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IM8 Series

MIXING CONSOLES

Solid Performance and Superior Sound for Professional Applications

The Yamaha IM8 series brings experience and know-how accumulated over 35 years in the production of industry-leading mixing consoles to bear in three mid-size consoles that cut no corners when it comes to overall performance and sonic quality. In addition to no-compromise design and development aimed at delivering the finest performance and most useful feature set available in this class, production and assembly are carried out at Yamaha's own domestic facilities – the same factories where the legendary Yamaha PM series consoles are produced – to ensure unrelenting quality control throughout. Every inch of these extraordinary consoles is well thought out and built for a purpose. There are no unnecessary features, and nothing is out of place. The IM8 series consoles deliver a basic but plentiful complement of features plus truly transparent, high-resolution sound with tireless reliability.

These are consoles for serious sound applications, and will provide eminently professional performance, sound, and control in permanent installations or on the road.

Main Features

- Professional build, features, and performance for serious live sound applications.
- Domestic production and assembly ensure faultless quality control.
- Unique Yamaha one-knob compressor on all mono input channels.
- Comprehensive master section provides extensive signal routing and control versatility.
- Output matrix affords extra output flexibility, particularly for installations.
- Traditional Yamaha color coded controls for easy identification and operation.
- USB audio I/O allows direct digital recording and playback with the supplied Cubase AI4 audio workstation software.
- External power supply maximizes console performance – dual power supplies can be used for redundant failsafe operation.

The Series

- **IM8-40**: 40 mono + 4 stereo inputs/8 aux + 8 group + 4 matrix + stereo + mono out buses
- **IM8-32**: 32 mono + 4 stereo inputs/8 aux + 8 group + 4 matrix + stereo + mono out buses
- **IM8-24**: 24 mono + 4 stereo inputs/8 aux + 8 group + 4 matrix + stereo + mono out buses
- PW8 Power Supply

Input Channels

Monoral Input Stereo Input

1 Input Section

All mono input channels have both balanced XLR type and TRS phone jacks for versatile input connectivity. Individual +48V phantom power switches on each mono channel provide phantom power for condenser microphones, and input levels can be optimally matched over a broad -60 dB through +10 dB range with a 26-dB pad switch and gain control. Other input section facilities on mono channels are a phase switch and 80 Hz high-pass filter switch.

Stereo input channels provide L and R phone jack inputs as well as pin jack stereo pairs. A gain control allows matching to stereo input signal levels from -34 dB to +10 dB

Precision Mic/Line Preamplifiers

Microphone preamplifiers are one of the most critical sound-defining circuits in any mixer. That's why professional who are serious about their sound often spend thousands of dollars on just a single channel of microphone pre-amplification. The microphone preamps built into the IM8 series consoles inherit technology from Yamaha's top-line professional consoles, and have been painstakingly designed to deliver superior sonic performance with any source. They offer low-noise, transparent amplification with the widest possible range of dynamic and condenser microphones as well as line-level signals, which means cleaner, better sounding mixes overall.

2 One-knob Compressor on All Mono Channels

This advanced Yamaha feature can be a tremendous advantage in achieving great sound with a variety of sources. It is ideal for compressing vocal channels, and can also be used to refine the sound of bass, guitar, and other instruments. Built-in channel compression is a premium feature usually only found on the most expensive consoles, but in the IM8 consoles you have Yamaha's innovative one-knob compression feature on all mono input channels. Conventional audio compressors with their threshold, ratio, knee, makeup gain and other controls can be complex and time-consuming to set appropriately for a given source. Yamaha's one-knob compressor eliminates the need for an engineering degree with a single control that lets you simply dial in the amount of compression you want.

3 4-band Equalizer

Designing a smooth, musical-sounding equalizer is an extremely difficult task that Yamaha engineers have perfected through years of refinement based on feedback from some of the most renowned engineers and artists in the field. The IM8 series equalizers apply this specialized know-how to the fullest degree. All stereo and mono channels have four-band equalizers featuring HIGH, HI-MID, LO-MID, and LOW controls as well as an EQ ON switch that can be used to instantaneously switch the EQ in or out of circuit. Mono channels have sweepable HI-MID and LO-MID controls that allow pinpointing specific frequencies for precise response tailoring or feedback control. The stereo channel HI-MID and LO-MID controls are fixed-frequency peaking types.

Input equalization (+15,-15dB maximum)	CH INPUT	HIGH:10kHz:shelving
		Hi-MID:400-8kHz:peaking
		Lo-MID:80-1.6kHz:peaking
		LOW:100Hz:shelving
	ST INPUT	HIGH:10kHz:shelving
		Hi-MID:3kHz:peaking
		Lo-MID:800Hz:peaking
		LOW:100Hz:shelving

4 8 AUX Sends

The IM8 series consoles provide plenty of auxiliary routing capacity for monitoring and handling external effects. All mono and stereo channels feature eight individual AUX send controls that can be switched for pre-fader or post-fader operation in pairs (i.e. AUX sends 1-2, 3-4, 5-6, and 7-8). You could, for example, set three of the AUX pairs for pre-fader operation so you have six individual monitor sends, while the remaining pair is set to post-fader for use as two effect sends … or any other combination that suits your needs.

5 Channel Output Control and Routing

All channels feature smooth, noiseless full-length faders for level control as well as 3-segment input level meters that provide a valuable visual reference to channel signal levels. The three segments correspond to -20 dB, 0 dB, and Peak levels. The peak indicator lights when the channel signal reaches 3-dB below clipping to warn the operator of impeding clipping distortion. Bus assign switches assign the channel signal to group bus pairs – 1-2, 3-4, 5-6, and 7-8 – as well as the stereo and mono buses. Pan controls on the mono channels pan the assigned signal between the assigned odd/even groups as well as between L and R on the stereo bus. Stereo channels have balance controls rather than pan controls. Another extremely useful feature of these consoles is mute groups. Each channel has four mute switches that assign channel muting to the corresponding mute master switches in the console's master section. You can specify up to four different mute configurations that can be instantaneously engaged or disengaged via the mute master switches. There's also a channel ON switch with indicator, and a PFL switch with indicator for convenient pre-fader monitoring of the channel signal.

Additional Channel I/O

All mono input channels feature insert I/O patch points so you can insert compressors, EQ, or other extra signal-processing gear into the channel signal path as required. Direct out jacks are also provided, and these can be internally jumpered to deliver the pre-EQ, pre-fader, or post-fader channel signal as required.


Real Panel

Master Control Section

6 AUX Send Masters

The IM8 console master section provides individual linear AUX send master faders for each of the eight AUX buses. These smooth linear faders make the IM8 consoles ideal choices for monitor mixing as well as front-of-house operation, affording precise fader positioning with visual feedback for perfectly balanced monitor mixes. Each AUX send master fader has a 3-segment level meter for visual level confirmation, and an AFL switch with indicator for convenient AUX signal monitoring. Insert patch points are provided before the AUX send faders, and the AUX send outputs on the rear panel are balanced XLR types.

7 Four Stereo AUX Returns

Four stereo AUX returns are ideal for returning signals from external effects such as reverb and delay to the console. In addition to assign switches that allow the returned signals to be assigned to group bus pairs 1-2 through 7-8, rotary AUX 1 through AUX 4 controls can be used to send the retuned signals to the corresponding AUX buses at the specified level. Of course there's a master return level control for each of the four stereo returns, as well as PFL switches with indicators for easy pre-fader monitoring.

8 Matrix Out

The IM8 series consoles feature four matrix outputs that can be fed signals from all eight of the group busses as well as the stereo and mono bus. Individual level controls for each source bus are provided for each of the four matrix outputs, along with a master matrix level control and AFL switch for local signal monitoring. The matrix is a convenient and configurable system for providing additional output mixes for any number of utility applications: extra monitors, dressing room feeds, lobby sound, and more.

9 Mute Masters

These four switches instantly mute or un-mute all channels on which the correspondingly numbered MUTE switches are engaged. This allows you to set up as many as four different channel mute configurations and engage or disengage them instantly as required. This is a great way to handle multiple bands, for example, or to shut down specific groups of microphones when they're not being used.

10 Talkback Section

In addition to a rear-panel mounted microphone connector and the standard ON switch and level control in the master section, the IM8 series consoles offer versatile talkback routing with eight switches that assign the talkback signal to individual AUX bus pairs (1-2, 3-4. 5-6, and 7-8), all group buses, the stereo and mono buses, or any of two matrix output pairs (1-2, 3-4).

11 Monitor Section

Any time you press an AFL (after-fader listen) or PFL (pre-fader listen) switch anywhere on the console the corresponding signal is sent to the rear-panel monitor outputs as well as the headphone output. At the same time the PFL or AFL indicator in the monitor section will light to indicate that one or more AFL/PFL switches are active. The indicators associated with each AFL and PFL switch let you see which ones are active at a glance. The monitor section also features level controls for the monitor and headphone outputs, and a precise 12-segment level meter.

Stereo and Mono Masters

Balanced XLR type output jacks on the rear panel deliver the console's stereo output, and the level of the signal appearing at these outputs is controlled via the L and R stereo master faders. An ON switch turns stereo output on or off, and a precise 12-segment level meter with peak indicators shows stereo signal levels. The stereo master faders have PFL as well as AFL switches, allowing both pre-fader and after-fader monitoring of the stereo bus signal. The mono bus output is also delivered via a balanced rear-panel XLR type connector, and the level is adjusted via an independent master mono fader with ON switch, 3-segment level indicator, and AFL switch/indicator. Both the stereo and mono buses also feature pre-fader insert patch points on the rear panel.

12 Group Outputs

All eight group buses feature full-length faders for precise level control, as well as 3-segment level indicators for convenient visual level monitoring. In addition to being output from the corresponding balanced TRS phone jacks on the real panel, the group bus signals can be assigned to the console's stereo and/or mono buses via assign switches located next to the faders. A pan control provides panning capability when a group bus signal is assigned to the stereo bus. AFL switches and indicators are also provided for each group fader. Group jacks provided on the rear panel provide pre-fader insert access to the group signal path.

13 2TR IN/USB and REC OUT/USB Sections

The IM8 consoles feature 2-track input and stereo record output facilities in both analog and digital formats. Analog 2-track input can be connected to the console via the rear-panel stereo pin jacks or a stereo mini-phone jack on the front panel. Assign switches allow the received 2-track signal to be sent to the stereo and/or mono buses, while a rotary control adjusts the signal level. A PFL switch and indicator are also provided for easy monitoring of the 2-track signal. Conversely, the signal from the stereo and/or mono buses can be assigned to a pair of pin-jack record outputs on the rear panel for connection to an external 2-track recording or similar device. The functions of the 2-track inputs and record outputs are duplicated by a USB terminal that can be used to transfer the corresponding digital audio signals to and/or from a computer running the supplied Cubase AI4 audio workstation software for direct digital recording from the console or playback via the console.

14 Front-panel Stereo Mini Phone Jack Input

A stereo mini phone jack on the console's front panel provides a conveniently located input for a portable audio player or similar device used to supply BGM, sound effects, or any other audio signal to be fed to the console's 2TR IN channel.

Other Features

Rear Panel

Rear Panel of IM8-40

Cubase AI4 Digital Audio Workstation Supplied

The IM8 series consoles come supplied with Cubase AI4, which is an audio and music production workstation that offers audio recording and editing, MIDI sequencing, an entire suite of VST effects plug-ins and a HALionOne sample player featuring selected waves from the famed Yamaha Motif synthesizers and tone modules. Cubase AI4 will run on compatible Windows or Macintosh computers, and digital audio is transferred between the computer and console via a single standard USB cable. Live performances can be recorded and then edited and mastered for distribution using Cubase AI's advanced audio production features.

CUBASE AI4 steinberg Creativity First

Options

PW8 2U
POWER SUPPLY

External Power Supply

The PW8 is a power supply unit that will deliver clean, stable power. The use of an external power supply unit means that components that could be a source of AC noise or heat are kept out of the console itself, thus contributing to superior sonic performance and stability. A second PW8 power supply unit can be connected via a single link cable for redundant failsafe operation.

PSL1010
POWER SUPPLY LINK CABLE
1m

LA1L
GOOSENECK LAMP

Q2031B 2U
Stereo 31-band Graphic Equalizer

- Two independent channels of graphic EQ with full 31-band control from 20Hz to 20kHz.
- Selectable ±6 dB or ±12 dB EQ ranges.
- Exceptionally quiet operation with less than 0.05% total harmonic distortion.
- Noise levels below -96 dB with a smooth, natural sound that is compatible with digital sources.
- Continuously variable high pass filters on both channels provide 12dB/octave roll-off below any frequency from 20 Hz to 200 Hz.
- Balanced +4 dB 1/4" phone jacks and balanced XLR jacks for both input and output.
- Independent peak indicators for each channel light when the output signal reaches 3 dB below clipping.
- EQ ON/OFF switches provide one-touch EQ bypass and instant comparison.
- Rugged 19" rack mountable design.

SPX2000 1U
Multi-Effect Processor

- Superb sonic quality with 24-bit/96-kHz processing throughout.
- 106dB dynamic range and flat response from 20 Hz to 40kHz at the 96-kHz sampling rate.
- 97 refined preset programs including the advanced "REV-X" reverb algorithm.
- The rugged aluminum front panel features 2 sets of intuitive cross-keys for easy navigation and editing.
- Five backlight color variations of the SPX2000 LCD for striking visual contrast and easy identification.
- Professional audio I/O and control connectors
- SPX2000 editor for Mac OS X and Windows available.

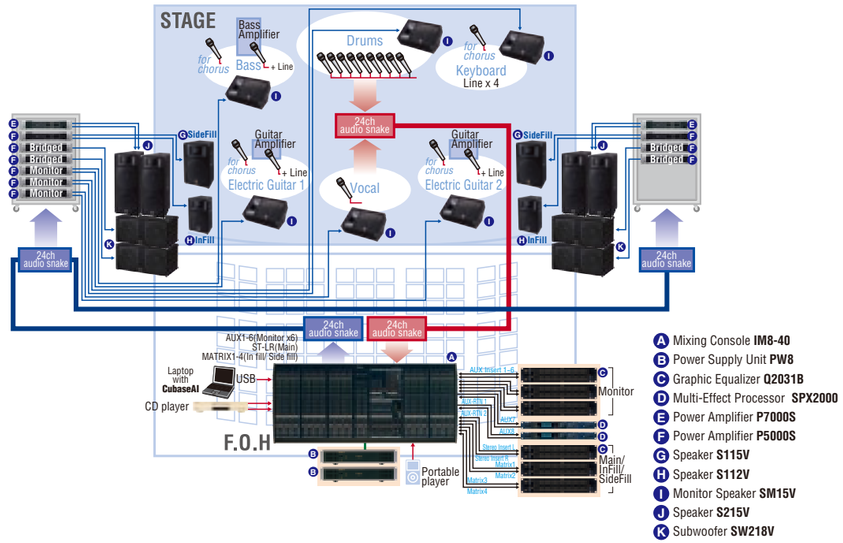
Applications

Live Sound: One Console for FOH and Monitor

Where space is limited and/or only one experienced engineer is available to operate the sound system, running both front-of-house and monitor sound from a single mixing console is usually the most effective solution. Fortunately, the IM8 consoles are fully capable of handling both functions at once.

System Details & Features

For this application a 40-channel IM8-40 console has been chosen to provide plenty of I/O capacity to handle both FOH and monitor functions while maintaining a surprisingly small footprint. Aux sends 1 through 6 supply signals for the on-stage monitor wedges via Q2031B graphic equalizers and P5000S power amplifiers. Side fills are also provided for seamless monitor sound throughout the stage area. Solid FOH sound is delivered via dual left and right subwoofers and mains powered P7000S and P5000S amplifiers. Aux 7 and 8 are connected to a pair of SPX2000 multi-effect units for first-class ambience and delay processing. Dynamics are handled by the console's onboard one-knob channel compressors, making it easy to achieve optimum sound while eliminating the need for outboard dynamics processors. BGM and sound effects are supplied via a compact audio player plugged into the console's easily accessible front-panel 2TR IN connectors, and a computer running the supplied Cubase AI4 digital audio workstation software can be connected to the USB I/O port for recording and additional playback as required.

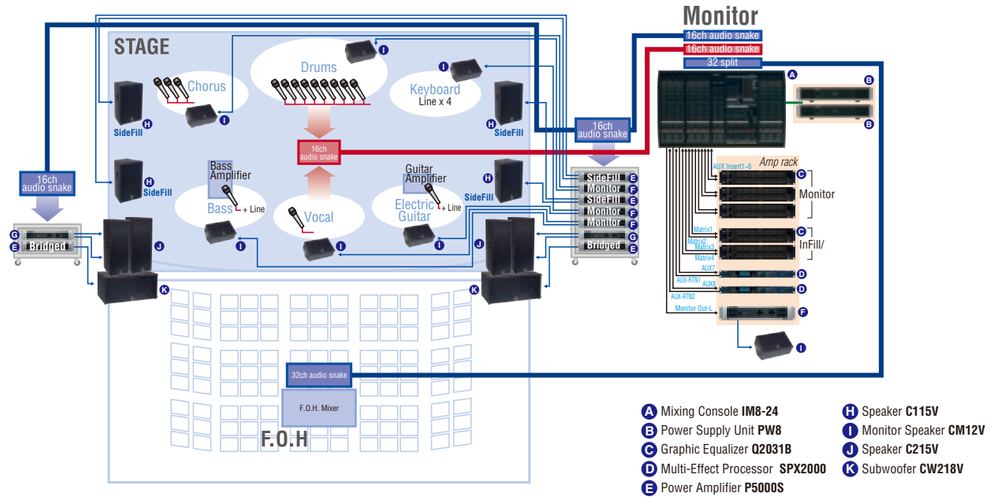


Live Sound: Separate Consoles for FOH and Monitor

When circumstances allow, providing separate front-of-house and monitor consoles and engineers makes it possible to respond more intimately and speedily to the performer's monitoring requirements, while allowing the FOH engineer to concentrate fully on providing the best possible house sound.

System Details & Features

A 24-channel IM8-24 console is used for monitor sound in this example. Aux sends 1 through 6 on the monitor console feed the stage wedges, while matrix outs 1 through 4 are used for the fills. This arrangement allows particularly flexible monitor output control. A local monitor is also provided for the monitor engineer. The monitor console uses dual linked PW8 power supply for failsafe reliability.



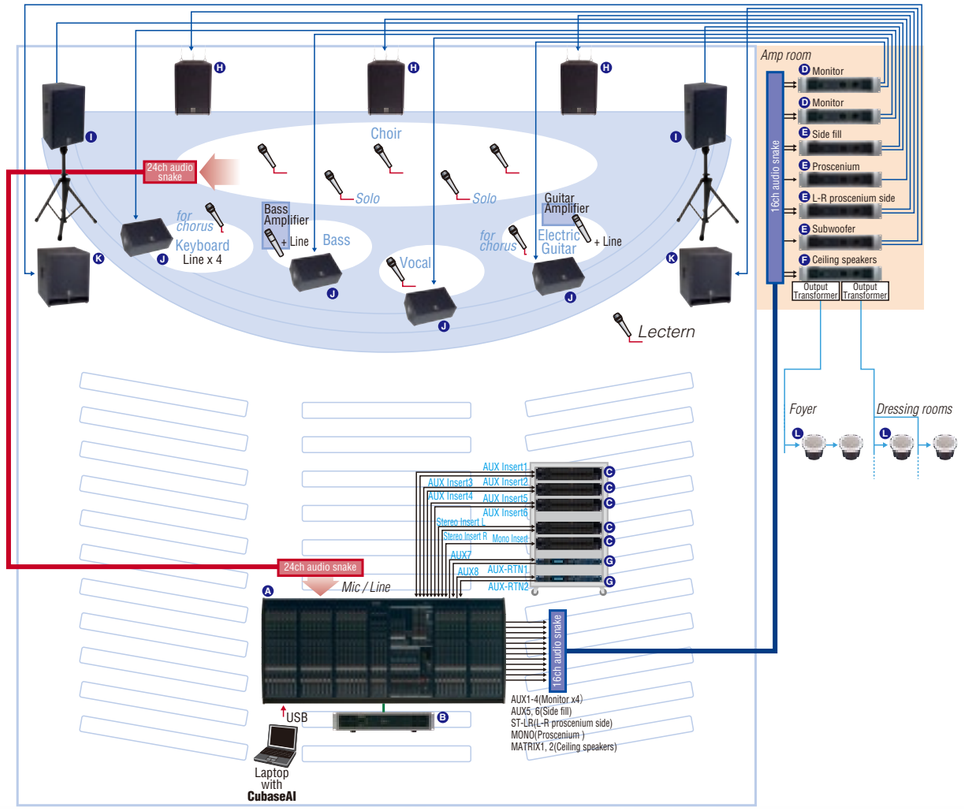
Applications

Installation for Worship, Music, and Theater

In addition to handling church activities, this installation is designed to deliver the best possible sound for music and theatrical presentations as well.

System Details & Features

A 40-channel IM8-40 console ensures that plenty of I/O capacity is available for any type of event the church may be required to host. Four stage monitors are powered by a pair of P3500S amplifiers, while left and right mains with subwoofers plus flown center and side speakers deliver uniformly high quality sound throughout the house. The mono-fed center speaker is particularly important in achieving maximum clarity and intelligibility for sermons and speeches, while the subwoofers deliver maximum musical impact. Q2031B graphic equalizers are inserted into Aux/Stereo L-R/Mono inserts for optimum response tuning. Top-quality effects are provided when needed via a pair of SPX2000 multi-effect units fed from the Aux 7 and 8 sends. The console's matrix is used to provide sound for the foyer, dressing rooms, and other remote locations via a P2500S amplifier with output transformers and appropriate ceiling-mounted speakers. A computer running the supplied Cubase AI4 digital audio workstation software can be connected to the console's USB I/O port for recording and playback as required.



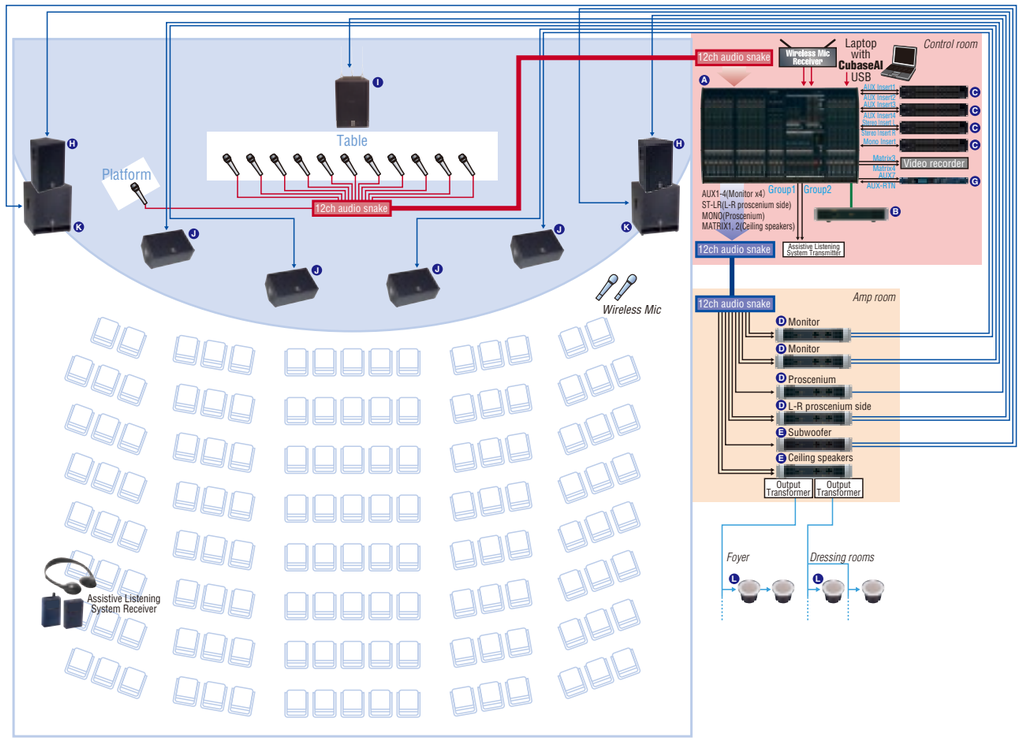
- A Mixing Console **IM8-40**
- B Power Supply Unit **PW8**
- C Graphic Equalizer **Q2031B**
- D Power Amplifier **P3500S**
- E Power Amplifier **P5000S**
- F Power Amplifier **P2500S**
- G Multi-Effect Processor **SPX2000**
- H Speaker **C115VA**
- I Speaker **C115V**
- J Monitor Speaker **CM12V**
- K Subwoofer **CW118V**
- L **Ceiling speaker**

Multi-purpose Community Hall

Lectures, panel discussions, meetings, presentations … community halls host a wide variety of events, and must have a flexible sound system in order to effectively accommodate them all. Here's an example of a system that would comfortably service a hall with a capacity of about 150 to 200.

System Details & Features

A single 24-channel IM8-24 console should provide more than enough capacity for a small-hall application of this type. In addition to sound for the hall itself, the IM8-24 matrix provides sound for the foyer and other remote locations via a P2500S amplifier with output transformers and appropriate speaker arrays. Four on-stage wedges provide monitor sound, while the house sound is delivered via left and right subwoofer and main stacks plus a flown center speaker that helps to maximize projection and intelligibility throughout the hall. An external pair of SPX2000 multi-effect units fed by the Aux 7 and 8 sends provides ambience and delay effects when needed. A wireless microphone system makes it easy to provide microphones in the guest seating area, or anywhere else throughout the facility. Basic recording capability can be particularly valuable in this type of application, and is easily implemented by connecting a computer running the supplied Cubase AI4 digital audio workstation software to the console's USB I/O port.



- A Mixing Console **IM8-24**
- B Power Supply Unit **PW8**
- C Graphic Equalizer **Q2031B**
- D Power Amplifier **P3500S**
- E Power Amplifier **P5000S**
- F Power Amplifier **P2500S**
- G Multi-Effect Processor **SPX2000**
- H Speaker **C112V**
- I Speaker **C112VA**
- J Monitor Speaker **CM12V**
- K Subwoofer **CW118V**
- L **Ceiling speaker**

Specifications

Outline

		IM8-40	IM8-32	IM8-24
I/O	Mic inputs	40	32	24
	Phantom power	+48V DC (each channel)		
	Line inputs	4x Stereo		
Mixing capability	Mixing channels	40 mono + 4 stereo	32 mono + 4 stereo	24 mono + 4 stereo
	GROUP	8		
	AUX	8		
	MAIN	Stereo, Mono		
	MATRIX	4		
Input channel functions		Compressor(Mic channel only), HPF(80Hz, 12dB/oct), 4-band mid-sweep PEQ(4-band PEQ for ST CH)		
Others		USB Audio I/O		

General specifications

IM8 general specifications				
		IM8-40	IM8-32	IM8-24
Total harmonic distortion		Less than 0.1% (20Hz to 20kHz)		
Frequency response		0, +1,-3dB(20Hz to 20kHz)		
Hum & noise level	Equivalent input noise	-128dBu		
	Residual noise	-98dBu		
Crosstalk		Less than -70dB		
Power requirements		Use PW8 power supply unit		
Power consumption		265W (Use with PW8)	230W (Use with PW8)	200W (Use with PW8)
Dimensions	Width	1716.0mm / 67.6"	1471.5mm / 58.0"	1227.0mm / 48.4"
	Height	219mm / 8.7"		
	Depth	739.0mm / 29.1"		
		51.5kg / 113.5lbs	44.5kg / 98.1lbs	37.5kg / 82.7lbs
Accessories		Owner's manual, Power Supply Link Cable(3m), Cubase AI4		

PW8 general specifications		
Power requirements		AC100V, 120V, 220V, 230V or 240V; 50/60Hz
Power consumption		Refer to each host product
Dimensions	Width	480mm / 18.9"
	Height	100.5mm / 4.0"
	Depth	412.0mm / 16.3"
Net weight		11.0kg / 24.3lbs

Input characteristics

Terminal	PAD	Actual load impedance	For use with nominal	Input level			Connector
				Sensitivity	Nominal	Maximum before clip	
CH IN A 24ch:1-24 32ch:1-32 40ch:1-40	0	3kohms	50-600ohm Mics & 600ohm Lines	-80dBu	-60dBu	-40dBu	XLR-3-31 type*
				-36dBu	-16dBu	+4dBu	
	26dB			-54dBu	-34dBu	-14dBu	
				-10dBu	+10dBu	+30dBu	
CH IN B 24ch:1-24 32ch:1-32 40ch:1-40	0	10kohms	600ohm Mics & Lines	-80dBu	-60dBu	-40dBu	TRS Phone Jack*
				-36dBu	-16dBu	+4dBu	
	26dB			-54dBu	-34dBu	-14dBu	
				-10dBu	+10dBu	+30dBu	
ST CH LINE IN [1-4]		10kohms	600ohm Lines	-54dBu	-34dBu	-14dBu	Phone Jack**, RCA Pin Jack**
				-10dBu	+10dBu	+30dBu	
CH INSERT IN 24ch:1-24 32ch:1-32 40ch:1-40		10kohms	600ohm Lines	-20dBu	0dBu	+20dBu	TRS Phone Jack**
MASTER INSERT IN (AUX, GROUP, ST, MONO)		10kohms	600ohm Lines	-10dBu	0dBu	+10dBu	TRS Phone Jack**
RETURN [1-4]		10kohms	600ohm Lines	-12dBu	+4dBu	+24dBu	Phone Jack**
2TR IN [L,R]		10kohms	600ohm Lines	-26dBV	-10dBV	+10dBV	RCA Pin Jack**, 3.5 DIA Stereo Phone Jack**
TB IN		10kohms	600ohm Lines	-66dBu	-50dBu	-30dBu	XLR-3-31 type**

0dBu = 0.775Vrms, 0dBV = 1Vrms
*: balanced, **: unbalanced
Sensitivity is the lowest level that will produce an output of +4dBu, or the nominal output level when the unit is set to maximum level.

Output characteristics

Terminal	Actual source impedance	For use with nominal	Output level		Connector
			Nominal	Maximum before clip	
STEREO OUT [L,R]	75ohms	600ohm Lines	+4dBu	+24dBu	XLR-3-32 type*
GROUP OUT [1-8]	150ohms	10kohm Lines	+4dBu	+20dBu	TRS Phone Jack***
AUX SEND [1-8]	75ohms	600ohm Lines	+4dBu	+24dBu	XLR-3-32 type*
MONO OUT	75ohms	600ohm Lines	+4dBu	+24dBu	XLR-3-32 type*
MATRIX OUT [1-4]	150ohms	10kohms	+4dBu	+20dBu	TRS Phone Jack***
CH INSERT OUT	150ohms	10kohms	0dBu	+20dBu	TRS Phone Jack**
MASTER INSERT OUT (AUX, GROUP, ST, MONO)	150ohms	10kohms	0dBu	+20dBu	TRS Phone Jack**
DIRECT OUT (MONO CH IN)	150ohms	10kohms	0dBu	+20dBu	TRS Phone Jack***
REC OUT [L, R]	600ohms	10kohms	-10dBV	+10dBV	RCA Pin Jack
MONITOR OUT [L, R]	150ohms	10kohms	+4dBu	+20dBu	TRS Phone Jack***
PHONES OUT	100ohms	40ohm phones	3mW	75mW	Stereo phone jack

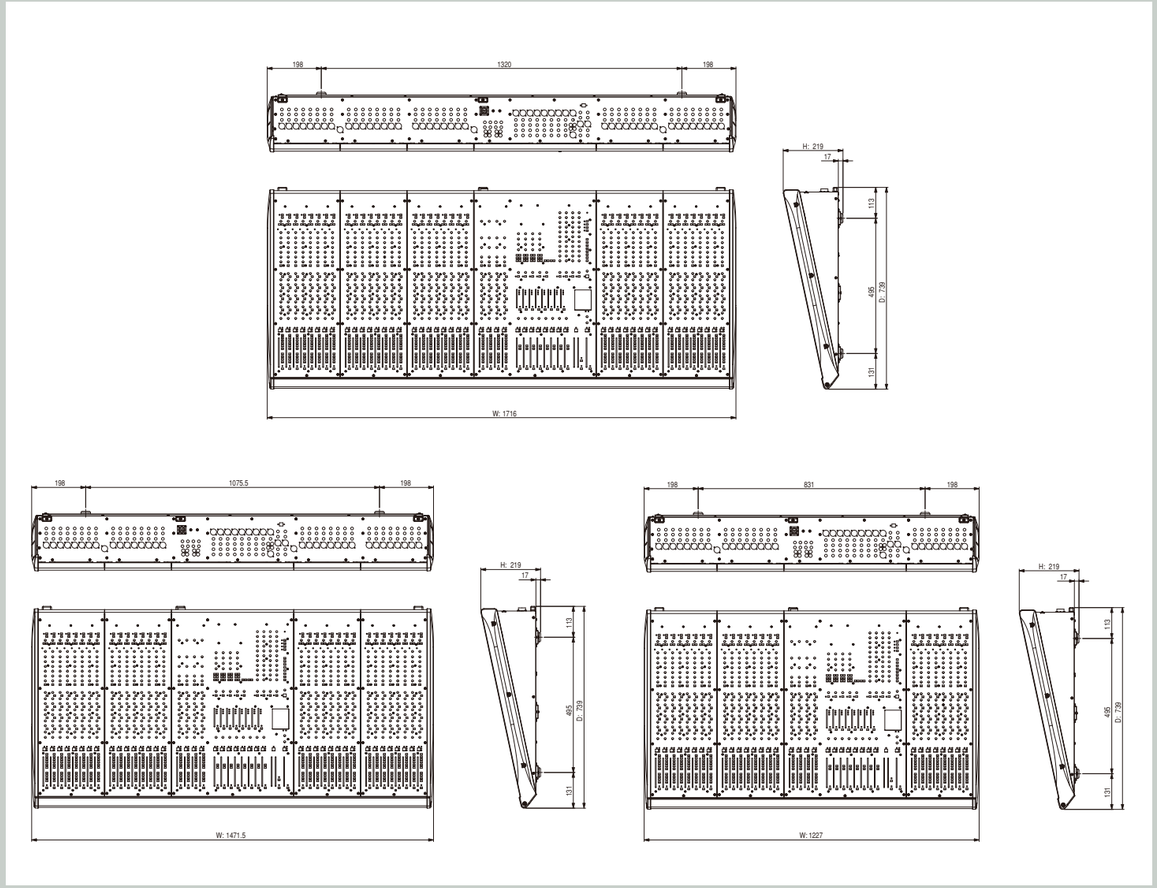
0dBu = 0.775Vrms, 0dBV = 1Vrms
*: Balanced, **: Unbalanced, ***:Impedance balanced

Digital Audio I/O characteristics

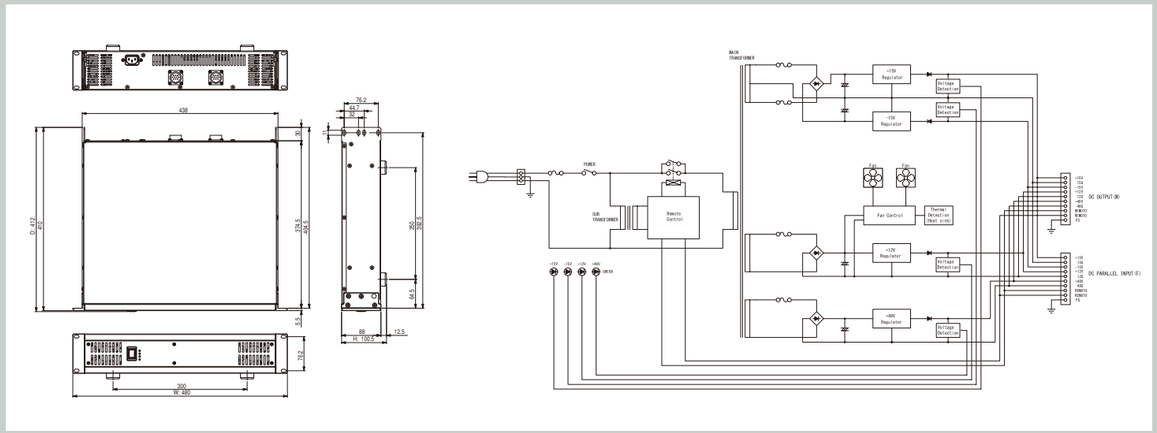
Terminal	Format	Connector
USB	USB AUDIO 1.1	USB B type

For more detailed specifications, please refer to the owner's manual.
Please download the manual from http://www.yamaha.co.jp/manual/english/.
The manual is available in multiple languages.

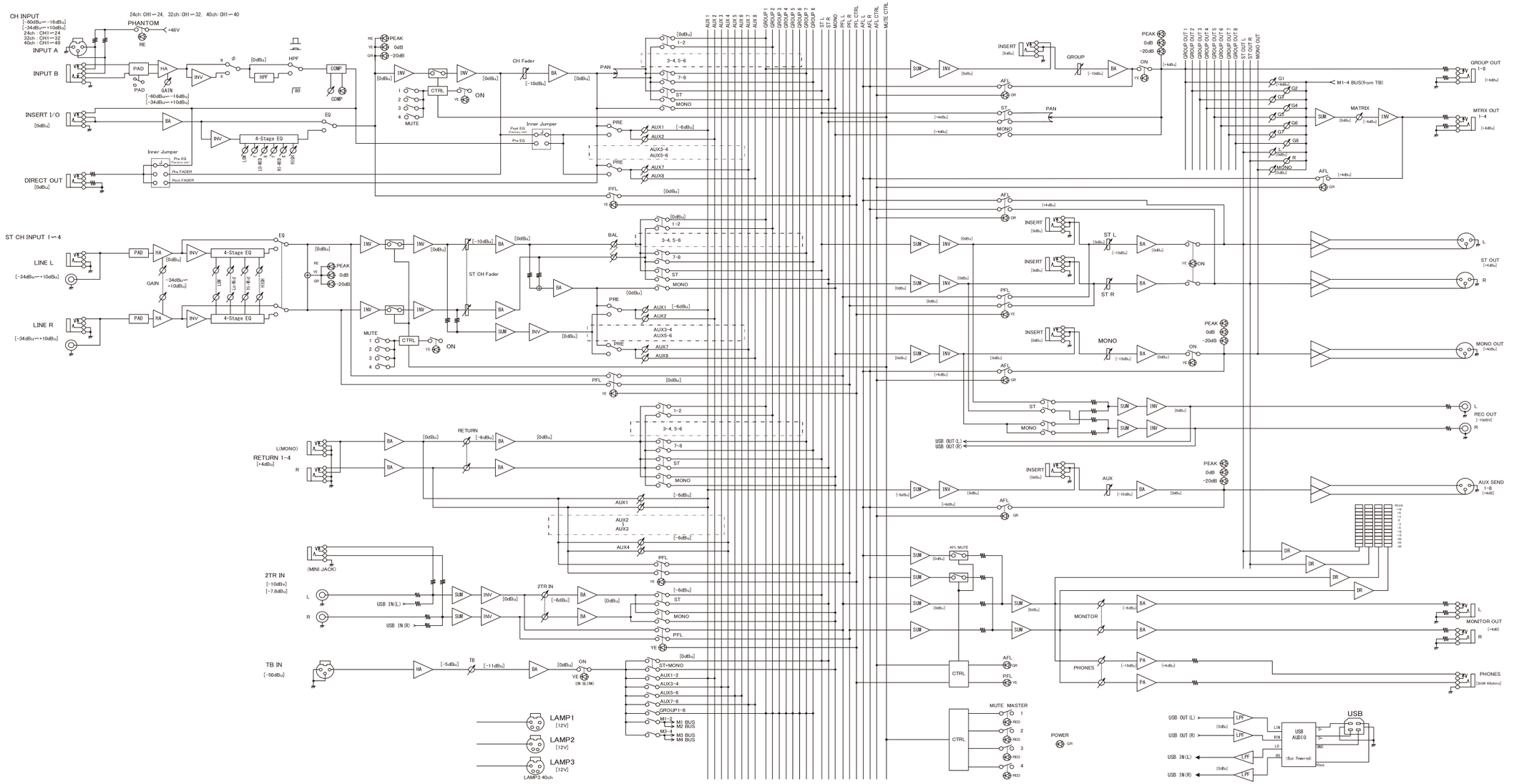
IM8 Dimensions

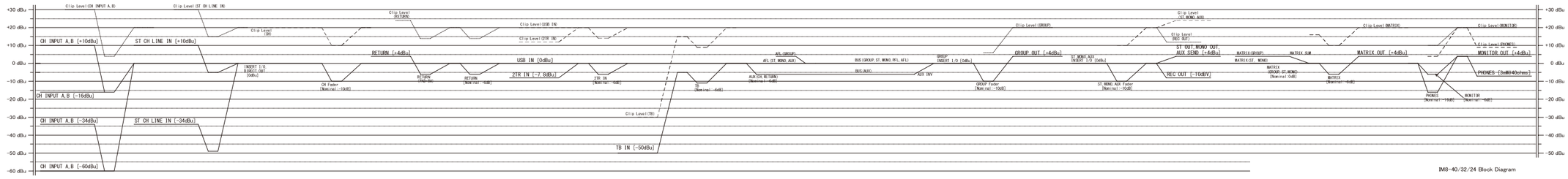


PW8 Dimension & Block Diagram



Block Diagram and Level Diagram





IM8-40/32/24 Block Diagram