

**SONY®**

DIGITAL VIDEOCASSETTE RECORDER

**DVW-A500/1**

**DVW-500/1**

**DVW-A500P/1**

**DVW-500P/1**

CONTROL PANEL

**BKDW-515**

**Digital BETACAM™**

INSTALLATION AND MAINTENANCE MANUAL

1st Edition (Revised 3)

## **⚠ 警告**

このマニュアルは、サービス専用です。  
お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。  
危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## **⚠ WARNING**

This manual is intended for qualified service personnel only.  
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

## **⚠ WARNUNG**

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.  
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

## **⚠ AVERTISSEMENT**

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

DVW-A500/1	Serial No. 50001 and Higher
DVW-500/1	Serial No. 50001 and Higher
DVW-A500P/1	Serial No. 50001 and Higher
DVW-500P/1	Serial No. 50001 and Higher
BKDW-515	Serial No. 10001 and Higher

### CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.  
Dispose of used batteries according to the manufacturer's instructions.

### Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.

Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ.  
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

### ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

### ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.

Udskiftning må kun ske med batteri af samme fabrikat og type.  
Levér det brugte batteri tilbage til leverandøren.

### Voor de klanten in Nederland

Dit apparaat bevat een (CF)n-Li batterij voor memory back-up.

Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.

Gooi de batterij niet weg, maar lever hem in als KCA.



Bij dit product zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.



# Table of Contents

## Manual Structure

Purpose of this manual .....	3
Contents .....	3
Relative manuals .....	4

## 1. Installation

1-1. Installation of Control Panel .....	1-1
1-2. SYS1, SYS2 ROM Versions .....	1-2
1-3. Removal of Control Panel / Replacement of Arms .....	1-2
1-4. Installation of Sub Panel Cover and Switch Cover .....	1-3
1-5. Installation of Control Panel .....	1-3
1-6. Installation Space .....	1-4
1-7. Full Reset of Control Panel .....	1-5
1-8. Extension of Control Panel .....	1-5

## 2. Service Information

2-1. Location and Function of Printed Circuit Boards .....	2-1
2-2. Replacing the Battery for Memory Backup .....	2-2
2-3. EL Panel Replacement .....	2-3
2-4. Error Message .....	2-4
2-4-1. Operation when Checksum Error of Current Setup Data Occurs .....	2-4
2-4-2. Correction when Checksum Error of VTR Bank Data Occurs .....	2-4
2-4-3. Correction when Checksum Error of Memory Card Data Occurs .....	2-4

## 3. Setup Menu

3-1. ITEM-F Series .....	3-1
--------------------------	-----

## 4. Maintenance Menu

4-1.	ROM Version .....	4-1
4-2.	VTR Maintenance Menu .....	4-1
4-3.	Panel Maintenance Menu .....	4-2
4-3-1.	Card Interface Test .....	4-2
4-3-2.	Buzzer Test .....	4-2
4-3-3.	EL Panel Test .....	4-3
4-3-4.	Key Test .....	4-3
4-3-5.	Dial Test .....	4-3
4-4.	Error Logger .....	4-4

## 5. Block Diagram

## 6. Spare Parts

6-1.	Notes on Repair Parts .....	6-1
6-2.	Spare Parts List for VTR .....	6-2
6-3.	Packing Materials and Supplied Accessories List for VTR .....	6-3
6-4.	Spare Parts List for Control Panel .....	6-4
6-5.	Packing Materials and Supplied Accessories List for BKDW-515 .....	6-6

# Manual Structure

---

## Purpose of this manual

This Manual describes the installation instructions for the digital videocassette recorder DVW-A500/1, 500/1, A500P/1, 500P/1 and the Control panel BKDW-515. This manual contains the information necessary when supplying and installing the unit, assuming use by system/service engineers.

---

## Contents

The sections covered in the manual are summarized below to give you a general understanding of the manual.

### **Section 1 Installation**

Explains the installation of the control panel.

### **Section 2 Service Overview**

Explains replacement of the memory backup battery and EL panel.

### **Section 3 Setup Menu**

Explains Setup menu of ITEM-F series only. As for ITEM-H00 to ITEM-900 series, refer to Operation Manual.

### **Section 4 Maintenance Menu**

Explains VTR Maintenance Menu and PANEL Maintenance menu.

### **Section 5 Block Diagram**

Describes the overall block diagram.

### **Section 6 Spare parts**

Describes the exploded views for the this unit, mounted boards list, packing list, and standard accessories list.

---

## Relative manuals

Besides this “Installation and Maintenance Manual”, the following manuals are available.

- **Operation Manual (Supplied with the VTR or the BKDW-515)**

This manual is necessary for application and operation of the VTR.

- **Installation Manual (Supplied with the VTR)**

This manual describes the items are required to install the VTR and its peripherals. If the BKDW-514 control panel is used, refer to this manual.

- **Maintenance Manual Part 1 (Supplied with the VTR)**

This manual describes the periodic maintenance and servicing information necessary for the principal block and board replacement.

- **Maintenance Manual Part 2 (available on request)**

These manuals describes detailed information necessary for general parts replacement and includes alignments, schematic diagrams, board layouts, detailed parts list, etc.

Please contact the Sony service organization to obtain a copy of the manuals.

- **Protocol Manual (available on request)**

  - **PROTOCOL OF REMOTE-1 (9Pin) CONNECTOR**

This Manual describes the protocol information necessary for controlling the VTR via RS-422A (9-pin serial remote).



# Section 1 Installation

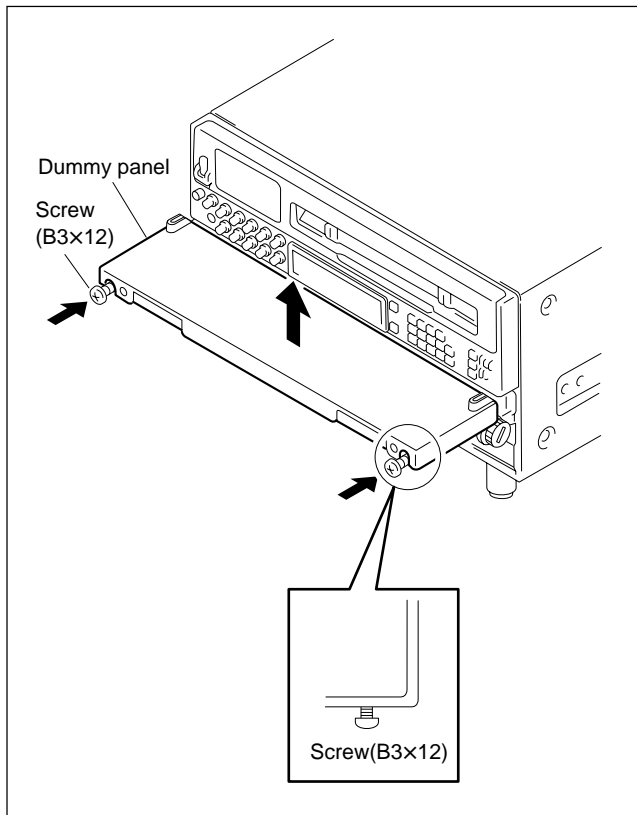
## Note

The BKDW-515 cannot be installed in the BKDW-511 Control Panel Case.

**for DVW-A500/1, DVW500/1,  
DVW-A500P/1, DVW-500P/1**

## 1-1. Installation of Control Panel

1. Fix a dummy panel for shipping use at 90 degrees.
2. Loosen the two black screws on the dummy panel. (Loosen the screws until screw's top are exposed from the surface of the dummy panel.)
3. While pushing the loosened black screws in the direction of the arrow, remove the dummy panel assembly from the arms.

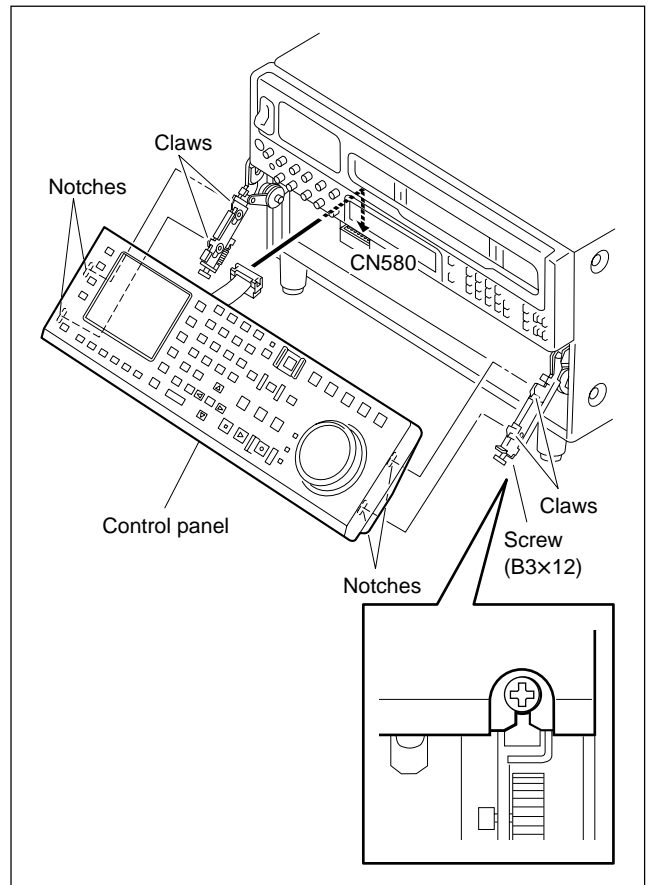


4. Fix the both arms at 45 degrees.
5. Connect the harness of the control panel to the connector (CN580) on the system set-up panel.
6. Set the notches of the control panel to the claws of the arms, and push the control panel until making a click sound.

## Note

Push the head of the two screws when the hook does not move smoothly and when the panel is difficult to attach. This facilitates the attaching.

7. Then tighten the two screws.



**for DVW-A500, DVW500,  
 DVW-A500P, DVW-500P**

**1-2. SYS1, SYS2 ROM Versions**

The control panel BKDW-515 is applicable to the ROMs on the SS-52 board with the following version.

SYS1: 4.0 and higher

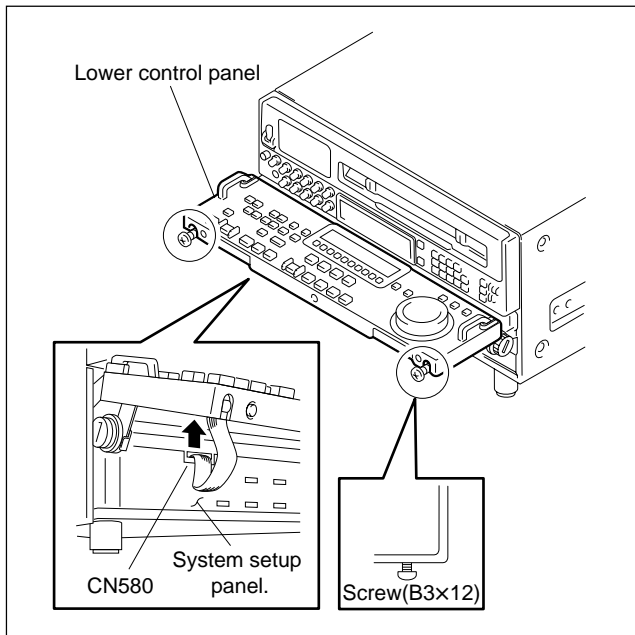
SYS2: 4.0 and higher

If the ROMs with lower version than above are used, please contact Sony's service organization.

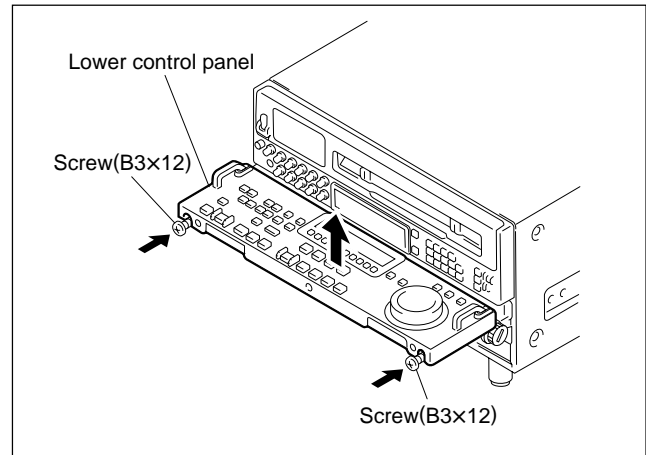
Make sure the ROM's version through the maintenance mode before replacement of the control panel.

**1-3. Removal of Control Panel / Replacement of Arms**

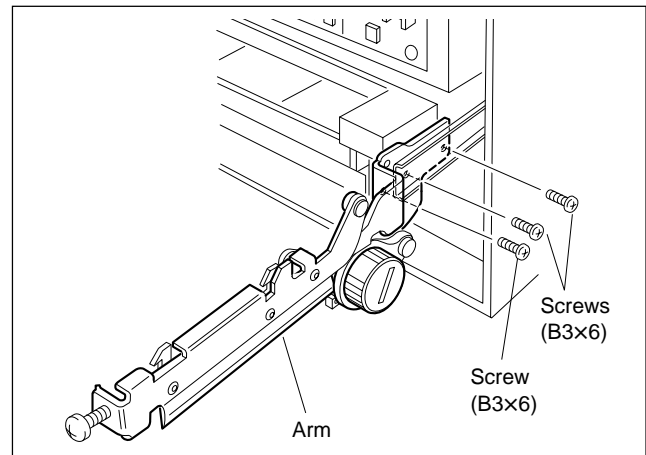
1. Fix a lower control panel at 90 degrees.
2. Disconnect the connector (CN580) in the system set-up panel.
3. Loosen the two black screws on the lower control panel. (Loosen the screws until screw's top are exposed from the surface of the lower control panel.)



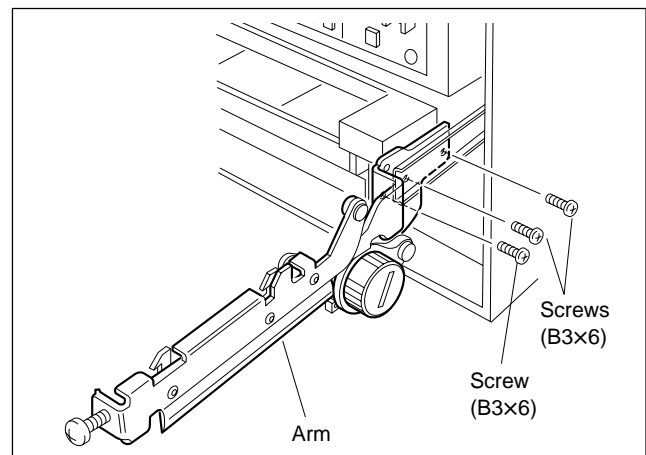
4. While pushing the loosened black screws in the direction of the arrow, remove the lower control panel assembly from the arms.



5. Remove the screws as shown in Figure, and remove both side arms.

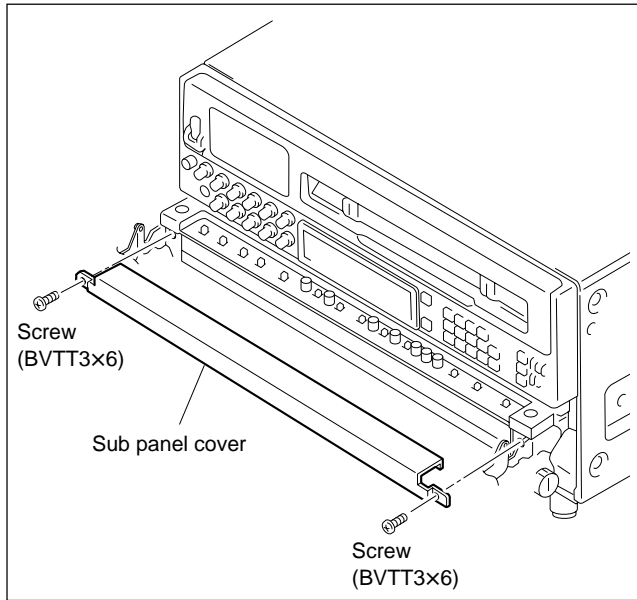


6. Install the arms supplied with BKDW-515.  
 SLIDER AD (R) ASSY: X-3678-375-  
 SLIDER AD (L) ASSY: X-3678-376-

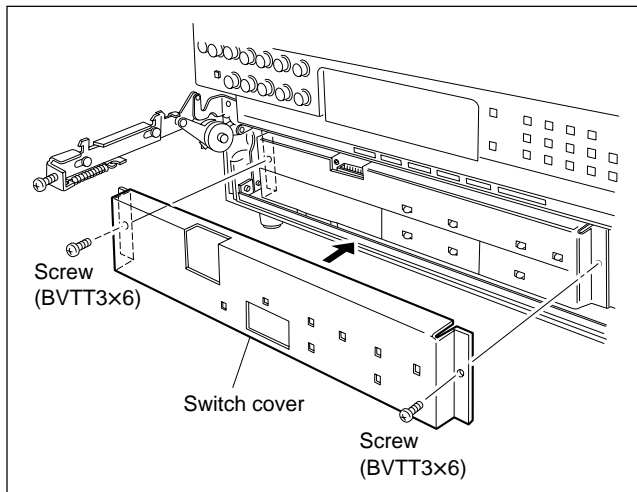


## 1-4. Installation of Sub Panel Cover and Switch Cover

1. Install the sub panel cover supplied with BKDW-515 to sub control panel.



2. Install the switch cover supplied with BKDW-515 to system set-up panel.



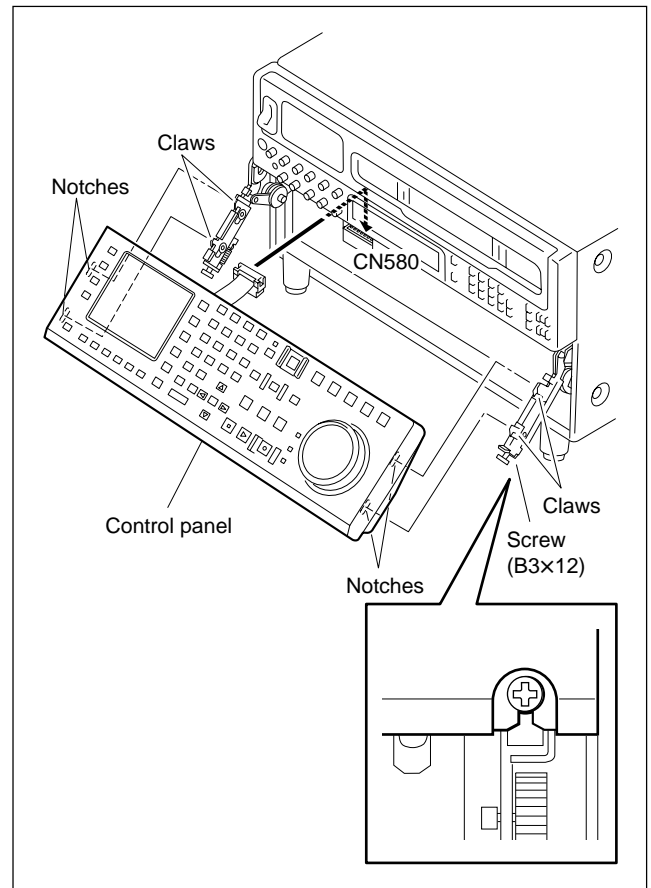
## 1-5. Installation of Control Panel

1. Fix the both arms at 45 degrees.
2. Connect the harness of the control panel to the connector (CN580) on the system set-up panel.
3. Set the notches of the control panel to the claws of the arms, and push the control panel until making a click sound.

### Note

Push the head of the two screws when the hook does not move smoothly and when the panel is difficult to attach. This facilitates the attaching.

4. Then tighten the two screws.

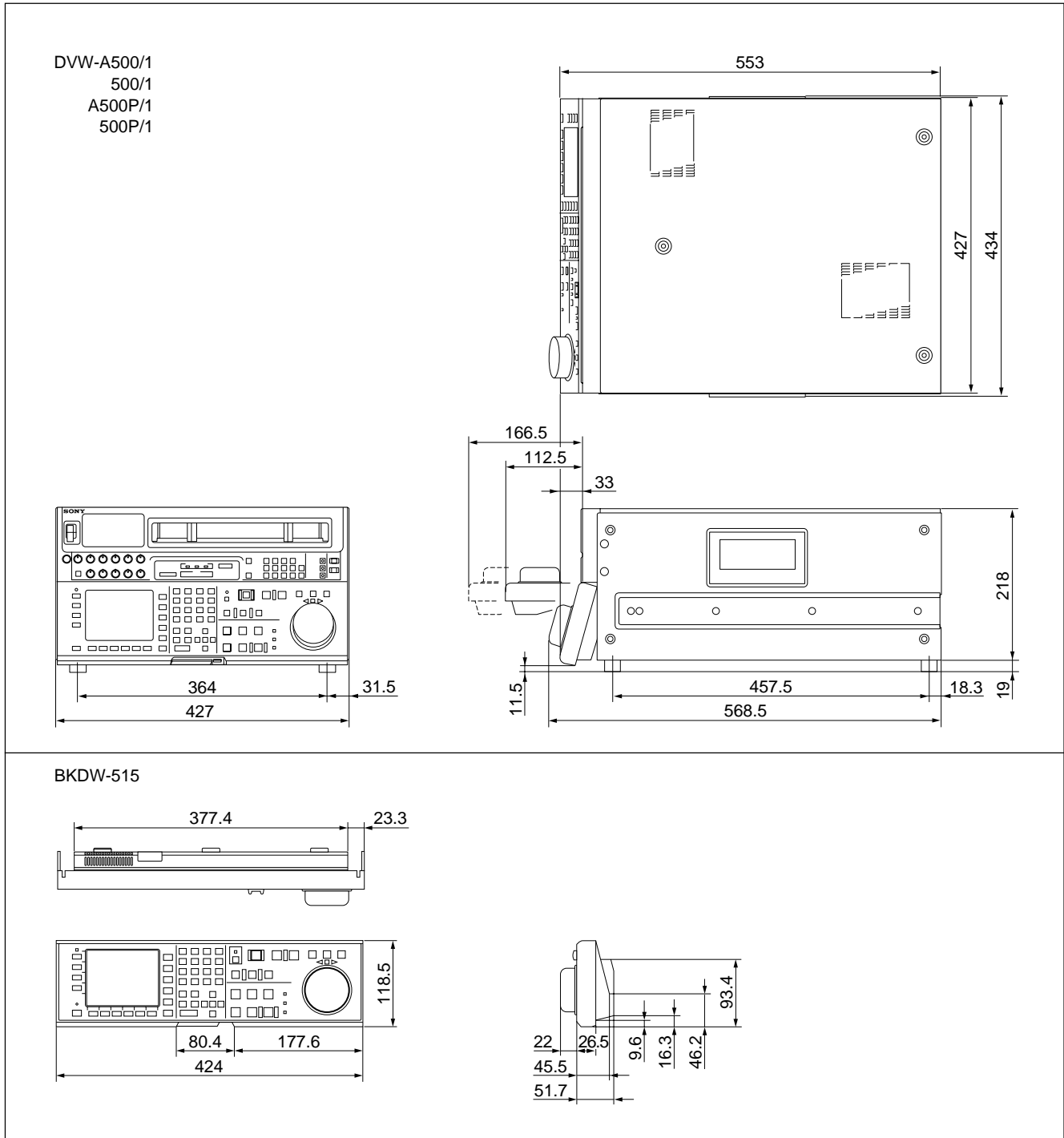


## 1-6. Installation Space

### Notes on Installation on Cart Machine

- When the digital Betacam recorder is to be mounted on the LMS, you can install not the control panel BKDW-515 but the BKDW-514 to the recorder.
- When the digital Betacam recorder is to be mounted on the FLEXICART, you can install both of BKDW-514/515 to the recorder.

As for how to mount the unit in a rack, refer to the Installation Manual supplied with the DVW series.



## 1-7. Full Reset of Control Panel

After installing the control panel in DVW-A500 and DVW-500 (DVW-A500P and DVW-500P for PAL), perform the full-reset operation of the control panel only once before it is used.

### Notes

- When the full-reset operation of the control panel is performed, all settings of the current setup data and VTR bank (1-8) stored on the control panel are reset to the factory-setting value. The registration data in a PF1/2 menu is then reset to the key layout at the factory corresponding to the VTR in which the control panel was installed. Cue point data is also cleared.
- During installation of the control panel, the set value of the current setup data and VTR bank can also be delivered directly. In this case, do not perform the full-reset operation. However, if the function and option of the VTR in which the control panel was installed differ before and after installation, the key in a PF1/2 menu that does not function by the VTR after installation is deleted automatically. For the key in a PF1/2 menu that has been deleted because it does not function by the VTR before installation, assign it manually by the VTR after installation as required.

1. Turn off the power switch.
2. Turn on the power switch while pressing and holding the [SFT], [RCL], and [SETUP] keys on the control panel. Maintain the state in which these keys were pressed.
3. Release the three keys after confirming that message "CONTROL PANEL FULL RESET" is displayed on the EL panel.

## 1-8. Extension of Control Panel

To extend the BKDW-515, prepare the following BKDW-510 (Control Panel Extension Kit), AC adapter and the connector box.

### Parts Required

- 10m Extension Cable (BKDW-510)
- AC Adapter  
Sony Part No.: 1-473-822-11
- Connector Box  
Sony Part No.: A-8277-618-A

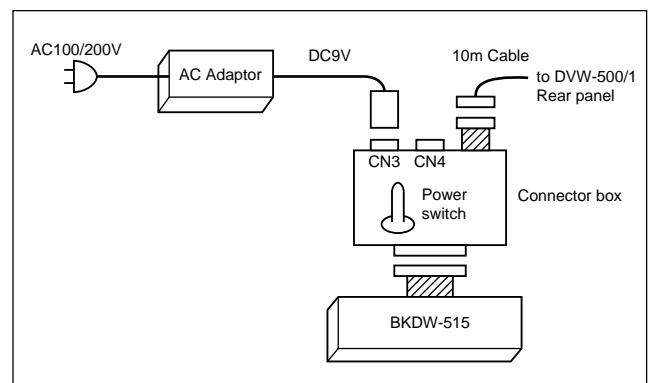
### Note

The control panel BKDW-515 can not be installed to the control panel case BKDW-511 (sold separately).

### Connection

- AC100V and AC200V acceptable for AC adapter
- There is power switch on the connector box.

1. Connect the connector of the BKDW-515 to connector of the connector box.
2. Connect the connector of an AC adapter to connector CN3 of the connector box.



## Notes when connecting the two BKDW-515

- Setup Setting Data

The Current Setup setting data inside of the BKDW-515 is transferred to the VTR just after the communication between the BKDW-515 and VTR are established. The ALARM LED on the front panel blinks during the data communication is incomplete.

When the two BKDW-515 are connected to a single VTR, last setting data out of two is written over the former data as the effective setting data.

If the two BKDW-515 with different data setting are connected to a single VTR, and if the power is turned to ON simultaneously, un-defined setting data will be sent to the VTR. Therefore, first, connect either BKDW-515 to a single VTR for storing the Current Setup setting data in bank memory of VTR or in the memory card beforehand. After that, connect the two BKDW-515 to a single VTR, turn on the power of both BKDW-515, then copy the memorized data into Current Setup. The Current Setup setting data among the two BKDW-515 and VTR will be automatically renewed to keep the contents of data identical.

- VTR Control

Control of VTR is set by an INT/EXT selection of the System Setup Panel and ITEM 117 "CONTROL PANEL SELECTION" of the setup menu.

## Notes when connection the BKDW-514 and BKDW-515 (Extender)

When connecting the BKDW-514 and BKDW-515 (Extender) to VTR, be sure to turn on the power of BKDW-515 first. If the power of BKDW-515 is in off, start up a menu system (SETUP MENU BANK 1/2/3/4: BANK 4 is effective from SYS-V3.01 and later) of DVW-500 series, therefore the contents set with BKDW-515 can not be used. If MENU lamps 1, 2, and 3 on the indicator section of VTR's upper control panel are off, the contents set with BKDW-515 can be used.

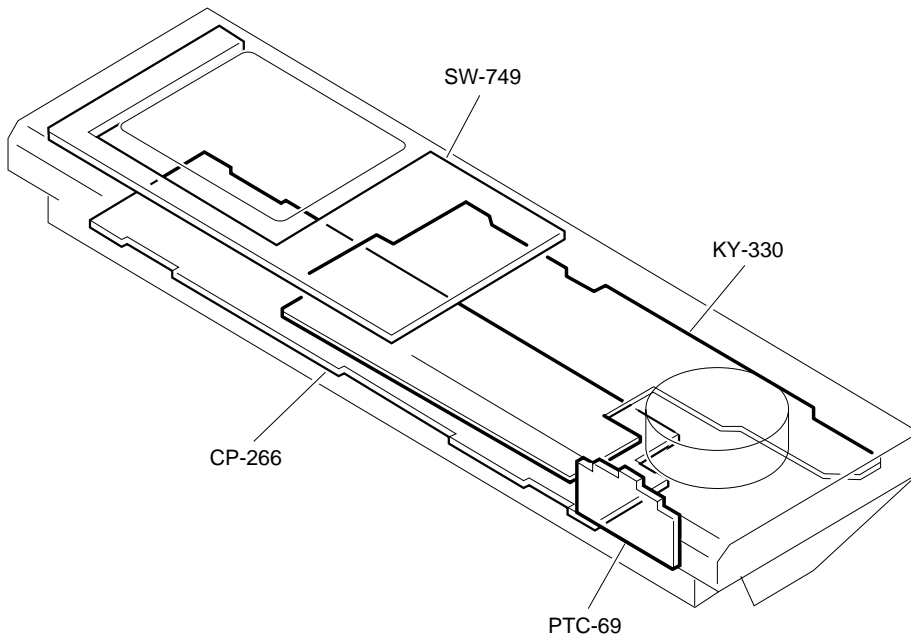
Pay attention when pressing the MENU button without pressing the SET button after renewing the Setup setting data with BKDW-514, because renewed data will be validated if both BKDW-514 and BKDW-515 have been connected regardless of SET button. However, renewed data will be invalidated if the only BKDW-514 has been connected.

## Section 2

### Service Information

#### 2-1. Location and Function of Printed Circuit Boards

Board Name	Circuit Function
CP-266	Panel Control CPU, EL Control, PIO, Memory Card I/F
KY-330	Editing Operation/Tape Transport Control Switches, Memory Card Connector
SW-749	Function Control Switches
PTC-69	JOG/Shuttle Dial Sensor



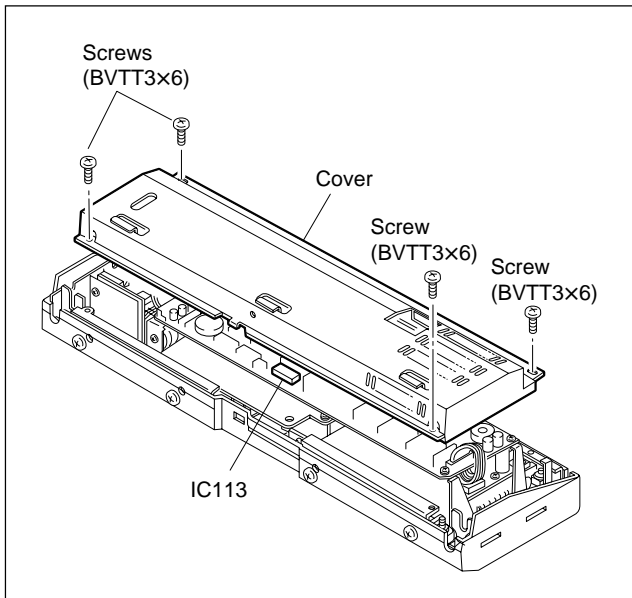
## 2-2. Replacing the Battery for Memory Backup

BT1 inserted into a socket in IC113 (memory for storing setup data and cue data) on the CP-266 board is a battery for memory backup.

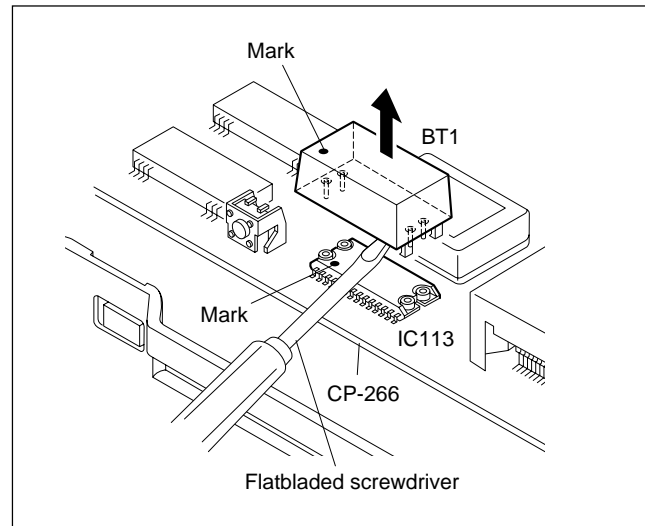
### Notes

- Replace a battery for memory backup every seven years.
- Store all the setup data (cue data if necessary) in a memory card before replacing the Battery for memory backup. (For more details on storage, refer to the Operation Manual.)

1. Turn off the power switch.
2. Disconnect the connector CN580 on the system setup panel and remove the control panel.
3. Remove the four screws, then remove the cover.



4. Insert the tip of a flatbladed screwdriver between IC113 and BT1 to remove BT1.



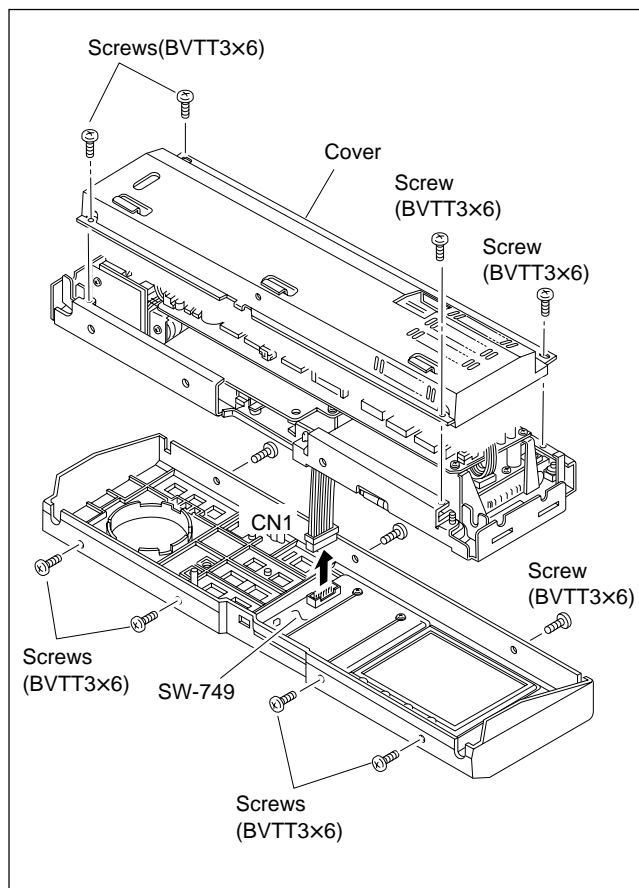
5. Align a new battery for memory backup with the 1-pin mark of IC113, then insert.
6. Assemble the control panel and install it in the unit.
7. Access the data in a memory card.

- BT1 : 1-767-156-11 M4T28-BR12SH1 (lithium battery)

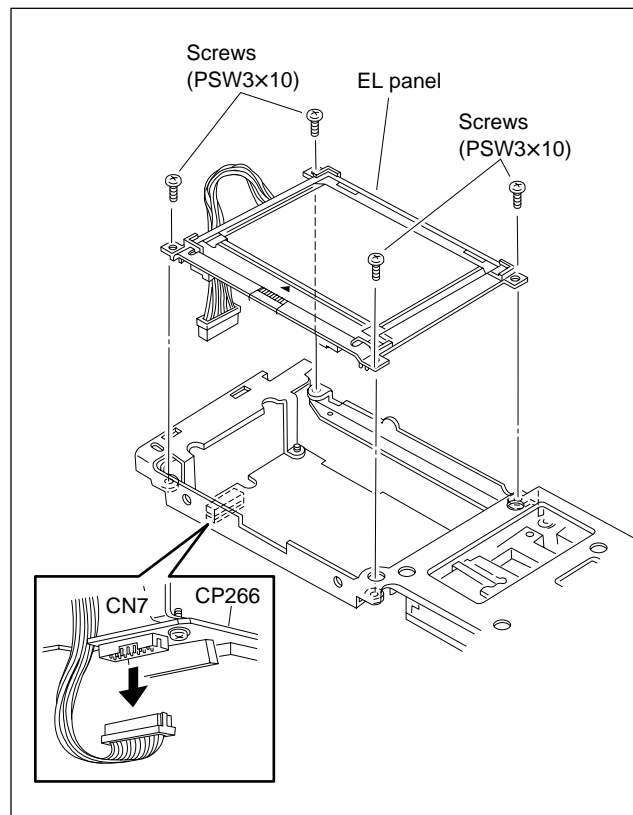


## 2-3. EL Panel Replacement

1. Turn off the power switch.
2. Disconnect CN580 on the system setup panel and remove the control panel.
3. Remove the four screws, then remove the cover.
4. Remove the seven screws and disconnect connector CN1 on the SW-749 board with the frame lifted from the key panel sub-ass'y.



5. Disconnect connector CN7 on the CP-266 board and remove the four screws, then remove the EL panel.



6. Confirm that no dust adheres on the panel and install in the reverse order of steps 1 to 5.

## **2-4. Error Message**

### **2-4-1. Operation when Checksum Error of Current Setup Data Occurs**

If the power switch is turned on when the current setup data on the control panel was destroyed for some trouble, message "CURRENT setup DATA ERROR" is displayed on the EL panel. The current setup data is automatically reset to the factory-setting value at the same time.

### **2-4-2. Correction when Checksum Error of VTR Bank Data Occurs**

If the power switch is turned on when the VTR bank data on the control panel was destroyed for some trouble, message "VTR bank CHECKSUM ERROR" is displayed on the EL panel. Confirm the type of the bank data to have been destroyed in a VTR BANK menu or MEMORY CARD menu and copy normal bank data. The title of the destroyed bank data is displayed as "DAMAGED."

### **2-4-3. Correction when Checksum Error of Memory Card Data Occurs**

If the memory card is inserted into the slot on the control panel when the data of a memory card was destroyed for some trouble, message "Data DAMAGED" is displayed on the EL panel. Confirm the destroyed bank data or cue set data and copy normal data. The title of the destroyed data is displayed as "DAMAGED" (for only WRITE PROTECT OFF in a memory card).

## Section 3 Setup Menu

This section describes the menu ITEM-F series used during adjustment. For the operation and ITEM-H00 to ITEM-900 series, refer to the Operation Manual.

### 3-1. ITEM-F Series

Display the ITEM-F series according to the procedure below.

1. Press the SETUP key to enter the setup menu.
2. Press the F6 (VTR SETUP) key to enter the VTR SETUP menu.
3. Press the cursor key while pressing the PLAY button.

#### Item selection

Press the cursor key while pressing the PLAY button and adjust the cursor on the scroll screen to the arbitrary item.

#### Data change

Press the F7 (CHANGE DATA) key to open the set change screen and select the data.

#### Data setting

Press the F10 (SAVE/EXIT) key.

**Note**

These ITEM-F series are exclusively used for adjustment. After adjustment is completed, return data to the factory setting.

ITEM		DATA		Description
No.	ITEM	No.	DATA	
F01	AUDIO NR IN SP MODE	0 1	on switch select	<p>This item is prepared exclusively for audio adjustment. After adjustment is completed, return to the factory setting '0 (on)'. Select the type of control to turn Dolby noise reduction ON in the metal tape playback.</p> <p>0: Dolby NR is normally ON when mental tape is used. 1: Dolby NR is switched ON and OFF depending upon the DOLBY NR switch setting on the sub control panel.</p> <p>(NOTE) When oxide tape is used, it is controlled depending upon the DOLBY NR switch setting on the sub control panel, regardless of the setting of this menu item.</p>
F02	EMERGENCY TAPE PROTECTION	0 1	enable disable	<p>This item is prepared exclusively for servo and mechanical adjustments. After adjustment is completed, return to the factory setting '0 (enable)'. Select whether the emergency tape protection operation is enabled or not when VTR detects error in tape transport mechanism.</p> <p>0: Tape protection operation is enabled. 1: Tape protection operation is disabled.</p>
F07	CONFI SELECT IN PB MODE	0 1	disable enable	<p>Selects the playback by the confidence head enable or disable in the normal PB mode of the digital mode.</p> <p>0: Disables the playback by the confidence head in the normal PB mode. 1: Enables the playback by the confidence head when the CONFI mode is entered (the CONFI lamp on the lower control panel lights) in the normal PB mode.</p>

ITEM		DATA		Description
No.	ITEM	No.	DATA	
F13	TRACKING CONTROL VIA SEARCH DIAL	<input type="text" value="0"/> 1	<input type="text" value="off"/> on	<p>Select whether the tracking control operation with search dial is enabled or not during DT head playback.</p> <p>This item is prepared exclusively for DT adjustment and tracking adjustments. After adjustment is completed, return to the factory setting '0 (off)'.</p> <p>0: Tracking control function is disabled during DT head playback. 1: Tracking control function is enabled by rotating the search dial during PLAY mode.</p>
F15	ANALOG TAPE LTC INSERT	<input type="text" value="0"/> 1	<input type="text" value="disable"/> enable	<p>Enables LTC to be inserted in an analog tape (Betacam SP)</p> <p>0: Inhibits insertion of LTC in an analog tape (factory setting) 1: Enables LTC to be inserted in an analog tape</p> <p>Note: When set to "enable", TC insert operation is executed even though the REC inhibit tab of an analog tape used is set to REC INHIBIT.</p>
F16	DEVICE TYPE MODIFY:0H	<input type="text" value="0000"/> 0001   FFFF	<input type="text" value="0"/> 1   FFFF	<p>Determines the response data for the 9 pin remote command DEVICE TYPE REQUEST (00h, 11h).</p> <p>0000: Returns the original device type data of the DVW. Except 0000: Returns the values numeric as it is.</p> <p>The higher-order two digits are DATA-1. The lower-order two digits are DATA-2.</p> <p>Note: The whole operations of the VTR including TTP is not influenced at all even if this item is set to "0000" or "except 0000". For except DATA: 0000 (factory setting), the control from 9 pin is not guaranteed.</p>

ITEM		DATA		Description
No.	ITEM	No.	DATA	
F20	CONFI LED STATUS  • CP ROM version 1.10 and higher	<input type="checkbox"/> 1	<input type="checkbox"/> status	The condition to light CONFI LED on the control panel is selected. 0: CONFI LED lights on when CONFI switch is set to ON. 1: CONFI LED lights on when playing back with CONFI head. Note that CONFI LED indicates the switch status only during the CONFI switch is pressed.
F21	PROCESS CONT VR LOCAL ENABLE  • CP ROM version 1.10 and higher	<input type="checkbox"/> 1	<input type="checkbox"/> on	In case that LOCAL DISABLE command is effective via the 9pin REMOTE, or "all disable" is selected in Setup 006: LOCAL FUNCTION ENABLE, the availability of PROCESS CONT VR on the subcontrol panel is selected. 0: Process control is invalid. 1: Process control is active.
F22	AUDIO ONLY REC  • CP ROM version 1.10 and higher	<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> momentary toggle	The unit directly goes into digital audio edit mode from playback mode by AUDIO EDIT PRESET key. 0: Does not go into Edit mode by AUDIO EDIT PRESET key. 1: Audio editing is available while AUDIO EDIT PRESET key is pressed. 2: Audio editing is available when AUDIO EDIT PRESET key is pressed once. When pressing once more, it returns to PLAY mode.
F23	A/V INPUT SELECT INHIBIT  • CP ROM version 1.10 and higher	<input type="checkbox"/> 1	<input type="checkbox"/> on	Audio/Video Input Select switch can be invalid during REC mode. 0: Audio/Video Input Select switch is active in REC mode. 1: Audio/Video Input Select switch is invalid in REC mode. If Item-21 is set to ON, Audio/Video Input Select switch is active even if "1" (on) is selected in this menu.
F24	MAXIMUM (PAL) DIGITAL TAPE SPEED • CP ROM version 1.10 and higher	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> x50 <input type="checkbox"/> x42 <input type="checkbox"/> x42/x24 <input type="checkbox"/> x24	Maximum speed of digital tape is limited in search mode. 0: 50 times speed in FF, REW, and SHUTTLE mode 1: 42 times speed in FF, REW, and SHUTTLE mode 2: 42 times speed in FF and REW mode, and 24 times speed in SHUTTLE mode 3: 24 times speed in FF, REW, and SHUTTLE mode
F24	MAXIMUM (NTSC) DIGITAL TAPE SPEED • CP ROM version 1.10 and higher	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> x50 <input type="checkbox"/> x35 <input type="checkbox"/> x35/x24 <input type="checkbox"/> x24	Maximum speed of digital tape is limited in search mode. 0: 50 times speed in FF, REW, and SHUTTLE mode 1: 35 times speed in FF, REW, and SHUTTLE mode 2: 35 times speed in FF and REW mode, and 24 times speed in SHUTTLE mode 3: 24 times speed in FF, REW, and SHUTTLE mode
F25	SERVO/AV REF SEL IN PRE-READ MODE • CP ROM version 1.10 and higher	<input type="checkbox"/> 1	<input type="checkbox"/> on	Servo Reference in PREREAD mode is specified. 0: It works according to the setting of Item-309. 1: EXT REF VIDEO is selected.
F26	DIGITAL AUDIO MUTE IN SEARCH MODE • CP ROM version 1.10 and higher	<input type="checkbox"/> 1	<input type="checkbox"/> on	The condition for MUTE of Digital Audio when playing back in Search mode is selected. 0: It works according to the setting of Item-802. 1: Mute is applicable in the modes except PLAY and EE.



## Section 4

# Maintenance Menu

The self-diagnosis and adjustment of the VTR and control panel can be performed in this maintenance menu.

### To enter the maintenance mode

Press the MAINTENANCE button while pressing the SFT key.

### To terminate the maintenance mode

Press the HOME key.

The following descriptions are key operations in the state when the unit is put into the maintenance mode.

## 4-1. ROM Version

The versions of all ROMs are displayed. Available options are displayed.

### To display the version of ROMs

Press the F1 (ROM VER) key.

For more details of the ROM version display, refer to Part 1, "Maintenance Mode" of the DVW-A500 Series Maintenance Manual.

#### Note

In Part 1, "Maintenance Mode" of the DVW-A500 Series Maintenance Manual, change the following during use.  
[KY] ⇒ [CP]

## 4-2. VTR Maintenance Menu

The self-diagnosis and adjustment of the VTR can be performed in this VTR maintenance menu.

When starting the VTR maintenance menu directly from the control panel, be sure to set the switch S100-7 on the SS board to ON.

### To enter the VTR maintenance menu

Press the F6 (VTR MAINT) key.

### To terminate the VTR maintenance menu

Press the F10 (EXIT) key.

For more details of the VTR maintenance menu, refer to Part 1, "Maintenance Mode" of the DVW-A500 Series Maintenance Manual.

#### Note

In Part 1, "Maintenance Mode" of the DVW-A500 Series Maintenance Manual, change the following during use.  
[SET button] ⇒ [F8 (SELECT) key]  
[MENU button] ⇒ [F10 (EXIT) key]

## 4-3. Panel Maintenance Menu

The self-diagnosis of the control panel can be performed in this panel maintenance menu.

### To enter the panel maintenance menu

Press the F7 (PANEL MAINT) key.

### To terminate the panel maintenance menu

Press the F10 (EXIT) key.

Key	Display	Description
F3	CARD I/F	Memory card interface test
F5	BUZZER	Buzzer test
F6	EL	EL panel test
F7	KEY	Rubber key, switch, and LED tests
F8	DIAL	Dial test
F10	EXIT	Returns to the maintenance menu.

### 4-3-1. Card Interface Test

A storage/access test for the memory card is executed.

#### Note

Do not use the memory card in which necessary data is stored. The data is erased.

A card can be extracted or inserted even if the power is turned on.

1. Insert a memory card.
2. Press the F3 key.  
A warning message is displayed at that time.
3. Press the F3 key while pressing the SFT key.  
A storage/access test is then executed.
4. If the test is normal, message "CARD I/F test PASSED." is displayed. If message "CARD I/F test FAILED." is displayed, the card interface or card is defective.

### 4-3-2. Buzzer Test

A buzzer test is executed. The setting changes to high, low, then high every time the F5 key is pressed. The sound in the displayed level is then generated.



### 4-3-3. EL Panel Test

An EL panel test is executed.

The screen displayed on the EL panel appears while the F6 key is pressed.

The displays changes every time the F6 key is pressed.

ALL ON : All light.

ALL OFF : All go off.

V BAR : Displays the test pattern in a vertical line.

H BAR : Displays the test pattern in a horizontal line.

### 4-3-4. Key Test

Rubber key, illumination switch, illumination switch LED, and other LED tests are executed.

1. Press the F7 key to enter the menu.
2. Press each key sequentially according to the display on the EL panel.
3. Confirm that the buzzer sounds when the key is pressed.  
Confirm that the switch lights and the buzzer sounds when the illumination key is pressed.
4. Message "Key TEST passed." is lastly displayed on the EL panel. The test is completed at that time.  
If abnormality occurs in the key during operation, no sound is generated when the key was pressed. The test can be executed no longer.  
To terminate the test halfway, press the SHIFT and CLR keys simultaneously.

### 4-3-5. Dial Test

Interface test between search dial and dial interface is executed.

1. Press the F8 key to enter the menu.
2. Confirm the display on the EL panel as follows:

Dial data : The numeral changes when the dial is turned. "2Ah" is displayed when the dial is fully turned to right and left. "0h" is displayed when the dial is in the center position.

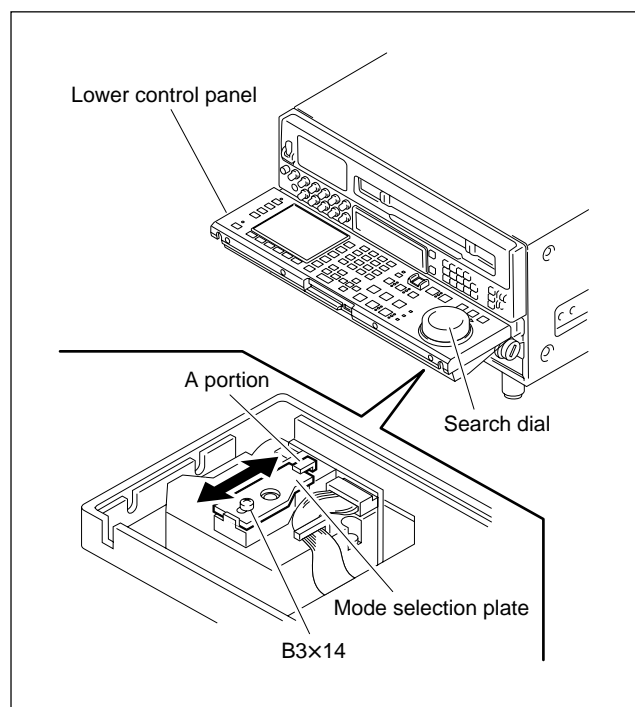
Dial direction : The arrow changes when the dial is turned. "⇌" is displayed when the dial is on the right of the center click position. "⇐" is displayed when the dial is on the left of the center click position.

#### JOG/SHUTTLE

sensor : JOG is displayed when the dial is pressed. SHUTTLE is displayed when the dial is released.

Dial mode sensor

: Fix the panel to the 90-degree position, loosen the screw shown in the figure at the back of the dial, and move the mode selection plate. The current display then changes to BETACAM/D-2.



## 4-4. Error Logger

After the power switch is turned on, the error logger function always monitors the unit to detect the errors. When any one of the conditions mentioned as follows, the corresponding message and time code are stored. This menu can be read and checked the contents of these data items in list form.

- **CH COND RED (Channel Condition Red)**  
When the red CANNEL CONDITION lamp on the upper control panel lights
- **REF ALARM (Reference Alarm)**  
When a reference signal is missing (no signal is input to the INPUT REF VIDEO connector) or a REF video input signal is not synchronized with the input video signal
- **TAPE EJECT**  
When the cassette tape is ejected  
(If no error is occurred from when the cassette tape was ejected last time until it is ejected this time, the preceding time code is overwritten by this time code.)
- **ERROR-xx**  
When a trouble is detected  
(The corresponding error code is recorded.)

### To enter the error logger menu

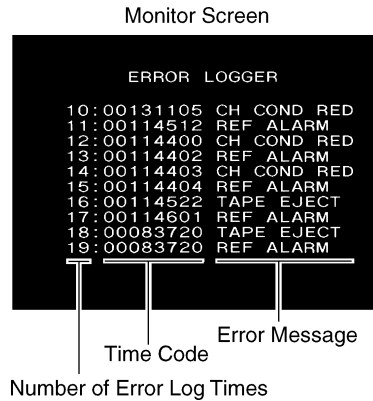
Press the F9 (ERROR LOG) key.

### To terminate the error logger menu

Press the F10 (EXIT) key.

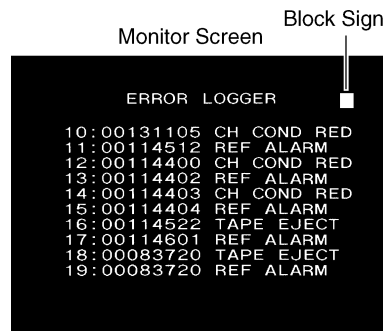
## Error Logger Screen

The error logger data is superimposed on the monitor screen (output to the VIDEO OUTPUT COMPOSITE 3 connector or SERIAL V/A OUTPUT 4 connector). A maximum of 99 error data items can be stored. To display the error data items that are not displayed on the screen, turn the search dial to scroll them. When 99 data items are exceeded, the old data is erased and the data sequence is advanced.



## Tape Operation during Error Logger Screen Display

1. The state of the error logger screen displayed, press F9 (VTR HOLD) key to VTR HOLD OFF.
2. At this time, to display a block sign on the monitor screen. This enables the tape operation.
3. To erase the block sign, press the F9 (VTR HOLD) key and turn on the VTR HOLD.



## Error Logger Data Erasure

To erase the error logger data, press the F5 (CLEAR LOG) key in the error logger screen display.





## Section 6

### Spare Parts

#### 6-1. Notes on Repair Parts

##### 1. Safety Related Components Warning

Components marked  $\triangle$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

##### 2. Standardization of Parts

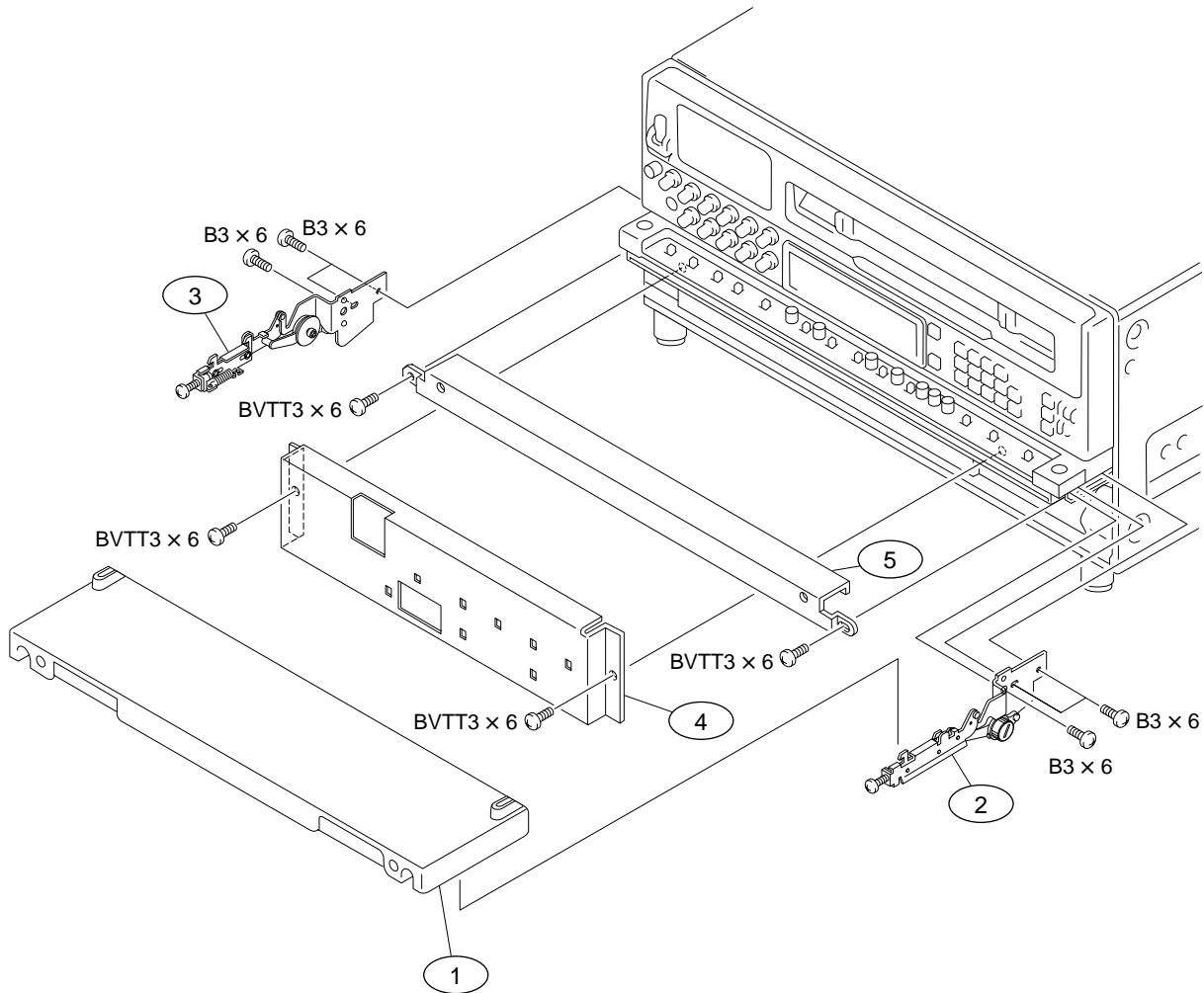
Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement. Parts list has the present standardized repair parts.

##### 3. Stock of Parts

Parts marked with “o” at SP(Supply Code) column of the spare parts list may be not stocked. Therefore, the delivery date will be delayed.

##### 4. Parts exclusive to the DVW-A500/1, 500/1, A500P/1 and 500P/1 are listed in this section. Refer to the maintenance manual for some parts that are not listed.

## 6-2. Spare Parts List for VTR



Ref. No.  
or Q'ty Part No. SP Description

1	A-8278-252-A	o	PANEL ASSY, DUMMY
2	X-3678-375-3	s	SLIDER AD(R)ASSY
3	X-3678-376-3	s	SLIDER AD(L)ASSY
4	3-689-875-01	o	COVER,SWC
5	3-689-879-02	o	COVER,SUB PANEL

### 6-3. Packing Materials and Supplied Accessories List for VTR

#### For DVW-A500/1, 500/1 (UC)

Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 1-551-812-11	s CORD, POWER 3P
1pc	1-772-749-11	s CARD, MEMORY (SRAM 64K)
1pc	2-990-242-01	o HOLDER (B), PLUG
1pc	3-181-533-02	o CUSHION (LOWER)
1pc	3-181-534-02	o CUSHION (UPPER)
1pc	3-181-535-01	o SPACER (A)
1pc	3-181-536-01	o SPACER (B)
2pcs	3-189-078-01	o CUSHION
1pc	3-189-456-01	o PLATE, TOP
1pc	3-189-457-01	o SPACER (C)
1pc	3-189-458-01	o INDIVIDUAL CARTON (for DVW-A500/1)
	3-189-459-01	o INDIVIDUAL CARTON (for DVW-500/1)
1pc	3-701-634-00	o BAG, POLYETHYLENE (for S/N 50001 thru. 50390:DVW-A500/1(UC)) (for S/N 50001 thru. 50080:DVW-500/1(UC))
4pcs	7-682-965-01	s SCREW +PSW 4x16

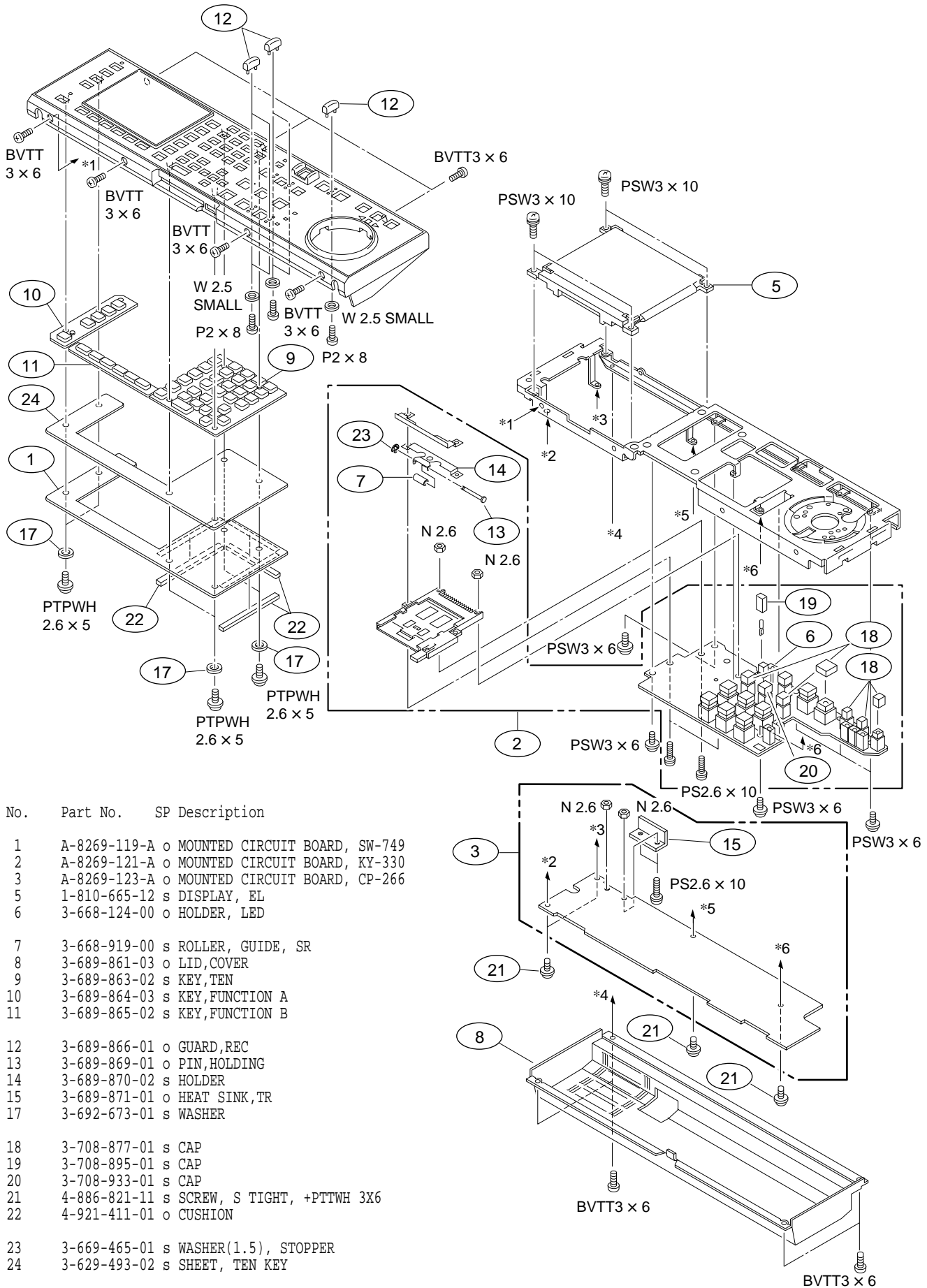
#### For DVW-A500P/1, 500P/1 (UC)

Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 1-551-812-11	s CORD, POWER 3P
1pc	1-772-749-11	s CARD, MEMORY (SRAM 64K)
1pc	2-990-242-01	o HOLDER (B), PLUG
1pc	3-181-533-02	o CUSHION (LOWER)
1pc	3-181-534-02	o CUSHION (UPPER)
1pc	3-181-535-01	o SPACER (A)
1pc	3-181-536-01	o SPACER (B)
2pcs	3-189-078-01	o CUSHION
1pc	3-189-456-01	o PLATE, TOP
1pc	3-189-457-01	o SPACER (C)
1pc	3-189-460-01	o INDIVIDUAL CARTON (for DVW-A500P/1)
	3-189-461-01	o INDIVIDUAL CARTON (for DVW-500P/1)
1pc	3-701-634-00	o BAG, POLYETHYLENE
4pcs	7-682-965-01	s SCREW +PSW 4x16

#### For DVW-A500P/1, 500P/1 (CE)

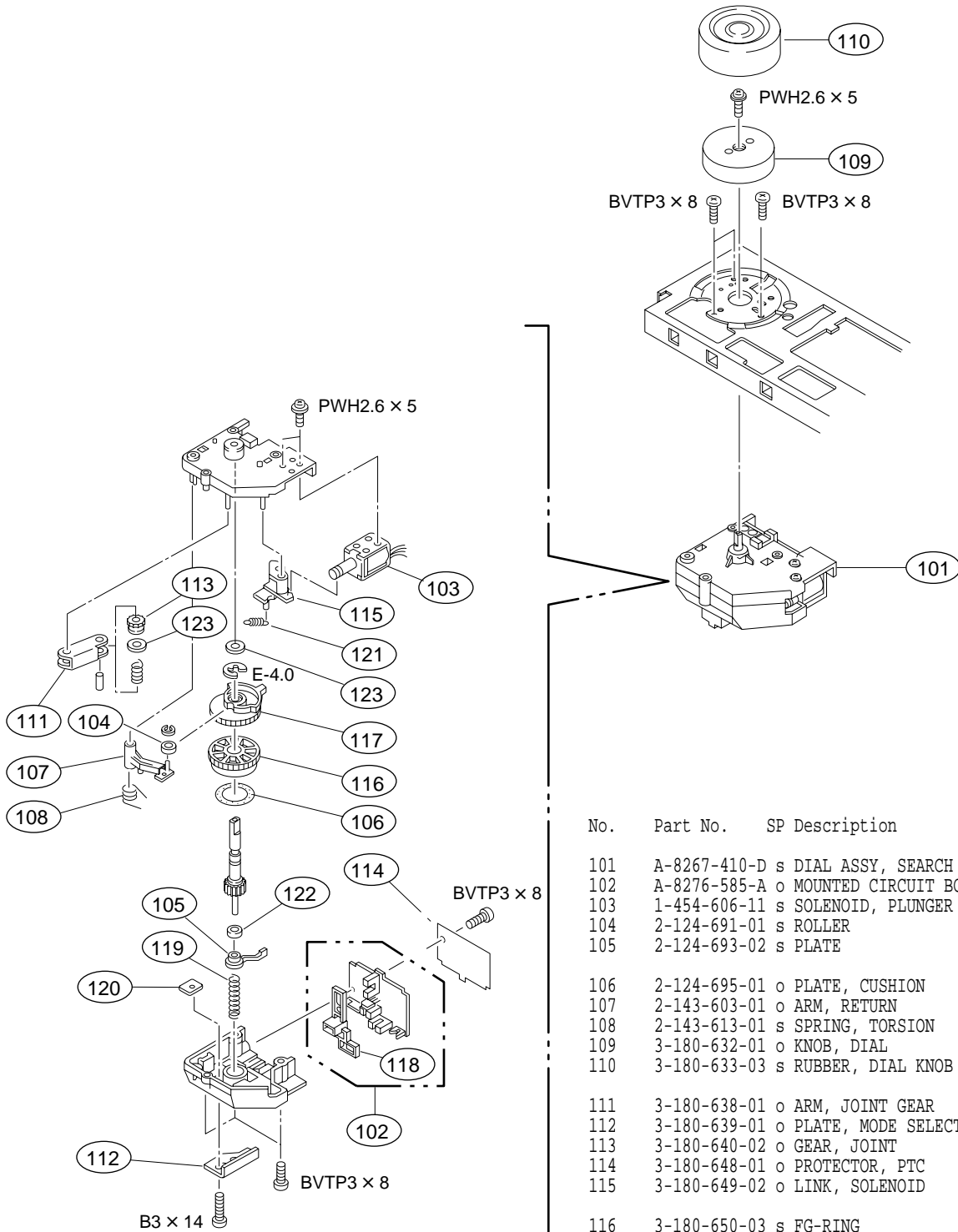
Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 1-782-929-11	s CORD, POWER SUPPLY (BS 3P)
1pc	1-759-164-11	s CARD, MEMORY (SRAM 64K BYTE)
1pc	3-613-640-01	o HOLDER (C), PLUG
1pc	3-181-533-02	o CUSHION (LOWER)
1pc	3-181-534-02	o CUSHION (UPPER)
1pc	3-181-535-01	o SPACER (A)
1pc	3-181-536-01	o SPACER (B)
2pcs	3-189-078-01	o CUSHION
1pc	3-189-456-01	o PLATE, TOP
1pc	3-189-457-01	o SPACER (C)
1pc	3-189-460-01	o INDIVIDUAL CARTON (for DVW-A500P/1)
	3-189-461-01	o INDIVIDUAL CARTON (for DVW-500P/1)
1pc	3-701-634-00	o BAG, POLYETHYLENE (for S/N 50001 thru. 50110:DVW-A500/1(CE)) (for S/N 50001 thru. 50080:DVW-500/1(CE))
4pcs	7-682-965-01	s SCREW +PSW 4x16

### 6-4. Spare Parts List for Control Panel



No.	Part No.	SP Description
1	A-8269-119-A	o MOUNTED CIRCUIT BOARD, SW-749
2	A-8269-121-A	o MOUNTED CIRCUIT BOARD, KY-330
3	A-8269-123-A	o MOUNTED CIRCUIT BOARD, CP-266
5	1-810-665-12	s DISPLAY, EL
6	3-668-124-00	o HOLDER, LED
7	3-668-919-00	s ROLLER, GUIDE, SR
8	3-689-861-03	o LID, COVER
9	3-689-863-02	s KEY, TEN
10	3-689-864-03	s KEY, FUNCTION A
11	3-689-865-02	s KEY, FUNCTION B
12	3-689-866-01	o GUARD, REC
13	3-689-869-01	o PIN, HOLDING
14	3-689-870-02	s HOLDER
15	3-689-871-01	o HEAT SINK, TR
17	3-692-673-01	s WASHER
18	3-708-877-01	s CAP
19	3-708-895-01	s CAP
20	3-708-933-01	s CAP
21	4-886-821-11	s SCREW, S TIGHT, +PTWH 3X6
22	4-921-411-01	o CUSHION
23	3-669-465-01	s WASHER(1.5), STOPPER
24	3-629-493-02	s SHEET, TEN KEY





No.	Part No.	SP Description
101	A-8267-410-D	s DIAL ASSY, SEARCH
102	A-8276-585-A	o MOUNTED CIRCUIT BOARD, PTC-69
103	1-454-606-11	s SOLENOID, PLUNGER
104	2-124-691-01	s ROLLER
105	2-124-693-02	s PLATE
106	2-124-695-01	o PLATE, CUSHION
107	2-143-603-01	o ARM, RETURN
108	2-143-613-01	s SPRING, TORSION
109	3-180-632-01	o KNOB, DIAL
110	3-180-633-03	s RUBBER, DIAL KNOB
111	3-180-638-01	o ARM, JOINT GEAR
112	3-180-639-01	o PLATE, MODE SELECTION
113	3-180-640-02	o GEAR, JOINT
114	3-180-648-01	o PROTECTOR, PTC
115	3-180-649-02	o LINK, SOLENOID
116	3-180-650-03	s FG-RING
117	3-180-651-04	o CAM, SD
118	3-180-859-01	o HOLDER, SENSOR
119	3-181-956-01	o SPRING, COMPRESSION
120	3-618-225-03	s NUT, PLATE
121	3-645-189-11	s SPRING, TENSION
122	3-701-441-21	s WASHER, POLY 4mm DIA., 0.50T
123	3-701-443-21	s WASHER, POLY 5mm DIA., 0.50T

## 6-5. Packing Materials and Supplied Accessories List for BKDW-515

Ref. No. or Q'ty	Part No.	SP Description
1pc	X-3678-375-3	s SLIDER AD(R)ASSY
1pc	X-3678-376-3	s SLIDER AD(L)ASSY
1pc	1-759-164-11	s CARD, MEMORY (SRAM 64K BYTE)
1pc	3-189-075-01	o SPACER (B)
1pc	3-189-076-01	o BOX, ACCESSORY
1pc	3-189-077-01	o SPACER (A)
2pcs	3-189-078-01	o CUSHION
1pc	3-189-079-01	o INDIVIDUAL CARTON
1pc	3-689-875-01	o COVER,SWC
1pc	3-701-616-01	o BAG, POLYETHYLENE
2pcs	3-701-629-01	o BAG, POLYETHYLENE
6pcs	7-682-547-09	s SCREW +B 3X6
4pcs	7-685-871-09	s SCREW +BVTT 3x6 (S)

このマニュアルに記載されている事柄の著作権は当社にあり、説明内容は機器購入者の使用を目的としています。

従って、当社の許可なしに無断で複製したり、説明内容(操作、保守等)と異なる目的で本マニュアルを使用することを禁止します。

The material contained in this manual consists of information that is the property of Sony Corporation and is intended solely for use by the purchasers of the equipment described in this manual.

Sony Corporation expressly prohibits the duplication of any portion of this manual or the use thereof for any purpose other than the operation or maintenance of the equipment described in this manual without the express written permission of Sony Corporation.

Le matériel contenu dans ce manuel consiste en informations qui sont la propriété de Sony Corporation et sont destinées exclusivement à l'usage des acquéreurs de l'équipement décrit dans ce manuel.

Sony Corporation interdit formellement la copie de quelque partie que ce soit de ce manuel ou son emploi pour tout autre but que des opérations ou entretiens de l'équipement à moins d'une permission écrite de Sony Corporation.

Das in dieser Anleitung enthaltene Material besteht aus Informationen, die Eigentum der Sony Corporation sind, und ausschließlich zum Gebrauch durch den Käufer der in dieser Anleitung beschriebenen Ausrüstung bestimmt sind.

Die Sony Corporation untersagt ausdrücklich die Vervielfältigung jeglicher Teile dieser Anleitung oder den Gebrauch derselben für irgendeinen anderen Zweck als die Bedienung oder Wartung der in dieser Anleitung beschriebenen Ausrüstung ohne ausdrückliche schriftliche Erlaubnis der Sony Corporation.

DVW-A500/1 (UC)  
DVW-500/1 (UC)  
DVW-A500P/1 (CE)  
DVW-500P/1 (CE)  
BKDW-515 (WW) E  
3-188-821-04 (2)

**Sony Corporation**  
B&P Company

Printed in Japan  
2003. 11 08  
©1995