

SPECIFICATIONS

GENERAL SPECIFICATIONS

Internal processing	32bit (Accumulator 58bit)
Number of scene memories	99
Sampling frequency	Internal 44.1kHz, 48kHz, 88.2kHz, 96kHz External Normal rate: 44.1kHz(-10%) - 48kHz(+6%) Double rate: 88.2kHz(-10%) - 96kHz(+6%)
Signal delay	Less than 1.6ms CH INPUT to STEREO OUT (@Sampling frequency = 48kHz) Less than 0.8ms CH INPUT to STEREO OUT (@Sampling frequency = 96kHz)
Fader	100mm motorized x17
Total harmonic distortion * Input GAIN=Min.	CH INPUT to STEREO OUT Less than 0.05%, 20Hz to 20kHz @ +14dBu into 600Ω Less than 0.01%, 1kHz @ +24dBu into 600Ω (@Sampling frequency = 48kHz) Less than 0.05%, 20Hz to 40kHz @ +14dBu into 600Ω Less than 0.01%, 1kHz @ +24dBu into 600Ω (@Sampling frequency = 96kHz)
Frequency response	CH INPUT to STEREO OUT 0.5, -1.5dB, 20Hz - 20kHz @ +4dBu into 600Ω (@Sampling frequency = 48kHz) 0.5, -1.5dB, 20Hz - 40kHz @ +4dBu into 600Ω (@Sampling frequency = 96kHz)
Dynamic range (maximum level to noise level)	110dB typ. DA Converter (STEREO OUT) 105dB typ. AD+DA (to STEREO OUT) @fs=48kHz 105dB typ. AD+DA (to STEREO OUT) @fs=96kHz
Hum & noise level ** (20Hz-20kHz) Rs=150ohms Input GAIN=Max Input PAD=0dB Input PAD=UdB Input sensitivity:-60dB Maximum voltage gain	-128dBu Equivalent Input Noise. -86dBu residual output noise. STEREO OUT STEREO OUT off. -86dBu (90dB S/N) STEREO OUT STEREO fader at nominal level and all CH INPUT faders at minimum level. -64dBu (68dB S/N) STEREO OUT STEREO fader at nominal level and one CH INPUT fader at nominal level 74dB CH INPUT (CH1-12) to STEREO OUT/OMNI (BUS) OUT 40dB OH INPUT (CH13-16) to STEREO OUT 74dB CH INPUT (CH1-12) to OMNI (AUX) OUT (via pre input fader) 74dB CH INPUT (CH1-12) to MONITOR OUT (via STEREO BUS)
Crosstalk (@1kHz) Input GAIN=min	-80dB adjacent input channels (CH1-12) -80dB adjacent input channels (CH13-16) -80dB input to output

* Total Harmonic Distortion is measured with a 6dB/octave filter @80kHz.

** Hum & Noise are measured with a 6dB/octave filter @12.7kHz; equivalent to a 20kHz filter with infinite dB/octave attenuation.

Power requirements	Japan: AC 100V 50/60Hz, 90W North America: AC120V, 60Hz, 90W Other Areas: AC220-240V, 50/60Hz, 90W
Dimensions (W x H x D)	436 x 148 x 548 mm (17-1/8" x 5-7/8" x 21-5/8")
Weight	14kg (30.86lbs)

LIBRARIES

	Number of factory presets	Number of user libraries
Effect library (EFFECT 1-4)	56	72
Compressor library	36	92
Gate library	4	124
EQ library	40	160
Channel library	2	127
Input patch library	1	32
Output patch library	1	32

ANALOG INPUT CHARACTERISTICS

Input terminal	PAD	GAIN	Actual load impedance	For use with nominal	Input level			Connector
					Sensitivity	Nominal	Max. before clip	
CH INPUT 1 to 12	0	-60dB	3kΩ	50-600Ω Mics & Lines	-70dBu	-60dBu	-40dBu	A: XLR-3-31 type (Balanced) B: TRS phone jack (Balanced)
	20	-16dB			-26dBu	-16dBu	+4dBu	
CH INPUT 13 to 16		-26dB	10kΩ	600Ω Lines	-36dBu	-26dBu	-6dBu	TRS phone jack (Balanced)
		+4dB			-6dBu	+4dBu	+24dBu	
CH INSERT IN 1 to 12			10kΩ	600Ω Lines	-12dBu	-2dBu	+18dBu	TRS phone jack (Unbalanced)
2TR IN [L, R]			10kΩ	600Ω Lines	-10dBV	-10dBV	+10dBV	RCA pin jack (Unbalanced)

ANALOG OUTPUT CHARACTERISTICS

Output terminal	Actual source impedance	For use with nominal	Output level		Connector
			Nominal	Max. before clip	
STEREO OUT L, R	75Ω	600Ω Lines	+4dBu	+24dBu	XLR-3-32 type (Balanced)
OMNI OUT 1 to 4	150Ω	10kΩ Lines	+4dBu	+24dBu	TRS phone jack (Balanced)
MONITOR OUT L, R	150Ω	10kΩ Lines	+4dBu	+24dBu	TRS phone jack (Balanced)
CH INSERT OUT 1 to 12	600Ω	10kΩ Lines	-2dBu	+18dBu	TRS phone jack (Unbalanced)
2TR OUT [L, R]	600Ω	10kΩ Lines	-10dBV	+10dBV	RCA pin jack (Unbalanced)
PHONES	100Ω	8Ω Phones	4mW	25mW	ST phone jack (Unbalanced)
			12mW	75mW	

DIGITAL INPUT CHARACTERISTICS

Terminal	Format	Data length	Level	Connector
2TR IN DIGITAL	IEC-60958	24bit	0.5Vpp/75Ω	RCA pin jack
ADAT IN	ADAT	24bit	—	OPTICAL

DIGITAL OUTPUT CHARACTERISTICS

Terminal	Format	Data length	Level	Connector
2TR OUT DIGITAL	IEC-60958 Consumer use	24bit	0.5Vpp/75Ω	RCA pin jack
ADAT OUT	ADAT	24bit	—	OPTICAL

DIGITAL INPUT/OUTPUT CHARACTERISTICS

Terminal	Format	Data length	Level	Connector
USB	USB 2.0	24bit	—	B type USB connector

CONTROL I/O CHARACTERISTICS

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

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O1V96i

DIGITAL MIXING CONSOLE



Printed in Japan



Capture The Perfect Moment

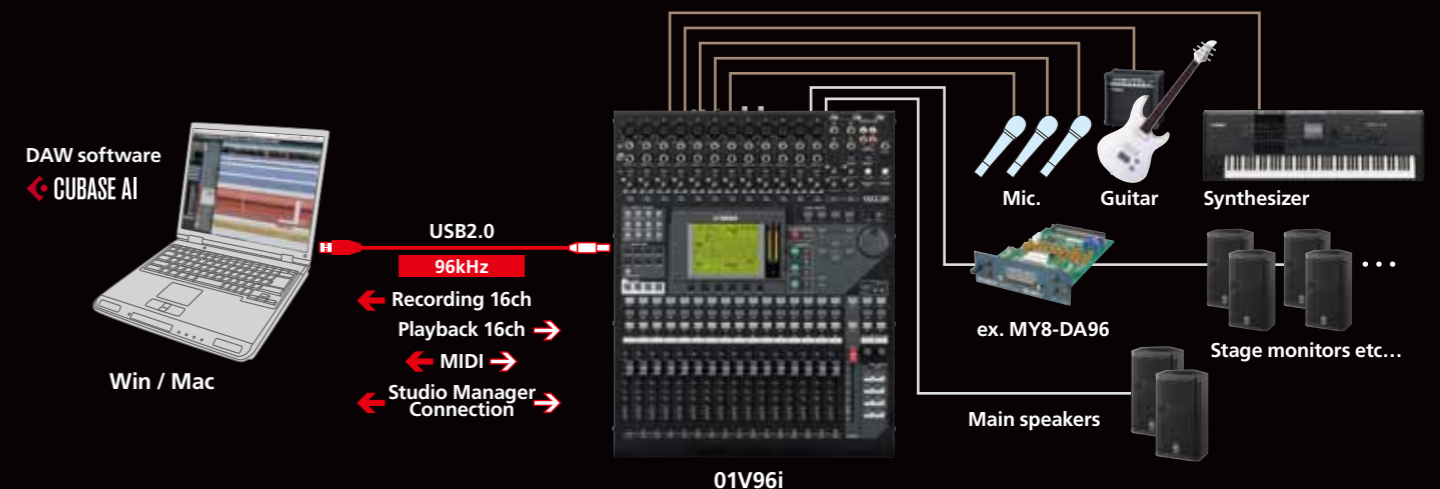
Sometimes everything just comes together—and when it does, the new 01V96i is there to capture that perfect moment for you in stunning 96kHz sound. Since its initial release in 1998, the 01V has been the mixer of choice for a wide variety of applications, ranging from recording and production environments to live sound and installation setups. The 01V96i represents the next step in the evolution of an industry standard, building on the proven configuration of its predecessors to create a compact digital mixer that meets the needs of an expanding user base. Now, with 16 in/16 out USB 2.0 audio streaming at an impressive 96kHz, the latest version of Steinberg's Cubase AI, the full suite of Yamaha's acclaimed Virtual Circuitry Modeling DSP effects and newly improved studio quality head amps, the next generation 01V96i will take every aspect of your mixing and recording to the next level.

01V96i
DIGITAL MIXING CONSOLE

96kHz Multi-Track Live Recording with A Single Connection

96kHz Audio Streaming MIDI DAWcontrol CUBASE AI

To meet the increasing demand for multi-track recording and playback in live sound applications, the 01V96i now features USB 2.0 connectivity—allowing you to effectively take your studio on the road with you. With 16 in/16 out live audio streaming at 96kHz and seamless DAW integration requiring just a single connection, it has never been easier to capture, edit and produce high quality, professional level recordings. USB connectivity also provides extensive two-way communication of MIDI data allowing you to seamlessly combine the precise physical control of your console with all the capability of the latest Cubase AI software that comes bundled with the 01V96i.





Every Masterpiece Started with A Blank Canvas. Shouldn't Yours?

At Yamaha, we believe that the signature on your sound should be your own, not ours. With this philosophy in mind, the 01V96i—like all of our higher-end digital mixing consoles—was designed to provide outstanding sonic transparency, giving you the purest signal reproduction possible as a starting point. With this clear, unaltered medium as the foundation, all of the color, shape and expressive elements of your sound are entirely in your hands.

So now you've got your canvas—time to add color. Yamaha's acclaimed VCM effects faithfully model the analog circuitry of classic effect units right down to the very last resistor and capacitor, bringing the richness and warmth of analog to a digital environment. So whether you're bringing vocals to life with a classic Yamaha SPX reverb, or smoothing out a bassline with a classic compressor from the 70's, you can depend on Yamaha's flexible digital processing to produce stunning vintage authenticity.

24bit/96kHz Performance with Improved Studio-Quality Head Amps



Unlike some digital consoles that achieve operation in 96kHz mode with a reduced number of tracks, 01V96i imposes no such limitations at any of the provided sampling rates, with high resolution 96kHz and 32bit internal processing (58-bit accumulator) as the standard. What's more, all onboard A/D and D/A conversion makes use of top-performance 24bit/96kHz converters. This is particularly important with the 01V96i because it features

improved, studio-quality head amps that offer extremely high resolution and a remarkable sense of "air". With onboard converters operating at the full 24bits and 96kHz, you can be sure that nothing is lost in the digital representation of the warm, transparent output from these exceptional preamps.

96kHz Internal Effects and Top-Quality Compression, Gating and Delay

What's the point of having 24bit/96kHz audio if you have to convert down to a lower sampling rate for effect processing? That's exactly what's happening if you're using hardware or software processors that don't offer 24bit/96kHz performance anywhere in your signal chain. That's why Yamaha included a comprehensive range of 96kHz compatible stereo effects. The 01V96i also features flexible, independent channel compression and gating/ducking processors for dynamics control, 4-band parametric channel equalizers

that offer extra versatility with switchable "type I" or "type II" EQ algorithms, as well as a channel delay. All channel processors, except for channel delay, come with an extensive selection of presets in a range of "libraries" that can simply be used unmodified or edited to suit specific requirements. All channel functions except gating are also provided on all output buses.

Full Suite of Yamaha VCM Effects and High-Resolution REV-X Reverbs

Channel Strip

Bring Back The Classics

The Channel Strip consists of 5 models that employ VCM (Virtual Circuitry Modeling) technology to recreate the sound and characteristics of several classic compression and EQ units from the 70's. Not only do these models faithfully capture the unique saturation of analog circuitry – in part thanks to precise modeling of the original FET gain reduction, tube/transformer buffer amplifier, VCA and RMS detector circuits – but they have also been fine-tuned by leading engineers and feature carefully selected parameters in a simple interface that makes it easier than ever to create the ideal sound.

Compressor 276 (mono) Compressor 276S (stereo)

Recreating the tube-amp saturation and fast response of the most sought-after studio-grade analog compressors, these models are perfect for smoothing out bass, fattening up drum parts or tightening vocals.

Compressor 260 Compressor 260S

These compressors faithfully model the solid-state voltage-controlled amplifier and RMS detection circuitry of the late 70's compressor/limiters, and have been tweaked by some of the best sound engineers in the industry to give optimal response in live situations.

Equalizer 601

The 601 equalizer offers two equalization modes: Clean and Drive. The Clean setting is perfect for gentle tweaking and musical shaping, while the Drive mode models the unique distortion characteristics of 70's analog EQ circuitry, providing superb analog drive and saturation.



NEW VCM EFFECTS

Master Strip

A Reel Advantage

The Master Strip employs VCM technology to recreate both the analog circuitry and tape characteristics that shaped the sound of open-reel tape recorders. Because of their ability to smooth out peak levels and tidy up the response, many high-end recording studios still maintain open-reel recorders such as the Studer A80 mk I, A80 mk IV and A820, and the Ampex ATR100 and others from the 70's and 80's to be used to provide tape compression at the mastering stage. Different types of tape – new BASF, old Ampex, etc. – are also selected and used according to the unique sounds they produce. Open Deck provides models of four machine types: Swiss '70, Swiss '78, Swiss '85, and American '70. You can even combine different record and playback decks for a wider range of variation. You also have a choice of "old" and "new" tape types, tape speed, bias, and EQ settings that can vary the "focus" of the sound, distortion, and saturation characteristics. Now you can easily take advantage of top-end analog sound-shaping techniques in real time using the Yamaha 01V96i digital console.



Vintage Stomp

Phasers on Stun

Stunning authenticity, that is. Vintage Stomp gives you three distinctly different phasers modeled after the most sought-after stompbox effects units of the 70's. Yamaha's VCM technology gives these outstanding recreations all the warmth and atmosphere of the original vintage units, and combines it with the control and processing flexibility that a digital environment affords.



DUAL PHASER



VINTAGE PHASER



MAX 100



Reverb

Bring Your Mix to Life

These high-resolution reverbs employ the latest "REV-X" algorithms first introduced in Yamaha's SPX2000 Digital Multi Effects Processor. The REV-X programs feature the richest reverberation and smoothest decay available, based on years of dedicated research and development. REV-X Hall, REV-X Room, and REV-X Plate programs are provided, with new parameters such as room size and decay envelopes that offer unprecedented definition and finer nuance control. The REV-X Hall and REV-X Room programs have a very open sound, while REV-X Plate delivers a brighter tonality that is ideal for vocals. All models deliver dense, warm reverb that does not interfere with the natural timbre of the source.

Powerful Mixing Capacity, Versatility and Expandability

Don't let its compact construction fool you—the 01V96i has tremendous mixing capacity for a console its size, making it extremely versatile and suitable for a wide range of studio and sound reinforcement applications.

► 40 Input/20 Bus Mixing at 96kHz

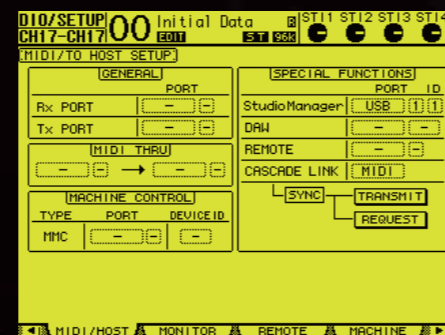
With up to 40 simultaneous inputs and 20 buses at 96kHz, the 01V96i delivers large console power in a rack-mount sized package. Offering a main stereo bus, eight individual mixing buses, two solo buses, and eight auxiliary buses—a total of 20 in all—the 01V96i gives you plenty of signal-routing options to adapt to just about any mixing requirements.

► Comprehensive Connectivity

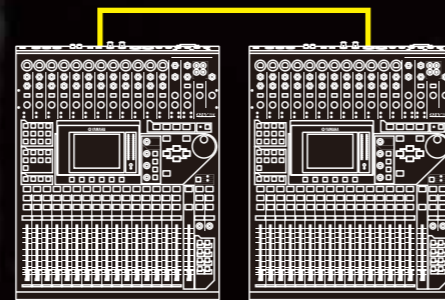
Right out of the box the 01V96i offers 16 analog channel inputs—12 with improved studio-quality head amps—and on the digital front, 8-channel optical ADAT, coaxial 2-track inputs and 16 inputs via USB. Analog outputs include the main stereo output, stereo monitor outputs, a stereo 2-track output, four OMNI outputs, 12 channel TRS insert points and a headphones output, matched with coaxial 2-track outputs and 8-channel optical ADAT for digital output. When you need more, Yamaha offers a range of mini-YGDAI expansion cards that can be inserted into the 01V96i's expansion slot. From traditional analog audio formats to standard digital audio and dedicated third-party proprietary network protocols, Mini-YGDAI cards make it easy to add I/O in a wide variety of audio and network formats to 01V96i.

► Cascade Link for Ultimate Expandability

When your situation demands a high capacity setup—particularly for live sound reinforcement applications—the “01V96i Cascade Link” allows you to run two units cascaded giving you up to 80 channels of mixing capability. One simple connection for all the power you would ever need.



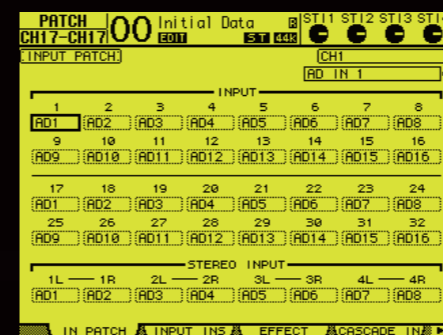
MIDI and Audio Signals (Cascade Link)



The Digital Advantage

The benefits of digital technology are innumerable in terms of functionality, cost and space. However the physical, intuitive aspects of analog style mixers can never be discounted either. Our motto in designing the console: mix with your ears, not with your eyes. It was with this philosophy in mind that we made the best use of the technology at our disposal to offer digital features that make a difference, without overshadowing the familiar analog attributes of mixing.

► Fast Flexible Patching



Patching and assigning channels has always been one of the most trying aspects of mixing with an analog console. Using the 01V96i's versatile, easy-to-use patching system, all available inputs, outputs, effects, channel inserts—and now USB I/O—can be assigned to any of the console's channels or outputs. 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. Centralized control means you'll never

have to run around to physically re-patch cables whenever you need to reconfigure the system. Patch setups can be stored in the 01V96i patch library for instant recall at any time.



► Precision Motor Faders That Do More Than Just Mix

All of Yamaha's professional digital mixing consoles feature motor faders for a reason. A mixing engineer needs to be able to see exactly where levels are at all times, and without motor faders, every time you recall a previously stored scene or remotely control your mixer from external devices, the mix you hear will be totally different from what is represented by the faders on the console. This can cause considerable confusion and affect your workflow dramatically. Why run the risk of blowing your mix by compromising on such a crucial feature? Yamaha's 100mm motor faders are the end result of the extensive research and analysis put into making our top-line digital mixers. With the intuitive, physical control they afford, these precision faders will ensure that your previously stored settings not only sound exactly the same, but look just as they did when you saved them. What's more, multiple monitor mixes can be recalled and modified instantly and intuitively via the sends on fader function.



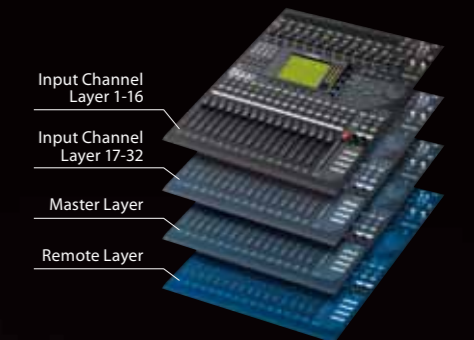
► Intuitive “Selected Channel”

“Selected Channel” controls are the “hands-on” channel controls for the currently selected input and output channel, with analog style buttons and knobs that allow you direct access and control of essential parameters. This Yamaha-designed configuration has become a classic as well as the de-facto industry standard, and is familiar territory to most experienced engineers.

► Layer Switching and Fader Mode



One of the greatest advantages of digital control is that it adds extraordinary power and flexibility to your console without taking up valuable space. The 01V96i has 16 channel faders and one stereo master fader. The channel faders can be instantly switched to handle input channels 1-16, 17-32, MASTER (8 AUX and 8 BUSES) or REMOTE via the console's LAYER switches. In the REMOTE layer, you can control major DAW software or create custom fader layers with which you can assign any in/out channels you like. The FADER MODE keys switch the 01V96i faders between fader and auxiliary level control instantaneously. Powered by fast, precise motor-driven mechanisms, the faders respond immediately by moving to the settings of the corresponding mode.



► Versatile Channel Pairing

In addition to being able to pair faders “horizontally,” corresponding faders in adjacent layers can be “vertically” paired, allowing each physical channel fader to be used for stereo channel control. Multiple stereo channels can thus be controlled from a single layer with a whole list of linked parameters.

Born Versatile, Tuned for Live

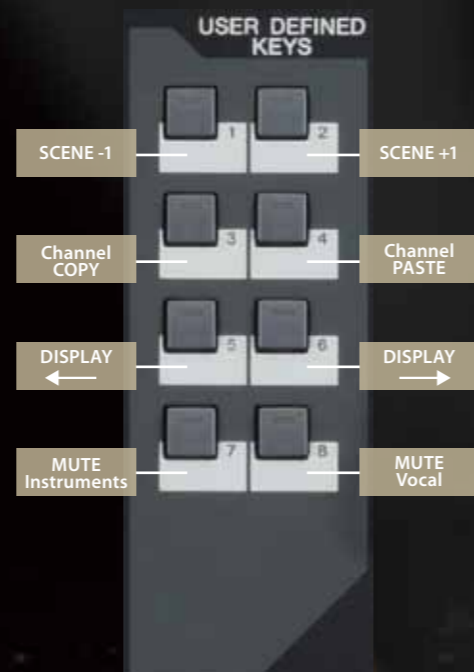
The 01V has been used in a wide variety of applications due to its exceptional versatility. Highly customizable, the 01V96i can be configured to meet specific demands of various environments and greatly benefit your operation of the console. In live situations in particular, the console's personalized functions add a familiar touch while streamlining your workflow tremendously.

► Grouping Function

You can group faders and mutes from any selected input channels or output buses and store the settings in multiple banks. The group function is very convenient for various applications including sound reinforcement.

► User Defined Keys for Customized Control of Your Console

Eight user-defined keys allow you to customize how you interact with your console. These keys can be assigned to control any functions you choose. You could, for example, assign them to switch scenes, copy/paste channels or flip display pages and numerous other functions that can give you a tremendous advantage in live sound applications. The Instant Group Assignment function allows you to use these keys to set up mute group masters quickly— ideal for live applications where groups of instruments or sound sources need to be muted instantly.



► Scene Memory — Instant Recall Is Just A Click Away



The ability to store and recall all console parameters in an instant is a huge advantage for sound reinforcement applications. You can instantly switch “scenes” during a performance, as well as recall the basic settings for a show at different venues, then tweak to optimize the sound for that environment. This can dramatically reduce setup time and benefit your workflow tremendously. All scene data can also be managed offline on a personal computer using the 01V96i Editor. You can do basic setup on your laptop, and then transfer the data to the console at the venue. The 01V96i digital

mixing console also lets you recall a scene with fade time, or apply “recall safe” for only the specified parameters and channels, or globally for added creative control and flexibility. There’s even a global paste function that lets you simultaneously paste selected parameters from one scene to multiple scenes – your EQ and AUX settings from final rehearsal, for example, can easily be copied to all other scenes that will be used during the performance.



► Seamless DAW Integration

In addition to its extensive stand-alone capabilities, the 01V96i can seamlessly integrate with your computer-based DAW. In addition to the bi-directional 16 x 16 USB2.0 audio integration, the 01V96i also functions as a powerful controller for your Digital Audio Workstation (DAW). This provides that familiar hands-on feel when recording, mixing and editing your tracks. Control templates are provided for Avid ProTools®, Steinberg Cubase® and Nuendo® while the general DAW mode supports a range of other DAWs. MIDI control tables can also be created to provide compatibility with MIDI-compatible DAW systems.

Rear Panel



1 TO HOST USB

USB 2.0 capable, providing 96kHz, 16IN/16OUT USB audio streaming, Studio Manager and MIDI control over USB.

2 PHANTOM + 48V

+48V Phantom power can be enabled in blocks of 4 microphone inputs at a time.

3 MONITOR OUT L/R

Balanced TRS jacks that can monitor either the Main Mix or the 2TR IN signals. The choice is made with the monitor zone selection switches.

4 OMNI OUT TERMINAL (1-4)

Balanced TRS jacks that serve as outputs for selected buses or channels.

5 STEREO OUT (L/R)

Balanced XLR jacks that output stereo-out signal.

6 WORD CLOCK IN/OUT

Industry standard BNC I/O for synchronization with external devices.

7 ADAT IN/OUT

An optical TOSLINK that inputs and outputs digital audio signal in ADAT format.

8 2TR OUT DIGITAL

RCA pin jacks that input IEC 60958 format digital audio. Used to connect to the digital inputs of DAT recorders, MD recorders, and other consumer-format devices.

9 2 TR IN DIGITAL

RCA pin jacks that input IEC-60958 digital audio. Used to connect to the digital stereo out on consumer-format devices such as DAT recorders, MD recorders and CD players.

10 MIDI IN / THRU / OUT

Terminals for connecting to external MIDI devices.

11 SLOT

Slots for inserting optional Mini-YGDAI cards. In addition to expanding analog inputs and outputs, Yamaha offers compatibility with digital input/output standards in a variety of formats, and compatibility with major network audio formats.



O1V96i EDITOR

Available for MAC and Windows platforms, O1V96i Editor is a total management software package that gives you complete control of all the console's parameters via your computer. Editor provides comprehensive monitoring as well as real-time display of selected channel status once it is connected to the console and online. Offline you can edit and manage scene data, patch lists, and other functions for a significant boost in control and work efficiency. If you are using a rental or another installed console, you can easily save your settings to a computer, then load them into the other console at your convenience. O1V96i Editor also makes an effective tool for safely managing your backups.



Cubase AI - The Perfect Complement



With Cubase, Steinberg has essentially redefined music production software in their pursuit to provide users with the most advanced, comprehensive DAW software available. The O1V96i comes with the latest version of Cubase AI to give you a flexible, intuitive platform to realize your full creative potential. With Cubase AI you get a stripped-down version of the Steinberg Cubase advanced music production system, using the same core technologies and interface that have won this series worldwide acclaim. Together with the O1V96i, both MAC and Windows PC users will have access to a full system solution with all the tools they need for composing, recording, editing and mixing studio-quality music whether you're in the studio or not.



Available Mini-YGDAI card specifications

* Guidance on the use of Mini-YGDAI cards <http://www.yamahaproaudio.com/myguide/index.php>

	Model	Format	Input	Output
Digital I/O Cards	MY16-AT	ADAT	16	16
	MY8-AE96	AES/EBU	8	8
	MY8-AE96S	AES/EBU	8	8
	MY16-AE	AES/EBU	16	16
	MY16-C II	CobraNet	16	16
	MY16-ES64	EtherSound	16	16
	MY16-MD64	MADI	16	16
	MY16-TD	TASCAM	16	16
AD/DACard	MY8-ADDA	Analog	8	8
AD Cards	MY4-AD	Analog	4	-
	MY8-AD24	Analog	8	-
	MY8-AD96	Analog	8	-
DA Cards	MY4-DA	Analog	-	4
	MY8-DA96	Analog	-	8
Lake Processing Card	MY8-LAKE	Lake Processing	8	8

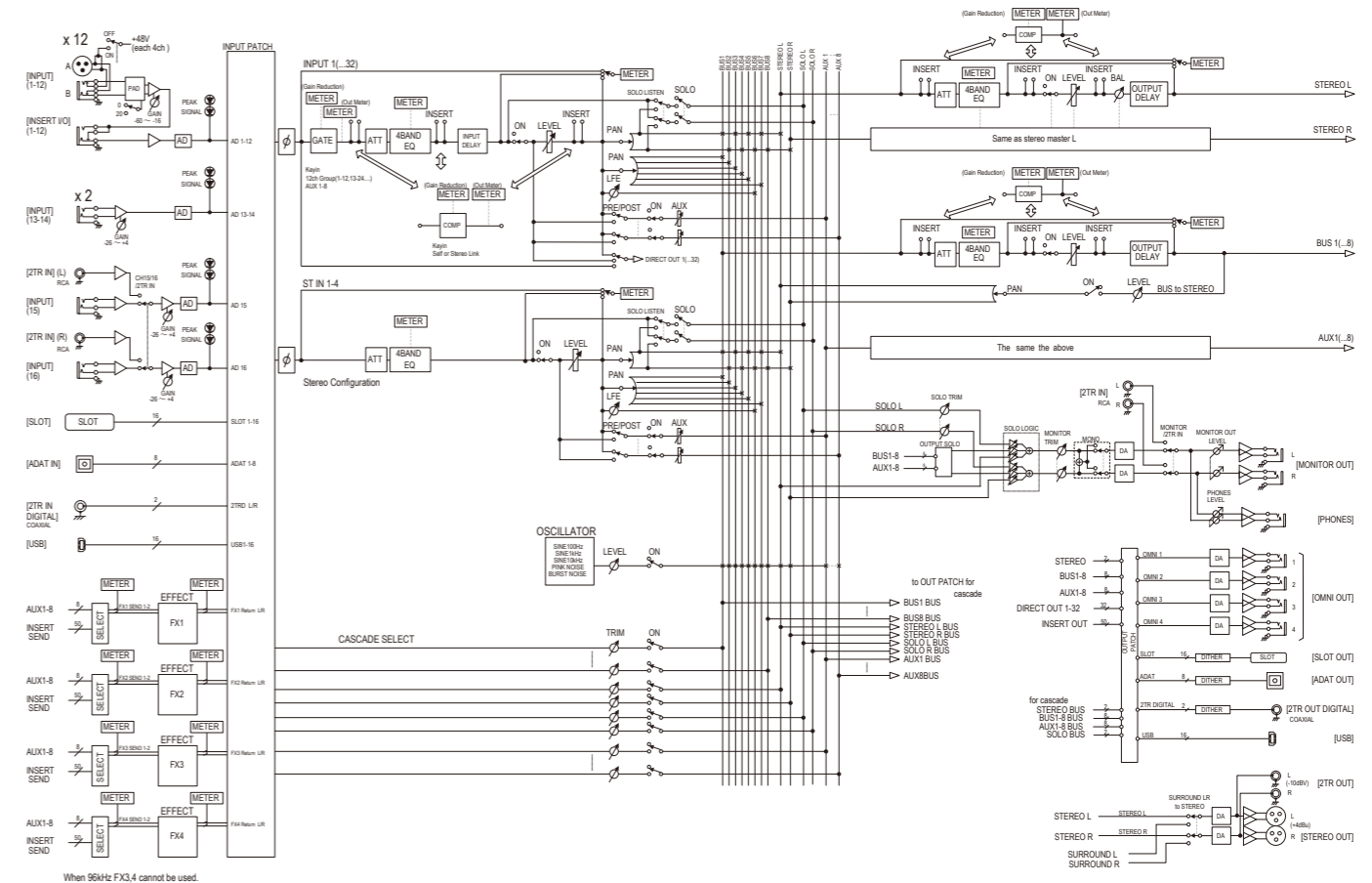
	Model	Format	Input	Output
Third Party Cards	Dante-MY 16-AUD	Dante	16	16
	WSG-Y16	Sound Grid	16	16
	16/o-Y1	A-Net Pro16	-	16
	6416Y2	A-Net Pro64	16	16
	AVY16-ES	EtherSound	16	16
	AVY16-ES100	EtherSound	16	16
	RN.341.MY	RockNet	16	16
	YG2	Optocore	16	16
	YS2	Optocore	16	16

Rack-Mount Kit



RK1

Block Diagram



Dimensions

