

Roland

PROFESSIONAL
AUDIO AND VIDEO EQUIPMENT
2014 - 2015

AUDIO

DIGITAL CONSOLES
DIGITAL SNAKES
PERSONAL MIXER/
MULTI-CHANNEL RECORDER
AUDIO RECORDERS



VIDEO

VIDEO MIXERS/SWITCHERS
VIDEO CONVERTERS



Bringing Professional Audio and Video Together

Welcome to the Roland Professional Audio and Video Equipment catalog.

Roland has introduced many innovative products to the professional market over the past few years and has built a strong trust across many users and installations around the world. Through continuous development and a clear focus on professional audio/video products, Roland is committed to providing unique solutions to improve workflow and maximize creative possibilities.

We offer solutions to many markets including: Broadcast • Education • Legal • Live Production • Sports • Theater • Theme Park • Videography • Visual Performance • Worship.

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL
RECORDER

AUDIO RECORDERS

VIDEO MIXERS/
SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

NEW PRODUCTS

S-2416 | Stage Unit



P.14

A new standard in digital stage units. 24 input x 16 output analog + 8 input x 8 output digital (AES/EBU).

XS series | Multi-Format Matrix Switcher

XS-84H 8-in x 4-out



XS-83H 8-in x 3-out



XS-82H 8-in x 2-out



P.27

The Roland XS Series - the new line of Multi-Format Matrix Switchers designed for fixed installations requiring high-quality integrated video and audio conversion and switching.

VR-3EX | AV Mixer



P.37

An all-in-one AV Mixer with built-in USB port for Web Streaming and Recording. Built-in multiviewer with touch control.

VR-50HD | Multi-Format AV Mixer



P.35

An all-in-one HD Multi-Format AV Mixer with built-in USB 3.0 for Web Streaming and Recording

VC-1 series | Video Converters



P.39

Lossless 3G-SDI and HDMI Conversion



M-480



M-300



M-200i

DIGITAL CONSOLES



S-4000 series



S-2416



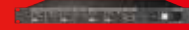
S-1608/S-0816



S-0808



S-4000M



S-MADI



W100S-R/SC-W100S/SC-W20F

DIGITAL SNAKES



M-48

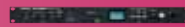


S-4000D

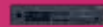


R-1000

PERSONAL MIXER/
MULTI-CHANNEL RECORDER



AR-3000SD



AR-200R



R-88



R-44



R-26

AUDIO RECORDERS



XS-82H/XS-83H/XS-84H



V-800HD



V-40HD



V-4EX



MVS-12



VR-50HD



VR-3EX

VIDEO MIXERS/SWITCHERS



VC-1-SH



VC-1-HS



VC-1-DL



VC-1-SC

VIDEO CONVERTERS

- Audio Production
- Personal Mixing
- Recording/Broadcasting

- Visual Production
- Web Streaming and Capture/Archiving
- Multi-Format AV Matrix Switching
- Video Recording

APPLICATIONS

V-Mixing System

Configure a system for any venue or application The V-Mixing System - an advanced mixing environment

It's not simply a digital version of an analog console. The V-Mixing System is the next generation mixing "ecosystem" that exploits the advantages of digital technology. It separates mixing (V-Mixer) from the input/output section (Digital Snake) enabling pure sound, minimal loss of transmission with very flexible system configuration and setup. It allows effortless additions for monitoring solutions (M-48 Personal Mixer) as well as multi-channel live recording (R-1000 48-Track Recorder/Player). The V-Mixing System brings together the predominant components of the live sound environment, expanding the possibilities and benefits far beyond the sum of its parts.

REAC

High quality sound is obtained with ease and flexibility REAC - advanced audio transfer technology

REAC (Roland Ethernet Audio Communication) technology is the cornerstone of the V-Mixing System. REAC is Roland's original technology for low latency, high quality digital audio transfer. REAC is an Ethernet based technology that enables multiple components to be easily integrated using lightweight Cat5e/6 cable. With just a single inexpensive cable, 40 input x 40 output channels of 24-bit uncompressed audio data (including level and control information) are transferred.



Digital Snakes

Enjoy superior clear sound, great intelligibility with minimum latency and the freedom to split or extend your audio sources anywhere.

Digital Snake

Bridging

The S-MADI REAC Bridge enables connectivity between MADI-equipped digital audio mixers/systems to any REAC-based devices.

S-MADI REAC MADI BRIDGE

Personal Mixers

The M-48 is the "next generation" live personal mixer that offers musicians the flexibility to control exactly what they want to listen to during their performances.

M-48 LIVE PERSONAL MIXER

Digital Consoles

Available with a variety of digital snake configurations, this fully featured digital solution is ideal for any mid-sized live event applications in corporate, church, school or rental/staging environments.

V-Mixing System

Recording

Multi-channel recording and playback is accomplished with reliability and stability using the dedicated R-1000 48-Track Recorder/Player.

R-1000 48-TRACK RECORDER/PLAYER

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

				
	M-480	M-300	M-200i	
Input	Mixing Channels	48	32	32
	Return Channels	6 Stereo (12)	-	-
	Dynamics Channel	48	32	32
	Delay	0 to 1200 msec	-	-
	PEQ	4-band PEQ	4-band PEQ	4-band PEQ
Effects	EQ	12 x 31-band GEQ or 8-band PEQ *Maximum 24 using FX	4 x 31-band GEQ *Maximum 8 using FX	4 x 31-band GEQ *Maximum 8 using FX
	Built-in Effect (Stereo/Dual mono)	6	4	4
Output	AUX bus	16	8	8
	MATRIX bus	8	4	4
	MAIN bus	L, C, R	L, C, R	L, R
	PEQ	4-band PEQ	8-band PEQ	4-band PEQ
	Limiter	Limiter	Limiter	Limiter/Comp
	Delay	0 to 1200 msec	0 to 400 msec	0 to 400 msec
	DCA	24	4	8
Console/ Others	Input Connectors	10 [XLR (x8), RCA (x2)]	12 [XLR (x4), RCA (x4), TRS Phone (x4)]	24 [XLR (x16), RCA (x2), TRS Phone (x6)]
	Output Connectors	10 [XLR (x8), S/PDIF (Optical, Coaxial)]	10 [XLR (x4), TRS Phone (x4), S/PDIF (Optical)]	14 [XLR (x8), TRS Phone (x4), AES/EBU]
	USB Recorder/Player	Yes	Yes	Yes
	REAC MODE	Master/Split	Master/Split	Master/Slave/Split
	Rackmount	-	10U	10U
	PC/Mac control	M-480 RCS	M-300 RCS	M-200i RCS
	iPad control	M-480 Remote	M-300 Remote	M-200i Remote

How to Configure a V-Mixing System

Step 1

Decide on inputs/outputs

There are a number of I/O configuration choices. Select based on size, I/O count, and modularity.



Determine if you need additional splits for monitoring, recording or distribution to multiple places. You can also distribute your main I/O units together into a merged REAC signal.



Step 2

Choose a Console

There are four choices of consoles to choose from.

Differences center around:

- Mixing Channels
- Processing Power
- Number of Faders
- Size and rackmount ability



Step 3

Choose Monitoring Solution

Monitoring needs can be addressed by adding the M-48 Personal Mixing option, another V-Mixer as a monitor console, or the combination of both.

The M-48 offers musicians the flexibility to control exactly what they want to listen to during their performance.



Add an additional V-Mixer to create a monitor position that can control wedges and/or any M-48 personal mixers connected taking the burden off of the FOH position.



Step 4

Choose Recording/ Playback Solution

Multi-channel recording and playback can be added by using a simple Cat5e/6 cable from a split point.

Record/play back up to 48-channels of audio using the Roland R-1000 Multi-Channel Recorder/Player.



V-Mixer M-480 | Live Mixing Console

Flagship console with a new world-class powerful mixing engine

REAC

Roland
Wireless
Connect

V-LINK



- 48 mixing channels plus 6 stereo returns for a total of 60 channels
- Main (LCR) outputs, 16 AUX buses, 8 matrices
- Configurable to 90 inputs and 90 outputs depending on Digital Snake configuration
- 4-band advanced parametric EQ, and delays on all inputs and outputs
- Compressors and Gates on all mixing channels
- Six built-in stereo (dual-mono) multi-effects and twelve graphic EQs (switchable to 8-band PEQs)
- 214 possible output patch points on each port (A,B, console), allows direct routing from preamp to output point without having to use mix channel
- Supports integration with Personal Mixing System and Multi-Channel Live Recording/Playback
- Cascade connection supports large format applications for 96 mixing channels
- Remote control from the dedicated iPad application, M-480 Remote

The large, bright 800 x 480 color LCD gives a very clear view of all the V-Mixer's parameters

● Channel Display



Channel Editing Display is a familiar and easy-to-use analog-style layout of all common channel parameters.

● Channel EQ



Dedicated screen for editing channel EQ. Change values quickly using the dedicated knobs.

● EFFECTS



View and edit the 6 stereo (dual mono), high-quality FX for channel/bus inserts such as reverb, delay, channel strip.

● GEQ/PEQ

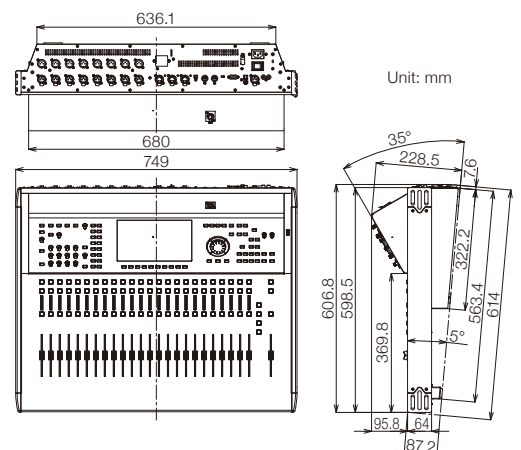


Setup screen for twelve 31-band Graphic EQs or 8-band Parametric EQs.

M-480 RCS - Remote control software for PC/Mac



Free download from
www.roland.com

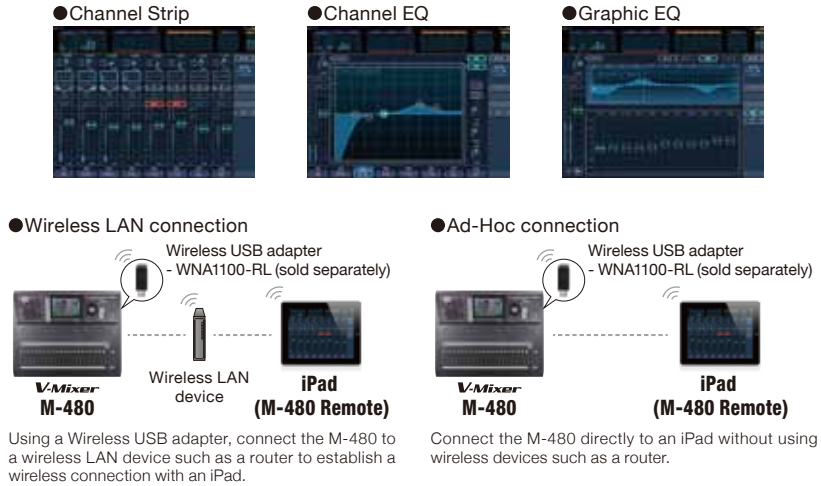


M-480 Remote

Application for remotely controlling the Roland M-480 V-Mixer live mixing console.



Available on the App Store



Options



WNA1100-RL
Wireless USB Adapter
The M-480 and an iPad can be connected wirelessly.



M-UF2G
2 GB USB Flash Memory
For uncompressed WAV recording/playback and saving/loading configuration files.

SPECIFICATIONS M-480

Channels, Buses, I/O	MIXING CHANNEL: 48 channels, 6 stereo returns BUSES: MAIN L/C/R, 16 AUX buses, 8 MATRIX buses INPUT: 10 ports (Max 90 ports when using REAC devices) OUTPUT: 10 ports (Max 90 ports when using REAC devices)
Internal processing	56 bits
AD/DA Conversion	24-bit/48.0 kHz or 44.1 kHz
Network Latency	2.8 mS (typ.) * Total System Latency of audio signal from S-1608 inputs to outputs via M-480's REAC ports (A or B). * Sample Rate: 48.0 kHz * Effects : No insert effects
CONSOLE INPUT jacks (1 to 8)	XLR-3-31 type (balanced, phantom power)
TALKBACK MIC IN jack	XLR-3-31 type (balanced, phantom power)
STEREO IN jacks (L/R)	RCA phono type
CONSOLE OUTPUT jacks (1 to 8)	XLR-3-32 type (balanced)
PHONES jack	Stereo 1/4 inch phone type
DIGITAL OUT jacks Stereo	Optical type, Coaxial type
REAC Ports	RJ-45 EtherCon type
USB connectors	USB Type A and Type B
Remote Controls	RS-232C connector: 9-pin D-sub type MIDI connectors (OUT/THRU, IN): 5-pin DIN type
Other Connectors	GND Terminal, LAMP connector XLR-4-31 type
Frequency Response	CONSOLE OUTPUT jacks (1 to 8): -2 dB / +0 dB (20 k ohms load, +4 dBu, typ.) PHONES jack: -3 dB / +0 dB (40 ohms load, 150 mW, typ.)
Total Harmonic Distortion + Noise	CONSOLE OUTPUT jacks (1 to 8): 0.05 % (+4 dBu, typ.) PHONES jack: 0.05 % (typ., 40 ohms load, 150 mW, typ.)
Dynamic Range	CONSOLE OUTPUT jacks (1 to 8): 110 dB (typ.)
Crosstalk@ 1 kHz	CONSOLE INPUT jacks (1 to 8): -80 dB (Pad: ON, Input gain: +10 dBu, typ.), CONSOLE OUTPUT jacks (1 to 8): -100 dB (typ.)
Nominal Input Level (Variable)	CONSOLE INPUT jacks (1 to 8): -65 to -10 dBu (Pad: OFF) or -45 to +10 dBu (Pad: ON), (typ.), STEREO IN jacks (L / R): -18 to 0 dBu, TALKBACK MIC IN jack: -50 to -10 dBu

Input Impedance	CONSOLE INPUT jacks (1 to 8): 14 k ohms, STEREO IN jacks (L / R): 10 k ohms, TALKBACK MIC IN jack: 41 k ohms
Non Clip Maximum Input level	CONSOLE INPUT jacks (1 to 8): +8 dBu (Pad: OFF) or +28 dBu (Pad: ON), (typ.), STEREO IN jacks (L / R): +18 dBu (typ.), TALKBACK MIC IN jack: +8 dBu (typ.)
Nominal Output Level	CONSOLE OUTPUT jacks (1 to 8): +4 dBu (Load impedance: 10 k ohms, typ.)
Output Impedance	CONSOLE OUTPUT jacks (1 to 8): 600 ohms PHONES jack: 100 ohms
Recommended Load Impedance	CONSOLE OUTPUT jacks (1 to 8): 10 k ohms or greater PHONES jack: 8 ohms or greater
Non Clip Maximum Output level	CONSOLE OUTPUT jacks (1 to 8): +22 dBu (1 kHz, 10 k ohms load, typ.) PHONES jack: 150 mW + 150 mW (1 kHz, 40 ohms load, typ.)
Residual Noise Level (IHF-A, typ.)	-88 dBu (All faders: Min)
Equivalent Input Noise Level (E.I.N.)	-126 dBu
Display	800 x 480 dots Wide VGA backlit TFT color screen
Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Power Consumption	95 W
Dimensions	749.0 (W) x 614.0 (D) x 228.5 (H) mm 29-1/2(W) x 24-11/16(D) x 9-1/16(H) inches
Weight	20 kg, 44 lbs 1 oz

* XLR type: 1 GND, 2 HOT, 3: COLD
* phantom power: DC +48 V(unloaded maximum), 14 mA(maximum load) (All XLR type inputs)
* LAMP power: DC +12 V/500 mA
* When a REAC Splitter&Distributor S-4000D 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.
* EtherCon is the registered trade mark of Neutric®

V-Mixer M-300 | Live Mixing Console

A powerful and compact digital mixing console

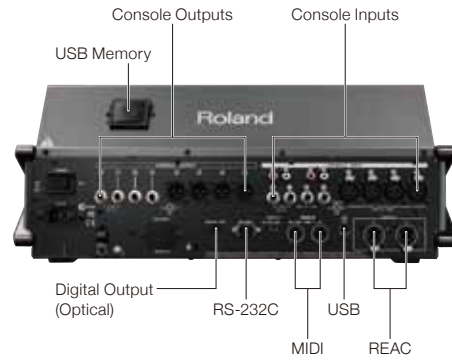
REAC

Roland
Wireless
Connect

V-LINK



Headphone Jack



Console Outputs
Console Inputs
USB Memory
Digital Output (Optical)
RS-232C
MIDI
USB
REAC

- 32 mixing channels, L/C/R outputs, 8 AUX buses, 4 Matrices
- Built-in REAC ports allows flexible system expansion
- 4-band PEQ and dynamics on all channels
- 11 different built-in multi-effects/ PEQ and delay on all outputs
- 100 mm motorized faders
- 24bit AD/DA for high-quality sound remotely controllable from a PC
- Record to /playback from USB flash memory
- Perfectly integrates with the Digital Snake for simple and high-quality audio transmission, distribution, splits and merging
- Construct a flexible and powerful system by adding the Personal Mixing System, multi-channel recording and other REAC components

Version 1.5 Software Highlights

- 4 x 31-band mono GEQs
- New effects added to Effect Library
- Audio Cross Fade between Scene Changes
- Channel Screen for each DCA Group
- New User Account functionality
- Additional RS-232C commands
- Supports Roland Wireless USB Adapter and iPad Control App

USB memory recorder/player

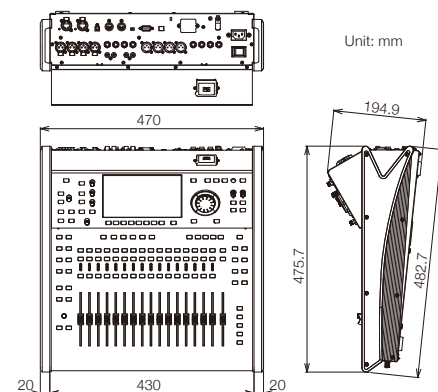


Record the output of the V-Mixer Main, assigned AUX bus or MATRIX bus directly to a USB memory drive connected to the built-in USB port. A mix produced with the V-Mixer is saved as an uncompressed WAV file, without the need for an external recorder. WAV files on the USB memory drive can also be played back on the V-Mixer and used for pre/post show music or background music/tracks. User settings and mixer data can also be saved to a USB memory drive. The USB recording function is available on all V-Mixer Consoles.

M-300 RCS - Remote control software for PC/Mac



Free download from
www.roland.com



Option



RA-10U
Rackmount Angle
Rackmountable to 19-inch rack (EIA)

M-300 Remote

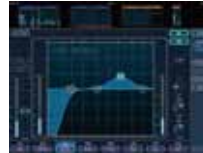
Application for remotely controlling the Roland M-300 V-Mixer live mixing console.



● Channel Strip



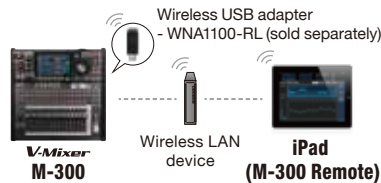
● Channel EQ



● Graphic EQ

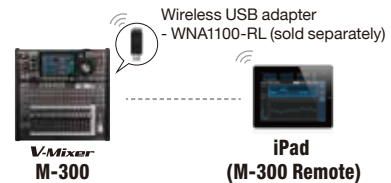


● Wireless LAN connection



Using a Wireless USB adapter, connect the M-300 to a wireless LAN device such as a router to establish a wireless connection with an iPad.

● Ad-Hoc connection



Connect the M-300 directly to an iPad without using wireless devices such as a router.

SPECIFICATIONS M-300

PROCESSING

Channels, Buses, I/O	MIXING CHANNEL: 32 channels BUSES: MAIN L/C/R, 8 AUX buses, 4 MATRIX buses INPUT: 12 ports (Max 92 ports when using REAC devices) OUTPUT: 10 ports (Max 90 ports when using REAC devices)
AD/DA Conversion	24-bit/48.0 kHz or 44.1 kHz
Network Latency	2.8 mS (typ.) * Total System Latency of audio signal from S-1608 inputs to outputs via M-300's REAC ports (A or B). * Sample Rate: 48.0 kHz * Effects: No insert effects

CONNECTORS

CONSOLE INPUT jacks (1 to 4)	XLR-3-31 type (balanced, phantom power)
CONSOLE INPUT jacks (5 to 8)	1/4 inch Phone type (balanced)
CONSOLE INPUT jacks (9 to 12)	RCA Pin type
CONSOLE OUTPUT jacks (1 to 4)	XLR-3-32 type (balanced)
CONSOLE OUTPUT jacks (5 to 8)	1/4 inch Phone type (balanced)
PHONES jack	Stereo 1/4 inch phone type
DIGITAL OUT jack	Optical type
REAC port	RJ-45 EtherCon type x 2
USB port	Type A x 1, Type B x 1
Remote Connectors	RS-232C connector: 9-pin D-sub type MIDI connectors (OUT/THRU, IN): 5-pin DIN type
Other Connectors	Grounding terminal AC INPUT connector

INPUT/OUTPUT CHARACTERISTICS

Frequency Response	CONSOLE OUTPUT jacks (1 to 8): -2 dB / +0 dB (20k ohms load, +4 dBu) PHONES jack: -3 dB / +0 dB (40 ohms load, 150 mW)
Total Harmonic Distortion + Noise	CONSOLE OUTPUT jacks (1 to 8): 0.05 % (typ., +4 dBu) PHONES jack: 0.05 % (typ., 40 ohms load, 130 mW)
Dynamic Range	CONSOLE OUTPUT jacks (1 to 8): 105 dB (typ.)

Cross Talk@ 1 kHz
CONSOLE INPUT jacks (1 to 4): -80dB (Pad: ON, Input sens: +4 dBu, typ.)
CONSOLE INPUT jacks (5 to 12): -80dB (Input sens: +4 dBu, typ.)
CONSOLE OUTPUT jacks (1 to 8): -100 dB (typ.)
* Sampling frequency is 48 kHz or 44.1 kHz.

Nominal Input Level (Variable)	CONSOLE INPUT jacks (1 to 4): -65 to -10 dBu (Pad: OFF) or -45 to +10 dBu (Pad: ON) CONSOLE INPUT jacks (5 to 12): -28 to +4 dBu
Input Impedance	CONSOLE INPUT jacks (1 to 4): 14 k ohms CONSOLE INPUT jacks (5 to 12): 10 k ohms
Non Clip Maximum Input level	CONSOLE INPUT jacks (1 to 4): +8 dBu (Pad: OFF) or +28 dBu (Pad: ON) CONSOLE INPUT jacks (5 to 12): +22 dBu
Nominal Output Level	CONSOLE OUTPUT jacks (1 to 8): +4 dBu (Load impedance: 10 k ohms)
Output Impedance	CONSOLE OUTPUT jacks (1 to 8): 600 ohms PHONES jack: 100 ohms
Recommended Load Impedance	CONSOLE OUTPUT jacks (1 to 8): 10 k ohms or greater PHONES jack: 8 ohms or greater
Non Clip Maximum Output level	CONSOLE OUTPUT jacks (1 to 8): +22 dBu (1 kHz, 10 k ohms load) PHONES jack: 150 mW + 150 mW (Typ., 1 kHz, 40 ohms load)
Residual Noise Level (IHF-A, typ.)	-88 dBu (All faders: Min)
Equivalent Input Noise Level (E.I.N.)	-126 dBu (Main Fader: Unity, Channel faders: Unity only one channel, Preamp gain: Max)
OTHERS	
Display	800 x 480 dots Wide VGA TFT color screen with backlight
Power Supply	AC 115 V, 117 V, 220 V, 230 V, 240 V (50/60 Hz)
Power Consumption	50 W
Dimensions	470.0 (W) x 482.7 (D) x 194.9 (H) mm 18-1/2(W) x 19(D) x 7-1/4(H) inches
Weight	9.8 kg 21 lbs 10 oz

(0dBu=0.775Vrms)

* XLR type: 1 GND, 2 HOT, 3: COLD

* phantom power: DC+48V(unloaded maximum), 14mA(maximum load) (All XLR type inputs)

* When a REAC Splitter S-4000D 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 200microseconds.



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V-Mixer M-200i | Live Mixing Console

Comprehensive iPad Control Meets Professional Mixing Console

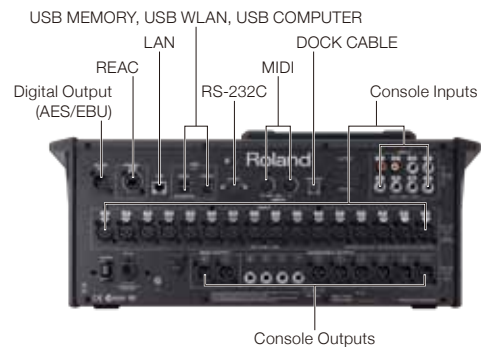
REAC

Roland
Wireless
Connect

V-LINK



* iPad not included



- 32-channel digital mixer (controllable with or without iPad)
- 17 motorized faders, dedicated buttons and knobs for key functions
- 24 onboard inputs and 14 outputs - expandable up to 64 x 54
- Fully featured, comprehensive iPad control for all major functions
- Wireless and wired iPad control (two at same time)
- Easily expandable to include personal mixing and multi-channel playback/record
- Multi-channel recording up to 40 channels

M-200i Remote - M-200i Remote Control Application for the iPad



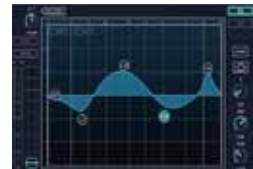
By simply installing the dedicated application, "M-200i Remote", you can control all key M-200i features from an iPad. Channel strips, channel EQ, channel dynamics, AUX SENDs, Scenes and other functions can be easily accessed. Use a simple swipe to move between channels. Make your faders longer for even more precise control. Visually drag, pinch or stretch EQ curves on a large screen.



● Channel Strip



● Channel EQ



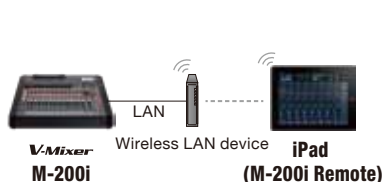
● Channel Edit



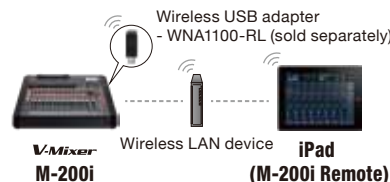
Three types of wireless connections

The M-200i and an iPad can be connected wirelessly by attaching the "WNA1100-RL" (sold separately) dedicated wireless USB adapter or connecting with a wireless LAN device directly.

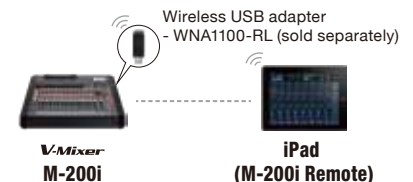
● Cable LAN connection



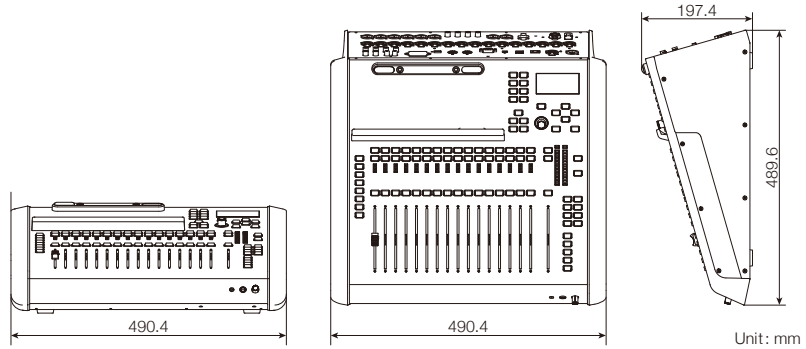
● Wireless LAN connection



● Ad-Hoc connection



Options	
M-200i RCS	Remote Control Software Free download from www.roland.com
WNA1100-RL	Wireless USB Adapter
M-UF2G	2 GB USB Flash Memory
RA-10U	Rackmount Kit



SPECIFICATIONS M200i

Processing	
Channels/Buses	CHANNELS: 32 BUSES: MAIN L/R, 8 AUX, 4 MATRIX
Inputs/Outputs	INPUTS: 24 (64 when using optional REAC devices) OUTPUTS: 14 (Max 54 ports when using REAC Devices)
Signal Processing	AD/DA Conversion: 24 bit Sample Rate: 48.0 kHz or 44.1 kHz
Console Latency	2.0 mS (typ.) *1 * Total Latency of audio signal from M-200i's console inputs to M-200i's outputs. * Sample Rate: 48.0 kHz * Effects: No insert effects
Network Latency	2.5 mS (typ.) *1 * Total System Latency of audio signal from S-1608 inputs to outputs via M-200i's REAC ports. * Sample Rate: 48.0 kHz * Effects: No insert effects
Connectors	
Inputs/Outputs/ Others	INPUT jacks (1 to 16): XLR-3-31 type (balanced, phantom power) INPUT jacks (17 to 22): 1/4 inch Phone type (balanced) INPUT jacks (23 to 24): RCA Phono type ASSIGNABLE OUTPUT jacks (1 to 6): XLR-3-32 type (balanced) ASSIGNABLE OUTPUT jacks (7 to 10): 1/4 inch Phone type (balanced) MAIN OUTPUT jacks (L, R): XLR-3-32 type (balanced) PHONES jacks: Stereo 1/4 inch phone type, Miniature phone type AES/EBU OUT jack: Optical type REAC port: RJ-45 EtherCon type RS-232C connector: 9-pin D-sub type MIDI connectors (OUT/THRU, IN): 5-pin DIN type USB MEMORY port: USB Type A USB WLAN ADAPTOR port: USB Type A USB COMPUTER port: USB Type B LAN port: RJ45 type DOC CABLE port: 10-pin mini DIN type DC IN jack Grounding terminal * XLR type: 1 GND, 2 HOT, 3: COLD * Phantom power: DC +48 V (unloaded maximum), 14 mA (maximum load, All XLR type inputs)
Input/Output Characteristics	
Frequency Response	ASSIGNABLE OUTPUT jacks (1 to 10): -2 dB/+0 dB (20k-ohms load, +4 dBu, typ.) MAIN OUTPUT jacks (L, R): -2 dB/+0 dB (20k-ohms load, +4 dBu, typ.) PHONES jack: -3 dB/+0 dB (40 ohms load, 150 mW, typ.) * Sample Rate: 48.0 kHz or 44.1 kHz * Input Connector: INPUT 1 to 24 (Pad: ON, Input sens: +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	ASSIGNABLE OUTPUT jacks (1 to 10): 0.05 % (+4 dBu, typ.) MAIN OUTPUT jacks (L, R): 0.05 % (+4 dBu, typ.) PHONES jack: 0.05 % (40 ohms load, 150 mW, typ.) * Sample Rate: 48.0 kHz or 44.1 kHz * Input Connector: INPUT 1 to 24 (Input sens: +4 dBu, 20 Hz to 20 kHz)

Dynamic Range	ASSIGNABLE OUTPUT jacks (1 to 10): 102 dB (typ.) MAIN OUTPUT jacks (L, R): 102 dB (typ.) * Sample Rate: 48.0 kHz or 44.1 kHz * Input Connector: INPUT 1 to 24 (Input sens: +4 dBu, 20 Hz to 20 kHz)
Crosstalk @ 1 kHz	INPUT jacks (1 to 24): -80 dB (Input sens: +4 dBu, IHF-A, typ.) ASSIGNABLE OUTPUT jacks (1 to 10): -88 dB (typ.) MAIN OUTPUT jacks (L, R): -88 dB (typ.) * Sample Rate: 48.0 kHz or 44.1 kHz
Nominal Input Level (Variable)	INPUT jacks (1 to 16): -65 to +4 dBu INPUT jacks (17 to 24): -28 to +4 dBu
Input Impedance	INPUT jacks (1 to 16): 14 k-ohms INPUT jacks (17 to 24): 10 k-ohms
Non Clip Maximum Input level	INPUT jacks (1 to 24): +22 dBu (1 kHz, 20 k-ohms load, typ.)
Nominal Output Level	ASSIGNABLE OUTPUT jacks (1 to 10): +4 dBu (Load impedance: 10 k-ohms, typ.) MAIN OUTPUT jacks (L, R): +4 dBu (Load impedance: 10 k-ohms, typ.)
Output Impedance	ASSIGNABLE OUTPUT jacks (1 to 10): 600 ohms (typ.) MAIN OUTPUT jacks (L, R): 600 ohms (typ.) PHONES jack: 49 ohms (typ.)
Recommended Load Impedance	ASSIGNABLE OUTPUT jacks (1 to 10): 10 k-ohms or greater MAIN OUTPUT jacks (L, R): 10 k-ohms or greater PHONES jack: 40 ohms or greater
Minimum Load Impedance	PHONES jack: 16 ohms
Non Clip Maximum Output level	ASSIGNABLE OUTPUT jacks (1 to 10): +22 dBu (1 kHz, 10 k-ohms load, typ.) MAIN OUTPUT jacks (L, R): +22 dBu (1 kHz, 10 k-ohms load, typ.) PHONES jack: 150 mW + 150 mW (1 kHz, 40 ohms load, typ.)
Others	
Display	Graphic LCD 132 x 64 dots with backlight
Current Draw	3.6 A
Dimensions	Desktop: 491 (W) x 490 (D) x 198 (H) mm Desktop: 19-3/8 (W) x 19-5/16 (D) x 7-13/16 (H) inches
Weight	9.8 kg, 21 lbs 10 oz
Accessories	DOCK CABLE, TABLET STAND, AC Adaptor, Power Cord, Owner's Manual

(0dBu=0.775Vrms)

*1: When a REAC Splitter S-4000D 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 no more than 200 microseconds.

Digital Snake S-4000 series

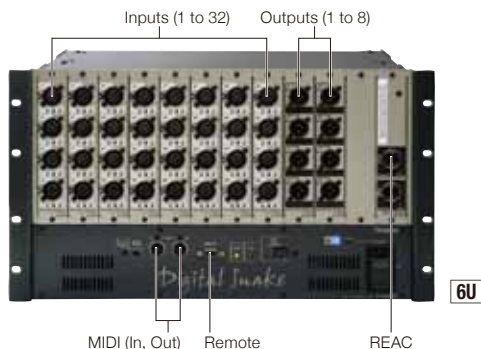
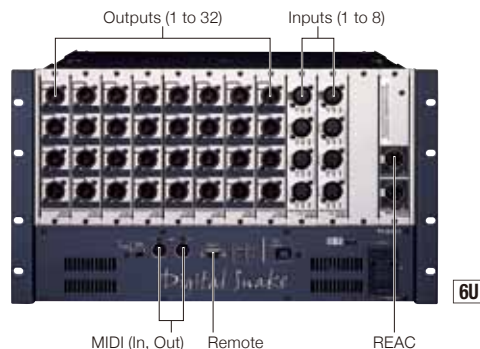
S-4000S-3208 | 32 x 8 Modular Stage Unit

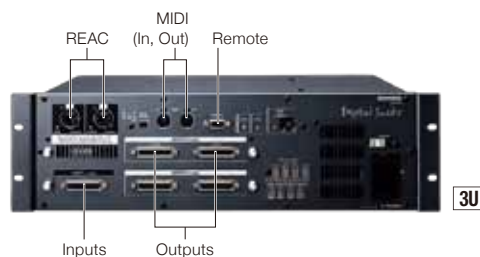
S-4000S-0832 | 8 x 32 Modular Stage Unit

S-4000H | 8 x 32 FOH Unit

S-4000R | Remote Controller

Simple and flexible digital snake units provide superb sound quality

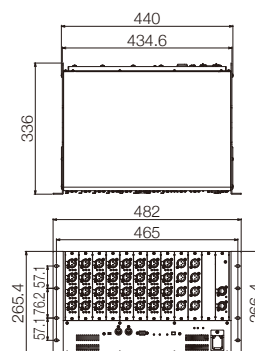
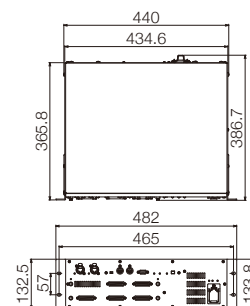
REAC
S-4000S-3208 Front Panel

S-4000S-0832 Front Panel

S-4000S-3208/0832 Rear Panel

S-4000H Front Panel

S-4000H Rear Panel

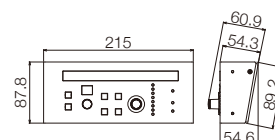
S-4000R Top Panel

S-4000R Rear Panel


- Superb quality pre-amps on each input channel
- S-4000S-3208/S-4000S-0832 can be used as I/O units of a V-Mixer for full digital mixing system
- S-4000S-3208 with S-4000H or S-4000S-0832 enables configuration of an individual digital transfer system
- Two REAC ports (one primary, one redundant) provide system reliability
- RS-232C interface for S-4000R Remote Controller or computer control
- MUTE ALL OUTPUTS button for noise-free connection of audio sources
- Connection port for optional redundant power supply (S-240P)
- S-4000R provides easy remote control of all input gain adjustments, phantom power and PAD settings

S-4000S-3208/0832 Dimensions

S-4000H Dimensions


Unit: mm

S-4000R Dimensions


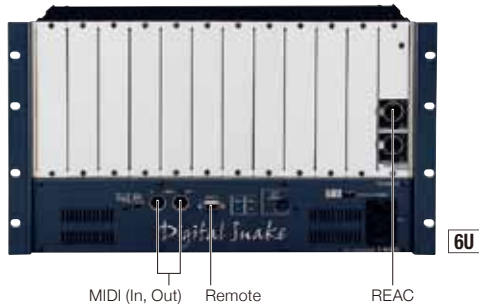
Digital Snake S-4000 series

- S-4000S-MR** | Digital Snake Modular Rack Chassis **SI-AD4** | 4-channel Analog Input Module **SO-DA4** | 4-channel Analog Output Module
- SI-AES4** | 4-channel Digital Input Module **SO-AES4** | 4-channel Digital Output Module **S-240P** | External Power Supply Unit

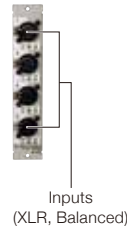
High quality options provide system flexibility



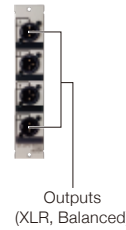
■ S-4000S-MR Front Panel



■ SI-AD4



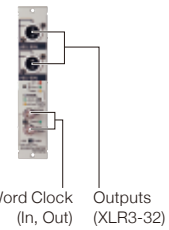
■ SO-DA4



■ SI-AES4



■ SO-AES4



■ S-4000S-MR Rear Panel



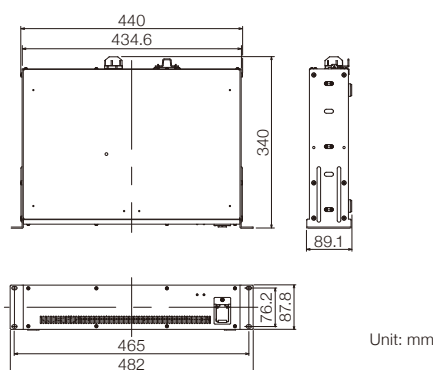
■ S-240P Front Panel



■ S-240P Rear Panel



■ S-240P Dimension



■ **S-4000S-MR is modular rack chassis with no pre-installed In/Out modules; Designed for custom configurations such as 24x16 and 40x0**

■ **SI-AD4 - 4-Channel Analog Input Module provides high quality pre-amps on each input channel with phantom power**

■ **SO-DA4 - 4-Channel Analog Output Module provides high quality D/A converter**

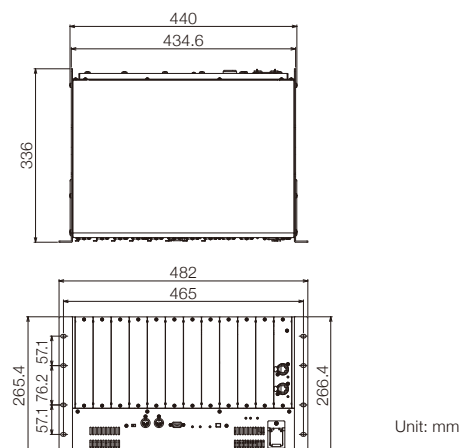
■ **SI-AES4 - 4-Channel Digital Input Module allows input of up to 96 kHz AES/EBU signal using the built-in sampling rate converter**
* No support for double wire

■ **SO-AES4 - 4-Channel Digital Output Module allows output of up to 96 kHz AES/EBU signal using the built-in sampling rate converter, and also supports synchronization with an external word clock**
* No support for double wire

■ **S-240P supplies redundant DC power to an S-4000S or S-4000H; Outputs DC 24 V 6 A power**

* S-4000S-MR can be customized in blocks of 8 channels when combined with the modules from the SI/SO series, which have both analog and digital I/O. Audio transmission and power supply redundancy is possible.

■ S-4000S-MR Dimension



Digital Snake S-4000 series

SPECIFICATIONS S-4000S-3208

Number of Channels	32 inputs/8 outputs
AD/DA Conversion	24-bit/44.1 kHz, 48 kHz, 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, 22 to 20 kHz)
Dynamic Range	110 dB
Cross Talk	-80 dB
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	20 k-ohms
Nominal Output Level	+4 dBu (Max. +22 dBu)
Output Impedance	150-ohms
Recommended Load Impedance	10 k-ohms or greater
Residual Noise Level (IHF-A, typ.)	-90 dBu

Equivalent Input Noise Level (E.I.N.)	-128 dB
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: about 1.2 ms)
Memory	10
Connectors	Input: 32 (XLR type, balanced, phantom power, 4 ch input module x 8), Output: 8 (XLR type, balanced, 4 ch output module x 2), REAC: MAIN, BACKUP (RJ-45 EtherCon type), Remote Connector: 1 (RS-232C, DB-9 type), MIDI Connectors: IN, OUT (5-pin DIN type)
AC Power Supply	AC 115 V, 117 V, 220 V, 230 V, 240 V (50/60 Hz)
Power Consumption	130 W
Phantom Power	+48 V/14 mA (each input on SI-AD4, remote controlled)
Dimensions	482 (W) x 336 (D) x 266 (H) mm 19 (W) x 13-1/4 (D) x 10-1/2 (H) inches
Weight	17.0 kg, 37 lbs. 8 oz.

SPECIFICATIONS S-4000S-0832

Number of Channels	8 inputs/32 outputs
AD/DA Conversion	24-bit/44.1 kHz, 48 kHz, 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, 22 to 20 kHz)
Dynamic Range	110 dB
Cross Talk	-80 dB
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	20 k-ohms
Nominal Output Level	+4 dBu (Max. +22 dBu)
Output Impedance	150-ohms
Recommended Load Impedance	10 k-ohms or greater
Residual Noise Level (IHF-A, typ.)	-90 dBu

Equivalent Input Noise Level (E.I.N.)	-128 dB
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: about 1.2 ms)
Memory	10
Connectors	Input: 8 (XLR type, balanced, phantom power, 4 ch input module x 2), Output: 32 (XLR type, balanced, 4 ch output module x 8), REAC: MAIN, BACKUP (RJ-45 EtherCon type), Remote Connector: 1 (RS-232C, DB-9 type), MIDI Connectors: IN, OUT (5-pin DIN type)
AC Power Supply	AC 115 V, 117 V, 220 V, 230 V, 240 V (50/60 Hz)
Power Consumption	130 W
Phantom Power	+48 V/14 mA (each input on SI-AD4, remote controlled)
Dimensions	482 (W) x 336 (D) x 266 (H) mm 19 (W) x 13-1/4 (D) x 10-1/2 (H) inches
Weight	17.0 kg, 37 lbs. 8 oz.

SPECIFICATIONS S-4000H

Number of Channels	8 inputs/32 outputs
AD/DA Conversion	24-bit/44.1 kHz, 48 kHz, 96 kHz
Frequency Response	-2 dB/+0 dB (@ +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	0.05 % or less (Input Gain: +4 dBu, 22 to 20 kHz)
Dynamic Range	110 dB
Cross Talk	-80 dB
Nominal Input Level	+4 dBu (Max. +22 dBu)
Input Impedance	30 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.)	-90 dBu

Equivalent Input Noise Level (E.I.N.)	-128 dB
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: about 1.2 ms)
Memory	10
Connectors	Input: 1 (DB-25 type, balanced, 8-channels), Output: 4 (DB-25 type, balanced, 32-channels each), REAC: MAIN, BACKUP (RJ-45 EtherCon type), Remote Connector: 1 (RS-232C, DB-9 type), MIDI Connectors: IN, OUT (5-pin DIN type)
Power Supply	AC 115 V, 117 V, 220 V, 230 V, 240 V (50/60 Hz)
Power Consumption	70 W
Dimensions	482 (W) x 387 (D) x 133 (H) mm 19 (W) x 15-1/4 (D) x 5-1/4 (H) inches
Weight	9.4 kg, 20 lbs. 12 oz.

SPECIFICATIONS S-4000R

Connector	Remote Connector: 1 (RS-232C, DB-9 type)
Power Supply	Supplied from connected device. (S-4000S, S-4000H; through the remote cable)

Dimensions	215 (W) x 87 (D) x 55 (H) mm 8-1/2 (W) x 3-7/16 (D) x 2-3/16 (H) inches
Weight	0.8 kg, 1 lbs. 13 oz.

SPECIFICATIONS S-4000S-MR

Connectors	REAC: MAIN, BACKUP (RJ-45 EtherCon type), Remote Connector: 1 (RS-232C, DB-9 type), MIDI Connectors: IN, OUT (5-pin DIN type)
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: about 1.2 ms)

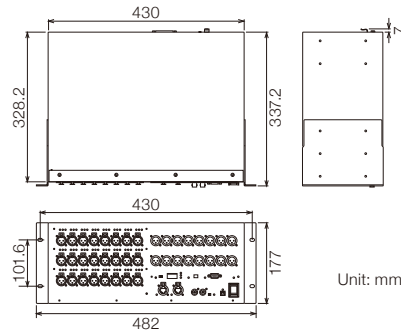
Memory	10
Power Supply	AC 115 V, 117 V, 220 V, 230 V, 240 V (50/60 Hz)
Power Consumption	130 W
Dimensions	482 (W) x 336 (D) x 266 (H) mm 19 (W) x 13-1/4 (D) x 10-1/2 (H) inches

S-2416 | Stage Unit

A new standard in digital stage units

REAC


4U



Unit: mm

- 24 input x 16 output analog + 8 input x 8 output digital (AES/EBU) = 32 input x 24 output
- 2 REAC ports to either cascade additional snake or for redundant connection
- Newly developed high-grade mic preamps
- 4U adjustable front or rear rack-mount design
- Supports 24-bit 96 kHz, 48 kHz, or 44.1 kHz sample rates
- Word clock in & out
- Remote control via any V-Mixer console, R-1000, S-4000R dedicated remote unit, and S-4000RCS via USB (Windows/Mac)

Main Functions

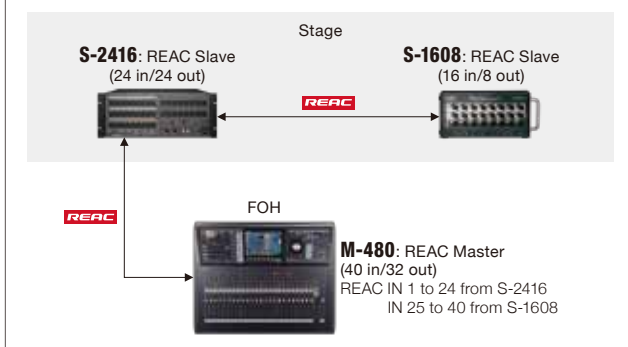
- Two REAC connectors, enabling support for redundant transmission
- DIP switches for easily adjusting the configuration



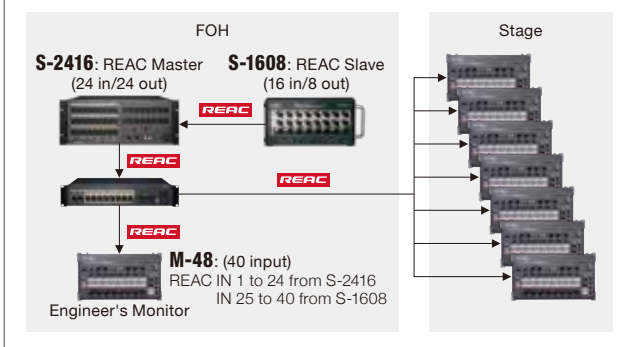
- AES/EBU ports provide a digital input/output environment
- Front/back adjustable rack mounting for greater freedom in installation



Cascade Connection Example (REAC Slave Mode)



Cascade Connection Example (REAC Master Mode)



SPECIFICATIONS S-2416

Number of Channels	32 in 24 out
AD Conversion	Sample Rate: 96.0 kHz, 48 kHz, 44.1 kHz Signal Processing: 24 bits
DA Conversion	Sample Rate: 96.0 kHz, 48 kHz, 44.1 kHz Signal Processing: 24 bits
Frequency Response	-2 dB/+0 dB (@ +4 dBu, 10 Hz to 40 kHz, Sample Rate: 96 kHz, typ.)
Total Harmonic Distortion + Noise	0.007 % (Pad: Off, Input Gain: -10 dBu, 20 Hz to 20 kHz, typ.)
Dynamic Range	INPUT jacks (1 to 24): 110 dB (typ.)
Channel Separation @ 1kHz	INPUT jacks (1 to 24): 103 dB (Input Gain: +4 dBu, IHF-A, typ.) OUTPUT jacks (1 to 16): 110 dB (typ.)
Nominal Input Level (Variable)	-65 to -10 dBu (PAD: Off) -45 to +10 dBu (PAD: On)
Non Clip Maximum Input level	INPUT jacks (1 to 24): +28 dBu (1 kHz, 10 k ohms load, typ.)
Input Impedance	INPUT jacks (1 to 24): 7 k ohms
Nominal Output Level	OUTPUT jacks (1 to 16): +4 dBu (Load impedance: 10 k ohms, typ.)
Maximum Output Level	OUTPUT jacks (1 to 16): +22 dBu (Load impedance: 10 k ohms, typ.)
Output Impedance	OUTPUT jacks (1 to 16): 600 ohms (typ.)
Recommended Load Impedance	OUTPUT jacks (1 to 16): 10 k ohms or greater

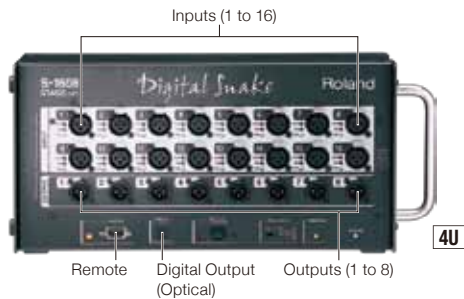
Residual Noise Level (IHF-A, typ.)	OUTPUT jacks (1 to 16): -84 dBu
Equivalent Input Noise Level (E.I.N.)	INPUT jacks (1 to 24): -128 dB (Input Gain: -65 dBu, IHF-A, typ.)
Network Latency	375 microseconds when using REAC cable only (AD to REAC to DA Latency: about 1.2 ms)
Connectors	INPUT jacks (1 to 24): XLR type, balanced, phantom power OUTPUT jacks (1 to 16): XLR type, balanced AES/EBU connector: DB-25 type REAC port: RJ-45 EtherCon type WORD CLOCK connector: BNC type REMOTE connector: DB-9 type COMPUTER port: USB type B * XLR type: 1 GND, 2 HOT, 3: COLD * phantom power: DC +48 V (unloaded maximum), 14 mA (maximum load) (All XLR type inputs)
Power Consumption	62 W
Dimensions	482 (W) x 348 (D) x 177 (H) mm 19 (W) x 13-3/4 (D) x 7 (H) inches (EIA-1U rack mountable)
Weight	9.7 kg, 21 lbs 7 oz
Operation Temperature	+0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
Accessories	Power cord, Owner's manual, Rubber foot x 4

(0dBu=0.775Vrms)

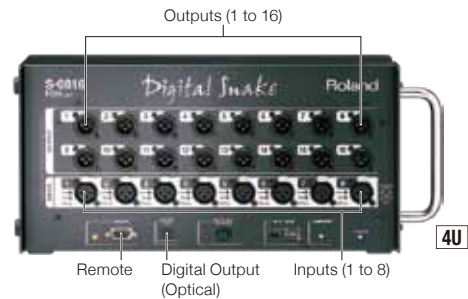
S-1608 | Stage Unit S-0816 | FOH Unit

Compact and portable, 16x8 Digital Snake offers many flexible configurations for any installation

■ S-1608 Front Panel



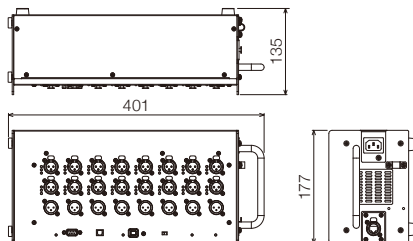
■ S-0816 Front Panel



- 16 x 8 Ch high quality 24-bit/96 kHz digital audio transmission via Cat5e cable
- Compact, floor-based or rack-mountable design
- REAC low latency digital audio transmission system

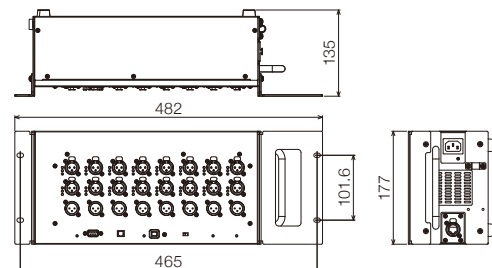
- Connect as I/O unit of V-Mixer for full digital mixing system
- Remote controllable preamps using an S-4000R or free downloadable RCS software for PC
- Easy and affordable splits and recording options

■ S-1608/S-0816 dimension



Unit: mm

■ S-1608/S-0816 with rack mount bracket dimension



Unit: mm

SPECIFICATIONS S-1608/S-0816

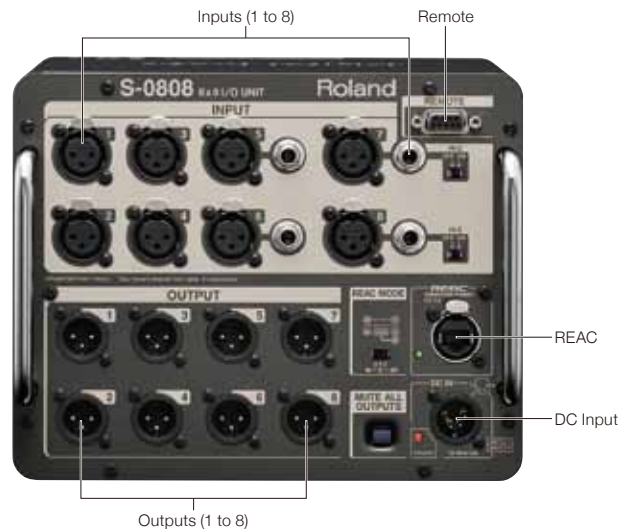
Number of Channels	S-1608: 16 inputs/8 Outputs S-0816: 8 Inputs/16 Outputs
AD/DA Conversion	24-bit/44.1 kHz, 48 kHz, 96 kHz
Frequency Response	-2 dB/+0 dB (@ +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	0.05 % or less (PAD: On, Input Gain: +4 dBu, 22 Hz to 20 kHz)
Dynamic Range	110 dB
Cross 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	-128 dB
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: approx 1.2 ms)

S-1608 Connectors	Input: 16 (XLR type, balanced, phantom power), Output: 8 (XLR type, balanced), Digital Output connector: 1 (Optical type), REAC Connector: 1 (RJ-45 EtherCon type), Remote Connector: 1 (RS-232C, DB-9 type)
S-0816 Connectors	Inputs: 8 (XLR type, balanced, phantom power), Outputs: 16 (XLR type, balanced), Digital Output connector: 1 (Optical type), REAC Connector: 1 (RJ-45 EtherCon type), Remote Connector: 1 (RS-232C, DB-9 type)
Power Supply	AC 115 V, 117 V, 220 V, 230 V, 240 V (50/60 Hz)
Power Consumption	45 W
Phantom Power	+48 V (each input, remote controlled)
Dimensions	401.0 (W) x 135.0 (D) x 177.0 (H) mm 15-13/16 (W) x 5-3/8 (D) x 7 (H) inches
Weight	5.5 kg, 12 lbs. 3 oz. (Including rack mount bracket)

* When a REAC Splitter S-4000D 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.

S-0808 | 8 x 8 I/O Unit

Enjoy flexibility using external battery operation or power supplied over REAC

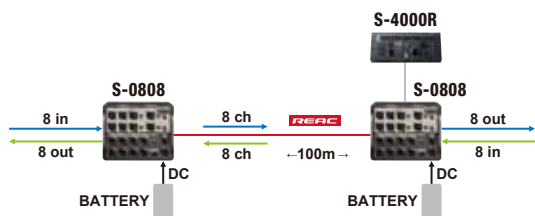


- Compact and light weight 8 input/8 output Digital Snake
- High quality, fully discreet preamp
- Eliminate the need for direct boxes by using the TRS or Hi-Z inputs

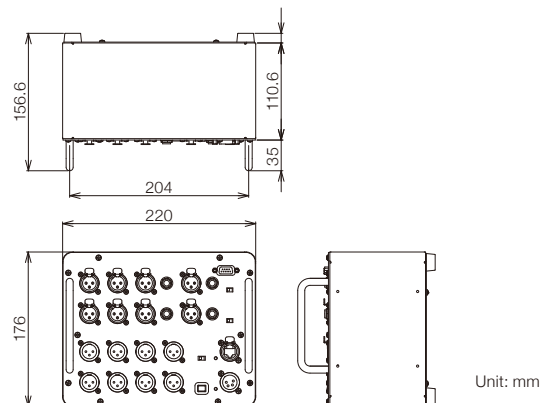
- Power options – REAC Embedded Power and External Battery enabling a variety of setups

- Preamp gain, PAD and Phantom Power can be controlled by S-4000R, S-4000RCS software and V-Mixer M-480/M-380

Battery-Powered 8 x 8 Snake



An 8 input, 8 output simple digital snake system – ideal when AC power is not convenient or available.



SPECIFICATIONS S-0808

Number of Channels	8 inputs/8 outputs
AD/DA Conversion	24-bit/44.1 kHz, 48 kHz, 96 kHz
Frequency Response	-2 dB/+0 dB (@ +4 dBu, 20 Hz to 20 kHz)
Total Harmonic Distortion + Noise	0.04 % or less (PAD: On, Input Gain: +4 dBu, 22 Hz to 20 kHz)
Dynamic Range	110 dB
Cross Talk	-80 dB or less (Input Gain: +4dBu, 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	7 k-ohms
Nominal Output Level	+4 dBu (Max.+22 dBu)
Output Impedance	600-ohms
Recommended Load Impedance	10k-ohms or greater
Residual Noise Level (IHF-A, typ.)	-80 dBu or less
Equivalent Input Noise Level	-128 dB
Network Latency	375 microseconds when using REAC cable only (AD - REAC - DA Latency: approx 1.2 ms)

Connectors	Input 1 to 8 (XLR type, balanced, phantom power), Input 5 to 8 (TRS Phone type, balanced) Output 1 to 8 (XLR type, balanced), REAC Embedded Power x 1 (RJ-45 EtherCon type), Remote Connector x 1 (RS-232C, DB-9 type) DC Input x 1 (XLR 4-pin type, Supports DC 12 to 18 V)
Power Supply	External Battery (DC 12 to 18 V) or REAC Embedded Power
Power Consumption	26 W (DC 12 V)
Phantom Power	+48 V/Max. 14mA (each input, remote controlled)
Dimensions	220 (W) x 176 (D) x 156.6 (H) mm 8-11/16 (W) x 6-15/16 (D) x 6-3/16 (H) inches
Weight	2.9 kg, 6 lbs. 7 oz.

- * TRS takes priority if XLR and TRS are simultaneously input to INPUT 5 to 8.
- * TRS of INPUT 7/8 turns to unbalanced when Hi-Z is turned on.

- * When a REAC Splitter S-4000D 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

S-MADI

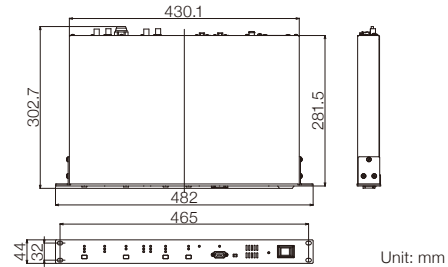
 REAC MADI Bridge

Expand audio system possibilities with REAC and MADI

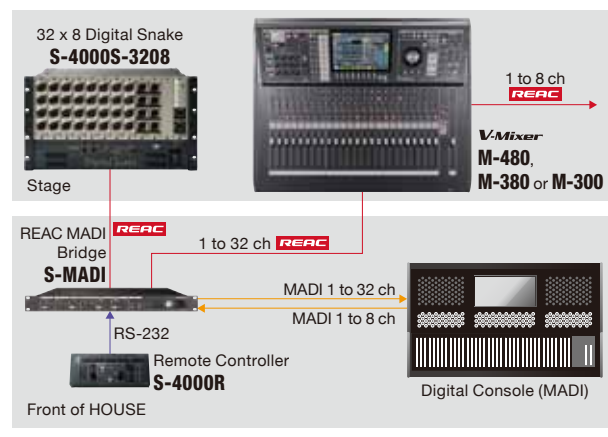
1U



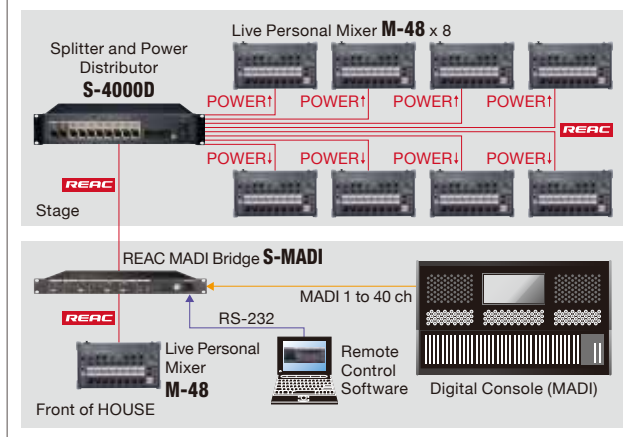
- Bi-directional format conversion between REAC and MADI
- BNC and Optical MADI ports
- Supports REAC Embedded Power and Split out for connecting and power additional devices (e.g., M-48 Personal Mixer, S-0808)
- Support for 44.1/48kHz
- Preamp and personal mixing control with S-4000RCS (Remote Control Software)
- Clock source can be selected from REAC, MADI or Word Clock



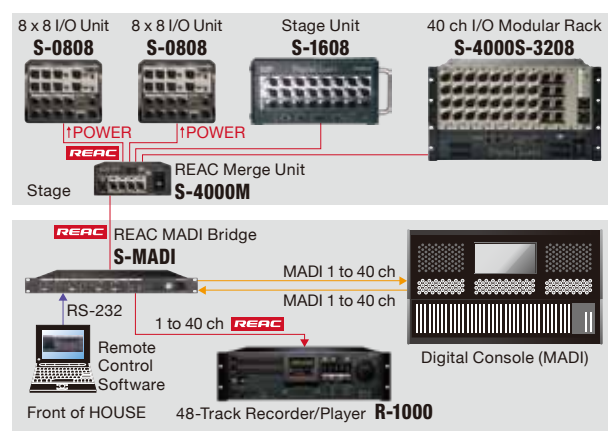
Digital Snake with Monitor Position



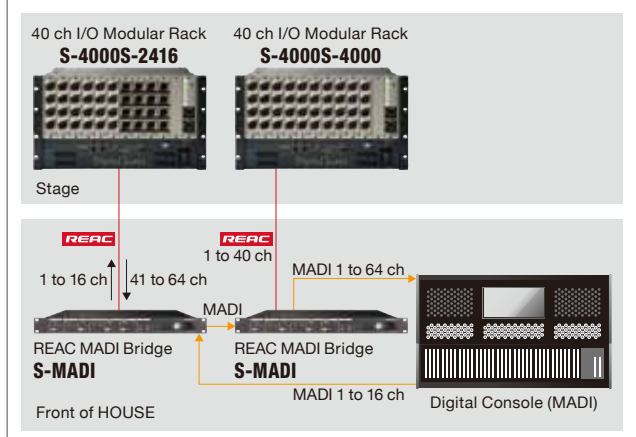
Personal Mixing



Digital Snake (Merge) and Recording



Digital Snake - 64 x 16



SPECIFICATIONS S-MADI

Sampling Frequency	48 kHz/44.1 kHz
MADI Channel Mode	64 Ch/56 Ch
Connectors	Front Panel: REMOTE (D-sub 9-pin type, RS-232C) Rear Panel: REAC MAIN (RJ-45 EtherCon type), REAC SPLIT OUT (REAC EMBEDDED POWER, RJ-45 EtherCon type), WORD CLOCK IN (BNC type), WORD CLOCK OUT (BNC type), Coaxial MADI IN (BNC type), Coaxial MADI OUT (BNC type), Optical MADI IN/OUT (SC duplex type)

Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Current Draw	0.7 A (REAC Embedded Power: Maximum)
Dimensions	482.0 (W) x 302.7 (D) x 44.0 (H) mm 19 (W) x 11-15/16 (D) x 1-3/4 (H) inches
Weight	3.5 kg/7 lbs 12 oz

S-4000M

 REAC Merge Unit

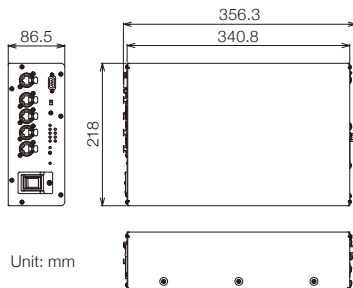
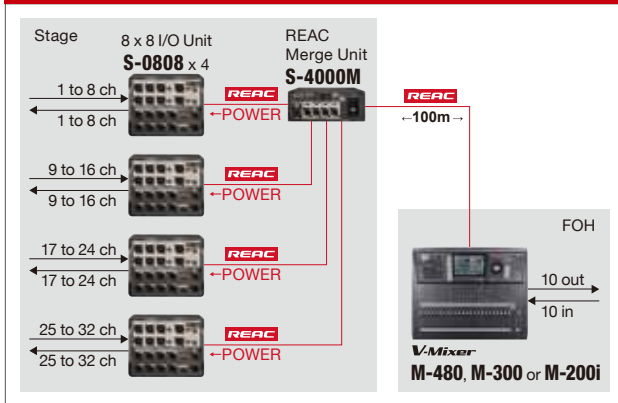
Enables distributed input/output possibilities by merging up to four REAC devices



REAC

- Merge up to 4 REAC devices into a single REAC stream
- Power REAC devices supporting embedded power
- Automatically assign input channels using the Auto Map function
- Patch input and output assignments using S-4000RCS software or the V-Mixer
- Configure and power up to four S-0808 Digital Snakes for a 16 input x 16 output point-to-point snake system

Live Stage Mixing Snake System (32 x 32)



SPECIFICATIONS S-4000M

Connectors	REAC (RJ-45 EtherCon type) x 1 REAC EMBEDDED POWER (RJ-45 EtherCon type) x 4 REMOTE (RS-232C, DB-9 type) x 1
Indicators	REAC EMBEDDED POWER: Red x 4 LINK: Green x 5 POWER: Blue x 1 AUTO MAP SLAVE UNITS: Red x 1
Switches	POWER x 1, MODE x 1, AUTO MAP SLAVE UNITS x 1
Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Power Consumption	1.6A/AC 115 V/AC 117V 0.9A/AC 220 V/AC 230 V/240 V (At max output of REAC EMBEDDED POWER)
Dimensions	218.0 (W) x 356.3 (D) x 86.5 (H) mm 8-5/8 (W) x 14-1/16 (D) x 3-7/16 (H) inches
Weight	3.0 kg, 6 lbs 10 oz
Accessories (Included)	Power Cord x 1, REAC Connector Cover x 5, Ferrite Core x 5, Rubber Foot x 4, Fastening Screw x 4, Owner's Manual x 1

S-4000D

 REAC Splitter and Power Distributor

A REAC Splitter that supplies audio and embedded power to M-48 or S-0808



REAC

2U

- Equipped with 10 REAC ports including 8 ports of REAC Embedded Power
- Automatic detection of REAC products. Power is not supplied if the device is not compatible with REAC Embedded Power

W100S-R

 REAC Cable

100 meter Cat5e Cable for REAC signal transmission on reel



REAC

- Crossover Ethernet cable with Neutrik® Ethercon connectors on both ends
- Compact and lightweight cable reel with SC-W100S cable pre-rolled

SC-W100S/SC-W20F

 REAC Cable

100/20 meter Cat5e Cable for REAC signal transmission

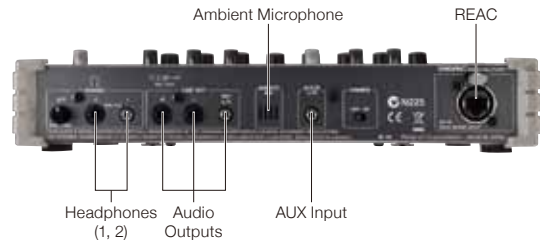


REAC

- Crossover Ethernet cable with Neutrik® Ethercon connectors on both ends

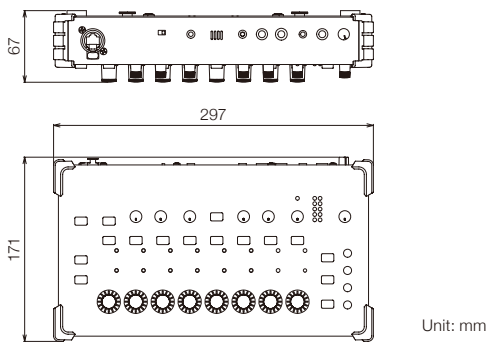
M-48 | Live Personal Mixer

The “next generation” live personal mixer offers musicians the flexibility to control exactly what they want to listen to

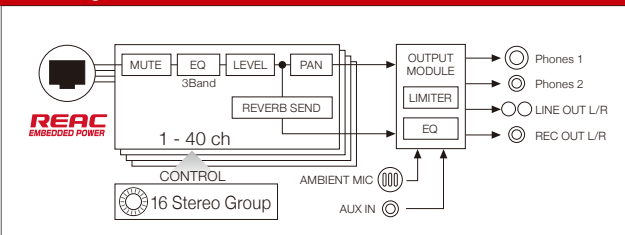


- Enables control of up to 40 audio channels via 16 stereo groups
- Provides the highest level of sound monitoring quality for both headphones and IEMs (In-ear Monitors) as well as for wedge and powered monitors
- Built-in ambient mic aids in communicating with other musicians as well as enabling a stage/room “presence”

- REAC Embedded Power transfers both power and 40 channels of audio to the M-48 via a single Cat5e/6 cable
- Volume, Pan, 3-band EQ and built-in Reverb per group – all instantly adjustable by convenient encoder knobs



Block Diagram



M-48 Setup

- A complete Monitoring System with the V-Mixer
The V-Mixer is equipped with all the remote management software, memory recall, providing a simple and flexible setup.

Setup Display



Source Assignment



- Connect to an existing Analog/Digital Console
Connect M-48s to your existing console using a Digital Snake front-end or the S-MADI for MADI capable digital consoles.



Setup and manage the M-48 on PC using the S-4000RCS Remote Control Software when using with an existing console.

SPECIFICATIONS M-48

Number of Input Channels	43 (40 in, STEREO AUX in, 1 AMBIENT MIC in)
Number of Output Channels	4 (STEREO LINE out, STEREO PHONES out)
AD/DA Conversion	24-bit/96.0 kHz, 48.0 kHz, 44.1 kHz
Nominal Input Level	AUX IN L/R: -16 dBu (at max volume)
Input Impedance	AUX IN L/R: 10 k-ohms
Non Clip Maximum Input level	AUX IN L/R: +2 dBu
Nominal Output Level	LINE OUT L/R: -6 dBu (LINE OUT Vol: Unity, Load impedance: 10 k-ohms), LINE OUT REC L/R: -12 dBu (LINE OUT Vol: Unity, Load impedance: 10 k-ohms)
Output Impedance	PHONES jacks (1, 2): 10 ohms LINE OUT L/R jacks: 600 ohms LINE OUT REC L/R jack: 1 k ohms
Recommended Load Impedance	PHONES jacks (1, 2): 16-ohms or greater (Composition impedance of 1 and 2), LINE OUT L/R jacks: 10 k-ohms or greater, LINE OUT REC L/R jack: 10 k-ohms or greater

Non Clip Maximum Output level	PHONES jacks (1, 2): 250 mW + 250 mW (1 or 2, 1 kHz, 40-ohms load), LINE OUT L/R jacks: +12 dBu (1 kHz, 10 k-ohms load), LINE OUT REC L/R jack: +6 dBu (1 kHz, 10 k-ohms load)
Connectors	REAC port: RJ-45 EtherCon type AUX IN L/R jack: Stereo miniature phone type LINE OUT L/R jacks: 1/4-inch TRS phone type LINE OUT REC L/R jack: Stereo miniature phone type PHONES jacks: Stereo miniature phone type and Stereo 1/4-inch phone type
Power Supply	REAC Embedded Power (S-4000D or S-4000M is needed for supplying power)
Power Consumption	13 W
Dimensions	297 (W) x 171 (D) x 67 (H) mm 11-3/4 (W) x 6-3/4 (D) x 2-11/16 (H) inches
Weight	1.5 kg, 3 lbs. 5

R-1000

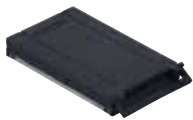
48-Track Recorder/Player

Capture. Playback. Soundcheck. Rehearse.
Ideally suited for many configurations and applications



- Records up to 48 tracks of 24-bit audio in BWF (WAV format)
- Approximately 20 hours recording (44.1/48 kHz) using the removable 500GB HDD
- Removable HDD ensures smooth integration with any DAW
- Plays up to 48 tracks of 24-bit audio via REAC
- Easy and intuitive operation using Built-in LCD monitor, any V-Mixer or a PC/Mac with R-1000RCS software

Option

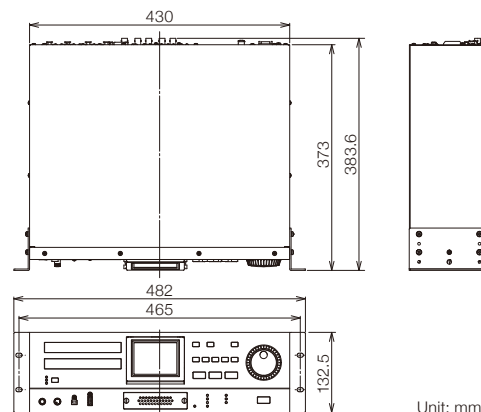


HDD-500G

HARD DISK DRIVE UNIT (500GB)
Dedicated removable hard disk drive for 20 hours recording (44.1/48kHz)

SSD-128G

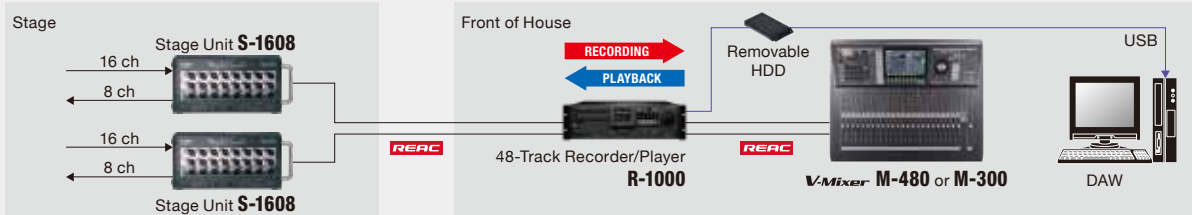
SOLID STATE DRIVE UNIT (128G)
Dedicated removable solid state drive for 5 hours recording (44.1/48kHz)



System Example

The R-1000 is a 48-channel multi-track recording and playback system for live concerts and productions. Utilizing the benefit of bi-directional audio with REAC, the R-1000 can be connected between the V-Mixer and the Digital Snake for recording, sound check, rehearsals and training exercises without the need to repatch.

Recording, Sound Check, Backing Track & Playback System (V-Mixer)



* Recording and Playback can not be done simultaneously.

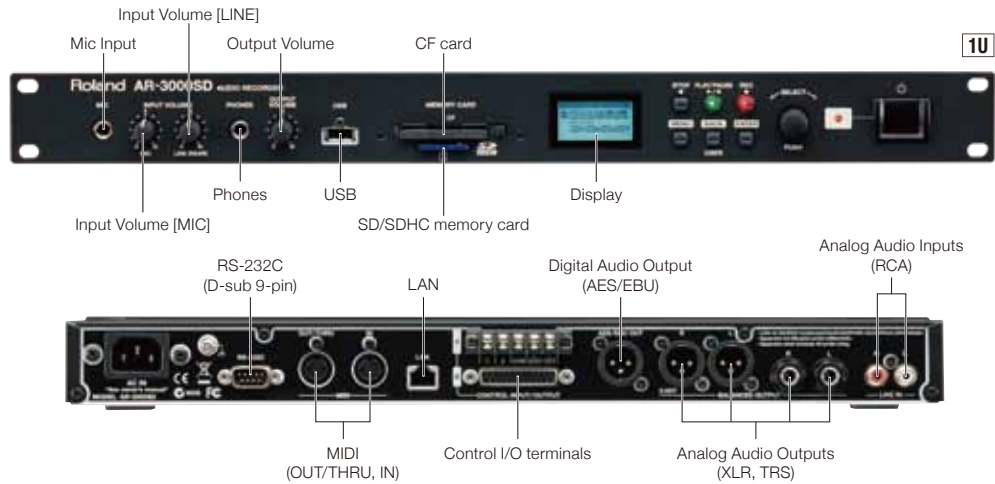
SPECIFICATIONS R-1000

Tracks	48 maximum (44.1/48.0 kHz), 24 maximum (96.0 kHz)
DA Conversion	Sample Rate: 44.1/48.0/96.0 kHz, Signal Processing: 24 bits
Data type	BWF (Broadcast Wave Format) Sample Rate: 44.1/48.0/96.0 kHz Bit Depth: 24 bits
Media	Removable hard disk
Connectors	USB connector (EXTERNAL STORAGE): USB type A (Support mass storage) USB connector (PC): USB type B (Support USB-MIDI) MONITOR OUT jacks (1, 2): XLR-3-32 type (Balanced) PHONES jack: Stereo 1/4 inch phone type REAC ports (A, B, C, D): RJ-45 EtherCon type RS-232C connector: 9-pin D-sub type MIDI connectors (IN, OUT/THRU): 5-pin DIN type GPI jack: 1/4-inch phone type VIDEO SYNC (BLACK BURST) jacks (IN/THRU): BNC type WORD CLOCK jacks (IN/THRU): BNC type SMPTE (LTC) IN jack: BNC type Grounding terminal AC INPUT connector * XLR type: 1 GND, 2 HOT, 3: COLD

Recording Time	24 bit/44.1 kHz/48 Tracks: 500 GB/1300 min 24 bit/48.0 kHz/48 Tracks: 500 GB/1200 min 24 bit/96.0 kHz/24 Tracks: 500 GB/1200 min * These recording times are approximate. Your actual results may vary somewhat. * If multiple projects and songs exists, the total recordable time will be less than these.
Display	320 x 240 dots backlit TFT color touch screen
Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Dimensions	482.0 (W) x 383.6 (D) x 132.5 (H) mm 19 (W) x 15-1/8 (D) x 5-1/4 (H) inches
Weight	7.3 kg, 16 lbs 2 oz.

AR-3000SD | Audio Recorder

A dependable digital audio recorder/player featuring programmable timer and LAN control.



- 24-bit recording and playback at 96 kHz for higher sound quality
- Built-in yearly programmable timer
- Built-in web server for control
- External control of playback using the connection terminals (GPIO)
- Trigger via USB keypad, MIDI, RS-232C, LAN-Telnet, GPI, Programmable Timer
- Send MIDI or RS-232C messages
- AR Series Card Data Editor, ARE-3000
- High durable SD/SDHC Memory Card using SLC (Single Level Cell), SD-4G

AR-200R | Audio Recorder

1/2 1U rack space
digital audio recorder/player



SPECIFICATIONS AR-3000SD

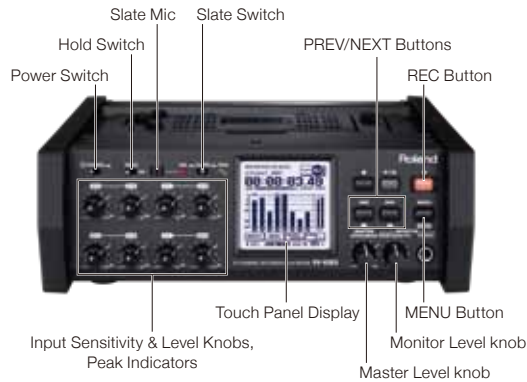
Recorder Part	
Data Type (Recording)	<p><WAV> Sampling frequency: 32 k, 44.1 k, 48 k, 96 kHz, Bit depth: 16, 24 bits, Channels: mono, stereo</p> <p><MP3 (MPEG-1 audio layer 3)> Sampling frequency: 32 k, 44.1 k, 48 kHz, Bit rate: 128 k, 192kbps, 320 kbps, Channels: stereo</p> <p><MP3 (MPEG-1 audio layer 3)> Sampling frequency: 32 k, 44.1 k, 48 kHz, Bit rate: 64 k, 96kps, 160 kbps, Channels: mono</p> <p><Standard MIDI Files (Format 0)></p>
Data Type (Playback)	<p><WAV> Sampling frequency: 8 k, 16 k, 22.05 k, 32 k, 44.1 k, 48 k, 96 kHz, Bit depth: 16, 24 bits, Channels: mono, stereo</p> <p><MP3 (MPEG-1 audio layer 3)> Sampling Frequency: 32 k, 44.1 k, 48 kHz, Bit rate: 32 k-320 kbps or VBR (Variable Bit Rate), Channels: mono, stereo</p> <p><RDAC (Roland Digital Audio Coding)> RDAC Grade (Sampling frequency): 8 k, 16 k, 22.05 k, 32 k, 44.1 k, 48 kHz, RDAC Mode: MODE1, MODE2, MODE3, LINEAR (16-bit linear), H-LINEAR (24-bit linear), RDAC Type (Channels): mono, stereo</p> <p><Standard MIDI Files (Format 0)></p> <p><RS-232C command></p>
Number of phrases	<p>Maximum 4000 phrases (using 1000 x 2 phrases format CF card and SD/SDHC memory card)</p> <p>171 hours (using 1GB CF card and SD-04G 4GB SDHC memory card, MP3, 64 kbps, mono)</p> <p>* This recording time is approximate. Actual results may vary somewhat.</p> <p>* When recording in stereo files, the maximum recording time would be shorter than above.</p>
Maximum Recording Time	
Input/Output	
MIC jack	<p>1/4-inch TRS phone type (balanced, unbalanced connection is possible)</p> <p>Input Sense: -43 dBu (unbalanced)</p> <p>Nominal Input Level: -38 dBu (INPUT VOLUME - MIC at 8 position, unbalanced)</p> <p>Maximum Input Level: -5 dBu (unbalanced)</p> <p>Input Impedance: 2 k ohms</p> <p>Recommended Source Impedance: 1 k ohms or less</p>

LINE IN jacks (MONO/L, R)	<p>RCA phono type (unbalanced)</p> <p>Input Sense: -15 dBu, Nominal Input Level: 0 dBu (INPUT VOLUME - LINE at 5 position), Maximum Input Level: +20 dBu, Input Impedance: 20 k ohms, Recommended Source Impedance: 2 k ohms or less</p>
BALANCED OUTPUT jacks (L, R)	<p>XLR type (balanced), 1/4-inch TRS phone type (balanced)</p> <p>Nominal Output Level: +10 dBu (OUTPUT VOLUME at 5 position)</p> <p>Maximum Output Level: +22 dBu</p> <p>Output Impedance: 600 ohms</p> <p>Recommended Load Impedance: 10 k ohms or greater</p>
MONO OUT (CONTROL INPUT/ OUTPUT B connector)	<p>DB-25 type (unbalanced)</p> <p>Nominal Output Level: +4 dBu, Maximum Output Level: +16 dBu, Output Impedance: 300 ohms, Recommended Load Impedance: 10 k ohms or greater</p>
PHONES jack	<p>Stereo 1/4-inch phone type</p> <p>Maximum Output Level: 90 mW + 90 mW (1 kHz, 40 ohms load, typ.), Output Impedance: 100 ohms, Recommended Load Impedance: 30 ohms or greater</p>
AES/EBU OUT jack	<p>XLR type (conforms to IEC 60958-4)</p>
Residual Noise Level	<p>BALANCED OUTPUT: -80 dBu or less (Input short, INPUT VOLUME - MIC at 0 position, INPUT VOLUME - LINE at 5 position, OUTPUT VOLUME at 5 position, IHF-A, typ.)</p>
Display	Graphic LCD 128 x 64 dots
Power Consumption	18 W
Dimensions	482 (W) x 310 (D) x 44 (H) mm 19 (W) x 12-1/4 (D) x 1-3/4 (H) inches, (EIA-1U rack mountable)
Weight	3.3 kg, 6 lbs 14 oz
Accessories	Owner's Manual, Power cord, Rubber Foot x 4, Card Protector x 1 (with 2 Screws)

(0dBu=0.775Vrms)

R-88 | 8-Channel Recorder and Mixer

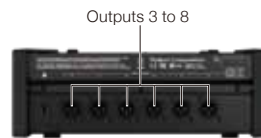
Seamless integration of recording, mixing and an audio interface - a new dimension in professional portable recording



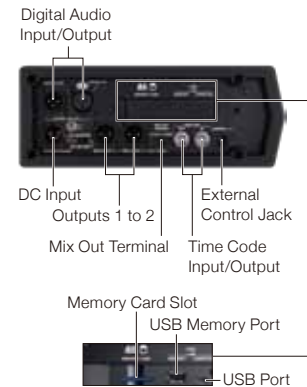
Right Side Panel



Rear Panel



Left Side Panel

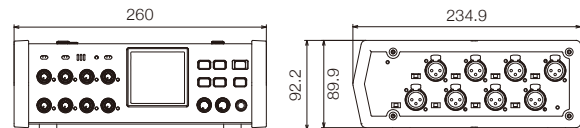


- Simultaneous recording of 8 channels + stereo mix (up to 96kHz)
- Up to 24 bit/192 kHz uncompressed linear PCM recording (up to 4 channels)
- 8 XLR inputs, 8 XLR outputs, AES/EBU input/output
- Built-in 8 channel mixer with 3-band EQ and MS microphone decoder
- Built-in 10 in/8 out USB audio interface to use with any common DAW (up to 96 kHz)

- Touch Panel Display for intuitive navigation
- SMPTE time code In/out for video sync
- BWF and iXML embedded metadata (SCENE, TAKE, TIME CODE RATE)
- Polyphonic WAV Function - ability to save 2, 4, 6 or 8 channels in a single file
- Selectable input delay per channel - adjustable by 0.05 - 20 ms - ideal for surround mic'ing
- Option Carrying Bag - CB-R88

Recording Time using 32GB SDHC memory card										Unit: hours
	16 bits/ 44.1 kHz	24 bits/ 44.1 kHz	16 bits/ 48 kHz	24 bits/ 48 kHz	16 bits/ 88.2 kHz	24 bits/ 88.2 kHz	16 bits/ 96 kHz	24 bits/ 96 kHz	16 bits/ 192 kHz	24 bits/ 192 kHz
1ch	100	67	92	61	50	33	46	30	23	15
2ch	50	33	46	30	25	16	23	15	11	7.7
4ch	25	16	23	15	12	8.4	11	7.7	5.7	3.8
8ch	12	8.4	11	7.7	6.3	4.2	5.7	3.8	—	—
10ch	10	6.7	9.2	6.1	5	3.3	4.6	3	—	—

* These recording times are approximate. Actual results may vary somewhat.
* If more than one recorded file exists, the total recordable time will be less.



SPECIFICATIONS R-88

Recorder Part

Channels 8 channels + 2 channels (stereo mix from built-in mixer)
(Sampling Frequency 44.1, 48, 88.2 and 96 kHz),
4 channels (Sampling Frequency 192 kHz)

Data Type Format: BWF (mono, stereo)
Sampling Frequency: 44.1, 48, 88.2, 96, 192 kHz
Bit Depth: 16, 24 bits
Meta Data: Origination Time, Frame Rate, etc.

Recording Media SDHC Memory Card: 4 to 32 GB, SD Memory Card: 2 GB

Pre-Recording OFF, 1, 2, 3, 4, 5 second(s)

Mixer Part

Mixing Channels Input: 8 channels, Output: 2 channels (stereo)

Channel Strip 3-band equalizer, Fader, Pan, MS microphone decoder

Master Fader, Limiter

Audio Input Part

Signal Processing AD Conversion: 24 bits

AD Dynamic Range 120 dB or greater ([SENS] knob = +4 dBu)

Channel Effects Limiter, Low Cut, MS microphone decoder

IN 1 to 8 jacks (Analog Inputs) XLR type (Phantom powered)
Nominal Input Level (chooses with [SENS] knob):
-56, -50, -44, -38, -32, -26, -20, -14, -8, -2, +4 dBu
(LEVEL KNOB MODE = INPUT: Changes with the [LEVEL] knob positions in the range of -infinity to +8 dB.)
Maximum Input Level: +26 dBu
Input Impedance:
Mic Input ([SENS] knob = -56 to -20 dBu): 3.4 k-ohms,
Line Input ([SENS] knob = -14 to +4 dBu): 5.6 k-ohms
* When sampling frequency is 192 kHz, IN 5 to 8 jacks are inactive.

DIGITAL IN jack XLR type (AES/EBU, conforms to IEC 60958-4)
* When using Digital Input, IN 1 to 2 jacks are inactive.

Phantom Power 48 +/-4 V, 10 mA per 1 channel
(8 channels of phantom power available simultaneously)

Audio Output Part

Signal Processing DA Conversion: 24 bits

OUT 1 to 2 jacks (Analog Outputs) XLR type
Output Buses: Channel 1 to 2, Channel 3 to 4, Channel 5 to 6,
Channel 7 to 8, Stereo mix from built-in mixer
Output Level: +4 dBu/-60 dBu
Maximum Output Level: +24 dBu
Output Impedance: 600 ohms

OUT 3 to 8 jacks (Analog Outputs) XLR type
Output Buses: Channel 1 to 2, Channel 3 to 4, Channel 5 to 6,
Channel 7 to 8, Stereo mix from built-in mixer
Output Level: +4 dBu
Maximum Output Level: +24 dBu
Output Impedance: 600 ohms
* When sampling frequency is 192 kHz, OUT 5 to 8 jacks are inactive.

MIX OUT jack (Analog Outputs) Stereo miniature phone type
Output Buses: Stereo mix from built-in mixer
Maximum Output Level: 2 Vrms/-30 dBu
Output Impedance: 1 k-ohm

DIGITAL OUT jack XLR type (AES/EBU, conforms to IEC 60958-4)
Output Buses: Stereo mix from built-in mixer

Others

Dimensions 260 (W) x 235 (D) x 93 (H) mm
10-1/4 (W) x 9-1/4 (D) x 3-11/16 (H) inches

Weight (including batteries) 2.7 kg
6 lbs

(0dBu=0.775Vrms)

R-44 | 4-Channel Portable Recorder

A compact, solid-state, four channel portable audio recorder



Front Panel



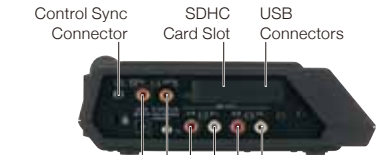
Headphone Jack

Right Side Panel



Input connectors (1 to 4)

Left Side Panel



Digital In/Out Connector (Coaxial) Line Output Connectors

- Up to 24-bit 192 kHz uncompressed linear PCM recording (2 channels)
- SD or SDHC card as the recording media for quiet and reliable field recording
- Built-in limiter, low-cut filter, and studio class effects
- Pre-recording function
- Synchronized operation of 2 units enables up to 8 channels of recording

- Built-in stereo microphones and monitor speakers

- High-contrast Organic LED display

- Three types of power options: AC adaptor, external battery, or standard AA batteries

* Four hours of operation is possible with NiMH.

* 44.1 kHz/16-bit/Stereo Recording, alkaline batteries, Phantom power: OFF.

Recording Time using 8 GB SDHC card (Unit: minute)

● Stereo Recording

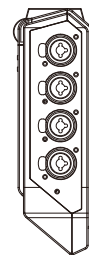
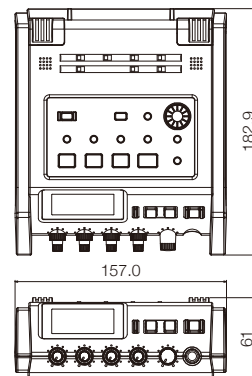
Sampling Rate	Sampling Frequency			
	44.1 kHz	48 kHz	96 kHz	192 kHz
16-bit	755	694	347	173
24-bit	503	462	231	115

● 4 channel Recording

Sampling Rate	Sampling Frequency			
	44.1 kHz	48 kHz	96 kHz	192 kHz
16-bit	377	347	173	—
24-bit	251	231	115	—

* Recording times are approximate. Actual results may vary.

* If more than one recorded file exists, the total recordable time will be less than listed.



Unit: mm

Option

CB-R44

Carrying Bag
Easy cable connection and media exchange.



SPECIFICATIONS R-44

Channels	4
Signal Processing	Sampling Bit Rate: 16/24-bit Sampling Frequency: 44.1 kHz/48 kHz/88.2 kHz/96 kHz/ 192 kHz (Limited to Stereo x 1 at 192 kHz) * 16 or 24-bit sampling rate can be selected with any frequency
Data Type	WAV/BWF
Recording Media	SDHC memory card (compatible with 64 MB to 32 GB)
Analog Input	Ch1 to 4: XLR/TRS Combo type, XLR type (phantom powered), TRS type (balanced/unbalanced), Stereo Built-in Microphones
Analog Output	Ch1 to 4: RCA Pin type (line output) Headphone: Stereo Phone type (1/4 inch)
Digital In/Out	RCA Pin type (IEC 60958-3)
Input Impedance	XLR: 4 k-ohms or greater (balanced) TRS: 6 k-ohms or greater (balanced)
Nominal Input Level (Input Level Knob: Center)	11 steps: -56, -50, -44, -38, -32, -26, -20, -14, -8, -2, +4 dBu (Input sense knob: -Inf. to +8 dB)
Maximum Input	+24 dBu (Input Sens Knob: +4 dBu)
Recommended Load Impedance	Line: 4 k-ohms or greater, Headphone: 16-ohms or greater
Output Level	Line Output: -20 dBu (fixed), Headphone: 40 mW + 40 mW
Total Harmonic Distortion + Noise Line (THD+N)	Output: 0.02 % (Input Sens: +4 dBu)

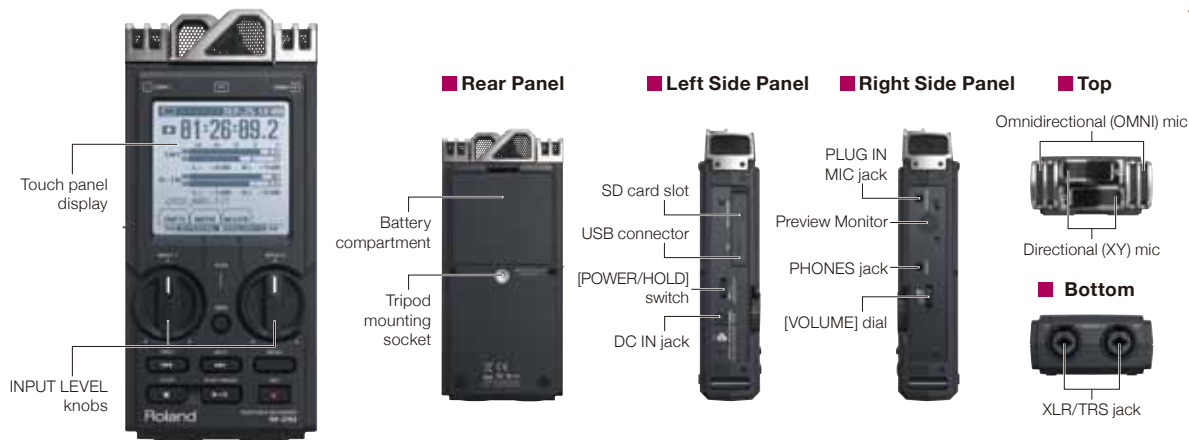
Noise Level	Line Output: -100 dBu (Input Sens: +4 dBu, Input Level: Center)
Residual Noise Level	Line Output: -103 dBu (Input Sens: +4 dBu, Input Level: Minimum)
Frequency Response	20 Hz to 40 kHz (0/-3 dB) Dynamic Range AD: 100 dB, DA: 104 dB
Phantom Power	48 V + or -4 V, 8 mA per 1 channel (20 mA or less in all channels)
USB Port	Mini-B Type Connector * USB 1.1 or 2.0 High Speed (Mass Storage Class)
Control Sync	Jack Stereo Mini Type Jack, Word clock sync and start/stop remote control of 2 units * Remote control function does not guarantee the exact same REC start time
Display	128 x 64 dot organic LED
Power Supply	AC adaptor (PSB-1U), AA type battery x 4 (Alkaline or NiMH)
Current Draw	1.2 A
Dimensions	157 (W) x 183 (D) x 61 (H) mm, 6-3/16 (W) x 7-1/4 (D) x 2-7/16 (H) inches
Weight	1.3 kg, 2 lbs 14 oz (including batteries)
System Requirements	Microsoft® Windows® Vista®/XP/2000, Mac OS X 10.2 or later



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R-26 | Portable Recorder

Up to six channels of simultaneous recording using two built-in stereo mics (XY and Omni) as well as two XLR/TRS inputs

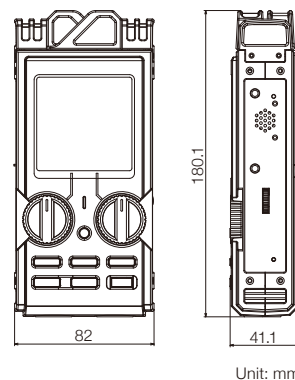


- Two types of built-in stereo microphones (omnidirectional and directional) that can be used in various combinations
- Two XLR/TRS combo inputs with 48 V phantom power plus an input for a stereo plug-in powered mic
- Supports up to six channels (three stereo channels) of simultaneous recording
- Large LCD touchscreen display for intuitive navigation

- Large input-level knobs for fine adjustment
- Built-in Hi-Speed USB interface for use as an audio interface or external storage
- Loop-Back function; combine this with the built-in or external mics for the optimum streaming setup (only with Audio Interface function)
- Bundled with SONAR LE software (PC)

Recording Time (Unit: hour)				
Data Format		Memory Size		
		2 GB	8 GB	32 GB
WAVE/BWF	16-bit, 44.1 kHz STEREO	3.0	12.2	48.9
	24-bit, 96.0 kHz STEREO	0.9	3.7	15.0
	16-bit, 44.1 kHz 4 CH	1.5	6.1	24.5
	24-bit, 96.0 kHz 4 CH	0.5	1.9	7.5
	16-bit, 44.1 kHz 6 CH	1.0	4.1	16.3
	24-bit, 96.0 kHz 6 CH	0.3	1.2	5.0
MP3	128 kbps	33	134	539
	320 kbps	13	53	215
WAVE/BWF + MP3	16-bit + 128 kbps 44.1 kHz	2.8	11.2	44.9
	16-bit + 128 kbps 48.0 kHz	2.5	10.4	41.5

* Each recording time is approximate. The times may change depending on the card specifications.
* In the case of plural files, the recording time will be shorter than the above.



SPECIFICATIONS R-26

RECORDER PART	
Tracks	6 (3 stereo)
Signal Processing	AD/DA conversion: 24 bits, 96.0/88.2/48.0/44.1 kHz
Data Type	<For Recording> WAVE/BWF: Sampling Rate 96.0/88.2/48.0/44.1 kHz, Bit Depth 24/16 bits, MP3 (MPEG-1 Audio Layer 3): Sampling Rate 48.0/44.1 kHz, Bit Rates 320/160/128 kbps, WAVE + MP3: Sampling Rate 48.0/44.1 kHz, Bit Depth 16 bits, Bit Rates 128 kbps <For Playback> WAVE/BWF: Sampling Rate 96.0/88.2/48.0/44.1 kHz, Bit Depth 24/16 bits, MP3 (MPEG-1 Audio Layer 3): Sampling Rate 48.0/44.1 kHz, Bit Rates 32 - 320 kbps or VBR (Variable Bit Rate)
Memory Card	SD Card (SDHC format compatible)
INPUT/OUTPUT	
Audio Inputs	Internal Stereo Microphone: Omnidirectional (OMNI) mic, Directional (XY) mic, Analog Input 1/L, 2/R (XLR/TRS Combo type): XLR type (phantom powered), 1/4-inch TRS phone type (balanced/unbalanced), Plug-in powered mic Input: Stereo miniature phone type
Audio Output	Phones (Stereo miniature phone type)
Nominal Input Level (Variable)	Analog Input 1/L, 2/R: +4/-2/-8/-14/-20/-26/-32/-38/-44/-50/-56/-62 dBu * Input Level Knob: Center LOW -7.5 dBu, MID -21 dBu, HIGH 26 dBu

Input Impedance	Analog Input 1/L, 2/R: 5 k ohms, Plug-in powered mic Input: MID/HIGH 3 k ohms, LOW 2 k ohms
Maximum Input	Analog Input 1/L, 2/R: +24 dBu (SENS = +4 dBu) Plug-in powered mic Input: +4 dBu (SENS = LOW)
Output Level	35 mW + 35 mW (In case 16 ohms load)
Recommended Load Impedance	16 ohms or greater
Frequency Response	20 Hz - 40 kHz
Phantom Power	48 V ± 4 V, 10 mA or less in all channels
USB Interface	Mini-B type connector, USB mass storage device class, USB audio (Hi-Speed USB)
OTHERS	
Power Supply	AC adaptor, Alkaline dry battery LR6 (AA) type x 4, Rechargeable Ni-MH battery (AA, HR6) X 4
Current Draw	500 mA
Dimensions	82.0 (W) x 180.1 (D) x 41.1 (H) mm 3-1/4 (W) x 7-1/8 (D) x 1-5/8 (H) inches
Weight	0.37 kg, 14 oz (excluding batteries)

(0dBu=0.775Vrms)

VIDEO MIXERS/SWITCHERS

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

		Video Switchers					
		V-800HD		V-40HD		V-4EX	
							
		MULTI-FORMAT 3Gbps 1080/60p HDCP		MULTI-FORMAT WUXGA 1080/60p HDCP AUDIO EMBEDDING		480p/576p HDCP USB 2.0 AUDIO EMBEDDING	
Internal Video Processing	Y/Pb/Pr	4:4:4/10bit		4:4:4/10bit		4:2:2/8bit <small>*480/576p internal processing</small>	
	RGB	4:4:4/10bit		-		-	
Video Format	Video	Up to 1080p		Up to 1080p		Up to 1080p	
	RGB	Up to 1920x1200 <small>(WUXGA)</small>		Up to 1920x1200 <small>(WUXGA)</small>		Up to 1920x1200 <small>(WUXGA)</small>	
Number of Connectors	SDI	4 in	2 out	-	-	-	-
	DVI-D	4 in	2 out	-	-	-	-
	HDMI	-	-	4 in	2 out	4 in	1 out
	HDBaseT	-	-	-	-	-	-
	DVI-A	4 in	-	-	-	-	-
	RGB/Component	4 in	2 out	4 in	2 out	1 in	-
	S-Video	-	-	-	-	1 in	-
Composite	4 in	1 out	4 in	1 out	4 in	1 out	
Still Image		Yes		-		-	
Layer Composition		3 <small>(Back ground, PinP/Key, DSK)</small>		3 <small>(Back ground, PinP/Key, DSK)</small>		2 <small>(Back ground, PinP/Key)</small>	
Monitor	Built-in Monitor	-		-		3.5inch with touch control	
	External Multi Viewer Output	HDMI 1080p		HDMI 1080p		HDMI 480p	
Audio	Analog	-	-	1 stereo input	-	1 stereo input	-
	Digital	-	-	4 stereo inputs	3 stereo outputs	4 stereo inputs	2 stereo outputs
USB Streaming (Video and Audio)		-		-		USB 2.0	
Wireless Control		-		-		-	



Stellar Image Quality at 1080p (3G-SDI)

Supports 1080p video signals at bit rates as high as 3 Gbps - twice the rate of conventional HD. Asserts all the vividness of high-realism, high-detail camera and computer sources.



Interlaced (1080/60i)



Progressive (1080/60p)



True Multi-Format Performance

There's no need to convert the input source to match the video output format. The built-in scalers up-convert and down-convert any video source to the optimal resolution.

Matrix AV Switchers						AV Mixers				Multi-Viewer/Switcher	
XS-84H		XS-83H		XS-82H		VR-50HD		VR-3EX		MVS-12	
4:4:4/10bit		4:4:4/10bit		4:4:4/10bit		4:4:4/10bit		4:2:2/8bit *480/576p internal processing		4:2:2/8bit *480/576i internal processing	
-		-		-		4:4:4/10bit		-		-	
Up to 1080p		Up to 1080p		Up to 1080p		Up to 1080p		Up to 1080p		480/576i	
Up to 1920x1200 (WUXGA)		Up to 1920x1200 (WUXGA)		Up to 1920x1200 (WUXGA)		Up to 1920x1080		Up to 1920x1200 (WUXGA)		-	
-		-		-		4 in 2 out		-		-	
-		-		-		-		-		-	
8 in 4 out		8 in 3 out		8 in 2 out		4 in 2 out		4 in 1 out		-	
-		-		-		-		-		-	
-		-		-		-		-		-	
8 in		8 in		8 in		2 in 2 out		1 in		1 out	
8 in *1		8 in *1		8 in *1		-		-		-	
8 in *1		8 in *1		8 in *1		2 in		4 in 1 out		12 in 5 out	
Yes		Yes		Yes		Yes		-		-	
Up to 4		Up to 4		Up to 4		4 (Back ground, PinP, PinP/Key, DSK)		3 (Back ground, PinP/Key, DSK)		-	
-		-		-		7inch with touch control		3.5inch with touch control		-	
HDMI 1080p		HDMI 1080p		HDMI 1080p		HDMI 1080p		HDMI 480p		HDMI 480p	
8 stereo inputs 4 stereo outputs		8 stereo inputs 3 stereo outputs		8 stereo inputs 2 stereo outputs		4 mono inputs and 4 stereo inputs 2 stereo outputs		4 mono inputs and 2 stereo inputs 1 stereo output		-	
8 stereo inputs 4 stereo outputs		8 stereo inputs 3 stereo outputs		8 stereo inputs 2 stereo outputs		4 stereo inputs 5 stereo outputs		4 stereo inputs 2 stereo outputs		-	
-		-		-		USB 3.0		USB 2.0		-	
Yes		Yes		Yes		-		-		-	

*1: Conversion cable required



Support for HDCP HDMI signals

True HDCP mode. Switching and composition are possible even for fully HDCP-encoded output signals.



Support for workflow combining audio and video

Audio embedding feature makes it possible to insert and synchronize analog audio input with HDMI-output video.



USB 3.0/2.0 Video/Audio Output

The USB 2.0/3.0 output enables web streaming with ease by simply connecting to a computer running a live streaming service. Recording is equally simple by using Quicktime or Video Capture for VR, the dedicated Windows/Mac capture software. The video format is up to 1080/59.94p through USB 3.0.

XS-84H/83H/82H | Multi-Format Matrix Switchers

Audio & Video Matrix Switchers featuring eight multi-format inputs and built-in scalers



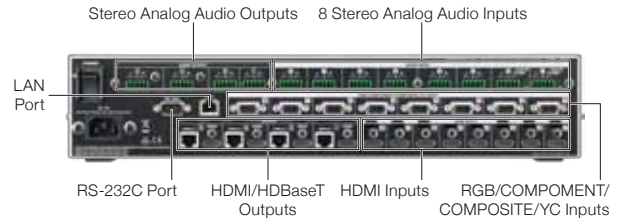
XS-84H 8-in x 4-out Multi-Format AV Matrix Switcher



XS-83H 8-in x 3-out Multi-Format AV Matrix Switcher



XS-82H 8-in x 2-out Multi-Format AV Matrix Switcher

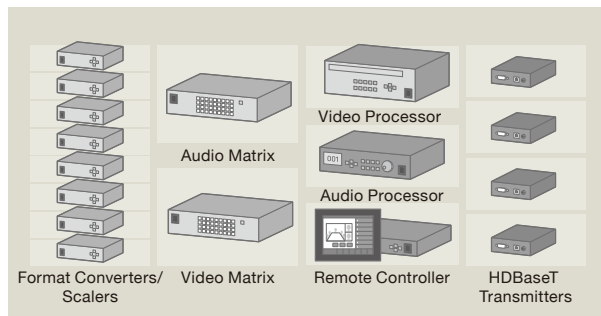


- **Inputs: 8 HDMI and 8 RGB/Component/S-video/Composite analog video**
- **Outputs: 2, 3 or 4 HDMI and 2, 3 or 4 HDBaseT**
* Switchable HDMI or HDBaseT per output
- **Support for maximum resolution of WUXGA and 1080p, with built-in scalers**

- **8 stereo line inputs (2 mic compatible with 48V phantom) with built-in AD/DA conversion and embedded/de-embedded HDMI audio**
- **16 channel (8 stereo) digital audio mixer with audio digital effects (HPF, 4 Band EQ, noise gate/expander, and compressor) and outputs delay**
- **Support for RS-232C, network, and iPad control**

Integrating Many Functions into One Unit

The series is very adaptable supporting eight HDMI, RGB/Component/S-video/Composite inputs and up to four HDMI or HDBaseT outputs with scalers to support picture-in-picture, resizing, rotating, and flipping. Audio can be embedded into outputs via eight stereo audio inputs (2 microphone) and/or HDMI audio as well as de-embedded on output. Additional features include iPad control, EDID emulation and HDCP management.



HDMI/HDBaseT Outputs

Resolutions up to WUXGA/1080p are supported. Each output block provides an HDBaseT connector for transmitting digital signals via Cat5e/6 cable over long distances.

* Switchable HDMI or HDBaseT per outputs.
* HDBaseT device or receiver necessary at the receiving end.

Integrated Video and Audio Environment

Using the Roland WNA1100-RL wireless USB adapter enables direct control from an Apple iPad installed with Roland XS Remote. Along with operating the unit, Roland XS Remote can be used to change settings instantly with its memory-recall function.

- **Controllable functions**
 - Preset change
 - Video switching
 - Audio level control
 - Change of Mode



WNA1100-RL
* sold separately.



XS Remote

XS-84H XS-83H XS-82H

Video Processing

Output Modes

The XS series has four preset output modes that can be edited.



MATRIX MODE



SPAN MODE

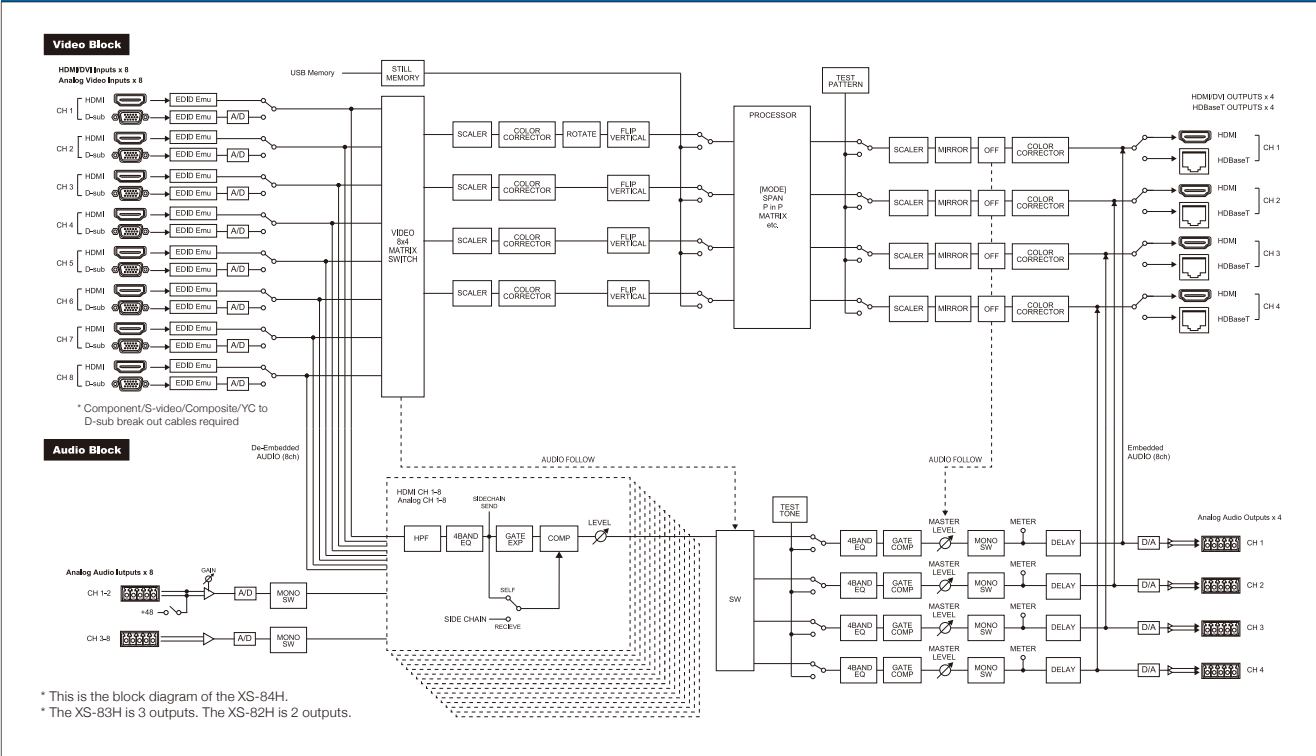


PinP 1 MODE



4K MODE

Block Diagram



SPECIFICATIONS XS-82H/83H/84H

Video	
Processing	4:4:4 (Y/Pb/Pr), 10-bit
Input Connectors	HDMI: Type A (19 pin) x 8 (Input 1 to 8) * HDCP supported RGB/Component/S-video/Composite: HD DB-15 type x 8 (Input 1 to 8)
Output Connectors	<XS-82H> HDMI: Type A (19 pin) x 2 (Output 1 to 2) HDBaseT: RJ-45 x 2 (Output 1 to 2) *HDCP supported <XS-83H> HDMI: Type A (19 pin) x 3 (Output 1 to 3) HDBaseT: RJ-45 x 3 (Output 1 to 3) * HDCP supported <XS-84H> HDMI: Type A (19 pin) x 4 (Output 1 to 4) HDBaseT: RJ-45 x 4 (Output 1 to 4) * HDCP supported
Input/Output Level and Impedance	<RGB/Component> Level: 1.0 Vp-p (luminance), 0.286 Vp-p (chroma, NTSC), 0.3 Vp-p (chroma, PAL) Impedance: 75 ohms <Composite/S-video> Level: 1.0 Vp-p (luminance), 0.286 Vp-p (chroma, NTSC), 0.3 Vp-p (chroma, PAL) Impedance: 75 ohms
Input Supported Formats	HDMI: up to 1080p/59.94, up to 1920 x 1200/60 Component: up to 1080p/59.94 RGB: up to 1920 x 1200/60 * Reduced Blanking Composite: 480i/59.94, 576i/50 S-video: 480i/59.94, 576i/50 Still Image: Windows® Bitmap File (.bmp) * Maximum 1920 x 1200 pixels, 24 bit per pixel, uncompressed
Output Supported Formats	HDMI: up to 1080p/59.94, up to 1920 x 1200/60 HDBaseT: up to 1080p/59.94, up to 1920 x 1200/60
Effects	Transition: Cut Composition: PinP Others: Vertically flip, Horizontally flip, Rotated 90 degrees
Audio Processing	
Audio Processing	Sampling Rate: 24-bit/48 kHz
Input Connectors	Digital: HDMI Type A (19 pin) x 8 Analog: 5 pin terminal block connector x 8

Output Connectors	<XS-82H> Digital: HDMI Type A (19 pin) x 2 Analog: 5 pin terminal block connector x 2 <XS-83H> Digital: HDMI Type A (19 pin) x 3 Analog: 5 pin terminal block connector x 3 <XS-84H> Digital: HDMI Type A (19 pin) x 4 Analog: 5 pin terminal block connector x 4
Input Level and Impedance	Ch 1 to 2: -60 to +4 dBu (Maximum: +22 dBu), 10k ohms (Gain 0 to 23 dBu), 5k ohms (Gain 24 to 64 dBu) Ch 3 to 8: +4 dBu (Maximum: +22 dBu), 8.5k ohms
Output Level and Impedance	Ch 1 to 4: +4 dBu (Maximum: +22 dBu), 600 ohms
Audio Formats	HDMI: Linear PCM, 24-bit, 48 kHz, 8 ch
Audio Effects	Input: High-pass filter, 4-band equalizer, Gate/Expander, Compressor Output: 4-band equalizer, Gate/Compressor, Delay
Others connectors	
RS-232C	D-Sub 9 pin type x 1
LAN	RJ-45 x 1
USB	A Type x 2 for USB memory, for WNA-1100RL
Others	
Display	2 color LCD 128 x 64 dots
Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Power Consumption	50 W
Dimensions	481 (W) x 334 (D) x 88 (H), EIA-2U Rack mountable size
Weight	5.3 kg
Accessories	Power Cord, Captive Screw Connectors, Rubber Feets, Owner's Manual

(0dBu=0.775Vrms)

V-800HD

Multi-Format Video Switcher

Eight Multi-Format Channels with Independent Scalers A Variety of Output Formats including a Built-in Multiviewer

3G bps
1080/60p

MULTI-FORMAT

HDCP

V-LINK

MIDI
VISUAL
CONTROL

SCALING

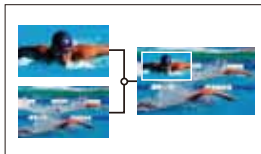
●Scaling Sample

USB
MEMORY64 (8 x 8)
Memory Presets

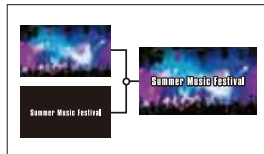
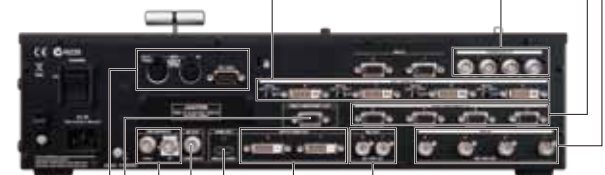
10 channels of PGM/PST

VIDEO FADER
TRANSITIONPinP/KEY/
DSK (Down Stream Keyer)

●PinP (Picture in Picture)



●DSK (Downstream Keyer)

DVI-I/HDMI Input
Up to WUXGA, 1080pCOMPOSITE Input
480i or 576iSDI Input
Up to 1080pRGB/COMPONENT Input
Up to WUXGA, 1080pRGB/COMPONENT
Output
Up to WUXGA, 1080pSD
Output
480i or 576iSDI Output
Up to 1080pMIDI/RS-232C
ConnectorsREFERENCE
ConnectorsMultiviewer Output
1080/60p with HDCPDVI-D/HDMI
Output
Up to WUXGA,
1080p

* Use an HDMI monitor that supports HDCP and 60p signals.

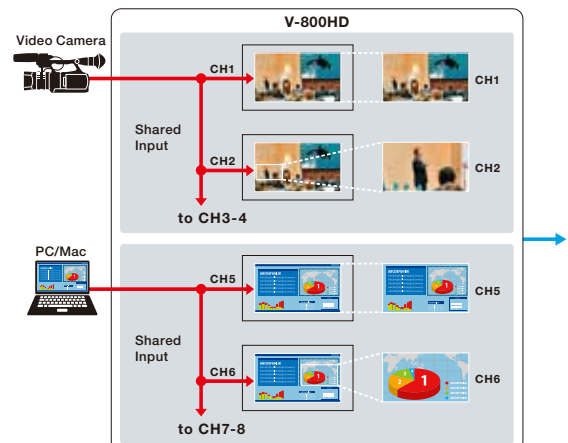
* SDI and composite inputs are displayed at the original source frame rate.

* DVI-I/HDMI and RGB/Component inputs are displayed using a reduced frame rate.

- 8 Input (4 SDI/Composite + 4 DVI-I/HDMI/RGB/Component), 6 Output (2 SDI + 2 DVI-D/HDMI + RGB/Component + Composite)
- 4:4:4/10-bit Internal Processing
- 1 M/E (Key, PinP) + DSK
- Built-in frame synchronizers and scalers on all inputs
- SDI support: 3G (Level A and B), HD, and SD
- DVI-D/RGB/HDMI support
- Input status LEDs
- HDCP support
- Live access to two still-image sources
- 10 assignable cross-points
- Multiviewer monitor output (Switch between Y/Cr/Cb and RGB modes)

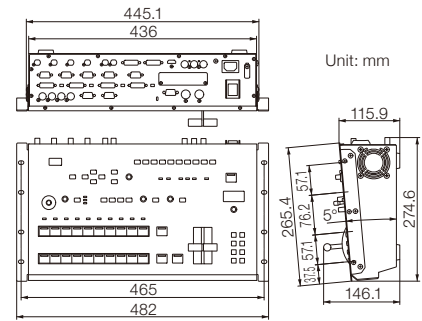
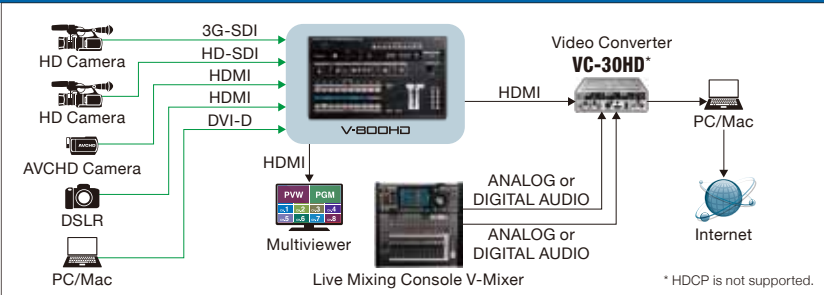
Multi-Zoom

Using the shared input function, you can assign the video on channel 1 to channels 2 through 4 and the video on channel 5 to channels 6 through 8. The scaler for each input can zoom into any position in the video image enabling a virtual multi-camera environment. This gives the appearance that you have additional cameras connected.

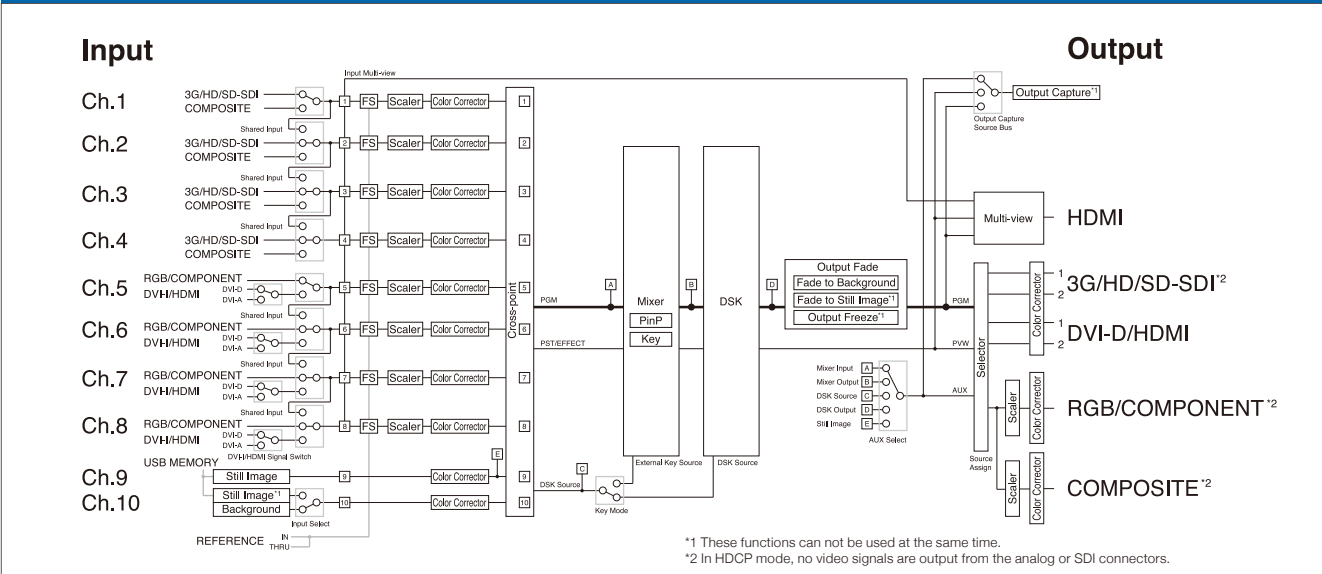


* Only the source of the previous adjacent channel can be shared.

V-800HD with Live Mixing Console and Video Converter



Block Diagram



SPECIFICATIONS V-800HD

Video Processing	
Processing	4:4:4 (Y/Pb/Pr, RGB), 10-bit
Video	480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p
	* The SDI input can input the same frame rate as a setup menu setting.
PC	640 x 480/60 Hz*1, 800 x 600/60 Hz*1 *3, 1024 x 768/60 Hz*1, 1280 x 768/60 Hz*1, 1280 x 1024/60 Hz*1, 1366 x 768/60 Hz*1, 1400 x 1050/60 Hz*1, 1600 x 1200/60 Hz, 1920 x 1080/60 Hz, 1920 x 1200/60 Hz*2
	* Conforms to VESA DMT Version 1.0 Revision 10
	*1 Output refresh rate is 75 Hz when frame rate is set to 50 Hz
	*2 Reduced blanking
	*3 When Reference is set to External, the resolution of 800 x 600 and refresh rate of 60 Hz are no longer compliant with the VESA standard. This means that display on some devices may not be possible in this situation.
	Still Image: Windows® Bitmap File (.bmp)
	* Maximum 1900 x 1200 pixels, 24-bit per pixel, uncompressed
Input/Output Level and Impedance	
Composite	1.0 Vp-p, 75 ohms
Analog HD/RGB	0.7 Vp-p, 75 ohms (H, V: 5 VTTL)
Input Connectors	
3G/HD/SD-SDI	BNC type x 4 * Conforms to SMPTE 424M (Level-A), 292M, 259M-C
DVI-I/HDMI	DVI-I type x 4 * Select DVI-A or DVI-D/HDMI using switch per channel
Analog Video	HD: Component (Mini D-Sub 15 pin type) x 4 * Combined use with Analog RGB SD: Composite (BNC type) x 4 * Select Composite or SDI using menu per channel
Analog RGB	Mini D-Sub 15 pin type x 4 * Combined use with Analog Video (HD) * Select DVI-D/HDMI or Analog RGB using menu per channel

Output Connectors	
3G/HD/SD-SDI	BNC type x 2 * Conforms to SMPTE 424M (Level-A), 292M, 259M-C
DVI-D/HDMI	DVI-D type x 2, HDMI x 1 (for multi-view monitor)
Analog Video	HD: Component (Mini D-Sub 15 pin type) x 1 * Combined use with Analog RGB SD: Composite (BNC type) x 1
Analog RGB	Mini D-Sub 15-pin type x 1 * Combined use with Analog Video (HD)
Other Connectors	
Tally	Mini D-Sub 15 pin type x 2 * Input (max): 12V, 200 mA Open collector Type
Reference	BNC type (IN, THRU) * Black Burst (Sync to frames), Bi-Level, Tri-Level
MIDI	5 pin DIN type (IN, OUT/THRU)
RS-232C	D-Sub 9 pin type x 1
USB port (host)	A type x 1 (for USB memory)
Effects	
Transition	Mix, Cut, Wipe (9 patterns)
Composition	PinP, DSK, Chrominance Key, Luminance Key, External Key
Others	Output Fade, Output Freeze
Others	
Power Consumption	75 W
Power Supply	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
Dimensions	482 (W) x 274.6 (D) x 115.9 (H) mm 19 (W) x 10-13/16 (D) x 4-9/16 (H) inches * When rack mount brackets are attached. * EIA-6U rack mount size.
Weight	5.5 kg 12 lbs 3 oz
Accessories	Power Cord, Rack Mount Angle (2), Input Template, Owner's Manual

* This product is a Class A digital device under FCC part 15.

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

V-40HD

Multi-Format Video Switcher

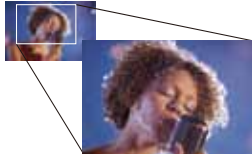
Four Multi-Format Channels at the Pinnacle of HD Picture Quality

INPUT

SCALING

Zoom and Adjustment.

The V-40HD features scalers that let you make settings independently for every input source. With these, you can take input sources of different resolutions and adjust to any sizing.



INPUT Selectors

Select from among HDMI, RGB/Component, and Composite as the connector for each input.

With just one touch, you can access the video source from any of the three pieces of equipment connected to the respective inputs.

PinP

Two images can be combined into one video image.

You can select any of four positions for an inset screen: top left, bottom left, top right, or bottom right. You can also freely adjust the size of the inset screen.



INPUT Connectors 1 - 4

Support for three formats per input.

[HDMI] Up to WUXGA, 1080p

[RGB/Component] Up to WUXGA, 1080p

[Composite] 480i or 576i

HDMI inputs support an embedded audio signal.

CONTROL INTERFACE

[RS-232C]

Use RS-232C for integrated remote control.

It's possible to connect a computer, wall panel or other remote device and use it to control switching, effects, and other operations.

MEMORY
25 (5 x 5) Memory Presets



WIPE PATTERN

Easy selection of video transition effects.



VIDEO FADER

Switch the sources at the speed you want.

Using the video fader (T-bar) lets you carry out scene transitions, fade-ins, and fade-outs manually at exactly the speed you want.

DSK (Downstream Keyer)

Composite logos and text into output video.

You can overlay logos and text onto composited and switched video. You can also transition between scenes underneath text or logos.



OUTPUT

OUTPUT Selectors

Three types of output formats to choose from.

Select SD, HD, or RGB simply by pressing a button.

Default Settings (can be changed)

SD	480i
HD	1080i
RGB	XGA (1024 x 768)

* You can select other format on the menu.

* The format of PVW OUT cannot be changed. (1920 x 1080/60Hz fixed)

PVW (Preview) Selectors

Chooses the view displayed on a preview monitor.

Select a four-way split screen, PST, PGM or DSK to display.

* The resolution and refresh rate of monitor output is fixed at 1920 x 1080/60 Hz (progressive).

* Use an HDMI monitor that supports HDCP and 60p signals.

* When INPUT is selected (four-way split), the sources are displayed using a reduced frame rate.



Output Connectors

Connect monitors, projectors, or recording equipment.

[HDMI] Up to WUXGA, 1080p

[RGB/Component] Up to WUXGA, 1080p

[Composite] 480i or 576i

* In HDCP mode, no video signals are output from the RGB/Component and composite connectors.

AUDIO INPUT

Mix analog audio into HDMI video.

The V-40HD is equipped with inputs for analog audio equipment. This enables you to embed analog audio in the HDMI video output.

USB PORT

For saving the internal memory.

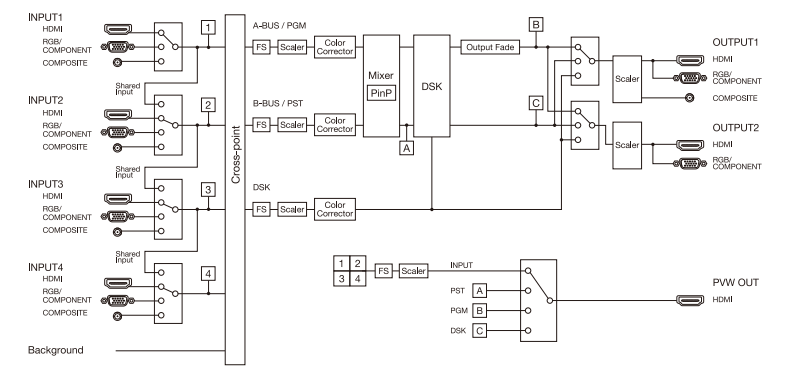
This lets you connect a USB flash drive and save the internal memory to it.



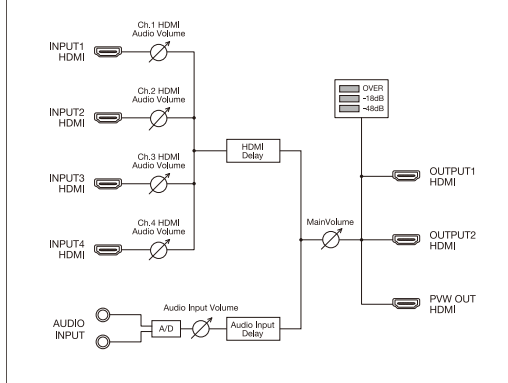
- 4 Inputs (HDMI/RGB/Component)
- 3 Outputs (HDMI/RGB/Component/Composite + HDMI/RGB/Component + HDMI)
- 4:4:4/10-bit Internal Processing (* 4:2:2/8-bit Output Processing)
- 1 M/E (PinP) + DSK
- Built-in frame synchronizers and scalers on all inputs
- Input status LEDs

- Full HDCP support
- Preview monitor output (Four-way split screen for Inputs, PST, PGM, or DSK)
- Audio embedding
- Up to 12 frames audio delay to align the timing with video for perfect lip sync
- Audio follow function

Block Diagram (Video)

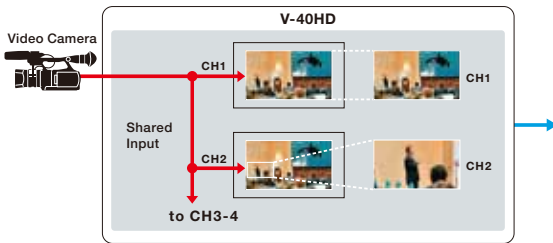


Block Diagram (Audio)

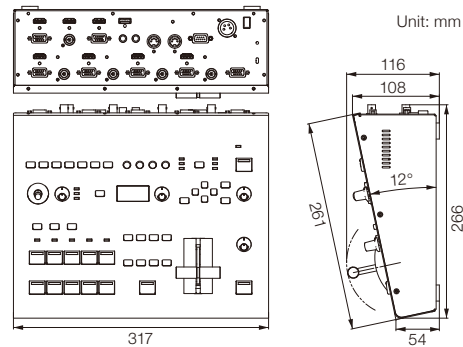


Multi-Zoom

Using the shared input function, you can assign the video on channel 1 to channels 2 through 4. The scaler for each input can zoom into any position in the video image enabling a virtual multi-camera environment. This gives the appearance that you have additional cameras connected.



* Only the source of the previous adjacent channel can be shared.



SPECIFICATIONS V40-HD

Video Processing	
Sampling Rate	4:4:4 (Y/Pb/Pr), 10 bits * Output signal processing is 4:2:2/8-bit.
Audio Processing	
Sampling Rate	24 bits/48 kHz, 2ch
Input Formats	
HDMI Video	480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p 640 x 480/60 Hz, 800 x 600/60 Hz, 1024 x 768/60 Hz, 1280 x 768/60 Hz, 1280 x 1024/60 Hz, 1366 x 768/60 Hz, 1400 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1080/60 Hz, 1920 x 1200/60 Hz * The video signal frame rate must match with the unit's frame rate setting. *1 *2
HDMI Audio	Linear PCM, 24 bits/48 kHz, 2ch
RGB/Component	480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p 640 x 480/60 Hz, 800 x 600/60 Hz, 1024 x 768/60 Hz, 1280 x 768/60 Hz, 1280 x 1024/60 Hz, 1366 x 768/60 Hz, 1400 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1080/60 Hz, 1920 x 1200/60 Hz * The video signal frame rate must match with the unit's frame rate setting. *1 *2
Composite	NTSC, PAL
Output Formats	
HDMI Video	480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p 640 x 480/60 Hz, 800 x 600/60 Hz, 1024 x 768/60 Hz, 1280 x 768/60 Hz, 1280 x 1024/60 Hz, 1366 x 768/60 Hz, 1400 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1200/60 Hz * The output refresh rates of 640 x 480 to 1400 x 1050 are 75 Hz when the unit's frame rate setting is 50 Hz. *1 *2
HDMI Audio	Linear PCM, 24 bits/48 kHz, 2ch

RGB/Component	480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94p, 1080/50p 640 x 480/60 Hz, 800 x 600/60 Hz, 1024 x 768/60 Hz, 1280 x 768/60 Hz, 1280 x 1024/60 Hz, 1366 x 768/60 Hz, 1400 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1200/60 Hz * The output refresh rates of 640 x 480 to 1400 x 1050 are 75 Hz when the unit's frame rate setting is 50 Hz. *1 *2
Composite	NTSC, PAL
Preview (HDMI)	Video: 1920 x 1080/60 Hz (fixed) * When INPUT is selected, the sources are displayed using a reduced frame rate. Audio: Linear PCM, 24 bits/48 kHz, 2ch
Signal Level/Impedance	
RGB/Component	Signal level: 0.7Vp-p (H, V: 5VTTL) Impedance: 75 ohms
Composite	Signal level: 1.0 Vp-p (luminance), 0.286 Vp-p (chroma [NTSC]), 0.3 Vp-p (chroma [PAL]) Impedance: 75 ohms
Analog Audio	Nominal input level: +4 dBu Maximum Input Level: +22 dBu Impedance: 15 k-ohms
Video Effects	
Transition	Mix, Cut, Wipe (9 patterns)
Composition	Picture in Picture, DSK (Luminance Key, Chroma Key)
Audio Effects	
Delay	0.0 to 12.0 frames
Others	
Dimensions	317 (W) x 266 (D) x 108 (H) mm 12-1/2 (W) x 10-1/2 (D) x 4-1/4 (H) inches
Weight	3.4 kg, 7 lbs 8 oz (excluding AC Adaptor)

*1: Conforms to VESA DMT Version 1.0 Revision 11
 *2: 1920 x 1200/60 Hz: Reduced blanking

(0dBu=0.775Vrms)

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

V-4EX | 4-Channel Video Mixer

All in one video mixer with HDMI in/out, USB streaming out, and built-in multiviewer with touch control

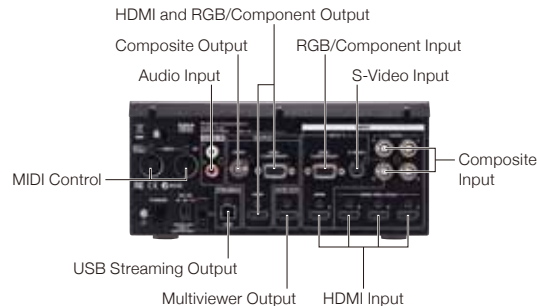
480p/576p

AUDIO EMBEDDING

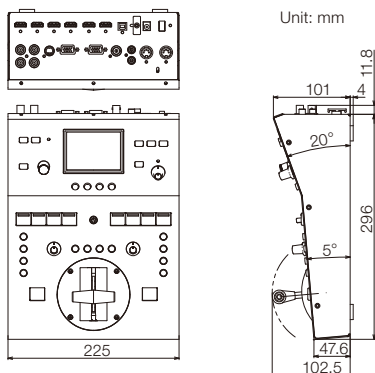
HDCP

USB 2.0
Video and Audio

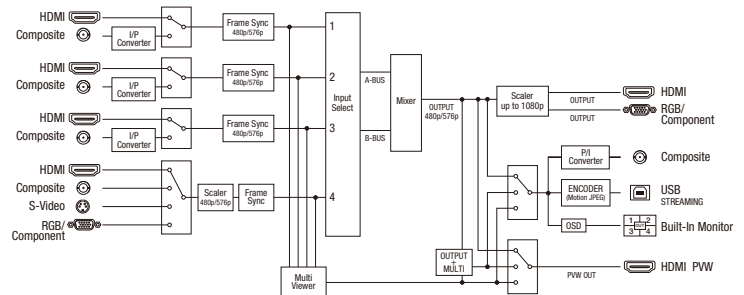
V-LINK

MIDI
VISUAL CONTROL

- 3 Input (HDMI/Composite) + 1 Input (Up to 1080p HDMI*/RGB/Component/Composite) *downscaled to 480p/576p
- PGM Output (Up to 1080p HDMI* + RGB/Component + Composite) + PVW Output (PVW/Multiviewer) *upscaled from 480p/576p
- 480p/576p Progressive internal processing
- Built-in multiviewer with touch control
- Built-in frame synchronizers on all inputs
- Scalers on CH 4 and Output
- 259 Transitions 148 Effects
- HDCP compliant
- Audio Embedding
- Audio Mixer & Delay - up to 4 frames
- USB Streaming Out for webstreaming



Block Diagram (Video)



* Total latency: 2 frames (from Input 1-3 to Output), 3 frames (from Input 4 to Output)
 * Internal Processing: 480/59.94p when set to NTSC, 576/50p when set to PAL

SPECIFICATIONS V-4EX

Processing		HDMI Audio (OUTPUT)	Linear PCM, 24 bits/48 kHz, 2 ch
Video Processing	4:2:2 (Y/Pb/Pr), 8 bits (Internal Processing: 480/59.94p when set to NTSC, 576/50p when set to PAL)	Composite Video	NTSC, PAL
Audio Processing	Sampling Rate: 24 bits/48 kHz, 2 ch	Preview Video (PVW OUT)	480/59.94p when set to NTSC 576/50p when set to PAL
Input Formats		Preview Audio (PVW OUT)	Linear PCM, 24 bits/48 kHz, 2 ch
HDMI Video (INPUT 1 to 3)	480/59.94p (when set to NTSC) 576/50p (when set to PAL)	USB Video	720 x 480 when set to NTSC, 720 x 576 when set to PAL, Motion JPEG
HDMI and Component Video (INPUT 4)	480/59.94i, 480/59.94p, 720/59.94p, 1080/59.94i, 1080/59.94p (when set to NTSC), 576/50i, 576/50p, 720/50p, 1080/50i, 1080/50p (when set to PAL)	USB Audio	Linear PCM, 16 bits/48 kHz, 2 ch
HDMI Audio	Linear PCM, 24 bits/48 kHz, 2 ch	Others	
RGB	640 x 480/60Hz, 800 x 600/60Hz, 1024 x 768/60Hz, 1280 x 768/60Hz, 1280 x 1024/60Hz, 1366 x 768/60Hz, 1400 x 1050/60Hz, 1600 x 1200/60Hz, 1920 x 1200/60Hz	Display	Graphic Color LCD, 320 x 240 dots, touch panel
Composite Video/S-Video	NTSC, PAL	Power Supply	AC adaptor
Output Formats		Current Draw	2.0 A
HDMI and RGB/Component Video (OUTPUT)	480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p, 640 x 480, 800 x 600, 1024 x 768, 1280 x 768, 1280 x 1024, 1366 x 768, 1400 x 1050, 1600 x 1200, 1920 x 1200 * The output format of HDMI and RGB/Component is always the same. When an interlaced format is selected, component signal is output from the RGB/COMPONENT connector. When a non-interlaced format is selected, RGB signal is output from the RGB/COMPONENT connector.	Accessories	AC adaptor, Power Cord, RCA - BNC conversion plug x 2, Owner's Manual
		Dimensions	225 (W) x 296 (D) x 105 (H) mm 8-7/8 (W) x 11-11/16 (D) x 4-3/16 (H) inches
		Weight	2.6 kg, 5 lbs. 12 oz.

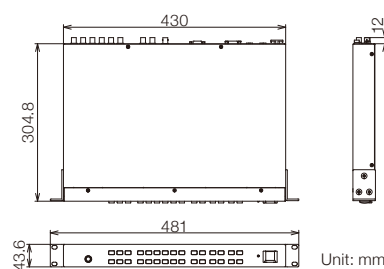
(0dBu=0.775Vrms)

* RGB formats: Conforms to VESA DMT Version 1.0 Revision 11
 * 1920 x 1200/60Hz: Reduced blanking

MVS-12 | Multi-Viewer/Switcher

Multi-viewer for convenient video monitoring with simple matrix switcher

V-LINK



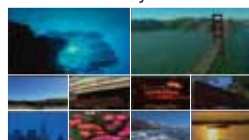
- Groups and displays up to 12 SD video signals to a single HD or RGB monitor
- Matrix switcher function enables ability to assign 12 inputs to 4 different outputs
- Four setups can be stored and recalled
- Controllable via Ethernet, RS-232C and MIDI
- Displays channel selection on monitor using V-LINK

4 Multi-Viewer Layouts

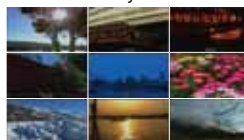
● 12 Screen Layout



● 10 Screen Layout



● 9 Screen Layout

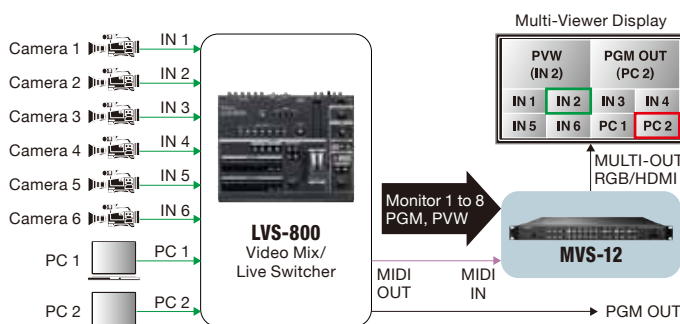


● 4 Screen Layout



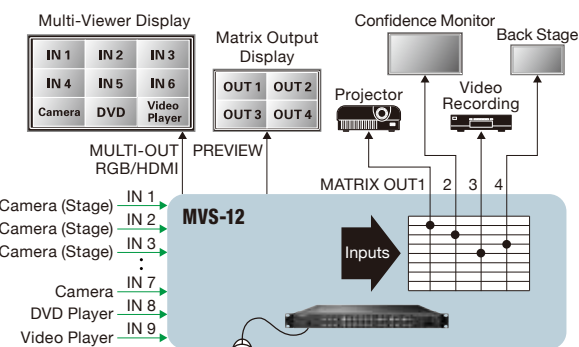
Multi-viewer and Matrix switcher function enables system expansion

● Monitoring for Switcher



The MVS-12 is a perfect companion for the LVS-800 allowing you to preview all monitor outputs. Using a MIDI connection the PGM/PVM video source is displayed and indicated by a red frame and green frame (tally).

● Monitoring for Video Installation



Video sources can be distributed to up to four different locations.

SPECIFICATIONS MVS-12

Video Format	Composite: NTSC or PAL HDMI, PC-RGB: 1920 x 1080 (60/50 Hz), 1680 x 1050 (60/75 Hz), 1600 x 900 (60/75 Hz), 1440 x 900 (60/75 Hz), 1280 x 1024 (60/75 Hz), 1280 x 720 (60/50 Hz), 1024 x 768 (60/75 Hz) (Progressive Scan)
Sampling Rate	4:2:2 (Y:B-Y:R-Y), 8-bit, 13.5 MHz (ITU-R BT.601)
Input/Output Level and Impedance	Composite: 1.0 Vp-p, 75 ohms PC-RGB: 0.7 Vp-p, 75 ohms (H, V: 5V TTL)
Connectors	Video Input Composite: BNC type x 12 jacks Output Connectors Composite (for MATRIX OUT): BNC type x 4 jacks Composite (for MATRIX OUT Preview): BNC type x 1 jack HDMI (for MULTI-OUT, MENU) x 1 jack PC-RGB (for MULTI-OUT, MENU): D-Sub 15-pin type x 1 jack
Other Connectors	Ethernet 10/100Base-Tx RJ45 type x 1 jack RS-232C DB-9 type x 1 jack MIDI IN 5-pin DIN type x 1 jack MIDI OUT/THRU 5-pin DIN type x 1 jack Mouse PS/2 type *Not bundled.

Power Supply	AC Adaptor (Accessory)
Current Draw	2 A
Dimensions	481 (430 without rack mount bracket) (W) x 320 (D) x 44 (H) mm 18-15/16 (16-15/16 without rack mount bracket) x 12-5/8 (D) x 1-3/4 (H) inches
Weight	3.0 kg 6 lbs. 10 oz. (without AC Adaptor)

* MONITOR: XGA (1024 x 768 pixels) or greater, HDMI or Analog RGB input is required.
HDMI OUTPUT Connection: Audio is not supported. HDMI version is 1.2. Supports EDID when the setup is AUTO.
RGB OUTPUT Connection: Manual pixel rate setup is needed.
Aspect Ratio: In MULTI-OUT, display aspect and each input aspects can be adjusted individually. MATRIX OUTPUT has no aspect adjustment function.
Switching: An mixed image before and after switching may appear on MATRIX Output at switching.

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

VR-50HD | Multi-Format AV Mixer

An all-in-one HD Multi-Format AV Mixer with built-in USB 3.0 for Web Streaming and Recording



AUDIO

12-Channel Digital Audio Mixer

The VR-50HD features a 12-channel digital audio mixer that mixes audio from cameras in addition to sound from four microphones, computers, and DVD players. Capturing and mixing 3G/HD/SD-SDI/HDMI audio in the audio mixer is also possible. Using the "Audio Follow" feature, you can even make the audio switch automatically from one source to another as the video source changes. Built-in delay and equalizer features make possible a broad range of use, from seminars to musical events.

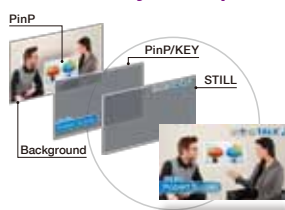


12 input, 4-Channel Multi-Format Video Switcher

A total of 12 HDMI, 3G/HD/SD-SDI/SDI, RGB/COMPONENT, and composite inputs are provided. In addition to professional HD cameras, you can connect equipment that ranges from computers and Blu-ray and DVD players to allow video cameras using composite output. The unit features multi-format specifications that allows you to never have to worry about differences in resolution among input devices.

* 6 channel switching is possible when not using compositing features such as PinP and Key.

Four Layer Composition



VIDEO

Built-In Preview Touch Monitor

The large 7-inch touch panel can be switched between seven-way multi-view, the quad view of inputs, still picture, and program out. By directly touching on the video that you want to switch to, the touch monitor allows for extremely easy operation.



Transition Effects

You can choose to cut, mix, or wipe by pressing the corresponding transition button. The Time dial lets you instantly apply an effect time of 0 to 4 seconds. Even without a T-bar, it's possible to achieve flexible switching.



AUDIO Output

SDI, HDMI: Linear PCM, 24 bit, 48 kHz, 2 ch
USB: Linear PCM, 16 bit, 48 kHz, 2 ch

Audio is mixed and re-embedded into the SDI, HDMI, and analog outputs as well as the USB output. Each of the outputs are assignable from the Main bus or Aux bus.

USB STREAMING Output

Uncompressed up to 1080/59.94p (USB 3.0), up to 720/29.97p (USB 2.0)

The resolution and frame rate of the video format can be changed thanks to the dedicated scaler for the USB output. Output is assignable from PGM or AUX bus.

HDMI MULTI-VIEW Output

1080/59.94p with HDCP
Seven-way multi-viewer

HDMI Output

Up to 1080p
HDCP support

Each of the outputs are assignable from PGM, PVW, or AUX bus.

3G/HD/SD SDI Input/Output

Up to 1080p
3G SDI supports Level A and B.

Each of the outputs are assignable from PGM, PVW, or AUX bus.

AUDIO Input

SDI, HDMI: Linear PCM, 24 bit, 48 kHz, 2 ch

12 analog inputs or from audio embedded in the 4 SDI or 4 HDMI inputs. The XLR jacks are provided with selectable phantom power.

RGB/COMPONENT Input/Output

Up to 1080p

COMPOSITE Input

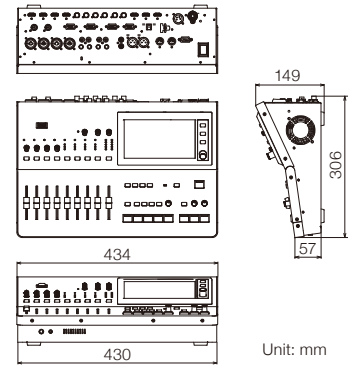
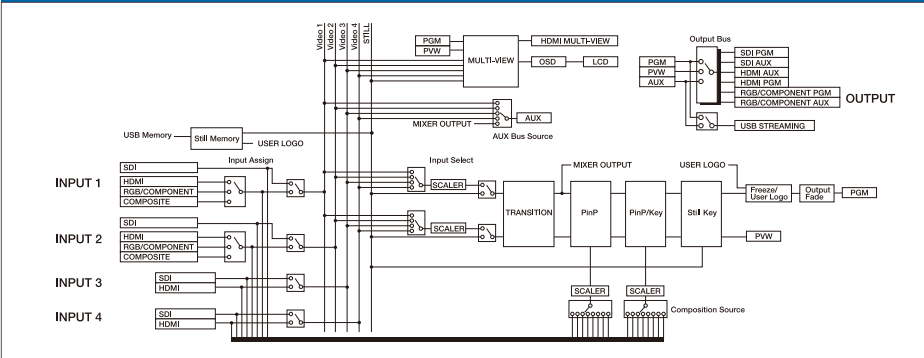
NTSC or PAL



- 12 input, 4-Channel Video plus still channel Multi-Format Switcher
- Supports 3G/HD/SD SDI, HDMI, RGB/Component, and Composite Video Inputs Up to 1080p (3G SDI)
- Embedding of audio with delay settings
- 12-Channel Digital Audio Mixer with XLR, TRS, and RCA jacks along with audio from SDI and HDMI inputs

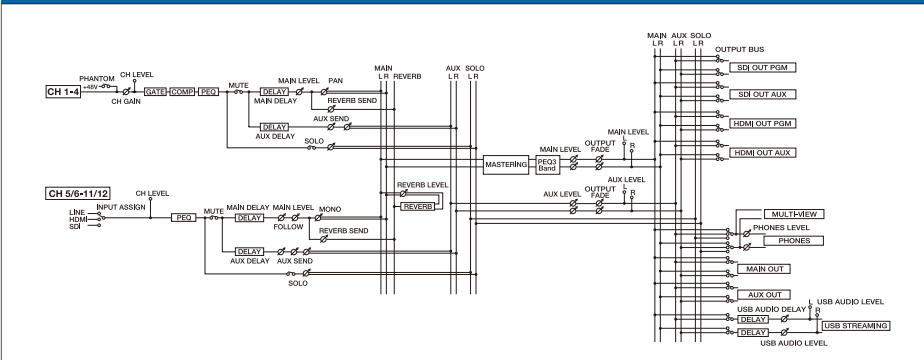
- 4 Layer, Compositing of PinP, PinP/KEY, and STILL
- Built-In Preview Touch Monitor (7 inch Graphic color LCD 800 x 480 dots)
- External Multi-View Output through HDMI
- HDCP Support
- USB 3.0 Video/Audio Output for web streaming and recording up to 1080p (uncompressed)

Block Diagram (Video)



Unit: mm

Block Diagram (Audio)



Video Capture for VR

Video Capture for VR is software that captures video and audio signals output from the VR-50HD USB port and saves them to movie files on your connected Windows/Mac.



Free download from www.roland.com

SPECIFICATIONS VR-50HD

VIDEO

Processing	4:4:4 (RGB), 10-bit 4:2:2 (Y/Pb/Pr), 10-bit
Input Connectors	3G/HD/SD-SDI: BNC type x 4 (INPUT 1 to 4) * Conforms to SMPTE 424M (SMPTE 425M-AB), 292M, 259M-C. HDMI (DVI-D): Type A (19-pin) x 4 (INPUT 1 to 4) * HDCP Supported. Analog RGB/HD-Component: Mini D-sub 15-pin type x 2 (INPUT 1 to 2) Analog Video (SD): Composite (BNC type) x 2 (INPUT 1 to 2) * INPUT 1-2: Select SDI, HDMI or Analog RGB, Composite using menu. * INPUT 3-4: Select SDI, HDMI using menu.
Output Connectors	3G/HD/SD-SDI: BNC type x 2 (PGM OUT, AUX OUT) * Conforms to SMPTE 424M (SMPTE 425M-AB), 292M, 259M-C. HDMI (DVI-D): Type A (19-pin) x 3 (PGM OUT, AUX OUT, MULTI VIEW) * HDCP Supported. Analog RGB/HD-Component: Mini D-sub 15-pin type x 2 (PGM OUT, AUX OUT)
Supported Formats	SDI: 480/59.94i, 576/50i, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p * Conforms to SMPTE 274M, SMPTE 296M, ITU-R BT.601-5. HDMI *2: 480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p 1024 x 768/60Hz *1, 1280 x 720/60Hz *1, 1280 x 800/60Hz *1, 1280 x 1024/60Hz *1, 1400 x 1050/60Hz, 1920 x 1080/60Hz HDMI (MULTI-VIEW Output) *2: 1080/59.94p Component: 480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p RGB *2: 1024 x 768/60Hz *1, 1280 x 720/60Hz *1, 1280 x 800/60Hz *1, 1280 x 1024/60Hz *1, 1400 x 1050/60Hz, 1920 x 1080/60Hz Composite: NTSC, PAL * Conforms to ITU-R BT.601-5. *1: Output refresh rate is 75 Hz when frame rate is set to 50 Hz. *2: Conforms to CEA-861-E or VESA DMT Version 1.0 Revision 11. * The video signal frame rate must match the unit's frame rate setting. USB-VIDEO: 480/29.97p, 576/25p, 480/59.94p, 576/50p, 720/29.97p, 720/25p, 720/59.94p, 720/50p, 1080/29.97p, 1080/25p, 1080/59.94p, 1080/50p Still Image: Windows® Bitmap File (.bmp) * Maximum 1920 x 1080 pixels, 24-bit per pixel, uncompressed.

AUDIO

Processing	Sampling Rate: 24-bit/48 kHz
Input Connectors	AUDIO IN (1 to 4) jacks (XLR/TRS combo type) * XLR type: 1 GND, 2 HOT, 3 COLD * Phantom Power: DC 48 V (unloaded maximum), 5 mA (maximum load) (Current value per channel). AUDIO IN (5 to 8) jacks (RCA phono type) AUDIO IN (9 to 12) jacks (TRS type)
Output Connectors	AUDIO OUT L, R jacks (XLR-3-32 type) * XLR type: 1 GND, 2 HOT, 3 COLD AUDIO OUT L, R jacks (RCA phono type) PHONES jack (Stereo 1/4-inch phono type) (headphones) PHONES jack (Stereo miniature type) (headphones)
Input Level and Impedance	XLR/TRS: -68 to +4 dBu (Maximum: +22 dBu, 4 k ohms) RCA phono: -10 dBu (Maximum: +8 dBu, 11 k ohms) TRS: +4 dBu (Maximum: +22 dBu, 98 k ohms)
Output Level and Impedance	XLR: +22 dBu (Maximum: +22 dBu, 600 ohms) RCA phono: -10 dBu (Maximum: +8 dBu, 1 k ohms) Headphones: 25 mW + 25 mW, 20 ohms
Effects	Channel Effects: Compressor, Noise Gate, 3-Band EQ, Delay Master Effects: Mastering, 3-Band EQ, Reverb
OTHERS	
Remote	Remote MIDI: 5-pin DIN type (IN, OUT/THRU) RS-232C: D-sub 9-pin type x 1
Interface	USB 2.0 port (host): Hi-Speed USB: Type A (for USB memory) USB 3.0 port (device): Type B for USB-VIDEO (Super-Speed/Hi-Speed), USB-AUDIO (Full-Speed)
Display	7 inch Graphic color LCD 800 x 480 dots (touch screen)
Power Supply	AC Adaptor DC 24 V Secondary AC Adaptor DC 12 V to 16 V (XLR-4-32 type)
Current Draw	2.5 A (DC 24 V)
Dimensions	434 (W) x 306 (D) x 149 (H) mm 17-1/8 (W) x 12-1/16 (D) x 5-7/8 (H) inches
Weight	5.3 kg, 11 lbs 11 oz (without AC Adaptor)
Operation Temperature	+0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
Accessories	AC Adaptor, Power Cord, Owner's Manual

(0dBu=0.775Vrms)

* This product is a Class A digital device under FCC part 15.

VR-3EX | AV Mixer

An all-in-one AV Mixer with built-in USB port for Web Streaming and Recording

480p/576p

HDCP

AUDIO EMBEDDING

USB 2.0
for Video / Audio

MIDI
VISUAL
CONTROL

V-LINK

AUDIO MIXER

The VR-3EX features an 18-channel digital audio mixer with built in effects for a wide variety of situations.

Intuitive Panel Layout

Gain, EQ (LO/MID/HI) controls and faders permit intuitive control of channel levels. Pressing the SETUP button for a channel enables more in-depth tuning via the touch screen display.



Rich Selection of Audio Effects

Built-in Equalizers, High-pass Filter, Gate, Compressor, Delay, and Reverb effects can be applied to each audio input channel, enabling a rich mix of sound with powerful impact.*



* CH 5/6, 7/8 and HDMI 1-4 have Equalizers, Delay, and Reverb only.

HDMI Audio Support

The VR-3EX can use the embedded audio from video cameras and other devices connected using HDMI. This makes it possible to work with clear, digital HDMI audio in just the same way as analog audio.



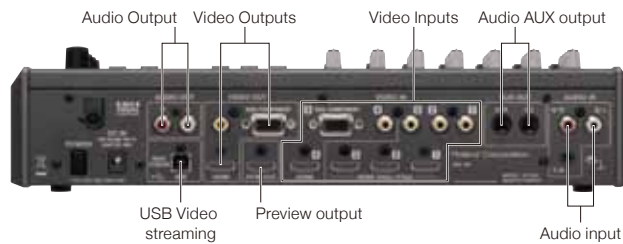
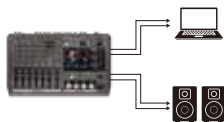
Internal Stereo Microphones

Built-in stereo microphones are located at the top of the case. These let the operator record commentary in his or her own voice or add in spectator cheers and applause to boost ambience.



Two Audio Mix Systems (Main & AUX)

Audio can be mixed and output separately from the main audio. This makes it possible to use the VR-3EX for recording and as a PA system at the same time.

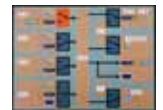


VIDEO MIXER

The video processing engine in the VR-3EX is fully digital and progressive, even when using effect-heavy processing.

Four Video Sources from Nine Input Connectors

The VR-3EX accepts HDMI, RGB component, and composite input over up to nine connectors and seamlessly switches between any four of them. Inputs and outputs are intuitively switchable using the touch-screen or pushbuttons.



Intuitive Touch-screen Monitor

The touch-screen monitor lets the operator switch video and make settings via the on-screen touch display switchable to four-way split input, a single out screen, or simultaneous five-way input and output. Output can also be sent to an external HDMI monitor via the PVW OUT connector.



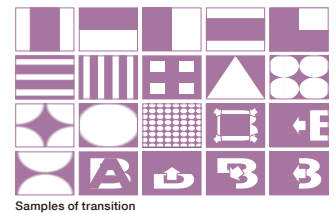
Simple Inset-screen and Split-screen Display

Various multi-screen display modes can be controlled with a button in the form of PinP using an inset screen positioned as wanted, horizontal or vertical split screen, or four-way split screen.



Video Transition Times

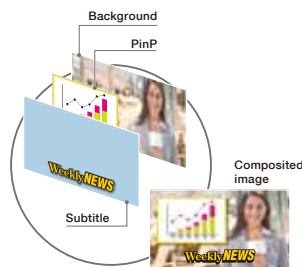
A Transition dial lets the operator adjust the time for screen dissolves and wipes to any interval up to four seconds. This makes it easy to achieve slow video transitions that create greater emotional impact.



Mix

Composition of Text, People, and More

Produce picture-in-picture, lower 3rd or subtitle compositing using a single key button. The VR-3EX is capable of chroma and luminance key composition, enabling video with inserted characters against composited backgrounds.



Diverse Array of Video Effects

The VR-3EX comes with a range of effects for transforming video to match the application. With just the twist of a control, even ordinary camera footage can receive dramatic flair that makes it pop.



VIDEO FX list
Strobe, Negative, Colorize, Findedge, Silhouette, Monochrome, Sepia, Emboss, Posterize, Color pass, Multi (11 types)

Operating and Backing-up by remote software

You can use the VR-3EX RCS dedicated software to operate and back-up the settings by remote control from a computer connected via USB.

Free download from www.roland.com



Recording using Windows/Mac

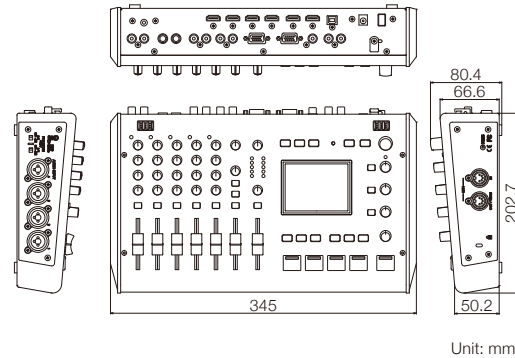
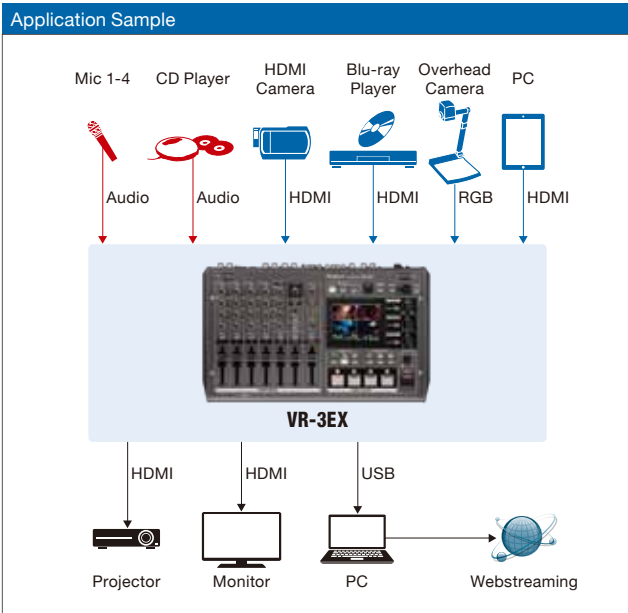
Video Capture for VR is application software that captures video and audio signals output from the VR-3EX USB port and saves them to movie files on a connected Windows/Mac.

Free download from www.roland.com



- HDMI & Composite Inputs
- Standard Definition 16:9 Mixing Engine
- Scaled Output up to 1080p
- Advanced 18 Channel Audio Mixer

- USB 2.0 for 480i Streaming
- 2.5" Multiview Touchscreen Monitor
- Picture-in-Picture, Keyer and Video Effects



SPECIFICATIONS VR-3EX

Video Processing	
Sampling Rate	4:2:2 (Y/Pb/Pr), 8 bits (Internal Processing: 480/59.94p when set to NTSC, 576/50p when set to PAL)
Audio Processing	
Sampling Rate	24 bits/48 kHz
Input Formats	
HDMI Video (VIDEO IN 1-3)	480/59.94p (when set to NTSC) 576/50p (when set to PAL)
HDMI Video (VIDEO IN 4)	480/59.94i, 480/59.94p, 720/59.94p, 1080/59.94i, 1080/59.94p (when set to NTSC) 576/50i, 576/50p, 720/50p, 1080/50i, 1080/50p (when set to PAL)
HDMI Audio (VIDEO IN 1-4)	Linear PCM, 24 bits/48 kHz, 2 ch
RGB/Component (VIDEO IN 4)	640 x 480/60 Hz, 800 x 600/60 Hz, 1024 x 768/60 Hz, 1280 x 768/60 Hz, 1280 x 1024/60 Hz, 1366 x 768/60 Hz, 1400 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1200/60 Hz * The refresh rate is the maximum value of each resolution. * Conforms to VESA DMT Version 1.0 Revision 11. * 1920 x 1200/60 Hz: Reduced blanking
Composite Video (VIDEO IN 1-4)	NTSC, PAL
Output Formats	
HDMI and RGB/Component Video (VIDEO OUT)	480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p 640 x 480, 800 x 600, 1024 x 768, 1280 x 768, 1280 x 1024, 1366 x 768, 1400 x 1050, 1600 x 1200, 1920 x 1200 * The output format of HDMI and RGB/Component is always the same. When an interlaced format is selected, component signal is output from the RGB/COMPONENT connector. When a non-interlaced format is selected, RGB signal is output from the RGB/COMPONENT connector. * The refresh rates of RGB format is 60 Hz when set to NTSC, 75 Hz when set to PAL (excluding 1600 x 1200 and 1920 x 1200. The refresh rate of these 2 is 75 Hz when set to PAL.) * RGB formats: Conforms to VESA DMT Version 1.0 Revision 11. * 1920 x 1200/60 Hz: Reduced blanking
HDMI Audio (VIDEO OUT)	Linear PCM, 24 bits/48 kHz, 2 ch
Composite Video (VIDEO OUT)	NTSC, PAL
Preview Video (PVW OUT)	480/59.94p when set to NTSC 576/50p when set to PAL
Preview Audio (PVW OUT)	Linear PCM, 24 bits/48 kHz, 2 ch

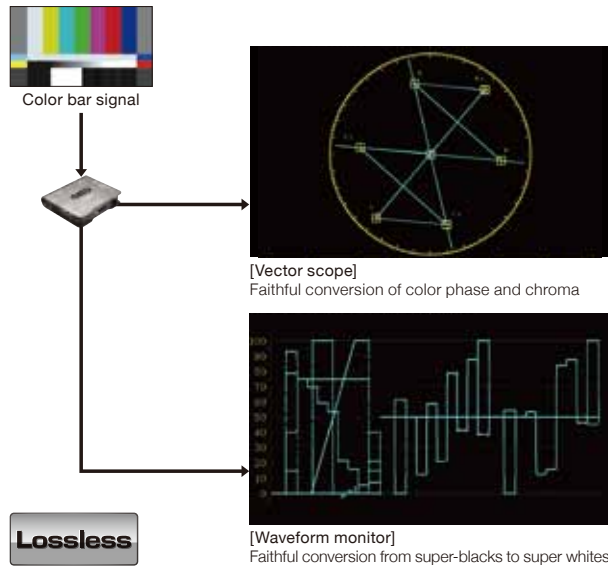
USB Video	720 x 480 when set to NTSC, 720 x 576 when set to PAL, Motion JPEG
USB Audio	Linear PCM, 16 bits/48 kHz, 2 ch
Input Connectors	
Video	VIDEO IN 1-4 (HDMI: Type A 19 pins) VIDEO IN 4 (RGB/Component: HD DB-15 type) VIDEO IN 1-4 (Composite: RCA phono Type)
Audio	AUDIO IN 1-4 (XLR/TRS combo type, phantom power) AUDIO IN 5-6 (Stereo RCA phono type) AUDIO IN 7/8 (Stereo miniature type) MIC (Internal stereo microphones)
Phantom Power	DC 48 V (unloaded maximum), 10 mA (maximum load) * Current value per channel
Output Connectors	
Video	VIDEO OUT (HDMI: Type A 19 pins) VIDEO OUT (RGB/Component: HD DB-15 type) VIDEO OUT (Composite: RCA phono type) PVW OUT (HDMI: Type A 19 pins)
Audio	AUDIO OUT L, R (Stereo RCA phono type) AUX OUT L, R (Stereo 1/4-inch phono type) PHONES (1/4-inch phono type) (headphones) PHONES (Stereo miniature type) (headphones)
Other Connectors	
MIDI	5 pins DIN type x 2 (IN, OUT/THRU)
USB	B type x 1 (for streaming and remote control)
Others	
Display	Graphic Color LCD, 320 x 240 dots, touch panel
Video Effects	Transition: Cut, Mix (3 patterns), Wipe (250 patterns) VIDEO FX: Strobe, Negative, Colorize, Findedge, Silhouette, Monochrome, Sepia, Emboss, Posterize, Color pass, Multi (11 types) Composition: Picture in Picture, Split, Quad, Luminance Key, Chroma Key Others: Output Fade, Freeze
Power Supply	AC Adaptor
Current Draw	2.3 A
Dimensions	345 (W) x 203 (D) x 80 (H) mm 13-5/8 (W) x 8 (D) x 3-1/8 (H) inches
Weight excl. AC adaptor	2.3 kg 5 lbs 2 oz
Accessories	AC Adaptor, Power Cord, Owner's Manual

(0dBu=0.775Vrms)

VC-1 series | Video Converters

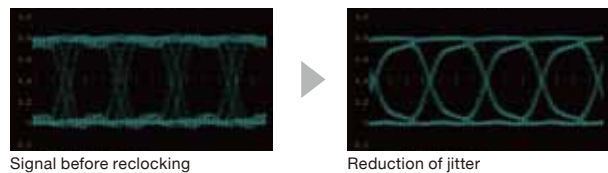
Uncompromising commitment to picture quality

The VC-1 series faithfully converts the original source with no change in color or brightness. It supports super-blacks and super-whites, and converts video from cameras and other source devices maintaining all aspects of the original source.



On-board reclocker

The VC-1 series features an on-board reclocker to compensate for attenuation of SDI signals carried over long distances. This makes it possible to receive camera-relay video while maintaining a high image quality.



Support for HDCP HDMI signals

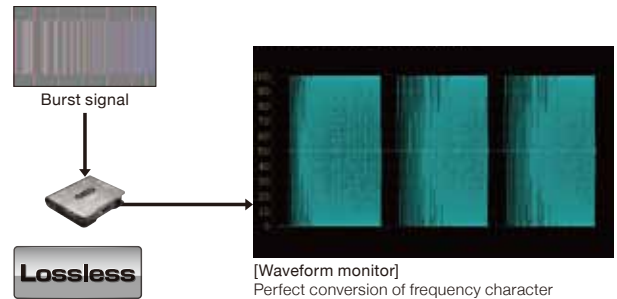
The VC-1 series is compliant with HDCP. For example, the VC-1-DL can take HDCP-applied HDMI input signals, apply frame synchronization or delay, and produce HDCP-applied HDMI output. This allows the VC-1 series to be used in any HDCP-based system with no worries.

* HDCP-applied HDMI signals cannot be converted to SDI and recorded to HDMI recorders and editors.



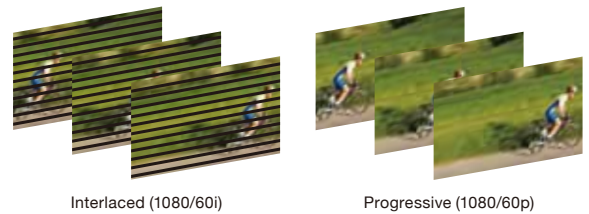
Faithful reproduction of video characteristics

The VC-1 series reproduces the video characteristics of the original source with no interlace artifacts, pixel shifting, or other conversion problems or signal errors. Jitter and return loss are at absolute minimal levels.



Support for 1080p 3G-SDI

Video signals beyond 1080i can be input and output. The VC-1 series supports both level A and level B 3G-SDI, letting you connect a wide variety of 3G-SDI equipment. 1080i, 720p, and SD signals are accommodated also automatically on connection.



Support for workflow combining audio and video

Audio embedding and de-embedding features are provided (channel-selectable) in the VC-1 Series. The audio embedding feature lets you place audio signals from a different source into the video output. For example, when converting an SDI signal to HDMI, you can use the audio embedding feature to output high-quality audio from any of the SDI audio channels. Digital (AES/EBU) input and output are also supported, letting you exchange sound between professional audio equipment with no degradation in signal. Analog input and output is supported as well making it possible to both monitor and input audio to/from a wide variety of equipment such as an audio console.



Easy configuration with DIP switches or dedicated PC/Mac software app

DIP switches make it simple to accommodate on-site adjustments. Change the conversion direction or other settings by simply sliding a DIP switch on the side of the unit. Delay Dials (VC-1-DL only) set the amount of delay for video and audio. Set the amount of delay independently for video and audio in a range of 0 to 9 fields (0 to 4.5 frames). Connection to a computer via USB cable unlocks even greater versatility with advanced settings including a memory location to lock in a favorite configuration. Control and configure multiple VC-1 units at the same time using a USB hub.







Delay Dials (VC-1-DL only) and DIP switches on side panel



VC-1 RCS

* The VC-1 RCS for PC/Mac can be downloaded from www.roland.com

SPECIFICATIONS VC-1 series

		 VC-1-SH SDI to HDMI	 VC-1-HS HDMI to SDI	 VC-1-DL FS Delay	 VC-1-SC Scan Converter	
Input	SDI	Yes	-	Yes	Yes * Selectable IN/OUT	
	HDMI	-	Yes	Yes	Yes	
	RGB/Component	-	-	-	Yes	
	Composite	-	-	-	Yes	
	Analog Audio	Yes	Yes	Yes	Yes * Selectable IN/OUT	
	Digital Audio	Yes * Selectable Analog/Digital	Yes * Selectable Analog/Digital	Yes * Selectable Analog/Digital	-	
	Reference	-	-	Yes	Yes	
Output	SDI	Yes * Selectable THRU/OUT	Yes	Yes	Yes * One of two is selectable IN/OUT	
	HDMI	Yes	Yes * Selectable THRU/OUT	Yes	Yes	
	Analog Audio	Yes	Yes	Yes	Yes * Selectable IN/OUT	
	Digital Audio	Yes * Selectable Analog/Digital	Yes * Selectable Analog/Digital	Yes * Selectable Analog/Digital	-	
Format	SDI	Video Format	[Input/Output] 1920 x 1080/60p/59.94p/50p/30p/29.97p/25p/24p/23.98p/60i/59.94i/50i, 1280 x 720/60p/59.94p/50p/30p/29.97p/25p, 720 x 487/59.94i, 720 x 576/50i		[Input] 1920 x 1080/60p/59.94p/50p/30p/29.97p/25p/24p/23.98p/ 60i/59.94i/50i/30PsF/29.97PsF/25PsF/24PsF/23.98PsF, 720 x 487/59.94i, 720 x 576/50i, 1280 x 720/60p/59.94p/50p/30p/29.97p/25p/24p/23.98p [Output] 1920 x 1080/59.94p/50p/59.94i/50i, 1280 x 720/59.94p/50p, 720 x 487/59.94i, 720 x 576/50i	
		Color Format	10 bits YCC 4:2:2			
		Audio Format	Linear PCM, 24 bits, 48 kHz, 16 ch *1			
	HDMI	Video Format	[Input/Output] 1920 x 1080/60p/59.94p/50p/30p/29.97p/25p/24p/23.98p/60i/59.94i/50i, 1280 x 720/60p/59.94p/50p/30p/29.97p/25p, 720 x 480/59.94i, 720 x 576/50i		[Input] 1920 x 1080/60p/59.94p/50p/30p/29.97p/25p/24p/23.98p/60i/59.94i/50i, 1280 x 720/60p/59.94p/50p/30p/29.97p/25p/24p/23.98p, 720 x 480/59.94p/59.94i, 720 x 576/50p/50i, 640 x 480/60/72/75/85 Hz, 800 x 600/56/60/72/75/85 Hz, 1024 x 768/60/70/75/85 Hz, 1280 x 768/60/75/85 Hz, 1360 x 768/60 Hz, 1152 x 864/75 Hz, 1400 x 900/60/75/85 Hz, 1280 x 960/60/85 Hz, 1280 x 1024/60/75/85 Hz, 1400 x 1050/60/75 Hz, 1680 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1200/60 Hz: Reduced blanking [Output] 1920 x 1080/59.94p/50p/59.94i/50i, 1280 x 720/59.94p/50p, 720 x 480/59.94i, 720 x 576/50i	
		Color Format	10 bits YCC 4:2:2, 8 bits YCC 4:4:4, 8 bits RGB 4:4:4			
		Audio Format	Linear PCM, 24 bits, 48 kHz, 8 ch *1			
	RGB/Component	Video Format	-	-	-	[Input] 1920 x 1080/60p/59.94p/50p/60i/59.94i/50i/24PsF/23.98PsF, 1280 x 720/60p/59.94p/50p, 720 x 480/59.94p/59.94i, 720 x 576/50p/50i, 640 x 480/60/72/75/85 Hz, 800 x 600/56/60/72/75/85 Hz, 1024 x 768/60/70/75/85 Hz, 1280 x 768/60/75/85 Hz, 1360 x 768/60 Hz, 1152 x 864/75 Hz, 1400 x 900/60/75/85 Hz, 1280 x 960/60/85 Hz, 1280 x 1024/60/75/85 Hz, 1400 x 1050/60/75 Hz, 1680 x 1050/60 Hz, 1600 x 1200/60 Hz, 1920 x 1200/60 Hz: Reduced blanking
	Composite	Video Format	-	-	-	NTSC, PAL
	Processing	Audio embedding/de-embedding	Yes	Yes	Yes	Yes
Video Delay		-	-	0 to 4.5 frames	-	
Audio Delay		-	-	0 to 4.5 frames	-	
Frame Synchronize		-	-	Yes	Yes	
Up/Down/Cross, Frame Rate*2, I/P, Aspect Ratio Conversion		-	-	-	Yes	
Control Software	VC-1 RCS for Win/Mac					
Others	USB Connector	USB Type B (Hi-Speed USB) x 1				
	Power Supply	DC 9 V (AC Adaptor)				
	Power Consumption	8 W	8 W	8 W	18 W	
	Dimensions	150 (W) x 130 (D) x 30 (H) mm, 5-15/16 (W) x 5-1/8 (D) x 1-3/16 (H) inches				
	Weight	500 g (without AC Adaptor), 1 lb 2 oz				
	Operation Temperature	+0 to +40 degrees Celsius				
	Accessories	AC Adaptor, Power Cord, Rubber Foot x 4, Owner's Manual				

(0dBu=0.775Vrms)

*1: VC-1-DL: When frame synchronizer is working, CH 3-8 of HDMI and CH 3-16 of SDI audio output are not available. VC-1-SC: CH 3-8 of HDMI and CH 3-16 of SDI audio output are not available.

*2: Frame skip/repeat type

The VC-1 series support HDCP (High-bandwidth Digital Content Protection system). When an HDCP-applied signal is input, output is possible from only the HDMI OUT connector. Output from the SDI OUT connector and AUDIO OUT connectors is stopped.

DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

VC-1 series

Awarding-winning multi-format conversion technology concentrated in a simplified mini-converter

VC-1-SH | SDI to HDMI



Conversion of video and audio signals from SDI input to HDMI output



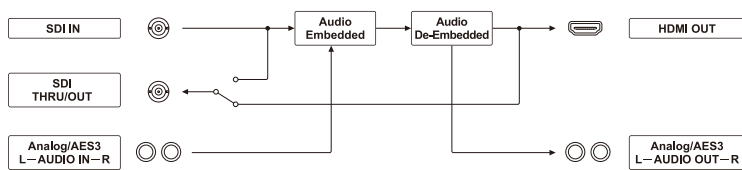
- SDI to HDMI conversion
- Lossless image conversion
- 3G (Level A and B)/HD/SD SDI
- HDCP support
- Selectable Channel for Embedded/De-Embedded Audio

* Up/Down/Cross, Frame rate, I/P, and Aspect ratio conversion are not supported.

MODE DIP SW

NO	MODE	OFF	ON
10	CONTROL	MODE SW	MEMORY
9	HDCP Encrypt	OFF	ON
8	SDI THRU/OUT	THRU	OUT
7	AUDIO OUT De-Embedded Ch Sel	1 + 2	3 + 4
6		5 + 6	7 + 8
5	SDI Audio Group	G1/G2	G3/G4
4	AUDIO IN Embedded Ch Sel	1 + 2	3 + 4
3		5 + 6	7 + 8
2	AUDIO IN Embedding	OFF	ON
1	AUDIO IN/OUT Type	Analog	AES3

Block Diagram



VC-1-HS | HDMI to SDI



Conversion of video and audio signals from HDMI input to SDI output



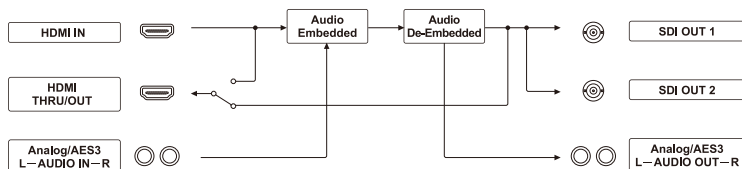
- HDMI to SDI conversion
- Lossless image conversion
- 3G (Level A and B)/HD/SD SDI
- HDCP support
- Selectable Channel for Embedded/De-Embedded Audio

* Up/Down/Cross, Frame rate, I/P, and Aspect ratio conversion are not supported.

MODE DIP SW

NO	MODE	OFF	ON
10	CONTROL	MODE SW	MEMORY
9	3G-SDI Type	Level A	Level B
8	HDMI THRU/OUT	THRU	OUT
7	AUDIO OUT De-Embedded Ch Sel	1 + 2	3 + 4
6		5 + 6	7 + 8
5	SDI Audio Group	G1/G2	G3/G4
4	AUDIO IN Embedded Ch Sel	1 + 2	3 + 4
3		5 + 6	7 + 8
2	AUDIO IN Embedding	OFF	ON
1	AUDIO IN/OUT Type	Analog	AES3

Block Diagram



DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

APPLICATIONS

VC-1-DL | FS Delay



Bi-directional Conversion of video and audio signals from HDMI to SDI or SDI to HDMI with Frame Sync and Delay



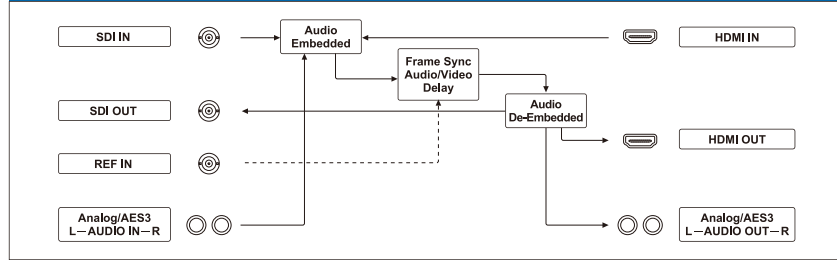
- HDMI to SDI/SDI to HDMI conversion
- Lossless image conversion
- 3G (Level A and B)/HD/SD SDI
- HDCP support
- Selectable Channel for Embedded/De-Embedded Audio
- Audio/Video Delay - up to 9 fields (4.5 frames)

* Up/Down/Cross, Frame rate, I/P, and Aspect ratio conversion are not supported.
 * When frame synchronizer is working, CH 3-8 of HDMI and CH 3-16 of SDI audio output are not available.

MODE DIP SW

NO	MODE	OFF	ON
10	CONTROL	MODE SW	MEMORY
9	3G-SDI Type	Level A	Level B
8	Input Select	SDI IN	HDMI IN
7	AUDIO OUT De-Embedded Ch Sel	1 + 2	3 + 4
6		5 + 6	7 + 8
5	SDI Audio Group	G1/G2	G3/G4
4	AUDIO IN Embedded Ch Sel	1 + 2	3 + 4
3		5 + 6	7 + 8
2	AUDIO IN Embedding	OFF	ON
1	AUDIO IN/OUT Type	Analog	AES3
Audio Delay		x0.5 Frame (x1.0 Field)	
Video Delay		x0.5 Frame (x1.0 Field)	

Block Diagram



VC-1-SC | Scan Converter



Up/Down/Cross Scan Converter to SDI/HDMI with Frame Sync

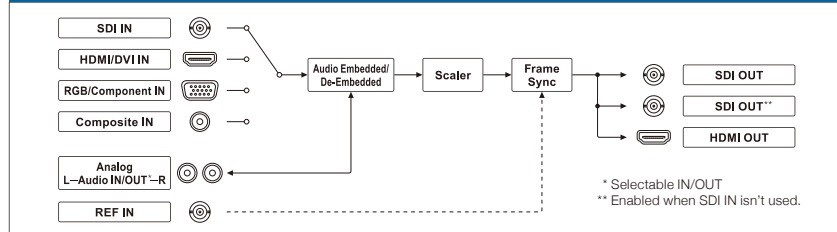


- 3G (Level A and B)/HD/SD SDI In/Out
- HDMI In/Out
- RGB/Component In
- Composite In
- HDCP support
- Built-in Frame Synchronizer and Scaler
- Up/Down/Cross, Frame Rate*, I/P, and Aspect Ratio conversion
- * Frame skip/repeat type
- Audio embedding or De-embedding
- VC-1 RCS, Dedicated PC/Mac Software App

MODE DIP SW

NO	MODE	OFF	ON
10	CONTROL	MODE SW	MEMORY
9	3G-SDI Type	Level A	Level B
8	NTSC Setup	0 IRE	7.5 IRE
7	Output Format	SD	720p
6		1080i	1080p
5	Output Frame Rate	59.94 Hz	50 Hz
4	AUDIO Embedded/De-Embedded Ch Sel	1 + 2	3 + 4
3		5 + 6	7 + 8
2	SDI Audio Group	G1/G2	G3/G4
1	Analog AUDIO	IN	OUT

Block Diagram

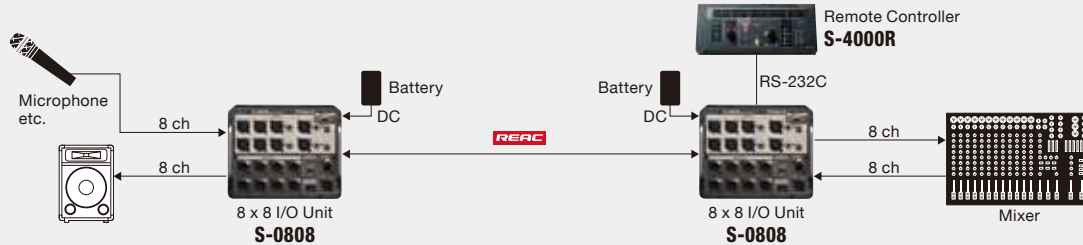


Audio Production

The V-Mixing System/Digital Snake System improves sound quality, reduces configuration complexity, and adds breakthrough capabilities.

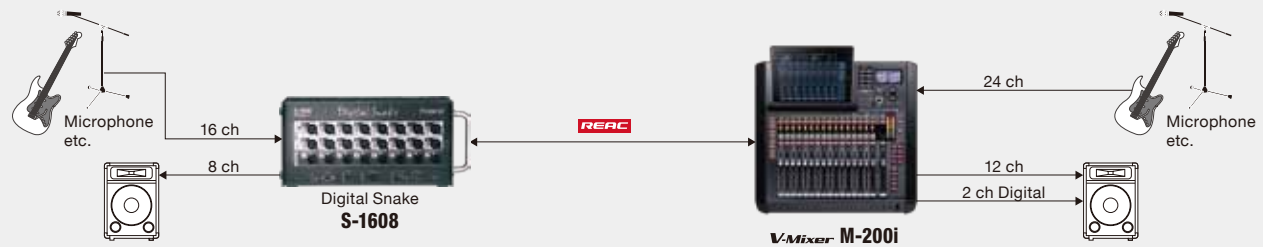
Location Sound - Digital Snake System 8 x 8 Ch with battery operation

An 8 x 8 Ch Digital Snake system enables high quality audio transmission with an easy setup. This system is ideal when AC power is not convenient or available.



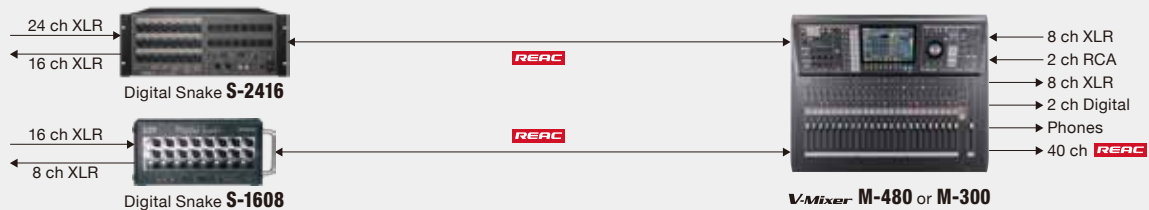
Live Event - Compact V-Mixing System – 40 Inputs/22 Outputs

16 mic/line inputs, 8 line inputs, 2 main outputs, and 10 assignable outputs are all included in the M-200i. Connect a Digital Snake to the REAC port to expand the number of inputs and outputs.



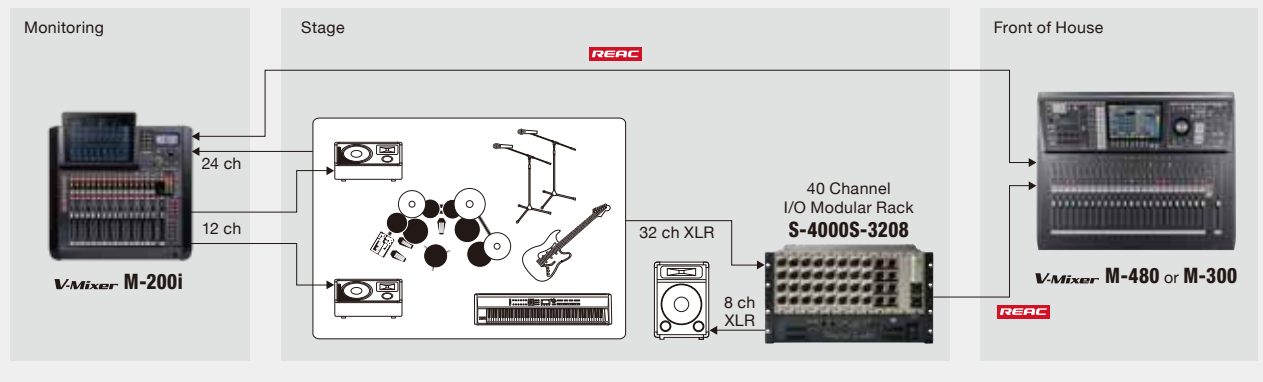
Installed Sound - Standard V-Mixing System – 50 Inputs/34 Outputs

Standard System consists of S-2416 and S-1608 Digital Snakes on stage.



Front of House, Stage I/O and Monitor V-Mixers Setup

The M-200i can be used as a stage I/O unit and a monitor console simultaneously with a V-Mixer on FOH.



DIGITAL CONSOLES

DIGITAL SNAKES

PERSONAL MIXER/
MULTI-CHANNEL RECORDER

AUDIO RECORDERS

VIDEO MIXERS/SWITCHERS

VIDEO CONVERTERS

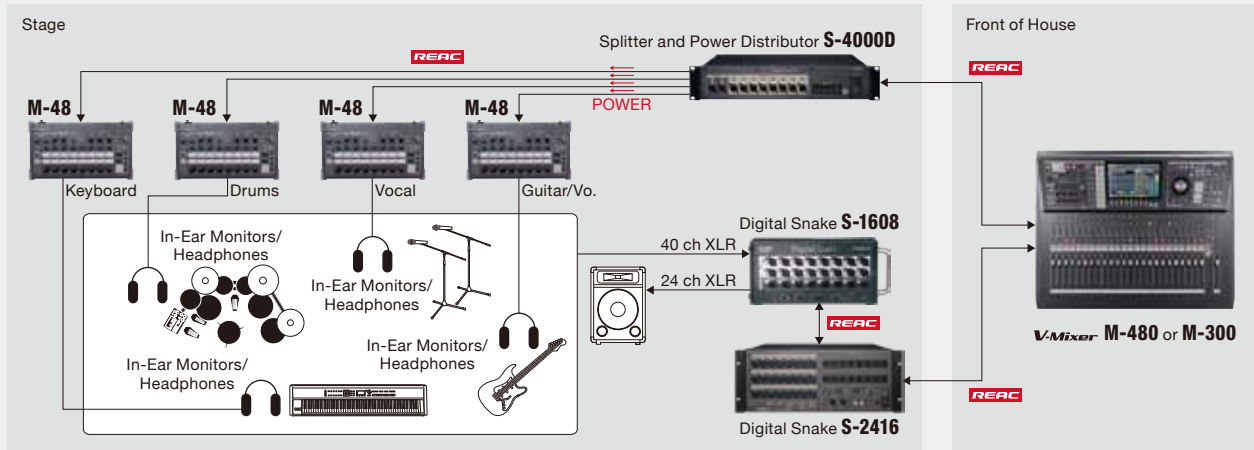
APPLICATIONS

Personal Mixing

M-48 Live Personal Mixing System offers each musician the flexibility to control exactly what they want to listen to during their performance.

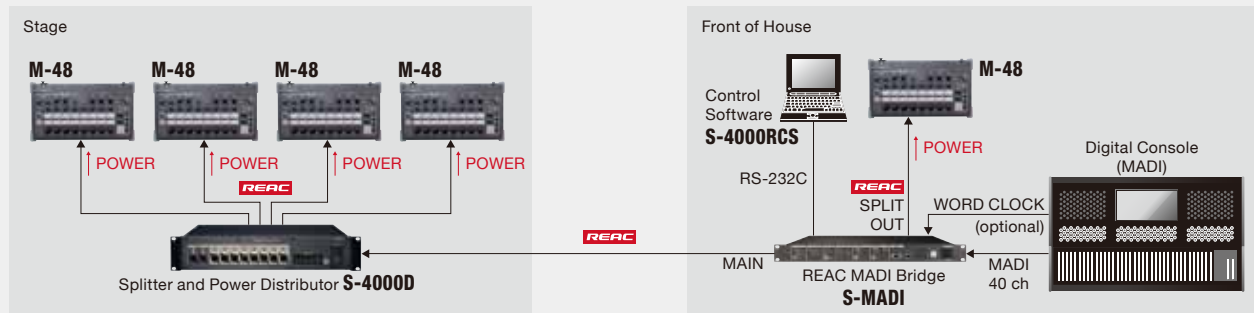
Personal Mixing Setup with V-Mixer

The M-48 enables control of up to 40 audio sources that can be managed via 16 stereo groups - assignable and unique per musician. Any V-Mixer can setup and control multiple M-48s via the S-4000D.



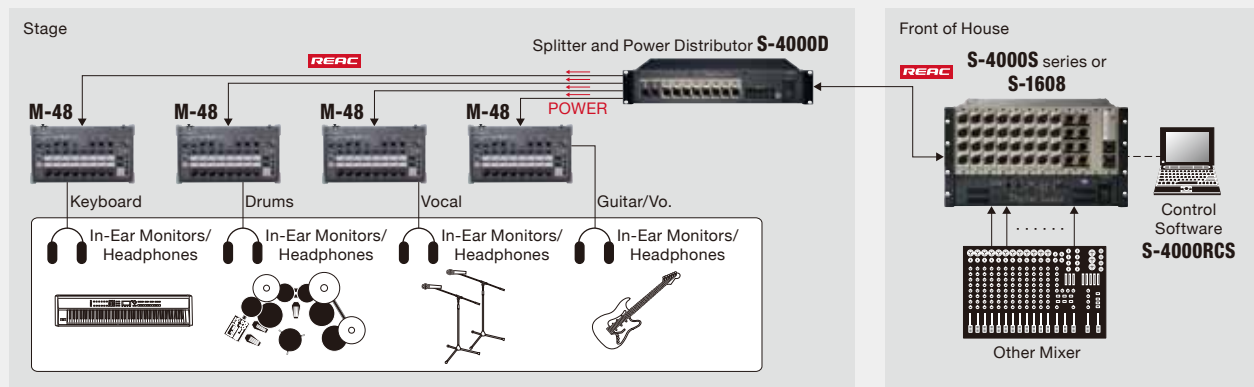
Personal Mixing Setup with Other Digital Consoles

Connect several M-48 Live Personal Mixers to a MADi equipped digital console. An additional M-48 can be connected to the SPLIT OUT port on the S-MADI that also supplies power - all over one Cat5e cable.



Personal Mixing Setup with Other Mixers

With your existing console, connect the M-48 along with the S-1608 (16 channel) or the S-4000S (40 channel) Digital Snake to utilize the complete system. The M-48 Live Digital Mixing System can be incorporated into your existing audio setup.



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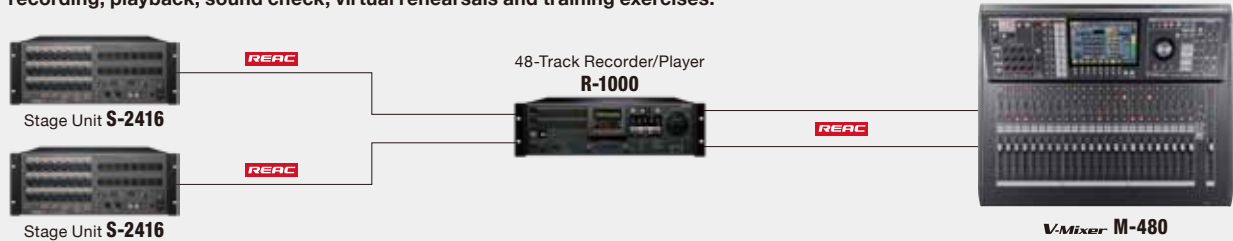
APPLICATIONS

Recording/Broadcasting

A REAC-based system enables a powerful and flexible mixing/recording environment with superb sound quality, intuitive operation and easy set-up.

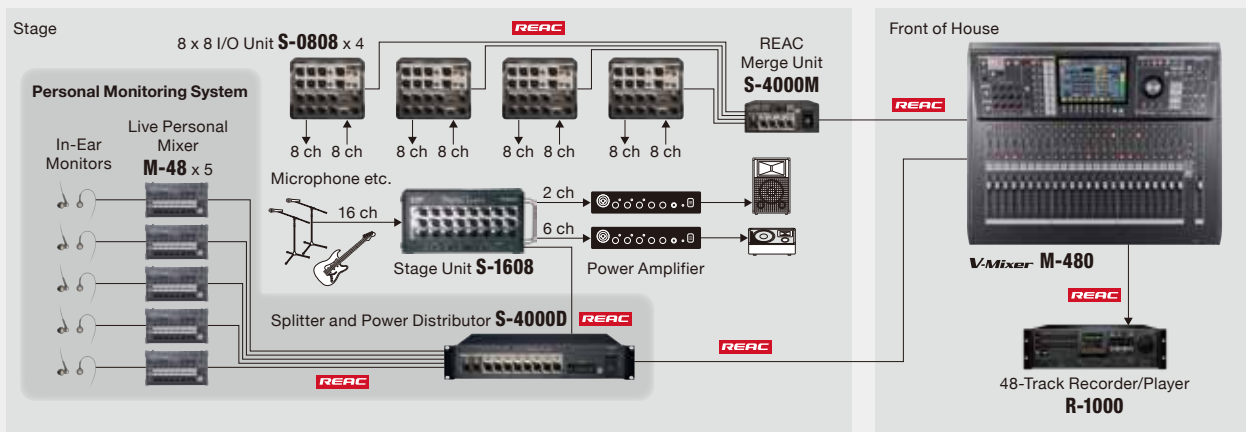
Recording, Sound Check, Backing Track and Playback System (V-Mixer)

The R-1000 can be used as a 48-channel multi-track recording and playback system for live concerts and productions. Utilizing the benefit of bi-directional audio with REAC, the R-1000 can be connected between the V-Mixer and the Digital Snake for multi-channel recording, playback, sound check, virtual rehearsals and training exercises.



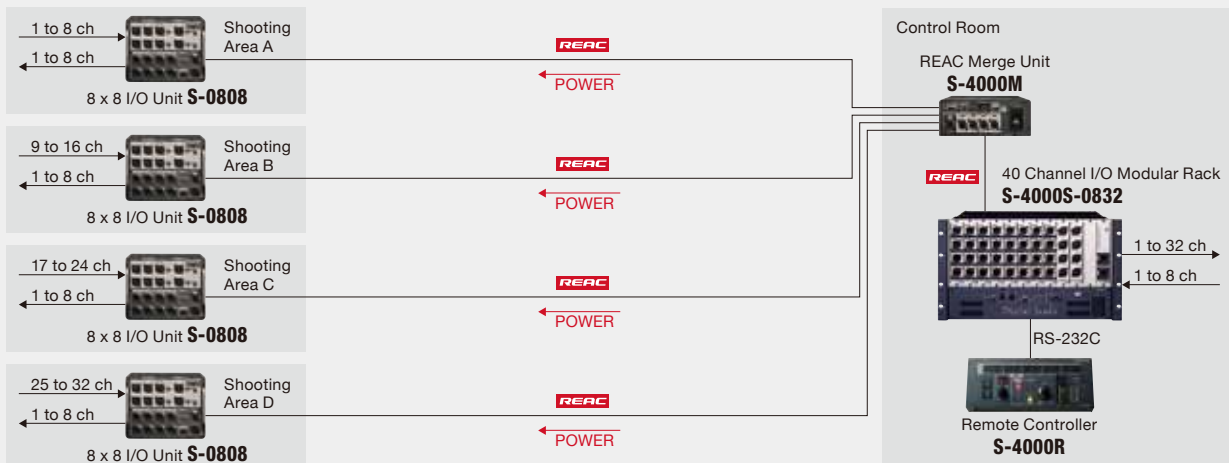
Full Digital Mixing, Monitoring and Recording Setup

This configuration enables full digital mixing, monitoring and recording. Combining the S-0808 and S-4000M offers an unparalleled setup flexibility. This live recording system uses the REAC port of the V-Mixer (SPLIT/BACKUP) connected to the REAC port of the R-1000. Up to 40 channels of 24-bit audio from the V-Mixer is recorded to the R-1000.



Broadcasting System with Multiple Locations

This system allows I/O to be placed in 4 separate locations using S-0808s. The signals from the 4 units are merged by the S-4000M as it travels to the S-4000S-0832 breakout location. Power to each of the S-0808s is supplied by the embedded power over REAC from the S-4000M.

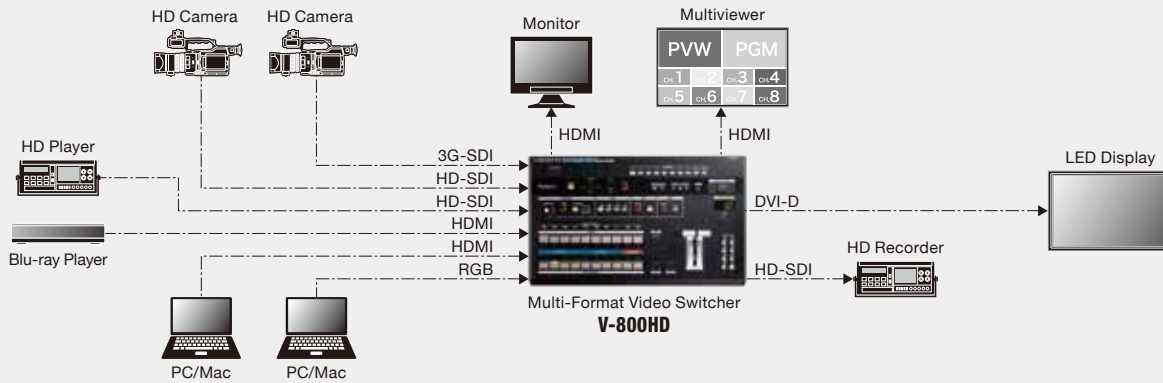


Visual Production

Roland professional video products enable powerful, high quality live video production with intuitive operation. Clear user interfaces provide reliability and easy to use mixers and playback devices.

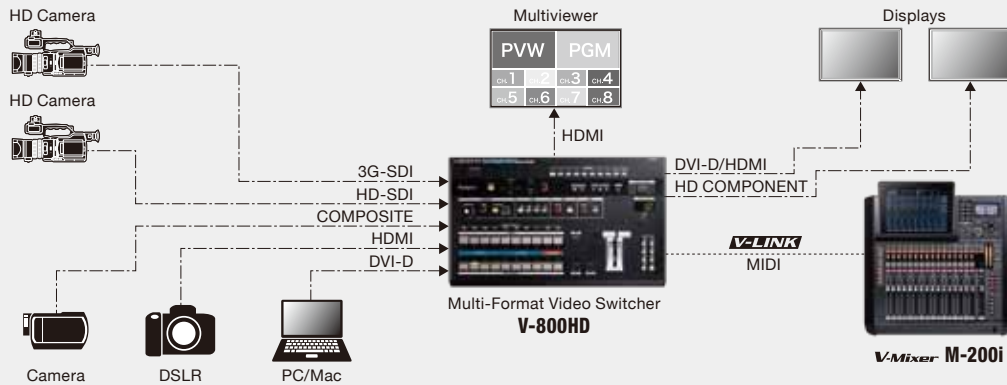
Concert/Live Stage Production

The V-800HD supports an incredible variety of system design and creative production options for live or fixed installation applications. It is adept at handling LED wall sizing challenges and is ideal for any live event or installation demanding flexibility, stability, high quality, ease of use, and professional connectivity.



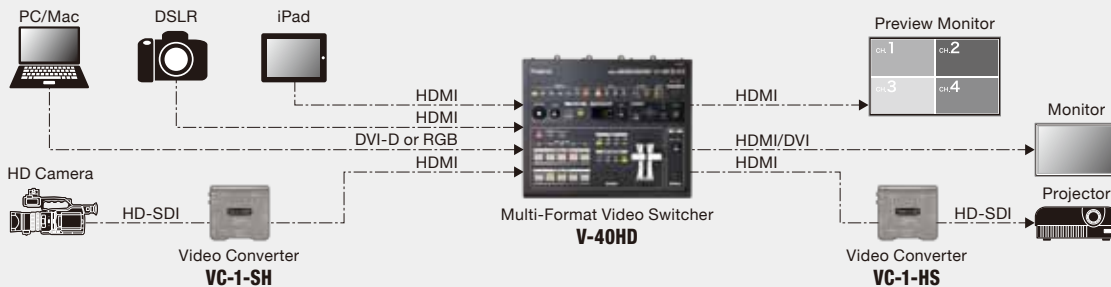
Corporate Presentation

This presentation system enables seamless video switching between different video formats - HD/SD video sources and RGB signals from PC. With V-LINK, audio faders on a Roland audio mixer follow the input selections and T-bar position of the video mixer.



Event Production

The V-40HD Live Video Switcher is ideal for any live event or installation that requires the freedom to connect a variety of sources whether they be digital or analog, computer or video format. It is particularly positioned to support configurations using popular HDMI cameras as well as computers.



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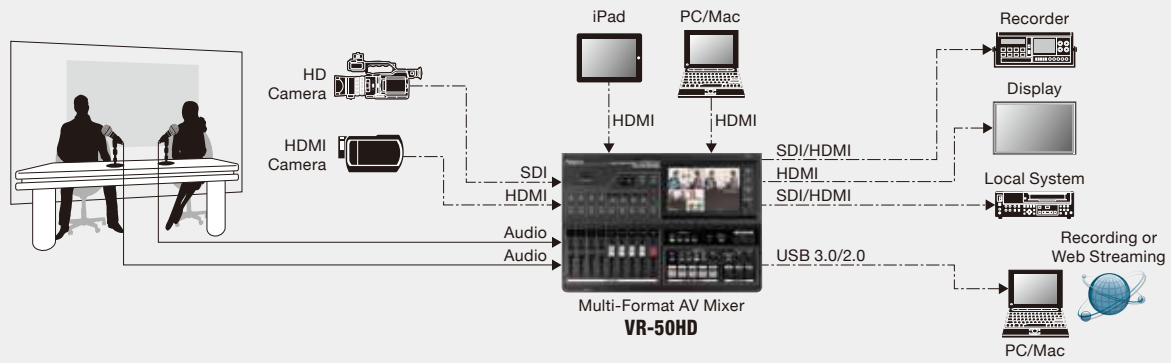
APPLICATIONS

Web Streaming and Capture/Archiving

Integrating Roland Professional Audio and Video products together enables unique and flexible solutions suitable for many applications.

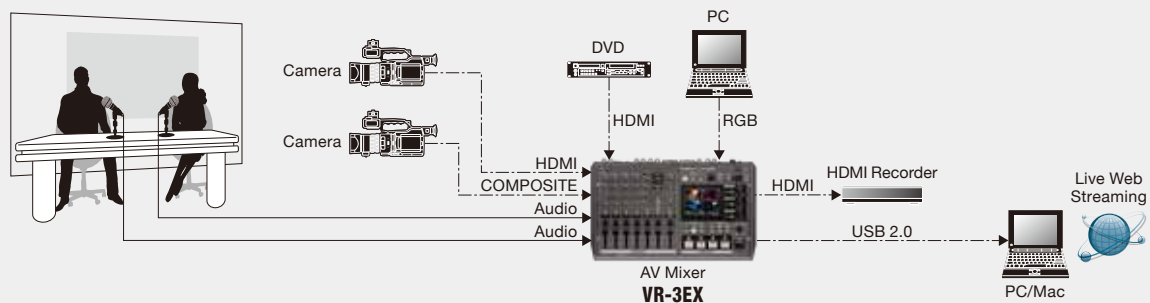
HD Live Video Production and Web Streaming

The Roland VR-50HD all-in-one AV mixer beautifully integrates an audio mixer, video switcher, multi-view touch screen and USB video/audio streaming into a stand-alone device controllable by a single operator.



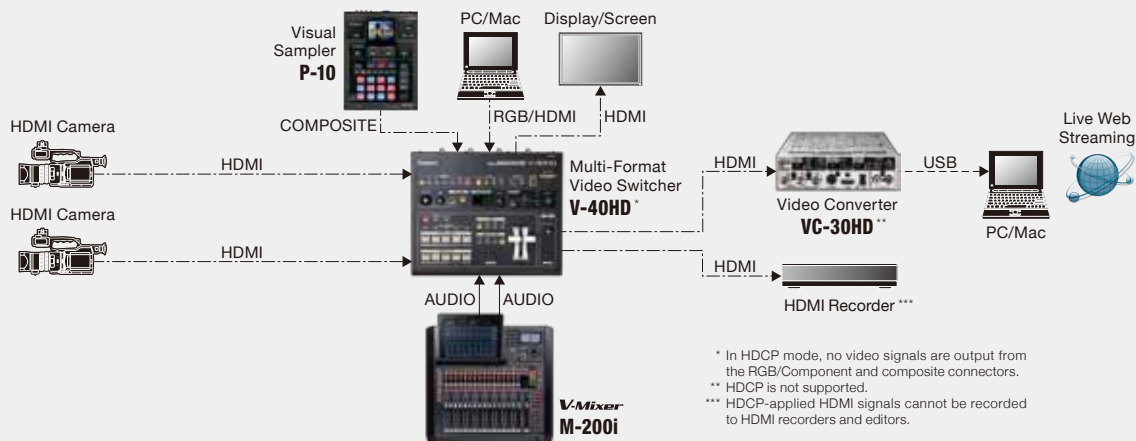
Live Video Production and Web Streaming

The Roland VR-3EX is the next generation 4-channel SD performance mixer which features HDMI inputs/outputs, USB streaming, HDCP support, built-in touch multi-viewer, an audio mixer all in a compact portable unit.



Live Stage/Church production with live broadcasting

The V-40HD Live Video Switcher is ideal for any live event or installation that requires the freedom to connect a variety of sources whether they be digital or analog, computer or video format. The V-40HD can input background music, narration, or other analog sound sources, mix and sync the video and audio, and then output the result via HDMI.



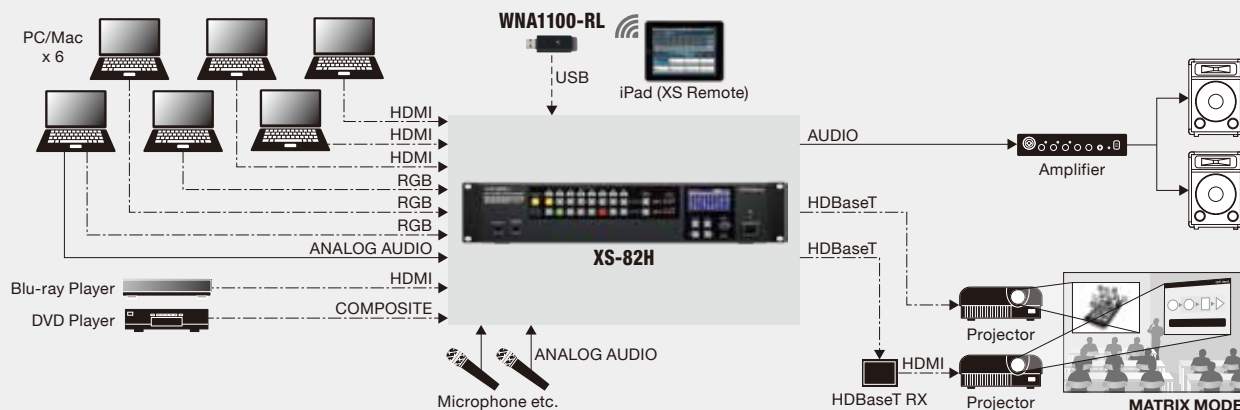
* In HDCP mode, no video signals are output from the RGB/Component and composite connectors.
 ** HDCP is not supported.
 *** HDCP-applied HDMI signals cannot be recorded to HDMI recorders and editors.

Multi-Format AV Matrix Switching

The Roland XS Series - the new line of Multi-Format Matrix Switchers designed for fixed installations requiring high-quality integrated video and audio conversion and switching.

Conference Rooms

The XS series can perform switching for up to eight computers and video devices. Systems comprising mixed digital and analog video sources in HDMI, RGB, Component, S-video, and composite can be configured. For audio as well, up to eight stereo channels of input can be switched and mixed.



Classrooms

The XS series can switch between HDCP-protected HDMI video from computers and smart phones and still-image data saved in internal memory. It can also display a school emblem while in standby with no equipment connected. Built-in compressors, EQs, and HPFs on the input lines enable adjustment of mic and line audio. Output on up to four HDBaseT lines makes it possible to transmit video to sub-displays.



Event Halls and Churches

The XS series supports component, S-video, and composite feeds in addition to HDMI and RGB, making it ideal for event halls equipped with sources in various media formats. Multi-screen productions become possible with the different video modes. The horizontal mirroring and cropping functions enable the creation of laterally symmetrical video output while still sending a wide shot to the lobby.



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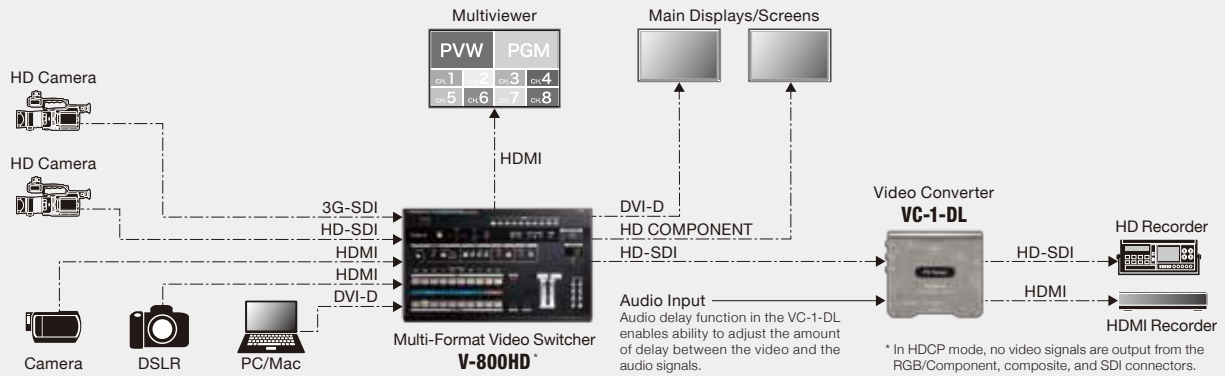
APPLICATIONS

Video Recording

Roland offers solutions that are ideal for portable, high quality and extended video recording applications.

Live Event Recording

This example illustrates affordable and reliable HD video recording of live events. The VC-1-DL combines video and audio, and converts to HDMI format.



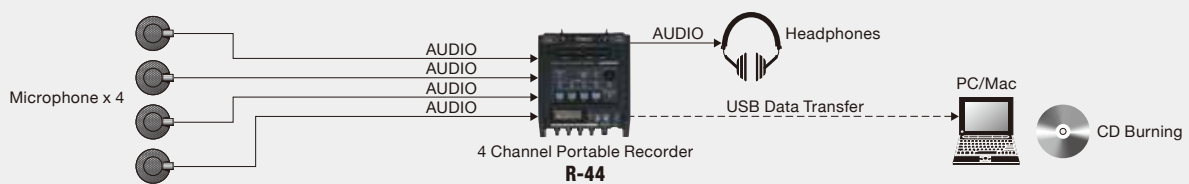
Location Sound

Beyond field applications the R-88 is nicely suited for post-production environments featuring a built-in 10-input/8-output USB audio interface for multi-channel recording. The interface function is also able to provide a backup record mechanism simultaneously recording all tracks to a DAW of choice.



Conference Recording

This example is a typical setup for recording conferences. The R-44 captures four channels of uncompressed audio from table microphones. The recorded audio can then be transferred via USB to a PC/Mac to burn CD's or transfer to flash drives for attendees.



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Product Information



Installation Cases



Promotional Videos

Link to your regional RSG location for local contact information and upcoming events.

