

# 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

# JVC

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# Specifications

## KM-H3000/2500

### Multi-Definition

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

### Input

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

### Output

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

### Interfaces

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

### \* Ordering notes

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.

### Attributes

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

### Operating Environment

Power 100-240V AC  
 Redundant Power Optional  
 Temperature 7-40°C (45-104°F)

### Mechanical Specifications

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-H3000E KM-H3000U**

**KM-H2500E KM-H2500U**

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# 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



## 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

**KM-H3000E KM-H3000U**

**KM-H2500E KM-H2500U**

## 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

MULTI FORMAT DIGITAL PRODUCTION SWITCHER KM-H3000

er: 1.0.0.1304  
i/50

PUSH

PUSH

KEY1 KEY2 KEY3

WIPE DVE

AUTO TRANS

KEY1 TRANS

KEY2 TRANS

KEY3 TRANS

## 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

# Multiviewer



Includes internal high quality 10-input multiviewer and output routable to Preview or PGM-2 HD-SDI outputs

# Powerful keying



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

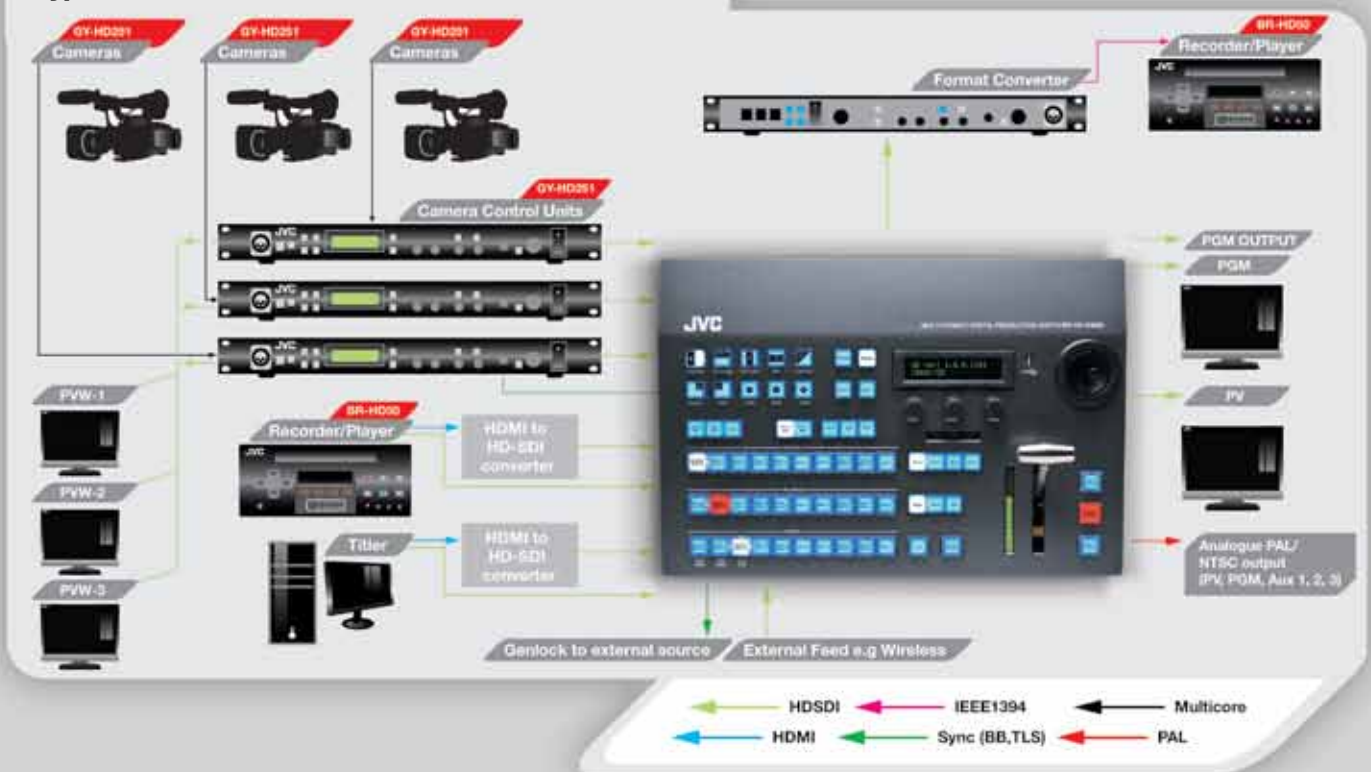
Unlike other switchers that ship with only basic functionality, KM-H Series switchers come fully equipped with all inputs, chroma key, animation stores and frame synchronisers, with no need to purchase further optional components to enjoy full functionality. The KM-H series now comes with a free multiview function which includes high quality 10-put multiviewer.

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 keys (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
- Free Multiview function

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.