

*Valves that give
Perfect Radio
Reception*



Mullard
THE · MASTER · VALVE

MULLARD

TYPE L.F.

(The Green Ring Valve.)

A bright filament valve suitable for low-frequency amplification. It is advisable to use grid bias of 1, 1½, 2, 3 volts for anode voltages of 30, 50, 70, 90 volts respectively. This valve requires a 4-volt accumulator to heat the filament.

Filament voltage 3.2 to 3.8 volts.
Filament current 0.6A.
Anode voltage 30 to 90 volts.
Total emission 5 mA.
Approx. Impedance 30,000 ohms.
Normal working slope 0.27 mA/volt.
Amplification Factor 8.4.



L.F. Code IUZAN Price 8/-

TYPE H.F.

(The Red Ring Valve.)

A bright filament valve of rigid construction designed for use as an H.F. amplifier and detector. A 4-volt accumulator is recommended for filament heating. When used as a detector a suitable value of grid leak is 3.0 megohms with a condenser of .0003 mfd.

Filament voltage 3.2 to 3.8 volts.
Filament current 0.6A.
Anode voltage 30 to 90 volts.
Total emission 5.0 mA.
Approx. Impedance 40,000 ohms.
Normal working slope 0.28 mA/volt.
Amplification Factor 9.8.

Code IUZUH Price 8/-

Both H.F. and L.F. valves possess arched filaments, supported at the ends only and entirely free from longitudinal strain. Two advantages accrue from this: firstly, no danger of over-tension of the filament exists, and secondly, microphonic noises are practically absent in such valves. A 5-ohm filament resistance is suitable for both.



H.F.

THE MASTER VALVE

THE MASTER VALVE

TYPE S.3.

A general purpose bright filament valve designed to operate on very low anode voltages. It is suitable for rectification, and high and low frequency amplification.

Filament voltage 3.4 to 3.8 volts.
Filament current 0.6 to 0.7A.
Anode voltage 15 to 50 volts.
Total emission 5 mA.
Approx. Impedance 24,000 ohms.
Normal working slope 0.15 mA/volt.
Amplification Factor 4.



S.3.

Code IUDYO Price 20/-

TYPE S.6.

This is a dull filament valve with a high amplification factor. It is especially useful for resistance-capacity coupled amplification and also for H.F. and L.F. transformer amplification and detection. It is fitted with a helmet-shaped cap, as is also the S.3.

Filament voltage 3.0 volts.
Filament current 0.2A.
Anode voltage 20 to 100 volts.
Total emission 10 mA.
Approx. Impedance 100,000 ohms.
Normal working slope 0.23 mA/volt.
Amplification Factor 22.

Code IUYSX Price 27/6

These two valves will fit standard anti-capacity clips.



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TYPES

D.06 H.F. and D.3 H.F.

(Double Red Ring Valves.)



D.06 H.F. Code D.06 H.F. IUZGU .. Price 16/6
D.3 H.F. Code D.3 H.F. IUZIW .. Price 14/-

These valves are H.F. amplifiers and are also suitable for use in resistance capacity amplifiers. The anode voltage for normal operation is low (50-100 volts), but when used in a resistance amplifier it should be increased to 100-300 volts.

	D.06 H.F.	D.3 H.F.
Filament voltage	3.0v.	1.8 to 2.0v.
Filament current	0.06A.	0.3A.
Anode voltage	50 to 125 volts.	
Total emission	8 mA.	
Approx. Impedance	60,000 ohms.	
Normal working slope	0.29 mA/volt.	
Amplification Factor	17.	

TYPES

D.06 L.F. and D.3 L.F.

(Double Green Ring Valves.)

These are designed for L.F. amplification and are suitable for operating small loud speakers.

It is advisable to use grid bias with these valves, which possess an impedance of about 16,500 ohms.

	D.06 L.F.	D.3 L.F.
Filament voltage	3.0v. (max.)	2.0v. (max.)
Filament current	0.06A.	0.3A.
Approx. Impedance	17,000 ohms.	16,000 ohms.
Normal working slope	0.42 mA/volt.	0.4 mA/volt.
Amplification Factor	7.	6.5.
Anode voltage	30 to 100 volts.	
Total emission	8 mA.	

Code D.06 L.F. IUZKY .. Price 16/6
Code D.3 L.F. IUZMA .. Price 14/-



D.06 L.F.
D.3 L.F.

THE MASTER VALVE

THE MASTER VALVE

TYPES

D.06 and D.3 Detector.

(Double White Ring Valves.)



D.06
Detector.

An essential part of every wireless receiving set is a rectifying or "detecting" unit. This unit, in effect, converts high-frequency oscillations which carry the signal into low-frequency pulses which can actuate a telephone or L.F. amplifier.

The detector valve is therefore a very important link in any receiving set, for on its performance depends the final results obtained from the whole set.

In order to meet our many enquiries for valves suitable as detectors, we have installed special apparatus for selecting valves which are efficient for this purpose.

	D.06 Detector.	D.3 Detector.
Filament voltage	3.0v. (max.)	2.0v. (max.)
Filament current	0.06A.	0.3A.
Approx. Impedance	17,000 ohms.	16,000 ohms.
Normal working slope	0.42 mA/volt.	0.4 mA/volt.
Amplification Factor	7.	6.5.
Anode voltage	20 to 100 volts.	
Total emission	8 mA.	

Code D.06 Detector DEKTA
Price .. 16/6

Code D.3 Detector DEKAB
Price .. 14/-



D.3
Detector.

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TYPES

D.F.A.0. D.F.A.1. D.F.A.3.

(Dull Filament Amplifying Valves.)

These are power amplifiers using relatively low anode volts and suitable for the largest loud speakers. They give high amplification with purity of reproduction.

It is advisable to use grid bias with all these valves.

(See Table below.)

D.F.A.0.

This valve takes .35 amp. and requires a 4-volt accumulator for filament supply.

D.F.A.1. D.F.A.4.

These require a filament current of 0.25 amp., and small 6-volt accumulators are sufficient to supply this current.



D.F.A.0.

D.F.A.3.

This is a .06 amp. filament valve which may be run from dry cells.

GRID BIAS DATA
(for best operating conditions)

Anode Voltage	Approx. Negative Grid Potential (Volts)			
	D.F.A.0	D.F.A.1	D.F.A.3	D.F.A.4
50	3	3	2½	1½
75	5	4½	4	3
100	8	7	6	4½



D.F.A.1.

THE MASTER VALVE

THE MASTER VALVE

TYPES

D.F.A.1.

Filament voltage 5.0 volts.

Filament current 0.25A.

Anode voltage 30 to 100 volts.

Total emission 25 mA.

Approx. Impedance 5,000 ohms.

Normal working slope 1.0 mA/volt.

Amplification Factor 5.5

Code .. DAFON

Price .. 22/6

D.F.A.0.

Filament voltage 3.5 volts.

Filament current 0.25A.

Anode voltage 30 to 100 volts.

Total emission 20 mA.

Approx. Impedance 7,000 ohms.

Normal working slope 0.7 mA/volt.

Amplification Factor 5.0

Code .. NORDA

Price .. 22/6

D.F.A.3.

Filament voltage 5.5 to 6.0 volts.

Filament current 0.38A.

Anode voltage 30 to 100 volts.

Total emission 15 mA.

Approx. Impedance 13,000 ohms.

Normal working slope 0.6 mA/volt.

Amplification Factor 7.5

Code .. IUZBO

Price .. 24/6

TYPE

D.F.A.4.

A valve suitable for resistance capacity amplifiers. It has a high impedance, and with an anode resistance of 100,000 ohms an anode voltage of 100-300 volts is recommended.

Filament voltage 5.0 volts.

Filament current 0.25A.

Anode voltage 75 to 125 volts.

Total emission 13mA.

Approx. Impedance 27,000 ohms.

Normal working slope 0.75 mA/volt.

Amplification Factor 20.

Code IUZES

Price 22/6



D.F.A.4.

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TYPE L.F.

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Filament current 0.6A.
Anode voltage 30 to 90 volts.
Total emission 5 mA.
Approx. Impedance 30,000 ohms.
Normal working slope 0.27 mA/volt.
Amplification Factor 8.4.



L.F. Code IUZAN . . . Price 8/-

TYPE H.F.

(The Red Ring Valve.)

A bright filament valve of rigid construction designed for use as an H.F. amplifier and detector. A 4-volt accumulator is recommended for filament heating. When used as a detector a suitable value of grid leak is 3.0 megohms with a condenser of .0003 mfd.

Filament voltage 3.2 to 3.8 volts.
Filament current 0.6A.
Anode voltage 30 to 80 volts.
Total emission 5.0 mA.
Approx. Impedance 40,000 ohms.
Normal working slope 0.26 mA/volt.
Amplification Factor 9.8.

Code IUZUH . . . Price 8/-

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S.3.

Code IUDYO . . . Price 20/-

TYPE S.6.

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Filament current 0.2A.
Anode voltage 20 to 100 volts.
Total emission 10 mA.
Approx. Impedance 100,000 ohms.
Normal working slope 0.23 mA/volt.
Amplification Factor 22.

Code IUYSX . . . Price 27/6

These two valves will fit standard anti-capacity clips.



S.6.

MULLARD

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TYPE
P.M.4.

P.M.4.

This valve is designed for power amplification, but is suitable for use in all stages of a receiving set. The filament is prepared by an entirely new process, whereby the special coating is obtained in an extremely adherent condition, and capable of giving considerable emission at very low temperatures. In fact, when in full operation the glow from the filament should be invisible in daylight. An additional advantage is the entirely non-microphonic nature of the filament. The current consumption is 100 milliamperes only, and therefore the upkeep costs are low in view of long life and low battery power required.

Filament voltage 3.8 volts.
 Filament current 0.1A.
 Anode voltage 30 to 100 volts.
 Total emission 20 mA.
 Approx. Impedance 9,000 ohms.
 Normal working slope 0.63 mA/volt.
 Amplification Factor 6.

Code PILMU .. Price 22/6

THE MULLARD WIRELESS SERVICE CO. Ltd.,

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THE MASTER VALVE