

# CR-1604

## 16x2 RACK MOUNT MIC/LINE MIXER



### THE BEST PRICE-TO-PERFORMANCE RATIO EVER

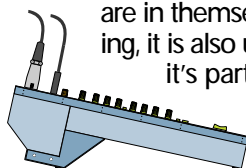
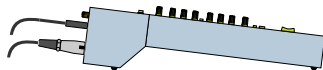
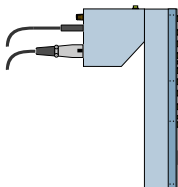
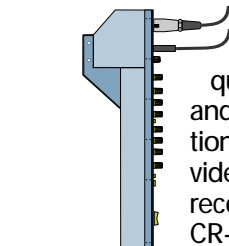
Our CR-1604 16-channel mic/line mixer has proven itself to be rugged, versatile and quiet in a wide range of

applications. It is currently in use in high-quality church, school and commercial installations, broadcasting studios, video post suites and large recording studios. The CR-1604's durability has also made it a favorite of touring systems and rental houses.

### A COMPLETE, EXPANDABLE SYSTEM

While the CR-1604's overall sound, specifications and features are in themselves outstanding, it is also unique because it's part of a six-component system. The

CR-1604 may be physically configured in a variety of ways. Ten extra mic inputs can be added.

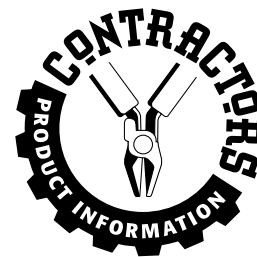


Up to three CR-1604s can be combined with no loss of inputs and full use of combined headphone and AUX outputs. And it can be automated with full-fader and muting of all inputs, four AUX returns, ALT 3/4 bus and main outputs.

No other compact mixer on the market offers this range of problem-solving possibilities. Our imitators are also hard-pressed to match Mackie's proven track record of reliability and product support.

### DURABILITY, NOT CALLBACKS

The 1604 is a built-like-a-tank, professional tool designed for non-stop, 24-hour-a-day professional duty. In church, school and business sound systems. In TV and radio stations and post-editing suites. Any job where nothing must ever go wrong. This isn't just a hollow claim. It's backed up by how we've built this mixer. For example, the CR-1604 uses sealed controls rather than open frame, second-generation



### RELATED PRODUCTS

XLR10 MIC EXTENDER  
MIXER MIXER • CORDPACK  
REMOTE FADER • ROTOPOD

### MORE INFORMATION

CR-1604 ARCHITECTS' AND ENGINEERS' SPECIFICATIONS  
"IN YOUR FACE"  
ALL-PRODUCT BROCHURE

### FEATURES

- 7 AUX sends per channel via 4 knobs
- 4 stereo (8 mono) AUX returns
- 6 studio-quality mic preamps with -129.5dBm E.I.N.
- Bal/unbal main outputs
- 3-band EQ at musical points
- Stereo in-place solo
- Constant power pan pots
- Individual channel signal metering via solo function
- UnityPlus gain structure
- Alternate 3/4 bus
- Built-in power supply
- BNC lamp connector & internal power supply
- Steel main chassis
- Gold-plated internal interconnects
- 3-Year Limited Warranty

# MACKIE®

# CR-1604

potentiometers that eventually deteriorate from airborne contamination. The mixer has a steel chassis, rugged double-sided, through-hole-plated fiberglass circuit boards, built-in power supply (instead of a "wall wart"), BNC lamp power connector— even parallel-wired dual faders for two times redundancy.

The CR-1604's inputs and outputs are protected against power surges, static discharges and even impedance mismatches.

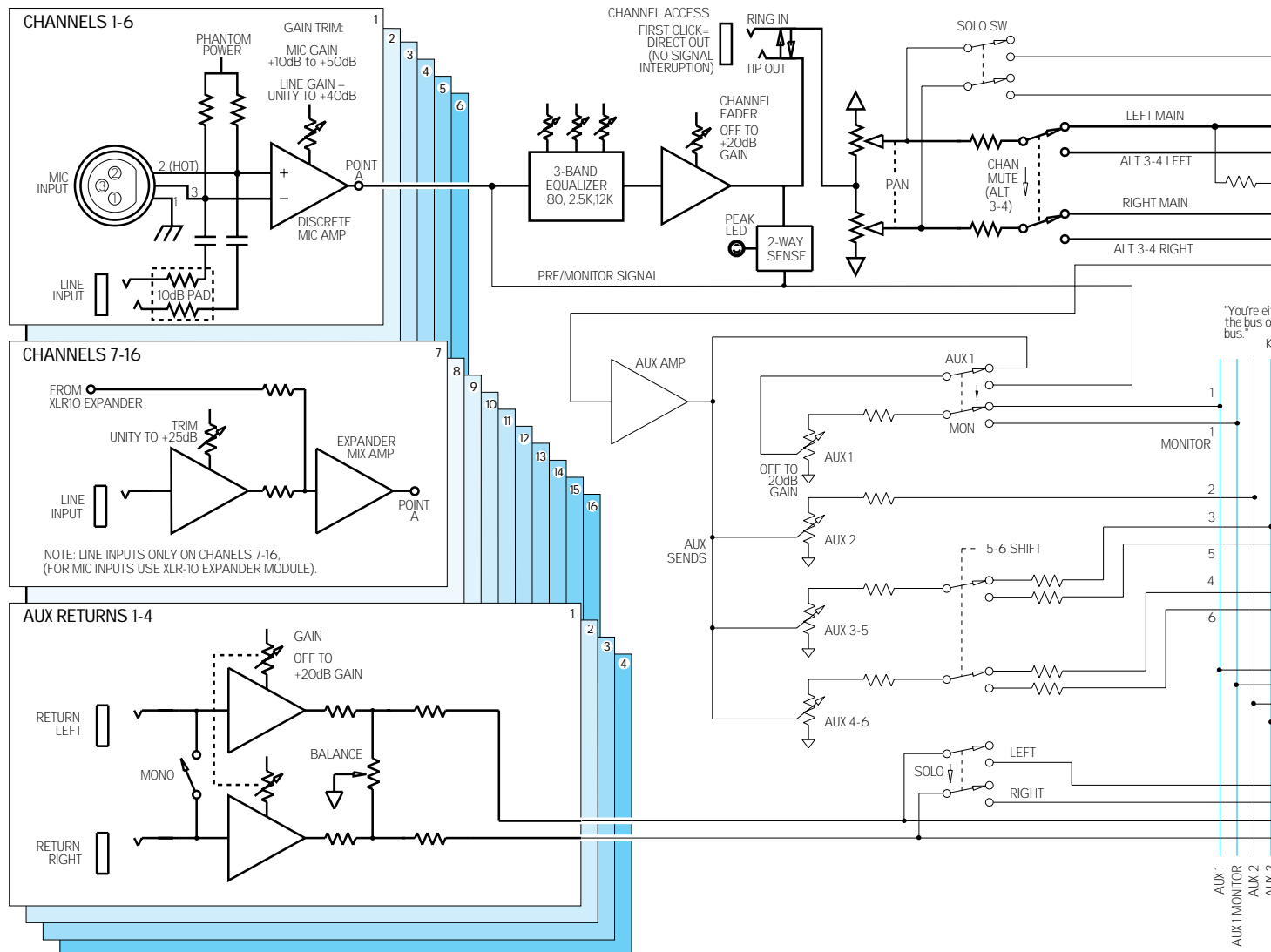
And the mixer also has exceptional protection from RF interference. Other compact mixers use plastic washers to secure 1/4" jacks to the chassis. Grounding is done internally to a circuit board trace. This means that RF can enter the mixer and propagate throughout the circuitry. The CR-1604 uses metal lockwashers to make electrical contact between jack and outer chassis. Internally, a shunting capacitor is placed across the inputs, routing RF back through the metal chassis where it is dissipated before it can

propagate via CR-1604 circuit boards. You can literally operate a 1604 under a transmitter tower without RF interference\*! No Mackie "clone" can make that claim.

## SOUNDS SO GOOD, IT'S USED TO MIX COMPACT DISCS

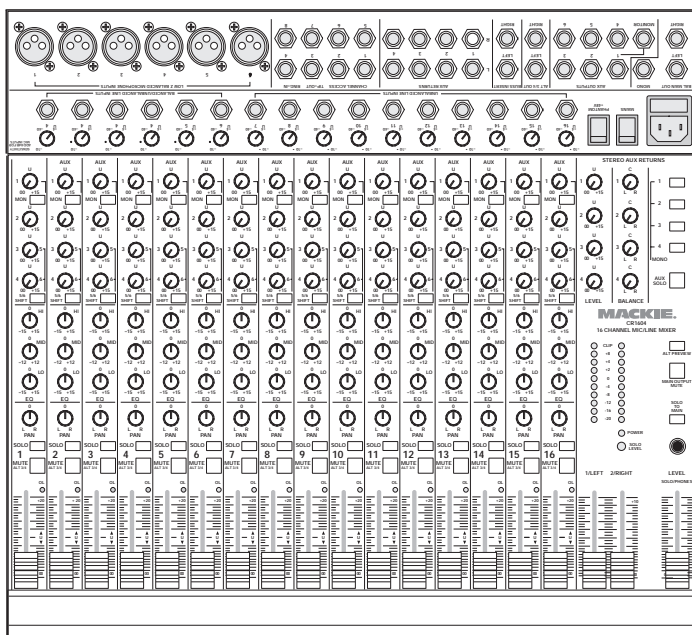
In terms of specs and features, it's quite understandable why the CR-1604 has redefined small mixers. It put an end to the classic trade-off of "low noise OR high headroom, but not both." In fact, numerous

\*A Radio World magazine reviewer did just that. See the March 25th, 1992 issue for the full story.

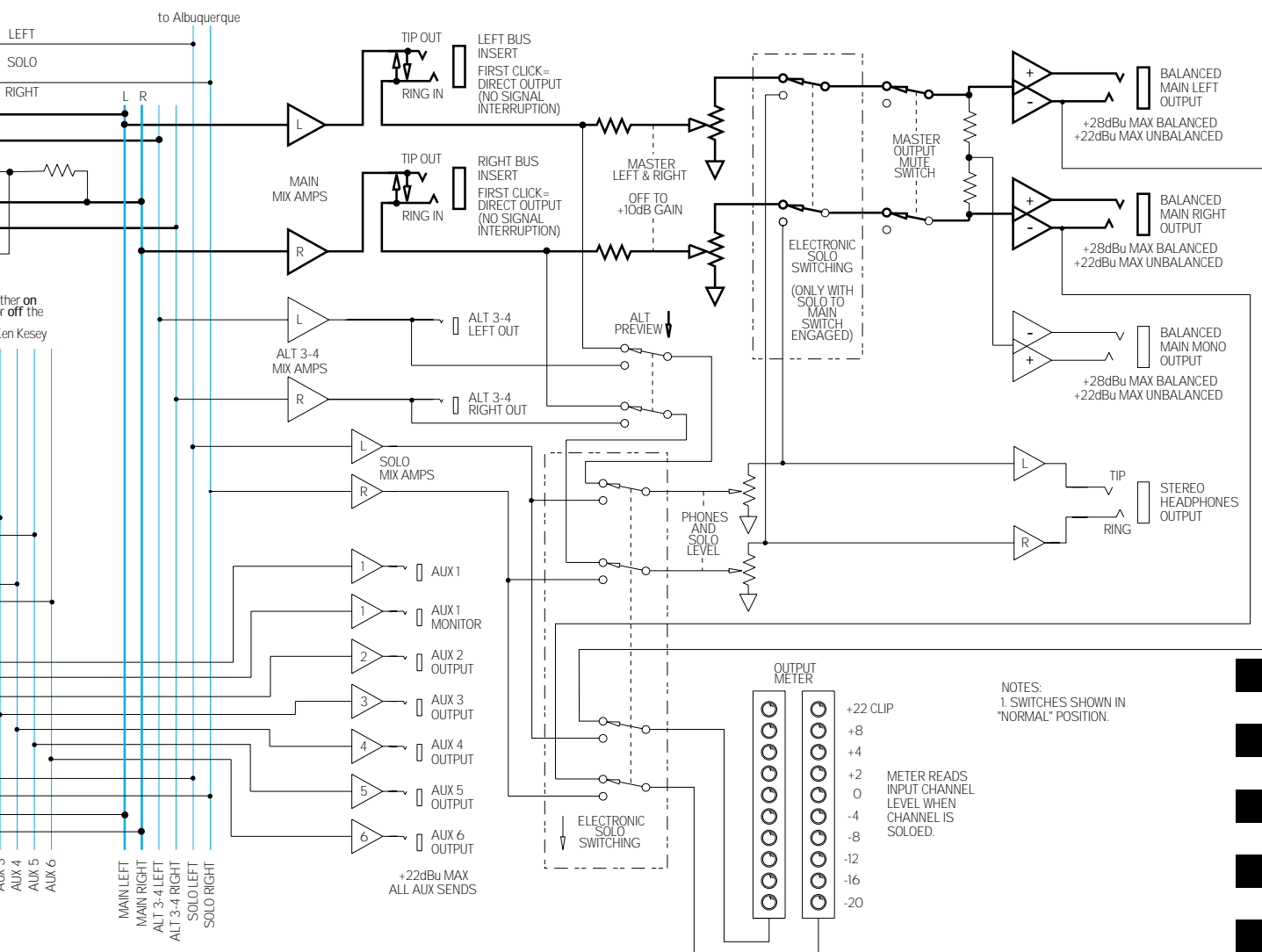


major-label CDs have been mastered on 1604s. The CR-1604 is also regularly used for TV scoring (*The Simpsons, Night Shade, Beverly Hills 90210*, and many others) and live TV show music mixing (*Arsenio Hall, Tonight Show* and *Saturday Night Live*). Lucas-Film's Skywalker Ranch uses over twenty of them on a daily basis. As does a very famous theme park.

One explanation is the CR-1604's specifications. Real world specs that we invite you to confirm on your test bench. You'll find that the CR-1604 delivers 90dB



continued on back page



working S/N and 108dB dynamic range. In the field, this translates into two times more headroom than old-style mixers — where it counts in the critical mix amp stage.

Instead of afterthought XLRs stuck on the back, we provide real phantom-powered mic inputs with discrete, balanced microphone preamps as good as large consoles. Four conjugate-pair transistors with large-emitter geometry reduce distortion at all levels, while delivering extremely low noise (our published spec of  $-129.5\text{dBm}$  @150 ohms is real and verifiable) and ultra-wide, 10Hz–300kHz bandwidth.

### A WEALTH OF INNOVATIVE FEATURES

Constant-power pan pots maintain consistent acoustic power while panning center to side. In-place stereo solo maintains stereo perspective when the user solos a channel — and the same button provides individual channel metering! An additional ALT 3/4 Bus provides an extra stereo output mix for broadcast or recording. AUX sends provide an extra 15dB of gain above unity to maximize effects at low volume levels, allowing you to monitor selected channels without having to give up send capabilities on other channels. Equalization is at 80Hz, 2.5kHz and 12kHz... points that prove to be more musically useful than those used by most compact mixers.

The ultimate proof that the CR-1604 stands above other compact mixers is the sheer number that are being

installed every day. Join the growing roster of system designers and contractors who are specifying the CR-1604 on the basis of its features, sound, and — above all — its undisputable, rock-solid reliability.

## SPECIFICATIONS

**Frequency Response:**  
20Hz-20kHz  $\pm 1\text{dB}$

**Distortion:**  
less than 0.025%, 20Hz-20kHz

**Noise:**  
Mic E.I.N.  
 $-129.5\text{dBm}$ , 150-ohm source  
 $-131.2\text{dBV}$ , 150-ohm source  
 $-131.5\text{dBm}$ , input shorted  
 $-133.7\text{dBV}$ , input shorted

Main output noise:  
 $-90\text{dBu}$

Working S/N ratio:  
90 dBu (ref: +4 dBu)

**Max. Output:**  
+28 dBu main output bal.  
+22 dBu all outputs unbal.

**Dynamic Range:** 108dB

**Max Gain**  
Mic: 50 dB  
Lines 1-6: 40 dB  
Lines 7-16: 25 dB

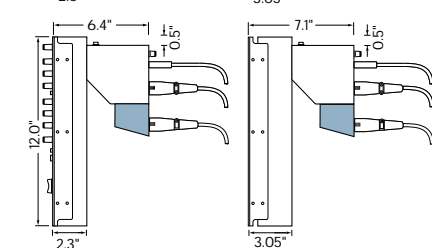
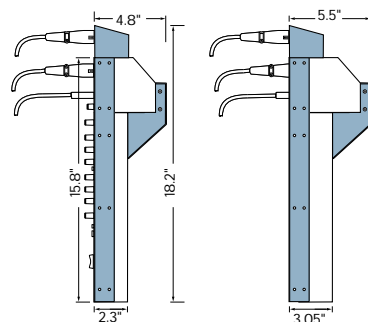
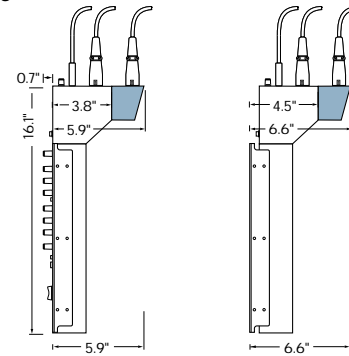
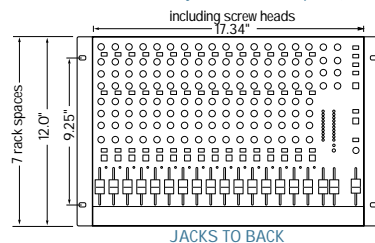
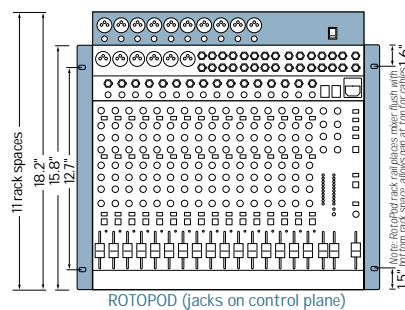
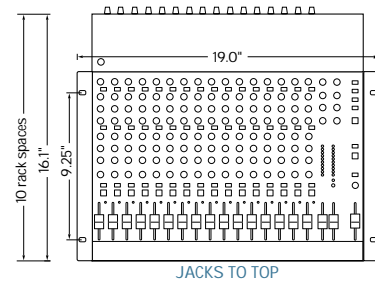
Mic in to balanced line out:  
86dB  
Mic in to unbalanced line out:  
80dB  
Channel faders 1-16: 20 dB  
AUX return: 20 dB  
L/R master: 10 dB

**Headphone Impedance:**  
20-2000 ohms.

**Equalization:**  
Hi: Shelving,  $\pm 15\text{dB}$  @ 12kHz  
Mid: Peaking,  $\pm 12\text{dB}$  @ 2.5kHz  
Lo: Shelving,  $\pm 15\text{dB}$  @ 80Hz

**Weight:** 18 lbs.

**Power consumption:**  
35 watts



Note: Dimensional drawings are shown with optional XLR10 and RotoPod assembly.



MACKIE DESIGNS INC. • 16220 WOOD-RED RD. N.E.  
WOODINVILLE • WA • USA • PHONE TOLLFREE 800/258-6883  
FAX 425/487-4337 • OUTSIDE THE U.S., PHONE 425/487-4333

Mackie Designs Inc. is engaged in a continuous program of product evaluation and improvement and reserves the right to change product specifications at any time without notice. © 1995-1998 Mackie Designs Inc. All rights reserved. "Mackie." is a registered trademark of Mackie Designs Inc.