



**1567A  
MIXER  
AMPLIFIER**

**OPERATING  
INSTRUCTIONS**



## SPEECH INPUT EQUIPMENT

- ★ RACKMOUNT
- ★ PORTABLE

### OUTSTANDING FEATURES

- 5 inputs, 2 outputs.
- Full flexibility with 5 mixer, master, bass, treble, illumination, VU Range and AC power controls.
- Compact—Occupies 3 rack units (5¼").
- Plug-in microphone AND line (output) transformers.
- High gain (97 db) High output (+18 dbm)
- Shielded power transformer for low noise level.
- DC heater supply for low noise level.
- Germanium and selenium rectifiers for long-term reliability.
- Hinged front panel for immediate access WITHOUT interrupting program connections.
- Non-glare panel with write-in strips for channel identification.
- VU meter accessory installed in minutes WITHOUT soldering.
- Range switch adjusts normal level indication of VU indicator for output levels of 0, +4, +8, +12 VU. (0 level = 1 milliwatt.)
- Prewired XL connector accessory converts screw terminals for portable use — installs WITHOUT soldering in minutes.
- Equalization for reluctance type phono pickup (RIAA) on channels 3 and 4 by means of PLUG-IN equalizer assembly.
- Leather-bound carrying case accessory for portable use — provides microphone and cable storage.
- Lightweight portability — less than 22 pounds with ALL accessories.
- Attenuator coupling networks DOUBLE blocked using MYLAR<sup>®</sup> capacitors for silent control action.
- AB MOLDED composition potentiometers standard equipment.
- Convertible to step-type attenuators.
- Meets FCC requirements for FM broadcast.



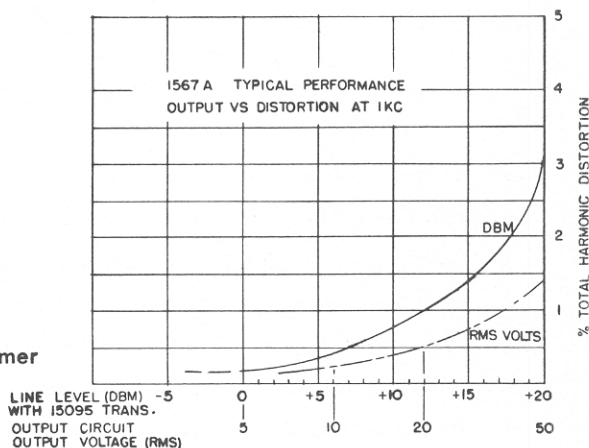
A Division of *CSL* Ling Altec, Inc.  
©Altec Lansing

1515 S. Manchester Ave., Anaheim, Calif.  
New York

12874-4 Price \$ .28  
Litho in USA C/P 4/66

## SPECIFICATIONS

<b>Type:</b>	Mixer Amplifier
<b>Gain:</b>	97 db max., channels 1-2-3-4 55 db max., channel 5 (17 mv input for 0 dbm output)
<b>Power Output:</b>	+18 dbm or 50 v open circuit
<b>Frequency Response:</b>	±1 db 30-15,000 cps
<b>Input Impedance:</b>	1 megohm channels 1-2-3-4; .25 megohm channel 5
<b>Source Impedance:</b>	30/50 and 120/200 ohms, channels 1-2-3-4 with 4722 Plug-in Microphone Transformer
<b>Load Impedance, Line Output:</b>	15,000 ohms to infinity. 150 and 600 ohms with 15095 Plug-in Line Transformer.
<b>Recorder Output:</b>	At least 270,000 ohms, 100 mmf max. capacity
<b>Noise Level:</b>	Equivalent input noise —123 dbm Output noise —68 dbm with master gain control closed
<b>Controls:</b>	5 mixer, master, bass, treble and illumination controls, VU range, power switch
<b>Power Supply:</b>	117 volts, 60 cps, 20 watts
<b>External Power Available:</b>	117 volt ac receptacle on chassis
<b>Tubes:</b>	3 — 12AX7, 1 — 6CG7
<b>Dimensions:</b>	5¼" H x 19" W x 6¾" D
<b>Color:</b>	Dark Green
<b>Weight:</b>	10¾ lbs.
<b>Accessories:</b>	12862 VU Meter assembly 12864 Phono Equalizer assembly 12863 XL Connector assembly 12866 Portable carrying case 4722 Plug-in Microphone Transformer 15095 Plug-in Line Transformer



## GENERAL DESCRIPTION

The 1567A is a five-channel mixer amplifier having four low level and one high level inputs. Front panel controls include 5 mixers, master, bass, treble, VU range, illumination and power. The entire unit, including its AC operated power supply is constructed on a standard rack chassis, occupying only 5¼ inches of mounting space.

Its design is such that the hinged front panel may be opened without interrupting program. Sufficient space has been allowed to install miniature step-type attenuators in place of the molded composition controls which are standard equipment.

The control panel has raised abrasion resistant characters with bleached "write-in" blocks for channel identification. Background areas are etched and colored in a non-glare easy-eye green.

The AC operated power supply has a shielded power transformer to limit stray flux fields. It uses selenium rectifiers for the plate and germanium rectifiers for the heater supply. A standard 3 wire cord and attachment cap are provided for connection to the AC line. A convenience out-

let on the rear of the chassis is controlled by the equipment power switch. The four low level inputs may be used with high impedance microphones using the coupling link provided or with low impedance microphones by substituting plug-in transformers for the coupling links. The output may be connected directly to a load or isolated by means of a plug-in line transformer. An additional output, unaffected by tone and master gain controls, is provided for supplying signal to tape recorders. Various accessory items provide unusual flexibility in operation and application. A VU meter accessory can be installed in minutes without soldering. Its multipliers and range switch are a standard part of the 1567A. The switch, in addition to "OFF," adjusts the normal level indication of the volume indicator to correspond to output levels of 0, +4, +8, or +12 VU into 150 or 600 ohm loads using the 15095 line transformer. The VU meter may be used as an output indicator also, without the 15095 line transformer, in which case normal indication with the range switch in the "0" position corresponds to an output of 4 volts.

Inputs #3 and #4 are wired to provide RIAA equalization for magnetic reluctance type phonograph pickups

when an accessory plug (12864) is used in the microphone transformer socket.

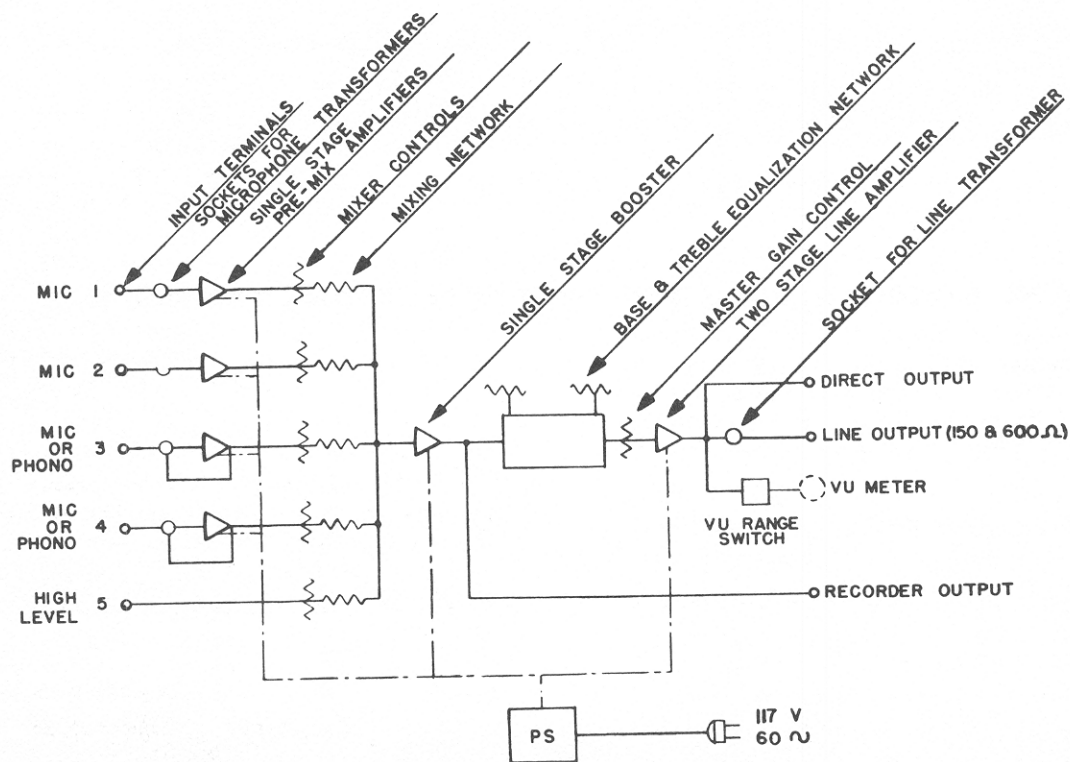
For portable use, an adapter converts the screw type input terminals to XL connectors with binding post connections for output. A fitted, leather-bound, carrying case (see photo) with comfortable luggage type handle is available. The space within the top cover is divided into three compartments: the larger to store cables and the two smaller, which are felt lined, to safely carry microphones. All three are covered by an inner lid.

## CIRCUIT DESCRIPTION

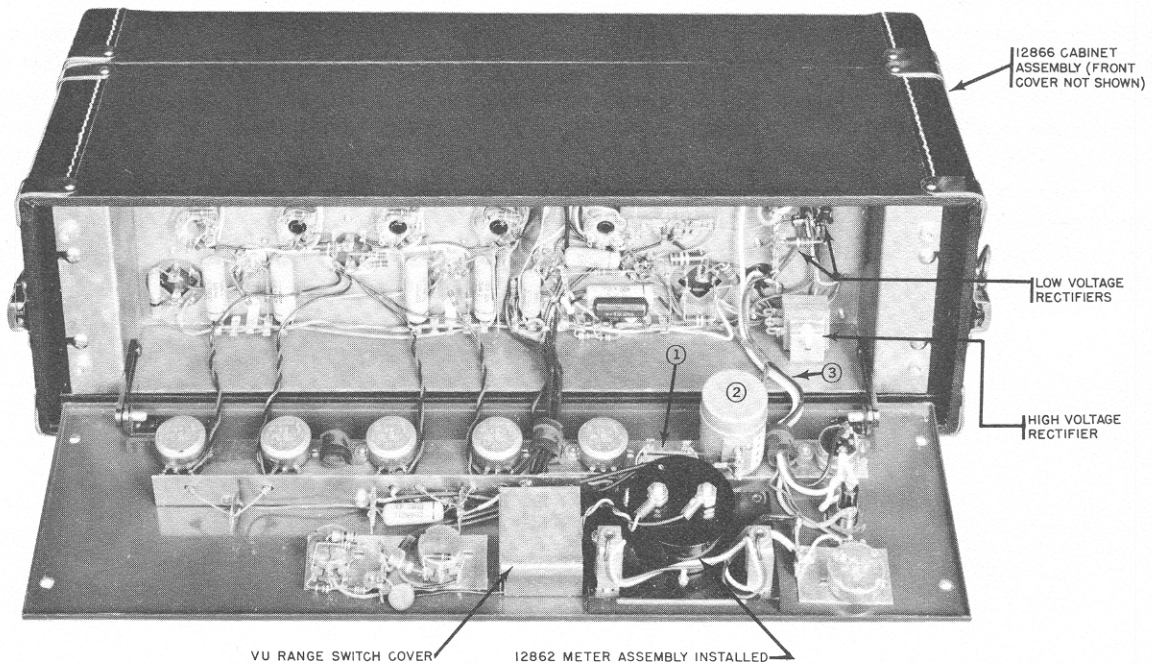
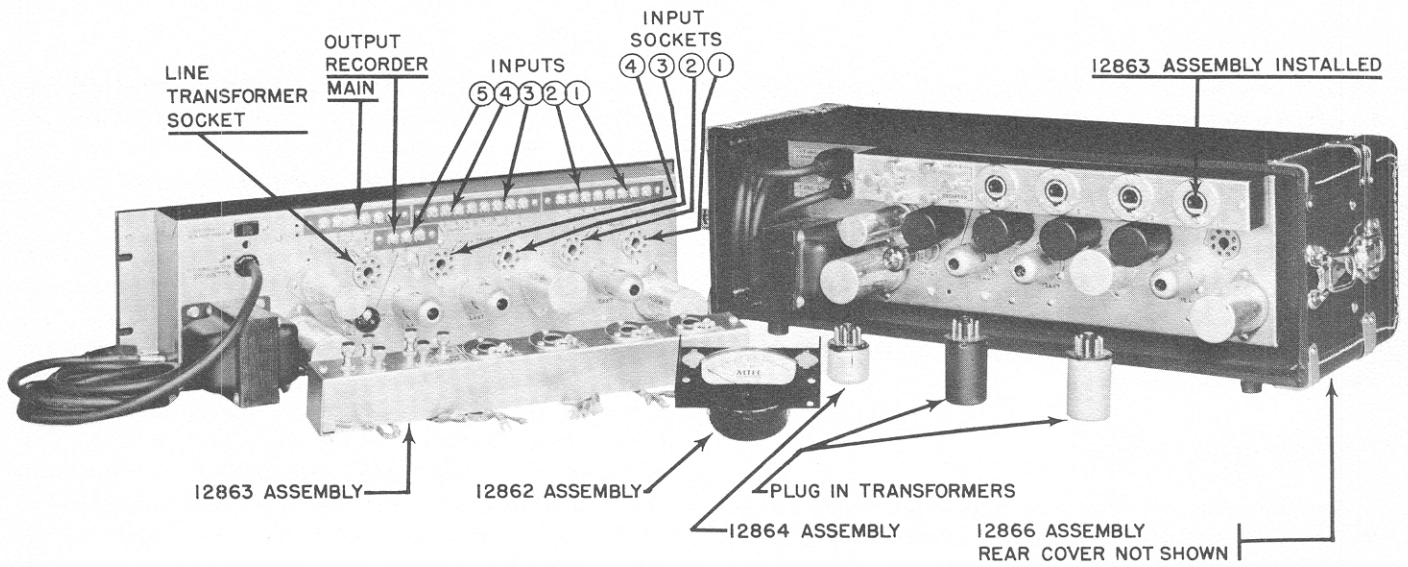
Each low level input connects to a standard octal socket for use with the 4722 microphone transformer or other accessory. The signal from each input is amplified by one half of a dual triode and fed into a mixing potentiometer. Premium quality Mylar<sup>®</sup> condensers are used to couple tube circuits to potentiometers since the smallest amount of leakage current will contribute to noisy control operation. As shown in the block diagram, a feedback path is provided around input amplifiers #3 and #4 for use with the 12864 plug-in equalizer to provide the RIAA reproduction curve. A fifth high level channel is connected directly to a mixing potentiometer. The output of all 5 potentiometers are combined in a mixing network and connected to a booster amplifier consisting of one half of a dual triode tube. To elimi-

nate the possibility of contact potential current from the grid circuit of the booster stage contributing to mixer control noise, the grid circuit is isolated from the mixer network with a Mylar<sup>®</sup> blocking condenser. Thus, the controls are "double blocked."

The booster output is connected to terminals labeled RECORDER OUTPUT and to the bass and treble equalizer network. A master gain control, also double blocked, follows the equalizer network and controls the final 2 stage negative feedback line amplifier. The line amplifier output has three branches. One connects directly to an output terminal pair. The second to an octal socket and in turn to four output terminals labeled LINE OUTPUT, and the third to the VU attenuator, switch and meter accessory. When the 15095 transformer is installed in the octal socket, 150 or 600 ohm load impedances are available at the line output terminals. Simultaneous use of both outputs is provided by this double terminal arrangement. The VU multiplier is connected directly to the amplifier output rather than to the line side of the output transformer so that the VU meter may be used even though the 15095 transformer is not used. Very little compromise is made in the resistive termination of the meter even though the range multiplier is of a simple type. In the most sensitive position ("0" VU) the meter termination is 3450 ohms (11½% low) and in the least sensitive position, 4150 ohms (6.4% high), maintaining suitable ballistic characteristics.

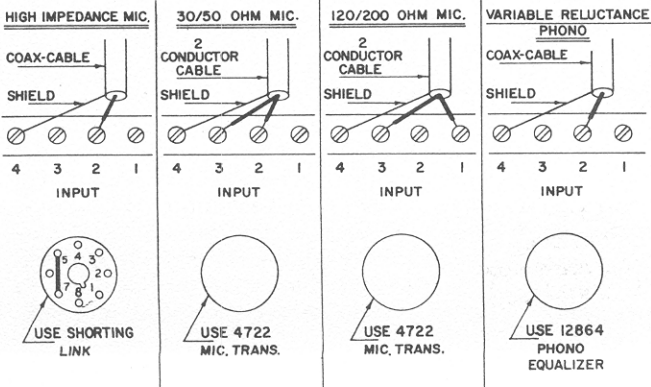






### INPUT CONNECTIONS, CHANNEL 1, 2, 3 & 4

Each channel input has four terminals (see photo) to provide various impedance combinations. Directly below each channel input terminal is the octal socket which will have a shorting link, 4722 mic transformer or the 12864 phono adapter (channels 3 and 4 only). Make connections as shown below.



### INPUT CONNECTIONS, CHANNEL 5

Channel 5 connections are just below the input-output terminals (see photograph). This is a high level input for use with line level signals, tape machine outputs, tuner outputs, high level ceramic phono cartridge outputs or other signals of .02 volts or more. It is a grounded input. If line isolation is required, a repeat coil such as the 15036 or the 15095 line transformer must be mounted externally.

