

# Features added to VC-300 HD/VC-200HD version 2.0

The following features were added to VC-300 HD/VC-200HD version 2.0.

## New Supported Formats

In addition to formats previously supported, ver2.0 now Supports added for the 24p, 23.98p, 25p, 30p, 60i, and 60p frame rates. See "VC-300 HD/VC-200HD version 2.0 Input/Output Support Chart" (p. 4) for a complete list of supported formats.

## Processor

- Gamma Correction Feature (p. 3)  
Gamma correction can now be performed on the output image. It can be used to adjust contrast or texture.
- ON/OFF toggling for the I-P conversion feature (p. 3)
- Improved image quality for up-conversion, down-conversion, and cross-conversion

## Output Image

- Feature to add copy protection (CGMS-D) to i.LINK output signals (p. 3)  
A (CGMS-D) signal can be added to the signal output from the i.LINK connector and then output. When the above signal is received and recorded by a video device that supports CGMS-D, copy restrictions as set with the VC-300HD/VC-200HD are applied.
- Pass-through output of SDI input (p. 3) **VC-300HD**  
Provides a loop-thru of SDI Input to the SDI Output when processing SDI Input video.

## Miscellaneous

- Remote Control Feature (p. 2)  
The VC-300HD/VC-200HD menu settings can be changed from an external control device, such as a PC, via RS-422A.
- User Preset Feature (p. 1–2)  
Since user presets can remember up to three sets of menu settings, this feature is ideal when switching between multiple settings.  
\* VC-300HD-specific features are marked with **VC-300HD** in the title.

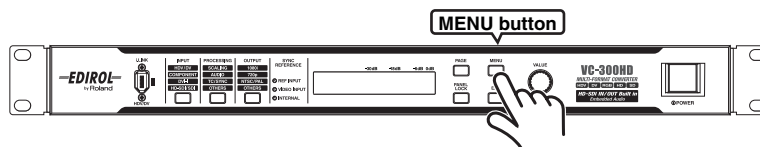
## The User Preset Feature

VC-300 HD/VC-200HD version 2.0 allows for the storage of up to three sets of menu settings as user presets. Complex settings can be called up instantly if they are saved in a user preset, so this feature is helpful when switching between a variety of settings.

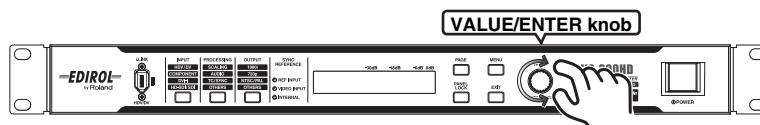
### Saving to the User Preset

Use the following procedure to save a user preset.

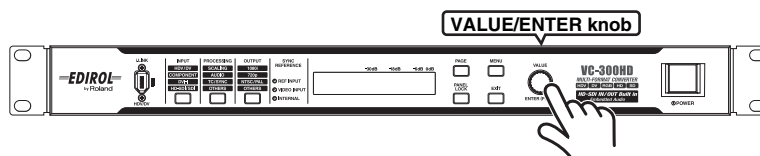
1. Press the MENU button.



2. Use the VALUE/ENTER knob to select "950: Save User Preset."



3. Press the VALUE/ENTER knob.



4. Use the VALUE/ENTER knob to select the user preset to save to.

5. Press the VALUE/ENTER knob.

The current menu settings are saved to the user preset selected in 4.

## Loading User Presets

User presets are loaded from the Status screen.

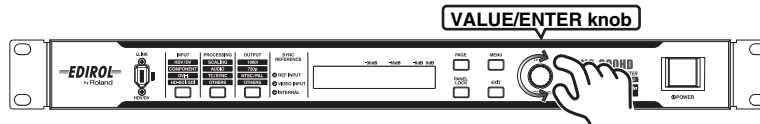
**1. Press the PAGE button until the user preset is shown on the display.**

\* Versions prior to VC-300 HD/VC-200HD version 2.0 do not display user presets on the Status screen.



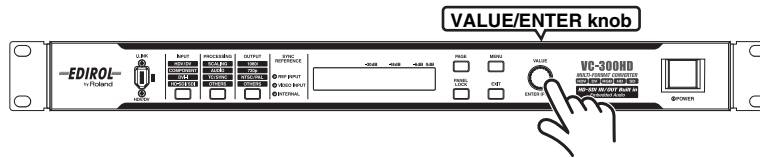
**2. Use the VALUE/ENTER knob to select the user preset.**

\* The factory defaults are loaded when Factory Load is selected.



**3. Press the VALUE/ENTER knob.**

The user preset selected in 2.(2) is loaded.



## Remote Control Feature

The CONTROL port on the rear panel can be used from VC-300HD/VC-200HD version 2.0. When the CONTROL port is used, the VC-300HD/VC-200HD menu settings can be changed from an external control device, such as a PC, so remote control is possible.

### CONTROL Port Specifications

- RS-422A Compliant
- Connector Type: FD-sub 9pin (Female)
- Transmission Method: Asynchronous full duplex
- Transmission Speed: 38400 bps
- Parity: Odd
- Data Length: 8 bit
- Stop Bit Length: 1 bit
- Coding Scheme: ASCII
- Flow Control: XON/XOFF

Pin Number	Signal Name	Pin Connections
1	GND	
2	TxD-	
3	RxD+	
4	GND	
5	NC	
6	GND	
7	TxD+	
8	RxD-	
9	GND	

### Setup Procedures

Perform setup of the control device and VC-300HD/VC-200HD using the following procedure.

**1. Connect the VC-300HD/VC-200HD and control device with a cable.**

In case of remote controlling from computer, please prepare a conversion cable of RS-232C to RS-422A which is ready for 9 Pins Remote control protocol.

\*Please check that the RS-422A plug of the conversion cable is compatible with above control protocol.

**2. Turn power on to the control device.**

**3. Set the transmission conditions on the control device.**

**4. Turn on power to the VC-300HD/VC-200HD.**

\* For details on RA-422A commands, please refer to the "Command Reference" that can be downloaded from the Roland website.

### Setup from the network

Software is available that can be used to control the VC-300HD/VC-200HD remotely using a web browser via a LAN connection. Please download the software from the Roland website.

You can download the software at <http://www.roland.co.jp/solution>.

\* A Lantronix, Inc. External Device Server UDS1100 and a RS-422A conversion cable are required to use this software.

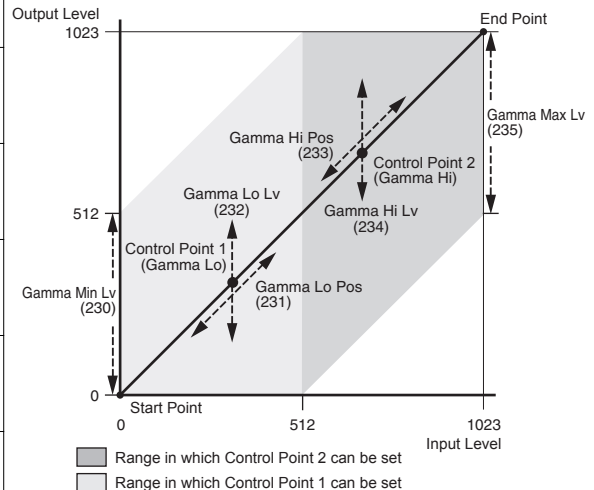
## Additional Menu Items

- Added Input/Output Formats
- Gamma Correction Feature
- Activity Detection Feature during IP conversion
- Feature to add copy guard (CGMS-D) to i.LINK output
- Pass-through output of SDI input
- Bulk-dump function

Because the above features were added, items were added to, or changed in the menu. The changes are listed below.

Item Number	Item Name	Description and Setting Values
110	i.LINK IN (Added to setting values, and name of item was changed)	[Auto], DV480/60i, DV576/50i, HDV720/60P, HDV720/50P, HDV1080/60i, HDV1080/50i, DV480/24P, HDV480/60P, HDV576/50P, HDV720/30P, HDV720/25P, HDV720/24P, HDV1080/30P, HDV1080/25P, HDV1080/24P
120	COMPONENT IN (Added to setting values)	[Auto], 480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/23.98PsF, 720/60p, 1080/60i, 1080/24PsF
140	SDI IN [VC-300HD] (Added to setting values)	[Auto], 480/59.94i, 576/50i, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 480/23pOv59i, 720/29pOv59p, 720/29.97p, 720/25pOv50p, 720/25p, 720/23pOv59p, 720/23.98p, 1080/29.97PsF, 1080/29.97p, 1080/25PsF, 1080/25p, 1080/23pOv59i, 1080/23.98PsF, 1080/23.98p, 720/60p, 720/30pOv60p, 720/30p, 720/24pOv60p, 720/24p, 1080/60i, 1080/30PsF, 1080/30p, 1080/24PsF, 1080/24pOv60i, 1080/24p
225	Motion Detection	When converting, images with activity are converted smoothly. [Off]: During I/P conversion, images with activity are not converted smoothly. [On]: During I/P conversion, images with activity are converted smoothly.
230	Gamma Min Lvl	Sets the start point (minimum value) of the Gamma curve. [0] - 512
231	Gamma Lo Pos	Sets the input level for the Gamma curve control point 1 (Gamma Lo). 0 - [256] - 512
232	Gamma Lo Lv	Sets the output level for the Gamma curve control point 1 (Gamma Lo). -512 - [0] - +511
233	Gamma Hi Pos	Sets the input level for the Gamma curve control point 2 (Gamma Hi). 512 - [768] - 1023
234	Gamma Hi Lv	Sets the output level for the Gamma curve control point 2 (Gamma Hi). -512 - [0] - +511
235	Gamma Max Lv	Sets the end point of the Gamma curve. 512 - [1023]
300	Video Out Format (Added to setting values)	[Auto], 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p, 480/59.94p, 576/50p, 480/59.94i, 576/50i, 1080/29.97PsF, 1080/25PsF, 1080/23.98PsF, 1080/23pOv59i, 720/29pOv59p, 720/25pOv50p, 720/23pOv59p, 1080/60p, 1080/60i, 1080/30PsF, 1080/24PsF, 1080/24pOv60i, 720/60p, 720/30pOv60p, 720/24pOv60p
312	HDV/DV CGMS Lv	Sets the HDV/DV output CGMS level. [Off]: CGMS level is not set. Copy Free: CGMS level is set to copy free. Copy Once: CGMS level is set to copy once. Not Copy: CGMS level is set to prohibit copy.
390	Test Pattern (Added to setting values)	The test pattern is displayed. [Off]: The test pattern is not displayed. 75%: Displays a 75% color bar. 100%: Displays a 100% color bar. Hatch: Displays a crosshatch. Ramp: Displays a ramp.
480	SDI Thru [VC-300HD]	The SDI signal input to the HD-SDI IN connector can be passed-through and output from the HD-SDI OUT connector. [Off]: No pass-through output. [On]: Pass-through output is provided.
950	Save User Preset	Saves user presets. When the VALUE knob is pressed after selecting the Preset No., the preset settings are saved to the selected Preset No.
990	Bulk Dump	Bulk transfers the current settings from the RS-422 connector. Bulk transfer starts when the VALUE knob is pressed.

Menu numbers 230 – 235 are related as follows.



\* The values enclosed in a [box] are the factory defaults.

# VC-300 HD/VC-200HD version 2.0 Input/Output Support Chart

## Input Format

SDI <b>VC-300HD</b>	i.LINK	COMPONENT
1080/60i	HDV1080/60i *2 *3	1080/60i
1080/59.94i	HDV1080/50i *2 *3	1080/59.94i
1080/50i	HDV1080/30P *2 *3	1080/50i
1080/30PsF	HDV1080/25P *2	1080/24PsF
1080/30p	HDV1080/24P *2 *3	1080/23.98PsF
1080/29.97PsF	HDV720/60P *4	720/60p
1080/29.97p	HDV720/50P *4	720/59.94p
1080/25PsF	HDV720/30P *4	720/50p
1080/25p	HDV720/25P *4	576/50p
1080/24PsF	HDV720/24P *4	576/50i
1080/24p (Over 60i)	HDV576/50P *4	480/59.94p
1080/24p	HDV480/60P *4	480/59.94i
1080/23.98p (Over 59.94i)	DV576/50i	
1080/23.98PsF	DV480/60i	
1080/23.98p	DV480/24P	
720/60p		
720/59.94p		
720/50p		
720/30p (Over 60p)		
720/30p		
720/29p (Over 59.94p)		
720/29.97p		
720/25p (Over 50p)		
720/25p		
720/24p (Over 60p)		
720/24p		
720/23.98p (Over 59p)		
720/23.98p		
576/50i		
480/59.94i		
480/23p (Over 59.94i)		

\* Wherever "AAA Over BBB" appears for an item in the table it means that an image with an AAA frame rate is pulled down to an image with a BBB frame rate.  
 \* DVI-A supported formats conform to VC-300 HD/VC-200HD version 1.0 and have been omitted here.

## Output Format (combination of output format settings and the output signal)

300:Video Out Format	SDI <b>VC-300HD</b>	i.LINK	COMPONENT/DVI-D
1080/60p	-	-	1080/60p
1080/60i	1080/60i	-	1080/60i
1080/59.94p	-	-	1080/59.94p
1080/59.94i	1080/59.94i	HDV 1080/60 *2 *3	1080/59.94i
1080/50p	-	-	1080/50p
1080/50i	1080/50i	HDV 1080/50i *2 *3	1080/50i
1080/30PsF	1080/30PsF *1	-	1080/30PsF
1080/29.97PsF	1080/29.97PsF *1	HDV 1080/30 *2	1080/29.97PsF
1080/25PsF	1080/25PsF *1	HDV 1080/25 *2	1080/25PsF
1080/24PsF	1080/24PsF	-	1080/24PsF
1080/24pOv60i	1080/24p (Over 60i) *1	-	1080/24p (Over 60i)
1080/23.98PsF	1080/23.98PsF	HDV 1080/24F *3 HDV 1080/24P *2	1080/23.98PsF
1080/23pOv59i	1080/23.98p (Over 59.94i) *1	HDV 1080/24A *2	1080/23.98p (Over 59.94i)
720/60p	720/60p	-	720/60p
720/59.94p	720/59.94p	HDV 720/60P *4	720/59.94p
720/50p	720/50p	HDV 720/50P *4	720/50p
720/30pOv60p	720/30p (Over 60p) *1	-	720/30p (Over 60p)
720/29pOv59p	720/29.97p (Over 59.94p) *1	HDV 720/30P *4	720/29.97p (Over 59.94p)
720/25pOv50p	720/25p (Over 50p) *1	HDV 720/25P *4	720/25p (Over 50p)
720/24pOv60p	720/24p (Over 60p) *1	-	720/24p (Over 60p)
720/23pOv59p	720/23.98p (Over 59.94p) *1	HDV 720/24P *4	720/23.98p (Over 59.94p)
576/50p	-	HDV 576/50P *4	576/50p
480/59.94p	-	HDV 480/60P *4	480/59.94p
576/50i	576/50i	DV 576/50i (PAL)	576/50i
480/59.94i	480/59.94i	DV 480/60i (NTSC)	480/59.54i

\*1 Items with a valid frame flag code appended.  
 When this output format is set, the user bit cannot be used.  
 \*2 Format used by the HDV Devices from Sony Corporation.  
 \*3 Format used by the HDV Devices from Canon, Inc.  
 \*4 Format used by the HDV Devices from Victor Company of Japan, Limited. (JVC)  
 \* Items marked with "-" are not output.  
 \* When 300: Video Out Format is set to Auto and the input image has a refresh rate of 30p, 29.97p, 25p, 24p, or 23.98p, the output image is as follows:  
 1080: All output is PsF (Progressive segmented Frame).  
 720p: Outputs in Pull Down.  
 480/24p: Outputs in 480/59.94i.

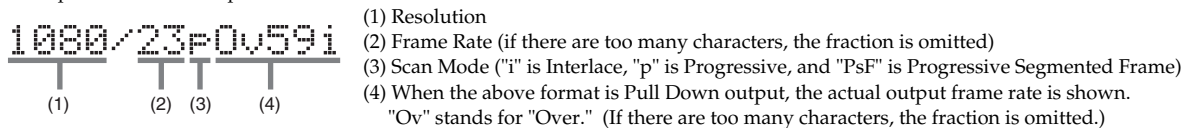
### Restrictions related to 24P (23.98 and 24.00) support

- Operates correctly only when both input and output frame rates are 23.98 or when both input and output frame rates are 24.00.
- When the output frame rate is 23.98 or 24.00, REF INPUT cannot be used. (Does not lock to REF INPUT)
- Of the images input from SDI, the Pull Down images are appended with a valid frame flag code. The output signal is unlocked temporarily at the locations where this valid frame flag code is discontinuous.
- When set to PsF output, 210: Out Zoom is fixed to 100%.
- VC-300HD/VC-200HD cannot properly convert non-Pull Down images to Pull Down images. When set to convert to and output Pull Down images, images with only valid frame flag codes assigned are output with HD-SDI output. note: cannot understand this.

### Input/Output Format Notation on the Display

The VC-300HD/VC-200HD displays input/output formats as shown below, following the limitations of the Display.

Example: For 1080/23.98p Over 59.94i



### About the illumination of the SYNC REFERENCE indicator when selecting input

When the "260" Sync Source" menu setting is either "REF" or "Video Input," the SYNC REFERENCE indicator lights or blinks as follows according to the synchronizing signal lock status.

- Blinking (slow): The selected synchronizing signal cannot be locked
- Blinking (fast): The selected synchronizing signal has been sensed and is currently being locked
- Lit: The image has been locked to the selected synchronizing signal

