Digital Snake

Digital Audio Transfer System

Compact, Portable Digital Snake System

S-1608
Stage Unit

S-0816
FOH Unit

REAC
24bit / 96kHz

Roland

S-1608 STAGE UNIT

Digital Snake

rss by Roland

Analog Output Terminals
On board 24bit/96kHz
DA converters.

Analog Input Terminals
On board 24bit/96kHz AD
converters and high quality mic
pre-amps with phantom
power supply.

S-1608 Stage Unit

The S-1608 and S-0816 Digital Snake are compact versions of the popular S-4000 Digital Snake system. Easy to use and quick to install, the S-1608/0816 Digital Snake system is a small format audio snake solution that offers the highest quality audio signal available in a portable snake system.

The snake comes with high quality pre-amp

Unlike analog multicore snake cables, RSS Digital Snake systems are equipped with high quality and remote-controllable mic pre-amps. The pre-amps of RSS Digital Snake systems have been specially designed for live audio applications and is made of high quality components carefully selected by Roland's engineers.

REAC Technology

REAC

The REAC (Roland Ethernet Audio Communication) protocol is an industry proven, low latency, high quality 24bit/96kHz audio transfer protocol used by the S-1608 and S-0816. The REAC protocol allows the Digital Snake signal to be ìsplitî to as many positions as required such as monitor, broadcast and recording locations using S-4000-SP REAC Splitter or any standard gigabit Ethernet switch.

High Resolution Sound Quality

By having high quality mic-pres on stage, the sound is amplified and converted at the closest point to the sound source, providing the best possible quality audio. By using Cat5e cable instead of large multi-core copper cable, the S-1608/0816 digital snake system is immune to the ìhums and buzzesî caused by electrical noise and ground issues.

Create Multiple Stage Configurations

Use Multiple S-1608/0816 Digital Snake System to create multiple stage configurations such as Left, Right and Center stage unit positions. Simply run Cat5e cables to FOH units in Front of House position for easy cable management.

Ideal Channel Count Expansion for the S-4000 Digital Snake System

The S-1608/0816 Digital Snake System can be used easily expand the channel count of the S-4000 32x8 Digital Snake System to 48x16 or more. Mix and match S-4000 and S-1608/0816 Digital Snake systems for customizable rental and installation systems.

REMOTE Terminal (RS-232C)

Connector for either the dedicated remote controller (S-4000R) or computer installed with S-4000-RCS remote control software.

Digital Output (Optical)

Output the audio signal input to INPUT 1/2 of the S-1608/0816 for monitoring sync.

Mute All Output Button

When this button is pressed and held, all outputs in the system will be muted.
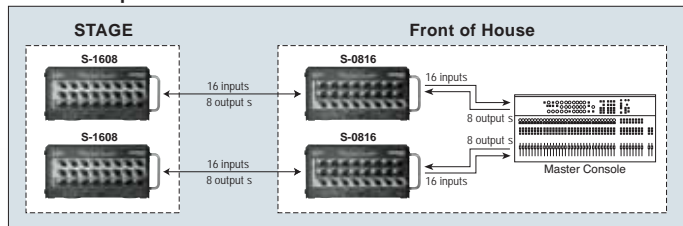
Mode Selection Switch

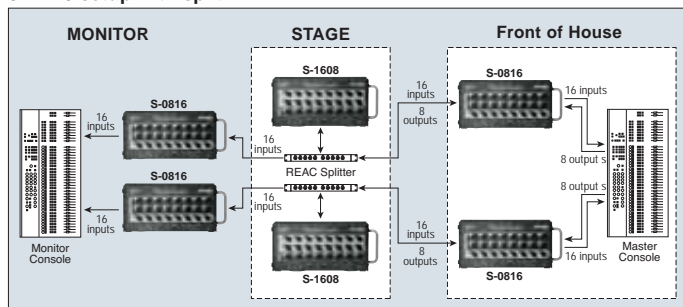| Master | Outputs source audio to the Slave and Split devices It receives Input from the Slave device. |
| Slave | Receives Input from and sends output to the Master device. |
| Split | Receives Input from all of the Master deviceís sources. |

S-0816 FOH Unit

The S-1608/0816 Digital Snake system is ideal for bands, corporate A/V events, seminars, rental and staging houses, House of Worship and broadcasters that needs the best possible sound quality from their audio without the high frequency losses and bulk of analog snakes.

Easy and Expandable

32 x 16 setup

STAGE — Front of House

S-1608
16 inputs
8 output s
S-0816
16 inputs
8 output s
8 output s

S-1608
16 inputs
8 output s
S-0816
16 inputs

Master Console

32 x 16 setup with split

MONITOR — STAGE — Front of House

S-0816
16 inputs
16 inputs

S-1608
16 inputs
16 inputs
8 outputs
S-0816
16 inputs
8 output s
8 output s

REAC Splitter

S-0816
16 inputs

S-1608
16 inputs
16 inputs
8 outputs
S-0816
16 inputs

Monitor Console

Master Console

Remote-controllable

S-4000R or S-4000RCS provide easy remote control of all input gain adjustment, phantom power and PAD settings.

REAC technology will make easy recording split

Because REAC is based on standard Ethernet technology, the individual audio inputs coming into S-1608/0816 digital snake system can be recorded via the Gigabit Ethernet port of PC computer. DAW software to capture the audio signal is now under development by Cakewalk and will be released in the near future. This will make multi-channel live recording easier than ever before.

Specifications

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Number of Channels	S-1608 : 16 in 8 out S-0816 : 8 in 16 out
AD and DA Conversion	24 bit / 96 kHz
Frequency Response	-2 dB / +0 dB (@ +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	0.05 % or less (Pad: On, Input Gain: +4 dBu, 22Hz to 20 kHz)
Dynamic Range	110 dB
Cross Talk	-80 dB or less (Input Gain: +4 dBu, typ.)
Nominal Input Level	-65 to -10 dBu (PAD: Off), -45 to +10 dBu (PAD: On)
	(1 dB step, Max. +28 dBu)
PAD	20 dB On/Off
Input Impedance	14 k ohms
Nominal Output Level	+4 dBu, Max. +22 dBu
Output Impedance	600 ohms
Recommended Load Impedance	10 k ohms or greater
Residual Noise Level (IHF-A, typ.)	-80 dBu or less
Equivalent Input Noise Level	S-1608: -128 dB S-0816: -124dB
Network Latency	375 microseconds when using REAC cable only (*1)
	(AD>REAC>DA Latency: approx 1.2 ms)
Connectors	S-1608 : Analog Input x 16 (XLR type, balanced, phantom power)
	Analog Output x 8 (XLR type, balanced)
	Digital Output connector x 1 (Optical type)
	REAC Connector x 1 (RJ-45 EtherCon type)
	Remote Connector x 1 (RS-232C, DB-9 type)
	S-0816 : Analog Input x 8 (XLR type, balanced, phantom power)
	Analog Output x 16 (XLR type, balanced)
	Digital Output connector x 1 (Optical type)
	REAC Connector x 1 (RJ-45 EtherCon type)
	Remote Connector x 1 (RS-232C, DB-9 type)
Indicators	POWER Indicator x 1, REAC Indicator x 1,
	REMOTE Indicator x 1, MUTE ALL OUTPUTS Indicator x 1
Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Power Comsumption	45W

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Phantom Power	+48 V / 14 mA (each input, remote controlled)
Dimensions	401 (W) x 135 (D) x 177 (H) mm or
	15-13/16 (W) x 5-3/8 (D) x 7 (H) inches
Weight	5.5 kg 12 lbs 3 oz
Operation Temperature	0 to +40 degrees Celsius
	+32 to +104 degrees Fahrenheit
Accessories	Power Cord x 1, REAC Connector Cover x 1, Ferrite Cores x 1
	Rubber Foot x 4, Rack Mount Kit x 1, Owner's Manual

*1: When a REAC Splitter S-4000-SP or a switching hub is used in-line with REAC cables, the network latency will increase by the amount of processing delay introduced by the splitting device itself. The actual delay is dependant upon the specifications of the splitting device, though the maximum delay amount for a single splitting device should be about 200 microseconds.
* 0 dBu = 0.775 Vrms
* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

S-1608 Dimensions(mm)
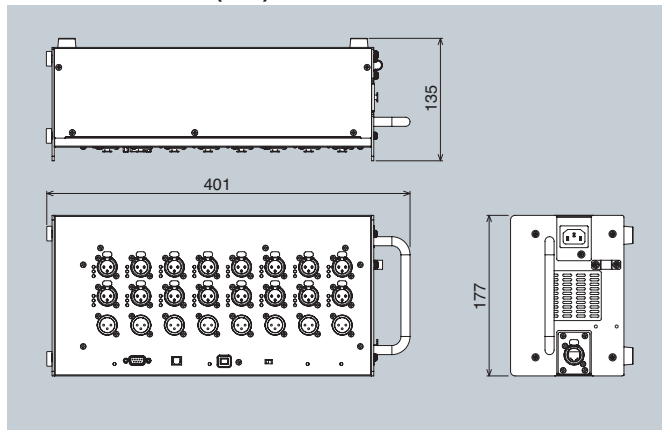
S-0816 Dimensions with rack mount kit (mm)
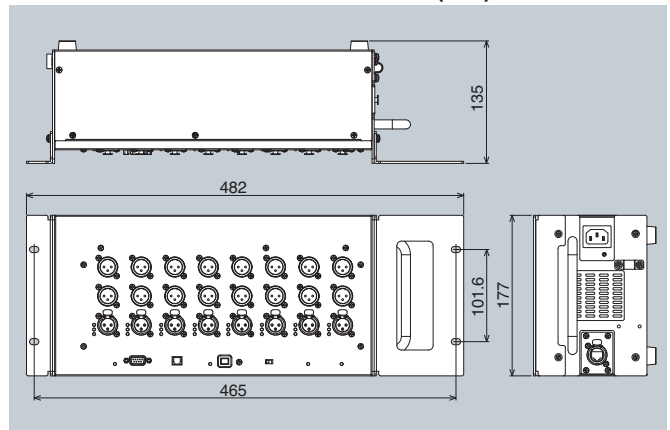
Optional Items

S-4000R
Remote Controller

S-4000R can be connected to both S-1608 or S-0816. It provides easy remote control of gain adjustments and controls Phantom power and PAD Settings. The S-4000R can save up to 10 setups to internal memory for instant recall of the all settings.

SC-W100S
100 meter Cat5e Cable

Crossover cable with Neutrik(R) Ethercon connectors

S-4000-SP
REAC Splitter

The S-4000SP is a dual 5-port dedicated gigabit splitter for the RSS Digital Snake System that provides highest level of reliability with backup REAC ports, two power supplies and Neutrick(R) Ethercon Connectors.

S-4000 RCS
Remote Control Software

As an alternative to the S-4000R a computer can be connected to the REMOTE terminals (RS-232C) of S-1608 or S-0816 and controlled by the S-4000 RCS Remote Control Software. This software is available as a free download for Mac or PC.

* The S-4000 RCS software is downloadable from www.rolandsystemsgroup.net

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www.rolandsystemsgroup.com/s1608