NOTES

A. MAXIMUM PULSE DURATION 4% OF ONE CYCLE WITH A MAXIMUM OF 0.8 MILLI second.

B. PEAK PLATE CURRENT OF THE PENTODE SECTION IN VERTICAL OUTPUT APPLICATION.
   TO ALLOW FOR TUBE SPREAD AND FOR DETERIORATION DURING LIFE THE CIRCUIT SHOULD BE DESIGNED
   AROUND A PEAK PLATE CURRENT NOT EXCEEDING 85 MAVAMS AT A PLATE VOLTAGE OF 50 Volts AND A
   GRID #2 VOLTAGE OF 170 Volts, AT UNDERHEATING (HEATER VOLTAGE 5.3 VOLTS) A PEAK ANODE CUR-
   RENT OF 70 MAVAMS SHOULD BE TAKEN INTO CONSIDERATION AT A PLATE VOLTAGE OF 50 Volts AND A
   GRID #2 VOLTAGE OF 170 Volts, AND A PEAK ANODE CURRENT OF 80 MAVAMS AT A PLATE VOLTAGE OF 50
   Volts AND A GRID #2 OF 190 Volts. THE PEAK PLATE CURRENT OF AN AVERAGE NEW TUBE IS 135 MAVAMS
   AT A PLATE VOLTAGE OF 50 Volts, A GRID #2 VOLTAGE OF 170 Volts AND A GRID #1 CURRENT OF 0.3
   MICROMPERES.

C. OPTIMUM PEAK CATHODE CURRENT AS FRAME OSCILLATOR.
   TO ALLOW FOR TUBE SPREAD, FOR DETERIORATION DURING LIFE AND FOR EMISSION DROP AT UNDER-
   HEATING THE SET SHOULD BE DESIGNED SO THAT WITH A PEAK CATHODE OF 100 MILLIAMPS IT STILL
   OPERATES SATISFACTORILY (MAX. PULSE DURATION 4% OF A CYCLE, WITH A MAXIMUM OF 0.8 MILLISEC).
   IT IS RECOMMENDED THAT THE AMPLITUDE OF THE PEAK CURRENTS OCCURRING WITH FRESH TUBES
   BE LIMITED AUTOMATICALLY TO THIS MAX. VALUE OF 100 MILLIAMPS (+, - BY NON-BYPASSED RES-
   SISTOR IN THE GRID OR ANODE LEAD.

D. WITH GRID CURRENT BIASING THE MAXIMUM PERMISSABLE VALUE OF THE GRID CIRCUIT RESISTANCE
   IS 22 MEGOHMS.
   MAXIMUM A.F. OUTPUT VOLTAGE.

MICROPHONY AND HUM.

THE TRIODE SECTION CAN BE USED WITHOUT SPECIAL PRECAUTIONS AGAINST MICROPHONY AND HUM IN
CIRCUITS WITH A 5% LOUDSPEAKER WHEN THE INPUT VOLTAGE REQUIRED FOR AN OUTPUT POWER OF
50 WATTS OF THE OUTPUT TUBE IS HIGHER THAN 10 MVOLTS. THE A.C. VOLTAGE BETWEEN HEATER PIN
4 AND THE CATHODE SHOULD NOT EXCEED 6.3 VOLTS (RMS) IN THIS CASE AND THE GRID CIRCUIT IMPED-
ANCE AT 50C/5 SHOULD NOT EXCEED 0.5 MEGOHM.

→ INDICATES A CHANGE.
6BM8
PENTODE SECTION
$E_f = 6.3$ Volts

GRID #1 BIAS - VOLTS

PLATE - MILLIAMPERES

6BM8
PENTODE SECTION
$E_f = 6.3$ Volts
$E_{C2} = 200$ Volts

PLATE - MILLIAMPERES

PLATE - VOLTS
CIRCUIT DIAGRAM OF TRIODE SECTION AS A.F. AMPLIFIER AND PENTODE SECTION AS TRANSFORMER-LESS AUDIO OUTPUT TUBE.