



O·H·R·C·A

Open  
High  
Resolution  
Configurable  
Architecture

M-5000 SERIES LIVE MIXING CONSOLES

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M-5000  
LIVE MIXING CONSOLE

24+4 fader

M-5000C  
LIVE MIXING CONSOLE

16+4 fader

## Announcing a new era in live mixing consoles: O·H·R·C·A

In a rapidly changing world, the ability to adapt is needed to excel.

O·H·R·C·A brings the power of adaptability to the world of live audio mixing.

It conforms to the needs of both the application and the operator by delivering 128 freely definable audio paths, flexible user interface and workflow, expandable protocols, and multi-format I/O choices — all delivered at a pristine 24-bit / 96kHz sound quality.

This achievement in an ideal frame size opens a new generation in live sound solutions.

REAC Dante MADI WSG SDI SFP DVI

### Configurable Architecture

- 128 audio paths assignable as channels, auxes, subgroups, matrices, mix minus, etc
- Easily adaptable to many applications including front-of-house, monitor position, or broadcast.

### Extensibility

- Unrestricted patching for up to 300 inputs/296 outputs (M-5000) and 300 inputs/288 outputs (M-5000C) at 96kHz (More at 48kHz)
- Support for 2 of the 7 available optional expansion cards
- Redundant audio transmission and optional redundant power supply

### High Resolution

- Outstanding 24-bit, 96kHz sound quality
- High-precision 72-bit linear summing circuitry
- High-end discrete preamps onboard and available in remote snake options

### Flexible Workflow

- 12" touch screen with integrated "touch and turn"
- 28 freely scrollable, isolatable, or assignable faders (20 with M-5000C)
- Dedicated, freely assignable user section of buttons and knobs

O·H·R·C·A

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# Configurable Architecture

## 128 freely definable audio paths unlock a completely new realm of flexibility

A primary feature of O-H-R-C-A is its configurable architecture.

The console's internal mix architecture is not fixed and can be freely defined within a range of up to 128 input/output channels/buses.

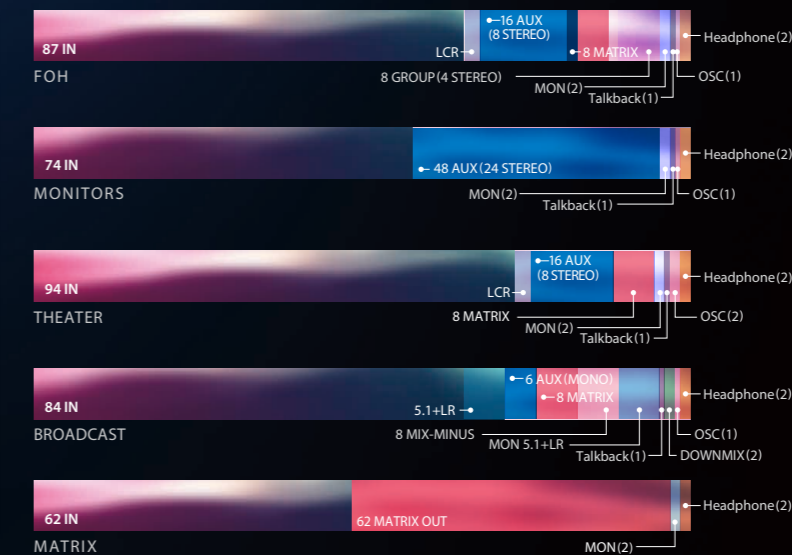
This allows the user to essentially "build" a console structure based on the immediate needs of the application.

This not only makes for a console that can accommodate a diverse range of applications, but also one that accommodates high levels of flexibility for precise response to dynamically changing conditions from venue to venue.

MIXER CONFIGURATION Setup Screen

MIXER CONFIGURATION	
TYPE	INPUT CHANNEL
INPUT CHANNEL 84	1 CH 1 STEREO
MAIN 3	2 CH 2 STEREO
SUBGROUP 0	3 CH 3 STEREO
AUX 24	4 CH 4 STEREO
MIX-MINUS 0	5 CH 5 STEREO
MATRIX 16 x 3	6 CH 6 STEREO
MONITOR 3	7 CH 7 STEREO
COMM 1	8 CH 8 STEREO
OSC 1	9 CH 9 STEREO
HEADPHONES 2	10 CH 10 STEREO
DCA 24	11 CH 11 STEREO
MUTE GROUP 8	12 CH 12 STEREO
SOLO 4	13 CH 13 STEREO
	14 CH 14 STEREO
REMAINING RESOURCES: 2	TOTAL: 84
	1 2 4 8 1 Add
TOTAL: 126	
8 IN CH	8 MAIN
	8 GRP
	8 AUX
	8 MM
	8 MTX
	8 ETC

Examples of Configurable Architecture



### Create the mixer you need.

Roland has achieved a revolutionary new internal architecture that gives the operator free rein to define their own mixer structure. With 128 available audio paths, mixing channels, auxes, Matrices, subgroup buses, MIX-MINUS buses, or other input output needs can be allocated to match the need at hand. This enables O-H-R-C-A to accommodate a diverse array of uses, including FOH duties, monitor mixing, theater applications, broadcasting, and more. The versatile internal capability of having a configurable architecture delivers the ability to adapt to ever-changing needs and of production requirements.

#### Input and output types available in Mixer Configuration

- INPUT CHANNEL (MONO/STEREO) • MAIN (5.1/LCR/LR/MONO + DOWNMIX)
- SUB GROUP (MONO/STEREO) • AUX (MONO/STEREO)
- MIX MINUS (MONO/STEREO) • MATRIX • MONITOR(5.1/LCR/LR)
- TALKBACK, TALKBACK RTN, OSCILLATOR, HEADPHONES

# Extensibility



## Adaptable to numerous audio networks and I/O requirements

Expansion options including REAC, Dante, MADi, Waves SoundGrid, SDI, SFP and DVI open the door to endless configurations and applications.

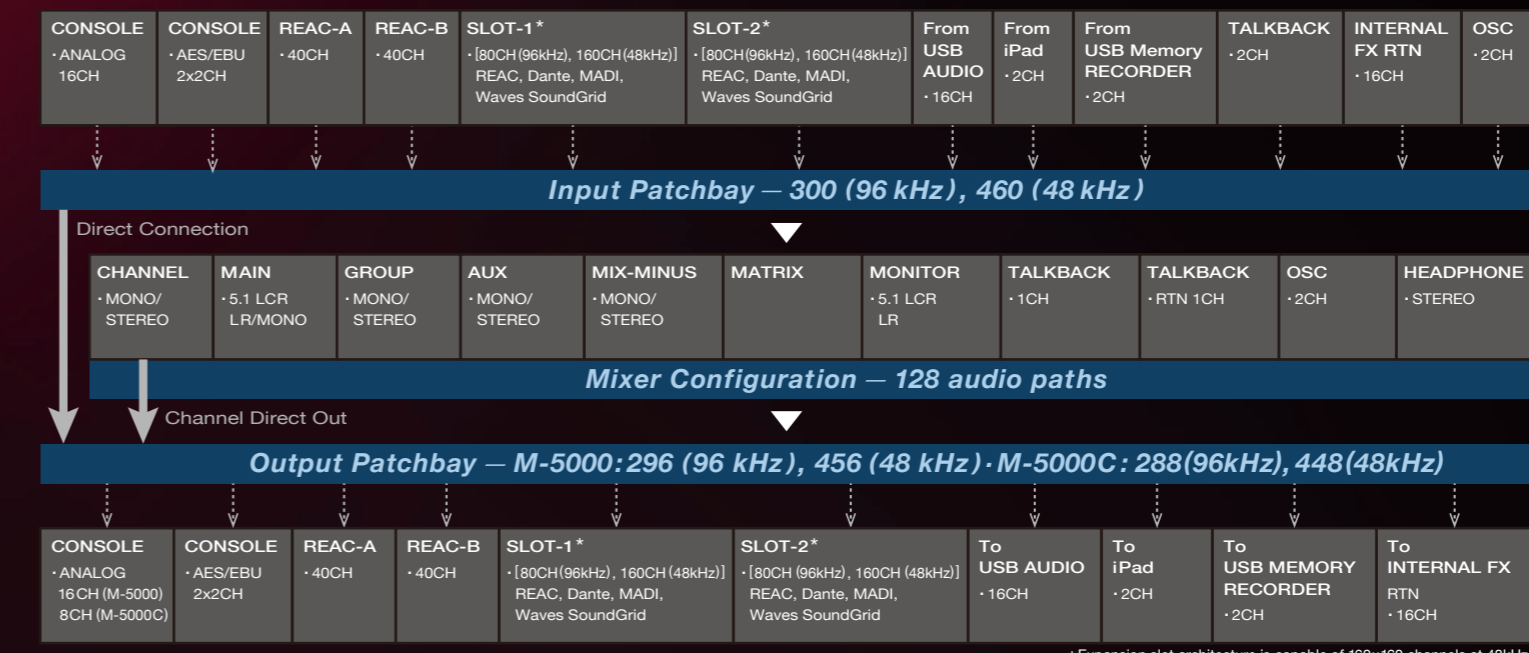
Expansion slots also future proof the console by being ready to adapt to emerging standards.

Up to 300 inputs and 296 outputs (460 inputs and 456 outputs at 48kHz)\* are managed in separate patchbays and can be used independently of the mixer.

Any input can be patched to any or multiple outputs, including control<sup>+</sup> of the gain and phantom power, without having to be patched through a mixing channel.

O·H·R·C·A makes it possible to control an enormous number of input and output channels across multiple protocols and formats.

\* 300 inputs and 288 outputs at 96kHz (460 inputs and 448 outputs at 48kHz) with M-5000C + Only REAC connection

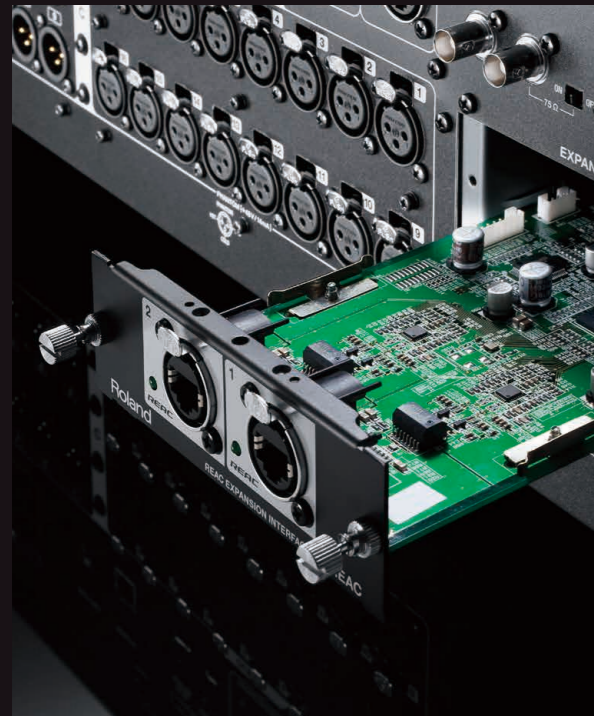


\*Expansion slot architecture is capable of 160x160 channels at 48kHz.

**REAC**  
REAC — Proven audio transfer and control technology

REAC (Roland Ethernet Audio Communication) is Roland's original technology for low latency, high quality digital audio transfer and control - 40 inputs by 40 outputs (80 total) at 24-bit 96kHz uncompressed quality. REAC is an Ethernet based technology that enables multiple components to be easily integrated using lightweight and inexpensive Cat5e/6 cable.

# Extensibility



**Expandable support for REAC, MADI, Dante, Waves SoundGrid, SDI and other future formats and solutions.**

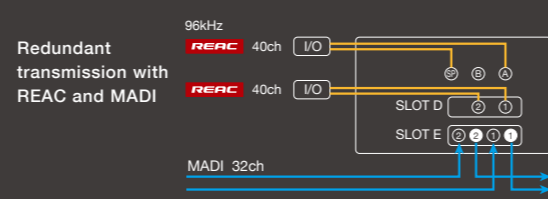
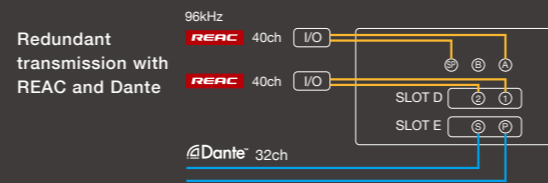
In addition to analog input and output ports, the console is equipped with AES/EBU ports and REAC-A, REAC-B, SPLIT/BACKUP ports on the rear panel. What's more, it provides two slots for optional expansion cards such as REAC, Dante, MADI, Waves SoundGrid, SDI, SFP and DVI.

## Redundant transmission and power supply option.

Redundant REAC lines can be created by connecting both a main and backup line. If the main line experiences a problem, switchover to the backup line takes place with no interruption in audio. Similar audio redundancy is also possible for REAC, MADI, or Dante cards installed in the expansion slots. In addition, redundant power is made possible by connecting an optional S-240P power unit to the DC input connector.

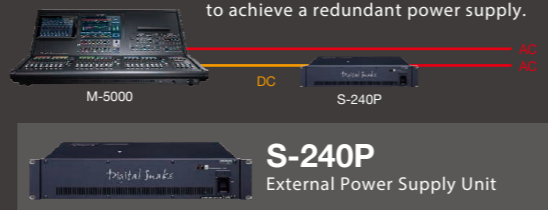
### Redundant audio transmission

The REAC ports support redundant transmission. Automatic switching to the backup line takes place in the event of trouble on the main line.



### Redundant power supply

In addition to the AC connection, the console is equipped with a DC IN. An optional S-240P power unit can be used to achieve a redundant power supply.



## Expansion Cards (Optional)



# High Resolution

Meticulous attention to processing detail, maintaining smooth fidelity with all the warmth and sparkle of the original sound.

An uncompromising commitment to the purity and clarity of sound extends to every aspect of the internal architecture and processing.

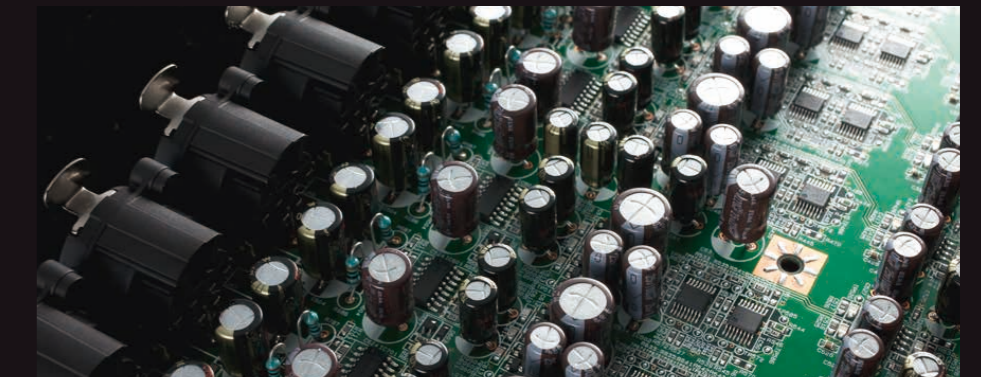
As befits this flagship model, it starts with a high sampling rate of 96kHz. The discrete circuitry was precisely designed with careful component selection and circuit architecture, separation of analog and digital sound modules, 72-bit linear summing circuit, and more.

We aimed for and have achieved unprecedented high sound quality through a rigorously uncompromising commitment to getting every detail right.



## Optimized internal processing achieved through FPGAs and custom DSPs.

Audio processing is optimized by using FPGAs that make high-speed computation for the mixing section possible and high-precision custom DSPs for the effects section. By ensuring a 72-bit linear capacity for the summing circuit that determines the sound quality of digital mixing, we have achieved internal audio processing that remains failure free from low volume levels to high. The effects section also adopts our own innovative 32-bit floating-point processing optimized for computational accuracy, enhancing both dynamic range and precision. The equalizer uses state-variable filters that have a proven track record in analog circuitry as well as high-precision computing power that generates zero noise — even when parameters are changed. For the dynamics section, a high-precision exponential circuit is used, accomplishing sophisticated level control.



## Analog input/output and internal circuitry dedicated to uncompromising sound purity.

Analog input and output features 24-bit, 96kHz AD/DA converters. The mic amplifier features a revised discrete architecture with rigorously selected components. The design considerations include separate analog and digital sound modules and audio circuitry thoroughly designed from input to output achieving a sound quality befitting a flagship console.

## Phenomenal sound quality through a high sampling rate of 96kHz.

Combining the console with Roland Digital Snakes that similarly support 96kHz delivers high-quality sound transmission at an extremely high resolution. This results in sound of the highest purity across all frequencies, from input to output.

# Flexible Workflow



A user interface with the ability to adapt to the preferences of the engineer.

Despite its compact dimensions, the surface design is configured in a highly intuitive manner. The basic concept behind the interface is “freedom” —accommodating the individual workflow of every engineer to the greatest extent possible.

The M-5000 is equipped with a 12" full-color touch screen, 28 channel faders in four areas, multifunction knobs and buttons, and a user-assignable section.

Fast and accurate operation is achieved by a design focused on the balance between usability and flexibility.

“Touch and turn” operation centered on a 12" touch screen.

The 12" full-color touch screen uses a flat design and vector graphics for clear and vivid display of information. The 16 encoders arranged under the screen feature rings whose colors change according to their assigned functions to match on-screen parameters. The “touch and turn” system of touching the desired parameter and turning the dedicated selected knob achieves fast, intuitive operation.



28 channel faders in 4 banks (M-5000).

The M-5000 features three banks of eight faders, plus one bank of four assignable faders – 28 faders in all. A horizontally scrollable five-layer design (input channel, DCA bus, and User 1 to 3) has been adopted for the fader banks. Each of the three eight-fader banks are equipped with an Isolate function that enables scrolling and layer switching independently or in tandem with other fader banks. Different channels can be assigned to each bank, such as input channels to area A, DCAs to B, and output buses to C. What's more, an Anchor function allows presetting often-used fader scrolling positions for fast recall or “jump” points. The M-5000C features two banks of eight faders plus one bank of four assignable faders.



Four assignable faders.

The four assignable faders provided at the right edge of the surface can be freely assigned to master output, lead vocals, and any other input or bus of the console, enabling dedicated control at any time.

Organic EL displays.

The channel and user-assignment displays use bright, full-color organic EL displays that offer excellent visibility in any light.



User-assignable section.

The right side of the surface features a user-assignable section that permits assignment of various parameters. This section, comprising four encoders, eight buttons in 3 banks, and an organic EL display, lets the user assign, color code, and label key functions for quick access.



# Remote Control & Live Recording



## Remote Control Software (RCS)

Use the M-5000 RCS program to operate the console from a computer (Mac/Windows). Connection can be made via USB or REMOTE connector, allowing operation over a LAN. The GUI for the M-5000 RCS allows multiple windows, and features support for high resolution displays and other optimizations. This enables use of a second display for viewing even more windows such as a large meter view of inputs and outputs.

\*The M-5000 RCS is available as a free download from Roland's website.  
\*Available in Q4, 2015



## Built-in Engineer's M-48 Monitor function

For the monitor engineer using M-48 Personal Mixers, the M-5000 offers an Engineering Monitor function that mirrors the musician's M-48 enabling the engineer to check the mix and hear exactly what the musician is hearing. The M-5000 allows selection of the REAC A or B port for the monitor feed, and an M-48 unit can be connected directly to the M-5000's backup port which is equipped with Embedded Power.



## A 16x16 USB audio interface

The M-5000 features a 16-in/16-out USB Audio interface function enabling 16-channel recording and 16-channel playback using an ASIO compliant DAW.



## Recording and playback using an R-1000

Connecting an R-1000 delivers playback and recording on up to 48 channels (at 48kHz; 24 channels at 96kHz). This enables the operator to put R-1000 output on standby at the SUB input (TR) on the M-5000 for virtual rehearsals, redundancy, or track playback. What's more, the M-5000 is capable of remotely operating multiple R-1000 units, enabling successive playback from song files and stacked, synchronized units for more tracks. (e.g. 2 x R-1000 deliver 48 tracks at 96kHz).



R-1000 48 Track Recorder/Player

## Remote control using an iPad

The dedicated M-5000 Remote app supports remote control from an iPad. Any of three methods can be used for connecting the iPad: a) wired hookup using the Dock connector, b) through a router connected to the LAN port, or c) direct ad-hoc connection using a Wireless USB LAN Adapter. When dock connected, stereo recording and stereo playback is possible to the iPad. The remote-control iPad can be used to control recording and playback, and input sources and output channels can be assigned as desired. The GUI for the iPad app features full support of Retina displays enabling crystal clear graphics.



## M-5000 Remote

Dedicated iPad app for remote control  
Free download from Apple Store



\*Available in Q4, 2015

# Key Functions

A variety of intuitive features in direct response to sound engineers requests

## Set three inputs per channel with full backup support

Three inputs can be set for each input channel of the console: primary input (IN), alternate (ALT) and track input (TR). For example, assigning the main vocal mic to "IN" and a backup mic to "ALT" allows for instant switch-over on the CH EDIT screen in the event of a mic failure. "TR" assignment is also available for backup audio as well as recording or virtual rehearsal/playback from a Roland R-1000. This is convenient if running recorded rehearsal content and also being able to easily patch in a previously captured track. Along with individual settings at the CH EDIT window, the system also supports global switching via scene setups.

CH	NAME	MODE	IN	ALT	TR	DIRECT	INSERT A
1	KICK	M	D1: 1		E1: 1	B: 1	1176LN
2	SN-TOP	M	D1: 2		E1: 2	B: 2	1176LN
3	SN-BTM	M	D1: 3		E1: 3	B: 3	
4	TOM-F	M	D1: 4		E1: 4	B: 4	
5	TOM 1	M	D1: 5		E1: 5	B: 5	
6	TOM 2	M	D1: 6		E1: 6	B: 6	
7	TOM 3	M	D1: 7		E1: 7	B: 7	
8	HH	M	D1: 8		E1: 8	B: 8	
9	RIDE	M	D1: 9		E1: 9	B: 9	
10	CRASH	M	D1: 10		E1: 10	B: 10	
11	OH	ST	D1: 11		E1: 11	B: 11	
			D1: 12		E1: 12	B: 12	
12	BS Lin	M	D1: 13		E1: 13	B: 13	
13	BS Mic	M	D1: 14		E1: 14	B: 14	
14	AG 1	M	D1: 15		E1: 15	B: 15	
15	AG 2	M	D1: 16		E1: 16	B: 16	

## Mono/stereo definable input/output channels

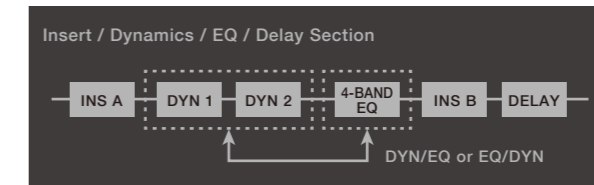
Input and output channels can be set as either mono or stereo in the channel edit mode. Channels used for stereo can be made stereo pairs for input, not just adjacent channels.

## Dynamics, Equalizer, and signal delay for both inputs and outputs

Input channels, AUX, Matrix, Group, and Main Out are switchable between mono and stereo. The signal flow for each is provided with high and low-pass filters, two independent Dynamics sections (with Compressor, Gate, Ducker, Limiter and Expander selectable for each), a 4-band fully-parametric equalizer, and signal delay. Full-featured audio processing is performed not just at the input stage, but at the output stage as well. Effect insertion points can be set both before and after the Dynamics and EQ blocks.

## Dynamics and EQ sections that permit reordering

The two Dynamics blocks can be used simultaneously enabling, for example, a compressor at an earlier stage and de-esser at a later stage. The sequence of the Dynamics and EQ sections can also be reordered.



## Channel and EFX delays can be adjusted in ms/Meters/Feet/Frames/Notes

Every input channel and output bus can specify its own delay time. For example, the output delay units for speaker delays can be set to Meter/Feet, and when synchronizing the console with a video input device the delay unit can be set to Frames.

\*Frame rate=24/25/29.97/30fps

## Built-in Sub-Group bus

The M-5000 is equipped with a Sub-Group bus for using POST Fader to send signals from the desired channels. As on the other output buses, Dynamics, EQ, Delay and Insert Effects can be used to adjust the sound.

## A Channel Link function that allows up to 12 Group settings

The Channel Link function permits freely linking parameters for multiple channels. Channels are linked by going to the CHANNEL LINK window and selecting a LINK group, then successively registering each channel by pressing the SEL button above its fader, making it possible to change the parameters to be edited all at once. Linkable channel parameters can be registered for each Group enabling operations such as individually linking EQ, Dynamics, and other parameters or selecting ALL to sync all parameters allowing setup of parameters for multiple channels in a single operation.



Selectable LINK PARAMETER settings:  
GAIN / FILTER / DYN1 / DYN2 / EQ / DELAY / DIRECT / SENDS / ROUTE / PAN / MUTE / FADER

# Key Functions

## Main Out supports 5.1 surround, LCR, and LR. Built-in surround panning and stereo downmix

As with the Input channels, the Main Out bus has two Dynamics and an EQ block whose order can be switched. Effect inserts are definable as well. In addition, 5.1 surround, LCR, and LR can be selected as output destinations and simultaneous stereo downmix output is possible when in 5.1-channel mode. The 5.1 output also supports surround panning, and when using LCR output, LCR PAN can be used to set the output balance for left, center, and right.



## Monitor output supporting 5.1-channel surround

As with Main Out, monitor output is provided on two types of buses: Monitor 1, which supports 5.1-channel surround, and stereo-compatible Monitor 2. For 5.1-channel monitoring, individual delay and an Alignment function allowing level adjustment are built in for LCR, LFE, Ls, and Rs. Moreover, Monitor 1 and 2 each have an Insert circuit. A flat monitor environment can be created by assigning graphic equalizers to monitors.

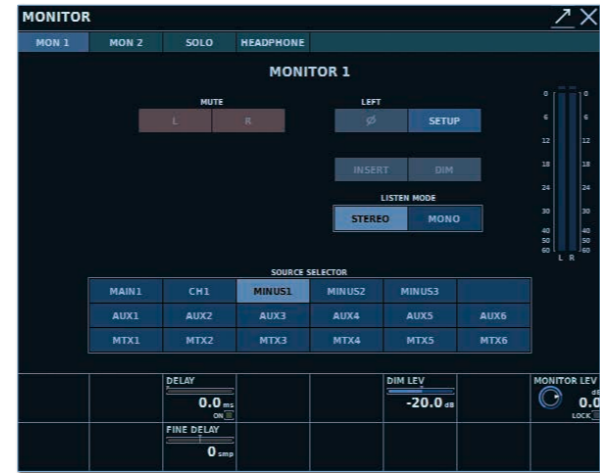
## Monitor Alignment function

Each monitor output has a built-in Delay which enables time alignment according to the position of the monitor speakers.



## A variety of assignable monitor sources

Up to 18 sources can be sent to monitor 1 or monitor 2. Along with the typical use of monitoring the Main Out, they also can be used for checking individual microphones, lighting feeds, mix minus of relay points. Monitor sources can be assigned to buttons in the User Assignable section for quick access. By assigning monitor sources to the user-assignable section, you can choose the source instantly without the need to call up the menu.



## Mix-Minus function

The M-5000 features a Mix-Minus (minus one) function, indispensable to recording and relay feeds. The required number of outputs from this can be set as desired.

## 24 DCAs

The M-5000 includes 24 DCAs. These are useful when globally controlling a large number of input channels, such as a string section or drums.

## DCA Spill function

DCA Spill function allows for calling up input channels assigned to DCA groups. This makes modifying the mix balance of each DCA group instantly accessible.

# Key Functions

## 8 MUTE groups

Eight sets of MUTE groups are available. Registering these in the user-assignable area makes it easy to turn muting on and off at the single touch of a control.

## 8 stereo multi-effects

The M-5000 features a total of eight stereo multi effects for input and output. These can be inserted and used at any desired point in input channels, AUX's, Matrices, Groups, and Main Outputs. The multi-effects include Digital Reverb, Delay, Multi-band Compressor, and Dynamic EQ, and are modeled on leading Roland effect processors that include: the SRV-2000, SDE-3000, SDD-320, RE-201, CE-1, SPH-323 and SBF-325. In addition, Distortion and Delay (digital and analog) modeled on BOSS compact pedals are also included.



## 32 31-band GEQs or 8-band PEQs

The GEQs and PEQs are independent of the multi-effects. Up to 32 GEQs or PEQs can be used simultaneously. Selected GEQs or PEQs can be assigned to a group among A through H. This makes curve settings of outputs with the same property such as floor monitors and side-fill monitors all at once possible.

## Proportional Q and Constant Q

When a GEQ is set to Proportional Q, larger amounts of boost or cut result in greater Q. When it is set to Constant Q, The Q does not change regardless of the amounts of boost or cut.



## External effects insert function

Up to 64 external effect insert points can be set both before and after channel Dynamics and EQ blocks. This applies to not only the local inputs and outputs of the console itself, but also every external network I/O path being connected.

## Two selectable Solo systems

The monitor feed features two stereo solo buses. For example, Solo 1 can be used for stage monitor speakers, and Solo 2 can be used for in-ear monitors. Solo 1, Solo 2, or Solo 1+2 is selectable for each channel and path. The headphones bus can also select either Monitor 1 and 2 to use as the source for monitoring and features a dedicated delay as well. This allows for sound alignment with FOH or other configurations.

## Auto Solo CH function

When you select Solo, you can perform solo monitoring with assigned effects such as Reverb and Delay.

## Solo In Place function

Pressing and holding the Solo In Place button for at least two seconds activates the function. Switching on a solo on an input channel during Solo In Place mutes the other input channels and outputs only the solo-on input channel to the routing destination.



## Two audio analyzers

Two 31-band audio analyzers are provided. One built-in to the console, and one on the dedicated RCS. Each can be assigned not only to the desired bus output, but to inputs as well.



\*Available in Q4, 2015



# Remote Control and Recording

## External control using GP I/O

The rear panel is equipped with eight GP I/O input connectors (including TRS phone jacks) and 12 GP I/O output connectors for external control. Latch and momentary settings are possible. These can be used for beginning CD playback on fader start and preventing incorrect operation while live on the air. They also make possible a wide range of control, including setting delay times by tapping, switching monitor speakers on and off by means of an external cough switch, monitor interrupts with dimmer during talkback, and more.

\*Available in Q4, 2015



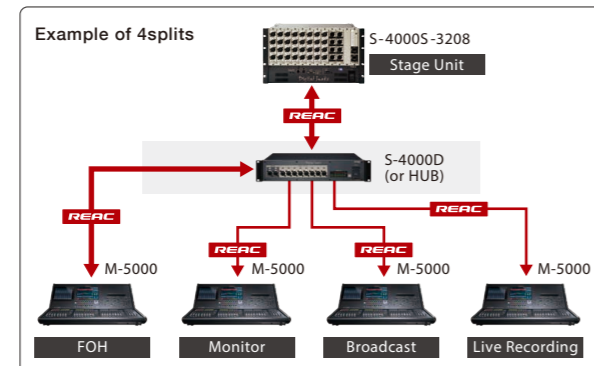
## System layout using the built-in REAC master/slave modes

O-H-R-C-A features a slave mode in addition to a master mode. This makes two-way transmission of audio input and output possible between two O-H-R-C-A consoles, M-480, M-300, M-200i, or other V-Mixers. Settings allow input to the master console using output from a slave console, or vice versa.



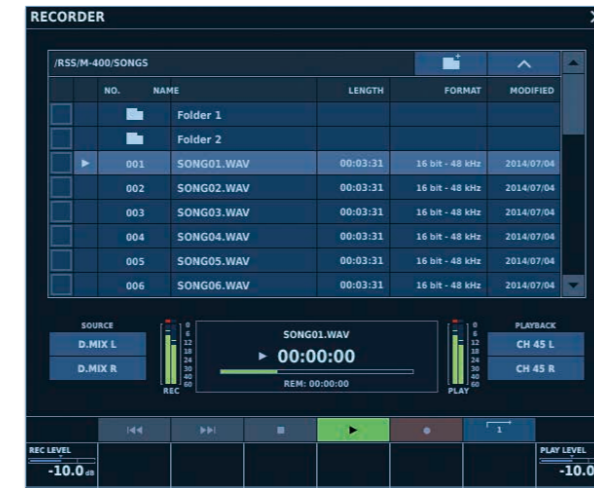
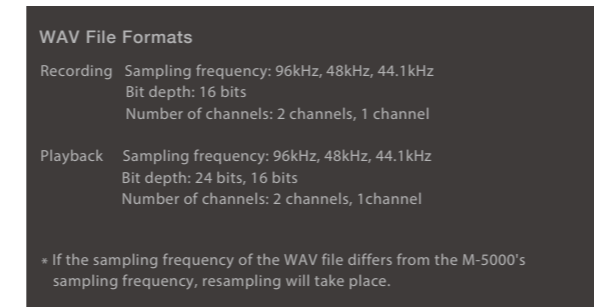
## Multiple digital splits from the stage units with simple connections

One of the features of REAC devices is that the inputs of stage units can be split to and shared with several consoles or output units. For example, not only can resources be shared with front of house and monitor, on the condition of relay or live recording, the same signal can be split to several consoles or output units at the same quality and level.



## USB Memory Recorder function

Any two output buses can be recorded as 2-track WAV files to a USB flash drive. It is also possible to playback 2-track WAV files from a USB flash drive.



## 300 scene memories

Scene memory is a function that lets you store and recall mixing parameters as "scenes". Up to 300 scenes can be stored and recalled. When recalling the scene, global scope (apply to all scenes) and recall filter (apply to selected one scene) can be used to set up the range of recalling.



## Talkback settings for up to 3 locations

Three Talkback systems are provided as output destinations making communication possible between three locations, such as FOH and the monitor position as well as between FOH and a relay vehicle. During talkback return, the desired TALK switch can be made to flash to indicate the call source. In addition, the amount of volume reduction performed by the Monitor Dimmer function during talkback can be adjusted individually for Monitor 1 and Monitor 2.



## Two oscillators

Two built-in oscillators can work simultaneously. Each of the oscillator signals can be sent to any output bus or output patchbay.



## A variety of built-in control interfaces, including RS-232C, MIDI, and Remote

O-H-R-C-A offers full support for RS-232C, MIDI, and other control command systems. The Remote connector allows remote operation over a LAN connection from a Windows or Mac computer using the RCS program.



## Support for world clock input and output

The console is equipped with a world clock connector, essential for system configurations using multiple digital devices. If the world clock breaks off, the clock source will be changed to internal clock without any interruption and a warning message will alert the user of the change.



## Lamp connector

The console is equipped with an XLR-4-31 type connector for supplying power to a third-party gooseneck lamp (DC 12V/500 mA).



System example with O-H-R-C-A(M-5000) and S-2416x4  
\*Inputs: Analog 112ch, AES/EBU 36ch, Outputs: Analog 80ch, AES/EBU 36ch

# Compact Size, Full Specification - M-5000C

The M-5000C is the full potential of O·H·R·C·A in a compact format.



## The perfect balance of compact size, powerful mixing capabilities and intuitive workflow.

With dimensions of just 740(W)×725(D)×346(H)mm, the M-5000C is designed to be highly portable and provide a lot of mixing power where there is not a lot of available space. Mixing even high channel counts is easy with the four fixed assignable faders sixteen scrollable and isolatable faders that feature anchor points and DCA spill workflows. With O·H·R·C·A at its core, productions requiring as many as 128 audio channel resources and direct patching of up to 300 inputs and 288 outputs (at 96kHz; 460 inputs and 448 outputs at 48kHz).



## Portable and powerful.

Although the size of M-5000C is more compact, it maintains the full power of M-5000. Along with 96kHz sampling rate for superb sound quality, M-5000C has 72-bit summing bus, newly designed discrete analog circuitry and optional redundant power supply. What's more, in addition to 16 inputs and 8 outputs on the console, the M-5000C features two expansion interface slots that can accommodate REAC, Dante, MADI, Waves SoundGrid and other XI-Series expansion cards. All of these features allow the M-5000C to achieve the innovative and flexible performance of O·H·R·C·A with enhanced mobility for applications with tight production spaces.



# Options

## EXPANSION INTERFACES

Various expansion cards make a diverse range of systems possible.



### XI-REAC

- 40 inputs x 40 outputs x 2 REAC ports



### XI-DANTE

- 32 inputs x 32 outputs at 96kHz or 64 inputs x 64 outputs at 48kHz
- Primary, Secondary, Control port



### XI-MADI

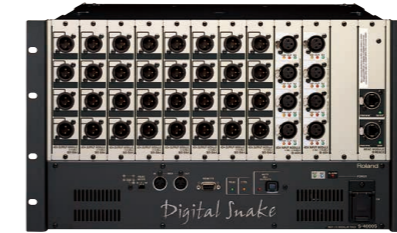
- 32 inputs x 32 outputs at 96kHz x 2 sets or 64 inputs x 64 outputs at 48kHz x 2 sets
- 2 MADI sets (BNC, Optical), Video Sync In



### S-4000S-3208

32x8 Modular Stage Unit

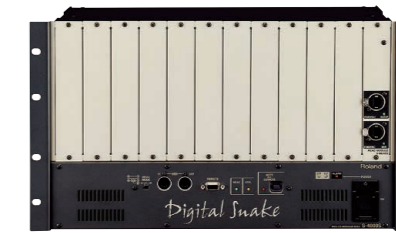
- 32 Mic/Line Inputs and 8 +4 Line Level Outputs
- Outstanding 24-bit, 96kHz sound quality
- High quality XR-1 mic preamps provide superb sound with lots of headroom
- Redundant Ethernet ports with rugged Neutrik Ethercon connectors offer seamless switching to backup cable with no loss of audio



### S-4000S-0832

8x32 Modular Stage Unit

- 8 Mic/Line Inputs and 32 +4 Line Level Outputs
- Outstanding 24-bit, 96kHz sound quality
- High quality XR-1 mic preamps provide superb sound with lots of headroom
- Redundant Ethernet ports with rugged Neutrik Ethercon connectors offer seamless switching to backup cable with no loss of audio



### S-4000S-MR

Digital Snake Modular Rack Chassis

- Modular rack chassis with no preinstalled In/Out modules
- Designed for custom configurations such as 24x16 and 40x0



### SI-AD4

4-Channel Analog Input Module

### SO-DA4

4-Channel Analog Output Module

### SI-AES4

4-Channel Digital Input Module

### SO-AES4

4-Channel Digital Output Module



### XI-WSG

- Effect Plug-in of Waves is available



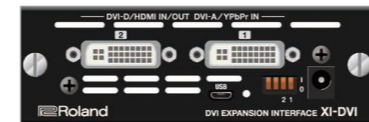
### XI-SDI

- 16in/16outx2 (Only works at 48kHz)



### XI-SFP

- 16in/16outx2 (Only works at 48kHz)



### XI-DVI

- 16in/16outx2 (Only works at 48kHz)



### S-2416

24 x 16 Stage Unit

- 24 input x 16 output analog + 8 input x 8 output digital (AES/EBU)
- Outstanding 24-bit, 96kHz sound quality
- 2 REAC ports to either cascade additional snake or for redundant connection
- Word clock in & out



### S-1608

16 x 8 Stage Unit

- 16 inputs x 8 outputs
- Outstanding 24-bit, 96kHz sound quality
- Compact, floor-based or rack-mountable design



### S-0816

8 x 16 Front of House Unit

- 8 inputs x 16 outputs
- Outstanding 24-bit, 96kHz sound quality
- Compact, floor-based or rack-mountable design



### S-0808

8 x 8 Input / Output Unit

- 8 inputs x 8 outputs
- Compact, light-weight, rugged
- External battery powered or embedded power over REAC (PoE)
- TRS and Hi-Z inputs



### S-4000M

REAC Merge Unit

- Merge up to 4 REAC devices into a single REAC stream
- Power REAC devices supporting embedded power
- Assign channels automatically with auto map function



### S-4000D

Splitter & Power Distributor

- REAC splitter equipped with embedded power
- 10 REAC ports including 8 ports of REAC Embedded Power for M-48s

## PERSONAL MIXING



### M-48

Live Personal Mixer

- Built-in ambient mic aids in communicating with other musicians as well as enabling a stage/room "presence"
- Volume, Pan, 3-band EQ and built-in Reverb per group-all instantly adjustable by convenient encoder knobs

## RECORDING



### R-1000

48-Track Recorder/Player

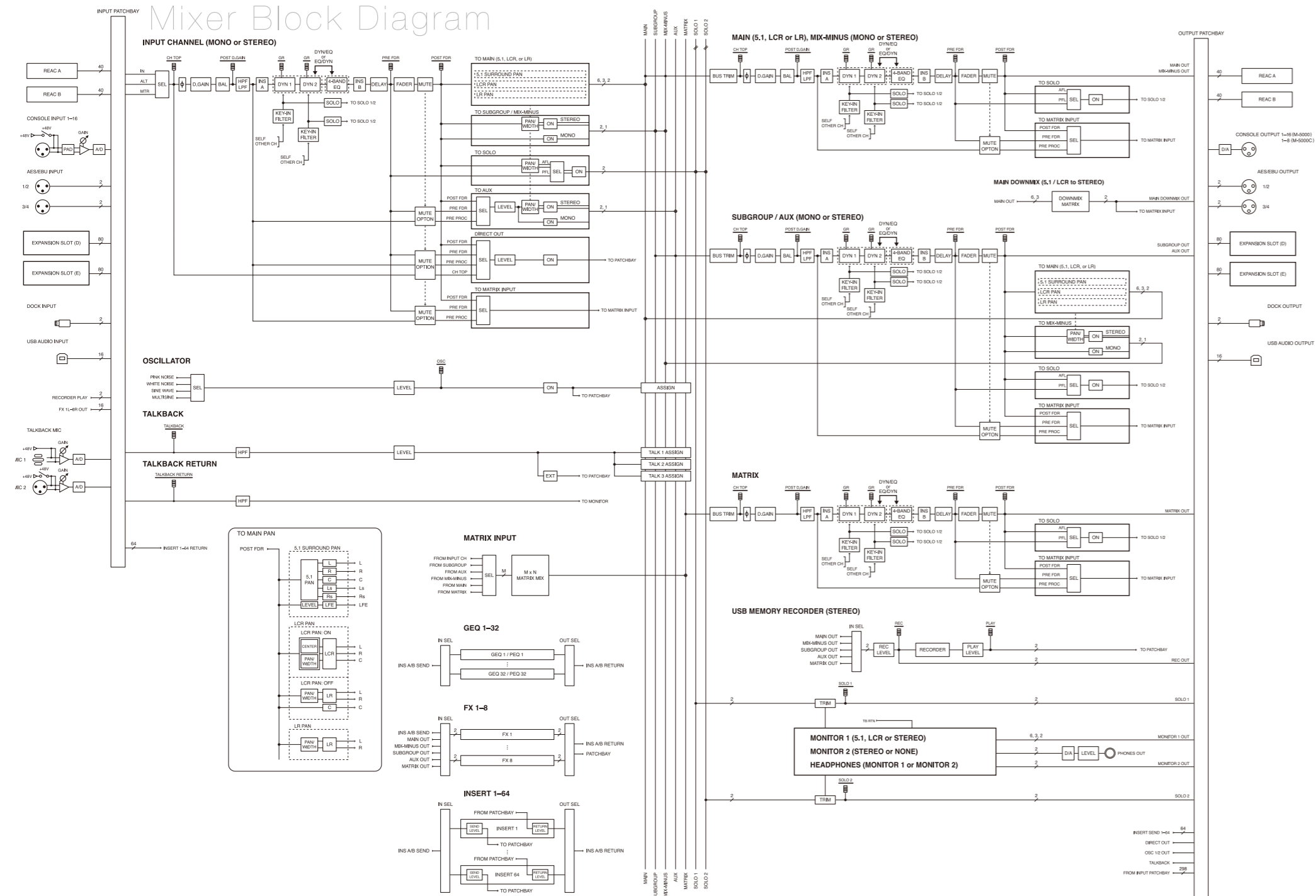
- Records and plays up to 48/24 tracks (at 48/96kHz) of 24-bit audio in BWF format
- Ideal for Virtual Sound Checks, Rehearsals, Playback and Training



**SSD-128G**  
Solid State Drive Unit

**HDD-500G**  
Hard Disk Drive Unit

# Mixer Block Diagram



# Specifications

PROCESSING	
	M-5000
<b>Mixing Channels</b>	Up to 128 CH (combination of INPUT CHANNEL, MAIN, SUBGROUP, AUX, MIX-MINUS, MATRIX, MONITOR, COMM, OSC, HEADPHONES)
<b>Inputs</b>	Max 300 ports (96 kHz), Max 460 ports (48 kHz / 44.1 kHz) • CONSOLE: 16 • AES/EBU: 4 • REAC: 40 x 2 • EXPANSION SLOT: 80 x 2 (96 kHz), 160 x 2 (48 kHz / 44.1 kHz) • USB AUDIO: 16 • DOCK: 2 • USB RECORDER: 20 • FX 1L-8R: 16 • TALKBACK: 2 • OSC: 2
<b>Outputs</b>	• AES/EBU: 4 • REAC: 40 x 2 • EXPANSION SLOT: 80 x 2 (96 kHz), 160 x 2 (48 kHz / 44.1 kHz) • USB AUDIO: 16 • DOCK: 2 USB • RECORDER: 2 • FX 1L-8R: 16
<b>Internal Processing</b>	72 bits (fixed point, bus summing)
<b>Signal Processing</b>	AD/DA Conversion: 24 bit Sampling Rate: 96 kHz, 48 kHz, 44.1 kHz
<b>Console Latency</b>	1.1ms (typ) *Total system latency of audio signal from console inputs to console outputs (at 96kHz).

CONNECTORS	
	M-5000
<b>Connectors</b>	INPUT jacks (1 - 16): XLR-3-31 type (balanced, phantom power) TALKBACK MIC 2 jacks: XLR-3-31 type (balanced, phantom power) AES/EBU IN jacks (1/2, 3/4): XLR-3-31 type (balanced) PHONES 1 jack: Stereo 1/4 inch phone type PHONES 2 jack: Stereo miniature phone type REAC ports (A, B, SPLIT/BACKUP): RJ-45 EtherCon type, REAC SPLIT/BACKUP port supports REAC EMBEDDED POWER. WORD CLOCK connector (IN, OUT): BNC type RS-232C connector: DB-9 type MIDI connector (OUT/THRU, IN) USB port (MEMORY): USB type A USB WLAN ADAPTOR port: USB type A USB COMPUTER port: USB type B LAN port: RJ45 type DOCK CABLE port: 10-pin mini DIN type GP I/O port: DB-25 type FOOT SWITCH jacks (1, 2): 1/4-inch TRS phone type EXT. POWER DC IN jack: XLR-4-32 type *XLR type: 1 GND, 2 HOT, 3 COLD *Phantom power: DC +48 V (unloaded maximum), 14 mA (maximum load) (All XLR type inputs)
<b>Output Impedance (typ.)</b>	PHONES jacks (1, 2): 45 ohms OUTPUT jacks (1 - 16): 600 ohms
<b>Recommended Load Impedance</b>	PHONES jacks (1, 2): 32 ohms or greater OUTPUT jacks (1 - 16): 10 k ohms or greater
<b>Minimum Load Impedance</b>	PHONES jacks (1, 2): 16 ohms
<b>Nominal Output Level (typ.)</b>	OUTPUT jacks (1 - 16): +4 dBu (Load impedance: 10 k ohms) OUTPUT jacks (1 - 8): +4 dBu (Load impedance: 10 k ohms)
<b>Non Clip Maximum Output level (1 kHz, typ.)</b>	PHONES jacks (1, 2): 500 mW + 500 mW (40 ohms load) OUTPUT jacks (1 - 16): +22 dBu (10 k ohms load) OUTPUT jacks (1 - 8): +22 dBu (10 k ohms load)

INPUT/OUTPUT CHARACTERISTICS		
	M-5000	M-5000C
<b>Input Impedance</b>	INPUT jacks (1 - 16): 7 k ohms TALKBACK MIC 2 jack: 4 k ohms (Phantom: ON)	
<b>Nominal Input Level (Variable, typ.)</b>	INPUT jacks (1 - 16): -65 to -10 dBu (Pad: OFF), -45 to +10 dBu (Pad: ON) TALKBACK MIC 2 jack: -50 to -10 dBu	
<b>Non Clip Maximum Input level (1 kHz, typ.)</b>	INPUT jacks (1 - 16): +8 dBu (Pad: OFF), +28 dBu (Pad: ON) TALKBACK MIC 2 jack: +8 dBu	
<b>Output Impedance (typ.)</b>	PHONES jacks (1, 2): 45 ohms	OUTPUT jacks (1 - 8): 600 ohms
<b>Recommended Load Impedance</b>	PHONES jacks (1, 2): 32 ohms or greater OUTPUT jacks (1 - 16): 10 k ohms or greater	OUTPUT jacks (1 - 8): 10 k ohms or greater
<b>Minimum Load Impedance</b>	PHONES jacks (1, 2): 16 ohms	
<b>Nominal Output Level (typ.)</b>	OUTPUT jacks (1 - 16): +4 dBu (Load impedance: 10 k ohms)	OUTPUT jacks (1 - 8): +4 dBu (Load impedance: 10 k ohms)
<b>Non Clip Maximum Output level (1 kHz, typ.)</b>	OUTPUT jacks (1 - 16): +22 dBu (10 k ohms load)	OUTPUT jacks (1 - 8): +22 dBu (10 k ohms load)

OTHER		
	M-5000	M-5000C
<b>Display</b>	Graphic color LCD 800 x 600 dots (touch screen) Graphic organic light emitting display 256 x 64 dots (Fader Bank Display x 7, User Assignable Display x 1)	
<b>Power Consumption</b>	180 W	
<b>Dimensions</b>	934(W) x 725(D) x 346(H) mm 36-13/16(W) x 28-9/16(D) x 13-5/8(H) inches	740(W) x 725(D) x 346(H) mm 29-3/16(W) x 28-9/16(D) x 13-5/8(H) inches
<b>Weight</b>	36 kg, 79 lbs 6 oz	32 kg, 70 lbs 9 oz
<b>Operation Temperature</b>	+5 to +40 degrees Celsius +41 to +104 degrees Fahrenheit	
<b>Accessories</b>	Owner's manual, Power cord, Dock cable REAC connector cover x 3, Ferrite core x 6 Tablet sheet x 2, Cover	