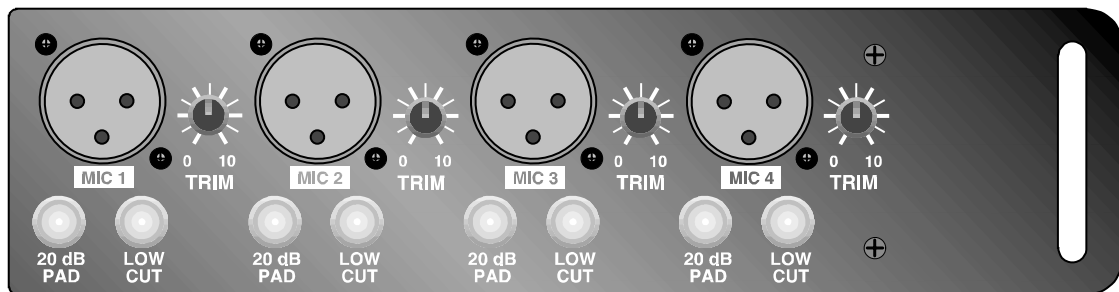
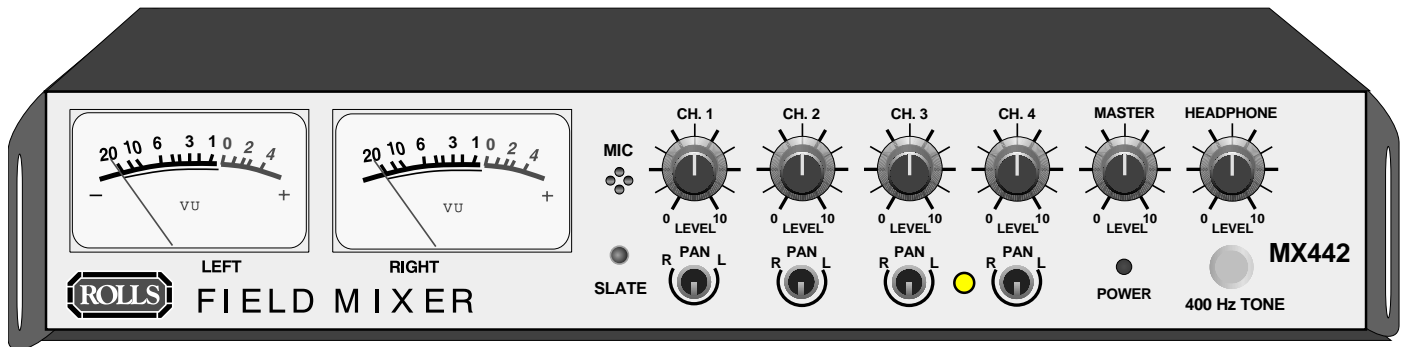


MX442 Field Mixer



OWNERS MANUAL

Thank you for your purchase of the Rolls MX442 Field Mixer. The MX442 is a breakthrough in price/performance for the broadcast engineer, remote sound engineer etc. This unit was researched and developed by industry professionals. You told us what you wanted, and we built it. Please read through the following manual to ensure proper operation of this unit.

FEATURES

- Large calibrated VU meters for easy monitoring in any light
- +48 volt phantom power on each input
- Panning
- Slate Mic with a 20Hz tone
- 400Hz setup tone
- Low Cut switches
- Trim controls on each channel
- Uses 2: 9-volt batteries or 12-volt ac adapter
- 5-position Headphone Monitor switch
- Battery test switch and indication on meters
- Remote mix input
- Low or high level output (-25 or +4 dB)
- Mono or stereo operation
- Built-in adjustable limiter

INSPECTION

1. Unpack and inspect the MX442 box and package.

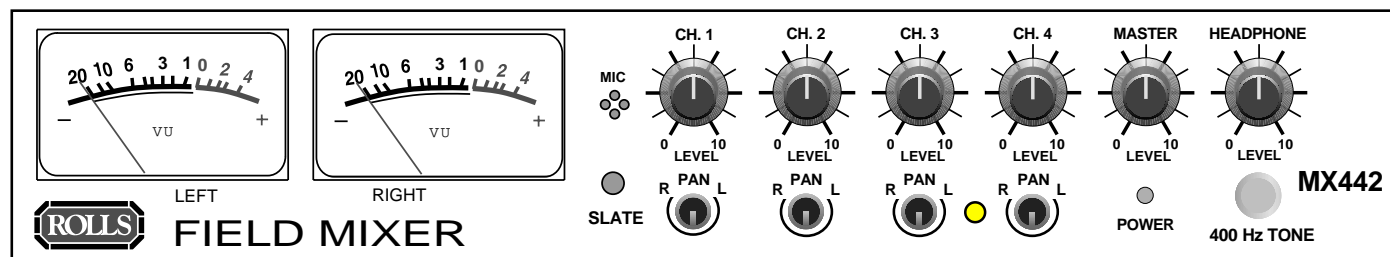
If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.

2. Please complete the Warranty Registration Card and return it to the factory.

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FRONT PANEL



LEFT/RIGHT VU Meters: Indicate the level of signal that is being monitored, or the signal present at the Headphone Output. The meters also indicate battery voltage.

MIC: This is the Slate Mic. When the SLATE button is pressed, this mic picks up signal at its input and sends the signal via the Master Level control to the Right and Left Outputs.

SLATE: Engages the Slate Mic as well as a 20Hz tone.

CH1 - CH4 LEVEL: Varies the signal level of the indicated channel to the mix bus.

CH1 - CH4 PAN: Controls the amount of relative signal sent for the indicated channel to either the Right or Left bus.

Limiter Adjust: This screwdriver adjustable potentiometer (not labeled on the panel) adjusts the amount of signal limiting by the MX442.

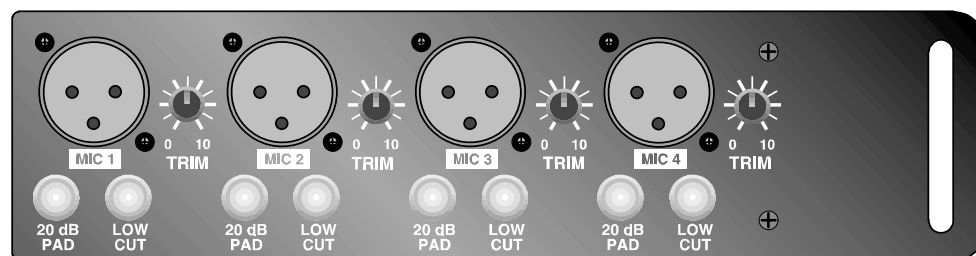
MASTER: varies the overall signal from the MX442 Right and Left Outputs.

HEADPHONE: Controls the level of signal sent to the Headphone Output.

Power LED: Indicates that the MX442 is on.

400Hz TONE: When pressed, sends a 400Hz 0 dB reference sine wave signal to the Right and Left Outputs.

LEFT PANEL



MIC 1 - 4: Balanced XLR connectors for connection to dynamic or condenser microphones. +48 volts of phantom power is available for each input.

TRIM 1 - 4: Adjusts the input gain to the indicated channel.

20 dB PAD (CH 1 - 4): When in, attenuates that channel's input level by 20 dB.

LOW CUT (CH 1 - 4): When in, attenuates that channel's frequency response below 100 Hz.

RIGHT PANEL



HEADPHONE SELECT: Selects which signal is being sent to the Headphone Output as well as the front panel meters; Stereo, Mono, Right, Left, or the Monitor signal.

BATT TEST: When pressed in, indicates the current battery condition via the front panel VU meters. Use the black percentage scale.

HEADPHONE Output: 1/4" TRS stereo jack for connection to any standard pair of headphones.

MONITOR IN: 1/4" TRS stereo input jack for connection to a cue or monitor mix.

AUX IN: 1/4" TRS stereo input jack for joining two units together, or adding a stereo line-level signal.

LEFT OUT: Main Output - Balanced XLR jack containing the left portion of a stereo signal, for connection to a recording device, mixer, or amplifier.

RIGHT OUT: Main Output - Balanced XLR jack containing the right portion of a stereo signal, for connection to a recording device, mixer, or amplifier.

-25/+4 dB Switch: Sets the output level of the Main LEFT and RIGHT Output jacks to -25 dB or +4 dB.

POWER: Toggle switch, when positioned towards the power jack; applies power to the MX442.
12 - 16 VDC: Input connector for connection to an auxiliary power source such as a Rolls PS27.

REAR PANEL

BATTERY COMPARTMENT: Holds two 9V Alkaline batteries to power the MX442.

DIP SWITCH: Switch 1 activates and bypasses the internal limiter. Switch 2 selects the MX442 Output Mode; Mono or Stereo. Switch 3 through 6 activates the phantom power for the indicated microphone channel. NOTE: The switch is "ON" when in the DOWN position.

CONNECTION

Connect XLR microphone cables to the Microphone inputs and to the microphones. If necessary, apply phantom power to any condenser microphone. Connect the Right and Left Master Outputs to the recording device or amplifier via XLR cables. Stereo headphones are to be connected to the Headphone Output, the Auxiliary input may be connected to another MX442 or other stereo signal source, the Monitor input may be connected to the master mixing board for a monitor or cue mix.

OPERATION

• Setting the Mic Levels

Begin by plugging in the microphone(s). Set the channel Level controls at 3 O'clock, and the Master Level control at approximately 12 O'clock. Speak into the microphone and adjust the Trim control until the average meter reading is 0 VU. For recording in stereo, adjust the Pan control to place the signal in the stereo field.

• The Slate and Mic switch

Press the Slate button and speak into the Slate Microphone to send the 20Hz slate tone and message to the main outputs and the recording device.

• The 400 Hz Tone switch

Press in this switch to send a 400 Hz reference tone to the output for setting system levels.

• The 20 dB Pad switch

Some condenser microphones put out a high amount of signal which makes it difficult to set the Trim and Level controls easily without overloading the gain circuits. The 20 dB Pad switch is pressed in if the microphone is "too hot" or putting out a very high level signal.

• The Low Cut switch

The Low Cut switch, when pressed in, rolls off the low frequencies starting at 100 Hz. This is used for removing unwanted "rumble".

• The Headphone Select Switch

There are many instances where different portions of the signal need to be monitored. When microphones are panned to different areas of the stereo field, sometimes one mic may be completely right and another completely left, it may become necessary to monitor each side individually. To monitor the signal present at the Right Main Output, select the "Right" setting. Similarly, set the Headphone Select to "Left" to monitor the Left Main Output. To hear both sides in stereo, select "Ster"; to hear both signals summed together in mono, select "Mono". Finally, hear the stereo signal present at the Monitor Output, select "Monit".

• The Monitor Input jack

This input receives a 1/4" Tip-Ring-Sleeve stereo signal, and is typically used for monitoring another mixing board at a master location. For example, the Right and Left mix from the MX442 is sent to a master console where a mixing engineer is controlling the audio sent to a main television or radio station. This engineer may need to send cues and other instruction to the person operating the MX442. A mix of the signals sent from the MX442 and the mixing engineer's voice may be sent via a 1/4" TRS stereo line to the MX442 MONITOR IN and the person operating the MX442 can hear both his mix and the mixing engineer.

• The Aux Input jack

This 1/4" TRS stereo jack joins the main mix just before the Master and Headphone Level controls. This input is used whenever other signals need to be mixed with the MX442 signals, and sent to the MX442 Main Outputs.

• The Output Level -25/+4 dB switch

Some master mixing boards will need to receive line level (+4 dB) signals, and others may have preamplifiers that cannot be bypassed and therefore will need to see mic level (-25 dB) signals. Most recording devices are designed to receive line level signals.

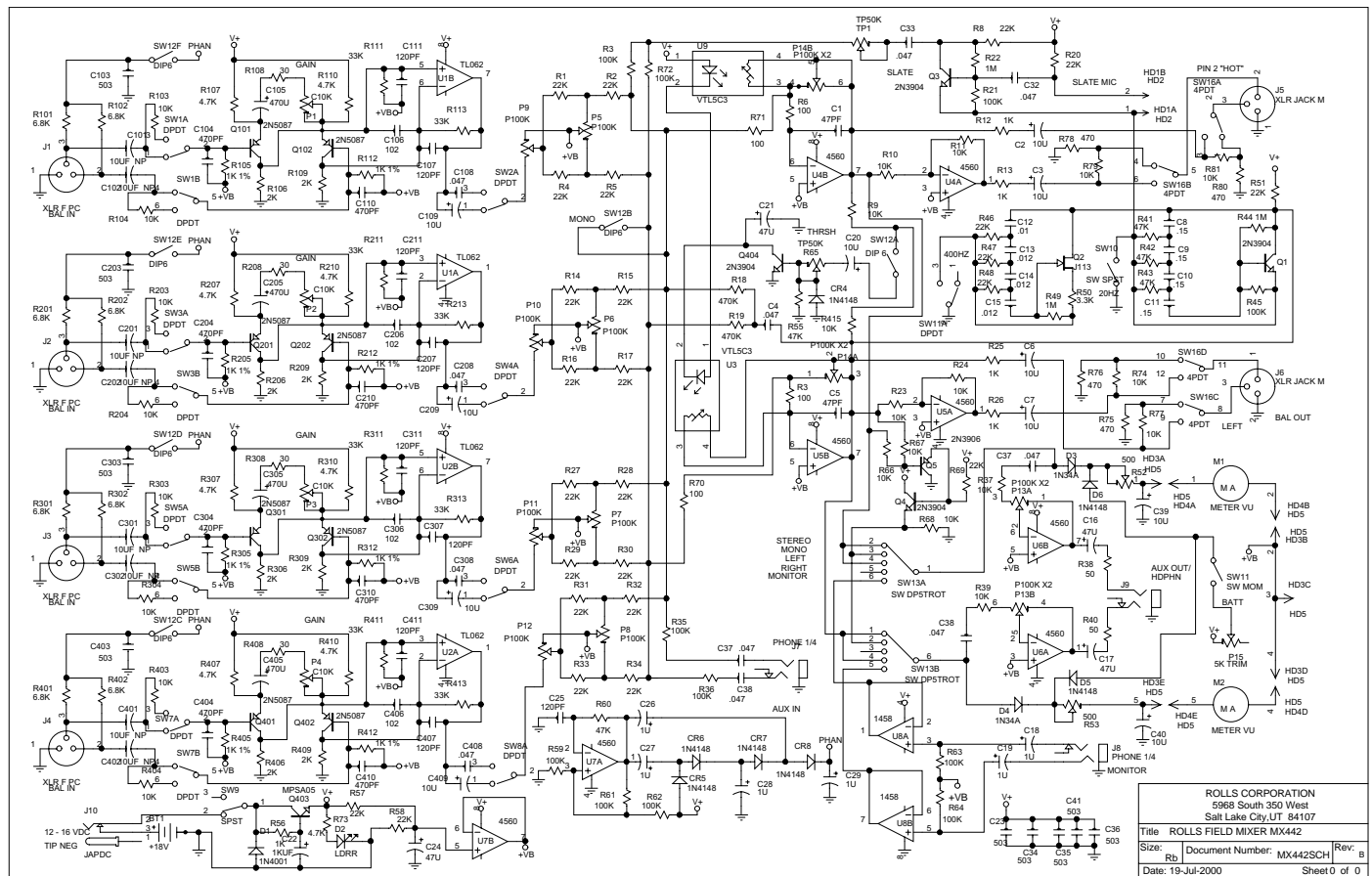
• The DIP switches

The 6-DIP switch located on the rear panel provides phantom power for each individual microphone input, selects mono or stereo output operation, and activates the internal limiter. The limiter is used to compress the overall MX442 signal to a level which will not exceed +4 dB. Note that this limiter may be adjusted by the screwdriver potentiometer located between the Channel 3 and Channel 4 Pan pots. If the MX442 is being used in an area where there is a wide dynamic range of sounds (the sound varies from very quiet to very loud), the limiter is used to keep the signal within a certain manageable range. The Mono/Stereo switch, when in the Mono (down) position, both the Right and Left outputs are summed together. Finally, switches 3 through 6 provide the indicated channel with +48 volts of phantom power to power condenser type microphones.

SPECIFICATIONS

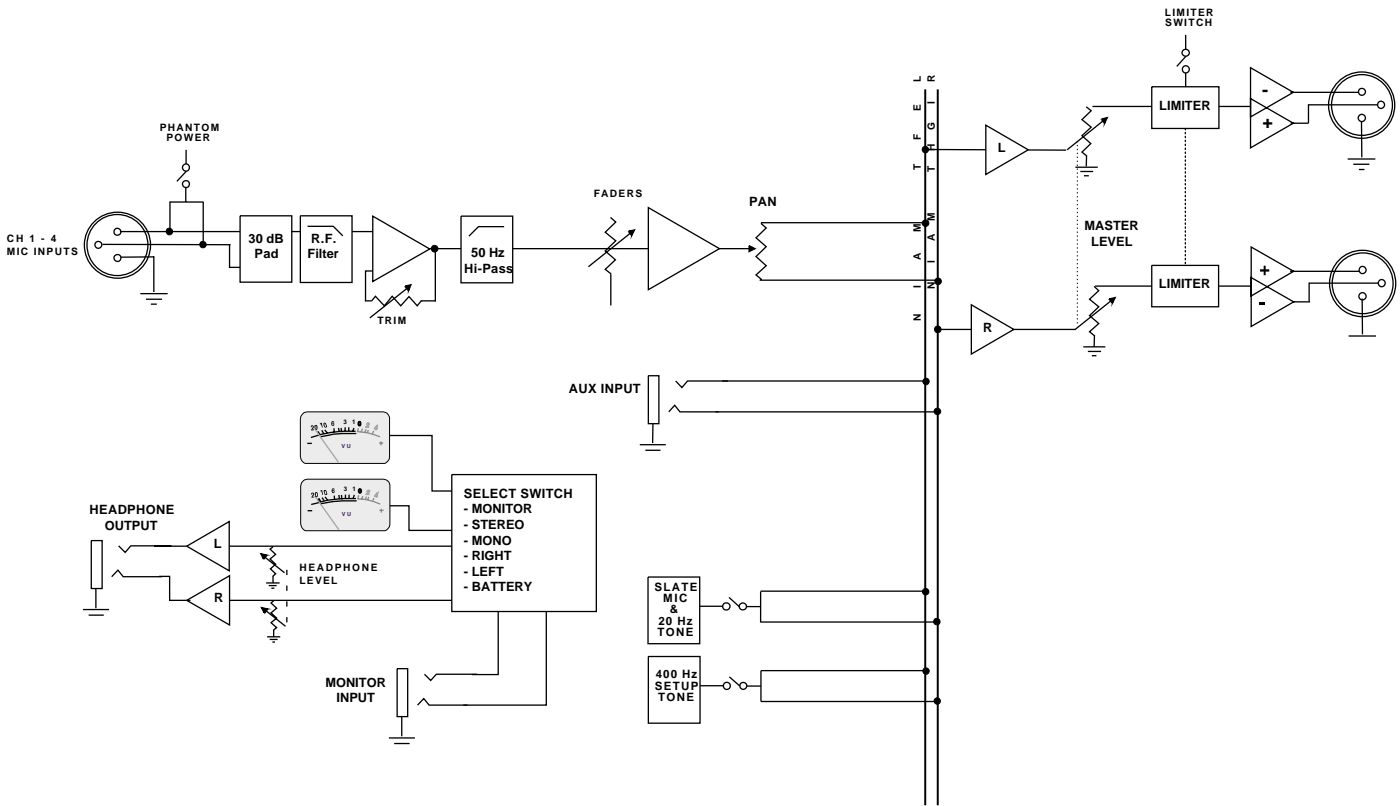
- Input Impedance: 10k ohms bal./unbal.
- Output Impedance: 50 ohms
- Max Input Level: +14 dBm
- Output Level: +20 dBV max
- Max Gain: 70 dB
- Phantom Power: +48 VDC (Individually switchable)
- Slate Tone: 20 Hz
- Level/Setup Tone: 400 Hz
- Low Cut switch: 100 Hz
- EIN: -128 dB
- THD: <.003%

SCHEMATIC



ROLLS CORPORATION 5988 South 350 West Salt Lake City, UT 84107	
Title: ROLLS FIELD MIXER MX442	Rev: B
Size: Document Number: MX442SCH	
Date: 19-Jul-2000	Sheet 0 of 0

BLOCK DIAGRAM



LIMITED WARRANTY

This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, **TRANSPORTATION CHARGES PREPAID**. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

This one-year warranty is in lieu of all expressed warranties, obligations or liabilities. **ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WARRANTY.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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