

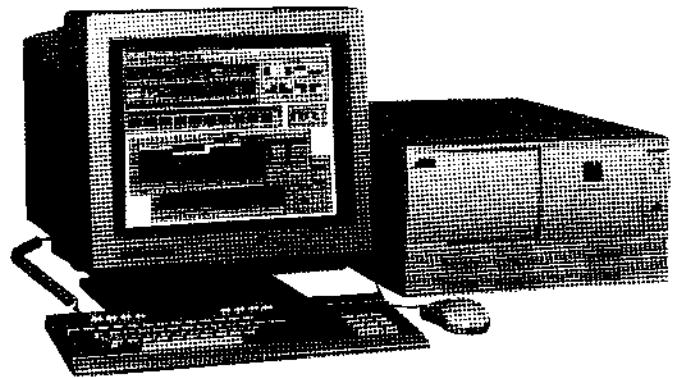
# Non-Linear Editing System

TimeGate

## MW-S1000E

COMPONENT DIGITAL  
**4:2:2**

- All-in-one hybrid 4:2:2:4 non-linear editing machine provides users with streamlined and customisable operations.
- The TimeGate MW-S1000E running under Windows NT, is capable of dual Pentium Processors, and is standard with 64 Mb of system RAM and a 12 to 27 GB gigabyte media disk array that provides dual video streams running at 40 Megabytes per second. An external expansion drive array can be added to boost total media capacity to 15 drives.
- All video input and output carried by standardised Movie II bus that supports up to 8 fully independent 270 Mb/s video streams simultaneously with Four channels of uncompressed audio.
- Live multi-layering capabilities allows the system to combine a background, two video streams that may contain 2D or 3D effects, or standard wipe patterns, and a graphic channel, down to one layer that is recorded on the media array. The new recording becomes a single video stream to be combined to yet another video stream. 2D, 3D effects and graphics make up a second, third, tenth and twentieth layer. This multi-layering process may be repeated until the desired edit is achieved. No rendering is involved in this process.
- The MW-S1000E offers editors real-time-slow-motion in forward and reverse play. Two streams of slow-motion video, one running forward and the other running backward at different speeds from 0 to greater than 500 times normal play can be achieved. Fit and Fill is also supported.
- There are high-quality, all real-time 4:2:2:4 digital 2D and 3D effects such as page turns, spheres, key frame moves, chroma keys and luminance keys as well as real-time graphics, including perspective, skew, size, rotation, axis trail, de-focus and more. All these effects can be further customized by the user and stored by name. Each customized effect can be key framed and placed on the timeline.
- A customisable user tool bar and shortcut keys offers editors more streamlined ways to work.
- There is real-time audio and video scrubbing and a waveform monitor/vectorscope. Real-time audio scrubbing is smooth enough to locate syllables or distinct sounds in an audio track. Video scrubbing allows the user to smoothly move between video frames without seeing jerky motions in the video.
- It is designed to work in tandem with JVC's D-9 format but is equally compatible with other popular analogue and digital tape formats. It can be configured from input to output with all serial, digital, analogue component, V/C or composite video paths.
- The MW-S1000E has a 270 Mb/s video data bus that can support up to 8 simultaneous video channels and 4:2:2:4 processing of all 2D video effects. Its high-performance specs provide dual stream video in and out, Compression ratios from lossless to 30:1 can be selected, and any combination can be mixed on the timeline.
- The non-linear editor is capable of rolling a separate source VTR to allow instant insertion of scenes directly into the record master. This eliminates the need to batch digitize whenever HDD storage is full, or for just eliminating digitising when possible to gain extra speed in producing the final master tape. Source VTR video and timeline video mixing will be offered in a future release.
- The MW-S1000E houses computer, all video, audio, codec, hard disk array and connectors on its back panel in one unit. The CPU motherboard is a server-type board for much greater expansion with third-party products. Networking is easily accomplished by adding the



appropriate Ethernet or fiber channel interface cards, with room to spare for other application cards.

- The MW-S1000E can be offered as a turnkey package complete with speakers, monitors, cables and popular JVC VTRs. This single chassis construction allows for fast and easy installation, set-up and routine maintenance.

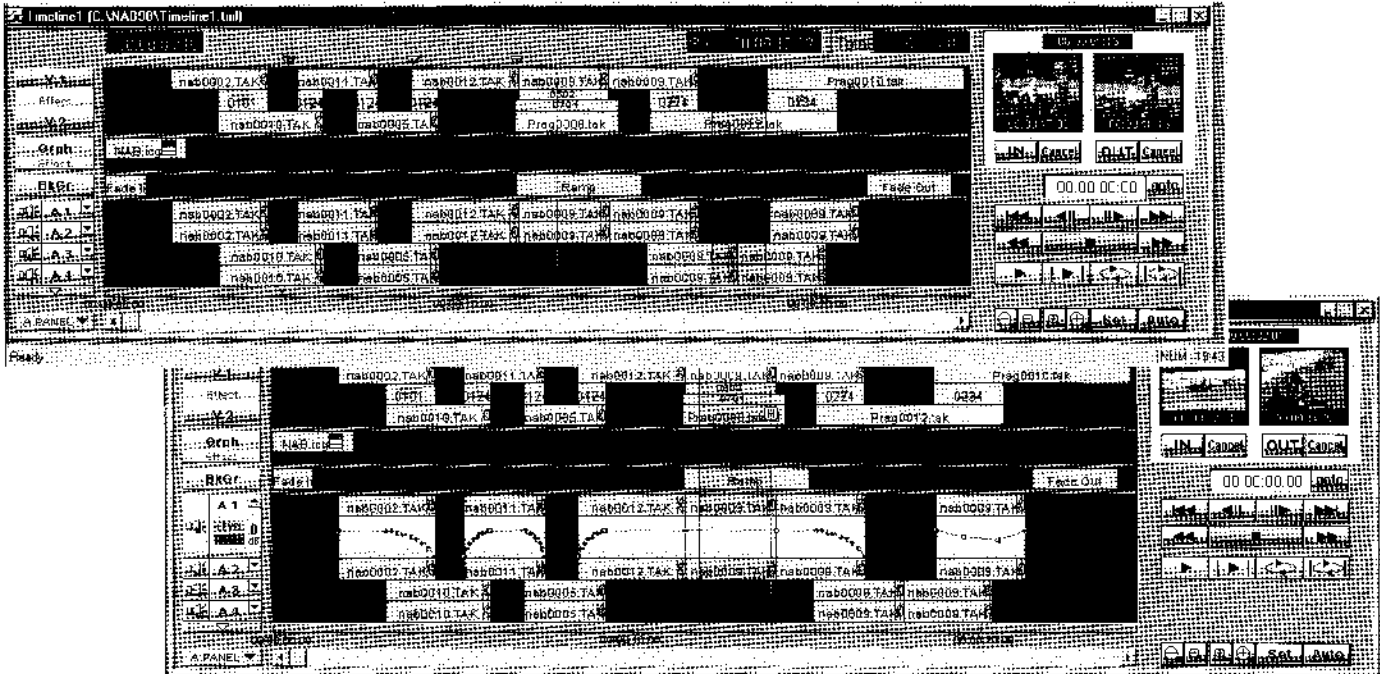
### Quick feature overview

- Superior online picture quality ensured by 4:2:2:4 component digital processing
- 8 different compression rates ranging from "Lossless" to 30:1
- M-JPEG compression system
- Typeset-quality graphics with Inscrber CG
- Optional SDI Input/output (SMPTE 259M) available to facilitate digital transfer of video to and from JVC's D-9 (DIGITAL S) format
- Real-time high-quality video editing
- Real-time effects processing
- 4 independent 4:2:2 2D DVE video channels (an optional 3D DVE is also available); 2 video channels, a graphics channel, and a back-ground channel
- 48 kHz, 16-bit audio channels with analogue or digital I/O
- VTR to VTR, Disk to VTR, and Disk with VTR A/B Roll editing
- EDL import/export
- Open Architecture conforming to industry standards for rapid modular upgrade of both hardware and software. (OS: Windows NT 4.0; Buses: PCI and Matrox Movie 2; Microsoft Direct Show; Open DML consortium extended AVI video and audio stream files).

### THIRD PARTY SOFTWARE TESTED BY JVC

- 3D Graphics/animation - Kinetix 3D studio MAX, Meta Creations Ray dream 3D studio
- Paint - Meta Creations Painter, Corel Photo Paint
- Photo retouch - Adobe Photoshop, Corel Photo Paint
- Drawing - Adobe Illustrator; Video Effects - Adobe After Effects, Artel Boris AE for After Effects
- Video Keying - Ultimate for After Effects; Motion/3D effects for CG - Inscribe plug-in software
- Sound effects - MIDI Classics Wave lab, Sonic Foundry Sound Forge (EDL management/conversion - Software Grille Pre! Reader
- HDD defragmentation - Executive Software Diskeeper (Adobe, After Effects, Photoshop and Illustrator are trademarks of Adobe Systems Incorporated. All other trademarks are the property of their respective owners.)

- User support online at [www.timegate.com](http://www.timegate.com)



Dual timeline

Recording Data

Reel No	Media	IN	OUT	File Name
000000	V A1 A2	23:20:05,27	23:20:07,13	nab0003
000000	V A1 A2	23:22:25,17	23:23:27,19	nab0004
000000	V A1	23:33:11,10	23:33:13,19	nab0005
000000	V A1	23:36:53,13	23:36:56,05	nab0006
000000	V A1	23:40:14,25	23:40:17,04	nab0007
000000	V A1 A2	23:45:37,29	23:45:40,20	nab0008
000000	V A1 A2	23:50:33,02	23:50:35,18	nab0009
000000	V A1 A2	23:52:37,20	23:52:40,19	nab0010
000000	V A1 A2	23:58:25,00	23:58:27,09	nab0011
000000	V	23:59:35,21	23:59:38,22	nab0012

VTR1

JVC BR-S62Z (NTSC)

DF  NDF

00:00:00:00

REV   FWD

VTR control

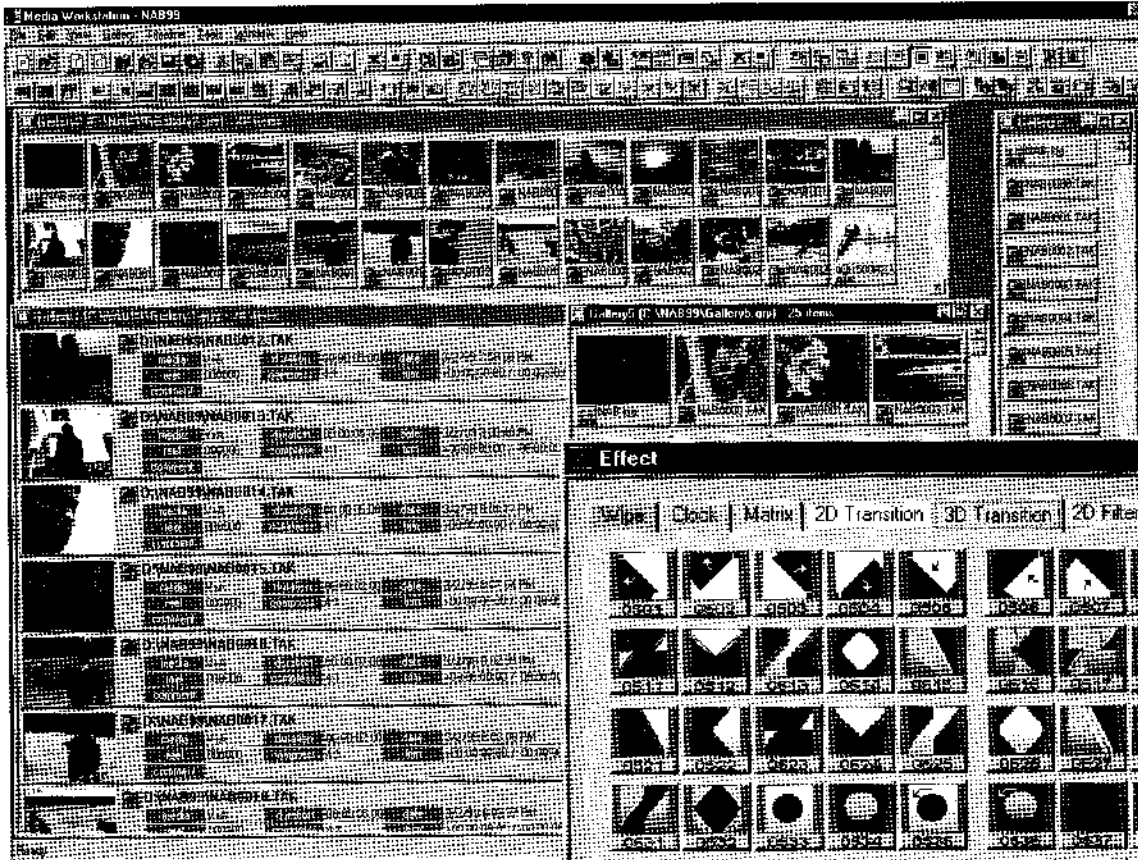
KEYFRAMES

<b>Placement</b>	<b>Size</b>	<b>Rotate</b>	<b>Axis</b>	<b>Perspective</b>
<b>Skew</b>	<b>Shape</b>	<b>Highlight</b>	<b>Shadow</b>	<b>Trail</b>
<b>Border</b>	<b>Crop</b>	<b>Opacity</b>	<b>Wipe</b>	<b>Paint</b>

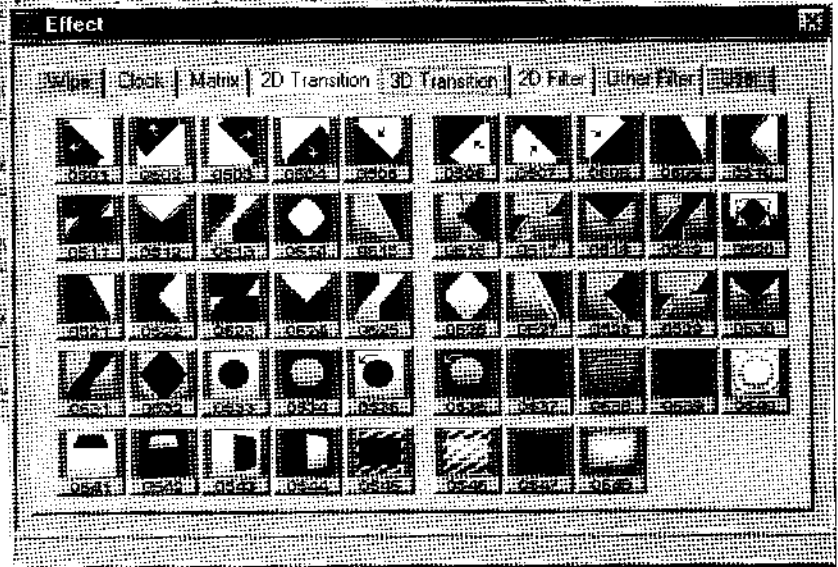
Example effect control

# MW-S1000E

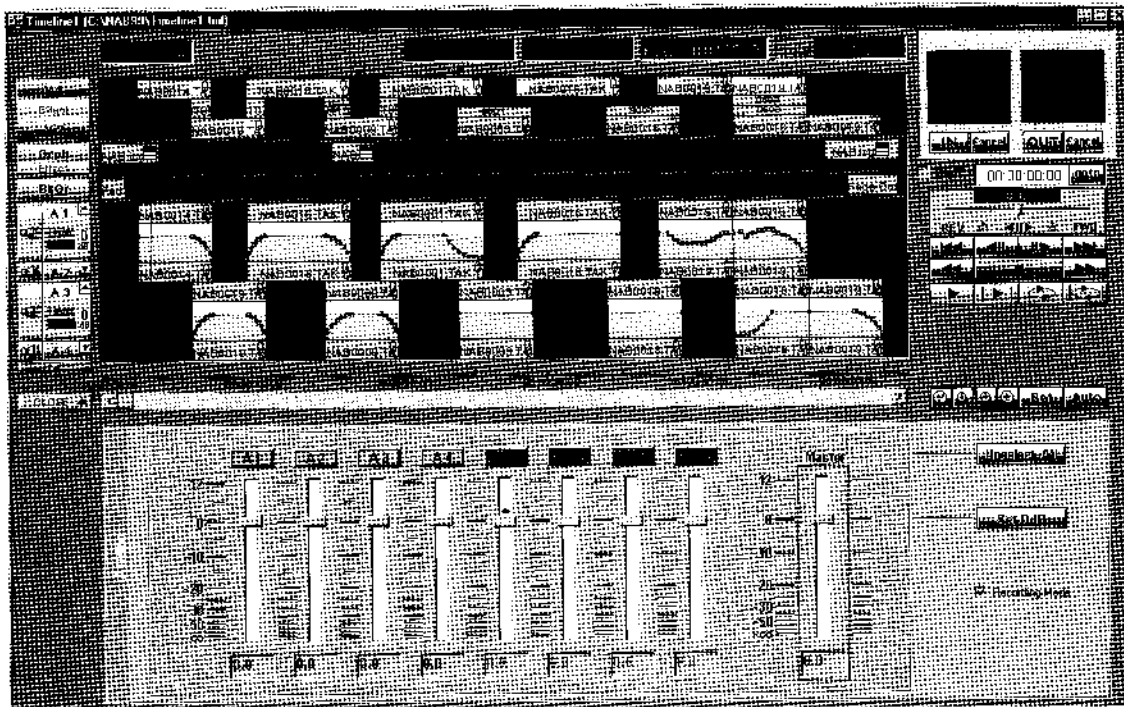
COMPONENT DIGITAL  
**4:2:2**



Gallery



3D DVE



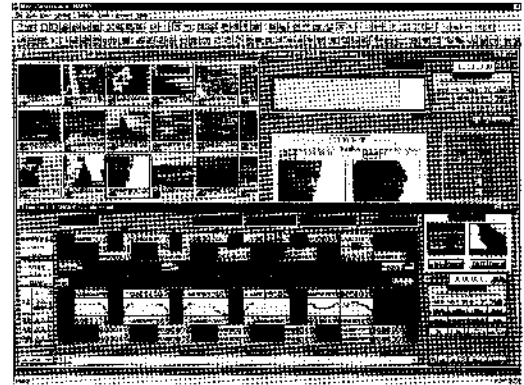
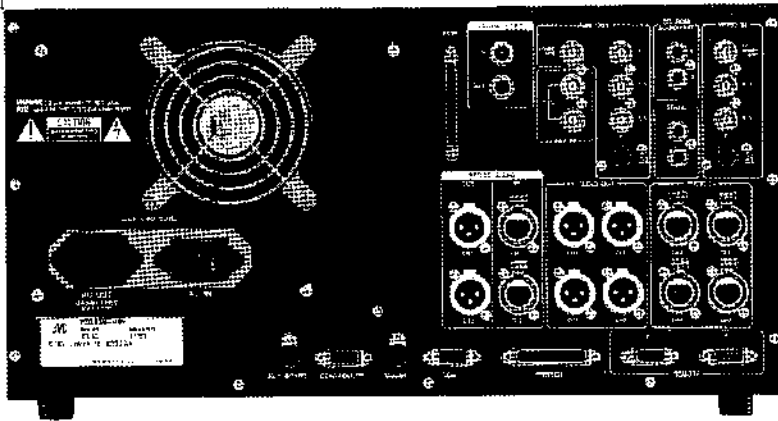
All model numbers, specifications and prices are subject to change without notice

Audio editing

**JVC**  
PROFESSIONAL

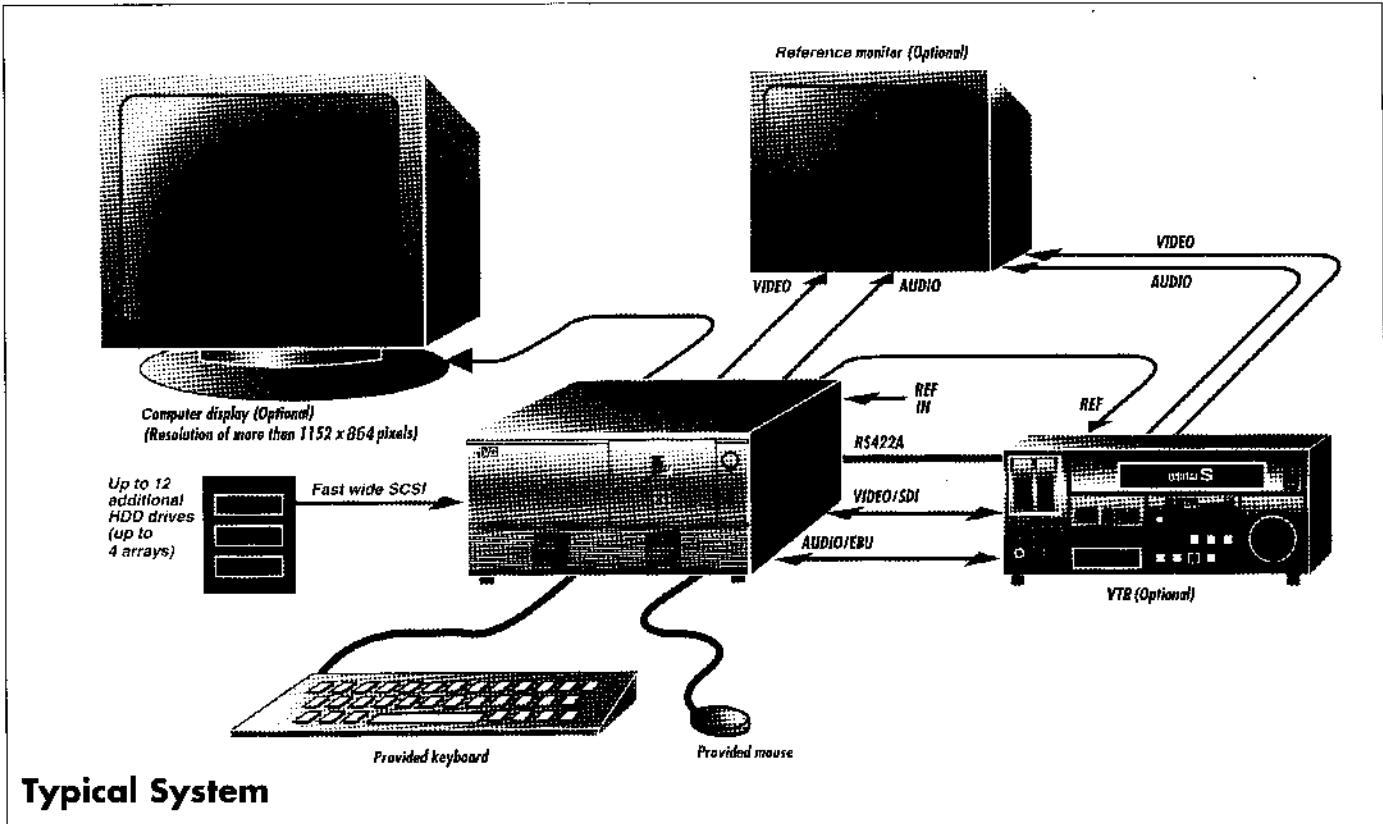
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COMPONENT DIGITAL  
**4-2-2**

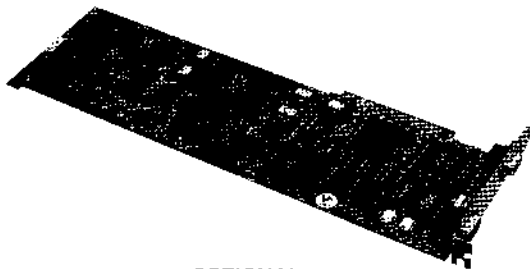


Media Workstation

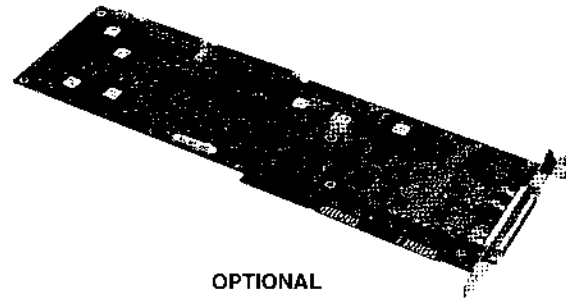
Typical Edit Screen



Typical System



OPTIONAL  
MW-D30U  
3D DVE Board



OPTIONAL  
MW-D10U  
SDI Input / Output Board

All model numbers, specifications and prices are subject to change without notice.

# MW-S1000E



## General

Standards supported: PAL, ITU-R 601  
Output quality: Offline, online (D-9)  
Type of recording: M-JPEG, 30:1 to 4:1 for A/B roll, 2:1 for cuts only

## Editing media

Standard: One internal array of 3 x 4 GB ultrawide differential SCSI (FAST-40) hard disks  
Optional: 4 external arrays from an approved list  
Total drives: 15 drives.  
Tape formats supported for hybrid operation: Any which can be controlled by RS-422 using JVC/Sony protocols.

## Recording time per media

Recording time per GB at highest quality: 3.3 minutes (D-9 quality)  
Recording time per GB at standard quality: 7 minutes (better than S-VHS quality)  
Recording time per GB at lowest quality: 25 minutes (off-line quality)

## Hardware desktop system:

Windows NT 4.0, Dual Pentium Capable. Processing / storage hardware

Optional hardware: Genie 3D DVE, Digilinx SMPTE 259M SDI I/O

## Standard Software:

Proprietary Media Workstation NLE Software, third party Active Movie.

Optional software supported: Third party PhotoShop, and any third party software approved by JVC

## Operation/display

User interface: One video monitor, one 20" computer display (864 x 1152 or above ), keyboard and mouse.  
Clip Search: Searched/sorted by reel number and timecode, file name, date, and file extension (.tmi, .wav, .tak, tga, etc.), All clips are available to all projects.  
Keyboard shortcuts: Supported  
Screen layout: Customised by scaling window sizes and having multiple windows open such as galleries and timelines.  
Display for stored/library clips: Icons  
Primary display for program assembly: Storyboard, timeline  
Sizes of picture display: Full screen  
Timings displayed: HMSF, absolute time

## Synchronization / machine control:

Two external machines for recording or insert editing via RS-422 and Re-recording at a higher resolution using internal EDL supported. The system internally regenerates broken timecode.  
Timecode formats supported: LTC, VITC, drop frame, non drop frame  
Rates used for synchronization (fps): 25

## Input/output

Picture Recording: Batch recording with user definable handles is supported, depending on drive capacity and the third party software used.  
Analogue inputs: [standard] 1 x Y/C, 1 x composite 1 x R-Y, Y, B-Y  
Digital inputs: [optional] SMPTE 259M  
Frames recorded: Every frame  
Fields per frame: Two  
No. of pixels: 720 x 576 (PAL), 720 x 486 (NTSC)  
Motion control: Joy stick (soon to be released), locate to marker, goto any time, random access on timeline  
Analogue outputs: [standard] 1 x Y/C, 1 x composite 1 x R-Y, Y, B-Y  
Digital outputs: [optional] 1 x SMPTE 259M  
No. of simultaneous replay channels: Two  
Timecode output (fps) : 25

## Effects

Basic transition types: Approximately 100 including fades, dissolves, simple wipes, matrix wipes, clock wipes  
Transition are real time, customised by: Transition time, border width/colour/softness, DVE location/aspect ratio, and page turn direction/radius/number of corners.  
DVE types: [standard] linear keys, chroma keys, approximately 20 2D DVEs including slide, zoom and mosaic, [optional] 3D DVEs including page turn, rotation, splash, sphere  
Graphics/Titles: [standard] InscrberCG (with .jcg file format)  
Layers of effects/graphics: Two video, one graphic and one background layer  
Customised effects: Support 3D Effect (Rotate, Axis, Perspective, Skew Shape, Defocus, Trail)  
Change key frame by drag & drop  
Cut, Copy and Paste for KEYFRAME on the Edit line  
Reverse top and tail  
Add short cut key  
Real time colour change by new colour dialogue  
Support constant aspect ratio when compressing video  
Special editing/effects features include: Colour compensation including chroma gain, video gain and video setup.  
DVE system: Provided by Pinnacle hardware and are real time.  
Graphics/title system: Provided by InscrberCG third party software, uncompressed.

<b>Editing:</b>	There are 32 stages of undo; edits can be made between mixed picture resolutions.
Editing types:	Cut, insert, insert black copy, assemble, tag edit
Edit window	Display audio wave form GOTO function Slider bar for search PICON is from IN point
For tape to tape editing:	Insert to record machine material
Edit point marking:	Mark on the fly, enter timecode in stop
Shot trimming techniques:	Jogging, trim in and out, drag timeline Multi-layer by internal HDD (approx. 4 times when using 2-video streams)
<b>Timeline control:</b>	Real time variable speed playback (Slow, Fast, Reverse) Fast seek video and audio Can easily close tape output control panel after timeline output to tape Drag & Drop the selected area from timeline to gallery GOTO original time code Set Audio Level for whole length of timeline
<b>Audio</b>	
Sampling rates (kHz):	48
Analogue inputs:	[standard] 4 ch +4 dBs, 20k kohms.
Analogue outputs:	[standard] 4 ch +4 dBs, 50 kohms.
Digital inputs/outputs:	[standard] 4 ch AES/EBU
No. of editing tracks:	8
No. of simultaneous channels:	[standard] 8
Edit point location techniques:	On the fly, click & drag, waveform
Level/mix functions:	Fade in/out, crossfades, track level, clip level, stereo mixdown
<b>Project function:</b>	Can use previous project parameters as template 1) Setup/timeline setup 2) Effect parameter (Border Width etc....) 3) Customised effect pattern 4) Background colour 5) Tool Bar Change Window design when opening the project file
<b>EDL/data file management</b>	
Number of EDL events in a programme:	999
EDLs supported:	Sony BVE 9100
<b>Media file import/export</b>	
File formats supported are:	
Video:	Extended AVI, Standard AVI
Audio:	WAVE (48K, 16 bit, mono)
Gallery:	Support BMP, PCX file format, with and without Alpha channel - 8, 16, 24, 32 bit graphics PICON preview Can load TEST PATTERNS (add load menu) Add TRIM information on story board
<b>Graphics:</b>	TGA, BMP(still frames grabbed are TGA files)
<b>Network file operation</b>	
Archiving:	Copy clips from another PC or server using optional Ethernet or fibre channel interface card
Recommended archiving devices:	MO and ZIP drives parallel I/F, D-9
Material archived:	Selectable source or program
<b>Configuration</b>	
Standard operational system:	JVC Media Workstation MW-S1000E Desktop unit 2D DVE and Character Generator, 12 GB AV hard drive array, keyboard, mouse, 64 MB RAM, 3.5" 1.44 MB floppy disk drive, 8 x CD-ROM Drive, 1.2 GB system hard drive.
Options:	MW-D10 Serial Digital I/O, MW-D30 3D DVE
<b>Dimensions</b>	
Size:	420(W) x 232 (H) x 622 (D) mm (16-9/16"x 9-3/16"x 24-1/2")
Weight:	Approx. 23 kg (50.7 lbs.) or less
Power Consumption:	Approx. 220 W
<b>Other recommended components</b>	External HDD array systems, Speaker system, 20" computer display (1152 x 864 required), JVC BM-H2000E high resolution 20" video monitor, JVC BR-D80E, BR-D85E or BR-D92E D-9 VTR JVC SA-D92 SDI I/O for BR-D92E or JVC SA-D80 SDI I/O for BR-D80E/85E

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\*"Pentium" is a trademark of Intel.