mutual Conductance	Amp. Factor	Anode A.C. Resist. (ohms)	Anode Volts	Grid Bias	Anode Current	Optimum Load (Ohms)	Power Output (Watts)		
PP3/250	4	1.0	300	6.5	6.5	1,000	300	37.0	48	3,000	4.2	BR47	9/6
PA 20	2	2.0	300	6.5	6.5	1,000	300	36.0	48	3,000	4.2	BR47	9/6
PP5/400	4	2.0	400	6.0	9.0	1,500	400	32.0	62	2,700	6.0	BR47	20/-
PA 40	4	2.0	450	10.0	4.25	425	450	96.0	*110	*4,000	*40.0	BR47	20/-
* Two valves in push-pull.													
A.C./D.C. TYPE (Indirectly Heated)													
PP 3521	35	0.2	250	10	6.0	600	175	22.5	60	2,800	1.5	BR74	9/6

MAZDA VALVE DATA—continued

BATTERY TYPES

OUTPUT PENTODES

Type	Rating					Typical Operating Conditions						Wireless World Base Number	Price
	Fil. Volts	Fil. Current	Max. Anode Volts	Max. Screen Volts	Mutual Conductance	Anode Volts	Screen Volts	Grid Bias	Anode Current	Optimum Load (Ohms)	Power Output (Watts)		
Pen 141	1.4	0.1	90	90	1.75	82	82	8.1	5.0	10,000	0.21	MO814	9/-
Pen 24	2	0.3	150	150	5.7	120	120	3.3	5.0	15,000	0.44	MO814	9/-
Pen 25	2	0.15	150	150	4.5	120	120	3.6	5.0	14,000	0.4	MO814	9/-
Pen 220	2	0.2	150	150	2.5	120	120	4.5	5.0	17,000	0.34	BR512	9/-
*QP 230	2	0.3	150	150	3.0	120	120	9.6	4.65	17,000	0.86	BR723	12/6
*QP 240	2	0.4	150	150	4.0	120	103	9.0	3.0	17,000	1.1	BR91	17/6
*QP 25	2	0.2	120	120	3.0	110	110	8.6	4.25	16,000	0.94	MO822	12/6

* Double Pentodes.

A.C. MAINS TYPES

AC/Pen	4	1.0	250	250	2.5	250	250	15.0	32	7,500	3.3	BR719	10/6
AC.2/Pen	4	1.75	250	250	8.0	250	250	5.3	32	6,700	3.5	BR719	10/6
AC.2/Pen.DD	4	2.0	250	250	8.0	250	250	5.3	32	6,700	3.5	BR724	12/6
AC.4/Pen	4	1.75	250	250	11.0	250	250	8.75	64	3,300	6.9	BR78	12/-
AC.5/Pen	4	1.75	250	250	9.0	250	250	8.5	40	5,200	4.85	BR78	10/6
AC.5/Pen.DD	4	2.0	250	250	9.0	250	250	8.5	40	5,200	4.85	BR710	12/6
AC.6/Pen	4	1.75	330	220	8.5	310	210	6.9	63	Special		BR739	15/-
Pen.44	4	2.1	275	275	11.0	260	270	11.1	70	3,000	8.0	MO810	12/-
Pen.45	4	1.75	250	250	9.0	250	250	8.5	40	5,200	4.85	MO810	10/6
Pen.45.DD	4	2.0	250	250	9.0	250	250	8.5	40	5,200	4.85	MO815	12/6
Pen.46	4	1.75	330	220	8.5	315	210	6.9	63	Special		MO811	15/-

A.C./D.C. TYPES

Pen.383	38	0.2	200	200	12.0	155	175	10.0	64	2,500	3.6	MO810	10/3
Pen.3520	35	0.2	250	250	7.0	200	200	8.0	40	4,400	3.0	BR719	10/6
Pen.3820	38	0.2	200	200	12.0	155	175	10.0	64	2,500	3.6	BR78	10/6
Pen.DD4020	40	0.2	250	250	7.0	200	200	6.3	32	5,400	2.5	BR724	12/6
Pen.DD4021	45	0.2	200	200	12.0	155	175	10.0	64	2,500	3.6	BR710	12/6
Pen.453.DD	45	0.2	200	200	12.0	155	175	10.0	64	2,500	3.6	MO815	12/6

RECTIFIERS

Type	Fil. Volts	Fil. Current	Half or Full Wave	Max. Volts per Anode	Max. Current	Wireless World Base Number	Price
UU 4	4	2.2	Full	350	120	BR43	9/-
UU 5	4	2.3	Full	500	120	BR43	9/-
UU 6	4	1.4	Full	350	120	MO83	9/-
UU 7	4	2.3	Full	350	120	MO83	9/-
UU 8	4	2.8	Full	350	250	MO83	15/-
U 4020	40	0.2	Half	250	120	BR51	9/-
U 403	40	0.2	Half	250	120	MO81	9/-
U 21	2	1.85	Half	4,500	5	BR45	15/-
U 22	2	2.0	Half	4,500	5	MO82	15/-
MU 2	2	3.1	Half (M.V.)	5,000	5	BR44	20/-

THYRATRONS

SPECIAL TYPES

Type	Fil. Volts	Fil. Current	*Max. Output Volts	Max. Peak Current (m.A.)	Control Ratio	Gas Voltage Drop	Wireless World Base Number	Price
T 31	4	1.5	120	500	20	40	BR56	20/-
T 41	4	1.5	120	500	20	40	MO86	10/6

* Peak—peak scan.

ACORNS

Type	Fil. Volts	Fil. Current	Max. Anode Volts	Max. Screen Volts	Mutual Conductance	Amplification Factor	Impedance	Designation	Price
A 40	4	0.25	200	—	2	25	12,500	Triode	45/-
A 41	4	0.25	250	100	2	—	—	Pentode	50/-

SPECIAL TELEVISION DIODE

D 1	4	0.2	Peak Inverse Anode Volts 500 Peak Anode Current 50 mA.						10/6
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Mazda Valves are manufactured in Great Britain for The British Thomson-Houston Co., Ltd., London and Rugby, and distributed by The Edison Swan Electric Co., Ltd., 155, Charing Cross Road, London, W.C.2.

=Mullard=

THE MASTER VALVE

CHARACTERISTICS AND OPERATING DATA

Vf = Filament or Heater Voltage.

If = Filament or Heater Current.

Va = Anode Voltage.

Vg2 = Auxiliary Grid or Screen Voltage.

Vg = Control Grid Voltage.

Ia = Anode Current.

Ri = Anode Impedance.

G = Amplification Factor.

S or Sc = Mutual or Conversion Conductance.

Wo = Audio Output.

C = Clear Bulb.

M = Metallised Bulb.

1.4 VOLT RANGE

Type	Description	Wireless World Base Number	Working Conditions					Characteristics at Working Conditions				Opti- mum Load	Price
			If.	Va.	Vg2	-Vg.	Ia.	Ri.	G.	S. or Sc.	Wo		
DK1	Heptode Frequency Changer (M.) ..	SC823	0.05	90	90†	0	0.55	600,000	—	0.25	—	—	10/6
DF1	H.F. Pentode (M.)	SC813	0.05	90	90	0	1.2	1,500,000	1,160	0.75	—	—	9/-
DAC1	Single Diode Triode (M.)	SC89	0.05	90	—	0	0.14	240,000	65	0.275	—	—	7/8
DL2	Output Pentode (C.)	SC815	0.1	90	90	7.5	7.5	115,000	180	1.55	0.24	8,000	9/-
DL1	Output Pentode (C.)	SC815	0.05	90	90	3.0	4.0	300,000	375	1.25	0.17	22,500	9/-

2 VOLT RANGE

TH2	Triode Hexode Frequency Changer	BR732	0.23	135	60	5.0	0.95	600,000	—	0.43	—	—	10/6
FC2	Octode Frequency Changer ..	BR729	0.1	135*	70†	0	0.95	—	—	0.2	—	—	10/6
FC2A	Octode Frequency Changer ..	BR729	0.13	135*	45‡	0.5	0.7	2,500,000	—	0.27	—	—	10/6
VP2	Vari-mu H.F. Pentode	BR712	0.18	135	135	0-7	3.0	400,000	—	1.5	—	—	9/-
VP2B	Vari-mu H.F. Pentode	BR717	0.14	135	60	1.5	2.0	1,300,000	—	1.4	—	—	9/-
SP2	H.F. Pentode	BR712	0.18	135	135	0	3.0	700,000	1,200	1.8	—	—	9/-
PM12A	Screened Tetrtode (M. or C.) ..	BR48	0.18	135	75	0	2.0	330,000	500	1.5	—	—	9/-
PM12	Screened Tetrode (M. or C.) ..	BR48	0.15	150	75	—	4.25	180,000	200	1.1	—	—	9/-
PM12M	Vari-mu Screened Tetrode (M. or C.)	BR48	0.18	150	90	0-7	2.5	—	—	1.4	—	—	9/-
2D2	Double-diode Detector	BR52	0.09	125	—	—	0.5	—	—	—	—	—	5/8
TDD2A	Double-diode Triode	BR59	0.12	135	—	1.5	1.95	25,000	30	1.2	—	—	7/6
TDD2	Double-diode Triode	BR59	0.1	150	—	5.5	2.5	12,000	16.5	1.4	—	—	7/6
PM1A	High Impedance Triode (C.) ..	BR47	0.1	150	—	1.0	1.0	41,600	50	1.2	—	—	4/9
PM1HF	Medium Impedance Triode (C.) ..	BR47	0.1	150	—	3-4.5	1.5	22,500	18	0.8	—	—	4/9
PM1HL	Medium Impedance Triode (M. or C.)	BR47	0.1	135	—	1.5	2.3	23,400	28	1.2	—	—	4/9
PM2HL	Medium Impedance Triode (M. or C.)	BR47	0.1	135	—	1.5	2.2	21,500	30	1.4	—	—	4/9
PM1LF	Medium Impedance Triode (C.) ..	BR47	0.1	150	—	7.5	4.0	12,000	11	0.9	—	—	4/9
PM2DX	Medium Impedance Triode (M. or C.)	BR47	0.1	135	—	4.5	2.0	18,000	18	1.0	—	—	4/9
PM2DL	Driver for Class B (M.)	BR47	0.1	135	—	4.5	2.0	12,000	18	1.5	—	—	4/9
PM2A	Output Triode	BR47	0.2	135	—	6.0	5.0	6,000	12	2.0	0.15	7,000	6/-
PM2	Output Triode	BR47	0.2	150	—	12.0	6.6	4,400	7.5	1.7	—	9,000	6/-
PM202	Super-power Triode (replaces PM252)	BR47	0.2	150	—	12-15	14.0	2,000	7	3.5	—	3,700	11/6
PM22	Output Pentode	BR410/512	0.2	150	150	10.0	15.0	—	—	1.3	—	8,000	16/6
PM22A	Output Pentode	BR410/512	0.15	135	135	4.5	5.6	150,000	—	2.2	0.34	19,000	9/-
PM22D	High Sensitivity Output Pentode ..	BR512	0.3	135	135	2.4	5.0	—	—	3.0	0.3	24,000	9/-
PM2B	Class B Double-triode	BR76	0.2	120	—	0	—	—	—	—	1.25	14,000	10/6
PM2BA	Class B Double-triode	BR76	0.2	120	—	4.5	—	—	—	—	1.45	14,000	10/6
QP22A	Q.P.P. Double Pentode	BR91	0.45	135	135	12.0	3.0	—	—	4.0	1.4	16,000	12/6
QP22B	Q.P.P. Double Pentode	BR723	0.3	135	135	11.7	3.8	—	—	3.1§	1.33	14,700	12/6

* Va = Vg2 = 135 V. † Vg3 + 5 = 70 V. ‡ Vg3 + 5 = 45 V. § S at Va = Vg2 = 100 V, and Vg1 = 0.

SPECIAL TYPES. (All these types are in clear bulbs)

Type	Description	Wireless World Base Number	Working Conditions						Characteristics at Working Conditions				Opti- mum Load	Price
			Vf	If	Va	Vg2	-Vg	-Ia	Ri	G	S or Sc	Wo		
AT4	Acorn Triode	—	4.0	0.25	200	—	6.0	4.5	12,500	25	2.0	—	—	50/-
AP4	Acorn Pentode	—	4.0	0.2	250	100	3.0	2.0	3,500,000	5,000	1.4	—	—	60/-
4671	Acorn Triode	—	6.3	0.15	180	—	5.0	4.5	12,500	25	2.0	—	—	45/-
4672	Acorn Pentode	—	6.3	0.15	250	100	3.0	2.0	1,500,000	2,100	1.4	—	—	50/-
DA1	Amplifying Triode for Deaf Aids ..	DA41	2.0	0.05	40	—	0.25	0.25	80,000	32	0.4	—	—	15/-
DA2	Output Triode for Deaf Aids ..	DA41	2.0	0.05	40	—	2.15	1.25	13,600	6.9	0.5	—	—	15/-
DA3	Output Triode for Deaf Aids ..	DA41	2.0	0.05	40	—	2.8	1.8	7,600	4.7	0.62	—	—	15/-
DAS1	Amplifying Tetrode for Deaf Aids ..	DA42	2.0	0.06	120	60	2.7	1.5	500,000	—	0.58	—	—	17/6
DC51	Amplifying Triode (These types are specially designed for use in Deaf Aid Apparatus.)	DA41	1.5	0.067	45	—	0	0.34	66,000	25	0.38	—	—	15/-
DF51	Amplifying Pentode	DA43	1.5	0.067	45	13.5	0	0.125	—	—	0.17	—	—	17/6
DD51	Output Triode	DA41	1.5	0.067	45	—	3.0	1.7	10,000	5	0.5	—	—	15/-
DL51	Output Pentode	DA43	1.5	0.134	45	45	1.5	1.6	85,000	128	1.5	—	—	17/6

PREPARED BY THE MULLARD WIRELESS SERVICE CO., LTD., CENTURY HOUSE, LONDON, W.C.2.

CHARACTERISTICS AND OPERATING DATA FOR Mullard Master Valves—contd.

INDIRECTLY HEATED A.C. MAINS VALVES. $V_f = 4.0$ V.													
Type	Description	Wireless World Base Number	Working Conditions					Characteristics at Working Conditions				Opti- mum Load	Price
			If.	Va.	Vg2	-Vg.	Ia.	Ri.	G.	S. or So.	Wo		
TV4	Tuning Indicator	SC828	0.3	250	—	0-5	—	—	—	—	—	—	9/-
TV4A	Tuning Indicator	SC828	0.3	250	—	0-21	—	—	—	—	—	—	9/-
TH4	Triode Hexode Frequency Changer	BR733	1.0	250	70	1.5	4.0	1,500,000	—	1.0	—	—	11/6
TH4B	Triode Heptode Frequency Changer (replaces TH4A).	BR733	1.45	250	100	2.5	3.25	1,500,000	—	0.75	—	—	11/6
FC4	Octode Frequency Changer	BR731	0.65	250	90†	1.5	1.6	—	—	0.6	—	—	11/6
VP4	Vari-mu H.F. Pentode	BR516/714	1.0	200	100	2-50	4.5	1,000,000	2,000	2.3	—	—	10/6
VP4A	Vari-mu H.F. Pentode	BR516/714	1.2	200	100	2.0	4.25	1,400,000	3,500	2.5	—	—	10/6
VP4B	Vari-mu H.F. Pentode	BR715	0.65	250	250	3.0	11.5	—	—	2.0	—	—	10/6
SP4	H.F. Pentode (M. or C.)	BR516/714	1.0	200	100	2.0	3.0	2,200,000	5,000	2.3	—	—	10/6
SP4B	H.F. Pentode	BR715	0.65	250	250	2.4	4.0	2,000,000	6,800	3.4	—	—	10/6
MM4V	Vari-mu Screened Tetrode	BR510	1.0	200	110	1.5	6.0	—	—	2.5	—	—	11/6
				200	110	40.0	0.15	—	—	0.01	—	—	
S4VA	Screened Tetrode (M. or C.) ..	BR510	1.0	200	110	1.5	2.75	500,000	1,000	2.0	—	—	10/6
S4VB	Screened Tetrode (M. or C.) ..	BR510	1.0	200	110	1.5	4.6	300,000	750	2.5	—	—	10/6
2D4A	Double-diode	BR52	0.65	200	—	—	0.8	—	—	—	—	—	5/6
2D4B	Double-diode with separate Cathodes	BR72	0.35	200	—	—	0.8	—	—	—	—	—	5/6
2DD4	Double-diode Triode	BR77	0.65	250	—	7.0	4.0	13,500	27	2.0	—	—	9/6
904V	High Impedance Triode (M.) ..	BR54	0.65	200	—	2.0	2.2	20,600	72	3.5	—	—	7/6
354V	Medium Impedance Triode (M. or C.)	BR54	0.65	250	—	4.5	6.5	11,500	40	3.5	—	—	7/6
244V	Medium Impedance Triode (M.) ..	BR54	0.65	200	—	5.5	5.5	9,000	25	2.8	—	—	9/-
164V	Medium Impedance Triode (C.) ..	BR54	0.65	200	—	8.5	13.0	3,640	16.4	4.5	—	—	14/-
TT4	Low Impedance Triode (replaces 104V).	BR54	1.0	250	—	16.0	20.0	3,300	10.5	3.2	0.5	10,000	10/-
TT4A	Low Impedance Triode	BR54	1.0	250	—	9.0	20.0	4,400	18.0	4.1	0.4	5,000	17/6
Pen 4VA	Output Pentode	BR514/719	1.35	250	250	22.0	36.0	40,000	—	2.8	3.8	6,000	10/6
Pen A4	Output Pentode (replaces Pen 4VB)	BR719	1.95	250	250	5.8	36.0	50,000	—	9.5	3.8	8,000	10/6
Pen B4	Output Pentode	BR719	2.1	250	275	14.0	72.0	22,000	—	8.5	8.8	3,500	12/-
Pen 4DD	Double-diode Output Pentode ..	BR725	2.25	250	250	6.0	36.0	50,000	—	9.5	4.3	7,000	12/6
Pen 428	Output Pentode	BR719	2.1	375	275	20.5	62.0	—	—	8.0	8.0	6,500*	25/-

† Vg3 + 5 = 70 V. * Data for 2 x Pen 428 in Class AB push-pull.

DIRECTLY HEATED A.C. OUTPUT VALVES. $V_f = 4.0$ V. unless otherwise stated

Type	Description	Wireless World Base Number	Working Conditions					Characteristics at Working Conditions				Opti- mum Load	Price
			If	Va	Vg2	-Vg	Ia	Ri	G	S	Wo		
AC044	Triode	BR47	1.0	300	—	38.0	50	1,200	6.0	5.0	3.5	2,300	9/6
AC042	Triode	BR47	2.0V	300	—	38.0	50	1,200	6.0	5.0	3.5	2,300	9/6
			2.0A										
PM24	Pentode	BR410/512	0.15	150	150	11.0	20	—	—	1.75	—	8,000	20/-
PM24A	Pentode	BR512	0.275	300	200	22.5	20	—	—	2.0	—	10,000	15/-
PM24M	Pentode	BR512	1.1	250	250	17.0	30	43,000	130.0	3.0	2.8	7,000	10/6
PM24B	Pentode	BR512	1.0	400	300	40.0	30	—	—	2.1	—	8,000	22/6
PM24E	Pentode	BR512	2.0	500	200	35.0	50	—	—	4.0	—	7,000	45/-
D024	Triode	BR47	1.85	400	—	40.0	63	1,070	8.0	7.5	7.1	3,200	20/-
D025	Triode	BR47	6.0V	400	—	112.0	63	800	3.0	3.75	—	4,000	30/-
			1.1A										
D026	Triode	BR47	2.0	400	—	92.0	63	950	3.6	3.8	7.5	3,000	25/-
D030	Triode	BR47	1.85	500	—	140.0	60	890	3.1	3.5	—	—	25/-

A.C. RECTIFIERS

Type	Description	Wireless World Base Number	Vf	If	Max. Va (R.M.S.)	Max. Rectified Output (mA)	Price
DW2	Directly-heated F.W. Rectifier	BR42	4.0	1.0	250—0—250	60	9/-
DW4/350	Directly-heated F.W. Rectifier (replaces DW3)	BR42	4.0	2.0	350—0—350	120	9/-
DW4/500	Directly-heated F.W. Rectifier (replaces DW4)	BR42	4.0	2.0	500—0—500	120	9/-
IW2	Indirectly-heated F.W. Rectifier	BR43	4.0	1.2	250—0—250	60	9/-
IW3	Indirectly-heated F.W. Rectifier	BR43	4.0	2.4	350—0—350	120	9/-
IW4/350	Indirectly-heated F.W. Rectifier	BR43	4.0	2.0	350—0—350	120	9/-
IW4/500	Indirectly-heated F.W. Rectifier (replaces IW4)	BR43	4.0	2.4	500—0—500	120	10/6
FW4/500	Directly-heated F.W. Rectifier	BR42	4.0	3.0	500—0—500	250	15/-

PREPARED BY THE MULLARD WIRELESS SERVICE CO., LTD., CENTURY HOUSE, LONDON, W.C.2.

CHARACTERISTICS AND OPERATING DATA FOR Mullard Master Valves—contd.

DC/AC VALVES. Pin Bases ; P Base (8 contact) and V Base (5 contact)														
Type	Description	Wireless World Base Number	Working Conditions						Characteristics at Wkg. Condns.				Opti- mum Load	Price
			Vf	If	Va	Vg2	-Vg	Ia	Ri	G	S or Sc	Wo		
EM1	Tuning Indicator (replaces TV6)	SC828	6.3	0.2	250	—	0-5	—	—	—	—	—	—	9/-
TH21C	Triode Hexode Frequency Changer.	BR736	21.0	0.2	250	70	1.5	4.0	1,500,000	—	1.0	—	—	12/6
TH30C	Triode Heptode Frequency Changer (replaces TH22C).	BR736	29.0	0.2	250	100	2.5	3.25	1,500,000	—	0.75	—	—	11/6
FC13	Octode Frequency Changer ..	SC825	13.0	0.2	200	90†	1.5	1.6	—	—	0.6	—	—	11/6
FC13C	Octode Frequency Changer ..	BR731	13.0	0.2	200	90†	1.5	1.6	—	—	0.6	—	—	11/6
VP13A	Vari-mu H.F. Pentode ..	SC818	13.0	0.2	200	100	2.0	4.0	—	2,200	2.2	—	—	10/6
VP13C	Vari-mu H.F. Pentode ..	BR715	13.0	0.2	200	200	2.0	9.0	—	—	2.2	—	—	10/6
SP13	H.F. Pentode	SC818	13.0	0.2	200	100	2.0	3.3	1,300,000	3,000	2.2	—	—	10/6
SP13C	H.F. Pentode	BR715	13.0	0.2	200	200	2.2	2.5	2,500,000	7,000	2.8	—	—	10/6
2D13A	Double-diode Detector ..	BR52	13.0	0.2	200	—	—	0.8	—	—	—	—	—	7/6
2D13C	Double-diode Detector ..	BR52	13.0	0.2	200	—	—	0.8	—	—	—	—	—	7/6
HL13	Medium Impedance Triode (M.)	SC88	13.0	0.2	200	—	3.7	5.0	12,000	40	3.3	—	—	7/6
HL13C	Medium Impedance Triode (M.)	BR75	13.0	0.2	200	—	3.7	5.0	12,000	40	3.3	—	—	7/6
TDD13C	Double-diode Triode	BR77	13.0	0.2	200	—	5.0	4.0	13,500	27	2.0	—	—	9/6
Pen26	Output Pentode	SC817	24.0	0.2	200	100	19.0	40.0	—	—	3.1	3.0	5,000	10/6
Pen36C	Output Pentode .. {	BR719	35.0	0.2	200	200	9.0	40.0	—	—	8.0	4.0	4,000	10/6
OL33		IO826												
Pen40DD	Double-diode Output Pentode..	BR725	44.0	0.2	200	200	8.5	45.0	—	—	8.0	4.0	4,500	12/6
CBL1	Double-diode Output Pentode {	SC821	44.0	0.2	200	200	8.5	45.0	35,000	—	8.0	4.0	4,500	12/6
CBL31		IO830												
CL4	Output Pentode.. ..	SC817	33.0	0.2	200	200	8.5	45.0	35,000	—	8.0	4.0	4,500	10/6
CL6	Output Pentode.. ..	SC817	35.0	0.2	200	100	9.5	45.0	19,000	—	8.0	4.0	4,500	10/6

† Vg3 + 5 = 70 V.

DC/AC RECTIFIERS

Type	Description	Wireless World Base Number	Vf	If	Max. Anode Volts (R.M.S.)	Max. Rectified Output (mA)	Price
CY1	Half Wave Rectifier (replaces UR1) ..	SC82	20	0.2	250	75	9/-
CY31		IO86					
UR1C	Half Wave Rectifier	BR51	20	0.2	250	75	9/-
CY2	Multiple Rectifier (replaces UR3) ..	SC84	30	0.2	250—0—250	120	10/6
CY32		IO87					
UR3C	Multiple Rectifier	BR71	30	0.2	250—0—250	120	9/-

"E" SERIES (SIDE CONTACT). Vf = 6.3 V. unless otherwise stated

Type	Description	Wireless World Base Number	Working Conditions					Characteristics at Wkg. Condns.				Opti- mum Load	Price
			If	Va	Vg2	-Vg	Ia	Ri	G	S or Sc	Wo		
EM1	Tuning Indicator	SC828	0.2	250	—	0-5	—	—	—	—	—	—	9/-
EM3	Tuning Indicator	SC828	0.2	250	—	0-21	—	—	—	—	—	—	9/-
EM4	Tuning Indicator	SC829	0.2	250	—	0-16	—	—	—	—	—	—	9/-
ECH2	Triode Heptode Frequency Changer	SC826	0.95	250	100	2.5	3.25	1,500,000	—	0.75	—	—	11/6
ECH3	Triode Hexode Frequency Changer.	SC826	0.2	250	100	2.0	3.0	1,300,000	—	0.65	—	—	11/6
ECH33		IO836											
EK2	Octode Frequency Changer ..	SC825	0.2	250	200§	2.0	1.0	2,000,000	—	0.55	—	—	11/6
EK3	Octode Frequency Changer ..	SC825	0.72	250	100	2.5	2.5	2,000,000	—	0.65	—	—	12/6
EF5	Vari-mu H.F. Pentode	SC818	0.2	250	100	3-50	8.0	1,200,000	2,000	1.7	—	—	11/6
EF6	H.F. Pentode	SC818	0.2	250	100	2.0	3.0	2,500,000	4,500	1.8	—	—	11/6
EF36		IO824											
EF8	Low Noise H.F. Pentode ..	SC819	0.2	250	250†	2.5	8.0	450,000	—	1.8	—	—	10/6
EF38		IO829											
EF9	Sliding Screen H.F. Pentode	SC818	0.2	250	100	2.5	6.0	1,250,000	—	2.2	—	—	10/6
EF39		IO824											
EB4	Double-diode (separate Cathodes)..	SC85	0.2	200	—	—	0.8	—	—	—	—	—	10/6
EAB1	Triple-diode	SC86	0.2	200	—	—	0.8	—	—	—	—	—	7/6
EBC3	Double-diode Triode ..	SC811	0.2	275	—	6.25	5.0	15,000	30	2.0	—	—	9/6
EBC33		IO813											
EFM1	L.F. Amplifier and Tuning In- dicator (M.).	SC827	0.2	250	—	—	—	—	—	—	—	—	15/-
EBF2	Double-diode H.F. Pentode (M.) ..	SC821	0.2	250	100†	2.0	5.0	1,300,000	—	1.8	—	—	12/6
EL2	Output Pentode	SC817	0.2	250	250	18.0	32.0	70,000	—	2.8	3.6	8,000	11/6
EL32		IO828											
EL3	Output Pentode	SC816	0.9	250	250	6.0	36.0	50,000	—	9.0	4.5	7,000	10/6
EL33		IO826											
EL6	Output Pentode	SC816	1.3	250	250	7.0	72.0	17,000	—	15.0	8.0	3,500	12/-
EL36		IO826											
EBL1	Double-diode Output Pentode	SC821	1.5	250	250	6.0	36.0	50,000	—	9.5	4.3	7,000	12/6
EBL31		IO830											

§ Vg3 + 5 = 50 V. † Vg2 = 0; Vg3 = 250. ‡ Rg2 = 95,000 ohms.

PREPARED BY THE MULLARD WIRELESS SERVICE CO., LTD., CENTURY HOUSE, LONDON, W.C.2.

CHARACTERISTICS AND OPERATING DATA FOR Mullard Master Valves—contd.

"E" SERIES RECTIFIERS								
Type	Description	Wireless World Base Number	Vf	If	Anode Voltage (R.M.S.)	Rectified Output (mA)	Price	
AZ1 AZ31	Directly-heated F.W. Rectifier {	SC31	4.0	1.1	300—0—300	100	9/-	
AZ2 AZ32		1032						
AZ3 EZ2	Indirectly-heated F.W. Rectifier {	SC31	4.0	2.0	300—0—300	160	9/-	
		1032						
	Indirectly-heated F.W. Rectifier {	SC33	4.0	2.0	350—0—350	120	9/-	
		SC33						
	Indirectly-heated F.W. Rectifier {	SC33	6.3	0.4	350—0—350	60	10/6	
		SC33						
OCTAL TYPES								
Type	Description	Price	Type	Description				Price
1A7G	Battery Pentagrid Frequency Changer	10/6	6F5G	High- μ Triode	7/6			
1C5G	Battery Output Pentode	9/-	6F6G	Output Pentode	10/6			
1C7G	Battery Pentagrid Frequency Changer	10/6	6H6G	Double-Diode (separate cathodes)	5/6			
1F5G	Battery Output Pentode	9/-	6J5G	Triode	7/6			
1F7G	Battery Double-Diode Pentode	11/6	6J7G	H.F. Pentode	10/6			
1H4G	Battery Triode	6/-	6K5G	High- μ Triode	7/6			
1H5G	Battery Single-Diode Triode	7/6	6K7G	Vari- μ H.F. Pentode	10/6			
1H6G	Battery Double-Diode Triode	7/6	6L5G	Triode	7/6			
1J6G	Battery Class B Double Triode	9/6	6L6G	Beam Power Tetrode	15/-			
1N5G	Battery H.F. Pentode	9/-	6L7G	Pentagrid Mixer	10/6			
			6N6G	Double Output Triode	15/-			
5U4G	D.H. Full-Wave Rectifier	15/-	6N7G	Class B Double Triode	15/-			
5V4G	I.H. Full-Wave Rectifier	9/-	6Q7G	Double-Diode Triode	9/6			
5X4G	D.H. Full-Wave Rectifier	15/-	6R7G	Double-Diode Triode	9/6			
5Y3G	D.H. Full-Wave Rectifier	9/-	6S7G	Vari- μ H.F. Pentode	10/6			
5Y4G	D.H. Full-Wave Rectifier	9/-	6U7G	Vari- μ H.F. Pentode	10/6			
5Z4G	I.H. Full-Wave Rectifier	9/-	6V6G	Beam Power Tetrode	10/6			
			6X5G	I.H. Full-Wave Rectifier	9/-			
6A8G	Pentagrid Frequency Changer	11/6	25A6G	Output Pentode	10/6			
6B8G	Double-Diode Pentode	12/6	25L6G	Beam Power Tetrode	10/6			
6C5G	Triode	7/6	25Z6G	I.H. Rectifier Doubler	9/-			
6D8G	Pentagrid Frequency Changer	11/6						
U.X. and U.Y. TYPES								
Type	Description	Price	Type	Description				Price
1A4	Battery Vari- μ H.F. Pentode	9/-	25Y5	Full-Wave Rectifier	9/-			
1A6	Battery Pentagrid Frequency Changer	10/6	25Z5	I.H. Rectifier Doubler	9/-			
1C6	Battery Pentagrid Frequency Changer	10/6	27	I.H. Triode	7/6			
1F4	Battery Output Pentode	9/-	30	D.H. Triode	6/-			
1F6	Battery Double-Diode Pentode	11/6	32	D.H. H.F. Tetrode	9/-			
1-v	Half-Wave Rectifier	9/-	33	Output Pentode	16/6			
			34	Vari- μ H.F. Pentode	9/-			
2A3	D.H. Output Triode	9/6	35	Vari- μ H.F. Tetrode	10/6			
2A5	Output Pentode	10/6	36	H.F. Tetrode	10/6			
2A6	Double-Diode High- μ Triode	9/6	37	Triode	7/6			
2A7	Pentagrid Frequency Changer	11/6	39/44	Vari- μ H.F. Pentode	10/6			
2B7	Double-Diode H.F. Pentode	12/6	41	Output Pentode	10/6			
			42	Output Pentode	10/6			
5Z3	D.H. Full-Wave Rectifier	15/-	43	Output Pentode	10/6			
			45	D.H. Output Triode	9/6			
6A3	Output Triode	9/6	47	D.H. Output Pentode	10/6			
6A4	D.H. Output Pentode	10/6	56	Triode	7/6			
6A6	Class B Double Triode	15/-	58	Vari- μ H.F. Pentode	10/6			
6A7	Pentagrid Frequency Changer	11/6	71A	D.H. Output Triode	9/6			
6B5	Double Output Triode	15/-	75	Double-Diode Triode	9/6			
6B7	Double-Diode Pentode	12/6	76	Triode	7/6			
6C6	H.F. Pentode	10/6	77	H.F. Pentode	10/6			
6D6	Vari- μ H.F. Pentode	10/6	78	Vari- μ H.F. Pentode	10/6			
6E5	Tuning Indicator	8/6	79	Class B Double Triode	10/6			
6F7	Triode Pentode	11/6	80	D.H. Full-Wave Rectifier	9/-			
6U5/6G5	Tuning Indicator	8/6	83	Full-Wave Mercury Vapour Rectifier	17/6			
			84	I.H. Full-Wave Rectifier	9/-			
12A5	Pentode	10/6	85	Double-Diode Triode	9/6			
12A7	I.H. Rectifier Pentode	12/6	89	Output Pentode	10/6			
12Z3	I.H. Half-Wave Rectifier	9/-						
15	H.F. Pentode	9/-	2101	Battery Output Pentode	9/-			
18	Output Pentode	10/6	2102	Battery Double-Diode Triode	7/6			
19	D.H. Class B Double Triode	9/6	2103	Battery Double Output Pentode	12/6			
24A	H.F. Tetrode	10/6	2151	Output Pentode	12/-			

Osram Valves

MADE IN ENGLAND

H.F. PENTODES AND TETRODES (BATTERY DIRECTLY HEATED TYPES)

Type	Description	Filament		Type of Base	Wireless World Base No.	Anode Volts max.	Screen Volts max.	Mutual Conductance mA/volt	As amplifier under conditions of max. anode and screen volts			Price
		Volts	Current amps.						Approx. Grid Bias Volts	Average Anode Current mA.	Average Screen Current mA.	
<i>S23</i>	<i>Short Grid Base Tetrode</i>	2	0.1	4-pin	BR48	150	70	1.1	-1.5	1.3	0.6	9/-
<i>VS24</i>	<i>Variable-Mu Tetrode ..</i>	2	0.15	4-pin	BR48	150	75	1.5	0	4.5	0.5	9/-
<i>VP21</i>	<i>Variable-mu Pentode ..</i>	2	0.1	7-pin	BR712	150	60	1.1	0	2.8	0.7	9/-
<i>W21</i>	<i>Variable-mu Pentode ..</i>	2	0.1	4-pin	BR49	150	150	1.4	0	3.6	1.2	9/-
<i>Z14</i>	<i>Short Grid Base Pentode</i>	1.4	0.05	or 7-pin	BR712							
<i>Z21</i>	<i>Short Grid Base Pentode</i>	2	0.1	Octal	IO821	90	90	0.75	0	1.2	0.3	9/-
				4-pin	BR49	150	150	1.7	-0.5	1.7	0.6	9/-
<i>S12</i>	<i>Miniature Tetrode for "Deaf Aid," etc. ..</i>	2	0.06	or 7-pin	BR712							
				Midget	DA42	100	30	0.7	0	2.5	0.4	17/6
				4-pin								

SHORT GRID BASE H.F. PENTODES, AND TETRODES WITH PENTODE CHARACTERISTICS (WITH INDIRECTLY HEATED CATHODE)

Type	Filament		Type of Base	Wireless World Base No.	Anode Volts max.	Screen Volts max.	Mutual Conductance mA/volt (working point)	As amplifier under conditions of max. anode and screen volts				Connected as Triode		Price
	Volts	Current amps.						Approx. Grid Bias Volts	Bias Resist. Ohms	Average Anode Current mA.	Average Screen Current mA.	Amplification Factor	Impedance. Ohms	
<i>MSP4</i>	4	1.0	7-pin	BR714	250	100	2.4	-1.75	400	3.3	1.0	—	—	10/6
<i>KTZ41</i>	4	1.5	Also 5-pin	BR510										
			7-pin	BR740	250	250	7.5	-2.5	244	8.0	2.25	80	6,250	12/6
<i>Z62*</i>	6.3	0.45	Octal	IO824	300	150	12.0	-1.5	65	18.0	5.25			
<i>KTZ63</i>	6.3	0.3	Octal	IO828	250	125	7.5	-2	160	10.0	2.3	38	4460	12/6
<i>KTZ73M</i>	6†	0.16	Octal	IO825	250	100	1.23	-3	1,200	2.0	0.5	21	10,500	10/6
							1.5	-3	1,000	2.0	0.25	—	—	10/6

* Short seal type, suitable for ultra-short wave amplifiers.

† Suitable for use with 6.3 v. transformer, or 6-volt accumulator, or series operation at 0.16 amp.

"VARIABLE-MU" PENTODES, AND TETRODES WITH PENTODE CHARACTERISTICS (WITH INDIRECTLY HEATED CATHODE)

Type	Filament		Type of Base	Wireless World Base No.	Anode Volts max.	Screen Volts max.	Mutual Conductance mA/volt at working point	As amplifier under conditions of max. anode and screen volts				Price
	Volts	Current amps.						Min. Grid Bias Volts	Bias Resist. Ohms	Average Anode Current mA.	Average Screen Current mA.	
<i>VMP4G</i>	4	1.0	7-pin	BR714	250	100	2.7	-2	150	8.0	5.0	10/6
<i>W42</i>	4	0.6	7-pin	BR721	250	125	1.5	-3	300	7.6	1.9	10/6
<i>KTW63</i>	6.3	0.3	Octal	IO828	250	125	1.5	-3	300	7.6	1.5	10/6
<i>KTW61</i>	6.3	0.3	Octal	IO824	250	80	2.9	-3	300	8.0	2.3	10/6
<i>KTW61M</i>				IO825								
<i>KTW73M</i>	6†	0.16	Octal	IO825	250	100	1.7	-3	300	6.5	1.3	10/6

† Suitable for use with 6.3 v. transformer, or 6-volt accumulator, or series operation at 0.16 amp.

Types normally supplied for servicing purposes only, shown in italics. Suffix M indicates metallised bulb.

OSRAM VALVES (continued)

FREQUENCY CHANGERS

Type	Description	Filament		D or I†	Type of Base	Wireless World Base No.	Conversion Conductance micromhos	Anode Volts max.	Screen Volts max.	Oscillator Anode Volts max.	Under conditions of max. anode, screen and osc. anode volts					Price
		Volts	Current amps.								Total Cath- ode Current mA.	Control Grid Volts	Oscilla- tor Grid Peak Volts	Bias Resist- ance Ohms	Con- version Imped- ance megohms	
X14	Heptode	1.4	0.05	D	Octal	IO832	230	90	45	90	1.47	0	10	—	0.2	10/6
X22	Heptode	2	0.15	D	7-pin	BR730	350	150	70	150	9.0	0	20	—	0.65	10/6
X23*	Triode-Hexode	2	0.3	D	7-pin	BR732	250	150	60	through	4.5	-1.5	6	—	0.016	10/6
X24	Triode-Hexode	2	0.2	D	7-pin	BR732	250	150	60	20,000 ohms	4.5	-1.5	6	—	0.016	10/6
MX40	Heptode	4	1.0	I	7-pin	BR728	500	250	100	250	5.85	-3	10	500	0.5	11/6
X41	Triode-Hexode	4	1.0	I	7-pin	BR733	640	250	80	250	8.5	-1.5	12	300	0.75	11/6
X81M	Triode-Hexode	6.3	0.3	I	Octal	IO836	520	250	100	through	10.0	-3	10	300	0.7	11/6
X63	Heptode	6.3	0.3	I	Octal	IO833	500	250	100	10,000 to	9.5	-3	25	300	0.31	11/6
X63M	Heptode	6.3	0.3	I	Octal	IO833	500	250	100	30,000 ohms	11.0	-3	10	300	2.5	11/6
X65	Triode-Hexode	6.3	0.3	I	Octal	IO836	225	250	100	30,000 ohms	10.0	-3	10	300	0.7	11/6
X71M	Triode-Hexode	15	0.16	I	Octal	IO836	520	250	100	30,000 ohms	10.0	-3	10	300	0.7	11/6
X73M	Heptode	6†	0.16	I	Octal	IO833	500	250	80	30,000 ohms	8.0	-3	10	350	0.4	11/6

* Replaced by X24.

† Suitable for use with 6.3 v. transformer, or 6-volt accumulator, or series operation at 0.16 amp.

§ Directly heated. ‡ Indirectly heated.

DIODES AND DIODE-TRIODES

Type	Filament		D (directly) or I (indirectly) heated	Type of Base	Wireless World Base No.	Anode Volts max.	Ampli- fication Factor	Imped- ance Ohms	Mutual Conduc- tance mA/volt	As amplifier under conditions of max. anode volts				Price
	Volts	Current amps.								Approx. Grid Bias Ohms	Bias Resist- ance Ohms	Average Anode Current mA.	Optimum Load Ohms	
HD14	1.4	0.05	D	Octal	IO812	90	66	240,000	0.275	0	—	0.14	500,000	7/6
HD23*	2	0.15	D	5-pin	BR59	150	40	28,600	1.4	-1.5	—	1.7	150,000	7/6
HD24	2	0.1	D	5-pin	BR59	150	40	28,600	1.4	-1.5	—	1.7	150,000	7/6
D41	4	0.3	I	5-pin	BR52									5/6
D42	4	0.6	I	4-pin	BR412									10/-
D43	4	0.6	I	4-pin	BR413									10/-
Double diode (low impedance)														
D63	6.3	0.3	I	Octal	IO87									5/6
Double diode (separate cathodes)—														
MHD4	4	1.0	I	7-pin	BR77	250	40	18,200	2.2	-4	1,000	4.0	30,000	9/6
DH63	6.3	0.3	I	Octal	IO813	250	70	58,000	1.2	-3	2,000	1.1	250,000	9/6
DH63M	6.3	0.3	I	Octal	IO813	250	36	22,500	1.6	-3	1,500	4.2	50,000	9/6
DL63	6.3	0.3	I	Octal	IO813	250	44	22,000	2.0	-3	1,000	4.5	100,000	9/6
DH73M	6†	0.16	I	Octal	IO813	250	44	22,000	2.0	-3	1,000	4.5	100,000	9/6

* Replaced by HD24.

† Suitable for use with 6.3 v. transformer, or 6-volt accumulator, or series operation at 0.16 amp.

TRIODES

Type	Filament		D (directly) or I (indirectly) heated	Type of Base	Wireless World Base No.	Anode Volts max.	Ampli- fication Factor	Imped- ance Ohms	Mutual Conduc- tance mA/volt	As amplifier under conditions of max. anode volts				Power output (single valve) watts	Price
	Volts	Current amps.								Approx. Grid Bias Volts	Bias Resist. Ohms	Average Anode Current mA.	Opti- mum Load Ohms		
HL2	2	0.1	D	4-pin	BR47	150	27	18,000	1.5	-3	—	1.75	—	—	4/9
L21	2	0.1	D	4-pin	BR47	150	16	8,900	1.8	-6	—	2.2	—	—	4/9
LP2	2	0.2	D	4-pin	BR47	150	15	4,170	3.6	-6	—	5.6	—	0.1	6/-
P2	2	0.2	D	4-pin	BR47	150	7.5	2,150	3.5	-12	—	14.0	—	0.2	10/-
H12*	2	0.06	D	} midget {	DA41	100	26	21,600	1.2	-1.5	—	0.6	250,000	—	15/-
L12*	2	0.06	D		DA41	45	4.8	6,000	0.8	-4.5	—	1.9	12,000	0.012	15/-
MH4	4	1.0	I	5-pin	BR54	250	40	11,100	3.6	-4	750	5.0	50,000	—	7/6
MHL4	4	1.0	I	5-pin	BR54	250	20	8,000	2.5	-8	1,000	8.0	20,000	—	7/6
ML4	4	1.0	I	5-pin	BR54	250	12	2,860	4.2	-16	1,000	14.0	7,000	—	10/-
H63	6.3	0.3	I	Octal	IO810	250	100	66,000	1.5	-2	2,000	1.0	200,000	—	7/6
L63	6.3	0.3	I	Octal	IO89	250	20	7,700	2.6	-8	800	9.0	50,000	—	7/6
PX4	4	1.0	D	4-pin	BR47	300	5	830	6.0	-42	900	50.0	4,000	3.5†	9/6
PX25	4	2.0	D	4-pin	BR47	400	9.5	1,265	8.0	-31	530	62.5	3,200	5.5	20/-
DA30	4	2.0	D	4-pin	BR47	500	4	580	6.9	-134	—	60.0	6,000	11**	25/-
DA100	6	2.7	D	Special	L41	1,000	5.5	1,410	3.9	-150	—	100	6,800	30†	168/-

* Miniature valves for "deaf-aid," etc.

† See below for push-pull data.

** Normally used in push-pull; total output Class AB1, 45 watts.

Types normally supplied for servicing purposes only, shown in italics. Suffix M indicates metallised bulb.

OSRAM VALVES (continued)

OUTPUT PENTODES, AND TETRODES WITH PENTODE CHARACTERISTICS

Type	Filament		D (directly or I (in- directly) heated)	Type of Base	Wireless World Base No.	Anode Volts. max.	Screen Volts. max.	Mutual Con- ductance mA/volt	Aver- age Anode Cur- rent mA.	Aver- age Screen Cur- rent mA.	Approx. Grid Bias Volts	Bias Resist. Ohms	Opti- mum Load (single valve) Ohms	Approx. Power output (single valve) watts	Price
	Volts	Current amps.													
N14	1.4	0.1	D	Octal	IO822	90	90	1.55	7.5	1.6	-7.5	700	8,000	0.25	9/-
KT2	2	0.2	D	5-pin	BR512	150	150	2.5	7.5	1.7	-4.5	—	17,000	0.5	9/-
KT21	2	0.3	D	5-pin	BR512	150	150	5.3	5.0	1.2	-2.5	—	19,000	0.75	9/-
KT24	2	0.2	D	5-pin	BR512	150	150	3.2	10.0	2.0	-3.2	250	10,000	0.8	9/-
QP21†	2	0.4	D	7-pin	BR723	120	120	5.0	5.0	1.0	-2.7	450	20,000	0.39	12/6
						150	150	2.3	3.5	0.9	Code V & W -9.8 to -9.5 X -8.8	—	25,000*	1.0	
MKT4	4	1.0	I	5-pin	BR514	250	225	3.0	32	5.0	-13.5	300	8,000	2.5	10/6
KT41	4	2.0	I	7-pin	BR719										
KT61	6.3	0.95	I	Octal	IO826	250	250	10.0	40	8.5	-4.4	90	6,000	4.2	10/6
KT63	6.3	0.7	I	Octal	IO826	250	250	2.5	34	5.5	-4.4	90	6,000	4.3	10/6
KT66	6.3	1.27	I	Octal	IO826	250	250	6.3	85	6.3	-16.5	420	7,000	3.0	10/6
KT32	26	0.3	I	Octal	IO826	135	135	9.0	75	5.0	-15	170	2,200	7.25	15/-
KT33C	13	0.6	I	Octal	IO819	200	200	10.0	60	10.0	-13.2	188	3,000	5.0	12/-
	26	0.3													
KT35	13	0.6	I	Octal	IO819	200	200	10.0	50	8.5	-11.5	200	4,000	4.3	10/6
KT72	26	0.3	I	Octal	IO826	200	200	10.0	50	8.5	-11.5	200	4,000	4.3	10/6
KT72	15	0.16	I	Octal	IO826	175	175	2.5	30	6.0	-12.5	300	6,000	2.0	10/6

† Double Pentode. ‡ 400 v. max. in push-pull. § 300 v. max. in push-pull. * Anode to anode. Output tetrodes with pentode characteristics have been shown with pentode base connections.

LOW FREQUENCY AMPLIFYING VALVES: PUSH-PULL DATA

Type	Description	Filament		Wireless World Base No.	Ampli- fication Factor	Imped- ance Ohms	Mutual Con- ductance mA/volt	Operating data for push-pull stage (Class AB2)*							Price (each)
		Volts	Current amps.					Anode Volts	Screen Volts	Grid Volts	Anode Current per valve mA.	Peak Input Voltage Grid to Grid	Anode to Anode Load Ohms	Total Power Output Watts	
PX4	Triode	4.0	1.0	BR47	5	830	6.0	300	—	-45	50	90	6,000	10.0	9/6
B63	Double Triode	6.3	0.8	UX76	—	—	—	300	—	0	17.5	70	10,000	10.0	15/-
DET19	Double Triode	6.3	0.8	UX77	—	—	3.4	300	—	-15	30	100	10,000	13.0	20/-
KT61	Tetrode	6.3	0.95	IO826	—	—	10.5	250	250	-6	28	14	10,000	8.6	10/6
KT66	Beam Tetrode	6.3	1.27	IO326	—	—	6.3	400	300	-30	60	76	2,800	50	15/-
KT66	connected as Triode	6.3	1.27	IO326	8	1,450	5.5	400	—	-38	62.5	84†	4,000	14.5	15/-
DA41	Triode	7.5	2.5	UX46	62	17,500	3.6	1,000	—	0	22	220	6,900	175	£2/15/0
DA100	(as TZ40)†	6.0	2.7	L41	5.5	1,410	3.9	1,000	—	-146	100	500	8,000	200	£8/8/0
DA250	Triode	10.0	2.0	Special	16	2,290	7.0	2,500	—	-130	80	360	12,000	800	£16/16/0

† American types. ‡ Grid not driven positive in this case. * Both halves of one valve in case of Double Triodes.

RECTIFYING VALVES

Type	Description	Type of Rectification	Type of Base	Wireless World Base No.	Filament		Max. Anode Volts R.M.S.	Max. D.C. Output Volts at Max. Current	Max. D.C. Output Current mA.	D.C. Output at Half Current Volts	D.C. Output at Half Current mA.	Price
					Volts	Current amps.						
U10	Directly Heated..	Bi-phase	4-pin	BR42	4.0	1.0	250	260	100	270	50	9/-
U12/14	Directly Heated..	Bi-phase	4-pin	BR42	4.0	2.5	500	540	120	620	60	9/-
MU12/14	Indirectly Heated	Bi-phase	4-pin	BR43	4.0	2.5	500	540	120	600	60	9/-
U16	Directly Heated..	Single phase	4-pin	BR44	2.0	1.0	5,000	6,400	5.0	—	—	15/-
U17	Directly Heated..	Single phase	4-pin	BR44	4.0	1.0	2,500	2,950	30	—	—	15/-
U18	Directly Heated..	Bi-phase	4-pin	BR42	4.0	3.4	500	520	250	600	125	15/-
U20	Directly Heated..	Bi-phase	4-pin	BR42	4.0	3.75	850	1,050	125	1,100	62.5	15/-
U30	Indirectly Heated	Bi-phase	7-pin	BR738	26	0.3	200	182	120	212	60	9/-
U31	Indirectly Heated	Single phase	Octal	IO86	13	0.6						
U50	Directly Heated..	Bi-phase	Octal	IO82	5.0	2.0	350	325	120	380	60	9/-
U52	Directly Heated..	Bi-phase	Octal	IO82	5.0	3.0	500	500	200	565	100	15/-
U71	Indirectly Heated	Single phase	Octal	IO86	30	0.16	250	250	75	—	—	9/-
GU50	Mercury Vapour..	Single phase	4-pin	BR44	4.0	3.0	1,500	1,270	250*	1,300	125*	25/-

* Delayed switching of anode volts essential.

Types normally supplied for servicing purposes only, shown in italics. Suffix M indicates metallised bulb.

OSRAM VALVES (continued)

TUNING INDICATORS ("TUNERAY")

Type	Description	Filament		Type of Base	Wireless World Base No.	Anode Voltage (through 1 megohm)		Target Voltage max.	Target Current mA.	Triode Current	Triode Grid Voltage for 0° Shadow angle	Price
		Volts	Current amps.			max.	min.					
Y61* } Y63 }	For A.C. Sets	6.3	0.3	Octal	IO838	250	180	250	4.5	0.25	-22	8/6
Y62* } Y64 }	For D.C./A.C. Sets	6.3	0.3	Octal	IO838	250	80	250	4.5	0.25	-22	8/6

* Y61 and Y62 are in tubular bulbs and replace Y63 and Y64 respectively.

OSRAM BARRETTERS (CURRENT REGULATORS)

OSRAM Barretter Type	Mean Current Rating (amps.)	Voltage Range	Type of Base	Price
202	0.2	120—200	4-pin	8/6
251	0.25	100—180	4-pin	12/6
301	0.3	138—221	E.S. cap	8/6
302	0.3	112—195	E.S. cap	8/6
303	0.3	86—129	E.S. cap	8/6
304	0.3	95—165	E.S. cap	8/6

OSRAM PILOT OR DIAL LAMPS

Cat. No. of Lamp	Description	Type of Receiver for which suitable	Price each
O.S.45	2.5v. 0.3A 12 mm. round	2v. Battery Sets ..	3½d.
O.S.50	3.5v. 0.15A 12 mm. round	2v. Battery Sets & Fuses	3½d.
O.S.55	3.5v. 0.3A 12 mm. round	A.C. sets with 4v. transformer* ..	3½d.
O.S.70	6.2v. 0.3A 15 mm. round	AC sets with 4v. transformer ..	4½d.
O.S.75	6.5v. 0.3A 12 mm. round	DC/AC sets with 0.2A valves ..	4½d.
O.S.7588	8v. 1.6 watt M.E.S. Indicator ..	DC/AC sets with 0.3A valves ..	4½d.
		AC sets with 6.3v. transformer ..	1/6

* Between centre tap and one side; or two lamps in series across 4-volt winding.

MISCELLANEOUS TYPES

Type	Description	Filament		D or I	Base	Anode Volts	Screen Volts	Mutual Conductance mA/volt	Impedance ohms	Price
		Volts	Current Amps.							
HA1	Acorn Triode	4	0.25	I	—	180	—	1.7	11,700	45/-
HA2	Acorn Triode (American 955) ..	6.3	0.15	I	—	180	—	2.0	12,500	45/-
ZA1	Acorn Pentode	4	0.25	I	—	250	100	1.4	—	50/-
ZA2	Acorn Pentode (American 954) ..	6.3	0.15	I	—	250	100	1.4	—	50/-
A373	Peak Voltmeter Diode	1.8	1.6	D	S.E.S.	2,000	—	—	—	60/-
A577	Voltmeter Triode	4	1.0	I	5-pin	250	—	2.0	3,000	60/-
A537	Low Noise Triode	4	0.4	I	Sm. side cont.	150	—	1.55	10,000	50/-
4053	Cathode Ray Oscillograph Tube (Vacuum Type) ..	4	1.0	I	9-pin	500	1½ in. dia. screen			45/-
4081	Cathode Ray Oscillograph Tube (Vacuum Type) ..	4	1.0	I	9-pin	800	2½ in. dia. screen			55/-
GTIC	Gasfilled Relay	4	1.3	I	5-pin	500	Max. current 1.0 amp peak, 0.5 amp. R.M.S., 0.3 amp. average			25/-

Types normally supplied for servicing purposes only, shown in italics. Suffix M indicates metallised bulb.

**Full technical data and characteristic curves on these and other specialised types of Osram valves, available on request to:—
The Osram Valve Technical Dept., The General Electric Co., Ltd.,
Magnet House, Kingsway, London, W.C.2.**

TUNGSRAM VALVES

British Tungram Radio Works, Ltd., West Road, Tottenham, N.17

Sole Distributors to the Trade: Siemens Electric Lamps and Supplies, Ltd., 38-39 Upper Thames Street, London, E.C.4

4-VOLT A.C. RANGE (English and Side Contact Based)

Type No.	Description C = Clear M = Metallised	I _n Amps.	V _a	V _{sg}	V _g	I _a mA.	R _i Ohms or Megohms	Sc† mA/V.	W _o Watts	Opt.‡ Load Ohms	Wireless World Base No.	Alternative Wireless World Base No.§	Price
TH4A ...	Triode Hep. F. Ch. M	1.5	275	100	Vm	3.2	1.5 MΩ	0.75†	6.0	8‡	BR736	—	11/6
TH4B ...	Triode Hep. F. Ch. M	1.5	275	100	Vm	3.2	1.5 MΩ	0.75†	4.5	8‡	BR736	—	11/6
TX4 ...	Triode Hex. F. Ch. M	1.0	300	80	Vm	5.5	1.0 MΩ	1.5†	1.0	15‡	BR733	—	11/6
TP4 ...	Triode Pen. F. Ch. M	1.2	250	200	Vm	6.5	1.0 MΩ	0.7†	1.4	3‡	BR93	—	11/6
VO4 & VO4s ...	Octode F. Ch. ... M	.65	250	70	Vm	1.6	1.0 MΩ	0.6†	1.5	8.5‡	BR731	SC825	11/6
MH4105/71 &.../73 ...	Heptode F. Ch. ... M/C	1.0	250	100	Vm	3.5	1.36MΩ	1.2†	0.52	20‡	BR728	CO74	11/6
HP4106c (or HP4105) ...	Pentode R.F. Vm ... M	1.0	250	100	Vm	5.0	1.2 MΩ	3.5	—	—	BR714	BR516	10/6
HP4101c ...	Pentode R.F. ... M	1.0	250	100	20.0	3.5	2.0 MΩ	3.5	—	—	BR714	BR516	10/6
HP4115 (or AF2) ...	Pentode R.F. Vm ... M	1.0	250	100	Vm	4.5	1.4 MΩ	3.2	—	—	BR714	BR516	10/6
VP4 & VP4s ...	Pentode R.F. Vm ... M	.65	250	100	Vm	8.0	1.2 MΩ	1.8	—	—	BR715	SC818	10/6
VP4B & VP4C ...	Pentode R.F. Vm ... M	.65	250	250	Vm	11.5	1.0 MΩ	4.0	—	—	BR715	BR714	10/6
SP4 & SP4s ...	Pentode R.F. ... M	.65	250	100	2.0	3.0	2.0 MΩ	2.4	—	—	BR715	SC818	10/6
SP4B ...	Pentode R.F. ... M	.65	250	250	3.0	2.9	2.0 MΩ	4.0	—	—	BR715	—	10/6
AS4125 ...	Tetrode R.F. ... M	1.0	200	100	Vm	3.0	0.25MΩ	3.0	—	—	BR510	—	10/6
AS4120 ...	Tetrode R.F. ... M/C	1.0	200	100	2.0	3.0	0.33MΩ	3.0	—	—	BR510	—	10/6
HL4+ & HL4G ...	Triode ... M/C	.65	250	—	0	5.0	10,000Ω	3.5	—	—	BR54	BR75	7/6
LL4 & LL4C ...	Triode ... C	1.2	350	1,000§	10.0	18.0	2,000Ω	3.5	1.0	11,000	BR54	BR56	7/6-17/0§
DDT4 & DDT4s ...	Duo Diode Triode... M	.65	250	—	0	5.0	13,000Ω	3.6	—	—	BR77	SC811	9/6
DD4 & DD4s ...	Duo Diode ... M	.65	200	—	—	0.8	15,000Ω	—	—	—	BR52	SC51	5/6
DD4D ...	Duo Diode (sep.caths)M	.5	200	—	—	4.0	10,000Ω	—	—	—	BR72	—	5/6
D418 ...	Diode ... M	.18	200	—	—	5.0	3,000Ω	—	—	—	BR46	—	5/6
PP4 & PP4s ...	Output Pentode ... C	1.1 f	250	250	15.0	34.0	—	3.5	2.8	7,500	BR512	SC815	10/6
APP4A & APP4As ...	Output Pentode ... C	2.0	250	250	16.5	35.0	—	3.5	3.0	7,000	BR722	SC817	10/6
APP4B & APP4Bs ...	Output Pentode ... C	2.0	250	250	6.0	36.0	—	10.0	3.6	7,000	BR719	SC816	10/6
APP4C ...	Op. Triple Grid ... C	2.0	250	250	6.0	36.0	—	10.0	4.0	7,000	BR713	—	10/6
APP4G & APP4Gs ...	Output Pen (low cap.)C	2.0	250	250	6.0	36.0	—	10.0	4.0	7,000	BR721	BR720	15/-
APP4E & APP4Es ...	Output Pentode ... C	2.1	375	275	15.0	72.0	—	8.5	8.0	3,500	BR719	SC816	12/-
DDPP4B & DDPP4M	Duo Diode Pentode ... C	2.0	250	250	6.0	36.0	—	10.0	3.6	7,000	BR724	BR725	12/6
P12/250 ...	Output Triode ... C	1.0 f	300	—	33.0	48.0	850Ω	6.0	2.5	2,400	BR47	—	9/6
P15/250 & P15/250s	Output Triode ... C	1.0 f	350	—	45.0	60.0	660Ω	6.0	4.0	2,300	BR47	SC87	10/6
VME4 ...	Magic Eye Vm ... C	.3	250	250	Vm	0.1	—	—	—	1MΩ	BR737	—	8/6
ME4s ...	Magic Eye ... C	.5	250	250	5.0	0.1	—	—	—	2MΩ	SC828	—	8/6
APV4 & IRV120/350s	Full Wave Rec. ... C	2.0	350	—	—	120	—	—	—	—	BR43	SC83	9/-
RV120/350 &s	Full Wave Rec. ... C	2.4 f	350	—	—	120	—	—	—	—	BR42	SC81	9/-
RV120/500 &s	Full Wave Rec. ... C	2.4 f	500	—	—	120	—	—	—	—	BR42	SC81	9/-
RV200/600 ...	Full Wave Rec. ... C	2.8 f	600	—	—	200	—	—	—	—	BR42	—	15/-

0.2 AMP. UNIVERSAL A.C./D.C. TYPES (English and Side Contact Based)

Type No.	Description C = Clear M = Metallised	I _n Amps.	V _a	V _{sg}	V _g	I _a mA.	R _i Ohms or Megohms	Sc† mA/V.	W _o Watts	Opt.‡ Load Ohms	Wireless World Base No.	Alternative Wireless World Base No.§	Price
TX21 ...	Triode Hexode F.Ch. M	21	250	80	Vm	5.5	1.0 MΩ	1.0†	1.5	15‡	BR733	—	11/6
TX29 ...	Triode Hep. F. Ch. M	29	250	100	Vm	3.2	1.5 MΩ	0.75†	5.5	8‡	BR736	—	11/6
TH30 ...	Triode Hep. F. Ch. M	30	250	100	Vm	3.2	1.5 MΩ	0.75†	4.5	8‡	BR736	—	11/6
VO18 & VO18s ...	Octode F. Ch. ... M	13	250	70	Vm	1.6	1.0 MΩ	0.6†	1.5	8.5‡	BR731	SC825	11/6
VP13K & VP13s ...	Pentode R.F. Vm ... M	13	250	100	Vm	8.0	1.2 MΩ	1.8	—	—	BR716	SC818	10/6
VP13B ...	Pentode R.F. Vm ... M	13	250	200	Vm	10.0	1.0 MΩ	3.5	—	—	BR715	—	10/6
HP13 & HP13s ...	Pentode R.F. Vm ... M	13	250	100	Vm	8.0	1.0 MΩ	3.5	—	—	BR715	SC818	10/6
SP13 & SP13s ...	Pentode R.F. ... M	13	250	100	2.0	3.0	2.0 MΩ	2.4	—	—	BR715	SC818	10/6
SP13B ...	Pentode R.F. ... M	13	250	200	3.0	3.0	2.0 MΩ	4.0	—	—	BR715	—	10/6
HL13 & HL13s ...	Triode ... M	13	250	—	4.5	5.0	10,000Ω	3.0	—	—	BR75	SC88	7/6
DDT13 & DDT13s ...	Duo Diode Triode... M	13	250	—	0	4.0	10,000Ω	3.6	—	—	BR77	SC811	9/6
DD13 & DD13s ...	Duo Diode ... M	13	200	—	—	0.8	15,000Ω	—	—	—	BR52	SC51	5/6
DD6 ...	Duo Diode ... M	6.3	200	—	—	0.8	15,000Ω	—	—	—	BR52	—	5/6
PP13s ...	Output Pentode ... C	13	200	200	14.0	25.0	—	3.5	1.8	8,000	SC817	—	10/6
PP24 & PP24s ...	Output Pentode ... C	24	200	100	11.0	40.0	—	8.0	3.0	5,000	BR720	SC817	10/6
PP34 & PP34s ...	Output Pentode ... C	34	200	200	7.5	45.0	—	8.5	3.2	4,400	BR720	SC817	10/6
PP35 ...	Output Pentode ... C	35	200	200	7.5	45.0	—	8.5	3.2	5,000	BR719	—	10/6
PP36 ...	Op. Triple Grid ... C	36	200	200	7.5	45.0	—	8.5	3.2	5,000	BR713	—	10/6
PP37 & CL6 ...	Output Pentode ... C	37	200	100	9.5	45.0	—	8.5	3.5	4,500	BR720	SC817	10/6
DDPP39 & DDPP39M	Duo Diode Pentode C	39	200	200	7.5	45.0	—	8.5	3.2	4,400	BR724	BR725	12/6
CB11 ...	Duo Diode Pentode C	39	200	200	7.5	45.0	—	8.5	3.2	4,400	SC821	—	12/6
ME6s ...	Magic Eye ... C	6.3	200	200	0	1.2	—	—	—	2MΩ	SC828	—	8/6
V20 & V20s ...	Single-Path Rectifier C	20	250	—	—	80.0	—	—	—	—	BR51	SC82	9/-
PV29 & PV29s ...	Two-Path Rectifier . C	25	125	—	—	120	—	—	—	—	BR71	SC84	9/-
V30 ...	Single-Path Rectifier C	30	275	—	—	120	—	—	—	—	BR51	—	9/-
PV30 & PV30s ...	Two-Path Rectifier . C	30	275	—	—	120	—	—	—	—	BR71	SC84	9/-

Rf Floating screen potential derived from dropping resistance.

§ Where two type numbers are shown, the alternative Base No. or Price applies only to the second type.

† Conversion conductance in the case of mixer valves (mA/V).

‡ Average I_a at full output (mA).

Vm Variable-mu.

‡ Optimum heterodyne voltage in the case of mixer valves (r.m.s.).

|| Triode slope in the case of frequency changer valves (mA/V).

f Directly heated filament.

TUNGSRAM VALVES (continued).**1.4-VOLT ALL-DRY BATTERY RANGE**
(Octal and Side Contact Based)

Type No.	Description C = Clear M = Metallised	I _H Amps.	V _a	V _{sg}	V _g	I _a mA.	R _i Ohms or Megohms	Sc† mA/V.	W ₀ Watts	Opt.† Load Ohms	Wireless World Base No.	Alternative Wireless World Base No.‡	Price
1A7-G & DK1 ...	Pentagrid F. Ch. C/M	0.05f	90	45	Vm	0.55	0.6 MΩ	0.25†	—	7‡	10832	SC823	10/6
1N5-G & DF1 ...	Straight R.F. Pen. C/M	0.05f	90	90	0	1.2	1.5 MΩ	0.75	—	—	10821	SC813	9/-
1H5-G & DAC1 ...	Diode-Triode C/M	0.05f	90	—	0	0.14	0.24MΩ	0.275	—	—	10812	SC89	7/6
1A5-G & DL1 ...	Economy Pentode... C	0.05f	90	90	4.5	4.0	—	0.85	0.115	25,000	10822	SC815	9/-
1C5-G & DL2 ...	Output Pentode ... C	0.1 f	90	90	7.5	7.5	—	1.55	0.240	8,000	10822	SC815	9/-
1Q5-GT ...	Beam Pentode ... C	0.1 f	90	90	4.5	9.1	—	2.1	0.270	8,000	10822	—	9/-
3Q5-GT ...	Beam Pen. (2.8 volt) C	0.05f	90	90	4.5	7.5	—	1.8	0.250	8,000	10818	—	9/-

2-VOLT BATTERY RANGE
(English and Side Contact Based)

Type No.	Description C = Clear M = Metallised	I _H Amps.	V _a	V _{sg}	V _g	I _a mA.	R _i Ohms or Megohms	Sc† mA/V.	W ₀ Watts	Opt.† Load Ohms	Wireless World Base No.	Alternative Wireless World Base No.‡	Price
VO2 & VO2s ...	Octode F. Ch. ... M	0.13f	135	60	Vm	0.7	2.0 MΩ	0.27†	0.9	8.5‡	BR730	SC824	0/6
VX2 & VX2s ...	Hexode Mixer-Ampl. M	0.13f	135	60	Vm	1.0	1.0 MΩ	1.4	—	—	BR717	SC822	9/-
DG210/o ...	Double Grid F. Ch. C	0.13f	100	20	1.5	1.0	5,000Ω	1.0	—	—	BR57	—	5/-
VP2B & VP2Bs ...	Grid Top Vm Pen. M	0.05f	135	135	Vm	2.5	2.0 MΩ	0.65	—	—	BR711	SC814	9/-
VP2D ...	Grid Top Vm Pen. M	0.1 f	120	60	Vm	1.3	1.0 MΩ	2.0	—	—	BR711	—	9/-
HP211c ...	Anode Top Vm Pen. M	0.13f	150	150	Vm	2.6	2.0 MΩ	1.7	—	—	BR712	BR49	9/-
SP2B & SP2Bs ...	Grid Top R.F. Pen. M	0.05f	135	135	0.5	2.6	1.3 MΩ	0.8	—	—	BR711	SC814	9/-
SP2D ...	Grid Top R.F. Pen. M	0.1 f	120	60	1.0	1.0	1.0 MΩ	1.7	—	—	BR711	—	9/-
HP210c ...	Anode Top R.F. Pen. M	0.13f	150	150	1.0	1.9	2.0 MΩ	1.9	—	—	BR712	BR49	9/-
SE211c ...	Vm Screen Grid M/C	0.13f	150	75	Vm	1.0	1.0 MΩ	1.5	—	—	BR48	—	9/-
SS210c ...	Straight Scrm. Grid M/C	0.13f	150	75	0.9	1.5	1.5 MΩ	1.4	—	—	BR48	—	9/-
HL2 & HL2s ...	Triode Osc. or Det. M/C	0.13f	135	—	1.5	1.2	20,000Ω	1.5	—	—	BR47	SC87	4/0
HR210 ...	Triode H.F. or Det. M/C	0.13f	135	—	1.5	1.2	23,000Ω	1.3	—	—	BR47	—	4/0
HR2 & HR2s ...	Triode R.C. or Det. C	0.065f	135	—	1.5	1.2	40,000Ω	0.6	—	—	BR47	SC87	4/0
LD210 ...	Triode L.F. or Det. M/C	0.13f	150	—	4.5	3.0	14,000Ω	1.3	—	—	BR47	—	4/0
DDT2 & DDT2A ...	Double Diode Triode M	0.1 f	135	—	2.5	1.0	21,000Ω	1.4	—	—	BR59	BR59x	7/6
DDT2B & DDT2Bs ...	Double Diode Triode M	0.1 f	135	—	4.5	2.5	16,000Ω	1.0	—	—	BR59	SC810	7/6
LL2 & LL2s ...	Driver Triode ... C	0.2 f	135	—	2.5	3.0	11,000Ω	2.6	0.055	25,000	BR47	SC87	4/0
LP220 ...	Low Power Triode... C	0.2 f	150	—	6.0	5.0	3,500Ω	3.5	0.200	7,500	BR47	—	6/-
P215 ...	Power Triode ... C	0.15f	150	—	12.0	8.0	3,300Ω	1.5	0.260	7,000	BR47	—	6/-
SP220 ...	Super Power Triode C	0.2 f	150	—	18.0	14.0	2,200Ω	3.0	0.360	6,700	BR47	—	6/-
CB215 & CB215s ...	Cl. B. Double Triode C	0.22f	135	—	0	12.0†	—	2.0	1.700	10,000	BR76	SC812	9/6
CB220 ...	Cl. B. Double Triode C	0.25f	150	—	3.0	15.0†	—	2.0	2.000	10,000	BR76	—	9/6
PP2 & PP2s ...	Economy Pentode... C	0.14f	135	135	5.0	7.0	—	2.1	0.440	19,000	BR513	SC815	9/-
PP215 & PP215s ...	Low Voltage Pen. ... C	0.15f	90	90	4.5	8.0	—	1.7	0.250	14,000	BR512	SC815	9/-
PP225 & PP225s ...	Large Pentode ... C	0.20f	135	135	12.0	18.0	—	2.0	0.900	6,000	BR512	SC815	9/-

x Diodes reversed.

6.3-VOLT "E" RANGE
(Side Contact and "Footless" Based)

Type No.	Description C = Clear M = Metallised	I _H Amps.	V _a	V _{sg}	V _g	I _a mA.	R _i Ohms or Megohms	Sc† mA/V.	W ₀ Watts	Opt.† Load Ohms	Wireless World Base No.	Alternative Wireless World Base No.‡	Price
ECH2 ...	Triode Heptode F. Ch. M	.95	250	100	Vm	3.2	1.5 MΩ	0.75†	5.5	7‡	SC826	—	11/6
ECH3 ...	Triode Hexode F. Ch. M	.2	250	Rf	Vm	3.0	1.0 MΩ	0.65†	2.8	10‡	SC826	—	11/6
ECH11 ...	Footless Triode Hex. M	.2	250	Rf	Vm	3.0	1.0 MΩ	0.65†	2.8	10‡	FO85	—	11/6
EK2 ...	Auto. Octode F. Ch. M	.2	250	50	Vm	1.0	1.0 MΩ	0.55†	1.5	15‡	SC825	—	11/6
EK3 ...	Beam Octode F. Ch. M	.65	250	100	Vm	2.5	2.0 MΩ	0.65†	4.5	12‡	SC825	—	11/6
EF5 ...	Vm R.F. Pen. ... M	.2	250	100	Vm	8.0	1.2 MΩ	1.7	—	—	SC818	—	10/6
EF6 ...	Straight R.F. Pen... M	.2	250	100	2.0	3.0	2.5 MΩ	2.0	—	—	SC818	—	10/6
FF8 ...	Vm R.F. Hexode ... M	.2	250	250	Vm	8.0	0.4 MΩ	1.8	—	—	SC819	—	10/6
EF9 ...	Log R.F. Pentode... M	.2	250	Rf	Vm	6.0	1.5 MΩ	2.2	—	—	SC818	—	10/6
EF11 ...	Footless Vm Pen. ... M	.2	250	Rf	Vm	6.0	1.5 MΩ	2.2	—	—	FO82	—	10/6
EF12 ...	Footless St. R.F. Pen. M	.2	250	100	2.0	3.0	2.5 MΩ	2.0	—	—	FO82	—	10/6
EBF2 ...	Duo Diode R.F. Pen. M	.2	250	Rf	Vm	5.0	1.5 MΩ	1.8	—	—	SC821	—	11/6
EBF11 ...	Footless DD RF Pen. M	.2	250	Rf	Vm	5.0	1.5 MΩ	1.8	—	—	FO84	—	11/6
EB3 ...	Duo Diode Triode... M	.2	275	—	6.2	5.0	15,000Ω	2.0	—	—	SC811	—	9/6
EAB1 ...	Triple Diode ... M	.2	200	—	—	0.8	15,000Ω	—	—	—	SC86	—	5/6
EB4 ...	Duo Diode ... M	.2	200	—	—	0.8	15,000Ω	—	—	—	SC85	—	5/6
EBL1 ...	D.D. Output Pen. ... M	.2	250	250	6.0	36.0	—	10.0	3.6	7,000	SC821	—	12/6
EL2 ...	Output Pentode ... C	.2	250	250	18.0	32.0	—	2.8	3.6	8,000	SC817	—	10/6
EL3 ...	Output Pentode ... C	1.2	250	250	6.0	36.0	—	10.0	3.6	7,000	SC816	—	10/6
EL5 ...	Output Pentode ... C	1.35	250	250	10.0	72.0	—	8.5	8.8	3,500	SC816	—	13/6
EL6 ...	Output Pentode ... C	1.4	250	250	7.0	72.0	—	15.0	8.2	3,500	SC816	—	12/-
ELL1 ...	Double Pentode ... C	.45	250	250	22.0	2 x 15	—	1.3	5.5	16,000	SC820	—	12/-
EFM1 ...	Vm Pen. Magic Eye. C	.2	250	Rf	Vm	1.0	—	1.0	—	—	SC827	—	12/-
EM1 ...	Magic Eye ... C	.2	250	250	Vm	0.7	—	—	—	—	SC828	—	8/6
EM4 ...	Double Magic Eye... C	.2	250	250	Vm	0.75	—	—	—	—	SC829	—	8/6
CL6 ...	Output Pen. (37 v)... C	.2	200	100	8.5	45.0	—	8.0	4.0	4,500	SC817	—	10/6
CBL1 ...	D.D.O.P. Pen. (39 v) C	.2	200	200	7.5	45.0	—	8.0	4.0	4,500	SC821	—	12/6
EZ2 ...	Vibrator Rec. F.W. C	.4	400	—	—	60.0	—	—	—	—	SC83	—	9/-
EZ3 ...	Vibrator Rec. F.W. C	.65	400	—	—	100.0	—	—	—	—	SC83	—	9/-
EZ4 ...	Large Rec. F.W. ... C	.9	400	—	—	175.0	—	—	—	—	SC83	—	20/-

TUNGSRAM VALVES (continued).**INTERNATIONAL AND AMERICAN TYPES**
(Octal and UX Based.) (See separate table for 1.4-volt types.)

Type No.	Description C = Clear M = Metallised	V _H Volts	I _H Amps.	V _a	V _g	V _g	I _a mA.	R _i Ohms or Megohms	S _c † mA/V.	W _o ‡ Watts	Opt.† Load Ohms	Wireless World Base No.	Alternative Wireless World Base No. §	Price
6A8G & 6A7	Pentagrid F. Ch. ... C	6.3	0.3	250	100	V _m	3.5	0.36MΩ	0.52†	1.2	20†	10833	UX73	11/6
6B8G & 6B7	Duo Diode Vm R.F. Pen C	6.3	0.3	250	100	V _m	10.0	0.6 MΩ	1.2	—	—	10830	UX71	11/6
6E8G...	Triode Hexode F. Ch.... M	6.3	0.3	250	100	V _m	3.3	1.0 MΩ	0.65†	2.8	10†	10836	—	11/6
6F6G & 42 ...	Output Pentode ... C	6.3	0.7	250	250	16.5	34.0	—	2.65	3.0	7,000	10827	UX69	10/6
6H6G ...	Duo Diode (sep. Caths.) C	6.3	0.3	100	—	—	4.0	10,000Ω	—	—	—	1087	—	5/6
6J5G ...	Triode Osc., A.F. ... C	6.3	0.3	250	—	8.0	9.0	7,000Ω	2.6	0.15	4,000	1089	—	7/6
6J7G & 77 ...	Screened R.F. Pen., Det. C	6.3	0.3	250	125	3.0	2.0	1.0 MΩ	1.2	—	—	10825	UX67	10/6
6J8G ...	Triode Heptode F. Ch. C	6.3	0.3	250	100	V _m	1.2	4.0 MΩ	0.29†	—	10†	10836	—	11/6
6K7G & 78 ...	Screened Vm R.F. Pen. C	6.3	0.3	250	125	V _m	10.0	0.6 MΩ	1.65	—	—	10824	UX67	10/6
6K8G...	Screened Beam F. Ch.... C	6.3	0.3	250	100	V _m	2.5	0.6 MΩ	0.35†	3.0	7.5†	10837	—	11/6
6L6G ...	Beam Power Tetrode ... C	6.3	0.9	250	250	14.0	72.0	—	6.0	6.5	2,500	10817	—	15/-
6L7G ...	Pentagrid Mixer ... C	6.3	0.3	250	150	3.0	3.3	1.0 MΩ	0.35	—	12†	10834	—	11/8
6Q7G ...	Duo Diode Triode ... C	6.3	0.3	250	—	3.0	1.1	58,000Ω	1.2	—	—	10813	—	9/6
6TH8G ...	Triode Hexode F. Ch.... M	6.3	0.6	250	100	V _m	5.5	1.0 MΩ	1.0	1.5	15†	10836	—	11/6
6U5G & 6U5...	Vm Magic Eye... ... C	6.3	0.3	250	250	V _m	0.24	—	—	—	1 MΩ	10838	UX611	8/6
6U7G & 6D6...	Vm R.F. Pen. ... C/M	6.3	0.3	250	100	V _m	8.2	0.8 MΩ	1.6	—	—	10824	UX67	10/6
6V6G ...	Beam Power Tetrode ... C	6.3	0.45	250	250	12.5	45.0	—	4.1	4.3	5,000	10817	—	10/6
6X5G...	I.H. Rectifier Vibr. ... C	6.3	0.63	350	—	—	100	—	—	—	—	1085	—	9/-
5Y3G & 80 ...	D.H. Rectifier ... C	5.0	2.0 f	350	—	—	125	—	—	—	—	1082	UX41	9/-
5Z4G & 80A...	I.H. Rectifier ... C	5.0	1.5	350	—	—	125	—	—	—	—	1084	UX42	9/-
5T4G & 5X4G	Large Rectifier... ... C	5.0	2.0 f	450	—	—	250	—	—	—	—	1082	UX41	10/6
5U4G & 5Z3...	Large Rectifier... ... C	5.0	2.0 f	450	—	—	250	—	—	—	—	1082	UX41	15/-
25A6G & 43 ...	Output Pentode ... C	25.0	0.3	180	135	20.0	38.0	—	2.5	2.75	5,000	10827	UX69	10/6
25L6G ...	Output Pentode ... C	25.0	0.3	200	100	8.5	45.0	—	8.0	4.0	4,500	10817	—	10/6
25Y5G & 25Y5	AC/DC Rectifier ... C	25.0	0.3	275	—	—	100	—	—	—	—	1087	UX61	9/-
25Z6G & 25Z5	AC/DC Rectifier ... C	25.0	0.3	125	—	—	100	—	—	—	—	1087	UX61	9/-

MISCELLANEOUS TYPES

(Octal, UX and English Bases.)

(Some older types may be listed as alternatives in International tables.)

Type No.	Description C = Clear M = Metallised	V _H Volts	I _H Amps.	V _a	V _g	V _g	I _a mA.	R _i Ohms or Megohms	S _c † mA/V.	W _o ‡ Watts	Opt.† Load Ohms	Wireless World Base No.	Alternative Wireless World Base No. §	Price
2A5 ...	Output Pentode ... C	2.5	1.75	250	250	16.5	34.0	—	2.65	3.0	7,000	UX69	—	10/6
2A6 ...	Duo Diode Triode ... C	2.5	0.8	250	—	2.0	0.8	90,000Ω	1.1	—	—	UX64	—	9/6
2A7 ...	Pentagrid F. Ch. ... C	2.5	0.8	250	100	V _m	3.5	0.36MΩ	0.52†	1.2	20†	UX73	—	11/6
2B7 ...	Duo Diode R.F. Pen. ... C	2.5	0.8	250	100	V _m	10.0	0.6 MΩ	1.2	—	—	UX71	—	11/6
6C5G* & 76 ...	Triode ... C	6.3	0.3	250	—	13.5	5.0	10,000Ω	1.45	1.0	4,000	1089	UX52	7/6
6C6 ...	R.F. Pen., Det. ... C	6.3	0.3	250	100	3.0	2.0	1.0 MΩ	1.22	—	—	UX67	—	10/6
6G5G & 6G5...	Magic Eye ... C	6.3	0.3	250	250	V _m	0.24	—	—	—	1 MΩ	10838	UX611	8/6
PX2100 or 10	Large Triode ... C	7.5	1.25f	450	—	32.0	18.0	5,000Ω	1.6	1.6	10,000	UX44	UX41	9/6
18 ...	AC/DC Output Pen. ... C	14.0	0.3	200	200	12.0	40.0	—	2.65	2.5	7,500	UX69	—	10/6
19 ...	Cl. B. Double Triode ... C	2.0	0.26f	150	—	3.0	15.0¶	—	2.0	2.0	10,000	UX62	—	9/6
24A ...	Screened Tetrode ... C	2.5	1.75	250	90	3.0	4.0	0.4 MΩ	1.05	—	—	UX53	—	10/6
33 ...	Output Pentode ... C	2.0	0.26f	135	135	12.0	18.0	—	2.0	1.0	6,000	UX54	—	9/-
35 & 51 ...	Vm Screened Tetrode... C	2.5	1.75	250	90	V _m	6.5	0.4 MΩ	1.05	—	—	UX53	—	10/6
45 ...	Output Triode ... C	2.5	1.5 f	275	—	56.0	36.0	—	2.05	2.0	4,600	UX44	—	9/6
47 ...	Output Pentode ... C	2.5	1.75f	250	250	16.5	31.0	—	2.5	2.7	7,000	UX51	—	10/6
P25/450 & 50	Large Triode ... C	7.5	1.25f	450	—	84.0	55.0	1,800Ω	2.1	4.6	4,400	BR47	UX44	20/-
57 ...	R.F. Pentode ... C	2.5	1.0	250	100	3.0	2.0	1.0 MΩ	1.22	—	—	UX67	—	10/6
58 & 58M ...	Vm R.F. Pentode C/M	2.5	1.0	250	100	V _m	8.2	0.8 MΩ	1.6	—	—	UX67	UX67	10/6
75 ...	Duo Diode Triode ... C	6.3	0.3	250	—	2.0	0.8	90,000Ω	1.1	—	—	UX64	—	9/6
81 ...	Half Wave Rectifier ... C	7.5	1.25f	700	—	—	85.0	—	—	—	—	UX43	—	17/6
PP2101 ...	Output Pentode ... C	2.0	0.14f	135	135	5.0	7.0	—	2.1	0.44	19,000	UX54	—	9/-
PV25 ...	Double Rectifier ... C	25.0	0.3	275	—	—	100	—	—	—	—	BR71	—	9/-
PVB6 ...	Automobile Rect. Vibr. C	6.3	0.63	400	—	—	100	—	—	—	—	BR52	—	9/-
DDPP6B ...	Duo Diode Output Pen. C	6.3	1.4	250	250	6.0	36.0	—	10.0	3.6	7,000	BR724	—	12/6
PP13A ...	AC/DC Output Pentode C	13.0	0.3	200	200	12.0	40.0	—	2.65	2.5	7,500	BR719	—	10/6
PP6BG & PP6C	Output Pentode ... C	6.3	1.2	250	250	6.0	36.0	—	10.0	3.6	7,000	10826	BR713	10/6

OTHER TYPES

0.18-AMP. UNIVERSAL AC/DC						LARGE POWER AND TRANSMITTING TYPES					
Wireless World Base No.	Price	Wireless World Base No.	Price	Wireless World Base No.	Price	Large Power Triodes		Transmitting Pentodes and Triodes		Rectifiers (Vacuum and Gas)	
MH1118	CO74	11/6	R2018	BR51	9/6	O15/400	P60/500	APP4G	OQ15/600	V21/7000	
HP2118	BR510/714	12/6	PP2018	BR54	13/-	P25/500	OP70/1000	OS12/500	OQ25/800	PV75/1000	
HP2018	BR510/714	12/6	PP2018	BR514/719	13/6	P26/500	O75/1000	OS12/501	OP38/600	PV100/2000	
HP1118	CO72	10/6	PP4118	CO73	10/6	P27/500	P100/1000	OS18/600	OQ35/1500	RG250/1000	
HP1018	CO72	10/6	PV3018	CO71	9/-	P28/500	P100/1250	OS40/1250	OQ71/1000	RG250/3000	
DD818	BR53	5/6	V2118	BR51	10/-	P30/500	O240/2000	OS125/2000	OQ150/3000	RG1000/3000	
						OP37/600	O250/2000		O800/3000		
							O1500/5000				

Rf Floating screen potential derived from dropping resistance.

§ Where two type numbers are shown, the alternative Base No. or Price applies only to the second type.

† Conversion conductance in the case of mixer valves (mA/V).

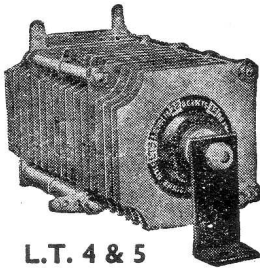
¶ Average I_a at full output (mA).V_m Variable-mu.

‡ Optimum heterodyne voltage in the case of mixer valves (r.m.s.).

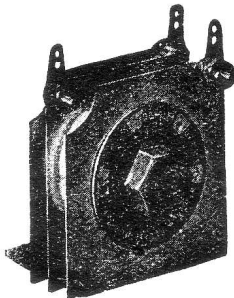
|| Triode slope in the case of frequency changer valves (mA/V).

/ Directly heated filament.

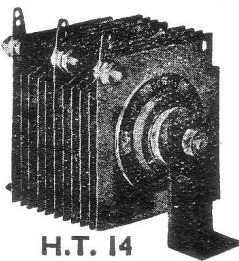
WHEN RELIABILITY comes first



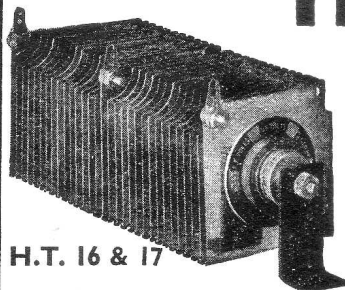
L.T. 4 & 5



L.T. 7, 8 & 9



H.T. 14

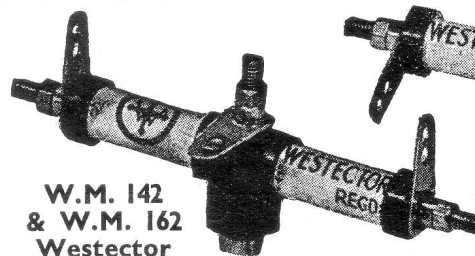


H.T. 16 & 17

Type	Condenser Capacity mfd.	Condenser Rating Volts	Type of Rectifier	Max. Input		Normal Rect. Current mA.	Unsmoothed Volts	
				Volts RMS	Current mA.		Full Current	Half Current
H.T.14	4+4	200	{ V.D. H.W.	80 135	60 30	20	140	170
H.T.15	4+4	200	{ V.D. H.W.	140 250	120 80	30	230	315
H.T.16	4+4	400	{ V.D. H.W.	240 400	200 90	60	330	515
H.T.17	8+8	250	{ V.D. H.W.	150 250	300 150	100	225	350
H.T.17 for Class B	8	350	H.W.	150	40	25	150	175
2xH.T.17	6+6	500	V.D.	300	550	120	530	620
H.1	100	12	H.W.	3.5	15	10	3.6	4
H.10	10	50	H.W.	35	15	10	36	40
H.50	2	250	H.W.	175	15	10	180	205
H.75	2	400	H.W.	260	15	10	270	305
H.100	1	500	H.W.	350	15	10	360	410
H.176	0.5	1,100	H.W.	620	15	10	650	730
J.10	10	250	H.W.	80	3	2	80	—
J.20	5	500	H.W.	160	3	2	160	—
J.50	2	650	H.W.	400	3	2	400	—
J.100	1	1,250	H.W.	800	3	2	800	—
J.176	0.5	2,000	H.W.	1,400	3	2	1,400	—
2xH.120	0.5 + 0.5	700	V.D.	480	30	10	870	1,000
2xH.176	0.25 + 0.25	1,000	V.D.	720	30	10	1,300	1,500
10xH.176	0.05 + 0.05	5,000	V.D.	3,600	30	10	6,500	7,500
2xJ.10	10+10	250	V.D.	80	6	2	170	—
2xJ.50	2+2	650	V.D.	400	6	2	850	—
2xJ.100	1+1	1,250	V.D.	800	6	2	1,700	—
4xJ.125	0.5+0.5	3,000	V.D.	1,700	6	2	4,000	—
2xJ.176	0.5+0.5	2,000	V.D.	1,400	6	2	3,000	—
10xJ.176	0.1+0.1	12,000	V.D.	7,000	6	2	15,000	—
W.4	0.0001	—	Detector (H.W.)	24	—	0.25	—	—
W.6	0.0001	—	Detector (H.W.)	36	—	0.25	—	—
W.X.1	0.0001	—	Detector (H.W.)	6	—	0.1	—	—
W.X.6	0.0001	—	Detector (H.W.)	36	—	0.1	—	—
W.M.142	0.0002	—	Detector (F.W.)	24+24	—	0.5	—	—
W.M.162	0.0002	—	Detector (F.W.)	36+36	—	0.5	—	—
L.T.4	—	—	B.	11	Amps. 1.5	Amps. 1	6	—
L.T.5	—	—	B.	22	1.5	1	12	—
L.T.7	—	—	C.T.	4+4	0.42	1	2	—
L.T.8	—	—	C.T.	8+8	0.42	1	6	—
L.T.9	—	—	C.T.	16+16	0.42	1	12	—
L.T.10	—	—	B.	20	3	2	12	—
L.T.11	—	—	B.	11	5.5	4	6	—
A.4	—	—	B.	14	3	2	9	—

V.D.—Voltage doubler. H.W.—Half-wave. B.—Bridge. C.T.—Centre-tapped.

Westinghouse metal rectifiers

W.M. 142
& W.M. 162
WestectorW. 4 & W. 6
Westector

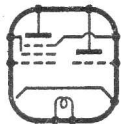
H. Type

Valve Symbols

AS USED IN "WIRELESS WORLD" CIRCUIT DIAGRAMS
(Including Cathode-ray Tube, Barretter and Tuning Indicator Symbols)



Triode-hexode.



Triode-pentode.



Octode.



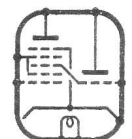
Pentagrid.



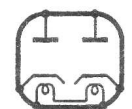
Heptode.



Class B valve.



Triode-heptode.



Voltage-doubling rectifier.



RF low-noise valve



RF pentode.



RF tetrode.



Double diode.



Double diode (split cathode).



Double-diode-triode.



QPP output valve.



Directly-coupled double triode.



Cathode-ray tuning indicator.



Triode.



Output tetrode.



Output pentode.



Half-wave rectifier.



Full-wave rectifier.



Directly-heated cathode (filament).



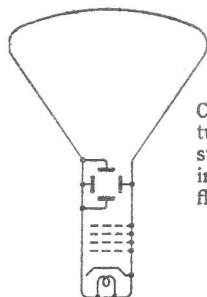
Double-diode output pentode.



Gas-filled triode.



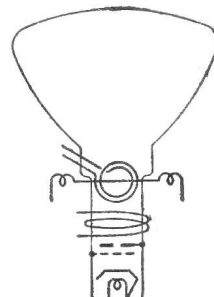
Barretter.



Cathode-ray tube (electrostatic focusing and deflection).

As a general rule symbols for indirectly heated (mains) valves are shown, although directly heated (battery) equivalents for most types are available. These battery valves are represented by replacing the heater and cathode symbols by the directly heated filament symbol which is given.

The general symbols for cathode-ray tubes relate to the all-electrostatic and all-magnetic types. When the two methods of deflection or focusing are combined in a single tube, the symbols are modified in the obvious manner.



Cathode-ray tube (magnetic focusing and deflection).