

JVC®

The Perfect Experience / —

DUAL DIGITAL VIDEO RECORDER (HDD & DVD)

VR-509E

**320GB internal HDD, built-in DVD-RW,
plus 500GB external option**



- MPEG-2 high picture quality with six selectable record modes
- Integral recording of time & date stamp on HDD, replicated on to built-in DVD-RW for secure non tampered recording
- 320GB (160GB x 2) built-in hard disk drive capacity, plus 500GB external option
- Compact chassis design (340 mm wide) for space-saving installation and flexibility
- Network connectivity provides new dimensions, including remote system control and alarm-triggered e-mails

Versatile, high-performance MPEG-2 video recorder with 320GB hard disk and built-in DVD recorder.

With its built-in 320GB hard disk drive and DVD-R/RW drive, JVC's VR-509E digital video recorder is equipped to handle the most demanding and extensive surveillance recording requirements. MPEG-2 compression assures high-quality pictures, while high-density recording at up to 100 frames per second is possible with as many as 9 cameras connected. And, with a width of only 340 mm, this compact unit can easily be installed in a store or small space.



High-quality pictures

■ MPEG-2 compression

MPEG-2 compression enables high-quality pictures to be recorded over a much longer period than with JPEG compression.

■ High-density recording

High-density recording (up to 100 ips) and high-precision recording are available. In addition, four modes are available for each type of recording: High, Normal, Basic and Long.

- High-density mode (Smooth mode): Resolution of 352 x 288 pixels, 100 ips max.
- High-precision mode: Resolution of 720 x 288 pixels, 50 ips max.

■ Live playback split 1/4/6/9

In addition to a monitor output (VIDEO OUT), a SPOT OUT (split-screen-dedicated output) is



provided. Cameras, channels, and split pattern can all be specified without using a splitter. Images can be displayed on a single screen or on split screens (4, 6 and 9).

■ Large-capacity HDD & external HDD connection

With twin 160GB HDDs, the VR-509E features total internal storage capacity of 320GB, so it's ready to handle even the most challenging and long-duration surveillance requirements. That capacity can be expanded even further with the addition of an external 500GB HDD.

- Standard HDD: 320GB (160GB x 2)
- External HDD: 500GB

Versatility



DVD drive for easy data export

A built-in DVD-R/RW drive compatible with DVD video (MPEG-2) enables you to easily copy data recorded on the HDD to a DVD which can be played back on a standard DVD player.

Simultaneous recording/playback

Thanks to the built-in hard disk's random access capability, you can review recorded images without interrupting recording.

Timer recording and alarm recording

Daily/weekly timer recording as well as specified date recording is possible for up to 8 programmes. In addition, alarm recording (high-quality and high-density recording) starts automatically when alarm signals are received during recording.

Emergency recording

When an alarm signal is input, the signals from all channels are recorded.

Pre-alarm recording

Pre-alarm recording works hand-in-hand with automatic alarm recording by tracking back to the required start point prior to the alarm signal input (60 sec. max.). The duration of pre-alarm recording is user selectable.

Motion detection function

The monitor screen is divided into 144 areas and alarm/sensor recording is automatically executed when motion is detected within any of these areas. Motion detection is performed based on a pre-determined set of parameters or sensitivity levels specified according to the camera's location.

Direct search on the screen

Supports 9-channel asynchronous camera inputs

User-friendly Functions

Jog/Shuttle dial

For more precise control over various playback speeds, including frame-by-frame playback, a jog/shuttle dial is provided.



Time/date stamp function

With the VR-509E being the industry's first HDD recorder to integrate the time & date stamp within the video image, it means that at the point of transfer from HDD to DVD the time & date stamp is also recorded and is viewable even on a normal domestic DVD player. Unlike recorders which record time & date on a separate track, the integral nature of the VR-509E's recording means that subsequent erasure or falsification is not possible. In some countries integral time & date stamp is a prerequisite for legal permissibility of the DVD copy from the HDD recording.

User guidance function

An easy-to-understand menu setting system simplifies setup and function adjustment.

Easy maintenance

A removable front cover provides easy access to the hard drive for simplified maintenance.

2x and 4x display

Images can be paused and enlarged by 2x or 4x.

Change of on-screen display positions

Alarm search

Date/time search

Various skip playbacks

Buzzer setting

Reliability

Digital watermark

Embeds data in images to protect the integrity of your data against falsification and unauthorised deletion during data replication. To detect the watermark, optional viewer software* is required.

*To be released soon.

E-mail notification

In a network environment where a mail server (SMTP) is available, the VR-509E can be configured to send out notification messages containing the alarm list when an alarm/sensor signal is input.

Hard disk mirroring

Using RAID 1 mirroring technology, the same data can be recorded simultaneously on each of the twin built-in HDDs. Data redundancy ensures that critical system data remains secure, even if one of the hard disks malfunctions.

NTP client function

Automatically accesses the NTP server to maintain accurate time setting.

Covert channel function

Ideal for highly sensitive applications, the covert channel function allows certain channels to be specified as covert. Camera input from these channels is not displayed and the screen is black. Only the system administrator or other authorised personnel can monitor or play back video from covert channels.

Recovery recording during power outage

Loop recording

Recording recovery after power failure

Designed to operate with UPS (Uninterrupted Power Supply)

Operation lock

Auto HDD scan

Passcode setting

System flexibility

Ethernet interface

A network-compatible Ethernet interface lets you plug this recorder into your local network and adjust or operate the unit from a PC. Once on the network, you can also take advantage of the web-server function and various other functions on the optional player software*. For example, live images can be displayed, camera titles can be input, and various settings can be adjusted.

*To be released soon.



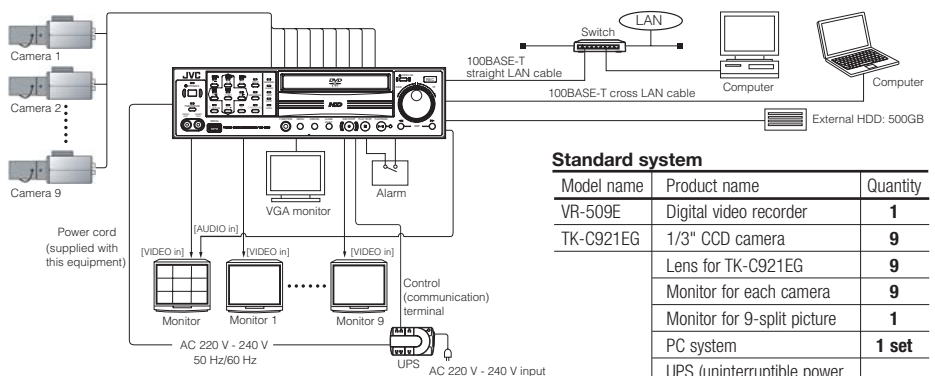
Web-Based Setting

- Camera titles can be input from the keyboard.
- Programme timer can be preset.
- Event search can be performed on alarm recordings.
- Security levels can be set for recorded video files.
- Recorded video files can be played back.

Range of extra inputs and outputs

2-channel audio input, RGB output for large screen, progressive scan flat panel displays, RS-232C for ancillary equipment control and two USB ports (one front, one rear) for external HDD.

System configuration



Standard system

Model name	Product name	Quantity
VR-509E	Digital video recorder	1
TK-C921EG	1/3" CCD camera	9
	Lens for TK-C921EG	9
	Monitor for each camera	9
	Monitor for 9-split picture	1
	PC system	1 set
	UPS (uninterruptible power supply system)	1

Rear Panel



Specifications

[Video signal]

Video input: 9 lines (supports asynchronous input)
 Video output: 9 lines (through)
 Video output x3 lines (front x1, rear x2)
 Line input: 1.0 V (p-p), 75 ohms (BNC unbalanced)
 Line output: 1.0 V (p-p), 75 ohms (BNC unbalanced)
 Number of effective pixels: 720 x 288 (HIGH-QUALITY)
 360 x 288 (SMOOTH)

[Audio signal]

Audio input: 2 lines
 Audio output: 2 lines (front x1, rear x1)
 Line input level: -8 dBs, 50 k ohms (unbalanced)
 Line output level: -8 dBs, 1 k ohms (unbalanced)
 Frequency: 100 Hz to 10 kHz
 Audio compression: 12 kHz sampling, L-PCM

[General]

Video compression: MPEG-2
 Capacity: 160GB x2*
 Interface: RS-232C, SERIAL, Ethernet
 Power supply: 220 V – 240 V (50 Hz/60 Hz)
 Power consumption: 0.5 A
 Operating temperature: 5°C to 40°C
 Storage temperature: -20°C to 60°C
 Operating humidity: 30% to 80 %
 Weight: 7.0 kg

[Accessories]

Instructions x1
 Power cord x2

*Since the same data is recorded on each of the 160GB HDDs when the mirroring function is used, maximum recording capacity is 160GB (not 320GB).

Recommended HDD

Product name: LaCie Big Disk Extreme with Triple Interface
 Model name: 300794
 Capacity: 500GB
 LaCie: <http://www.lacie.com/>
 For details, please visit the manufacturer's web site for more information.

Related Equipment

■ TK-C920E(A) TK-C21EG(A)	■ TK-C750E TK-C751EG	■ TK-C1460BE	■ TK-C1430E TK-C1431EG	■ TK-C1480BE TK-C1481BEG	■ TK-WD310E	■ TK-C205E(A)	■ TK-C205VPE	■ TK-C215V12E TK-C215V4E TK-C210FWE	■ TK-C676E(B) TK-C655E(B)	■ TK-C625E
1/3" CCD colour camera with 540TVL resolution	1/3" CCD standard colour camera	1/2" CCD ExDR day/night camera	1/3" CCD ExDR day/night camera	1/2" CCD ExDR colour camera	1/3" CCD WDR colour camera with Easy day/night operation	1/4" CCD fixed dome camera with 540TVL resolution	1/4" CCD fixed dome camera with 535TVL resolution	1/4" CCD fixed dome camera with 540TVL resolution*	1/4" CCD Pan/Tilt/Zoom dome camera	1/4" CCD Pan/Tilt/Zoom dome camera with 540TVL resolution

*TK-C210FWE's resolution is 500TVL.

Design and specifications subject to change without notice.



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