

V1 Digital Recorders



V1 Digital Recorders

With thousands of systems shipped to post production houses and broadcast facilities worldwide, the V1 is fast becoming the standard VDR for many applications. Its ease of use makes analog VCR replacement quick and seamless. The V1's full feature set and proven reliability have prompted its integration into many diverse production environments.



V1 Features

- Scrubbing Video in Sync with Audio
- RS-422 serial SONY 9-pin control
- Built-in VITC and LTC time code reader / generator
- Motion-JPEG (4:1 - 34:1)
- Instant Picture On Locate
- Instant Play
- 2 channels of 48kHz 18-bit audio
- High resolution (ITU 601/4:2:2) 2 field picture
- Two bays for fixed and/or removable storage
- NTSC or PAL
- Ethernet control
- Optional LCD video panel

The V1 is a high-quality Video Disk Recorder/Player designed to record and playback video and audio using hard disks, optical cartridges or the V1 Video Server. It consists of a 3U rack mount unit with a full function remote control and 2 drive bays that can house hard disk drives or a removable M.O.

Due to its familiar controls and operation, the V1 can function as an instant replacement for a video tape recorder of any format, or as an additional recorder/player. It is field accurate and can be controlled from an industry standard RS-422 serial interface using the familiar "Sony 9-pin protocol." At the same time, the V1 has the advantage of locating immediately to any position on the disk, providing instant access to the video data.

The V1 records 1 video channel, 2 audio channels and Time Code (VITC and LTC.) The video data is compressed using Motion-JPEG standards and recorded along with the audio and the time code address onto the hard disk drive.

Two serial ports are built-in; one for a serial remote control, the other to slave the V1 to an edit controller or a workstation. When used with a workstation, the ballistics of the V1 are adjustable to match the variable playback speed of the audio, thus achieving hard lock of audio and video.

The V1 uses our proprietary Constant Block Size Compression (CBSC™.) Every field "data block" occupies the same amount of storage no matter how complex the field image, dramatically reducing disk access time. Consequently, the V1 can successfully record and playback to or from standard SCSI hard disks and does not require a RAID or an exceptionally fast hard drive.

V1D

V1 family applications:

- General purpose recorder
- Broadcast VDR
- Broadcast on-air automation
- Ad-on-demand digital delivery system
- Multi-channel sports recorder/player
- Delayed programming
- Production/Post-production VDR
- Video Assist Recorder
- Video source for audio workstations
- Video source for ADR/Foley recording
- Frame recorder
- Video surveillance systems
- Amusement park recorder/player
- Video projection walls



V1D has all the features of the V1 plus:

- SDI - Serial Component Digital Interface
- Motion-JPEG (2:1 - 34:1)
- 4 channels of 48kHz 18-bit audio



Designed for high-end video production and broadcast applications, the V1D has all the features of the V1 plus a serial digital component interface "SDI" (SMPT259M, 270Mbits/sec) as well as 4 tracks of analog/digital audio. It is fully compatible with the V1.

Through the SDI input, the V1D records component digital video (4:2:2) direct from a D1 resolution source. It also has composite input/output and component analog output (YUV, RGB and S-Video). The convenient front panel LCD Monitor is optional.

The V1D has adjustable data compression ratios to allow the user to configure the recorder for best image quality (2:1), editing image quality (34:1) for a long record/play time, or anything in between.

The V1D records 1 video channel, 4 audio channels and Time Code (VITC and LTC.)

V1D rear panel



V1m / V1m \times 2



V1m -

The V1m has the lowest cost of the V1 family. It consists of a 2u rack mount unit that can house two drive bays. It has no front panel controls. The basic model supports compression ratios of 12:1 to 34:1. The V1m can be ordered with optional extended memory to support compression ratios as low as 2:1. All other features and specifications are similar to the standard V1.

See back page for complete specifications.

V1m \times 2 -

The V1m \times 2 houses 2 V1m recorders in the same 2U rack mount chassis. This unit is specially designed for multi-channel video applications where space is at a premium. Typical application of the V1m \times 2 are:

- V1 video server
- Multi-camera video-assist recorder
- Delayed programming
- Video projection walls

Remote Control

RCV1 Remote Control (Optional) -

The RCV 1 is a standard Sony 9 pin controller, it can be used with the V1 line of products as well as other VDR/VTRs that conform to the 9 pin protocol for convenient local control.



V Tools Pro Software

VToolsPro Software Utility

VToolsPro is a software utility, included with every V1, that runs on a Mac or PC (running NT4 or Windows 98). This utility offers several useful features such as complete transport control, playlists, duplication, etc. Here are the main screens and applications:



Complete Transport Control Screen

Emulates the V1 front panel. You can use this screen to control the V1 through a RS-422/RS-232 port or via Ethernet. You can also access all the menus and set up the V1 parameters according to your application.

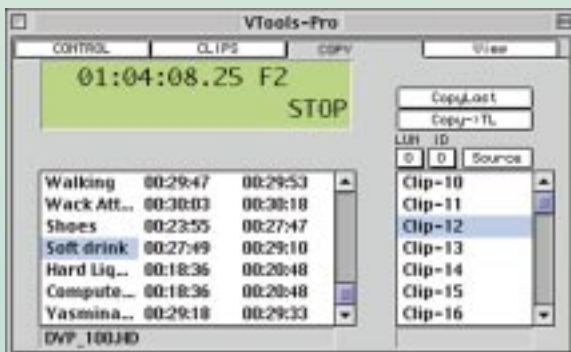
Video Clips Screen

Create video clips. You can define clips by entering their start and end times. You can play the clips individually or arrange them in a list in chronological order and then play the list.



Copy Clip Screen

Copy V1 video files without the presence of a V1. You can copy entire disks or selectively copy video clips from one disk and record them onto a destination disk, or copy one source disk to multiple destination disks.



View Clips Screen

Visualize your video on the computer screen via Ethernet or SCSI.



Other Major Features

VToolsPro is also used to update the internal software (firmware) of the V1 without opening up the V1. The V1 will receive the new software through the serial port or Ethernet and then updates its internal non-volatile memory. Also, VToolsPro can convert Media Composer compositions and save them on a V1 disk. This conversion is achieved without additional video processing and without degradation to the signal out of the Media Composer.

Technical Specifications



V1D

Serial Video Interface:

Component Digital Video I/O (SMPTE 259M):
NTSC/PAL, 800mVpp +/- 10%, 750ohm, BNC

Digital Audio Interface:

AES/EBU Digital Audio I/O: 2 x 2 channel
transformer balanced 10Vpp, 1100ohm, XLR

Analog Video Interface:

Component/Composite Video I/O: NTSC/PAL,
1Vpp, 750ohm, BNC, S-video

Analog Audio Interface: (1U External)

Audio I/O: 4 Channels, electronically balanced
@ +4dB into 600ohm, XLR (18 bits, 48kHz
sampling)

Control Interface:

Ethernet: RJ45 10baseT

Time Code I/O: LTC, electronically balanced
+4dB into 600ohm, 1/4" jack, VITC read from
video input, VITC out

Serial Control inputs: 2 RS-422 using Sony 9-
pin protocol, DB-9

MIDI: MIDI Time Code

Bi-Phase: Bi-Phase input, DB-9

H Adjustment: -799 to +799 (37ns steps)

Sub-carrier phase adjustment: 0 to 359
degrees

Power: 110/115/230/240 VAC, +/- 10%, 50/60
Hz, 85 Watts

Operating Temperature Range: +10 to +40 C,
with rated performance

Interface Rack: 3U rack unit, 15 inches deep

Storage Media: SCSI-equipped fixed/ remov-
able hard drives, Magneto-optical drives,
V1 Server

Accessories:

RCV1 Remote Control (Optional): Standard
Sony 9 pin controller, it can be used with the
V1 as well as other VDRs that conform to the 9
pin protocol



V1

Digital Audio Interface: (V1 Option only)

AES/EBU Digital Audio I/O: 2 channel
transformer balanced 10Vpp, 1100ohm, XLR

Analog Video Interface:

Composite Video I/O: NTSC/PAL, 1Vpp,
750ohm, BNC, S-video (V1 only)

Analog Audio Interface:

Audio I/O: 2 Channels, electronically balanced
@ +4dB into 600ohm, XLR (18 bits, 48kHz
sampling)

Control Interface:

Ethernet: RJ45 10baseT (Optional)

Time Code I/O: LTC, electronically balanced
+4dB into 600ohm, 1/4" jack, VITC read from
video input

Serial Control inputs: 2 RS-422 using Sony 9-
pin protocol, DB-9

MIDI: MIDI Time Code

Bi-Phase: Bi-Phase input, DB-9

H Adjustment: -799 to +799 (37ns steps)

Sub-carrier phase adjustment: 0 to 359
degrees

Power: 110/115/230/240 VAC, +/- 10%, 50/60
Hz, 85 Watts

Operating Temperature Range: +10 to +40 C,
with rated performance

Interface Rack: 3U rack unit, 15 inches deep

Storage Media: SCSI-equipped fixed/ remov-
able hard drives, Magneto-optical drives,
V1 Server

Accessories:

RCV1 Remote Control (Optional): Standard
Sony 9 pin controller, it can be used with the
V1 as well as other VDRs that conform to the 9
pin protocol



V1m

The V1m is a lower cost design with no front
panel controls and is designed for remote
operation via Sony 9-pin protocol.

The V1mx2 houses 2 V1m recorders in the
same chassis.

Analog Video Interface:

Composite Video I/O: NTSC/PAL, 1Vpp,
750ohm, BNC

Analog Audio Interface:

Audio I/O: 2 Channels, electronically balanced
@ +4dB into 600ohm, XLR (18 bits, 48kHz
sampling)

Control Interface:

Ethernet: RJ45 10baseT (Optional)

Time Code I/O: LTC, electronically balanced
+4dB into 600ohm, 1/4" jack, VITC read from
video input

Serial Control inputs: 2 RS-422 using Sony 9-
pin protocol, DB-9

Bi-Phase: Bi-Phase input, DB-9

H Adjustment: -799 to +799 (37ns steps)

Sub-carrier phase adjustment: 0 to 359
degrees

Power: 110/115/230/240 VAC, +/- 10%, 50/60
Hz, 85 Watts

Operating Temperature Range: +10 to +40 C,
with rated performance

Interface Rack: 1U rack unit, 16 inches deep

Storage Media: SCSI-equipped fixed/ remov-
able hard drives, Magneto-optical drives,
V1 Server

Accessories:

RCV1 Remote Control (Optional): Standard
Sony 9 pin controller, it can be used with the
V1 as well as other VDRs that conform to the 9
pin protocol

Doremi Labs, Europe

Les Lucioles, Les Espaces de Sophia, Bat. K
80 Route des Lucioles
Valbonne, 06560, France

Tel: +33 4 (93) 00 43 30; Fax: +33 4 (93) 65 35 73



Doremi Labs, Inc.

3631 Cahuenga Blvd. West,
Los Angeles, CA 90068, USA
Tel (323) 874 3411; Fax (323) 874 3401;
"www.doremilabs.com"