

**CCD VIDEO CAMERA****HVM-332****OPERATING INSTRUCTIONS**

Before operating the unit, please read this manual thoroughly and retain it for future reference.

**MODE D'EMPLOI**

Avant de faire fonctionner cet appareil, prière de lire attentivement ce mode d'emploi et de le conserver à titre de référence ultérieure.

**OWNER'S RECORD**

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. HVM-332      Serial No. \_\_\_\_\_

**FEATURES**

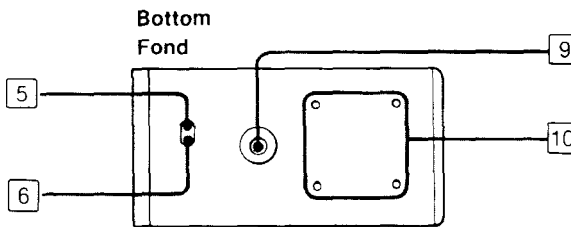
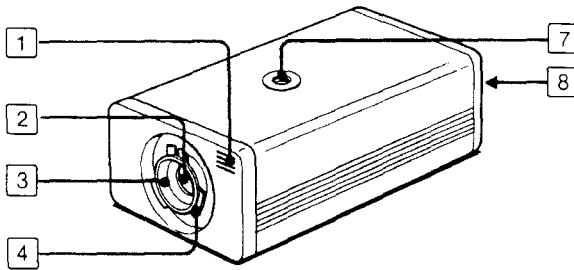
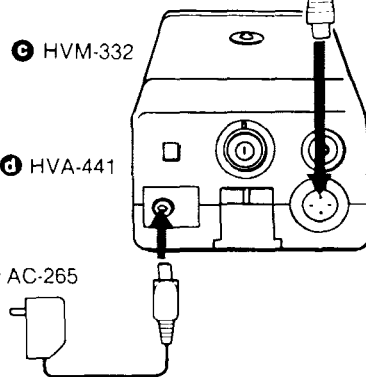
The HVM-332 is a monochrome video camera which uses a CCD (Charge Coupled Device), a solid state image sensor. This can be used with Sony camera and monitor system "WatchCam" by connecting through the optional HVA-441 camera adaptor.

- Approximately 250,000 picture elements give a high-resolution picture.
- Low lag, no image burning and precise image geometry
- Quick start-up after turning on the power
- Stable picture obtained even when shooting in an area subject to a strong magnetic field
- Possible to take a picture while moving
- High sensitivity, miniaturized and lightweight
- Auto-iris lens and auto-gain control provided
- Infrared cut filter attached to reduce susceptibility to "smearing"
- Focus adjustable
- 4-pin multiconnector for connecting video, audio and power with a single cable
- Special mini bayonet lens mount for attaching an optional attachment lens
- Built-in electret condenser microphone

**CARACTERISTIQUES**

La HVM-332 est une caméra vidéo monochrome qui utilise un dispositif à transfert de charge ("CCD"), ainsi qu'un senseur d'image à semi-conducteurs. Elle peut être utilisée avec une caméra Sony et un système de surveillance "WatchCam" via le reccordement à l'adaptateur pour caméra HVA-441, disponible en option.

- Les 250.000 éléments d'image procurent une image de haute définition.
- Retard réduit, pas de brûlage d'image, géométrie d'image précise.
- Démarrage rapide après la mise sous tension.
- La stabilité des images est garantie même lors d'une prise de vue dans une zone soumise à un champ magnétique puissant.
- Possibilité de prise de vue en mouvement.
- Haute sensibilité, miniaturisée et légère.
- Un objectif à diaphragme automatique et un réglage de gain automatique sont fournis.
- Un filtre de coupure d'infrarouge est fixé sur l'objectif pour réduire le risque de rémanance.
- Mise au point réglable.
- Multi-connecteur à 4 broches pour le raccordement vidéo, audio et d'alimentation par un seul câble.
- Monture d'objectif à mini-baïonnette spéciale pour la fixation d'une lentille additionnelle, disponible en option.
- Microphone à condensateur électret incorporé.

**WARNING****A****B****a** FDM-402A**b** VK-120A**c** HVM-332**d** HVA-441**e** AC-265

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Do not open the cabinet. Refer servicing to qualified personnel only.

**INFORMATION**

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna

- Relocate the equipment with respect to the receiver

- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC Rules.

THIS APPARATUS COMPLIES WITH THE CLASS B LIMITS FOR RADIO EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS OF CANADA.

## SPECIFICATIONS

### Pickup device

Pickup device	Interline-transfer CCD
Picture elements	510 × 492 (h/v)
Sensing area	6.2 mm × 4.6 mm (equivalent to a 1/2-inch pickup tube)

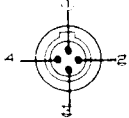
### Optical and others

Lens	f = 11 mm, F1.8, auto-iris with special mini bayonet mount Infrared cut filter attached (detachable)
Signal system	EIA standards
Sync system	Internal
Horizontal resolution	380 lines
Vertical resolution	350 lines
Minimum illumination	9 lux (0.8 footcandle) with an infrared cut filter

### Recommended illumination

More than 400 lux (40 footcandle)

### 4P MULTI connector



1 DC input 2 Video output  
3 Ground 4 Audio output  
Video: 1.0 V p-p, 75 ohms sync negative  
Audio: -5 dBs (436 mVrms), less than 10 kilohms

Power requirements	12 V DC ±10%
Power consumption	2.4 W
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-20°C to +60°C (-22°F to 140°F)
Dimensions	Approx. 52 × 32 × 100 mm (w/h/d) (2 <sup>1</sup> / <sub>8</sub> × 1 <sup>5</sup> / <sub>16</sub> × 3 <sup>15</sup> / <sub>16</sub> inches)
Weight	Approx. 240 g (8 oz)
Accessory supplied	Infrared cut filter (1)

Design and specifications subject to change without notice.

### OPTIONAL ACCESSORIES

Camera adaptor HVA-441  
AC power adaptor AC-265  
Camera mounting bracket WU-441  
Camera connecting cable VK-120A  
Camera extension cable VK-110  
Wide attachment lens VCL-04HS, VCL-06HS  
Flat black and white monitor FDM-402A  
Water-resistant camera case WPC-140  
Waterproof camera cable VK-220

## PRECAUTIONS

### Safety

This camera is designed for operation on 12V DC. For operation from an AC power line, use the camera adaptor and the AC power adaptor recommended for this camera. Do not use any other adaptor.

### Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight.

### Operation

- Avoid rough handling or mechanical shock.
- Do not operate the camera outside a 0°C to +40°C (32°F to 104°F) temperature range.

### Cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type solvent, such as alcohol or benzine which might damage the finish.

### Repacking

Do not discard the carton. It affords maximum protection whenever the camera is transported. Repack it as it was originally packed at the factory.

If you have any questions about this camera, contact your authorized Sony dealer.