

FERRANTI

DOUBLE TRIODE

An indirectly heated double triode valve with centre tapped heater. Except for the common heater each triode unit is independent of the other. It is suitable for use as a frequency changer or R.F. Amplifier at frequencies up to 300 Mc/s.

PHYSICAL DETAILS.

Base	...	...	...	B9A (Noval).
Bulb	...	...	...	Clear.
Max. Overall Length	...	...	...	56 mm. (2 $\frac{3}{4}$ in.).
Max. Seated Height	...	...	...	49 mm. (1 $\frac{1}{2}$ in.).
Max. Diameter (Base)	...	...	...	22.2 mm. ($\frac{7}{8}$ in.).
Mounting Position	...	...	...	Any.

BASE CONNECTIONS.

Pin 1—Anode Triode 2.	Pin 5—Heater.
Pin 2—Grid Triode 2.	Pin 6—Anode Triode 1.
Pin 3—Cathode Triode 2.	Pin 7—Grid Triode 1.
Pin 4—Heater.	Pin 8—Cathode Triode 1.
Pin 9—Heater Centre Tap.	

HEATER.†

The heater is centre tapped and the two halves may be operated either in series or in parallel with one other.

	Series.†	Parallel.‡
Heater Voltage	12.6	6.3 volts.
Heater Current	0.15	0.3 Amp.

RATINGS.*

Max. Anode Supply Voltage	...	550 volts.
Max. Anode Voltage (working)	...	300 volts.
Max. Anode Dissipation	...	2.5 watts.
Max. Cathode Current	...	15 mA.
Max. Neg. Grid Voltage	...	50 volts.
Max. V _{h-k}	...	150 volts.
Max. R _{g-k} (Cathode Bias)	...	1.0 MΩ
Max. R _{h-k}	...	20 kΩ

CHARACTERISTICS.*

Anode Voltage	100	170	200	250	volts.
Grid Voltage	-1	-1	-1	-2	volts.
Anode Current	3.0	8.5	11.5	10	mA.
Mutual Conduc.	3.75	5.9	6.7	5.5	mA/V.
Amplificat. Factor	62	66	70	60	
Anode Imped.	16.5	11	10.5	11	kΩ

CAPACITANCES.

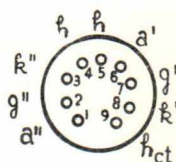
*C _{in}	...	...	...	2.3 pF.
Ca'-k'+h	...	...	...	0.45 pF.
Ca''-k''+h	...	...	...	0.35 pF.
*Ca-g	...	...	...	1.6 pF.
*Ca-k	...	...	...	0.2 pF.
*Ch-k	...	...	...	2.5 pF.
*Ck-g+h	...	...	...	4.7 pF.
Ca'-a''	...	...	...	<0.4 pF.
Cg'-g''	...	...	...	<0.005 pF.
Ca'-g'+h	...	...	...	1.9 pF.
Ca'-g''+h	...	...	...	1.8 pF.
Cg-h	...	...	...	<0.17 pF.
Ca'-g''	...	...	...	<0.07 pF.
Ca''-g'	...	...	...	<0.04 pF.

*Each Section.

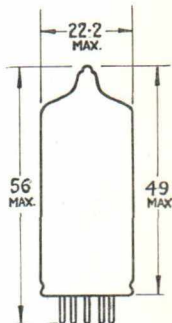
†V_h applied between pins 4 and 5.

‡V_h applied between pins 9 and pins 4 and 5 connected together.

12AT7



Base
Connections
Underside View
of Base



All dimensions
shown are in
millimetres
(max.).



12AT7

