

# SD or HD?

Shouldn't your production switcher handle both?



If you haven't already made the move to HD, chances are you will at some point in the future. As the heart of a small television studio or in playout, venue and OB applications, new JVC KM-H Series multi-format digital production switchers deliver flexibility, reliability and affordability – with the added benefit of being able to handle both SD and HD video signals.

The KM-H3000 is a powerful 12-input, 3-key SD/HD-SDI switcher, while the KM-H2500 is a 6-input, 2-key model ideal for entry level applications. Both feature a robust, single-piece metal construction for desktop or optional in-desk/rack-mount operation, high-end push buttons and a robust T-Bar; all designed to handle the physical challenges of mobile and flight-case use.

Both switchers feature an intuitive, traditional panel layout and a simple menu structure, and are very easy to set-up and use. Buttons are user adjustable to any brightness and hue for easy viewing in darkened environments, allowing the user to fully customise the appearance of their own unit. High quality chroma keying and sophisticated dual animation playout capability ensures that the KM-H switchers will satisfy the most demanding of applications.

### Key Features

- Twelve (six on KM-H2500) multi-definition SD/HD-SDI inputs 480i, 576i, 720p, 1080i 50/60Hz
- Three keyers (two on KM-H2500)
- Four inputs feature frame synchronisers
- Four up/down converters
- Two 2D DVEs with crop and resize functionality
- Robust full metal single-piece design with professional buttons and T-bar
- Two internal media store sources with animation support
- One pattern generator with circle and pattern rotation
- One wash generator
- One floating high quality chroma keyer
- Six SD/HD-SDI outputs; 2 program, preview, Aux 1, Aux 2 and Aux 3
- One analogue composite output
- Sync generator with three independently timed outputs
- Remote control using RS422 and 24 GPI inputs
- Ten memories, eight tallies
- Optional desk/rack-mount frame
- Optional redundant power supply

# Specifications

## KM-H3000/2500

<b>Multi-Definition</b>		
Standard Definition*	480i/59.94, 576i/50 (all at 4:3 and 16:9)	
High Definition	1080i/59.94, 1080i/50, 720p/59.94, 720p/50	
<b>Input</b>		
Inputs	(KM-H3000) - 12 SDI Multi-Definition (KM-H2500) - 6 SDI Multi-Definition	
Frame Sync	4	
Reference	Black Burst, Tri-Level Sync (internally terminated)	
Input Connectors	BNC	
Colour Signalling	Y:Cb:Cr 4:2:2, 10 bit	
Signal Interface	SMPTE 292M	
Signal Loss	>15dB, 5 MHz to 1.5GHz	
<b>Output</b>		
Outputs*	6 SDI Multi-Definition + 1 analogue	
Output Types	2 x PGM, 1 x Preview, 3 x Aux (w/clean feed), 1 x down-converted analogue NTSC/PAL	
Reference	3 independently adjustable outputs with Genlock Black Burst and Tri-Level Sync Internally or externally locked	
Signal Interface	SMPTE 292M	
Signal Loss	> 15dB, 5 MHz to 1.5 GHz	
<b>Interfaces</b>		
Tally Support	8 (D-sub 9 connector)	
Editor Interface	1 (D-sub 9, RS-422)	
General Purpose Interface	24 input (1 x D-sub 25 connector)	
Ethernet Management Interface	10/100Mbps (RJ45 connector)	
Media Interface	USB 2.0	
<b>* Ordering notes</b>		
There are two versions of each switcher: KM-H2500U/KM-H3000U and KM-H2500E/KM-H3000E. The U versions feature a North American-style power cord and standard definition format is 480i/59.94, as is the analogue output. The E versions feature European-style power cords and standard definition format is 576i/50, as is the analogue output.		
<b>Attributes</b>		
Source Buttons	(KM-H3000) - 10 (KM-H2500) - 6	
User Adjustable Panel Glow	Yes	
Matte Background Colour Generator	Yes	
Wash/Graduation	Yes (2 colours)	
Dissolve	Variable transition rate	
Keyers	(KM-H3000) - 3 (KM-H2500) - 2	
Transition Methods	Fader, Auto, Cut, GPI, Editor	
Key Source and Fill	Input, Matte, Wash, Media Store	
Key Types	Self, Linear, Chroma, PIP	
Chroma Key	Yes	
Picture in Picture	Yes	
Wipe Patterns	10	
Circle Wipe	Yes	
Digital Video Effects	2D	
Aux Buses	3	
SD/HD Up/Down Conversion	Yes	
Internal Still and Animation Stores	2	
Display	VFD	
Menu Control	3 push button knobs	
Positional Joystick	(KM-H3000 only) - Professional grade	
<b>Operating Environment</b>		
Power	100-240V AC	
Redundant Power	Optional	
Temperature	7-40°C (45-104°F)	
<b>Mechanical Specifications</b>		
Panel Dimensions (WxDxH) mm	404 x 272 x 122	
Mounting Options	Desktop, Rack, In-Desk	
Construction Material	Robust Metal	
Weight	(KM-H3000) - 4.17 Kg (9.2 lbs) (KM-H2500) - 3.95 Kg (8.7 lbs)	



• KM-H3000

• KM-H2500



# KM-H Series

Multi-format digital production switchers



# KM-H3000

Multi-format digital production switcher

## Wipes/menu

- Instant access to transition types, each modifiable via the menu system
- Wipe modifiers include vertical and horizontal multipliers and wipe rotation
- Colour borders, softness, aspect ratio, also controlled by menu system
- Buttons allow easy access to memory functions, providing ten individual function stores

## Key/DVE selection

- Auto select chooses the input's key
- Exceptionally high-quality chroma keyer
- DVE dual picture-in-picture keyer

## Key selection

- Activates source selection for Key 2 and Key 3, and the three aux busses, via the Key/Aux bus

## Key/Aux Bus

- Key input selection bus
- Auxes can be used to send a number of different sources to other equipment, such as on-set monitors, slow motion servers, replay servers, waveform monitors, video servers, etc.

## Program Bus

- Enables direct selection of program output, with active source lighting
- Accesses media stores for still images and animations

## Preset Bus

- Selection of next background
- Also AUX PGM, AUX PREV and AUX CLN (clean) selection buttons for aux outputs

## Memory/menu

- Memory access keys for quickly recalling memory sets from one of the ten available memories
- Menu and Next keys activate and navigate the menu

## Menu display

- Easy to read screen for clear menu display
- Three rotary/push button controls, offering simple parameter selection
- Intelligent 'menu follows function' feature

## USB interface

- USB port for uploading still images and animations
- Allows easy software updates
- Saves switcher system configuration

## Positioner

- Durable positioner for rapid 2D DVE and wipe positioning



## Transition type

- Direct access to dissolve, wipe or DVE transition

## Transition element

- Change any combination of video layers simultaneously
- Preview output always shows an accurate representation of the next scene

## T-bar & indicator

- Multi-LED fader progress bar (zinger) displays the transition direction and progress
- Assists in setting fader limits
- Robust, reliable and easy-to-use metal fader

## Key transitions

- Easy independent cut or dissolve of keyers

# Powerful keying



Two 2D DVEs, featuring lower third and background graphic



High quality chroma key with DVE, lower third and graphic overlay

## KM-H2500

Perfect for entry-level applications, the KM-H2500 shares the features and facilities of the KM-H3000 with the following exceptions:

- Six multi-definition SDI inputs
- Two keyers
- No positioner, so Wipe and DVE positioning set via knobs



# The heart of the studio

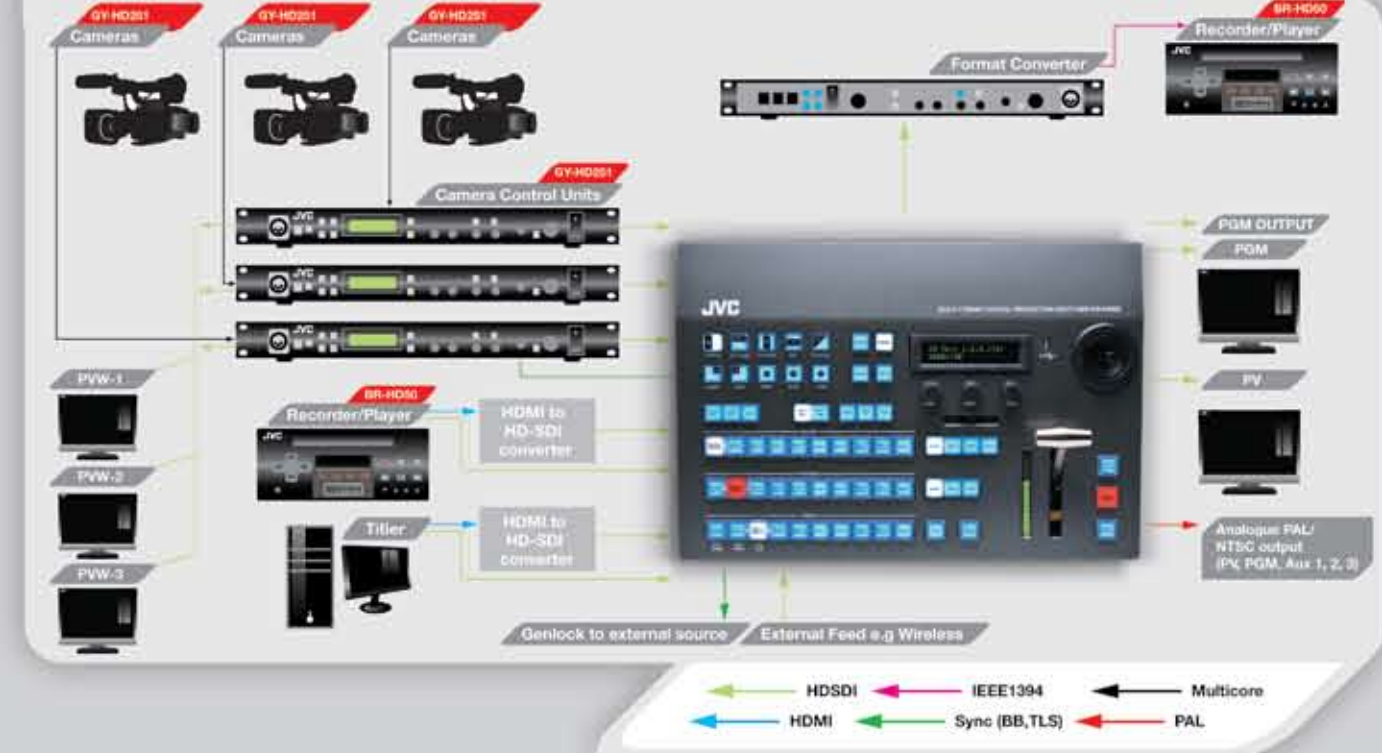
Unlike other switchers that ship with only basic functionality, **KM-H Series** switchers come fully equipped with all inputs, chroma key, animation stores and frame synchronisers, with no need to purchase further optional components to enjoy full functionality.

Fitting perfectly with JVC's philosophy of providing an affordable upgrade path to High Definition production, the KM-H Series digital production switchers are the ideal companion for systems incorporating GY-HD250 series multirole cameras and DT-V series HD monitoring solutions.

## Feature summary

- Twelve (six on KM-H2500) multi-definition inputs, 480i, 576i, 720p, 1080i 50/60Hz
- Three keyers (two on KM-H2500)
- Four inputs with frame synchronisers
- Four up/down converters
- Two 2D DVEs with crop and resize functionality
- Two internal media store sources with animation support
- Floating high quality chroma keyer
- Sync generator with three independently timed outputs

## Typical studio architecture with KM-H3000



With full-functionality built-in to the KM-H2500 and KM-H3000 production switchers, there's no need to buy expensive options. The only additional accessories are:

- Desktop mount for studio use** - Recessed mounting in the desk ensures the switcher remains securely mounted, and vented, especially when used in an OB van.
- Redundant power supply** - JVC's offering of redundant power is a rare and valuable feature for such affordable digital switchers, ideal for live events and critical applications.

KM-H3000E KM-H3000U  
KM-H2500E KM-H2500U

