

Color Video Camera

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, lisez attentivement le présent mode d'emploi et conservez-le pour toute référence ultérieure.

Manual de instrucciones

Antes de utilizar la unidad, lea las instrucciones con atención y consérvelas para su consulta en el futuro.

Super HAD CCD. SSC-DC193/DC193P/DC198P ExwaveHAD™ SSC-DC393/DC393P/DC398P

Sony Corporation © 2002 Printed in China

Owner's Record

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

Model No. _____ Serial No. _____

WARNING

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

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

The apparatus shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING (SSC-DC198P/DC398P only)

The mains plug must be used to disconnect mains power. Please ensure that the socket outlet is installed near the equipment and shall be easily accessible.

For the customers in the U.S.A. (SSC-DC193/DC393 only)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

This device requires shielded interface cable to comply with FCC emission limits.

Caution

This installation should be made by a qualified service person and should conform to all local codes.

ATTENTION

Electromagnetic fields at specific frequencies may influence the picture of this unit.

AVERTISSEMENT

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'éviter tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

Evitez d'exposer l'appareil à un égouttement ou à des éclaboussures. Aucun objet rempli de liquide, tel qu'un vase, ne doit être placé sur l'appareil.

AVERTISSEMENT(SSC-DC198P/DC398P uniquement)

La fiche secteur doit être utilisée pour couper l'alimentation secteur. Veuillez vous assurer que la prise murale est installée à proximité de l'appareil et qu'elle est facilement accessible.

ATTENTION

Il est possible que des champs électromagnétiques à des fréquences spécifiques influencent l'image de cet appareil.

ADVERTENCIA

Para prevenir el riesgo de incendios o de electrocución, no exponga la unidad a la lluvia ni a la humedad.

Para evitar descargas eléctricas, no abra la unidad. En caso de avería, solicite el servicio de personal cualificado únicamente.

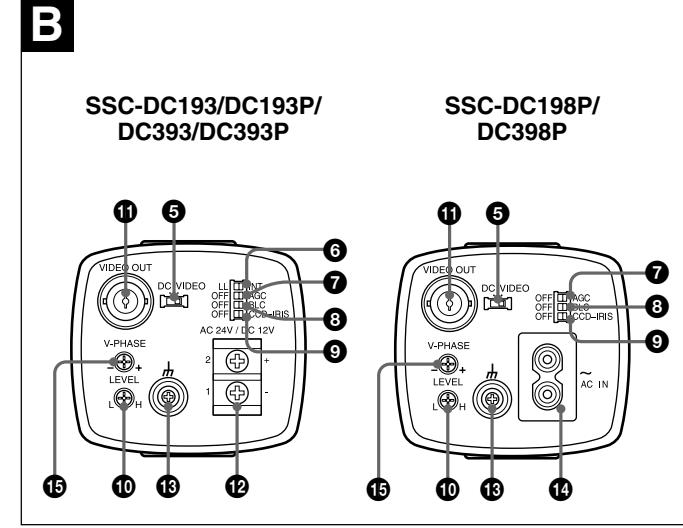
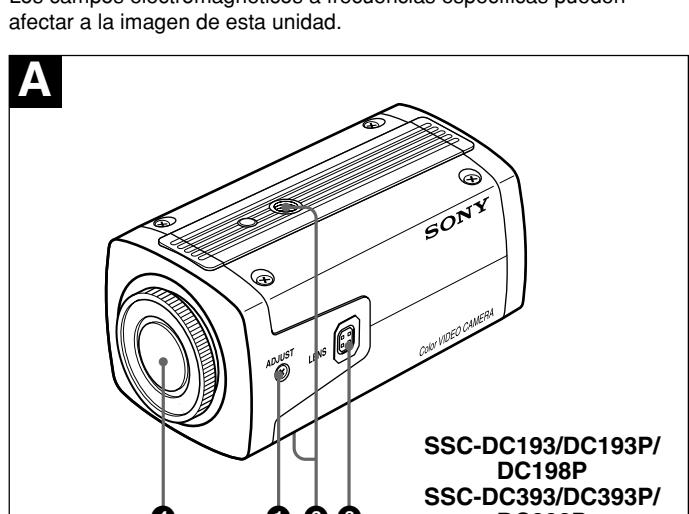
No se debe exponer la unidad a goteos ni salpicaduras. Asimismo, tampoco debe situarse cerca de objetos que contengan líquidos como, por ejemplo, jarrones.

ADVERTENCIA (sólo SSC-DC198P/DC398P)

El enchufe del cable de alimentación debe utilizarse para desconectar la red eléctrica. Asegúrese de que la toma de corriente esté instalada cerca del equipo y de que se pueda acceder a ella con facilidad.

ATENCIÓN

Los campos electromagnéticos a frecuencias específicas pueden afectar a la imagen de esta unidad.



English

This manual applies to the SSC-DC193, SSC-DC193P, SSC-DC198P, SSC-DC393, SSC-DC393P and SSC-DC398P. The operating instructions apply to these cameras, but their signal systems and power requirements are different.

	Signal system	Power requirements
SSC-DC193	NTSC color system	DC 12 V/AC 24 V 60Hz
SSC-DC193P	PAL color system	DC 12 V/AC 24 V 50Hz
SSC-DC198P	PAL color system	AC 220-240 V, 50Hz
SSC-DC393	NTSC color system	DC 12 V/AC 24 V 60Hz
SSC-DC393P	PAL color system	DC 12 V/AC 24 V 50Hz
SSC-DC398P	PAL color system	AC 220-240 V, 50Hz

Features

The color video camera is designed for use in a monitoring system.

- High resolution and high sensitivity with a 1/3 type Exwave HAD™* (Exwave Hole Accumulated Diode) CCD (SSC-DC393/DC393P/DC398P) and a 1/3 type Super HAD CCD* (Super Hole Accumulated Diode CCD) (SSC-DC193/DC193P/DC198P) as the imaging device
- CCD-IRIS function
- Automatic white balance tracking and adjustment (ATW)
- Compatible with DC controlled or video signal controlled auto iris lenses
- BLC (Backlight Compensation) through the center measurement.
- LEVEL adjustment for various lighting conditions
- Power supply: Automatically switched between DC 12 V and AC 24 V. (except SSC-DC198P/DC398P)
- AC line lock and INT (except SSC-DC198P/DC398P)
- The built-in tripod adapters are located to both the top and bottom of the camera.
- Super HAD CCD® and Exwave HAD™ are registered trademarks of Sony Corporation.

Notes on Use

Power supply

- The DC193/DC393 must always be operated with a DC 12V/AC 24V, 60Hz power supply. The camera automatically detects the power. In the U.S.A., use a Class 2 power supply which is UL Listed. In Canada, use a CSA Certified Class 2 power supply.
- The DC193P/DC393P must always be operated with a DC 12 V/AC 24 V, 50Hz power supply.
- Ground the unit or an irregular voltage may be generated in the AC power cord and this may cause a malfunction and/or damage to the video camera.
- The DC198P/DC398P must always be operated with a 220 to 240V AC, 50Hz power supply.

Handling of the unit

Bear care not to spill water or other liquids on the unit, or to get combustible or metallic material inside the body. If used with foreign matter inside, the camera is liable to fail, or to be a cause of fire or electric shock.

Operating and storage locations

Avoid aiming the camera at very bright objects such as the sun or electric lights for an expanded period. Avoid operating or storing the unit in the following locations.

- Extremely hot or cold places (operating temperature -10°C to +50°C; 14°F to 122°F, however, we recommend that the unit be used within a temperature range of -5°C to +40°C; 23°F to 104°F)
- Damp or dusty places
- Where it is exposed to rain
- Where it is subject to strong vibration
- Close to generators of powerful electromagnetic radiation such as radio or TV transmitters.
- Where it is subject to fluorescent light reflections.
- Where it is subject to unstable (flickering, etc.) lighting conditions.

Care of the unit

- Remove dust or dirt on the surface of the lens or CCD with a blower.
- Use a dry soft cloth to clean the body. If it is very dirty, use a cloth dampened with a small quantity of neutral detergent, then wipe dry.
- Avoid the use of volatile solvents such as thinners, alcohol, benzene, and insecticides. They may damage the surface finish and/or impair the operation of the camera.

Other

- When BLC is in the "ON" position, "hunting" may occur, that is, the image may get darker and lighter as the camera "hunts" for the best exposure level. If hunting occurs, set the BLC switch to "OFF."
- If you use the CCD-IRIS function in locations where the camera is exposed to fluorescent light, a slow color change may occur.

In the event of any problems with the operation of the camera, contact your Sony service representative.

Location and Function of Parts

Top/Bottom/Front/Side

Illustration A

① Focal length adjustment

Use this screw to adjust the focal length (the distance between the lens mounting plane and the image plane).

② Tripod adapter

The screw holes for attaching the tripod are located on both the top and bottom of the camera.

③ Lens connector (4 pin socket)

Supplies power and control signals to an auto iris lens.

④ Lens mount

Use to mount an appropriate CS-mount lens.

Rear

⑤ Auto iris lens selection switch (DC/VIDEO)

Switch for selecting the control signal for the auto iris lens.

DC: For auto iris lenses controlled by DC signals

VIDEO: For auto iris lenses controlled by video signals

Notes

- When the DC/VIDEO switch is set to VIDEO, the BLC function may not work properly.
- When the auto iris lens selection switch is set to VIDEO, "hunting" may occur. If this occurs, use the LEVEL (L/H) adjustment screw on the lens to change the incidental light level.
- When adjusting the incidental light level, set the ALC (Automatic Light Control) adjustment screw to Av.

⑥ Sync switch (except SSC-DC198P/DC398P)

Use to select the synchronization system, from INT (Internal) or LL (Line Lock).

⑦ AGC ON/OFF switch

Use to increase the gain of the video amplifier when it is dark.

⑧ BLC ON/OFF switch

When switched on, this function adjusts exposure to compensate for situations where the subject is lit from behind.

⑨ CCD-IRIS ON/OFF switch

When using a manual iris lens, set the CCD-IRIS switch to "ON" to automatically adjust the sensitivity according to the incidental light conditions. When using an auto iris lens, set this switch to "OFF."

⑩ LEVEL adjustment screw

Use to adjust the iris level when you are using a DC controlled auto iris lens.

⑪ VIDEO OUT connector (BNC-type)

Connect to an external video monitor or VCR.

⑫ AC 24 V/DC 12 V screw terminals

Connect to an external power supply of AC 24 V or DC 12 V (except SSC-DC198P/DC398P).

⑬ Ground terminal (screw type)

Connect this terminal to the ground, when noise occurs.

⑭ AC INLET (SSC-DC198P/DC398P)

Connect this to a 220V to 240V AC power supply.

⑮ V-PHASE adjustment screw

Use to adjust the vertical phase of cameras synchronized by Line lock.

Note

This screw cannot be used when a video signal-controlled auto iris lens is mounted.

⑯ VIDEO OUT connector (BNC-type)

Connect to an external video monitor or VCR.

⑰ AC 24 V/DC 12 V screw terminals

Connect to an external power supply of AC 24 V or DC 12 V (except SSC-DC198P/DC398P).

⑱ Ground terminal (screw type)

Connect this terminal to the ground, when noise occurs.

⑲ AC INLET (SSC-DC198P/DC398P)

Connect this to a 220V to 240V AC power supply.

⑳ V-PHASE adjustment screw

Use to adjust the vertical phase of cameras synchronized by Line lock.

Français

Le présent mode d'emploi concerne les modèles SSC-DC193, SSC-DC193P, SSC-DC198P, SSC-DC393, SSC-DC393P et SSC-DC398P. Les instructions d'utilisation s'appliquent à ces caméras, mais leurs systèmes de signal et leurs puissances de raccordement sont différentes.

	S

Note

Este tornillo no se puede utilizar si se ha montado un objetivo de diafragma automático controlado por señales de video.

① Conector VIDEO OUT (tipo BNC)

② Terminales de tornillo de 24V CA/12V CC

Realice la conexión a un suministro de alimentación externa de 24V CA o 12V CC (excepto SSC-DC198P/DC398P).

③ Terminal de conexión a tierra (tipo de tornillo)

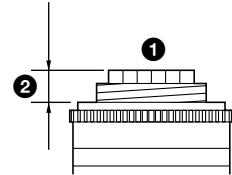
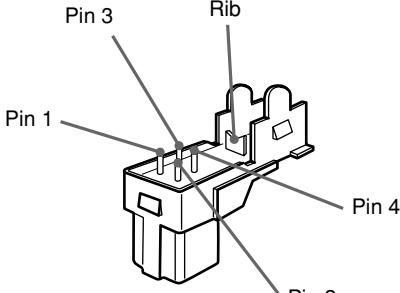
Si se producen ruidos, conecte este terminal a tierra.

④ AC INLET (SSC-DC198P/DC398P)

Conéctelo a una fuente de alimentación de 220 a 240 V CA.

⑤ Tornillo de ajuste V-PHASE

Utilice este tornillo para ajustar la fase vertical de las videocámaras sincronizadas mediante el bloqueo de línea.

C**D**

Lens Connector (not supplied)

[English]

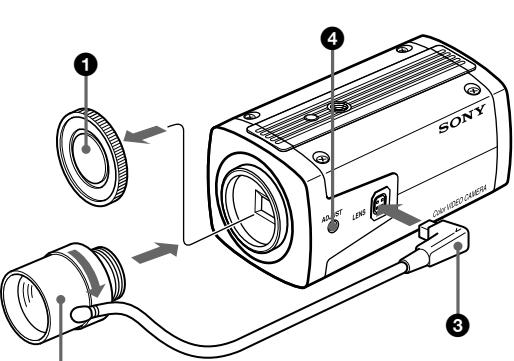
Rib (If the cable is thick, cut this off.)		
Pin 4	Video signal control	Ground
DC control	Drive - (Ground)	
Pin 2	Video signal control	Not used
DC control	Control +	
Pin 1	Video signal control	Power supply (DC 9 V/Max. 50 mA)
DC control	Control -	
Pin 3	Video signal control	Video signal (0.7 Vp-p)
DC control	Drive +	

[Français]

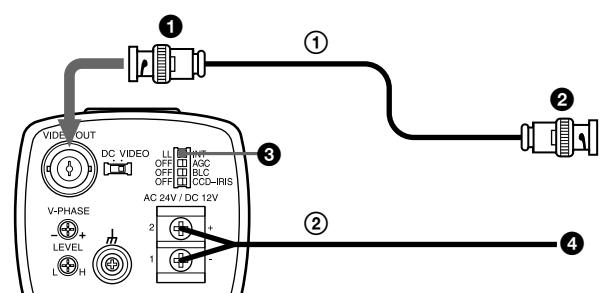
Nervure (découpez-la si le cordon est de forte section)		
Broche 4	Signal de commande vidéo	Masse
	Commande CC	Drive - (Masse)
Broche 2	Signal de commande vidéo	Non utilisé
	Commande CC	Control +
Broche 1	Signal de commande vidéo	Alimentation (9 V CC/ max. 50 mA)
	Commande CC	Control -
Broche 3	Signal de commande vidéo	Signal vidéo (0,7 Vc-c)
	Commande CC	Drive +

[Español]

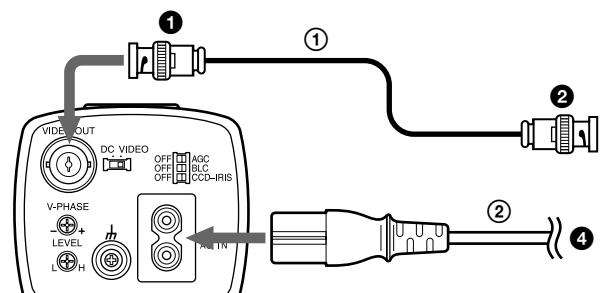
Pestaña (corte la si el cable es demasiado grueso).		
Terminal 4	Control de señal de vídeo	Tierra
	Control CC	Drive - (Tierra)
Terminal 2	Control de señal de vídeo	No empleado
	Control CC	Control +
Terminal 1	Control de señal de vídeo	Suministro de alimentación (CC 9 V/Máx. 50mA)
	Control CC	Control -
Terminal 3	Control de señal de vídeo	Señal de vídeo (0,7 Vp-p)
	Control CC	Drive +

E**F**

SSC-DC193/DC193P/DC393/DC393P



SSC-DC198P/DC398P

**Installation****Suitable lenses**

The lens must be a CS-mount type lens weighing less than 1kg. The protrusion behind the mounting surface must be within the following limits ②.

① CS-mount lens ② 4 mm or less

Installation of an Auto Iris Lens Connector

Install the lens connector (not supplied) when using an Auto Iris Lens. This installation should be done only by qualified service personnel or system installers.

A lens connector is not included with this camera package.

1 Cut the iris control cable at the edge of the lens connector to remove the existing lens connector and then remove the outer cable cover as shown in the diagram on the left.

2 Solder the lens cable to the pins of the lens connector.

Fitting the lens

- ① Unscrew the lens mount cap.
- ② Screw in the lens, and turn it until it is secured.
- ③ Insert the lens plug in the LENS connector.

When fitting a manual-iris lens, omit step 3.

④ According to the type of lens, adjust the focal length by turning the focal length adjustment screw.

Caution

Keep the lens mount cap on the camera when is not attached a lens.

Installing the camera**ATTENTION**

If installing the camera on the ceiling, be sure it is secure. If not securely installed, the camera may fall and injury may occur.

If the camera is installed on the ceiling using equipment such as a bracket, housing and motorized swivel base (pan/tilt), do the following:

- Use tripod screws and securely tighten them with a driver. Order the tripod screws (Sony Part No. 3-174-693-01) from your nearest Sony dealer.
- Install the tripod adapter on a flat surface.

Connecting the Camera

- ① Connect the video cable to the VIDEO OUT connector.
- ② Connect the video cable to the VIDEO IN connector on a video monitor, etc.
- ③ Select the synchronization system using the sync switch (only with SSC-DC193/DC193P/DC393/DC393P).

Note

Use this switch to set the camera synchronization mode internal or line lock. The line lock is available only for AC 24 V. When the camera power is DC 12 V, be sure to select the internal mode.

④ Connect the power source using the power cable:
SSC-DC198P/DC398P: to AC 220 - 240V power source
SSC-DC193/DC193P/DC393/DC393P: to a DC 12 V, or an AC 24 V power source

Notes

- Be sure to input only the proper voltage to the power terminal of the camera.
- Be sure to push the power cord all the way in.

① 75-ohm coaxial cable

② Power cable

Phase Adjustment**Vertical phase (Line lock mode)**

The picture may roll vertically if the vertical phase is not set. Use the V-PHASE adjustment screw to adjust the vertical phase.

Adjusting the Incident Light Level

Since the incidental light level has been preset at the factory, usually no further adjustment is required. If the picture is too dark, however, or if the picture's highlights are extremely overexposed, adjust the LEVEL adjustment screw with a screwdriver. This adjustment can only be used for DC controlled auto iris lens.

1 Turn toward L (low) to make the picture darker.

2 Turn toward H (high) to make the picture brighter.

CCD Characteristics

The following conditions may be observed when using a CCD camera, but are not due to any fault with the camera.

Vertical smear: This phenomenon occurs when viewing a very bright object.

Patterned noise: This is a fixed pattern which may appear over the entire monitor screen when the camera is operated at high temperature.

Jagged picture: When viewing stripes, straight lines, or similar patterns, the image on the screen may appear jagged.

Specifications

Imaging device	1/3type interline transfer CCD
Picture elements	SSC-DC193: 510 (horizontal) × 492 (vertical) SSC-DC193P/DC198P: 500 (horizontal) × 582 (vertical) SSC-DC393: 768 (horizontal) × 494 (vertical) SSC-DC393P/DC398P: 752 (horizontal) × 582 (vertical)
Lens mount	CS-mount
Signal system	SSC-DC193/DC393: NTSC color system SSC-DC193P/DC198P/DC393P/DC398P: PAL color system
Sync system	SSC-DC193/DC193P/DC393/DC393P: Internal/AC line lock SSC-DC198P/DC398P: AC line lock
Horizontal resolution	330lines (SSC-DC193/DC193P/DC198P), 480lines (SSC-DC393/DC393P/DC398P)
Minimum illumination	SSC-DC193/DC193P/DC198P: 0.6 lx (F1.2) SSC-DC393/DC393P/DC398P: 0.7 lx (F1.2)
S/N	50 dB (AGC OFF) ATW only
White Balance	1 Vp-p, 75 ohm, negative sync
Video output	SSC-DC193/DC393: 1/60 to 1/10000 sec SSC-DC193P/DC198P/DC393P/DC398P: 1/60 to 1/10000 sec
CCD iris	Switchable: ON (Turbo mode)/OFF SSC-DC193/DC393: DC 12 V ±10%/AC 24 V ±10%, 60Hz SSC-DC193P/DC393P: DC 12 V ±10%/AC 24 V ±10%, 50Hz SSC-DC198P/DC398P: AC 220 - 240V, 50Hz
Automatic Gain Control	SSC-DC193/DC193P: 3.5W SSC-DC198P/DC398P: 3.7W
Power requirements	SSC-DC193/DC193P: 3.5W SSC-DC198P/DC398P: 4.2W
Operating temperature	-10°C to +50°C (14°F to 122°F)
Operating humidity	20 to 80%
Storage temperature	-40°C to +60°C (-40°C to 140°F)
Storage humidity	20 to 95%
Shock resistance	70G
Mass	SSC-DC193/DC193P/DC393P: 360g (13 oz) SSC-DC198P/DC398P: 390g (14 oz)
Dimensions (w/h/d)	60 × 54 × 120 mm (2 5/8 × 2 1/4 × 4 3/4 inches)
Supplied accessories	Lens mount cap (1) Operating Instructions (1) Power cable (1) (only SSC-DC198P/DC398P)

Design and specifications are subject to change without notice.

Installation**Object compatibles**

L'objectif doit être à monture CS et peser moins de 1 kg. La saillie à l'arrière de la surface de montage ne peut dépasser les limites suivantes ②.

① Objectif à monture CS ② 4 mm ou moins

Montage d'un connecteur d'objectif à diaphragme automatique

Installez un connecteur d'objectif (non fourni) lors de l'utilisation d'un objectif à diaphragme automatique.

Cette installation ne doit être effectuée que par un technicien qualifié ou par les installateurs du système.

Aucun connecteur d'objectif n'est fourni avec cette caméra.

1 Coupez le câble de commande du diaphragme au bord du connecteur d'objectif afin de retirer le connecteur d'objectif existant, puis retirez le capuchon de câble externe, comme indiqué dans l'illustration de gauche.

2 Soudez le câble de l'objectif aux broches du connecteur d'objectif.

Montage de l'objectif

1 Dévissez le bouchon de montage d'objectif.

2 Vissez l'objectif et tournez jusqu'à ce qu'il se verrouille.

3 Branchez la fiche d'objectif sur le connecteur LENS.

Si vous utilisez un objectif à diaphragme manuel, passez l'étape 3.

4 Selon le type d'objectif, réglez la distance focale en tournant la vis de mise au point.

Attention

Laissez le bouchon de boîtier sur la caméra lorsque vous n'y montez pas d'objectif.

Installation de la caméra**ATTENTION**

Si vous installez la caméra au plafond, assurez-vous qu'elle est bien fixée.