

# LS9

## Digital Mixing Console



### LS9-32



LS9-32 Rear Panel



### LS9-16



LS9-16 Rear Panel

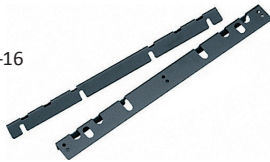
## Lightweight, compact, all-in-one digital mixers with advanced features and outstanding sound quality.

- 32 or 16 mono mic/line input channels plus 4 stereo input channels, expandable up to 64 or 32 channels in two layers.
- 16 mix buses, 8 matrix buses, plus stereo and mono buses with LCR mode.
- Top-performance analog mic/line preamplifiers.
- Compact and light enough for one person to move and set up easily.
- Yamaha Selected Channel interface allows smooth, intuitive access to detailed channel functions via a color LCD display and logically arranged encoders.
- Extensive gating, compression, and equalization facilities.
- Built-in USB memory recorder/player for recording or BGM playback.
- Virtual Rack packed with effects and EQ for just about any processing requirements.
- Scene memory for instant store and recall of all console parameters, including head amp gain.
- Advanced access management includes user keys (standard USB memory devices) that can be issued with different access levels for different users.
- LS9 Editor Software for enhanced operability and programmability.

### OPTIONS

#### RK-1

Rack-mount Kit for LS9-16



#### LA1L

Gooseneck Lamp

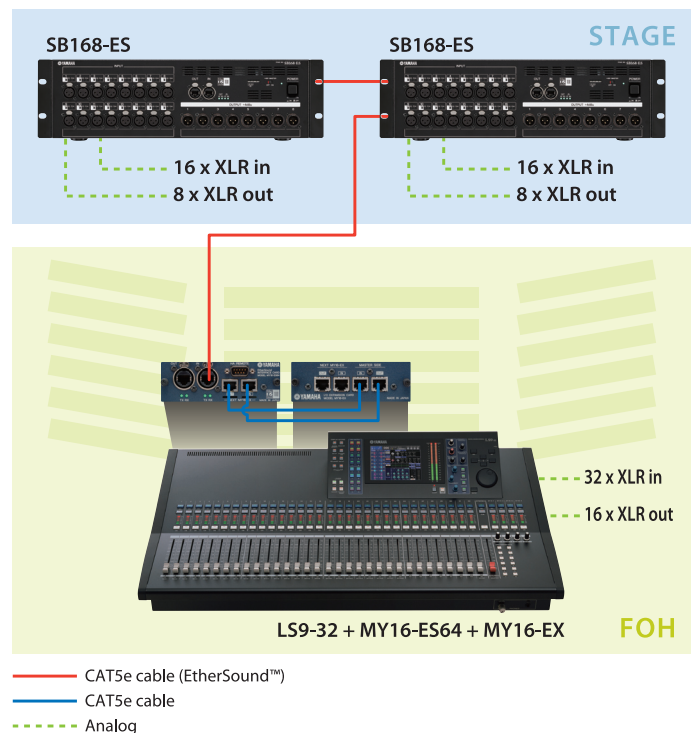


### SYSTEM EXAMPLE

#### Small / Medium Scale Live Sound System with LS9-32

This example depicts a live sound system built around an LS9-32 console. This system offers 32 inputs/16 outputs on stage, with additional 32 inputs/16 outputs available at the FOH position.

The two stage boxes and the LS9-32 are daisy-chained using CAT5e cables. SB168-ES dedicated Quick Setup feature within the AVS-ESMonitor software allows quick and easy configuration of your setup. You can use the SB168-ES head amp remote function from the LS9-32 to control microphone gain.



## GENERAL SPECIFICATIONS

<b>Internal processing</b>	32bit (Accumulator=58bit)
<b>Number of scene memories</b>	300
<b>Sampling frequency rate</b>	Internal : 44.1kHz, 48kHz External: 44.1kHz (-10%) to 48kHz (+6%)
<b>Signal Delay</b>	Less than 2.5 ms CH INPUT to OMNI OUT (@fs=48kHz)
<b>Total harmonic distortion**<sup>1</sup></b> CH INPUT to OMNI OUT Input Gain=Min.	Less than 0.05% 20Hz to 20kHz @+4dBu into 600Ω
<b>Frequency response</b> CH INPUT to OMNI OUT	+0.5, -1.5dB 20Hz to 20kHz @+4dBu into 600Ω
<b>Dynamic range</b> (maximum level to noise level)	110dB typ, DA Converter (OMNI OUT) 108dB typ, AD+DA (to OMNI OUT)
<b>Hum &amp; noise level**<sup>2</sup></b>	-128dBu Equivalent Input Noise (20Hz to 20kHz, Rs=150Ω, Input Gain=Max) -84dBu residual output noise
<b>Crosstalk (@1kHz)</b> Input Gain=Min.	-100dB* <sup>3</sup> , -80dB, Adjacent Input Channels -100dB* <sup>3</sup> , -80dB, Input to Output
<b>Phantom Power</b>	+48V
<b>Power requirements</b>	AC110V-240V, 50/60Hz
<b>Power consumption</b>	LS9-32: 170W, LS9-16: 95W
<b>Dimensions (W x H x D)</b>	LS9-32: 884 x 220 x 500mm (34.8" x 8.6" x 19.6") LS9-16: 480 x 220 x 500mm (18.9" x 8.6" x 19.6")
<b>Weight</b>	LS9-32: 19.4kg (42lbs) LS9-16: 12.0kg (26lbs)

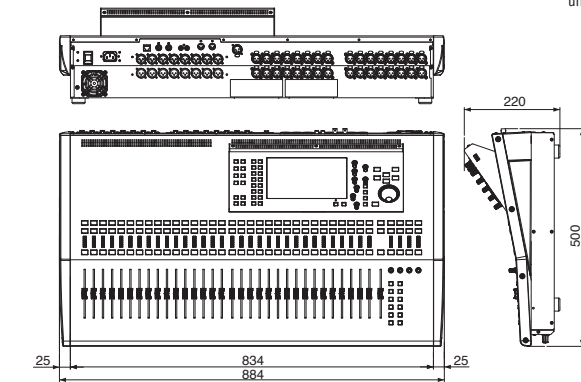
\*1 Total harmonic distortion is measured with a 18dB/Oct filter @80kHz.

\*2 Hum & noise level is measured with a 6dB/oct filter @12.7kHz; equivalent to 20kHz filter with infinite dB/Oct attenuation.

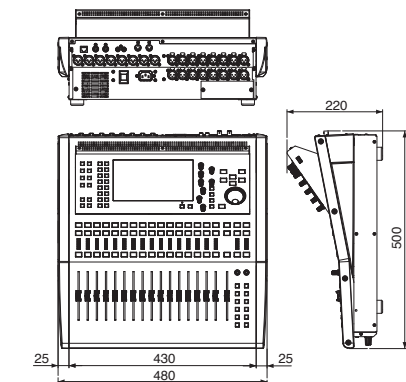
\*3 Crosstalk is measured with a 30 dB/octave filter @22kHz.

## DIMENSIONS

unit : mm



LS9-32



LS9-16

## ANALOG INPUT SPECIFICATIONS

Input terminal	GAIN	Actual source impedance	For use with nominal	Input level			Connector
				Sensitivity	Nominal	Max. before clip	
INPUT 1-n * <sup>1</sup>	-62dB	3kΩ	50-600Ω Mics & 600Ω Lines	-82dBu	-62dBu	-42dBu	XLR3-31 type*
	+10dB			-10dBu	+10dBu	+30dBu	

\*1. LS9-32: n=32, LS9-16: n=16

## ANALOG OUTPUT SPECIFICATIONS

Output terminal	Actual source impedance	For use with nominal	GAIN SW	Output terminals		Connector
				Nominal	Max. before clip	
OMNI OUT 1-n * <sup>1</sup>	75Ω	600Ω Lines	+24dB	+4dBu	+24dBu	XLR3-32 type*
			+18dB	-2dBu	+18dBu	
PHONES	15Ω	8Ω Phones	—	75mW	150mW	ST Phone Jack**
		40Ω Phones	—	65mW	150mW	

\*1. LS9-32: n=16, LS9-16: n=8

## DIGITAL INPUT SPECIFICATIONS

Terminal	Format	Data length	Level	Connector
2TR IN DIGITAL	IEC60958	24bit	0.5Vpp/75Ω	RCA Pin jack

## DIGITAL OUTPUT SPECIFICATIONS

Terminal	Format	Data length	Level	Connector
2TR OUT DIGITAL	IEC60958 (Consumer Use)	24bit	0.5Vpp/75Ω	RCA Pin jack

## CONTROL I/O SPECIFICATIONS

Terminal		Format	Level	Connector
NETWORK (Ethernet)		100Base-T	100Base-T	RJ-45
MIDI	IN	MIDI	—	DIN Connector 5P
	OUT	MIDI	—	DIN Connector 5P
WORD CLOCK	IN	—	TTL/75Ω terminated	BNC Connector
	OUT	—	TTL/75Ω	BNC Connector
USB HOST		USB1.1	—	A type USB Connector (female)
LAMP (LS9-32 only)		—	0-12V	XLR4-31 Type

