M51402-ULZ

14x2 MICRO SERIES MIC/LINE MIXER

1. GENERAL CONFIGURA-

TION. The mixer shall accommodate 6 line or 6 microphone signals, mono channels 1–6; 8 line signals, stereo channels 7-14; 2 stereo pairs of Aux Return inputs; 6 Send/Return channel Inserts; 3 stereo pairs of Main Mix outputs; 1 stereo pair of Control Room outputs; 1 stereo pair of Alt 3-4 outputs; 2 Aux Send outputs; and 1 stereo headphone output. The mixer shall be capable of placement on a table or installation in a standard 19-inch rack mount (via optional rack rail brackets) and shall be entirely self-contained.

2. MIXER INPUTS. MONO CHANNELS 1-6: The mixer shall include 6 electronically balanced mic inputs, using XLR-3-F-type connectors, accepting nominal levels from -60dBu to +14dBu via 6 rotary Trim controls. Phantom power shall be available via a globallycontrolled rocker-type switch. 6 balanced or unbalanced (bal/unbal) line inputs shall be wired in parallel, using ¹/₄" TRS phone jacks, accepting nominal levels

from -40dBu to +22dBu. The mixer shall include 6 channel Inserts, using 1/4" TRS phone jacks (tip=send, ring=return, sleeve=ground), delivering and accepting nominal levels from -10dBV to +22dBu. STEREO CHAN-NELS 7/8, 9/10, 11/12 and 13/14: The mixer shall include 8 bal/unbal line inputs, forming 4 stereo input pairs, using 1/4" TRS phone jacks, accepting nominal levels from -10dBV to +22dBu, with +4dBu/-10dBV level switches. OTHER **INPUTS: The mixer shall** include 4 bal/unbal Aux Return inputs, forming two stereo pairs, using ¹/4" TRS phone jacks, accepting nominal levels from -10dBV to +22dBu. The mixer shall include 1 stereo pair of Tape In jacks, using unbalanced RCA-type phono jacks, accepting nominal levels from -20dBV to +16dBu.

3. MIXER OUTPUTS. MAIN **OUTPUTS: The mixer's Main** Output stereo pairs shall be fitted in three ways: Using balanced XLR-3-M-type connectors, delivering nominal levels from -6dBV to +28dBu, including 1 Main Output Level switch to provide 30dB attenuation (XLR outputs only); using bal/unbal 1/4" TRS phone jacks, delivering nominal levels from -10dBV to +22dBu; and using unbalanced RCA-type phono jacks, delivering nominal levels from -10dBV to



MORE INFORMATION

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+22dBu. OTHER OUTPUTS: The mixer shall include 1 stereo pair of Alt 3–4 outputs using bal/unbal ¹/₄" TRS phone jacks, delivering nominal levels from -10dBV to +22dBu; 1 stereo pair of Control Room outputs using bal/unbal ¹/₄" TRS phone iacks, delivering nominal levels from -10dBV to +22dBu; 2 Aux Send outputs using bal/unbal ¹/₄" TRS phone jacks, delivering nominal levels from -10dBV to +22dBu; and 1 Headphones output using an unbalanced 1/4" TRS phone jack (tip=left, ring=right, sleeve=ground).



4. MIXER INPUT SECTION.

In addition to the controls listed in section 2 (MIXER INPUTS), each channel shall include 2 rotary Aux Send controls, providing up to 15dB gain; 3 rotary equalization (EQ) controls: ±15dB @ 12kHz shelving, ±12dB @ 2.5kHz peaking and ±15dB @ 80kHz shelving; 1 rotary Pan control, 4dB attenuation panned center; 1 Mute/Alt 3–4 switch, to be used as a channel mute or to route the signal to the alternate stereo bus (Alt 3-4); 1 dual-mode solo switch (AFL or PFL, globally switched); and 1 channel Fader, providing up to 10dB above unity gain.

5. MIXER OUTPUT SECTION.

The mixer shall have 2 Main Mix Faders, providing up to 10dB gain; 1 Control Room/Phones Fader, providing up to 10dB gain; 1 Source Matrix including 3 switches to deliver any combination of stereo signals to the Control Room, Phones and Meters, including Main Mix, Alt 3-4 and Tape, which shall be replaced by any solo signals resulting from the engagement of any channel's Solo switch; 1 Assign to Main Mix switch to deliver the Source Matrix signals to the Main Mix; 1 Solo Mode switch to globally determine solo type (pre-fader listen or after-fader listen, in place); 2 rotary Aux Return level controls, providing up to 20dB gain; 1 rotary Aux Send 1 Master control, providing up to 10dB gain; 1 Aux Send

global Pre/Post switch; 1 EFX to Monitor switch, allowing Aux Return 1 signals to be delivered to Aux Send 1 via the Aux Return 2 level control; and 1 blinking red Solo LED, to indicate a solo condition.

6. METERING. The mixer shall include 1 stereo 12-segment LED meter with points at -30, -20, -10, -7, -4, -2, 0, +2, +4, +7, +10dB and Clip. The source signals for the meters shall be the same signals selected in the Source Matrix, and a solo condition shall replace the Source selection with the soloed channel(s). The meters shall be calibrated so that a OdBu signal at the Control Room output shall be indicated as 0dB on the meters, ±1 LED.

7. PHYSICAL CONFIGURA-

TION. The mixer shall be made of steel, painted dark gray with light gray graphics. The mixer's dimensions shall be 3.3" (84mm) in height, 14.0" (356mm) in width and 13.0" (330mm) in depth, as viewed horizontally. The mixer shall weigh 9 lbs, 8 oz (4.5 kg). **Optional rack-mount** brackets shall allow the mixer to be mounted in a rack system, with either the chassis top or the control knobs' tops to be flush with the rack rail.

8. SPECIFICATIONS. In

addition to specifications already cited, the mixer shall meet or exceed the following specifications: Frequency response: microphone input to any output, 20Hz to 60kHz, +0dB/-1dB; Total Harmonic Distortion (THD): any input to any output, 1k @ +14dBu, less than 0.0025%; Equivalent Input Noise (EIN): microphone input to insert send. -129.5dBu; Common Mode Rejection (CMR): microphone input to insert send, maximum gain, 1kHz, -90dB; Typical Main Output noise: all channels assigned, channels 1, 3 and 5 panned left, channels 2, 4 and 6 panned right, -86dBu; Signal to Noise ratio: ref +4dBu operating level, 90dB: Attenuation: ref. 0dB @ 1kHz, Main Mix level control down, -85dBu; Channel Mute engaged, -84dBu; Channel Gain control down, -83dBu; Input impedance: microphone inputs, 1.3 k Ω ; Channel Insert return, 2.5 $k\Omega$; All other inputs, greater than 10 k Ω ; Output impedance: Tape Out, 1.1 k Ω ; All other outputs, 120Ω .

The mixer shall be a Mackie Designs MicroSeries 1402-VLZ, and shall alternatively be referred to as an MS1402-VLZ.

Because Mackie Designs constantly endeavors to improve its products with new components and manufacturing methods, all specifications and descriptions are subject to change without notice.



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