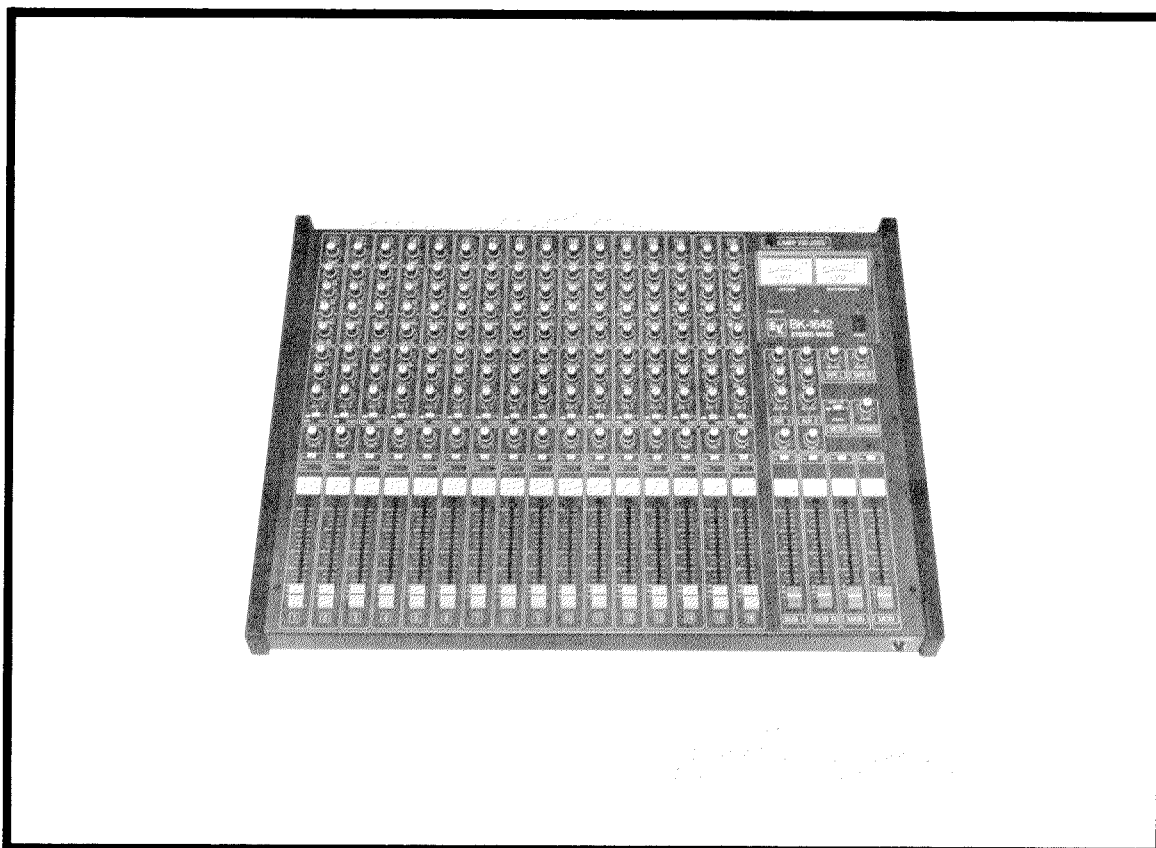




# Electro-Voice® BK-42 SERIES STEREO MIXER

## OWNER'S MANUAL



**BK-42 SERIES STEREO MIXER**

## **INTRODUCTION**

Congratulations! You have just made one of the "best buys" of your audio career. The Electro-Voice BK-42 series mixers were designed to offer the highest level of audio performance at a very reasonable price.

The BK-42 mixers provide the flexibility and sonic quality required by today's audio professional. The multiple mixing busses and channel patch points enable the use of multiple effects and processors. The prefade listen (PFL) is invaluable for fine tuning the mix. Vocalists will find the aux to monitor sends useful in providing a "wet" mix for stage monitors. The built-in phantom power allows use of any dynamic or condenser microphone without separate power supplies.

All of the BK-42 series mixers are identical in circuitry, operation and major features. The BK-842 offers the possibility of rack mounting and because of its configuration has 60 mm faders and a movable connector panel (see BK-842 addendum). To get the most from your new Electro-Voice mixer, please read this manual.

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SECTION 1.0

GENERAL SPECIFICATIONS

**FREQUENCY RESPONSE —**

**Mic Input to Any Output, EQ Flat, All Faders Nominal**  
20-20,000 Hz ±1 dB

**TOTAL HARMONIC DISTORTION —**

< 0.05% at +4 dBu<sup>1</sup>, 20-20,000 Hz  
< 0.10% at +24 dBu, 20-20,000 Hz

**HUM AND NOISE —**

**Measured with a DIN audio filter (22-22 kHz)**

– 128 dBu EIN-equivalent input noise, mic input terminated 150 Ω.

Mixer signal-to-noise ratio measured with masters at nominal and all inputs off: 79 dB

**CROSSTALK —**

– 65 dB typical at 1 kHz adjacent inputs to outputs  
– 40 dB minimum, all combinations 20-20,000 Hz

**MAXIMUM VOLTAGE GAIN ±3 dB —**

86 dB — Mic In to Main Out  
75 dB — Mic In to Sub, and Monitor Out  
60 dB — Line In to Main Out  
50 dB — Line In to Sub, and Monitor Out

**MICROPHONE INPUTS —**

Low impedance, balanced — pin 2 reference positive  
Maximum input level: +6 dBu (1.5 V)  
Input impedance at 1 kHz: 4400 Ω  
Common Mode Rejection Ratio,  
Typical: –75 dB  
Minimum, 20-20,000 Hz: –55 dB

**LINE INPUTS —**

High impedance, balanced tip positive  
Maximum input level: +24 dBu (12 V)  
Input impedance: 60 kΩ

**INPUT CHANNEL EQUALIZATION —**

± 15 dB shelving at 100 Hz  
± 15 dB peak/dip sweeping from 350-5,000 Hz  
± 15 dB shelving at 10 kHz

**PEAK INDICATOR THRESHOLD —**

+ 16 dB on input channel (4 dB before clipping)  
+ 14 dB on VU meter (10 dB before clipping)

**VU METER CALIBRATION —**

0 VU = +4 dBu (1.228 V)

**HEADPHONE OUTPUT —**

Output 20 mW into 8Ω  
Frequency response: 50-15,000 Hz at ±2 dB

**LAMP CONNECTOR —**

12 V ac 375 mA maximum

**PHANTOM POWER —**

48 V dc at pin 2 and 3 on mic connector, 6.8 kΩ source impedance

**POWER REQUIREMENTS —**

100, 120, 220 or 240 V ac 50/60 Hz, 40 watts (120 V ac)

**PFL (pre-fader listen) —**

Switchable for input and output channels

**AUX 2 SEND (Input channels) —**

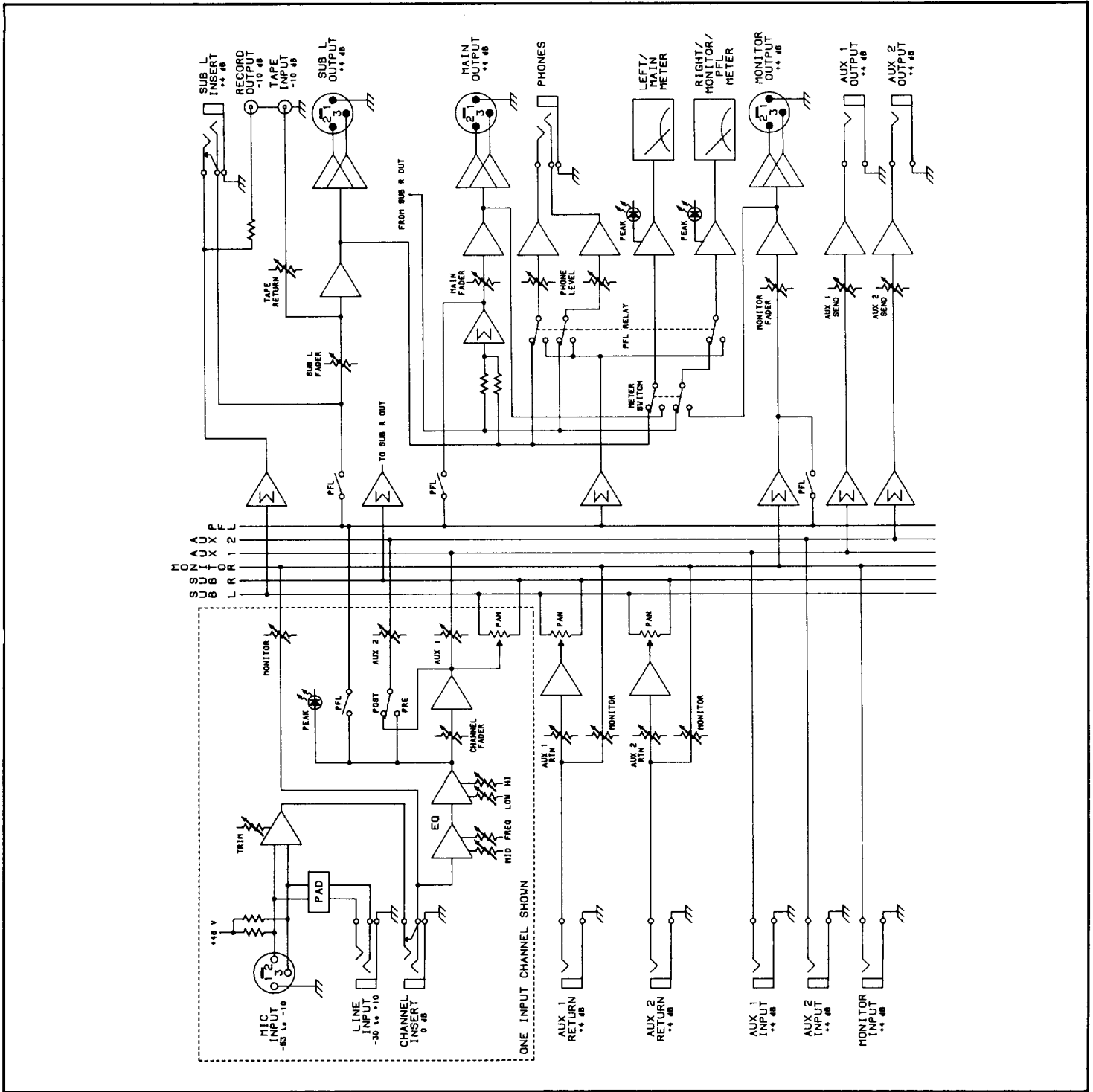
Switchable pre- or post-fader

LINE LEVEL INPUTS

OUTPUTS

	MAXIMUM LEVEL	INPUT IMPEDANCE		MAXIMUM LEVEL	MINIMUM LOAD	INTERNAL IMPEDANCE
Left & Right Insert	+20 dBu	10 kΩ	Main (balanced)	+24 dBu	600 Ω	75 Ω
Left & Right Tape Return	—	5 kΩ	Monitor (balanced)	+24 dBu	600 Ω	75 Ω
Aux Input 1 & 2	+20 dBu	51 kΩ	Left Sub (balanced)	+24 dBu	600 Ω	75 Ω
Monitor Input	+20 dBu	75 kΩ	Right Sub (balanced)	+24 dBu	600 Ω	75 Ω
Input Channel Insert	+20 dBu	5 kΩ	Left & Right Insert	+20 dBu	2000 Ω	100 Ω
			Aux 1 & 2 Out	+20 dBu	600 Ω	100 Ω
			Input Channel Insert	+20 dBu	2000 Ω	100 Ω

SECTION 2.0



SIGNAL FLOW DIAGRAM

**SECTION 3.0**

**3.0 INPUT CHANNEL CONTROLS (Figure 1)**

The input channel is the beginning of the signal amplification chain of the mixer. Each input channel will accept one signal source which may be equalized, have effects added and sent to the monitor and main system for the audience to hear. Each input has a low-impedance microphone input (the 3-pin XLR connector) and a high-impedance mic or line input (1/4-inch phone jack). The line input will accept signals from an instrument, high-impedance microphone, tape/CD player, keyboard or electronic drums or almost any other audio source. Always make sure that the channel fader (see illustration) or master faders are down before plugging or unplugging input sources.

**3A. TRIM CONTROL**

The TRIM control adjusts the gain of the input amplifier. This is necessary to accommodate the wide variation in signal strength presented to the mixer by the endless variety of signal sources — vocal mics, instruments, CD players, etc. The TRIM control allows you to optimize the amplification for each individual input source. Correct setting of the TRIM control results in the best signal-to-noise ratio ( . . . no hiss) and the greatest dynamic range and freedom from overload distortion.

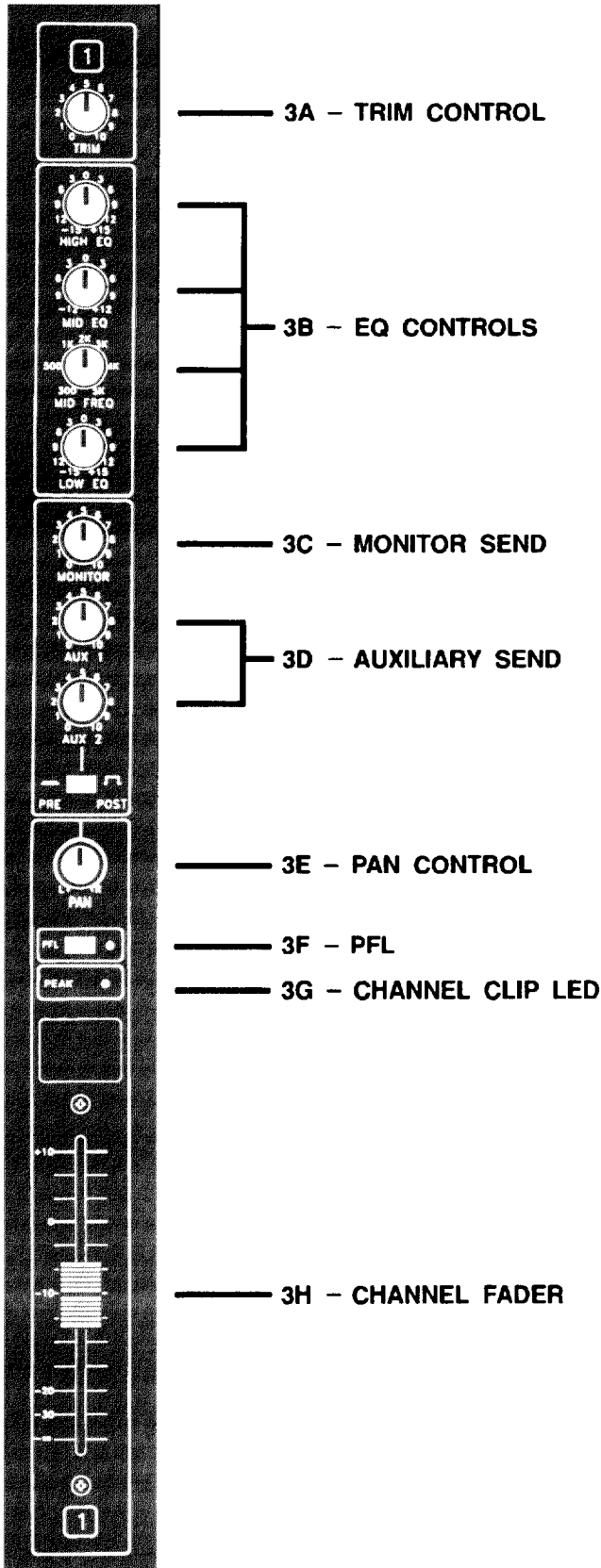
TO GET THE CLEANEST, QUIETEST OPERATION FROM THE BOARD, IT IS IMPORTANT THAT THE TRIM CONTROL BE PROPERLY SET. To set up a mix, first set all TRIM controls at "0" (minimum). Start at the output stage of the mixer and work back towards the input. Set the subgroup controls and the channel faders at "0" (nominal level). Set the EQ. Use as little gain from the TRIM control as possible to achieve balance.

To achieve the lowest noise and widest dynamic range, you want to run the output section hard and use little or no TRIM adjustment. Work with the output section of the mixer and the level controls on your amplifier to achieve the necessary playback level.

**3B. EQ CONTROLS**

Equalization can be more simply described as sophisticated tone control. The EQ circuits used in the BK-42 series have a substantial amount of sound shaping capability.

This wide range can be a bonus when dealing with widely-varying instrument signals, poor acoustics



**3B. EQ CONTROLS (continued)**

or other problems. The EQ should be used sparingly, however, for the best results. Too liberal use of the EQ can cause phasing problems, add noise and use up a lot amplifier power.

**3B-1. HIGH EQ      10 kHz SHELVING TYPE  
± 15 dB**

Controls the treble content of the input signal. Turning the control counterclockwise decreases the amount of treble, clockwise increases it.

**3B-2. MID EQ**

Controls the midrange content of the input signal. Turning the control counterclockwise decreases the amount of midrange and turning it clockwise increases it.

**3B-3. MID FREQUENCY 300-5 kHz Sweepable  
± 15 dB**

Controls the frequency range the MID EQ control works in. By varying the FREQUENCY, different tonal perspectives can be created. The sweepable frequency gives much more control flexibility.

**3B-4. LOW EQ            100 Hz Shelving Type  
± 15 dB**

Controls the bass content of the input signal. Turning the control counterclockwise decreases the amount of midrange and turning it clockwise increases it.

**3C. MONITOR SEND**

The monitor send control sets the level of that input signal in the monitor mix. It is independent of all input channel controls except the TRIM control. It is not affected by the channel EQ controls or slide fader. Thus, it is independent of, and not affected by, changes in the main or house mix.

**3D. AUXILIARY SEND**

The AUXILIARY 1 send control sets the level of that signal in the AUX 1 mix and is post-fader, which means that it is affected by the gain setting of the fader. The AUX 1 send may also be used as a mono send for recording.

The AUXILIARY 2 send control sets the level of that input signal in the AUX 2 mix and is switchable PRE or POST EQ and fader. In the PRE position it serves as another "MONITOR OUT" and in the POST position, another "EFFECTS OUT."

**3E. PAN CONTROL**

Short for "panoramic potentiometer." This control allows you to place the channel's input signal within the stereo image by assigning more or less of the signal to the left or right submaster controls. Turning the panpot to the left of center moves the apparent source toward the left channel. Turning the panpot to the right of center moves the apparent source toward the right channel. Centering the control makes the apparent source centered between the channels. If all inputs are panned center, the result is mono.

Some users pan all the instruments to one side and the vocals to the other and use the subgroup controls to balance them.

**3F. PFL**

PFL (pre-fader listen) allows the operator to preview any pre-fader signal individually or in combination through the headphone output. To activate the PFL simply depress the appropriate switches. The status indicator will light indicating the pre-fader signals being monitored. When the PFL circuit is engaged, the right channel meter will show the audio level of the selected channel(s).

In the normal position (all PFL switches off) the headphone circuit monitors the output of the SUB L and SUB R outputs. The audio level of the headphone jack is controlled by the PHONES control.

**3G. CHANNEL CLIP LED**

The CHANNEL CLIP LED monitors the input channel circuit for clipping or overload (both before and after the EQ section). If it lights, you are bordering on distortion. You will hear this in the output as a harsh, blaring sound on volume peaks. This might be caused by excessive boost in the channel equalization controls, or a TRIM control setting that is too high for the input signal. Generally, re-adjusting the TRIM control will cure the difficulty.

**3H. CHANNEL FADER**

The slide fader controls the output level of the channel as it is fed to the subgroups. The control should be normally set around the "0" mark (nominal level). At this point, the signal level is high enough to keep noise from creeping in and low enough to insure plenty of headroom and freedom from clipping distortion. If the fader must run wide open to get enough level, turn up the TRIM control (judiciously) or increase the level setting of the left and right submaster controls. Conversely, if the fader must be pulled way back to get the right level, the TRIM control or stereo submasters should be adjusted. Adjust the TRIM control if the CLIP LED lights, otherwise adjust the stereo submasters. For optimum performance, the channel FADERS should be run close to the "0" mark.

**SECTION 4.0**

**4.0 OUTPUT SECTION CONTROLS**

**4A. MONITOR SEND (AUX 1, AUX 2)**

The TO MON (to monitor) control sets the level of AUX 1 and/or AUX 2 effects to the monitor system. With the use of this control, the performers can hear the added effects in their monitors.

**4B. EFFECTS SEND (AUX 1, AUX 2)**

The EFFECTS SEND control sets the level of the signal appearing at the effects send output jack(s) going to any type of outboard effects device(s) such as a digital reverb, flanger, compressor/limiter, etc. The source of this signal is via the individual AUX 1 and AUX 2 send level controls on each input channel.

**4C. EFFECTS RETURN (AUX 1, AUX 2)**

The EFFECTS RETURN level control determines the amount of externally generated effects signals in the main mix. This signal is mixed into the left and right stereo sub channels via the Aux 1 and Aux 2 PAN control(s).

**4D. PAN CONTROL (AUX 1, AUX 2)**

The effects PAN control (Aux 1, Aux 2) directs the signal coming from the EFFECTS RETURN level control(s) into the left and/or right sub channels. The control works in an identical way to the input channel PAN control.

**4E. MASTER SECTION CONTROLS**

The master section controls affect the subgroup, main and monitor output levels.

The use of subgroups can be demonstrated by this example: If the input channel(s) PAN controls are set fully clockwise for all the vocals, then we will have assigned the SUB R fader as a "vocal submaster." If we raise or lower the SUB R control we can set the proper vocal level in the mix while preserving the input channel balance set among the vocalists.

**4E-1. SUB L (Left Submaster)**

Controls the volume of the left stereo output channel. It is also used as a subgroup master.

**4E-2. SUB R (Right Submaster)**

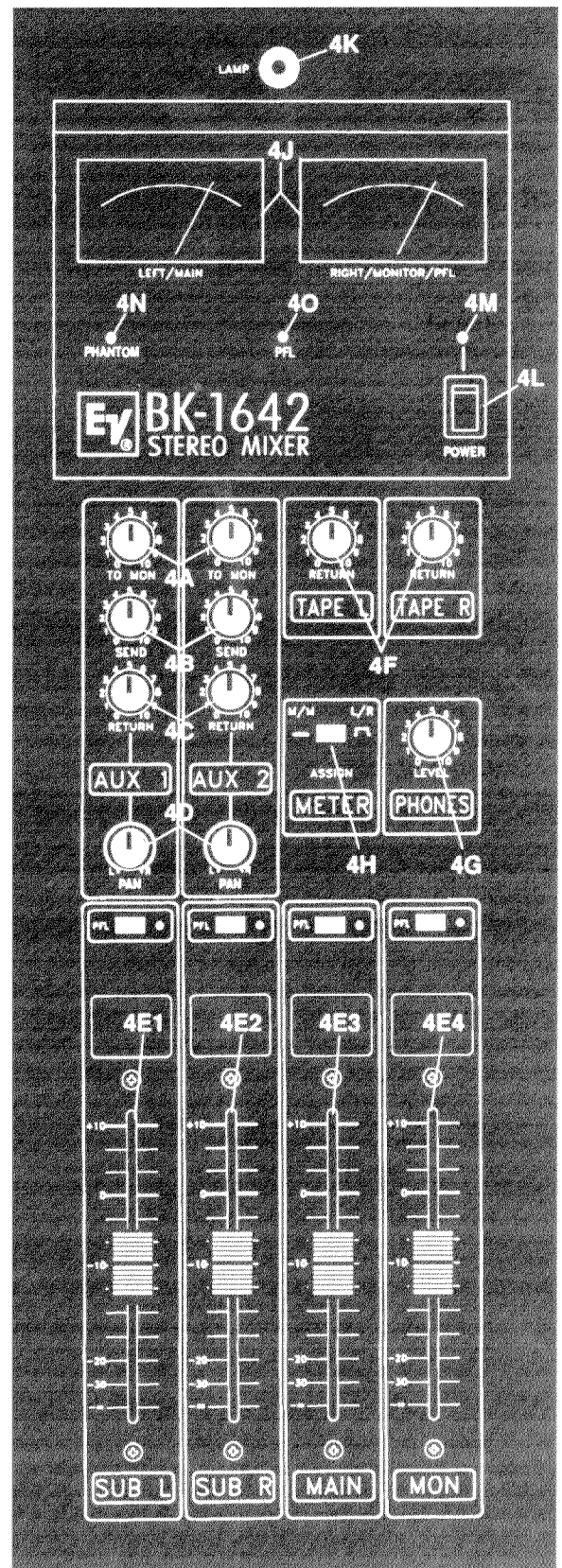
Controls the volume of the right stereo output channel. It is also used as a subgroup master.

**4E-3. MAIN MASTER**

The MAIN (monaural) output is an equal mix of the left and right stereo outputs. The MAIN master controls the volume of the output.

**4E-4. MON (Monitor Master)**

Controls the volume of the monitor output signal. The monitor output is a mix of the individual channel monitor sends.



**FIGURE 2 — Output Section Controls and Functions**



### SECTION 4.0 (continued)

#### 4F. TAPE L AND TAPE R (Tape Left and Right Returns)

These controls adjust the level of tape left and right inputs.

#### 4G. PHONES (Headphone Level)

The PHONE gain control sets the level at the HEADPHONE jack (front panel). Any signal selected by depressing a PFL switch will be monitored through the headphone jack. Without any of the PFL switches depressed, the headphone circuit monitors the left and right subgroup outputs in stereo.

#### 4H. METER ASSIGNMENT SWITCH

A push-push switch is provided to allow the user to select the points in the circuit which are monitored by the VU meters. When the switch is depressed, the indication will be the audio level at the Sub Left and Sub Right outputs. In the other (non-depressed) position, signal level at the main and monitor outputs will be shown.

#### 4J. VU METERS

Two "B" scale analog VU meters with integral peak lights are used to indicate signal level at selected points in the circuit (see meter assignment switch and PFL switches). The meter scale goes from -20 dBu to +4 dBu, a standard in the industry. The integral peak light, located in the upper right-hand corner of each meter, shows when the output goes above the +14 dBu level and the headroom is being rapidly exhausted and distortion is imminent. The meters read either left/right stereo, main/monitor level or, if any of the PFL switches are depressed, the right meter will monitor the PFL signal. A PFL LED is provided on the meter bridge to acknowledge this condition.

#### 4K. LAMP CONNECTOR

A BNC-type socket is provided at the top of the mixer panel to accommodate a Littlelite® gooseneck lamp to allow operation of the board in low-light conditions. These lamps are available in different lengths from many professional sound dealers and attaches without tools. The LAMP CONNECTOR can accommodate either normal or high intensity lamps.

#### 4L. POWER SWITCH

The power switch is used to turn on and off the main ac power.

#### 4M. POWER INDICATOR

This LED (green) is illuminated when the ac main power is on.

#### 4N. PHANTOM POWER INDICATOR

This LED (red) indicates when phantom power is present at the microphone inputs.

#### 4O. PFL INDICATOR

This LED (amber) indicates when the PFL circuit is activated and shows that the right meter is reading the PFL level.

### SECTION 5.0

#### 5.0 REAR PANEL INPUT CONNECTORS

A BK-42 series mixer can accept program material covering a dynamic range of over 100 dB. All of the line inputs can safely accept signals at least up to +20 dBu. (See specifications for details.) All line inputs are made through standard 1/4-inch phone jacks (except for TAPE inputs). Several of the inputs that directly access the mix busses can be used to stack mixers together without using up an input channel. The stacking group includes the AUX 1, AUX 2 and MONITOR inputs. The AUX return inputs may be used as the stacking inputs. For stereo subgroup stacking, set AUX 1 PAN to L, and AUX 2 PAN to R and use AUX 1 and 2 RETURNS for left and right stacking, respectively.

#### 5A. BALANCED LOW-Z MIC INPUT

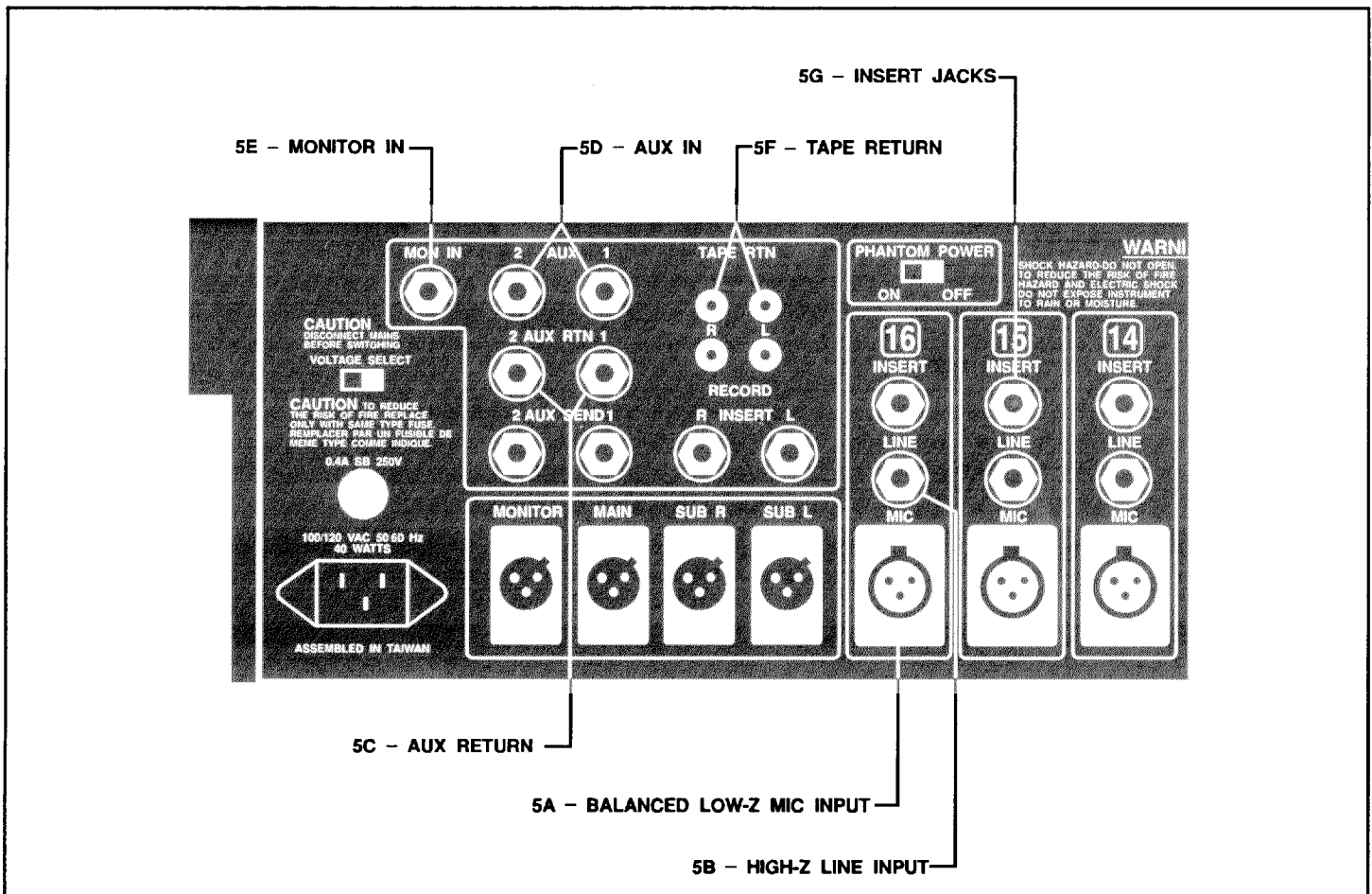
A 3-pin XLR-type connector is used for balanced low-impedance microphones. The MIC INPUT is actively balanced; active balancing allows elimination of the input transformer (along with its limitations), while maintaining the RF and hum rejection of a good transformer-coupled input.

It is important during operation or testing of the mixer that all channel faders remain fully down whenever the mic input is not *properly* terminated with a microphone or equivalent 150-ohm source. An open mic input invites the introduction of high noise levels which could produce lower quality sound or an incorrect test measurement.

#### 5B. HIGH-Z LINE INPUT

A standard 1/4-inch phone jack is used for balanced or unbalanced line level signals. Examples of line level signals include most electronic keyboards, drum machines and synthesizers, tape decks, CD players, etc. All input channel controls, including the variable GAIN control, affect the LINE input. Maximum input level before preamp clipping is 12 volts or +24 dB.

If a sufficient signal level is not possible with the GAIN control in its furthest clockwise position, the input signal must then be treated as a mic level signal and connected to the microphone input. If necessary, use an appropriate balancing transformer (EV model 502CP or equivalent) or a direct box with the microphone (XLR) input.



**FIGURE 3 — Rear Panel Input Connectors**

## SECTION 5.0 (continued)

### 5C. AUX RETURN (RTN) (AUX 1 and AUX 2)

The AUX RETURN jack(s) are used for signals to be fed to the subgroup busses. The signal is controlled by the RETURN and PAN front panel functions.

### 5D. AUX IN (AUX 1 and AUX 2)

The AUX IN jack(s) will put signals directly into the respective AUX bus. Crosstalk and buffering protection are provided by the input circuit and the signal level is controlled by the external source.

### 5E. MONITOR IN

The MONITOR IN jack will put signals directly onto the MONITOR bus. Crosstalk and buffering protection are provided by the input circuit and the signal level is controlled by the external source.

### 5F. TAPE RETURN

There are RCA-jacks on the mixer to allow hooking up a tape deck or CD player. The input goes into the left and right subgroups and its level is controlled by front panel controls. It is also possible to use these as another AUX return.

### 5G. INSERT JACKS (SUB L and SUB R)

A space-saving 3-conductor (stereo) phone plug is used for both output from SUB L and SUB R respectively, and for the return to the mixer's master section from an external processing device. Be sure the device you want to patch in has line level unbalanced inputs and outputs. The signal at the insert jack can drive loads of 2,000 ohms or greater and the external processing device should have a low output internal impedance (100 ohms or less).

A nominal input signal is a level of +4 dBu; the maximum level is +20 dBu.

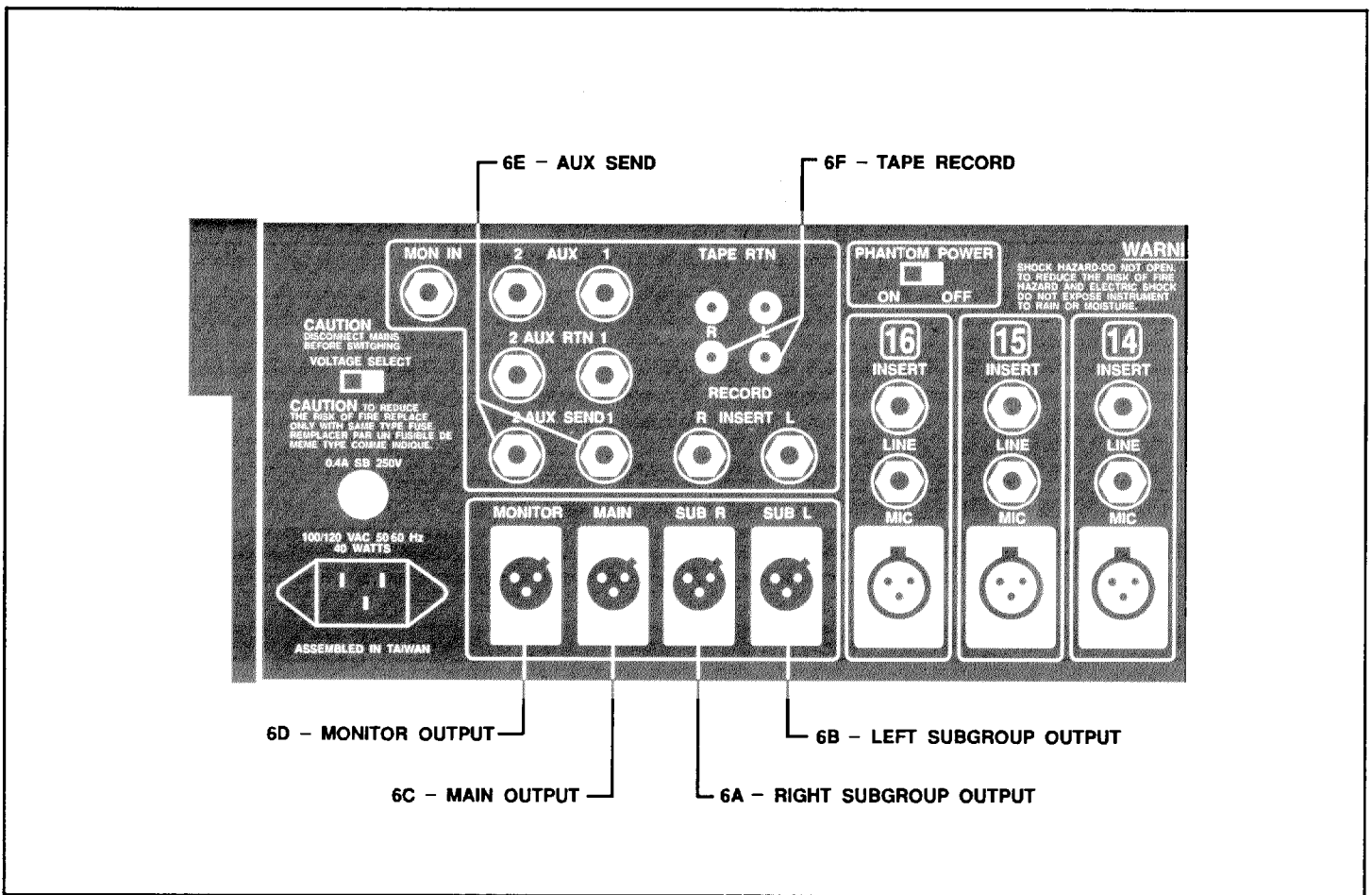


FIGURE 3 — Rear Panel Output Connectors

**SECTION 6.0**

**6.0 REAR PANEL OUTPUT CONNECTIONS**

In the BK-42 series mixer, the SUB L, SUB R, MAIN and MONITOR outputs are servo-balanced and made through chassis-mount 3-pin XLR-type connectors to a maximum level of +24 dBu.

All other output connections are line level, unbalanced, and made through standard ¼-inch phone jacks (except for RECORD OUT).

**6A. SUB R RIGHT SUBGROUP OUTPUT**

This output is derived by summing all of the points (channels and external) assigned to the right subgroup buss. A PAN control rotated fully clockwise to the "R" position will assign that signal only to the right buss.

**6B. SUB L LEFT SUBGROUP OUTPUT**

This output is the left subgroup equivalent of the SUB R output.

**6C. MAIN OUTPUT**

The MAIN output is a 50/50 mix of the right and

left subgroup outputs. Since the BK-42 series is a true subgroup mixer, all signals that appear in the main mix must come through the subgroup channels.

**6D. MONITOR OUTPUT**

The MONITOR output signal is the sum of all the input channel monitor sends and the external monitor input signal.

**6E. AUX SEND (AUX 1 and AUX 2)**

The AUX SEND output signal is the sum of all of the input channel AUX sends (PRE or POST EQ and fader) plus any signal coming through the AUX IN input.

**6F. TAPE RECORD**

The TAPE RECORD output signals are the sum of all the input channels and effects with their position in the L + R stereo mix. The TAPE RECORD output is via RCA-jacks fixed at -10 dBu for easy interfacing and compatibility with semi-pro and hi-fi tape decks.

**SECTION 7.0****7.0 SWITCHES****7A. PHANTOM POWER**

This switch turns on and off the phantom power supply. The phantom power supply provides power for condenser-type microphones through the microphone cable. When switched on, it provides 48 volts dc (with 3.4 K-ohm source impedance) at pins 2 and 3 on all of the microphone input connectors. Pin 1 (the shield conductor) provides the ground return path. This will power standard condenser microphones. When switched on or off, the voltage will ramp slowly up or down; it takes a few seconds to reach full level. This prevents unwanted transients from reaching the microphone inputs. When the switch is engaged, a red LED will light on the meter bridge to confirm its operation.

**7B. VOLTAGE SELECT**

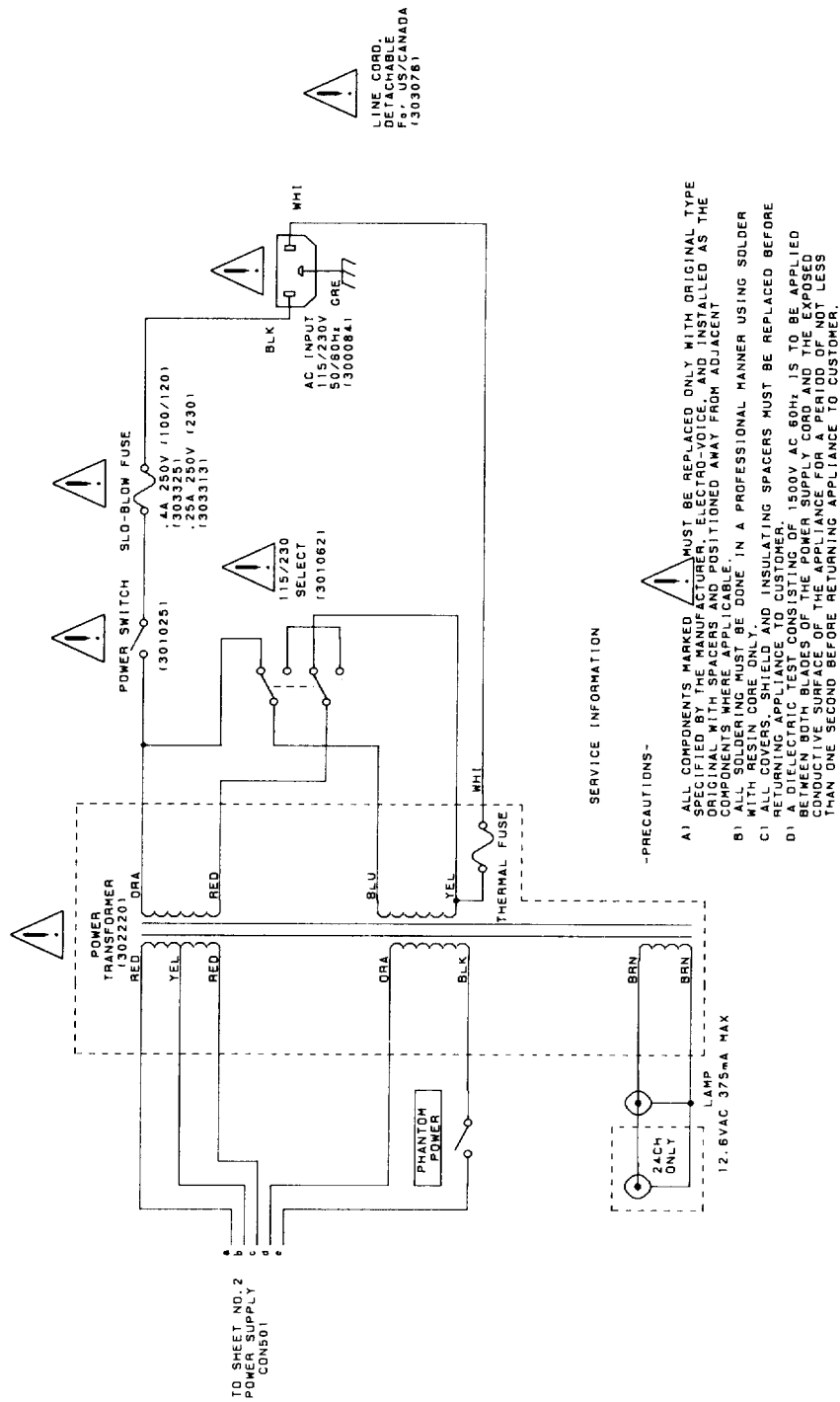
**CAUTION! BEFORE ATTEMPTING TO MOVE THIS SWITCH, THE MIXER MUST BE TURNED OFF AND THE POWER CORD DISCONNECTED!**

The BK-42 series is capable of operation at 115 or 230 V, 50 or 60 Hz. To safely accomplish a voltage change, follow these steps:

1. As noted above, turn the mixer off and completely disconnect the ac power cord.
2. If the unit is used for 115-V operation, be sure a 0.4 AMP SLO-BLO (5x20 mm) FUSE is installed in the holder. If the unit is used for 230-V operation, be sure a 0.25 AMP SLO-BLO (5x20 mm) FUSE is installed in the holder.
3. Change the chassis-mounted switch on the back of the unit to the correct corresponding voltage.
4. Plug the power cord in and resume normal operation.

SECTION 8.0

8.0 WIRING DIAGRAM



LINE CORD  
 DETACHABLE  
 FOR US/CANADA  
 13030781

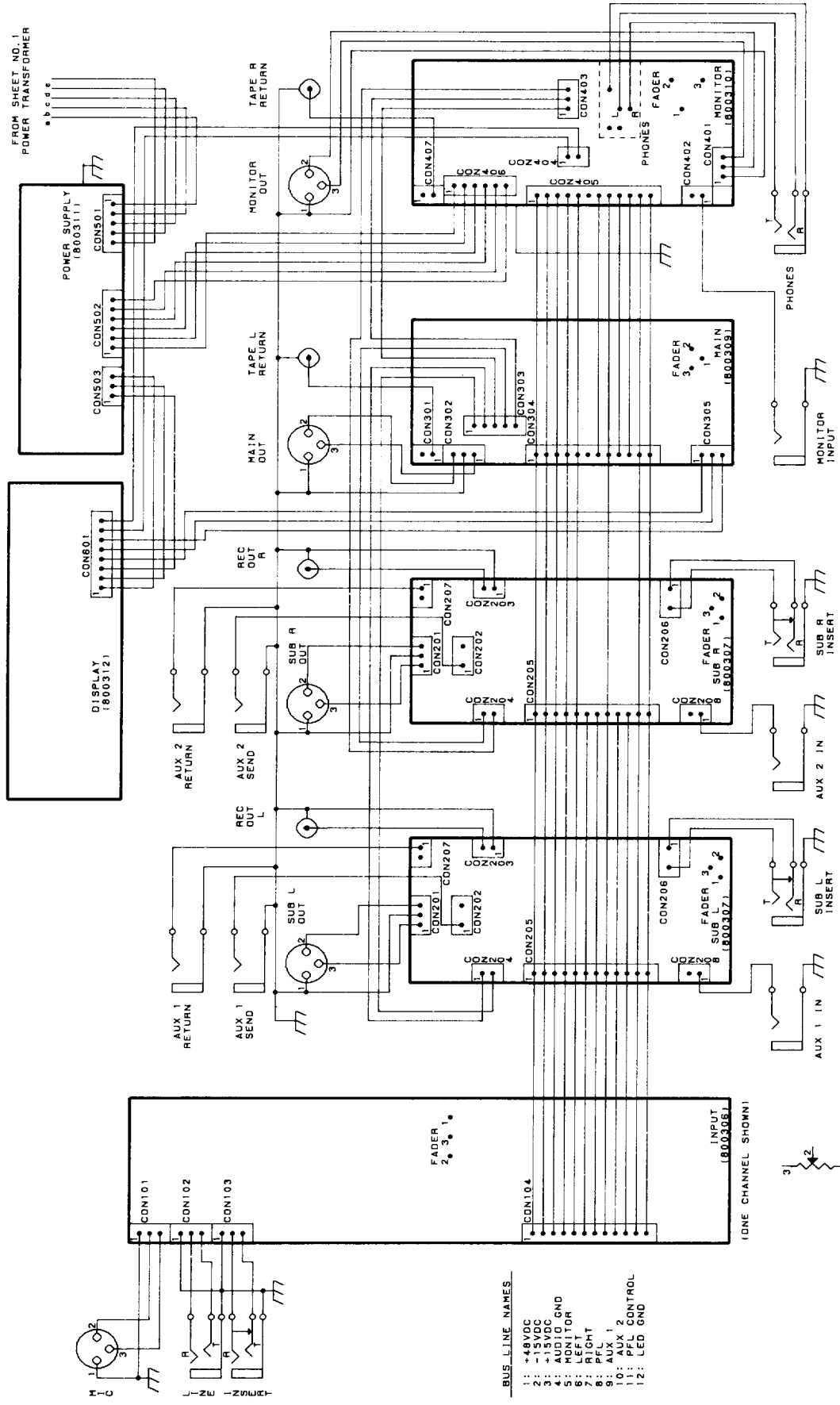
SERVICE INFORMATION

-PRECAUTIONS-

- A) ALL COMPONENTS MARKED WITH A WARNING SYMBOL MUST BE REPLACED ONLY WITH ORIGINAL TYPE SPECIFIED BY THE MANUFACTURER. ELECTRO-VOICE, AND INSTALLED AS THE ORIGINAL WITH SPACERS AND POSITIONED AWAY FROM ADJACENT COMPONENTS WHERE APPLICABLE.
- B) ALL SOLDERING MUST BE DONE IN A PROFESSIONAL MANNER USING SOLDER WITH A MELTING POINT OF 60°C (140°F) OR HIGHER.
- C) ALL COVERS, SHIELD AND INSULATING SPACERS MUST BE REPLACED BEFORE RETURNING APPLIANCE TO CUSTOMER.
- D) A DIELECTRIC TEST CONSISTING OF 1500V AC 60Hz IS TO BE APPLIED BETWEEN BOTH BLADES OF THE POWER SUPPLY CORD AND THE EXPOSED CONDUCTIVE SURFACE OF THE APPLIANCE FOR A PERIOD OF NOT LESS THAN ONE SECOND BEFORE RETURNING APPLIANCE TO CUSTOMER.

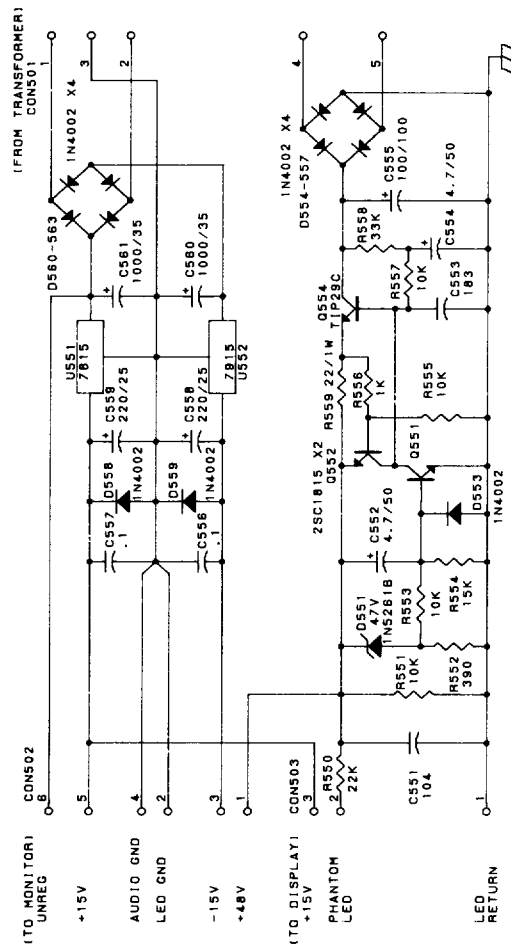
SECTION 8.0

8.0 WIRING DIAGRAM



SECTION 9.0

9.0 SCHEMATIC



POWER SUPPLY BOARD

SERVICE INFORMATION

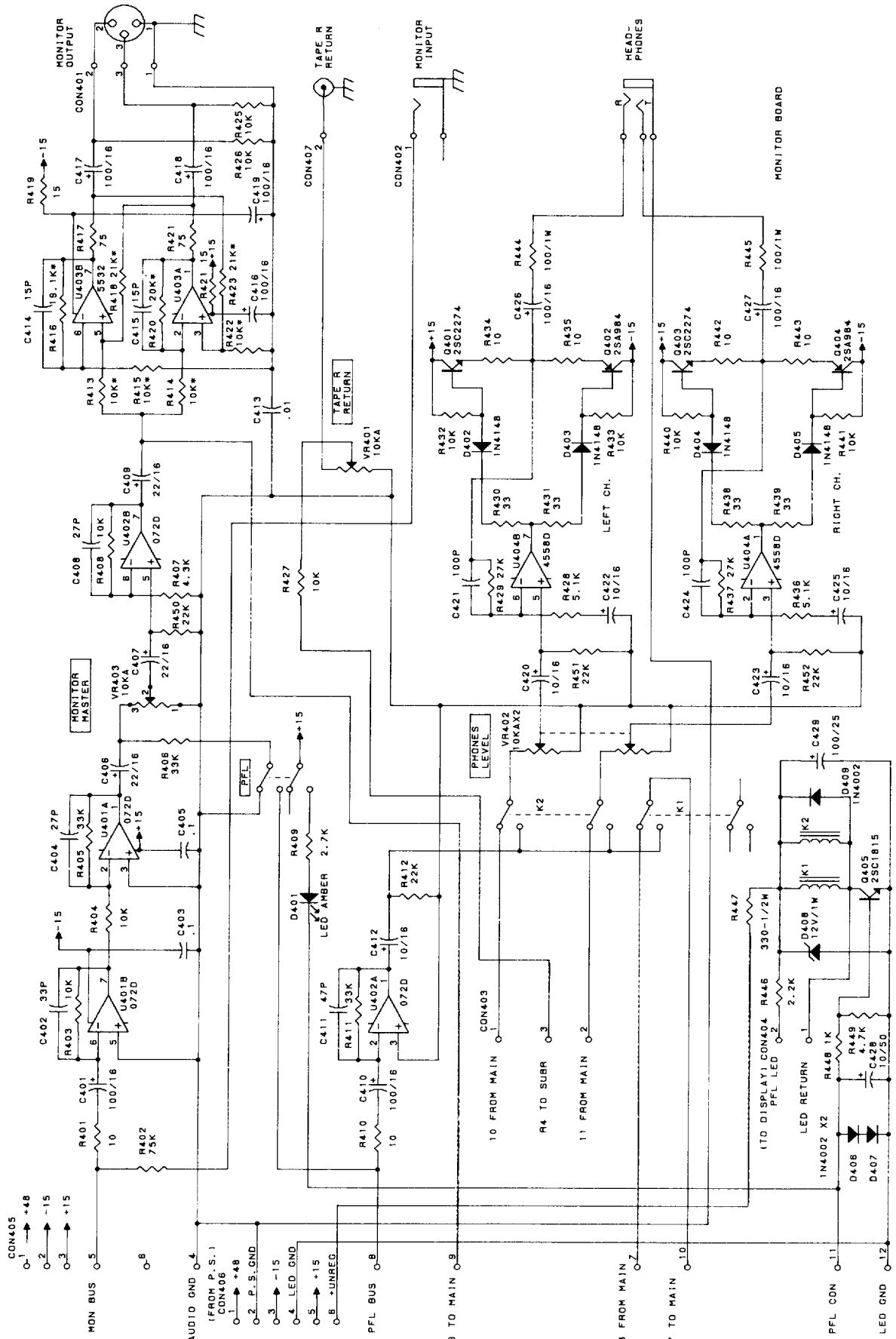
1. RESISTANCE VALUES ARE INDICATED IN OHMS UNLESS OTHERWISE SPECIFIED.  
(K=1,000 M=1,000,000)
2. CAPACITANCE VALUES ARE SHOWN IN MICROFARADS UNLESS OTHERWISE NOTED.  
(M=1,000,000 P=100,000)
3. RESISTORS ARE 5% CARBON FILM .25W UNLESS OTHERWISE SPECIFIED.  
(\* DENOTES 1% METAL FILM .25W±1%)





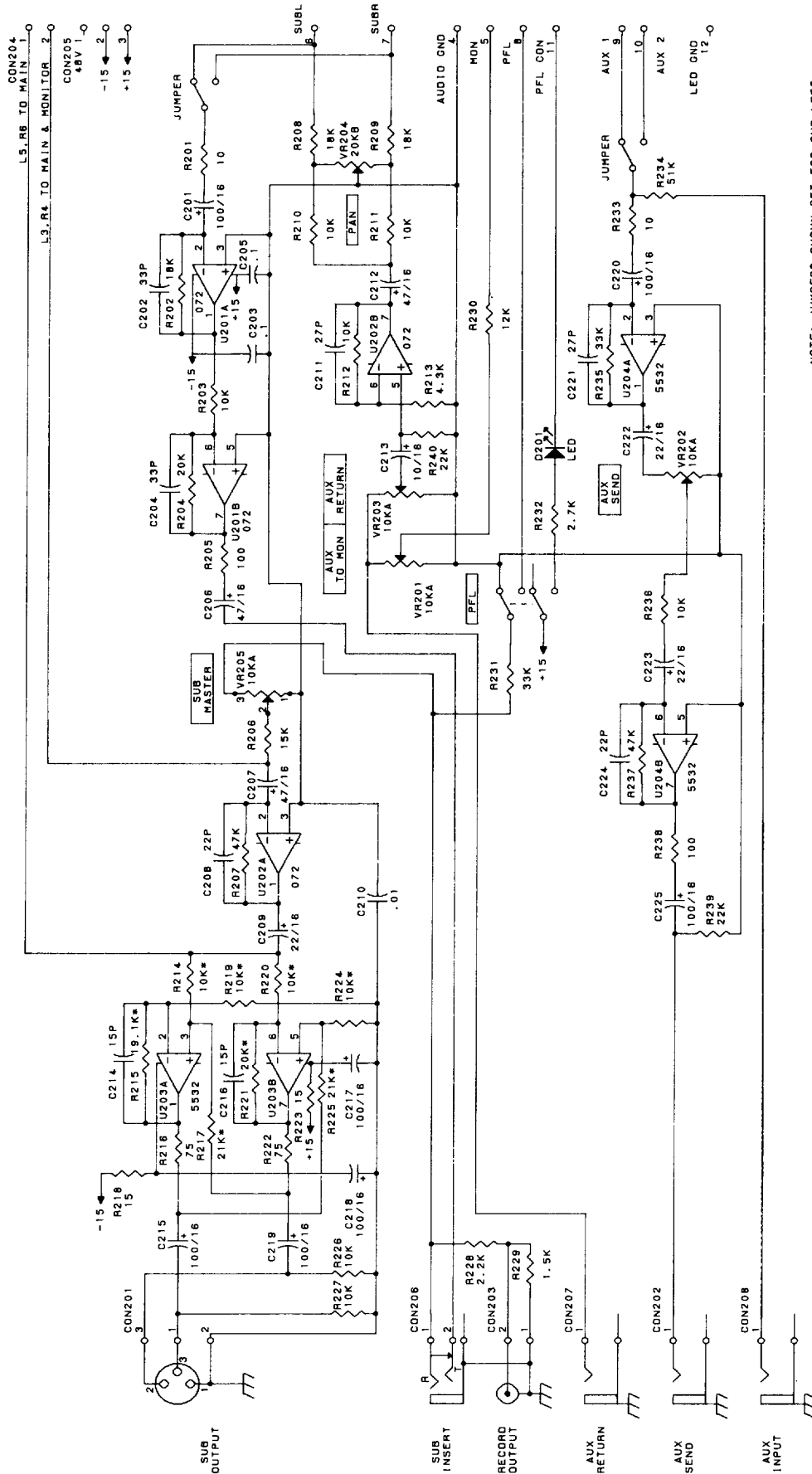
SECTION 9.0

9.0 SCHEMATIC



SECTION 9.0

9.0 SCHEMATIC

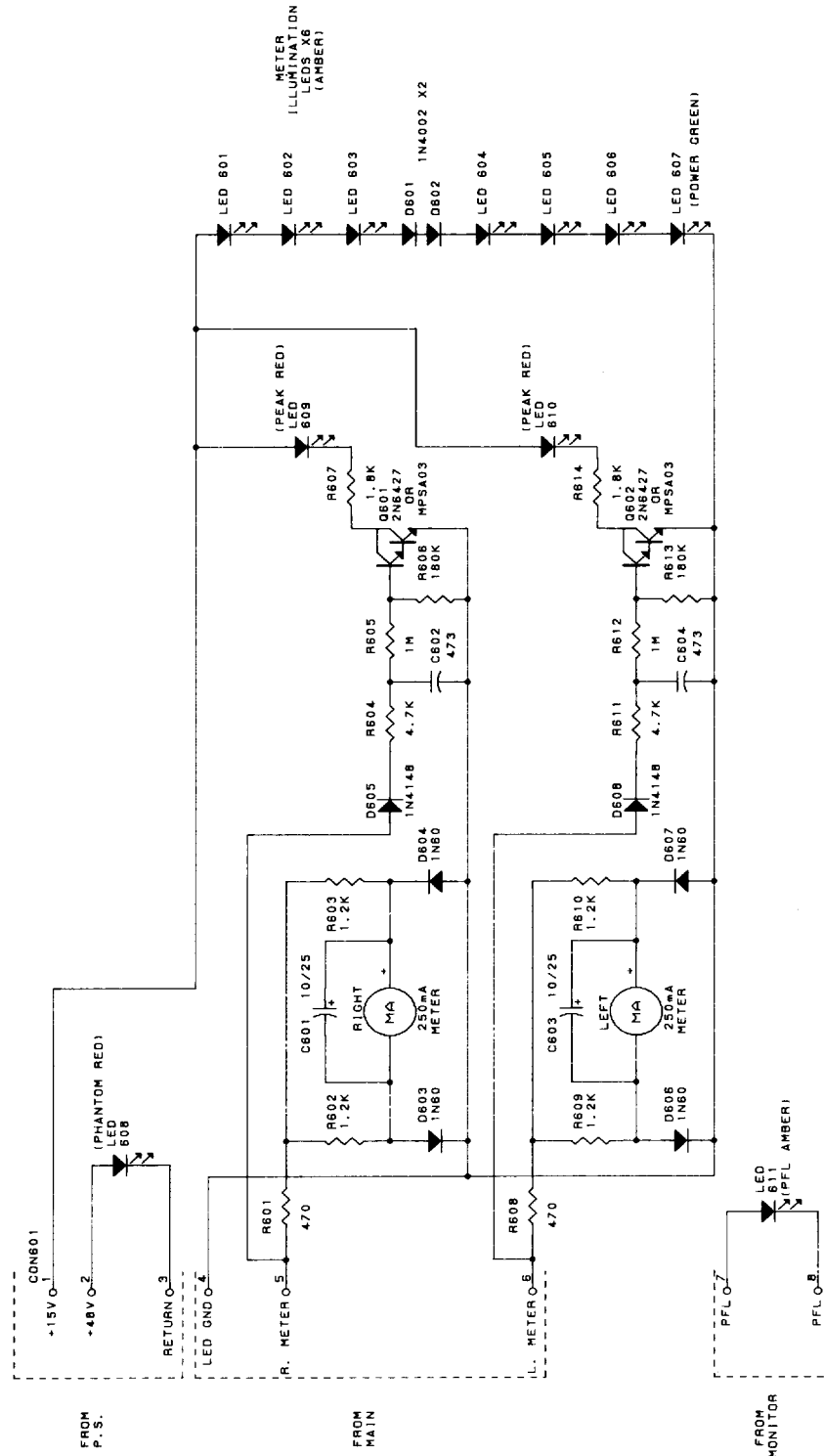


NOTE: JUMPERS SHOWN SET FOR SUB LEFT

SUB BOARD

SECTION 9.0

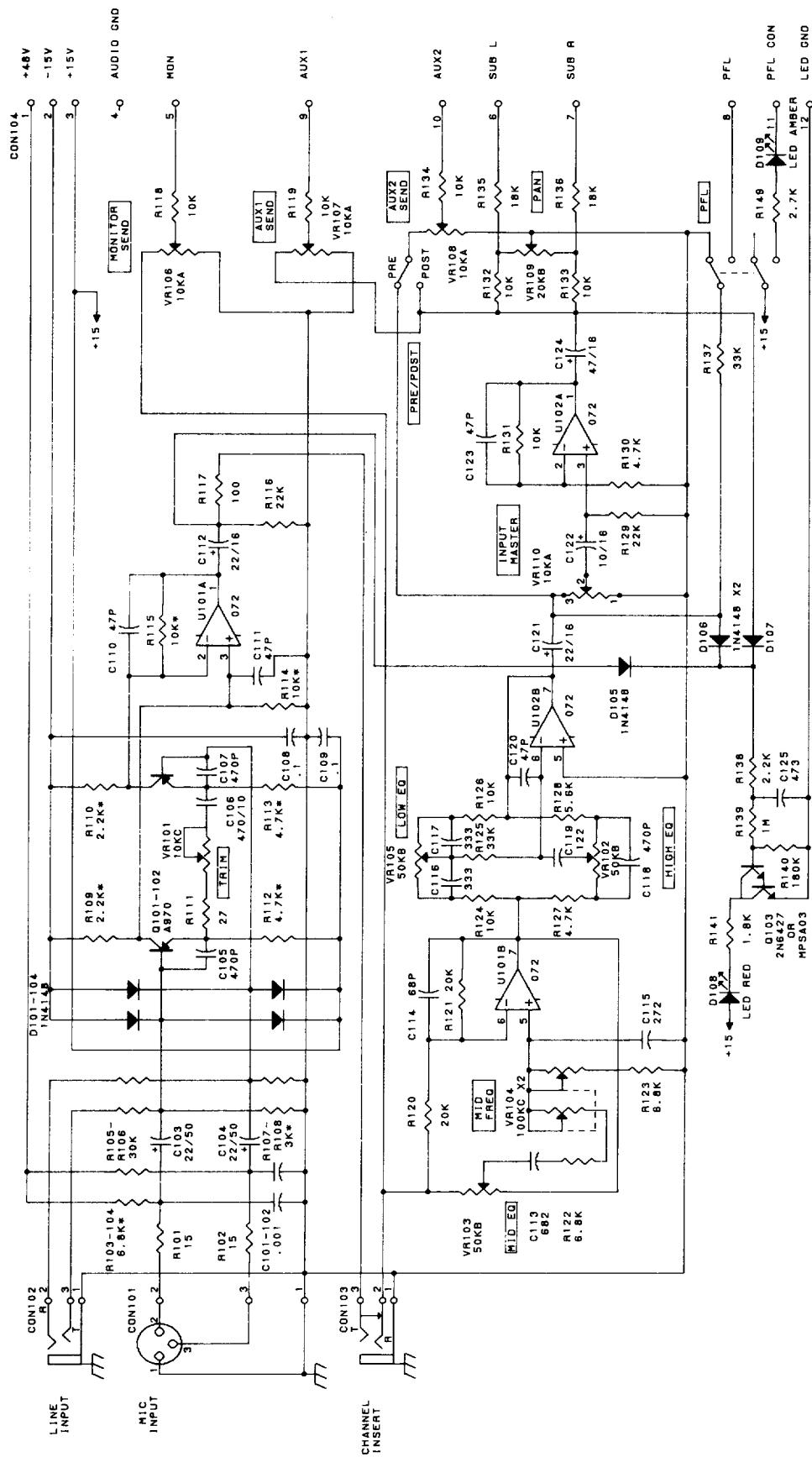
9.0 SCHEMATIC



DISPLAY BOARD

SECTION 9.0

9.0 SCHEMATIC



INPUT BOARD

## SECTION 10.0

## 5.1 SERVICE AND WARRANTY INFORMATION

### 10.0 BK-842 MOUNTING CONVERSION

To convert the BK-842 from a rack-mount configuration to a table-top console, follow the following steps:

1. Disconnect the mixer from all ac lines and remove all input and output cables and connectors.
2. Remove the five Philips head screws as shown on the diagram from the blank metal panel at the top of the mixer. The Philips head screw immediately adjacent to the fuse is **NOT** removed.
3. Remove the five Philips head screws from the connector panel on the back of the mixer chassis.
4. Move the connector panel up to the top of the mixer chassis being very careful not to pull any of the wiring or connectors off.
5. Replace the five screws to hold the connector panel in place.
6. Move the blank metal panel to the back of the mixer and secure it with five screws.

## SECTION 11.0

### 11.0 TROUBLESHOOTING

#### 11A. IN CASE OF DIFFICULTY

1. Don't panic — be systematic. Change one thing at a time. Check the obvious!!! Verify input connections.
2. Check all cables. Many problems are caused by poor cables.
3. If there are no lights, check ac power source, power switch and power fuse.
4. If the problem is one of a "dead" input, verify by trying the same source in another input.
5. Verify problems by substituting the bad part with one that works. Do this by moving the cable from one that works to one that doesn't.
6. Fuses that blow instantly on turn-on are a sign of internal distress and mean that you should refer the unit to "qualified service personnel".
7. Don't panic, be systematic. Change one thing at a time. Check the obvious!!!

**WARRANTY (Limited)** — All Electro-Voice products are guaranteed against malfunction due to defects in materials and workmanship for a specified period beginning at the date of original purchase. If such a malfunction occurs, the product will be repaired or replaced (at our option) without charge during the period and under the limitations stipulated in the data sheet or owner's manual for that individual product, if delivered prepaid to the proper Electro-Voice service facility. The unit will be returned prepaid. Warranty does not extend to finish, appearance items, or malfunction due to abuse or operation under other than specified conditions, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee. A list of authorized warranty service centers is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831); or Electro-Voice West, 8234 Doe Avenue, Visalia, CA 93291 (AC/209-651-7777). This warranty gives the customer specific legal rights, and there may also be other rights which vary from state to state.

#### FACTORY SERVICE ADDRESS

Electro-Voice, Inc.  
Service Department  
600 Cecil Street  
Buchanan, MI 49107  
(616) 695-6831

