

Introduction

THE 1604-VLZ PRO is the latest update of our CR1604-VLZ, incorporating our new ultra-high quality XDR™ (Extended Dynamic Range) mic preamps with the best RFI rejection of any compact mixer design on the market and maximum freedom from ground loops.

Like all Mackie mixers, the 1604-VLZ PRO is designed for rugged, 24-hour-a-day use. It is a supremely flexible mixer, not just because of its multiple input/output configurations, but because of its true 4-bus architecture, 6 aux sends (with 3-4/5-6 shift switch), and extensive routing capabilities.

No matter what the application, the 1604-VLZ PRO can be configured for optimal use. As a tabletop mixer, input/output jacks can be positioned at the rear of the unit, or with the optional RotoPod Kit (RP1604-VLZ), positioned on the same plane as the controls. Placed in a rack system, the 1604-VLZ PRO can be set so that jacks are facing front (using the RotoPod kit) or facing the rear to keep wandering hands from playing with cords. Whether used in a permanent installation, or as a portable mixer, the 1604-VLZ PRO is completely at home.

Built like a tank, the 1604-VLZ PRO is a team player that can stand up to vigorous use, day in and day out, any place it is installed. Its sturdy-yet-light steel monocoque construction houses rugged, double-sided through-hole-plated fiberglass circuit boards, and 60mm faders with ultra-tight lip seals for keeping out dust and other contaminants. Impact-resistant knobs are mounted so they "ride" just above the steel chassis — they absorb impact without trouble. They're designed to last, too, thanks to co-molded potentiometers that don't get brittle and crack up. Then, we use metal stand-offs

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RELATED PRODUCTS

RP1604-VLZ RotoPod bracket kit, 1604-VLZ Dirt Avert™ Ballistic Nylon Dust Cover, 1604-VLZ Fabric Mixer Bag and 1604-VLZ Suede Mixer Bag for 1604-VLZ PRO. 12-inch and 18-inch Running Light Gooseneck lamps. 1202-VLZ PRO 12-Channel Mic/Line Mixer, 1402-VLZ PRO 14-Channel Mic/Line Mixer, 1642-VLZ PRO 16-Channel Mic/Line Mixer, SRM350/SRM450 Active 2-Way SR Loudspeakers, M•800/M•1400i/M•1400 Power Amplifiers, C200/C300z passive 2-way SR Loudspeakers

16-Channel Mic/Line Mixer



Features

- 16 low noise/high headroom XDR™ (Extended Dynamic Range) XLR mic inputs with the best RFI rejection of any compact mixer design and maximum freedom from ground loops.
- 16 balanced/unbalanced mono line inputs
- True 4-bus design
- Multi-way physical configuration via rotatable I/O pod, or optional RotoPod Kit (RP1604-VLZ)
- Inserts on all channels
- Direct outs on channels 1–8
- 3-band EQ with sweepable mids
- 75Hz, 18dB/oct. Low Cut filter on each channel
- PFL/AFL (Solo In-Place) on all channels (global)
- Very Low Impedance (VLZ) architecture
- Control Room/Phones source matrix
- 6 aux sends, 2 with master level controls
- Wide input gain range with "virtual pad"
- Stereo main outputs plus mono main output with separate level control
- Balanced inputs and outputs (except RCAs, phones & inserts)
- Level set LED and marker

Applications

- Live sound mixing for churches, clubs, schools, conference centers, boardrooms, tradeshows, presentations
- Keyboard, drum machine and DJ
- Multitrack studio and field recording
- A/V presentations, video post production, CD authoring, multimedia
- Live broadcast remotes, ENG, ad production

1604-VLZ PRO 16-Channel Mic/Line Mixer

Specifications

Mic Preamp

Equivalent Input Noise (20Hz–20kHz):	
150Ω	–129.5dBu
50Ω	–131.0dBu
0Ω	–134.5dBu

Frequency Response:	
–1dB	5Hz–100kHz
–3dB	3Hz–192kHz

IM Distortion (4:1 SMPTE), 35dB gain	0.0008%
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Harmonic Distortion (20Hz–20kHz), 35dB gain	0.0007%
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Gain:	Max	+60dB
	Min	0dB or Unity

Max Input	+22dB
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Input Impedance	1.3kΩ
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Common Mode Rejection	> 90dB
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Common Mode Rejection Ratio	> 140dB
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Main Mix Noise¹

Main Mix fader @ unity, ch. faders down:	–90.5dB
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Main Mix fader @ unity, ch. faders @ unity:	–88.0dB
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Total Harmonic Distortion (THD)²	0.005%
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Attenuation (Crosstalk)³

Channel Mute switch engaged:	–84dBu
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Channel Fader down:	–84dBu
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Frequency Response⁴

20Hz to 60kHz:	+0dB/–1dB
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20Hz to 100kHz:	+0dB/–3dB
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Other Maximum Levels

All other inputs:	+22dBu
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Main Mix 1/4" TRS outputs:	+28dBu
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All other outputs:	+22dBu
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Other Impedances

Channel Insert return:	2.5kΩ
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All other inputs:	> 10kΩ
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Tape out:	1.1kΩ
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All other outputs:	120Ω
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EQ

High Shelving:	±15dB @ 12kHz
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Mid Peaking:	±15dB, sweep 100Hz–8kHz
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Low Shelving:	±15dB @ 80Hz
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Low Cut Filter:	18dB/octave, –3dB @ 75Hz
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Power Consumption

120VA.C., 50/60Hz, 50 watts

Physical

Dimensions	see drawings on page 4 & 5
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Weight	20 lbs. (9.1kg)
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at regular intervals to mount thick fiberglass circuit boards inside the mixer.

Radio frequency interference from TV/radio stations and cellular phone users is virtually eliminated, thanks to Mackie's new XDR mic preamp design.

The mixer's built-in power supply is beefy enough to handle major power consumption without breaking up. And there's no bulky "wall wart" to be kicked out of place or to cover up extra outlets.

All of this adds up to an extremely durable mixer that can withstand major use and misuse. Multi-user applications like churches, night clubs, A/V rooms and schools are perfect homes for the 1604-VLZ PRO.

Sixteen XDR mic preamps deliver the finest quality sound ever offered in a compact mixer. They cannot be damaged by hot patching. And they are impedance-independent: frequency response remains the same whether the mic preamp is presented with an extremely high or low-impedance load. Additionally, each channel has its own switchable low cut filter (18dB/octave @ 75Hz), so mic thumps, room rumble and stage mishaps are left out of the mix without diminishing the audible bass frequency range.

Four buses add mixing flexibility. Channels can be assigned to buses 1-2, 3-4 and/or Main Mix L/R, and the 4 subs can be assigned to left and/or right main mix. A Control Room/Phones source matrix lets you route any combination of tape, subs 1-2, 3-4, main mix or Aux Return 4 to headphones, control room outputs, and meters. This enables you to monitor 2-track tape output or route a click/cue track to phones, create special phones or broadcast mixes via the subs, or create an extra stereo mix (with its own gain control) for another zone, like

Specifications footnotes:

1) 20Hz–20kHz bandwidth, 1/4" Main out, Channel Trims @ unity gain, channel EQs flat, all channels assigned to Main Mix, odd channels Pan left, even channels Pan right. Reference +4dBu.

2) 1kHz @ +14dBu, 20Hz–20kHz.

3) 1kHz relative to 0dBu, 20Hz–20kHz bandwidth, Line in, 1/4" Main Out, Trim @ unity.

4) Any input to any output.

MACKIE®