

# SONY

CCIR/PAL

## LVA-8000P

### Laser VideoDisc Player



**CRVdisc**  
Component Recording Video



The LVA-8000P is a Laser VideoDisc Player providing superb quality video and audio reproduction of both moving and still pictures from LVM-3AA0 optical discs. This high quality picture playback capability makes the LVA-8000P an ideal choice for visual data base, information display, scientific and other analysis applications where the quality of picture reproduction is of prime importance.

The LVA-8000P boasts many advanced operational features. High speed access to any video frame on a disc, noiseless picture playback at various speeds and a frame memory function enable the LVA-8000P to provide optimum picture playback in a variety of operational situations. For maximum system flexibility, both RS-232C and RS-422 REMOTE interface connectors are provided.

With its outstanding picture playback quality and operational flexibility, the LVA-8000P is effective in many applications, from corporate presentations to interactive training.

## Host of Outstanding Features

### Long Life, Writable Discs

The LVA-8000P plays back images from both sides of LVM-3AA0 optical discs, each side having a storage capacity of 24 minutes of moving pictures or 36,250 still frames. From Sony's accelerated aging tests, it is estimated that the drop out ratio of LVM-3AA0 discs will not exceed twice their initial level, even after 100 years of storage in a normal office environment (20°C, 65% Relative Humidity).

\* The LVR-6000/LVS-6000P series is available for the disc recording purpose.

### High Quality Picture

The component time division multiplex video recording format provides the LVA-8000P with excellent, high quality, picture reproduction. The alloy formation techniques used to record on to the optical discs is an important part of the recording process and helps to retain the image crispness of the original image.

### Black and White Mode

The LVA-8000P can be set to either COLOUR or B&W mode with the slide switch on the rear panel. In the B&W mode, a 6.7MHz bandwidth enables high resolution black and white pictures to be reproduced.

### Frame Memory Function

A built-in Frame Memory provides the LVA-8000P with optimum picture reproduction, depending on the applications.

#### Random Search operation:

Immediately before the search operation starts, the frame memory retains the current picture and outputs it while the head is moving. When the required frame is found, the video output is switched from the frame memory to the head, giving continuity to the video signal.

#### Slow/Still playback:

Since the disc is played back frame by frame due to its recording format, fast moving objects are sometimes

Front Panel





blurred particularly in slow motion or still modes. A frame memory enables the LVA-8000P to provide field by field slow and still playback, which minimizes picture blurring. In slow motion or still playback, motion analysis can then be easily carried out.

#### User Memory:

Any two picture fields can be stored in the memory and retrieved instantly whenever required.

### A Choice of Output Facilities

Component video output (Y/R-Y/B-Y), analogue RGB output, Y/C separate video output and composite/B&W video output are provided for flexible connection to various equipment. A monitor video output facility is also provided.

### High Speed Access

The LVA-8000P employs a newly developed mechanical design, incorporating a linear motor to shorten the access time. Any video frame on a disc can be accessed in 0.5 seconds or less.

### System Flexibility

Two types of system control interface are provided and are switch-selectable.

#### RS-232C interface:

The LVA-8000P can be controlled from an external computer via the built-in RS-232C port. The unit's software protocol is compatible with that of both the Sony LVR/LVS series laser videodisc recording system and LDP series videodisc players. This ensures that the same software programs may be used. The optional interface manual LDM-5000 provides detailed protocol information.

#### RS-422 interface:

Sony's Editing Control Units, such as RM-450 and BVE series, can control the LVA-8000P through the RS-422 serial 9-pin REMOTE interface. The LVA-8000P can be used together with a VTR as a video source in an editing system. The optional interface manual LDM-5422 provides detailed protocol information.

#### System Sync/Phase Volume adjustment:

A built-in TBC provides system sync/phase adjustment for direct connection to an effects unit or switcher.

## PAL and NTSC Signal Processing Capability

When the optional DB-W8000N NTSC Board is installed in the LVA-8000P, both PAL and NTSC signals can be played back.

### Convenient Functions

Various functions are provided for the convenient use of the LVA-8000P.

#### User data:

The LVA-8000P can playback user data from a 64K Byte area on an optical disc. Typical data include Disc ID, Contents and picture index etc. which have been recorded with the assistance of an external computer.

#### Noiseless picture playback at variable speeds:

Noiseless pictures can be played back at still and slow motion from 1/255 to normal speed or fast motion at three times normal speed in either forward or reverse direction.

#### Index indication on/off switch:

For search operation, the current frame number or input frame number can be superimposed on the picture. If this indication is not necessary during picture playback, it can be switched off. Even in the off mode, the monitor video output still includes this data indication as an operational aid.

#### Optional remote commander:

The LVA-8000P can be controlled via wired or wireless remote control by using the optional RM-W7000 remote commander.

#### Multi-connection capability:

An external video and audio signal can be input to the LVA-8000P and switched to its outputs. Several LVA-8000Ps and one external video/audio source can also be serially connected using the loop-through facility. Any of the picture sources can be then selected easily by the RM-W7000 optional remote commander or an external computer.

#### Genlock capability:

When a reference video signal is input, the playback signal will be synchronized with the reference signal.

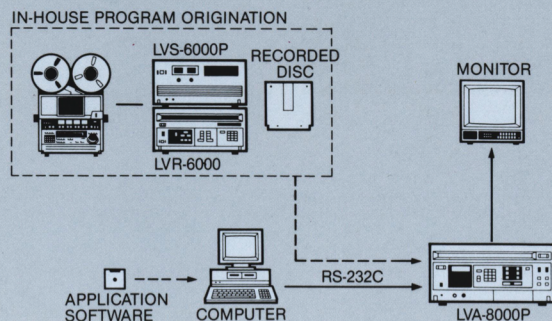
#### 19" EIA standard rack:

With the optional rack mount kit RMM-7000, the LVA-8000P can be mounted into 19" EIA standard rack.

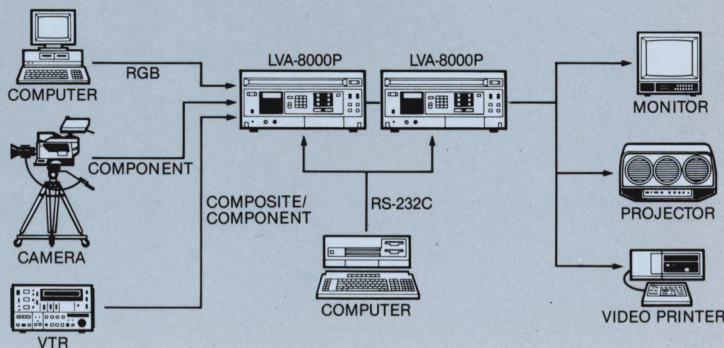
## System Examples

The high quality playback of the LVA-8000P and rapid access time make it the ideal choice for a variety of applications.

### Example 1: Computer Control System



### Example 2: Multi-Connection System





## Specifications

### General

Power requirements:	AC 220V ~ 240V, 50Hz
Power consumption:	105W
Operating temperature:	5°C ~ 35°C (41°F ~ 95°F)
Storage temperature:	-20°C ~ 60°C (-68°F ~ 140°F)
Humidity:	20% ~ 80%
Weight:	22 kg (48 lb 8 oz)
Dimensions:	424(W) × 213(H) × 530(D) mm (16 3/4 × 8 1/2 × 20 7/8")

### Playback system

Laser:	Semiconductor diode laser ( $\lambda$ : 780nm)
Videodisc:	12" (300mm) (CAV mode only)
Maximum playback time and frames:	24 minutes/side 36,250 frames/side
Spindle revolution:	1,500 RPM
Access time:	0.5sec. (full stroke average)
Variable speed playback:	1/255 to 3 times normal speed in forward and reverse directions plus still

### Video

Signal:	CCIR standard, PAL colour
Output:	Composite: 1.0Vp-p, 75 ohms, unbalanced, sync negative (BNC) Y/C: Y: 1.0Vp-p, 75 ohms, unbalanced, sync negative C: 0.3Vp-p, 75 ohms, unbalanced, (DIN 4-pin) Component: Y: 1.0Vp-p, 75 ohms, unbalanced, sync negative (BNC) R-Y, B-Y: 0.7Vp-p, 75 ohms, unbalanced (BNC) RGB: 0.7Vp-p, 75 ohms, unbalanced (BNC)
Input:	Composite: 1.0Vp-p, 75 ohms, unbalanced, sync negative (BNC) Component: Y: 1.0Vp-p, 75 ohms, unbalanced, sync negative (BNC) R-Y, B-Y: 0.7Vp-p, 75 ohms, unbalanced (BNC) RGB: 0.7Vp-p, 75 ohms, unbalanced (BNC)
Bandwidth (luminance):	4.5MHz (colour mode/Component video out) 6.7MHz (black and white mode)
Signal to noise ratio:	48dB (typical)
Reference video input:	1.0Vp-p, 75 ohms switchable, unbalanced, sync negative (Loop-through BNC)
External sync input:	0.2Vp-p to 5.0Vp-p, 75 ohms, unbalanced, negative (BNC)

### Audio

Output:	+4dBm, 600 ohms, balanced (XLR)
Input:	+4dBm, 600 ohms/10K ohms switchable, balanced (XLR)
Headphone:	-46dBs to -26dBs, 8 ohms load, binaural, unbalanced
Dynamic range:	88 dB
Frequency response:	20Hz to 15kHz

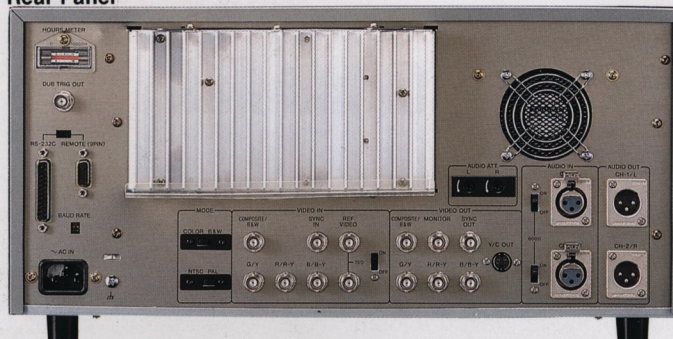
### External control interface

Interface:	RS-232C: 25-pin REMOTE 9-pin (RS-422 serial)
Protocol:	RS-232C: compatible with the Sony LVR/LVS and LDP series REMOTE 9-pin (RS-422 serial): conforming to Sony 9-pin Protocol

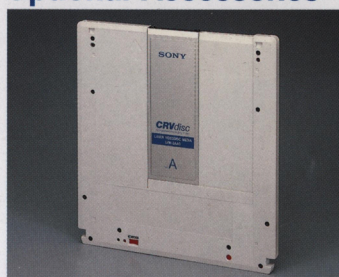
### Accessories

Supplied accessories:	Operation manual (1) AC power cord (1)
Optional accessories:	LVM-3AA0 Laser VideoDisc Media RM-W7000 Remote Commander DB-W8000N NTSC Board LDM-5000 RS-232C Interface Manual LDM-5422 9-pin REMOTE Interface Manual RMM-7000 Rack Mount Kit

### Rear Panel



### Optional Accessories



**LVM-3AA0**  
Laser VideoDisc Media



**RM-W7000**  
Remote Commander  
(for wired/wireless remote control)



**LVR-6000/LVS-6000P**  
Laser VideoDisc Recorder

Design and specifications subject to change without notice.

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