LIMITED WARRANTY

ROLLS CORPORATION
SALT LAKE CITY, UTAH
7/01
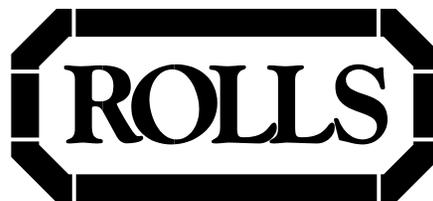
RM65 HEXMIX
6 x 4 Audio Mixer
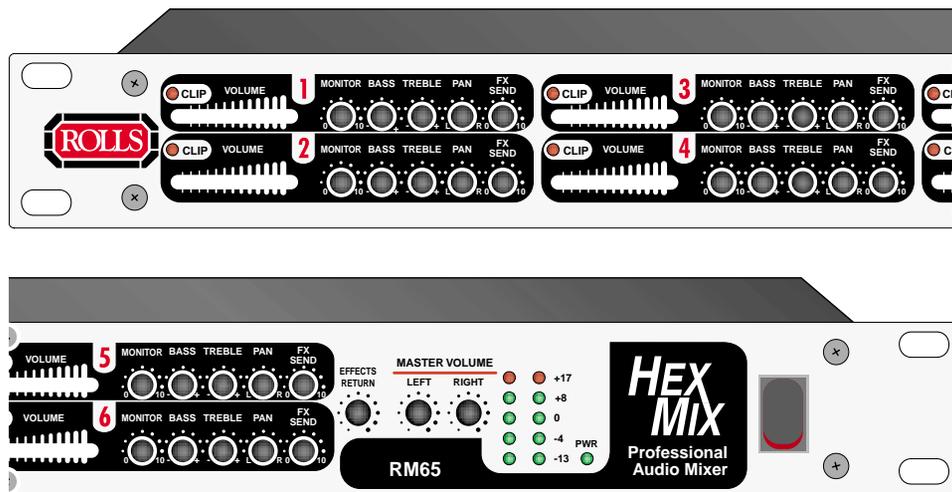
FEATURES
- 6 XLR and 1/4" Inputs
- Individual 36 V Phantom Power
- Clip LEDs on each channel
- Input Trim, Monitor, FX Send and Pan on each channel
- Treble & Bass control on each channel
- FX Return, may be used as an additional input
- Stereo Aux Bus Input

OWNERS MANUAL

INTRODUCTION

Thank you for your purchase of the Rolls RM65 6 x 4 stereo professional Audio Mixer. This unit is a breakthrough in size/performance for an audio mixer. It's a full-function 6 channel mixer in a single space 19" rack chassis. It is intended for sound reinforcement, studio, choir, and other applications where high channel to size ratio is desired. It has 6 phantom power switches and input gain trims located on the rear panel. This manual assumes the user has some familiarity with audio mixers. If the features, knobs, or jacks seem unclear - please contact the dealer for help.

INSPECTION

1. Unpack and inspect the RM65 box and package.
If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.
2. Please complete the Warranty Registration Card and return it to the factory.

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DESCRIPTION
FRONT PANEL
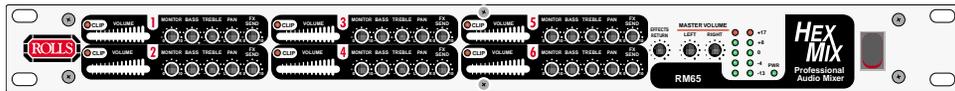
CHANNEL CONTROLS
VOLUME: Adjusts the amount of signal sent through the channel and to the FX send and output.
CLIP LED: Indicates that the channel is being overdriven.
MONITOR: Adjusts the amount of signal sent from that channel to the Monitor Send jack. The signal is pre-fader (pre-Volume control)
BASS: Controls the boost or cut of frequencies below 400 Hz for each channel.
TREBLE: Controls the boost or cut of frequencies above 400 Hz for each channel.

SCHEMATIC
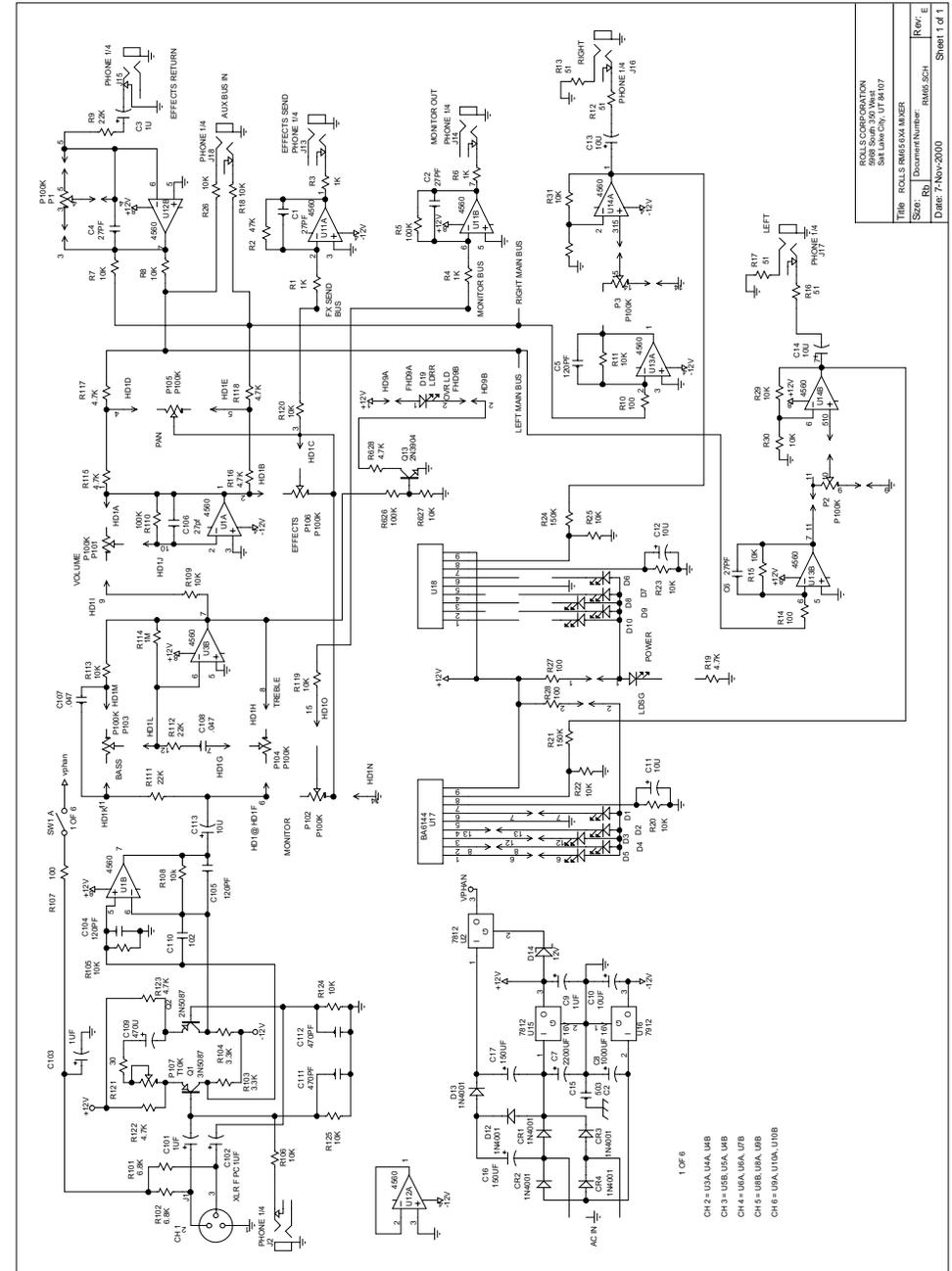
SPECIFICATIONS

Input Impedance:		600 W balanced
		50K W unbalanced (1/4")
Output Impedance:		50 W TRS Balanced
Max Input Level:		-15 dBV XLR 600 W
		+18 dBV 1/4"
Phase Shift:		< 10 deg. 20 Hz - 20 kHz
Phantom Power:		36 V DC
Input Connectors:		XLR and 1/4"
Outputs:		1/4" main balanced +17 dB max
		1/4" monitor +17 dB max
		1/4" FX send
Max Gain:	(Mains)	60 dB mic
		26 dB line
	(Monitor)	55 dB
Tone controls:		20 dB treb, bass cut/boost, 400 Hz center
Max S/N Ratio:		106 dB
THD		< .003%
IMD (SMPTE)		< .003%
CMRR		52 dB
Power		120 VAC 50-60 Hz, 15 W
Weight:		7 lbs (3KG)
Size:		19" x 1.75" x 6.5" (48cm x 4.5cm x 17cm)

NOTES:

PAN: Adjusts the amount of relative signal to the Right, Left or both Main Out jacks.
FX SEND: Controls the amount of signal (post-volume control) that is sent for that channel to the FX Send jack.
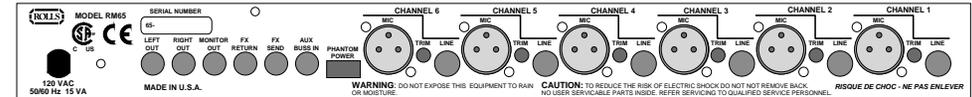
MASTER CONTROLS
FX RETURN: Adjusts the amount of signal coming back into the FX Return jack.
MASTER VOLUME, RIGHT - LEFT: Controls the amount of signal sent out the main Right and Left Output jacks, and sets the overall signal level except for the Monitor Send jack.

REAR PANEL

1 - 6 CHANNEL MIC INPUTS: XLR input connectors for mic or line level signals.
1 - 6 CHANNEL LINE INPUTS: 1/4" input connectors for line level signals.
TRIM: Adjusts the amount of input signal from the mic and line input jacks.
PHANTOM POWER: 6 switches for turning on the microphone phantom power for the XLR inputs, and are numbered for the channel they are assigned to. DOWN is on, UP is off.
AUX BUS IN: 1/4" TRS stereo input to the main mix bus, and may be used as an auxiliary stereo input for joining two RM65s together.
FX SEND: 1/4" unbalanced jack for sending the signals assigned by each channel's FX Send control out to external effects.
FX RETURN: 1/4" unbalanced jack for inputting signals from external effects devices.
MONITOR OUT: 1/4" unbalanced jack for sending signals assigned by each channel's monitor output control to an auxiliary amplifier or monitoring system.
RIGHT and LEFT OUTPUT: 1/4" TRS balanced jacks to be used as the unit's main outputs.

USING PHANTOM POWER
Phantom power is a means of powering condenser microphones through the microphone cable. The RM65 has individually switchable 36 volts of phantom power for each of its 6 channels through the XLR jacks. The DIP switches on the rear of the unit are for switching the power on and off. When the little switch tab is down, the power is on. The number on the switch corresponds to the channel that is receiving the power. If phantom power is not needed, it should be switched off to avoid possible damage to a microphone, or degraded sound quality.

OPERATION

The RM65 is ideal for small combo groups where a small number of instruments and microphones need to be mixed together. Refer to Figure 1 for an example of how to connect the inputs and outputs of your RM65. Connect microphones to balanced XLR cables and to the XLR inputs. If any of these microphones are condenser microphones, they will require phantom power. To turn on the phantom power for an individual channel, set the phantom power switch for that channel to the ON (down) position. Instruments may be played into a microphone which is connected as indicated above, or if you have active pickups in your instrument simply connect the output of your instrument to an RM65 Line Input as the acoustic guitar is shown in Figure 1.

Electric guitars and basses normally are connected to an instrument amplifier or preamplifier. Amplifiers may have microphones placed in front of the speaker, or if the amp has a line level output (check with the amplifier's owners manual) - it may also be connected to the mixer directly. Keyboards and sound modules are connected directly to the RM65's line inputs as shown.

To use the FX Loop, connect a 1/4" unbalanced cable to the FX Send and to the Input on your signal processor or effects device. Connect the Output of the signal processor or effects device to the RM65 FX Return jack. The level of the effect will be controlled by the settings on the channels' FX Sends and by the Output Level of your effects device, The overall level of the effect will be controlled by the FX Return level on the front of the RM65.

To use the Monitor feature of the RM65, connect the Monitor Out jack to a monitor amplifier via a 1/4" unbalanced cable. Each channel's monitor level is controlled by that channel's Monitor level setting. Be aware that the RM65 has no master monitor level, so you will need to set the overall monitor level with the monitor amplifier and the Monitor Levels of each channel.

Connect the Right and Left Main Outputs to the main amplifier(s) and make sure the amplifier is the correct rating for the speakers. If you are operating in mono, use either the Right or Left Output.

The RM65 may also be used for recording. Connect microphones, instruments, and effects to the inputs as described above - the connect the Right and Left outputs to your recording device and set the levels accordingly.
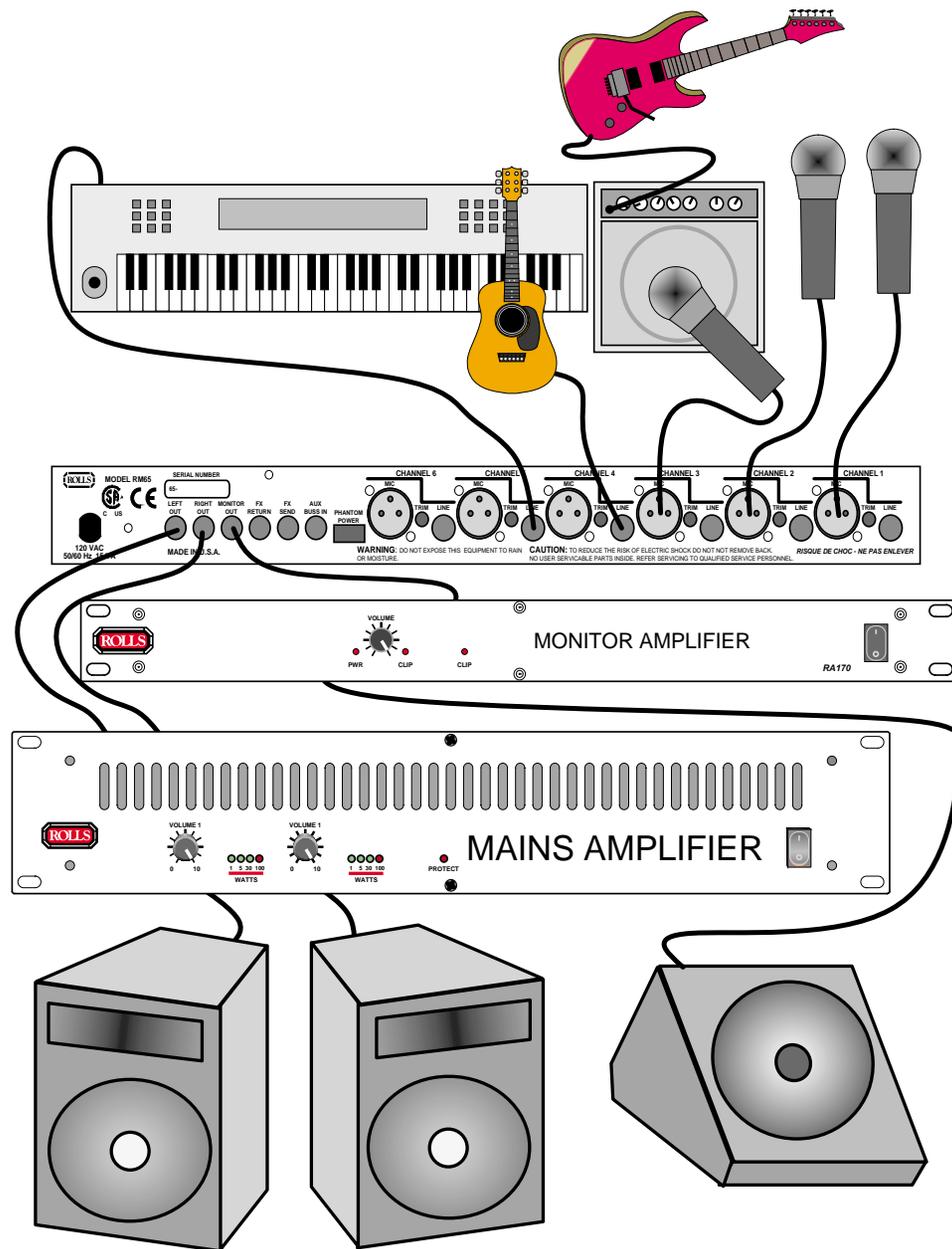

Figure 1