MACKIE® Onyx 1220i — PREMIUM PRODUCTION MIXER WITH FIREWIRE

Onyx 1220i

The Onyx 1220i features four full mono mic/line channels (each with 3-band Perkins EQ and mid-frequency sweep), four stereo channels (each with 3-band Perkins EQ), two aux sends on all channels with pre/post capability and a powerful master section.

The Onyx 1220i is equipped with 16x2 FireWire capability, allowing all channels, aux sends and main L/R to be routed to any desired DAW, including Pro Tools® 9 and M-Powered™ 8. The FireWire output from the computer may be brought back straight into a channel strip for easy mix integration. FireWire aggregation allows multiple Onyx 1220i mixers to be connected.

Each mono channel has an Onyx mic preamp, phantom power, an input Gain control with 60 dB of gain, a sharp 18 dB/octave, 75 Hz Low Cut filter, Pan, Mute, Solo, a 60mm fader and a Channel Insert jack for connecting an external processor.

There are built-in DIs on the first two channels for direct connection of guitars or bass and a dedicated talkback section for easy communication with band members on stage or during recording sessions.

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

The Control Room/Phones section has its own level control, outputs and input matrix for selecting any combination of Main Mix, Tape In and Alt 3-4.

The Onyx 1220i is compact and rack-mountable. Plus, it's a Mackie which means it is "Built-Like-A-Tank" and will survive years of abuse.

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:

■ 12-channel premium analog mixer with integrated 24-bit / 96 kHz FireWire I/O

■ Four Onyx boutique quality mic preamps

■ 3-band Perkins EQ with sweepable mids on mic/line channels

■ 3-band Perkins EQ on stereo line channels

■ 16x2 FireWire routing for simultaneous streaming of aux sends, main L/R and pre/post EQ assignment for all channels

■ Compatible with most major DAWs
  • Pro Tools® 9 / M-Powered™ 8
  • Logic®
  • SONAR™
  • Cubase®
  • Ableton® Live
  • Final Cut Pro®
  • ...and more

■ Stereo playback from DAW, returned to control room or into channel for integration into mix

■ Built-in DI on first two channels for direct connection of guitars, bass, etc.

■ Individual 48V phantom power switches on all mic inputs

■ Talkback section with built in mic and flexible routing

■ "Planet-Earth" switching power supply for worldwide use

■ Optional rack kit available

■ Includes Tracktion 3™ Music Production Software for Mac or PC

Onyx 1220i SPECIFICATIONS

Noise Characteristics

Equivalent Input Noise (EIN), mic input at insert, 150 Ω source impedance, 20 Hz to 20 kHz

60 dB (max) gain:	–127 dBu
40 dB gain:	–126.5 dBu

Equivalent Input Noise (EIN), mic input at insert, 50 Ω source impedance, A-weighted

60 dB (max) gain:	–130.5 dBu
40 dB gain:	–130 dBu

Output Noise Figure (1/4" Main out, all channels assigned to main, Gain knobs at unity, 20 Hz to 30 kHz)

Main Mix knob down, channel Level knobs down:
  –102 dBu (–106 dB SNR, ref +4 dBu)
Main Mix knob unity, channel Level knobs down:
  –96 dBu (–100 dB SNR, ref +4 dBu)
Main Mix knob unity, channel Level knobs unity:
  –93 dBu (–97 dB SNR, ref +4 dBu)

FireWire Through (Record + Playback) Dynamic Range:
(0 dBu in, mic input to FireWire send, returned to Control Room, all gain stages at unity, 20 Hz to 20 kHz)

44.1 kHz sample rate:	–104 dB
96 kHz sample rate:	–106.5 dB

Frequency Response

Mic input to any output (all gain stages at unity, +0 / –0.5 dB)	20 Hz to 20 kHz
Stereo channel line input to any output (all gain stages at unity, +0 / –0.5 dB)	20 Hz to 20 kHz

FireWire in and out (mic input to FireWire send, returned to Control Room, all gain stages at unity):

44.1 kHz sample rate (+0 / –0.5 dB)	20 Hz to 20 kHz
	–3 dB at 21 kHz
96 kHz sample rate (+0 / –0.5 dB)	20 Hz to 20 kHz
	–3 dB at 45 kHz

Distortion (THD+N)

(20 Hz to 20 kHz bandwidth)

Mic input at insert (+4 dBu in, 0 dB gain, +4 dBu out)	0.0015%
Mic input at insert (–36 dBu in, +40 dB gain, +4 dBu out)	0.017%
Stereo channel line input to any output (+4 dBu in, all gain stages at unity, +4 dBu out)	0.005%

FireWire in and out
(+4 dBu in, mic input to FireWire send, returned to Control Room, all gain stages at unity)

44.1 kHz sample rate:	0.01%, 20 Hz to 2 kHz
	0.02%, 2 kHz to 20 kHz
96 kHz sample rate:	0.01%, 10 Hz to 1 kHz
	0.03%, 1 kHz to 47 kHz

Attenuation and Crosstalk

@1 kHz	
Main Mix knob down	–85 dBu
Channel Alt/Mute switch engaged	–95 dBu
Channel Level knob down	–95 dBu

Common Mode Rejection Ratio (CMRR)

Mic input to insert, max gain, 1 kHz	–70 dB

Maximum Input Levels

Mic input, gain at min (0 dB)	+22 dBu
Mic input, gain at max (60 dB)	–38 dBu
Line input, gain at –20 dB	+22 dBu
Instrument input, gain at –20 dB	+22 dBu
Tape input	+12 dBu
Aux return	+22 dBu

Maximum Output Levels

All outputs	+22 dBu

Equalization

Mono Channels	
Low	±15 dB @ 80 Hz
Mid frequency	100 Hz to 8 kHz
Mid gain	±15 dB
High	±15 dB @ 12 kHz
Stereo Channels	
Low	±15 dB @ 80 Hz
Mid	±15 dB @ 2.5 kHz
High	±15 dB @ 12 kHz

FireWire

Sample Rates Available	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
Buffer Size	32 (44.1 kHz and 48 kHz only), 64, 128, 256, 512, 1024, 2048 samples
Resolution	24-bit

Onyx 1220i SPECIFICATIONS continued...

Meters

2-segment pre-fader channel meters	OL (+18 dBu), –20 dBu
12-segment pre-fader Control Room meters	OL (+20 dBu), +15, +10, +6, +3, 0, –2, –4, –7, –10, –20, –30 (0 dB = 0 dBu)

Input Impedance

Mic input	2.8 kΩ balanced
Hi-Z input	1 MΩ unbalanced
Mono channel line input	30 kΩ balanced
	15 kΩ unbalanced
Stereo channel line input	20 kΩ balanced
	10 kΩ unbalanced

Output Impedance

Main XLR output	100 Ω balanced
Phones output	75 Ω
All other outputs	300 Ω

AC Power Requirements

Power Consumption	30 watts
Universal AC Power Supply	100 – 240 VAC, 50 – 60 Hz
Operating Temperature	0˚ – 40˚C
	32˚ – 104˚F

Physical Properties (packaged product)

Height	7.5 in / 191 mm
Width	16.0 in / 406 mm
Depth	19.0 in / 483 mm
Shipping Weight	15.7 lb / 7.1 kg

Physical Properties (product)

Height	3.85 in / 96 mm
Width	12.25 in / 310 mm
Depth	16.75 in / 420 mm
Net Weight	13.5 lb / 6.1 kg

Options

Rackmount Kit	0031910-00
Mixer Bag	0032344

Ordering Information

Onyx 1220i 12-Channel Premium Mixer with FireWire, US	P/N 0030516-00
Onyx 1220i 12-Channel Premium Mixer with FireWire, EU	P/N 0030516-01

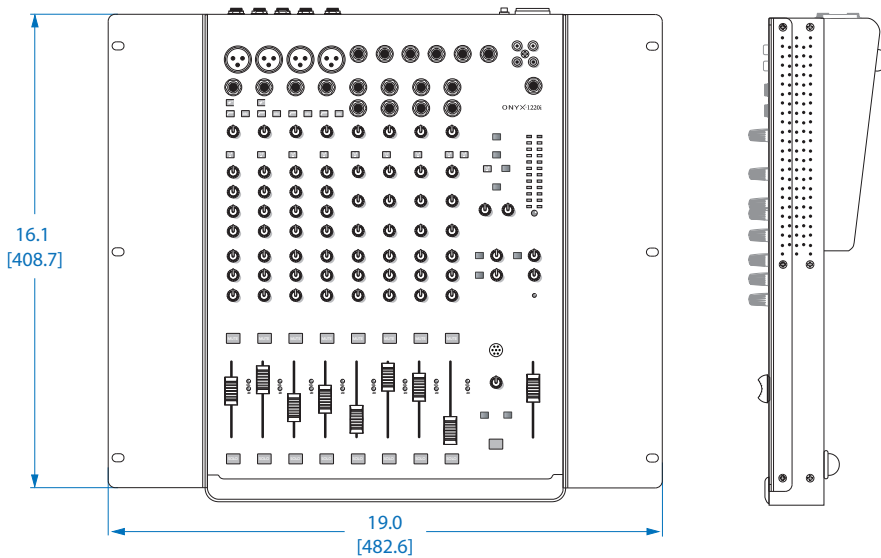## Onyx 1220i DIMENSIONS

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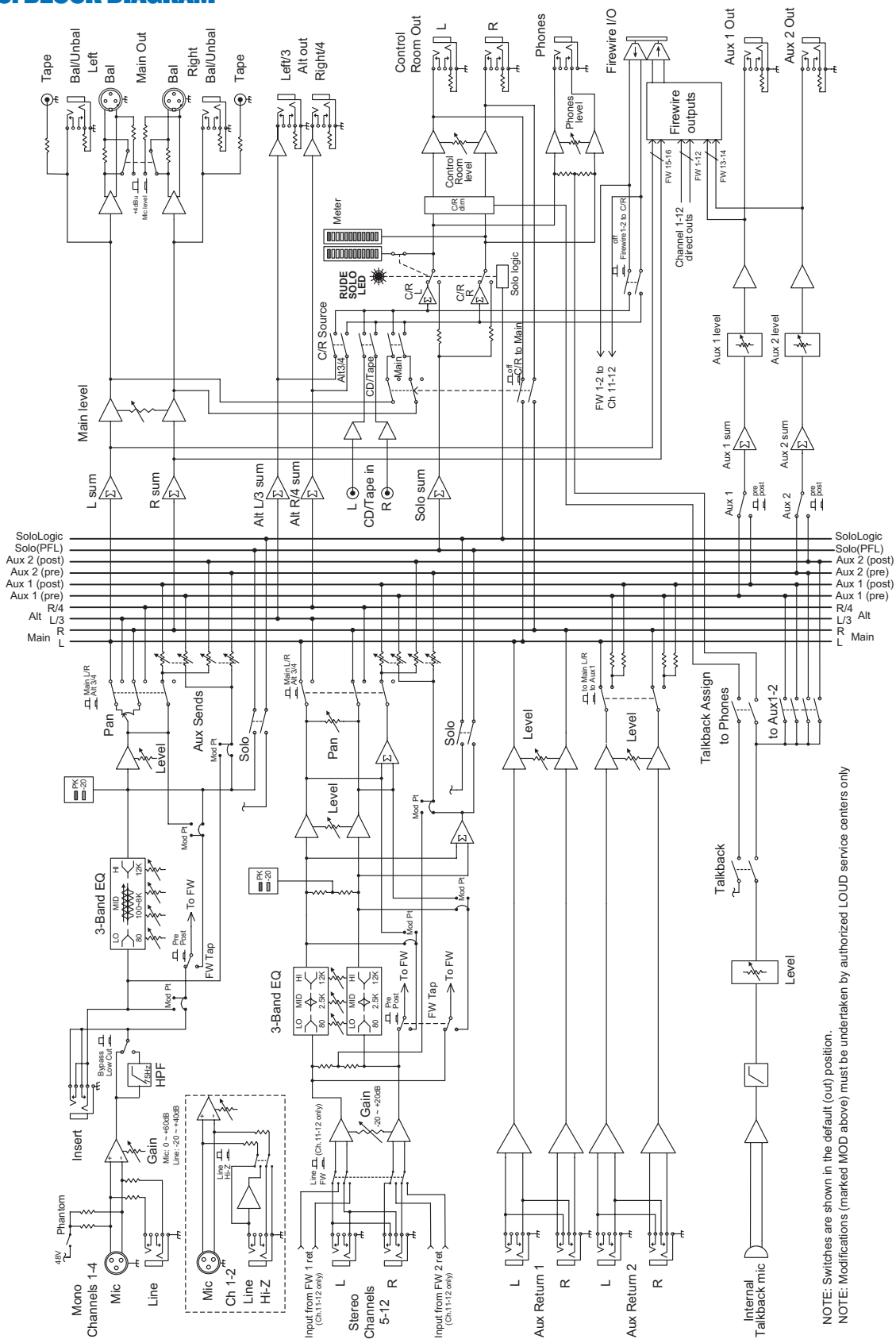[96]

3.85
[96]

16.75
[420]

12.25
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1.9
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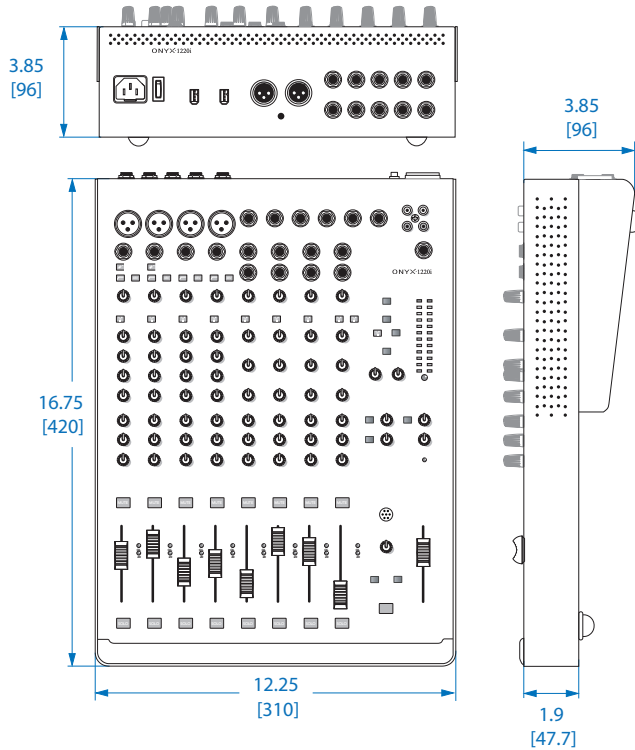
NOTES:
1. WEIGHT APPROX. 13.5 lb [6.1 kg].
2. SHIPPING WEIGHT APPROX. 15.7 lb [7.1 kg].

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES. DUAL [MM] DIMENSIONS FOR REF ONLY
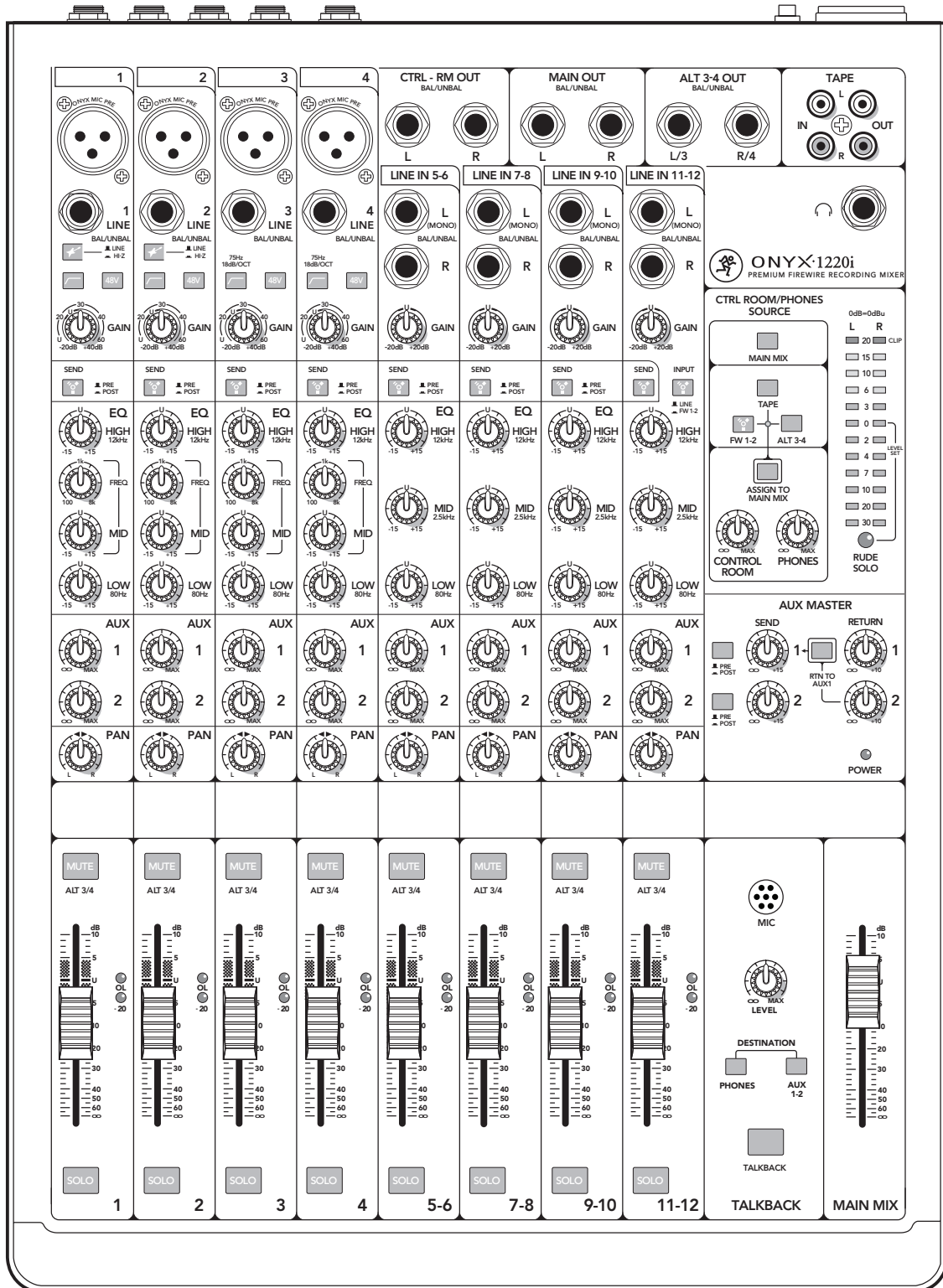
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19.0
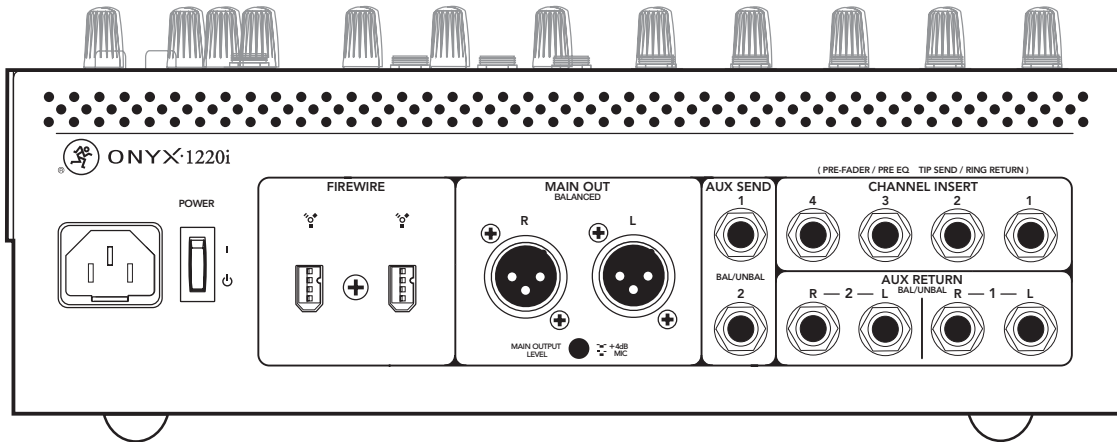[482.6]

Onyx 1220i BLOCK DIAGRAM

NOTE: Switches are shown in the default (out) position.
NOTE: Modifications (marked MOD above) must be undertaken by authorized LOUD service centers only

Onyx 1220i FRONT PANEL

Onyx 1220i front panel diagram showing channel strips 1–4 with ONYX MIC PRE inputs, LINE inputs, GAIN, EQ (HIGH, FREQ, MID, LOW), AUX 1/2, PAN, MUTE/ALT 3/4, faders and SOLO; stereo LINE IN channels 5-6, 7-8, 9-10, 11-12; CTRL-RM OUT, MAIN OUT, ALT 3-4 OUT, TAPE IN/OUT sections; CTRL ROOM/PHONES SOURCE with MAIN MIX, TAPE, FW 1-2, ALT 3-4, ASSIGN TO MAIN MIX, CONTROL ROOM, PHONES, RUDE SOLO; level meter (0dB=0dBu); AUX MASTER with SEND and RETURN; POWER; TALKBACK (MIC, LEVEL, DESTINATION PHONES/AUX 1-2); and MAIN MIX fader.

MACKIE® Onyx 1220i PREMIUM PRODUCTION MIXER WITH FIREWIRE

Onyx 1220i REAR PANEL

MACKIE®

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