

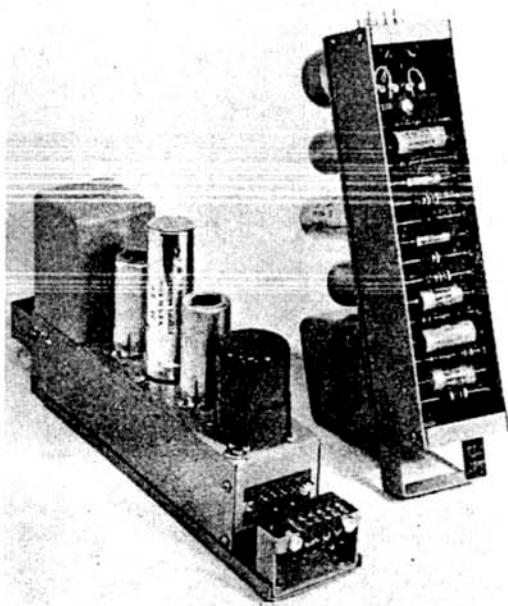
# Variable Equalization Microphone Preamplifier Type 100D

## DESCRIPTION:

A miniature 2-stage plug-in preamplifier with special provision for use of external plug-in equalizer (Type EQ 100D) which provides for low and high frequency roll and boost at no change in gain. 50 cps flat plus 3, plus 6, plus 9 boost or minus 3 or minus 6 roll. 5 KC or 10 KC switch for plus 3, plus 6, plus 9 boost or minus 3, minus 6 roll.

The 100D preamplifier has tube metering facilities and plug-in "FP" electrolytic condenser. It is designed for rack mounting in plug-in trays.

The 100D is available without the equalizer for use as booster in uncompensated microphone preamplifiers. The EQ 100D plug-in equalizer is substituted for one resistor at the plug terminals at no change in gain or distortion.



## SPECIFICATIONS

**Gain:** 40 DB.

**Input Impedance:** Designed to work from an input source of 30 to 60 ohms and 150 to 250 ohms. (Unloaded input transformer.)

**Output Load Impedance:** 150 or 600 ohms balanced. Due to the extremely low internal impedance the change in output voltage from load to no load is negligible.

**Maximum Output Power:** Plus 20 DBM at less than 0.3% IM (plus 22 DBM at less than 0.8%) using 40 cycles at 7 KC 4:1. Total harmonic distortion 30 to 15 KC less than 0.5%.

**Maximum Input Level:** —20 DBM.

**Output Noise Level:** Equivalent to input signal of less than 128 DBM.

**Frequency Response:** Plus or minus 1. DB 20 to 20,000 cps.

**Tube Complement:** 1 each 12AX7 (ECC83) and 1 each 12AY7. First stage is a cascode and the second stage is parallel connected. The total net feedback is approximately 33DB. Feedback consists of one internal loop over last stage and one overall loop from tertiary winding of output transformer to cathode of first stage. 325V at 9 ma, 6.3V at 0.6 amps.

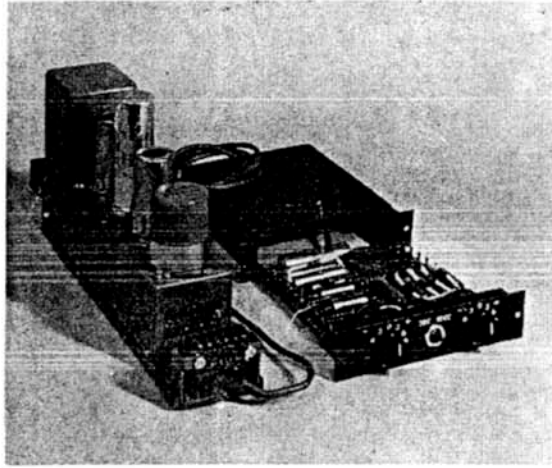
**Mechanical:** Width, 2 1/8". Length, 9 7/8" (incl. handle and tray). Height, 5 1/8". Weight, 3 1/2 pounds. (Side plates removable for access to all components below resistor strip.)

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## Plug-In Equalizer - Type No. 100D EQ

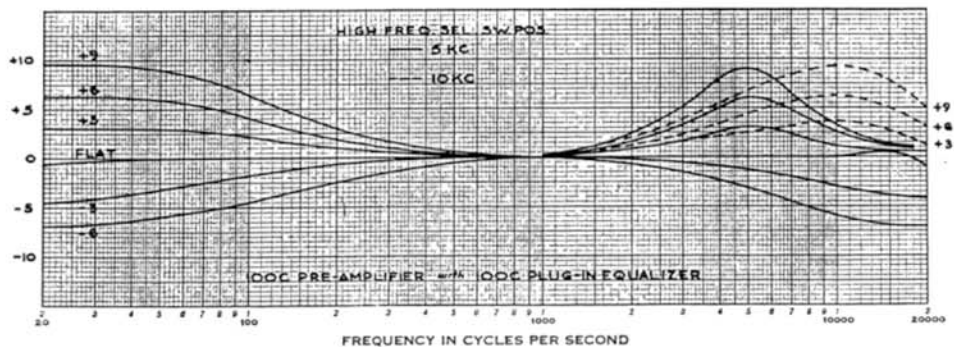


### DESCRIPTION:

The EQ 100D plug-in equalizer is a variable, environmental equalizer network which substitutes for one resistor in the 100D Preamplifier.

Only 1 pair of two conductor shielded is required for the connection of the equalizer unit and it may be operated as far as 20 feet from the 100D Preamplifier satisfactorily.

The gain of the 100D Preamplifier remains constant at 1000 cycles with or without the equalizer connected.



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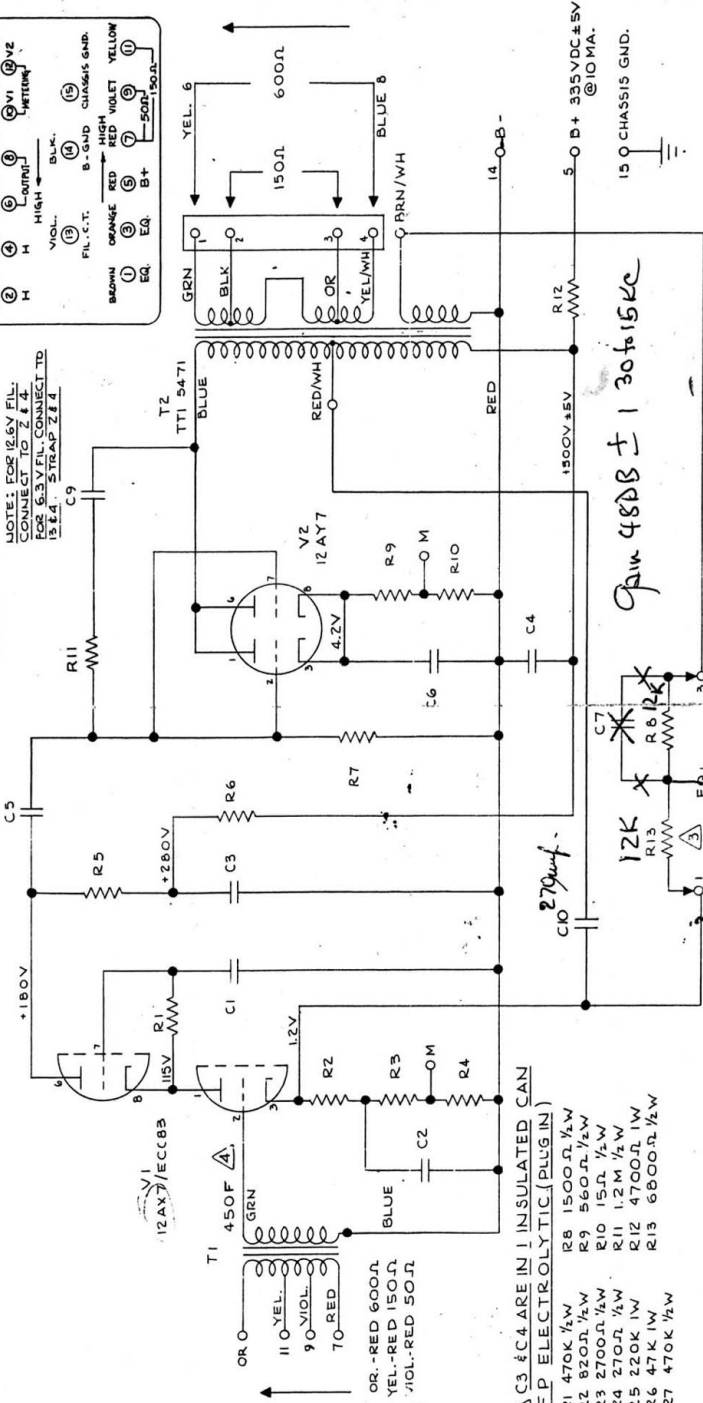
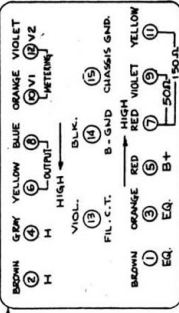
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A RELEASED

WIRING DIAGRAM - PLUG

NOTE: FOR 12.5V FIL: CONNECT TO 2 & 4. FOR 6.3V FIL: CONNECT TO 2 & 4. 15.0V STRAP 2 & 4.



Gain 48dB ± 1.30 to 15Kc

- ⚠ C3 & C4 ARE IN 1 INSULATED CAN
- F.P. ELECTROLYTIC (PLUG IN)
- R1 470K 1/2W
- R2 820Ω 1/2W
- R3 2700Ω 1/2W
- R4 270Ω 1/2W
- R5 220K 1W
- R6 47K 1W
- R7 470K 1/2W
- R8 1500Ω 1/2W
- R9 560Ω 1/2W
- R10 15Ω 1/2W
- R11 1.2M 1/2W
- R12 4700Ω 1W
- R13 6800Ω 1/2W

⚠ 450D HAS 600Ω TAP (ORANGE)  
 ⚠ DISCONNECT R13 WHEN 100B EQUALIZER IS USED.

- C1 .0027MFD/40V
- C2 50MFD 6V
- C3 20MFD 45V
- C4 20MFD 45V
- C5 .047MFD
- C6 50MFD 6V
- C7 .01MFD
- C9 .047MFD
- C10 450MFD 500V

⚠ ALL RESISTORS 5%.

UNIVERSAL AUDIO, INC.		MODEL 100 D	
OF HOLLYWOOD		PRE-AMPLIFIER	
DRAWN BY	L. HATCH	DESIGN BY	M. J. FISHER
CHECK BY	M. J. FISHER	APPROV BY	L. FISHER

Modified For Max Gain

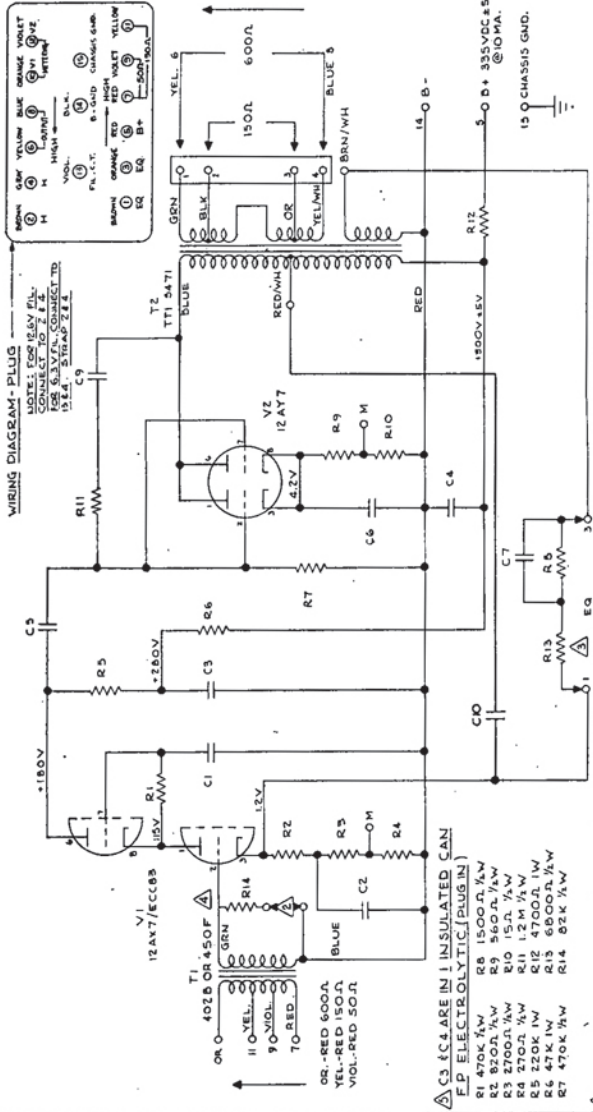


Fig. 8. Schematic of Model 100D microphone preamplifier.

