SOUND LIKE YOU MEAN IT®

AXIS

Digital Mixing System

The Mackie AXIS™ Digital Mixing System delivers unmatched speed, visibility and customization for professional production and install.

With full Dante® integration, the modular AXIS system combines the power of the 32-channel DL32R™ digital mixer and innovative DC16™ control surface to deliver a live sound solution with stunning workflow efficiency.

Large, high-resolution screens provide class-leading readability and the unique SmartBridge™ intelligently handles up to three iPad® devices. AXIS delivers unparalleled visual feedback and customization that results in dramatically faster workflow.

Complete with flexible 32×32 recording and a wide selection of powerful DSP, the AXIS system delivers a forward-thinking, modular digital mixing solution with more features per price than any other digital mixer available.

AXIS DIGITAL MIXING SYSTEM:

- 32-Channel Digital Mixing System for professional production and install
- Flexible modular system with unmatched speed, visibility and customization
  - DL32R – Powerful 3U rackmount digital mixer
  - DC16 – Innovative, workflow-driven control surface
- Intelligent surface-to-wireless mixing via SmartBridge™ and Master Fader iOS control app
- Flexible 32×32 recording/playback
- Complete Dante® interoperability

DL32R DIGITAL MIXER:

- 32 mic/line inputs featuring low-noise, recallable Onyx+™ mic preamps
- 18 fully-assignable outputs with flexible I/O routing
  - 14 balanced XLR line outputs
  - Stereo AES digital output
  - Stereo TRS monitor outputs
- Wide Selection of Powerful DSP
  - 36 input channels with 4-band PEQ + HPF, gate, compression and RTA/spectrograph
  - 32 stereo-linkable input channels
  - 4 stereo-linkable return channels*
  - 28 output busses with 4-band PEQ + HPF/LPF, 31-band GEQ, comp/limiter, alignment delay and RTA/spectrograph
    - 14 stereo-linkable aux sends
    - 6 stereo-linkable matrix busses
    - 6 stereo-linkable subgroups*
    - Main L/R busses
  - 6 VCAs and 6 mute groups
  - 3 stereo FX processors with dedicated sends and returns
  - Full I/O routing with A/B sources per channel
  - 32×32 routing of any signal on/off a Dante network
  - Assignable oscillator including pink/white noise and sine waves
  - Modern and Vintage options per processor
- Flexible Multi-Track Recording and Playback
  - 32×32 recording/playback direct to USB 2.0 HDD
  - 32×32 USB 2.0 audio interface for Mac and PC
  - Simultaneous recording using included Dante Virtual Sound Card
- Compact 3U rackmount design perfect for install or portable applications
- Personal monitor mixing using up to 20 iPad®, iPhone® or iPod touch® devices

DC16 CONTROL SURFACE:

- Dedicated Dante-connected control surface for the AXIS system
  - 17 full channel strips with Alps® 100mm motorized touch-sensitive faders and per channel encoders
  - Dedicated selected channel section with controls for fast access to important parameters
  - Mix selector and view groups deliver innovative navigation without preset banks
  - Ergonomic layout with generous working space for easy access to all controls
- Unmatched Visual Feedback
  - Large, full-color backlit channel ID screens with class-leading readability
  - Flexible channel labeling including name, color and icon
  - 6-segment LED channel meters and 3-segement GR meters per channel
  - Dedicated show display with snapshot control
- Surface to Wireless Mixing via SmartBridge™
  - Automatically senses presence of up to three iPad devices and changes Master Fader operation to deliver tight integration and customized functionality
  - Central iPad follows dedicated hardware controls for selected channel
  - Unique history and fixed display iPad modes provide flexible workflow options
  - Control up to four channels simultaneously from control surface and iPad devices
  - Grab any iPad and go for instant wireless mixing from anywhere in the venue
  - Wired recording and playback to central iPad
  - Built-in charging for all three iPad devices
  - Dedicated Wi-Fi router connection point
- Tough Professional Hardware
  - All-steel chassis with aluminum front and back extrusions
  - Low profile, compact design fits seamlessly into any workspace
- Additional I/O For Your Axis System
  - 4×4 Dante via dual locking etherCON
  - XLR talkback input
  - 1/8" stereo input
  - Control room/phones outputs

MASTER FADER CONTROL APP:

- Complete control over the AXIS system
- Intuitive design with proven workflow that's easy to master, easy to teach
- Quick setup with large library of factory and user-definable presets
- Access Limiting allows flexible customization of each device, preventing unwanted adjustments
- Export presets, shows and complete system backups via Dropbox, email and more using iOS system sharing
- Complete offline operation allows system creation with just an iPad
- Pocketable control from iPhone and iPod touch
- Easy and frequent updates via App Store

* Wi-Fi router and iPad required.
Wi-Fi router, iPad, iPhone and/or iPod touch not included.
Return channels and subgroups feature PEQ and compression.

See Supported Devices on page 4 for complete compatibility information.

iPad, iPhone and iPod touch are registered trademarks of Apple Inc., registered in the U.S. and other countries

DL32R SPECIFICATIONS

General Digital

Sample Rate:	48 kHz
A/D/A Bit Depth:	24-bit
DL32R System Latency: Analog Input > Main Bus > Analog Output	1.5 ms
0 dBFS Reference:	+22 dBu

Frequency Response

All inputs to all outputs:	±0, –1 dB, 20 Hz to 20 kHz

Distortion (THD)

Mic input to main output, 1 kHz, –1 dBFS:	<0.005%

Noise / Dynamic Range / Signal-to-Noise Ratio

Equivalent Input Noise (EIN) 150 Ω termination:	–128 dBu
Crosstalk Analog XLR input-input:	<–105 dB @ 1 kHz (min. gain) <–80 dB @ 1 kHz (max. gain)
Analog XLR / TRS output-output:	<–100 dB @ 1 kHz
Signal-to-Noise Ratio (A-weighted) (ref +4 dBu, one channel and main fader at unity):	92 dB
Output Noise (A-weighted) Muted Output:	–90 dBu
Dynamic Range (A-weighted) Analog Input to Analog Output (One channel and main fader at unity):	109 dB
Analog Input (Unity gain, to analog clipping, –60 dBFS signal):	111 dB
Analog Output (To analog clipping, –60 dBFS signal):	111 dB
CMRR:	>70 dB @ 1 kHz (60 dB gain)

Analog Inputs 1–32

Connectors 1–24: 25–32:	 XLR Balanced Combo XLR / TRS Balanced
XLR Mic Pre:	Onyx+
Input Impedance 1–24: 25–32:	 3 kΩ 3 kΩ mic [XLR] 30 kΩ line [1/4"]
Max Input Level XLR: 1/4":	 +21 dBu +30 dBu
Gain [digitally controlled analog] XLR: 1/4":	 0 to 60 dB [3 dB steps] –20 to 40 dB [3 dB steps]
48V Phantom Power (XLR):	48 VDC, 10 mA max per mic, with up to 16 simultaneously. 5 mA max per mic, with up to 32 simultaneously. Individual digital controller per channel

Analog Outputs 1–14

Connectors:	XLR Balanced
Output Impedance:	600 Ω
Max Output Level:	+21 dBu

Analog Monitor Outputs L/R

Connectors:	1/4" TRS Impedance Balanced [Supports balanced / unbalanced operation]
Output Impedance:	240 Ω Balanced, 120 Ω Unbalanced
Max Output Level:	+21 dBu

Analog Headphone Out

Connector:	1/4" TRS Stereo
Max Output Level:	+18 dBu into 600 Ω +19.5 dBu max into 100 kΩ

AES Output

Format:	AES3 Professional, 48 kHz, 24-bit stereo
Connector:	XLR Balanced
Output Impedance:	110 Ω

DL32R / DANTE SPECIFICATIONS CONTINUED

USB – Streaming[1]

Connection:	USB 2.0 High Speed (as a device)
Connector:	USB-B
Supported MS Windows [Driver installation required]:	Windows 7, 8, 10
Supported Mac OS [Audio Class 2.0 Compliant, no driver required]:	OS X 10.8.4, 10.9, 10.10, 10.11
Audio:	32 in / 32 out, 48 kHz, 16-bit / 24-bit

USB – HDD Recording / Playback[1]

Connection:	USB 2.0 High Speed (as a host)
Connector:	USB-A
Audio:	1-32 channel, 48 kHz, 16-bit / 24-bit (multichannel .wav)
Supported Devices:	USB 2.0 / 3.0 Class Compliant HDD
HDD Format:	FAT32
Bus Power:	5V, 1A max

Dante

Dante Ports:	2x Ethercon Gigabit Ethernet
Control Port:	1x RJ45 Gigabit Ethernet Wi-Fi
Sample Rate:	48 kHz
Bit Depth:	24-bit
Transmit / Receive Channels:	32 / 32
Supports Dante Redundant and Switch modes	
Configuration via Dante Controller	

[1] Streaming and HDD Record / Playback are not available simultaneously.

Supported Devices

iOS Version Requirement: For optimal performance, we suggest using the latest iOS version [iOS 8.0 minimum]

iPad Version Requirement
Wireless: All iPad models (except the original iPad), Future iPad devices[2]

iPhone / iPod touch Version Requirement
Wireless: iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone 5s, iPhone 6, iPhone 6s, iPhone 6 Plus, iPhone 6s Plus, iPod touch (5th generation), Future iPhone and iPod touch devices[2]

Control Application:	Mackie Master Fader App[3]
Simultaneous Control:	20 iOS Devices

DSP

36 input channels with 4-band PEQ + HPF, gate and compression

- 32 stereo-linkable input channels
- 4 stereo-linkable return channels (PEQ and compression only)

28 output busses with 4-band PEQ + HPF/LPF, 31-band GEQ, comp/limiter, alignment delay and RTA

- 14 stereo-linkable aux sends
- 6 stereo-linkable matrix busses
- 6 stereo-linkable subgroups (PEQ and compression only)
- Main L/R busses

6 VCAs and 6 mute groups

3 stereo FX processors (2 reverb, 1 delay) with dedicated sends and returns

Full I/O routing with A/B sources per channel

Assignable oscillator including pink/white noise and sine waves

Modern and Vintage options per processor

Power

Power Requirements:	100 VAC – 240 VAC, 50 – 60 Hz, Universal Supply
Power Consumption:	100 watts max
Line Cord:	User-replaceable IEC
Operating Temperature [extended ambient temperature]:	0 – 40 °C 32 – 104 °F

[2] This assumes, of course, that future iOS devices do not communicate via infrared, radiation, television, sparklers, hoagies, frickin' laser beams, or some other crazy, fandangled new contraption. Even then, we'll still give it the 'ol college try. After all, we do have sharks at the ready.

[3] https://itunes.apple.com/us/app/mackie-master-fader-4/id1051811529?mt=8

DC16 SPECIFICATIONS

General Digital

Sample Rate:	48 kHz
A/D/A Bit Depth:	24-bit
0 dBFS Reference:	+22 dBu

Frequency Response

All inputs and all outputs:	±0, –1 dB, 20 Hz to 20 kHz

Stereo Input

Connector:	1/8" Unbalanced
Input Impedance:	10 kΩ
Max Input Level:	+16 dBu

Talkback Mic

Connector:	XLR Balanced
XLR Mic Pre:	Onyx
Input Impedance:	3 kΩ
Max Input Level:	+21 dBu
Gain:	0 – 60 dB

Analog Monitor Outputs L/R

Connectors:	1/4" TRS Impedance Balanced [Supports balanced / unbalanced operation]
Output Impedance:	240 Ω Balanced, 120 Ω Unbalanced
Max Output Level:	+21 dBu

Analog Headphone Out

Connector:	1/4" TRS Stereo
Max Output Level:	+18 dBu into 600 Ω +19.5 dBu max into 100 kΩ

DC16 IPad Connectivity

Connection:	USB-A for Lightning iPads
Connectors:	1x USB-A (Control, audio and charging) 2x USB-A (Charging only)
Control:	Full Control
Audio:	Digital streaming, 2 in / 2 out

Networking

Connection:	1x RJ45 Gigabit Ethernet

Dante

Connection:	2x etherCon Gigabit Ethernet
Sample Rate:	48 kHz
Bit Depth:	24-bit
Transmit / Receive Channels:	4 / 4
Supports Dante Switch modes	
Configuration via Dante Controller	

Supported Devices

iOS Version Requirement:	For optimal performance, we suggest using the latest iOS version [iOS 8.0 minimum]
iPad Version Requirement	
Wired:	iPad (4th generation), iPad mini, iPad mini 2, iPad mini 3, iPad Air, iPad Air 2, Future iPad devices[4]
Control Application:	Mackie Master Fader App Requires Master Fader V4.5[5]

Power

Power Consumption:	102 watts
External Supply	
Power Requirements:	100 VAC – 240 VAC, 50 – 60 Hz Universal Supply
Output Voltage:	12 VDC
Current:	8.5A
Connector:	Locking Multi-Pin Connector
Line Cord:	User-replaceable IEC
Operating Temperature [extended ambient temperature]:	0 – 40 °C 32 – 104 °F

[4] This assumes, of course, that future iOS devices do not communicate via infrared, radiation, television, sparklers, hoagies, frickin' laser beams, or some other crazy, fandangled new contraption. Even then, we'll still give it the 'ol college try. After all, we do have sharks at the ready.

[5] https://itunes.apple.com/us/app/mackie-master-fader-4/id1051811529?mt=8

DIMENSIONS AND ORDERING INFORMATION

Physical Properties (packaged product)

DL32R

Height:	8.8 in / 224 mm
Width:	21.2 in / 538 mm
Depth:	21.0 in / 533 mm
Weight:	23.0 lb / 10.4 kg

Dante

Height:	2.9 in / 74 mm
Width:	5.9 in / 150 mm
Depth:	7.3 in / 185 mm
Weight:	1.0 lb / 0.5 kg

DCI6

Height:	7.4 in / 188 mm
Width:	40.5 in / 1028 mm
Depth:	21.2 in / 538 mm
Weight:	42 lb / 19 kg

Physical Properties (product)

DL32R

Height:	5.4 in / 138 mm
Width:	19.0 in / 483 mm
Depth:	17.5 in / 443 mm
Weight:	18.0 lb / 8.2 kg
Rack:	3U Rack Spaces

Dante

Height:	1.7 in / 44 mm
Width:	5.8 in / 147 mm
Depth:	4.8 in / 122 mm
Weight:	1.0 lb / 0.5 kg

DCI6

Height:	3.3 in / 84 mm
Width:	36.8 in / 935 mm
Depth:	17.6 in / 447 mm
Weight:	38 lb / 17 kg

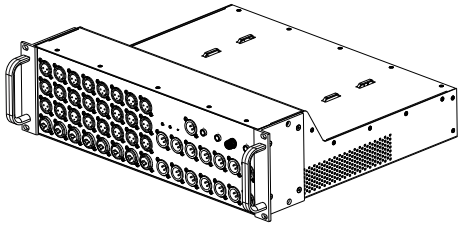
Ordering Information

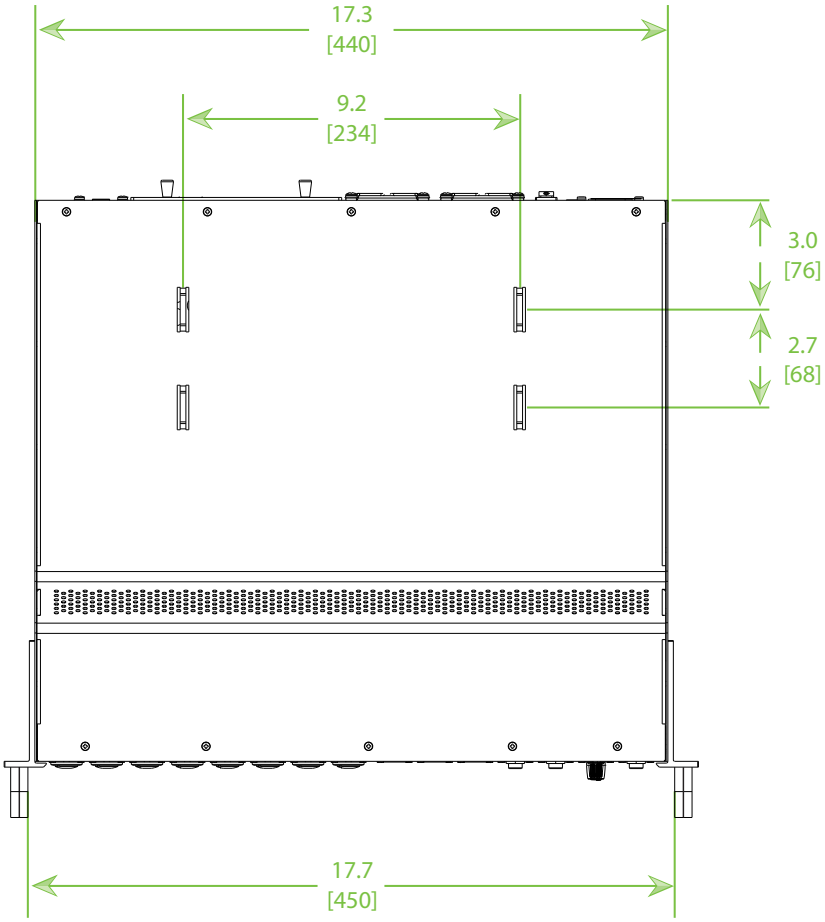
DL32R 32-channel Wireless Digital Mixer with Master Fader iPad Control:	
~110V US	P/N 2042086-00
~230V EU	P/N 2042086-01
~230V UK	P/N 2042086-03
~240V AU	P/N 2042086-04
~230V CN	P/N 2042086-05
~120V BZ	P/N 2042086-06
Dante Expansion Card:	P/N 204290I
DCI6 16-Fader Control Surface for Mackie DL32R:	
~110V US	P/N 2044170-00
~230V EU	P/N 2044170-01
~230V UK	P/N 2044170-03
~240V AU	P/N 2044170-04
~230V CN	P/N 2044170-05
~120V BZ	P/N 2044170-06

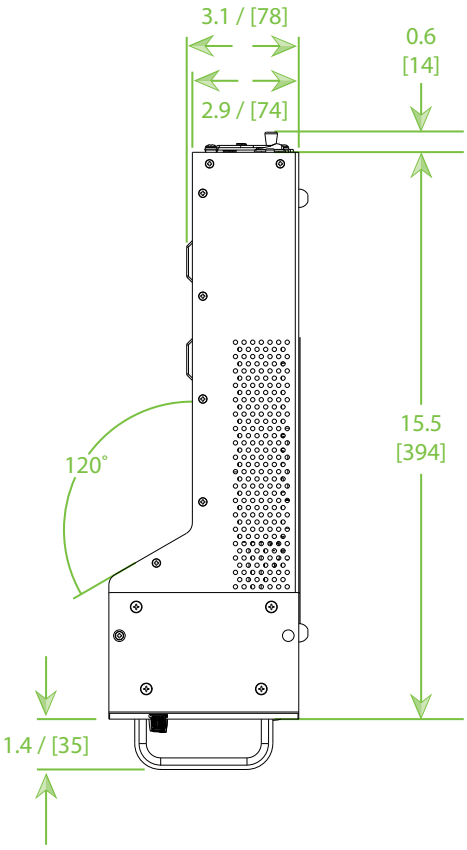
Accessories

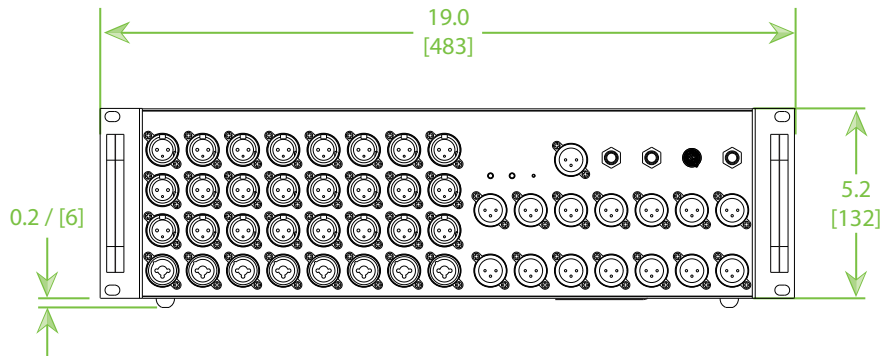
DCI6 Road Case:	P/N 2044370
DCI6 Cover:	P/N 2036849-42
80m Cat5e Reel:	P/N 2043430-080
DL32R Install Rackmount Kit:	P/N 2042160

DL32R DIMENSIONS







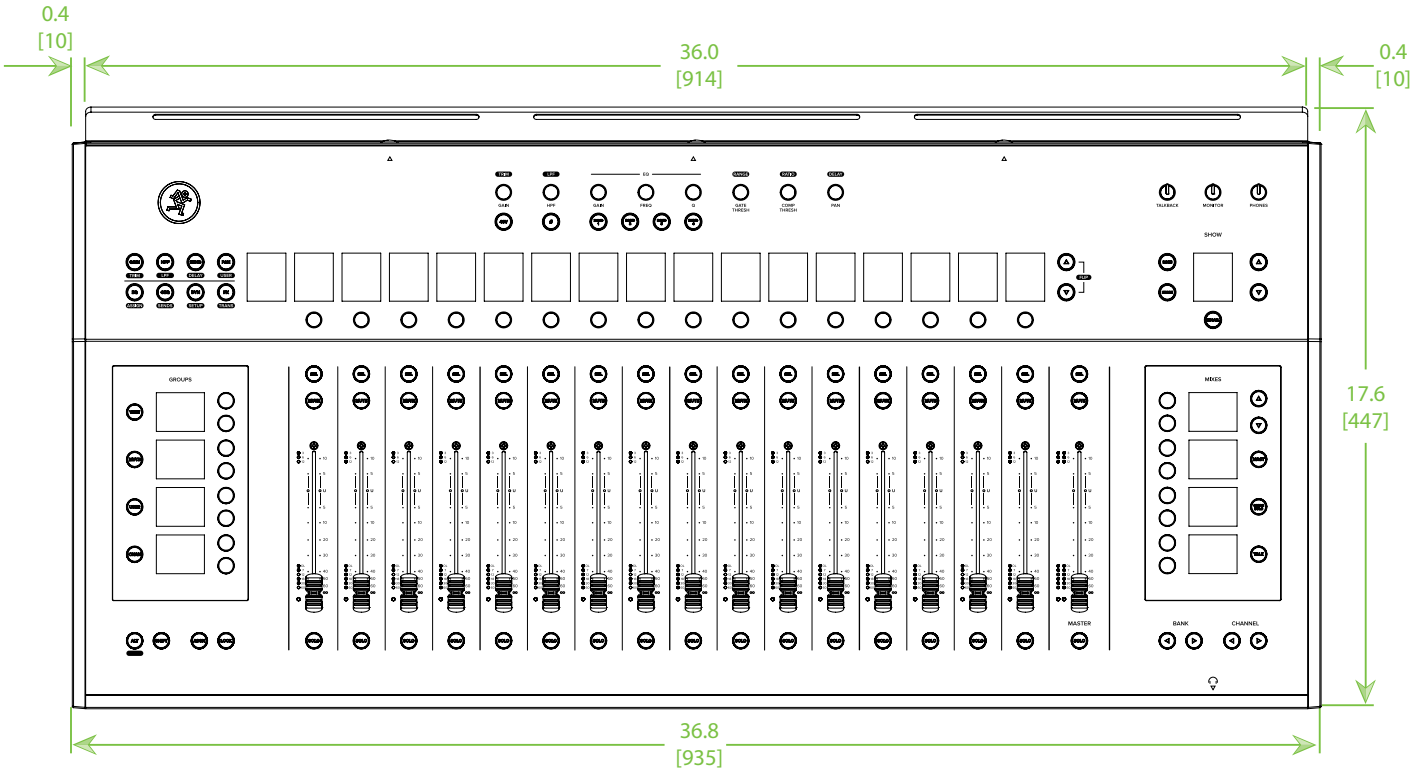


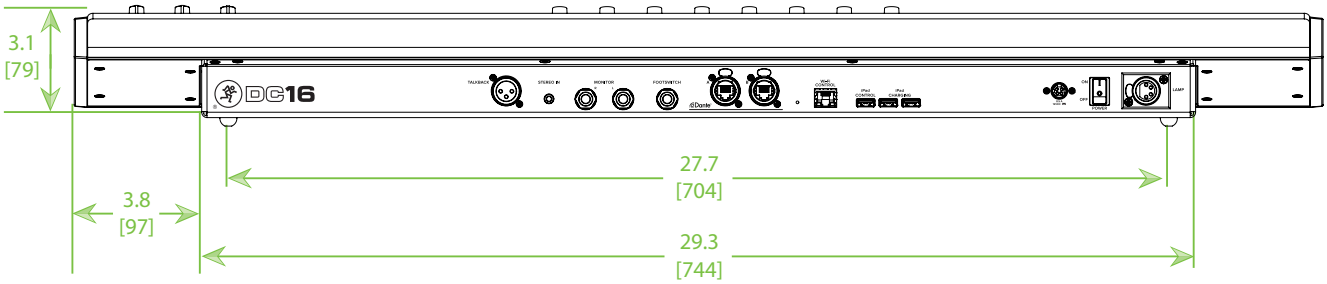
NOTES:

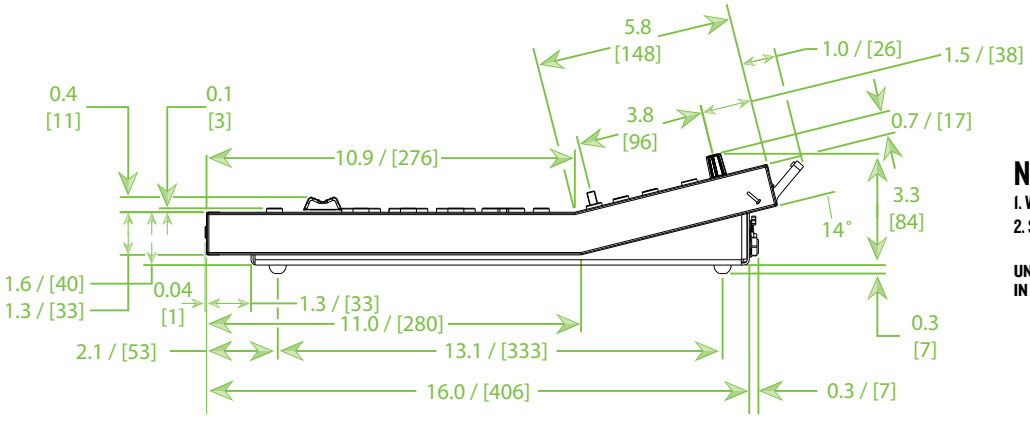
1. WEIGHT APPROX. 18.0 lb [8.2 kg].
2. SHIPPING WEIGHT APPROX. 23.0 lb [10.4 kg].

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

DC16 DIMENSIONS





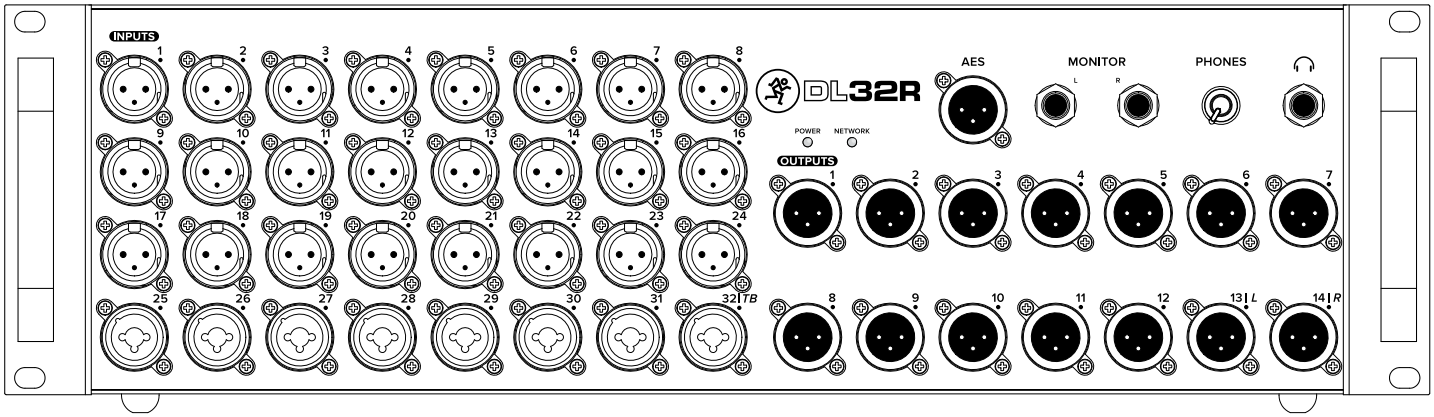


NOTES:

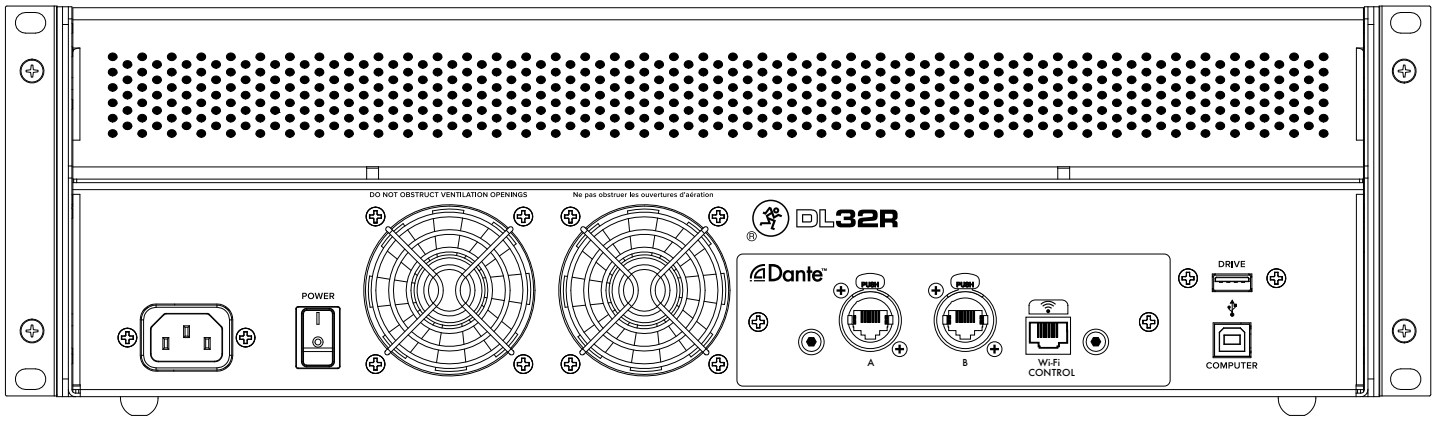
1. WEIGHT APPROX. 38.0 lb [17 kg].
2. SHIPPING WEIGHT APPROX. 42.0 lb [19 kg].

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

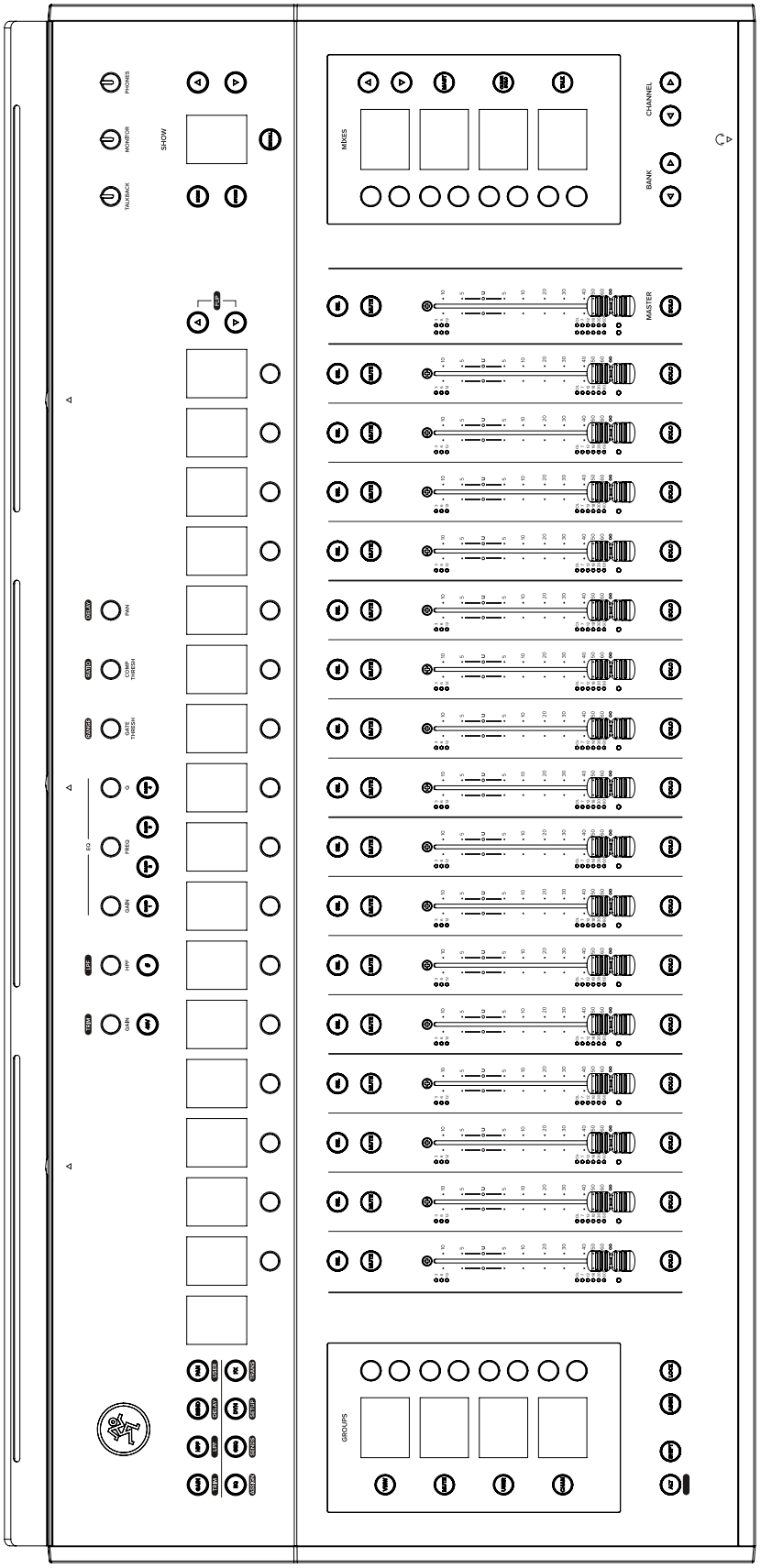
FRONT PANEL



REAR PANEL



TOP PANEL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MONITOR
TALKBACK
SHOW
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HPF
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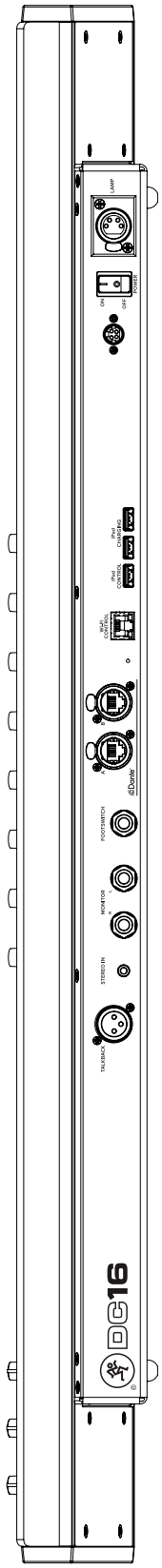
GROUPS

REAR PANEL



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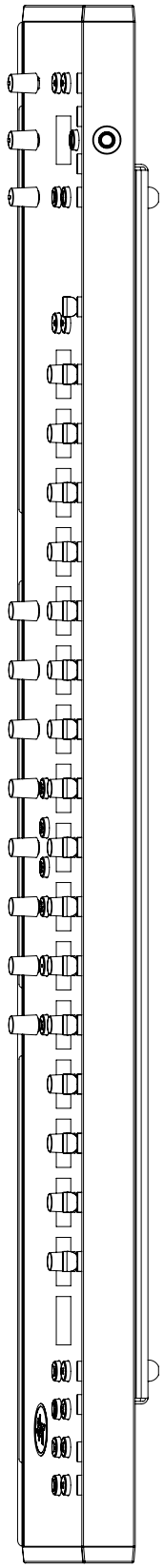
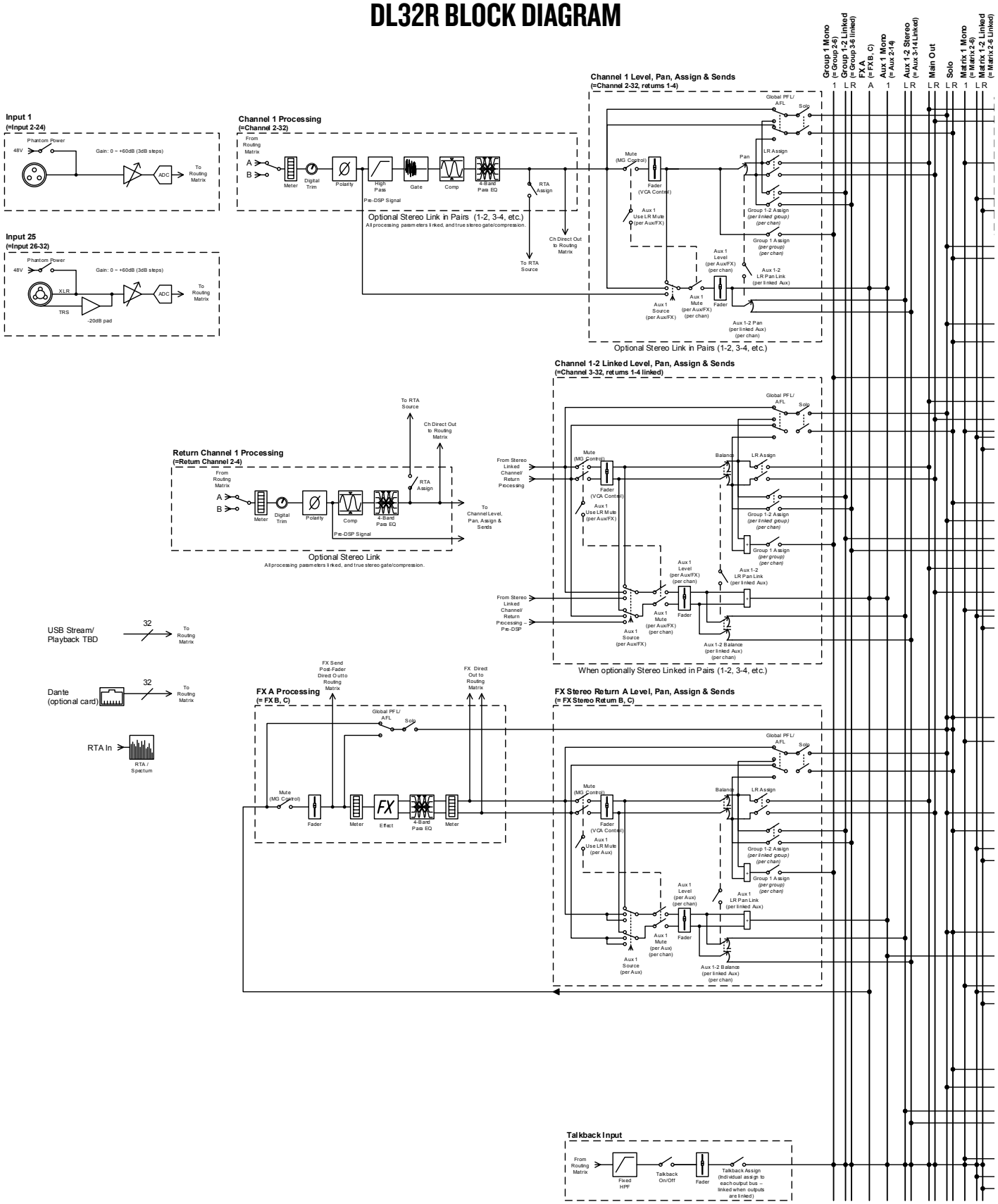
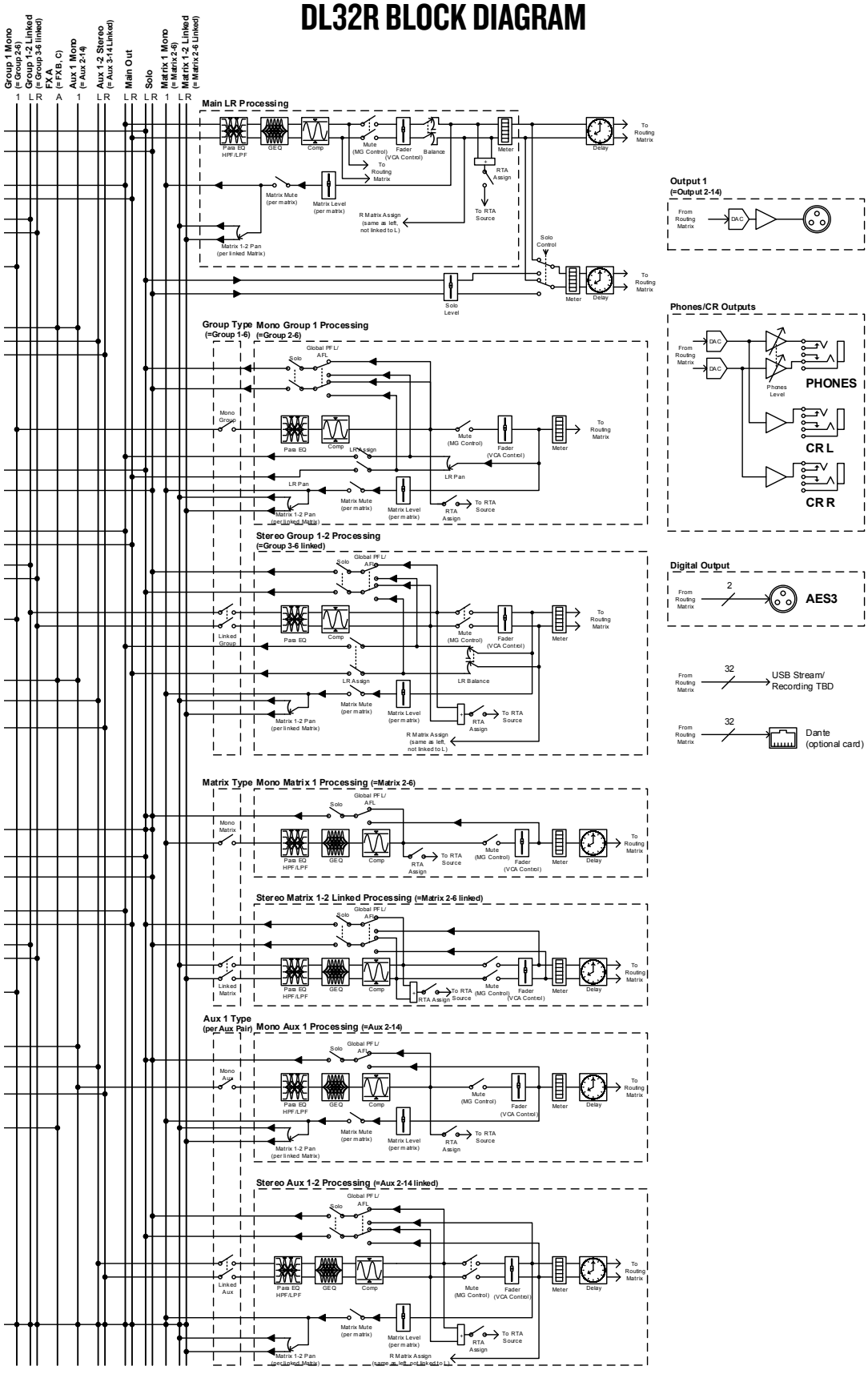


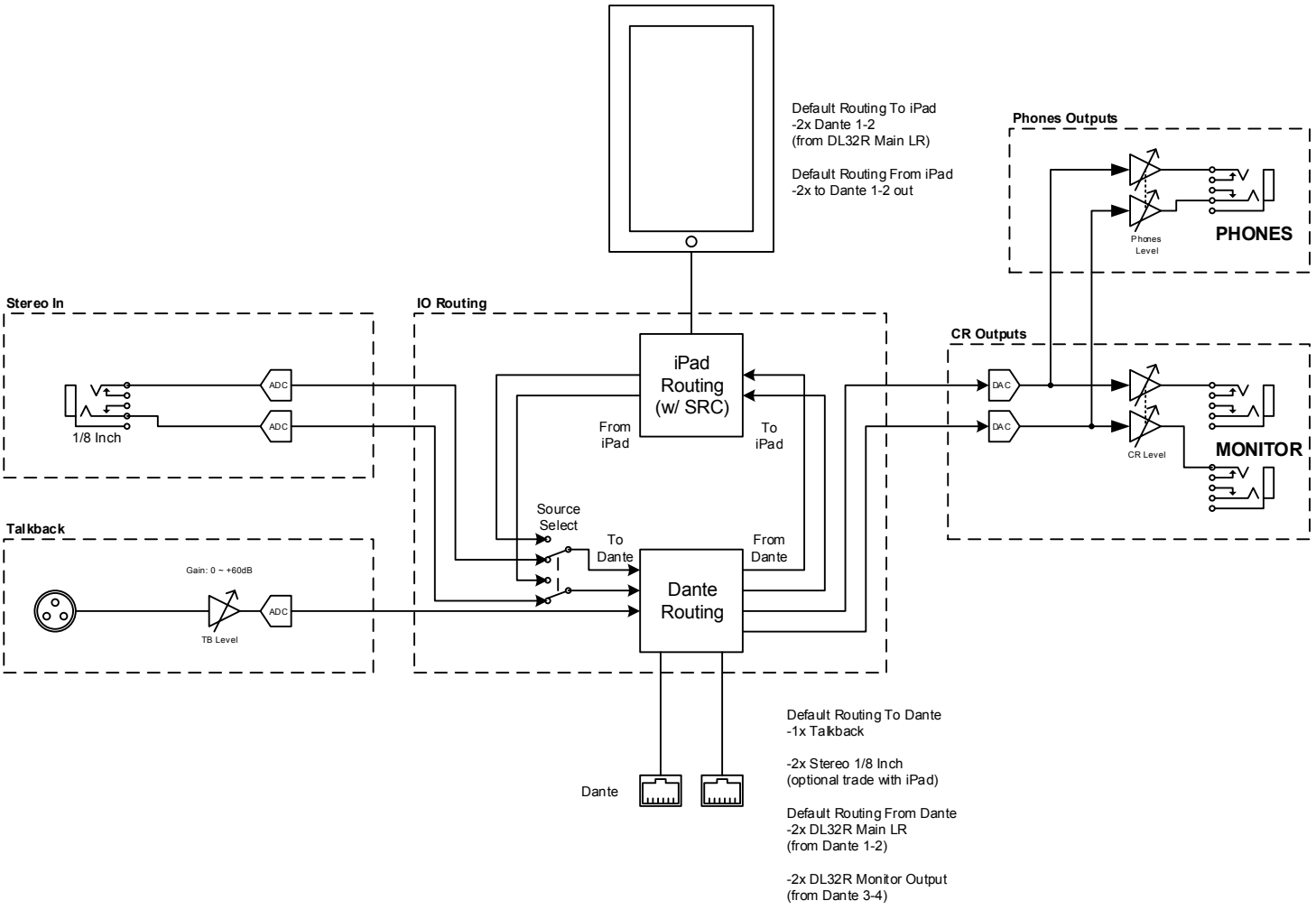
DL32R BLOCK DIAGRAM



DL32R BLOCK DIAGRAM



DC16 BLOCK DIAGRAM



Electronic files for these products are available at: www.mackie.com

Specification Sheets	AXIS_SS.PDF DL32R_SS.PDF DANTE_SS.PDF
Owner's Manuals	DL32R_OM.PDF DCI6_OM.PDF
Mackie Master Fader Reference Guide	MASTER FADER_RG.PDF

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LOUD Technologies Inc. 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.

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