FOR-A
INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY

Future Proof
3Gbps

2M/E - 4M/E Digital Video Switcher

HVS-5000 Series

花火
HANABI

Future Proof

The HVS-5000 HANABI series,
FOR-A's flagship 3Gbps Digital Video production switcher
Available in 2M/E to 4M/E configurations.

Today's customers expect increases value and high performance from their production switcher purchases.

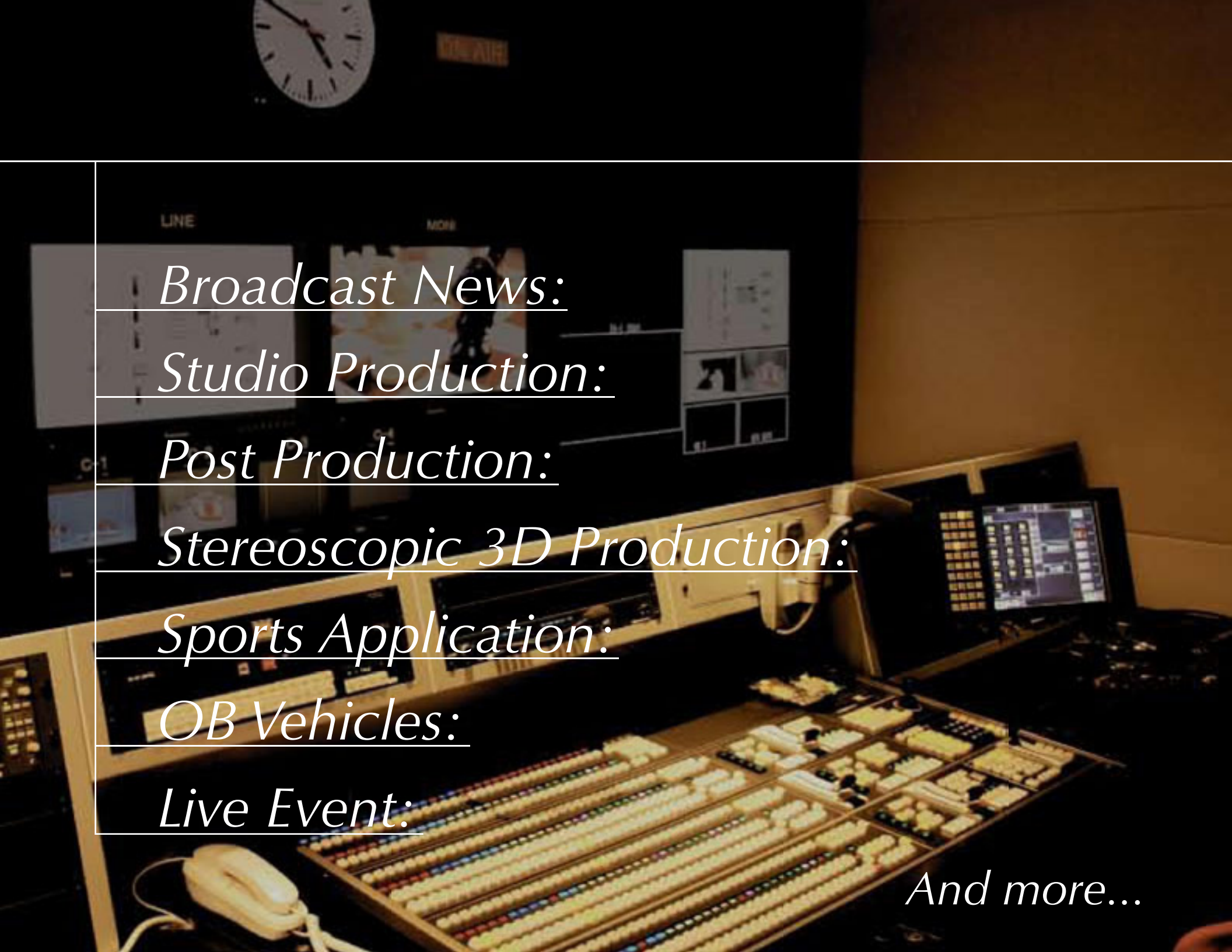
Not just in the systems flexibility or its ability to handle the changing production requirements in today's competitive market, but in the initial investment costs as well.

The HVS-5000 series achieves this and more.

The HVS-5000 series is not "just" an SD or HD switcher. It's a powerful 3G digital video production switcher system that combines the best of both. And yet, provides you with the flexibility required to meet the increased demands of your production workflow, while being the heart of your facilities system.

With HVS-5000 series you own more than "SD today, HD Tomorrow" production system.

You own a FOR-A HVS-5000 series that redefines the meaning of "Future-Proof"!



Broadcast News:

Studio Production:

Post Production:

Stereoscopic 3D Production:

Sports Application:

OB Vehicles:

Live Event:

And more...

Line-up

The HANABI HVS-5000 series lineup includes three model choices: the HVS-5300A with 2M/E, the HVS-5300 with 3M/E, and the HVS-5400 with 4M/E. The HVS-5000 series operating control panel is similar to that of the current HANABI series products and have additional features that provide for sequencing and other functions to maximize your workflow, making it the best choice for both live and editing applications. The system can be designed to accommodate a variety of switcher combinations which can also scale to meet various applications.

HVS-5300A 2M/E Model

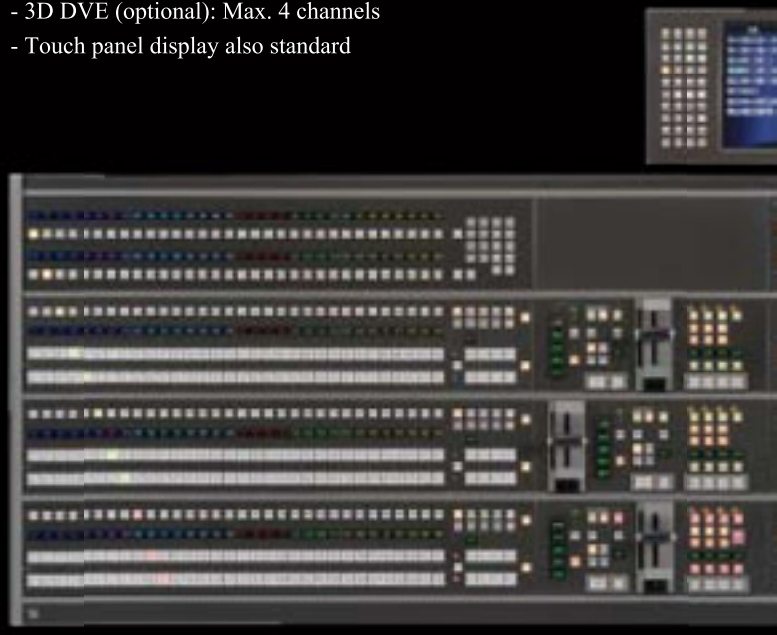
- Main Unit: 10 RU
- Operation unit:
  16-buttons (2 models), 24-buttons (2 models), 32-buttons (1 model)
- Video Inputs: 32 inputs standard, Max. 96 inputs
- Video Outputs: 24 outputs standard (16 AUXs), Max. 40 outputs (32 AUXs)
- Reference I/O: 2 inputs /2 outputs standard, Max. 4 inputs /4 outputs
- Still Stores: 8 channels standard, Max. 16 channels
- Keyers: 8 keyers standard (4 keyers per M/E)
- 2D DVE (for keyers): 8 channels standard (4 channels per M/E)
- 3D DVE (optional): Max. 4 channels
- Touch panel display also standard

- HVS-2161OU: 16-buttons
- HVS-2162OU: 16-buttons
- HVS-2241OU: 24-buttons
- HVS-2242OU: 24-buttons
- HVS-3321OUA: 32-buttons

HVS-2241OU HVS-2242OU

HVS-5300 3M/E Model

- Main Unit: 10 RU
- Operation unit:
  24-buttons (2 models), 32-buttons (2 models), 40-buttons (2 models)
- Video Inputs: 32 inputs standard, Max. 96 inputs
- Video Outputs: 28 outputs standard (16 AUXs), Max. 44 outputs (32 AUXs)
- Reference I/O: 2 inputs /2 outputs standard, Max. 4 inputs /4 outputs
- Still Stores: 8 channels standard, Max. 16 channels
- Keyers: 12 keyers standard (4 keyers per M/E)
- 2D DVE (for keyers): 12 channels standard (4 channels per M/E)
- 3D DVE (optional): Max. 4 channels
- Touch panel display also standard



- HVS-3241OU: 24-buttons
- HVS-3242OU: 24-buttons
- HVS-3321OU: 32-buttons
- HVS-3322OU: 32-buttons
- HVS-3401OU: 40-buttons
- HVS-3402OU: 40-buttons

HVS-5400 4M/E Model

- Main Unit: 10 RU
- Operation unit:
  32-buttons (2 models), 40-buttons (2 models)
- Video Inputs: 32 inputs standard, Max. 96 inputs
- Video Outputs: 32 outputs standard (16 AUXs), Max. 48 outputs (32 AUXs)
- Reference I/O: 2 inputs /2 outputs standard, Max. 4 inputs /4 outputs
- Still Stores: 8 channels standard, Max. 16 channels
- Keyers: 16 keyers standard (4 keyers per M/E)
- 2D DVE (for keyers): 16 channels standard (4 channels per M/E)
- 3D DVE (optional): Max. 4 channels
- Touch panel display also standard

- HVS-4321OU: 32-butons
- HVS-4322OU: 32-buttons
- HVS-4401OU: 40-buttons
- HVS-4402OU: 40-buttons

HVS-3321OU HVS-3322OU

HVS-4321OU HVS-4322OU

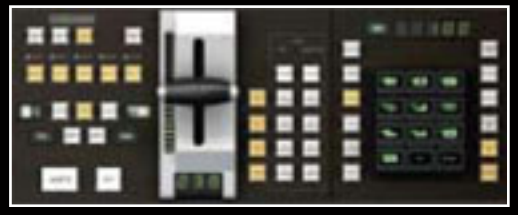
Panel Design

Optimized to unleash the full power of 3G, the HVS-5000 series incorporates the usability and button assignment commonly found in FOR-A's HANABI series products. With an intuitive panel design that is organized by function, 7-color LED source display, LED buttons for clear identification of DVE patterns, and integrated duration disay with each fader, the HVS-5000 series panel neatly summarizes and organizes the diverse information on the touch-panel display. This enables control of switcher operation with the touch of your finger when instantaneous decisions are required.

Transition Control Panel

Fader control panels vary for type 1 and type 2 operation units. Type 1: Features a panel design engineered with direct control in mind, such as control of transition patterns, DVEs, and keyers. Type 2: Features optimal panel design for traditional operation. Buttons are arranged for independent selection of MIX/CUT/WIPE/DVE, each having a dedicated pattern display window. The ideal operating style for your environment of use is now within reach.

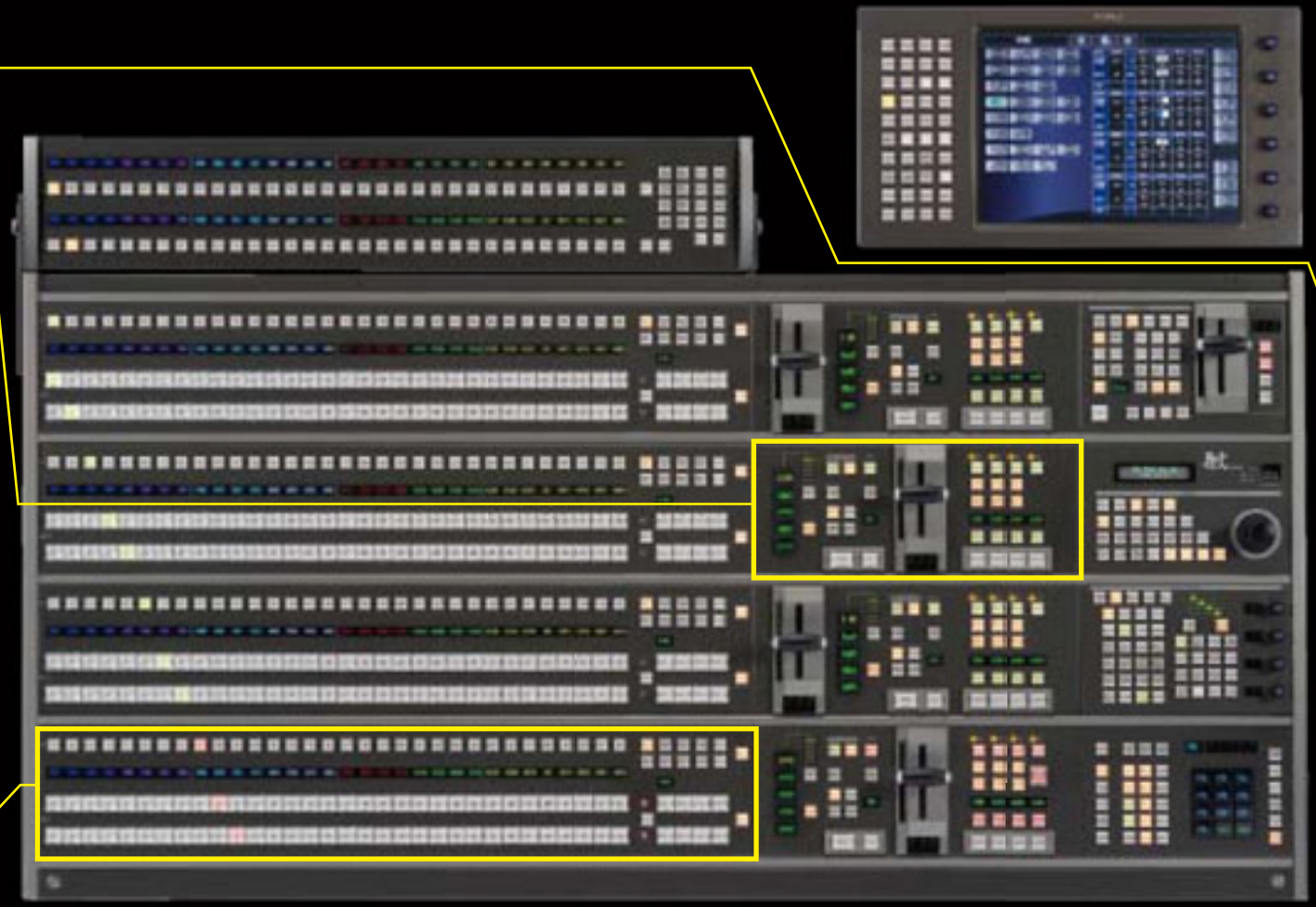
TYPE 1 Panel



TYPE 2 Panel

BUS Panel

The BUS panel clearly identifies source names with 7-color LEDs, for reassuring control.



Operation Unit: TYPE-1

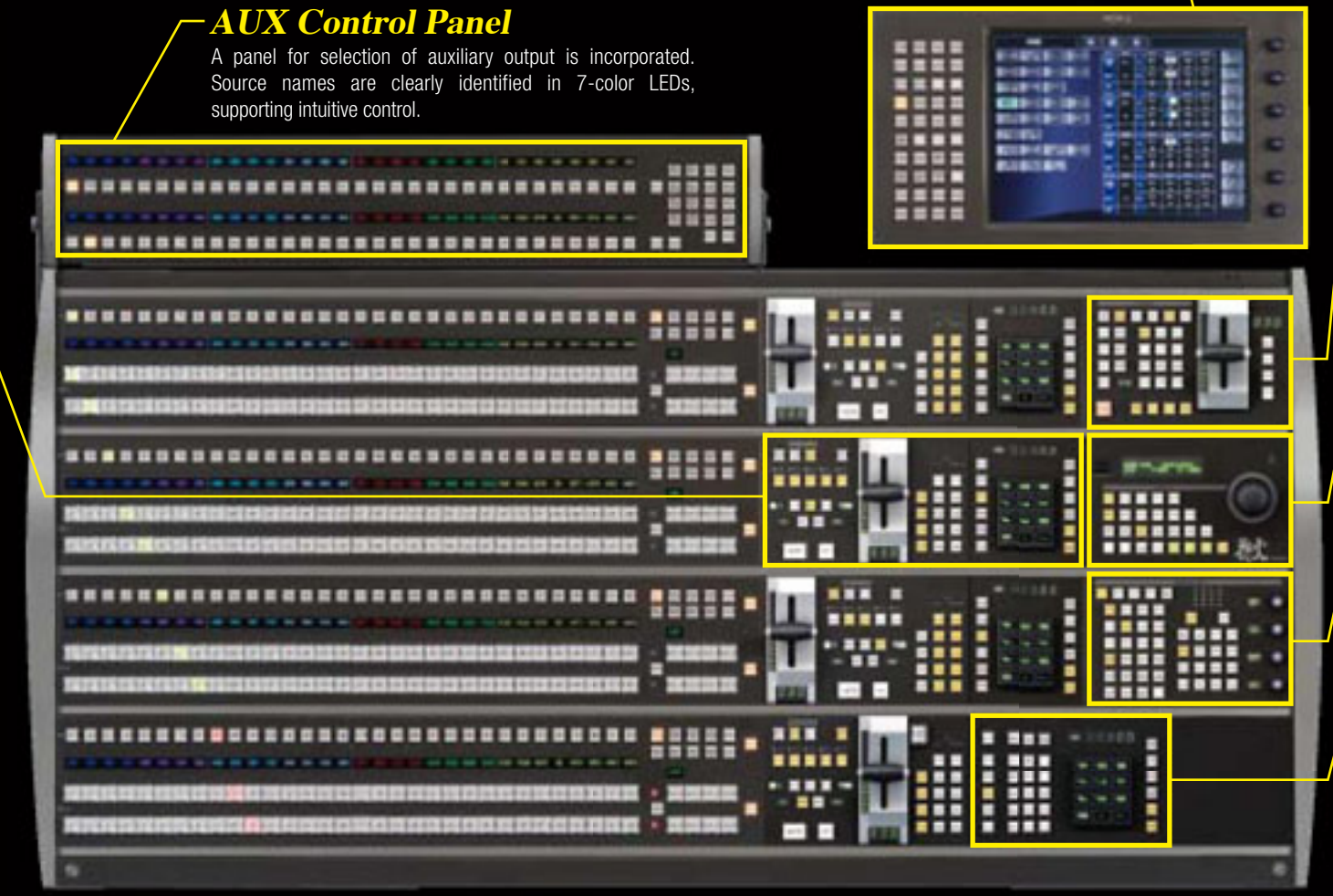
Still Store Setting Menu

Touch-Panel Display

A large touch-panel controller comes standard for each model, enabling intuitive operation of the switcher functions such as configuring parameter settings, editing the still store and sequence timeline, and making color correction settings.

AUX Control Panel

A panel for selection of auxiliary output is incorporated. Source names are clearly identified in 7-color LEDs, supporting intuitive control.



Sequence Control Panel

Enables sequence control as well as keyer and DSK transitions and creation of user patterns.

Sequence Setting Menu

Joystick Panel

Incorporates a 3-axis joystick. Used to modify wipe and 2D/3D DVEs, or for auto chroma key cursor control and other operations.

Keyer Control Panel

Controls the many keyers provided by the HVS-5000 series. Configure keyer priority, chroma key settings, key edges, and other settings as needed.

Multi-Pad Panel

Controls the full range of macro functions. In addition, the panel is used in event memory, sequence storage, and recall operations.

Free Panel Layout

The layout of panels for sequence control, the joystick, keyer control, and multi-pad control can be rearranged to suit your working style.

Operation Unit: TYPE-2

Main Features

The HVS-5000 series offers a wide range of system features and functions. Explore the many convenient production features that come standard in the HVS-5000 series including support for the next-generation 3Gbps system specification, mixed HD/SD inputs, independent M/E control, external device control, macros, VTR tracking, and video support utilizing external memory.

Mixed HD and SD Input

The HVS-5000 series offers easy operations and allows seamless switching between HD and SD signals formats. With the optional up/down/cross converter card installed, the systems can support mixed inputs from HD and SD devices. With the switcher alone, it is possible to perform mixed processing without concern for the differences between HD and SD signals.

Supported formats:
HD-SDI: 1080/59.94i, 1080/50i,
1080/30PsF, 1080/29.97PsF, 1080/25PsF,
1080/24PsF, 1080/23.98PsF
720/59.94p, 720/50p
SD-SDI: 525/60, 625/50

3Gbps Signal Standard Support

In addition to HD and SD signals, the series supports the next-generation signal standard 3Gbps.

Supported formats:
3G-SDI: 1080/59.94p, 1080/50p

Max. 96 Inputs, 48 Outputs

The HVS-5400 allows configuration with up to 96 inputs and 48 outputs. Capacity can be added in units of 16 inputs and 16 outputs.

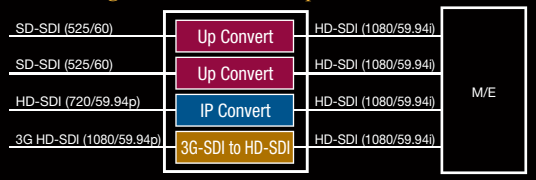
Model	M/E	Inputs	Outputs
HVS-5300A	2 M/E	Standard: 32 Max. 96	Standard: 24 (16 AUXs) Max. 40 (32 AUXs)
HVS-5300	3 M/E	Standard: 32 Max: 96	Standard 28 (16 AUXs) Max. 44 (32 AUXs)
HVS-5400	4 M/E	Standard 32 Max. 96	Standard: 32 (16 AUXs) Max. 48 (32 AUXs)

Up-/Down-/Cross-Converter

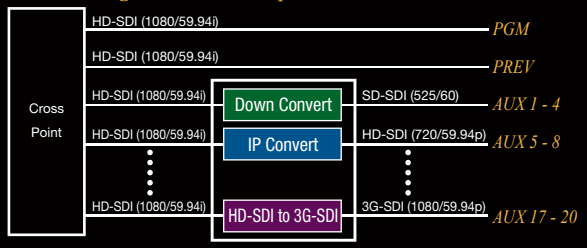
The HVS-5000 series offers the option of installing an up/down/cross converter. With the frame synchronizer which comes standard with this option, asynchronous video can be input as is. The series can be upgraded to as many as eight channels in units of four channels.

* No functions for frame-rate conversion.
* Mixed formats may require the optional HVS-5GL reference I/O expansion card or other optional cards.

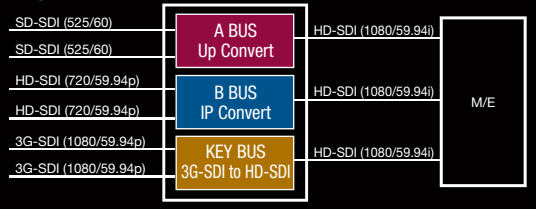
Can be assigned to individual inputs



Can be assigned to AUX outputs



Assignable to BUS



Convert Details

Input formats		Converted formats	
SD-SDI	525/60	HD-SDI	1080/59.94i
			720/59.94p
		3G-SDI	1080/59.94p
	625/50	HD-SDI	1080/50i
			720/50p
		3G-SDI	1080/50p
HD-SDI	1080/59.94i	SD-SDI	525/60
		HD-SDI	720/59.94p
		3G-SDI	1080/59.94p
	1080/50i	SD-SDI	625/50
		HD-SDI	720/50p
		3G-SDI	1080/50p
	1080/30PsF	HD-SDI	—
	1080/29.97PsF	HD-SDI	—
	1080/25PsF	HD-SDI	—
	1080/24PsF	HD-SDI	—
	1080/23.98PsF	HD-SDI	—
	720/59.94p	SD-SDI	525/60
		HD-SDI	1080/59.94i
		3G-SDI	1080/59.94p
	720/50p	SD-SDI	625/50
		HD-SDI	1080/50i
		3G-SDI	1080/50p
3G-SDI	1080/59.94p	SD-SDI	525/60
		HD-SDI	1080/59.94i
			720/59.94p
	1080/50p	SD-SDI	625/50
		HD-SDI	1080/50i
			720/50p

Reference I/O

Supports multiple reference I/O signals. Selectable on the basis of individual analog BB or tri-level sync input/output signals. Used for mixed HD/SD and independent control of each M/E. Two input channels (with loop-through) and two output channels are provided. Add an optional HVS-5GL for expansion to four channels each for input and output.

4 Keyers and 2D DVEs for Each M/E

Incorporates four-channel keyers for each M/E as a standard feature. 2D DVE and chroma key are standard in all keyers. Optionally, advanced chroma key can be added to each M/E keyer.
Supplementing the M/E keyers are two-channel DSKs (which can be assigned to auxiliary output), expandable to four channels. This enables insertion of on-screen text and subtitles for each auxiliary channel. If the four-channel keyers in each M/E are not sufficient, the DSKs can be used to switch to a configuration of four regular keyers and two downstream keyers, useful for live coverage or special events.

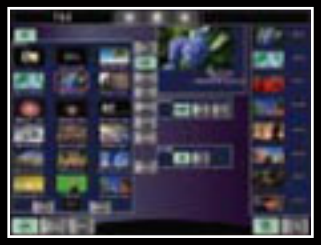
VTR Tracking Function

Perhaps one of the most unique functions of HVS-5000 series is this VTR tracking function. Tracking images with typical video switchers (as for mosaic or defocus tracking of the subject or moving images reduced through 2D DVE) requires configuration of settings for effects as well as detailed settings for size, position and timeline on key frames. In contrast, the HVS-5000 series links to VTR timecodes and enables automatic setting of key frames. As a result, you can simply track the effect as you control the VTR with the switcher control panel. Key frames following the timeline are created, eliminating the need to adjust the timeline.

Set key frames links to VTR timecode

Maximum 16-Channel Still Stores

Incorporates an eight-channel still store. Add an optional HVS-5SS unit for expansion to up to 16 channels. Hundreds of still images can be stored on the internal hard disk, and desired images can be downloaded to the still store.
Utilizing image split-screen areas for logo animation, still store assignment facilitates animated logo output.



Still Store Setting Menu

External Clip Drive

An optional external clip drive can be connected for video playback. One unit can play or record approximately one hour of full HD video (V+K: 30 minutes). It is useful for CG wiping, opening graphics, and other effects to animation.
Wiping with a typical video switcher usually involves applying key frames using switcher timeline functions for settings coordinated with the external device. The FOR-A HANABI series enables wiping simply by configuring the wipe function settings, for CG wiping linked with automatic transitions.
Available as an optional external unit, this unit supports video signal input as well as importing of MXF files from a computer via Ethernet.

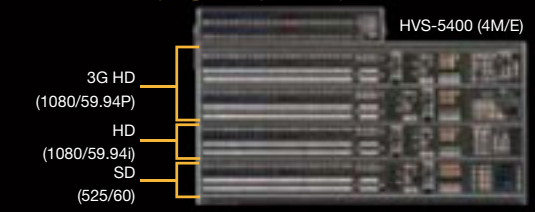
HVS-5ECD

CG-Wipe Setting Menu

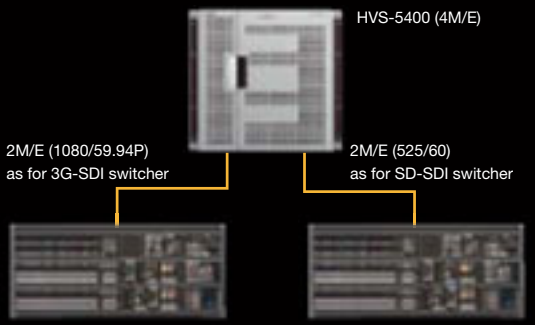
Independent Control of Each M/E

In the multiple M/Es of the HVS-5000 series, a different format can be selected for each M/E. For example, with M/E 1 of HVS-5300A set to 525/60 and M/E 2 set to 1080/59.94i, you can perform up conversion for M/E 1 to work with HD signals.
Moreover, each M/E can be controlled independently of the others. For example, set up two groups on the HVS-5400 (M/E 1 and M/E 2, and M/E 3 and M/E 4) and connect two control panels for switcher operation corresponding to two M/E of two units.

Allow selection of separate formats for each M/E

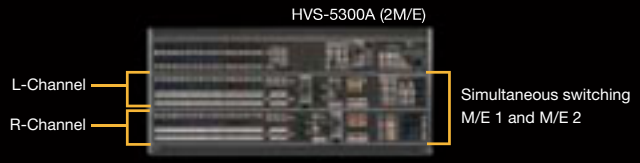


Allows fully independent control for each M/E



Each can be operated as a separate switcher

Also allows simultaneous control of multiple M/Es



Usable during Stereoscopic 3D video recording and editing

It can start as SD, then grow with you to HD, then grow again with 3G. It can be the Vision Mixer Hub of two studios/production areas, both working in the same or different Standards.
With options it can combine SD, HD, and even 3G, allowing you to still use “legacy” equipment. It can even do simultaneous productions in different standards, with Transition and Bus Link. Should your needs even go to 3D stereoscopic, the HVS-5000 series is right there with you.

Main Features

3D DVE

In addition to the 2D DVE of each keyers which comes as standard, HD/SD-compatible 3D DVE* is also available. Development currently underway will make these realistic 3D DVE (using polygon algorithms, a hallmark of FOR-A technology) compatible with 3Gbps signals. As before, images are mapped to 3D shapes such as page turns or spheres rendered in real-time, to provide digital video effects through full 3D processing. Up to 4 channels can be added.

3D Page Roll

3D Quad Turn

3D Pizza Box

3D Sphere

Border Trail (Decay effect)

High light (Color)

- Real 3D DVE:
  Real-time rendering for mapping images to 3D shapes such as Page Turn and Sphere and providing complete 3D processing for DVEs

- Uncompromised high image quality:
  Filtering is optimized for the image size for improved enlargement and reduction quality, and an edge key generation function is used to reduce jagginess for higher image quality

- New defocus circuit design:
  Defocus effects can be applied as sub effects and used simultaneously with DVEs

- Trail effects:
  In addition to regular decay trails and star trails, border trails are also available that provide trail effects in border colors

- Internal still image memory:
  Includes an internal still image memory within DVEs to enable mapping of still images to the side image of a pizza box or the back side of a page turn.

* HD/SD only. Not compatible with 3Gbps transfer. (3Gbps version under development.)

Color Corrector

Color correction functions can be added. By choosing from three modes, versatile color adjustment is possible. This unit also offers gamma adjustment, video level processing, and RGB and YPBPR video clip functions, an option that enables separate color correction for each bus.

Applications;
- Input adjustment for multi camera shooting
- AUX output adjustment for studio floor monitor, etc...

Three color correction functions
(balance, differential and sepia)
- Gamma adjustment functions in HIGH, MID and LOW tones
- Process control functions
  (video level, chroma level and setup level)
- Various clip functions (RGB/YPBPR)

Color Correction Setting Menu

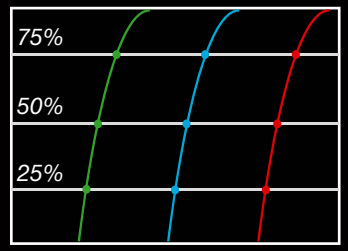
Color Correction Mode

Balance mode
For color correction in RGB signals

Deferential mode
For color correction without upsetting the white balance

Sepia mode
For converting the colors into a monotone

Gamma Correction Mode



For gamma correction separately for the RGB signals in the HIGH (near 75%), MID (near 50%) or LOW (near 25%) tone.

Advanced Chroma Key

M/E keyers offer the advanced chroma key option, enabling two channels to be configured per M/E.
Advanced chroma keyer: In anticipation of full-scale virtual studio operations, this innovative technology makes it easy for anyone to perform keying rapidly. Chroma key algorithms developed by FOR-A are used. With specifications uniquely different from those of video switcher chroma keyers, this option is strongly recommended to those requiring powerful chroma keyers.

Advanced chroma key functions
- Auto chroma key function with original FOR-A algorithms
- Edge color replacement function
- Flicker noise control filter function
- Fine key adjustment and reflected glare adjustment function

* The advanced chroma key enables a total of two channels to be used per M/E: one channel from either KEY1 or KEY2, and one channel from either KEY3 or KEY4.
* The advanced chroma key and 2D DVE cannot be used simultaneously. If the advanced chroma key is set to KEY1 (KEY3) or KEY2 (KEY4), 2D DVE cannot be used even with another keyer.

Advanced Chroma Keyer Setting Menu

Safety Marker

The safety area can be displayed. Magnification of displayed area can be adjusted in a range of 10%–100%. Markers can be displayed as boxes or brackets.

Safety Marker Setting Menu

Line-DVE

DVEs can be applied to each M/E buses for enabling transitions for the image using WIPE or MIX. This makes it easy to set picture-in-picture and other effects.

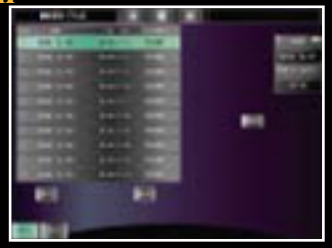
Matte Generator

Supports monochrome (two channels), gradation (two channels), and internal color bar (one channel) output. Up to 5 colors can be used in the gradation matte.

Matte Setting Menu

Macro Function

With the included macro function, complex series of operations can be recorded and played. One-button playback is possible. Up to 100 macros can be registered.



Macro Setting Menu

Sequence Function

Parameter adjustments can be registered as a sequence of events. Corrections or changes are easy, using timeline display. Up to 100 sequences can be registered.

Sequence Setting Menu

Event Memory

Event memory is provided for storing a variety of parameter settings. Up to 1,000 events can be registered.

Event Memory Setting Menu

External Device Control

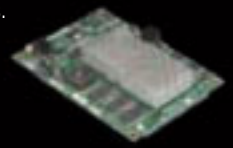
Allows integrated control of various external devices, including routing switchers, VTRs, disk recorders, multi-viewers and so on.

VTR Control Menu

Options

HVS-5DVE3D

HD/SD-compatible 3D DVE card for realistic 3D effects, applying FOR-A polygon algorithms. Up to four cards can be installed.



* Installation requires HVS-5DVEIF.
* 3Gbps signals are not supported.

HVS-5DVEIF

Interface card for installing the HVS-5DVE3D DVE card in the main unit.

HVS-5UD

Expansion card providing up-/down-/cross-converter functions. Can be assigned to individual inputs or buses. One card can be used for 4 channels of data. Up to two cards can be installed.

* No functions for frame-rate conversion.

HVS-5CC

Optional software for adding color correction functions to each BUS.

HVS-5ED

Optional software adding support for a variety of editing protocols. (Inquire for information of supported protocols.)

HVS-5ADCK

Optional advanced chroma key that can be applied to keyers of each M/E. Two channels can be used for each M/E.

* Using the advanced chroma key effectively replaces the configured keyer DVE functions.

HVS-5SDI

Input expansion card. Adds 16 inputs through expansion. Up to 4 cards can be installed.

HVS-5SDO

Auxiliary expansion card. Adds 16 outputs on the auxiliary bus through expansion.

HVS-5GL

Reference input/output expansion card. Adds 2 inputs and 2 outputs and 4 RS-422 interfaces through expansion.

HVS-5SS

Still store expansion card. Adds 8 channels of still store through expansion.

HVS-5ECD

External clip drive unit, equipped with SSD (Solid State Drive), supporting video recording and playback. Useful for wiping and external storage.

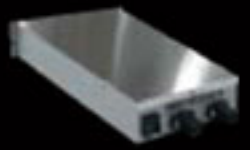
* 3Gbps signals are not supported.

HVS-5PSM

Redundant power supply for the main unit. 1 set of 2 units. Hot-swap function included.

HVS-5PSO

Redundant power supply for the operation unit. Hot-swap function included.



HVS-AUX8/16/32

Auxiliary remote control unit. Remotes with 8, 16, or 32 buttons are available. Up to 16 can be connected. Can be freely assigned for each panel.

HVS-AUXRK/AUX8RK

Kit for removing and extending the panel section of auxiliary remote control units. Extension of up to 5m is possible.

HVS-TALR20/32

Contact output-type tally relay unit. Output signals can be freely assigned. Includes independent output circuits for 20 or 32 channels. The HVS-TALR20/32 and HVS-TALOC20/32 allow up to five units to be connected in a cascading configuration.

HVS-TALOC20/32

Open collector-type tally unit. Output signals can be freely assigned. Includes independent output circuits for 20 or 32 channels. The HVS-TALR20/32 and HVS-TALOC20/32 allow up to five units to be connected in a cascading configuration.

Specifications

	SD mode	HD mode
Standard (Support Formats)	SD-SDI: 525/60, 625/50	HD-SDI: 1080/59.94i, 1080/50i, 1080/30PsF, 1080/29.97PsF, 1080/25PsF, 1080/24PsF, 1080/23.98PsF 720/59.94p, 720/50p
		3G-SDI: 1080/59.94p, 1080/50p
Processing	4 : 2 : 2 : 4 digital component	
Quantization	Y: 10-bit, C: 10-bit, Key: 10-bit	
Sampling Frequency	Y: 13.5MHz C: 6.75MHz Key: 13.5MHz	HD-SDI: Y: 74.25MHz, 74.25/1.001MHz, C: 37.125MHz, 37.125/1.001MHz Key: 74.25MHz, 74.25/1.001MHz
		3G-SDI: Y: 148.5MHz, 148.5MHz/1.001MHz C: 74.25MHz, 74.25/1.001MHz Key: 148.5MHz, 148.5/1.001MHz
Video Input	SD-SDI: 270Mbps, 75Ω, BNC	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, 75Ω, BNC
		3G-SDI: 2.97Gbps or 2.97/1.001Gbps, 75Ω, BNC
Number of Video Inputs	32 inputs standard, Max. 96 inputs optional	
Reference Input	BB: NTSC: 0.429Vp-p /PAL: 0.45Vp-p, 75Ω or loopthrough, BNC	BB: NTSC: 0.429Vp-p /PAL: 0.45Vp-p or Tri-level Sync: ±0.3Vp-p, 75Ω or loopthrough, BNC
Num. of Ref. Inputs	2 inputs standard, Max. 4 inputs optional	
Video Output	SD-SDI: 270Mbps, 75Ω, BNC	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, 75Ω, BNC
		3G-SDI: 2.97Gbps or 2.97/1.001Gbps, 75Ω, BNC
Num. of Video Outputs	HVS-5300A: 24 outputs standard (4 PGMs, 2 PREVs, 2 CLEANs, 16 AUXs), Max. 40 outputs optional (32 AUXs)	
	HVS-5300: 28 outputs standard (6 PGMs, 3 PREVs, 3 CLEANs, 16 AUXs), Max. 44 outputs optional (32 AUXs)	
	HVS-5400: 32 outputs standard (8 PGMs, 4 PREVs, 4 CLEANs, 16 AUXs), Max. 48 outputs optional (32 AUXs)	
Reference Outputs	BB: NTSC: 0.429Vp-p /PAL: 0.45Vp-p, 75Ω, BNC	BB: NTSC: 0.429Vp-p /PAL: 0.45Vp-p or Tri-level Sync: ±0.3Vp-p, 75Ω, BNC
Num. of Ref. Outputs	2 outputs standard, Max. 4 outputs optional	
I/O Delay	4H (when DVE not applied to output)	
	1 frame + 4H (when Keyer and DVE applied)	
	2 frames + 4H (when HVS-5UD option applied)	
Storage	Internal HDD	
Interfaces	- RS-422: 5 ports standard, Max. 9 ports optional, 9-pin D-sub (female) (for Tally unit, Editor, etc)	
	- GPI IN: 1 port, 15-pin D-sub (female)	
	- GPI OUT: 1 port, 25-pin D-sub (female)	
	- ALARM: 1 port, 9-pin D-sub (female)	
	- ARCNET: 1 port, 75Ω, BNC (for HVS-AUX8/16/32)	
	- Ethernet: 10Base-T/100Base-TX/1000base-T, 1 port, RJ-45	
Temperature / Humidity	0ºC - 40ºC / 30% - 90% (no condensation)	
Power	100VAC - 240VAC, 50/60Hz	
Consumption	- Main Unit: 1200VA (100VAC)/1122VA (240VAC) standard, Max. 1500VA (100VAC)/1474VA (240VAC)	
	- Operation Unit: Refer to right table	
Dimensions / Weight	- Main Unit: 430 (W) x 440 (H) x 500 (D) mm / Approx. 58kg standard, Max. Approx. 78kg (HVS-5400, full option)	
	- Operation Unit: Refer to right table	
Accessories	- Main Unit: AC cord x 2, LAN cable x 1, Rack mount brackets x 1 set	
	- Operation Unit: Touch panel display unit x 1 set, AC cord x 1, RS-232C cable x 1, VGA cable x 1, PC3250-1 (OU - Touch panel connection cable) x 1, LAN cable x 2, Manuals (Setup manual, Tutorial manual, Menu list) *Rack mount brackets of operation unit are optional	
Options	Refer to left page	

Operation Units (Dimensions/Weight/Consumption)

HVS-2161OU	1136 (W) x 165.9 (H) x 520 (D) mm / Approx. 27kg
	150VA (100VAC)/170VA (240VAC)
HVS-2162OU	1178 (W) x 165.9 (H) x 520 (D) mm / Approx. 27kg
	150VA (100VAC)/170VA (240VAC)
HVS-2241OU	1136 (W) x 165.9 (H) x 520 (D) mm / Approx. 27kg
	150VA (100VAC)/170VA (240VAC)
HVS-2242OU	1178 (W) x 165.9 (H) x 520 (D) mm / Approx. 27kg
	150VA (100VAC)/170VA (240VAC)
HVS-3321OUA	1281 (W) x 165.9 (H) x 624 (D) mm / Approx. 37kg
	200VA (100VAC)/220VA (240VAC)
HVS-3241OU	1281 (W) x 165.9 (H) x 624 (D) mm / Approx. 36kg
	180VA (100VAC)/200VA (240VAC)
HVS-3242OU	1321 (W) x 165.9 (H) x 624 (D) mm / Approx. 36kg
	180VA (100VAC)/200VA (240VAC)
HVS-3321OU	1281 (W) x 165.9 (H) x 624 (D) mm / Approx. 37kg
	200VA (100VAC)/220VA (240VAC)
HVS-3322OU	1321 (W) x 165.9 (H) x 624 (D) mm / Approx. 37kg
	200VA (100VAC)/220VA (240VAC)
HVS-3401OU	1427 (W) x 165.9 (H) x 624 (D) mm / Approx. 38kg
	200VA (100VAC)/220VA (240VAC)
HVS-3402OU	1486 (W) x 165.9 (H) x 624 (D) mm / Approx. 38kg
	200VA (100VAC)/220VA (240VAC)
HVS-4321OU	1300 (W) x 165.9 (H) x 769 (D) mm / Approx. 40kg
	240VA (100VAC)/260VA (240VAC)
HVS-4322OU	1323 (W) x 165.9 (H) x 769 (D) mm / Approx. 40kg
	240VA (100VAC)/260VA (240VAC)
HVS-4401OU	1444 (W) x 165.9 (H) x 769 (D) mm / Approx. 44kg
	240VA (100VAC)/260VA (240VAC)
HVS-4402OU	1486 (W) x 165.9 (H) x 769 (D) mm / Approx. 44kg
	240VA (100VAC)/260VA (240VAC)

Not includes rack mount brackets

Touch Panel Display

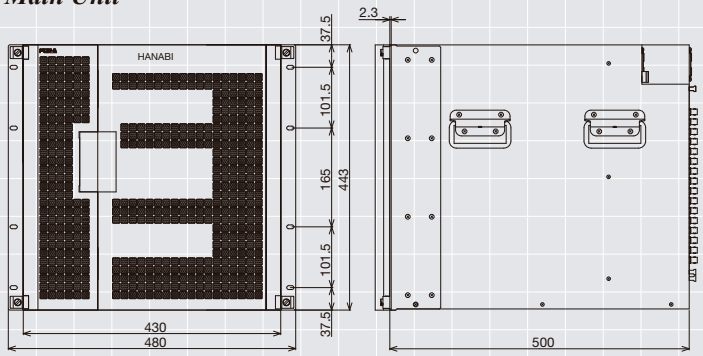
	422 (W) x 230 (H) x 49 (D) mm / Approx. 6kg

Options

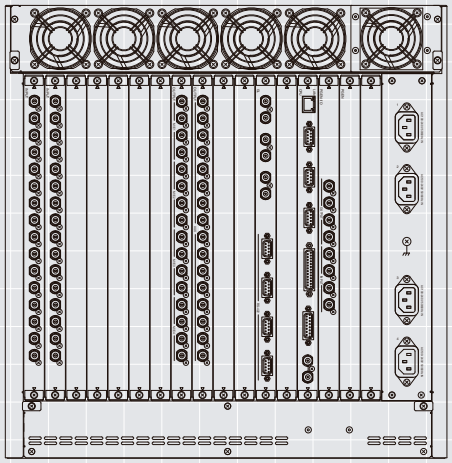
Model	Products	Max. installable
HVS-5SDI	3G/HD/SD-SDI input expansion card	4 cards
HVS-5SDO	3G/HD/SD-SDI output expansion card	1 card
HVS-5UD	Up-/Down-/Cross-Converter card	2 cards
HVS-5SS	Still Store expansion card	1 card
HVS-5GL	Reference I/O and RS-422 expansion card	1 card
HVS-5DVEIF	DVE Interface card	1 card
HVS-5DVE3D	HD/SD 3D-DVE card	4 cards
HVS-5CC	Color corrector	1 (Software)
HVS-5ADCK	Advanced chroma keyer	1 (Software)
HVS-5ED	Editor Interface	1 (Software)
HVS-5ECD	External clip drive	1 unit
HVS-5PSM	Redundant power supply for main unit	1 pair
HVS-5PSO	Redundant power supply for operation unit	1 unit
HVS-AUX8/16/32	AUX remote control unit	16 units
HVS-AUXRK/AUX8RK	AUX remote panel extension kit	Same as above
HVS-TALR20/32	Tally relay unit (20/32 terminal)	Total of 5 units
HVS-TALOC20/32	Tally open corrector unit (20/32 terminal)	

Dimensions

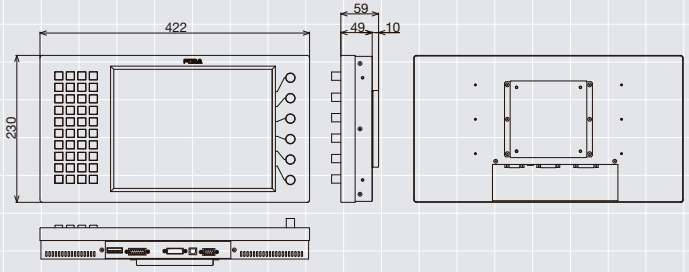
Main Unit



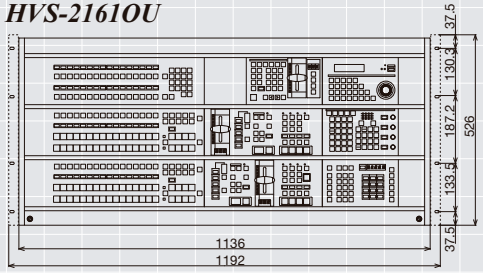
Main Unit: Rear Panel



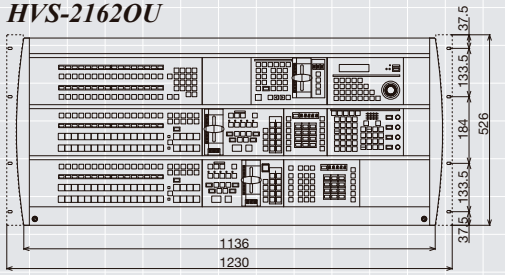
Touch Panel Display

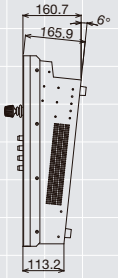


HVS-2161OU



HVS-2162OU





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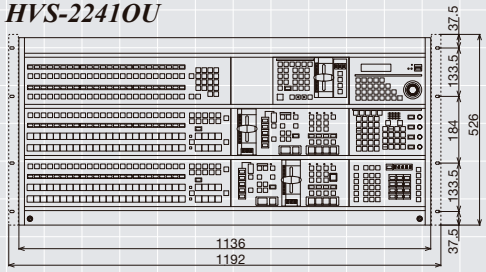

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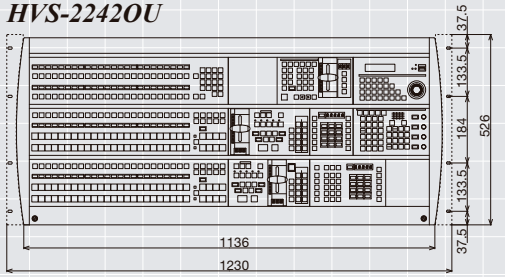
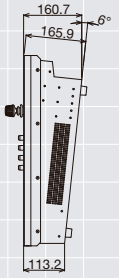
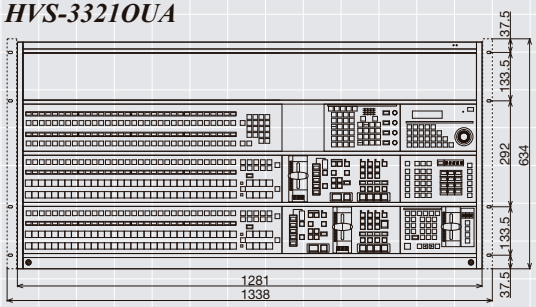
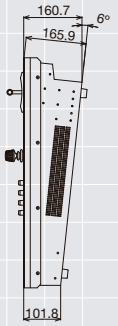




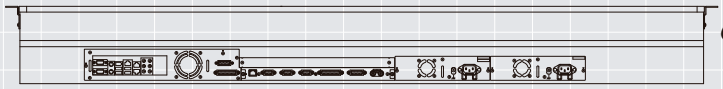
HVS-3321OUA





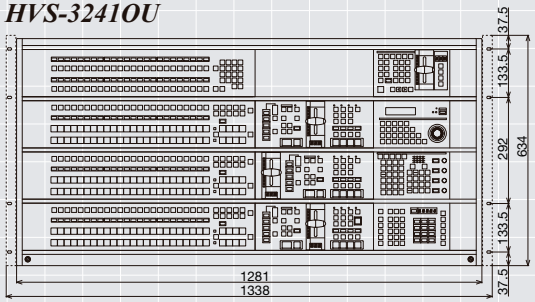
Operation Unit: Rear Panel
(16-buttons /24-buttons)

Operation Unit: Rear Panel
(24-buttons /32-buttons)



Operation Unit: Rear Panel
(40-buttons)

HVS-3241OU



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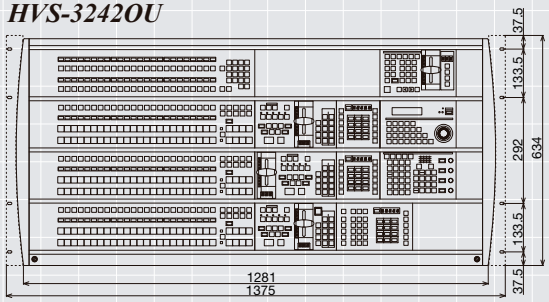

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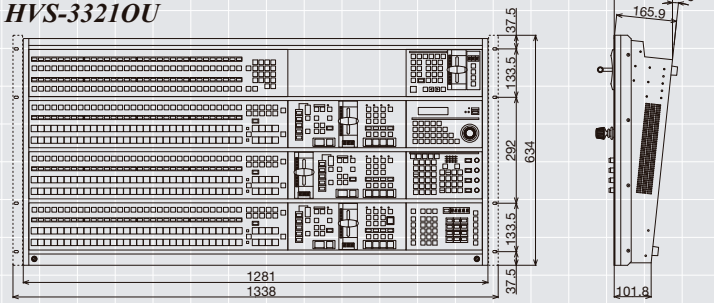

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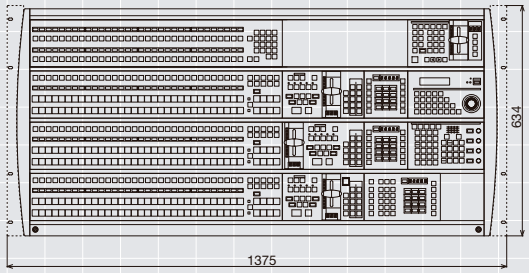

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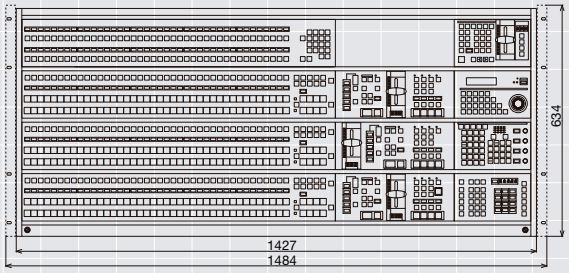

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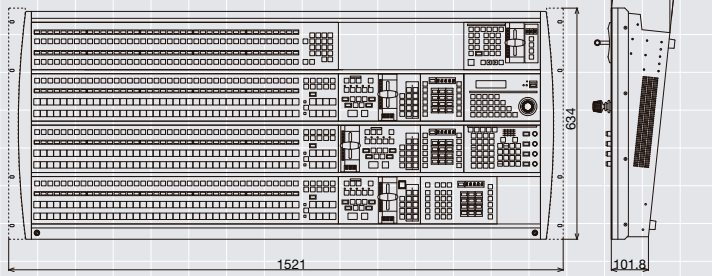
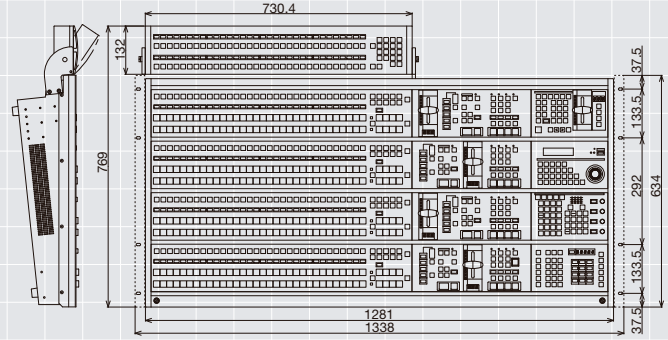


HVS-4321OU



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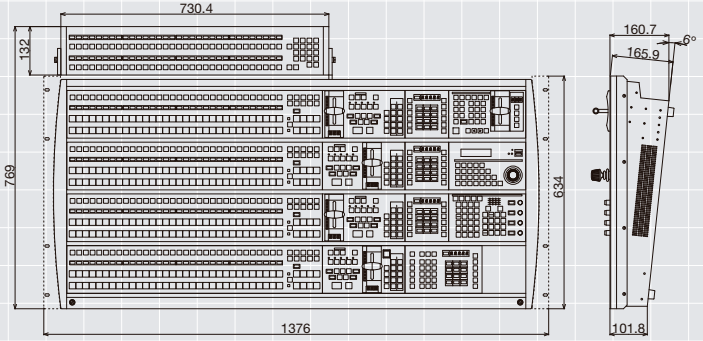

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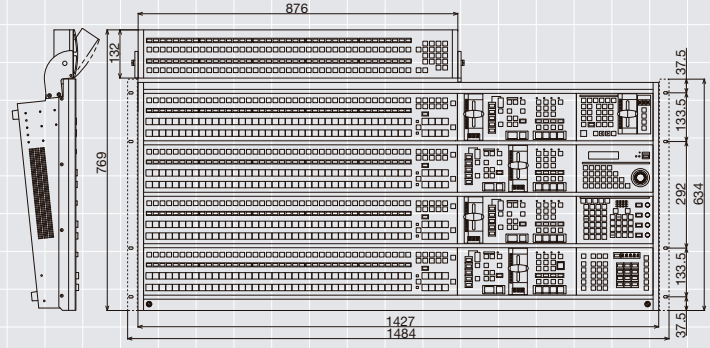

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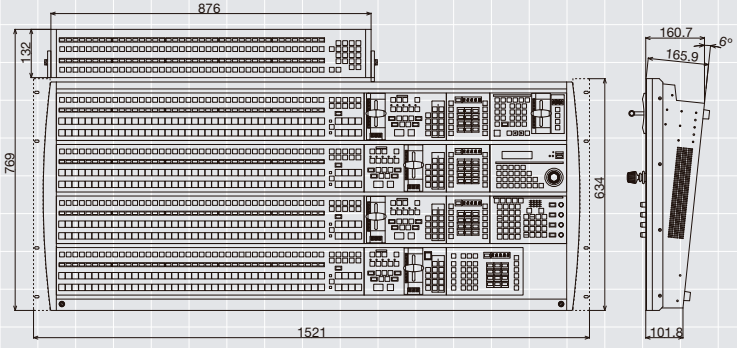

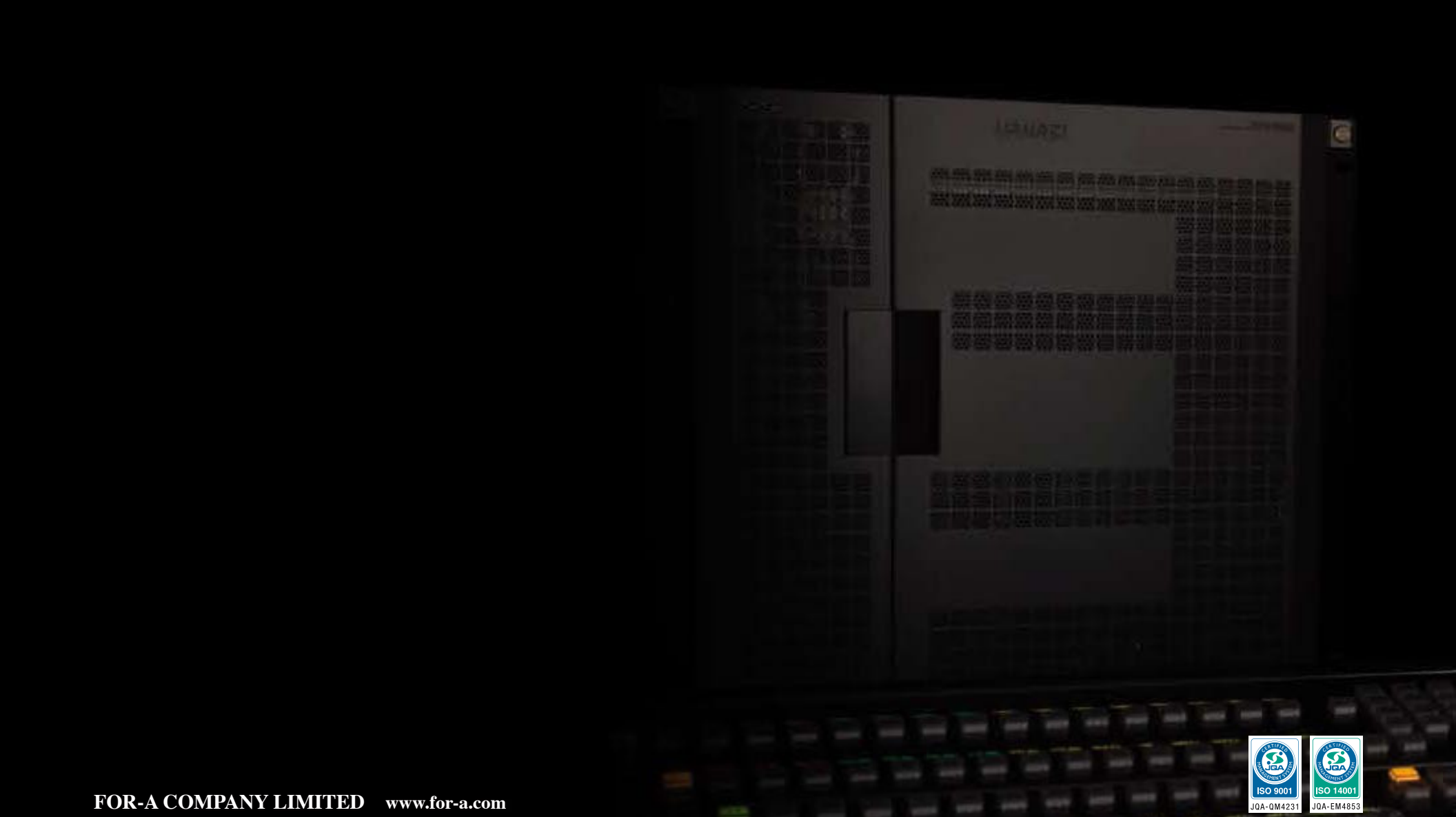

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