

SONY®



CCD BLOCK ADAPTOR

HKC-T1500

HKC-T3300



電気製品は、安全のための注意事項を守らないと、
火災や人身事故になることがあります。

このオペレーションマニュアルには、事故を防ぐための重要な注意事項と製品の取り扱いかたを示してあります。**このオペレーションマニュアルをよくお読みのうえ**、製品を安全にお使いください。お読みになったあとは、いつでも見られるところに必ず保管してください。

Digital HDVS

OPERATION MANUAL
1st Edition (Revised 1)

Japanese/English

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

IMPORTANT

The nameplate is located on the bottom.

CAUTION

Sharp objects and edges inside the camera. Beware of injury.

For the customers in the U.S.A.

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 of Part 15 of FCC Rules.

For the customers in Europe

This product with the CE marking complies with the EMC Directive 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 Environments:

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

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.

AVERTISSEMENT

Afin de réduire les risques d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

IMPORTANT

La plaque signalétique se situe sous l'appareil.

Pour les clients européens

Ce produit portant la marque CE est conforme à la Directive sur la compatibilité électromagnétique (EMC) 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).

Le fabricant de ce produit est Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japon.

Le représentant autorisé pour EMC et la sécurité des produits est Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Allemagne. Pour toute question concernant le service ou la garantie, veuillez consulter les adresses indiquées dans les documents de service ou de garantie séparés.

WARNUNG

Um die Gefahr von Bränden oder elektrischen Schlägen zu verringern, darf dieses Gerät nicht Regen oder Feuchtigkeit ausgesetzt werden.

WICHTIG

Das Namensschild befindet sich auf der Unterseite des Gerätes.

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie der 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 (Stadtgebiet im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

Der Hersteller dieses Produkts ist Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

Der autorisierte Repräsentant für EMV und Produktsicherheit ist Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Deutschland. Bei jeglichen Angelegenheiten in Bezug auf Kundendienst oder Garantie wenden Sie sich bitte an die in den separaten Kundendienst- oder Garantiedokumenten aufgeführten Anschriften.

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Overview

The HKC-T1500 and the HKC-T3300 CCD Block Adaptors are adaptor kits for CCD block extension. They provide you higher mobility by separating the CCD block of an Sony HDC1500-series/HDC3300 HD Color Camera from the camera.

Applicable models

HKC-T1500	HDC1500-series HD color cameras
HKC-T3300	HDC3300 HD color camera

As the tally/intercom signals can be checked also on the separated block, you can perform your shooting without worrying about the distance from the camera.

In a shooting situation for which you cannot carry the camera, or in limited space, you can detach the handle from the separated block and can also fix the block to a tripod.

Product Configuration

CCD block adaptor (1 ea.)

This adaptor accommodates the CCD block separated from the camera.

You can perform your shooting by carrying only the CCD block mounted in this adaptor.

Cable adaptor (1 ea.)

Being mounted in the camera in place of the CCD block of the camera, this adaptor relays signals between the camera and the CCD block.

Note

As the HKC-T1500/T3300 is shipped from the factory with the cable adaptor mounted in the CCD block adaptor, it is necessary to detach the cable adaptor from the CCD block adaptor first.

For the detaching procedure, see “Assembly” on page 28.

HDCM-12 cable (12.5 m) (1 ea.)

This cable connects between the CCD block mounted in the CCD block adaptor and the cable adaptor mounted in the camera and relays signals and operating power.

For the HKC-T1500, longer cables are available as options (Multicore Cables):

- HDCM-25 (25 m): Part number 1-820-810-11
- HDCM-50 (50 m): Part number 1-820-811-11

VF relay cable (1 ea.)

Connecting the VF connector of the cable adaptor and the VF connector of the camera, this cable relays signals between the viewfinder attached to the CCD block adaptor and the camera.

MIC relay cable (XLR 3-pin) (1 ea.)

Connecting the MIC connector of the cable adaptor and the AUDIO IN connector of the camera, this cable relays the microphone input signals from the CCD block adaptor to the camera.

INTERCOM relay cable (XLR 5-pin) (1 ea.)

Connecting the INTERCOM connector of the cable adaptor and the INTERCOM 1 connector of the camera, this cable relays audio intercom signals between the CCD block adaptor and the camera.

Top cover (1 ea.)

To use the CCD block adaptor without the handle, attach this cover in place of the handle.

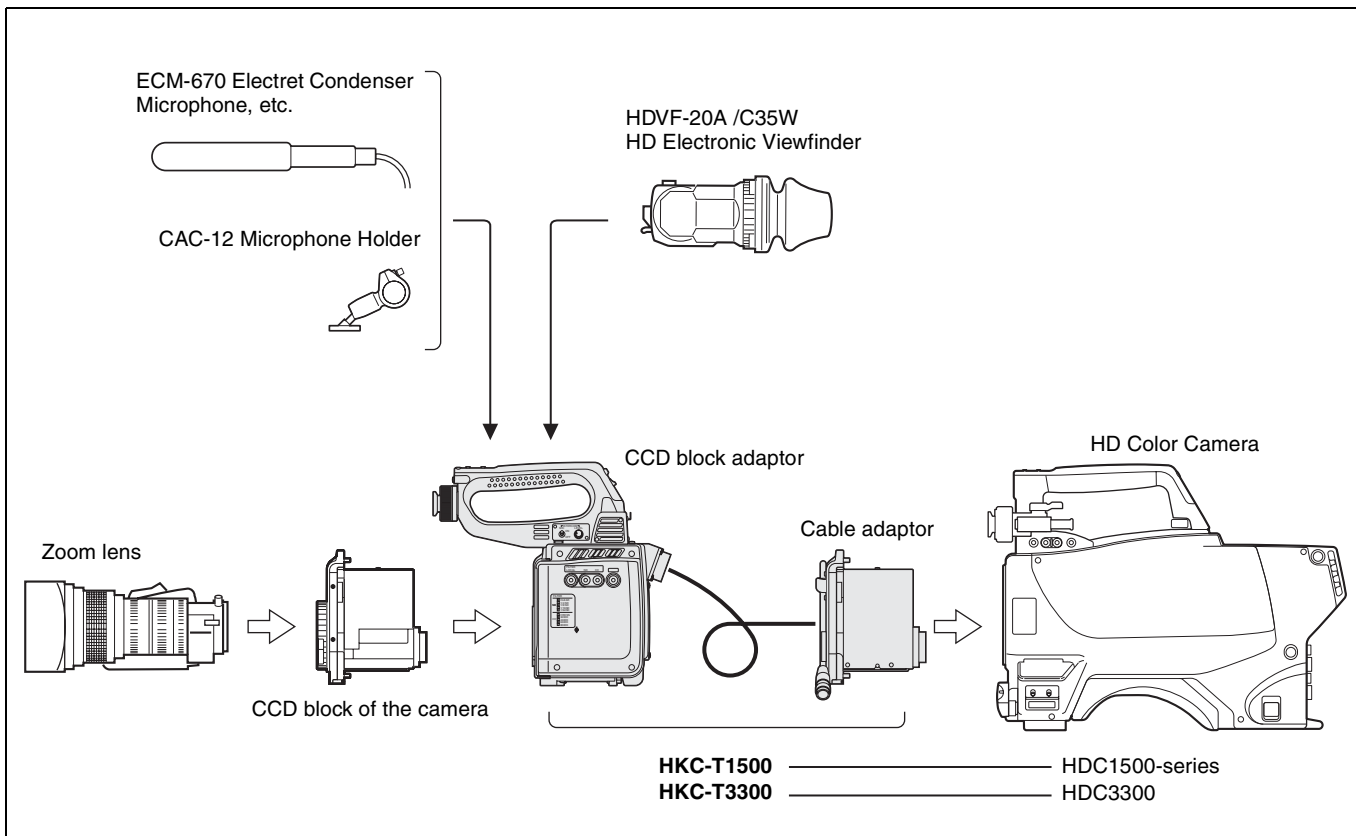
Camera hanger (1 pair) (HKC-T1500 only)

Attaching these hangers to the CCD block of the camera makes the task of mounting/unmounting the CCD block easy.

Cable clamp (1 ea.)

Attaching this clamp to the CCD block adaptor improves operability by fixing the HDCM cable to the side of the adaptor.

System Configuration



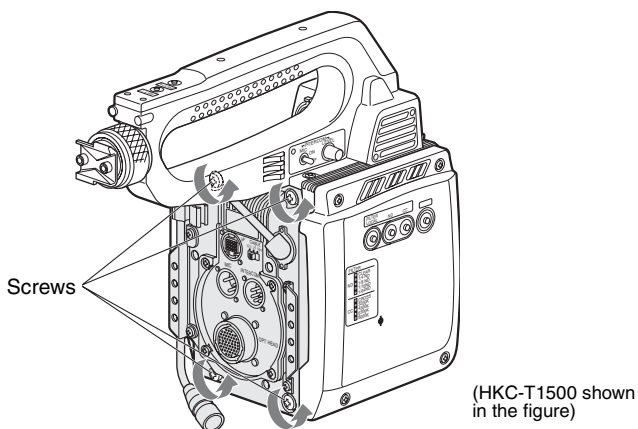
Assembly

Mount the CCD block detached from the camera to the CCD block adaptor then mount the cable adaptor of the HKC-T1500/T3300 to the camera in its place.

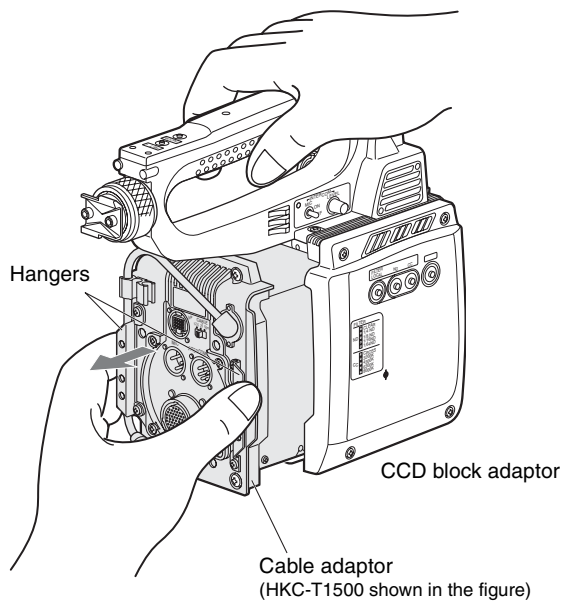
Use a Phillips screwdriver.

Step 1: Removing the Cable Adaptor from the CCD Block Adaptor

- 1 Loosen the four screws holding the cable adaptor.



- 2 Holding the handle of the CCD block adaptor with one hand, grasp the cable adaptor by the hangers with the other hand and pull it out horizontally.

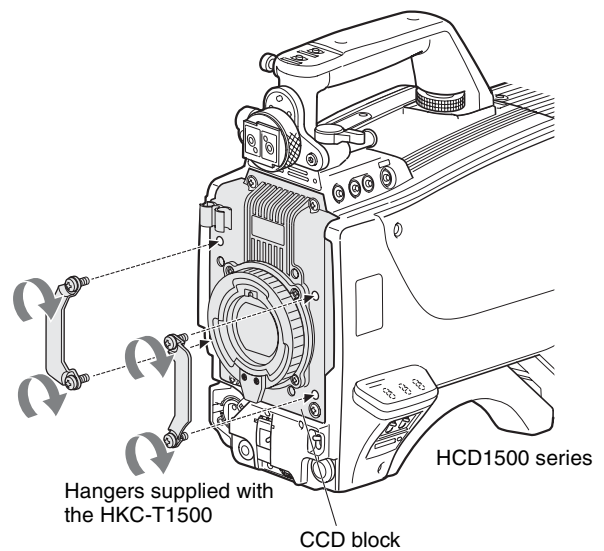


Step 2: Removing the CCD Block from the Camera

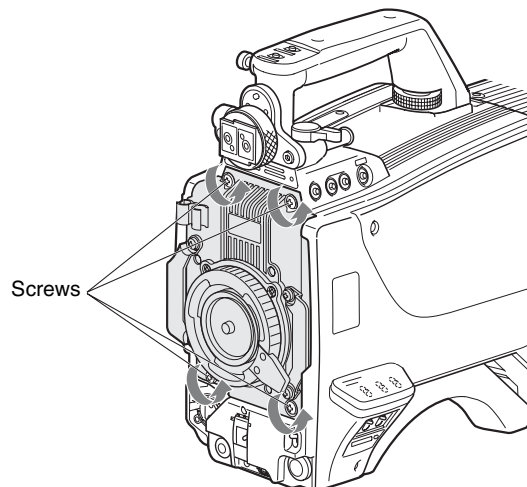
Caution

- Before removing the CCD block, set the POWER switch of the camera to OFF.
- Do not touch any parts inside the CCD block adaptor and the camera.

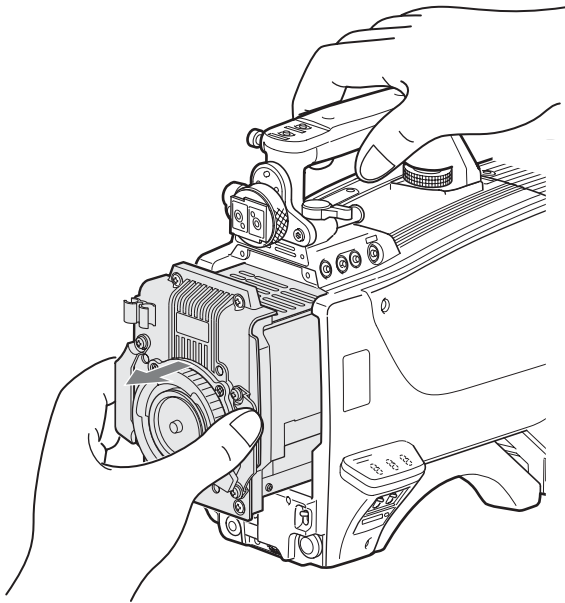
- 1 For an HDC1500-series camera, first remove the lens mount cap from the camera and turn the lens fixing lever to the bottom as shown below, then attach the hangers (supplied with the HKC-T1500) to the CCD block. (The hangers have been attached to the HDC3300 at the factory.)



- 2 Attach the lens mount cap to its original position.
- 3 Loosen the four screws holding the CCD block.

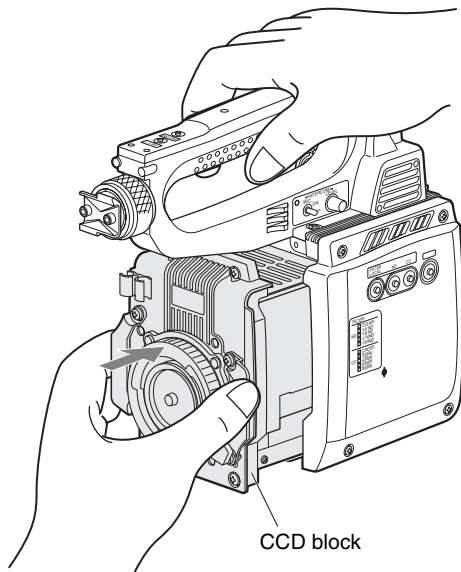


- 4** Holding the handle of the camera with one hand, grasp the CCD block by the attached hangers with the other hand and pull it out horizontally.



Step 3: Mounting the CCD Block to the CCD Block Adaptor

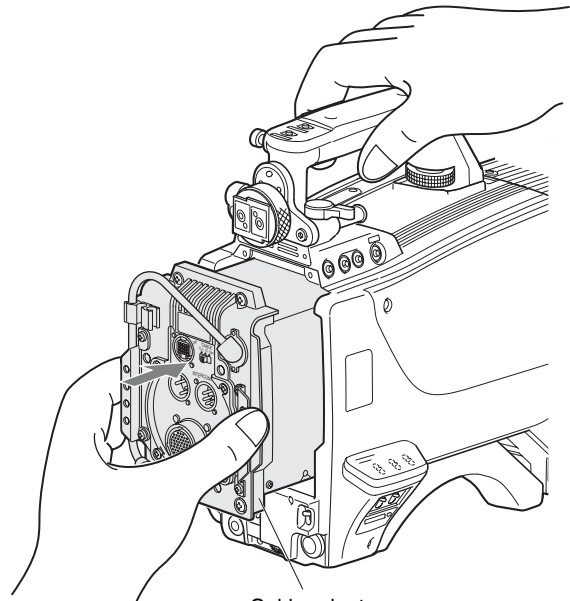
- 1** Holding the CCD block horizontally, insert it into the CCD block adaptor so that the connector at the rear of the CCD block fits in the connector located at the internal end of the CCD block adaptor.



- 2** Tighten the four screws on the CCD block (those loosened to remove the CCD block from the camera).

Step 4: Mounting the Cable Adaptor to the Camera

- 1** Holding the cable adaptor horizontally, insert it into the camera so that the connector at the rear of the cable adaptor fits in the connector of the camera.

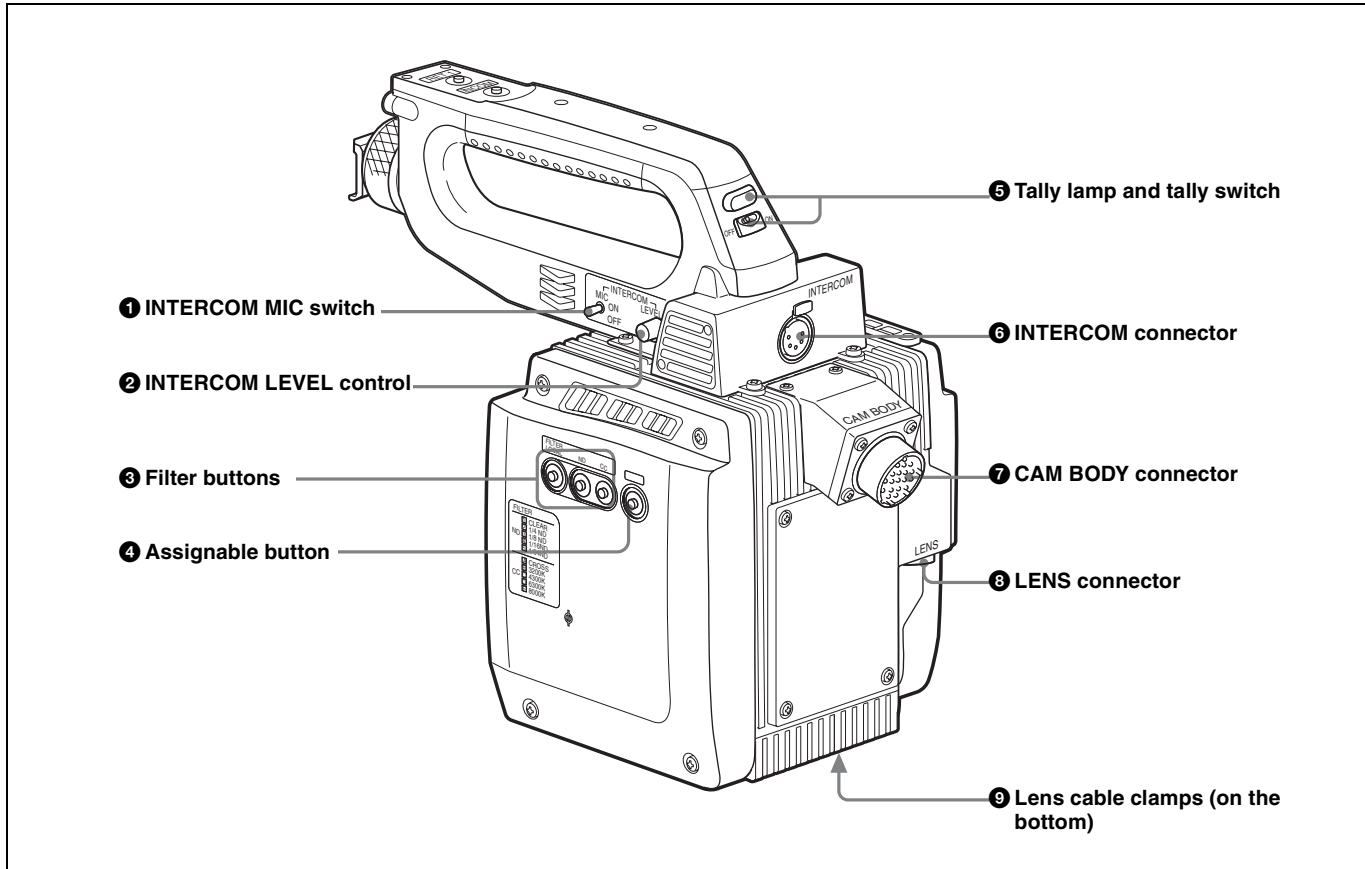


Cable adaptor
(HKC-T1500 shown in the figure)

- 2** Tighten the four screws on the cable adaptor (those loosened to remove the cable adaptor from the CCD block adaptor).

Locations and Functions of Parts

CCD Block Adaptor



1 INTERCOM MIC (intercom microphone) switch

To turn on/off the microphone of an intercom headset. Set the MIC switch for INTERCOM of the camera to OFF to use the microphone of an intercom headset.

2 INTERCOM LEVEL control

Functions the same as the INTERCOM LEVEL control on the front of the camera. You can adjust the intercom audio reception level with this control by setting the MIC switch for INTERCOM of the camera to FRONT. (In this case, the INTERCOM LEVEL control on the front of the camera becomes inoperative.)

3 Filter buttons

Functions the same as that on the camera.

4 Assignable button

Functions the same as that on the camera.

5 Tally lamp and tally switch

ON: To have the tally lamp light when a tally signal or a call signal generated by pressing a CALL button is received (The lamp functions the same as the tally lamp in the viewfinder.)

OFF: To prevent the tally lamp from lighting

6 INTERCOM connector (XLR 5-pin)

Used for input and output of intercom audio signals.

7 CAM BODY (camera body) connector (55-pin)

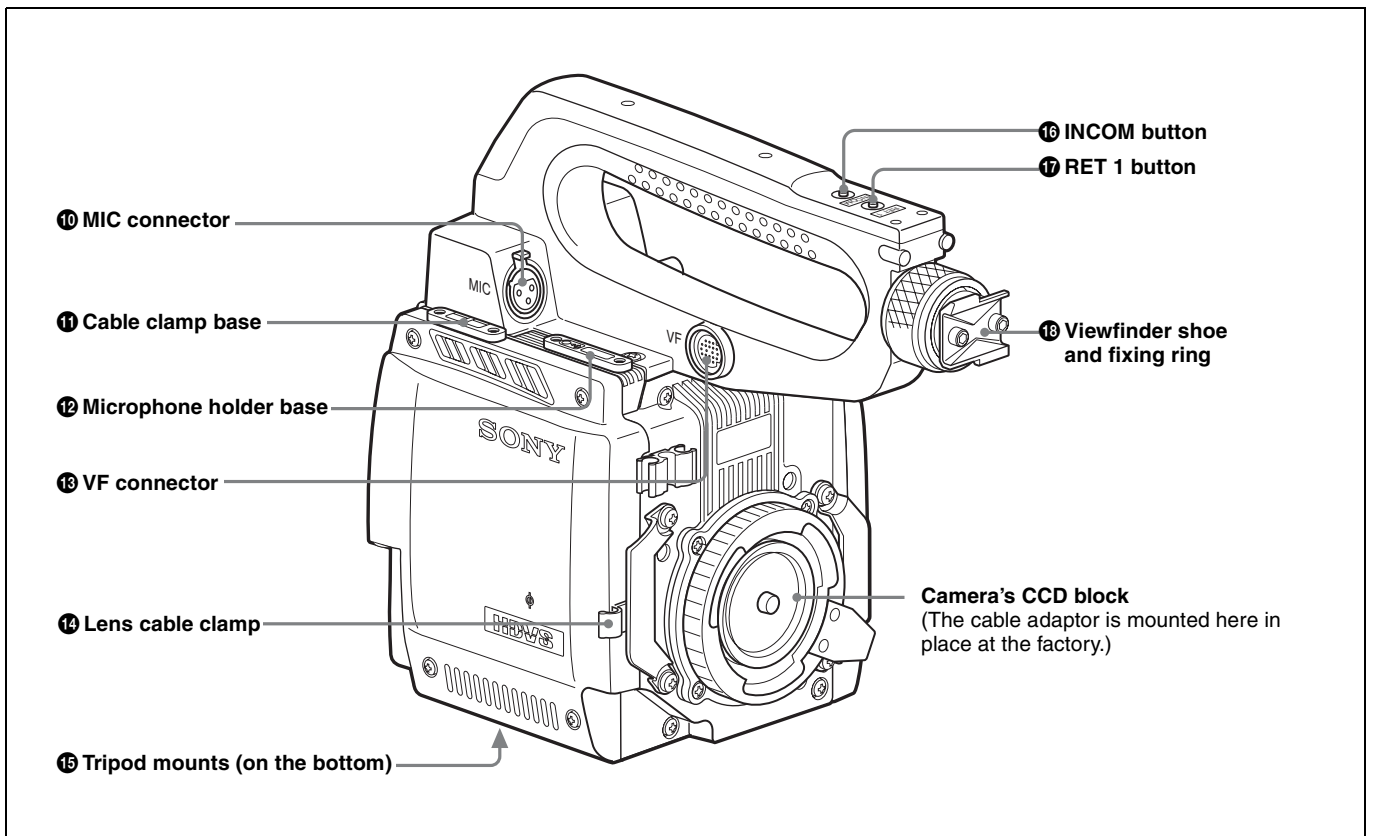
Used to connect to the OPT HEAD connector on the cable adaptor mounted in the camera, using the supplied special HDCM cable.

8 LENS connector (12-pin)

Used to connect the cable of the mounted lens.

9 Lens cable clamps (on the bottom)

To secure the lens cable.



10 MIC (microphone) connector (XLR 3-pin)

Used to connect the cable of a microphone.

11 Cable clamp base

Attach the supplied cable clamp here.

For details, see “To use the supplied cable clamp” on page 38.

12 Microphone holder base

Attach the CAC-12 Microphone Holder (optional) here.

For the attaching procedure, see “Attaching a Microphone” on page 35.

13 VF (viewfinder) connector (20-pin)

Used to connect the cable of a viewfinder.

14 Lens cable clamp

To secure the lens cable.

15 Tripod mounts (on the bottom)

One is for a 1/4-inch screw thread, and the other is for 3/8-inch.

For details on mounting on the tripod, see “Mounting on a Tripod” on page 36.

16 INCOM (intercom) button

Functions the same as that on the camera.

17 RET 1 (return video 1) button

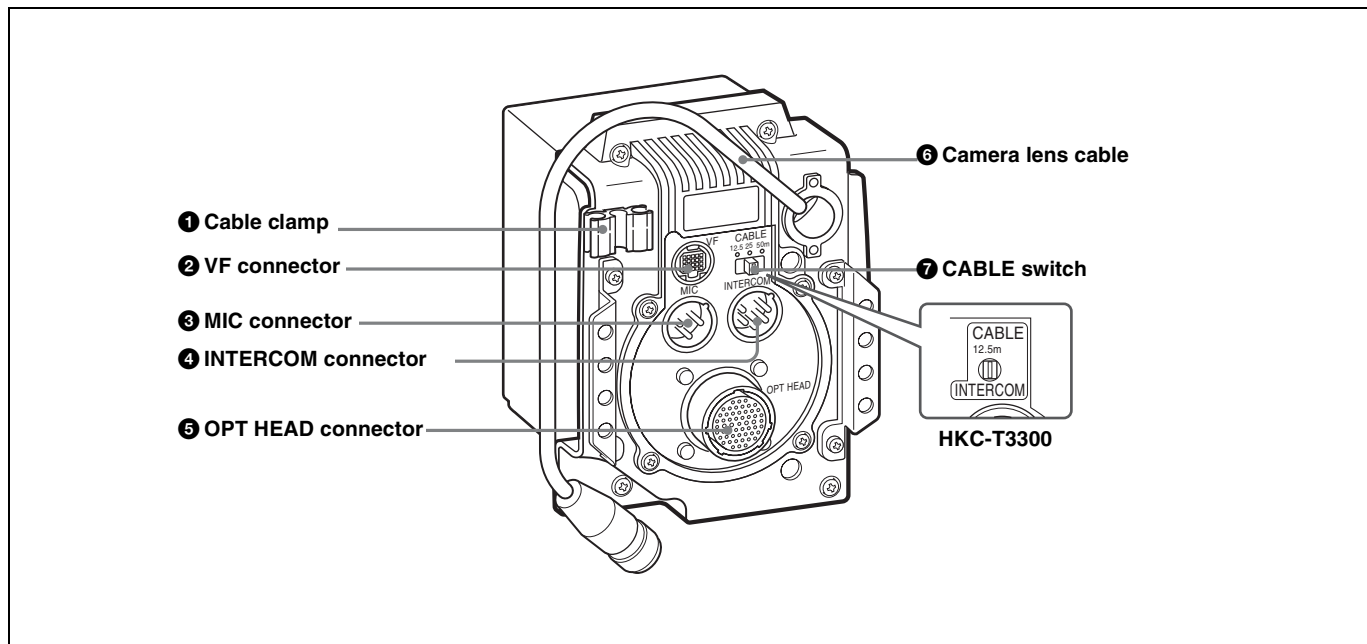
Functions the same as that on the camera.

18 Viewfinder shoe and fixing ring

Used to attach a viewfinder.

For the attaching procedure, see “Attaching a Viewfinder” on page 34.

Cable Adaptor



1 Cable clamp

To secure the camera lens cable connected to the LENS connector of the camera.

2 VF (viewfinder) connector (20-pin)

For connection to the VF connector on the camera, using the supplied VF relay cable.

3 MIC (microphone) connector (XLR 3-pin)

For connection to the AUDIO IN 1 connector on the camera, using the supplied MIC relay cable.

4 INTERCOM connector (XLR 5-pin)

For connection to the INTERCOM 1 connector on the camera, using the supplied INTERCOM relay cable.

5 OPT HEAD (optical head) connector (55-pin)

For connection to the CAM BODY connector on the CCD block adaptor, using the supplied special HDCM cable.

6 Camera lens cable

Connect to the LENS connector on the camera.

7 CABLE (cable length) switch

Set the switch on the HKC-T1500 according to the length of the special HDCM cable used to connect between the CCD block mounted in the CCD block adaptor and the cable adaptor.

Note

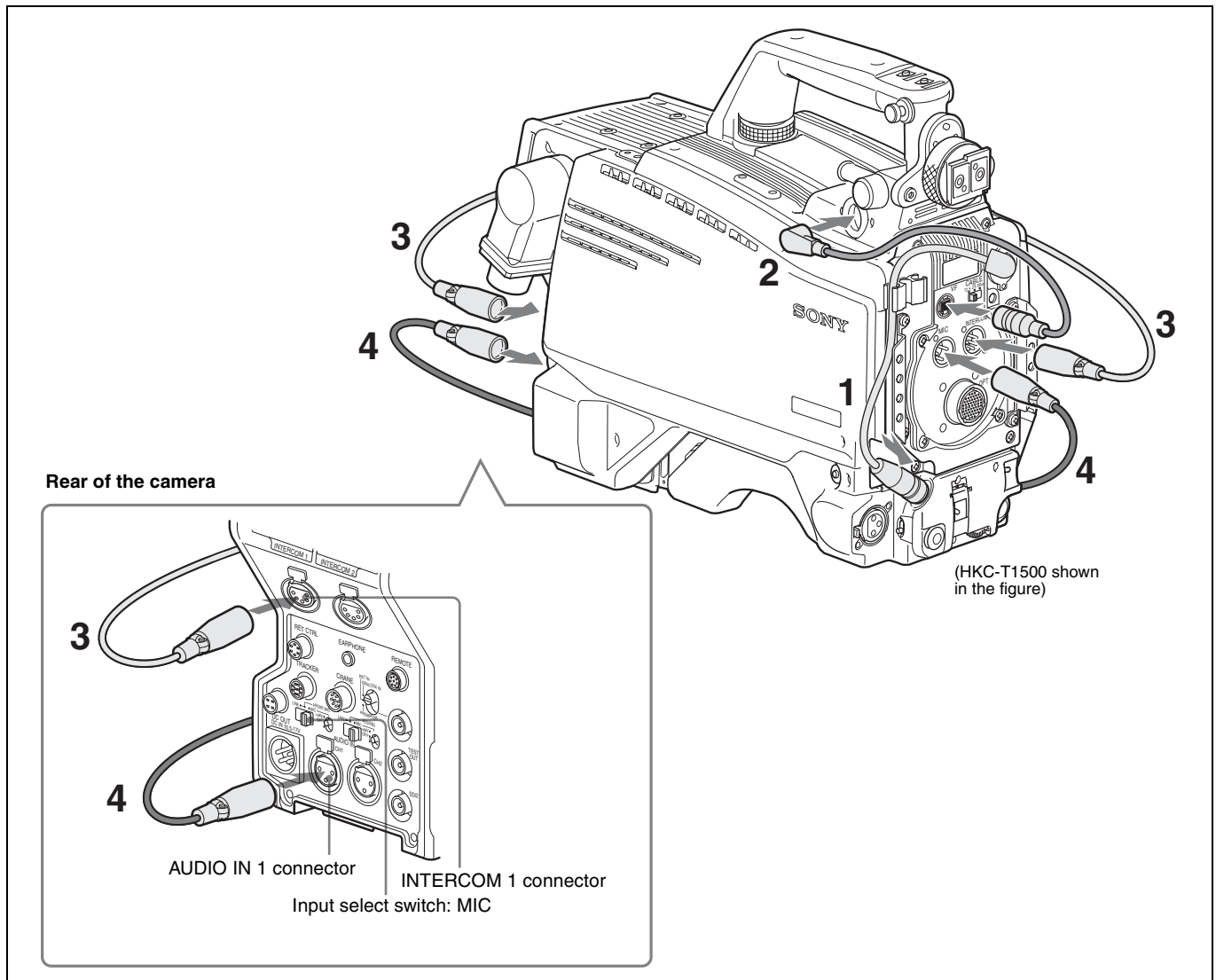
The switch on the HKC-T3300 can be set to "12.5 m" only.

Connecting Between the Cable Adaptor and the Camera

After mounting the cable adaptor in the camera, make connections between the cable adaptor and the camera, as shown below.

These connections are not required if you will not use intercom, microphone and viewfinder signals on the separated CCD block. To check the viewfinder screen on the camera side, connect the viewfinder to the VF connector on the camera as for normal use.

- 1** Connect the camera lens cable of the cable adaptor to the LENS connector on the camera and secure the cable with the cable clamp.
- 2** Connect the VF connector on the camera and the VF connector on the cable adaptor, using the supplied VF relay cable (supplied with the HKC-T1500/T3300).
- 3** Connect the INTERCOM 1 connector on the rear of the camera and the INTERCOM connector on the cable adaptor, using the supplied INTERCOM relay cable (supplied with the HKC-T1500/T3300).
- 4** Connect the AUDIO IN 1 connector on the rear of the camera and the MIC connector on the cable adaptor using the supplied MIC relay cable (supplied with the HKC-T1500/T3300) and set the input select switch for the AUDIO IN 1 connector to MIC.



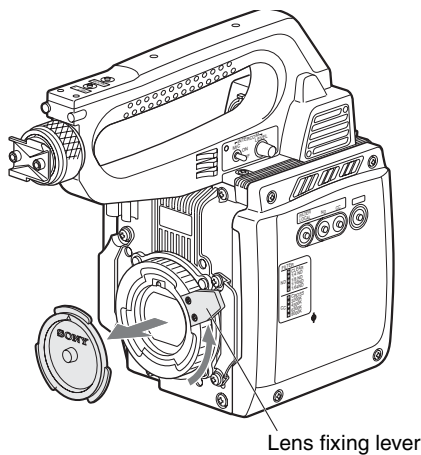
Attaching the Accessories

Attaching a Lens

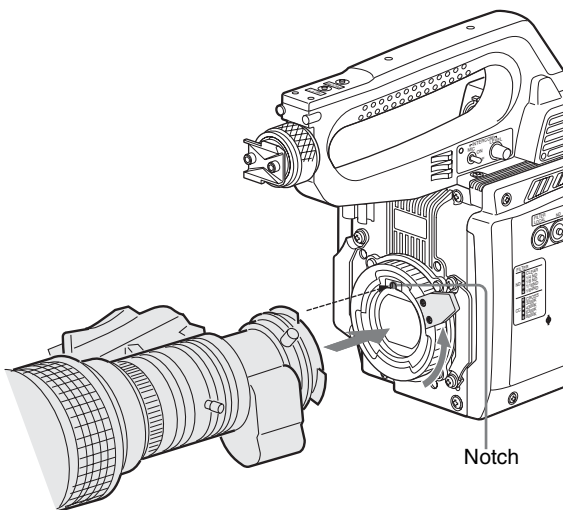
Attach a lens to the CCD block mounted in the CCD adaptor.

For information on handling lenses, refer to the operation manual for your lens.

- 1 Push the lens fixing lever upward and remove the lens mount cap from the lens mount.

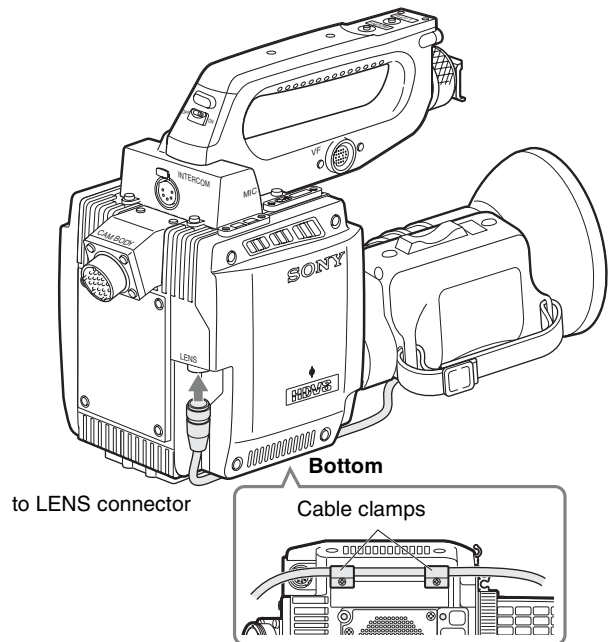


- 2 Align the lens' alignment pin with the notch in the center upper part of the lens mount and insert the lens into the mount.



- 3 While supporting the lens, push the lens fixing lever downward to secure the lens.

- 4 Connect the lens cable to the LENS connector and secure it with the cable clamps on the bottom.



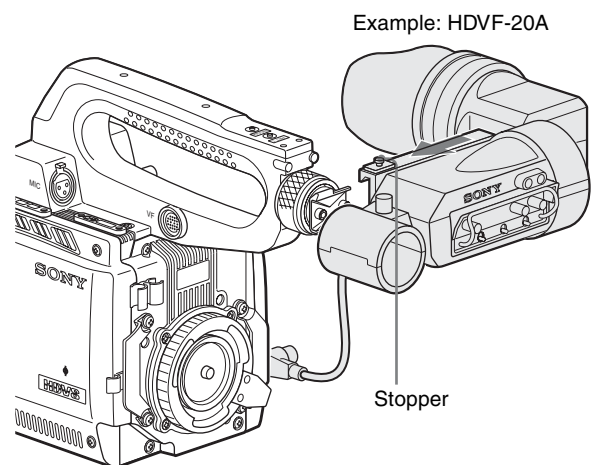
Attaching a Viewfinder

Caution

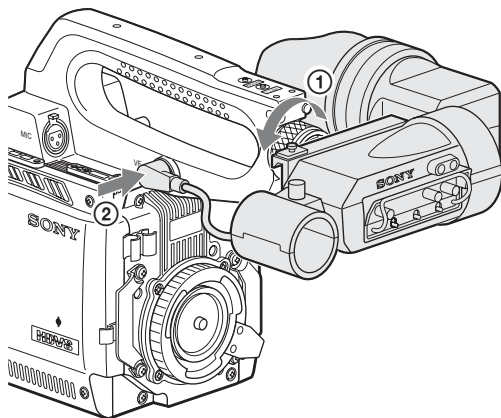
When the viewfinder is attached, do not leave the camera (or the camcorder) with the eyepiece facing the sun. Direct sunlight can enter through the eyepiece, be focused in the viewfinder and cause fire.

Attach the HDVF-20A/C35W Viewfinder (optional) to the CCD block adaptor. (The example figures show the HDVF-20A.)

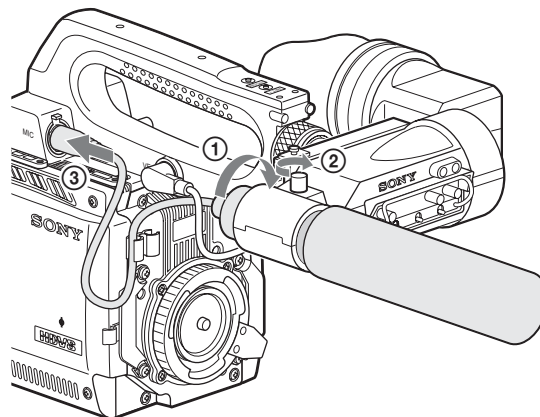
- 1 Slide the viewfinder in the direction of the arrow. The viewfinder stopper automatically moves down.



- 2 Tighten the viewfinder fixing ring and connect the viewfinder cable to the VF connector of the CCD block adaptor.



- 2 Close the microphone holder and tighten the screw, then connect the microphone cable to the MIC connector of the CCD block adaptor.



To detach the viewfinder

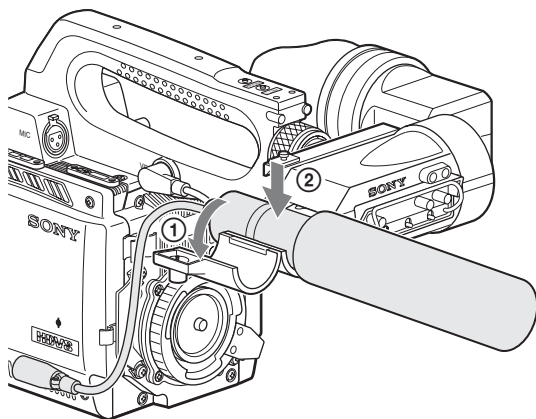
- 1 Remove the viewfinder cable from the VF cable and loosen the viewfinder fixing ring.
- 2 Pull the viewfinder stopper up and slide the viewfinder in the direction opposite that when attaching it.

Attaching a Microphone

Using the microphone holder of the HDVF-20A

When the HDVF-20A viewfinder has been attached, a microphone can be attached to the microphone holder of the viewfinder.

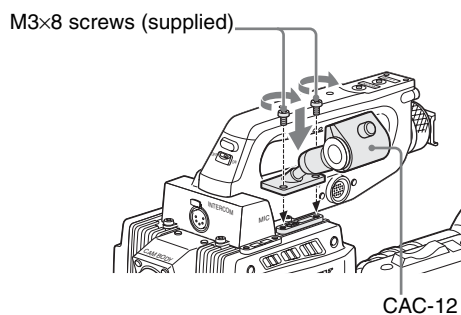
- 1 Open the microphone holder by loosening the screw then place the microphone on the holder.



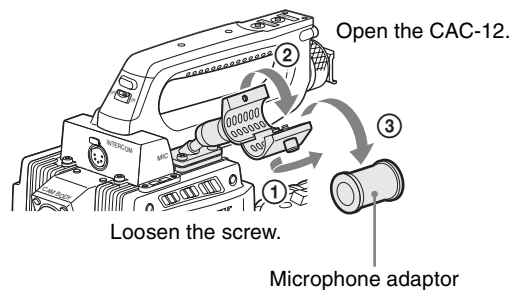
Using the CAC-12 Microphone Holder (optional)

When no viewfinder is used or the HDVF-C35W viewfinder has been attached, you can attach a microphone, using the optional CAC-12 Microphone Holder.

- 1 Using the supplied two M3×8 screws, attach the CAC-12 Microphone Holder to the microphone holder base of the CCD block adaptor.



- 2 Open the CAC-12 and remove the microphone adaptor.

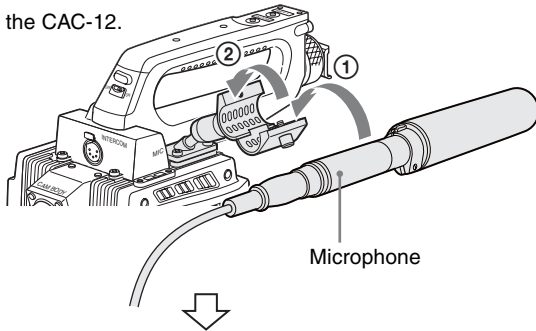


Note

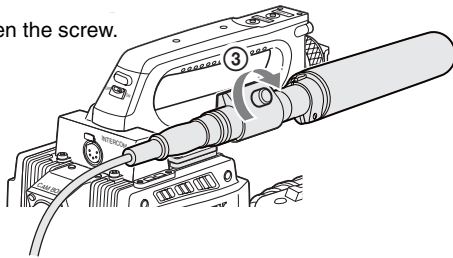
Leave the microphone adaptor attached if you use a small-diameter microphone.

- 3** Place a microphone in the CAC-12.

Close the CAC-12.



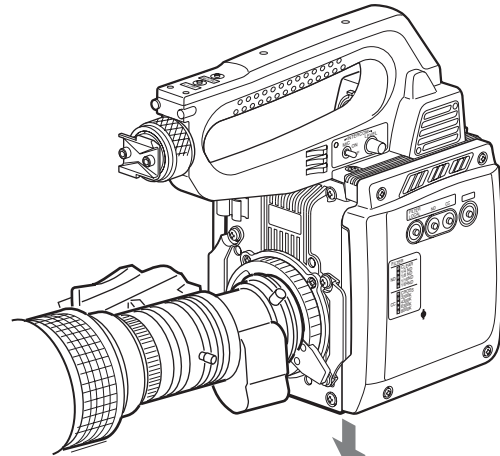
Tighten the screw.



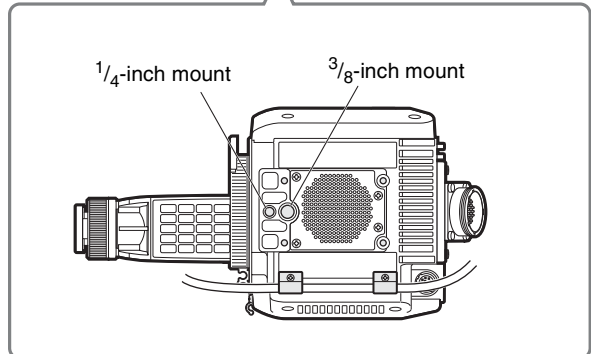
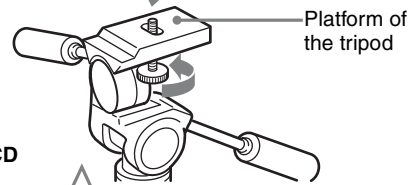
- 4** Connect the microphone cable to the MIC connector of the CCD block adaptor.

Mounting on a Tripod

Two tripod mounts are provided on the bottom of the CCD block adaptor. Mount the CCD block adaptor, using a mount appropriate to your tripod.



Bottom of the CCD block adaptor

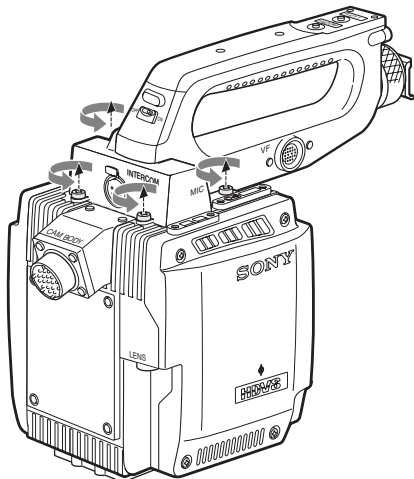


Using the CCD Block Adaptor Without the Handle

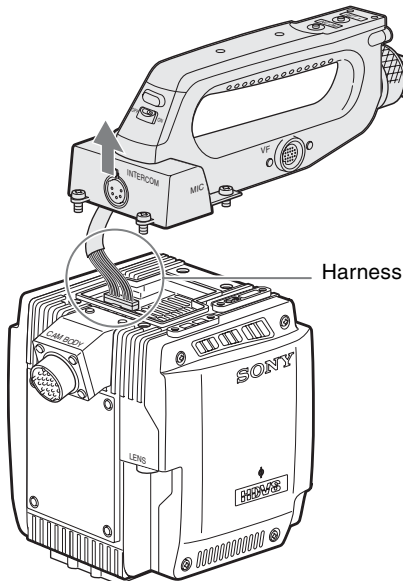
When the CCD block adaptor must be installed in a limited space, you can detach the handle.

After detaching the handle, attach the supplied top cover in its place.

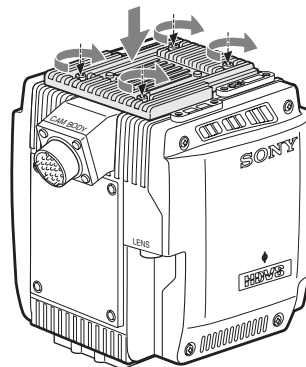
- 1 Loosen the four screws that secure the handle.



- 2 Pull up the handle and disconnect the harness.



- 3 Attach the supplied top cover and tighten the four screws.



When attaching the handle again

Follow the reverse of the detachment procedure.

Note

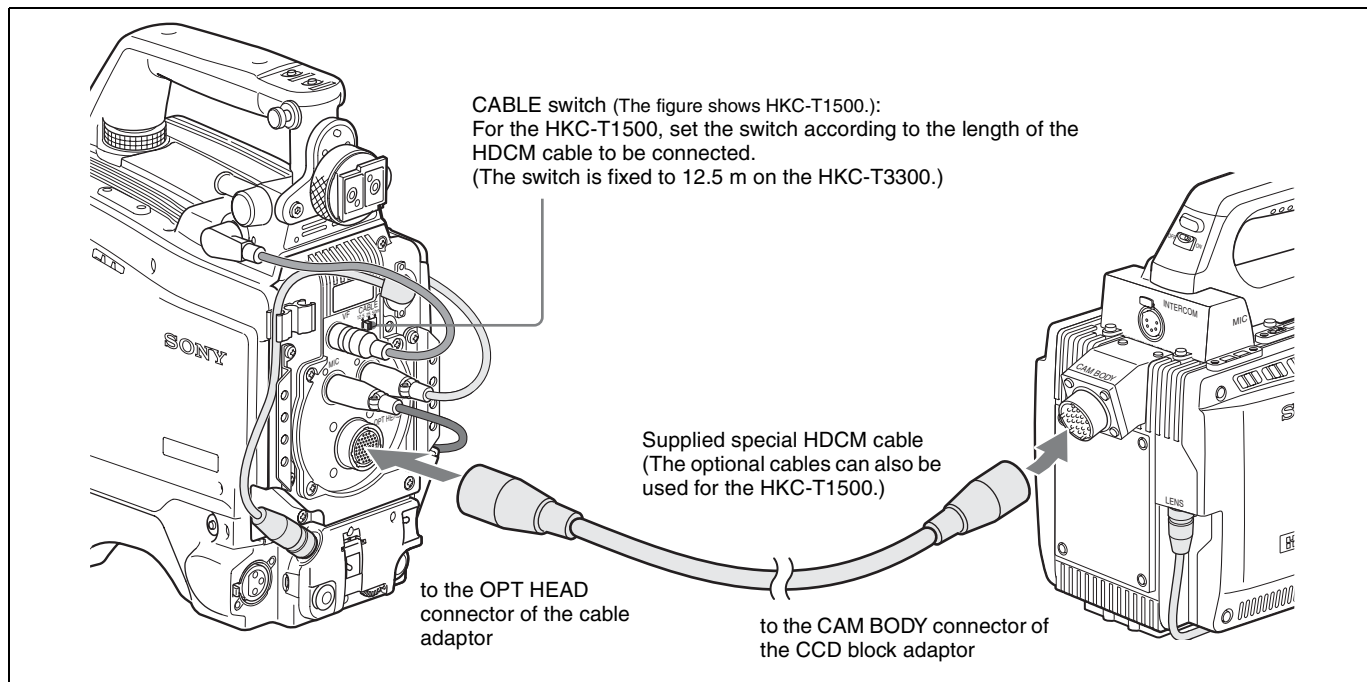
Be careful that the harness is not caught between the handle and the CCD block adaptor. Tightening the screws with the harness caught will damage wires.

Connecting Between the Cable Adaptor and CCD Block Adaptor

Using the supplied HDCM cable (12.5 m), connect the OPT HEAD connector of the cable adaptor and the CAM BODY connector of the CCD block adaptor.
For the HKC-T1500, optionally available HDCM cables (25 m/50 m) can also be used.

Notes

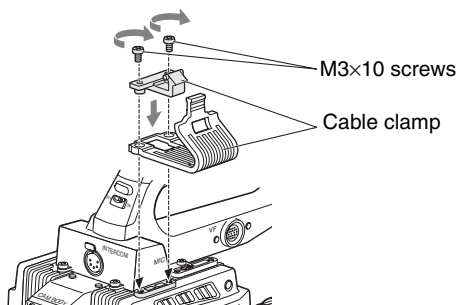
- Be sure to use the CCD block with the camera having the corresponding serial number.
- When you use the HKC-T1500/T3300, update the software of the camera to the latest version. With the software before Ver. 1.10, the HDC1500-series camera will not function in this system. With the software before Ver. 1.06, the HDC3300 will not function in this system.



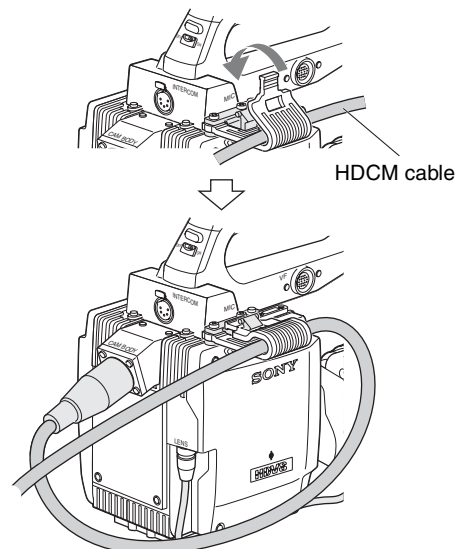
To use the supplied cable clamp

You can fix the HDCM cable to the CCD block adaptor, using the supplied cable clamp.

- 1 Assemble the cable clamp and attach it to the cable clamp base of the CCD block adaptor with the supplied screws (M3×10).



- 2 Put the HDCM cable in and close the cable clamp.



Specifications

Power requirements 13.5 to 17.0 V DC
 Operating temperature -20°C to $+45^{\circ}\text{C}$ (-4°F to $+113^{\circ}\text{F}$)
 Operating humidity 10% to 90% (no condensation)
 Mass
 Cable adaptor:
 approx. 0.5 kg (1 lb 2 oz)
 CCD block adaptor:
 approx. 1.05 kg (2 lb 5 oz) (adaptor only)
 approx. 1.8 kg (3 lb 16 oz) (with the CCD block)

Supplied accessories HDCM-12 cable (12.5 m) (1)
 VF relay cable (1)
 MIC relay cable (1)
 INTERCOM relay cable (1)
 Top cover (1)

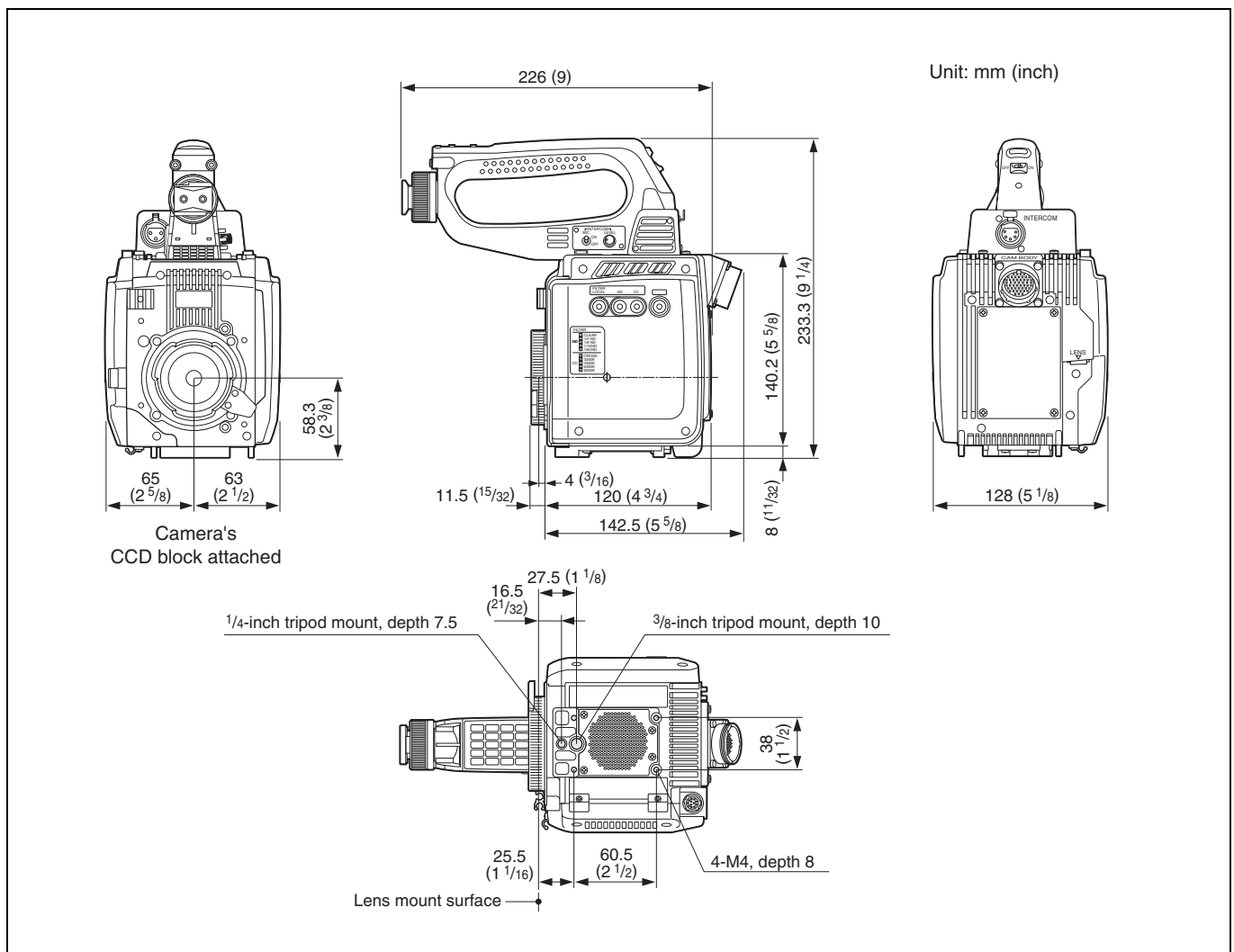
Camera hanger (1 pair) (HKC-T1500 only)
 Cable clamp (1)
 Screws: M3×10 (2)
 M3×8 (2)
 Operation manual (1)

Optional accessories (for HKC-T1500 only)

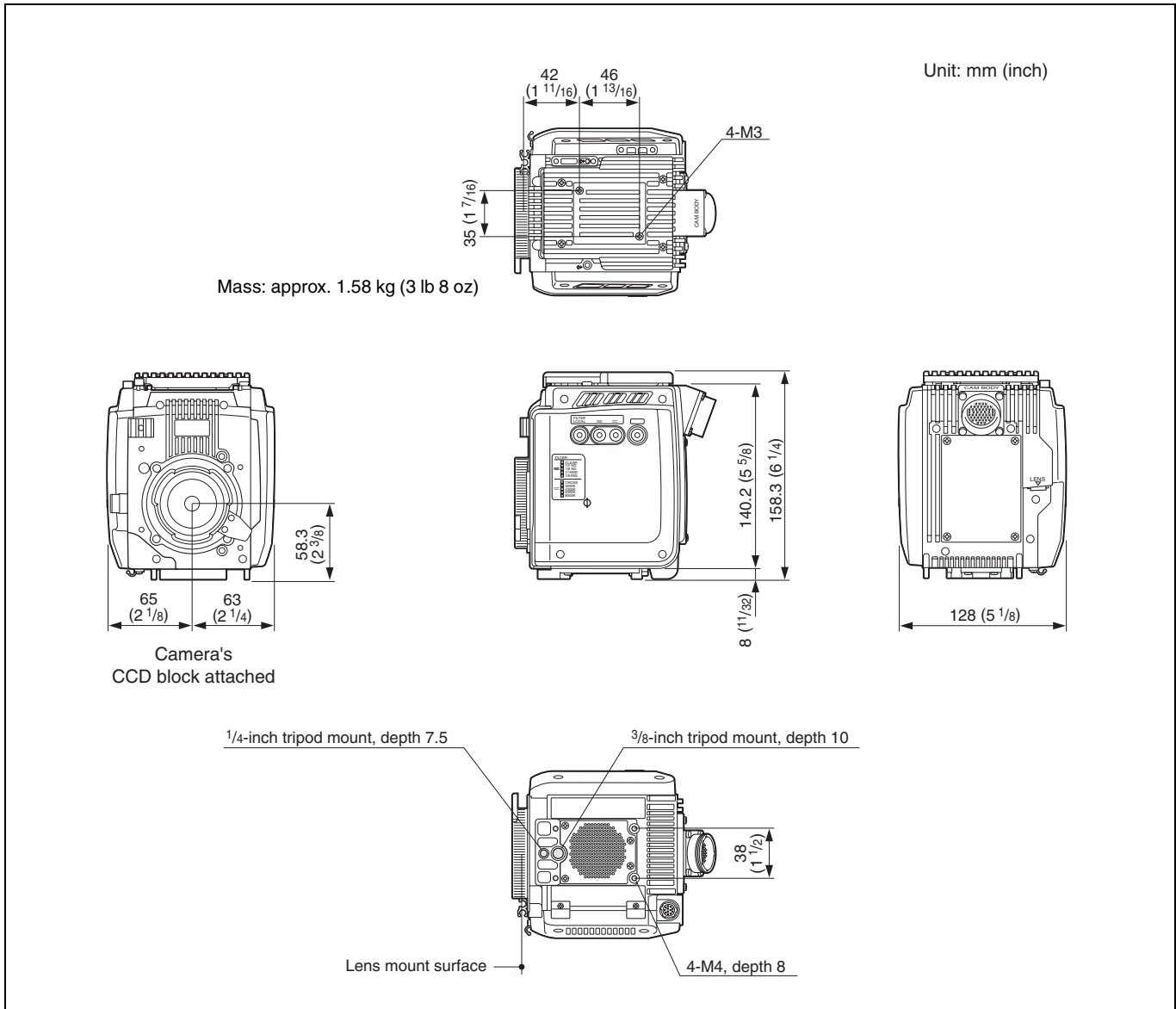
Multicore cables:
 HDCM-25 (25 m): Part number 1-820-810-11
 HDCM-50 (50 m): Part number 1-820-811-11

Design and specifications are subject to change without notice.

Dimensions (1): With the handle



Dimensions (2): Without the handle



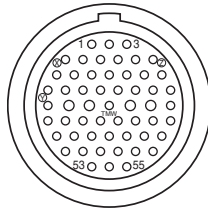
Note

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Pin Assignments

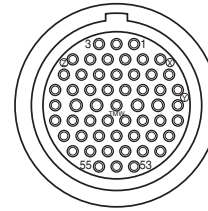
Multi connectors

CCD block adaptor
CAM BODY connector (55-pin, male)



(External View)

Cable adaptor
OPT HEAD connector (55-pin, female)

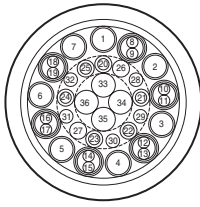


(External View)

No.	Signal	I/O ¹⁾	Specifications	No.	Signal	I/O ¹⁾	Specifications
1	R1 VIDEO (X)	OUT	Zo = 75 ohms	29	UNREG GND	—	GND for UNREG
2	R1 VIDEO (G)	—	GND for R VIDEO	30	UNREG GND	—	GND for UNREG
3	R2 VIDEO (X)	OUT	Zo = 75 ohms	31	INCOM MIC (Y)	OUT	
4	G1 VIDEO (G)	—	GND for G VIDEO	32	NC		No connection
5	G1 VIDEO (X)	OUT	Zo = 75 ohms	33	PLL-H (X) -GND	—	
6	G2 VIDEO (X)	OUT	Zo = 75 ohms	34	PLL-H (Y) -GND	—	
7	G2 VIDEO (G)	—	GND for G VIDEO	35	F-acum	IN	
8	R2 VIDEO (G)	—	GND for R VIDEO	36	LENS UNREG	IN	
9	IRIS CONT	IN	+3.4 V (F16) to +6.2 V (F2.8)	37	INCOM Receive	IN	0 dBu
10	B1 VIDEO (G)	—	GND for B VIDEO	38	VF Pb VIDEO (X)	IN	Zi = 75 ohms
11	B1 VIDEO (X)	OUT	Zo = 75 ohms	39	VF Pb VIDEO (G)	—	GND for VF VIDEO
12	B2 VIDEO (X)	OUT	Zo = 75 ohms	40	RX COMMAND (X)	OUT	Zo = 100 ohms
13	B2 VIDEO (G)	—	GND for B VIDEO	41	PLL-H (X)	IN	Positive pulse
14	OHB H (G)	—	GND for OHB H	42	PLL-H (Y)	IN	Negative pulse
15	MIC GND	—	GND	43	HTSG	IN	
16	INCOM GND	—	GND	44	PGM	IN	0 dBu
17	GND (CHU-F)	—		45	VF Pr VIDEO (X)	IN	Zi = 75 ohms
18	NC		No connection	46	VF Pr VIDEO (G)	—	GND for VF VIDEO
19	NC		No connection	47	RX COMMAND (Y)	OUT	Zo = 100 ohms
20	NC		No connection	48	TX COMMAND (X)	IN	Zo = 100 ohms
21	OHB H (for PLL)	OUT	Positive pulse	49	LENS RX (X)	IN	Zo = 100 ohms
22	MIC (X)	OUT	-60 dBu, -50 dBu, -40 dBu,	50	LENS TX (X)	OUT	Zo = 100 ohms
23	MIC (Y)	OUT	-30 dBu, -20 dBu, selectable	51	VF Y VIDEO (X)	IN	Zi = 75 ohms
24	INCOM MIC (X)	OUT	-20 dBu (CARBON MIC), -60 dBu (DYNAMIC MIC)	52	VF Y VIDEO (G)	—	GND for VF VIDEO
25	CHU F	IN	Positive pulse	53	TX COMMAND (Y)	IN	Zo = 100 ohms
26	UNREG	IN		54	LENS RX (Y)	IN	Zo = 100 ohms
27	UNREG	IN		55	LENS TX (Y)	OUT	Zo = 100 ohms
28	GND (LENS UNREG)	IN					

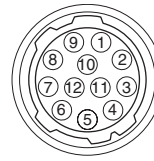
1) I/O indications in the table are those at the CCD block adaptor. IN and OUT are reversed for the cable adaptor.

36-conductor cable connections



LENS connector

CCD block adaptor
LENS connector (12-pin, female)



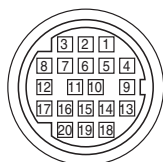
(External View)

55-pin No.	Cond. No.	Signal	55-pin No.	Cond. No.	Wire
26, 27	33, 34	UNREG	26, 27	33, 34	UL1516 #20 x2
29, 30	35, 36	UNREG GND	29, 30	35, 36	UL1516 #20 x2
21	21	OHB H (for PLL)	21	21	UL1721 #28
14		OHB H (G)	14		
5	7	G1 VIDEO (X)	5	7	UL1631 #30
4		G1 VIDEO (G)	4		
6	1	G2 VIDEO (X)	6	1	UL1631 #30
7		G2 VIDEO (G)	7		
1	2	R1 VIDEO (X)	1	2	UL1631 #30
2		R1 VIDEO (G)	2		
3	3	R2 VIDEO (X)	3	3	UL1631 #30
8		R2 VIDEO (G)	8		
11	5	B1 VIDEO (X)	11	5	UL1631 #30
10		B1 VIDEO (G)	10		
12	6	B2 VIDEO (X)	12	6	UL1631 #30
13		B2 VIDEO (G)	13		
22	8	MIC (X)	22	8	UL2854-2 #28
23	9	MIC (Y)	23	9	UL2854-2 #28
15		MIC GND	15		
9	32	IRIS CONT	9	32	UL1423 #26
41	20	PLL-H (X)	41	20	UL1721 #28
33		PLL-H (X) -GND	33		
37	28	INCOM Receive	37	28	UL1423 #26
24	10	INCOM MIC (X)	24	10	UL2854-2 #28
31	11	INCOM MIC (Y)	31	11	UL2854-2 #28
16		INCOM GND	16		
44	29	PGM	44	29	UL1423 #26
51	4	VF Y VIDEO (X)	51	4	UL1631 #30
52		VF Y VIDEO (G)	52		
38	22	VF Pb VIDEO (X)	38	22	UL1721 #28
39		VF Pb VIDEO (G)	39		
45	23	VF Pr VIDEO (X)	45	23	UL1721 #28
46		VF Pr VIDEO (G)	46		
48	16	TX COMMAND (X)	48	16	UL2854-2 #28
53	17	TX COMMAND (Y)	53	17	UL2854-2 #28
-		Shell	-		
40	18	RX COMMAND (X)	40	18	UL2854-2 #28
47	19	RX COMMAND (Y)	47	19	UL2854-2 #28
-		Shell	-		
25	24	CHU F	25	24	UL1721 #28
17		GND (CHU-F)	17		
42	25	PLL-H (Y)	42	25	UL1721 #28
34		PLL-H (Y) -GND	34		
35	31	F-acum	35	31	UL1423 #26
43	30	HTSG	43	30	UL1423 #26
50	12	LENS TX (X)	50	12	UL2854-2 #28
55	13	LENS TX (Y)	55	13	UL2854-2 #28
-		Shell	-		
49	14	LENS RX (X)	49	14	UL2854-2 #28
54	15	LENS RX (Y)	54	15	UL2854-2 #28
-		Shell	-		
36	26	LENS UNREG	36	26	UL1516 #20 x1
28	27	GND (LENS UNREG)	28	27	UL1516 #20 x1

No.	Signal	I/O	Specifications
1	RET VIDEO ENABLE	IN	ENABLE: 0 V DISABLE: +5 V or OPEN
2	VTR START/STOP	IN	ENABLE: 0 V DISABLE: +5 V or OPEN
3	GND	—	GND for UNREG
4	AUTO SERVO	OUT	AUTO: +5 V MANU: 0 V or OPEN
5	IRIS CONT	OUT	+3.4 V (F16) to +6.2 V (F2.8)
6	UNREG	OUT	+10.5 V to +17 V
7	IRIS POSITION	IN	+3.4 V (F16) to +6.2 V (F2.8)
8	AUTO/MANU	OUT	AUTO IRIS: 0 V MANUAL IRIS: +5 V
9	EXTENDER ON/OFF	IN	EX 2 ON: 0 V EX 0.8 ON: +1.8 V OFF: +4.8 V
10	ZOOM POSITION	IN	WIDE: 2 V TELE: 7 V
11	FOCUS POSI (/LENS RX)	IN	∞: 2 V min.: 7 V
12	(/LENS TX)	OUT	

VF connectors

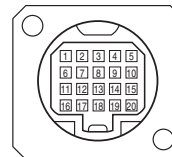
CCD block adaptor
VF connector (20-pin, female)



(External View)

No.	Signal	I/O	Specifications
1	S DATA	IN/OUT	TTL level
2	NC		No connection
3	NC		No connection
4	SCK	OUT	TTL level MANU: 0 V or OPEN
5	NC		No connection
6	NC		No connection
7	NC		No connection
8	G TALLY	OUT	ON: 5 V OFF: GND
9	NC		No connection
10	NC		No connection
11	NC		No connection
12	Y VIDEO	OUT	1.0 Vp-p, $Z_o = 75$ ohms
13	VIDEO GND	—	GND for VIDEO
14	Pb VIDEO	OUT	700 mVp-p, $Z_o = 75$ ohms
15	Pr VIDEO	OUT	700 mVp-p, $Z_o = 75$ ohms
16	NC		No connection
17	R TALLY	OUT	ON: 5 V OFF: GND
18	NC		No connection
19	UNREG GND	—	GND for UNREG
20	UNREG	OUT	

Cable adaptor
VF connector (20-pin, female)

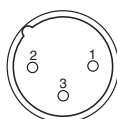


(External View)

No.	Signal	I/O	Specifications
1	NC		No connection
2	NC		No connection
3	NC		No connection
4	NC		No connection
5	NC		No connection
6	NC		No connection
7	NC		No connection
8	NC		No connection
9	NC		No connection
10	NC		No connection
11	NC		No connection
12	Y VIDEO	IN	1.0 Vp-p, $Z_i = 75$ ohms
13	VIDEO GND	—	GND for VIDEO
14	Pb VIDEO	IN	700 mVp-p, $Z_o = 75$ ohms
15	Pr VIDEO	IN	700 mVp-p, $Z_o = 75$ ohms
16	NC		No connection
17	NC		No connection
18	NC		No connection
19	NC		No connection
20	NC		No connection

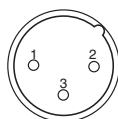
MIC connectors

CCD block adaptor
MIC connector
(XLR 3-pin, female)



(External View)

Cable adaptor
MIC connector
(XLR 3-pin, male)



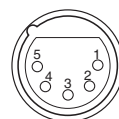
(External View)

No.	Signal	I/O	Specifications
1	AUDIO (G)	—	-60 dBu, -50 dBu, -40 dBu, -30 dBu, -20 dBu, selectable High impedance, balanced
2	AUDIO (X)	IN	
3	AUDIO (Y)	IN	

(0 dBu = 0.775 Vrms)

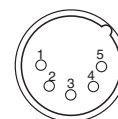
INTERCOM connectors

CCD block adaptor
INTERCOM connector
(XLR 5-pin, female)



(External View)

Cable adaptor
INTERCOM connector
(XLR 5-pin, male)



(External View)

No.	Signal	I/O	Specifications
1	INTERCOM MIC (Y)	IN	-20 dBu (CARBON MIC) -60 dBu (DYNAMIC MIC)
2	INTERCOM MIC (X)	IN	
3	GND (INTERCOM PGM)	—	
4	INTERCOM RECEIVE	OUT	0 dBu
5	PGM	OUT	0 dBu

(0 dBu = 0.775 Vrms)

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