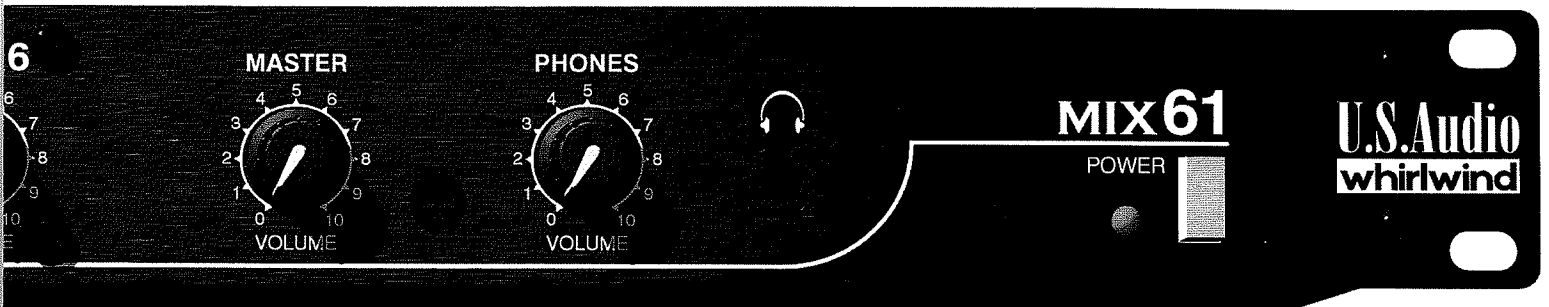


# MIX 61



## INTRODUCTION

The Mix 61 is a mono 6 mic or line input to 1 line level output audio mixer with headphone monitoring. Housed in a single space rack enclosure with XLR connectors, the Mix 61 delivers professional quality audio with phantom power on all inputs and a user selectable voltage switch for international power.

## THEORY OF OPERATION

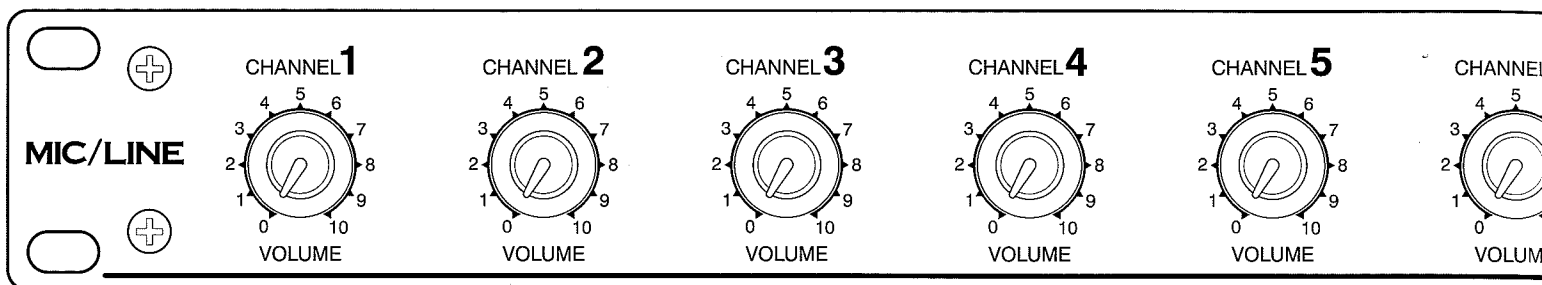
Each of the 6 inputs of the Mix 61 is a female XLR with a mic/line selection switch. In the stock configuration +18 volt phantom power is present on all XLR connectors. Phantom power can be disabled by switching jumper J14 from pins 1-2 to pins 2-3 (See Controls and Functions). On each channel a mic/line switch attenuates the gain by 25dBm. After the input circuits, each input channel is applied to a level potentiometer circuit. The potentiometer has an audio like taper from the 9 o'clock to 3 o'clock range, providing incremental adjustments with the 12:00 o'clock position providing unity gain in line operation. Below the 9 o'clock position, the potentiometer attenuates the signal in larger increments and fully counter clockwise the attenuation is 60dB which will adequately mute most audio inputs. Above the 3:00 o'clock position, the level control has larger increments of gain with 18dB when turned fully clockwise. After the input channel circuitry the 6 channels are summed together and presented to both the master output and headphone circuits. The master output level control and headphone level control have tapers exactly the same as described above with the input section. After the signal has left the master level circuits, it is balanced and delivered to the male XLR output jack. The output XLR drive circuit is designed such that if either pin 2 or 3 is shorted to ground, it will not affect the other pin. The signal going to the headphone level circuit is pre fader, in that the master level control will not affect the headphone volume at all. The headphone section is designed to accept headphone impedances of 50 to 600 ohms. With low impedance headphones, the Mix 61's current amps will provide signal to the headphones that is loud enough to hear in noisy environments. The headphone jack is TRS with tip and ring connected to provide a mono output to stereo headphones.

Power is connected to the Mix 61 via a standard universal power inlet (AC cord provided) and a 120/230 volt mains switch on the rear panel. When the Mix 61's power switch is activated the LED will light.

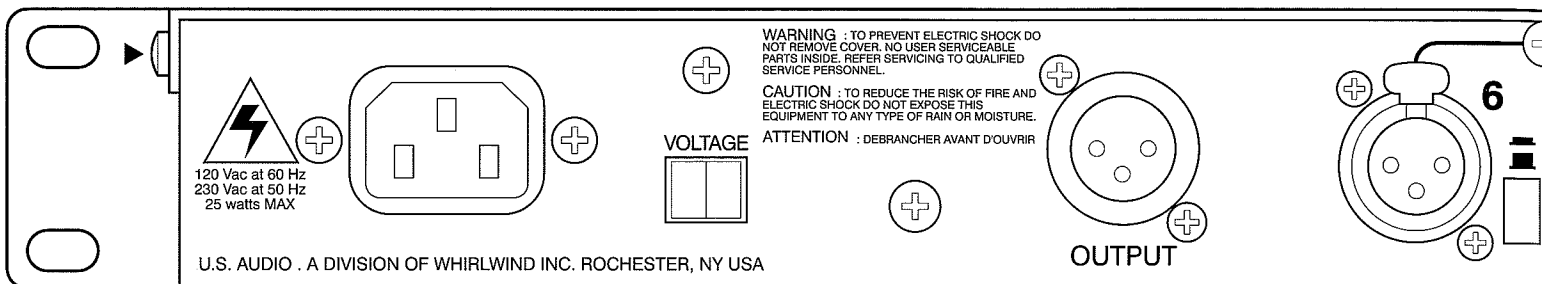
The Mix 61's earth ground from the power inlet is connected to the chassis of the unit and also connected to the audio ground via jumper JMP5. This jumper can be removed to separate audio ground from earth (See Controls and Functions).

## UNPACKING

U.S. Audio has made every effort to ensure that your equipment is received in the same perfect condition it was when it left the factory. Please inspect your product for any signs of damage during shipping and report them to your dealer so that a claim can be made to the shipper. We recommend that you save your packing material for use in the unlikely event that you need to return your equipment for service.



1



7

8

9

10

11

## CONTROLS AND FUNCTIONS

**1. INPUT VOLUME CONTROLS 1-6** vary the amount of signal sent to the master buss through a range of 60dBm attenuation at full off to +18dBm of gain full on.

**2. MASTER VOLUME CONTROL** determines the amount of signal from the summing amp that is fed to the output. This also has a gain range of -60 to +18dBm.

**3. HEADPHONE VOLUME CONTROL** varies the signal at the headphone jack. The signal going into the headphone circuit is pre master fader and independent of the master volume pot.

**4. HEADPHONE JACK** drives stereo headphones with impedances greater than 50 ohms and is wired mono with the tip and ring connected.

**5. POWER LED** indicates that the unit is turned on.

**6. POWER SWITCH** connects AC to the transformer primary and the front panel LED indicates that the unit is working. Both sides of the AC line are switched and the main fuse is located on the circuit board inside of the unit.

**7. POWER CORD INLET** for connection of a standard universal power cord (SUPPLIED).

**8. VOLTAGE SWITCH** for selecting between 120Vac at 60Hz or 230Vac at 50Hz.

**9. XLR OUTPUT** controlled by the front panel master volume pot and provides balanced output.

**10. XLR INPUT** for each of the 6 inputs provides a balanced XLR connection either mic or line level.

**11. MIC/LINE SWITCH** for switching between mic and line input levels.

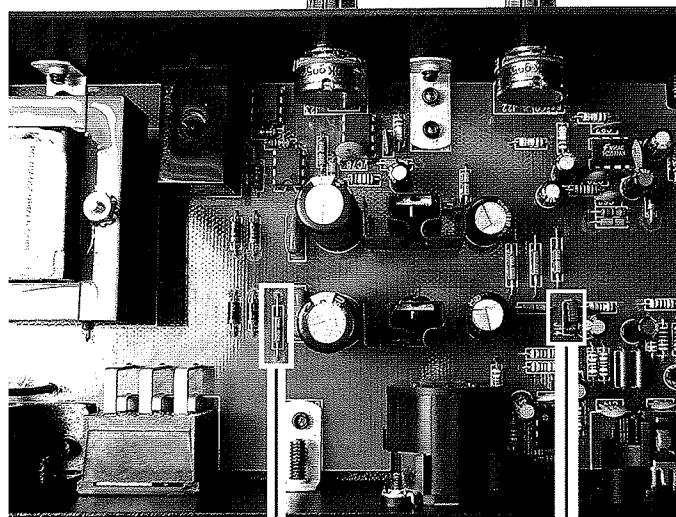
For JUMPER modification remove the top cover by removing 6 screws, 2 on top of each side, 1 in front and 1 in back top center (See Arrows).

To disable PHANTOM POWER, switch jumper J14 from the default pins 1 and 2 to pins 2 and 3.

To remove EARTH GROUND from the unit remove JMP5 using a pair of wire clippers being careful not to disturb surrounding components.

### PHONES VOLUME

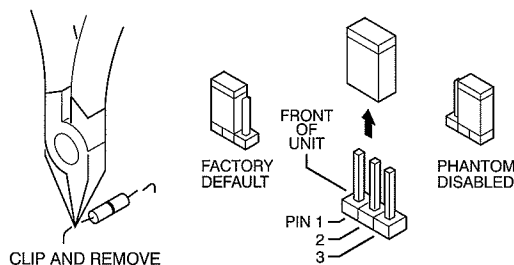
FRONT



BACK

JMP5

J14

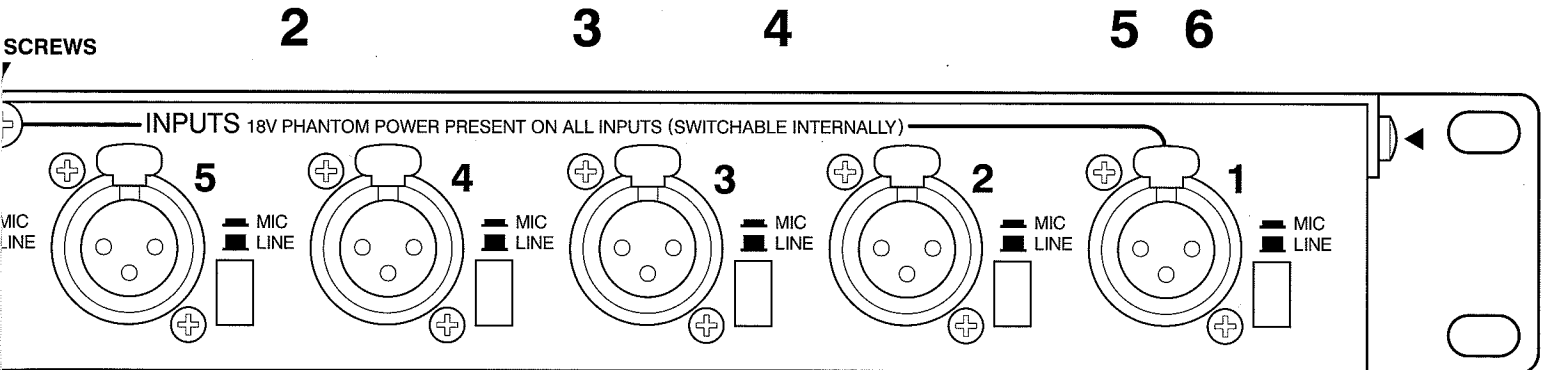
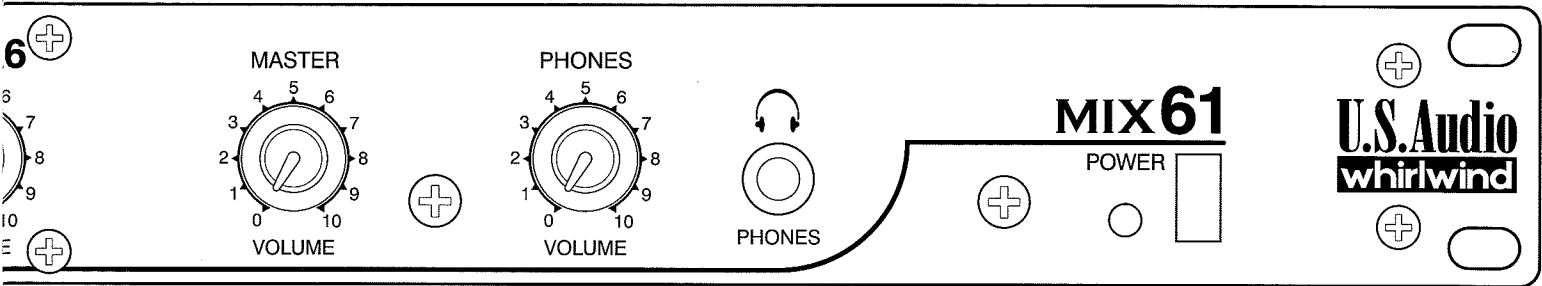


CLIP AND REMOVE

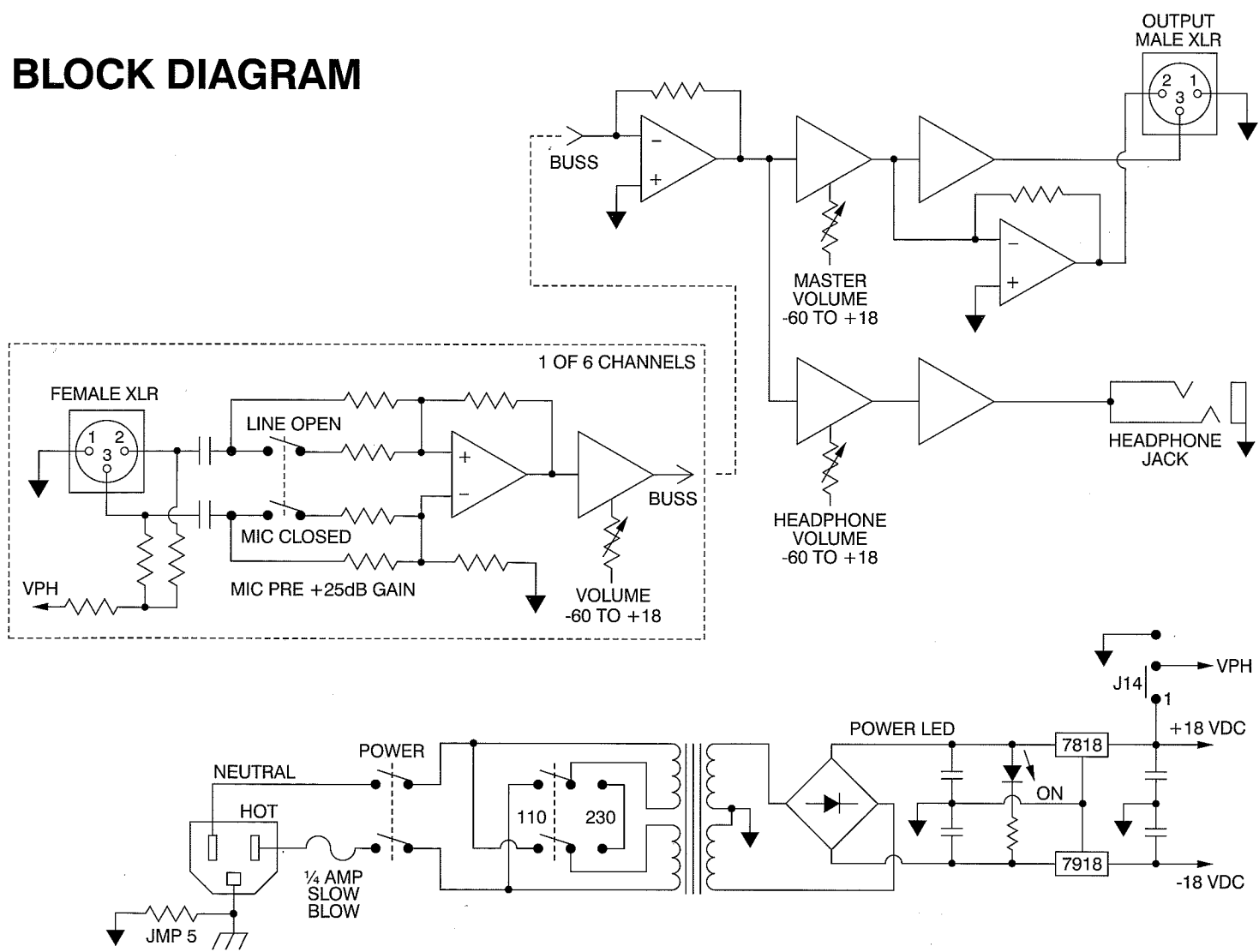
FACTORY DEFAULT

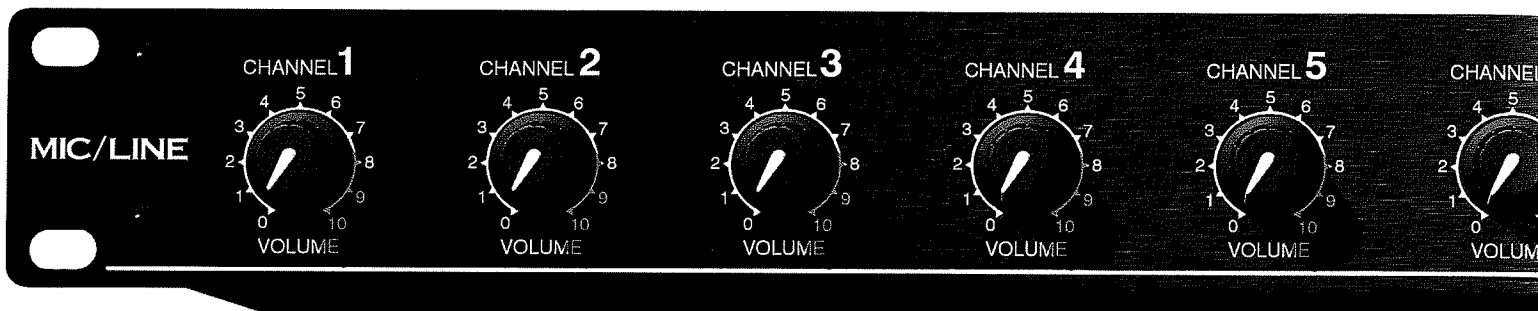
PIN 1  
2  
3

PHANTOM DISABLED



# BLOCK DIAGRAM





## SPECIFICATIONS

### Frequency Response

Line mode

+ or -3dB 6Hz to 44kHz

-.2dB 20Hz

-.7dB 20kHz

Mic Mode

+ or -3dB 13Hz to 43kHz

-1.5dB 20Hz.

-.7dB 20kHz.

### Maximum Input Level

Line mode

+22dBm

Mic mode

-3dBm

### Input Impedance

Line mode

20k ohms

Mic Mode

1064 ohms

### Maximum Output Level

+22dBm

### Output Impedance

100 ohms

### Rise Time

8 uS

### Common mode rejection

>55dBm at 50Hz.

### Total Harmonic Distortion + Noise

Line Mode at unity gain

.005%

Mic mode at 40dBm gain

.04%

### Minimum Headphone Impedance

50 ohms

### Size

Single Space Standard

19.0" (482.6mm) Width

6.0" (152.4mm) Depth

1.75" (44.45mm) Height

### Weight

Shipping Weight

7.5lbs (3.40kg)

Unit Weight

6.0lbs (2.75kg)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

**U.S. Audio**<sup>TM</sup>  
**whirlwind**

99 Ling Road  
 Rochester, New York 14612  
 Phone 716 . 663 . 8820 . Fax 716 . 865 8930  
 Email: Sales@whirlwindusa.com . [Http://www.whirlwindusa.com](http://www.whirlwindusa.com)

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