

HD/SD Portable Video Switcher
HVS-300HS "1M/E HANABI Portable"

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

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HANABI

HD/SD Portable Video Switcher

HVS-300HS "1M/E HANABI Portable"



HVS-300HS: The New Standard in Small HD/SD Switchers!

Unrivalled Features, Unequaled Cost Performance

The HVS-300HS is the newest addition to FOR-A's popular Hanabi series and represents one of the most powerful, compact, broadcast level switchers on the market.

Although small, its 1 Rack Unit main frame is packed with features including; Frame synchronizing and re-sizing engine on every channel which allow any Standard Definition equipment to be used in full HD mode. It also has plenty of wipe patterns including 2D and 3D DVE transitions. The base unit also has keyer with chroma key, DSK, Dual picture in picture, 16-channel Multi Viewer, Still Stores and much more. It is perfectly suited for a wide-range of applications including studio production, event and sports coverage, news, live staging and corporate use.



HVS-300HS Main Features

Whether you work in HD, SD or a combination of both, there are enough inputs and outputs to suit your needs.

Compact Main Frame

The main unit incorporates up to 12 inputs and 8 outputs, Frame Synchronizer, Re-sizing Engine, Still Store, Keyer with Chroma Key, DSK, and a wide array of other functions in a compact EIA 1RU size.



Input/Output

4 HD/SD-SDI inputs and outputs are provided in the standard configuration. This includes 2 PGM outputs and 2 AUX outputs. With optional I/O cards we can provide up to 12 Inputs and 8 Outputs.

Support Formats;

1080/60i, 1080/59.94i, 1080/50i, 1080/24PsF, 1080/23.98PsF, 720/60p, 720/59.94p, 720/50p, 525/60 (NTSC), 625/50 (PAL)

Frame Synchronizers

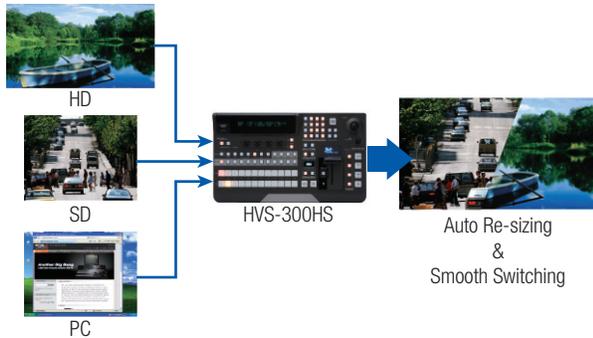
Each input is fitted with its own frame synchronizer which can be turned on or off for minimum delay.

This also allows any sources without genlock capability (such as consumer devices or computers) to be used. When "genlocking" everything, we provide Black Burst or Tri-level sync output.

Up-converter/Re-sizing Engine

Up-converter/ re-sizing engine on every input. Should you need to use Standard Definition equipment in HD mode, just plug in.

This is ideal for users making the transition to HD production.



OSD (On-screen Display)

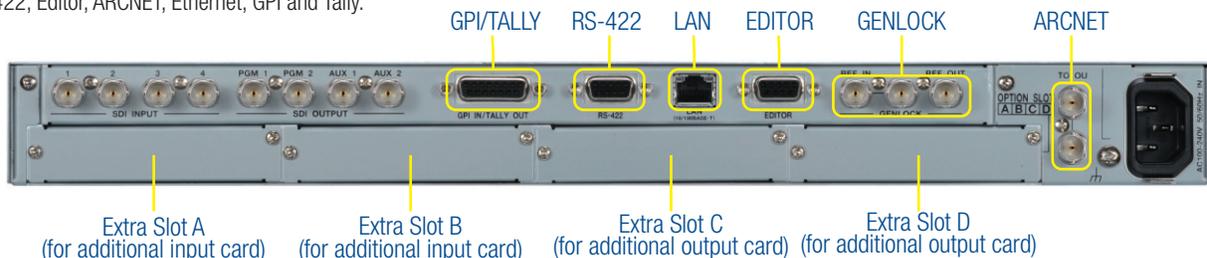


OSD image

Another new idea is to allow switcher settings to be displayed on a preview output so that configurations can easily be modified and status verified at a glance.

Interfaces

The HVS-300HS also supports many types of interfacing, such as RS-422, Editor, ARCNET, Ethernet, GPI and Tally.



Keyer/DSK

One Keyer and one DSK are provided as standard features. The Keyer provides an easy to use broadcast level Chroma Key. Both Keyer and DSK are equipped with a 2D DVE for positioning graphics or over the shoulder shots.

Transitions/DVEs

For transitions we offer CUT, MIX and over 100 wipe patterns, plus 38 2D/3D-DVE Wipe patterns. We even have separate transitions for the keyers and picture in picture functions.

2 Still Stores

The base unit also comes with 2 dedicated still stores, which can upload or download images via the USB port.

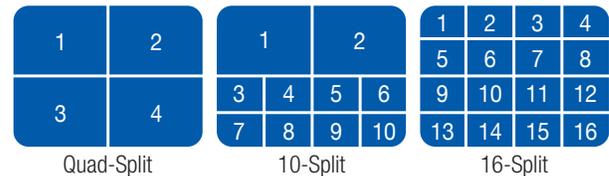
The USB port also makes up&down-loading user settings very quick and easy.

4/10/16 Split Multi Viewer

One of the most popular new features of our switcher is its built in 16-channel multiviewer, a standard feature.

You can freely assign any input or output (program or preview) to the multiviewer, using either its 4, 10 or 16 channel display.

The multiviewer also features tally and titling functions so that users always know which signals are going to each output.

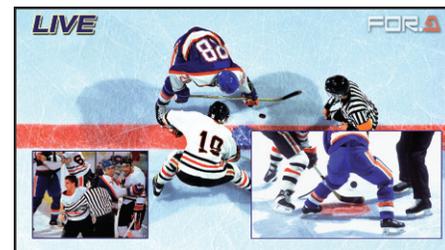


2 Picture-in-Picture

For box shots, over the shoulder shots and graphic display, there are two dedicated picture in picture channels that can compress any input from 1% to 25%. These are in addition to the keyer DVEs.

Users can also Expand, Squeeze, Crop and add Borders with the dual Picture-in-picture mode.

These effects can be assigned to user buttons so that fade-ins, fade-outs, slide-ins and slide-outs for picture in picture transitions can be operated by single button operations.



4 Control Panels

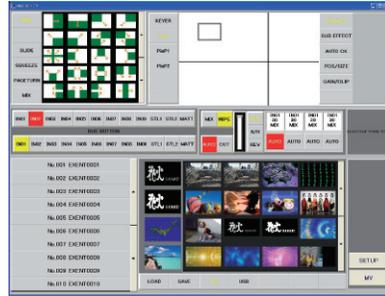
The HVS-300HS has 4 types of control units. These control devices should suit any working environment and provide a level of redundancy to please any operator or engineer.

HVS-300U: Operation Unit



The HVS-300U control unit is a traditional type of control panel with large bus buttons, AUX buttons, a fader, and function buttons laid out to maximize ease of operation.

HVS-30GUI: Remote Control Software



We also offer control software called the HVS-30GUI. This can be installed on any PC and will provide users with full switcher control over IP.

HVS-30FP: Front Control Panel



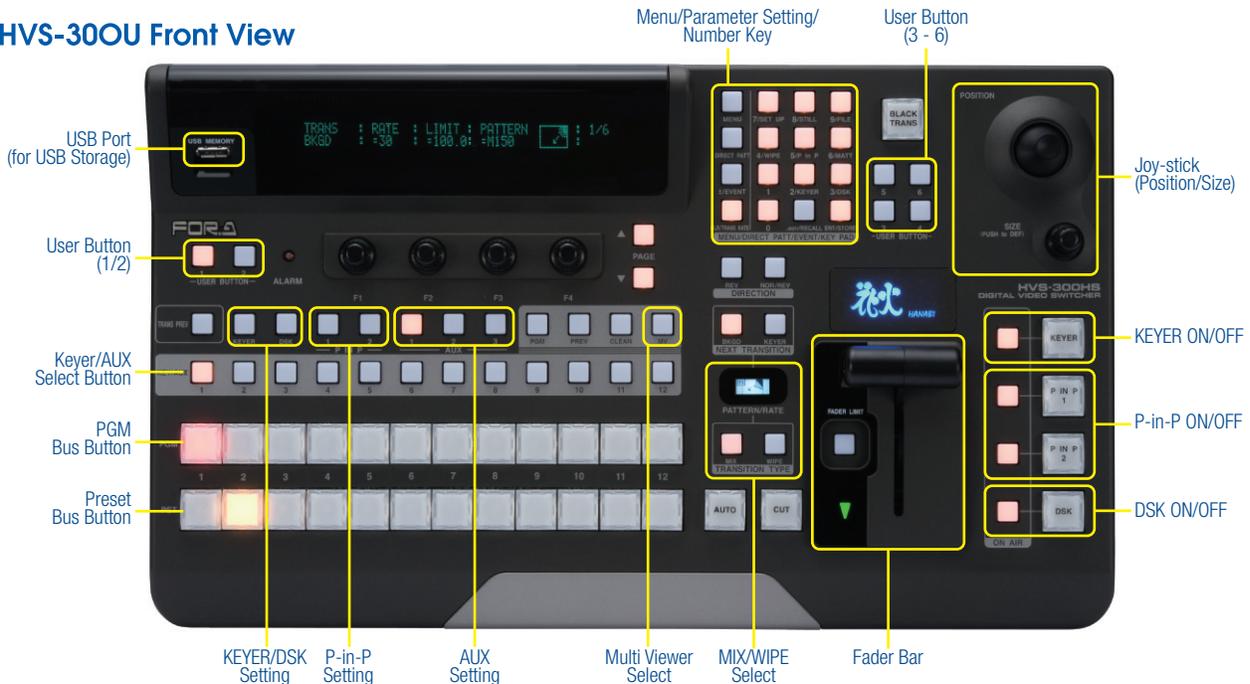
The HVS-30FP, a simple and compact control unit designed to fit on the front of the Main unit and into a 1 RU rack space.

HVS-30RU: Remote Control Unit

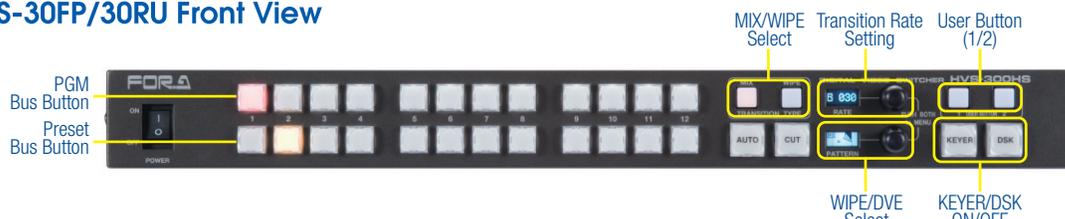


The HVS-30RU is similar to the HVS-30FP and can be used for remote switching or as an AUX remote.

HVS-300U Front View



HVS-30FP/30RU Front View



Options

The HVS-300HS can have up to 12 inputs and 8 outputs when optional I/O cards are installed. There are four extra slots available, 2 for inputs and 2 for outputs. These can be used with optional I/O cards for HD/SD-SDI, Analog Component, Analog Composite, DVI and Analog RGB signals.

HVS-30HSDI HD/SD-SDI Input Card



The optional HD/SD-SDI input card provides 4 extra inputs.

HVS-30HSDO HD/SD-SDI Output Card



The optional HD/SD-SDI output card provides 2 additional outputs. The HD/SD-SDI output cards have a 3rd down-converted SD output as well.

HVS-30HSAI Analog Video Input Card



The analog input card provides 2 analog inputs. These can be set up as composite, component or one of each.

HVS-30HSAO Analog Video Output Card



The analog output card provides 2 analog outputs. These can be set up as composite, component or one of each. Of course the composite output is down converted in HD mode.

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-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 VGA to WUXGA.

HVS-AUX8

HVS-AUX16 AUX Remote Panel



We have optional AUX remote panels with either 8 or 16 buttons. The 8-button panel is half a rack wide, and the 16-button panel is of a full rack width.

One can daisy-chain multiple AUX remote control units via ARCNET. Furthermore, a cable extension kit is available so that the button panel can be detached from the main unit.

HVS-TALOC20/32

HVS-TALR20/32 Tally Interface Unit



Tally Interface with power supply. There are 4 types available for both Open Collector and Relay systems with choices of 20 or 32 contacts respectively.

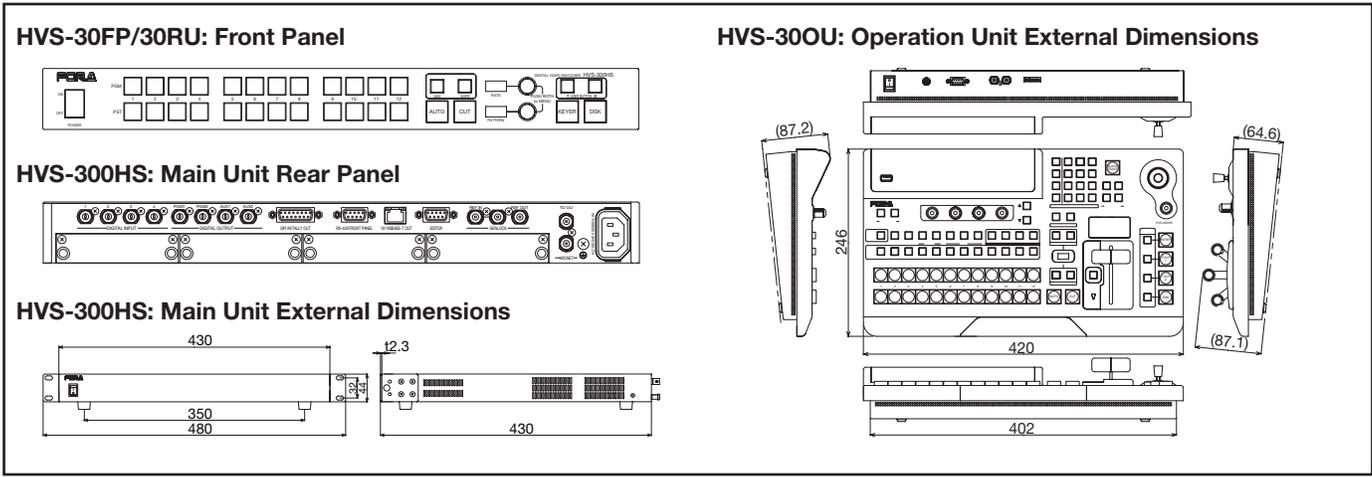
- HVS-TALOC20: Open Collector system with 20 contacts
- HVS-TALOC32: Open Collector system with 32 contacts
- HVS-TALR20: Relay system with 20 contacts
- HVS-TALR32: Relay system with 32 contacts

HVS-30ED Editor Interface Software

Interface software to connect with an Editor. It is BVS-3000 and GVG-100 Protocol compliant.

Specifications

	HD mode	SD mode
Standard	1080/60i, 1080/59.94i, 1080/50i, 1080/24PsF, 1080/23.98PsF, 720/60p, 720/59.94p, 720/50p (selectable at menu)	525/60 (NTSC), 625/50 (PAL) (selectable at menu)
Processing	4:2:2:4, 10-bit, digital component	
Quantization	Y: 10-bit, C: 10-bit, KEY: 10-bit	
Video Input	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, or SD-SDI: 270Mbps, 75Ω, 4 inputs, BNC	SD-SDI: 270Mbps, 75Ω, 4 inputs, BNC
Video Input (Option)	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, or SD-SDI: 270Mbps, 75Ω, BNC DVI: DVI-D connector, Resolution (XGA - WUXGA) (HDCP incompatible) VGA: 15-pin D-sub (female), Resolution (XGA - WUXGA), R/G/B: 0.7Vp-p, H/V: TTL HD analog component: Y: 1.0Vp-p, PB/PR: 0.7Vp-p, 75Ω, BNC SD analog component: Y: 1.0Vp-p, R-Y/B-Y: 0.7Vp-p, 75Ω, BNC Analog composite: 1.0Vp-p, 75Ω, BNC	SD-SDI: 270Mbps, 75Ω, BNC DVI: DVI-D connector, Resolution (VGA - XGA) (HDCP incompatible) VGA: 15-pin D-sub (female), Resolution (VGA - XGA), R/G/B: 0.7Vp-p, H/V: TTL SD Analog component: Y: 1.0Vp-p, R-Y/B-Y: 0.7Vp-p, 75Ω, BNC Analog composite: 1.0Vp-p, 75Ω, BNC
Reference Input	BB: NTSC: 0.429Vp-p/PAL: 0.45Vp-p, or Tri-level sync: ±0.3Vp-p, 75Ω or lothrough, 1 input, BNC	BB: NTSC: 0.429Vp-p/PAL: 0.45Vp-p, 75Ω or lothrough, 1 input, BNC
Video Output	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, 75Ω, 4 outputs, BNC (PGM x 2, AUX x 2)	SD-SDI: 270Mbps, 75Ω, 4 outputs, BNC (PGM x 2, AUX x 2)
Video Output (Option)	HD-SDI: 1.485Gbps or 1.485/1.001Gbps, 75Ω, BNC HD Analog component: Y: 1.0Vp-p, PB/PR: 0.7Vp-p, 75Ω, BNC DVI: DVI-D connector, Resolution (SXGA - WUXGA) (HDCP incompatible) VGA: 15-pin D-sub (female), Resolution (SXGA - WUXGA), R/G/B: 0.7Vp-p, H/V: TTL	SD-SDI: 270Mbps, 75Ω, BNC SD Analog component: Y: 1.0Vp-p, R-Y/B-Y: 0.7Vp-p, 75Ω, BNC DVI: DVI-D connector, Resolution (SVGA) (HDCP incompatible) VGA: 15-pin D-sub (female), Resolution (SVGA), R/G/B: 0.7Vp-p, H/V: TTL
Reference Output	BB: NTSC: 0.429Vp-p/PAL: 0.45Vp-p, or Tri-level sync: ±0.3Vp-p, 75Ω, 1 output, BNC	BB: NTSC: 0.429Vp-p/PAL: 0.45Vp-p, 75Ω, 1 output, BNC
I/O Delay	1H (minimum delay mode) 1 frame - 2 frame + 1H (Using frame synchronizer or Input re-sizing engine) 2 frame - 3 frame + 1H (Using frame synchronizer or Input re-sizing engine + DVE) 3 frame - 4 frame + 1H (Using frame synchronizer or Input re-sizing engine + Output re-sizing engine + DVE)	
Backup Device	USB memory device	
Interfaces	EDITOR: 1 port, 9-pin D-sub (female) RS-422: 1 port, 9-pin D-sub (female) GPI IN/TALLY: 1 port, 15-pin D-sub (female) (12 in/outputs) ARCNET: 1 port, 75Ω or lothrough, BNC Ethernet: 10/100Base-T, 1 port, RJ-45	
Temperature / Humidity	0°C - 40°C / 30% - 90% (no condensation)	
Power / Consumption	100VAC - 240VAC ±10%, 50/60Hz / Max. 220VA (211W)	
Dimensions / Weight	HVS-300HS: 430 (W) x 44 (H) x 430 (D) mm / Approx. 8kg (full option: 10kg) HVS-300U: 420 (W) x 87.2(H) x 246 (D) mm / Approx. 3kg HVS-300HS+HVS-30FP: 430 (W) x 44 (H) x 446 (D) mm / Approx. 9kg HVS-30RU: 430 (W) x 44 (H) x 42 (D) mm / Approx. 1.5kg	
Accessories	Operation manual, AC cord, Rack mount brackets (for main unit)	
Options	HVS-30HSDI: HD/SD digital input card HVS-30HSAI: HD/SD analog input card HVS-30PCIN: PC input card HVS-AUX8: Aux Control Box (8-button type) HVS-AUX16: Aux Control Box (16-button type) HVS-30ED: Editor interface software	HVS-30HSDO: HD/SD digital output card HVS-30HSAO: HD/SD analog output card HVS-30PCO: PC output card HVS-TALOC20/32: Tally open collector unit (20/32 terminal) HVS-TALR20/32: Tally relay unit (20/32 terminal)



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