■Specifications

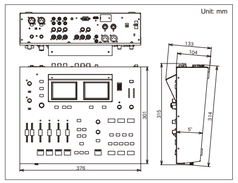
VIDEO	
Video Format	[Video] NTSC or PAL (ITU601) [PC-RGB] 640 x 480/120 Hz, 800 x 600/120 Hz, 832 x 624/75 Hz, 1024 x 768/80 Hz, 1152 x 864/80 Hz, 1152 x 870/75 Hz, 1280 x 1024/75 Hz, 1600 x 1200/60 Hz (RGB VH: positive/negative logic) * VESA DMT Version 1.0 Revision 10 conform. * The refresh rate is the maximum value of each resolution.
Video Sampling Rate	[Video] 4:2:2 (Y:B-Y:R-Y), 8 bits, 13.5 MHz
Frame Synchronizer	5 systems
Input Level and Impedance	[Video (composite)] 1.0 Vp-p, 75 ohms [S-video] Luminance signal: 1.0 Vp-p, 75 ohms Chrominance signal: 0.286 mVp-p, 75 ohms (NTSC) /0.3 mVp-p, 75 ohms (PAL) [PC-RGB] 0.7 Vp-p, 75 ohms (H, V: 5 V TTL)
Output Level and Impedance	[Video (composite)] 1.0 Vp-p, 75 ohms [S-video] Luminance signal: 1.0 Vp-p, 75 ohms Chrominance signal: 0.286 mVp-p, 75 ohms (NTSC) /0.3 mVp-p, 75 ohms (PAL)
Connectors	[Input] Video (composite): BNC type x 3, S-video: 4-pin mini DIN type x 3, PC-RGB: D-Sub 15-pin Shrink type x 1 * Inputs 1 to 3; When S-video is simultaneously input to 1 to 3, S-video takes priority [Output] Video (composite): BNC type x 2, S-video: 4-pin mini DIN type x 2 [Preview Output] Video (composite): BNC type x 1
AUDIO	
Internal Processing	Sample Rate: 24-bit/48.0 kHz
Input Level	[AUX AUDIO INPUT] +4 dBu to –62 dBu (variable) Max: +22 dBu [Channel 1/2/3] –10 dBu Max: +8 dBu [PC AUDIO] –15 dBu Max: +3 dBu
Input Impedance	[AUX AUDIO INPUT] XLR type: 4 k ohms, TRS phone type: 6 k ohms [Channel 1/2/3 and PC AUDIO] 15 k ohms
Input Connectors	[AUX AUDIO INPUT] XLR-3-31 type (balanced, phantom power), 1/4 inch TRS phone type (balanced/unbalanced) * TRS type takes priority [Channel 1/2/3] RCA phono type [PC AUDIO] Stereo miniature type
Output Level	[AUDIO OUTPUT] –10 dBu Max: +8 dBu [PHONES] 50 mW + 50 mW
Output Impedance	[AUDIO OUTPUT] XLR type: 600 ohms, TRS phone type: 1 k ohms, [PHONES] 10 ohms
Output Connectors	[AUDIO OUTPUT] XLR-3-32 type (balanced), RCA phono type [PHONES] Stereo 1/4 inch phone type

RECORDER	
Recording Format	[Format] MP4 (.mp4) Video Codec: MPEG-4 Visual Audio Codec: MP3 (MPEG-1 Audio Layer-3)
Bit Rate	2 Mbps, 4 Mbps, 6 Mbps
Media	SD Memory Card (1 to 2 GByte) SDHC Memory Card (Max 32 GByte), Class 4 or greater
File System	FAT32 (Max file size of 4 GByte)
Movie Size	[TV Size] NTSC (720 x 480) PAL (720 x 576)
Max Recording Time	Recorded file is up to 4 GByte. Bit Rate at 2 Mbps: approximately 4 hours/4 GByte Bit Rate at 4 Mbps: approximately 2 hours/4 GByte Bit Rate at 6 Mbps: approximately 80 minutes/4 GByte
Supported Playback Format	[Video File Format] .MP4, .AVI Video Codec: MPEG-4 Visual, Audio Codec: MP3 (MPEG-1 Audio Layer-3) [Audio File Format] .WAV, .MP3 [Picture File Format] .BMP, .JPG
OTHER CONNECTORS	
HDMI Connector	[Resolution] Setup to NTSC: 480p Setup to PAL: 576p OUTPUT or PREVIEW OUTPUT
USB A Type Connector	For USB Storage device, For USB Video Stream output (Support UVC/UAC) USB 2.0 High-Speed
Remote Control Interfaces	MIDI IN: 5-pin DIN type x 1 jack MIDI OUT/THRU: 5-pin DIN type x 1 jack
OTHERS	
Transition Effects	Switcher: Cut, Mix, Hard edge wipe, Soft edge wipe DSK: Cut, Mix
Video Effects	Luminance key, Chroma key, Picture-in-picture, Split
Power Supply	DC 12 V (AC Adaptor: PSB-7U)
Current Draw	3 A (AC Adaptor: PSB-7U)
Dimensions	376 (W) x 314 (D) x 133 (H) mm, 14-13/16 (W) x 12-3/8 (D) x 5-1/4 (H) inches
Weight	4.3 kg, 9 lbs 8 oz (without AC Adaptor)

*0 dBu=0.775 Vrms

■Rear Panel

■Dimensions



Roland Systems Group Roland Systems Group, a member of the worldwide group of Roland companies, is dedicated to the support of audio and video professionals demanding excellence in both performance and system design. Through the development and support of video and audio products, we endeavor to improve workflow and maximize creative possibilities.

V-LINK Using V-LINK, musicians can "play" video from their electronic instrument when used with video products. With V-LINK, musicians have a powerful interface for realtime audio and video integration.

Ensuring high quality while protecting the environment: Roland is ISO9001 and ISO14001 certified
At Roland, several group companies have obtained ISO9001 certification. In addition, in January 1999, Roland also received ISO14001 international environmental management system certification. We're actively seeking ways to maintain harmony with the environment. (ISO=International Standardization Organization: an organization for the promotion of standardization of international units and terms. They provide different categories of certification: ISO9001 Series certification is a product quality certification for products that undergo a certain level of quality control from the design stage to the after service stage; ISO14001 Series certification is for environment-related standards. Each member of the Roland Group is striving to obtain certification.)

Roland
WE DESIGN THE FUTURE
www.rolandsystemsgroup.net

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Roland

VR-5 AV MIXER & RECORDER

USB VIDEO CLASS | USB AUDIO CLASS | V-LINK | SD HC

All-in-One Studio for a Streaming Era

Effortless live video production, recording and streaming with the VR-5

1 Connect cameras

Composite or S-Video sources including DVD players.

RCA-BNC Adaptors included

2 Connect microphones

Any type of mic including condensers.

3 Connect PC/Mac, and Projector or Display

Built-in scan converter to accept RGB sources.
HDMI output to projector for live productions.

4 Stream online! + Capture live

Via USB, the VR-5 appears like a web cam enabling live broadcasting using various streaming services. Simultaneously record to SD memory card.

Simple online streaming combining cameras, microphones, PC, and video playback.

Use live streaming services such as "Ustream" and "Stickam", as well as any video call service such as "Skype" and "iChat".

VR-5 AV MIXER & RECORDER
USB VIDEO CLASS | USB AUDIO CLASS | V-LINK | SD HC

A world of power in a compact unit
All controllable by a single operator

MONITOR
Intuitive operation with Dual Touch Monitors

The Program and Preview monitors are operated by touching the screen such as when selecting video sources and PinP position changes. The sound from the sources can be monitored using headphones.

■Select the input source by touching the quad-view layout display.

■Menu parameters are easily accessed and set.

USB Port for Live Streaming
Connect to a PC via USB

USB VIDEO CLASS
USB AUDIO CLASS

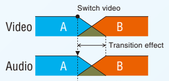
*The world's first USB Video/Audio Class supported AV mixer. Simply connect like a Web camera to enable easy live streaming.

*Our research at time of printing

AUDIO MIXER
Full digital audio mixing

Two mono and five stereo audio inputs (total of 12Ch) are mixed with full digital audio processing. This results in a high quality sound with effects such as "Noise Gate" for reducing background noise, and a "Mastering Tool" to ensure consistent output volume. The "Audio Follow" function enables the audio to fade from one source to another as the video source changes.

■Audio Follow function



VIDEO/AUDIO OUTPUT
Output controls

VIDEO OUT and AUDIO OUT knobs enable independent video and audio fade-in/out levels. Press the "USER LOGO" button to display a stored image such as company logo, show name or conference title.

RECORDER
Record to SD memory card

The built-in recorder can record the final output of the VR-5 to an SD memory card. Up to four hours of recording is possible when using a 4GB card. The MPEG-4 capture format enables easy sharing of recorded video. The VR-5 can also playback video, still image, and audio files from SD card.

■Supports SD and SDHC memory cards.

Note: Video can not be played back when recording.

VR-5 Image Converter (Win/Mac)

Software for preparing data to be played back from the VR-5 is available from the Roland Systems Group website.

Supported Formats:
AVI, MPG, MOV, WMV, MP4, DV

VIDEO/PC SELECT
Video switching with a single touch of a button

The dedicated video buttons can be used for selecting a video source - as an alternative to using the touch screen.

VIDEO EFFECTS
Simple video compositing

In addition to Transition effects, Picture in Picture (PinP) and SPLIT are also available. Simply select an effect and the respective video sources.

■Transition between sources with various switching effects

Mix Wipe

■SPLIT displays two video sources simultaneously

■PinP inlays a small window in the main source

PC INPUT
Audio and video from a PC

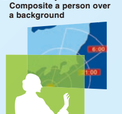
Connect a PC to the RGB connector for various applications such as presentation, slide shows and movie playback.

■RGB input and stereo-mini Audio input

KEYER
Control transparency with a single knob

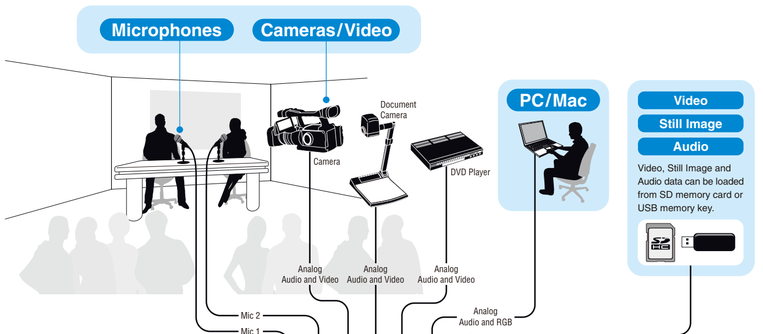
Advanced video composition such as placing a person or text over a background video source can be fine-tuned using a single knob.

■Chroma Key
Composite a person over a background



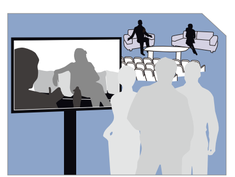
■Luminance Key
Composite text over a background

Everything you need in a single device



Live Production

Live stage production using a venue projector or display.



Live Recording

Record the visual and audio data from the VR-5 to an SD memory card.

Live Streaming

Stream the event or program (visuals and audio) from the VR-5 to the Internet by connecting a PC via USB and linking to a live streaming service.