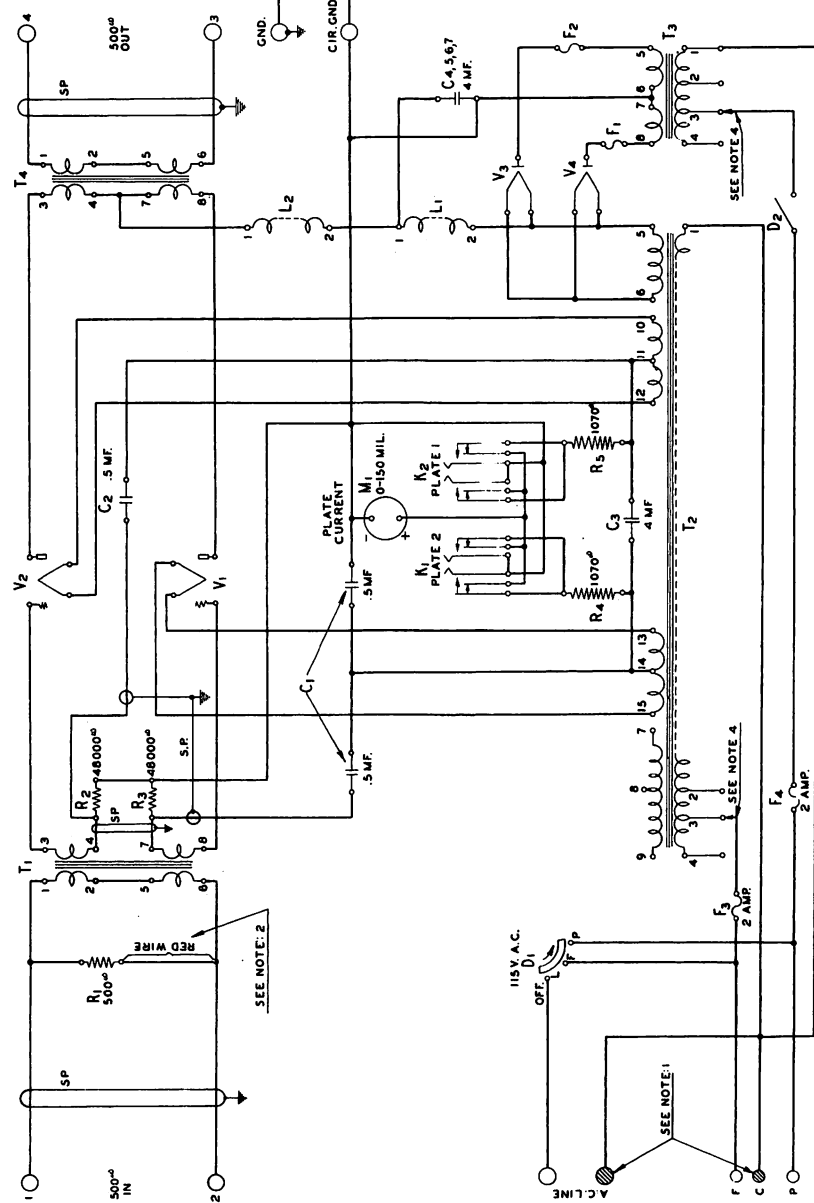


ASO-3482-1 ASSOCIATED WITH EQUIPMENT BULLETIN, AMPLIFIER, 57-A

TRACED FROM B.L. APP'D
 DIMS. LA-1049 ISS 3
 WITH POLL CHANGE
 WAS 1, 2, 3, 4, 5
 TLED
 13506-1 1028-30 9 2 2

DESIGNATED	APPARATUS
C1	1M1-C CONDENSER
C2	1M1-B CONDENSER
C3	137-A CONDENSER
C4, C7 INCL.	1B1-A CONDENSER
R1	1B-AC RESISTANCE
R2, R3	3B-A RESISTANCE
R4, R5	1B-1A RESISTANCE
T1	247-J INPUT TRANSFORMER
T2	317-A TRANSFORMER
T3	316-A TRANSFORMER
T4	134-C OUTPUT TRANSFORMER
V1, V2	252-A VACUUM TUBE
V3, V4	253-A VACUUM TUBE
K1, K2	92-AL KEY
M1	WESTON #701 FLUSH TYPE MILLIAMMETER
L1	STEEL CASE
L2	137-A RETARD COIL
D1	136-A RETARD COIL
D2	#7246 CUTLER HAMMER DOOR SWITCH
F1, F2	WITH ESCUTCHEON PLATE OMITTED
F3, F4	62-B FUSE
	CLEARSITE PLUG FUSE

- NOTES:-
1. DENOTES GROUND SIDE OF LINE
 2. RED WIRE TO BE REMOVED WHEN USED AS AUXILIARY POWER STAGE WITH 56-A ON 59-A AMPLIFIER
 3. *SP* DENOTES SHIELDED PAIR
 4. ON T-4'S FLEXIBLE LEAD IS NORMALLY CONNECTED TO TERMS FOR LINE VOLTAGES FROM 110 TO 125. TO 110, CONNECT TO TERM 1. OR 115, TO 125, CONNECT TO TERM 4.



ASR-4226 WIRING DIAGRAM
 ASSOCIATED DRAWINGS -
 57-A AMPLIFIER

SCHEMATIC

WESTERN ELECTRIC SOUND PROJECTOR SYSTEMS
 ELECTRICAL RESEARCH PRODUCTS INC. NEW YORK
 DRAWN BY ON EEP-300-300
 CHECKED BY DATE 1/10-21-50

SCALE **ASO-3482**

ASO-3482

Instructions for Use

For public address systems in halls, churches, large auditoriums, or wherever amplification of voice frequencies to high power is needed, one or more Western Electric No. 57A Amplifiers will provide any requisite volume level with a quality of reproduction limited only by other parts of the system such as the microphones or the loud speakers.

This amplifier, as illustrated above and shown schematically on Figure 1, is a power amplifier designed to amplify voice frequency sources of moderate level to a value suitable for the operation of loud speaking receivers at high levels, and is intended to be used in the final stage of an amplification system. It may also be used in parallel with the power stage of the Western Electric No. 59A or 59B Amplifier in cases where a power output level higher than that furnished by the No. 59A or 59B Amplifier is desirable.

The gain of the amplifier is approximately 23 db and the maximum undistorted output level which it will furnish is +32 db at a single frequency of 1,000 cycles per second.

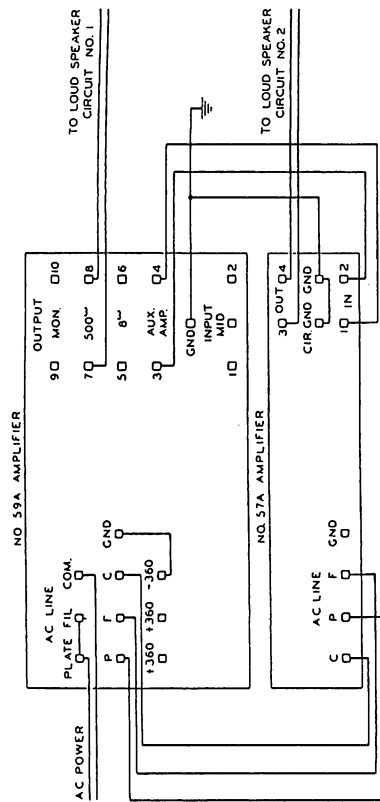
The apparatus used to make up this unit is mounted on the front and rear of a panel approximately 19 1/8 inches wide and 15 3/4 inches high and is arranged so that it may be mounted on a relay rack.

The amplifier circuit consists of a single stage using two No. 252A Vacuum Tubes in push-pull arrangement. It is equipped with a full wave rectifier employing two No. 253A Vacuum Tubes which, in conjunction with a filter, supplies plate and grid potentials to the No. 252A Vacuum Tubes.

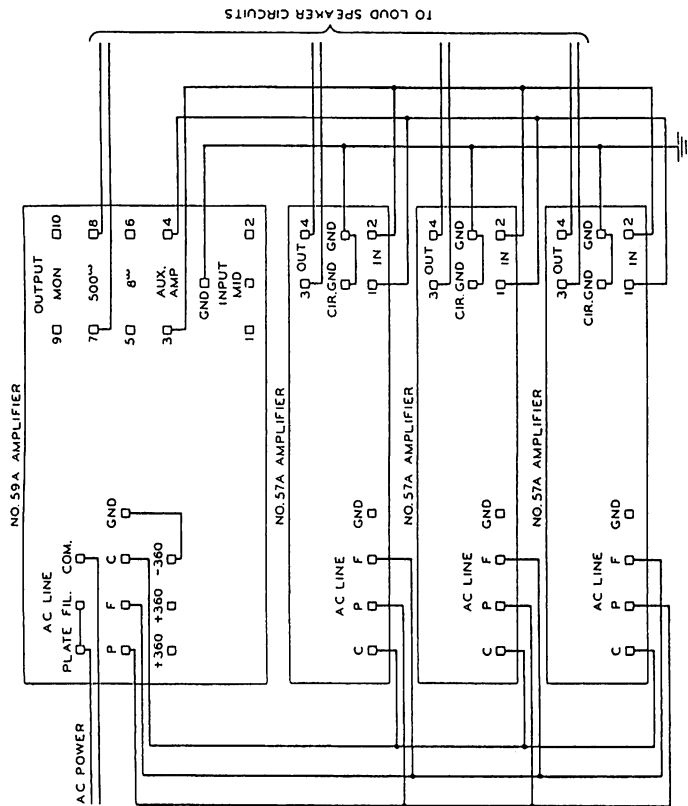
The amplifier is designed to operate on an impedance of 500 ohms and into an impedance of 500 ohms. Two push-type keys and a milliammeter are connected in the circuit as shown in Figure 1 so that the meter normally indicates the combined space currents of the No. 252A Vacuum Tubes. The space current of either No. 252A Vacuum Tube may be indicated on the meter by operation of the proper key.

The amplifier requires a power source of between 102.5 and 127.5 volts, 50 to 65 cycles AC for energizing the plate and filament circuits. Taps are provided on the power transformers (See Figure 1) for the purpose of making adjustments to meet the average condition of line voltage, the normal voltage rating of these taps being 107.5, 115 and 122.5 volts. The amplifier is designed to operate on line voltages which are within 5 volts of the rating of any tap, and in order that the vacuum tubes will have a maximum life this variation must be adhered to. The power taken from the AC supply with a line voltage five volts greater than the rating of any tap and with a frequency of 60 cycles is approximately 155 volt-amperes or 135 watts. For controlling the AC power to the amplifier a three position snap switch is provided having "OFF", "FILAMENT" and "PLATE" positions to provide the proper sequence of applying power to the filament and plate circuits of the vacuum tubes.

Terminals are provided so that the AC power may be controlled remotely by a switch or relay which provides the proper sequence of operation. Parts which may require replacement or inspection, such as fuses and vacuum tubes, are mounted on the front of the panel and are made accessible by removing the front cover. Opening this cover automatically removes power from the primary circuit of the high voltage plate transformer.



Connections for Using One No. 57A Amplifier with One No. 59A Amplifier



Connections for Using Three No. 57A Amplifiers with One No. 59A Amplifier