

HD Camera Adaptor

Operating Instructions

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

XDCA-53

WARNING

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

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

Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

IMPORTANT

The nameplate is located on the bottom.

WARNING

Excessive sound pressure from a headset can cause hearing loss.

In order to use this product safely, avoid prolonged listening at excessive sound pressure levels.

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.

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.

For the customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

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), 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.

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

IMPORTANT

La plaque signalétique se situe sous l'appareil.

AVERTISSEMENT

Une pression acoustique excessive en provenance du casque peut provoquer une baisse de l'acuité auditive.

Pour utiliser ce produit en toute sécurité, évitez l'écoute prolongée à des pressions sonores excessives.

Pour les clients au Canada

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

Pour les clients en Europe

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.

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

WICHTIG

Das Namensschild befindet sich auf der Unterseite des Gerätes.

WARNUNG

Zu hoher Schalldruck von Headset kann Gehörschäden verursachen.

Um dieses Produkt sicher zu verwenden, vermeiden Sie längeres Hören bei sehr hohen Schalldruckpegeln.

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 (Stadtbereich 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.

Table of Contents

Overview6

Features6

Using the CD-ROM7

 Reading the CD-ROM Manuals7

Names and Functions of Parts..... 8

System Configuration..... 12

 Mounting on the Camcorder Support12

Important Notes on Operation16

Specifications17

 General17

 Connectors17

 Supplied Accessories17

 Accessories Not Supplied18

Overview

The XDCA-53 HD Camera Adaptor (referred to as “the adaptor” hereafter) allows you to connect an XDCU-50 HD Camera Extension Unit to supply power to the camcorder and extend the distance over which camcorder input and output signals can be transmitted (maximum distance 100 m (328 feet)).

Can be installed on the following camcorder

PMW-EX3

For details, refer to the XDCU-50 Operating Instructions for information about how to set up a system consisting of this adaptor, a camcorder, and the XDCU-50, and for precautions about use of the system.

Features

HD digital transmission

This adaptor supports bidirectional transmission of uncompressed HD digital signals between this adaptor and XDCU-50.

The maximum transmission distance is 100 m (328 feet).

You can transmit high-quality video signals regardless of cable length.

Monitor output connector

Either main line video signals from the camcorder or return video signals from the XDCU-50 can be output as HDSDI signals.

Return video selection button

You can switch the monitor output to return video while the adaptor’s RET button is held down.

Communication interfaces

- Intercom (1 line)
- Tally (red and green)
- Trunk line (1 line)

Using the CD-ROM

The supplied CD-ROM contains PDF-format Operating Instructions manuals (in English, Japanese, French, German, Italian, Spanish, and Chinese) for this adaptor, a HD Camera Adaptor XDCA-55 and a HD Camera Extension Unit XDCU-50.

Reading the CD-ROM Manuals

Preparations

The following program must be installed on your computer in order to read the documents contained on the CD-ROM.
Adobe Reader Version 6.0 or higher

Memo

If Adobe Reader is not installed, you can download it from the following URL:
<http://www.adobe.com/>

Adobe and Adobe Reader are trademarks of Adobe Systems Incorporated in the United States and/or other countries.

To read the documents

Do the following:

- 1 Insert the CD-ROM in your CD-ROM drive.

A cover page appears automatically in your browser.
If it does not appear automatically in the browser, double-click on the index.htm file on the CD-ROM.

- 2 Select and click on the manual that you wish to read.

This opens the PDF file.

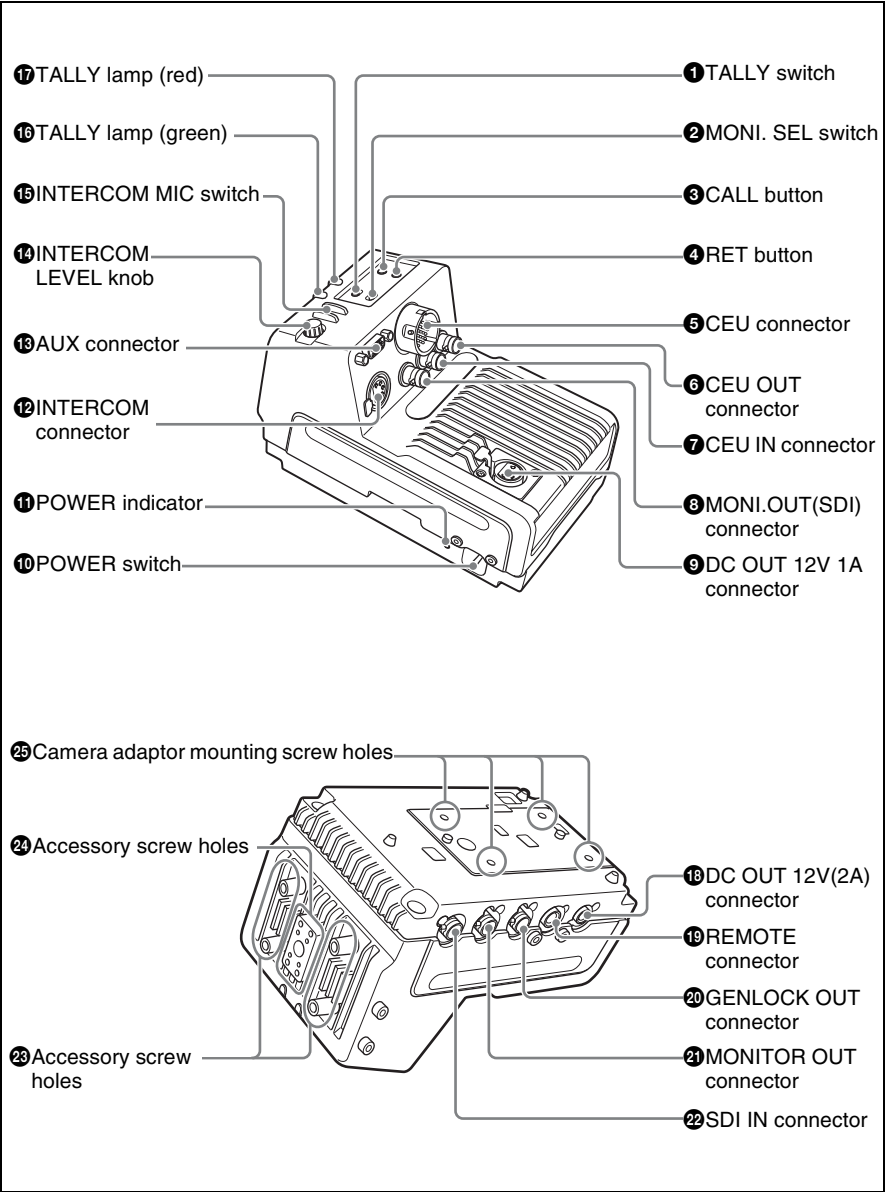
Memo

The files may not be displayed properly, depending on the version of Adobe Reader. In such a case, install the latest version you can download from the URL mentioned in “Preparations” above.

Note

If you have lost or damaged the CD-ROM, you can purchase a new one to replace it. Contact a Sony service representative.

Names and Functions of Parts



❶ TALLY switch

Enables (on) or disables (off) the TALLY lamps (red and green).

However, tally signals assigned to pins 14 and 15 of the AUX connector are not affected by the setting of this switch.

ON: Lights the TALLY lamps (red and green) according to tally signals and the state of the CALL button.

OFF: Does not light the TALLY lamps (red and green).

❷ MONI. SEL (monitor select) switch

Selects the output from the MONI.OUT(SDI) connector or MONITOR OUT connector.

RET: Always outputs return video signals.

CAM/RET: Outputs return video as long as the RET button is pressed, and outputs camcorder video signals when the RET button is not pressed.

❸ CALL button

Calls the operator of an XDCU-50. When pressed, the CALL lamp on the XDCU-50 lights. The CALL and TALLY lamps on this unit, the camcorder, and the remote control unit do not light.

Note

Control over tally lamps varies depending on the devices used in the system (camcorder, XDCU-50, remote control unit).

For details, refer to the instruction manuals of the other devices.

❹ RET (return) button

When the MONI. SEL switch is set to CAM/RET, you can also switch the video signal from the MONI. OUT (SDI) connector or MONITOR OUT connector to return video.

❺ CEU (camera extension unit) connector (26-pin)

Connect to the CA connector (26-pin) of the XDCU-50 with the optional CCZ-A cable. Power is supplied from the XDCU-50.

❻ CEU OUT (camera extension unit output) connector

Connect to the CA IN connector of the XDCU-50 with a BNC cable (5C-FB).

❼ CEU IN (camera extension unit input) connector

Connect to the CA OUT connector of the XDCU-50 with a BNC cable (5C-FB).

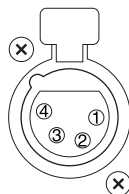
❽ MONI.OUT (monitor output) (SDI) connector

Outputs HD SDI signals, either return video signals from the XDCU-50 shooting and output camcorder video signals from the camcorder.

❾ DC OUT 12V 1A connector (XLR 4-pin)

Supplies +12 V power to a monitor or other external device.

The pin assignments are as follows.



Pin No.	Signal name
1	GND
2	Not used
3	Not used
4	+12V

❿ POWER switch

Powers the unit on when pressed to the “I” side, and powers the unit off when pressed to the “⏻” side.

DC power output from the adaptor is also turned on and off by this switch.

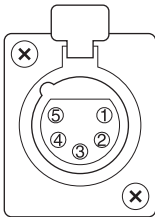
11 POWER indicator

Lights in green when the adaptor is powered on.

12 INTERCOM connector (XLR 5-pin)

Allows you to connect an XLR 5-pin type headset. Dynamic microphones are supported.

The pin assignments are as follows.



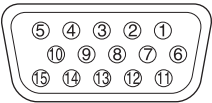
Pin No.	Signal name
1	INCOM MIC GND
2	INCOM MIC IN
3	INCOM RECEIVE GND
4	INCOM RECEIVE OUT
5	Not used

Contact your dealer or a Sony service representative for information about how to adjust the side tone level.

13 AUX connector (15-pin)

Connect to an external system to input and output tally signals, trunk line signals, and timecode.

Provides a trunk line connection to the trunk line of the camera adaptor via a RS-232C interface, for use as a communications line with external devices. Also equipped with general-purpose lines between this camcorder and the XDCU-50. The pin assignments are as follows.



Pin No.	Signal name	Description
2	TC (X) OUT	Timecode signal output
7	TC (G) OUT	
3	TRUNK RX	Trunk line (RS-232C)
13	TRUNK TX	
8	TRUNK (G)	
4	RET CONT IN	Return control external input On: GND Off: Open
9	MIC CONT IN	Intercom microphone control input On: GND Off: Open
5	GND	Ground
10	TALLY GND	TALLY output
14	R TALLY OUT	Red tally output (open collector)
15	G TALLY OUT	Green tally output (open collector)
1	AUX VIDEO (X)	General-purpose analog video line between this adaptor and XDCU-50
6	AUX VIDEO (G)	
11	AUX1	General-purpose line 1 between this adaptor and XDCU-50
12	AUX2	General-purpose line 2 between this adaptor and XDCU-50

14 INTERCOM LEVEL knob

Adjusts the receiving volume level of the headset connected to the INTERCOM connector.

15 INTERCOM MIC switch

Controls the headset microphone connected to the INTERCOM connector, turning it on or off as required.

ON: Turns the headset microphone on.

OFF: Turns the headset microphone off.

PTT: Turns the headset microphone on for as long as the switch is held in this position.

16 TALLY lamp (green)

When the TALLY switch is on, lights in green when a green tally signal is input to an XDCU-50 connected to the adaptor.

17 TALLY lamp (red)

When the TALLY switch is on, lights in red when a red tally signal is input to an XDCU-50 connected to the adaptor, and when a call signal is received, for example because a CALL button was pressed on another device.

Note

This lamp does not light when the adaptor's CALL button is pressed. It does not light either when the CALL button on the remote control unit or other device is pressed.

18 DC OUT 12V(2A) connector (4-pin round)

Connect to the DC IN connector of the camcorder with the supplied power cable.

19 REMOTE connector (8-pin)

Connect to the REMOTE connector of the camcorder with the supplied REMOTE cable.

20 GENLOCK OUT connector

Connect to the GENLOCK IN connector of the camcorder with the supplied BNC cable. Reference sync signals output from the XDCU-50 are sent as SD black burst signals to the camcorder via this connector.

21 MONITOR OUT connector

Outputs SD analog composite video signals, either return video signals from XDCU-50 or the camcorder video signals.

22 SDI IN connector

Connect to the SDI OUT connector of the camcorder with the supplied BNC cable. SDI signals output from the camcorder are input to this connector.

23 Accessory screw holes

These are accessory screw holes (4) for M4 screws to secure an HD monitor.

24 Accessory screw holes

These are a screw hole for an U1/4-20 screw to secure an accessory, and eight screw holes to secure the accessory kit.

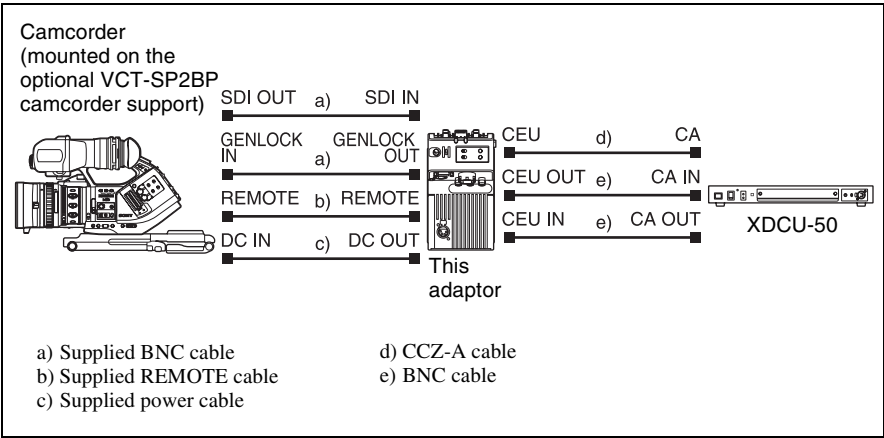
25 Camera adaptor mounting screw holes

These are screw holes for M4 screws, allowing you to secure the adaptor to the optional VCT-SP2BP Camcorder Support.

System Configuration

The following figure shows the configuration of a system that includes this adaptor.

Refer to the *XDCU-50 Operating Instructions* for details about how to use the adaptor when it is connected to the XDCU-50.



Note

Do not connect or disconnect the cables connecting this adaptor and XDCU-50 (CCZ-A and BNC cables) while the system is powered on. The excessive current protection function may be activated, cutting off power to the power circuits of this adaptor or the XDCU-50. If the power should be cut off, connect the cables again in the proper fashion and wait for a while before starting the system again.

Mounting on the Camcorder Support

Proceed as follows to mount the adaptor and the camcorder on the optional VCT-SP2BP Camera Support, and to connect the adaptor to the camcorder.

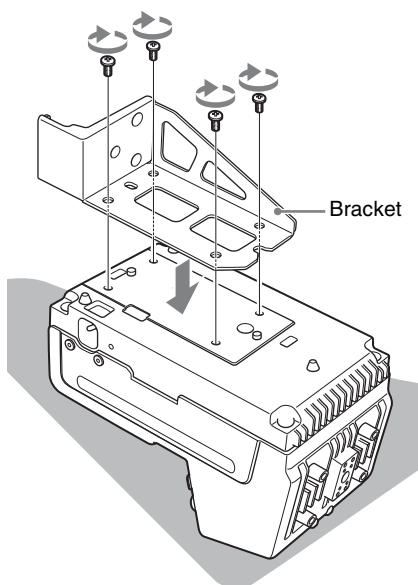
Note

Always power the camcorder off before mounting it on the VCT-SP2BP.

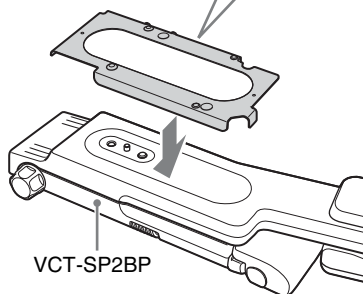
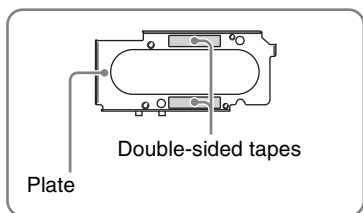
- 1 Remove the shoulder pad of the camcorder.

Refer to the *Operating Instructions manual of the camcorder* for information about how to remove the shoulder pad.

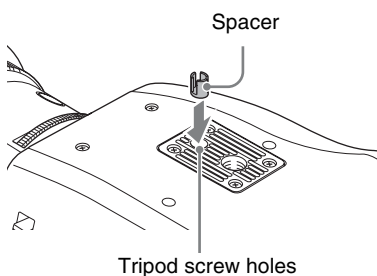
- 2 Place the adaptor on a flat surface, as shown in the figure, align the supplied bracket with the camera adaptor mounting screw holes (4), and screw it down securely.



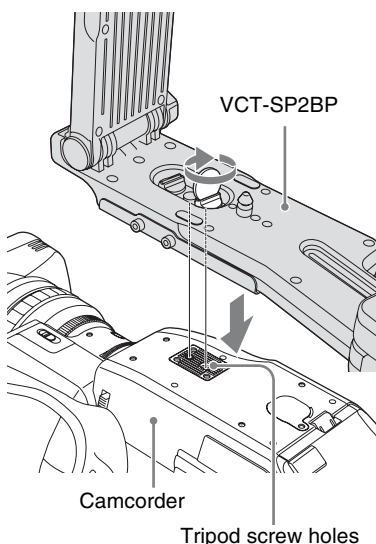
- 3** Peel off the covers from the double-sided tapes on the rear side of the supplied plate, and attach the plate to the VCT-SP2BP.



- 4** Place the camcorder on a flat surface with the bottom panel facing up, and insert the spacer into the tripod screw holes.



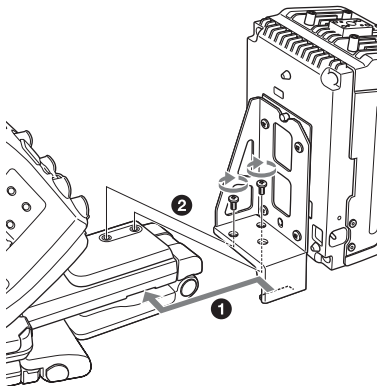
- 5** Place the VCT-SP2BP on the bottom panel of the camcorder, with the rear side facing up. Secure the VCT-SP2BP by tightening screws into the tripod screw holes of the camcorder.



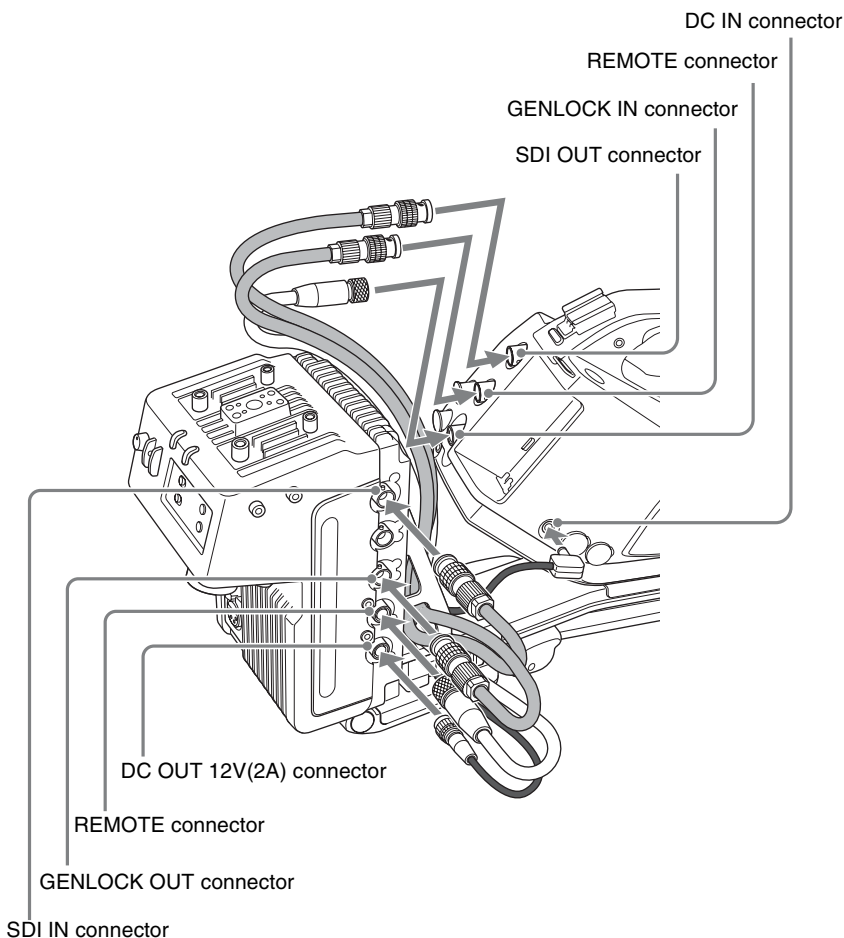
The VCT-SP2BP cannot be attached if your camcorder has only one tripod screw hole.

For details, contact your dealer or a Sony service representative.

- 6** Insert the bottom part of the bracket that you attached to the adaptor in step **2** into the groove on the camcorder support (**1**), as shown by arrow in the figure. Then slide the adaptor to mount it on the camcorder support, and secure the bracket with two screws (**2**).



- 7** Connect the adaptor to the camcorder with the supplied cables.



The following table shows the connector pairs to connect.

Adaptor connector	Camcorder connector
SDI IN	SDI OUT
DC OUT 12V(2A)	DC IN
REMOTE	REMOTE
GENLOCK OUT	GENLOCK IN

See “Names and Functions of Parts” (page 8) for details about the functions of each connector.

Important Notes on Operation

Use and storage locations

Store in a level, ventilated place. Avoid using or storing the adaptor in the following places.

- In excessive heat or cold (operating temperature range: 0°C to 40°C (32°F to 104°F))
- Remember that in summer in warm climates the temperature inside a car with the windows closed can easily exceed 50°C (122°F).
- In damp or dusty locations
- Locations where the adaptor may be exposed to rain
- Locations subject to violent vibration
- Near strong magnetic fields
- Close to radio or TV transmitters producing strong electromagnetic fields.
- In direct sunlight or close to heaters for extended periods

Do not subject to strong shocks

Do not drop the adaptor or subject it to strong shocks. The adaptor may be damaged.

Do not wrap in a cloth or other covering during operation

Internal temperatures may rise, causing malfunctions.

Maintenance

Clean the cabinet and panels by wiping lightly with a soft, dry cloth. If they are very dirty, use a cloth dampened with a small amount 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 or cause it to peel off.

Transport

When transporting the adaptor by truck, ship, or air, or whenever it may be handled as freight, always pack it in the original protective packaging, after removing the camcorder, adaptor, and cables from the camcorder support.

Transfer

Avoid transferring the PMW-EX3 camcorder and the adaptor as mounted on the camcorder support. Before transfer, dismount the camcorder from the camcorder support. Otherwise the adaptor may fall off the camcorder support during transfer, causing injury.

Specifications

General

Power requirements

13V DC

Power consumption

Approx. 7 W

Notes

- Connect only a device with a power consumption current of 1 A or less to the DC OUT connector.
- Connect only a camcorder with a power consumption current of 2 A or less (including external connection) to the DC OUT connector (4-pin round).

Operating temperature

0°C to +40°C (23°F to 104°F)

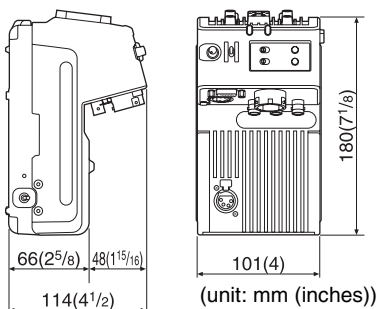
Operating humidity

20% to 90%

Storage temperature

-20°C to +60°C (-4°F to +140°F)

Dimensions



Mass Approx. 1.0kg (2 lb 35 oz)

Connectors

Camera extension input/output connectors

CEU IN/OUT

BNC type (one each), 0.8Vp-p, 75Ω

CEU Round 26-pin, female

Camcorder input/output connectors

SDI IN

BNC type, 0.8Vp-p, 75Ω

DC OUT(2A)

4-pin round, female

GENLOCK OUT

BNC type, black burst, 75Ω

REMOTE

8-pin round, female

Output connectors

MONI.OUT(SDI)

BNC type, 0.8Vp-p, 75Ω

MONITOR OUT

BNC type, 1.0 Vp-p, 75Ω

Other connectors

INTERCOM

XLR 5-pin, female

AUX D-Sub 15-pin, female

DC OUT 1A

XLR 4-pin, female

DC 12 V, max. rated power 1 A

Supplied Accessories

Operating Instructions

Japanese (1)

English (1)

CD-ROM (1)

Camcorder connection cables

BNC cables (2)

REMOTE cable (1)

DC Power cable (1)

Camcorder support attachment

CA bracket (1)

CA bracket screws (6)

Plate (1)
Spacer (1)
Cable clamp belt (1)
Belt bracket (1)
Belt bracket fixing screws (2)

Accessories Not Supplied

VCT-SP2BP Camcorder support

Design and specifications are subject to change without notice.

Note

Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

For Customer in China

根据中华人民共和国信息产业部第39号令《电子信息产品污染控制管理办法》及标准中要求的“有毒有害物质或元素名称及含量”等信息，本产品相关信息请参考以下链接：
<http://pro.sony.com.cn>

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