

No. 1086-B AMPLIFIER

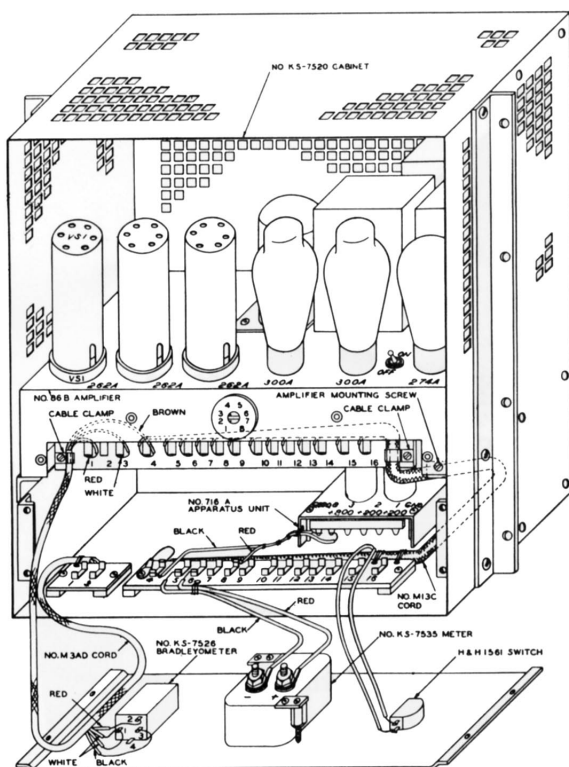
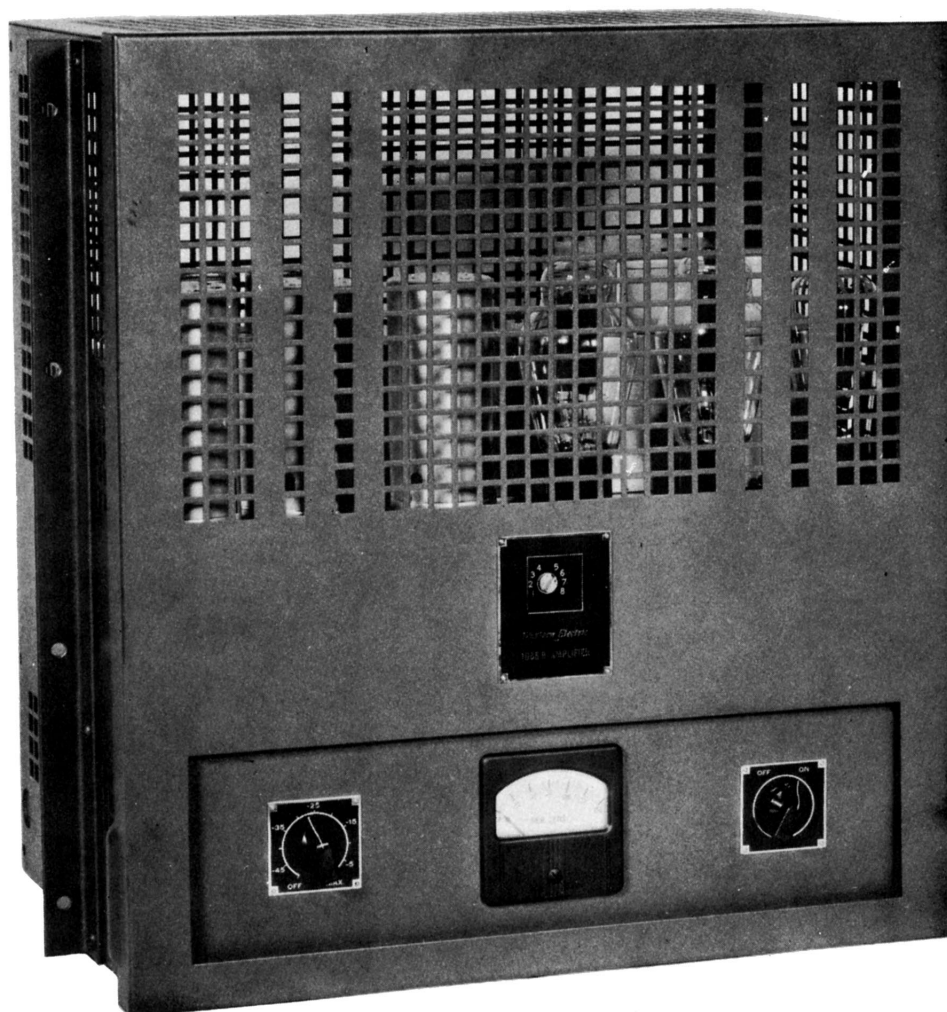


FIGURE 3 — Amplifier with Covers Removed



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AMPLIFIER

INSTRUCTIONS FOR USE

The Western Electric No. 1086B Amplifier is a high gain general purpose amplifier for use in high quality program systems where it is desired to amplify a low level program to a volume suitable for loud speaker or telephone line use.

ELECTRICAL CHARACTERISTICS

<i>Circuit</i>	See Figure 1.
<i>Gain (maximum)</i>	96 db.
<i>Output Power</i>	15 watts (or +34 db level on the basis of a reference level of 0.006 watt) with less than 1% harmonics (harmonics 40 db below fundamental).
<i>Output Noise Level</i> (<i>weighted for normal listening</i>)	—44 db.
<i>Effective Volume Range</i>	78 db.
<i>Input Impedance</i> (<i>impedance amplifier is designed to work from</i>)	200 ohms.
<i>Output Impedance</i> (<i>impedance amplifier is designed to work into</i>)	500 ohms or 8 ohms.
<i>Frequency Characteristic</i>	50-15,000 cycles. See curve, Figure 2.
<i>Power Required</i>	105-125 volts 60 cycles, 150 watts. Should be fused at 2 amperes. (For operating on 50 cycles a No. D-96970 Power Transformer can be supplied. This transformer is interchangeable with the No. 332B Power Transformer which is furnished for 60 cycle operation.)

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Variable Gain Control 45 db variation practically continuous. Dial
Potentiometer is graduated in steps of 5 db.
Fixed Gain Control 60 db.

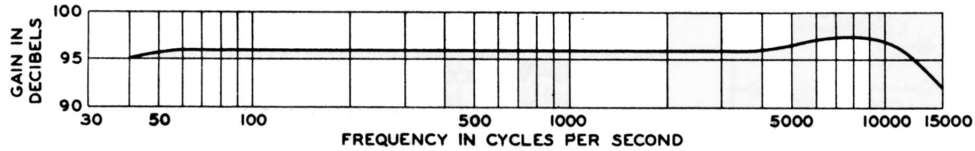


FIGURE 2 — *Gain Frequency Characteristic*

This adjustment is used to vary the fixed gain of the amplifier to fit a particular application, and is not normally changed after once being adjusted at the time of installation. The adjustment is made by means of strapping on terminal strip "TS-1" in the 86B amplifier, in accordance with the following table:

<i>Gain</i>	<i>Strapping</i>								
96 db (maximum)	2-3	3-1	5-6	7-8	8-9	13-14	15-16	16-17	
91 db	2-3	4-1	5-6	7-8	8-9	13-14	15-16	16-17	
86 db	2-3	3-1	5-6	7-8	8-9	13-14	15-16	18-17	
81 db	2-3	4-1	5-6	7-8	8-9	13-14	15-16	18-17	
76 db			2-8		8-9	13-14	15-16	16-17	
66 db			2-8		8-9	13-14	15-16	18-17	
56 db			2-8		10-9	13-14	15-16	18-17	
46 db			2-8		11-9	13-14	15-16	18-17	
36 db			2-8		12-9	13-14	15-16	18-17	

Note: The strapping of 2-8, and the removal of all strapping from terminals 3, 4, 5, 6 and 7, removes the first stage vacuum tube (VT-1) from the circuit. This tube may therefore be removed from the socket without affecting the normal operation of the amplifier.

In making any of the above gain adjustments, any of the terminals from 1 to 18 not mentioned in the strapping connections should be left unconnected.

MECHANICAL CHARACTERISTICS

Width 19 1/8 inches, including mounting angles.
 (box 17 1/4 inches)
Height 19 1/4 inches.

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Depth 10 $\frac{5}{8}$ inches.
Weight Approximately 75 lbs.
Mounting Standard 19-inch relay rack or wall mounting.
Component Parts—Assembly The parts which make up a No. 1086B Amplifier are listed below and are shown in Figure 3.
1—Western Electric No. 86B Amplifier
1—Western Electric No. M3AD Cord
1—Western Electric No. M13C Cord
1—Western Electric No. KS-7520 Cabinet
1—Western Electric No. KS-7526
Bradleyometer
1—Western Electric No. KS-7535 Meter
1—H. & H. No. 1561 Switch
2—"Readrite" 1 $\frac{1}{4}$ -inch Black Bar Knobs

Note: A No. 716A Apparatus Unit is furnished when specified in the order only.

These parts are packed separately and should be assembled in accordance with Figure 3, and with information given hereafter.

Vacuum Tubes The vacuum tubes required for the operation of this amplifier are:

3—Western Electric No. 262A Vacuum Tubes
2—Western Electric No. 300A Vacuum Tubes
1—Western Electric No. 274A Vacuum Tubes

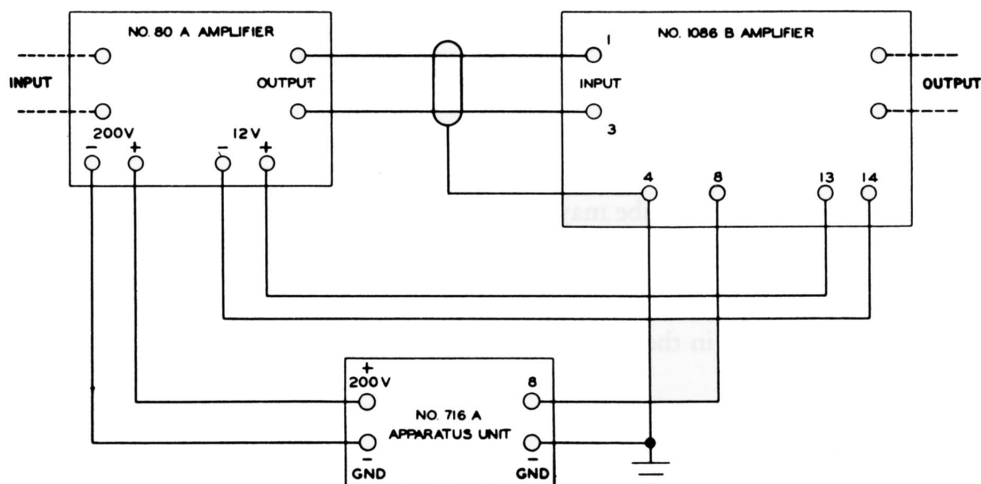


FIGURE 4 — Connections for No. 80A Amplifier