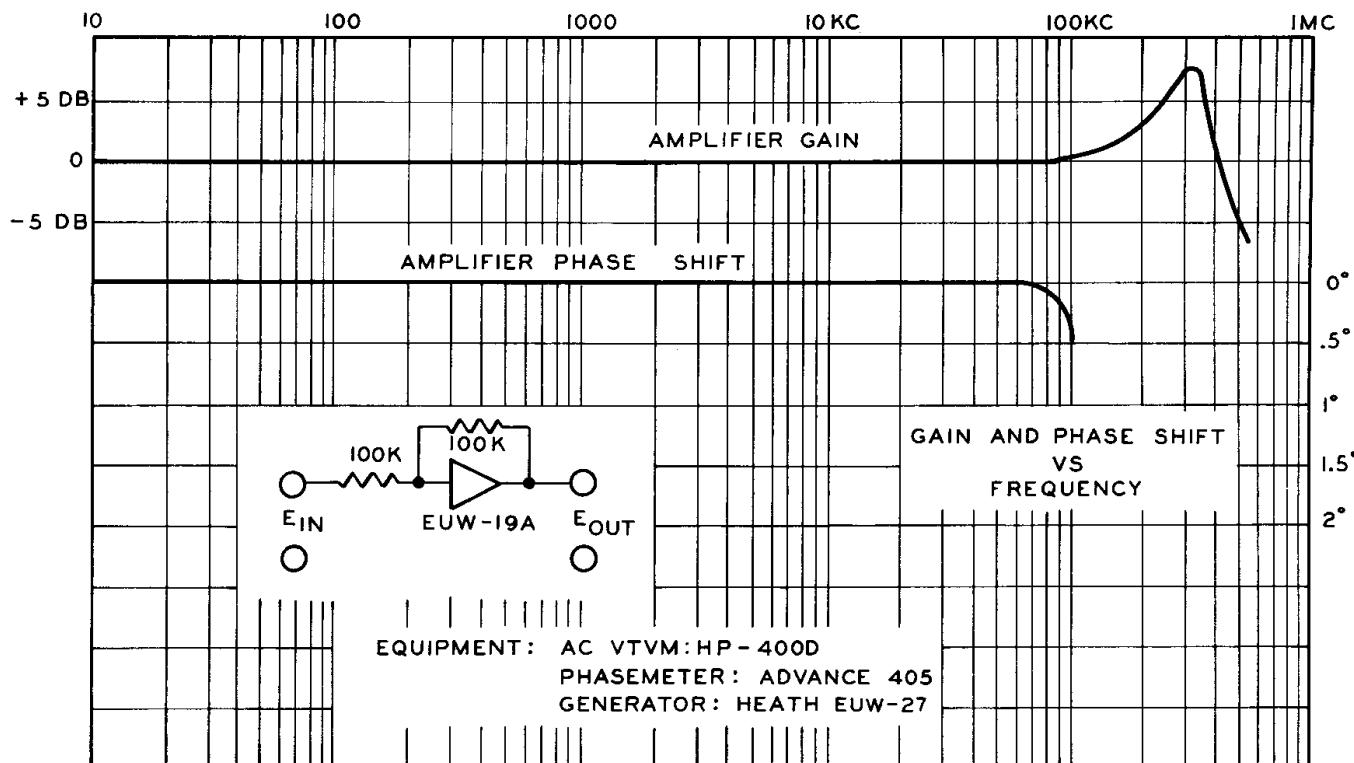


SPECIFICATIONS

- Contents of System. Four Differential Input Operational Amplifiers.
 One Booster Amplifier.
 One DC+ Power Supply, regulated.
 One DC- Power Supply, regulated.



OPERATIONAL AMPLIFIERS

- DC Gain, Open Loop. 21,000 (87 db), typical.
- Frequency Response. See curve.
- Output Voltage Range. -50 V DC to +50 V DC.
- Output Current Range. -1 ma to +1 ma with 50 KΩ load.
- Output Impedance. Less than 1.5 Ω with 1:1 feedback as shown.
- Phase Shift. See curve.
- Rise Time. 12 μ sec (with 1:1 feedback as shown).
- Drift. Less than ±8 mv/day referred to the input under normal conditions after 48 hours, or more, aging period.
- Bias Supplies. 4 - one for each amplifier for DC Zero adjustment. Amplifier 1 bias is switch selected for follower or inverter operation.

BOOSTER AMPLIFIER

Maximum Output.....	±20 ma at ±50 V DC.
Gain.....	Approximately 0.8.
Output Impedance.....	Less than 0.2 Ω.

**+300 V AND -300 V REGULATED
POWER SUPPLIES**

DC+ Output Voltage Range.....	Regulated +275 to +325 volts (approximately).
DC- Output Voltage Range.....	Regulated -275 to -325 volts (approximately).
Voltage Regulation (Each Supply).....	Output variation less than 1% from no load to full load at 300 volts. Output variation less than ±1 volt for a ±10 volt variation in the AC line input.
Ripple Voltage (Each Supply).....	Less than 10 millivolts rms ripple, jitter, and noise.
Output Impedance (Each Supply).....	Less than 10 Ω from 5-100,000 cps.

POWER REQUIREMENTS

AC Input.....	105-125 volts, 50/60 cps.
Filament Power Only.....	44 watts.
Total Power Required.....	94 watts at quiescent operating conditions.
Fuses.....	Two 3/4 ampere slow-blow fuses; one for the filament circuits, and one for the DC+ and DC- supplies.

AUXILIARY POWER CONNECTOR

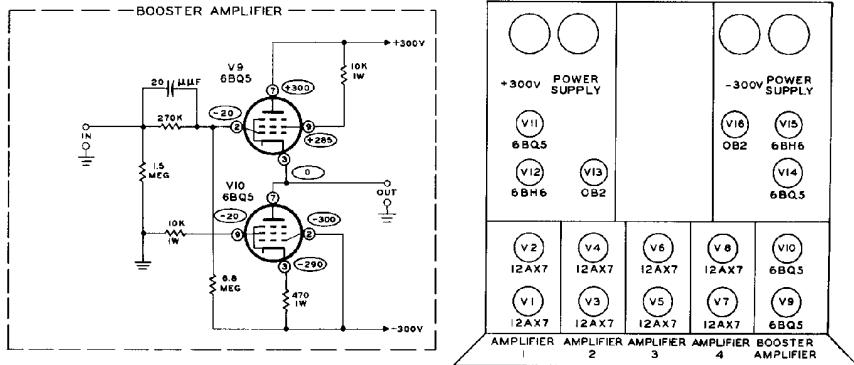
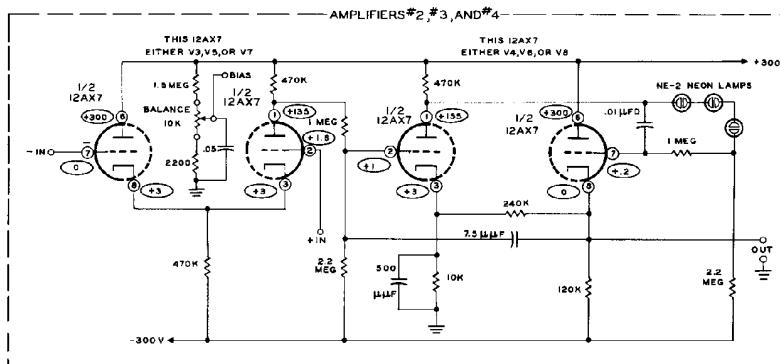
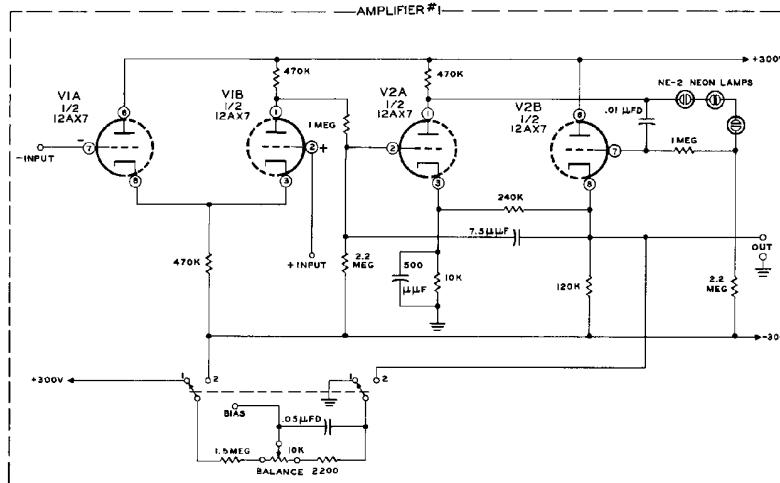
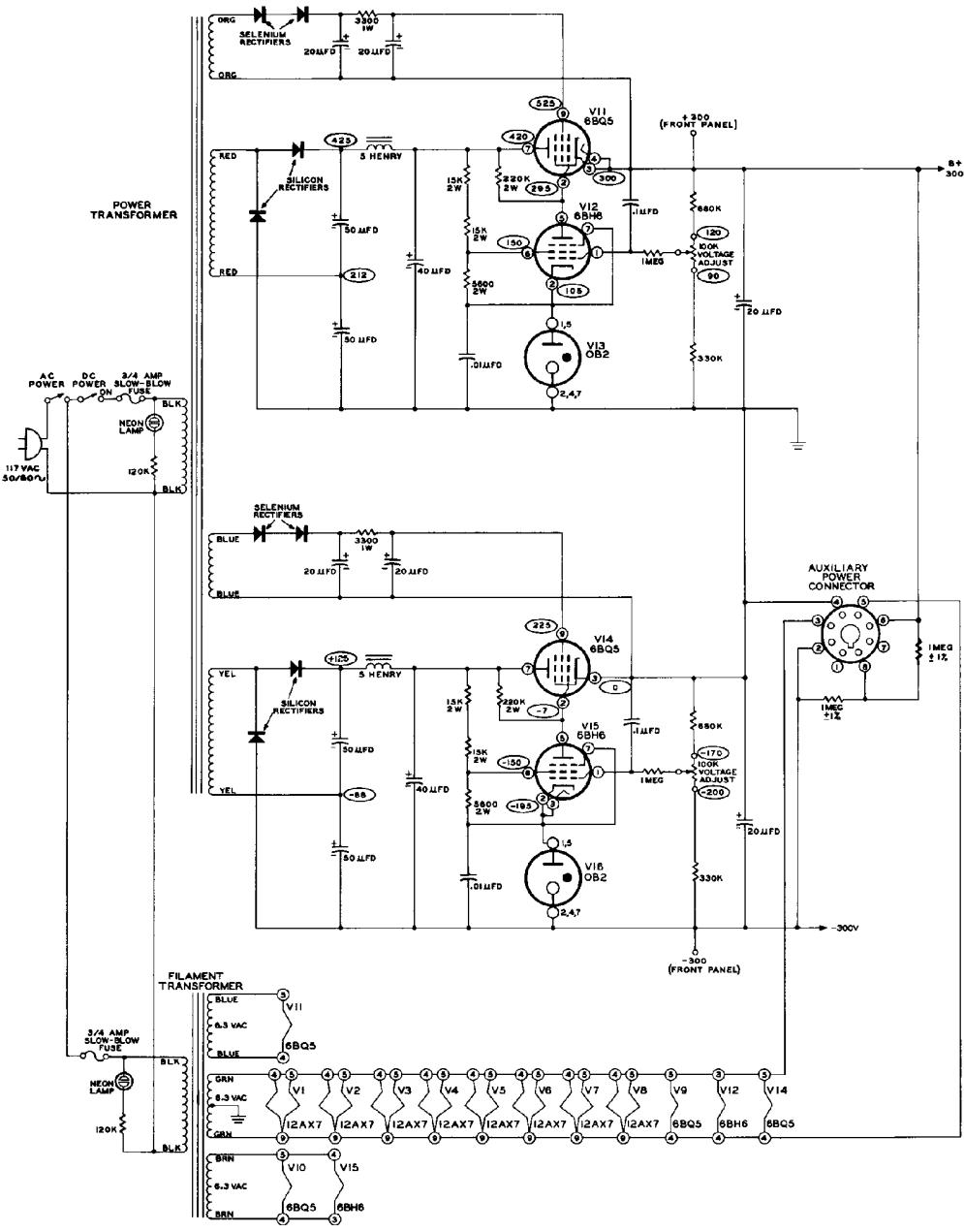
Location.....	Octal socket on rear of unit, and banana jacks on front panel.
Power Available.....	+300 volts at 20 ma and -300 volts at 20 ma with unit in operation. +300 volts at 60 ma and -300 volts at 60 ma when all amplifier tubes are removed. 6.3 volts AC at 50 ma with unit in operation. 6.3 volts AC at 3.2 amperes with all amplifier tubes removed.
Balance Resistors.....	Available at auxiliary connector to balance power supplies.

GENERAL

Dimensions.....	11-1/4" wide x 6-3/8" high x 12-7/8" deep.
Net Weight.....	15-3/4 lbs.
Shipping Weight.....	17 lbs.

All prices are subject to change without notice.
The Heath Company reserves the right to discon-
tinue instruments and to change specifications at

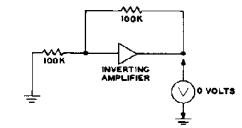
any time without incurring any obligation to
incorporate new features in instruments pre-
viously sold.



**SCHEMATIC OF THE
HEATH SCIENCE SERIES
OPERATIONAL AMPLIFIER SYSTEM
MODEL EUW-19A**

NOTES:
ALL RESISTORS ARE 1/2 WATT UNLESS SHOWN OTHERWISE.
ALL RESISTOR VALUES ARE IN OHMS. 1K = 1000 OHMS. 1MEG = 1,000,000 OHMS.
ALL CAPACITOR VALUES ARE IN MICROFARADS. UNLESS SHOWN OTHERWISE,
CAPACITOR VOLTAGE RATING IS 500 VOLTS DC. THIS IS THE VOLTAGE THAT
INDICATED TO CHARGE CAPACITORS, EXCEPT FOR AC VOLTAGES ON
POWER TRANSFORMER WINDINGS.
RESISTORS SHOWN WITH AN (R) MEAN INPUT VTYW WITH
AMPLIFIERS BALANCED.

SWITCH POSITIONS FOR AMPLIFIER 1 ARE AS FOLLOWS:
POSITION 1 = INVERTING AMPLIFIER
POSITION 2 = FOLLOWER AMPLIFIER
INVERTING AMPLIFIER VOLTAGES TAKEN WITH AMPLIFIERS BALANCED WITH AN (R) FEEDBACK AS IN THE FOLLOWING
INC DIAGRAM.



BOOSTER AMPLIFIER VOLTAGES TAKEN WITH BOOSTER
AMPLIFIER BALANCED WITH AN INVERTING AMPLIFIER
AS IN THE FOLLOWING DIAGRAM.

