

4K HDR MULTI-FORMAT VIDEO SWITCHER

V-600UHD

Startup Guide



Checking the Included Items

Check that all of the included items are present. If any of the included items are missing, contact your dealer.

- ☐ V-600UHD unit
- ☐ Rack mount angle x 2
- \square Power cord
- ☐ Startup Guide (this document)

PDF Manual (download from the Web)

Details on operations and menu lists are provided in "Reference Manual" (PDF).

Downloading

- Enter the following URL on your computer. https://proav.roland.com/manuals/
- 2. Choose "V-600UHD" as the product name.



Before using the unit, ensure that its system program is at the most recent version.

For information on available upgrades for the system program, see the Roland website (https://proav.roland.com/global/support/).

You can check the system program version by Pressing the [MENU] button → "System" → "Version."

Before using this unit, carefully read "IMPORTANT SAFETY INSTRUCTIONS" (inside front cover), "USING THE UNIT SAFELY" (p. 2), and "IMPORTANT NOTES" (p. 3). After reading, keep the document(s) where it will be available for immediate reference.

USING THE UNIT SAFELY

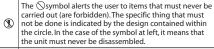
INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠CAUTION Notices

Used for instructions intended to alert the **⚠WARNING** user to the risk of death or severe injury should the unit be used improperly. Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. **⚠** CAUTION * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals

About the Symbols

	The \(\times\) symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
--	---



The symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

WARNING

Make sure that the power cord is grounded

Connect mains plug of this model to a mains socket outlet with a protective earthing connection.

or pets.

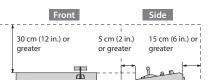


To completely turn off power to the unit, pull out the plug from the outlet

Even with the power switch turned off, this unit is not completely separated from its main source of power. When the power needs to be completely turned off, turn off the power switch on the unit, then pull out the plug from the outlet. For this reason, the outlet into which you choose to connect the power cord's plug should be one that is within easy reach and readily accessible.

Secure a sufficient amount of space at the setup location Since this unit normally emits a slight amount of heat

make sure to secure sufficient space around it, as shown below.



20 cm (8 in.) or greater

20 cm (8 in.) or greater

Do not disassemble or modify by yourself Do not carry out anything unless you are instructed to do so in the owner's manual. Otherwise, you risk causing malfunction.

Do not repair or replace parts by yourself



Be sure to contact your dealer, a Roland service center, or an official Roland dealer.



For a list of Roland service centers and official Roland dealers, refer to the Roland website.

Do not use or store in the following types of locations

- · Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
- · Damp (e.g., baths, washrooms, on wet floors); or are
- · Exposed to steam or smoke; or are
- · Subject to salt exposure; or are
- · Exposed to rain; or are
- Dusty or sandy; or are
- · Subject to high levels of vibration and shakiness; or are
- Placed in a poorly ventilated location.

Do not place in an unstable location

Otherwise, you risk injury as the result of the unit toppling over or dropping down.



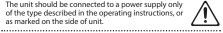
Use only the supplied power cord

Use only the attached power cord. Also, the supplied power cord must not be used with any other device.



Connect the power cord to an outlet of the correct

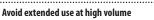
The unit should be connected to a power supply only of the type described in the operating instructions, or as marked on the side of unit.



№ WARNING

Do not bend the power cord or place heavy objects on it

Otherwise, fire or electric shock may result.



Use of the unit at high volume for extended periods of time may cause hearing loss. If you ever experience any hearing loss or ringing in the ears, you should immediately stop using the unit and consult a specialized physician.



Do not allow foreign objects or liquids to enter unit; never place containers with liquid on unit

Do not place containers containing liquid (e.g., flower vases) on this product. Never allow foreign objects (e.g., flammable objects, coins, wires) or liquids (e.g., water or juice) to enter this product. Doing so cause short circuits, faulty operation, or other malfunctions.



Turn off the unit if an abnormality or malfunction occurs

In the following cases, immediately turn off the power, remove the power cord from the outlet, and contact your dealer, a Roland service center, or an official Roland dealer for service.



- · The power cord has been damaged; or
- · If smoke or unusual odor occurs: or
- · Objects have fallen into, or liquid has been spilled onto the
- The unit has been exposed to rain (or otherwise has become
- The unit does not appear to operate normally or exhibits a marked change in performance.

For a list of Roland service centers and official Roland dealers, refer to the Roland website.

Be cautious to protect children from injury

Always make sure that an adult is on hand to provide supervision and guidance when using the unit in places where children are present, or when a child will be using the unit.



-----Do not drop or subject to strong impact

Otherwise, you risk causing damage or malfunction



Do not share an outlet with an unreasonable number of

Otherwise, you risk overheating or fire.



Before using the unit in overseas, consult with your retailer, the nearest Roland service center, or an authorized Roland distributor.





Don't allow the unit's ventilation openings to be blocked by a newspaper, tablecloth, curtains, or similar



Don't place burning objects on the unit

Don't place any burning object (such as a candle) on the unit.

•••••



WARNING

Be aware of weather conditions

Use the apparatus in moderate climates.



CAUTION

When disconnecting the power cord, grasp it by the plug

To prevent conductor damage, always grasp the powe cord by its plug when disconnecting it.



Periodically clean the power plug

An accumulation of dust or foreign objects between the power plug and the power outlet can lead to fire or electric shock.



At regular intervals, be sure to pull out the power plug, and using a dry cloth, wipe away any dust or foreign objects that may have accumulated.

Disconnect the power plug whenever the unit will not be used for an extended period of time

Fire may result in the unlikely event that a breakdown



Route all power cords and cables in such a way as to prevent them from getting entangled

Injury could result if someone were to trip on a cable and cause the unit to fall or topple.



Avoid climbing on top of the unit, or placing heavy objects on it

Otherwise, you risk injury as the result of the unit toppling over or dropping down.



Never connect/disconnect a power plug if your hands are

Otherwise, you could receive an electric shock



Disconnect all cords/cables before moving the unit

Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external



Before cleaning the unit, disconnect the power plug from the outlet

If the power plug is not removed from the outlet, you risk receiving an electric shock.



Whenever there is a threat of lightning, disconnect the power plug from the outlet

If the power plug is not removed from the outlet, you risk causing malfunction or receiving an electric shock



••••• Keep small items out of the reach of children

To prevent accidental ingestion of the parts listed below, always keep them out of the reach of small children.



 Removable Parts Screws (p. 9)

Handle the ground terminal carefully

If you remove the screw from the ground terminal, be sure to replace it; don't leave it lying around where it could accidentally be swallowed by small children. When refastening the screw, make that it is firmly fastened, so it won't come loose.



Take care not to get burned

The rear panel may become hot, so take care to avoid



2

IMPORTANT NOTES

Power Supply

• Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter or a motor (such as a refrigerator, washing machine, microwave oven, or air conditioner). Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit.
 Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.
- Do not place containers or anything else containing liquid on top of this unit. Also, whenever any liquid has been spilled on the surface of this unit, be sure to promptly wipe it away using a soft, dry cloth.

Maintenance

• Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

 Before sending the unit away for repairs, be sure to make a backup of the data stored within it; or you may prefer to write down the needed information. Although we will do our utmost to preserve the data stored in your unit when we carry out repairs, in some cases, such as when the memory section is physically damaged, restoration of the stored content may be impossible. Roland assumes no liability concerning the restoration of any stored content that has been lost.

Additional Precautions

- Any data stored within the unit can be lost as the result of equipment failure, incorrect operation, etc. To protect yourself against the irretrievable loss of data, try to make a habit of creating regular backups of the data you've stored in the unit.
- Roland assumes no liability concerning the restoration of any stored content that has been lost.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- When disconnecting all cables, grasp the connector itself never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing others nearby, try to keep the unit's volume at reasonable levels.
- This unit allows you to switch images at high speed. For some people, viewing such images can cause headache, nausea, or other discomfort. Do not use this unit to create video that might cause these types of health problems. Roland Corporation will accept no responsibility for any such health problems that may occur in yourself or in viewers.
- This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

Using External Memories

- Please observe the following precautions when handling external memory devices. Also, make sure to carefully observe all the precautions that were supplied with the external
 - Do not remove the device while reading/writing is in progress
- To prevent damage from static electricity, discharge all static electricity from your person before handling the device.

Intellectual Property Right

- It is forbidden by law to make an audio recording, video recording, copy or revision of a third party's copyrighted work (musical work, video work, broadcast, live performance, or other work), whether in whole or in part, and distribute, sell, lease, perform or broadcast it without the permission of the copyright owner.
- Do not use this product for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this product.
- This product can be used to record or duplicate audio or visual material without being limited by certain technological copy-protection measures. This is due to the fact that this product is intended to be used for the purpose of producing original music or video material, and is therefore designed so that material that does not infringe copyrights belonging to others (for example, your own original works) can be recorded or duplicated freely.
- This product is using the open source license (GPL/LGPL/GPLv2/GPL-2.0+/MIT Licence) software.
 You have the right to acquire, modify and distribute the source code for this open source license software.
 You can obtain the open source license source code used in this product by downloading it from the following website:

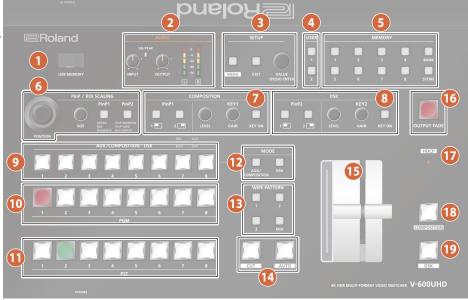
https://proav.roland.com/global/support/

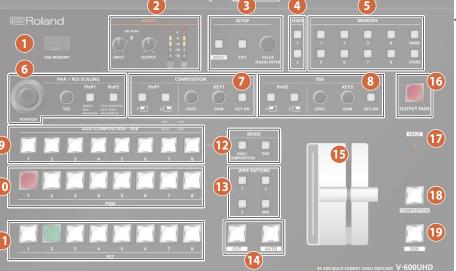
- This product contains eParts integrated software platform of eSOL Co., Ltd. eParts is a trademark of eSOL Co., Ltd. in Japan.
- This Product uses the Source Code of μ T-Kernel under T-License 2.0 granted by the T-Engine Forum (www.tron.org).
- Roland is either a registered trademark or a trademark of Roland Corporation in the United States and/or other countries.
- Company names and product names appearing in this document are registered trademarks or trademarks of their respective owners.

Panel Descriptions

Top Panel / Side Panel







Name		Explanation		
1	USB MEMORY port	This is for connecting a USB flash drive. You use this when importing still images, or when saving or loading settings.		
		* Never turn off the power or remove the USB flash drive while the USB flash drive is being accessed.		
2	AUDIO			
[INPUT] knob		Adjusts the volume level (digital gain) for AUDIO IN L/R.		
SIG/PEAK indicator		Lit green when input is detected at AUDIO IN L/R, and lit red when the volume is excessive.		
[OU	TPUT] knob	Adjusts th	ne audio c	output/headphones volume.
Level meter		Indicates	the audio	output (L/R) volume level.
3 SETUP				
[MENU] button		Switches between displaying or hiding the menu. The menu appears on the multi-view monitor connected to the MULTI-VIEW connector.		
[EXI	T] button	Returns you to the menu one level higher.		
		Turning Selects a menu iter setting value.		menu item or changes a alue.
[VAI	LUE] knob	Pressing	Accepts the selected menu item or applies changes to a setting. It also executes operations.	
4	USER			
[1], [2] buttons		Execute the functions that are assigned by the menu settings.		
5	MEMORY			
[1]-[8] buttons		Save the current settings (such as video settings and operating panel status) to memory, or recall settings from memory. Button functioning is switched according to whether the [STORE] button is on/off.		
		[STORE] o	on (lit)	Saves current settings in memory.
		[STORE] o	off (unlit)	Recalls settings that are saved in memory.
[BANK] button		When this is turned on (lit), the [1]–[8] buttons function as bank selection buttons for memories.		
[STORE] button		When this is turned on (lit), you can save settings in memories.		

Name	Explanation			
6 PinP / ROI SCALING				
[POSITION] stick	Adjusts the display position of the input video or PinP inset screen.			
[SIZE] knob	Enlarges or reduces the size of the input video or PinP inset screen.			
	Select what is controlled by operating the [POSITION] stick and [SIZE] knob.			
	[PinP1] button			
	Lit green	PinP1 window		
[PinP1], [PinP2] buttons	Lit red	Video shown in the PinP1 inset screen		
(*1)	Lit magenta	Lit magenta ROI (input video)		
(1)	[PinP2] button			
	Lit green	PinP2 window		
	Lit red	Video shown in the PinP2 inset screen		
	Lit magenta	ROI (input video)		
* When selecting "ROI" you can adjust the input video selected as the preset video				

Side panel

* When selecting "ROI," you can adjust the input video selected as the preset video.			
7 COMPOSITION (*1)			
PinP1 [1], [2] buttons	Turns picture-in-picture video compositing on/ off. The selected button lights up when it is switched on. The color of the lit button indicates the output destination of the compositing results.		
	Lit green	PinP1 composition on	
	Lit red	Final output	
	Unlit	PinP1 composition off	
KEY1 [LEVEL] knob	During key compositing, this adjusts the amount of keying (transparency).		
KEY1 [GAIN] knob	During key compositing, this adjusts the degree of edge blur (the semi-transmissive region) for keying.		
	Turns key composition on/off. When on, the KEY1 [KEY ON] button lights up.		
KEY1 [KEY ON] button	The color of the lit button indicates the output destination of the compositing results.		
	Lit green	KEY1 composition on	
	Lit red	Final output	
	Unlit	KEY1 composition off	

Name	Explanation		
8 DSK			
PinP2 [1], [2] buttons	Turns picture-in-picture video compositing on/ off. The selected button lights up when it is switched on. The color of the lit button indicates the output destination of the compositing results. Lit green PinP2 composition on		
	Lit red Final output Unlit PinP2 composition off		
KEY2 [LEVEL] knob	During key compositing, this adjusts the amount of keying (transparency).		
KEY2 [GAIN] knob	During key compositing, this adjusts the degree of edge blur (the semi-transmissive region) for keying.		
KEY2 [KEY ON] button	Turns key composition on/off. When on, the KEY2 [KEY ON] button lights up. The color of the lit button indicates the output destination of the compositing results. Lit green KEY2 composition on Lit red Final output		
	Unlit KEY2 composition off		
9 AUX/COMPOSITION	- DSK		
	Indicates the status of video input to the crosspoints. Here you can also select the video that is sent to the destination specified by the MODE [AUX/COMPOSITION] button and [DSK/ROI] button. Unlit Video is not being input. Lit green Valid video is being input.		
Cross-point [1]–[8] buttons (*2)	Video is being sent to AUX. You can use the [1]–[8] buttons to change the video that is sent to AUX.		
	Video is being sent to COMPOSITION You can use the [1]–[8] buttons to change the video that is sent to COMPOSITION.		
	Video is being sent to DSK. You can use the [1]–[8] buttons to change the video that is sent to DSK.		
10 PGM			
Cross-point [1]–[8] buttons	Selects the final output video. The button of the channel for final output is lit red.		
11 PST			
Cross-point [1]-[8]	Selects the preset video (the video to output next). The button of the channel for preset video is lit green. While compositing of the video is in progress it lit red.		

When the menu is not shown, you can hold down the [MENU] button and press a PST cross-

input source setting.

point [1]-[8] button to successively switch the

buttons

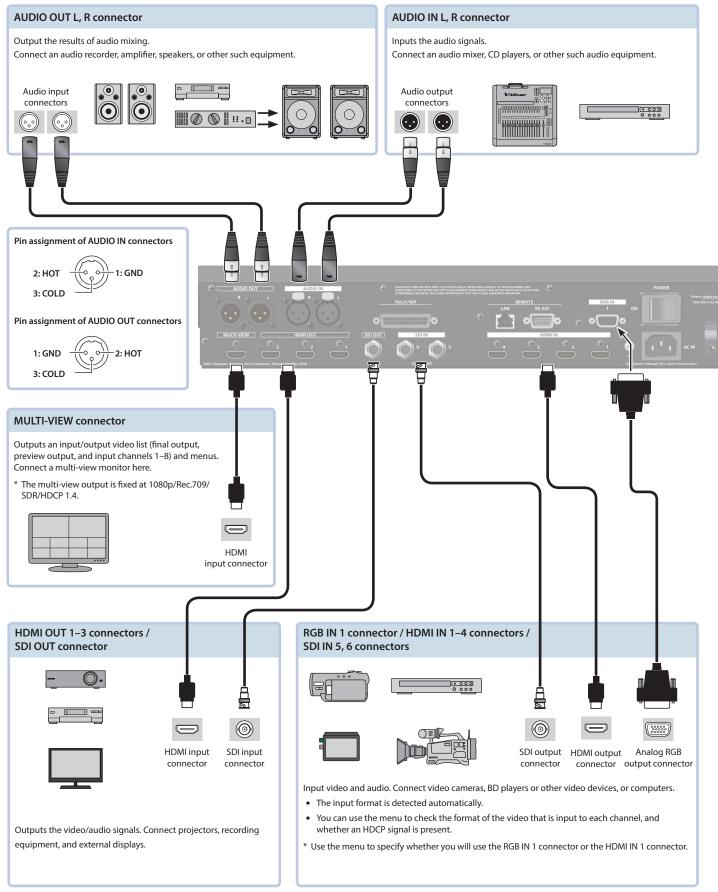
Nan	ne	Explanation			
12	12 MODE				
[AUX/COMPOSITION] button [DSK] button (*2)		Selects the destination of the video. The video selected by the AUX/COMPOSITION - DSK cross-point [1]–[8] button is sent. [AUX/COMPOSITION] button			
		Lit red	AUX w COMPOSITION		
		Lit yello	W COMIFOSITION		
		[DSK] button			
		Lit blue DSK			
13	WIPE PATTERN				
[1]–[3] buttons [MIX] button		Selects the video transition effects. The selected button lights up.			
		[1]–[3]	The original video is broken into by the next video.		
		[MIX]	The two pictures are blended together as the video is switched.		
		Makes the preset video (the video to output next) the final output.			
14	[AUTO] button	[CUT]	The picture switches instantly.		
		[AUTO]	The picture switches with a transition effect applied.		
15	Video fader	Makes the preset video (the video to output next) the final output.			
	[OUTPUT FADE] button	Performs a fade-in or fade-out for the final output video.			
16		Lit	Fade-out		
		Blink	Fade-in/fade-out in progress		
		Unlit	Normal output		
17	HDCP indicator	This lights up, blinks, or becomes unlit according to HDCP (High-bandwidth Digital Content Protection) settings and the connection status of HDCP-compatible equipment.			
18	[COMPOSITION] button	If this is on (lit), the composited result COMPOSITION (PinP1/KEY1) is the final output.			
19	[DSK] button	If this is on (lit), the composited result DSK (PinP2/KEY2) is the final output.			
20	Cooling-fan exhaust port	Expels internal heat to keep temperatures inside the V-600UHD cool.			
21	Cooling-fan intake port	Do not block the cooling-fan intake and exhaust ports. Blocking the intake and exhaust ports might result in a temperature rise inside the V-600UHD and lead to malfunction due to heat.			

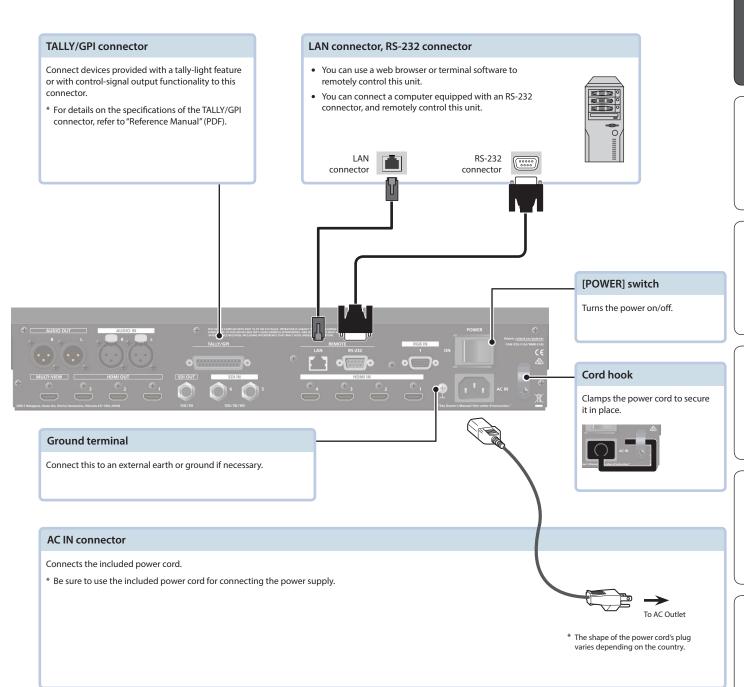
- COMPOSITION (PinP1/KEY1) operation is not possible if the Aux/Composition
- Only AUX can be selected if the Aux/Composition setting is "Aux," and only COMPOSITION can be selected if the Aux/Composition setting is "Composition."

For details, please refer to "Reference Manual" (PDF).

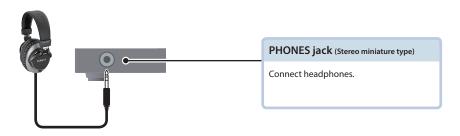
Rear Panel / Front Panel (Connecting Your Equipment)

- * To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.
- * Be sure to use cables and adaptor plugs with the proper connectors matching those of the other devices you are using.





Front panel



Basic Operations

Turning the Power On/Off

* Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

Turning the power on

- 1. Make sure all devices are turned off.
- 2. Turn on the [POWER] switch on the V-600UHD to turn on the power.



3. Turn on the power to the source devices.

Turn on the power to video cameras or other source equipment connected to input connectors on the V-600UHD.

4. Turn on the power to the output devices.

Turn on the power to projectors or other devices connected to output connectors on the V-600UHD.

Turning the power off

- 1. Turn off the power in the sequence of first the output equipment, and then the sources.
- 2. Turn off the [POWER] switch on the V-600UHD to turn off the power.

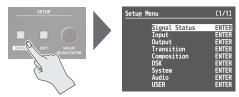
NOTE

- Do not turn off the power while a message of "Processing..." is shown on menu display area of the multi-view monitor. Your settings may not be saved properly.
- If you need to turn off the power completely, first turn off the V-600UHD, then unplug the power cord from the power outlet. Refer to "To completely turn off power to the unit, pull out the plug from the outlet" (p. 2)

Using the Menus

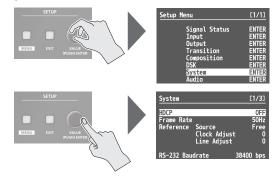
This explains how to display menus and make settings for video and for the V-600UHD itself.

- * Menus are shown only on the multi-view monitor connected to the MULTI-VIEW connector (p. 6).
- 1. Press the [MENU] button to display the menu.



The [MENU] button lights up, the menu categories are displayed.

2. Turn the [VALUE] knob to select a category, and press the [VALUE] knob to confirm.



The menu for the selected category is displayed.

Turn the [VALUE] knob to select a menu item, then press the [VALUE] knob to confirm.

The cursor moves to the setting value.

- If the menu item is located at a deeper level, repeat step 3.
- Pressing the [EXIT] button moves you back one level higher.
- **4.** Turn the [VALUE] knob to change the value of the setting.



- By turning the [VALUE] knob while pressing it, you can change the value more greatly.
- Pressing and holding the [VALUE] knob returns the current menu item you're setting to its default value.
- 5. Press the [VALUE] knob to apply the setting.

The cursor returns to the menu item.

6. Press the [MENU] button to quit the menu.

MEMO

For details on the menu items, refer to the "Reference Manual" (PDF) which you can download from the Roland website.

https://proav.roland.com/manuals/



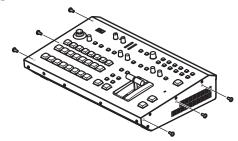
Appendix

About Rack Mounting

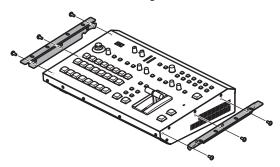
Attaching the included rack-mount angle brackets lets you install the V-600UHD in a 19-inch rack.

Attaching the rack-mount angles

- 1. Turn off the power to the V-600UHD and disconnect the power cord and all connection cables.
- 2. Remove the mounting screws (6) specified in the figure.



- 3. Using the mounting screws (6) you removed in step 2, attach the rack-mount angles.
- * Both of the rack-mount angles have the same shape; there is no difference between left and right.



NOTE

When uninstalling the rack-mount angles

- Before uninstalling the rack-mount angles, turn off the power to the V-600UHD and disconnect the power cord and all connector
- Be sure to block the screw holes with the removed screws. Using different screws can result in malfunction.

Important notes on rack mounting

- Before mounting, turn off the power to the V-600UHD and detach the power cord and all connection cables.
- When mounting the unit, take care not to pinch your fingers etc.
- The video fader protrudes beyond the mounting surface of the rack. Take care not to damage it when mounting the unit.
- To prevent incorrect operation or malfunction, take care not to subject areas protruding beyond the rack to accidental impact.
- To ensure room for connectors and cables, leave 2U of clearance above the unit.
- Use all threaded holes (at 3 locations on each side, for a total of 6) to secure the unit to the rack using screws. Screws for rackmounting are not included.
- Never transport the rack with the unit installed in it. The impact of shaking or vibration might deform the rack-mount angles.
- When mounting the V-600UHD in a rack, pay attention to the following points to ensure efficient cooling.
 - Install in a well-ventilated location.
 - Avoid blocking the cooling-fan intake and exhaust ports on the side panels of the V-600UHD.
- Avoid mounting the unit in a sealed-type rack. Warm air within the rack cannot escape and is sucked into the unit, making efficient cooling impossible.
- If the back of the rack cannot be opened, install an exhaust port or ventilation fan at the top back surface of the rack where warm air collects.
- Also read the "Placement" (p. 3) under "IMPORTANT NOTES."

