



## Onyx Series Mixers

### Onyx8 • Onyx12 • Onyx16 • Onyx24

Mackie Onyx Premium Analog Mixers with USB are the ultimate compact solution for live audio, home recording, and content creation.

24-Bit / 96kHz multitrack recording, award-winning, high-gain Onyx mic preamps, and an end-to-end ultra-low-noise design deliver the sound quality professionals demand.

Packed with features including powerful DSP effects, British-style Perkins EQ, full-color display, and integrated recording and playback from an SD card.

Mackie Onyx Premium analog mixers give you the power you need to capture your best performance with pristine fidelity at home or on the go.

### APPLICATIONS:

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

### FEATURES:

- **Classic Sound, Modern Performance**
  - Award-winning Onyx mic preamps provide up to 60dB of gain
  - Premium analog circuitry delivers studio-quality sound and keeps noise to a minimum
  - Analog/USB channel strips with flexible routing
  - Legendary Perkins “British style” EQ with sweepable midrange offers classic sounds of the 60’s and 70’s
  - Robust digital effect engine, including user-customizable reverbs, delays, and more, with a dedicated FX EQ
- **Record and Playback via SD Card or USB**
  - High-resolution 96kHz / 24-bit multi-track recording to Mac/PC via USB
  - Direct to SD card stereo recording and playback
  - Channel-assignable 4-track USB return (two stereo pairs)
  - Send your Main Mix to USB via a dedicated switch

- **Studio Command - Powerful and Intuitive Full-Color Display and Single-Knob Interface**
  - Easy navigation of FX parameters, onboard SD recording and playback
  - Visually browse files on the SD card via the built-in display
  - Dedicated physical buttons for Previous, Next, Record, and Play/Pause
  - Store up to 6 user FX presets for easy recall
- **Professional High-Resolution FX Processor**
  - Utilize built-in effects for live performances, streams, and beyond
  - Reverb, delay, chorus, and more
  - Dial in the perfect sound with adjustable parameters and dedicated EQ
- **Bluetooth® Streaming – Go Wireless**
  - Pair your Bluetooth enabled device and stream audio directly to a channel on the mixer
  - Streamed audio can be routed to Aux Sends and the Main Mix
- **Powerful Mixing Toolkit**
  - 3-band Perkins EQ with On/Off hard bypass switch on all channels
  - Hi-Z switches allows direct connection of guitars, basses, and other instruments
  - 100Hz low-cut filter and 48V phantom power on all mic channels
  - Stereo 1/8” input and Bluetooth streaming
  - Stereo line inputs
  - Aux/Monitor outputs with dedicated per-channel send control
  - Dedicated Control Room outputs
  - Headphone output with dedicated level control
  - Dedicated L-R Assign switches per channel
  - 12-segment stereo meters
  - Overload indicators on all channels
  - PFL/AFL channel solo
  - Footswitch input for FX Mute (footswitch not included)
- **Hit the Ground Running with Powerful Software and Plugins**
  - Pro Tools® | First recording software and plugin bundle
    - o Musician Collection for Pro Tools | First, with 23 plugins like BBD Delay, Eleven Lite, 304E EQ, and 304C Compressor
  - Waveform™ OEM recording software and plugin bundle
    - o DAW Essentials™ Bundle for Waveform™ OEM, with 16 powerful plugins like Equaliser, Compressor, Reverber8, and Limiter
- **Rugged Chassis and Professional Design**
  - Backlit Mute and Solo buttons provide a positive tactile feel and clear visual feedback
  - Sealed rotary pots resist dust and grime
  - Built-Like-A-Tank™ heavy steel chassis
  - High-visibility, high-contrast controls
  - Rugged, QuickGrip™ side cheeks offer convenient mobility and protection

## ONYX SPECIFICATIONS

### Noise Characteristics

Equivalent Input Noise (EIN) (150 Ω Source Impedance, 20 Hz to 20 kHz)	
Mic in to Insert Send out, max gain	-128 dBu
Residual Output Noise	
All outputs, master levels off, all channel levels off	-98 dBu
All outputs, master levels unity, one channel level unity	-88 dBu

### Frequency Response

Mic input to any output (gain at unity, +0 dB / -1 dB)	20 Hz to 30 kHz
--	-----------------

### Distortion

(22 Hz to 80 kHz bandwidth)	
Mic in to Main Out (+4 dBu output)	<0.01%

### Attenuation and Crosstalk

Adjacent Inputs @1 kHz	-90 dB
Inputs to Outputs @1 kHz	-80 dB
Fader Off @1 kHz	-85 dB
Mute Switch @ 1 kHz	-90 to -100 dB

### Common Mode Rejection Ratio (CMRR)

Mic in to Main out, max gain, 1 kHz	70 dB
-------------------------------------	-------

### Maximum Levels

All inputs	+22 dBu
Main Mix XLR	+28 dBu
All other outputs	+22 dBu

### Impedances

Mic in	3.3 kΩ
Channel Insert Return	10 kΩ
All other inputs	≥20 kΩ
Phones out	25 Ω
All other outputs	120 Ω Unbalanced, 240 Ω Balanced

### Equalization

All Channels (except 1/8" stereo channel)	
Low	±15 dB @ 80 Hz
Mid (Mono channels)	±15 dB 100 Hz – 8 kHz
Mid (Stereo channels)	±15 dB @ 2.5 kHz
High	±15 dB @ 12 kHz
Low Cut Filter	18 dB/octave @ 100 Hz

### Digital Effects

Number of Presets	12
-------------------	----

### Meters

Main L/R Mix	
Two columns of 12 segments each: 0L, +15, +10, +6, +3, 0 (0 dBu), -2, -4, -7, -10, -20, -30	

### USB

Format	USB 2.0
I/O	Multiple Inputs, 2x2 Stereo Outputs
A/D/A	24 bit, 44.1 kHz, 48 kHz, 96 kHz

### SD

2x2 / 24-bit / 96 kHz
-----------------------

## ONYX SPECIFICATIONS CONTINUED...

### Phantom Power

48 VDC to all mic channels simultaneously

### AC Power Requirements

Power Consumption	30 watts (Onyx8) 40 watts (Onyx12) 45 watts (Onyx16) 55 watts (Onyx24)
Universal AC Power Supply	100 – 240 VAC, 50 – 60 Hz
Power Connector	3-Pin IEC Line Cord

### Physical Properties (product)

<b>Onyx8:</b>	
Height:	4.5 in / 114 mm
Width:	10.5 in / 267 mm
Depth:	11.0 in / 279 mm
Weight:	7.1 lb / 3.2 kg
<b>Onyx12:</b>	
Height:	5.4 in / 137 mm
Width:	14.8 in / 376 mm
Depth:	14.0 in / 356 mm
Weight:	13.0 lb / 5.9 kg
<b>Onyx16:</b>	
Height:	5.4 in / 137 mm
Width:	18.7 in / 475 mm
Depth:	14.0 in / 356 mm
Weight:	15.6 lb / 7.1 kg
<b>Onyx24:</b>	
Height:	5.4 in / 137 mm
Width:	25.2 in / 640 mm
Depth:	14.0 in / 356 mm
Weight:	20.3 lb / 9.2 kg

### Physical Properties (packaged product)

<b>Onyx8:</b>	
Height:	7.4 in / 188 mm
Width:	14.9 in / 378 mm
Depth:	15.2 in / 386 mm
Weight:	10.2 lb / 4.6 kg
<b>Onyx12:</b>	
Height:	9.0 in / 229 mm
Width:	20.0 in / 508 mm
Depth:	19.1 in / 485 mm
Weight:	17.4 lb / 7.9 kg
<b>Onyx16:</b>	
Height:	9.0 in / 229 mm
Width:	23.9 in / 607 mm
Depth:	19.1 in / 485 mm
Weight:	20.5 lb / 9.3 kg
<b>Onyx24:</b>	
Height:	12.2 in / 310 mm
Width:	31.0 in / 787 mm
Depth:	21.6 in / 549 mm
Weight:	28.0 lb / 12.7 kg
<b>Options</b>	
Onyx8 Carry Bag	P/N 2052461-08
Onyx12 Carry Bag	P/N 2052461-12
Onyx12 Dust Cover	P/N 2052462-12
Onyx12 Rack Ear Kit	P/N 2052504
Onyx16 Carry Bag	P/N 2052461-16
Onyx16 Dust Cover	P/N 2052462-16
Onyx16 Rack Ear Kit	P/N 2052505
Onyx24 Dust Cover	P/N 2052462-24

## ONYX SPECIFICATIONS CONTINUED...

### Ordering Information

**Onyx8 8-Channel Premium Analog Mixer with Multi-Track USB**

P/N 2051990-00 (US)
P/N 2051990-01 (EU)
P/N 2051990-03 (UK)
P/N 2051990-05 (CN)
P/N 2051990-06 (BZ -120V)
P/N 2051990-08 (KR)

**Onyx12 12-Channel Premium Analog Mixer with Multi-Track USB**

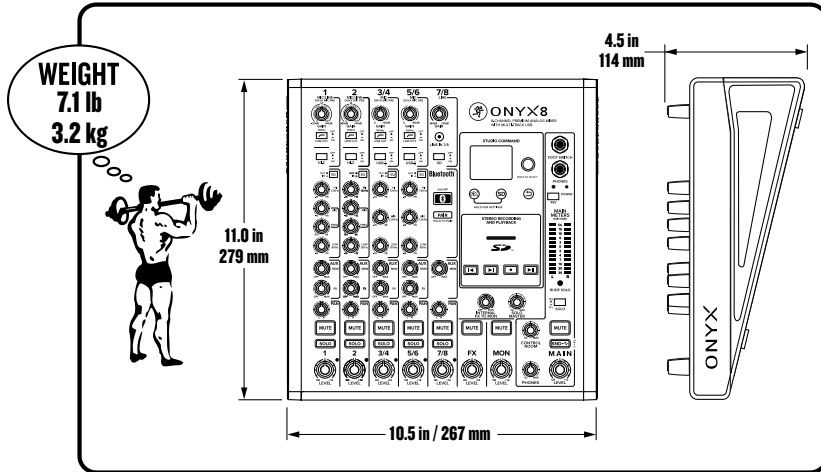
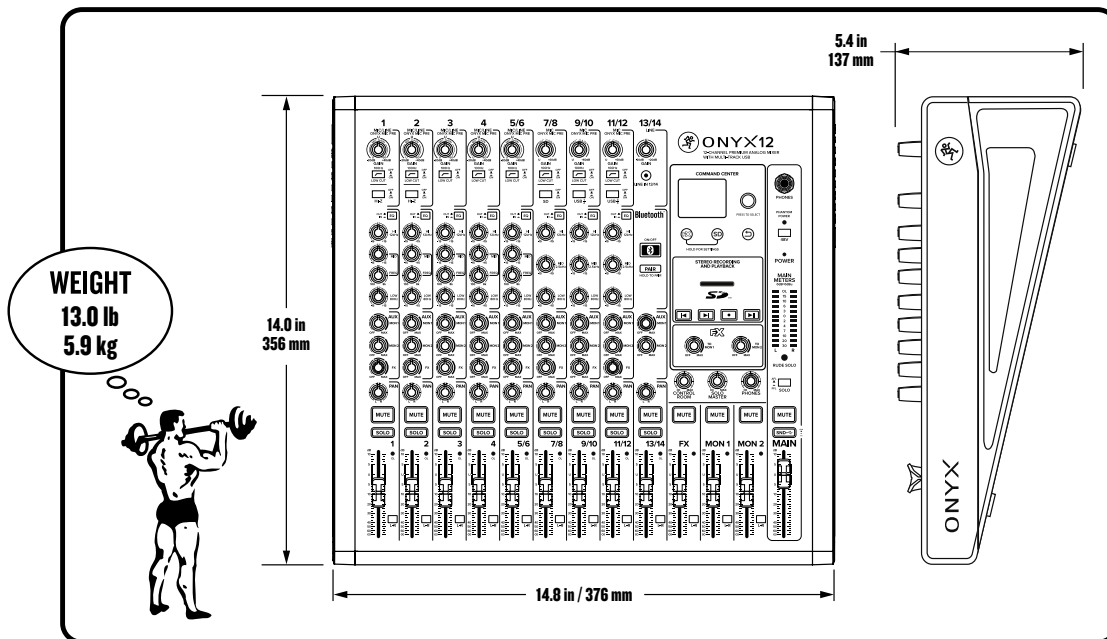
P/N 2051991-00 (US)
P/N 2051991-01 (EU)
P/N 2051991-03 (UK)
P/N 2051991-05 (CN)
P/N 2051991-06 (BZ -120V)
P/N 2051991-08 (KR)

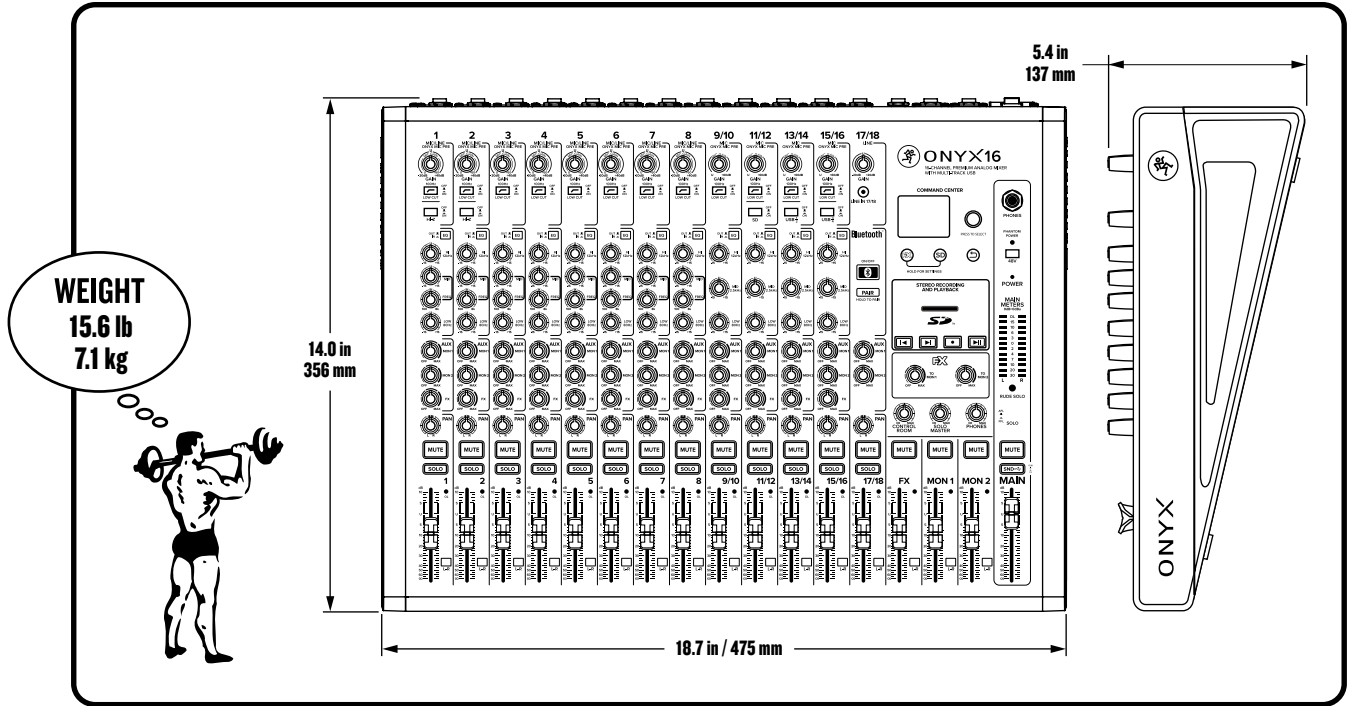
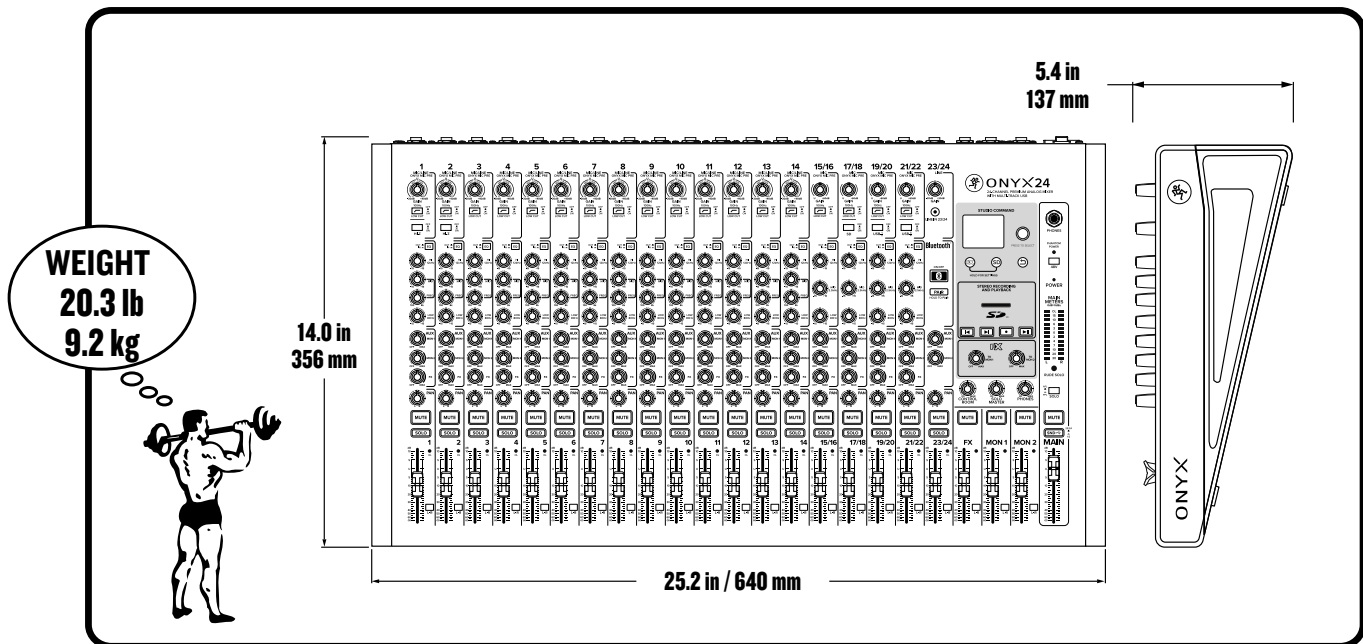
**Onyx16 16-Channel Premium Analog Mixer with Multi-Track USB**

P/N 2051992-00 (US)
P/N 2051992-01 (EU)
P/N 2051992-03 (UK)
P/N 2051992-05 (CN)
P/N 2051992-06 (BZ -120V)
P/N 2051992-08 (KR)

**Onyx24 24-Channel Premium Analog Mixer with Multi-Track USB**

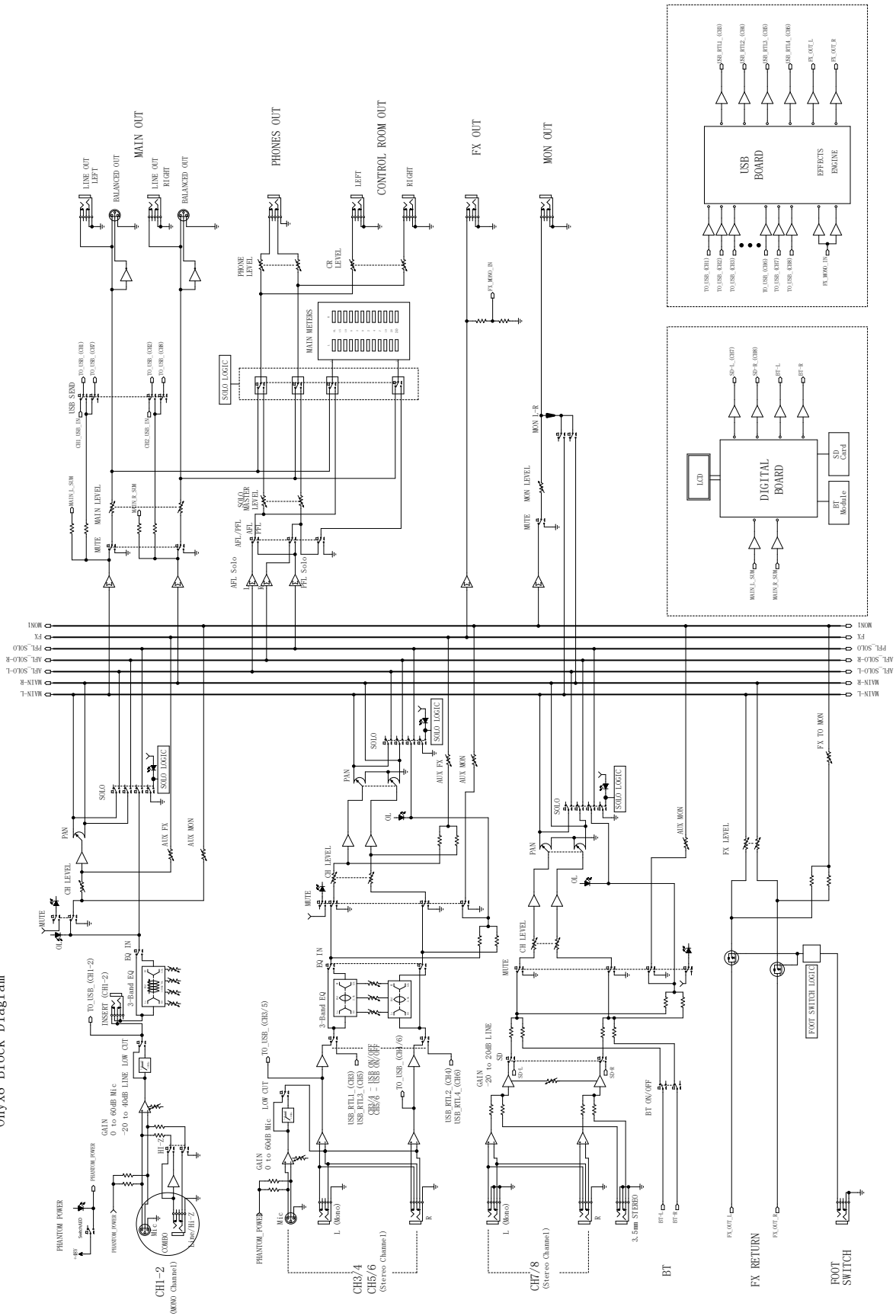
P/N 2051993-00 (US)
P/N 2051993-01 (EU)
P/N 2051993-03 (UK)
P/N 2051993-05 (CN)
P/N 2051993-06 (BZ -120V)
P/N 2051993-08 (KR)

**ONYX8 DIMENSIONS**

**ONYX12 DIMENSIONS**


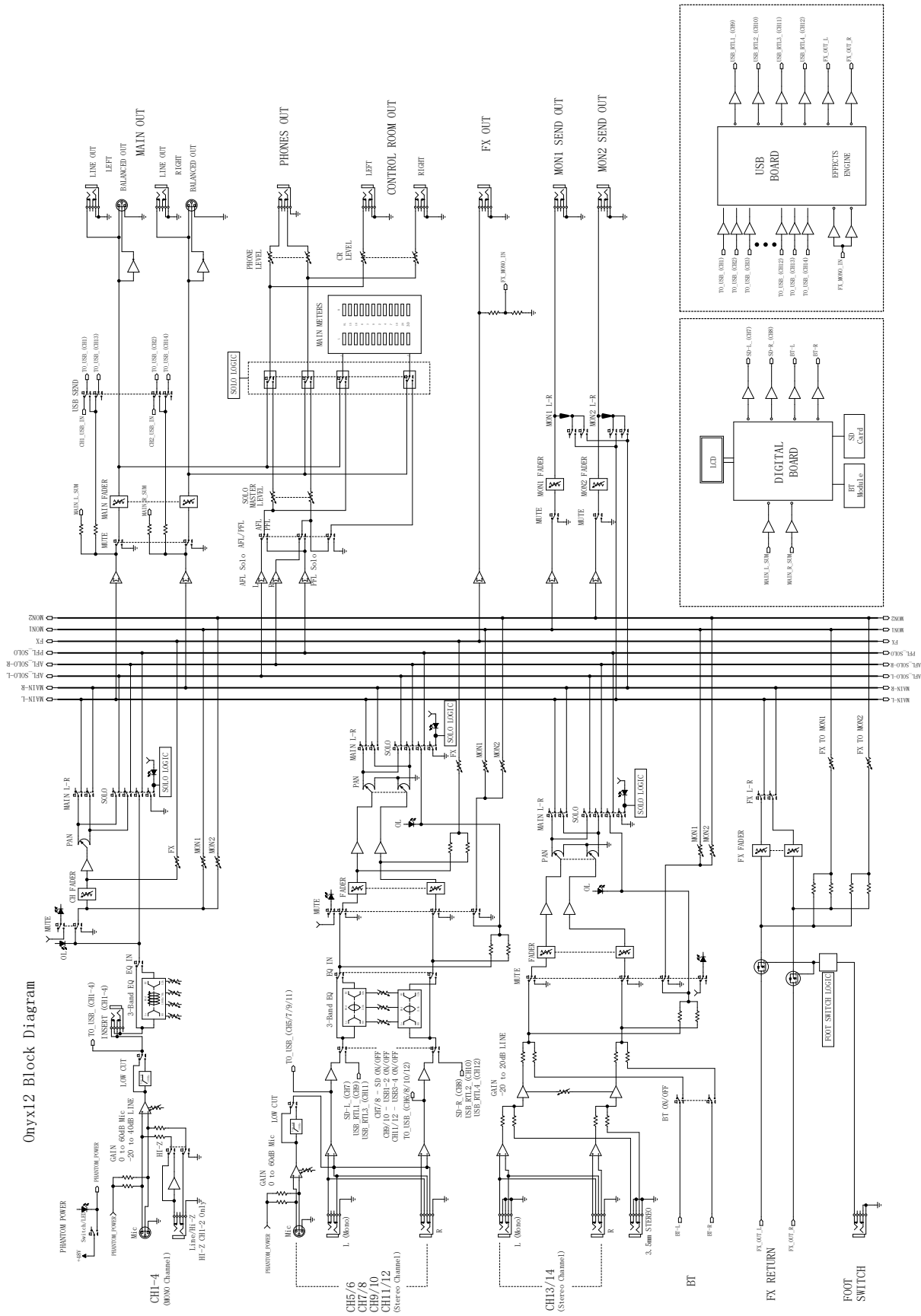
**ONYX16 DIMENSIONS**

**ONYX24 DIMENSIONS**


## ONYX8 BLOCK DIAGRAM

Onyx8 Block Diagram



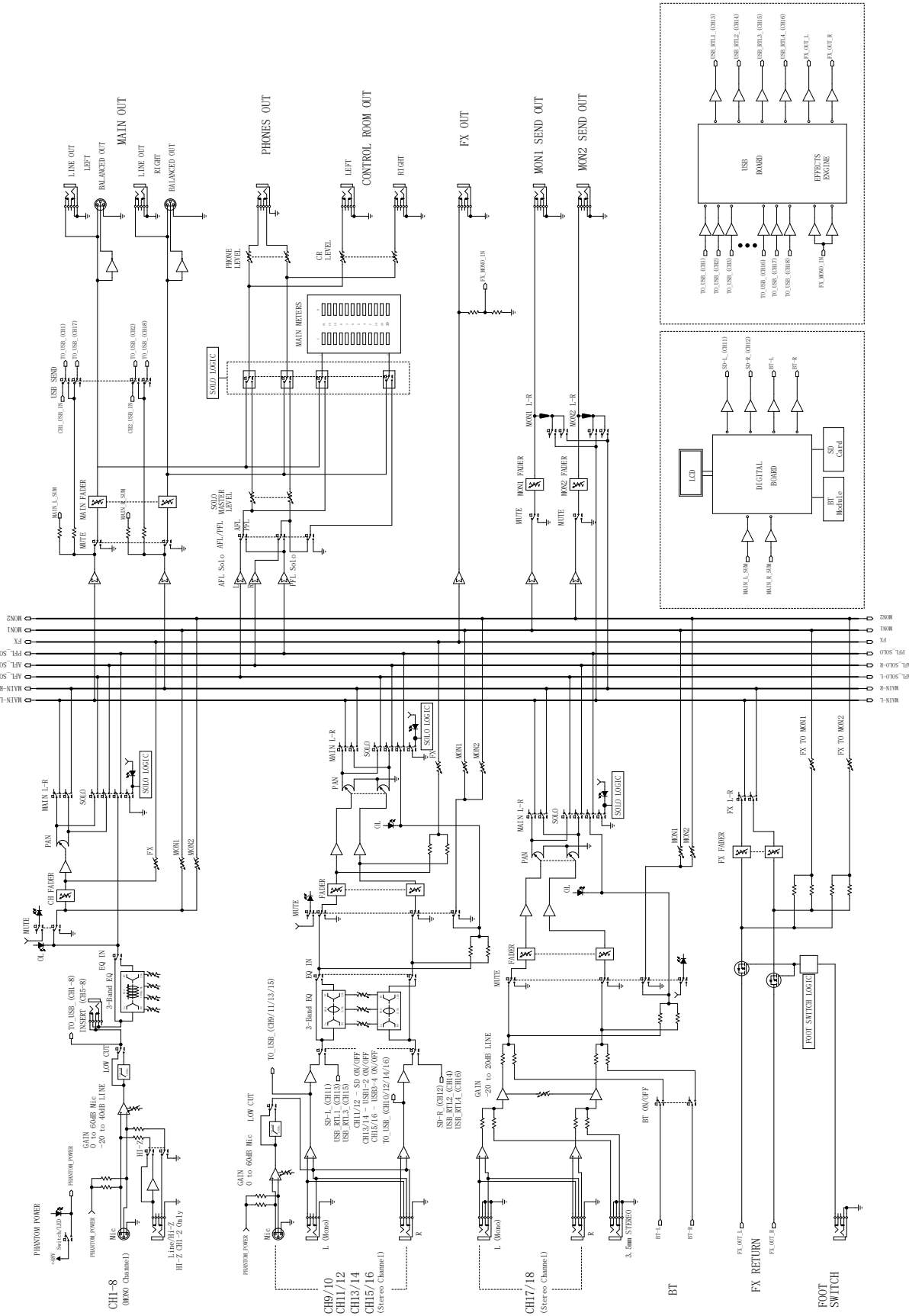
# ONYX12 BLOCK DIAGRAM



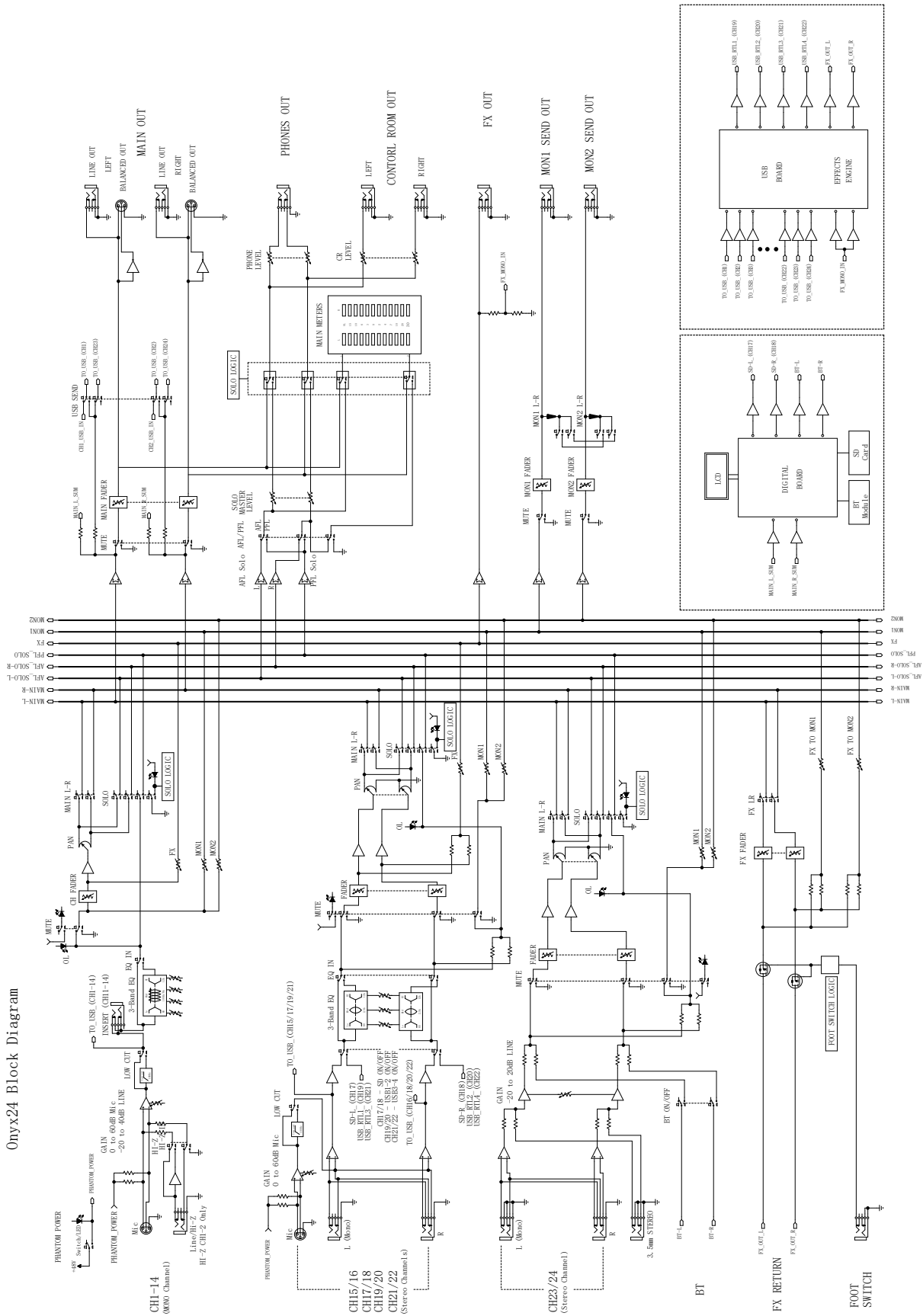


## ONYX16 BLOCK DIAGRAM

Onyx16 Block Diagram



## ONYX24 BLOCK DIAGRAM





www.mackie.com  
19820 North Creek Parkway #201  
Bothell, WA 98011 USA  
800-898-3211, Fax 425-487-4337

Part No. SW1303 Rev. B 04/21



Electronic files for this product are available at:  
[www.mackie.com](http://www.mackie.com)

Specification Sheet	Onyx_Series_SS.PDF
Owner's Manual	Onyx_Series_OM.PDF

LOUD Audio, LLC. is always striving to improve our products by incorporating new and improved materials, components, and manufacturing methods. Therefore, we reserve the right to change these specifications at any time without notice.

“Mackie” and the “Running Man” figure are registered trademarks of LOUD Audio, LLC. All other brands mentioned are trademarks or registered trademarks of their respective holders, and are hereby acknowledged.