

SONY®

HD ELECTRONIC VIEWFINDER

HDVF-9900



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OPERATION MANUAL
1st Edition (Revised 1)

Japanese/English

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.

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

WARNUNG

Um Feuergefahr und die Gefahr eines elektrischen Schlages zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.

IMPORTANT

The nameplate is located on the bottom.

For the customers in the USA

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.

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

For the customers in Europe

This product with the CE marking complies with the EMC Directive(89/336/EEC) issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European standards:

- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following

Electromagnetic Environment(s):

E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

Pour les clients européens

Ce produit portant la marque CE est conforme à la Directive sur la compatibilité électromagnétique (EMC) (89/336/CEE) émise par la Commission de la Communauté européenne.

La conformité à cette directive implique la conformité aux normes européennes suivantes:

- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants:

E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé, ex. studio de télévision).

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie (89/336/EWG) EG-Kommission.

Angewandte Normen:

- EN55103-1: Elektromagnetische Verträglichkeit (Störaussendung)
- EN55103-2: Elektromagnetische Verträglichkeit (Störfestigkeit)

für die folgenden elektromagnetischen Umgebungen:

E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

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Overview

The HDVF-9900 HD Electronic Color Viewfinder is a 9-type color viewfinder for use with a Sony high-definition color camera.

This viewfinder has the following features:

Super-Fine-Pitch Trinitron CRT

The viewfinder uses an aperture-grill cathode-ray tube with an aperture grill of 0.25 mm. The result is a high-quality color picture with a horizontal resolution of 340 lines or more (with 16:9 display mode).

Stable picture

A high-voltage regulation circuit provides a stable image with a minimum of distortion, regardless of screen brightness.

Continuously variable peaking

A continuously variable peaking circuit provides a sharp image, making it easy to focus the camera.

Multi-format compatibility

The viewfinder supports the following signal formats: 1080/60i, 1080/59.94i, 1080/50i, 1080/24Psf (48i)*.

Tally lamps

The viewfinder has red and green tally lamps which light in response to tally signals.

Superior usability

The viewfinder height may be set to one of three positions, and it may be tilted up to 50° upwards or 45° downwards.

Drip-proof construction

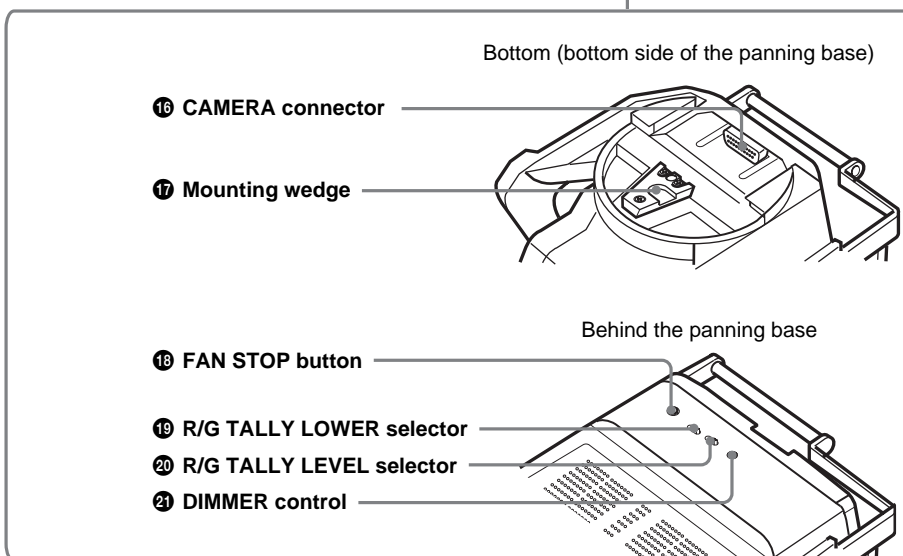
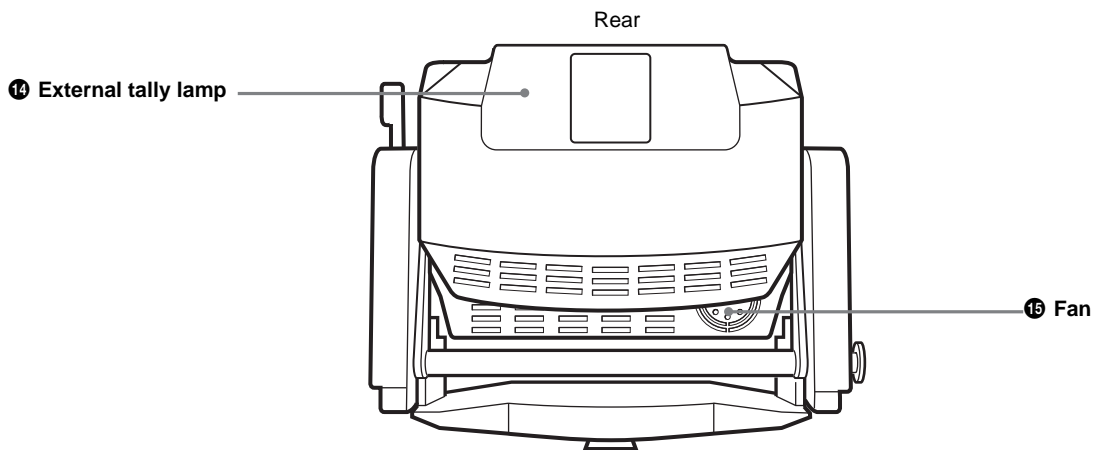
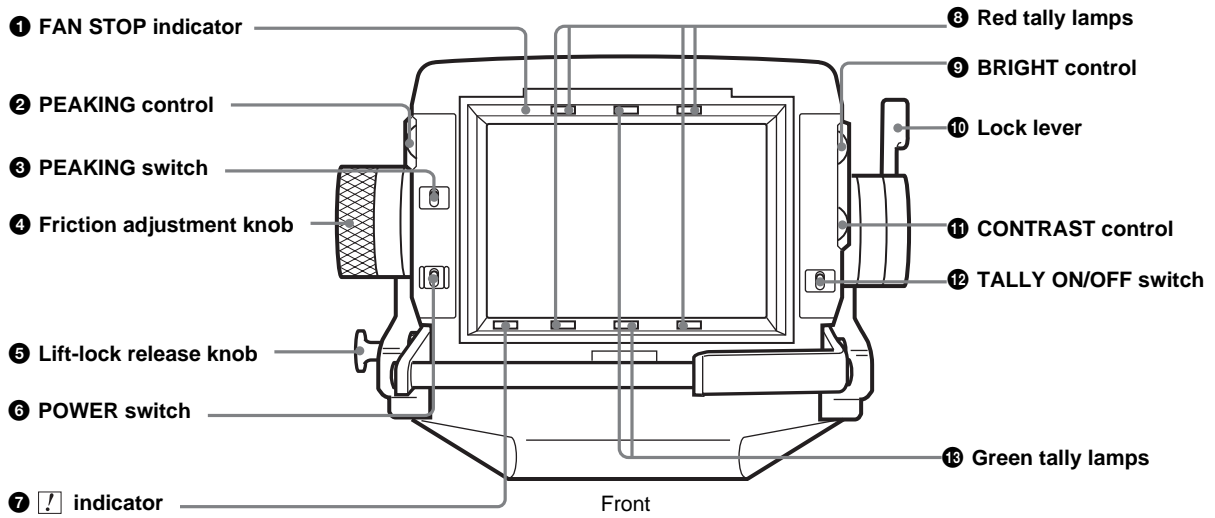
The drip-proof design is able to withstand light rain, making the viewfinder well suited to outdoor use.

Studio monitor hood, outdoor hood

The viewfinder may be fitted with a strong, easy-to-use studio hood (supplied), or an outdoor broadcasting (OB) hood with excellent shading ability (supplied).

* When the camera operates in 24Psf format mode, the viewfinder operates in 48i format mode.

Location and Function of Parts



Location and Function of Parts

❶ FAN STOP indicator

Lights up while the fan ❶ is stopped by pressing the FAN STOP button ❶.

❷ PEAKING control*

When the PEAKING switch ❸ is set to ON, this control may be used to sharpen the edges in the picture. Turning the control clockwise will increase the sharpness. The peaking may be adjusted from 0 to 18 dB.

❸ PEAKING switch

When this switch is set to ON, peaking can be adjusted using the PEAKING control ❷. When the switch is set to OFF, the PEAKING control ❷ is disabled, and the peaking value will be 0 dB.

❹ Friction adjustment knob

Used to adjust the amount of friction in the tilting mechanism.

❺ Lift-lock release knob

The viewfinder height may be adjusted while pulling this knob. By releasing the knob after adjusting the height to the standard (low), middle position, or top position, the viewfinder will remain fixed at that height.

❻ POWER switch

When pushed downward, turns the power supply from the camera to the viewfinder on or off.

When pushed upward, demagnetizes the CRT. For complete demagnetization, leave the unit for about 3 seconds or more after pushing the switch upward.

❼ [?] (attention) indicator

This indicator lights when the camera detects certain conditions. The particular conditions which cause the indicator to light up are set by the camera.

For information on how to set up and verify the conditions under which the [?] indicator will light, refer to the manual for the camera being used.

❽ Red tally lamps

Light up when the camera receives a red tally signal.

❾ BRIGHT (brightness) control*

Used to adjust the picture brightness.

❿ Lock lever

This lever is used to lock the viewfinder into a desired angle. The angle is locked when the lever is pushed towards the camera lens. When the lever is pulled toward the back of the camera, the angle may be adjusted. The tilt mechanism will resist movement with the amount of friction set by the friction adjustment knob ❹.

⓫ CONTRAST control*

Used to adjust the picture contrast.

⓬ TALLY (external tally lamp) ON/OFF switch

Controls the external tally lamp ❿. When set to ON, the external tally lamp will operate. When set to OFF, the lamp will not operate (will not light in response to a tally signal).

⓭ Green tally lamps

Light up when the camera receives a green tally signal.

⓮ External tally lamp

Lights up at the same time as the red tally lamps ❽. To set the tally lamps so that they stay off even when a tally signal is input, set the TALLY ON/OFF switch ⓬ to OFF. May be used to display the camera number by attaching one of the supplied number plates (0 through 9).

⓯ Fan

When heat builds up inside the unit, the fan automatically operates to cool the unit.

⓰ CAMERA connector (D-sub 25-pin)

Used to connect to the camera's viewfinder connector.

⓱ Mounting wedge

To attach the viewfinder to a camera, the mounting wedge is inserted into the V-shaped groove on the top of the camera.

* These controls have no effect on the camera's video output signals.

18 FAN STOP button

When ambient temperature is high, the fan **15** automatically operates. When this happens, the fan can be turned off for about 5 minutes by pressing this button.

Note

If excessive heat keeps building up inside the unit, the life of the unit may be shortened. When the fan operation resumes 5 minutes after the FAN STOP button has been pressed, do not press the button again for at least 2 minutes.

19 R/G TALLY LOWER (lower red/green tally lamps) selector

Used to select the red tally lamps **8** and the green tally lamp **13** lighting up according to the input of tally signals.

ON: All red and green tally lamps light up.

OFF: Only the red tally lamps and the green tally lamp at the upper part of the viewfinder light up.

20 R/G TALLY LEVEL (red/green tally lamps brightness) selector

Used to adjust the brightness of the red tally lamps **8** and the green tally lamps **13**.

H: Light brighter.

M: Light normally.

L: Light dimly.

21 DIMMER (external tally lamp) control

Used to adjust the brightness of the external tally lamp **14**. Use a screwdriver to turn the control clockwise to increase the brightness, or counterclockwise to decrease the brightness.

Attaching to the Camera

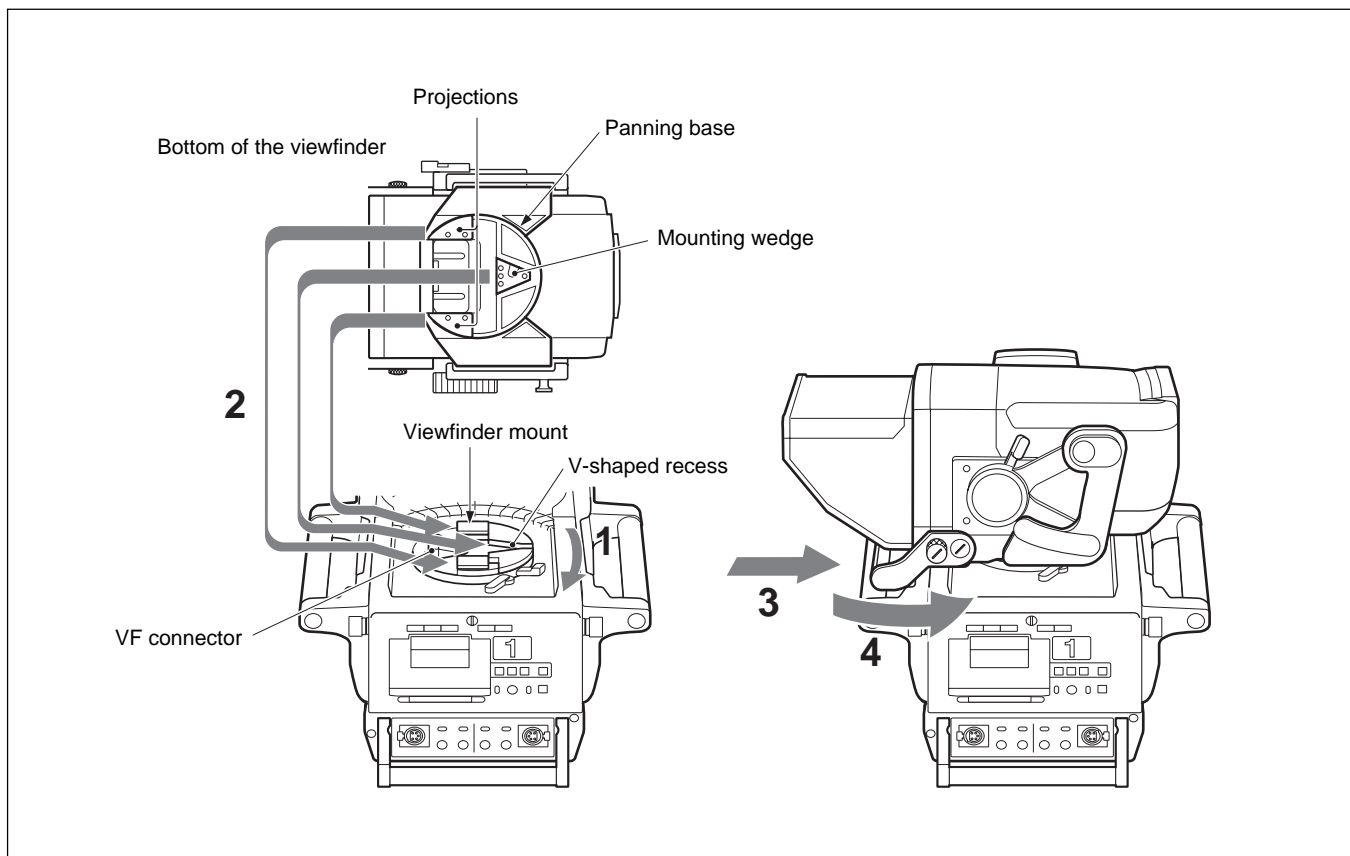
The viewfinder is attached to the panning base mounting plate (see the figure below) on the top of the camera.

Note

When attaching the viewfinder to or removing it from a camera, always be sure to lock the viewfinder in standard position (the lowest position).

Proceed as follows.

For more information on adjusting the viewfinder position, see the section “Adjusting the Position – Tilting” on page 8(E).



Attaching a viewfinder to the camera

- 1** Turn the viewfinder mount of the camera fully clockwise until it is placed at the position shown in the figure above.
- 2** Place the viewfinder on the viewfinder mount of the camera so that the mounting wedge on the bottom of the viewfinder enters the V-shaped recess on the viewfinder mount and that the projections on the bottom of the viewfinder are placed at the position shown in the figure above.
- 3** Push the viewfinder by the handle so that the panning base is securely held by the viewfinder mount.
Pull the handle to check that the viewfinder is fixed to the camera.

- 4** Rotate the viewfinder to optimum angle.

Caution

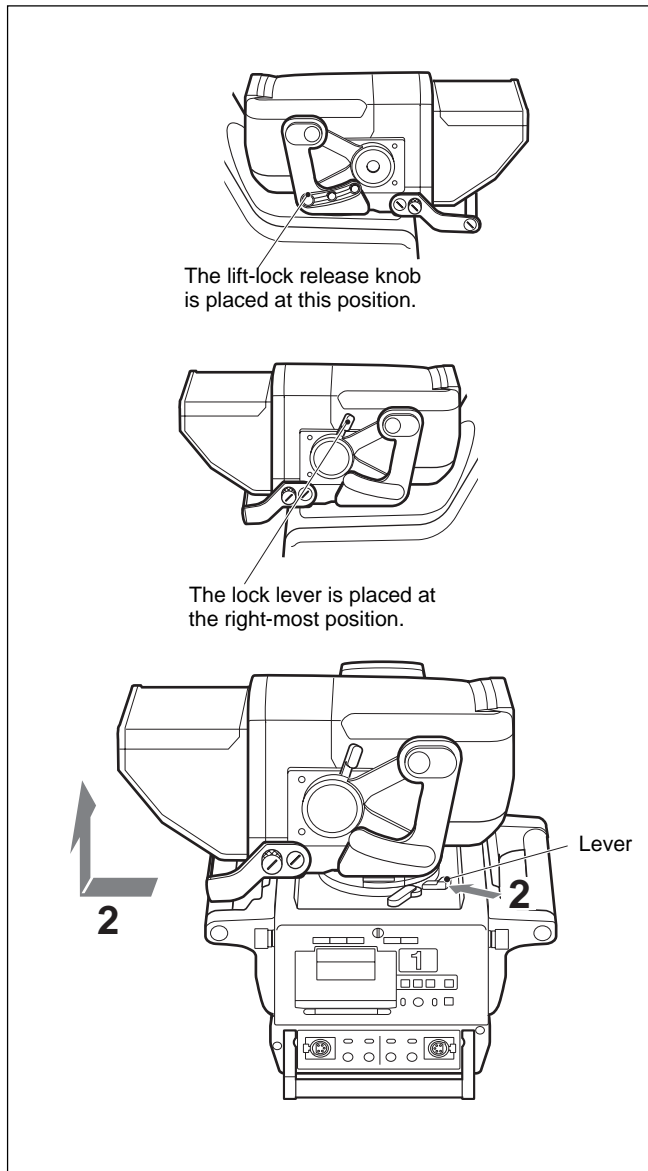
Attach the viewfinder to the camera securely, or the viewfinder may fall down.

Detaching the viewfinder

Before detaching the viewfinder, check the following two points:

- That the lift-lock release knob of the viewfinder is at its lowest position
- That the lock lever is fixed at the right-most position

Proceed as follows.



Detaching the viewfinder

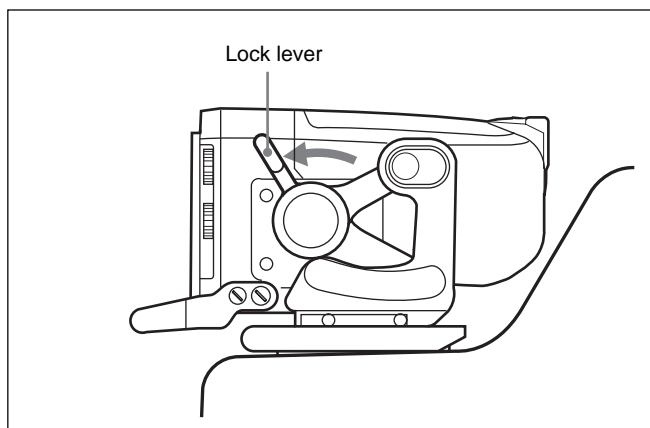
- 1** Turn the viewfinder fully clockwise.
- 2** Pull the handle of the viewfinder toward you while pushing the lever of the camera, and lift up the viewfinder.

Adjusting the Position — Tilting

Notes

- If you pull the lift-lock release knob before the viewfinder is attached to the camera, the tilting mechanism will spring open and the viewfinder may tip over. Be sure to attach the viewfinder to the camera before performing the procedure below.
- When moving the camera with the viewfinder attached, always lower the viewfinder to its standard (lowest) position and push the lock lever towards the camera lens. Also, verify that the lift-lock release knob is fitted into the standard position depression.

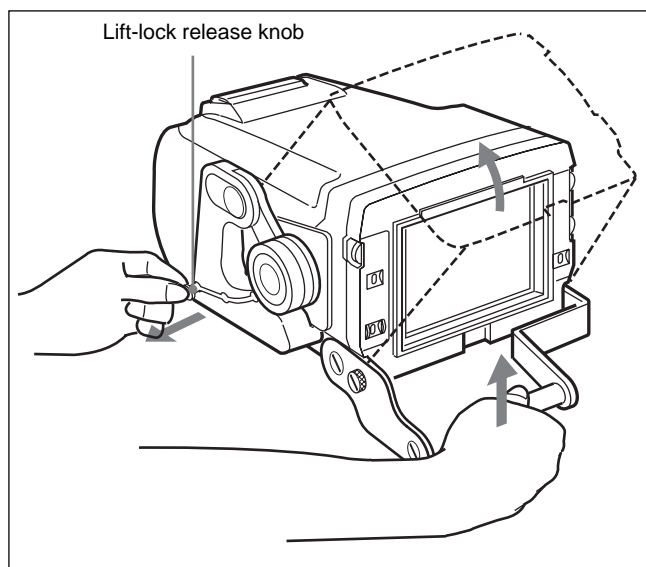
- 1** Pull the lock lever towards the rear of the camera.



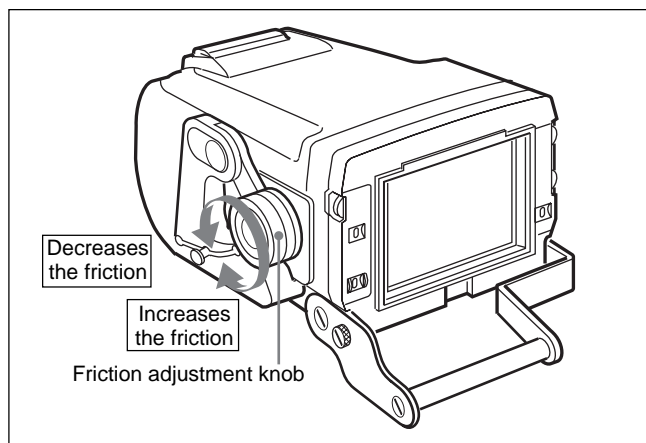
- 2** While pulling the lift-lock release knob, grasp the viewfinder handle and lift the viewfinder to its middle or top position.

Note

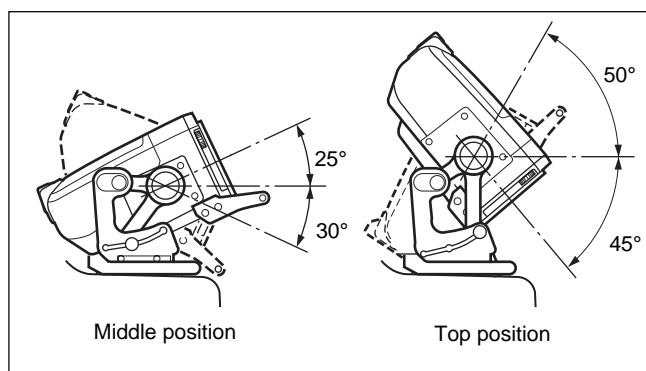
If the viewfinder is raised while holding onto the lift-lock release knob only, the viewfinder may not lock properly in the desired height position. Always lift the viewfinder while holding onto both the lift-lock release knob and the handle.



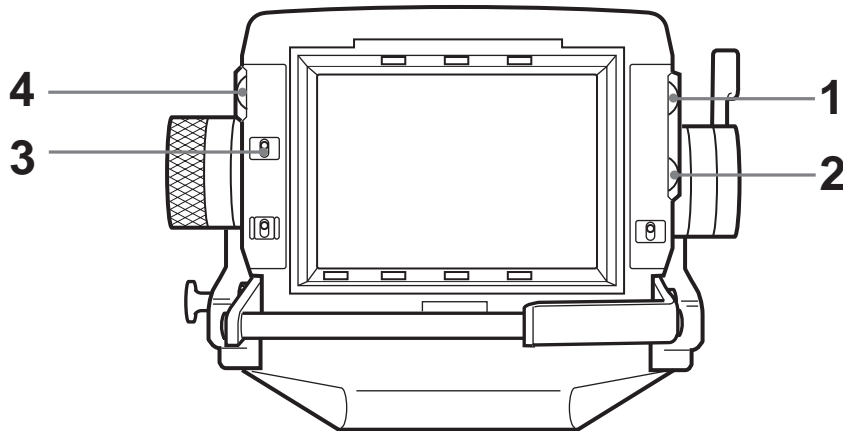
- 3** Turn the friction adjustment knob to set the desired tilt friction. Turning the knob clockwise will increase the amount of tilt friction, and turning it counterclockwise will decrease it.



- 4** Adjust the tilt angle. After setting the viewfinder to the desired angle, push the lock lever towards the camera lens to lock the viewfinder in position.



Adjusting the Screen



- 1 Turn the BRIGHT control to adjust the brightness of the screen.
Turning the control clockwise makes the picture brighter.

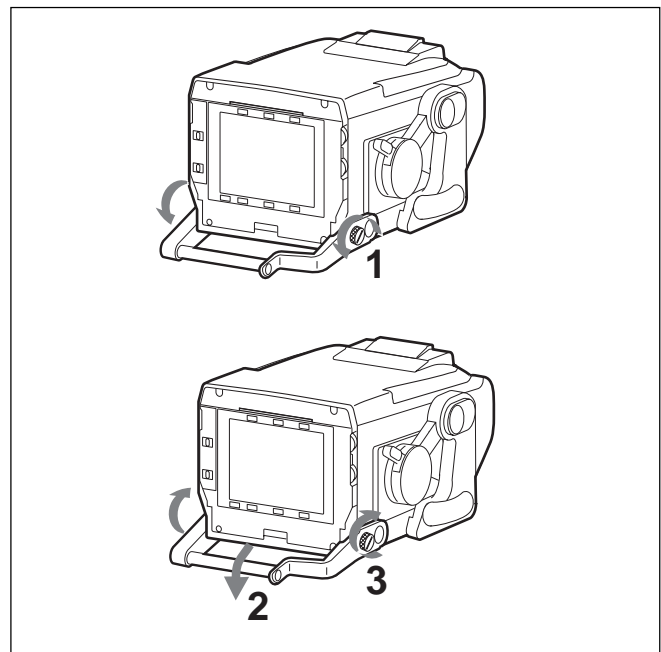
Note

When the BRIGHT control is turned counterclockwise as far as it will go, no picture may be displayed on the screen.

- 2 Turn the CONTRAST control to adjust the screen contrast.
- 3 Set the PEAKING switch to ON.
- 4 Turn the PEAKING control to adjust the peaking.
Turn the control clockwise to make edges in the image sharper.

Adjusting the handle position

The handle position can be adjusted downward to 30°.



- 1 Loosen the screws at both sides of the handle.
- 2 Push down the handle.
- 3 Tighten the screws securely with coins, etc.

Note

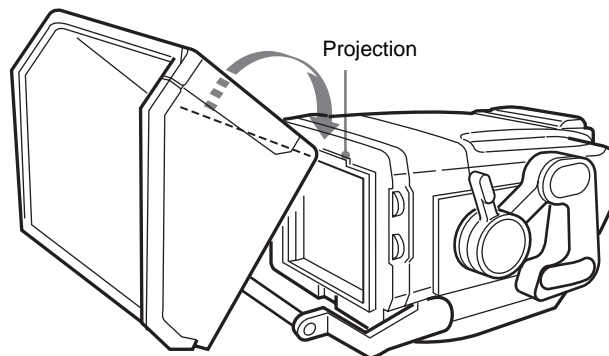
If you rotate the viewfinder with the handle pushed down, the handle may touch the camera.

Attaching Accessories

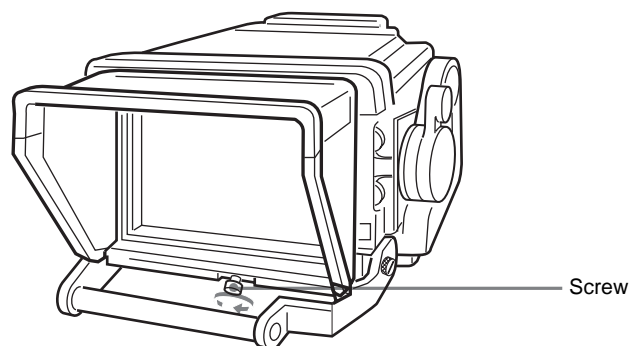
Attaching hoods

This section describes how to attach the supplied studio monitor hood. The outdoor broadcasting (OB) hood (supplied) is attached in the same manner.

- 1 Hook the hood on the projection over the screen.

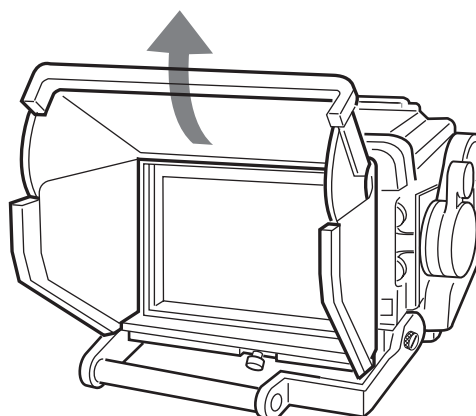


- 2 Tighten the screw to fix the hood in place.

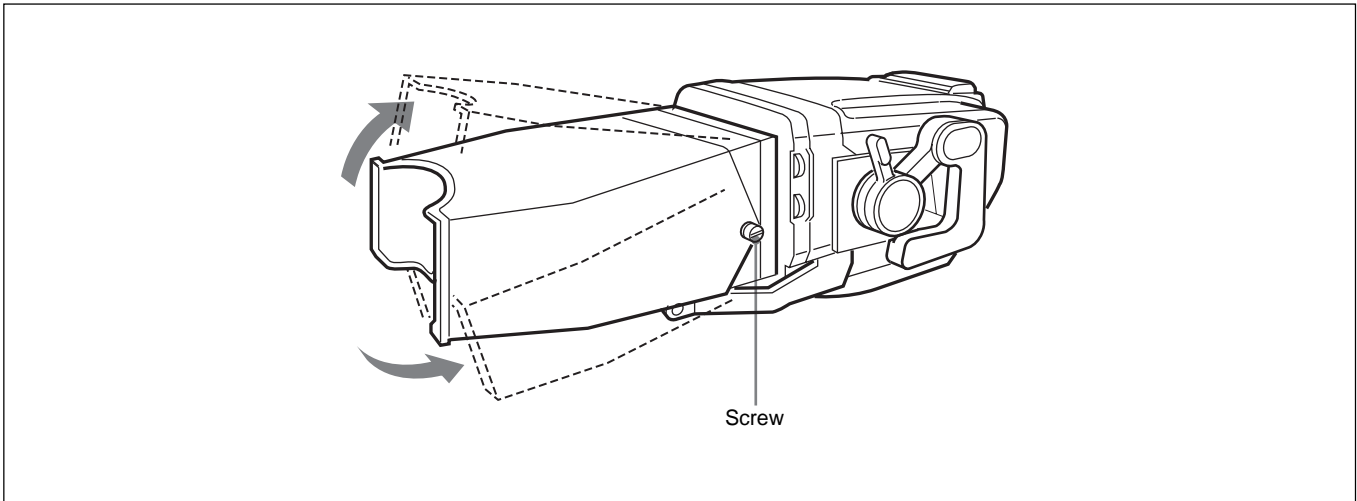


The studio monitor hood can be opened up by 30°; the OB hood direction can be adjusted up or down approximately by 25°.

Studio monitor hood



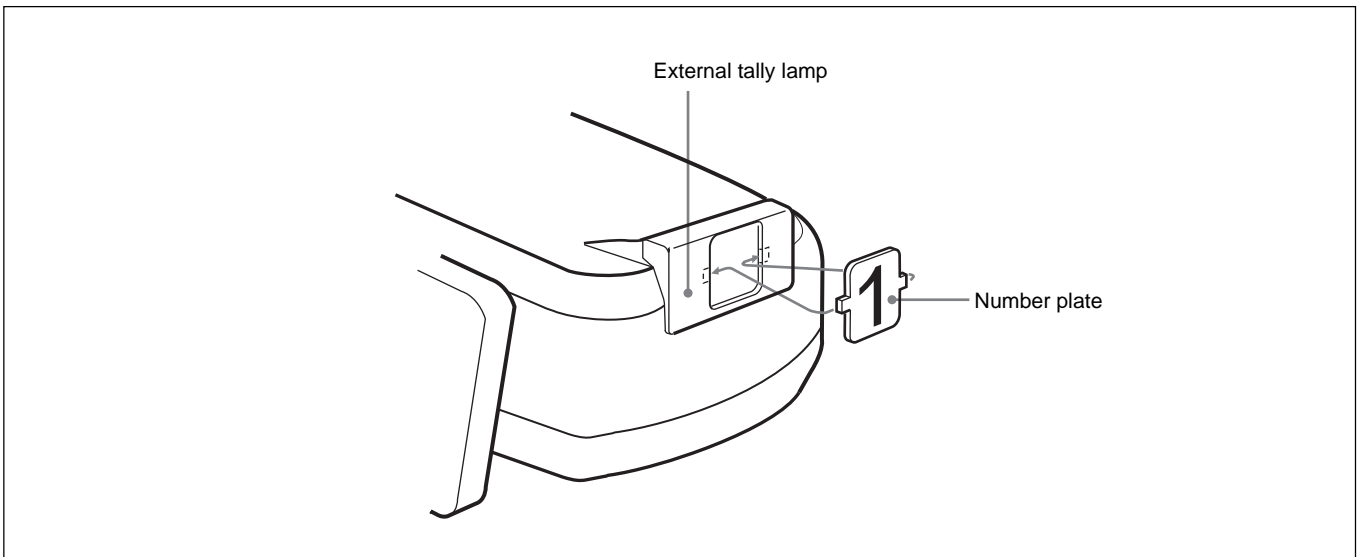
OB hood (supplied)



When the OB hood is difficult to move, or when it will not stay in a set position, adjust the tilt friction using the screws at both sides of the hood. Turning the screws clockwise will tighten the joint, and turning them counterclockwise will loosen it.

Attaching a number plate

Insert the tabs on the sides of the required number plate (supplied) into the slots on the sides of the external tally lamp.

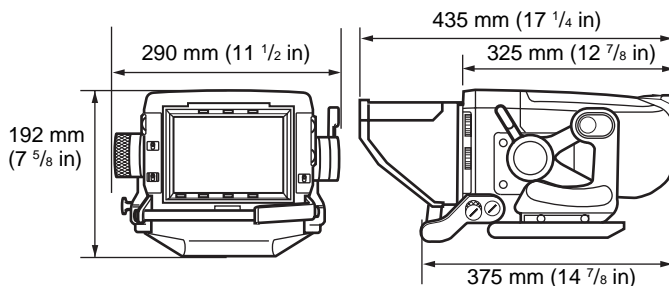


Specifications

General

Power supply	10.5 to 17.0 V DC (supplied by the camera)
Power consumption	50 W
Operating temperature	-20°C to 45°C (-4°F to 113°F)
Mass	7.9 kg (17 lb 7 oz) not including hood

External dimensions:



CRT

9-type Super-Fine-Pitch Trinitron, 90° deflection	
Picture size	155.4 × 87.4 mm (6 1/8 × 3 1/2 in) (16:9 aspect ratio)

Deflection and high voltage

Brightness	250 cd/m ²
Resolution	340 lines
Geometric distortion	2.0% or less
EHT voltage regulation	within ±1.0%
EHT voltage	16 kV (standard)

Input voltage and signal characteristics

Video input	1.0 V _{p-p} ±6 dB (SMPTE 274M), 75-Ω terminated
DC restoration	Back porch type Back porch level: within 2% of peak, 10% to 90% APL
Frequency response	0.1 to 25 MHz (±3 dB)
Peaking	0 to 18 dB (15 MHz)

Synchronization	Line pull range:
	Horizontal, ±500 Hz or more
	Vertical, -10 Hz or more
Line hold range:	±500 Hz or more

Compatible signal formats

System	Total scanning lines/frame	Effective scanning lines/frame	Frame rate*	Scan system	Aspect ratio	Standard(s)
1080/48i	1125	1080	24	2:1 interlace	16:9	SMPTE 274M
1080/50i	1125	1080	25	2:1 interlace	16:9	SMPTE 274M
1080/60i	1125	1080	30	2:1 interlace	16:9	SMPTE 274M/ BTA S-001B

Connectors

CAMERA connector	D-sub 25-pin
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Supplied accessories

- Studio monitor hood (1)
- Outdoor broadcasting hood (1)
- Number plate (1)
- Operation manual (1)

Related products

HDC-900/910 HD Color Video Camera

Design and specifications are subject to change without notice.

* Compatible with the frame rate of 1/100I.

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B & P Company

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