

HD/SD Video Switcher

HVS-390HS "HANABI"

FOR.A[®]
INNOVATIONS IN VIDEO
and AUDIO TECHNOLOGY

HD/SD VIDEO SWITCHER
HVS-390HS

花火
HANABI



HVS-390HS

All the switcher you will ever need!

Unparalleled versatility for today's ever changing world

The HANABI HVS-390HS is available as a 1M/E or 2M/E switcher.

1M/E versions can be upgraded to 2M/E.

The 2M/E is switchable to 2.5M/E, with the additional bus being controlled by either the (included) Web browser control, or an (optional) control panel.

Extreme choice in control surfaces



HVS-392WOU
2M/E 28 buttons



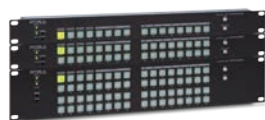
HVS-392OU
2M/E 20 buttons



HVS-392ROU
2M/E 12 buttons



HVS-391OU
1M/E 20 buttons



AUX control panels
Ethernet type



Desktop Type of
AUX control panels
Ethernet type



AUX control panels
Arcnet type



HVS-390HS
web browser

With the HVS-390HS, there is no compromise offering up to 3 different control panels and up to 10 remote AUX control panels that can be used all at the same time!

You can choose what size or type of control you prefer and what fits your environment.

From the 1M/E 20 button panels, all the way up to the operator designed 2M/E 28 button panel.

As well as traditional control panels, there is also the choice of simple remote panel, included Web browser control, and our range of AUX control panels. All control choices are easy to operate, for safe, reliable and repeatable LIVE operation!

The HVS-390HS - Why is it all the switcher you'll ever need?

Bus selection buttons
 One click to select a bus for signal selection
 Double click for instant menu access

16 dedicated user buttons*
 The user buttons are programmable to instantly recall almost all switcher functions including: system memories, menus, previews, and any on/off functions
 * HVS-392WOU only

Key/AUX bus sources
 One click to select source for the above selected bus

Mnemonic row for sources
 Source buttons can be programmed using name or custom bitmap image



Smooth, professional joystick with X, Y, and Z axis
 The high quality joystick is selectable for fine or normal adjustment of DVE X/Y/Z position as well as Rotation/angle and Default

Hanabi
 Your guarantee of the highest quality and reliability

Industry standard
 T-Bar/Auto controls can be programmed for function using the next transition area

WOU panel offers
 Mnemonic row for each keyer showing type of key source as well as transition effect selected

FOR-A "On-Air" system
 Assign cut/mix/wipe/DVE function to dedicated transition buttons

HVS-390HS standard features

- 4 × Keyers on each M/E, including 2 high quality Chroma keyers, can be used as keyers and/or Picture in Picture
- Freely assign up to 4 × keyers to an AUX output or M/E output (2 from M/E 1, 2 from M/E 2)
- All keyers include DVE with resize and perspective/tilt, etc. (2.5D)
- 2 × 3D DVEs on each M/E for background and keyer transitions
- CG Wipe engine on each M/E offering animated wipe/mix transitions
- 'Next transition' including direction for all keyers and background on each M/E, as well as FOR-A's On-Air programmable transition section
- Included Web Browser GUI gives total control and set up from a connected device such as PC, Mac, or Tablet, etc.
- FTP access for stills and clips, plus built-in USB for stills
- Increase the number of stills by using spare inputs as extra still stores
- The Web Browser provides an easy way to edit: Macros, Event Memories and key-frame sequences
- Industry leading color correction with 2 per M/E, assignable for inputs or entire bus
- 4 clip store capability with up to 60 frames in each clip store (HVS-39MEM option provides 120 frames)
- Option to save stills and clips to internal memory (HVS-39MB)
- Redundant PSU for both Main and Control Panel available, hot-swappable from the front of the MU
- Safe-area generator and audio monitoring are selectable and adjustable per window on internal multi-viewer layouts
- 2 × Multi-viewer outputs in HD mode, each with selectable layouts
- Standard interface for multiple external device control, including audio mixers, routers, and VTR/VDCP units via RS-422
- Individually switchable frame synchronizer on each input
- 4 × Upconverters are standard—expandable to 12
- 16 inputs are standard, expandable to 24 with optional HD/SD-SDI, DVI, VGA, composite or component cards
- 8 outputs plus 1 × HDMI output are standard, expandable to 13 with optional HD/SD-SDI, DVI, VGA, composite or component cards
- Depending on configuration and usage, HVS-390HS has a minimum delay of 1H in HD
- Up to 100 m BNC cable can be used to connect Mainframe and control panel
- Dedicated Black Burst or Tri-Level sync output

The HVS-390HS - Why is it all the switcher you'll ever need?

Unparalleled broadcast reliability and performance

Advanced AUX- Virtual 6M/E

While the HVS-390HS has a full powered primary Mix Effects (M/E), FOR-A offers the first switcher system to use Advanced AUX technology.

Operators and technical staff will appreciate the capabilities of a virtual 6M/E switcher. With Advanced AUX technology any AUX bus can be used like never before... and AUX output can cut, mix, wipe, key and move graphics with a DVE.



A dozen DVE channels

The HVS-390HS has 8 channels of 2.5D and 4 channels of 3D DVE. Twelve channels of DVE means you don't need to float DVEs as you should have enough for any production need. All twelve channels are included, no extra charge. Some other suppliers, ask you to pay for enough DVEs or only provide 4.



Animation playout (CG wipe): with picture of CG wipe

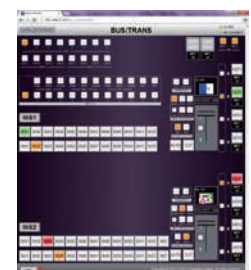
The HVS-390HS can store and playout from an internal 4 channel media player. Why not free up your external clip player(s) and let the 'no extra charge' internal media player replay those animated bugs or integrate your animations into transition opens and closes. Your wipe transitions will really get noticed as the animation becomes part of your A/B wipe.



Operation via Web browser

The ability to set up, adjust and operate the HVS-390HS via a Web browser, from a PC, Mac, or tablet device, over Ethernet, is included at 'no extra charge'.

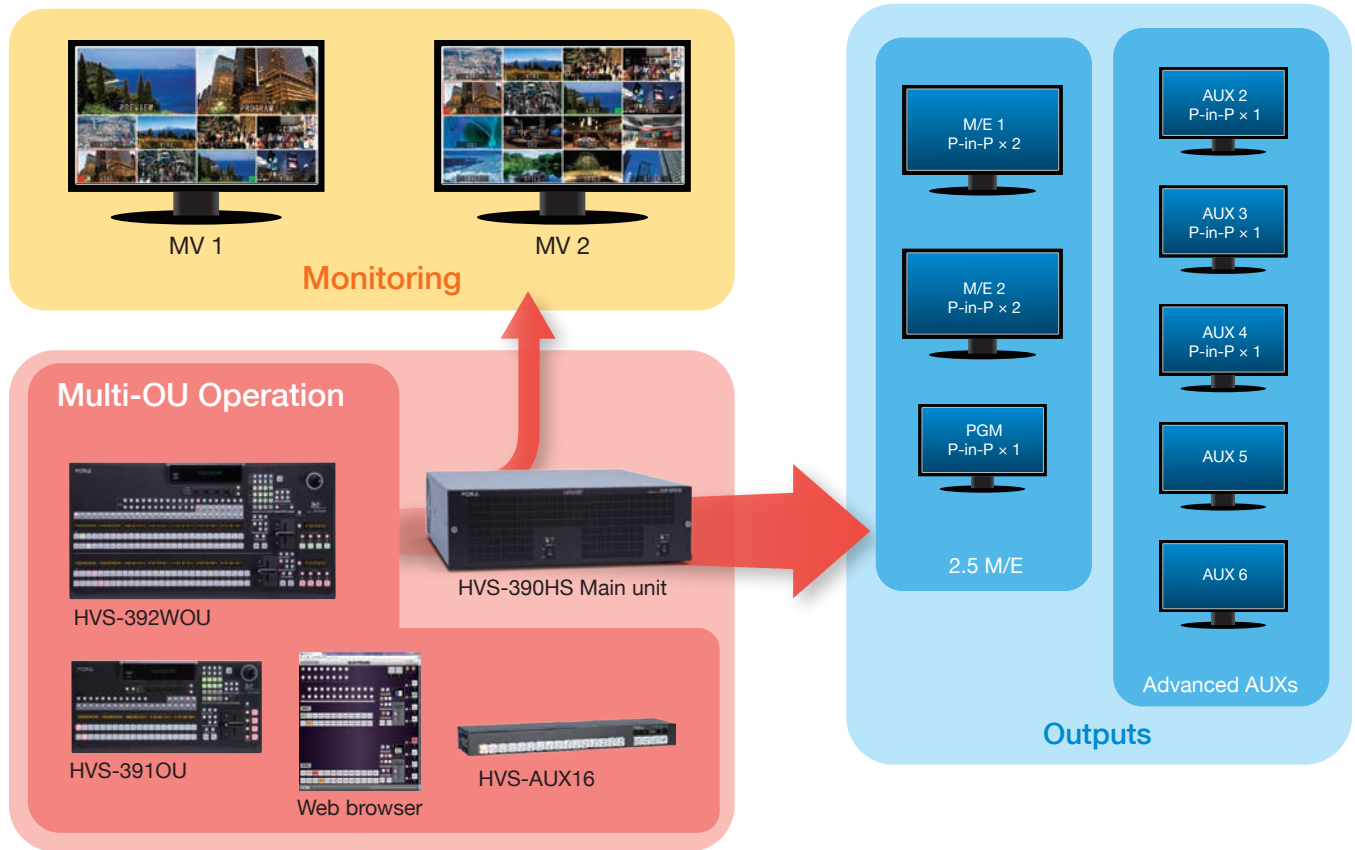
This also allows easy recalling and editing of macros, key-frame sequences and event memories. The Web browser control also displays thumbnails of stills loaded to still stores. This easy to use software control can be used as at secondary operational positions, or as an AUX control for TD or director.



Powerful outputs! - All at the same time

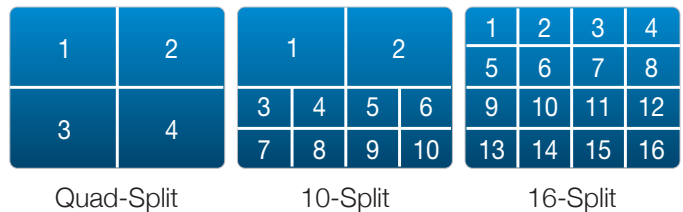
● 2.5 M/E switcher

With Advanced AUX plus technology, we provide a virtual 6M/E production switcher. You can even also use AUX bus 7 and 8 as a Half M/E (Program/Preset bus) complete with mix transitions and up to 4 DSKs.



● Dual multi-viewer

Two independent multi-viewers are equipped, each capable of displaying 16 windows with safety area marker and audio level meter.



HVS-390HS versatile and reliable main unit

A 3U main unit is available with optional redundant power supply. Up to two redundant power supplies can be equipped. It is the same main unit for 1M/E or 2 (2.5)M/E systems, thus providing easy future to upgrade.

HVS-390HS input/output options

HVS-390HS can accept up to 2 optional input cards and 2 output cards from the following types:

HVS-30HSDI

HD/SD-SDI Input Card



4 channels HD/SD-SDI input card. It has a frame synchronizer function and re-size (expansion) function on all inputs so SD images can be processed internally as HD images.

HVS-30HSAI

Analog Video Input Card



2 channel analog video input card. Either channel can be used as composite or component and the component inputs can be set for SD or HD.

HVS-30PCIN

PC (DVI/VGA) Input Card



For computer-based applications we have an input card with one DVI-D and one VGA connector, with resolutions ranging from VGA to WUXGA.

HVS-30HSDO

HD/SD-SDI Output Card



2 channel HD/SD-SDI output card. A third dedicated down-converted output is provided for simultaneous output of HD and SD.

HVS-30HSAO

Analog Video Output Card



2 channel analog video output card. Outputs can be set-up as 1 component and 1 composite or as 2 component. The component outputs can be set as SD or HD.

HVS-30PCO

PC (DVI/VGA) Output Card



For computer-based applications we have an output card with one DVI-D and one VGA connector, with resolutions ranging from SVGA to WUXGA.

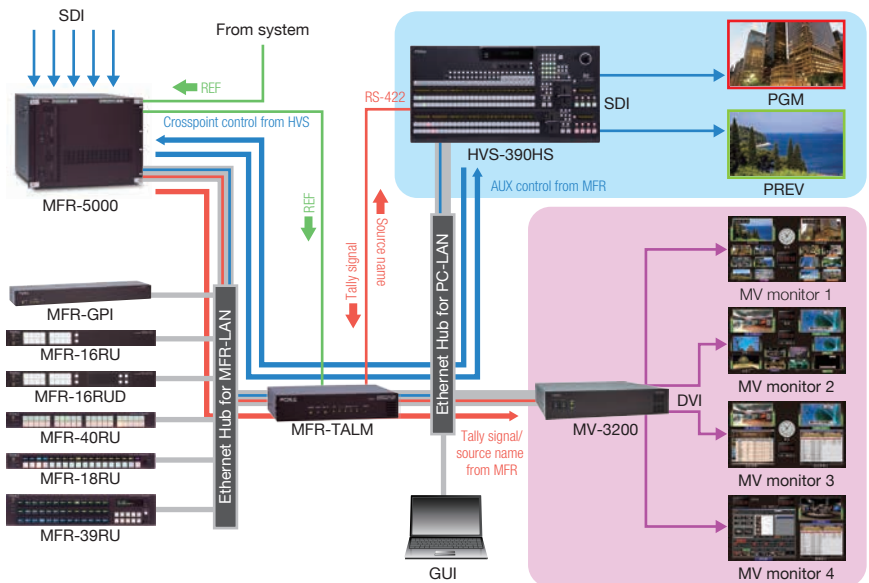
HVS-30TALR

Tally Interface Card

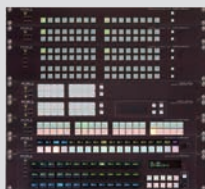
Tally relay interface card (18 terminals). Up to 2 cards can be installed (the slot is shared with I/O cards).

Facility Integration:

- When integrating a router and switcher, FOR-A's system incorporates pass through for processing of tally information and source names.
- Integrate an audio mixer with the HVS-390HS using ESAM II (edit suite audio mixer) industry standard protocol.
- Media player interfaces can use VDCP (video disk communications protocol) RS-422 based VTR style control.
- VR-Link optional software for FOR-A for current or future virtual studio use.



System related FOR-A products



MFR-series
Routing Switcher



MV-series
Multi-viewers



MBP-100MP
Multi-format File Base server



VTW-350HS
Character Generator

Specifications

Number of M/Es	1 M/E or 2 M/E	
Control Panel	4 types	
	HVS-391OU: 1 M/E 20-button model / HVS-392WOU: 2 M/E 28-button model / HVS-392OU: 2 M/E 20-button model / HVS-392ROU: 2 M/E 12-button rack size model	
Video Formats	1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/25PsF, 1080/24PsF, 1080/23.98PsF, 720/59.94p, 720/50p, 525/60 (NTSC), 625/50 (PAL)	
Video Input	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75Ω BNC × 16 * Frame synchronizer on each input	
Video Input (optional)		
HVS-30HSDI	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75Ω BNC × 4	
HVS-30HSAI	HD analog component, SD analog component, Analog composite	
HVS-30PCIN	DVI-D: XGA to WUXGA (1080i), XGA to WXGA (720p), VGA to XGA (SD) (HDCP incompatible)	
	RGB: XGA to WUXGA (1080i), XGA to WXGA (720p), VGA to XGA (SD)	
Number of Inputs	Standard: 16 (SDI), Max.: 24 (with HSDI × 2 or HSDI-A × 2)	
Video Output	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75Ω BNC × 8 (PGM × 2, AUX × 6), HDMI (AUX) × 1 (HDCP, AUDIO incompatible)	
Video Output (optional)		
HVS-30HSDO	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75Ω BNC × 3	
HVS-30HSAO	HD analog component, SD analog component, Analog composite	
HVS-30PCO	DVI-D: SXGA to WUXGA/HDTV (1080i), SXGA/WXGA (720p), SVGA (SD) (HDCP incompatible)	
	RGB: SXGA to WUXGA (1080i), SXGA/WXGA (720p), SVGA (SD), YPbPr: HDTV (1080i)	
Number of Outputs	Standard: 9 (SDI × 8, HDMI × 1), Max.: 13 (with 2 output cards)	
AUX Outputs	Standard: 6, Max.: 8 * Crossfade switching available on each AUX output	
Signal Processing	4:2:2 Digital component	
Quantization	HD/SD-SDI: 10-bit	
Genlock Input	BB: NTSC 0.429 Vp-p/PAL 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p, 75Ω BNC × 1, loop-through (Terminate with 75Ω terminator, if unused.)	
System Phase Adjust	Horizontal: -1/2H to +1/2H	
Genlock Output	BB: NTSC 0.429 Vp-p/PAL 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p, 75Ω BNC × 1	
I/O Delay	HD: 1 H, SD: 1.7 H (minimum delay)	
	1 to 2 frames + minimum delay (when FS or up-resize engine used)	
	2 to 3 frames + minimum delay (when FS or up-resize engine plus DVE used)	
	3 to 4 frames + minimum delay (when FS or up-resize engine plus output resize engine and DVE used)	
Interfaces	EDITOR: 9-pin D-sub (female) × 1 (inch screw)	
	RS-422: 9-pin D-sub (female) × 6 (inch screw)	
	GPI IN: 15-pin D-sub (female) × 1 (inch screw) 10 inputs	
	GPI/TALLY OUT: 25-pin D-sub (female) × 1 (inch screw) 20 outputs	
	ARCNET: 75Ω BNC × 1, loop-through (Terminate with 75Ω terminator, if unused.)	
	Ethernet: 100BASE-TX/1000BASE-T RJ-45 × 1	
Temperature / Humidity	0°C to 40°C / 30% to 90% (no condensation)	
Power	100 V AC to 240 V AC ±10%, 50/60 Hz	
Consumption	HVS-390HS: Max. 510 W (100 V to 120 V AC), 460 W (220 V to 240 V AC)	
	HVS-391OU: Max. 32 W (100 V to 120 V AC), 30 W (220 V to 240 V AC)	
	HVS-392WOU: Max. 39 W (100 V to 120 V AC), 37 W (220 V to 240 V AC)	
	HVS-392OU: Max. 43 W (100 V to 120 V AC), 40 W (220 V to 240 V AC)	
	HVS-392ROU: Max. 28 W (100 V to 120 V AC), 26 W (220 V to 240 V AC)	
Dimensions/Weight	HVS-390HS: 430 (W) × 450 (D) × 132 (H) mm / Approx. 17 kg (standard), Approx. 20 kg (full option)	
	HVS-391OU: 576 (W) × 279 (D) × 131 (H) mm / Approx. 5.5 kg	
	HVS-392WOU: 800 (W) × 409 (D) × 132.6 (H) mm / Approx. 10.5 kg	
	HVS-392OU: 576 (W) × 409 (D) × 132 (H) mm / Approx. 8.5 kg	
	HVS-392ROU: 430 (W) × 409 (D) × 132 (H) mm / Approx. 7.5 kg	
Accessories	Main unit: Operation manual (CD-ROM), Setup guide, AC cord, Rack mount brackets (for main unit) HVS-391OU/392WOU/392OU/392ROU: Operation manual, AC cord, BNC cable (10 m)	
Consumables (if used 24 hours a day at room temperature)	Cooling fan: Replace every 4 years Power unit: Replace every 5 years	
Options	HVS-39EXTME: M/E expansion card (for 1 M/E model)	HVS-39MEM: Video memory expansion card
	HVS-30HSDI: HD/SD-SDI input card (w/ up-resize engine)	HVS-30HSAI: Analog input card
	HVS-30PCIN: PC input card	HVS-30HSDO: HD/SD-SDI output card
	HVS-30HSAO: Analog output card	HVS-30PCO: PC output card
	HVS-AUX8/16/32: AUX remote unit (Arcnet type)	HVS-AUX16A/32A/64A: AUX remote unit (Ethernet type)
	HVS-AUX16B: Desktop Type of AUX remote unit (Ethernet type)	HVS-AUX8RK/AUXRK: AUX remote extension kit
	HVS-TALR20/32: Tally relay unit (20/32 terminal)	HVS-TALOC20/32: Tally open collector unit (20/32 terminal)
	HVS-30TALR: Tally relay output card	HVS-39ED: Editor interface software
	HVS-39VR: Virtual link software	HVS-39PSM: Redundant power supply unit for main unit
	HVS-39PSO: Redundant power supply unit for HVS-391OU/392WOU/392OU/392ROU	HVS-39MB: Memory backup function



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