

JVC[®]
PROFESSIONAL

DIGITAL VIDEO
RECORDER

VR-510U

**Digital video recorder for
timelapse VCR replacement**

- Easy-to-use front panel design
- MPEG2 video and audio compression
- Simultaneous recording and playback
- Multiple search modes with jog/shuttle dial
- Pre/post sensor (event) recording
- Maintenance-free design
- Connectable to a multiplexer



With MPEG2 high quality pictures, simultaneous recording/ playback, and user-friendly front-panel design, this digital video recorder is the ideal video surveillance solution.

A huge 80 GB hard disk combined with advanced MPEG2 and twin CODEC technology puts this incredibly versatile digital video recorder squarely in the lead as the ultimate video surveillance solution. With optional multiplexer, the VR-510U is ready to install in virtually any existing surveillance system. Features like simultaneous recording and playback, pre/post sensor recording, alarm recording, search function, quick/random access and convenient jog/shuttle control give you far more flexibility than is possible with a conventional video recorder. You'll be able to review previously recorded material without interrupting recording, access images and scenes instantly using a variety of different search methods, re-record multiple times with no loss of quality, and choose from a wide selection of recording speeds, and quality. You can even record real-time audio in most recording modes. And since the front panel controls look and function in almost the same way as an ordinary VCR, you'll be able to start using it immediately.



Recording Flexibility

High-quality MPEG2 picture recording

MPEG2's high-quality intra-frame compression allows you to record images at resolutions of either 720 x 480 pixels - when picture quality is a priority - or 360 x 480 pixels - when you need extended recording capability. No matter which you choose, you'll be able to record hours and hours of high-quality audio and video on the large-capacity hard disk. Stable high picture quality recording is maintained even when recording is repeated many times. And since the hard disk is not PC-based, it will never freeze or crash, making it ideal for critical recording where reliability is a must.

Various recording modes

Long-time recording with large-capacity 80 GB hard disk

With 80 GBs of storage, this large-capacity hard disk enables high-quality/high-volume recording and playback. Choose from a wide range of recording qualities and speeds - from 14 hours of high-quality, real-time video to more than 17,000 hours of low-resolution timelapse video. For full details, refer to the table below.

If you need even more recording capacity, you can have an additional 80 GB hard disk installed (SA-K51U, option).

Mode	30 fps	15 fps	10 fps	5 fps	3 fps	2 fps	1 fps	1/2 fps	1/5 fps	1/10 fps
High	14	28	43	86	143	215	430	861	2,153	4,306
Normal	28	56	85	170	284	426	853	1,706	4,265	8,531
Basic	37	75	113	227	379	568	1,137	2,275	5,687	11,375
Low	56	113	170	340	568	852	1,704	3,408	8,520	17,041

Recording quality, recording speed and recording time (hours)

*Audio recording is possible at 30, 15, 10, 5, 3, 2, 1 and 1/2 fps.

**When audio is also recorded, recording time is reduced.

Audio recording function

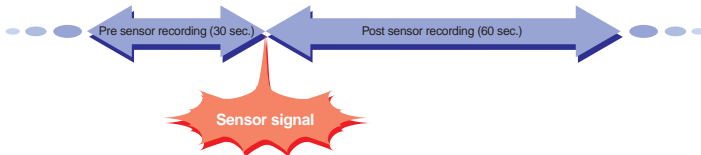
High-quality MPEG2 32K audio can be recorded together with video in most recording modes. Audio recording is continuous even during interval recording. If some applications don't require audio, just switch it off and take advantage of extended video recording capacity.

Pre/post sensor recording

You can check material recorded both before (Pre) and after (Post) a sensor signal is input. Pre sensor recording duration can be selected from 10/30 and 60 sec. Post sensor recording duration can be selected from 10/15/30/60/120/180 sec. and manual.

<Example>

When the pre sensor recording duration is 30 sec. and the post sensor recording duration is 60 sec.



Sensor recording

If an alarm signal is received when the recorder is in the Stop mode, recording starts automatically, so you can rest assured that you will always have a recording of any incident that occurs. As with alarm recording, images are recorded at 30 frames per second and audio signals are recorded.

Alarm recording

You can set the VR-510U to automatically enter the alarm recording mode whenever an alarm signal is input. In the alarm recording mode, images are recorded at 30 frames per second. Audio is also recorded and image recording quality remains in whatever mode was in use when the alarm signal was detected. The alarm recording duration can be manually specified or selected from 10/15/30/60/120/180 sec.

Repeat recording

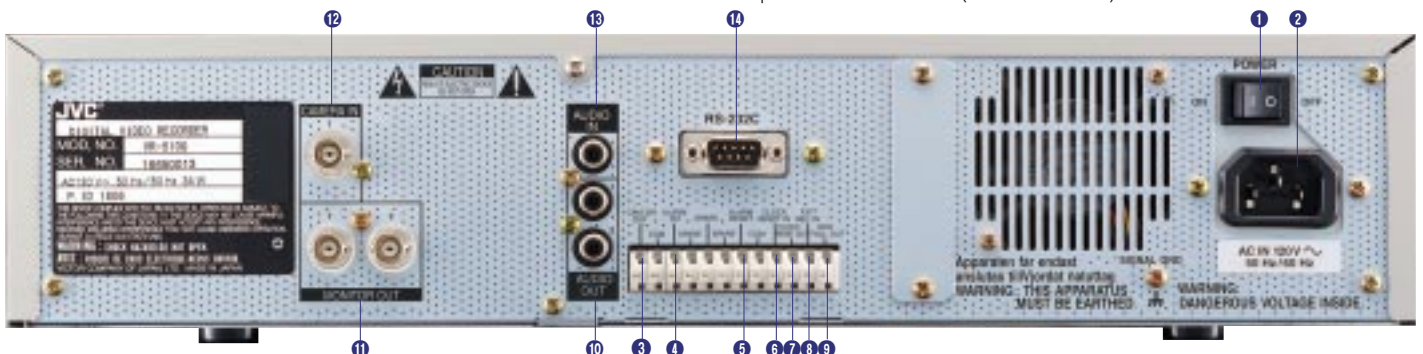
When the hard disk is full, new recordings will overwrite previous recordings (beginning with the oldest). Write-protection capability allows you to prevent overwriting of alarm recordings if necessary.

Timer recording

Up to 8 timer recording settings can be programmed, including daily and weekly.

Rear panel

- | | |
|------------------------------|------------------------------|
| ① [POWER] switch | ⑧ [EXT REC IN] terminal |
| ② [AC IN] socket | ⑨ [HDD FULL OUT] terminal |
| ③ [CAM SW OUT] terminal | ⑩ [AUDIO OUT] connector |
| ④ [ALARM IN 1] terminal | ⑪ [MONITOR OUT] connector |
| ⑤ [ALARM RESET] terminal | ⑫ [CAMERA IN] connector |
| ⑥ [CLOCK RESET IN] terminal | ⑬ [AUDIO IN] connector |
| ⑦ [CLOCK RESET OUT] terminal | ⑭ [RS-232C] remote connector |



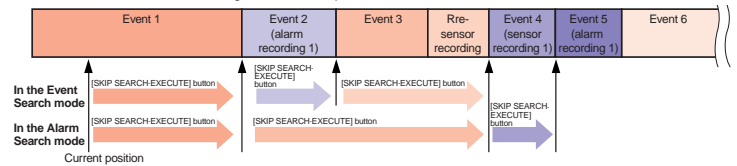
Versatility

Simultaneous recording and playback

You can review any image sequence at any time without interrupting recording.

A variety of search modes

In addition to jog/shuttle search, this recorder is equipped with an impressive set of versatile search functions including time/date search, event/alarm search, alarm direct search and day/time direct search. With the time/date direct search, you can access images by date and time, while alarm direct search gives you instant access to any one of up to 110 listed alarms.



<Event/alarm search>

Easy Operation

Easy-to-use front panel design

The VR-510U's familiar VCR-style front-panel design provides a comfortable, easy to use interface that smooths the transition from conventional, tape-based systems.

Jog/shuttle dial

A jog/shuttle dial is provided for quick, easy image search.

User-friendly Design

Maintenance-free design

Unlike a VCR, the VR-510U has no heads to clean and no tapes to wear out, so you can count on optimum quality image recording at all times.

Operation lock key



Two security levels are available to prevent accidental or deliberate interference. Depending on your needs and situation, you can choose to lock all operations or just recording operations.

System Flexibility

RS-232C interface

Lets you connect a PC to the recorder for PC-controlled operation.

Connectable to a multiplexer

The VR-510U can be connected to a multiplexer, so it's easy to incorporate in your existing surveillance system.

Power-off video throughput function

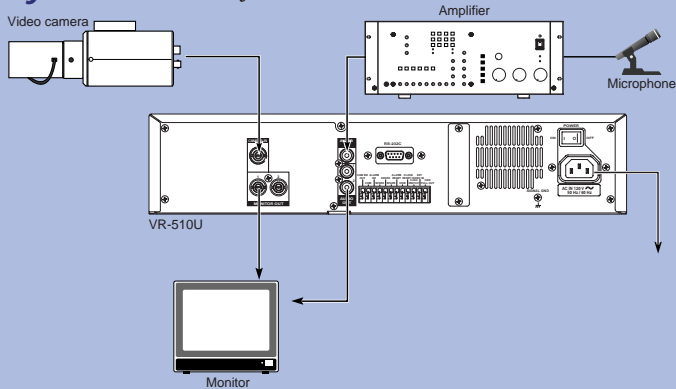
Even when the power is off, the camera's EE input can be output from the VCR.

Other Features

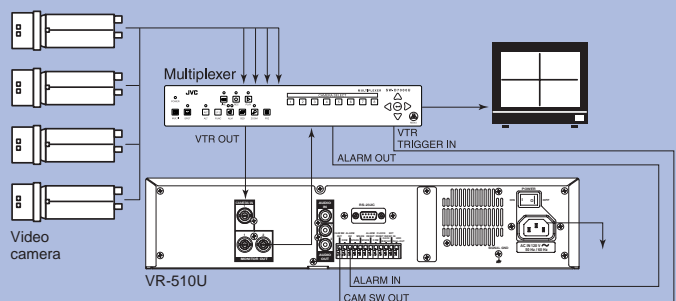
- Auto recording restart after power failure
- On-screen menu setting function
- Auto recording start via external activation signal
- Daylight-saving time compensation
- Optional SA-K51U HDD kit (80 GB for addition)

Applications

System 1 Basic System

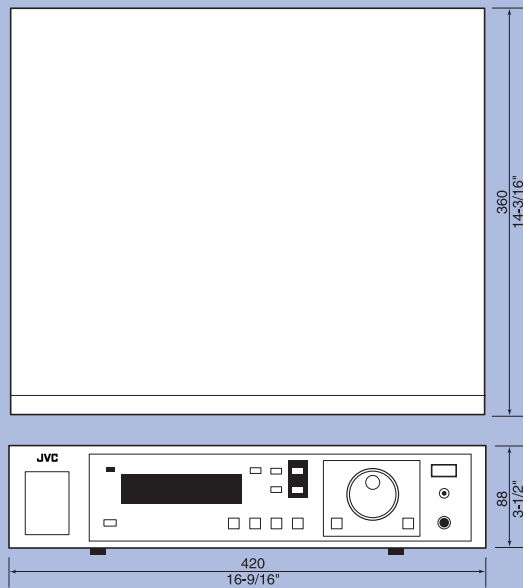


System 2 System with 4 to 16 cameras and multiplexer



* For a connectable multiplexer, consult your JVC dealer.

Dimensions (mm/inches)



Specifications

- Signal system: NTSC
- Recording system: MPEG2 compression system
- Built-in hard disk: 80 GB (160 GB with SA-K51U)
- Video input: Composite input (BNC) x 1
- Video output: Composite output (BNC) x 2
- Video image size: 720 (horizontal) x 480 (vertical) with high quality recording
360 (horizontal) x 240 (vertical) with normal/medium/low quality recording
- Audio input: -8 dB, 50 kohms, RCA x 1
- Audio output: -8 dB, 1 kohm, RCA x 2
- Frequency response: 100 Hz to 10 kHz
- Audio compression system: 32 kHz sampling, 16-bit MPEG layer 2
- External control: RS-232C
- Power requirement: AC 120 V, 60 Hz
- Operating temperature: 5°C to 40°C (41°F to 104°F)
- Storage temperature: -20°C to 60°C (-4°F to 140°F)
- Dimensions (WHD): 420 x 88 x 360 mm (16-9/16" x 3-1/2" x 14-3/16")
- Weight: 6 kg (13.2 lbs.)
- Provided accessories: Power cord x 1
Lithium battery (CR2032) x1 (for operation check)
Operation lock key x 2
Instruction manual x 1

Options

TK-C1480U
Extended dynamic range color 1/3" CCD camera



TK-C1460U
Day/night camera



TK-C700U/720U
1/3" CCD DSP color video camera



Design and specifications subject to change without notice.



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■ The Hachioji Plant of Victor Company of Japan, Ltd., has received ISO14001 and ISO9001 Certifications under the global standard for environmental management.