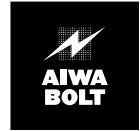


aiwa



TD-P10 U

TAPE DRIVE

Hardware Requirements

Use this unit with a computer whose parallel port supports the EPP mode or the ECP mode.

Hardware Installation Manual

To Call Technical Support
(800) 920-2673
8:00AM to 5:00PM pacific time,
Monday through Friday

OWNER'S RECORD

For your convenience, record the model number and serial number (you will find them on the bottom of your set) in the space provided below. Please refer to them when you contact your AIWA dealer in case of difficulty.

Model No. Serial No.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

EMI/EMC

■ FCC Part 15B, Class B

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.



Caution

Shielded I/O cables must be used when operating this equipment.

A shielded power cable must be used when operating this equipment.

■ C108.8-M1983, Class B

Industry Canada Compliance statement:

This equipment does not exceed class B limits for radio noise emissions for digital apparatus set out in the Radio Interference Regulation of the Industry Canada. Operation in a residential area may cause unacceptable interference to radio and TV reception requiring the owner or operator to take whatever steps are necessary to correct the interference.

Avis de conformité aux normes du ministère de l'Industrie du Canada:

Cet équipement ne dépasse pas les limites de Classe B d'émission de bruits radioélectriques pour les appareils numériques telles que prescrites par le Règlement sur le brouillage radioélectrique établi par le ministère de l'Industrie Canada. L'exploitation faite en milieu résidentiel peut entraîner le brouillage des réceptions radio et télé, ce qui obligerait le propriétaire ou l'opérateur à prendre les dispositions nécessaires pour en éliminer les causes.

Safety

■ UL 1950 IEC 950 A1, +A2, +A3

■ cUL-22.2-950 A1, +A2, +A3

Table of Contents

Important Notes on Operation	4
Overview	7
Tape Cartridges	7
System Prerequisites	9
Preparation	10
Checking the Contents of the Package	10
Names and Function of Parts	11
Setting the Tape Drive	12
Connection	13
Drive Operation and Maintenance	15
Turning the Power On	15
Write Protection	16
Inserting and Removing Tapes	16
Cleaning the Read/Write Head	18
Installation of the Backup Software	20
Troubleshooting	23
Technical Support	25
Specifications	27

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QIC-EXtra is a trademark of Verbatim Corporation.

TRAVAN™ is a trademark of Imation Enterprises Corporation.

QIC-WIDE is a trademark of SONY Corporation.

Windows, Windows 95, Windows 98 and Windows NT are trademarks of Microsoft Corporation.

Pentium is a registered trademark of Intel Corporation.

All other names and product names are the property of their respective owners.

Important Notes on Operation

Limitation of liability

Under no circumstances can Aiwa Co., Ltd. accept liability for incidental or consequential damage to data recorded on tapes due to malfunctions or improper operation of this unit.

Warning

- Do not attempt to disassemble or modify this unit. Doing so can result in malfunctions or accidents.
- Do not insert your fingers or other parts of the body into the tape insertion slot. Doing so can result in injury. Be especially careful to keep the hands of small children away from this unit. Do not insert foreign objects into this unit. Doing so can result in malfunctions.
- While this unit is operating, the bottom of the tape cartridge becomes hot. Be careful not to touch it, as this can result in burns.
- The tape drive is fitted with a cooling fan to prevent the internal temperature becoming excessive. Ensure that the unit is operated at a suitable spacing from walls and other obstructions, so that there is a clear passage of air to the fan. Operating the unit when the fan is obstructed can lead to malfunctions.
- Take great care when carrying the drive not to subject it to unreasonable shock. Even if there is no external sign of damage, the internal mechanism could be damaged.

Caution

- Before beginning the job of installing this unit, disconnect the computer and any connected peripherals from the AC power supply. Carrying out the job while the computer is still connected to the power supply can result in electric shock.

Before beginning the installation, read carefully the instructions with this unit, and observe all warnings and cautions.

- Do not use this unit when it is affected by condensation: this can result in damage to the read/write head, or jammed or broken tapes. The same problems can result when there is condensation inside a tape cartridge. After moving a tape cartridge from a cold to a warm place, wait for two or three hours before inserting it in this unit.

Turning the unit on and off

After turning off the power, **be sure to wait for at least 10 seconds before turning the unit on again**; otherwise the unit may malfunction and data read/write operation may not be correctly effectuated.

Read/write head cleaning

When cleaning the read/write head, be sure to turn the unit off.

Never power on this unit when cleaning the read/write head with a lint-free cotton swab moistened with more than 90% isopropyl alcohol, until the read/write head is dry.

After cleaning, wait for at least 10 minutes for the read/write head to dry completely before powering on. Failure to do so will damage the head electrically.

Cartridge retensioning

A retensioning pass (running the tape from end to end) is strongly recommended when (a) the cartridge is first loaded into a drive, (b) the cartridge is exposed to temperature changes of 16°C or more, or (c) one section of tape has been used excessively in a single operating period.

Operating conditions

To keep this unit working properly, follow these guidelines.

- Do not operate this unit in a dusty environment.
- Clean the read/write head at the recommended intervals. (*See page 18.*)
- Do not leave a tape cartridge loaded when the computer system is not in use.
- Do not remove the tape cartridge when the drive is being accessed (when the ACCESS indicator is lit steadily or blinks).
- Keep tape cartridges away from magnetic fields, sunlight, extreme humidity and extreme temperatures.
- Store tape cartridges in their protective cases.
- Do not use this unit where it may be subject to vibration or shock.

Important Notes on Operation

Maximum length of the interface cable

The total length of the interface cable from the computer to the tape drive and from the tape drive to the printer should not be more than 10 feet (3 meters).

It is not possible to use the printer and tape drive at the same time.

If you attempt to print while using the tape drive, the tape drive will give an error and stop operating, and the printed results cannot be guaranteed. The effect of attempting to use the tape drive during printing is similar.

When turning on the computer

Be sure to turn on the tape drive first before turning on the computer; otherwise the computer cannot control the tape drive and a printer or any other device connected to the tape drive.

If the monitor screen was distorted

The PC monitor screen might be distorted if you put this tape drive near the monitor. In this case, set this tape drive more than 5 inches (12.7cm) away from the monitor.

Overview

This tape drive is designed as a backup device for installation into an IBM-PC or an IBM-compatible PC.

This unit can be connected to any computer, desktop or laptop, equipped with a 25-pin printer connector. A printer or another parallel port device can be connected in a daisy chain from the tape drive. (The printer or the device operates only when the tape drive is powered on.)

This unit can read and write AIWA BOLT formatted data, and read QIC-3020 formatted data.

This unit can store compressed data of a maximum capacity of 10 GB with an AIWA BOLT 10GB tape cartridge, using the backup software supplied with this unit.

This unit can read and write data which has been compressed by software at a compression rate of 2:1, at a maximum backup speed of 40 MB per minute, provided that this unit is connected to the computer via the Enhanced Parallel Port (EPP).

Tape Cartridges

Recommended Pre-Formatted Tape Cartridges (Read/Write)

Tape Cartridge Type	Read	Write/Format	Capacity	
			* With Compression	Without Compression
AIWA BOLT 10GB	Yes	Yes	10GB	5GB
AIWA BOLT 6.6GB	Yes	Yes	6.6GB	3.3GB

- * The figures for capacity with compression are calculated on the basis of a 2:1 compression ratio.
The compression is carried out by software, and the compression ratio depends on the data being compressed.

Overview

Read-Only Tape Cartridges

QIC Format				
Format	Tape Cartridge		Model Number	Tape Length
	Type	Manufacturer		
QIC-3020	QIC-EXtra	Verbatim	TR-3 EXtra	1,000 ft
			MC 3020 EXtra	1,000 ft
	TRAVAN	Imation (3M)	TR-3	750 ft
	QIC-WIDE	Sony	QW3020XLF	400 ft
	XL	Imation (3M)	MC 3000XL-TAUMAT	400 ft

System Prerequisites

Before connecting this unit to your computer, make sure that you have the necessary hardware and information.

Hardware Requirements

To install this unit, your computer must be a 486-, or Pentium-based computer that has the following:

- A parallel port (printer port)
- A CD-ROM drive to install the backup software

It is strongly recommended to use this unit with a computer whose parallel port supports the EPP (Enhanced Parallel Port) mode or the ECP (Extended Capabilities Port) mode.

Data backup speed may be considerably slowed down when using the standard type or bi-directional type parallel port.

If your computer does not meet these prerequisites, contact your computer dealer or manufacturer to upgrade your system.

Operating System Requirements

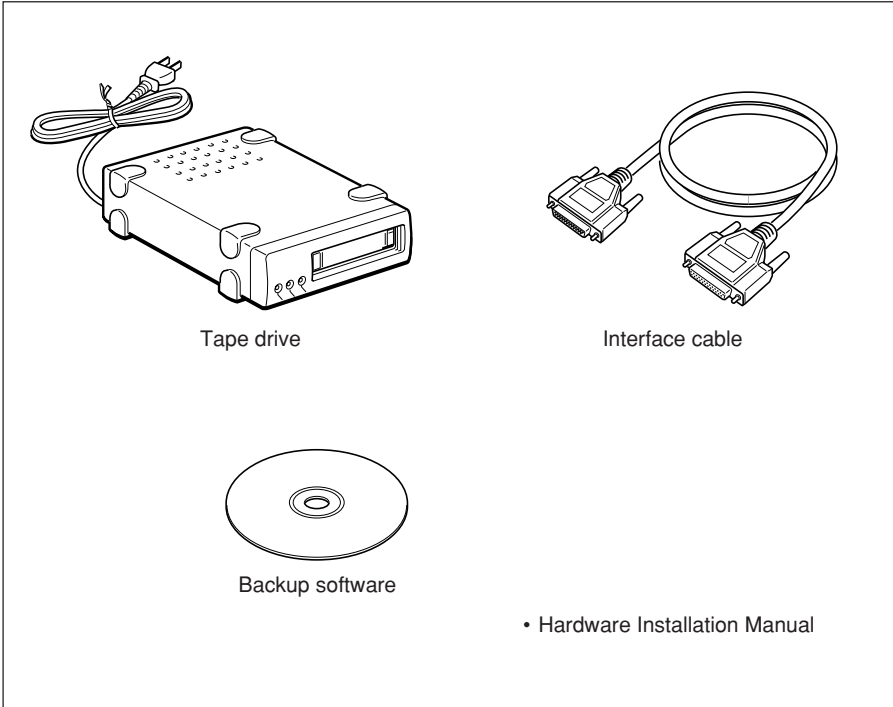
This unit works with any of the following operating systems:

- Microsoft Windows NT Workstation (version 4.0)
- Microsoft Windows 95
- Microsoft Windows 98

Preparation

Checking the Contents of the Package

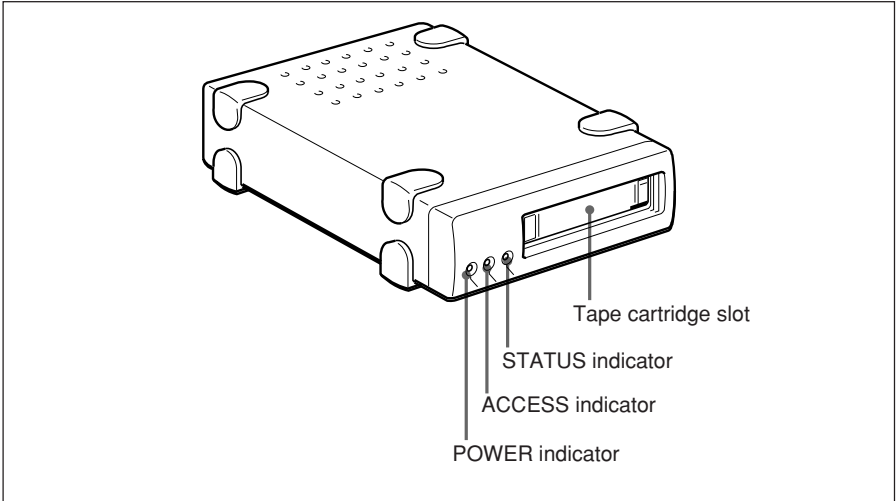
Before installing this unit in your computer, make sure that the package contains the following items.



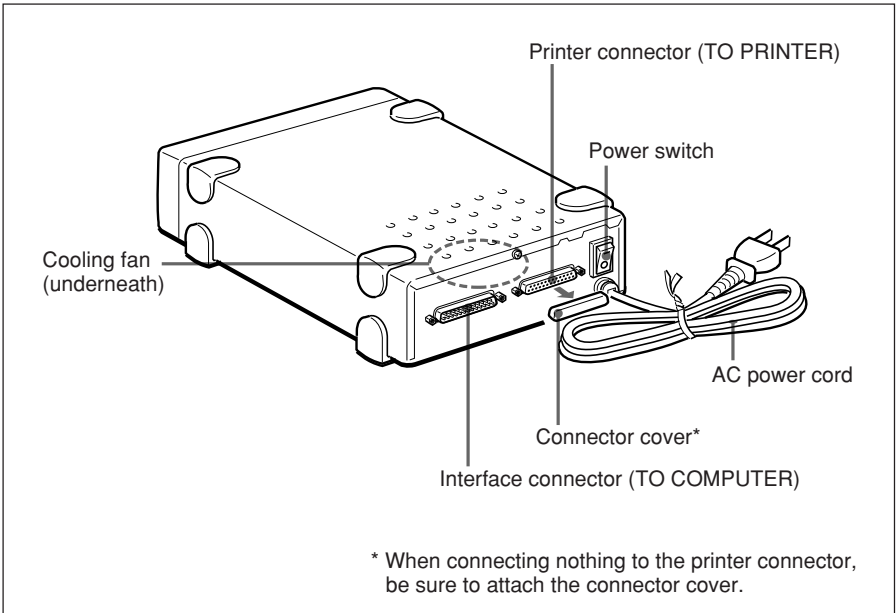
Note

Remember to keep all packing materials for later use, especially the polystyrene foam cushioning and the antistatic bag which contains the tape drive.

Names and Function of Parts



Front panel



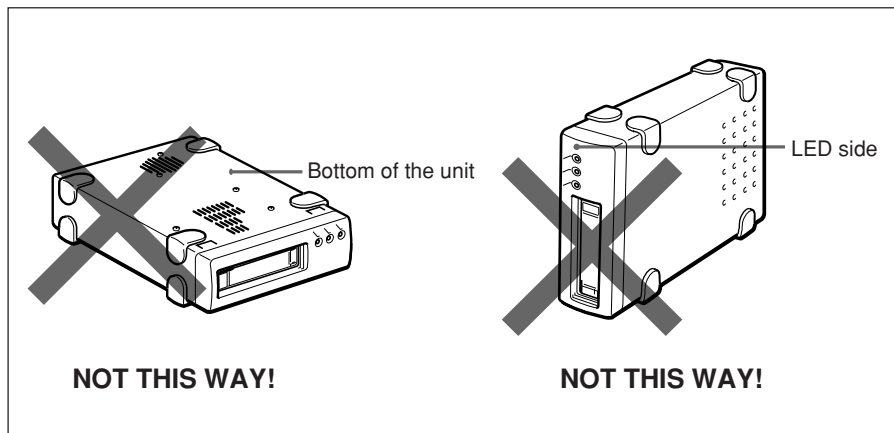
Rear panel

Preparation

Setting the Tape Drive

You can set this unit either horizontally or vertically.
Set the unit on a flat place.

Do not, however, place the unit with its bottom or the LED side facing upward .



Note

Do not use this unit where it may be subject to vibration or shock.

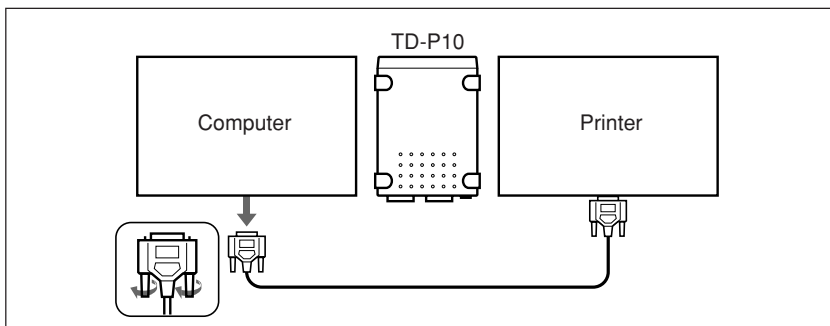
Connection

Precaution

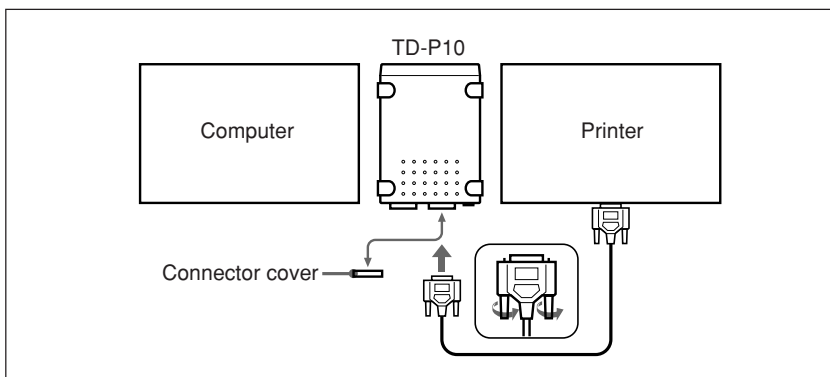
Before connecting the tape drive, power off your computer system and disconnect the computer and any connected peripherals from the AC power supply.

1 Power off the computer system and printer, and disconnect all plugs from the AC power supply.

2 Disconnect the printer cable from the computer.



3 Plug the connector detached in step 2 to the printer connector (TO PRINTER) on the rear of the tape drive.

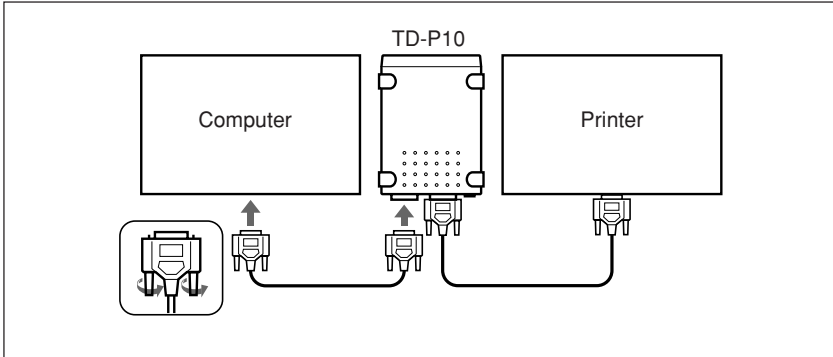


Note

The connector cover for the printer connector on the tape drive protects the tape drive from static electricity, and protects the connector from dust and rust. Be sure to fit the connector cover when nothing is connected to the printer connector for a long time.

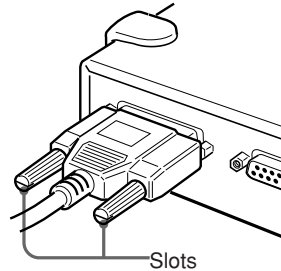
Connection

- 4 Connect the tape drive and the computer using the supplied interface cable.

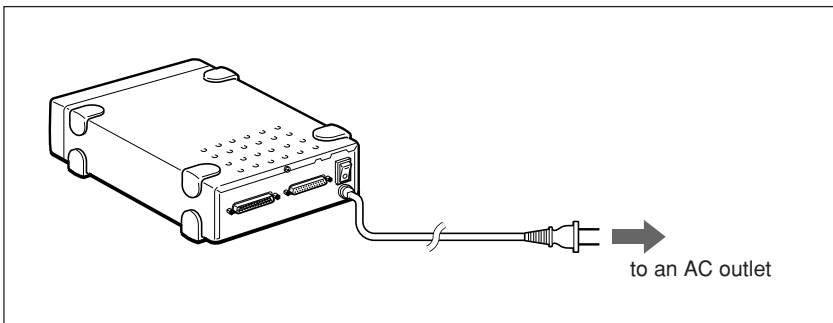


Note

The slots in the fixing screws of the interface connectors are for undoing the connectors with a screwdriver or coin, if they are too tight to undo by hand. Fasten the connector screws by hand. If it is necessary for any reason to use a screwdriver or coin, be very careful not to overtighten the screws. If overtightened, it may become impossible to disconnect the cable.



- 5 Connect the AC power cord to an AC outlet (120V AC, 60Hz).



Drive Operation and Maintenance

Turning the Power On

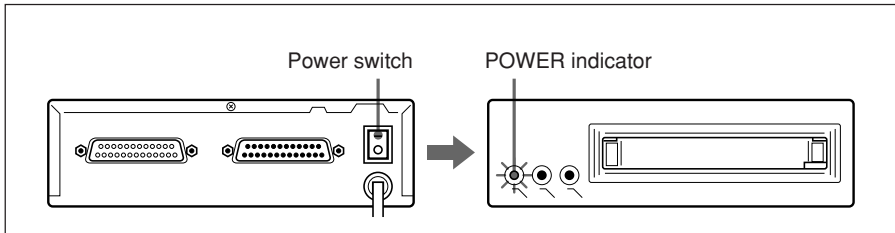
Turn on the tape drive, the printer and the computer in the following order.

- 1 The tape drive
- 2 The printer
- 3 The computer

Note

If you turn on the computer before turning on the tape drive, you cannot control the tape drive from the computer.

Press the upper side of the power switch on the rear to turn on the tape drive. The POWER indicator lights up.



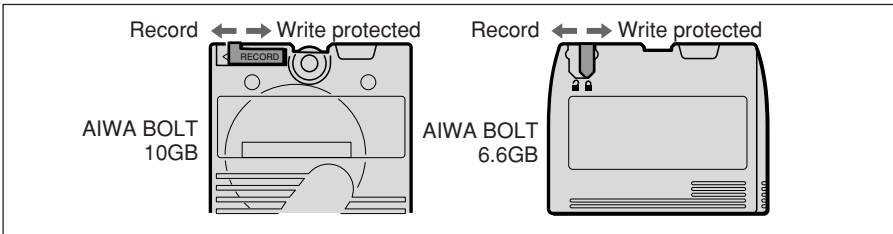
To turn off the tape drive, press the lower side of the power switch.

Drive Operation and Maintenance

Write Protection

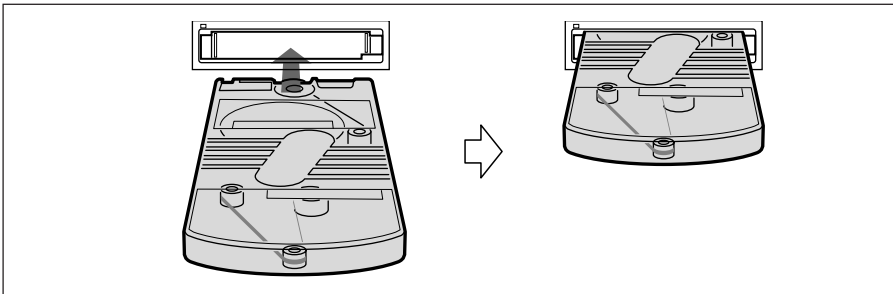
The tape cartridge has a Write-Protect function to prevent recording over existing data on tape. A Write-Protect tab is located on the top side of the tape cartridge in the upper left corner.

To write protect a tape cartridge, slide the tab completely to the right (locked position). To allow writing to the tape cartridge, slide the tab completely to the left (unlocked position).



Inserting and Removing Tapes

Hold the tape cartridge and insert it as illustrated below. Push the cartridge in until it locks into place with a click.



When the cartridge is loaded, the ACCESS indicator on the front panel blinks in green.

Once the cartridge is ready for operation at Beginning-Of-Tape (BOT), the ACCESS indicator goes off.

Note

Wait for about 1 minute until the ACCESS indicator goes off and the cartridge is ready for operation. A mechanical sound is heard during this period, but this is not a problem.

Cautions

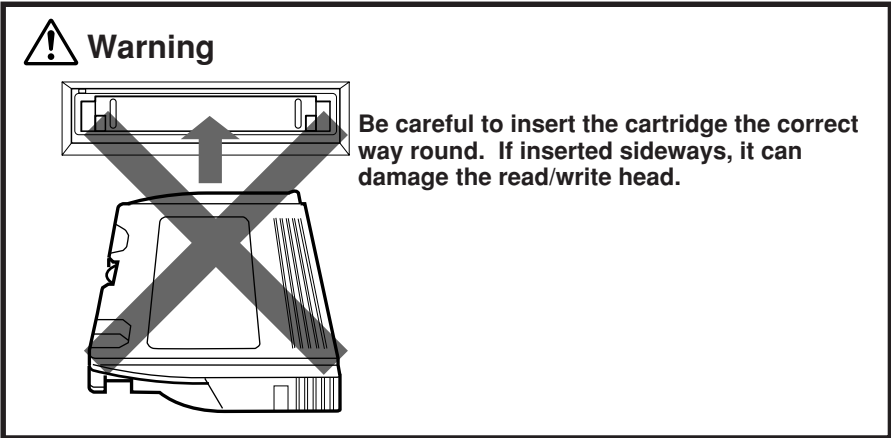
- Note that the indicator blinks in green whenever this unit is being accessed. Do not remove the cartridge from this unit while it is being accessed.
- With the tape cartridge in the correct orientation, push it gently in until it clicks. Never force the cartridge if it does not slide in easily.

The color of the indicators on the front panel will show the state of the unit as shown below.

Indicator (color)	State	Meaning
ACCESS (green)	Off	Tape stopped at BOT or no tape in this unit.
	On	Tape stopped, but not at BOT
	Blinking	Tape in motion
STSTATUS (amber)	Blinking	Tape drive failure or tape failure
POWER (green)	On	Power is turned on.

Note

If the ACCESS indicator blinks in red, remove the cartridge from the unit, then re-insert it. If the indicator still blinks in red, use a new tape cartridge.



Cleaning the Read/Write Head

Caution: The Read/Write Head damage

This unit adopts the MR (Magneto Resistive) Head for the read/write head so that the high density recording is realized. The MR Head is however very sensitive to moisture.

To avoid damaging the head as cleaning:

- Power off your computer before cleaning the head by using a lint-free cotton swab moistened with more than 90% isopropyl alcohol.
- Wait for at least 10 minutes for the head to dry completely.
- Never use QIC-80 Cleaning Cartridge or QIC-80 Cleaning Kit.

Failure to do so will electrically damage the head.

There are two kinds of methods to clean the read/write head.

- One is the method to use the Geneva C³ IRTTAPE Cleaning Cartridge or Imation TRAVAN NS Dry Process Head Cleaning Cartridge.
- Another is the method to use a swab which is dampened with more than 90% isopropyl alcohol.

Clean the read/write head of this unit in the following cases:

- After a new tape cartridge is used.
- If a data error occurs.
- After every 8 hours of tape operation.

Cleaning the Read/Write Head with the Geneva Cleaning Cartridge or Imation TRAVAN NS Dry Process Head Cleaning Cartridge

Before cleaning the read/write head, make sure this unit is powered on.

Follow the instructions included with the cleaning cartridge.

Note

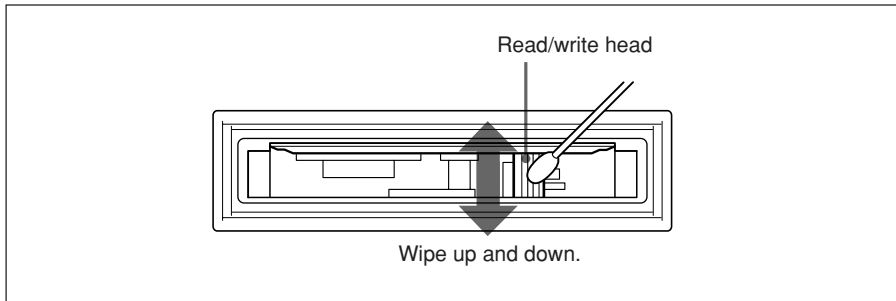
The cleaning cartridge tested and approved by AIWA for use with this unit is the Geneva C³ IRTTAPE Cleaning Cartridge (Part Number: GEN 100-1) or Imation TRAVAN NS Dry Process Head Cleaning Cartridge.

Cleaning the Read/Write Head manually

Before cleaning the read/write head manually, make sure this unit is powered off.

Hold the access door open and gently wipe the read/write head up and down as shown below. For cleaning, you may use a lint-free cotton swab moistened with more than 90% isopropyl alcohol. Wait for at least 10 minutes for the head to dry completely after cleaning.

Never power on this unit before the read/write head is dry. Doing so will electrically damage the read/write head.



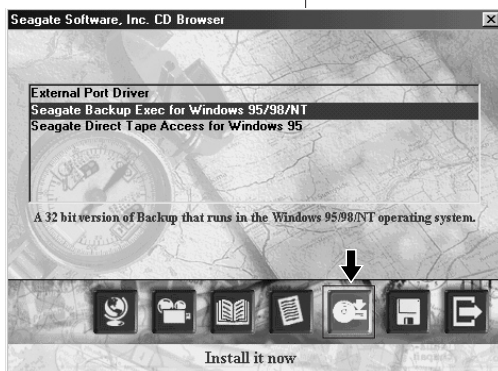
Installation of the Backup Software

This section provides instructions for loading the software driver to enable Windows 95/Windows 98 to operate this unit. For Windows NT Workstation 4.0, refer to the instructions inside the case of backup software CD-ROM.

- 1 Put the backup software CD-ROM in your CD-ROM drive to install the backup software.**
- 2 The CD Browser is displayed automatically on the Windows 95/Windows 98 desktop.**

Choose Seagate Backup Exec for Windows 95 (Windows 98), then click the installation button.

Follow the instructions of the backup software. After completing the installation, you can use this unit in the Windows 95 (Windows 98) environment.



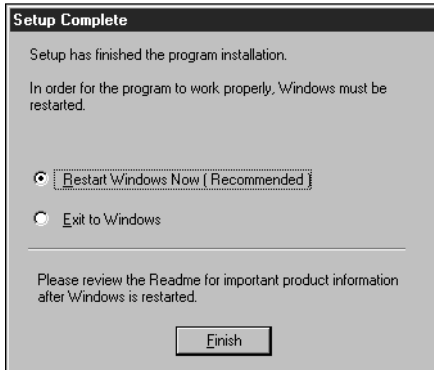
The actual contents of the CD Browser display might be different from the above example.

Note**To install Direct Tape Access**

If you have not installed the External Port Driver or the Backup.Exec program itself has not yet been installed, be sure to install the External Port Driver from the CD-ROM before installing and using the Direct Tape Access.

Note

Depending on the circumstances, it may take a few minutes to display the Setup Complete dialog box after all necessary information is input.



Troubleshooting

- **The tape drive is not recognized**

- a) Check that this unit is correctly connected. (See page 13.)
- b) Check the total length of the interface cable and printer cable. The total length of the cables should not exceed 10 feet (3 meters).

- **It is not possible to carry out a backup**

- a) The tape cartridge is write-protected. In this case slide the tab to the left (unlocked position).
- b) The tape cartridge is not in AIWA BOLT format. Replace it with a tape cartridge in AIWA BOLT format. (See page 7.)
- c) This is not a tape cartridge which can be used with this unit. Replace it with an appropriate cartridge. (See page 7.)

- **A 10 GB backup is not possible on an AIWA BOLT formatted AIWA BOLT 10GB**

- a) The basic capacity of an AIWA BOLT 10GB is 5 GB. The figure of 10 GB assumes software data compression at a ratio of 2:1. The compression ratio depends on the data concerned, so a capacity of 10 GB may not always be attainable.

- **An error message occurs during a compare or restore operation**

- a) Use the Tape Tool provided as part of the backup software to retension the tape. This may eliminate the problem.
- b) The read/write head may be dirty. Carry out head cleaning.
For head cleaning, always follow the instructions in "Cleaning the Read/Write Head" in this manual (page 18).
- c) If neither of these measures eliminates the problem, try using a new tape cartridge.

- **The time taken for a backup is much longer than expected**

- a) When reading a large number of small files, the file access time is a significant factor. This is not a malfunction.
- b) The drive may be stopping frequently because of the time taken for software data compression. Setting the software compression mode to “Compress data to save time during backup” or “Never compress the data” may eliminate the problem. If changing the software compression mode setting does not improve the performance, the computer processing speed may be inadequate.
- c) Use the Tape Tool provided as part of the backup software to retension the tape. This may eliminate the problem.
- d) The read/write head may be dirty. Carry out head cleaning.
For head cleaning, always follow the instructions in “Cleaning the Read/Write Head” in this manual (page 18).
- e) If none of these measures eliminates the problem, try using a new tape cartridge.
- f) When the parallel port of the computer used to connect the tape drive does not support the EPP mode or the ECP mode, the backup speed will considerably be slowed down, but this is not a problem. Using a computer having a parallel port that supports the EPP or the ECP mode is strongly recommended.

Technical Support

If problems arise during the installation or use of an AIWA product, AIWA's Technical Support staff is available to help you. During regular business hours (8:00 AM to 5:00 PM pacific time, Monday through Friday), calls will be directly answered by the Technical Support Staff.

Before calling, perform the following procedures.

- (a) Have the model number and the product serial number readily available.
- (b) Record all error messages, numbers and descriptions. Also, record precisely when the error message was received and what was being done as the failure occurred.
- (c) Check all cable connections (including the cord that connects the computer to the electrical outlet) to make sure that all the cables are connected securely. This is especially important if the computer system has been recently moved.
- (d) Ensure that all add-on cards are properly seated and that the settings correspond to the configuration requirements.
- (e) Make sure the unit is in an area where both it and a telephone are easily accessible.
- (f) Call AIWA Technical Support at the hours and numbers listed on the cover of this manual. The technical support staff will ask several questions regarding the problem. The staff may also suggest tests for troubleshooting purposes. If the support technicians cannot help resolve the problem by telephone, arrangements will be made to replace the unit. A Return Merchandise Authorization number (RMA) will be issued so that the return can be processed. The RMA number cannot be issued unless the above procedure has been followed in full. No package will be accepted for replacement unless it is labeled with a valid RMA number and returned in its original packaging, or the equivalent.

Technical Support

Important

Never ship electronic products unprotected.

Static electricity can damage or destroy sensitive equipment. The original packaging used by AIWA included an anti-static bag to protect the product.

Use both the original anti-static bag and the exterior box (or an equivalent anti-static bag and box) if an AIWA product needs to be returned to AIWA.

Failure to do so will void the warranty on the product.

Specifications

Recording format	AIWA BOLT Format
Formatted capacity	5 GB (AIWA BOLT 10GB, 1200 ft. length) 3.3 GB (AIWA BOLT 6.6GB, 750 ft. length)
Backup speed	Maximum 25MB/min. (via the Enhanced Parallel Port, without data compression and with no other job to be executed by the CPU) 2.00 Mbps (QIC-3020 Format only)
Power requirements	120 V AC, 60 Hz, 0.45A
Operating temperature	10°C to 35°C (50°F to 95°F)
Relative humidity	20% to 80% (no condensation)
Dimensions (w/h/d)	173 x 60 x 231 mm (w/h/d) (6 ⁷ / ₈ x 2 ³ / ₈ x 9 ¹ / ₈ inches)
Weight	2.5 kg (5 lb 8 oz)
Interface	Parallel port (EPP or ECP recommended)

Design and specifications are subject to change without notice.

AIWA CO.,LTD.

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