

# ***AIT Autoloader***

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## **Operating Instructions**

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

**STORSTATION**

**LIB-D81**

## WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.  
To avoid electrical shock, do not open the cabinet.  
Refer servicing to qualified personnel only.

## Caution

The mains plug on this equipment must be used to disconnect mains power.  
Please ensure that the socket outlet is installed near the equipment and shall be easily accessible.

## NOTICE

Use the power cord set approved by the appropriate testing organization for the specific countries where this unit is to be used.

## Achtung

Zur Trennung vom Netz ist der Netzstecker aus der Steckdose zu ziehen, welche sich in der Nähe des Gerätes befinden muß und leicht zugänglich sein soll.

## Hinweis

Der höchste Schalldruckpegel beträgt 70 dB(A) oder weniger gemäß ISO7779.

### Ratings

Voltage

AC 100 V - 240 V

Current

0.7 A - 0.35 A

Frequency

50 / 60 Hz

Max. Ambient Temperature

40°C

A certified power supply cord has to be used with this equipment.

The relevant national installation and/or equipment regulations shall be considered.

A certified power supply cord not lighter than ordinary polyvinyl chloride flexible cord according to IEC 60227 (designation H05VV-F 3G 0.75 mm<sup>2</sup> or H05VVH2-F2 3G 0.75 mm<sup>2</sup>) shall be used. Alternative a flexible cord be of synthetic rubber according to IEC 60245 (designation H05RR-F 3G 0.75 mm<sup>2</sup>) shall be used.

Zum Netzanschluss dieses Gerätes ist eine geprüfte Leitung zu verwenden.

Es sind die zutreffenden nationalen Errichtungs- und/oder Gerätebestimmungen zu beachten.

Es ist eine geprüfte flexible PVC-ummantelte Leitung entsprechend IEC 60227 (H05VV-F 3G 0.75 mm<sup>2</sup> oder H05VVH2-F 3G 0.75 mm<sup>2</sup>) zu verwenden. Andernfalls ist eine flexible Leitung aus synthetischem Gummi entsprechend IEC 60245 (Bauartkurzzeichen H05RR-F 3G 0.75 mm<sup>2</sup>) zu verwenden.

## INFORMATION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note: 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 experience radio/TV technician for help.

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

If you have any questions about this product, please access Sony Support Center written in the warranty card.

Declaration of Conformity	
Trade Name:	SONY
Model No.:	LIB-D81
Responsible Party:	Sony Electronics Inc.
Address:	680 Kinderkamack Road Oradell, NJ 07649-1601
Telephone No.:	201-930-6972
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.	

Ratings are indicated on the rear, while regulatory agency marks are separately affixed on the bottom.

이 기기는 가정용으로 전자파 적합등록을 한 기기로서  
주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

기기의 명칭 (모델명) : LIB-D81  
인증받은자의 상호 : SONY KOREA CORP.  
제조년월일 : 별도표시  
제조사/제조국가 SONY CORPORATION/JAPAN

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## Overview

The LIB-D81 is a desktop AIT (Advanced Intelligent Tape) automatic loader (hereafter, “AIT autoloader”) with a built-in AIT drive. Up to 8 cartridges can be inserted in the AIT autoloader. The unit can also be connected to and used with a workstation or server.

### **Up to 8 cartridges can be used**

Up to 8 AIT cartridges can be used. Cartridges can be replaced from the front panel. The following types of cartridges can be used in this AIT autoloader:

- AIT-3 cartridge: records up to 1.6 terabytes of data
- AIT-2 cartridge: records up to 0.8 terabytes of data
- AIT-1 cartridge: records up to 0.56 terabytes of data

### **Notes**

- Cartridges that can be used vary according to the type of built-in drive.
- The memory capacity mentioned above assumes a data compression ratio of 2:1.

### **Compact**

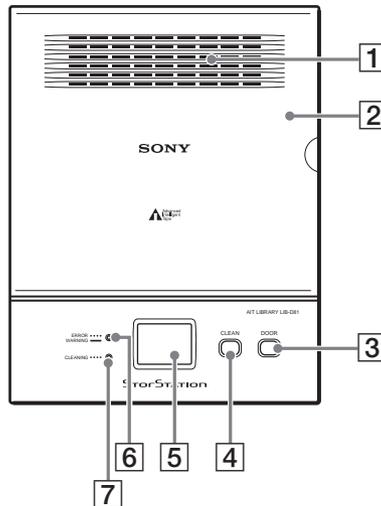
Because of its compact size (170 × 350 × 224 mm) and light weight (approx. 7 kg), the LIB-D81 is the perfect desktop AIT Autoloader.

### **Wide LVD SCSI compliant**

The AIT autoloader is Wide LVD SCSI compliant.

# Product Features and Functions

## Front



### **1 Ventilation Holes**

Be careful not to block the ventilation holes. If the ventilation holes are blocked, the AIT autoloader may overheat, resulting in damage.

### **2 Front Door**

Used in inserting and ejecting AIT cartridges. Press the DOOR button to unlock and open the door. The AIT autoloader cannot operate when the door is open, therefore when inserting or replacing a cartridge, be that the door is securely closed. When the door is closed it locks automatically.

### **3 DOOR Button**

Press to open the front door. Do not press this button while the AIT autoloader is operating.

### **4 CLEAN Button**

Insert the cleaning cartridge in slot CL/8 and press for at least three seconds to clean the AIT drive.

### **5 Message Display**

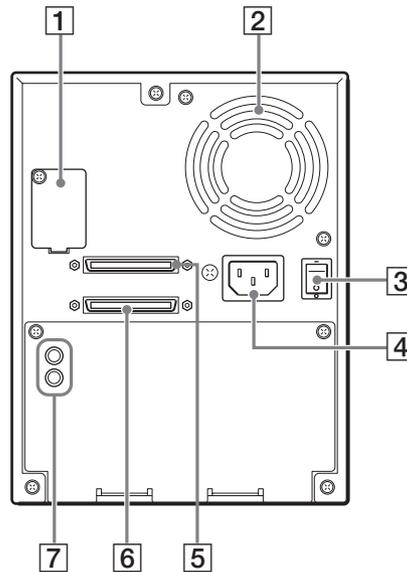
The message display displays how many cartridges are in the AIT autoloader. When in normal standby state, it displays the status of the AIT autoloader.

### **6 ERROR/WARNING LED**

Lights or flashes orange when a specific operation is necessary or an error occurs. When it lights it indicates a warning, whereas when it flashes it indicates an error. When this happens, a 2-character code appears on the message display. For details about these codes, see “Error Code List” (page 47), “Other Messages” (page 52), or the code reference table.

### **7 CLEANING LED**

Flashes green when the AIT drive is in need of cleaning. For details about cleaning the AIT drive, see “Cleaning the AIT Drive” (page 37).



### **1 Setup DIP Switches and DIP Switch Cover**

Used to set up the AIT autoloader. Remove the screws and cover to access the DIP switches. For details, see “Setting the DIP Switches” (page 19).

### **2 Ventilation Holes**

Please be careful not to block the ventilation holes. If the ventilation holes are blocked, the AIT autoloader may overheat, resulting in damage.

### **3 Power Switch**

To turn the AIT autoloader on or off, press this power switch. When you restart the AIT autoloader, be sure to wait at least 10 seconds before turning it on again.

### **4 Power Supply Connector**

Plug the provided power cord into this connector.

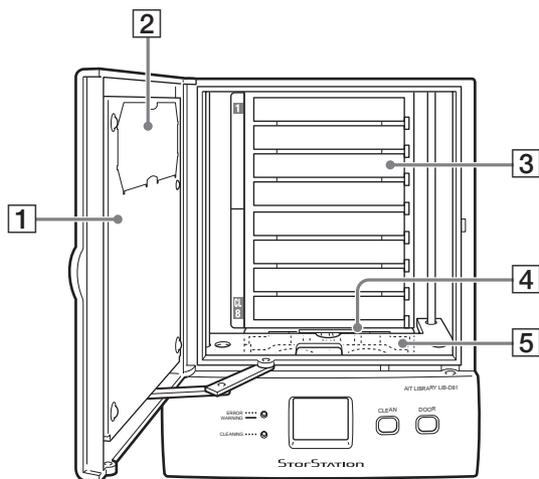
### **5 SCSI connector 1    6 SCSI connector 2**

For information about connecting the SCSI connectors, see “Connecting to the Host Computer” (page 17) and “Connecting SCSI Peripheral Devices” (page 22) in Chapter 2, “Installation”.

### **6 SCSI ID Setup Switch**

Used to set the SCSI ID of the AIT autoloader. For details, see “Setting the SCSI ID” (page 21).

## Interior (Front)



### **1 Front Door**

### **2 Air Filter**

Periodically clean the air filter with a vacuum cleaner (we recommend monthly cleaning). For details about how to replace the air filter, see “Cleaning the Air Filter” (page 41).

### **3 Cartridge Case**

You can insert up to eight AIT cartridges in the case. Slots are numbered 1 to 8, from the highest slot down. When using it, make sure that you insert the cleaning cartridge in slot CL/8 (the lowest slot).

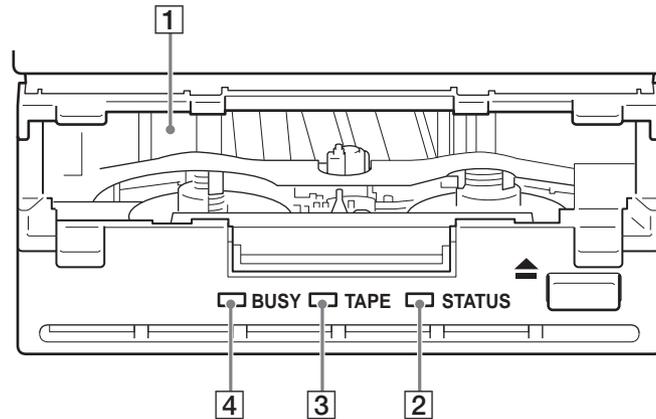
### **4 AIT Drive**

The AIT autoloader is equipped with one AIT drive.

### **5 Elevator**

Lowers cartridges to the AIT drive and returns them to their slots. When you turn on the AIT autoloader, the elevator moves up and down counting the cartridges, whose number appears on the message display.

## AIT Drive (Front)



### **1** Cartridge Slot

Used to insert and eject AIT cartridges from the AIT drive.

### **2** STATUS LED

Lights when the cartridge in the drive is write-protected. It flashes in the following situations.

#### **Drive needs cleaning**

Repetitive long on, short off.

#### **During cleaning; tape is spent**

Regular flashing.

#### **Drive is malfunctioning**

Repetitive two short on, one long off.

### **3** TAPE LED

Lights when a cartridge is being loaded. It flashes in the following situations.

#### **When inserting or ejecting a cartridge**

Regular flashing.

#### **Cartridge is spent**

Repetitive long on, short off.

### **4** BUSY LED

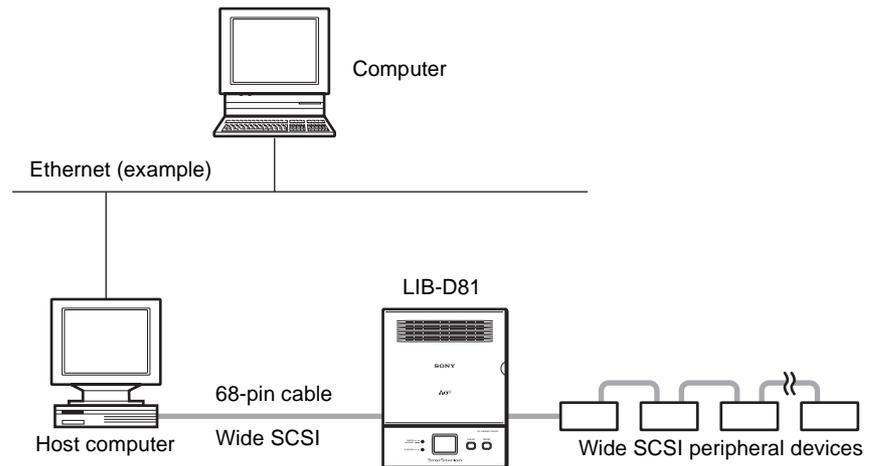
Lights when data is transferred through the SCSI interface. Flashes regularly when data is read from or written to a cartridge.

Do not restart the AIT autoloader when this LED is lit as this may cause read and write errors, or irreparable damage to the data cartridge.

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# System Structure

To obtain the best performance out of your AIT drive, we recommend that you connect the AIT autoloader to a host computer equipped with an Ultra 160 Wide SCSI LVD/SE interface. The autoloader is controlled through the host computer.



## Note

A SCSI host adapter card must be installed in the host computer.

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# Compatible Cartridges

This section describes what AIT cartridges are used in the AIT autoloader.

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## AIT Cartridges

To achieve the maximum transfer rate and recording capacity, use the appropriate type of AIT cartridge for your drive. For information on recording capacities, see “Hardware Specifications” (page 45) in the “Appendix”.

### AIT-1 Drive



AIT-1 mark

### AIT-2 Drive



AIT-1 mark



AIT-2 mark

## AIT-3 Drive



AIT-1 mark



AIT-2 mark



AIT-3 mark

### **Caution**

Do not use 8 mm video tapes sold at stores. An 8 mm video tape looks a lot like an AIT cartridge, but has different specifications. Do not use any other cartridges other than AIT cartridges.

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## Cleaning Cartridge

To clean the AIT drive, use an AIT Cleaning cartridge (sold separately). For information on cleaning, see “Cleaning the AIT Drive” (page 37) in Chapter 5, “Cleaning the AIT Drive”.

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## Software

For guidance on application software that can be used with the AIT autoloader and supported operating systems, contact your dealer.

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## Precautions

- Use cartridges suited to the type of AIT drive installed. Using cartridges other than AIT cartridges may cause improper operations. For information about cartridges that can be used with the AIT autoloader, see “Compatible Cartridges” (page 12).
- Do not insert anything except AIT cartridges in the slot of the cartridge case, as doing so may result in damage.

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## Overview

This chapter explains general procedures for positioning the AIT autoloader, connecting it to the host computer and turning on the AIT autoloader. This chapter also explains initial setup. Installation and setup procedures may vary depending on your system.

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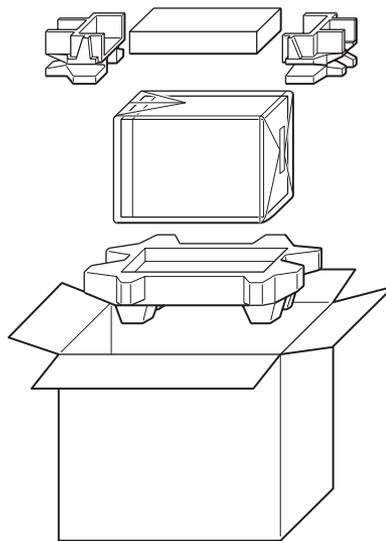
## Unpacking

**Note**

You will need the box and packing materials if you wish to move or transport the AIT autoloader in the future. Retain them for future use.

- 1 Remove the AIT autoloader from the box as indicated on the box.

Remove the packing materials, such as plastic covers and tapes.



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# Package Contents

After opening the box, make sure that all the following items are present. Contact your dealer if anything is missing.

- LIB-D81 (1)
- Power cable (1)
- SCSI terminator (1)
- Cleaning cartridge (1)
- Quick Start Guide (1)
- CD-ROM (containing this document) (1)

**Note**

In addition to the above, other documentation and/or documents may be included in the package.

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# Preparing the Host Computer

Prepare the host computer before installing the AIT autoloader as follows.

- 1** Make sure that a SCSI host adapter card is installed in the host computer.
- 2** Install the application software supporting the autoloader on the host computer.

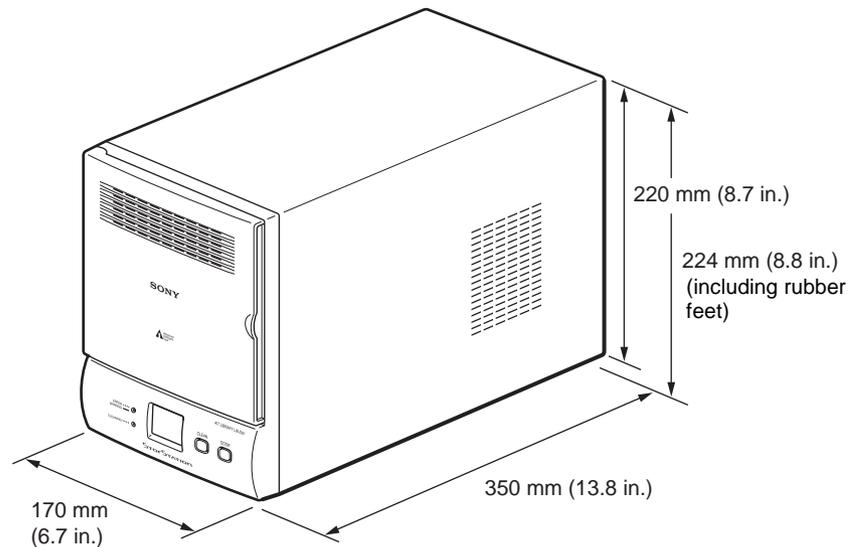
For guidance on application software that can be used with the AIT autoloader and supported operating systems, contact your dealer.

# Installing the AIT Autoloader

The autoloader weighs about 7 kg (15.4 lb.) and has the following dimensions. Before installing the autoloader, make sure that the surface is appropriate.

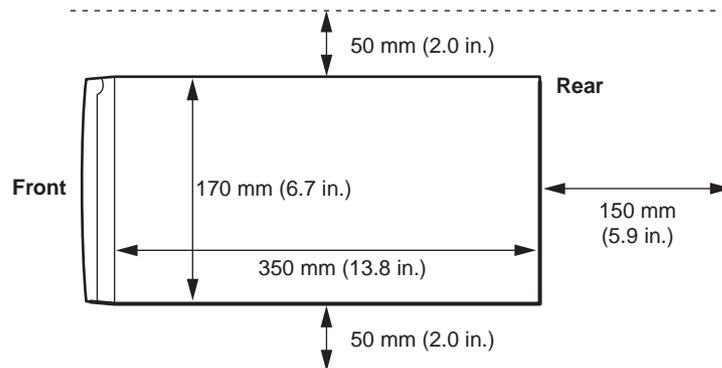
## Note

Install the AIT autoloader on a horizontal surface near an AC power outlet. Also leave a gap of about 150 mm (5.9 in.) behind the rear of the unit to allow air to circulate.



## Caution

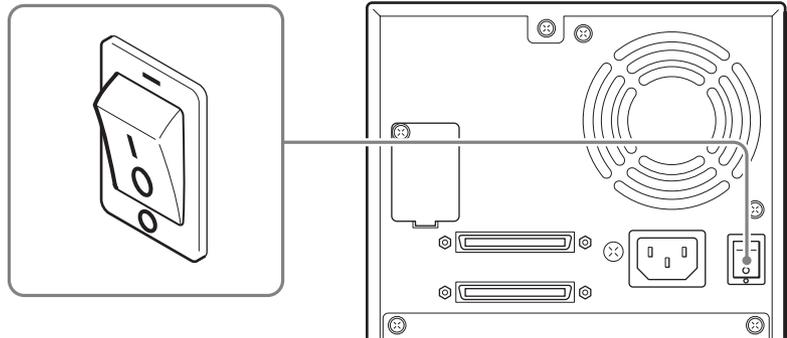
Make sure that you position the AIT autoloader as indicated in the illustration. Correct operation is not guaranteed if you place the AIT autoloader on its side.



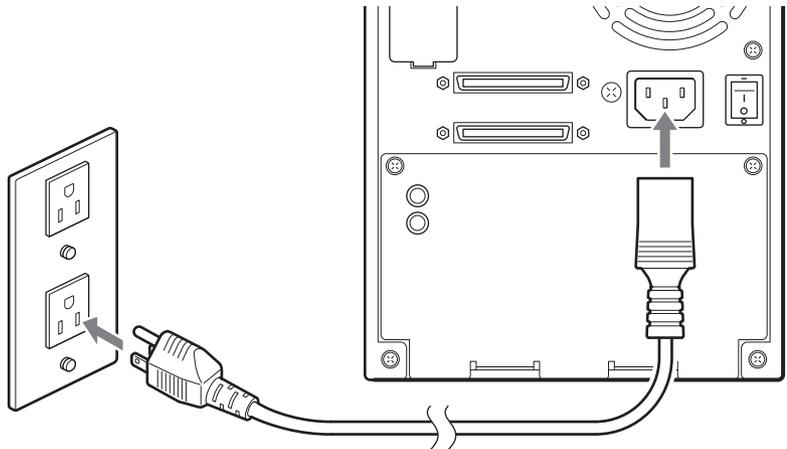
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# Connecting the Power Cable

- 1 Make sure that the power switch on the rear of the AIT autoloader is in the off position (O is depressed).



- 2 Connect one end of the power cable to the power supply connector and the other end to the power outlet.



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# Connecting to the Host Computer

Connect the AIT autoloader and the host computer with a SCSI cable. This section explains general connection steps. To connect, use an Ultra2 Wide SCSI LVD cable commonly sold in stores. However, when using a model equipped with an AIT-3 drive, use an Ultra 160/m SCSI LVD cable. The autoloader side uses the 68-pin half pitch connector.

When connecting other SCSI devices along with the AIT autoloader, see “Connecting SCSI Peripheral Devices” (page 22).

**Caution**

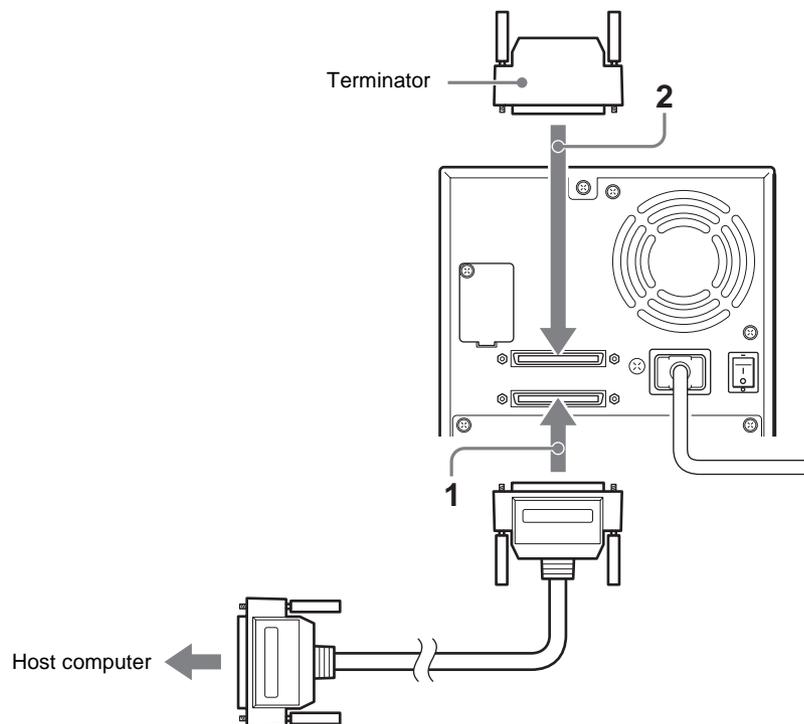
- Do not connect the AIT autoloader to the HVD (High Voltage Differential) SCSI bus. If connected, the autoloader or other devices on the SCSI bus may be damaged.

- When connecting the Wide SCSI cable, turn off all of the connecting devices, including the AIT autoloader and the host computer.
- When connecting the AIT autoloader as the last device on the SCSI bus, be sure to attach the provided terminator.
- In LVD (Low Voltage Differential) SCSI, make the total length of the SCSI cable (internal and external), which connects the host computer and the device at the end of the SCSI bus, shorter than 12 m (39.4 ft.). (The length of the AIT autoloader internal cable is 0.5 m (19.7 in.) )
- Using SCSI cables longer than 30 cm (11.8 in.) to connect between devices is recommended.
- SCSI cables cannot be branched.

#### Notes

- For information about the SCSI bus, see “SCSI Specifications” (page 46) in the “Appendix”.
- Prepare the necessary SCSI cables. For information about SCSI cable specifications, see “SCSI Cable and Terminator Specifications” (page 46) in the “Appendix”.

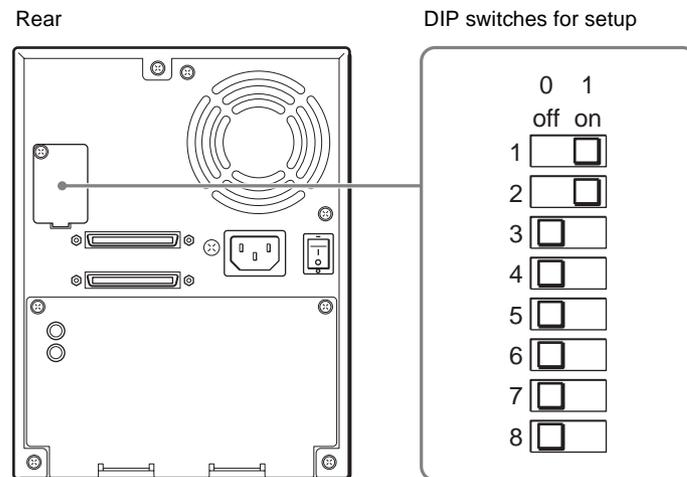
- 1 Confirm that the power to the host computer and AIT autoloader are off.
- 2 Connect the SCSI cable and terminator as shown in the figure below.
  - 1 Use a commercial SCSI cable to connect the AIT autoloader to the host computer.
  - 2 Connect the provided terminator to connector.



# Setting the DIP Switches

By setting the DIP switches at the back of the AIT autoloader, you can:

- Supply power to the SCSI terminator (on by default)  
When you are using several SCSI devices, you can set the AIT autoloader to supply power to the SCSI terminator.
- Display warning messages when specific parts reach the end of their life or when in need of cleaning (on by default)  
You can set the AIT autoloader to display warning messages when specific parts reach the end of their service life or when need of cleaning (weekly).
- Use the autoloader option function (off by default)  
You can set the AIT autoloader to monitor the AIT drive status on a regular basis, as well as automatically eject and insert cartridges.



The default settings of the DIP switches are as follows.

DIP SW (DEFAULT)		
0	1	
off	on	
1	<input type="checkbox"/>	TERM PWR
2	<input type="checkbox"/>	MAINTENANCE
3	<input type="checkbox"/>	LOADER SEL
4	<input type="checkbox"/>	CONTINUOUS AUTOLOAD
5	<input type="checkbox"/>	
6	<input type="checkbox"/>	RMIC
7	<input type="checkbox"/>	RESERVED
8	<input type="checkbox"/>	RESERVED

Switches are off when in the “0” position and on in the “1” position. The default setting of the DIP switches is indicated in brackets.

1 TERM PWA (on)

0: Power is not supplied to the SCSI terminator.

1: Power is supplied to the SCSI terminator.

- 2 MAINTENANCE (on)
- 0: Warning messages are not displayed when specific parts reach the end of their service life or when in need of cleaning (weekly).
  - 1: Warning messages are displayed when specific parts reach the end of their service life or when in need of cleaning (weekly).
- 3 LOADER SEL (off)
- 0: The autoloader option function is not active.
  - 1: The autoloader option function is active.  
When this setting is active, the AIT autoloader monitors the AIT drive status on a regular basis, as well as perform the following.
    - When a cartridge is unloaded, it is automatically ejected and returned to its original slot, and the cartridge from the next slot is inserted into the AIT drive.
    - When the cleaning cartridge is in the AIT drive and cleaning ends, the cleaning cartridge is automatically ejected and returned to its original slot, and the cartridge from the next slot is inserted into the AIT drive.
- 4 CONTINUOUS (off)
- 0: The autoloader option function is not in continuous mode.
  - 1: The autoloader option function is in continuous mode.  
You can use this setting only if LOADER SEL is set to “1”. When you activate this setting and the autoloader option function returns a cartridge to slot CL/8 (the last slot), it automatically inserts the cartridge from the newest slot into the AIT drive.
- 5 AUTOLOAD (off)
- 0: The autoloader option function is not in automatic loading mode.
  - 1: The autoloader option function is in automatic loading mode.  
You can use this setting only if LOADER SEL is set to “1”. When you activate this setting and turn on the AIT autoloader, the AIT autoloader automatically inserts the cartridge from the newest slot in the AIT drive.
- 6 RMIC (off)
- This function is not supported.
- 7 RESERVED (off)
- Extension. Do not use.
- 8 RESERVED (off)
- Extension. Do not use.

**1** Make sure that the power switch on the rear of the AIT autoloader is in the off position (○ is depressed).

**2** Use a pointed object such as a machinist’s screwdriver to change the settings of the DIP switches.

**3** Press the power switch to turn on the power.

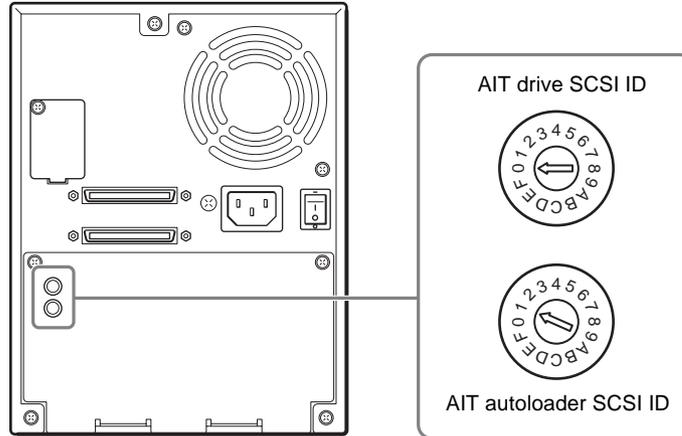
If you change the SCSI ID settings or connect SCSI peripheral devices, do not turn on the power from here. Instead, see “Setting the SCSI ID” (page 21) and “Connecting SCSI Peripheral Devices” (page 22).

# Setting the SCSI ID

Use the SCSI ID switches at the back of the AIT autoloader to set the AIT drive and/or AIT autoloader SCSI ID.

The default settings of the switches are as follows.

Use the upper switch to set the AIT drive SCSI ID and the lower switch to set the AIT autoloader SCSI ID.



## Caution

- Do not set the same SCSI ID for the AIT drive and AIT autoloader.
- Make sure that you perform these settings before turning on the AIT autoloader.

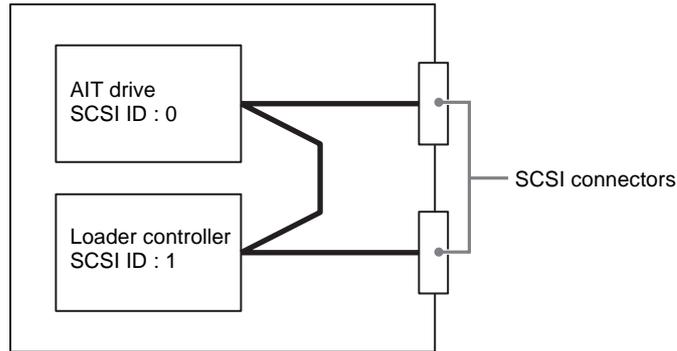
- 1** Make sure that the power switch on the rear of the AIT autoloader is in the off position (○ is depressed).
- 2** Use a pointed object such as a machinist's screwdriver to turn the switches until their arrows match the setting that you want.
- 3** Press the power switch to turn on the power.

If you want to connect SCSI peripheral devices, see "Connecting SCSI Peripheral Devices" (page 22).

---

# Connecting SCSI Peripheral Devices

SCSI peripheral devices can be connected to the SCSI connectors of the AIT autoloader. The SCSI configuration of the autoloader is as shown below. Connect the devices according to the system environment.



## Notes

- The default factory settings of the SCSI IDs are as follows.
  - AIT drive: 0
  - Loader: 1
- Do not use repetitive SCSI IDs.
- Connect peripheral devices before turning on the AIT autoloader and host computer.

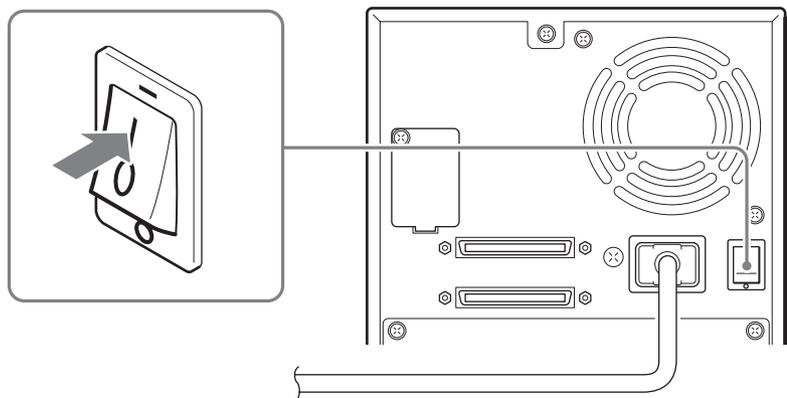
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# Turning the Power On/Off

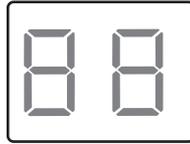
## Turn On the Power

Turn on the AIT autoloader, then turn on the host computer.

- 1** Press the power switch on the rear of the autoloader, as illustrated.

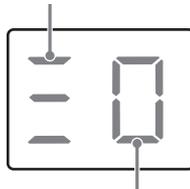


The message display changes as follows and the startup process begins.  
(Startup takes several minutes.)



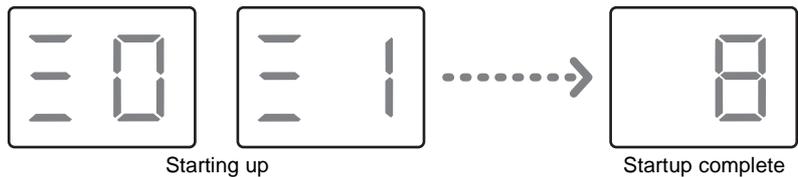
During startup, the following appears on the message display.

Moves gradually up and down during the elevator check.



Indicates the startup phase, from 0 to 3.

When startup is complete, the message display indicates the number of cartridges in the AIT autoloader.



- 2 After pressing the standby switch on the autoloader's front panel, wait at least 10 seconds before turning on the host computer.

**Notes**

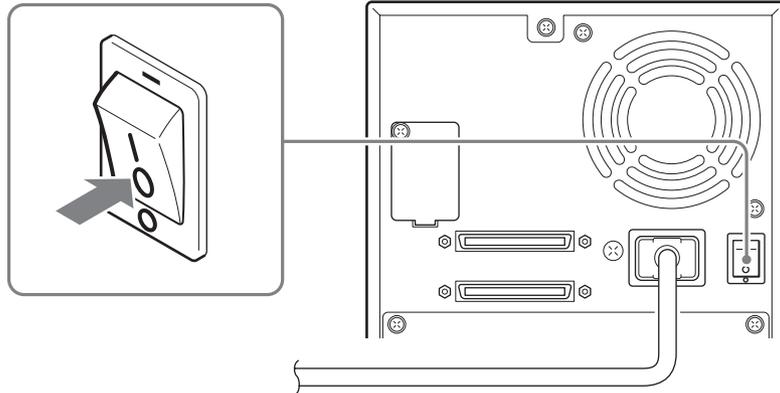
- If you start the host computer before the autoloader, the SCSI ID is not detected correctly. Therefore, you must always start the autoloader before starting the host computer.
- If the autoloader does not work as above, see "Troubleshooting" (page 42).

## Turn Off the Power

Press the power switch on the rear of the AIT autoloader to turn it off.

### Caution

Do not turn off the AIT autoloader when it is in use or there is a cartridge in the AIT drive, as this could damage data.



### Note

After turning the AIT autoloader off, wait at least 10 seconds before turning it on again.

---

## Setting Cartridges

Prepare cartridges and insert them into the AIT autoloader.

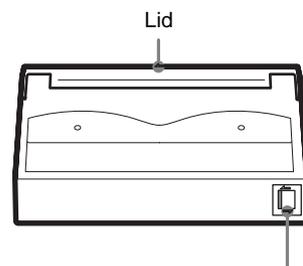
---

### Preparing Cartridges

Make sure that cartridges are not write-protected and prepare them for use.

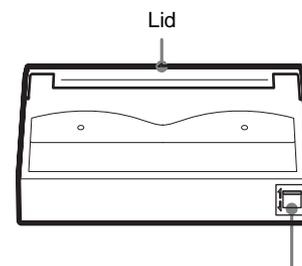
Verify whether the write-protected tab is in the write-enable position. If the tab is orange, data can be written to a cartridge.

#### AIT-1



If the tab is moved to the left, data can be written to and erased from the cartridge. ←  
If the tab is moved to the right, data cannot be written or accidentally erased from the cartridge. ⇒

#### AIT-2, AIT-3

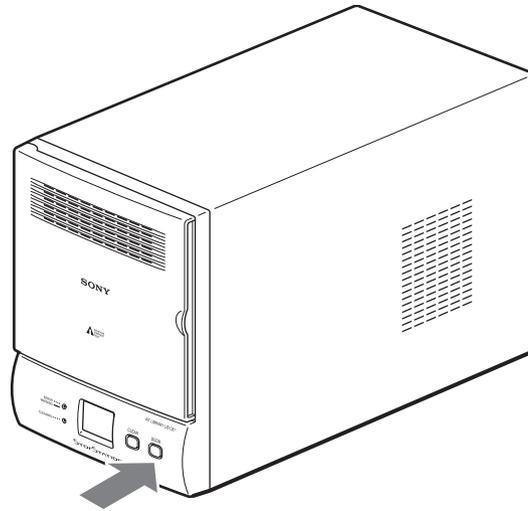


If the tab is lowered, data can be written to and erased from the cartridge. ↓  
If the tab is raised, data cannot be written to or accidentally erased from the cartridge. ↑

## Inserting Cartridges

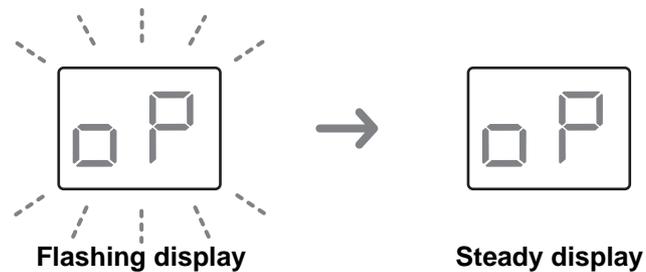
Insert cartridges into the AIT autoloader as outlined below.

- 1 On the front of the AIT autoloader, press the DOOR button.



[o P] flashes on the message display.

The AIT autoloader is preparing to open the front door. Wait until the display stops flashing, which may take up to a minute.

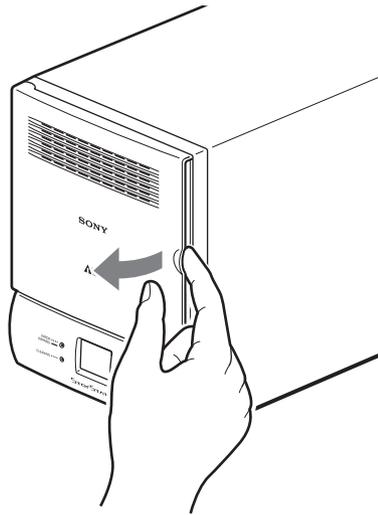


When the display stops flashing, the front door unlocks.

### Note

To prevent the front door from opening during operation, it automatically locks when it is closed. Attempting to open the door without unlocking it may damage the AIT autoloader.

- 2** When you are certain that [o P] on the message display has stopped flashing, open the front door as illustrated here.



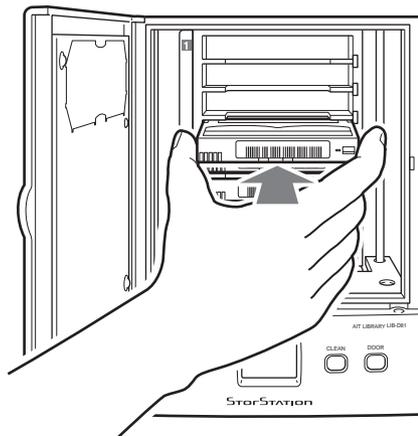
When you open the front door, [o P] remains displayed on the message display.

**Caution**

- It is possible for the host computer to prevent the front door from being opened or closed. When this is the case and you press the DOOR button, the ERROR/WARNING LED lights and [o 5] appears on the message display indicating that the door cannot be opened.
- If the front door is not opened within 3 minutes of [o P] appearing steadily on the message display, the door is automatically locked and the message display reverts to normal.

- 3** Insert cartridges into the AIT autoloader.

Make sure that you insert cartridges in the right direction, and push them in the AIT autoloader until you hear a click. Slot in the AIT autoloader are numbered 1 to 8, from the highest slot down. (Slot numbers match SCSI element numbers.)



**Caution**

The AIT autoloader contains a large number of wires and parts. Do not touch any part other than the slots inside the AIT autoloader as this may lead to damage and/or injury.

#### 4 Close the front door.

When you hear the door click, it is closed. Make sure that the door clicks when you close it.

When the door is completely closed, the cartridges that you inserted into the AIT autoloader are counted and their number is displayed on the message display.

#### **Caution**

If cartridges protrude from slots or are otherwise improperly inserted into slots inside the AIT autoloader, the ERROR/WARNING LED lights orange and [0 1] appears on the message display, indicating an error, and the front door is automatically unlocked. Open the front door and correct any problems as necessary.

---

## Setting Application Software

Make the necessary settings to be able to use the AIT autoloader. Refer to the documentation of the application software used with the AIT autoloader for details about the necessary settings.

---

## Overview

This chapter explains the control panel, basic settings, handling cartridges, element address assignments, and Maintenance.

---

## Control Panel

You can use the control panel to display information about the AIT autoloader and clean the AIT drive.

This section explains the operation of the control panel and the information displayed by the message display.

---

## Using the Control Panel

Use the control panel to perform the following.

- Display information related to the AIT autoloader.
- Clean the AIT drive.
- Perform disaster recovery.

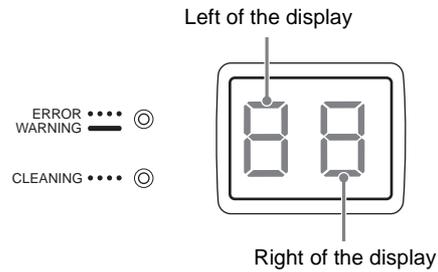
**Note**

Disaster recovery is a function through which all the data on the host computer is backed up on cartridges, which can then be used to restore your system in the unlikely event of a catastrophic failure, for example.

---

## Message Display

The message display displays the current number of cartridges in the AIT autoloader, the AIT autoloader's operational status, as well as warning and error messages.



### Normal display

- The left of the display indicates the operational status of the autoloader.
- The right of the display indicates the current number of cartridges in the AIT autoloader.

### Display during user operations, requests to users, error messages

A two-character code appears on the display. For details about the meaning of the various codes, see “Error Code List” (page 47) and “Other Messages” (page 52).

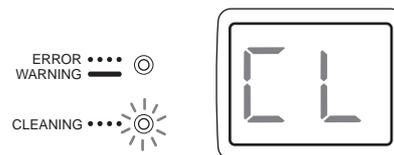
---

## Warnings

When the AIT drive needs to be cleaned or specific parts need to be replaced at the end of their service life, LED light on the front panel of the AIT autoloader and messages appear on the message display, as illustrated here.

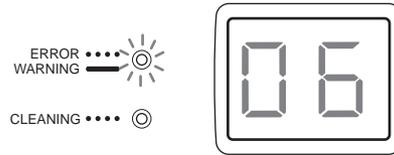
### Cleaning request

The CLEANING LED flashes green and the [C L] code flashes on the message display. By default, you are notified that the AIT drive needs cleaning when the AIT autoloader has been online for approximately a week.



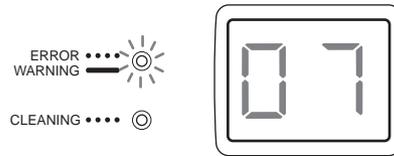
### High internal temperature

The ERROR/WARNING LED lights orange and the [0 6] code appears on the message display. Suspend operation or lower ambient temperature. When the AIT autoloader internal temperature returns to normal levels, the ERROR/WARNING LED goes out. It is possible for the air filter to become clogged with dust or other particles. To prevent this from happening, be sure to clean the air filter regularly. For details, see “Maintenance” (page 33).



### Specific parts have reached the end of their service life

The ERROR/WARNING LED lights orange and the [0 7] code appears on the message display. Contact customer service.



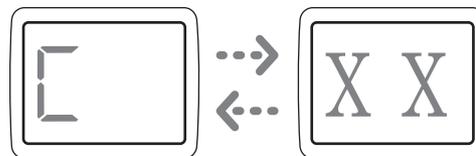
---

## Errors

When an error occurs in the AIT autoloader, the ERROR/WARNING LED flashes orange and an error code appears on the message display. For information about error codes, see “Error Code List” (page 47) in the “Appendix”.

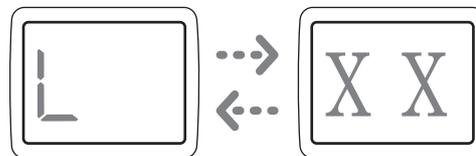
### Example: Problem with a cartridge

[C ] and [XX], where “XX” is the error code, appear alternatively on the message display.



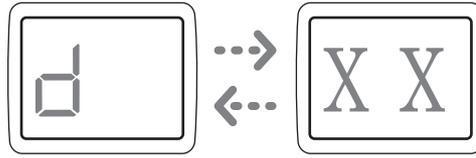
### Example: Problem with the autoloader

[L ] and [XX], where “XX” is the error code, appear alternately on the message display.



### Example: Problem with the drive

[d ] and [XX], where “XX” is the error code, appear alternately on the message display.



#### Note

For illustration purposes, we have used the autoloader in error code examples throughout the document.

---

## Disaster Recovery Function

Disaster recovery is a function through which all the data on the host computer is backed up on cartridges, which can then be used to restore your system in the unlikely event of a catastrophic failure, for example. Perform disaster recovery with the application software on the host computer.

For details about operations and settings on the host computer, refer to the documentation accompanying the computer and software applications.

- 1** Prepare to perform disaster recovery.
  - 1** Create a disaster recovery tape with the host computer.
  - 2** Place the AIT drive in Disaster recovery mode.

Send the AIT drive mode selection command from the host computer. The AIT drive enters Disaster recovery mode. You can also place the AIT drive in Disaster recovery mode by following the instructions of step 2 below.
- 2** Begin disaster recovery.
  - 1** Insert the disaster recovery tape into slot 1.
  - 2** Simultaneously press the CLEAN and DOOR buttons at the front of the AIT autoloader for at least 5 seconds. The AIT drive enters Disaster recovery mode. When the AIT drive enters Disaster recovery mode, [d r] appears flashing on the message display.
  - 3** Turn off the AIT autoloader, wait approximately 10 seconds, then restart it.

The disaster recovery tape is automatically inserted into the AIT drive. Refer to the documentation accompanying the computer and software applications to perform the disaster recovery procedure.

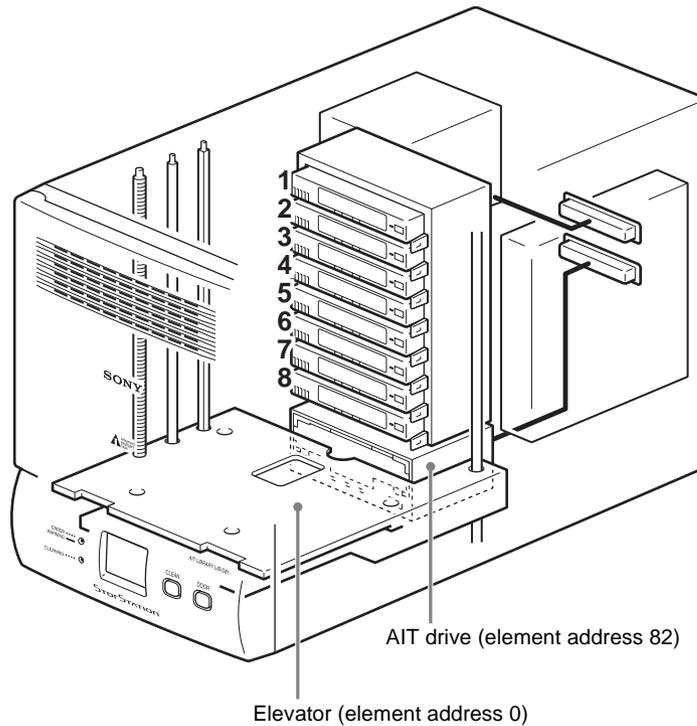
---

# Assigned Element Addresses

An element is a physical location where a cartridge is kept. Applications use element addresses to differentiate between the elements of the AIT autoloader. In AIT autoloader, the element addresses are assigned to the cartridge slots and the AIT drive as illustrated below.

**Note**

Because element addresses of the AIT autoloader are fixed numbers, they cannot be reassigned.



---

# Handling the Cartridges

When handling or storing the cartridges, note the following.

---

## Handling

- Do not subject the cartridges to strong vibrations. Do not drop the cartridges.
- When loading a cartridge into the AIT autoloader, the lid of the cartridge opens up automatically. Do not manually open the lid and touch the interior tape.
- The cartridge is preadjusted at the factory, so do not disassemble it.
- The tab of a cartridge is used to prevent writing to the cartridge by accident. If the cartridge does not need to be written to, move the tab to write-protect it. → “Preparing Cartridges” (page 24) in Chapter 2, “Installation”.

- If the AIT autoloader is used in a high-humidity environment or a location that is subject to wide variations in temperature, condensation may prevent the cartridge read/write operation.
- If the cartridge does not need to be written to or read from, do not insert or eject it too often.

---

## Storing

- Store cartridges in an appropriate environment.  
Store cartridges according to the temperature and other surrounding conditions written on the package. Also, try to keep the temperature and humidity of the environment constant. Store cartridges out of the direct sun rays. Do not store them near heating systems. Never place cartridges on a dashboard or in the glove compartment of a car.
- Store cartridges in a dustless environment.  
Eliminate sources of dust. Avoid eating, drinking, or smoking near the storage location. Also, do not store cartridges near copying machines or printers that emit toner and paper dust.
- When storing cartridge, set the erase-protection tab so that the data cannot be over written.
- After removing a cartridge from the autoloader, store it in an appropriate location as soon as possible.  
Avoid, as much as possible, changes of temperature and density, contamination by dust and scratches made by touching the interior tape.

---

## Maintenance

Perform the following periodically.

- Clean the air filter.  
If the front panel air filter becomes clogged with dust, the AIT autoloader may overheat, resulting in damage. Periodically clean the air filter with a vacuum cleaner. (We recommend monthly cleaning.) For details about how to remove the air filter, see “Cleaning the Air Filter” (page 41) in the “Appendix”.
- Clean the AIT drive.  
Clean the AIT drive on a weekly basis. You are notified that the AIT drive needs cleaning by a flashing green CLEANING LED and a message when the AIT autoloader has been online for approximately a week. If the 2 MAINTENANCE DIP switch at the back of the AIT autoloader is in the off position, you are not notified when cleaning becomes necessary. By default, this DIP switch is in the on position. For details, see “Setting the DIP Switches” (page 19).

# Operating the AIT Autoloader

Chapter

# 4

---

## Overview

This chapter explains how to eject and change cartridges.

---

## Using Cartridges

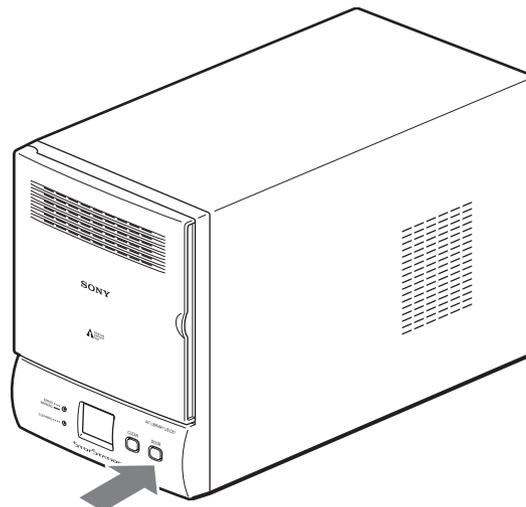
This section explains how to eject and change cartridges. For information about how to prepare and insert cartridges, see “Inserting Cartridges” (page 25) in Chapter 2, “Installation”.

---

## Ejecting/Changing Cartridges

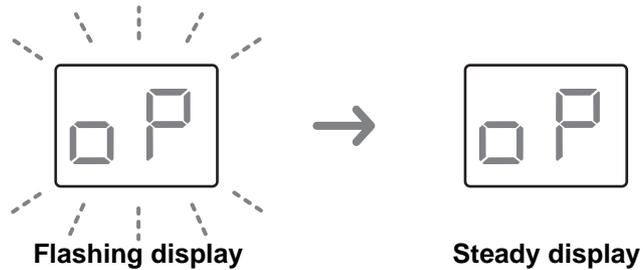
To eject and change cartridges set in slots of the AIT autoloader, perform the following.

- 1 On the front of the AIT autoloader, press the DOOR button.



[o P] flashes on the message display.

The AIT autoloader is preparing to open the front door. Wait until the display stops flashing, which may take up to a minute.

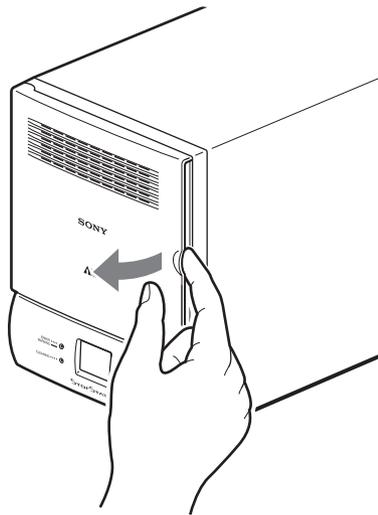


When the display stops flashing, the front door unlocks.

**Note**

To prevent the front door from opening during operation, it automatically locks when it is closed. Attempting to open the door without unlocking it may damage the AIT autoloader.

- 2 When you are certain that [o P] on the message display has stopped flashing, open the front door as illustrated here.

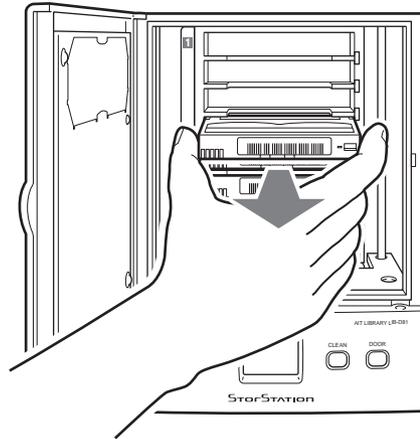


When you open the front door, [o P] remains displayed on the message display.

**Caution**

- It is possible for the host computer to prevent the front door from being opened or closed. When this is the case and you press the DOOR button, the ERROR/WARNING LED lights and [0 5] appears on the message display indicating that the door cannot be opened.
- If the front door is not opened within 3 minutes of [o P] appearing steadily on the message display, the door is automatically locked and the message display reverts to normal.

- 3 Eject the cartridge from the slot as illustrated below.



**Caution**

The AIT autoloader contains a large number of wires and parts. Do not touch any part other than the slots inside the AIT autoloader as this may lead to damage and/or injury.

**Note**

If the cartridge that you want to eject in the AIT drive, see “Transporting the AIT Autoloader” (page 44) in the “Appendix”.

- 4 When you want to change cartridges, insert a new cartridge in the empty slot.

Make sure that you insert cartridges in the right direction, and push them in the AIT autoloader until you hear a click.

- 5 Close the front door.

When you hear the door click, it is closed. Make sure that the door clicks when you close it.

When the door is completely closed, the cartridges that you inserted into the AIT autoloader are counted and their number is displayed on the message display.

**Caution**

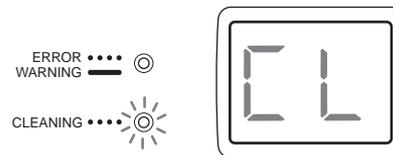
If cartridges protrude from slots or are otherwise improperly inserted into slots inside the AIT autoloader, the ERROR/WARNING LED lights orange and [0 1] appears on the message display, indicating an error, and the front door is automatically unlocked. Open the front door and correct any problems as necessary.

## Overview

This chapter explains how to clean the AIT drive.

## Cleaning the AIT Drive

When the AIT drive is in need of cleaning, the CLEANING LED flashes green and the following appears on the message display.



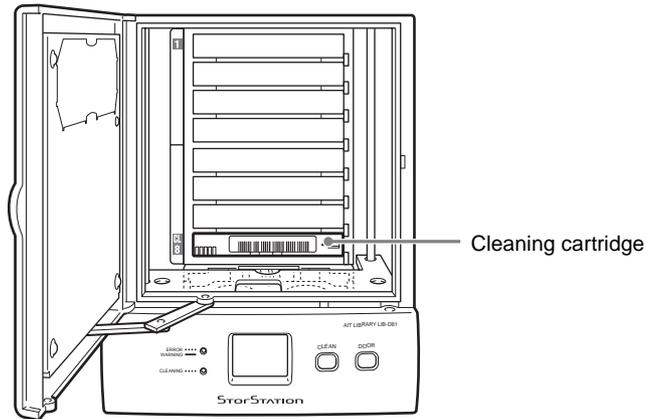
To clean the AIT drive, insert a cleaning cartridge (sold separately) into the drive. Make sure that you insert the cleaning cartridge into the slot CL/8 before you proceed.

### **Caution**

- If there is a cartridge in the AIT drive when you begin cleaning the drive, it is returned to its original slot before the cleaning procedure starts.
- If the 2 MAINTENANCE DIP switch at the back of the AIT autoloader is in the off position, you are not notified when cleaning becomes necessary. By default, this DIP switch is in the on position. In this position, you are notified to clean the AIT drive when the AIT autoloader has been online for approximately a week. For details, see “Setting the DIP Switches” (page 19).

- 1** Prepare your cleaning cartridge.
- 2** On the front of the AIT autoloader, press the DOOR button, open the front door, and insert the cartridge into slot CL/8 (the lowest slot).

For details about how to insert a cartridge into a slot, see “Setting Cartridges” (page 24) in Chapter 2, “Installation”.



**Caution**

The AIT autoloader contains a large number of wires and parts. Do not touch any part other than the slots inside the AIT autoloader as this may lead to damage and/or injury.

**3** Close the front door.

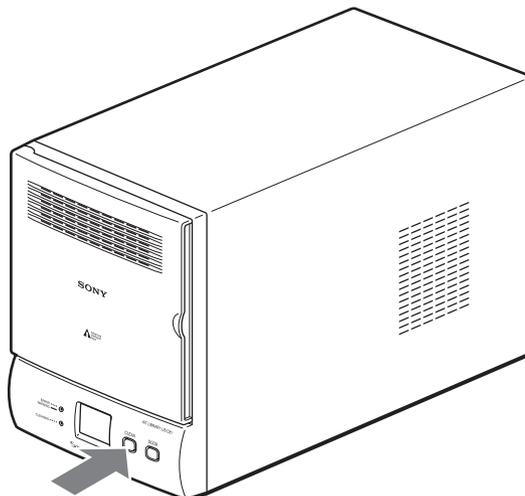
When you hear the door click, it is closed. Make sure that the door clicks when you close it.

When the door is completely closed, the cartridges that you inserted into the AIT autoloader are counted and their number is displayed on the message display.

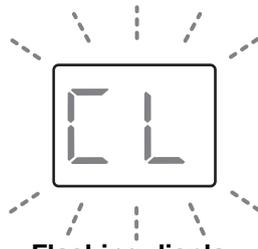
**Caution**

If cartridges protrude from slots or are otherwise improperly inserted into slots inside the AIT autoloader, the ERROR/WARNING LED lights orange and [0 1] appears on the message display, indicating an error, and the front door is automatically unlocked. Open the front door and correct any problems as necessary.

**4** On the front of the AIT autoloader, press the CLEAN button for at least three seconds.



[C L] flashes on the message display and cleaning starts.



**Flashing display**

When cleaning ends, the cleaning cartridge is returned to slot CL/8 and the CLEANING LED goes out.

- 5 When the CLEANING LED goes out, press the DOOR button, open the front door, and eject the cleaning cartridge.

**Caution**

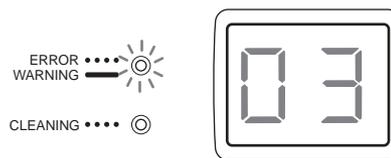
- If the CLEANING LED does not go out, it is possible that the cleaning cartridge is spent. Replace the cleaning cartridge with a new one and perform the cleaning procedure again.
- If there is a cartridge in the AIT drive when you begin cleaning the drive, it is returned to its original slot before the cleaning procedure starts.
- If you are writing to a damaged cartridge, unloading may take some time. For this reason, cleaning can take up to 20 minutes.

**Note**

If the AIT autoloader cannot clean the AIT drive, the following error messages may appear.

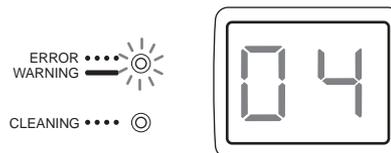
**If there is no cartridge in slot CL/8**

The ERROR/WARNING LED lights and [0 3] appears on the message display.



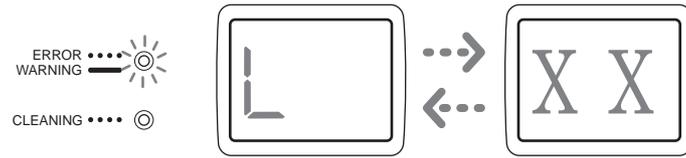
**If there is an AIT cartridge in slot CL/8**

The ERROR/WARNING LED lights and [0 4] appears on the message display.

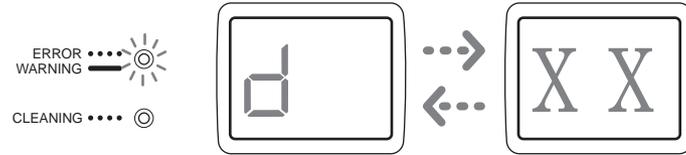


### If cleaning fails for any other reason

The ERROR/WARNING LED flashes, [L ] and [XX] or [d ] and [XX] (where “XX” is an error code) appear alternately on the message display.



Or



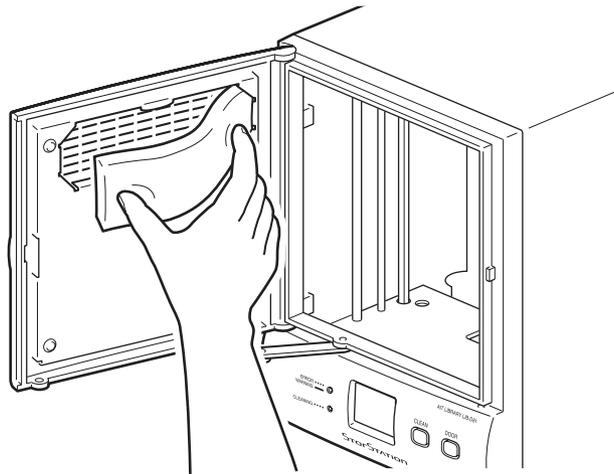
# Appendix

## Cleaning the Air Filter

### Note

Clean the air filter once a month using a vacuum cleaner.

- 1 Press the DOOR button and open the front door.
- 2 Turn off the AIT autoloader.
- 3 Extract the air filter from the AIT autoloader.



### Caution

Take care not to cut yourself on the metal corners of the air filter.

- 4 Clean the air filter with a vacuum cleaner.
- 5 Reinsert the air filter.
- 6 Close the front door.
- 7 Turn on the AIT autoloader.

---

# Troubleshooting

Before contacting a Sony Service center, please check the following. If the problem persists, contact a Sony Service center.

## **The AIT autoloader does not work**

- Verify that the power is on.
- Verify that the power cable is connected correctly.
- Verify that the front door is closed.
- Verify that the terminator is attached correctly.
- Verify that the SCSI cable is correctly connected from the AIT autoloader to the host computer.
- Verify that the host computer is on.
- Verify that no error code is displayed on the message display. For information about error codes, see “Error Code List” (page 47).
- Only restart the AIT autoloader 10 seconds after it is turned off.

## **The AIT autoloader and the host computer cannot communicate with each other**

- Verify that the SCSI IDs of the autoloader, AIT drive, and host computer are unique. Duplicate SCSI IDs cannot be used on one SCSI bus. → “Setting the SCSI ID” (page 21) in Chapter 2, “Installation”.
- Verify that the SCSI cable is connected correctly. → “Connecting to the Host Computer” (page 17) in Chapter 2, “Installation”.
- Verify that the SCSI adapter card is correctly installed in the computer.
- Verify that all the connected SCSI devices are LVD devices. The AIT autoloader is an LVD device. Do not connect HDV devices to the autoloader.
- Verify that all the devices on the SCSI bus are Wide SCSI devices. The AIT autoloader is a Wide SCSI device. All the devices on the SCSI bus must be Wide SCSI devices. (Wide-Narrow adapters can also be used.)
- Verify that the length of the SCSI cable that connects the host computer and the AIT autoloader at the end of the SCSI bus is shorter than 12 m (39.4 ft.).
- Verify that the SCSI bus is terminated correctly. → “SCSI Specifications” (page 46).
- Verify that the AIT autoloader supports the application software. For guidance on application software that can be used on the AIT autoloader and on compatible operating systems, contact your dealer.
- Verify that the application software is correctly installed and correctly set up on the host computer.
- Verify that the host computer was turned on more than 10 seconds after turning on the autoloader. If the host computer is turned on too soon after turning on the autoloader, the host computer may not detect the SCSI devices.

## **Data cannot be written or read even though the application and the autoloader are working properly**

- Verify that the write-protect tab of the cartridge is in the write-enable position. → “Preparing Cartridges” (page 24) in Chapter 2, “Installation”.
- Only use Sony AIT cartridges. Verify that the AIT drive supports the cartridges.
- If a cartridge has been used for a long time or very frequently, replace it with a new cartridge.
- Verify that the cartridge is not damaged.

- Try cleaning the AIT drive. → “Cleaning the AIT Drive” (page 37) in Chapter 5, “Cleaning the AIT Drive”.

## The cartridges cannot be ejected

- Follow the instructions in “Ejecting/Changing Cartridges” (page 34) in Chapter 4, “Operating the AIT Autoloader”.  
If you are still unable to eject cartridges, please contact your dealer for assistance.
- If you are unable to eject the cartridge in the AIT drive, perform the following procedure.

### 1 On the front of the AIT autoloader, press the DOOR button for at least five seconds.

[E J] flashes on the message display. The cartridge in the AIT drive is automatically ejected and returned to its original slot.

The front door is then unlocked and [o P] appears on the message display.

#### Notes

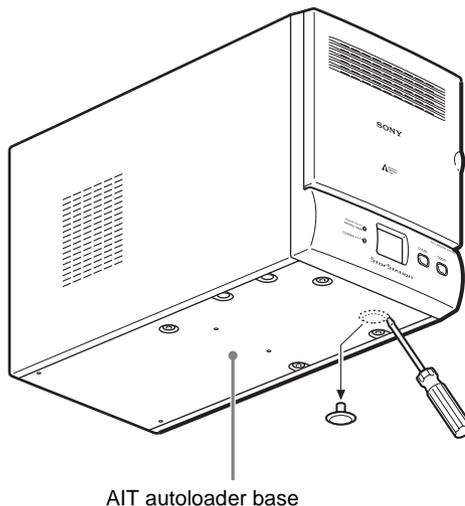
- When the original position of the cartridge is unknown, such as after restarting the AIT autoloader, the cartridge is inserted in the highest available slot.
- When you press the DOOR button for at least five seconds when there is not cartridge in the AIT drive, [E J] flashes on the message display and the front door is unlocked.

### 2 When you are certain that [o P] on the message display has stopped flashing, open the front door and eject the cartridge.

## The front door does not open

If pressing the DOOR button fails to unlock the front door, perform the following.

- On the front of the AIT autoloader, press the DOOR for at least five seconds.  
[E J] flashes on the message display and the front door is unlocked.
- If the above fails, remove the protective cap at the base of the AIT autoloader as illustrated below, and then use a pointed object such as a ballpoint pen to press the release button. The front door unlocks allowing you to open it.



Remove the protective cap with a screwdriver, and then use a pointed object such as a ballpoint pen to press the release button.

## Miscellaneous

Verify that the front door is securely closed. The AIT autoloader cannot operate normally if the front door is not closed.

---

# Transporting the AIT Autoloader

If you are transporting the AIT autoloader for any reason, such as when moving or repairing the autoloader, make the following preparations.

- When packing, perform the unpacking procedure outlined in “Unpacking” (page 14) in reverse.
- Eject all the cartridges in the autoloader. If the cartridges cannot be ejected by normally, see “The cartridges cannot be ejected” (page 43) in “Troubleshooting”.
- Remove all the cables such as the power cable, the SCSI cable, the terminator, and the network cable.

---

# Hardware Specifications

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## Hardware

### AIT Drive

LIB-D81/A1: SDX-400C/L (1)

LIB-D81/A2: SDX-500C/L (1)

LIB-D81/A3: SDX-700C/L (1)

### Number of drives that can be installed

One drive

### Number of cartridges that can be inserted

Maximum of 8

### Data transfer rate

	<b>Native</b>
<b>AIT-3</b>	12 MB/s
<b>AIT-2</b>	6 MB/s
<b>AIT-1</b>	4 MB/s

Message display 7-segment LED display, displays 2 characters

LED Two

### External connectors

SCSI 68-pin (2)

Loader

Wide SCSI LVD/SE

Drive

AIT-1 and AIT-2 drives: Ultra Wide SCSI LVD/SE

AIT-3 drive: Ultra 160 SCSI LVD/SE

### Operating environment

Temperature: 5°C to 40°C

Humidity: 20% to 80%

(Avoid condensation)

Power AC100 V to 240 V  $\pm$ 10% (50/60 Hz)

### Power consumption

AIT-1 Model 40 W (Max)

AIT-2 Model 40 W (Max)

AIT-3 Model 45 W (Max)

### External Dimensions

170 (W)  $\times$  224 (H)  $\times$  350 (D) mm

(6.7 (W)  $\times$  8.8 (H)  $\times$  13.8 (D) in.)

Mass 7 kg (15.4 lb.)

---

## Memory

AIT-3 cartridge: 1.6 terabytes

AIT-2 cartridge: 0.8 terabytes

AIT-1 cartridge: 0.56 terabytes

(When data compression is 2:1)

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Please note: Due to constant improvements, the specifications and outward appearance of the AIT autoloader may change without prior announcements.

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# SCSI Cable and Terminator Specifications

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## SCSI Cable

For impedance and primary conductor, use a Ultra Wide LVD SCSI cable that conforms to SCSI-3 specifications. However, when using a model equipped with an AIT-3 drive, use an Ultra 160/m SCSI LVD cable.

---

## SCSI Cable Length

The total allowable length of SCSI cables used in one LVD SCSI bus is as follows. (This length includes the length of all internal and external cables.)

- The length of the AIT autoloader internal cable is 0.5 m (19.7 in.).
- If there are more than three devices on an LVD SCSI bus, the total allowable length is 12 m (39.4 ft.).

---

# SCSI Specifications

This section describes common specifications of SCSI components and SCSI buses.

---

## About the SCSI Components

The SCSI system is composed of the following components.

- **Initiator**  
This is a host computer system that functions as an initiator program of commands. The system consists of the application software, the operating system, the device driver and the SCSI adapter card.
- **Bus**  
By connecting the SCSI cables to the SCSI adapter card, the autoloader and other devices, a path (or a bus) is created for transferring commands.
- **Targets**  
The AIT autoloader and the AIT drive are peripheral devices (or targets) that receive commands from the host computer. Up to 16 devices (including the host computer) can be connected to the Wide SCSI bus. Also, up to 8 devices can be connected to the Narrow SCSI bus.

---

## About the SCSI Bus

When you are setting up the AIT autoloader using a SCSI bus, please note the following precautions

### LVD SCSI

The AIT autoloader is an LVD SCSI device. All SCSI devices connected to the AIT autoloader on the SCSI bus must be LVD SCSI devices.

## Wide SCSI

The interface of the AIT autoloader is Wide SCSI. In order to connect the AIT autoloader to a Narrow SCSI bus, use a 50-pin to 68-pin LVD SCSI adapter. Also, make sure every unused data lines are terminated by an adapter.

## SCSI ID

Set a unique SCSI ID for each device on a SCSI bus. The host computer uses these SCSI IDs to differentiate between the devices. Also, the SCSI IDs are used to prioritize the order of communication when several devices are communicating with the host computer. The lower the ID number, the lower the priority it has.

### Caution

The SCSI ID of a device has nothing to do with its physical location. For example, in a SCSI bus that has multiple devices connected to it, the SCSI ID of the last device can be 2.

## SCSI Bus Termination

If the AIT autoloader is the device connected to the end edge of the SCSI bus, you must attach a terminator to the unused SCSI connector to terminate the SCSI bus. Now, the AIT autoloader can supply electric power to the terminator. For information about details, see “Setting the DIP Switches” (page 19) in Chapter 2, “Installation”.

---

# Error Code List

When the AIT autoloader generates an error, an error code appears on the message display. The following is the list of error codes that can appear on the message display. If a message from the list appears on the message display, contact customer service.

If an error code appears on the message display that does not figure in this list, before contacting customer service verify the LED on the front of the AIT autoloader, as well as perform the operations outlined in “Other Messages” (page 52)

If the problem persists, contact customer service.

Error code	Description	Display	Logged
00	No valid error code information.	—	No
01	Detected a microcode anomaly upon startup.	[0 1] appears on the message display.	No
02	Detected a base RAM anomaly upon startup.	[0 2] appears on the message display.	No
03	Detected a buffer RAM anomaly upon startup.	[L ] and [0 3] appear alternately on the message display.	No
20	The Identify message detected a SCSI parity error after selection.	—	Yes
21	Detected SCSI parity error. Message Out phase retried but gave up.	—	Yes

Error code	Description	Display	Logged
22	Detected SCSI parity error. Command phase retried but gave up.	—	Yes
23	Detected SCSI parity error. Data Out phase retried but gave up.	—	Yes
24	Detected a parity error message. Message In phase retried but gave up.	—	Yes
25	Received Initiator detected error message. Message phase retried but gave up.	—	Yes
26	Received Initiator detected error message. Command phase retried but gave up.	—	Yes
27	Received Initiator detected error message. Status phase retried but gave up.	—	Yes
28	Received Initiator detected error message. Data In phase retried but gave up.	—	Yes
29	Received Initiator detected error message. Data Out phase retried but gave up.	—	Yes
2A	Received an illegal message from the SCSI interface.	—	Yes
2B	Received an illegal Identify message at the SCSI interface	—	Yes
2C	Failed reselection. Reselection retried but gave up.	—	Yes
2F	REQ/ACK handshake timeout or controller chip interruption timeout at the SCSI interface.	—	Yes
30	Reports a unit attention event.	—	Yes
31	An as yet unsupported LUN specified at the SCSI interface.	—	Yes
32	Loader not yet ready.	—	Yes
33	Loader front door open.	—	Yes
34	Currently in reprogramming mode.	—	Yes
35	Currently in menu mode.	—	Yes
36	Reported an information exception condition.	—	Yes
41	Reception of drive data timeout at the drive interface.	[L ] and [4 1] appear alternately on the message display.	Yes
42	Received data of abnormal length from drive at the drive interface.	[L ] and [4 2] appear alternately on the message display.	Yes
43	Drive detected as offline at the drive interface.	[L ] and [4 3] appear alternately on the message display.	Yes
70	Detected calibration error (lower sensor readings abnormal).	[L ] and [7 0] appear alternately on the message display.	Yes

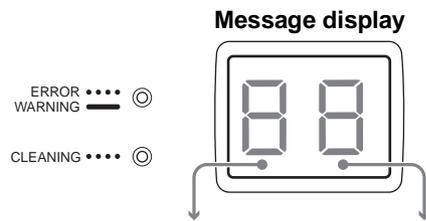
Error code	Description	Display	Logged
71	Detected calibration error (notch readings abnormal).	[L ] and [7 1] appear alternately on the message display.	Yes
72	Detected calibration error. (Upon calibration of the lower edge of the drive rim, it was detected that it needed to be calibrated above the upper limit.)	[L ] and [7 2] appear alternately on the message display.	Yes
78	Because cartridge pickup failed, when performing recovery it is impossible to do so because there are no available slots.	[L ] and [7 8] appear alternately on the message display.	Yes
7A	The door lock sensor does not close when attempting to lock the front door.	[L ] and [7 A] appear alternately on the message display.	Yes
7B	The door lock sensor does not lock when attempting to lock the front door.	[L ] and [7 B] appear alternately on the message display.	Yes
7C	The door lock sensor does not unlock when attempting to open the front door.	[L ] and [7 C] appear alternately on the message display.	Yes
80	Detected a GAP when the elevator is in movement.	[L ] and [8 0] appear alternately on the message display.	Yes
81	Cannot detect the normal number of notches when the elevator is in movement.	[L ] and [8 1] appear alternately on the message display.	Yes
82	The pulse of the last notch is determined to be $\pm xx$ mm out of position when the elevator is in movement.	[L ] and [8 2] appear alternately on the message display.	Yes
83	The pass sensor fails to change even if space between notches is 1.5 times wider when the elevator is in movement.	[L ] and [8 3] appear alternately on the message display.	Yes
88	Cannot detect the lower edge of the elevator during the initialization MOVE.	[L ] and [8 8] appear alternately on the message display.	Yes
89	Cannot detect the lower edge of the elevator during the calibration MOVE (in Type Drive).	[L ] and [8 9] appear alternately on the message display.	Yes
8A	Cannot detect the notch edge during the initialization MOVE.	[L ] and [8 A] appear alternately on the message display.	Yes
90	Detected a GAP at the end of the picker movement.	[L ] and [9 0] appear alternately on the message display.	Yes
91	Cannot detect the RVS sensor during picker movement.	[L ] and [9 1] appear alternately on the message display.	Yes
92	Cannot detect the FWD sensor during picker movement.	[L ] and [9 2] appear alternately on the message display.	Yes

Error code	Description	Display	Logged
93	Cannot detect the RVS/FWD sensors during the initialization MOVE.	[L ] and [9 3] appear alternately on the message display.	Yes
98	Failed cartridge pickup during GET operation. (Cannot detect the CTRG. sensor at the end of the GET operation.)	[L ] and [9 4] appear alternately on the message display.	Yes
99	Cannot clear the GAP during the GAP clear operation when retrying GET.	[L ] and [9 9] appear alternately on the message display.	Yes
9A	Failed to detect RVS sensor during elevator movement of the GET operation.	[L ] and [9 A] appear alternately on the message display.	Yes
9B	Failed to detect FWD sensor during elevator movement of the GET operation.	[L ] and [9 B] appear alternately on the message display.	Yes
9C	Detected a GAP at the end of the PUT operation.	[L ] and [9 C] appear alternately on the message display.	Yes
9D	The pass sensor cannot detect the cartridge at the end of the PUT operation.	[L ] and [9 D] appear alternately on the message display.	Yes
9E	Failed to detect RVS sensor during elevator movement of the PUT operation.	[L ] and [9 E] appear alternately on the message display.	Yes
9F	Failed to detect FWD sensor during elevator movement of the PUT operation.	[L ] and [9 F] appear alternately on the message display.	Yes
A0	Detected an empty slot.	[L ] and [A 0] appear alternately on the message display.	Yes
A1	Cannot perform the GET operation because the picker contains a cartridge.	[L ] and [A 1] appear alternately on the message display.	Yes
A2	Detected that all slots are occupied.	[L ] and [A 2] appear alternately on the message display.	Yes
A3	Cannot perform the PUT operation because the picker does not contain a cartridge.	[L ] and [A 3] appear alternately on the message display.	Yes
A4	The picker made a GET operation request while in the RVS position.	[L ] and [A 4] appear alternately on the message display.	Yes
A7	Detected a sensor anomaly. (GAP, cartridge, or pass.)	[L ] and [A 7] appear alternately on the message display.	Yes
A8	Detected a drive hardware error.	[L ] and [A 8] appear alternately on the message display.	Yes
A9	Detected a drive medium error.	[L ] and [A 9] appear alternately on the message display.	Yes
AA	Drive did not enter MOUNT state after a lapse of three seconds during the PUT operation.	[L ] and [A A] appear alternately on the message display.	Yes

Error code	Description	Display	Logged
C0	Detected a check sum anomaly during microcode update.	—	Yes
C1	Detected a F/W ID anomaly during microcode update.	—	Yes
C8	Detected a timeout when ejecting the media from the drive.	[L ] and [E 8] appear alternately on the message display.	Yes
E0	Cannot write data to flash memory within 1 ms.	[L ] and [E 0] appear alternately on the message display.	Yes
E1	Cannot clear flash memory sectors within 10 s.	[L ] and [E 1] appear alternately on the message display.	Yes
E8	Detected a check sum anomaly in the flash memory device setting area.	[L ] and [E 0] appear alternately on the message display.	No
F0	Detected a GAP sensor anomaly.	[L ] and [F 0] appear alternately on the message display.	Yes
F1	Detected a pass sensor anomaly.	[L ] and [F 1] appear alternately on the message display.	Yes
F2	Detected a cartridge sensor anomaly.	[L ] and [F 2] appear alternately on the message display.	Yes
F3	Detected a picker forward sensor anomaly.	[L ] and [F 3] appear alternately on the message display.	Yes
F4	Detected a picker reverse sensor anomaly.	[L ] and [F 4] appear alternately on the message display.	Yes
F5	Detected an elevator lower sensor anomaly.	[L ] and [F 5] appear alternately on the message display.	Yes
F6	Detected a door lock sensor anomaly.	[L ] and [F 6] appear alternately on the message display.	Yes
F7	Detected a door close sensor anomaly.	[L ] and [F 7] appear alternately on the message display.	Yes

# Other Messages

## Messages displayed during operation



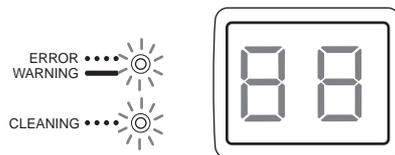
Left of the display	Right of the display	Description
8 (lit)	8 (lit)	Immediately after turning on the AIT autoloader.
≡ Flashing - consecutively up and down	Changes from 0 to 3	During startup. (The ERROR/WARNING and CLEANING LED also flash.)
≡ Flashing - consecutively up and down	Number of the moving cartridge, flashing	During cartridge movement or inventory.
	Number of cartridges	Standby. Displays the number of cartridges in the loader.
□ Rotating clockwise	Cartridge currently in drive, flashing	AIT drive in operation.
o (flashing)	P (flashing)	Unlocking the front door.
o (lit)	P (lit)	Front door unlocked and open.
C (flashing)	L (flashing)	When the CLEAN button is pressed or during cleaning. (See note 7 on page 54.)
E (flashing)	J (flashing)	When forcibly ejecting cartridges. (See note 4 on page 54.)
d (flashing)	r (flashing)	Disaster recovery mode. (See the note below.)

### Note

For details about the disaster recovery function, see “Disaster Recovery Function” (page 31).

## When problems occur

When problems occur, the ERROR/WARNING or CLEANING LED lights or flashes, and one of the following codes appears on the message display.



LED	Lit/Flashing	Code	Description	Remedy
ERROR/ WARNING	● ● ● ● Flashing (orange)	[L ] and [X X] appear alternately on the message display.	Loader error.	Restart the system and verify if the error message disappears. If it occurs again, note the error code and contact customer service for repair. For details on error codes, see “Error Code List” (page 47).
		[d ] and [X X] appear alternately on the message display.	AIT drive error.	
		[C ] and [X X] appear alternately on the message display.	Data cartridge error.	
ERROR/ WARNING	— Lit (orange)	0 1	Cartridge not completely inserted.	Open the front door and reinsert cartridges as necessary.
		0 3	Cleaning cartridge not inserted at the beginning of cleaning.	Insert the cleaning cartridge in slot CL/8.
		0 4	A data cartridge was inserted in slot CL/8 at the beginning of cleaning.	Insert the cleaning cartridge in slot CL/8.
		0 5	The DOOR button is pressed, when the front door is locked by an application.	Do not attempt to open the front door manually.
		0 6	Internal temperature abnormally high.	Make sure that the operating environment is within the allowed temperature limits (5 to 40°C) and verify that AIT autoloader fan is operating normally.
		0 7	Parts replacement needed.	For replacement parts, contact customer service.
		0 8	Too many cartridges in the loader. (There are cartridges in all the slots and the AIT drive.)	Eject one or more cartridges from the AIT autoloader.
		0 9	The internal temperature of the device is too low to guarantee operation.	Make sure that the operating environment is within the allowed temperature limits (5 to 40°C).
CLEANING	● ● ● ● Flashing (green)	C L	AIT drive cleaning request.	Clean the AIT drive. If the CLEANING LED starts flashing again, repeat cleaning up to three times. Also verify if the cleaning cartridge has reached the end of its service life. If after performing the above the CLEANING LED continues flashing, contact customer service for repair.

### Notes

- 1 To begin cleaning the AIT drive, insert the cleaning cartridge in slot CL/8 and press the CLEAN button for at least three seconds.
- 2 If you are unable to open the front door, it may be locked from your backup software.
- 3 If the cartridge is not ejected from the AIT drive when an error occurs, proceed as follows.
  - 1 Press the DOOR button for at least five seconds.  
The cartridge is forcibly ejected from the AIT drive and the front door unlocked.**
  - 2 Restart the system.**
  - 3 Restart the AIT autoloader.**
- 4 If [ □ ] appears to be rotating or [E J] flashes on the display, then the loader is in operation. Depending on the state of the cartridge, it may take up to 20 minutes for it to be detected.
- 5 Pressing the CLEAN and DOOR buttons simultaneously for at least five seconds starts Disaster recovery.
- 6 In the code reference table, “XX” refers to an error code.
- 7 Cleaning normally takes approximately one minute. If there is a cartridge in the AIT drive when you begin cleaning the drive, it is returned to its original slot before the cleaning procedure starts.  
If you are writing to a damaged cartridge, unloading may take some time. For this reason, cleaning can take up to 20 minutes.

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For information about the AIT autoloader, refer to your reseller.

Sony Corporation