

Effective from serial number 501001 onwards.

This manual includes operating and service information for all models of the SR Series currently in production. Where differences between models exist, such as four bus and two bus models, this is indicated in the text.

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## INSTALLATION

### CONNEXIONS

#### Operating System and Audio Connexions

Typical uses of SR Series mixers are shown with connexion schematics. All recorders require connexion to the mixer in the same manner, but recorder input/output connector types may differ from those shown in CONNEXION DETAIL.

#### Equipment List

SR SERIES mixer  
Microphones and Instruments  
Multitrack Recorder  
Stereo Recorder  
Monitor power amplifier and loudspeakers  
Echo FX unit  
Cue headphone amplifier and outlets.

#### Connexion of Microphones and Instruments

CHANNEL MIC (microphone) inputs are low input impedance, high gain inputs for the connexion of all types of microphones. Best performance will be obtained using balanced microphones of 200 to 600 ohm output impedance connected via screened 2 core cable. In this configuration, the mixer phantom power distribution may be used to power condenser microphones. Unbalanced microphones should be connected with the signal on pin 3 and screen on pins 1 and 2 together. In this configuration, phantom power should NOT be applied. (See user configured options - phantom power). The mixer input withstands the +48 volts put out by certain types of condenser mic external powering units.

Mic inputs can also be used with instruments such as guitars, and direct injection boxes if required to impedance match the instrument to the preamp and balance the circuit to reduce interference pick up. Instruments with medium output levels (50-500 mV), such as keyboards, may also be connected to the mic inputs if the instrument output is low impedance. Connect the instrument as you would an unbalanced microphone (see above) and observe the cautions described there. Should the instrument output be high impedance, loss of signal will occur and signal-to-noise ratio will suffer. Selecting the mic PAD may produce an acceptable input.

#### Channel Line Inputs

These are high impedance, medium gain inputs for the connexion of high level signals. Four to eight line inputs will be required to replay the tape tracks for remix. The rest are available for connexion of instruments with high output levels, such as echo returns, additional tape machines, etc.

The input is balanced. Connect balanced equipment to tip and ring of the jack; screen to case. Connect unbalanced signals to the tip and link ring and case to the screen of the cable.

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### Connexion of Stereo Recorder

Mixer main outputs LEFT and RIGHT are the stereo output for the mastering recorder. The output level is adjustable for any tape machine input level and balanced output available. Refer to OPTIONS section of this handbook for more information.

The outputs are supplied unbalanced. Connect signal to pin 3 on the XLR type connectors and screen to pin 1. Stereo machine outputs should be connected to any adjacent pair of available line inputs. Generally, these are the last two on the mixer (channels 15, 16 - 23, 24). See CONNEXION DETAILS.

### Connexion of Monitor Output

The operators monitor output is available on a 1/4" jack socket and is labelled "MON OUT". This is an unbalanced stereo circuit designed for use with stereo power amplifiers with an input sensitivity rating of 100mV to 1V (approximately) for full rated output. Connect the TIP of the monitor output jack to the LEFT amplifier channel, and the RING to the RIGHT channel, SCREEN to case. Mixer outputs generate turn-on thumps, which can strain loudspeakers if the mixer is turned on while the power amp is on. To avoid this, it is good practice to always have ALL other equipment in your system turned on BEFORE turning on any power amps.

### Connexion of Fx Devices

As supplied, AUX A and AUX B would generally be used as FX sends as they are factory wired to take their signal AFTER the channel fader. Wired like this, if a channel which is being sent to the FX device is turned down in the mix, the level of signal sent from that channel is also turned down proportionally. This prevents that channel from leaking into the mix via the FX device when it is not wanted there. As with other mono unbalanced outputs, connect TIP to the device input, SCREEN to earth.

### Use of Aux C as Additional Fx Send

As mentioned above, it is generally undesirable to take FX sends from any but post fader sources for the reasons described. Provision has been made within the mixer to allow the user to select the source from which an aux send control derives its source. As supplied, AUX C is a PRE-EQ send from the input channels, but no send from the tape return section is provided. It is therefore suggested that the POST FADER source option be selected for AUX C, making it an additional FX send which can be returned to any available INPUT channel.

### Connexion of Cue (Foldback) Amplifiers

In recording applications, AUX D is intended for use as the CUE, or foldback mix. Provision has been made within the GROUP section which allows tape tracks to be mixed to this bus for the purpose of monitoring them during overdubs. This is a MONO, UNBALANCED output, and can be fed to a mono amplifier, stereo amplifier, (using a suitable adaptor cable) or a stereo amp "strapped" for mono operation as shown in CONNEXION DIAGRAM. See amp manufacturers instructions for mono operation. For distribution of CUE program to several pairs of headphones, the power amplifier output should be divided by a suitable resistor.

### Connexion of Mono Output

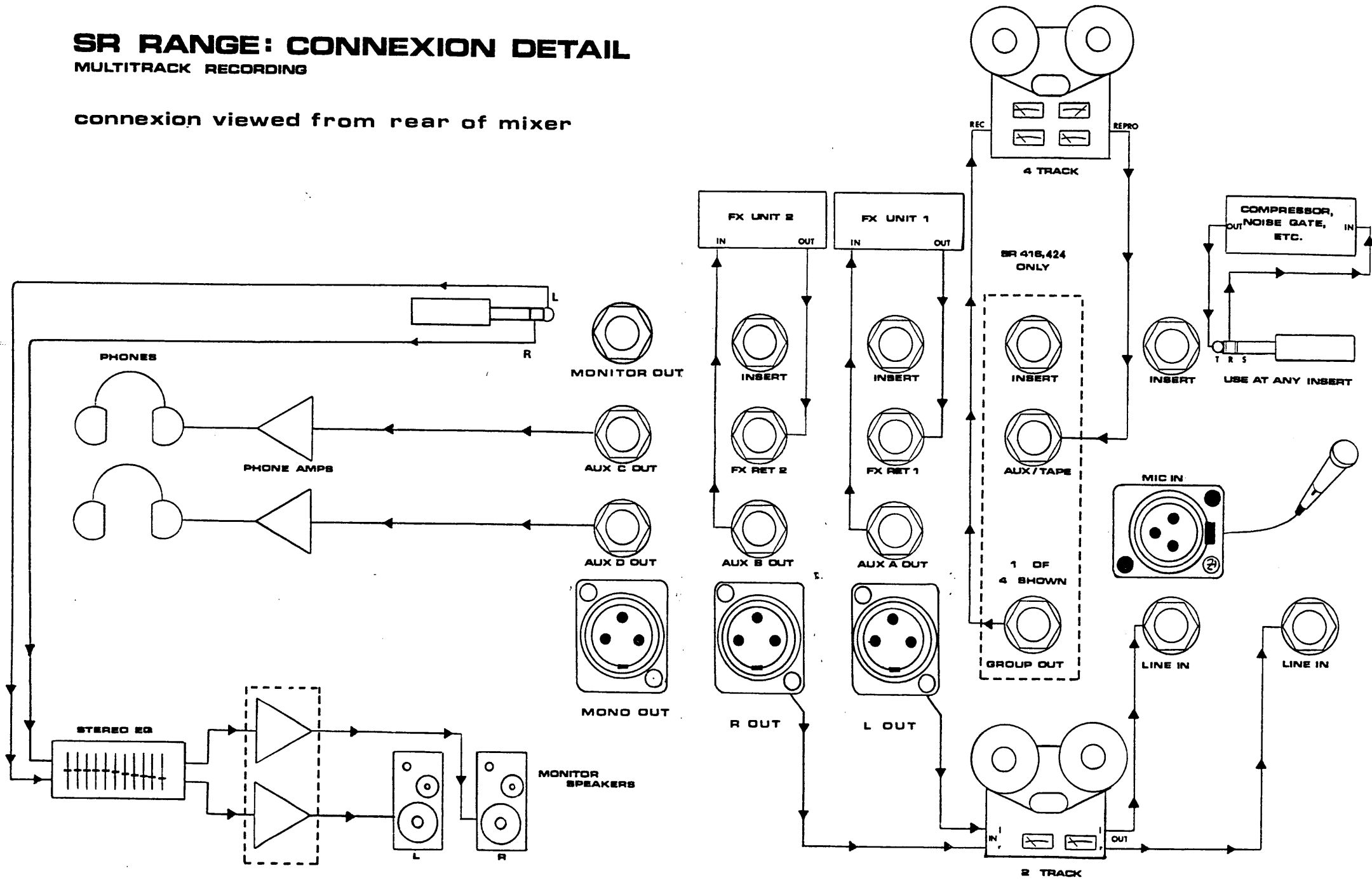
The mono out is an XLR connector with signal to pin 3 and screen to pin 1. Balanced output is an option, refer to options section. If desired, the mono output can be used to drive a power amplifier connected to a loudspeaker in the studio for the purpose of track playback. While not practical for the purpose of overdubbing, it can be quite handy if you have a large number of people in the studio as it can keep them from running in after a track is completed and crowding the control room where you are trying so hard to keep a semblance of order.



# SR RANGE: CONNEXION DETAIL

## MULTITRACK RECORDING

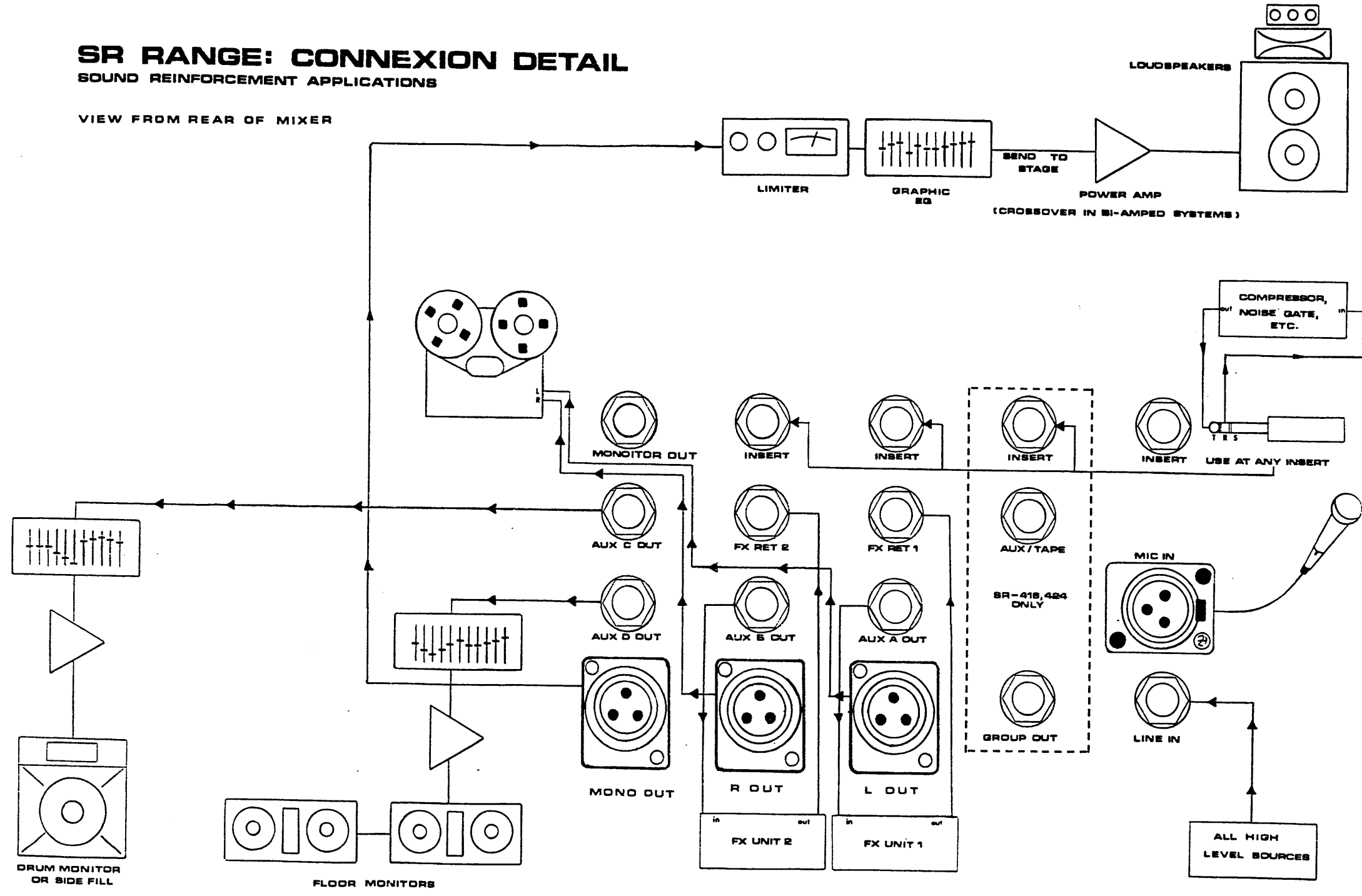
connexion viewed from rear of mixer



# SR RANGE: CONNEXION DETAIL

## SOUND REINFORCEMENT APPLICATIONS

VIEW FROM REAR OF MIXER



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**IMPORTANT - PLEASE READ AND UNDERSTAND!**

### EARTHING

Mains electricity is dangerous and can kill. Most pieces of mains powered equipment have an earth wire running from the case to the mains plug. (Some are "double insulated" and do not need this.) This earth wire is there for safety. Unfortunately with many earthed items wired together sound quality can suffer. It is common practice in studios to disconnect some of these earth wires for sound quality reasons. This can be dangerous.

**Equipment will still work even if it is not earthed. This does not mean it is safe! Government and insurance underwriters' electrical codes must be observed. These codes take precedence over any suggestions contained in this manual.**

The sound quality problems mentioned are hum and interference, caused because there are several paths to earth (along the audio screens and down all the mains earths). The problem can be overcome by having just one piece of equipment connected to mains earth (usually the power amp).

Do not leave the earth wire loose in a mains plug as it may touch the live terminal.

Having only one item connected to mains earth means that all the others rely on the audio screen or ground for safety. It is important to remember this. Test regularly that all exposed metal gear including microphones, guitar strings and D I boxes have a low resistance to mains earth.

This Allen & Heath mixer case is not connected to mains earth, for the audio reasons mentioned. The mixer power supply is however, and this earth must not be removed.

It is best to plan ahead and have your installation checked by a competent engineer before you commence. Do not trust equipment and installations modified by others before you.



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### AC SUPPLY VOLTAGES

Supply type MPS8P, MPS9 or RPS1 provides the DC supply for all mixer functions. It is factory set for operation on the required AC supply as follows:

Europe	220/240v AC 50Hz
North America	110/120v AC 60Hz
Japan	100v 50/60Hz.

The supply voltage setting may be altered to suit local requirements if required.

### **HEALTH AND SAFETY NOTICE**

The DC power unit is intended for connection with high voltage supply as stated above. Interference with the internal assembly while connected to the supply presents a risk of lethal electric shock. When service work is called for first, **DISCONNECT THE EQUIPMENT FROM THE AC SUPPLY. DO NOT RECONNECT UNTIL THE WORK IS COMPLETE AND COVER IN PLACE.**

Refer to the circuit diagram MPS8P, MPS9 or RPS1 for reconnection details.

This work should be carried out by qualified service personnel to avoid risk of damage to the equipment and operators.