

# Color Video Camera

## 半球型摄像机

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

**使用说明书**  
使用本机前，请仔细阅读本使用说明书并妥善保存以备日后参考。

## Super HAD CCD II™ SSC-N21

http://www.sony.net/

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### English

### Owner’s Record

The model and serial numbers are located on the bottom. 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 reduce a risk of fire or electric shock, do not expose this product 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 and no objects filled with liquid, such as vases, shall be placed on the apparatus.

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

**WARNING**  
A readily accessible disconnect device shall be incorporated in the building installation wiring.

**CAUTION**  
The rating label is located on the bottom.

**Power Supply**  
**Caution for U.S.A. and Canada**  
The SSC-N21 operates on AC 24 V or DC 12 V. The SSC-N21 automatically detects the power.

In the USA, this product shall be powered by a UL listed Class 2 Power Supply Only.  
In Canada, this product shall be powered by a CSA Certified Class 2 Power Supply Only.

**For customers in the U.S.A.**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B or Part 15 of FCC Rules.

**For customers in Canada**  
This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

**For the customers in Europe**  
The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.  
The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

**For the customers in Europe, Australia and New Zealand**

**WARNING**  
This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.  
In the case that interference should occur, consult your nearest authorized Sony service facility.  
This apparatus shall not be used in the residential area.

**ATTENTION**  
The electromagnetic fields at specific frequencies may influence the picture of the unit.

### Features

- This is a dome-shaped color video camera for which the 1/3 type **Super HAD CCD II™** has been adopted. It has the following features:
- Manual setting of the camera direction - panning, tilting and rotating.
  - Vari-focal auto iris lens as standard equipment. The focal length of the lens is from 2.8 mm (1/8 inch) to 10.5 mm (2/3 inch).
  - High quality CCD and clear dome casing enable high sensitivity. (0.15 lx, F1.2, 50 IRE)
  - Automatic white balance tracking and adjustment (ATW/ATW-PRO).
  - AC 24 V/DC 12 V power supply system.
  - Line lock function (AC 24 V).
  - **Super HAD CCD II™** is a registered trademark of Sony Corporation.

### Notes on Use

- Operating or storage location**  
Do not shoot an extremely bright object (an ill illumination, the sun, etc.). Also, avoid operating or storing the camera in the following locations, as these can be a cause of a malfunction.
- Extremely hot or cold places (Operating temperature: –10°C to +50°C [14°F to 122°F])
  - Exposed to direct sunlight for a long time, or close to heating equipment (e.g., near heaters)
  - Close to sources of strong magnetism
  - Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters
  - Locations subject to vibration or shock
  - Humid or dusty locations
  - Locations exposed to rain
  - Locations under the influence of fluorescent light or reflection of a window
  - Under an unsteady light (the image will flicker.)

- Ventilation**  
To prevent heat buildup, do not block air circulation around the camera.
- Transportation**  
When transporting the camera, repack it as originally packed at the factory or in materials of equal quality.
- Cleaning**
- Use a blower to remove dust from the lens.
  - Use a soft, dry cloth to clean the external surfaces of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
  - Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.

**Note on laser beams**  
Laser beams may damage the CCDs. If you shoot a scene that includes a laser beam, be careful not to let a laser beam become directed into the lens of the camera.

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

### Location and Function of Part

#### Side A

- Cables **❶**, **❷** are not connected when the unit comes from the factory.
- ❶ Power cable**  
Connect the power cable to AC 24 V or DC 12 V (**❸**). The connector tip is a quick-disconnect type. You can screw the cables in either connectors of the tip.
- ❷ BNC cable**  
Connect the BNC cable to a monitor or video device (**❹**).
- ❸ Gap adjustment flange (knockout type)**  
If the cable creates a gap between the installation surface and the camera, break off the knockout flange by using nippers and insert the cable through the opening. There are two knockouts.
- ❹ Zoom lever**  
Move this lever to adjust the angle of view. Tighten its screw to fix its position.
- ❺ Focus lever**  
Move this lever to adjust the focal length. Tighten its screw to fix its position.

#### Inside B

- ❻ Camera installation holes (2 positions)**  
Install the camera onto the ceiling or wall with the screws (not supplied) inserted through these holes.
- ❼ Mode setting DIP switch**  
The following DIP switches are turned on if they have been set to the top positions.

PinNo.	Switch	Location	
		Up(ON)	Down(OFF)
1	SYNC	LL	INT
2	AGC	ON	OFF
3	iBLC	ON	OFF
4	ATR-Lite	ON	OFF
5	NR	ON	OFF
6	WB	ATW PRO	ATW
7	D/N	ON	DAY
8	D/N_TIME	SHORT	LONG
9	D/N_LEVEL	HIGH	LOW

- 1: SYNC (Sync Lock) switch (Initial setting: INT)**  
Use this switch to set the camera synchronization mode to INT (Internal) or LL (Line Lock).  
When the camera power is DC 12 V, the camera is in the internal operation mode regardless of the switch setting.
- Caution**  
Please power off the camera before changing the SYNC switch.
- 2: AGC (Automatic Gain Control) switch (Initial setting: ON)**  
Use this switch to increase the gain of the video amplifier when set to ON.
- 3: iBLC (Intelligent Backlight Compensation) ON/OFF switch (Initial setting: OFF)**  
Use this switch to adjust the exposure to compensate for situations where the subject is lit from behind.
- 4: ATR-Lite (Lite Adaptive Tone Reproduction) switch (Initial setting: OFF)**  
When the switch is set to ON, the camera will adjust the tone automatically in accordance to the difference between bright and dark.
- 5: NR (Noise Reduction) switch (Initial setting: ON)**  
When the switch is set to ON, the camera will automatically apply the digital compensation to noise.
- 6: WB (White Balance) switch (Initial setting: ATW)**  
Choose the WB modes of the camera:  
ATW PRO (when the switch is set to ON): adjust the WB automatically on the base of the color temperature of fluorescent light, incandescent lamp or natural light.  
ATW (when the switch is set to OFF): adjust the WB automatically, especially effective in specific lights, such as sodium, etc..
- 7: D/N (Day/Night) switch (Initial setting: DAY)**  
Choose the modes of D/N:  
D/N mode (when the switch is set to ON): switch to the color mode when in a high bright environment; switch to the black mode when in a low light environment.  
Color mode (when the switch is set to OFF)
- 8: D/N\_TIME (Day/Night time) switch (Initial setting: LONG)**  
Sets the time for switching Day/Night mode.  
SHORT takes more than 2 seconds, and LONG takes more than 30 seconds.
- 9: D/N\_LEVEL (Day/Night level) switch (Initial setting: LOW)**  
Sets the brightness of the object of when Day/Night mode switches.  
When set to LOW, the camera will turn to the black mode in a lower light environment than set to HIGH.

- ❶ V PHASE (Vertical Phase) adjustment screw**  
Use this screw to adjust the vertical phase of cameras synchronized by LL.
- ❹ MON (MONITOR OUT) connector**  
Connect the monitor cable to this connector. You can adjust the camera while looking at the image on the monitor. After adjusting the camera, disconnect the cable.

### Connecting the Cables

- 1** Connect the BNC cable to a monitor or video device (see figure **A ❹**).
- 2** Connect the power cable to the power supply (AC 24 V/DC 12 V) (see figure **A ❸**).
- Caution**  
When you connect the power cable, be sure that the exposed ends of the power cable do not touch each other to prevent a short circuit.

(continued on the reverse side)

### 中文

### 警告

**为减少火灾或电击危险，请勿让本设备受到雨淋或受潮。**

**为防止触电严禁拆开机壳，维修请咨询具备资格人士。**

设备不要受到滴水或水溅，不要将盛满液体的花瓶等物品放在设备上。

**警告**  
本安装应该由有资格的服务人员进行，并须符合所有当地法规规定。

**警告**  
应该在设备外部组入易于使用的断电设备。

**注意事项**  
额定标签位于底部。

**声明**  
此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。  
如果发生干扰，请咨询最近的 Sony 授权服务中心。

**注意**  
某些特定频率的电磁场可能会干涉本装置的图像。

### 特性

- 这是一款采用 1/3 型 **Super HAD CCD II™** 的半球型摄像机。具有以下特点：
- 手动设定摄像机方向-水平、垂直和旋转。
  - Vari-focal auto iris 镜头作为标准配置。镜头的焦距从 2.8 mm 至 10.5 mm。
  - 高品质 CCD 和透明的圆顶盖确保了高灵敏度。(0.15 lx, F1.2, 50 IRE)
  - 自动白平衡跟踪和调节 (ATW/ATW-PRO)。
  - 24 V 交流/12 V 直流电源系统。
  - 线路锁定功能 (24 V 交流)。
  - **Super HAD CCD II™** 是 Sony Corporation 的注册商标。

### 使用须知

#### 操作或存放场所

- 请勿拍摄非常亮的物体（灯光、阳光等）。避免在以下位置使用或存放摄像机，否则会导致故障。
- 极热或极冷的地方（操作温度：–10℃ 至 +50℃）
  - 长时间暴露于直射阳光下，或者靠近热源（比如加热器）的地方
  - 靠近强磁源的位置
  - 靠近无线电或电视发射器等强电磁辐射源的地方
  - 易于受到强力振动或撞击的地方
  - 潮湿或有灰尘的地方
  - 暴露于雨水的地方
  - 受到荧光灯或窗户反射光影响的地方
  - 在不稳定光线的下面（图像会闪烁。）

**通风**  
为了避免热量积蓄，不要阻挡摄像机附近的通风。

**运送**  
当运送摄像机时，重新以出厂时的包装进行包装，或用同等品质的材质包装。

- 清洁**
- 用吹灰器清除镜头灰尘。
  - 使用柔软、干燥的布清洁摄像机的外表面。要清除顽固的污渍，请用少量清洁剂蘸湿软布，然后擦干即可。
  - 不要使用酒精、苯或稀释剂等挥发性溶剂，这些物质可能会破坏表面光洁度。

**关于激光束**  
激光束可能会损坏 CCD。若拍摄含有激光束的场面，请注意不要让激光束直接射入摄像机的镜头。

摄像机在使用过程中出现的任何问题请与您的 Sony 经销商联系。

### 各部件位置和功能

#### 侧面 A

- 本机出厂时未连接电缆 **❶**、**❷**。
- ❶ 电源电缆**  
将电源电缆连接至 24 V 交流电源或 12 V 直流电源 (**❸**)。连接器端为快速断线型，可固定任一端连接器上的电缆。
- ❷ BNC 电缆**  
将 BNC 电缆连接至监视器或视频装置 (**❹**)。
- ❸ 间隙调整法兰（排出型）**  
若电缆在安装表面与摄像机之间产生了间隙，请用镊子折断排出法兰并将电缆穿过开口处。有两个排出法兰。
- ❹ 变焦杆**  
拨动此杆可调整视线角度。此杆本身是一螺杆，拧紧此杆以将它锁定在其位置。
- ❺ 聚焦杆**  
拨动此杆可调整焦距长度。此杆本身是一螺杆，拧紧此杆以将它锁定在其位置。

#### 内部 B

- ❶ 摄像机安装孔 (2 个位置)**  
用螺丝（未附带）通过这些安装孔将摄像机安装在天花板上或墙上。
- ❷ 模式设定 DIP 开关**  
如果下列 DIP 开关被设定于顶端位置，则它们处于打开状态。

PinNo.	开关	位置	
		上 (ON)	下 (OFF)
1	SYNC	LL	INT
2	AGC	ON	OFF
3	iBLC	ON	OFF
4	ATR-Lite	ON	OFF
5	NR	ON	OFF
6	WB	ATW PRO	ATW
7	D/N	ON	DAY
8	D/N_TIME	SHORT	LONG
9	D/N_LEVEL	HIGH	LOW

- 1: SYNC (同步锁定) 开关（初始设定：INT）  
使用此开关将摄像机同步模式设定为或 INT（内部）或 LL（线路锁定）。  
摄像机电源为 12 V 直流电源时，摄像机以内部操作模式工作，而不管开关设定位置。
- 注意**  
在切换 SYNC 开关前请先切断摄像机电源。
- 2: AGC（自动增益控制）开关（初始设定：ON）  
设定为 ON 时，可使用此开关以提高视频放大器的增益。
- 3: iBLC（智能逆光补偿）ON/OFF 开关（初始设定：OFF）  
使用此开关对处于逆光环境的拍摄对象进行曝光补偿。
- 4: ATR-Lite（简易适应性色调再生）开关（初始设定：OFF）  
此开关设定为 ON 时，摄像机将根据明暗之间的差异自动调节色调。
- 5: NR（降噪）开关（初始设定：ON）  
此开关设定为 ON 时，摄像机将自动对噪点进行数码补偿。
- 6: WB（白平衡）开关（初始设定：ATW）  
选择摄像机的 WB 模式：  
ATW PRO（此开关设定为 ON 时）：根据荧光灯、白炽灯或自然光线的色温自动调节 WB。  
ATW（此开关设定为 OFF 时）：自动调节 WB，在钠灯等特定光源下特别有效。
- 7: D/N（日/夜）开关（初始设定：DAY）  
选择 D/N 的模式：  
D/N 模式（此开关设定为 ON 时）：在很明亮的环境中切换到彩色模式；在低亮度的环境中则切换到黑白模式。  
彩色模式（此开关设定为 OFF 时）

- 8: D/N\_TIME（日/夜时间）开关（初始设定：LONG）  
设定切换日/夜模式的时间。  
采用选项“SHORT”时，需要 2 秒以上，采用选项“LONG”时，需要 30 秒以上。
- 9: D/N\_LEVEL（日/夜等级）开关（初始设定：LOW）  
设定日/夜模式切换时对象的亮度。  
设定为“LOW”时，摄像机会在比设定为“HIGH”时更低亮度的环境中变为黑白模式。

- ❶ V PHASE（垂直相位）调节螺丝**  
使用此螺丝以调整为 LL 所同步的各摄像机的垂直相位。
- ❹ MON（MONITOR OUT）连接器**  
将监视器电缆连接至此连接器。在监视器上观看图像时可以调节摄像机。调节摄像机后，请拔下电缆。

### 连接电缆

- 1** 将 BNC 电缆连接至监视器或视频装置（参见图 **A ❹**）。
- 2** 将电源电缆连接至电源插座（24 V 交流电源/12 V 直流电源）（参见图 **A ❸**）。
- 注意**  
为防止发生短路，在连接电源电缆时，请勿使电源电缆裸露端相互接触。

(接反面)





