

1604-VLZ3

The 1604-VLZ3 is the flagship mixer of the series, the culmination of 20 years experience in mixer design and the standard for production and broadcast facilities worldwide. With improved XDR2™ mic preamps, a re-designed mix bus, and optimized active EQ on every channel, the 1604-VLZ3 is packed with premium features and maximum flexibility.

The 1604-VLZ3 is equipped with 16 mono mic/line channels, four subgroup outputs, a stereo main out and a mono main out.

Each channel has phantom power, an input Gain control with 60 dB of gain, a sharp 18 dB/octave, 75 Hz Low Cut filter, a 3-band EQ with sweepable mid, six Aux sends, Pan, Mute, Solo, assign switches, a 60mm fader and a Channel Insert jack for connecting an external processor. In addition, channels 1-8 have their own Direct Out jacks for sending signal to a recorder.

The Control Room/Phones section has its own level control, outputs and input matrix for selecting any combination of Main Mix, Tape In and Subs to create custom headphone mixes, to monitor tape levels and more.

Aux Send 1 and 2 each have a master level control and a switch on each channel for selecting pre- or post-fader send, whereas Aux Send 3-6 are a fixed post-fader send, perfect for effects loops. There are four stereo returns with various routing options for each return.

Other features include a stereo tape input and output, a 1/4-inch stereo headphone jack, stereo 12-segment LED meters, BNC lamp socket and TRS stereo output jacks.

No matter what the application, the 1604-VLZ3 may be configured for optimal use. As a tabletop mixer, input/output jacks may be positioned at the rear of the unit or, with the optional RotoPod kit (RotoPod-VLZ), positioned on the same plane as the controls. Placed in a rack, the 1604-VLZ3 may be set so that the jacks are facing front (using the RotoPod kit) or facing the rear to keep wandering hands from playing with cords.

The 1604-VLZ3 is designed for continuous hassle-free use in any application or installation, and it's packed with useful features and practical routing capabilities. A legend perfected, the 1604-VLZ3 is an unbelievable workhorse that is perfect for nearly any application.

APPLICATIONS

Live sound mixing, houses of worship, clubs, gymnasiums, banquet halls, conference rooms, boardrooms, multitrack studio and field recording, video post-production, multimedia applications, broadcast, and many, many more.



FEATURES:

- Ultra-compact 16-channel mixer featuring Mackie VLZ3's signature low noise, high-headroom design
- 16 studio-grade XDR2™ Extended Dynamic Range mic preamps with:
 - Ultra-wide 60 dB gain range
 - 130 dB dynamic range
 - +22 dBu line input handling
 - Extended low-frequency response
 - Distortion under 0.0007% (20 Hz – 20 kHz)
 - Phantom power for studio condenser mics
- 16 high-headroom line inputs, 16 channel inserts
- Advanced DC pulse transformer RF rejection
- 60mm long-wearing logarithmic taper faders
- Six aux sends, level, pan, –20 dB/Solo LED and Overload/Mute LED on each channel
- Four stereo aux returns, eight Direct Outs, four Group/Bus outputs
- 3-band active EQ with sweepable midrange
- 18 dB/octave, 75 Hz low-cut filter on each channel
- Control room/phones multi-input source matrix
- Balanced 1/4" inputs and outputs (except inserts)
- Rack-mountable design with three physical configurations via rotating I/O pod
- Sealed rotary controls to resist dust and grime
- Multi-voltage power supply for worldwide use
- Rugged steel chassis

1604-VLZ3 SPECIFICATIONS

Noise Characteristics

| | |
|--|------------|
| (Mic in to Insert Send out, max gain) | |
| 150 Ω termination, 20 Hz to 20 kHz bandwidth (20 Hz to 20 kHz bandwidth, 1/4" Main Out, channel gains @ unity gain, channel EQs flat, all channels assigned to Main Mix, odd channels panned left, even channels panned right) | -129.5 dBu |
| Main Mix fader @ unity, channel faders down | -88.5 dBu |
| Main Mix fader @ unity, channel faders @ unity | -82.5 dBu |
| Signal-to-Noise Ratio, ref. +4 dBu | 92 dBu |

Frequency Response

| | |
|---------------------------|---------------|
| (Mic input to any output) | |
| 20 Hz to 60 kHz | +0 dB / -1 dB |
| 20 Hz to 100 kHz | +0 dB / -3 dB |

Distortion (THD+N)

| | |
|---|----------|
| (1 kHz @ 35 dB gain, 20 Hz to 20 kHz bandwidth) | |
| Mic In to Insert Send | <0.0007% |
| Mic In to Main Out | <0.005% |

Attenuation and Crosstalk

| | |
|--|---------|
| (1 kHz relative to 0 dBu, 20 Hz to 20 kHz bandwidth, Line In, 1/4" Main Out, Gain @ unity) | |
| Channel Mute switch engaged | -84 dBu |
| Channel Gain knob down | -84 dBu |

Common Mode Rejection Ratio (CMRR)

| | |
|-----------------------------|--------------------|
| (Mic In to Insert Send out) | |
| 1 kHz | better than -70 dB |

Maximum Levels

| | |
|-------------------|---------|
| Mic In | +22 dBu |
| All other inputs | +22 dBu |
| Main Mix TRS Out | +28 dBu |
| All other outputs | +22 dBu |

EQ

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

Input and Output Impedance

| | |
|-----------------------|--------------------------|
| Mic In | 2.5 k Ω |
| Channel Insert Return | 2.5 k Ω |
| All other inputs | 10 k Ω or greater |
| Tape Out | 1.1 k Ω |
| All other outputs | 120 Ω |

AC Power Requirements

| | |
|-----------------------|---------------------------|
| Power Consumption | 50 watts |
| US, JP | 100 – 120 VAC, 50 – 60 Hz |
| Fuse rating | 1A slo blo, 5 x 20 mm |
| EU | 200 – 240 VAC, 50 – 60 Hz |
| Fuse rating | 0.5A slo blo, 5 x 20 mm |
| Operating Temperature | 0° – 40°C 32° – 104°F |

Physical Properties (packaged product)

| | |
|-----------------|-------------------|
| Height | 22.0 in / 559 mm |
| Width | 21.0 in / 533 mm |
| Depth | 9.4 in / 240 mm |
| Shipping Weight | 31.2 lb / 14.2 kg |

Physical Properties (product)

| | |
|------------|------------------|
| Height | 17.5 in / 445 mm |
| Width | 17.3 in / 440 mm |
| Depth | 5.1 in / 129 mm |
| Net Weight | 20.0 lb / 9.1 kg |

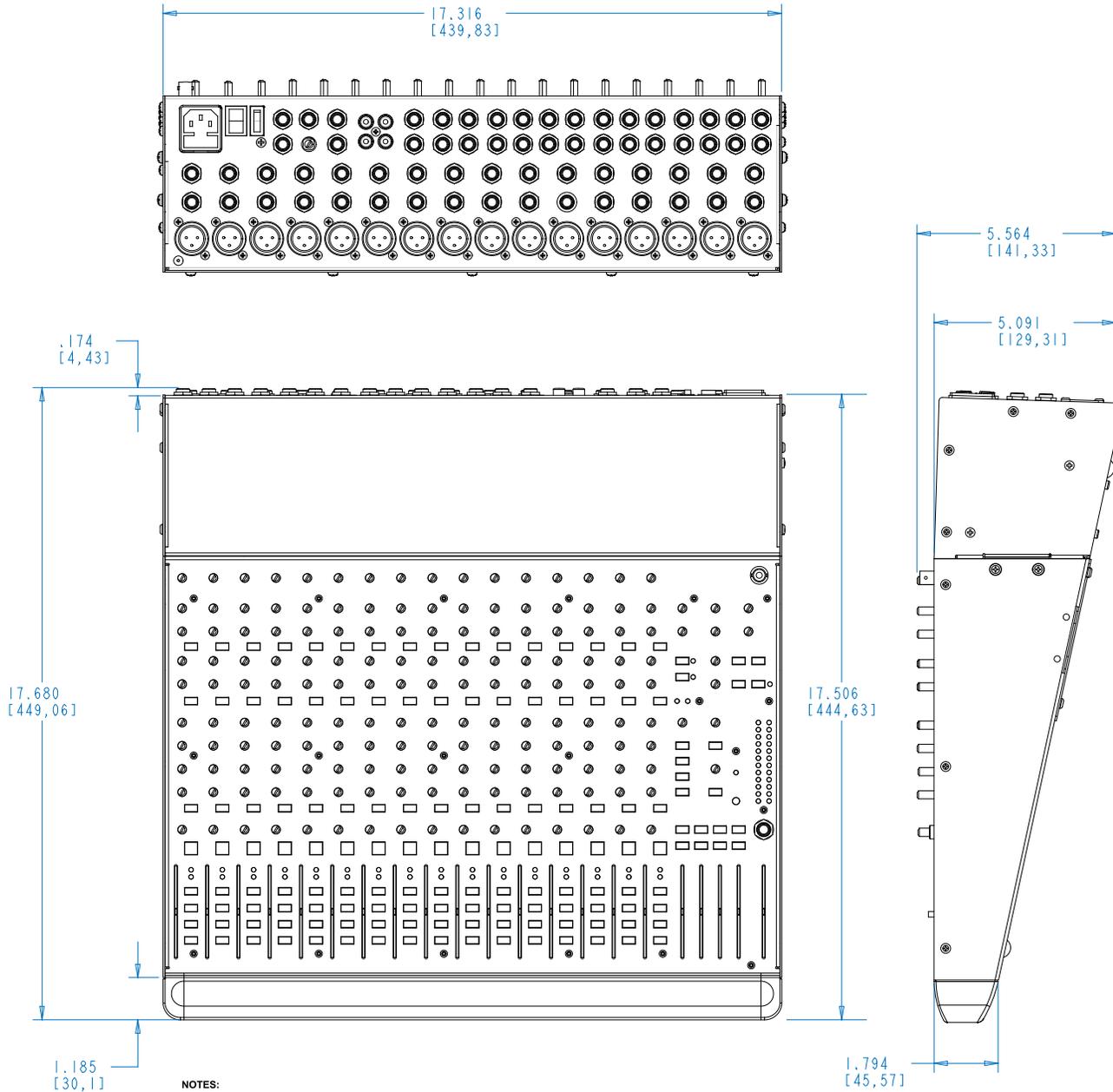
Options

| | |
|---------------------------|------------|
| RotoPod Kit / Bracket Set | 090-050-90 |
| Mixer Bag | 093-004-02 |
| Dust Cover | 093-009-00 |

Ordering Information

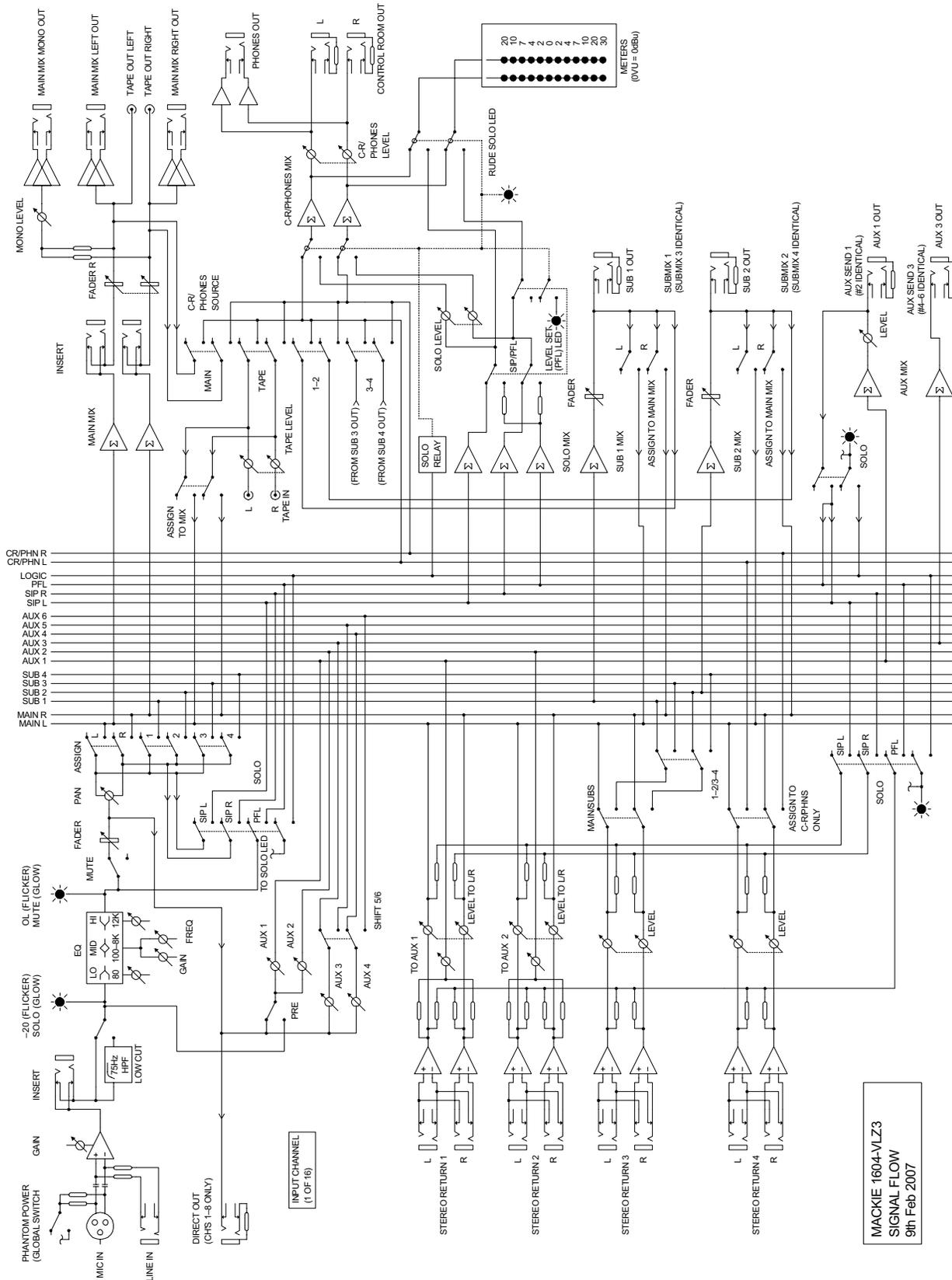
| | |
|---|----------------|
| 1604-VLZ3 16-Ch./4-Bus Compact Recording/SR Mixer, US | P/N 0018454-00 |
| 1604-VLZ3 16-Ch./4-Bus Compact Recording/SR Mixer, EU | P/N 0018454-01 |
| 1604-VLZ3 16-Ch./4-Bus Compact Recording/SR Mixer, JP | P/N 0018454-02 |

1604-VLZ3 DIMENSIONS



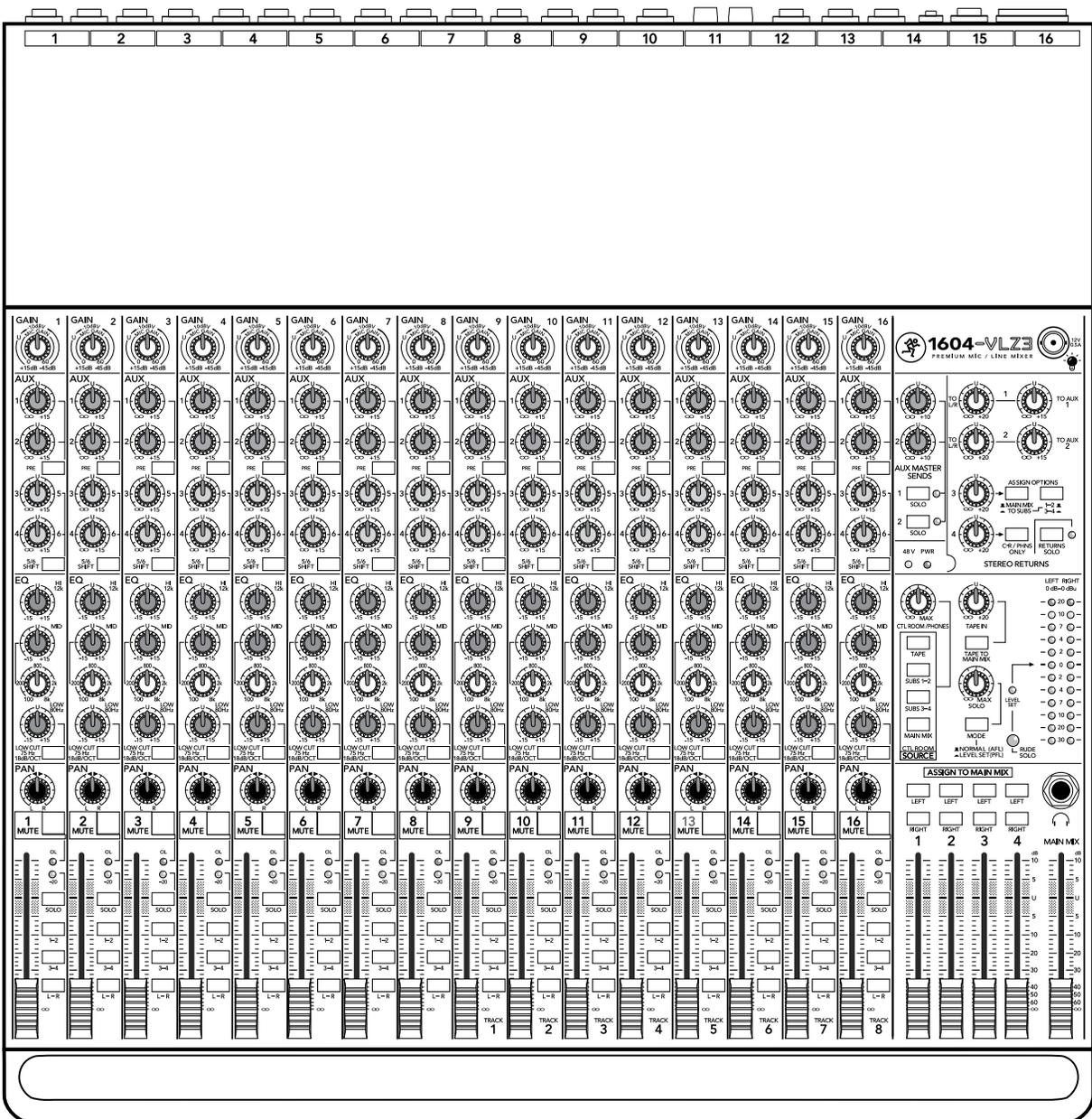
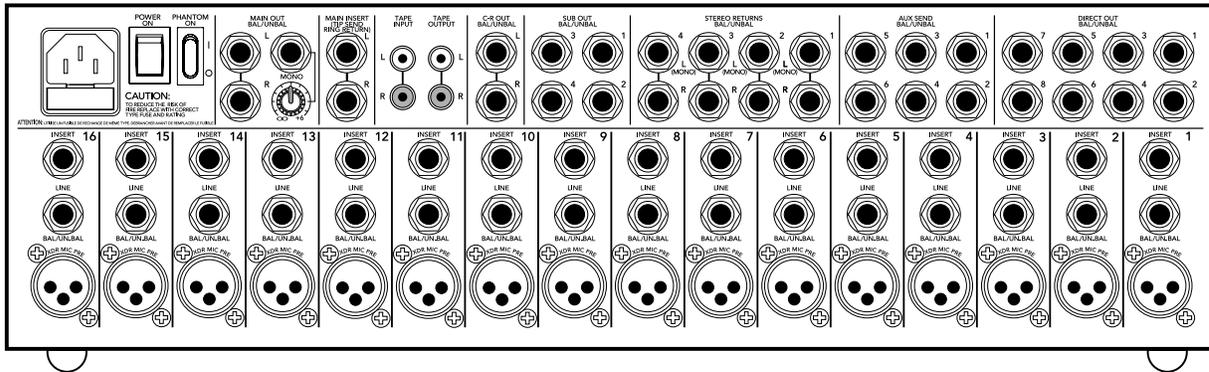
NOTES:
1. WEIGHT APPROX. 20.0 lb [9.1 kg].
2. SHIPPING WEIGHT APPROX. 31.2 lb [14.2 kg].
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE
IN INCHES. DUAL [MM] DIMENSIONS FOR REF ONLY

1604-VLZ3 BLOCK DIAGRAM



MACKIE 1604-VLZ3
SIGNAL FLOW
9th Feb 2007

1604-VLZ3 FRONT AND REAR PANELS



Electronic files for this product are available at:

www.mackie.com

| | |
|---------------------|-----------------|
| Specification Sheet | 1604VLZ3_SS.PDF |
| Owner's Manual | 1604VLZ3_OM.PDF |

Since we are always striving to make our products better by incorporating new and improved materials, components, and manufacturing methods, we reserve the right to change these specifications at any time without notice. "Mackie" and the "Running Man" figure are registered trademarks of LOUD Technologies Inc. All other brand names mentioned are trademarks or registered trademarks of their respective holders, and are hereby acknowledged.

©2010 LOUD Technologies Inc. All Rights Reserved.

MACKIE®

www.mackie.com

16220 Wood-Red Road NE

Woodinville, WA 98072 USA

800-898-3211, Fax 425-487-4337, sales@mackie.com

Part No. SW0773 Rev. B 12/10