

# COSMOS DULL EMITTER VALVE.

Type D.E. 55.  
INSTRUCTIONS.

**IMPORTANT.—Read this before using the Valve**

Use a 6 volt accumulator. (Filament rating is 5.5 volts.)

Although the valve can be operated direct from 6 volts, increased life will be obtained if a filament rheostat or regulator is used, and the valve operated at the lowest temperature that will give the maximum volume of sound.

The filament operates at a very dull red heat, hardly visible in daylight.

If the valve fails to function properly, it may be due to bad contact between the valve pins and the sockets of the valve holder. This may be the case, even though the filament lights up. Try opening the split pins carefully with a penknife.

**This valve is made in two sizes—Standard Bulb and Small Bulb. The latter is necessary for some sets, including Cosmos 5-Valve Sets in some types of cabinets.**

If this valve is too long for your set, ask your supplier for a D.E.55 Small-Bulb Valve.

In case of any complaint concerning this valve, it should be returned to the dealer from whom it was purchased.

METRO-VICK SUPPLIES LTD. LONDON

The **D.E. 55 Valve** is an all-round general purpose valve of high inherent stability adapted for use in sets or circuits where the more efficient "Shortpath" valves are found too "lively." It is suitable for:—

**H.F. Amplifier.**  
**Detector.**  
**L.F. Amplifier.** } With all ordinary circuits.

In the last stage, Type SP. 55/R (Red Spot) should be used when a Loud Speaker is to be operated at considerable volume.

**H.T. Voltage.** H.F. Amplifier .... 30—60 volts  
 Detector .... 30—60 volts  
 L.F. Amplifier .... up to 120 volts

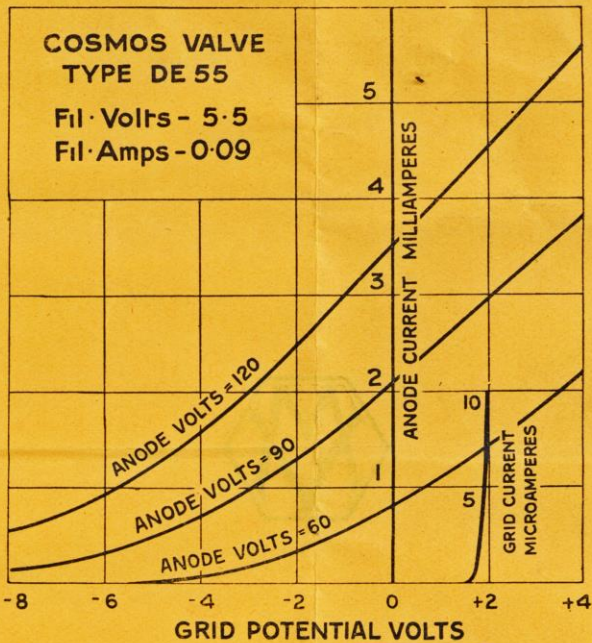
**Grid Bias.** **Detector.**—Grid leak should be connected to positive end of filament. A grid leak of 2 to 5 megohms is suitable.

H.F. Amplifier.  
 L.F. Amplifier. } Grid return lead should be connected to negative end of L.T. through grid battery of voltage value shown below.

**GRID BIAS TABLE FOR D.E.55 VALVE.**

Anode Voltage ....	30	60	90	120	
Grid Bias Volts ....	0	0	1.5	3.0	

The use of a grid battery not only improves quality of reproduction, but reduces H.T. current, and greatly increases the life of the H.T. battery, and the life of the valves.



Characteristic Curves of COSMOS Valve,  
Type D.E. 55.

Filament voltage	....	....	....	....	5.5 volts
Filament current	....	....	....	....	0.09 amps.
Anode impedance, approx.	....	....	....	....	18,000 ohms
Voltage amplification factor	....	....	....	....	9.0
Mutual conductance (slope of characteristic), approx. :—					0.5 mA per volt

