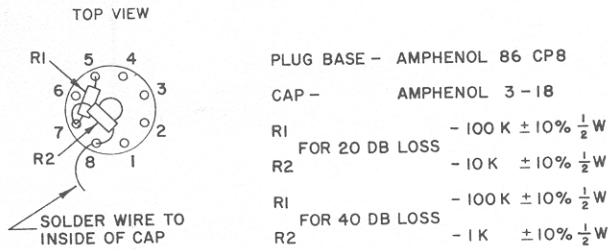
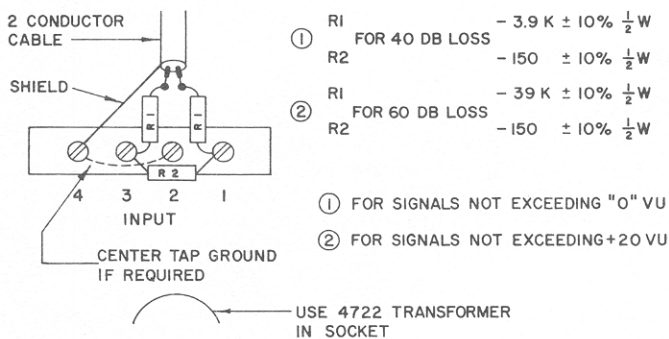


SPECIAL INPUT CONNECTIONS

- High level unbalanced input on mic channel.
A pad is required for this connection. It may be made of two 1/2 watt resistors mounted on an octal plug base as shown.
Install plug in octal socket and make input connections as shown for high impedance microphone.



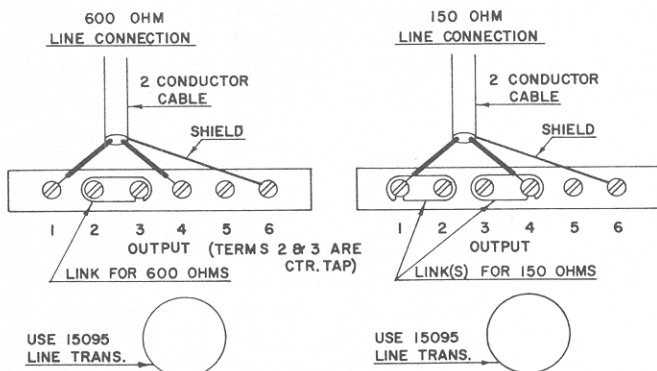
- High level balanced input on microphone channel using 4722 transformer for line isolation.



OUTPUT CONNECTIONS

Line Output

Terminals 1, 2, 3, and 4 on the output terminal strip (see photograph) are for loads of 150 and 600 ohms when the 15095 line transformer is used. Connect as shown.



Compressor amplifiers connected between the 1567A and following power amplifiers will provide excessive gain which must be attenuated. The following adjustment procedure is suggested:

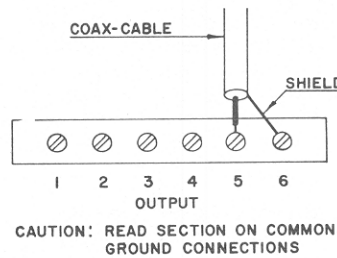
- Set 1567A operating controls at "normal" settings.
- With a typical signal feeding the 1567A, adjust attenuation at the input of the compressor amplifier to provide the desired amount of compression. If a control is not provided on the equipment an attenuator or a fixed pad must be added.
- Adjust power amplifier gain control for the desired loudspeaker level.

IT IS IMPERATIVE THAT EXCESSIVE GAIN IS ATTENUATED AT THE POINTS INDICATED ABOVE RATHER THAN

BY GREATER LOSS SETTINGS OF THE MIXER AND MASTER GAIN CONTROLS.

NOISE OR MICROPHONEISM ASSOCIATED WITH THE 1567A WILL BE CAUSED IN MOST EVERY INSTANCE BY FAILURE TO FOLLOW THE ABOVE PROCEDURES.

Direct Output



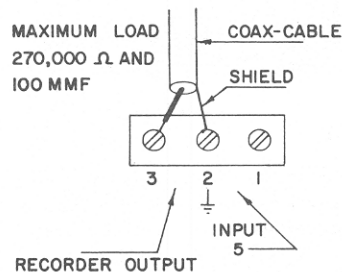
The 1567A can directly drive high impedance power amplifiers such as the 1568A, 1569A, 1570B, 128B, etc. without using the 15095 line transformer. The impedance of the direct output is about 1100 ohms providing good performance over as much as 25 feet of 29 mmf per foot coax-cable. When this connection is used special attention must be given to ground interconnections or hum will result. Be sure to read the section on common ground connections.

Paralleling Outputs (2 or more 1567A Amplifiers)

- Direct Output: Place 15,000 ohm carbon resistor in series with each amplifier output.
- 600 Ohm Output (with 15095 line transformer): Place 560 ohm carbon resistor in series with each amplifier output.
- 150 Ohm Output (with 15095 line transformer): Place 150 ohm carbon resistor in series with each amplifier output.

Note: On 150 and 600 ohm connections where the lines are balanced (not grounded at either end) the resistor values may be halved and two used, one in series with each side of the line for more accurate balance.

Recorder Output



This output can be used to feed signals to tape recorders having an input impedance of 270,000 ohms or more. The interconnecting cable should have a total capacitance of not more than 100 mmf. This is about equivalent to three feet of high grade coax-microphone cable. Before making this connection, be sure to read the section on common ground connections.

COMMON GROUND CONNECTIONS

The circuit ground in the 1567A is connected to the chassis at the input, to prevent RF or other noise picked up on shields of microphone cable from being detected and amplified by the system. Any additional connection between circuit and chassis or ground will cause system hum. When the 1567A is connected to a power amplifier without an isolating transformer (15095 or equivalent), the circuit to chassis connection at the power amplifier must be removed. It is necessary when doing this to make sure that the two chassis remain electrically connected. If the chassis are mounted in the same rack or cabinet or if the 3 wire power cord of one is inserted in the convenience outlet of the other or if both are inserted in outlets providing a third wire ground, the inter-chassis connection will be automati-

cally made. In the case of portable tape recorders where the case insulates the metal chassis from ground, the circuit-chassis connection need not be removed unless the power cord has a 3 prong grounding type plug. In this event the circuit-chassis ground or the power line ground must be removed.

Single conductor coaxial cable is used for the unbalanced connections described above. The shield of the coax cable is connected to the amplifier input or output "common" terminal at each end. Two conductor shielded cable is used for interconnection when line transformers are used (15095 or equivalent). In this case circuit-chassis grounds are not disturbed and the cable shields should be connected at one end only.

VU METER ACCESSORY

The 12862 VU meter assembly consists of a bracket and meter. To install, open the 1567A front panel, remove the pilot light holders, two screws and two nuts from the rear side of the pilot light mounting bracket. Discard the light shield and mounting bracket. Mount the meter in the new bracket with the bracket flanges facing toward the front of the meter. Place the assembly over the studs on the panel and secure with the original nuts and washers. Remount the pilot lights in the bracket cutouts and attach the leads, which are under the VU Range Switch cover, to the meter. Be sure to replace the VU Range switch cover.

Place insulating caps over meter screw terminals. Be sure to replace the VU Range switch cover.

CONNECTOR ASSEMBLY

The 12863 Connector assembly provides 4 XL type connectors for the four low level inputs and binding posts for channel 5 high level input, the recorder output and the line output connections. It is installed by laying the connector assembly on the top edge of the chassis and placing the spade lugs on the connector and binding post wires, under the input-output terminal screws, which provide the impedances selected (see section on input and output connections). When the connections have been made, the assembly is rotated to cover the terminals and attached by means of the two captive screws at the ends of the assembly. The spade lugs must be positioned so that the strain relief sleeves do not prevent the assembly from seating on the chassis. The connectors which are provided in the assembly are Cannon XLR-3-13. Cannon XLR-3-12SC plugs are required to mate with them.

CARRYING CASE ASSEMBLY

The 12866 Assembly consists of a fitted case having two covers, two brackets and eight screws furnished as loose parts. The 1567A mounts on the brackets when they are attached to the ends of the cabinet. The brackets are fastened to the cabinet using four of the screws furnished. The other four screws are used to fasten the amplifier chassis to the brackets. Caution—do not mix the four panel screws furnished as part of the 1567A with the case mounting screws. Both are the same type but different lengths. The panel screws must not be greater than $\frac{1}{4}$ inch in length whereas the case screws are $\frac{3}{8}$ inch in length.

The rear case cover has a small slot along one edge to allow input, output and power cables to pass when the cover is attached. The cover may be installed with the slot on the bottom or the top to accommodate cable passage in either direction.

OPERATION

Normal Settings —

For average input signals mixer and master gain controls should be set for a loss of 14 db in each. With these

settings, average microphone levels will produce "0" VU line levels. When high gain power amplifiers such as the 1568A and 1569A follow the 1567A, the gain control on the power amplifier must be set for sufficient attenuation to prevent overdriving the loudspeakers. It is important that the loss be taken in the power amplifier rather than in the master control of the 1567A in order to preserve optimum signal to noise ratio.

Tone Controls —

These provide both boost and attenuation of bass and treble. The normal or flat position is obtained when the knob markers are straight up corresponding to the center position spot on the panel.

Write-in Blocks —

The bleached aluminum area on the control panel above each mixer knob can be written on with soft lead pencil to identify the channel use. To remove writing use a damp cloth—never use a pencil eraser or other abrasive material as the surface will become shiny and unsuitable.

SERVICING

Failure

In event of failure, the trouble can best be localized by means of D.C. voltage measurements. Nominal voltage values are marked on the schematic diagram. Deviations from the marked values as large as $\pm 20\%$ can be expected at the vacuum tube elements and should be considered normal.

Hum

With exception of the output (6CG7) all tube heaters are on D.C. and should contribute no hum. Should hum appear in the output, common connections as described above should be checked and other AC operated devices mounted nearby should be switched "Off" to be sure that magnetic flux field from their power supplies are not at fault. The panel cable marked (3) in the interior view photograph should be examined to see that it does not fold close to the coupling condenser marked (1) when the panel is closed. This cable carries AC current and can couple hum into the other circuits.

SPECIAL MODIFICATIONS

Step Type Attenuators

Miniature Daven or equivalent step type attenuators not exceeding $1\frac{1}{8}$ " diameter and $1\frac{1}{8}$ " depth can be mounted in place of the pots supplied. Typical mounting is shown in the interior view photograph where the attenuator marked (2) replaces the master gain control. When installing, be sure to locate the terminals as shown.

Mixer Controls—Daven CP 124X (20 steps 2 db/step last steps tapered to infinity—no detent)

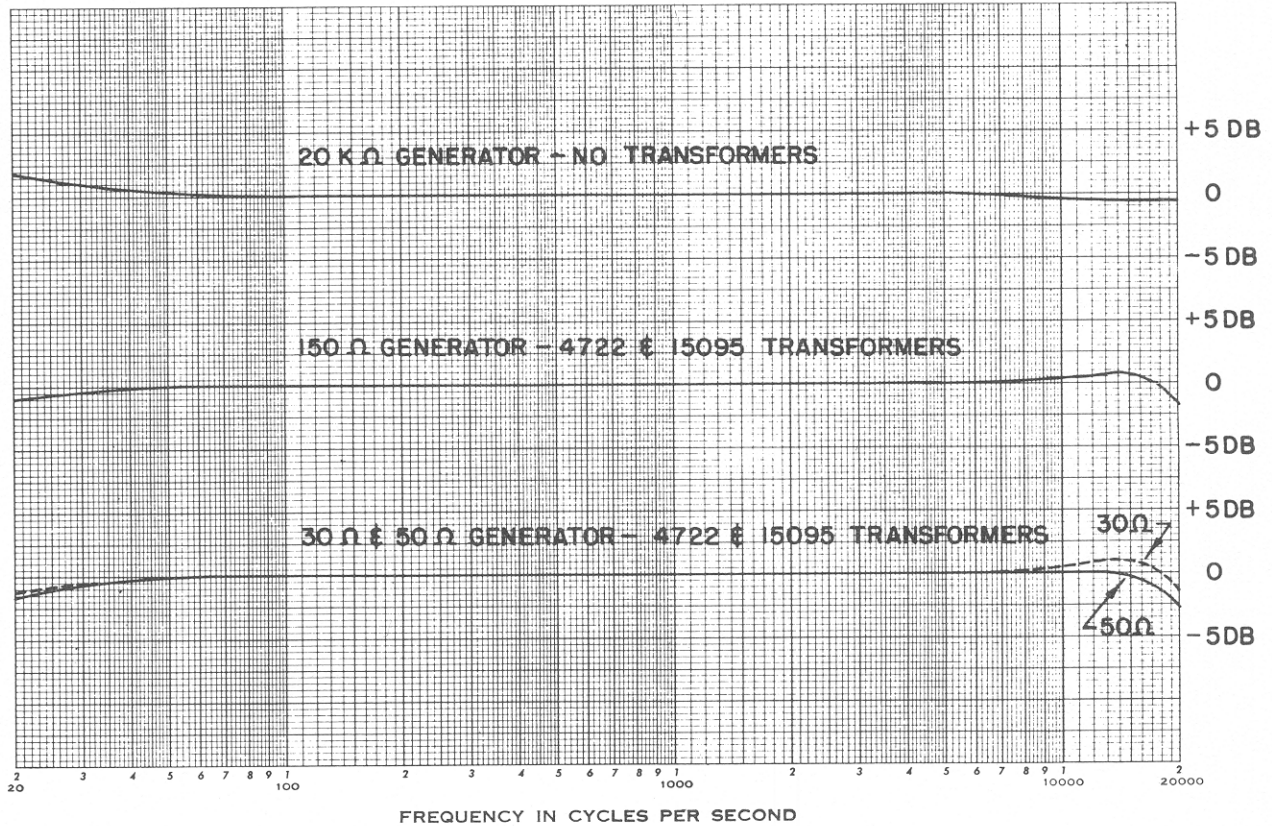
Master Control—Daven CP 124Y (20 steps 2 db/step last steps tapered to infinity—no detent)
(Shaft length— $\frac{7}{16}$ " beyond bushing)

Channel "Off-On" Switches

Mallory LC 250 MPAC-PP or Clarostat type 47 controls with AG-17 switches may be used in place of the standard mixer controls to provide individual channel switches. Install the pot in the normal manner then connect one switch terminal to the pot ground and the other to the pot input. When the mixer knob is pulled "Out" from the panel the channel is switched "Off." Pushing the knob in turns the channel "On."

TYPICAL FREQUENCY RESPONSE - 1567A AMPLIFIER

MIXER - 14 DB, MASTER - 14 DB, OUTPUT +10 DBM (600 Ω)



PARTS LIST

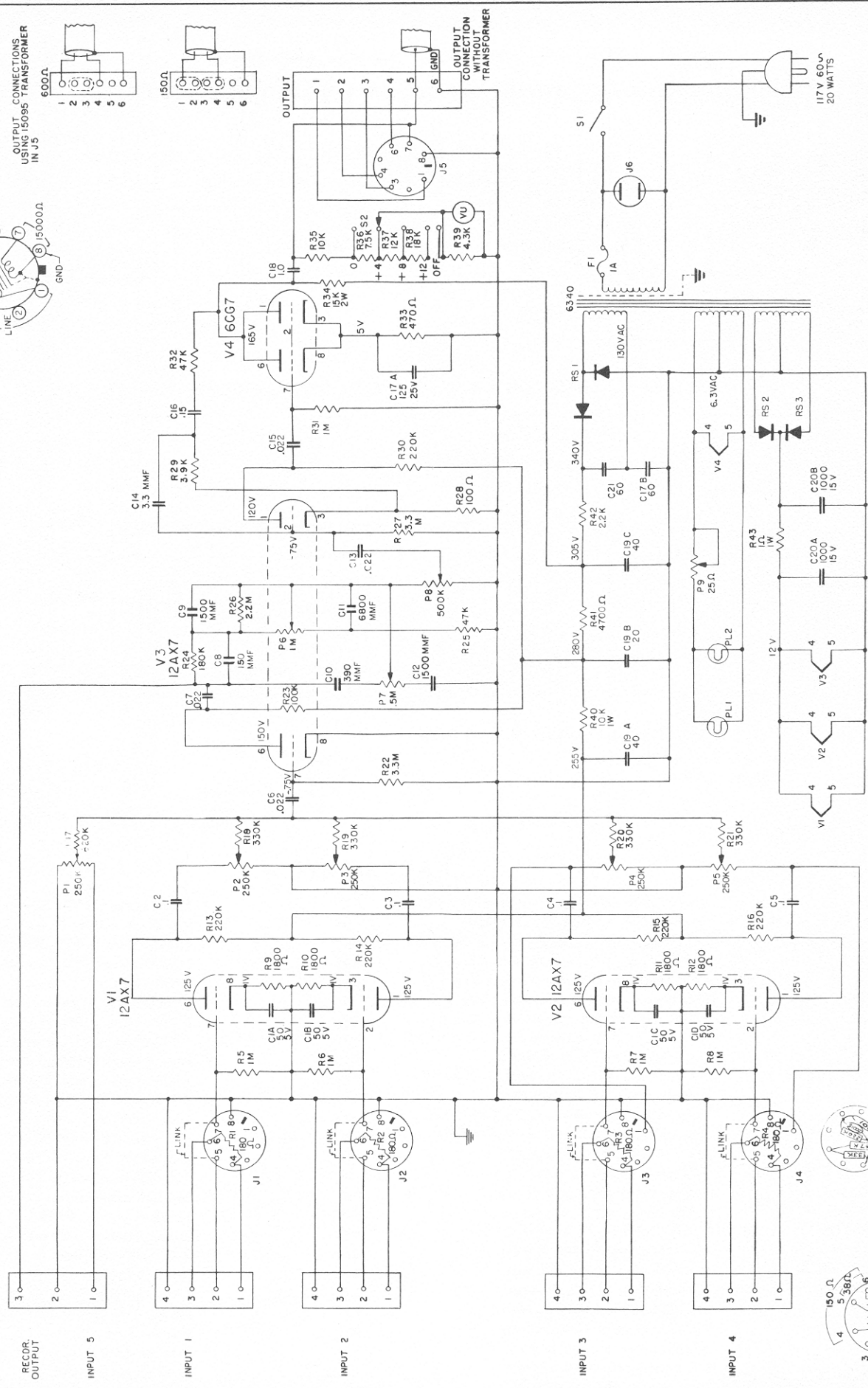
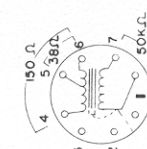
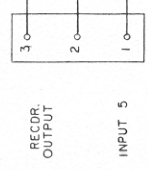
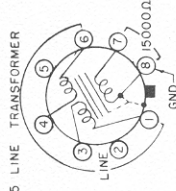
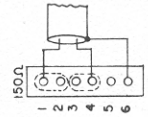
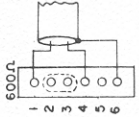
C1	50-50-50-50 mfd., 5 V., Mallory SPO 97068	R29	3,900 ohms ±10%, ½ watt
C2, 3, 4, 5	.1 mfd., 400 V., Mylar,® C.D. PM4P1	R33	470 ohms ±10%, ½ watt
C6, 7, 13, 15	.022 mfd., 400 V., Mylar,® C.D. PM4S22	R34	15,000 ohms ±10%, 2 watt
C8	150 mmf., ±10% ceramic disc, Erie 831	R35	10,000 ohms ±5%, ½ watt
C9, 12	1500 mmf., ±10% ceramic disc, Erie 811	R36	7,500 ohms ±5%, ½ watt
C10	390 mmf., ±10% ceramic disc, Erie 831	R37	12,000 ohms ±5%, ½ watt
C11	6800 mmf., ±10% ceramic disc, Erie 811	R38	18,000 ohms ±5%, ½ watt
C14	3.3 mmf., ±10% ceramic disc, C.D. L10V33	R39	4,300 ohms ±5%, ½ watt
C16	.15 mfd., 400 V., C.D. PJ4P15	R40	10,000 ohms ±10%, 1 watt
C17	60-125 mfd., 200-25 V., Mallory Type FP.	R41	4,700 ohms ±10%, 1 watt
C18	1 mfd., 400 V., C.D. PKM 4W1	R42	2,200 ohms ±10%, 1 watt
C19	40-40-20 mfd., 400 V., Mallory FP376.9	R43	1 ohm ±10%, 1 watt
C20	1000-1000 mfd., 15 V., Mallory WP200	P1, 2, 3, 4, 5	250,000 ohms Altec 12749-2
C21	60 mfd., 250 V., C.D. BR6025	P6	1 megohm, Altec 12752-1
R1, 2, 3, 4	180 ohms ±10%, ½ watt	P7	500,000 ohms, Altec 12751-1
R5, 6, 7, 8, 31	1 megohm ±10%, ½ watt	P8	500,000 ohms, Altec 12865-2
R9, 10, 11, 12	1,800 ohms ±10%, ½ watt	P9	25 ohms, Altec 12750-1
R13, 14, 15, 16, 30	220,000 ohms ±10%, ½ watt	RS1	Sarkes Tarzian 58D rectifier
R17	820,000 ohms ±10%, ½ watt	RS2, 3	G.E. 1N91 rectifier
R18, 19, 20, 21	330,000 ohms ±10%, ½ watt	S1	Altec 12753-2
R22, 27	3.3 megohms ±10%, ½ watt	S2	Altec 12704-4
R23	100,000 ohms ±10%, ½ watt	F1	1 amp 3AG fuse
R24	180,000 ohms ±10%, ½ watt	PL1, 2	Mazda #44
R25, 32	47,000 ohms ±10%, ½ watt	T1	Peerless 6340
R26	2.2 megohms ±10%, ½ watt	V1, 2, 3	12AX7 vacuum tube
R28	100 ohms ±10%, ½ watt	V4	6CG7 vacuum tube

15095 LINE TRANSFORMER

LINE
150 Ω
600 Ω

STRAP
1-4 3-6
3-4

OUTPUT CONNECTIONS
USING 15095 TRANSFORMER
IN J5



ALTEC
1567 A AMPLIFIER
SCHEMATIC

TABLE LISTED BY DATE

DATE	REVISION
1	1958
2	1958
3	1958
4	1958

FIRST MADE FOR 1567 A AMPLIFIER
TOLERANCES EXCEPT AS NOTED: RESISTORS TO 1% UNLESS OTHERWISE SPECIFIED

ALTEC LANSING
1567 A AMPLIFIER

LEGEND
Ω = OHMS
K = 1000 Ω
M = 100,000 Ω
ALL CAPACITANCE VALUES IN MFD.
UNLESS OTHERWISE INDICATED

4722 MICROPHONE TRANSFORMER

PHONO EQUALIZER ASSEMBLY

117V 60V
20 WATTS

6558