



STAGE BOX

SB168-ES



3U



The SB168-ES is an affordable 3U-size stage box that utilizes EtherSound™ technology to propagate digital sound signals. When connected to popular all-in-one digital consoles like the PM5D, LS9, or M7CL, the SB168-ES offers superb support for live sound. 16 channels of sonically-superb remote analog input – each with its own head amp – combined with 8 channels of analog output to let you chain multiple units in sequence for simultaneous use. The SB168-ES also functions as a conventional EtherSound™ device – an analog input-output box. Compared to a conventional analog console + analog multicore the SB168-ES is noise resistant, and lets you boost quality by keeping the length of microphone cables as short as possible. Even more, the SB168-ES is easy to set up, so that any time, effort, or money needed for equipment installation are significantly reduced.



Perfect Propagation of Digital Sound

Data transmission utilizes CAT5e cable, which offers the ability to carry uncompressed 24-bit / 48 kHz or 44.1 kHz high-quality sound over distances up to approximately 100 meters*. You can activate the SB168-ES head amp remote function from the mixing console to adjust mic gain levels so that they match specific sound scenes. Coupled with the superior sonic quality of the head amps, this capability presents huge advantages for live performance.

* Depending on the type of cable used.

Using EtherSound™ for Digital Sound Propagation

The SB168-ES uses the EtherSound™ technology. Of the digital audio signal transmission protocols currently available, EtherSound™ is highly regarded for its low latency, high-quality bidirectional multi-channel transmission capabilities, and its use of easily obtainable CAT5e cable. Moreover, EtherSound™ allows you to combine sound signals with control signals for the SB168-ES head amp remotes, or +48V function.

You can daisy chain connections through MY16-ES64 and MY16-EX

mini-YGDAI cards to connect to a Yamaha digital console, which makes setting up easy anywhere – from up on stage to front of house. And since the SB168-ES is capable of operating as a generic EtherSound™ device, you can also use AuvITran Ltd's AVS-ESMonitor to control its parameters.



MY16-ES64



MY16-EX



AVS-ESMonitor

Yamaha Reliability

Up to now, digital signal propagation systems were extremely expensive. The SB168-ES was designed from the outset to be used together with Yamaha digital consoles, making high performance affordable. It also features +48V, signal, and peak indicators for each input terminal, providing an excellent environment for active monitoring.

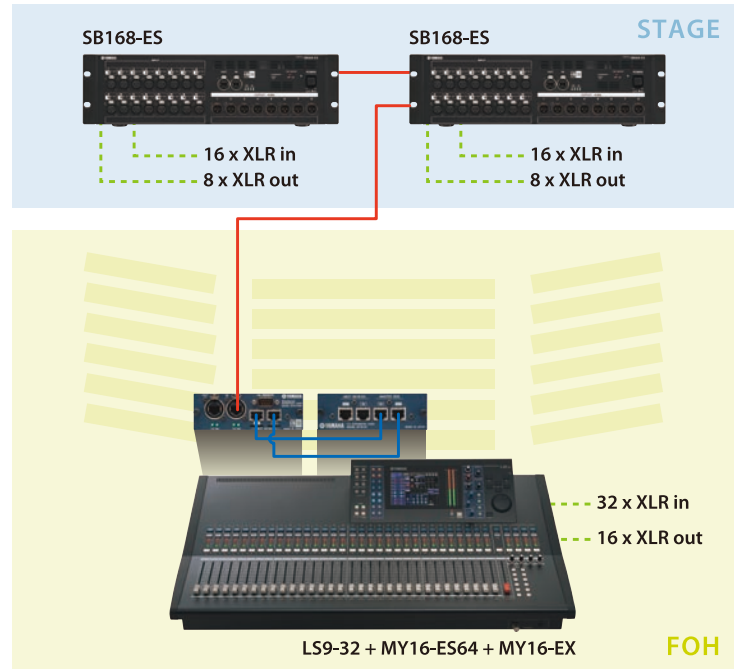
Applications

■ 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.

- CAT5e cable (EtherSound™)
- CAT5e cable
- - - Analog

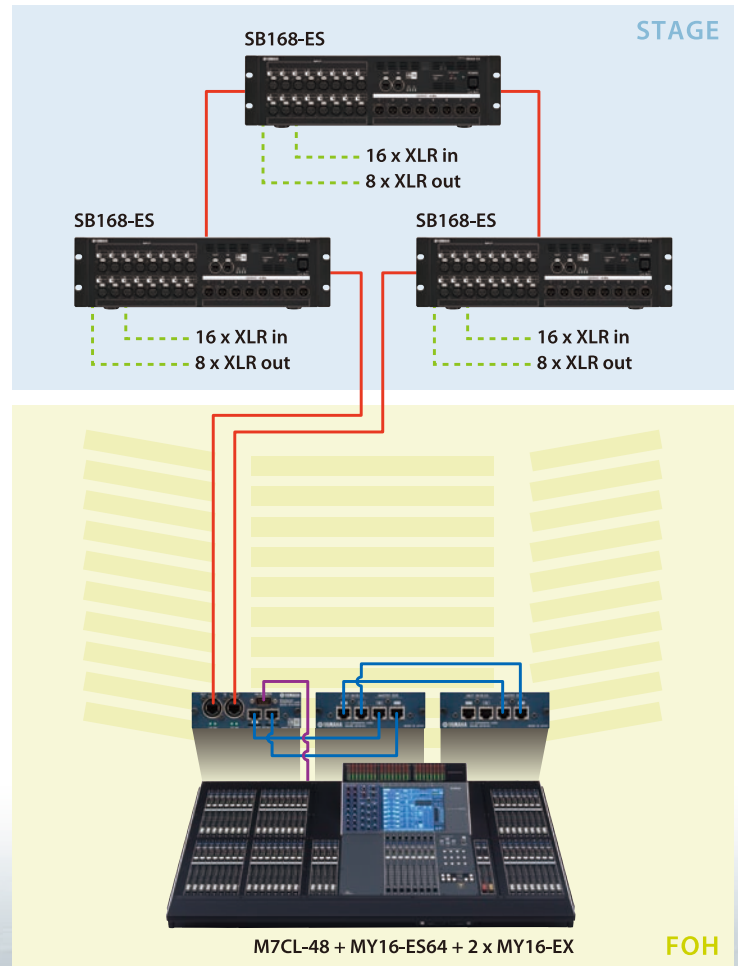


■ Medium Scale Live Sound System with M7CL-48

This example depicts a live sound system built around an M7CL-48 console. This system offers 48 inputs and 24 outputs on stage.

This system uses CAT5e cables and ES-100 ring topology in a redundant configuration to connect the stage boxes and the M7CL-48, allowing simple, hassle-free setup.

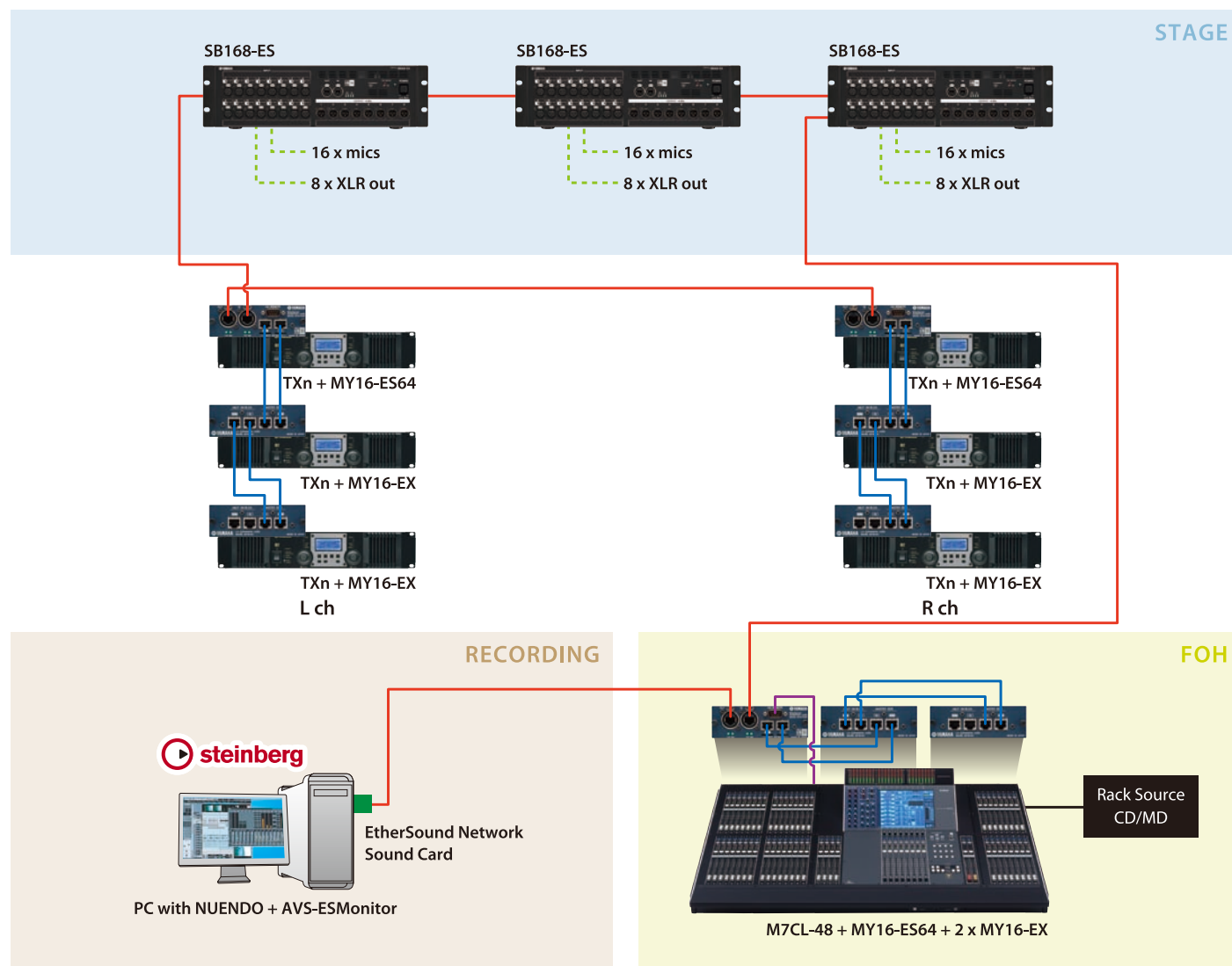
- CAT5e cable (EtherSound™)
- CAT5e cable
- - - Analog
- HA Remote



Large Scale Live Sound System

This example depicts a live sound system built around an M7CL-48 console.

The M7CL-48 console can remotely control up to 48 microphone head-amps, and store the settings in its Scene Memories. This particular EtherSound™ system allows easy setup and system monitoring from a personal computer also used for multitrack recording. This setup also allows direct feeding of digital signal from the console for recording.



- CAT5e cable (EtherSound™)
- CAT5e cable
- - - Analog
- HA Remote



Specifications

- 16-ch in with remote HA, and 8-ch out
- +48V, signal, and peak indicators
- EtherSound™ audio protocol
- Simultaneous use of up to 4 units
- 3U rack size
- Compatible with ES applicable products (can be used as audio interface to ES from analog16 in/8 out) and AVS-ESMonitor software
- Rack mount ears are two step recessible



COMPATIBLE HOST MODELS

Model	Max No. of Units	HA Remote
M7CL-48	3	9-pin
M7CL-32	3	9-pin
LS9-32	2	via Slot
LS9-16	1	via Slot
DM1000	2	9-pin
DM2000	4	9-pin
PM5D	4	9-pin
DME64N	4	9-pin
DME24N	1	9-pin

GENERAL SPECIFICATIONS

Dimensions (W × H × D)	Net Weight	Power Requirements
480 mm × 132 mm × 350 mm	8 kg	AC 110-240 V 50 Hz/60 Hz

ANALOG INPUT CHARACTERISTICS

Input Terminals	Gain	Actual Load Impedance	For Use with Nominal	Input Level		Connector
				Nominal	Max. before Clip	
INPUT 1-16	-62 dB	3 kΩ	50-600 Ω Mic & 600 Ω Line	-62 dBu (0.616 mV)	-42 dBu (6.16 mV)	XLR-3-31 type (Balanced)
	+10 dB			+10 dBu (2.45 V)	+30 dBu (24.5 V)	

ANALOG OUTPUT CHARACTERISTICS

Output Terminals	Actual Source Impedance	For Use with Nominal	Max. Output Level Select SW	Output Level		Connector
				Nominal	Max. before Clip	
OUTPUT 1-8	75 Ω	600 Ω Line	+24 dB (default)	+4 dBu (1.23 V)	+24 dBu (12.3 V)	XLR-3-32 type (Balanced)
			+18 dB	-2 dBu (616 mV)	+18 dBu (6.16 V)	

DIGITAL I/O CHARACTERISTICS

Terminals	Format	Data Length	Level	Audio	Connector
IN, OUT	EtherSound	24bit	100BASE-TX	8 ch Input / 16 ch Output	EtherCON

CONTROL I/O CHARACTERISTICS

Terminals	Format	Level	Connector
NETWORK	IEE802.3	10BASE-T / 100BASE-TX	RJ-45

* Specifications and appearance subject to change without notice.

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www.yamahaproaudio.com



YAMAHA CORPORATION
P.O. BOX 1, Hamamatsu Japan

Printed in Japan



This document is printed on chlorine-free (ECF) paper with soy ink.

LPA569



P10021533