KORG

SOUNDLINK HYBRID
ANALOG/DIGITAL MIXERS

The convenience of Analog.

The power of Digital.

The best mixer's the one that sounds great and is easiest to use.

It's a rare mixing situation that doesn't throw you some curves. As Greg Mackie put it, "*...feedback, timid presenters, vocalists who suddenly double their volume, mic mis-handling, groups you've never mixed before...if it can go wrong it will sooner and more often than you expect.*"

Greg Mackie (short bio at right) has been live mixing for almost 50 years.

Interestingly enough, he helped design a current all-digital mixer —- you know, a mixer with less controls but lots of screen menus and "bank switching" to get to the channels. He used it for a while mixing bands, talent shows, speaking events, etc. Conclusion?

Greg Mackie founded TAPCO in the 70's to make the first practical band mixers. Then in 1990, he formed the eponymous company truly revolutioned both live and studio recording for cash-strapped musicians and seasoned pros alike.After retiring for that company in 2002, he's been busy designing for others and himself.

Born in London, UK, Peter worked at Trident Audio for 18 years (10 years as Head of R&D) assembling, testing and designing now-legendary high-end analog studio and mixers. He moved to the USA to join Mackie Designs, staying for 7 years as VP of Engineering and Chief Designer for Digital Mixers and related products. In 2003 Peter founded Stonepower Ltd as an independent professional audio design house, working on projects for numerous brands.

"I discovered that the all-digital interface simply would not let me make changes and corrections fast enough — too many menus and scrolling. On the other hand, I found the equalization, effects, dynamic processing, and presets of digital to be essential."

SoundLink is Greg Mackie and Peter Watts' **HYBRID** solution, superbly interpreted and executed by KORG.

It gives you analog's almost instantaneous control for the emergencies that inevitably happen, but with the power of high-quality digital effects where it counts.

The adjective "**hybrid**" gets kicked around by a lot of mixer manufacturers. Greg Mackie designed SoundLink to use analog where it makes things easiest – but more digital than our competition where recallable, high-quality digital is the best solution. We think it lives up to the word "hybrid" more fully than any other mixer in its price range.

On the other end of these Input Gain knobs are SoundLink's **HiVolt microphone preamps**. They run at a higher voltage than any other comparably-priced mixer on the market. That means higher input headroom so that speech and loud instruments don't distort.

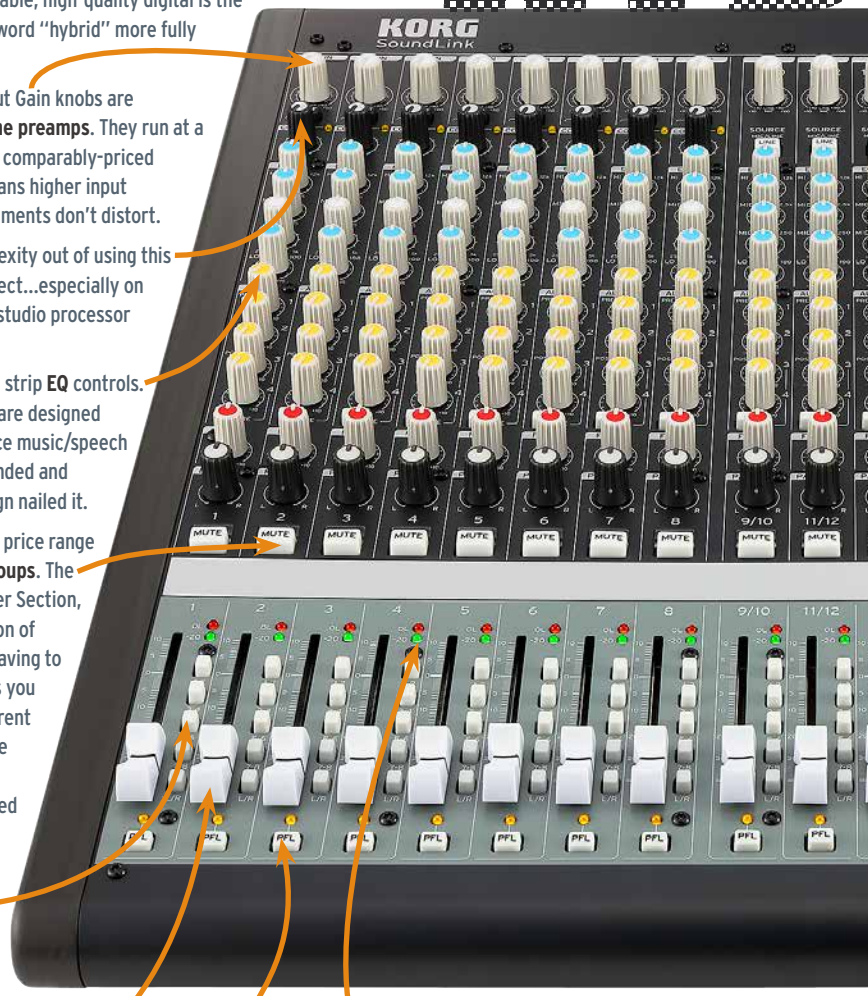
One-knob Compression takes the complexity out of using this critically important signal processing effect...especially on vocals/spoken word. Ours is rack-mount studio processor quality thanks to the Peter Watts touch.

Sure, every mixer has channel strip **EQ** controls. What's important is that they are designed to naturally and subtly enhance music/speech instead of sounding heavy-handed and obvious. Peter Watts' "big console" design nailed it.

No other mixer in SoundLink's price range has incredibly useful **Mute Groups**. The buttons here and on the Master Section, let you chose what combination of channels you want to have live without having to fiddle with multiple channels. This means you can have a different mute group for different songs, or an acoustic number, or separate Mute Groups for Sermon, Choir, Soloist, Testimony, etc. Mutes are internally lighted red or yellow to distinguish between single Mute or Mute Group states.

Assign a channel to any of **4 stereo buses** (8 mono bus outputs) or main L/R. Useful for many purposes such as separate feeds for rear fill/side, subwoofer out, etc. Our competitors only give you 2 stereo buses.

Silky-smooth **60mm Alps®** faders. Alps is the Mercedes Benz of linear and rotary controls. They cost more and work better, resist dust better, and last for many years.



PFL (pre-fader listen) switch lets the channel pass signal to the PHONES and MONITOR OUT jacks ***before*** adjustment by the channel fader.

Do you really need a whole "ladder" of Input Level LED's on every channel? Nope. What each channel needs to "tell" you during mixing is: *A)* Is the channel passing audio?, *B)* is the channel going into clipping? So Greg specified -20 and OL (overload) LEDs on each channel and put them right next to each fader.

RID

Some mixers have an input for hooking up a smart phone, tablet or MP3 player for music during breaks. But surprisingly few put that input on the FRONT of the mixer where it's convenient. And fewer still make it an 1/8" jack instead of a 1/4" jack that requires an adapter. This input feeds channels 23 and 24 on the MW-2408 and Channels 14 and 16 on the MW-1608.

Digital done right: Sophisticated multi-band, dual "Q" Equalization; adjustable Compressor, Limiter and Noise Gate; automatic Feedback Suppressor (that actually works well without digital artifacts), 31-band Spectrum Analyzer for pin-pointing feedback, and 20 of KORG's highly-respected 32-bit digital effects. All this is tweak-able, savable, recallable and visible on the fluorescent display.

Digital processing and effects are frustrating if they're buried in some long, scrolling menu inside a menu. **Nine direct buttons** for EQ and other control features, and a row of individual L/R, AUX 1 and Aux 2 assign buttons for both Equalization and Dynamics makes mixing easier.

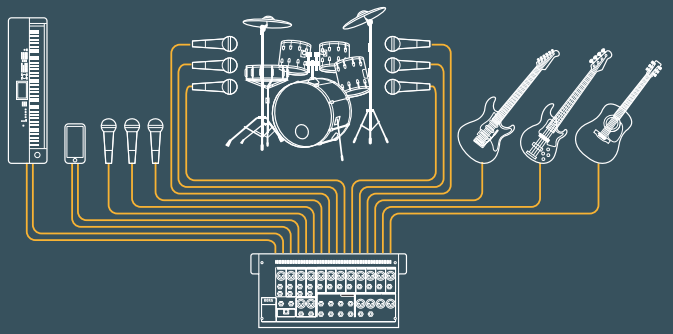
MUSICIAN'S PHONES controls and **MUTE GROUPS** are two of Greg Mackie's features that have users saying "*Why didn't anyone else think of that?*". MUSICIAN'S PHONES lets you create custom mixes for musician's headphones, in-ear or wedge monitors without disturbing the main mix. MUTE GROUPS create combinations of input channels that can be stored and recalled. See the next page of this brochure for more information.

This mixer has 24 channels that you can SEE and TOUCH at one time, instead of being faced with maybe 8 faders and a "bank switch" button. On a design like that, good luck getting to Channel 17 instantly when a vocalist suddenly gets too loud.

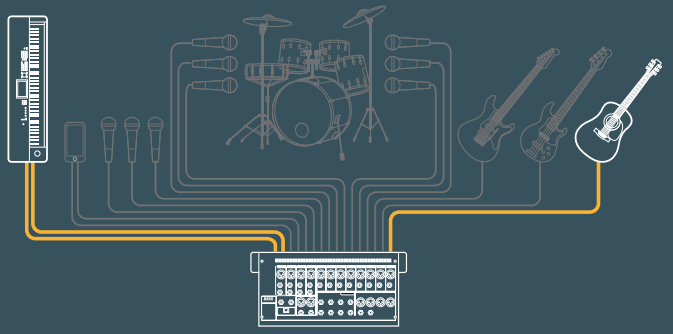
Four **stereo sub-mixes** (8-buses) let you combine, for example, all of the drum mics or all of the background vocal mics onto a single fader. Or send different mixes to eight separate points like subwoofers or balcony fill or crying room.

And finally, a word about build quality. Both SoundLink mixers have sturdy steel frames that resist flexing during load-in and load-out. Their real wood side panels also add to rigidity. The premium surface rotary controls resist impacts from above.

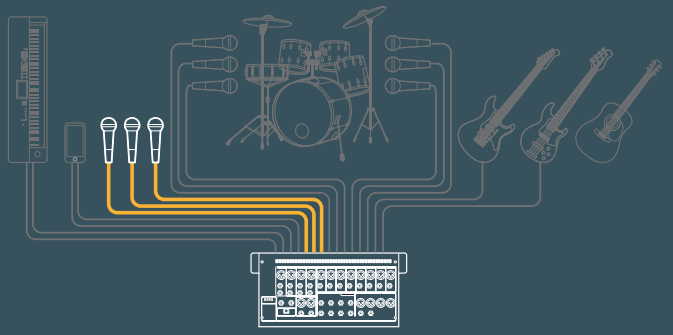
THE POWER OF SOUNDLINK MUTE GROUPS



Above is a theoretical full band input line up into an MW-1608. You're satisfied with the levels (fader positions) of everything during most of the set.
But in one song, there's only a vocal, an acoustic guitar and keyboard. You could quickly pull down 13 channel faders and lose your settings.
Or you could create and save a **MUTE GROUP** that has just 2 inputs. Activate it any time from the Master Section.

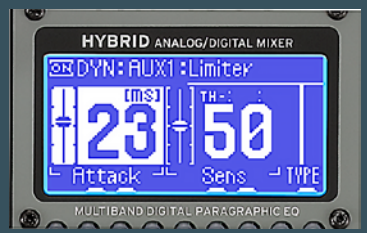


Here's another **MUTE GROUP** for a 3-voice acapella number. It's a form of digital automation made affordable!



The power of SoundLink digital

Greg Mackie and Peter Watts' brilliant graphic EQ solution is just the start of SoundLink's comprehensive arsenal of digital tools.



- **Save and load:**
  - Global settings for Memorization Mode LCD Contrast
  - 5 preset and 10 user Dynamics settings
  - Peak Slow/Fast and Normal Slow/Fast Master meter display
  - Peak Slow/Fast and Normal Slow/Fast Spectrum Analyzer display
  - 6 ParaGraphic EQ settings
  - 24 preset and 30 user Digital Effects settings
- You can select your choice of Limiter, Hard Compressor, and Soft Compressor. Each Dynamics processor has two parameter controls
- Assign the Feedback Suppressor to AUX 1, AUX 2 or L/R
- KORG premium digital FX:
  - Hall Reverb normal & Warm
  - Room Reverb normal & Warm
  - Vocal Reverb normal & Warm
  - Plate Reverb normal & Warm
  - Spring Reverb normal & Warm
  - Analog Delay
  - Tape Echo
  - Variable Standard and KORG SDD3000 Delay
  - Chorus
  - Flanger
  - Low Bass Booster

Plus 4 test tones for use with the Spectrum Analyzer

Even from the back, you can tell this is a serious mixer.

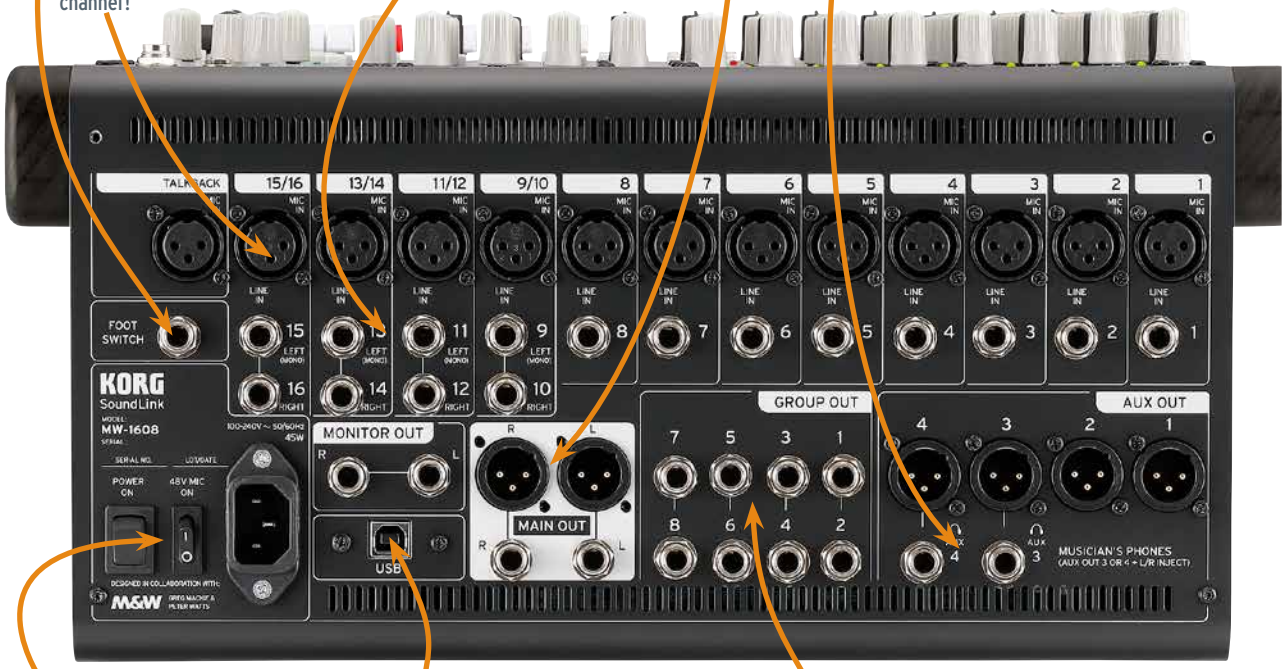
Foot Switch input lets you turn effects on and off quickly. Optional foot switches are available from your KORG dealer.

Newly-designed HiVolt microphone preamps — even on the TALKBACK channel!

When you go to hook your SoundLink to your speakers, you'll appreciate balanced XLRs as well as balanced 1/4" TRS outputs.

Stereo channels — four on the MW-1608; eight on the MW-2408.

Another exclusive SoundLink feature: outputs for two customized musician monitor mixes via AUX 3 and 4. Dedicated controls inject more or less of the LR main mix in with the musician's own instrument.



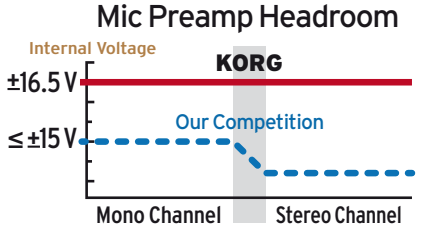
With microphone preamps as good as our HiVolts, you'll get more detail and nuances out of any microphone. +48-volt Phantom Power lets you take advantage of premium condenser microphones.

Stereo USB port lets you capture performances and rehearsals at up to 48 kHz/24 bits.AND it can be used as a stereo ***input*** routed through Channels 15-16 (or 23-24 on the MW-2408). Perfect for adding backing tracks to a live mix.

Eight-bus flexibility not found on any other competitive 16/24-ch mixer. Eight mono outputs can be used for drum or backing vocal submixes, subwoofer out, rear or side fills, extra musician monitors, balcony fill, church foyers and crying rooms, or feed an 8-channel A/D recording interface.

HiVolt preamps amp up headroom.

Internal operating voltage determines how much headroom a microphone preamp has. Our competitors use around 15 volts on mono channels and even lower voltages on stereo channels' mic preamps.



KORG HiVolt mic preamps run at **+/-16.5** volts, the highest of any comparably-priced mixer — on stereo as well as mono channels. That means you can handle hotter inputs without distortion. And did we mention how good HiVolt preamps sound?

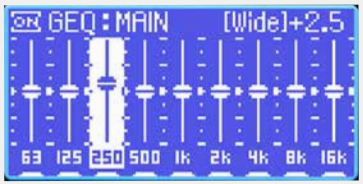
GREG MACKIE AND PETER WATTS' INGENIOUS DIGITAL PARAGRAPHIC EQ SOLUTION

A 31-band equalizer is like a scalpel.

In conjunction with a 31-band Spectrum Analyzer, you use it "surgically" on just a *few narrow bands* to reduce room acoustic problems and overall system feedback*.

So although you ***need*** all 31 narrow bands, you rarely ***use*** anywhere near 31 sliders at once.

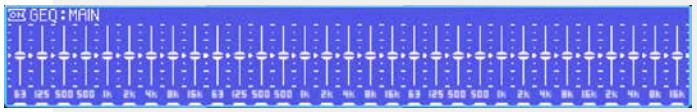
That fact is at the heart of Greg Mackie and Peter Watts' 9/31-band ParaGraphic equalizer. You can select ***any 9*** of 31 bands at one time.



Only the ones needed to correct for boominess, standing waves, reflective surfaces or any of the other problems a lot of rooms have.

Make adjustments with 9 real buttons.

In effect, SoundLink mixers create this:



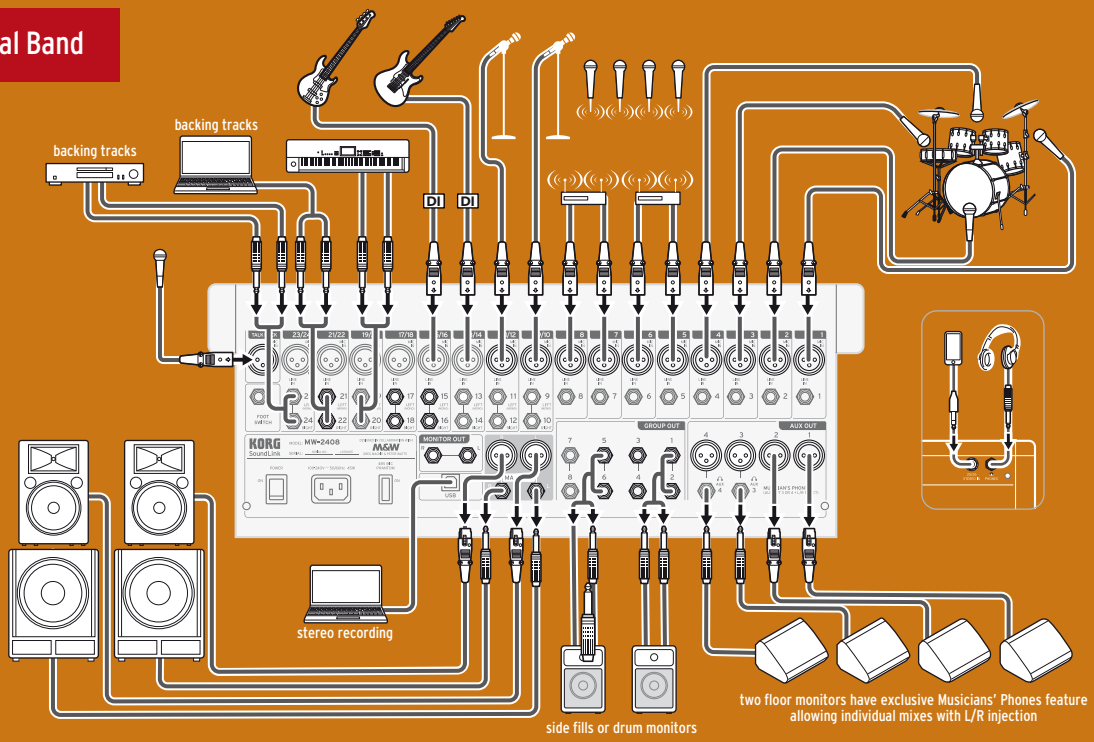
without needing a ginormous physical display.

"*ParaGraphic*" is a play on *Parametric*, a type of equalizer that can vary the steepness and width of the EQ curve. SoundLink digital provides wide (1-octave) and Narrow (½-octave) bandwidth.

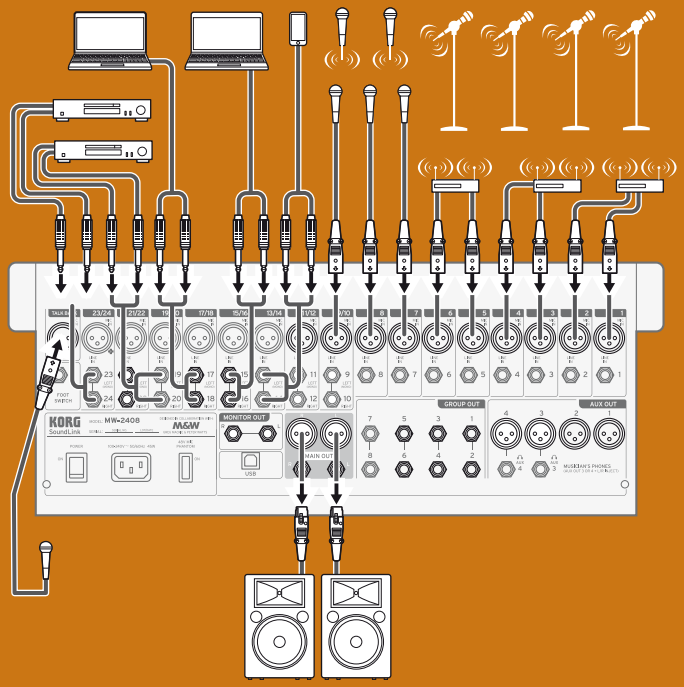
You can also use the buttons and display as a hands-on basic, **9**9-band equalizer. Up to 6 EQ settings can be saved and recalled.

*Our Feedback Suppressor works on a different source of feedback. You need both.

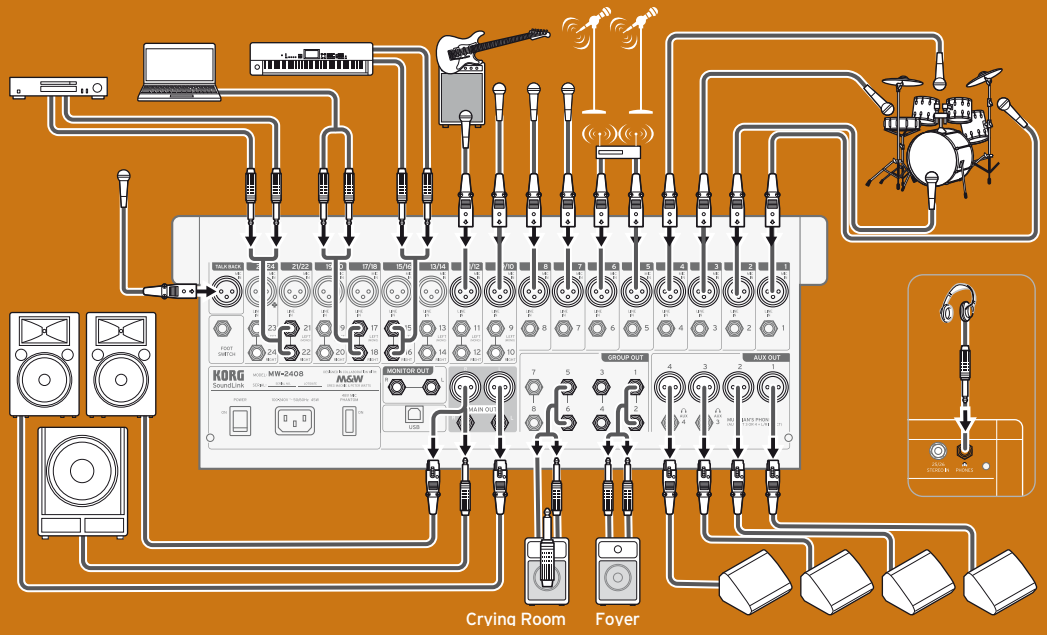
Typical Band



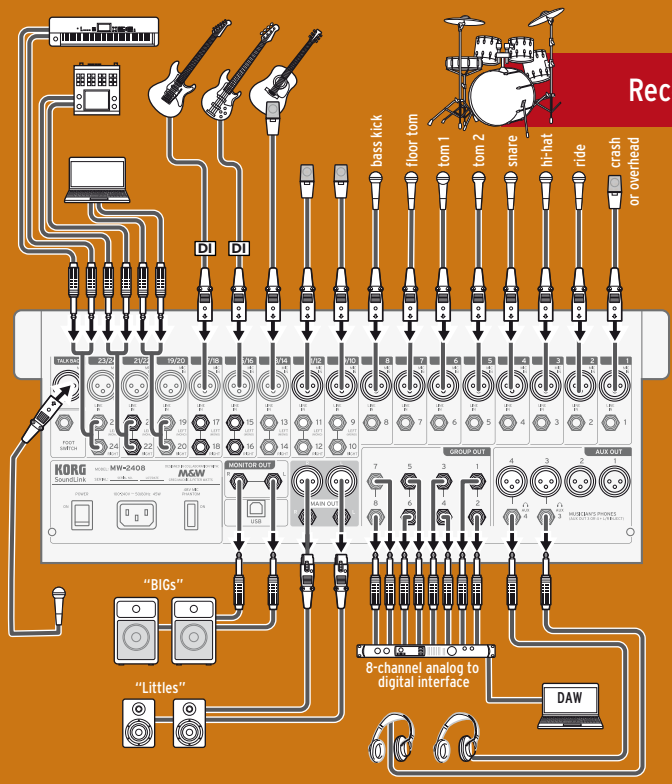
Corporate / Event Center

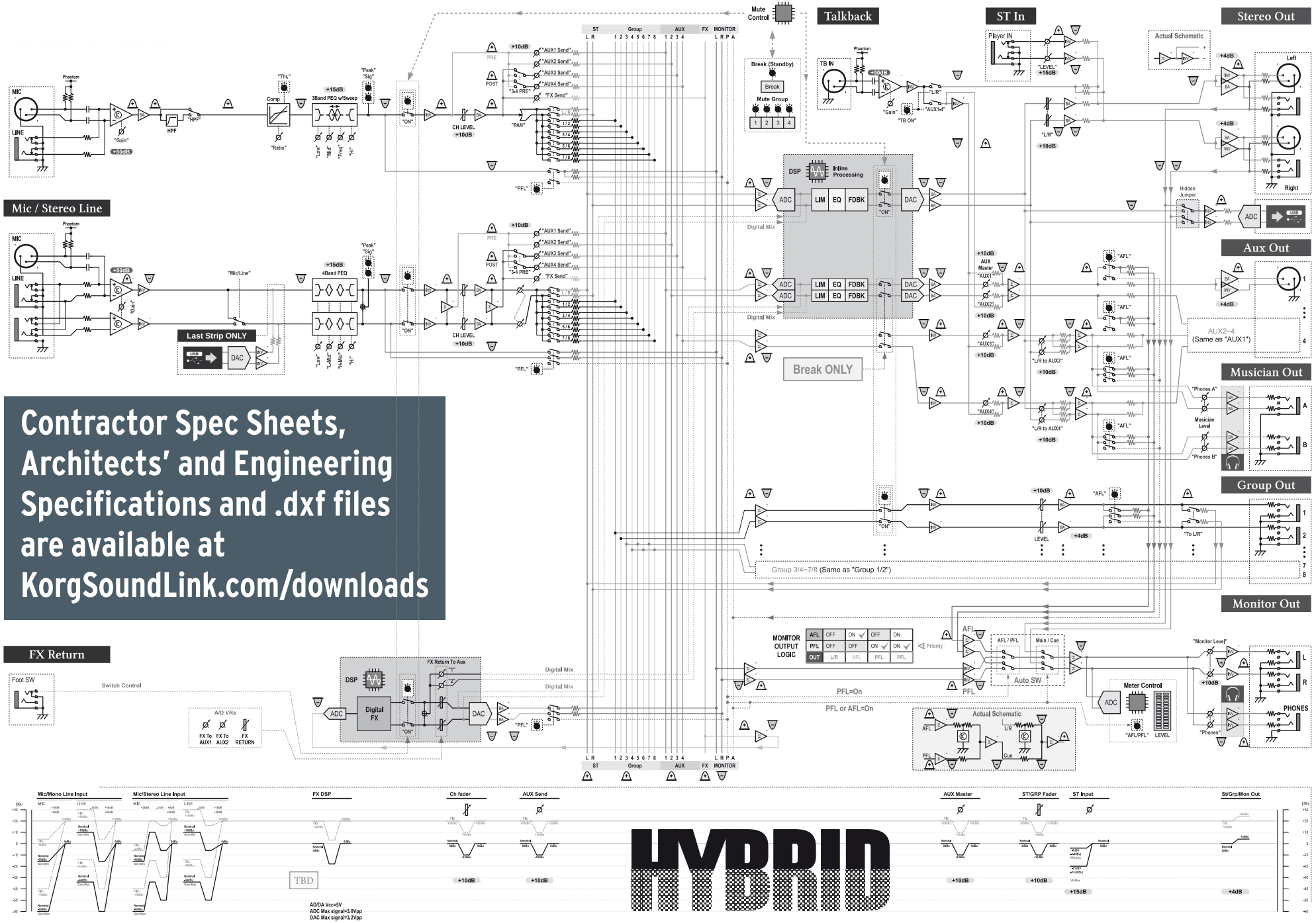


Small to medium church



Recording





Contractor Spec Sheets, Architects' and Engineering Specifications and .dxf files are available at KorgSoundLink.com/downloads

HYBRID

SoundLink MW-1608 & MW-2408
Hybrid Analog / Digital Mixers

HYBRID

- True hybrid design developed with mixer design legends Greg Mackie and Peter Watts
- 24 x 8 x 2 or 16 x 8 x 2 models
- Peter Watts-designed HiVolt mic preamps, with more headroom than any comparably-priced mixer (±16.5V internal voltage on mono **and** stereo channels)
- Velvet Sound™ A/D & D/A converters with 0.004% THD,
- Practical design structure and ingenious features make it easier to mix unpredictable live performances
- L/R Monitor, ¼" and XLR main outs, eight ¼" Group Outs, four XLR Aux Outs, two ¼" Musician's Phones outputs linked to Aux 3 & 4, front panel Headphone output, stereo USB output
- Eight mono/four stereo individual output buses (true 8-bus design)
- Unique Musician's Phones Monitor Section gives two musicians individual control of how much of "me" versus the total mix they hear
- Only mixer in its class with Mute Groups to quickly create and recall various input combinations of on-stage musicians

- Mono channels have Peter Watts-derived HI (12k), MID (250 hz - 5k sweepable) and LO (100 Hz) EQ; Stereo channels feature HI, HI MID (2.5k), LO MID (250 hz) and LO EQ
- Digital section includes Peter Watts-designed Compressor, Limiter and Noise Gate, each with editable, recallable parameters
- Ingenious 9/31-band ParaGraphic EQ addresses nine bands out of a possible 31
- Twenty of KORG's renowned 32-bit digital effects — 10 at once, save and recall user settings
- Foot switch control for FX
- Talkback to L/R or to Aux 1-4
- Peter Watts-derived rack-mount-processor-grade, one-knob Compressor on all mic channels
- Best Automatic Feedback Control of any compact mixer
- USB stereo output/input Input for optional foot switch
- Super-useful touches such as all-XLR speaker outputs and enhanced Break Switch with 1/8" input
- Silky-smooth, long-life ALPS® faders and rotary controls
- MW-2408 fits in a 19" rack
- iZotope™ Elements included

KORG

www.korgSoundLink.com

SPECIFICATIONS

Input Type	Balanced female XLR, ¼" TRS, USB
HiVolt Microphone Preamp	-128dBu E.I.N, -10 to -60 dBU nominal input level; 3KΩ input impedance, 16.5 V internal operating voltage
Frequency Response to Main Output (unity gain)	+0.5 to -1.5 dBu 20Hz to 20kHz
THD to Main Output[1]	0.004%
S / N Ratio to Main Output[2]	-70 dBu
System Crosstalk[3]	Input to Output, -70 dBu; Adjacent Channels, -90 dBu
Gain Control Range (± 1 dB)	+10dB to +60dB (Mic), -10 to +40dB (Line)
Main Outputs	Balanced male XLR and ¼" TRS
Maximum Output Leve	+26 dBu
Output Impedance	75 Ω
Headphone Output	100 mW / ch. @ 32Ω load, 20 Hz-20 kHz (+0.5dB, -1.5dB)
Savable Settings	Channel Mutes, Effects & effects Mutes, Mute Groups, Break settings, Dynamics, Graphic EQ, Feedback assign to bus
Recallable Presets	4 Mute Groups, 10 Global Scene Memories, 24 FX Memories, 10 Dynamics, 6 GEQ, 16 or 24 Channel Mutes, 3 Feedback bus assignments
Mono Channel EQ	HI (12k, shelving), MID (peak, sweepable from 250hz to 5k) and LO (100 Hz, shelving), ±15dB boost/cut;
Stereo Channel EQ	HI (12k shelving), HI MID (2.5k shelving), LO MID (250 hz shelving) and LO (100Hz shelving)
High Pass Filter	18dB/octave at 80Hz
Digital Multi-band EQ	31-bands with 9 frequencies selectable at any one time, Wide 1-octave interval and Narrow ½-octave modes
Digital Compressor	**Hard:** -1 ms to 40 ms Attack, +11dB to 0dB Threshold; **Soft:** -1 ms to 40 ms Attack, +11 to -5dB Threshold
Digital Limiter	1 ms to 40 ms Attack, +19 to +3dB Threshold
Digital Noise Gate	Hard – 40ms to 1500ms Release, -35 to +7dB Threshold; Soft – 40ms to 1500ms Release, -50 to +4dB Threshold
Spectrum Analyzer	24-channel with Peak Hold function, assignable to main L/R, AUX 1 or AUX 2
Main L/R Bus ADC Dynamic Range	115dB (A-wtd)
Aux and FX Buses ADC Dynamic Range	111dB (A-wtd)
DAC Dynamic Range for all Out buses	115dB (A-wtd)
USB Stereo Input / Recording Port	USB Class 1
Internal Processing	32-bit for internal processing;
A/D/A Bit Depth	Korg Tru-Bit-Perfect 32-bit
USB Bit Depth	24-bit
Sampling rates	48 kHz, 44.1 kHz
Digital Effects	Rev Hall, Rev Hall Warm, Room, Warm Room, Rev Vocal, Rev Vocal Warm, Stage, Stage Warm, Plate Reverb, Plate Reverb Warm, Spring Reverb Warm, Analog Delay, Tape Echo, Variable Delay, Delay of the Korg SDD3000, Chorus, Flanger, Exciter, Sub Bass booster, 1 kHZ Test Tone, Slow Sweep, Fast Sweep, White or Pink Noise
Power Connector	IEC
Input-Voltage Range	100 to 240 VAC, 50/60 Hz
Power Requirements (continuous)	45 W
Recommended Ambient Operating Temperature	0˚ to 40˚ to Celsius /32˚ to 104˚ Fahrenheit
Dimensions (W x H x D)	**MW-2408:** 18.9" x 7.36" x 20.89"/ 480 mm x 187 mm x 530 mm (17.3" / 440 mm wide without side panels, 19" with rack rails); **MW-1608:** 15.6" x 7.36" x 20.89"/ 396 mm x 187 mm x 530 mm (10.6" / 256 mm wide without side panels)
Weight	MW-2408: 20.5 lbs / 9.3kg MW-1608: 17.6 lbs / 8.0kg

1) 20-20 kHz, unity gain, unweighted • 2) Ref = +4 dB, 20 kHz BW, unity gain, A-weighted • 3) Ref = +4 dBu, 20 Hz-20 kHz, unwtd)