

SONY®

PROFESSIONAL DISC DRIVE UNIT

PDW-U1

XDCAM HD
Professional Disc System


Professional Disc
DL 

MPEG HD422

MPEG HD

MPEG IMX

DVCAM™

OPERATION MANUAL

English

2nd Edition (Revised 6)

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.

WARNING

When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power plug to an easily accessible socket-outlet near the unit. If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power plug.

WARNING: THIS WARNING IS APPLICABLE FOR USA ONLY.
If used in USA, use the UL LISTED power cord specified below.
DO NOT USE ANY OTHER POWER CORD.

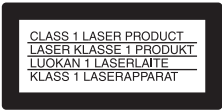
| | |
|----------|---|
| Plug Cap | Parallel blade (NEMA 1-15P Configuration) |
| Cord | Type NISPT-2 or SPT-2, two 16 or 18 AWG wires |
| Length | Minimum 1.5 m (4 ft. 11in.), Less than 2.0 m (7 ft.) |
| Rating | Minimum 7A, 125V |

Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

WARNING: THIS WARNING IS APPLICABLE FOR OTHER COUNTRIES.

1. Use the approved Power Cord (2-core mains lead) / Appliance Connector / Plug that conforms to the safety regulations of each country if applicable.
2. Use the Power Cord (2-core mains lead) / Appliance Connector / Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord / Appliance Connector / Plug, please consult a qualified service personnel.



The PDW-U1 is classified as a CLASS 1 LASER PRODUCT.

Laser diode properties

Wavelength: 400 to 410 nm
Emission duration: Continuous
Laser output power: 135 mW (max. of pulse peak), 65 mW (max. of CW)

Tekniska data för laserdiod

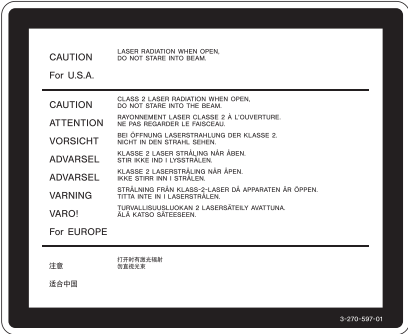
Våglängd: 400 till 410 nm
Emissionslängd: Kontinuerlig
Laserut effekt: 135 mW (max. för pulstopp), 65 mW (max. för kontinuerlig våg)

Spesifikasjoner laserdiode

Bølgelengde: 400 til 410 nm
Strålens varighet: Kontinuerlig
Laserens effekt: 135 mW (maks stråletoppunkt), 65 mW (maks ved kontinuerlig stråling)

Laserdiodin ominaisuudet

Aallon pituus: 400 - 410 nm
Välilyksen kesto: Jatkuva
Laserlähdon teho: 135 mW (sykehuipun maks.), 65 mW (jatkuvan aallon maks.)



This label is located inside the right side cover of the unit.

Denna etikett finns på den inre högra sidan av enheten.

Denne mærkat sidder på højre side inde i drevenheden.

Tämä kyltti sijaitsee laitteen kotelon sisäpinnan oikealla puolella.

Dette merket er plassert til høyre på innsiden av enheten.

CAUTION

The use of optical instruments with this product will increase eye hazard.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAÄ ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING

OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates,

uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures;

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If you have any questions about this product, you may call;

Sony Customer Information Service Center 1-800-222-7669 or <http://www.sony.com/>

| Declaration of Conformity | |
|---|--|
| Trade Name | : SONY |
| Model | : PDW-U1 |
| Responsible Party | : Sony Electronics Inc. |
| Address | : 16530 Via Esprillo, San Diego, CA 92127 U.S.A. |
| Telephone Number | : 858-942-2230 |
| 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. | |

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 Canada

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

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.

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.

This apparatus shall not be used in the residential area.

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

AVERTISSEMENT

Lors de l'installation de l'appareil, incorporer un dispositif de coupure dans le câblage fixe ou brancher la fiche d'alimentation dans une prise murale facilement accessible proche de l'appareil. En cas de problème lors du fonctionnement de l'appareil, enclencher le dispositif de coupure d'alimentation ou débrancher la fiche d'alimentation.

AVERTISSEMENT

1. Utilisez un cordon d'alimentation (câble secteur à 2 fils)/fiche femelle/fiche mâle conformes à la réglementation de sécurité locale applicable.
2. Utilisez un cordon d'alimentation (câble secteur à 2 fils)/fiche femelle/fiche mâle avec des caractéristiques nominales (tension, ampérage) appropriées.

Pour toute question sur l'utilisation du cordon d'alimentation/fiche femelle/fiche mâle ci-dessus, consultez un technicien du service après-vente qualifié.

Pour les clients au Canada

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

Pour les clients en Europe, Australie et Nouvelle-Zélande

AVERTISSEMENT

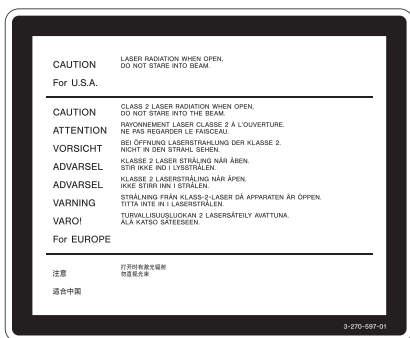
Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

Pour les clients en Europe

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.

Ne pas utiliser cet appareil dans une zone résidentielle.



Cette étiquette est placée sur le panneau latéral de droite de l'unité.

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.

WARNUNG

Beim Einbau des Geräts ist daher im Festkabel ein leicht zugänglicher Unterbrecher einzufügen, oder der Netzstecker muss mit einer in der Nähe des Geräts befindlichen, leicht zugänglichen Wandsteckdose verbunden werden. Wenn während des Betriebs eine Funktionsstörung auftritt, ist der Unterbrecher zu betätigen bzw. Der Netzstecker abzuziehen, damit die Stromversorgung zum Gerät unterbrochen wird.

WARNUNG

1. Verwenden Sie ein zugelassenes Netzkabel (2-Leiter-Netzkabel) und einen Gerätestecker, die den Sicherheitsvorschriften des jeweiligen Landes entsprechen, falls zutreffend.
2. Verwenden Sie ein Netzkabel (2-Leiter-Netzkabel) und einen Gerätestecker, die den Leistungsanforderungen (Spannung, Stromstärke) genügen.

Falls Sie Fragen zum Gebrauch des obigen Netzkabels/Gerätesteckers haben, wenden Sie sich bitte an qualifiziertes Kundendienstpersonal.

Eigenschaften der Laserdiode

Wellenlänge: 400 bis 410 nm
Emissionsdauer: Ununterbrochen
Laser-Ausgangsleistung: 135 mW (max.
Impulsspitze), 65 mW (max.
Dauerstrich)

Für Kunden in Europa,
Australien und Neuseeland

WARNUNG

Dies ist eine Einrichtung, welche die Funk-
Entstörung nach Klasse A besitzt. Diese
Einrichtung kann im Wohnbereich
Funkstörungen verursachen; in diesem Fall
kann vom Betreiber verlangt werden,
angemessene Maßnahmen durchzuführen
und dafür aufzukommen.

Für Kunden in Europa

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.

Dieser Apparat darf nicht im Wohnbereich
verwendet werden.



Dieser Aufkleber befindet sich auf der
Innenseite der rechten Seitenabdeckung der
Einheit.

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1-1 Features

The PDW-U1 is a compact and lightweight disc drive which, when connected to a nonlinear editor, enables reading and writing of video and audio data. In combination with a laptop computer, it can be used in the field, and together with a nonlinear editor, it provides an ideal inexpensive video production system. The features of the PDW-U1 include the following.

Support for all XDCAM formats

Reading and writing are supported in all formats adopted by the XDCAM¹⁾ series, that is, MPEG HD422, MPEG HD, MPEG IMX, and DVCAM, in addition to all bit rates.

1) XDCAM is a trademark of Sony Corporation.

Support for mixed format recording mode

As long as the frame frequency group is the same, clips in different recording formats can be recorded or written to the same disc.¹⁾

The system frequencies supported by this unit are divided into frame frequency groups, as shown in the following table.

1) The recording format is regarded as different whenever the system frequency, video

resolution, video codec/bit rate, or number of audio channels or number of bits does not match.

| Frame frequency group | System frequency |
|-----------------------|------------------|
| 59.94Hz | 59.94P |
| | 59.94i |
| | 29.97P |
| 50Hz | 50P |
| | 50i |
| | 25P |
| 23.98Hz | 23.98P |

You can record clips with different recording formats, for example HD422 and HD420SP clips, by putting this unit into mixed format recording mode.

Note

Continuous playback may not be possible at the transition point between two clips with different recording formats.

Support for dual-layer discs

This unit supports single-layer (23.3 GB) and dual-layer (50 GB) discs.

IT-friendly system through USB interface

The interface is the very widely used high-speed USB (USB 2.0), enabling easy connection to a computer. The PDW-U1 can be used in the same way that an external drive is used to load data files from the

drive into the computer, and to write data files from the computer to the drive.

User data recording mode

User data (files other than XDCAM AV files) can be recorded on Professional Discs as PC data via the USB interface. This allows Professional Discs to be used as data recording media, with a data storage capacity of 46.4 GB (when dual-layer PFD50DLA discs are used).

Notes

- The maximum number of files that can be created on a disc is 5,000 for single-layer discs and 6,000 for dual-layer discs (both including directories). The maximum number of clips that can be created on a disc is 300, for both single-layer and dual-layer discs.

If this limit is reached, nothing more can be written to the disc, even if the disc still has free capacity remaining.

- Directly editing or executing files stored in the UserData directory may cause an error depending on the type or settings of the application.
Specifically, avoid execution of applications which attempt to create a temporary work area in the directory and direct execution of executable files stored in the directory.

High data transfer rates

The newly-developed optical drive allows high-speed access (maximum read speed 120 Mbps, maximum write speed 84 Mbps) from a nonlinear editing system.

XDCAM preview environment

By using the XDCAM Browser application software (Windows/Macintosh) on the supplied CD-ROM, you can easily construct an environment consisting of this unit and other XDCAM devices that allows you to preview, transfer, and operate on XDCAM clips.

Refer to the XDCAM Browser Installation Guide and the PDF manual for information about how to install the application software and about application functions.

Lightweight and compact field specification

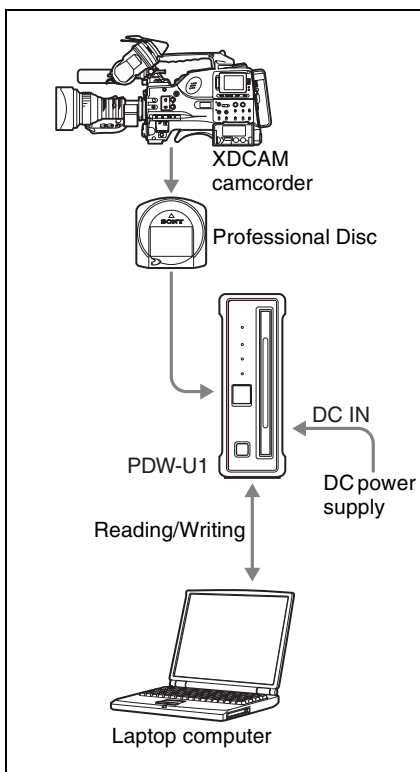
The unit is designed to be lightweight and compact for use in the field. The mechanical construction is highly resistant to shocks and dust.

Menu operation from a computer using the utility software

By installing the supplied utility software in a computer connected to this unit, you can make settings or upgrade the unit by means of menu operations on the computer.

1-2 Example of Use

The following figure shows an example system for reading or writing material recorded with a XDCAM camcorder on a computer connected to this unit.



1-3 Supplied Software

1-3-1 List of the Software

The following software are supplied with the unit.

| Software | Supported OS | Function | Recording medium |
|----------------------|-------------------|--|---|
| XDCAM Drive Software | Windows/Macintosh | Basic software that allows you to connect this unit to a computer and handle XDCAM video and audio data as files. | Professional Disc Drive Unit CD-ROM |
| Utility Software | Windows/Macintosh | Provides the following functions on a computer connected to this unit. <ul style="list-style-type: none"> • Displaying device information • Disc format and recovery • Firmware updates • Making settings <div> Note The Utility Software is installed automatically when you install the XDCAM Drive Software. </div> | |
| XDCAM Browser | Windows/Macintosh | Allows you to view and operate on clips recorded on Professional Discs. For more information about the supported functions and the system requirements, refer to the PDF file on the Utility Software for XDCAM CD-ROM. | Utility Software for XDCAM CD-ROM ^{a)} |

a) The Utility Software for XDCAM CD-ROM contains driver software that you need to connect computers and other devices in the

XDCAM series. For details, refer to the CD-ROM installation guide.

1-3-2 System Requirements

The XDCAM Drive Software and the Utility Software have been tested and found to run under the following conditions.

Note
 These test results may not apply to all computers.

Windows

| Item | Requirement |
|----------------------|---|
| Processor | Intel Core 2 Duo 2.66 GHz or higher, or Intel Xeon 2 GHz or higher |
| Memory | 2 GB or more |
| Free hard disk space | 2 GB or more |
| Monitor | — |
| Operating system | Microsoft Windows XP Professional Service Pack 3 or later Microsoft Windows Vista Business 32-bit/64-bit version, Service Pack 2 or later Microsoft Windows Vista Ultimate 32-bit/64-bit version, Service Pack 2 or later Microsoft Windows 7 Professional 32-bit/64-bit version Microsoft Windows 7 Ultimate 32-bit/64-bit version |
| Other | Hi-Speed USB (USB 2.0) (High-Speed USB (USB 2.0) host controller is necessary to connect the computer to this unit.) |

Macintosh

| Item | Requirement |
|----------------------|---|
| Processor | Intel Core 2 Duo 2.2 GHz, or Intel Xeon 2 GHz or higher |
| Memory | 2 GB or more |
| Free hard disk space | 2 GB or more |
| Monitor | Resolution: 1280 × 1024 pixels or better |
| Operating system | Mac OS X 10.5.8 or later Mac OS X 10.6.4 or later |
| Other | Hi-Speed USB (USB 2.0) (High-Speed USB (USB 2.0) host controller is necessary to connect the computer to this unit.) |

For more details of supplied software, see page 30.

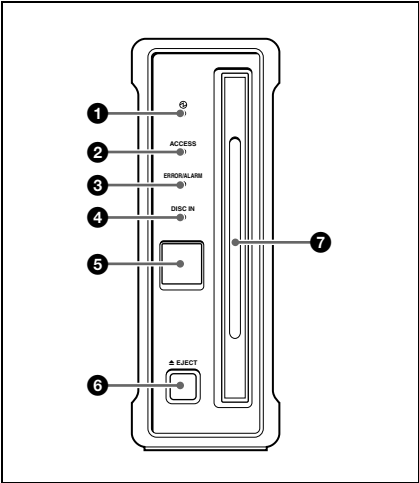
Note

XDCAM Drive Software does not support PowerPC or Mac OS X 10.4.

Names and Functions of Parts

Chapter2

2-1 Front Panel



❶ ㊦ (power) indicator
 Lights green when the ㊦ (power) button on the rear panel is on.

❷ ACCESS indicator
 Flashes blue when the disc is being accessed from the computer.

Note
 Do not press the ㊦ (power) button on the rear panel to turn off, or disconnect the power cord while the ACCESS indicator is flashing. Doing so may lead to a loss of data on the disc.

❸ ERROR/ALARM indicator
 If a fault occurs in the unit, this lights continuously or flashes red, as shown in the following table.

| Indicator | Meaning |
|------------------------------|---|
| Lit continuously | Condensation has occurred. |
| Flashing four times a second | An error occurred (principally a hardware default). |
| Flashing once a second | An alarm not listed above occurred. |

Note
 The indicator may flash or light only for five seconds depending on the alarm.

You can check alarms generated by this unit, using the alarm log of the utility software. For details, refer to the help file of the utility software.

If the indicator is flashing four times a second, and it is not possible to check the alarm log, a malfunction may have occurred. In this case, contact your Sony service representative.

When the error is eliminated, the indicator goes off.

❹ DISC IN indicator
 Lights green when a disc is loaded.

❺ Manual eject mechanism
 When there is no power supply to the unit, to eject the disc, remove the cover over this part, then turn the screw counterclockwise with a Phillips screwdriver.

For details, see 3-4-5 “To Eject Discs With the Unit Powered Off” (page 21).

6 EJECT button

Ejects a disc (see page 20).

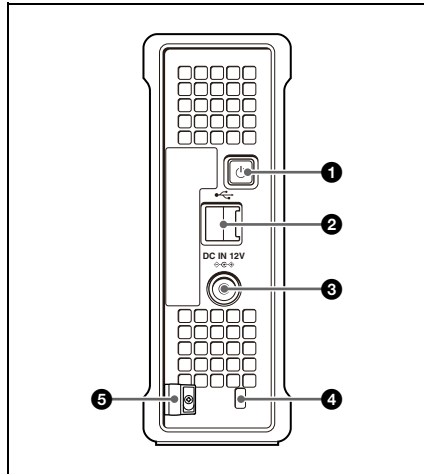
Notes

- This button is disabled while the disc is being accessed. Either stop accessing the disc before ejecting, or eject by an operation from the computer.
- When this unit is connected to a Macintosh computer, this button is disabled.

7 Disc slot

With the label surface on the right, insert the disc (see page 20).

2-2 Rear Panel



1 (power) button

This switches the power on and off.

2 USB connector (Hi-speed USB)

Use the supplied USB cable to connect to the computer.

Note

If the video and audio are not output on a computer connected using the USB connector, try disconnecting the USB cable, and reconnect making sure it is correctly inserted.

3 DC power inlet connector

Connect to the AC power using the supplied AC adaptor and a power cord (not supplied).

4 Security slot

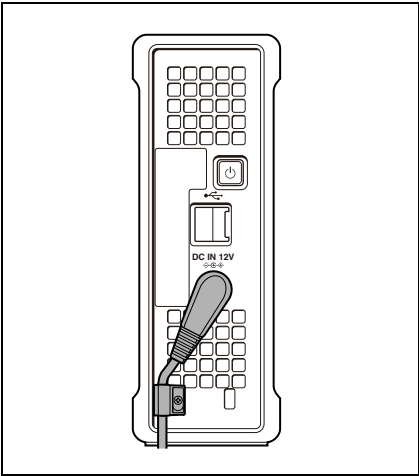
You can fit a commercially available security cable into this slot.

For information about how to use your security cable, refer to the instructions provided with the security cable.

5 Cable clamper

Use this clamper to fix the cable of the AC adaptor.

Clip the cable with the clamper as shown in the following figure.



3-1 Software Installation

To use this unit, the necessary software must first be installed on the computer to which it is connected.

Note

Operation of the XDCAM Drive Software may be unstable if it is installed together with some anti-virus software, spy-ware tools, or UDF2.5 file system drivers other than the operating system standard. If the installation cannot be completed successfully, check the settings for conflicts with this other software, then try reinstalling.

3-1-1 Windows Installation

To install the XDCAM Drive Software and utility software

Load the supplied Professional Disc Drive Unit CD-ROM into the computer's CD-ROM drive, and run the program Setup.exe in the XDCAM Drive Software folder on the CD-ROM. Follow the directions on screen to install the XDCAM Drive Software, and then the utility software.

Notes

- If an old version of the XDCAM Drive Software is already installed, it must be uninstalled before you install the new version. Use "Add or Remove Programs" on the Control Panel to remove the old version of the Sony XDCAM Drive Software. After doing so, be sure to restart the computer.
- After installation, the previous settings return to their default values.

3-1-2 Macintosh Installation

To install the XDCAM Drive Software and utility software

Load the supplied Professional Disc Drive Unit CD-ROM into the computer's CD-ROM drive, and unzip the file XDCAM Drive Software.dmg which is located in the Macintosh folder on the CD-ROM, and then run the installation package. Follow the directions on screen to install the XDCAM Drive Software, and then the utility software.

Note

Installing the XDCAM Drive Software and utility software overwrites a previous installation.

If you are using version 1.0 of the utility software installed somewhere other than the factory default, remove it manually. Settings from version 2.1 and later are preserved after the new installation.

3-2 Connections and Settings

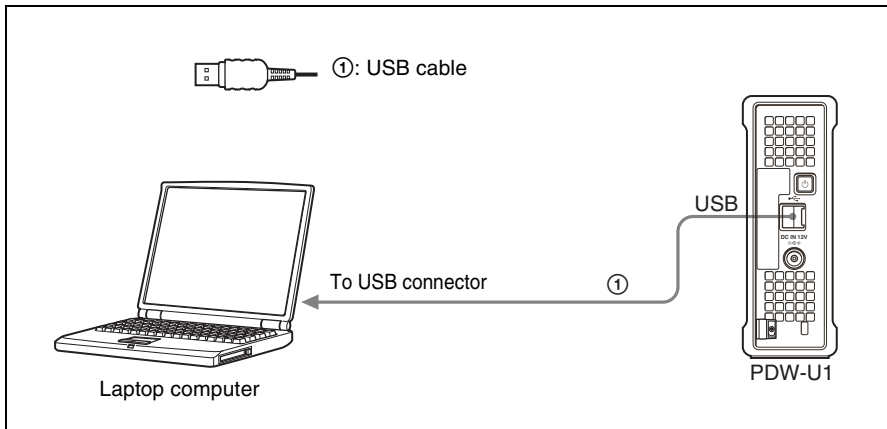
3-2-1 Connecting to a Computer

By connecting this unit to a computer, you can use the utility software, and the other supplied software.

Notes

- The XDCAM Drive Software (*see page 17*) must be installed in advance.
- To disconnect the PDW-U1 from a Windows computer, run the “Safely Remove Hardware” dialog, and then disconnect the cable.

Example connection



3-3 Power Preparations

This unit can be powered by AC adaptor. Connect the supplied AC adaptor and a power cord (not supplied) to the DC power inlet connector (*page 15*) on the rear panel of the unit.

Note

It is not possible to power this unit through a USB cable.

3-4 Handling Discs

3-4-1 Discs Used for Reading and Writing

This unit uses the following professional discs for reading and writing:

- PFD23 (capacity 23.3 GB)
- PFD23A (capacity 23.3 GB)
- PFD50DLA (capacity 50.0 GB)

Note

This unit cannot read or write the following discs.

- Blu-ray Disc
- Professional Disc for Data

3-4-2 Notes on Handling

Handling

The Professional Disc is housed in a cartridge, and is designed to allow handling free of risk from dust or fingerprints. However, if the cartridge is subjected to a severe shock, for example by dropping it, this can result in damage or scratching of the disc. If the disc is scratched, it may be impossible to record video/audio, or to play back the content recorded on the disc. The discs should be handled and stored carefully.

- Do not touch the surface of the disc itself within the cartridge.
- Deliberately opening the shutter may cause damage.
- Do not disassemble the cartridge.
- The supplied adhesive labels are recommended for indexing discs. Apply the label in the correct position.

Storage

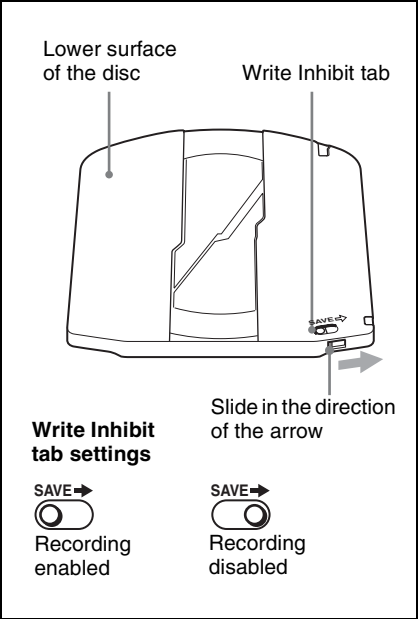
- Do not store discs where they may be subjected to direct sunlight, or in other places where the temperature or humidity is high.
- Do not leave cartridges where dust may be able to gain ingress.
- Store cartridges in their cases.

Care of the discs

- Remove dust and dirt on the outside of a cartridge using a soft dry cloth.
- If condensation forms, allow ample time to dry before use.

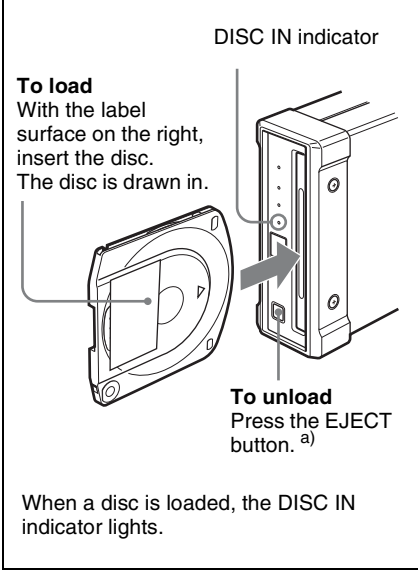
3-4-3 Write-Protecting Discs

To protect the content recorded on the disc from accidental erasure, move the write-protect tab on the lower surface of the disc in the direction of the arrow, as shown in the following figure.



3-4-4 Loading and Unloading Discs

To load and unload a disc, press (power) button to turn the unit on and light the indicator, and follow the procedures indicated in the next illustration.



a) Windows only

Note

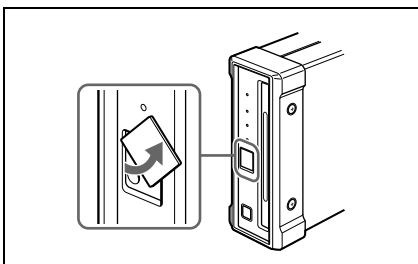
The EJECT button is disabled when this unit is connected to a Macintosh computer. To eject a disc, see “To eject discs from a remote computer” (page 29). If the Macintosh does not recognize the disc, eject the disc by using the eject icon in the utility software of this unit.

3-4-5 To Eject Discs With the Unit Powered Off

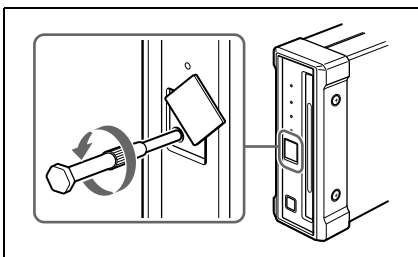
When the power is not supplied, it may not be possible to eject discs by pressing the EJECT button. In these situations, you can use the following as an emergency procedure to eject a disc manually.

- 1 Power the unit off.
- 2 Turn the cover of the manual eject mechanism on the front panel counterclockwise, as shown in the figure.

Be careful not to turn the cover more than necessary.



- 3 Check the position of the screw, then using a Phillips screwdriver, turn the screw counterclockwise until the disc is ejected.




After ejecting the disc, it is not necessary to return the screw to its original position. The next time the unit is powered on, normal operation will resume.

- 4 Replace the cover.

3-4-6 Media Protection Function

This unit is equipped with a media protection function.

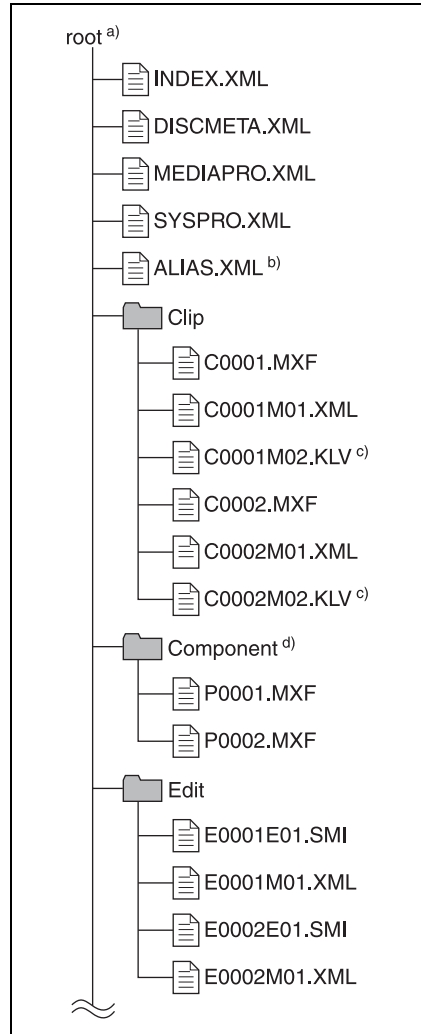
The media protection function means that when a disc is loaded in the unit, if you press the  (power) button on the rear panel, turning it off, or disconnect the power cord to shut off the AC supply, the unit switches automatically to standby-off mode, and prevent a disc error.

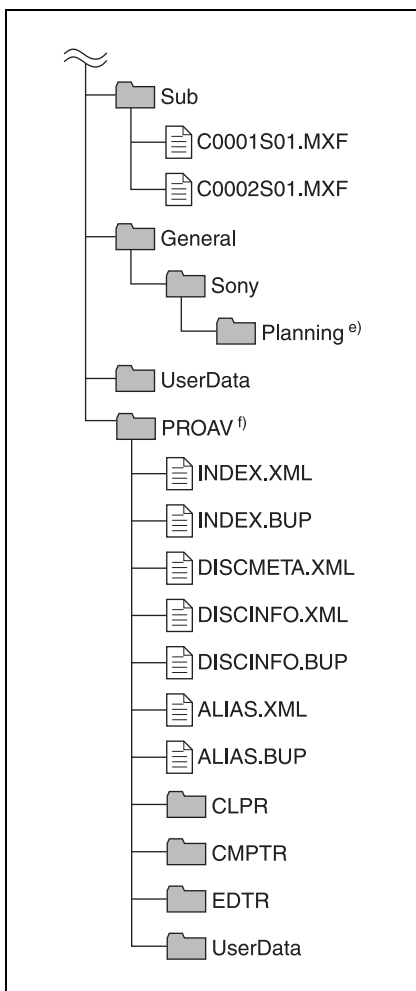
4-1 Overview

When a computer is connected to this unit, you can handle video and audio data as files.

4-1-1 Directory Structure

The following figure shows the directory structure of discs visible to a remote computer.





- a) Root directory
- b) Only when Naming Form is set to “free” in the User Settings screen of the utility software.
- c) Only when KLV files are contained.
- d) Directories and files automatically created through voice-over editing with a PDW-HR 1
- e) A directory in which to save planning metadata. *For details about planning metadata, refer to operation manuals for XDCAM devices that support planning metadata.*
- f) Only when the “Hide PROAV folder.” check box is not checked in the User Settings screen of the utility software.

4-1-2 File Operation Restrictions

This section explains which operations are possible on files stored in each directory.

Root directory

| File name | Content | Operations | | | | |
|-------------------------|---|------------|-------------------|--------|--------|--------|
| | | Read | Write | Rename | Create | Delete |
| INDEX.XML | Contains data for management of the audio/video material on the disc. | Yes | No | No | No | No |
| DISCMETA.XML | Contains metadata to indicate the disc properties. | Yes | Yes ^{a)} | No | No | No |
| MEDIAPRO.XML | Contains a list of audio/video material on the disc, basic properties, related information, and information about access methods. | Yes | No | No | No | No |
| SYSPRO.XML | Contains information about device system settings and menu settings. | Yes | No | No | No | No |
| ALIAS.XML ^{b)} | Contains conversion tables for assigning user-defined names to clips and clip lists. | Yes | No | No | No | No |
| Other files | Files other than the above | — | No | — | No | — |

- a) Only files which can be written by an XDCAM device.
- b) Only when Naming Form is set to “free” in the User Settings screen of the utility software.

- Notes
- Directories cannot be created in the root directory.
 - The directories in the root directory (Clip, Component, Edit, Sub, UserData, PROAV and General) cannot be deleted or renamed.

Clip directory

| File name | Content | Operations | | | | |
|-------------------------|---|------------|----------------------|------------------|-------------------|-------------------|
| | | Read | Write | Rename | Create | Delete |
| C*.MXF ^{a)} | Clip file created by recording (MXF file) *: 0001 to 9999 | Yes | Yes ^{b) c)} | Yes | Yes ^{b)} | Yes ^{d)} |
| C*M01.XML ^{a)} | Metadata file generated automatically when C*.MXF file is created. *: 0001 to 9999 | Yes | Yes ^{e)} | No ^{f)} | No ^{g)} | No ^{h)} |
| Other files | Files other than the above | — | No | — | No | — |

- a) The unit can handle files with user-defined names in the “C*” part.
- b) Only files which are 2 seconds or longer in length, in a format matching the format (system frequency) and recording format (MPEG HD/IMX and number of audio channels) of the recorded sections of the disc, and which can be overwritten by an XDCAM device.
- c) Overwriting is not possible.
- d) When the “Make the drives recinhibit.” check box is not checked in the utility software, you can select and delete any clip.
- e) Only files which can be written by an XDCAM device.

- f) When the “C*” part of a C*.MXF file name is changed, a C*M01.XML file with the same name in the “C*” part is also changed automatically.
- g) When a C*.MXF file is created, a C*M01.XML file with the same name in the “C*” part is created automatically.
- h) When a C*.MXF file is deleted, a C*M01.XML file with the same name in the “C*” part is also deleted automatically.

Note

Directories cannot be created in the Clip directory.

Component directory

| File name | Content | Operations | | | | |
|----------------------|--|-------------------|----------------------------|-------------------|----------------------|-------------------|
| | | Read | Write | Rename | Create | Delete |
| P*.MXF ^{a)} | Directories and files played back after voice-over editing with a PDW-HR1 *: 0001 to 0099 | Yes ^{a)} | Yes ^{b) c) d) e)} | Yes ^{e)} | Yes ^{b) d)} | Yes ^{f)} |
| Other files | Files other than the above | No | No | No | No | No |

- a) The unit can handle files with user-defined names in the “P*” part.
- b) Only files which can be written by an XDCAM device and which are 2 seconds or longer in length.
- c) Overwriting is not possible.

- d) Multiple files cannot be opened simultaneously.
- e) Only when the utility software user setting window has “Naming From” set to “free”.
- f) Any clip can be selectively deleted.

Note

It is not possible to create a directory within the Component directory.

Edit directory

| File name | Content | Operations | | | | |
|-------------------------|--|------------|-------------------|------------------|-------------------|-------------------|
| | | Read | Write | Rename | Create | Delete |
| E*E01.SMI ^{a)} | Clip list file *: 0001 to 0099 | Yes | Yes ^{b)} | Yes | Yes ^{c)} | Yes ^{d)} |
| E*M01.XML ^{a)} | Metadata file generated automatically when E*E01.MXF file is created. *: 0001 to 0099 | Yes | Yes ^{b)} | No ^{e)} | No ^{f)} | No ^{g)} |
| Other files | Files other than the above | — | No | — | No | — |

- a) The unit can handle files with user-defined names in the “E*” part.
- b) Only files which can be written by an XDCAM device. Partial writing is not possible.
- c) Only files which can be written by an XDCAM device.
- d) When the “Make the drives RecInhibit.” check box is not checked in the utility software.
- e) When the “E*” part of an E*01.SMI file name is changed, an E*M01.XML file with the same name in the “E*” part is also changed automatically.

- f) When an E*E01.SMI file is created, an E*M01.XML file with the same name in the “E*” part is also generated automatically.
- g) When an E*E01.SMI file is deleted, an E*M01.XML file with the same name in the “E*” part is also deleted automatically.

Note

Directories cannot be created in the Edit directory.

Sub directory

| File name | Content | Operations | | | | |
|-------------------------|--|------------|-------|------------------|------------------|------------------|
| | | Read | Write | Rename | Create | Delete |
| C*S01.MXF ^{a)} | Proxy AV data (MXF file) generated automatically when a C*.MXF file is created. *: 0001 to 9999 | Yes | No | No ^{b)} | No ^{c)} | No ^{d)} |
| Other files | Files other than the above | — | No | — | No | — |

- a) The unit can handle files with user-defined names in the “C*” part.
 - b) When the “C*” part of a C*.MXF file name is changed, a C*S01.MXF file with the same name in the “C*” part is changed automatically.
 - c) When a C*.MXF file is created, a C*S01.XML file with the same name in the “C*” part is generated automatically.
 - d) When a C*.MXF file is deleted, the C*S01.XML file with the same name in the “C*” part is also deleted automatically.
- Note**
- Directories cannot be created in the Sub directory.

Directories cannot be created in the Sub directory.

| File name | Content | Operations | | | | |
|-----------|---------|------------|-------|-------------------|--------|-------------------|
| | | Read | Write | Rename | Create | Delete |
| Any file | | Yes | Yes | Yes ^{a)} | Yes | Yes ^{b)} |

The following directory operations are possible in the General directory.

| File name | Content | Operations | | | | |
|-----------|---------|------------|-------|-------------------|--------|--------|
| | | Read | Write | Rename | Create | Delete |
| Any file | | Yes | Yes | Yes ^{a)} | Yes | Yes |

The following directory operations are possible in the UserData directory.

Notes

- The maximum number of files that can be created on a disc is 5,000 for single-layer discs and 6,000 for dual-layer discs (both including directories). The maximum number of clips that can be created on a disc is 300, for both single-layer and dual-layer discs.

If this limit is reached, nothing more can be written to the disc, even if the disc still has free capacity remaining.

- Note that directly editing or executing the files stored in the UserData directory may cause an error depending on the type or setting of the application for it. Specifically direct execution of the application which attempts to create a

temporary work area in the directory and the executable file stored in the directory must be avoided.

4-2 Preparations for File Access

- 1** Connect this unit to a computer (*page 18*).
- 2** Turn this unit and the computer on.
- 3** In the utility software setup menu, set items as required.
For details of the setup menu, refer to the help file of the utility software.
- 4** Insert a disc into this unit (*page 20*).

4-3 File Access Operations

Accessing files with nonlinear editing software

For details of the file access operations, refer to the manual provided with the editing software to be used.

Accessing files with Explorer/Finder

Start Windows Explorer or Macintosh Finder and check that a drive letter has been assigned to this unit. (The drive letter will differ depending on the number of other peripherals connected to the remote computer.)

You can perform file operations on the disc loaded in this unit in the same way that you operate on local drives and files on network computers.

Note

All file operations are not possible for some types of files.

For details, see 4-1-2 “File Operation Restrictions” (page 23).

To eject discs from a remote computer

For Windows, right click the icon representing this unit in Explorer, and select Eject from the menu which appears.

On a Macintosh, click the Eject button to the right of the Finder icon for this unit, or drag to the eject icon in the Dock.

5-1 Starting and Exiting the Utility Software

5-1-1 Starting

First make sure that this unit is connected to the computer.

For connection details, see 3-2-1 “Connecting to a Computer” (page 18).

On a Windows computer

With the computer connected to this unit, carry out any of the following.

- Open the folder in which the utility software is installed, then double click on the executable file of the Utility Software.
- Click the Start button, and then select “All Programs” > “Sony XDCAM Drive” to start the Utility Software.

On a Macintosh computer

Open the folder in which the utility software is installed, and then double click on the executable file of the Utility Software.

This displays the home window of the utility software.

Note

You must log on to the computer as a user with Computer Administrator privileges to be able to change the settings in the User Settings screen of the utility software.

5-1-2 Exiting

On a Windows computer

Click the × (close) button in the top right corner of the window.

On a Macintosh computer

Click the × (close) button in the top left corner of the window.

5-2 About the Application Software

The supplied Utility Software for XDCAM CD-ROM contains the XDCAM Browser software, which allows you to view and operate on clips recorded on Professional Discs.

Refer to the installation guide and the PDF manual for information about how to install the application software and about application functions.

Appendix

Important Notes on Operation

Condensation

When this unit is moved from a cold place to a warmer place, or operated in high humidity, condensation may form on the optical pickup. If the unit is operated in this state, it may make correct reading and writing impossible.

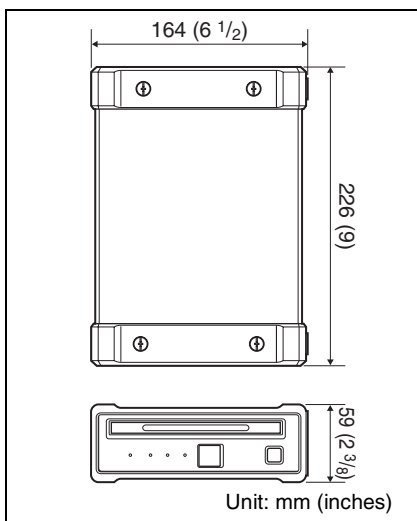
Note the following points, to avoid problems with condensation.

- If moving the unit in conditions where condensation is possible, make sure the disc is inserted in advance.
- When the ⏻ (power) button is on, if the ERROR/ALARM indicator lights, and “HUMID!” appears in the utility software alarm log, do not insert a disc until the indicator has gone off.

Specifications

General

- Power requirements
 - DC 12 V
- Power consumption
 - 10 W
- Operating temperature
 - 5°C to 40°C (41°F to 104°F)
- Storage temperature
 - 20°C to +60°C (–4°F to +140°F)
- Operating relative humidity
 - 20% to 90%
 - Less than 90%
- Mass
 - 1.4 kg (3 lb 1 oz)
- External dimensions (w/h/d)
 - 59 × 164 × 226 mm
 - (2³/₈ × 6¹/₂ × 9 inches)



System

Reading/Writing formats

Video

MPEG HD (50/35/25/18 Mbps), MPEG IMX (50/40/30 Mbps), DVCAM (25 Mbps)

Proxy video

MPEG-4

Audio

MPEG HD: 16 bits/48 kHz (2/4ch) or 24 bits/48 kHz (8ch)

MPEG IMX: 16 bits/48 kHz (8 ch) or 24 bits/48 kHz (4 ch)

DVCAM: 16 bits/48 kHz (4 ch)

Proxy audio

A-law (8/4 channels, 8 bits, 8 kHz)

Recording/Playback times (single layer disc)

MPEG HD422

50 Mbps: Approx. 43 min.

MPEG HD (4 ch)

35 Mbps: Approx. 65 min.

25 Mbps: Approx. 85 min.

18 Mbps: Approx. 112 min.

MPEG HD (2 ch)

35 Mbps: Approx. 68 min.

25 Mbps: Approx. 90 min.

18 Mbps: Approx. 122 min.

MPEG IMX

50 Mbps: Approx. 45 min.

40 Mbps: Approx. 55 min.

30 Mbps: Approx. 68 min.

DVCAM: Approx. 85 min.

Recording/Playback times (dual-layer disc)

MPEG HD422

50 Mbps: Approx. 95 min.

MPEG HD (4 ch)

35 Mbps: Approx. 145 min.

25 Mbps: Approx. 190 min.

18 Mbps: Approx. 248 min.

MPEG HD (2 ch)

35 Mbps: Approx. 150 min.

25 Mbps: Approx. 200 min.

18 Mbps: Approx. 265 min.

MPEG IMX

50Mbps: Approx. 100 min.

40Mbps: Approx. 120 min.

30Mbps: Approx. 150 min.

DVCAM: Approx. 185 min.

Output/input connector

USB Connector (High-Speed USB support)

Accessories supplied

Operation manual (1)

Professional Disc Drive Unit CD-ROM (1)

- XDCAM Drive Software
- Utility Software

Utility Software for XDCAM CD-ROM (1)

- XDCAM Browser
- SxS Device Driver
- SxS UDF Driver
- XDCAM FAM Driver

AC adaptor (1-468-626-6x) (1)

USB cable (1-757-429-2x) (1)

Accessories not supplied

AC power cord (1)

- For the customers in the U.S.A. and Canada
Part No. 1-757-562-1x (125 V, 7 A, about 2.0 m)
- For the customers in European countries
Part No. 1-575-131-8x (250 V, 2.5 A, about 2.0 m)

Design and specifications are subject to change without notice.

Notes

- Always make a test recording, and verify that it was recorded successfully. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- 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.

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