



# DIGITAL MIXING SYSTEM



**ALLEN & HEATH**

## ACCESSIBLE, FLEXIBLE, DIGITAL



**GLD inherits the key benefits of our iLive pro touring system** and makes them affordable for the kinds of hardworking rental companies, houses of worship and live venues that have used and loved our GL series analogue mixers for many years.

GLD is more than a mixer—it's a complete digital mixing system. Our dSNAKE Cat5 digital multicore together with our plug 'n' play audio racks and expanders make it simple and affordable to build the system as your needs grow. Networking cards let you link GLD systems, make multi-track recordings or connect with other equipment. An Aviom™ compatible Monitor port allows connection to personal monitoring systems.

Analogue veterans, digital converts and novices alike will feel at home with GLD, thanks to a balance of WYSIWYG analogue-style controls and intuitive touchscreen interface. The layout and appearance of the GLD-80 can be customised quickly and easily, providing an interface that logically mirrors your application and puts the operator at their ease.

As you would expect from Allen & Heath, GLD delivers outstanding audio performance, with a new high-end mic preamp, low latency and the DSP muscle to provide full processing without compromise. GLD-80's FX engines are taken directly from the iLive system and feature beautifully crafted emulations of industry classics.

Finally, a system that delivers all the benefits of digital mixing at the price of an analogue mixer—and that's before you think about all the outboard gear it replaces.

# CORE FEATURES

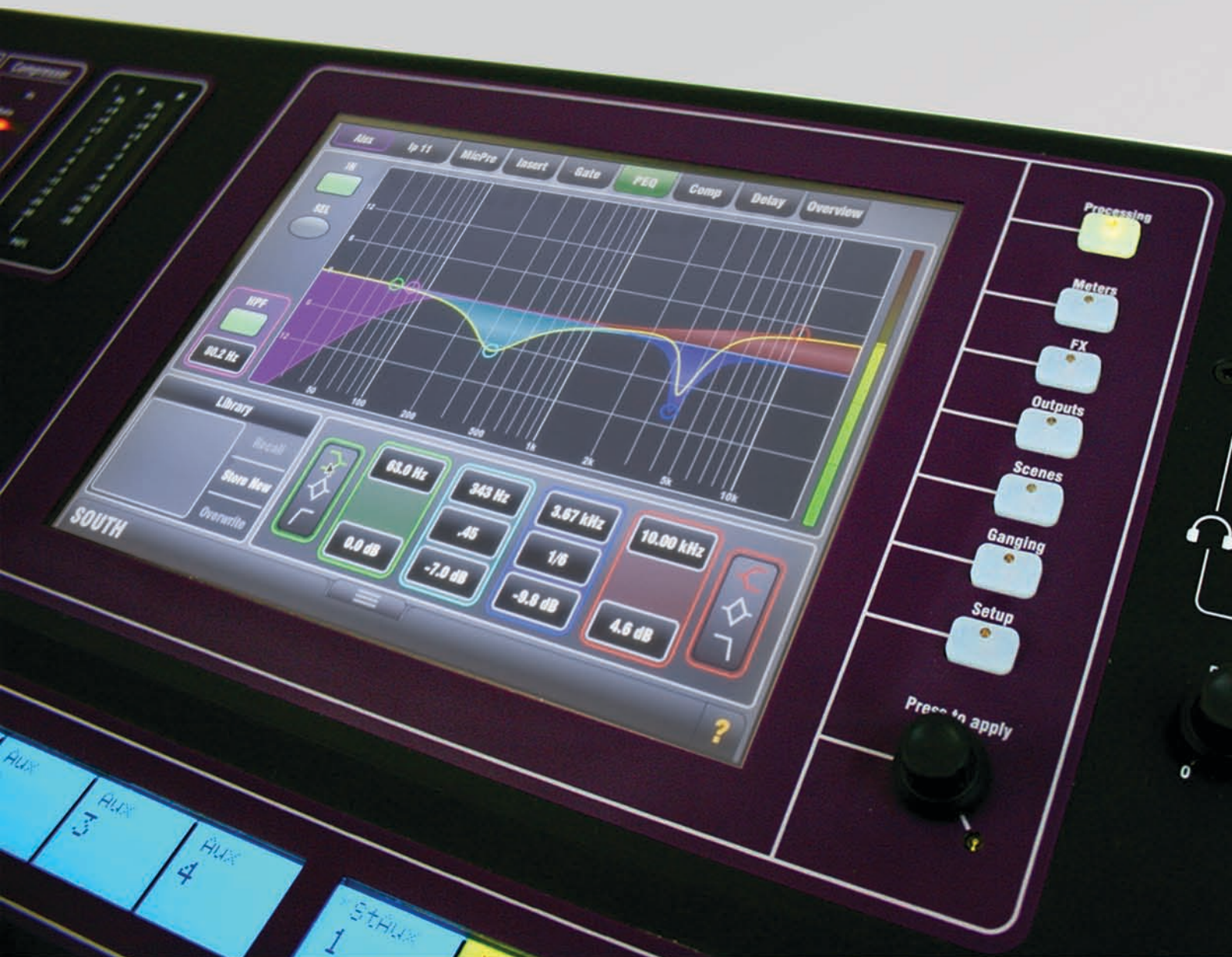
- Compact digital mixer with scalable, remote I/O
- Systems from 4 to 44 mics
- Easy to use, quick to access, analogue style interface
- dSNAKE Cat5 digital snake—up to 120m cable length
- 8.4 inch colour touchscreen for graphical view and setup
- 20 faders, 4 layers, 80 channel strips in a freely customizable layout
- 48 input channels into 30 assignable buses (Aux, Group, Matrix, Main, FX Send) into 20 mix outputs
- 8 stereo RackFX engines with dedicated 'short' returns with 4-band PEQ
- Full processing on all inputs including trim, polarity, HPF, insert, gate, 4-band PEQ, compressor and delay
- Full processing on all outputs including insert, PEQ, GEQ, compressor and delay
- LR, None (monitors), LR+M (sum), LR+M (bus), LCR main mix modes
- 16 DCAs / mute groups
- Built-in Talkback, RTA and Signal Generator
- I/O module options for FOH/Monitor split, multitrack recording, link to iLive and more
- MIDI In/Out and Ethernet Network port
- Aviom™ compliant Monitor port on main AudioRack
- High end 1dB step recallable mic/line preamps
- User definable channel names and colours
- Engineer's mono Wedge and stereo IEM strips
- Input, output and insert soft patchbays
- Quick copy, paste and reset of mixes and parameters
- Libraries, Scenes and Show memories with USB transfer
- Get started quickly with Template Shows



# ULTIMATE USER EXPERIENCE

## Touchscreen

GLD-80 features a colour touchscreen with on-screen keyboard and dedicated data encoder for instant and intuitive access to all key functions and parameters. The user friendly interface has been designed from scratch with simplicity in mind:



## Analogue style processing strip

GLD-80 puts essential controls like Preamp, HPF, Gate, Parametric EQ and Compressor right at your fingertips. Hit the Select key on a channel strip and the processing strip becomes the controls for that input or mix, with clear visual displays of current settings and dedicated, analogue style controls.



## Customizable surface layout

20 faders arranged in 4 layers means you get access to 80 independent channel strips. Not only can you design your own mixer by arranging them across the surface, but each one comes with a write-on display where custom names and colours for easy identification are coupled with information relevant to the current mix mode.

Assign strips to Inputs, FX, Mix masters, DCAs or engineer's Wedge/IEM.

Quickly control gains, pan and two custom parameters such as aux or FX sends with the fader strip rotary encoders.

Manage your mix with 2 buttons. Access all the processing for each strip with Sel and Mix parameters/contributions.



Drag 'n' drop channels to customize the surface strip layout.

Tap on a socket to patch an input or output channel

# GLD-80 THE HEART OF THE SYSTEM

Quickly access preamp gain and Pad, HPF frequency, gate threshold, frequency, gain and bandwidth for each PEQ band, compressor threshold, ratio and gain

Each strip contains coloured display, assignable rotary encoder, 5 LED bar meter, Mute, Select, Mix and PAFL switches, and 100mm motorised fader

20 faders in 2 banks. Each bank of faders has 4 layers to provide access to lots of channels in a compact space

Copy, Paste or Reset any section of channel processing, a whole channel or mix



USB 2 track playback, recording, data transfer, archiving and firmware update

Dedicated, assignable Talkback button

10 user-assignable SoftKeys for scene recall, DCA mutes, quick Sel or Mix access, tap tempo and much more

'Scene Safe' protects a channel from being overwritten when recalling a scene

'Freeze in Layers' keeps a channel in place regardless of layer selection

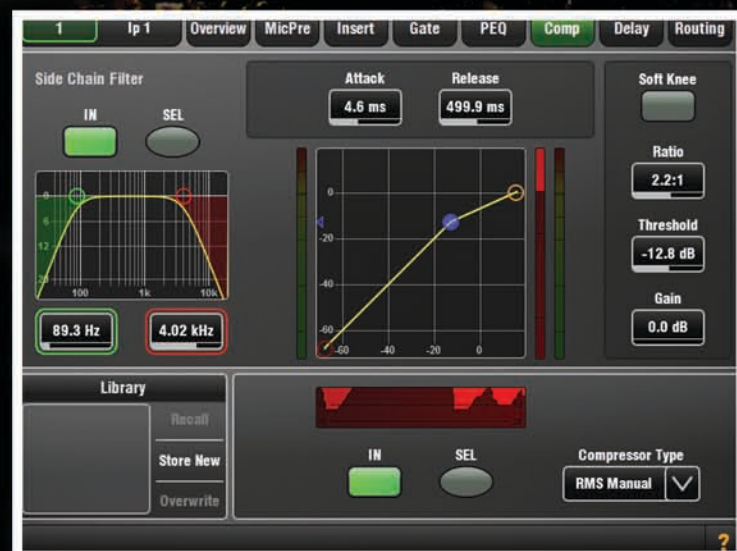
GEQ Fader Flip toggles access to the Graphic EQ on faders

# OUTSTANDING AUDIO QUALITY

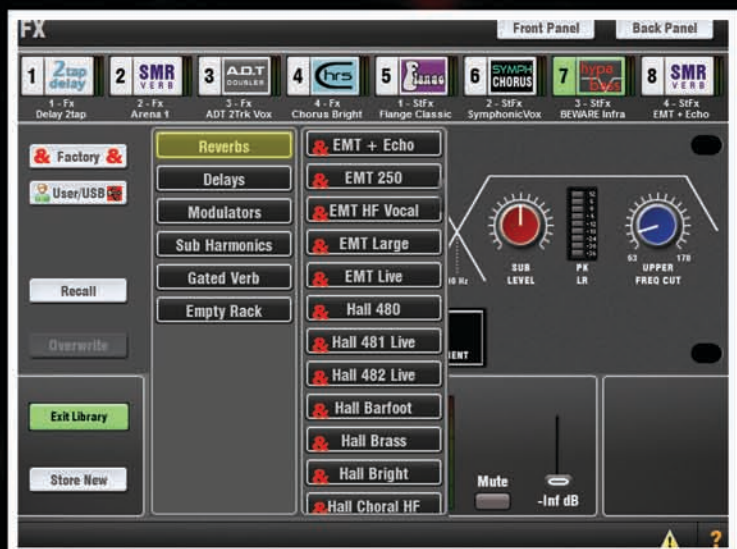
## iLive Heritage

GLD builds on the success of the iLive digital mixing system and delivers the same outstanding audio quality, transparency, low latency and proven reliability.

One of the great strengths directly inherited from iLive is its dynamics and acclaimed suite of FX: 8 stereo RackFX engines with the additional, dedicated channels and buses to handle them all without compromise. GLD is capable, for example, of simultaneously running up to 56 sources, 20 mix outputs, 6 mono FX and 2 stereo FX to the mix.



Try out various compressor styles and pick your favourite algorithm for each channel.



Choose from a library of emulations of classic industry devices, and enjoy the very same FX sound that has toured the globe with Adele and many others.

## Classic FX Emulations



## Spatial Modelling Reverberation

Based around 4 complex spatial modes - Classic, Hall, Room, EMT. Each of these models employ different reflection and decay algorithms to provide natural sound spaces.

## 2Tap Delay

Generate separate left and right delay from a mono source, each with its own tempo. These can be linked for mono output. Tap the screen, dial the value or assign tap tempo to SoftKeys for delay from 5ms to 2.7s. Controls let you adjust delay, feedback, filters and width to create a wide range of effects.

## ADT

Create classic automatic double tracking effects, voice thickening, vintage slap back tape delay loop emulation and more. Generate double or quad tracked voices from a mono source with stereo width enhancement and auto panning control.

## Chorus

Recreate the classic analogue chorus effects from the 80's using 3 stereo field emulations which can be combined to create even more variation. Features a built-in sine or rectified LFO modulator and auto panner.

## Flange

3 emulations - subtle airy 'Ambient', classic silky tape-based 'Vintage', and an untameable 'Wild' effect. Classic pedal flangers were researched and their many LFO modulation, regeneration and stereo splitting effects implemented here.

## Hypabass

A sub-harmonic synthesizer classically used in the live environment to generate infra (lower than 35Hz) and sub bass (35-70Hz) from weaker bass programme. It features very low distortion and separate control of these two frequency spectrums.

## Symphonic

A faithful emulation of this simple to use, frequently requested classic 80's chorus. Using just two controls it produces a rich and lively chorus sound with suggestion of mild phasing. Two presets satisfy the popular live sound application - SymphonicVox and SymphonicStrings.



# PLUG & PLAY SYSTEM BUILDING

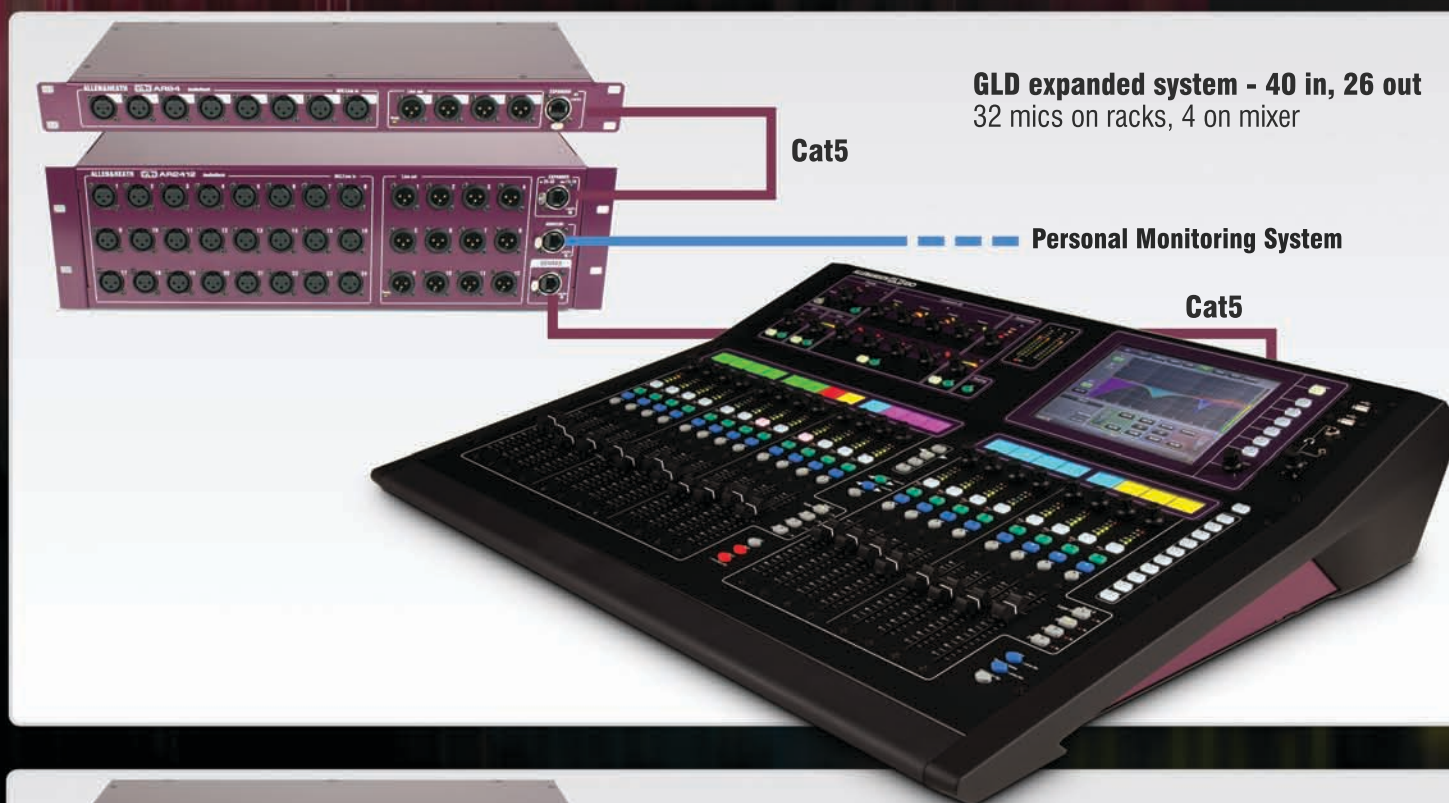
## True plug 'n' play

GLD gives you the freedom to put your I/O where you need it and the flexibility to expand and adapt your system as your needs change. The GLD-80 mixer is the heart of any GLD system. Although GLD-80 is capable of standalone operation, it comes into its own when connected to the main GLD-AR2412 AudioRack and up to two GLD-AR84 expanders. All components in a GLD system are connected over up to 120 metres (over 390ft) of Cat5 cable, so no more bulky, costly copper multicores.

**GLD standard system - 32 in, 22 out**  
24 mics on rack, 4 on mixer



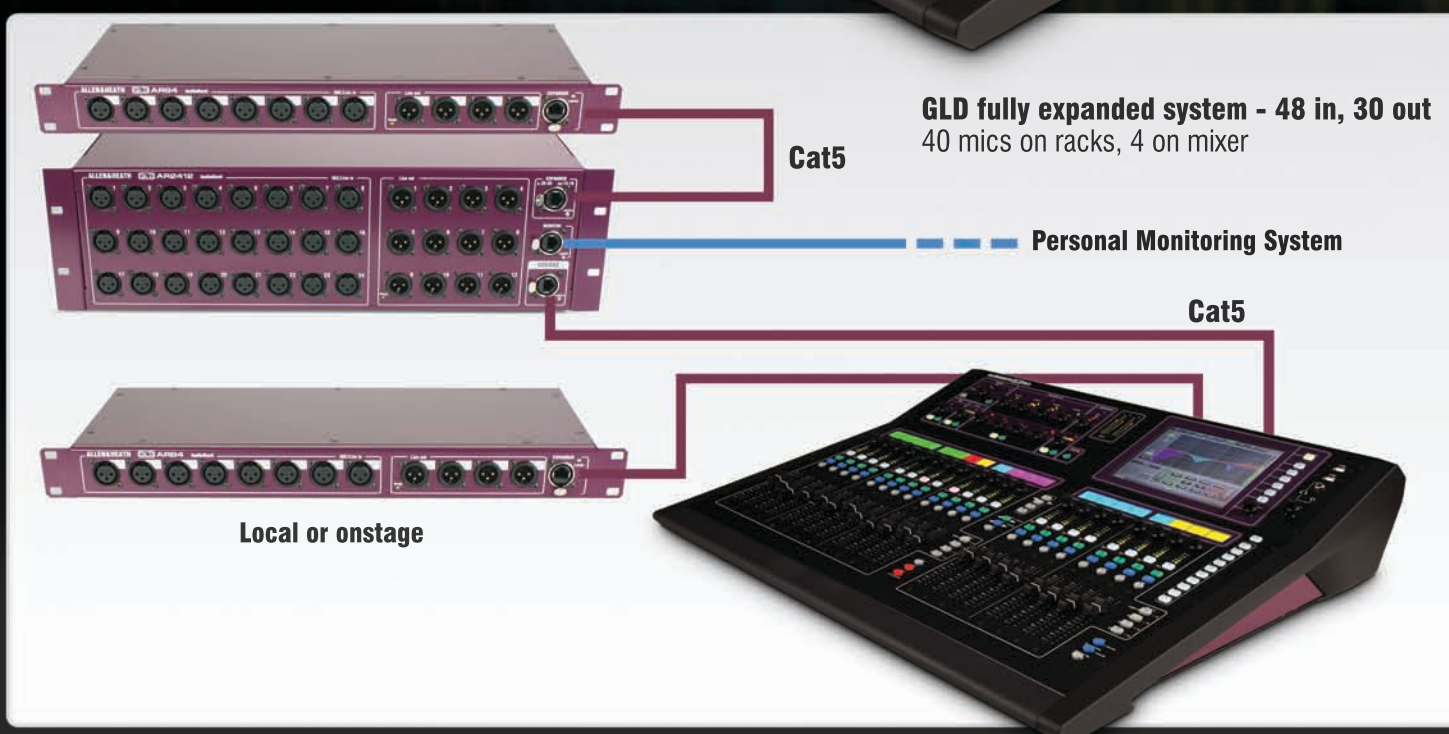
**GLD expanded system - 40 in, 26 out**  
32 mics on racks, 4 on mixer



**GLD compact system - 16 in, 14 out**  
8 mics on rack, 4 on mixer



**GLD fully expanded system - 48 in, 30 out**  
40 mics on racks, 4 on mixer





# EXPANDABLE SYSTEM WITH FLEXIBLE I/O



Ethernet Network connection for future control options

Cat5 dSNAKE port to connect to GLD-AR2412 AudioRack

Expander port to connect an additional GLD-AR84 AudioRack

64 ch. 2 way remote audio port, supports a range of A&H option cards

8 inputs—4 Mic/Line XLR, 2 stereo RCA line inputs

10 outputs—4 XLR, stereo RCA, 1 S/PDIF, 1 AES3

## GLD-AR2412 AudioRack



24 XLR Mic/Line inputs  
12 XLR Line outputs

Cat5 dSNAKE port to connect to GLD-80 Mixer

Monitor port - Aviom™ compatible

Expander port to connect a GLD-AR84 AudioRack

## GLD-AR84 AudioRack



8 XLR Mic/Line inputs  
4 XLR Line outputs



Connects to a GLD-AR2412 on stage or directly to the mixer

# RECORD, PLAY, TRANSFER & ARCHIVE

## Easy to Capture

Nowadays everybody wants a recording of the show. No problem. Capturing a high quality stereo recording with GLD could not be simpler - plug in your USB stick, patch your source and press record.



2 track WAV recording from any source or Mix master

Multi format playback support—patch to any Input channel: WAV, MP3, MP4 (m4a/AAC), FLAC

## Easy to Backup

Use your USB stick to perform firmware updates, archive & transfer Libraries and Shows.

One of the major advantages of going digital is the ability to take a complete snapshot of the mixer with the press of a button. GLD can store all parameters and settings into Scenes and recall them all at will. All the scenes can be wrapped up into a Show so that at the end of the night settings can be saved or archived to USB.

Personalised settings for each processing block, channel or FX can be saved as Library presets, which can be transferred to USB key for backup or use on another GLD system.



# EXPAND, CONNECT, INTEGRATE

## Option Cards

A range of option cards allows GLD systems to be connected using Dante, MADi, EtherSound and more. Multichannel recording and digital split can easily be configured using GLD's extensive soft patching.



## ACE

ACE (Audio & Control over Ethernet) is Allen & Heath's own, cost-effective multichannel protocol. With up to 64 channels to and from another GLD or iLive system, it's ideal for a FOH/Monitor digital split and affordable audio distribution.



## DANTE

Connect to any Dante-enabled device with Audinate's AVB-ready, TCP/IP friendly Dante protocol, and record / playback up to 64 tracks with a Cat5 cable and the Dante Virtual Soundcard (ASIO / Core Audio compatible) - no need for third party interfaces.



## MADI

Industry standard MADI is a frequent choice of equipment interconnection in live, studio and broadcast applications. Connect up to two, 64 channel bidirectional MADI streams with up to 150m of coaxial cable, and set the Aux BNC connector to daisy-chain or split signals to multiple devices.



## WAVES

Hook up a Waves Server for high-precision, ultra low latency plug-in processing, multitrack recording and playback, benefitting from Waves audio-over-Ethernet SoundGrid technology—specifically designed for real-time audio applications.



## EtherSound

A popular low latency industry networking standard supporting 64 channels of bidirectional audio over Cat5 cable, EtherSound can link to a significant number of third party devices available for audio distribution, recording and more.



## MMO

MiniMultiOut gives you a variety of formats for multichannel digital output including 3x ADAT ports (24 channels), Aviom™ (16 channels) and links to Allen & Heath's iDR series or the Hear Back personal monitoring system.



## Inputs

**XLR Mic/Line Inputs**  
Mic/Line Preamp  
Input Sensitivity  
Analogue Gain  
Pad  
Maximum Input Level  
Input Impedance

Balanced, (All XLR on GLD-80 and AudioRacks)  
Fully recalable  
-60 to +15dBu  
+5 to +60dB, ~1dB steps  
-20dB  
+32dBu  
>4K $\Omega$  (Pad out), > 10K $\Omega$  (Pad in)

**Mic/Line Channel noise**  
Mic EIN  
Unity gain (Pad in)  
Low gain (5dB, Pad out)  
Mid gain (30dB, Pad out)

20-20kHz, Direct Out @ unbalanced out  
-127dB with 150 $\Omega$  source  
-90dBu  
-93dBu  
-89dBu

**Mic/Line Channel THD+N**  
Unity gain (Pad in)  
Low gain (5dB, Pad out)  
Mid gain (30dB, Pad out)

20-20kHz, Direct Out @ unbalanced out  
0.005% -86dBu @ 1kHz, 0dBu output  
0.003% -89dBu @ 1kHz, 0dBu output  
0.004% -88dBu @ 1kHz, 0dBu output

**RCA Line Inputs**  
Input Sensitivity  
Trim  
Maximum Input Level  
Input Impedance  
RCA channel Noise  
RCA channel THD+N

Unbalanced (GLD-80)  
-24 to +24dBu, nominal 0dBu  
+/-24dB, recallable  
+18dBu  
>10K $\Omega$   
-92dBu, 20-20kHz  
0.0035% -90dBu @ 1kHz, 0dBu output

## Outputs

**XLR Outputs**  
Output Impedance  
Nominal Output  
Maximum Output Level  
Residual Output Noise

Balanced, Relay protected  
<75 $\Omega$   
+4dBu = 0dB meter reading  
+22dBu  
-91dBu (muted, 20-20kHz)

**RCA Line Outputs**  
Output Impedance  
Nominal Output  
Maximum Output Level  
Residual Output Noise

Balanced, Relay protected  
<75 $\Omega$   
0dBu = 0dB meter reading  
+18dBu  
-94dBu (muted, 20-20kHz)

**Digital Outputs**  
**SPDIF**  
**AES3** 2 ch XLR output

48kHz sampling rate  
RCA, 600mV, coax terminated input 75 $\Omega$   
XLR, 2.5Vpp balanced terminated 110  $\Omega$

## System

Measured balanced XLR in to XLR out, 20-20kHz, minimum Gain, Pad out

Dynamic Range  
System Signal to Noise  
Frequency Response  
System peak level THD+N  
System Line level THD+N

112dB  
-90dB  
0/-0.25dB @ 20Hz, 0/-0.5dB @ 20kHz  
0.0055% -68dBu @ +17dBu output, 1kHz  
0.0022%, -84dBu @ +9dBu output, 1kHz

Headroom  
Internal operating Level  
dBFS Alignment  
Meter Calibration  
Meter Peak Indication  
Meter Type

+18dB  
0dBu  
0dBu = 0dBFS (+22dBu at XLR output)  
0dB meter = -18dBFS (+4dBu at XLR out)  
-3dBFS (+19dBu at XLR out)  
Fast (peak) response

Sampling Rate  
ADC  
24-bit Delta-Sigma  
DAC  
Latency

48kHz +/-100PPM  
24-bit Delta-Sigma  
24-bit Delta-Sigma  
1.49ms (GLD-80 local XLR in to XLR out)  
0.68ms (GLD-80 local XLR in to digital out)

USB Playback  
USB Record

2 channel, WAV, MP3, M4A, FLAC  
2 channel, 44.1kHz / 16bit - WAV

I/O Port  
Card Options

64 channel bi-directional  
A&H ACE, MADI, Dante, ES, Waves, MMO

Operating Temperature Range

0 deg C to 35 deg C (32 deg F to 95 deg F)

## Mains Power

GLD-80  
GLD-AR2412  
GLD-AR84

100-240V AC, 50/60Hz, 95W max  
100-240V AC, 50/60Hz, 70W max  
100-240V AC, 50/60Hz, 20W max

## Dimensions and Weights

**GLD-80 Mixer**  
Unpacked  
Packed in shipping box  
Unpacked weight  
Packed weight

Width x Depth x Height  
730 x 577 x 159mm (28.7" x 22.7" x 6.2")  
930 x 730 x 290mm (36.6" x 28.6" x 11.4")  
16kg (35lbs)  
21kg (46lbs)

**GLD-AR2412 AudioRack**  
Unpacked  
Packed in shipping box  
Unpacked weight  
Packed weight

Width x Depth x Height  
483 x 220 x 137mm (19" x 8.6" x 5.4") 3U rack  
600 x 350 x 250mm (23.6" x 13.7" x 9.8")  
5kg (11lbs)  
6.4kg (14lbs)

**GLD-AR84 AudioRack**  
Unpacked  
Packed in shipping box  
Unpacked weight  
Packed weight

Width x Depth x Height  
483 x 220 x 48mm (19" x 8.6" x 1.9") 1U rack  
600 x 330 x 143mm (23.6" x 12.9" x 5.6")  
3kg (6.6lbs)  
4.4kg (9.7lbs)

## Control

Faders  
Fader Banks  
Touch Screen  
Control Strips  
Strip Display  
Softkeys  
MIDI  
Network

100mm motorised  
2 Independent banks - 12, 8 faders  
8.4" TFT, 800x600 resolution  
4 Layers per Bank = 80x strips  
LCD per strip, assignable backlight colours  
10 assignable  
MIDI In and Out  
TCP/IP Ethernet (for future application)

## Input Processing

48 Input Processing Channels  
**Trim**  
**Polarity**  
**High Pass Filter**

Mono = 1-44, Stereo = 45/46, 47/48  
+/-24dB digital trim  
Normal/Reverse  
12dB/octave 20Hz - 2kHz

**Insert**  
**Delay**

Assign to any sockets, In/Out, +4dBu/-10dBV level  
Up to 85ms  
Input global setting - ms, feet, meters, samples

**Gate**  
Sidechain  
Sidechain Lo-Cut Filter  
Sidechain Hi-Cut Filter  
Threshold  
Depth  
Attack  
Hold  
Release

Input global setting - ms, feet, meters, samples  
Self key, In/Out, Sel 'listen'  
12dB/octave, Freq 20Hz - 5kHz  
12dB/octave, Freq 120Hz - 20kHz  
-72dBu to +12dBu  
0 to 60 dB  
50us to 300ms  
10ms to 5s  
10ms to 1s

**PEQ**  
Type  
Frequency Range  
Analogue Ranges  
Band 1  
Band 2  
Band 3  
Band 4  
Bell Width  
Shelving Type  
Hi-Pass, Lo-Pass Filter

4-Band fully parametric, +/-15dB  
Global setting for Inputs = 20-20kHz or 'Analogue'  
20-200Hz, 35-1kHz, 500-15kHz, 2k-20kHz  
Selectable LF Shelving, Bell, Hi-Pass  
Bell  
Bell  
Non-constant Q, variable, 1.4 to 1/9th octave  
Classic Baxandall  
12dB/octave

**Compressor**  
Sidechain  
Sidechain Lo-Cut Filter  
Sidechain Hi-Cut Filter  
Threshold  
Ratio  
Attack  
Release  
Knee  
Manual Types  
Auto Types

Self key, In/Out, Sel 'listen'  
12dB/octave, Freq 20Hz - 5kHz  
12dB/octave, Freq 120Hz - 20kHz  
-46dBu to 18dBu  
1:1 to infinity  
300us - 300ms  
100ms - 2s  
Soft/Hard  
Peak Manual, RMS Manual  
VocalAuto, OptoAuto, PunchBag  
Individual Trim (per channel)  
Source, follow Fader, follow Mute (global for all)

**Channel Direct Out**  
Options

8x RackFX engine  
Reverbs, Delays, Modulators, Sub-harmonics etc.  
Send>Return, Inserted, Daisy Chain FX

## Mix Processing

20 Mix Processing Channels

**External Input**  
**Trim**  
**Polarity**

Configure as mono/stereo Groups, Aux, Main, Matrix  
Mains = None, LR, LCR, LR+M(bus), LR+M(sum)  
Assignable source  
+/-24dB digital trim  
Normal/Reverse

**Insert**  
**Delay**

Assign to any sockets, In/Out, +4dBu/-10dBV level  
Up to 170ms  
Mix global setting - ms, feet, meters, samples

**GEQ**  
Type  
Gain  
GEQ Fader Flip Mode

Constant 1/3 octave, 28 bands 31Hz -16kHz  
+/-12dB  
2 overlapping frequency banks on strip faders  
layer 1 - 31-1kHz + Mix master fader  
layer 2 - 500-16kHz + Mix master fader  
SEL key resets frequency band to 0dB  
RTA following PAFL is displayed on strip meters

**Compressor**  
Sidechain  
Sidechain Lo-Cut Filter  
Sidechain Hi-Cut Filter  
Threshold  
Ratio  
Attack  
Release  
Knee  
Manual Types  
Auto Types

4-Band fully parametric, +/-15dB  
Global setting for Mixes = 20-20kHz or 'Analogue'  
20-200Hz, 35-1kHz, 500-15kHz, 2k-20kHz  
Selectable LF Shelving, Bell, Hi-Pass  
Bell  
Bell  
Selectable HF Shelving, Bell, Lo-Pass  
Non-constant Q, variable, 1.4 to 1/9th octave  
Classic Baxandall  
12dB/octave

**Compressor**  
Sidechain  
Sidechain Lo-Cut Filter  
Sidechain Hi-Cut Filter  
Threshold  
Ratio  
Attack  
Release  
Knee  
Manual Types  
Auto Types

Self key, In/Out, Sel 'listen'  
12dB/octave, Freq 20Hz - 5kHz  
12dB/octave, Freq 120Hz - 20kHz  
-46dBu to 18dBu  
1:1 to infinity  
300us - 300ms  
100ms - 2s  
Soft/Hard  
Peak Manual, RMS Manual  
VocalAuto, OptoAuto, PunchBag  
filter in/out with sel 'listen'

## FX Processing

**Internal FX**  
Types  
Mode

8x RackFX engine  
Reverbs, Delays, Modulators, Sub-harmonics etc.  
Send>Return, Inserted, Daisy Chain FX

**FX 'Short' Return Channels**  
Controls  
FX Return PEQ

8 Stereo dedicated returns  
Same as Input Channel PEQ

**Talkback**  
High Pass Filter  
Routing

Assignable source  
12dB/octave, 20Hz-2kHz  
To Groups, Aux, Main, Matrix

**Signal Generator**  
Sine, Bandpass sweep  
Controls  
Routing

Sine, White Noise, Pink Noise, Bandpass Noise  
20-20kHz  
Level, Mute  
To Groups, Aux, Main, Matrix

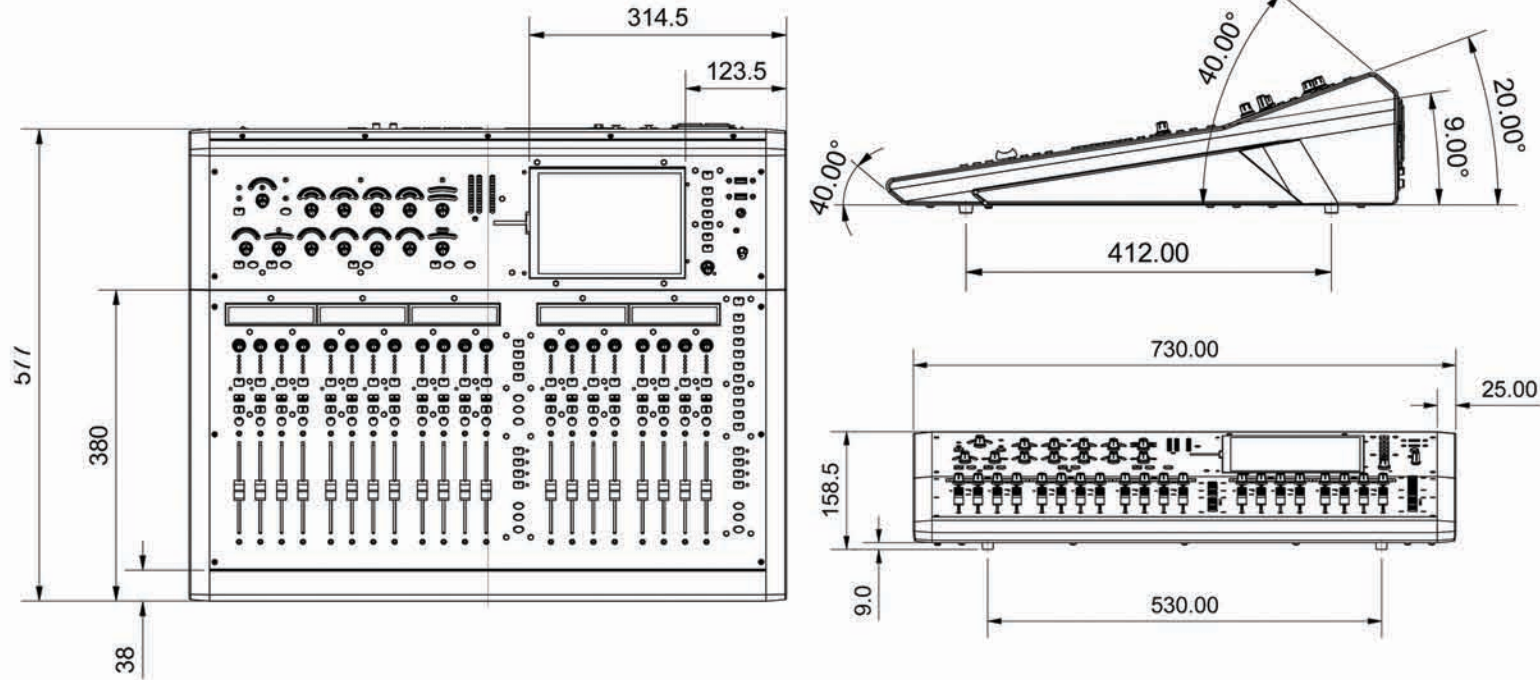
**RTA**  
Source  
Peak Band Indication

31-Bands 1/3 octave 20-20kHz  
Follows selected PAFL source  
Option to display dominant frequency

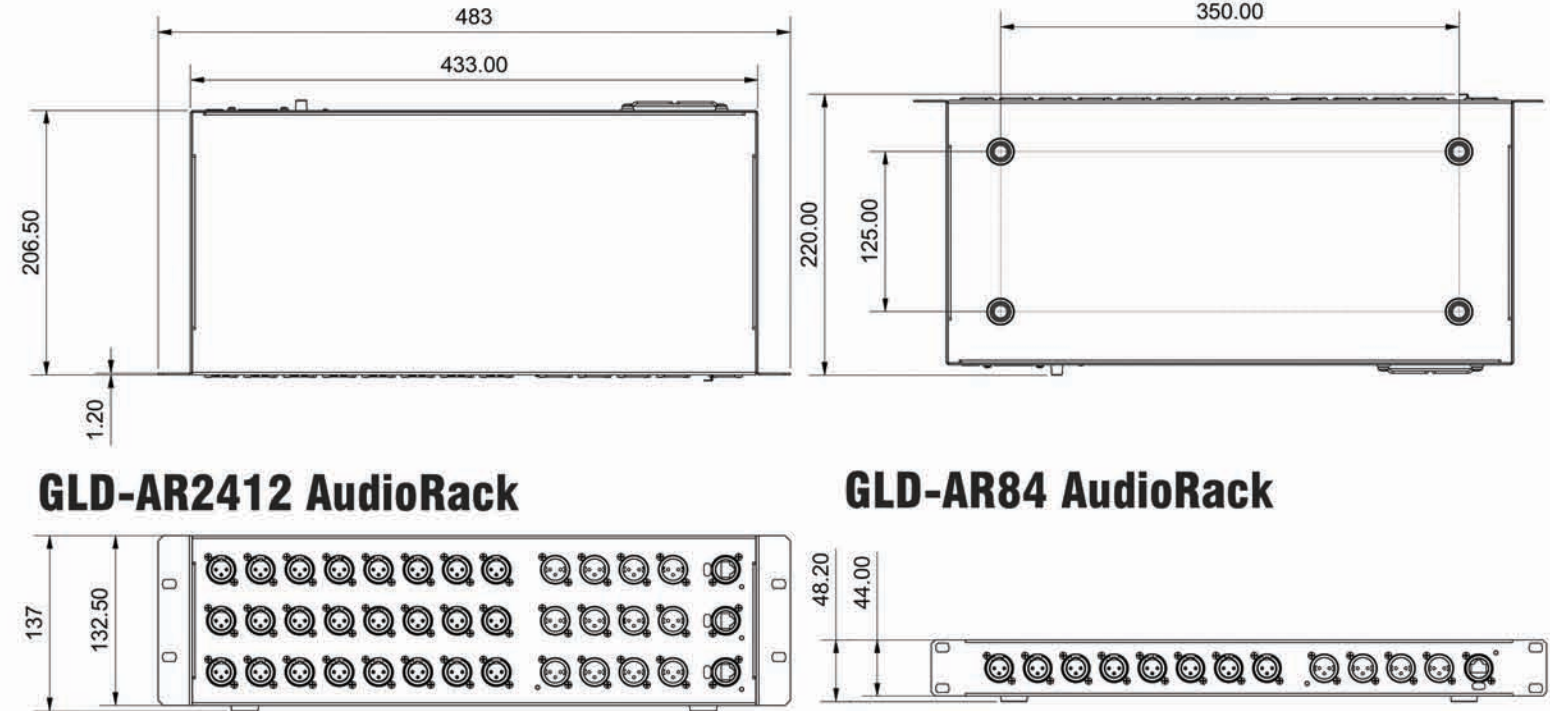
# GLD SPECIFICATIONS

# DIMENSIONS AND SYSTEM BLOCK DIAGRAM

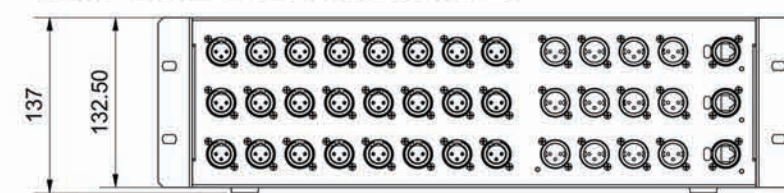
## GLD-80 Mixer



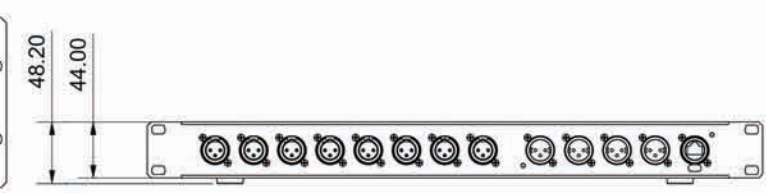
## AudioRacks



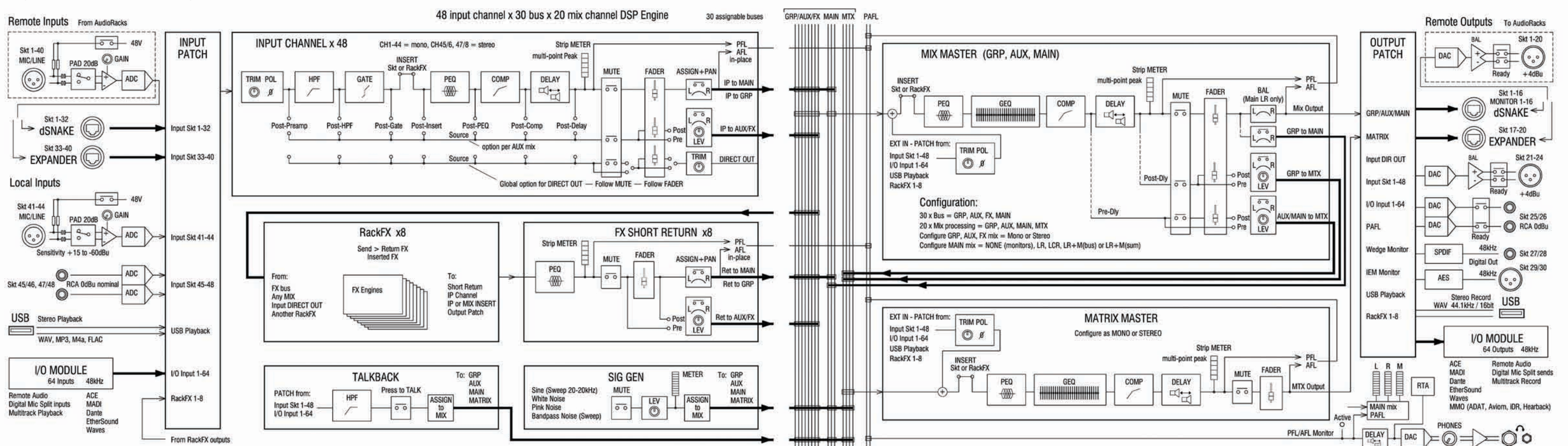
## GLD-AR2412 AudioRack



## GLD-AR84 AudioRack



## System Block Diagram





## ACCESSORIES



### AH8721 120m drum of Cat5 cable

120m (393ft) drum of Cat5 with locking connectors made by Klotz. This is the most flexible Cat5 cable for mobile use on the market.



### AH7000 80m Cat5 Etherflex Drum

80m (264ft) drum of Neutrik Etherflex cable with EtherCon locking connectors.



### LEDLamp

LEDLamp is a variable brightness 18" gooseneck lamp.

### Dustcover

Black water repellent 4oz polyester dustcover with purple piping and sewn on GLD logo

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