

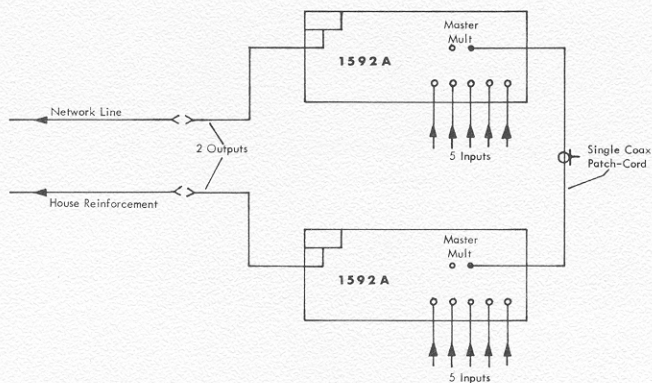


Figure 6. Paralleling two 1592A Mixer-Amplifiers

4. DEFEAT OF TONE CONTROLS (variable low and high frequency tone controls with front-panel controls) is incorporated in the event fixed equalization is utilized at some other point in the system. This is accomplished by turning Tone Controls "OFF" at labeled switch, available only from inside chassis (Figure 7).
5. A FOUR-INCH METER, MODEL 41222, is available

as an accessory. All circuitry for the meter, including front-panel range switch, are standard, pre-wired parts of the amplifier, and provisions are made for meter mounting and illumination. The VU Meter can be installed in minutes, without soldering. (Figure 13).

6. ALTEC HINGE-MECHANISM, on which the front-panel is mounted, allows the panel to be opened while the unit is in operation, without interrupting program material or requiring removal of the amplifier from its rack. (Figure 7).
7. PORTABILITY of the 1592A is enhanced by its weight of only 12 pounds, and an optional, accessory carry-case, Model 12866, fitted and leather-bound, with luggage-type grip. The lid of the carry-case is compartmentalized for cable and microphone storage.
8. ABRASION-RESISTANT LETTERING is featured on the 1592A front-panel, which also has bleached "write-in" blocks for channel identification. Background areas of the panel are etched and colored in non-glare green.
9. The 1592A Mixer Amplifier is constructed on a standard 19" rack chassis, occupying but 5 1/4" of mounting space.

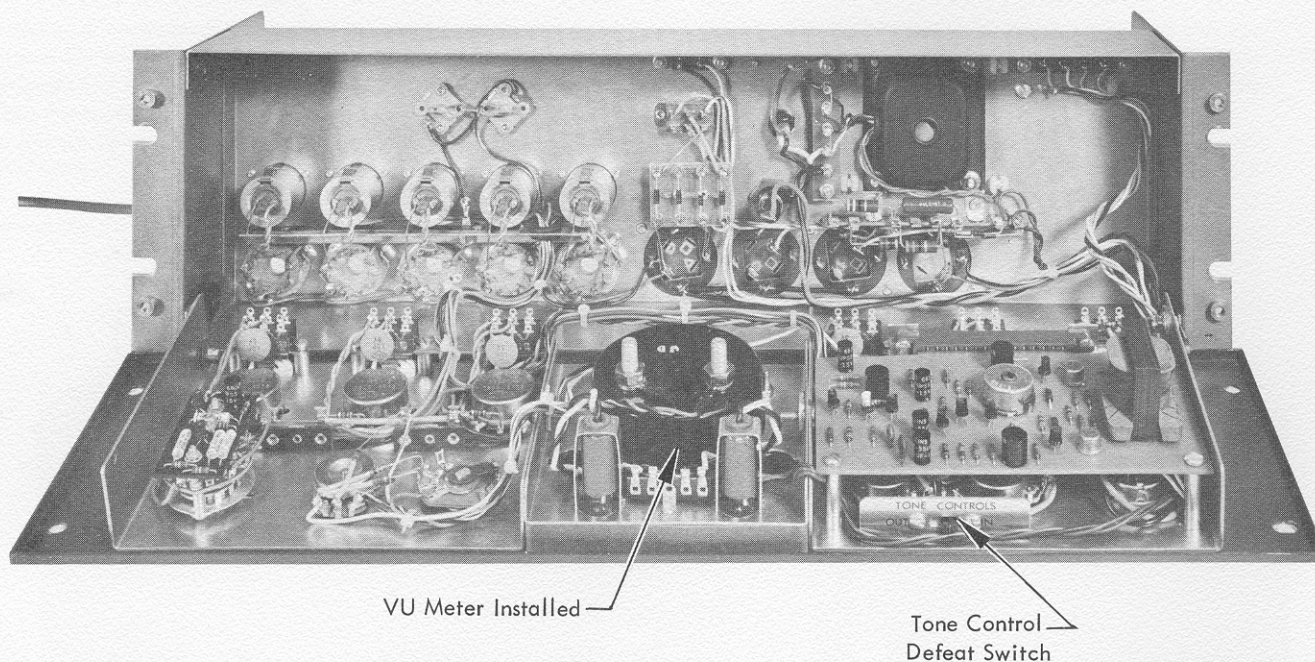


Figure 7. 1592A Mixer-Amplifier with Front Panel Open

FRONT PANEL CONTROLS (Figure 1).

1. Master Control
2. Tone Controls: Bass (LF) and Treble (HF)
3. Mixer Controls for each of five input channels
4. VU Meter Range adjustment (if VU used)
5. Monitor volume control and output jack
6. Test Tone ON/OFF switch (Tone level adjusted at

- Mixer-1)
7. Equipment ON/OFF switch
8. Bright/Normal Switch
9. Speech/Music Switch

REAR PANEL CONTROLS (Figure 5)

1. Battery voltage selector (12/14V or 24/28V dc) slide-switch with locking plate.
2. Output Strapping Connections (Figures 5 and 12).
3. Multiple Master Jacks (Figures 5 and 6).
4. Individual channel plug-in accessory sockets (Figure 5).

INPUT CONNECTIONS

Five input signals may be connected to the amplifier with standard, three-pin XL connectors, and may be used in any combination of microphone, magnetic phono, or high-level line by using the appropriate plug-in accessory in the socket beneath the input female plug. Four types of plug-in accessories are available for the input circuits. Following are descriptions of the plug-in accessories, with curves and graphs to aid use and installation.

Figure 11 illustrates the proper connections required for the individual plug-in accessories.

1578A TRANSISTOR PREAMPLIFIER

The 1578A Transistor Preamplifier is designed as a microphone preamplifier with a gain of 33.5 dB. Sensitivity is 43 millivolts rms for an output of +8 dBm. Frequency response is ± 5 dB, 20-20,000 Hz, or ± 1.5 dB, 15-50,000 Hz. Source impedance is 150 Ω nominal, usable 30 to 20,000 Ω . Equivalent input noise is -122 dBm. The 1578A requires 12V dc at 13 mA. Input connections are shown in Figure 11. The curve in Figure 8 illustrates the performance of the 1578A.

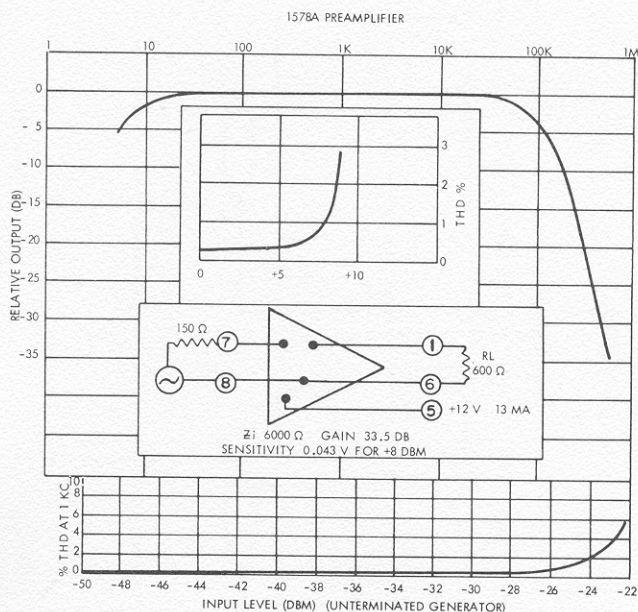


Figure 8

1588A MICROPHONE PREAMPLIFIER

The 1588A Transistor Preamplifier has a transformer-isolated input and is designed for use with microphones. The 1588A has a gain of 33.5 dB and a frequency response of ± 1 dB from 30

to 30,000 Hz. Source impedance is 150/250 Ω and the load impedance is 600 Ω . The 1588A is encased in mu-metal providing effective magnetic shielding for the input transformer of 90 dB. The equivalent input noise level is -122 dBm. Physically and electrically the 1588A is interchangeable with the 1578A Preamplifier. Input connections are the same as those shown for the 1578A in Figure 11. The curve in Figure 9 illustrates the performance of the 1588A.

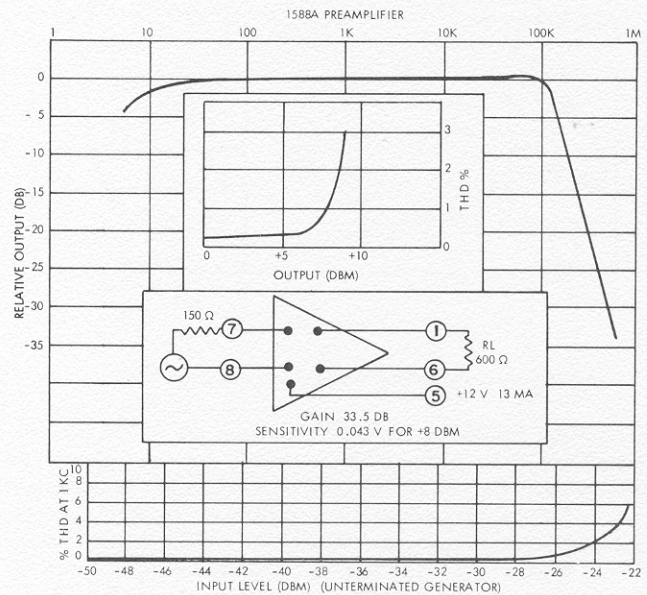


Figure 9

1579A PHONO EQUALIZED PREAMPLIFIER

The 1579A Phono Equalized Preamplifier is specially designed for magnetic phono pick-ups to meet the RIAA standard. Sensitivity is 5 millivolts for 70 millivolt output at 1 KHz. Output is +9 dBm at less than .5% THD (total harmonic distortion). Input impedance is 47,000 Ω and power required is 12V dc at 11 mA. Input connections are shown in Figure 11. Figure 10 illustrates the performance of the 1579A as referenced to the RIAA standard.

15095 LINE TRANSFORMER

The 15095 Line Transformer may be used as a bridging transformer in the input of the 1592A mixer/amplifier for bridging a balanced 600 Ω line. When a terminating function rather than a bridging function is required a 680 Ω resistor is added between pins 2 and 3 of the XL connectors.

OPERATION (Normal Settings)

For average input signals, Mixer and Master Gain controls should be set for a loss of 14 dB. With these settings, average microphone levels will produce Zero VU line levels. When high-gain power amplifiers, such as ALTEC 1568A and 1569A follow the 1592A, 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 1592A,

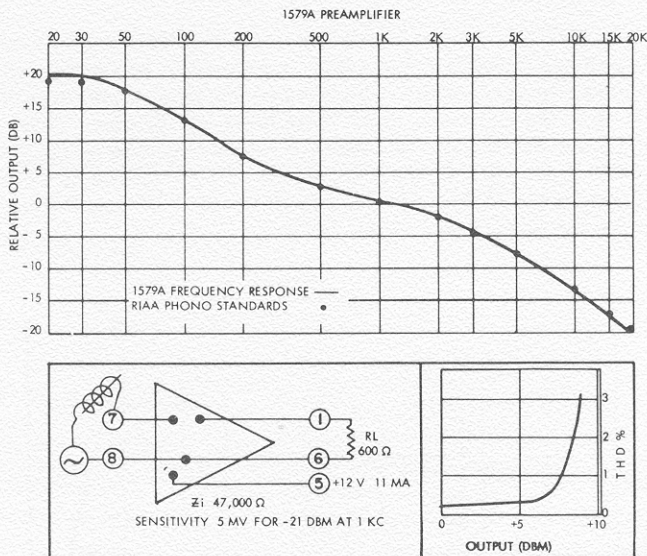


Figure 10

in order to preserve optimum signal-to-noise ratio.

Compressor Amplifiers connected between the 1592A and following amplifiers may provide excessive gain, which must be attenuated. The following adjustment procedure is suggested:

1. Set the 1592A operating controls at "normal" settings.
2. With a typical signal feeding the 1592A, adjust attenuation at the input of the compressor amplifier to provide the desired amount of compression. If a control is not provided on the compressor equipment, an attenuator or fixed pad must be added.
3. Adjust power amplifier gain control for 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 ASSOCIATED WITH THE 1592A WILL BE CAUSED IN MOST EVERY INSTANCE BY FAILURE TO FOLLOW THE ABOVE PROCEDURES.

VU METER ACCESSORY INSTALLATION (See Figure 13).

To install the 41222 VU meter, open the 1592A frontpanel. Remove the light shield located on the front of the panel by removing two screws, two nuts, two washers and two spacers. Discard the light shield and the hardware. Unclip the pilot lamp holders and remove the two screws which hold the meter mounting bracket in place. Mount the VU meter in the bracket with the bracket flanges facing toward the front of the meter. Return the mounting bracket to its original position and secure with the two screws. Clip the pilot lamp holders into the upper set of bracket cut-outs. Attach the prepared leads to the VU meter terminals, observing polarity.

CARRYING CASE ASSEMBLY

The 12866 Assembly consists of a fitted case having two covers, two brackets and eight screws, furnished as loose parts. The 1592A mounts on the brackets when they are attached to the

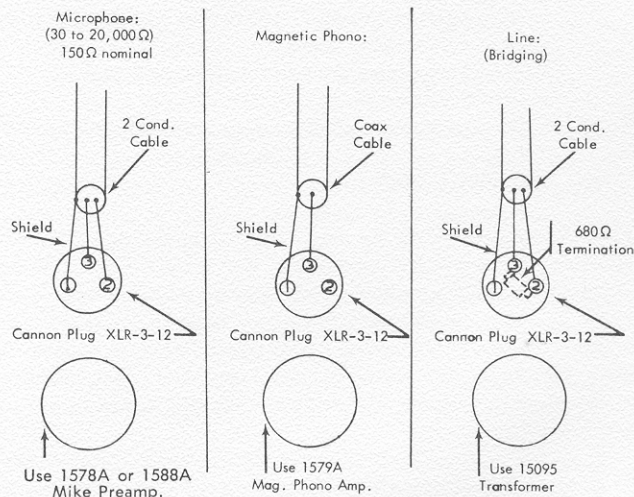
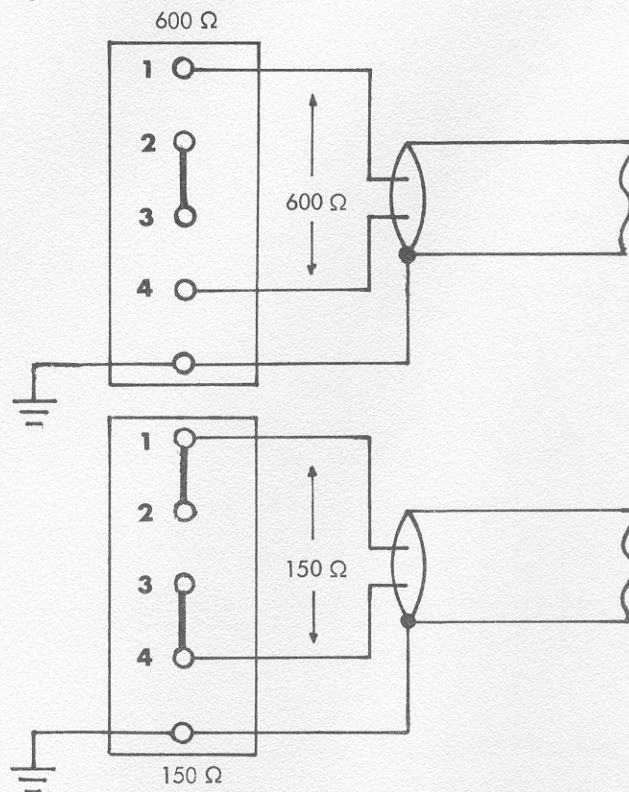


Figure 11

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. NOTE: Do not mix the four panel screws furnished as part of the 1592A with the case mounting screws. Both are of the same type, but of different lengths. The panel screws must not be greater than 1/4" in length, whereas the case screws are 3/8" in length.



1592A OUTPUT STRAPPING CONNECTIONS

Figure 12