

MOONWALK SERVICE



DOCUMENTAZIONE

Moonwalk Service

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 **YAMAHA**
CREATING 'KANDO' TOGETHER

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A Reason To Smile

O1V96
DIGITAL MIXING CONSOLE

No Compromise. Just Smaller.

Yamaha's flagship digital mixing consoles are the accepted standards throughout the world: the awesome PM1D for sound reinforcement, broadcast, and theater; the DM2000, DM1000, and 02R96 for sound and music production.

Now the 01V96 brings you the same performance and reliability in a smaller, more affordable format that's perfect for the home or smaller professional production studio. Still, it has a maximum 40-channel input capacity and can be cascaded for applications that require more. And, of course, 24-bit/96-kHz operation is standard. Mixer functions and effects are all inherited from the top-of-the-line DM2000, so you know you're getting the best. Prepare to be amazed at how far Yamaha digital evolution has come. If you thought that cutting-edge digital mixing and processing performance was still beyond reach, here is a very good reason to smile.



Cutting-edge Performance, Capacity, Control & Compatibility

You simply won't find another digital console this compact and affordable that offers this much performance and flexibility. The 01V96 fits comfortably in the small-studio space – and budget – while delivering sound, capacity, control, and compatibility on a par with much larger consoles.

24-bit/96-kHz Performance Takes Digital Sound To the Next Level



Digital audio technology has come a long way since the early days of 16 bits at 44.1 kHz – a format that many considered to be the reason for “harsh”, “cold” sound. The entire industry is now settling on 24-bit/96-kHz digital operation for significantly superior sonic quality. The 01V96 does give you a choice – you can work at 44.1 kHz, 48 kHz, 88.2 kHz, or 96 kHz, depending on the needs of each individual project. But when you want the truly transparent, incredibly dynamic sound of 24-bits at 96 kHz, the 01V96 is ready to deliver. It even includes a comprehensive range of superb 96-kHz compatible stereo effects with 32-bit internal processing.



24 Analog & Digital Channel Inputs ... Expandable to 40

Right out of the box the 01V96 gives you 16 analog channel inputs – 12 with high-performance microphone head amplifiers – and eight digital channel inputs via a built-in ADAT optical interface. The first 12 analog channels will accept microphone signals or balanced/unbalanced line-level signals, while the remaining four channels can be used either as individual balanced/unbalanced line inputs or two stereo pairs. Without going any further you're ready to handle a comprehensive mix of analog and digital inputs. When you need more, Yamaha offers a range of Mini-YGDAL expansion cards that can simply be plugged into the 01V96 expansion slot to provide additional I/O in a variety of formats: ADAT, AES/EBU, TDIF or analog.

20-bus Configuration

The 01V96 offers a main stereo program bus, eight individual mixing buses, two solo buses, and eight auxiliary buses – a total of 20 in all. This gives you plenty of signal-routing options to adapt to just about any mixing requirements.

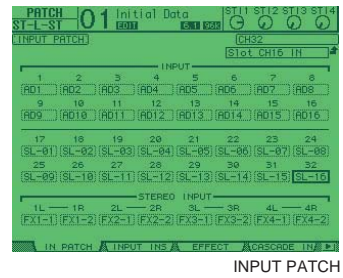
Built-in ADAT Optical Interface

The 01V96 comes with an industry-standard ADAT optical digital I/O interface built right in – no options necessary. ADAT “Lightpipe” optical I/O is standard on a wide range of current digital sound gear, so you can simply plug in via optical cables for 8 digital inputs and 8 digital outputs that will handle your digital signals without compromise. Additional optical I/O capacity can be added via the 01V96 expansion slot, as necessary.



Fast, Flexible Digital Patching

All available inputs, outputs, effects, and channel inserts can be assigned to any of the console's channels or outputs via the 01V96's remarkably versatile, easy-to-use digital patching system. For example, any of the effect processors can be assigned to an auxiliary bus for send-type operation, or inserted directly into any input channel as required. A direct out function also allows the signal from any of the input channels to be routed directly to any digital or analog output. The eight auxiliary buses can also be patched to anywhere in the system. Centralized control means you'll never have to run around to physically re-patch cables whenever you need to reconfigure the system, and patch setups you might want to use again can be stored in the 01V96 "patch library" for instant recall at any time.



INPUT PATCH

99-Scene Memory

Complete console setups can be memorized and instantly recalled via the 01V96 SCENE MEMORY controls. Memory is provided for up to 99 scenes. In addition to recalling scenes from the panel controls you can recall them remotely via MIDI program change messages, providing a handy degree of automation capability.



Integrated DAW Control



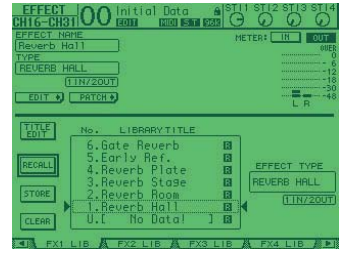
The 01V96 has been designed to integrate tightly with leading digital audio workstations to create a complete production and mixing environment. Extensive support is provided for Digidesign's Pro Tools® system as well as Steinberg's Nuendo® DAW – full control of mixing and processing parameters, as well as transport/track-arming control and access to editing functions – directly from the 01V96 control surface. There's also a "General DAW" mode that provides compatibility with other workstations.



TRANSPORT (USER DEFINED KEYS ASSIGN)

Internal Effects Fully Support 96-kHz Processing

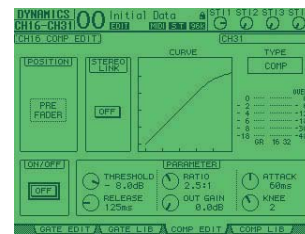
You could use external digital effect processors with the 01V96, but what's the point when it features top-performance 24-bit/96kHz effect processors built-in? Also, you're going to compromise audio quality if you have to convert down to a lower sampling rate for effect processing – which is exactly what's going to happen if you use hardware or software processors that don't offer 24-bit/96kHz performance anywhere in your signal chain. That's why Yamaha included a comprehensive range of 96-kHz compatible stereo effects in the 01V96. You can use two effects simultaneously at 88.2/96-kHz, and up to four effects at lower sampling frequencies.



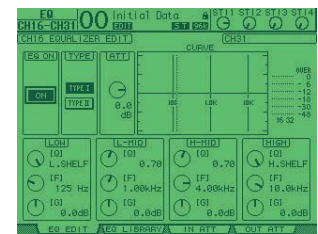
FX1 LIB

Top-quality Compression, Gating, EQ and Delay

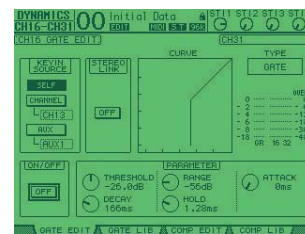
All input channels on the 01V96 feature flexible, independent compression and gating/ducking processors for dynamics control. All bands on the 4-band parametric channel equalizers are fully sweepable from 20 Hz to 20 kHz, with bandwidth variable from 0.1 to 10 and a ±18dB gain range for extraordinary equalization flexibility. The channel delays also go well beyond the norm, with a maximum delay of 452 milliseconds (96 kHz mode). Even the stereo bus, eight mix buses, and eight aux buses have individual compression and EQ!



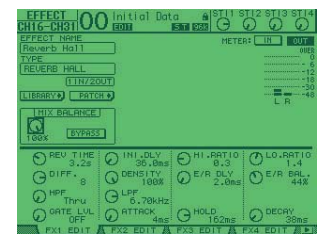
COMP EDIT



EQUALIZER EDIT



GATE EDIT



FX1 EDIT

Expandable Data Libraries

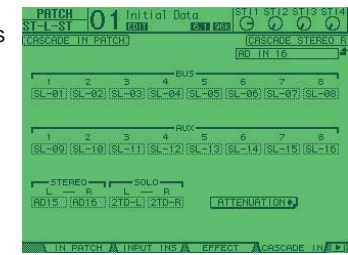
Setting up EQ, compression, and other parameters for a mix from scratch can be a daunting task, so Yamaha has provided an extensive selection of presets in a range of "libraries" that can simply be selected and used unmodified, or edited to suit specific requirements. Libraries are provided for effects, compression, gating, EQ, I/O patching, and channel setups. Of course, your own setups can be added to the libraries for instant recall whenever they are needed.



EFFECT LIBRARY

01V96 Cascade Link

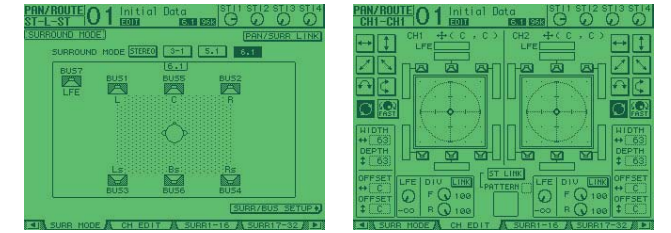
When you really need high capacity – particularly for sound reinforcement applications – the 01V96 offers "01V96 Cascade Link" capability that allows two 01V96 units to be cascaded to create up to an 80-channel mixing system at an unbelievably affordable price!



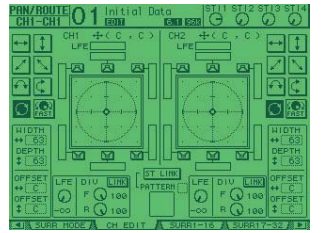
CASCADE IN PATCH

Surround Panning

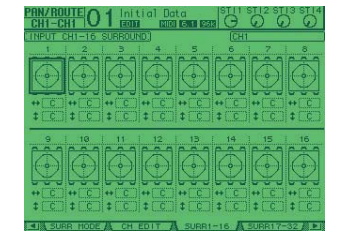
Surround is becoming an important part of modern sound production. The 01V96 features 6.1, 5.1 and 3-1 surround panning modes so you can create surround mixes without having to sacrifice features or performance in other areas.



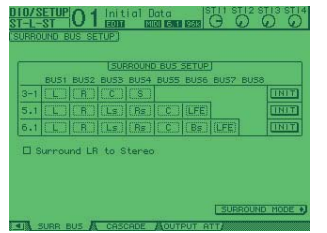
SURROUND MODE



SURROUND CH EDIT



INPUT CH1-16 SURROUND



SURROUND BUS SETUP

Studio Manager Software Supplied



The 01V96 comes supplied with Yamaha's Studio Manager software application for both Macintosh and Windows platforms. Studio Manager gives you complete access to all parameters for either on-line or off-line control, and the program's visual interface makes it easy to relate on-screen controls to the corresponding console functions. The Studio Manager can also be used to manage an extensive archive of mix data.



* Software screen is not final.

Refined User Interface

Even the 01V96 user interface has evolved from the original 01V in many ways, now more closely resembling its big brothers – the 02R96 and DM2000 – in terms of layout and ease of operation. Overall, you'll find that the 01V96 allows analog-style hands-on operation that will contribute to smooth, efficient workflow. There are even eight user-defined keys that can be assigned to functions of your choice.



1 Large LCD Panel

The new 01V96 display is a high-resolution 320 x 240 dot LCD panel that provides easy visual access to all of the console's functions and parameters. Many parameters are displayed graphically so you can see what's happening at a glance – EQ curves and compression parameters are especially “readable” in this format.

2 Channel Strips With Precision 100-mm Motor Faders

The 16 channel strips on the 01V96 panel provide access to the most essential operations for the corresponding channels. Depending on the currently selected layer, the channel strips will control channels 1 through 16, channels 17 through 32, or the eight AUX sends and eight buses (the “Master Layer”). Also the channel faders will function according to the settings in the FADER MODE section. In addition to a 100-millimeter motor fader, each channel strip includes a channel ON/OFF key, a SOLO key, and a SEL key that assigns the channel as the console’s “selected channel”. Detailed panning and EQ control for the currently selected channel is available via the SELECTED CHANNEL controls. The master STEREO fader is also a 100-mm motor type, with its own ON and SEL keys.

3 Layer-switching For Fast 32-channel + Aux/Bus Fader Access

One of the advantages of digital control is that it allows extraordinary power and flexibility to be packed into minimum space. The 01V96 has 17 physical 100-millimeter motor faders. The first 16 can be instantly switched to handle input channels 1 through 16, 17 through 32, or auxiliary sends 1 through 8 and buses 1 through 8, via the console’s LAYER switches. There’s also a ST IN layer switch that switches between the stereo 1/2 or 3/4 inputs for the stereo layer controls. Having all controls right in front of you at all times not only save space, but it also means that all operations can be carried out without having to move away from the monitoring “sweet spot”.

4 Fader Mode

The FADER MODE keys allow the 01V96 faders to be instantaneously switched between fader and auxiliary level control. And because the faders feature fast, precise motor-drive mechanisms they immediately respond by flying to the appropriate settings for the selected mode.

5 Display Access

The DISPLAY ACCESS keys determine which type of data will be shown on the LCD panel – a total of 12 selectable categories. This approach minimizes the need to scroll through on-screen lists when you need access to a particular type of data.

6 Selected Channel Controls

The SELECTED CHANNEL controls include the hands-on panning and EQ controls for the currently selected channel, with analog-style buttons and knobs for direct, easy access to the parameters. Need to adjust the high-mid frequency a little? Just tap the HIGH MID key and turn the FREQUENCY knob until you get the sound you want.

7 Scene Memory

Here’s where you can store all console parameters as a new scene, or instantly recall previously-stored scenes. The current scene number – 01 through 99 – is shown on the LCD panel. Additional scene memories can be managed via a computer running the supplied Studio Manager software.

8 User Defined Keys

These 8 keys can be assigned to control any functions you choose. You could, for example, use them to recall input patch setups, to arm MTR tracks for recording, or to handle locator functions. When the REMOTE layer is selected, the USER DEFINED KEYS are automatically assigned to Pro Tools® control functions by default.

9 Data Entry

Large cursor, INC/DEC, and enter keys are complemented by a data entry dial that lets you spin in values quickly and easily. The data entry dial also doubles as a shuttle/scrub dial for recorder or DAW control.

10 Analog Input Section

Most of the 01V96 input connectors are top-mounted for easy access in any application. Inputs 1 through 12 feature high-performance head amplifiers for microphone or line input that deliver a pristine signal to the console’s precision 24-bit/96-kHz A/D converters. 48-volt phantom power for condenser microphones is switchable in 4-channel groups, trim controls and pad switches facilitate optimum level matching with the source, and channel inserts make it easy to insert external analog processing gear into the pre-A/D signal path. Inputs 13 through 16 accept line-level signals singly (each input has an independent trim control) or in pairs for stereo input.

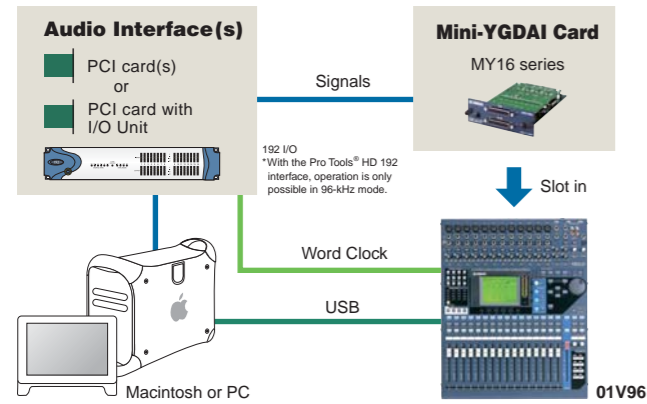
11 Rear Panel

The rear panel is home to balanced analog stereo and monitor outputs as well as four balanced “omni” outputs. The optical IN and OUT connectors for the 01V96’s built-in ADAT interface are also located on the rear panel. There are also digital 2-track inputs and outputs featuring coaxial connectors. On-board sample rate conversion allows CD players and other digital sources connected to the digital input to be monitored or routed to an input channel without having to be synchronized to the system clock. A range of synchronization and control options are available via word clock inputs and outputs, MIDI connectors, and a USB “TO HOST” connector which can be used for computer control via the supplied Studio Monitor software. The rear panel also has an expansion slot which will accept a wide range of Yamaha mini-YGDAI expansion cards that can add up to 16 additional channels in a variety of formats.

At Home In Any Application

Music production, sound reinforcement, broadcast, theater ... the 01V96 has the performance and versatility to work wonders in just about any application.

Computer-based 96-kHz Recording



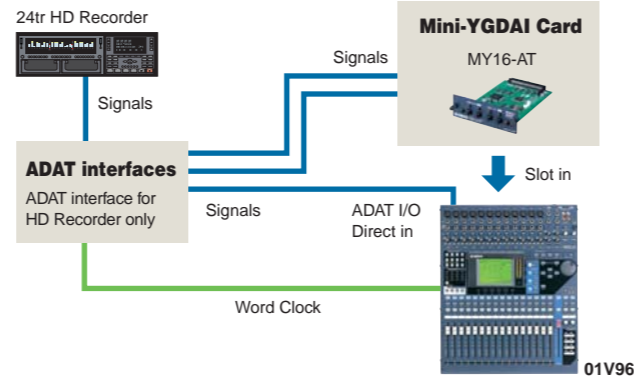
With the new Pro Tools® HD system the 01V96 can directly transfer eight channels of 96-kHz audio via a single I/O card (i.e. there's no need to use "double channel mode"). Add to this the 01V96's advanced control surface features, and you have an extraordinarily powerful, efficient computer-based hard-disk recording system. If you'd rather combine the 01V96 with Steinberg's Nuendo® audio workstation software you can use "double-channel mode" for 96-kHz recording (see column below). While the 01V96 functions as an advanced control surface for the software, it can also handle critical audio processing tasks as well as monitoring.

Connection with 96-kHz Recorders & Workstations

Although the 01V96 handles 96 kHz audio as standard, most of the currently available digital recorders and workstations can handle 96 kHz audio only in double channel mode (using two tracks to make one). In this configuration the 01V96 uses one channel per (96-kHz) track, but twice the number of I/O connections must be used. MY8-AT/TD/AE cards work in double channel mode to handle 16 channels of 44.1/48-kHz audio or up to 8 channels of 96 kHz audio in double channel mode. With the latest equipment that handles 96-kHz audio as standard (in double speed mode like the 01V96) you can make standard connections using the MY8-AE96 card. The MY8-AE96 card can work either in double speed or double channel mode.

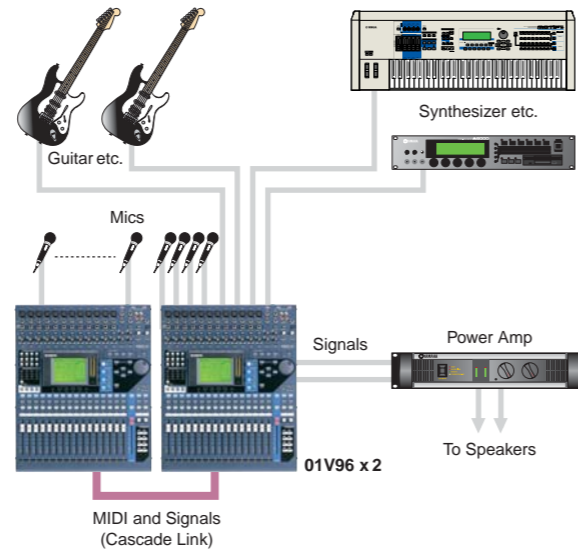


Direct Connect To 24-track HDR



The 01V96's built-in ADAT optical interface is an advantage when connecting directly to a stand-alone hard disk recorder for 24-bit/48-kHz recording. Here's a system in which a stand-alone recorder is paired with the 01V96 for an all-digital signal path and awesome mixing and processing power for a full 24 tracks.

Sound Reinforcement



Sound reinforcement applications generally require much more input capacity than studio production. If a single 01V96 won't do it, try cascading two 01V96s – you now have up to 80 input channels to handle all but the biggest sound reinforcement applications. The built-in dynamics and effects can be a tremendous advantage in this type of application, too.

24-bit/96 kHz Expansion Options

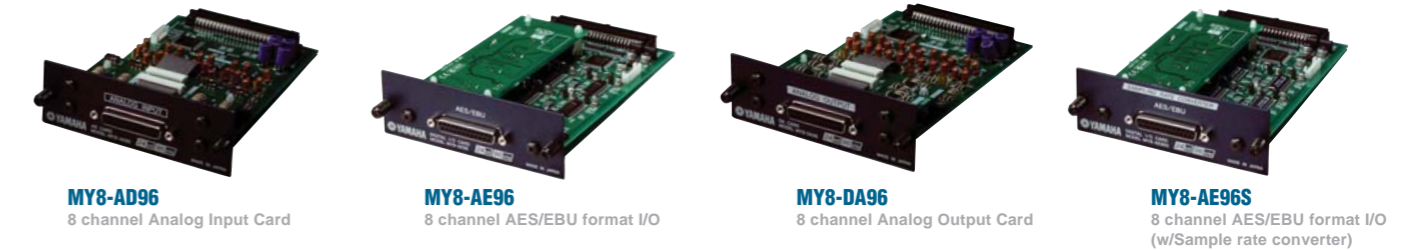
Although the 01V96 offers plenty of I/O capacity in it's standard configuration, the rear panel mini-YGDAI expansion slot offers room for more. The expansion slot is 24-bit/96-kHz compatible, so you can select mini-YGDAI plug-in cards to create the input/output configuration that's perfect for your needs. Whether you need digital I/O in ADAT, TASCAM, or AES/EBU format, or extra analog I/O capability, the appropriate cards are available. Top-quality I/O and processing cards are also available from other industry-leading manufacturers such as Apogee® and Waves®.

Mini-YGDAI Cards

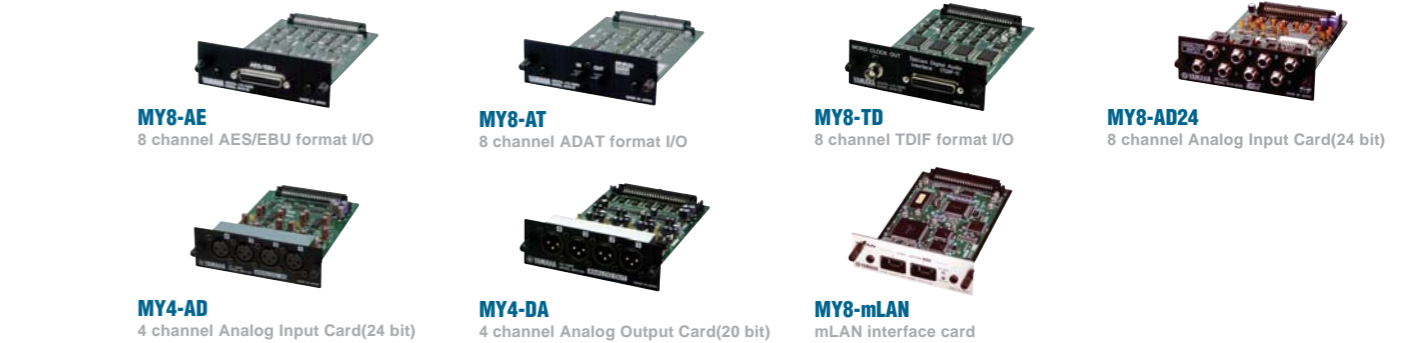
16 I/O Series



96-kHz Series



Standard Series



Third Party Models



Accessory



GENERAL SPECIFICATIONS

Number of scene memories	99		
Sampling Frequency	Internal External	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz Normal rate 44.1 kHz -10% - 48 kHz + 6% Double rate 88.2 kHz -10% - 96 kHz + 6%	
Signal Delay	≤ 1.6 ms CH INPUT to STEREO OUT (@Sampling frequency = 48 kHz) ≤ 0.8 ms CH INPUT to STEREO OUT (@Sampling frequency = 96 kHz)		
Fader	100 mm motorized x 17		
Total Harmonic Distortion* Input Gain=Min.	CH INPUT to STEREO OUT ≤ 0.05% 20 Hz to 20 kHz @+14 dB into 600 Ω ≤ 0.01% 1 kHz @+24 dB into 600 Ω (@Sampling frequency = 48 kHz) ≤ 0.05% 20 Hz to 40 kHz @+14 dB into 600 Ω ≤ 0.01% 1 kHz @+24 dB into 600 Ω (@Sampling frequency = 96 kHz)		
Frequency Response	CH INPUT to STEREO OUT 0.5, -1.5 dB 20 Hz - 20 kHz @ + 4 dB into 600 Ω (@Sampling frequency = 48 kHz) 0.5, -1.5 dB 20 Hz - 40 kHz @ + 4 dB into 600 Ω (@Sampling frequency = 96 kHz)		
Dynamic Range (maximum level to noise level)	110 dB typ. DA Converter (STEREO OUT) 105 dB typ. AD+DA (to STEREO OUT) @fs = 48 kHz 105 dB typ. AD+DA (to STEREO OUT) @fs = 96 kHz		
Hum & Noise** (20 Hz-20 kHz) Rs = 150 Ω Input Gain = Max. Input Pad = 0 dB Input Pad = 0 dB Input Sensitivity = -60 dB	-128 dB equivalent input noise -86 dB residual output noise. STEREO OUT STEREO OUT off -86 dB (90 dB S/N) STEREO OUT STEREO fader at nominal level and all CH INPUT faders at minimum level -64 dB (68 dB S/N) STEREO OUT STEREO fader at nominal level and one CH INPUT fader at nominal level		
Maximum Voltage Gain	74 dB CH INPUT (CH1-12) to STEREO OUT/OMNI (BUS) OUT 40 dB CH INPUT (CH13-16) to STEREO OUT 74 dB CH INPUT (CH1-12) to OMNI (AUX) OUT (via pre input fader) 74 dB CH INPUT (CH1-12) to MONITOR OUT (via STEREO BUS)		
Crosstalk (@1 kHz) Input Gain = Min.	80 dB adjacent input channels (CH1-12) 80 dB adjacent input channels (CH13-16) 80 dB input to output		
Power Requirements	U.S./Canada Others	120 V 220-240 V	90 W 90 W 60 Hz 50/60 Hz
Dimensions	430 (W) x 540 (D) x 150 (H) mm		
Net Weight	15 kg		
Operating free-air temperature range	10 - 35 °C		
Storage temperature range	-20 - 60 °C		
Accessories	AC Cable, CD-ROM (Studio manager)		
Option	Digital interface card (MY16, MY8, MY4 series), RACK MOUNT KIT: RK124		

* Total Harmonic Distortion is measured with a 6 dB/octave filter @80 kHz.
** Hum & Noise are measured with a 6 dB/octave filter @12.7 kHz, equivalent to a 20 kHz filter with infinite dB/octave attenuation.

LIBRARIES

	Number of factory presets	Number of user libraries
Effect libraries (EFFECT1-4)	44	76
Compressor libraries	36	92
Gate libraries	4	124
EQ libraries	40	160
Channel libraries	2	127
Input patch libraries	1	32
Output patch libraries	1	32

Available Mini-YGDAI card specifications

* Guidance on the use of Mini-YGDAI cards http://www2.yamaha.co.jp/div/webmg/pa_card/e/check.php3

Maker	Model	Function	Input	Output ¹	Format	Resolution	Frequency	The number of Available cards	Note
Yamaha	MY8-AT	Digital I/O	8	8	ADAT	20 bit	44.1/48 kHz	1	Can handle 24 bit/96k Hz by double channel mode
	MY8-TD	Digital I/O	8	8	TASCAM	24 bit	44.1/48 kHz	1	Can handle 24 bit/96 kHz by double channel mode
	MY8-AE	Digital I/O	8	8	AES/EBU	24 bit	44.1/48 kHz	1	Can handle 24 bit/96 kHz by double channel mode
	MY4-AD	ANALOG IN	4	-	-	24 bit	44.1/48 kHz	1	
	MY8-AD	ANALOG IN	8	-	-	20 bit	44.1/48 kHz	1	
	MY4-DA	ANALOG OUT	-	4	-	20 bit	44.1/48 kHz	1	
	MY8-AD24	ANALOG IN	8	-	-	24 bit	44.1/48 kHz	1	
	MY8-AD96	ANALOG IN	8	-	-	24 bit	44.1/48/88.2/96 kHz	1	
	MY8-DA96	ANALOG OUT	-	8	-	24 bit	44.1/48/88.2/96 kHz	1	
	MY8-AE96S	Digital I/O	8	8	AES/EBU	24 bit	44.1/48/88.2/96 kHz	1	Sampling Rate Converter for input
	MY8-AE96	Digital I/O	8	8	AES/EBU	24 bit	44.1/48/88.2/96 kHz	1	
	MY8-mLAN	mLAN Interface	8	8	IEEE1394	24 bit	44.1/48 kHz	1	Maximum 5 Nodes
	MY16-AT	Digital I/O	16	16	ADAT	24 bit	44.1/48 kHz	1	Can handle 24 bit/96 kHz by double channel mode
	MY16-AE	Digital I/O	16	16	AES/EBU	24 bit	44.1/48 kHz	1	Can handle 24 bit/96 kHz by double channel mode
MY16-TD	Digital I/O	16	16	TASCAM	24 bit	44.1/48 kHz	1	Can handle 24 bit/96 kHz by double channel mode	
Waves	YS6K	Effect & I/O	8	8	ADAT	24 bit	44.1/48 kHz	1	
Apogee	AP8AD	ANALOG IN	8	-	-	24 bit	44.1/48/88.2/96 kHz	1	4ch @fs = 88.2, 96 kHz
	AP8DA	ANALOG OUT	-	8	-	24 bit	44.1/48/88.2/96 kHz	1	4ch @fs = 88.2, 96 kHz

*1. Selectable from STEREO/BUS/AUX/DIRECT OUT/INSERT OUT/CASCADE OUT (STEREO, BUS1-8, AUX1-8, SOLO). See the user's manual for further information.
• Details depend on each interface card.

ANALOG INPUT CHARACTERISTICS

Input Terminals	PAD	GAIN	Actual Load Impedance	For Use With Nominal	Input level			Connector in Console
					Sensitivity*1	Nominal	Max. before clip	
CH INPUT 1-12	0	-60dB	3k Ω	50-600 Ω Mics & 600 Ω Lines	-70 dB (0.245 mV)	-60 dB (0.775 mV)	-40 dB (7.75 mV)	A: XLR-3-31 type (Balanced) *2 B: Phone Jack (TRS) (Balanced) *3
	20	-16dB			-26 dB (38.8 mV)	-16 dB (123 mV)	+4 dB (1.23 V)	
CH INPUT 13-16		-26dB	10k Ω	600 Ω Lines	-36 dB (12.3 mV)	-26 dB (38.8 mV)	-6 dB (388 mV)	Phone Jack (TRS) (Balanced) *3
		+4dB			-6 dB (388 mV)	+4 dB (1.23 V)	+24 dB (12.28 V)	
CH INSERT IN 1-12			10k Ω	600 Ω Lines	-6 dB (388 mV)	+4 dB (1.23 V)	+24 dB (12.28 V)	Phone Jack (TRS) (Unbalanced) *4
2TR IN (L, R)			10k Ω	600 Ω Lines	-10 dBV (316 mV)	-10 dBV (316 mV)	+10 dBV (3.16 V)	RCA Pin Jack (Unbalanced)

*1. Sensitivity is the lowest level that will produce an output of + 4 dB (1.23 V) or the nominal output level when the unit is set to maximum gain. (all faders and level controls are maximum position.)
*2. XLR-3-31 type connectors are balanced. (1 = GND, 2 = HOT, 3 = COLD)
*3. Phone jacks are balanced. (Tip = HOT, Ring = COLD, Sleeve = GND)
*4. CH INSERT IN/OUT phone jacks are unbalanced. (Tip = OUTPUT, Ring = INPUT, Sleeve = GND)
• In these specifications, when dB represents are specific voltage, 0 dB is referenced to 0.775 Vrms.
• For 2TR IN levels, 0 dBV is referenced to 1.00 Vrms.
• All input AD converters (CH INPUT 1-16) are 24bit linear, 128times oversampling (@fs = 44.1, 48 kHz).
• +48 V DC (phantom power) is supplied to CH INPUT 1-12 XLR type connectors.
3 PHANTOM + 48 V switches CH1-4, 5-8, 9-12 turn on the phantom power for inputs 1-4, 5-8, 9-12 respectively.

ANALOG OUTPUT CHARACTERISTICS

Output Terminals	Actual Source Impedance	For Use With Nominal	Output Level		Connector in Console
			Nominal	Max. beforeclip	
STEREO OUT (L, R)	150 Ω	600 Ω Lines	+4 dB (1.23 V)	+24 dB (12.28 V)	XLR-3-32 type (Balanced) *1
OMNI OUT 1-4	150 Ω	600 Ω Lines	+4 dB (1.23 V)	+24 dB (12.28 V)	Phone Jack (TRS) (Balanced) *2
MONITOR OUT (L, R)	150 Ω	600 Ω Lines	+4 dB (1.23 V)	+24 dB (12.28 V)	Phone Jack (TRS) (Balanced) *2
CH INSERT OUT 1-12	600 Ω	10 k Ω Lines	+4 dB (1.23 V)	+24 dB (12.28 V)	Phone Jack (TRS) (Unbalanced) *3
2TR OUT (L, R)	10k Ω	600 Ω Lines	-10 dBV (316 mV)	+10 dBV (3.16 V)	RCA Pin Jack (Unbalanced)
PHONES	100 Ω	8 Ω Phones	4 mW	25 mW	Stereo Phone Jack (TRS) (Unbalanced) *4
		40 Ω Phones	12 mW	75 mW	

*1. XLR-3-32 type connectors are balanced. (1 = GND, 2 = HOT, 3 = COLD)
*2. Phone jacks are balanced. (Tip = HOT, Ring = COLD, Sleeve = GND)
*3. CH INSERT IN/OUT phone jacks are unbalanced. (Tip = OUTPUT, Ring = INPUT, Sleeve = GND)
*4. PHONES stereo phone jack is unbalanced. (Tip = LEFT, Ring = RIGHT, Sleeve = GND)
• In these specifications, when dB represents are specific voltage, 0 dB is referenced to 0.775 Vrms.
• 2TR OUT (L, R), 0 dBV is referenced to 1.00 Vrms.
• All output DA converters are 24 bit, 128 times oversampling (@fs = 44.1, 48 kHz).

DIGITAL INPUT CHARACTERISTICS

Terminal	Format	Data Length	Level	Connector in Console
2TR IN DIGITAL	IEC-60958	24 bit	0.5 Vpp/75 Ω	RCA Pin Jack
ADAT IN	ADAT *1	24 bit	-	OPTICAL

*1. ALESIS Proprietary Multichannel Optical Digital Interface Format.

DIGITAL OUTPUT CHARACTERISTICS

Terminal	Format	Data Length	Level	Connector in Console
2TR OUT DIGITAL	IEC-60958 *1 Consumer use	24 bit *2	0.5 Vpp/75 Ω	RCA Pin Jack
ADAT OUT	ADAT *3	24 bit	-	OPTICAL

*1. channel status of 2TR OUT DIGITAL
type : linear PCM
category code : Digital signal mixer
copy prohibit : NO
emphasis : NO
clock accuracy : Level II (1000 ppm)
sampling rate : depends on the internal configuration
*2. dither : word length 16/20/24 bit
*3. ALESIS Proprietary Multichannel Optical Digital Interface Format.

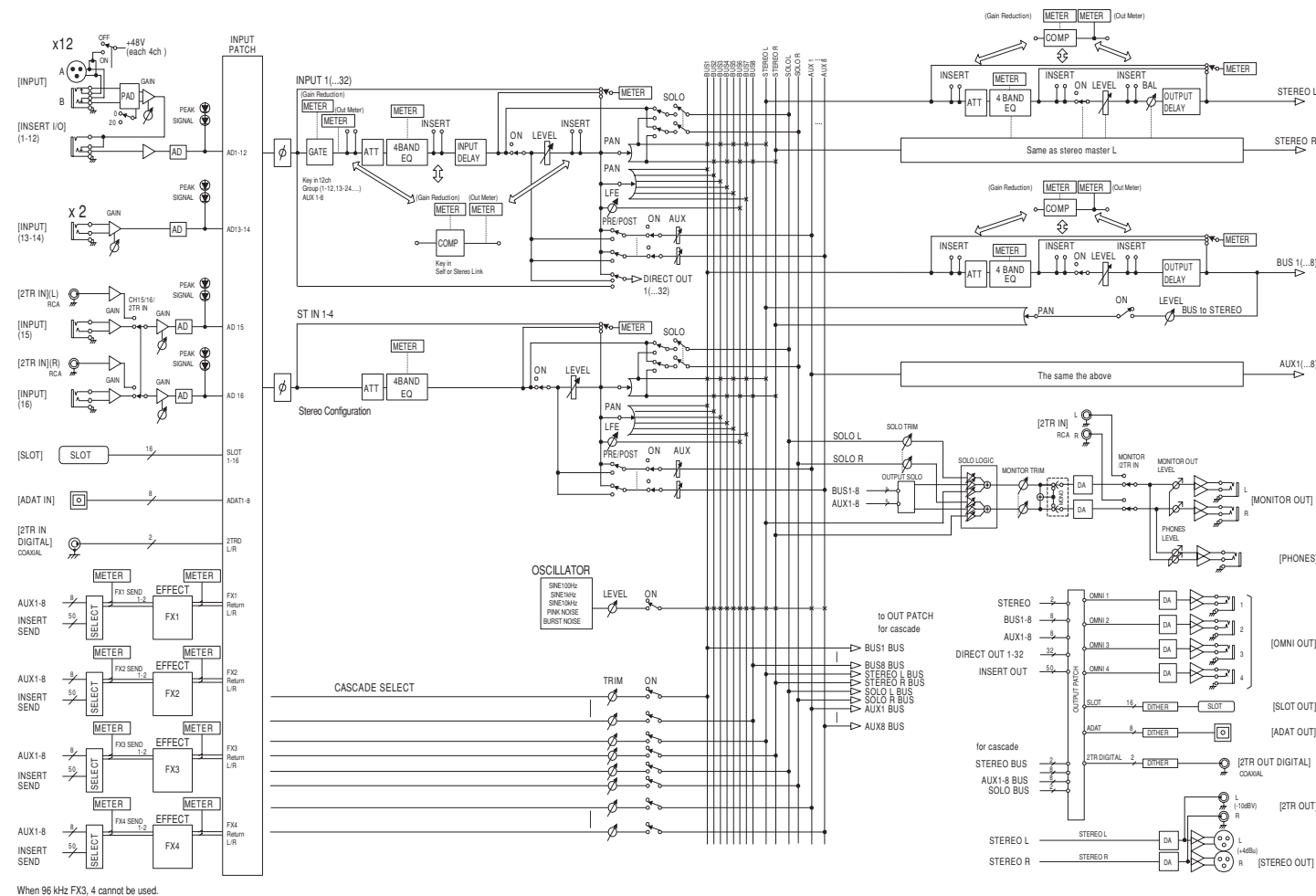
CONTROL I/O CHARACTERISTICS

Terminal	Format	Level	Connector in Console	
TO HOST USB	USB	0 V - 3.3 V	B type USB connector	
MIDI	IN *1	MIDI	-	DIN Connector 5P
	OUT	MIDI	-	DIN Connector 5P
	THRU	MIDI	-	DIN Connector 5P
WORD CLOCK	IN	-	TTL/ 75 Ω	BNC Connector
	OUT	-	TTL/ 75 Ω	BNC Connector

*1. MIDI IN can use as TIME CODE IN MTC.

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01V96 Block Diagram



When 96 kHz FX3, 4 cannot be used.

Dimensions

