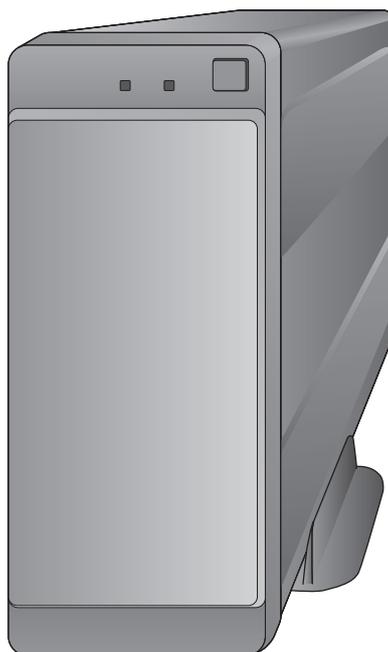


Operating Instructions <Operator Guide>

DATA ARCHIVER

Model No. **LB-SC9**



Thank you for purchasing this product.

This instruction describes how to use the DATA ARCHIVER.

- Please read these instructions carefully before using this product, and save this manual for future use.
- Before using this unit, read “Operating Instructions <Preparation before using>” and observe the instructions in that document.

Troubleshooting

Troubleshooting guide (⇒ 27 ~ 29)

Errors and warnings (⇒ 30 ~ 34)

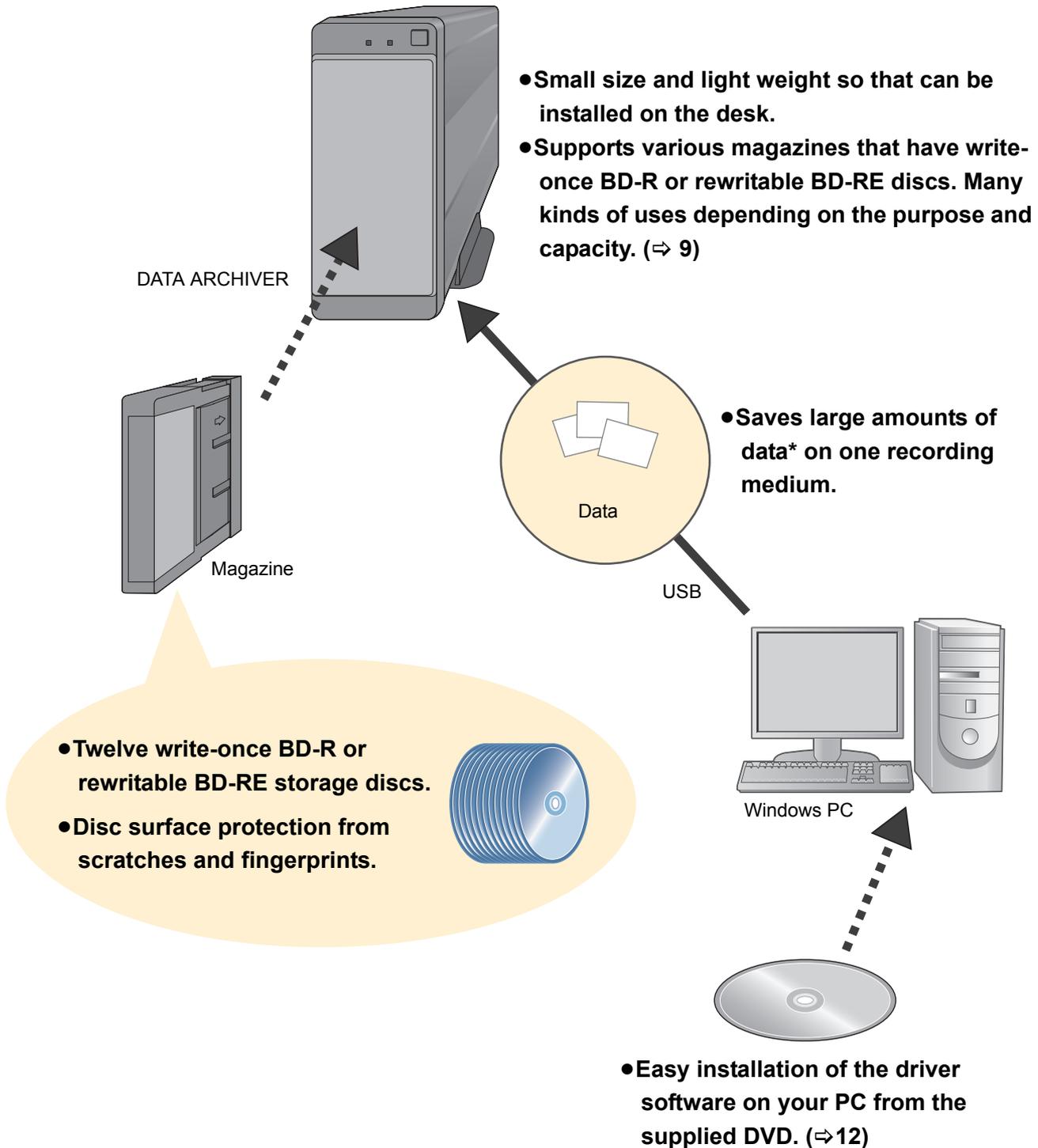
For the latest support information, please check the support site below.

<http://panasonic.net/avc/archiver/lb-sc9/support.html>

Functions of the unit

The unit is a magazine drive that can store data for a longer period in a magazine that has a BD-R or BD-RE disc.

The unit is able to write or read data between a magazine and a PC connected via USB.

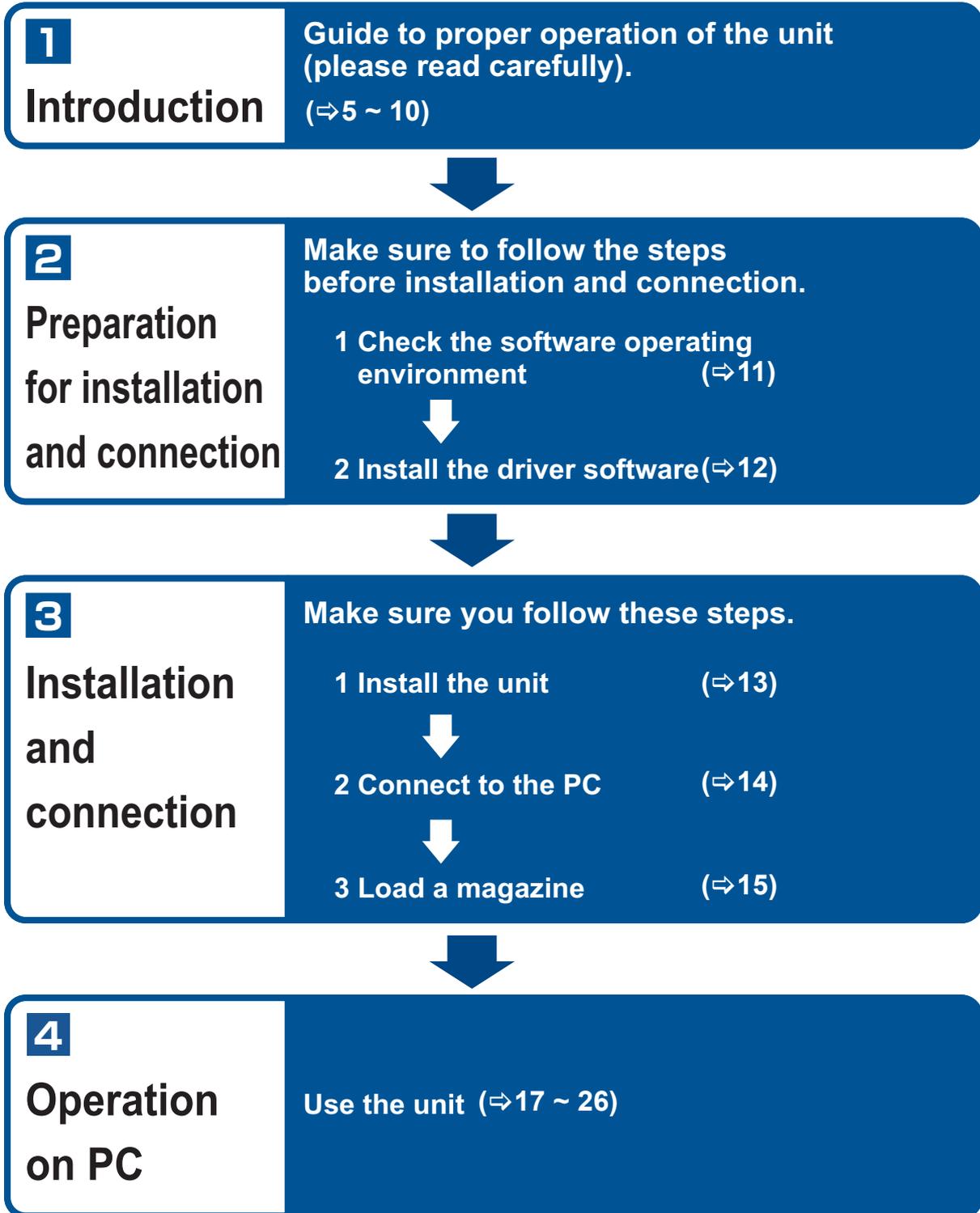


* **Maximum device capacity**

An available magazine has a maximum capacity of 1.2 TB (unformatted BD-R magazine [not supplied]).
(⇒ 5)

Guidelines to operate the unit

Follow the steps below to operate the unit properly.



■ Updating the firmware (⇒ 26)

The firmware and driver software of the unit may be updated for operational improvements and the addition of new functions.

For more information about the updates, please visit the support site below.

<http://panasonic.net/avc/archiver/lb-sc9/support.html>

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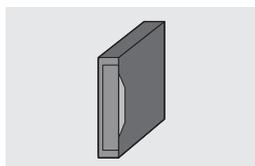
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■ **Illustrations and notations in this document**
Please note that the figures, illustrations, and screenshots for the products in these Operating Instructions may differ slightly.

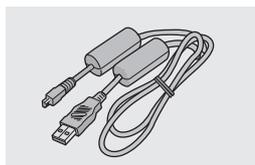
Before using the unit

Accessories

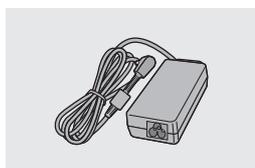
Check the accessories before using the unit.



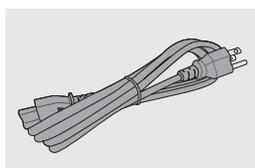
- 600 GB BD-R magazine: 1**
- Spine label: 1



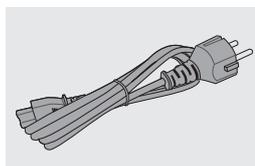
- Dedicated USB cable: 1**
- K1HY09YY0017



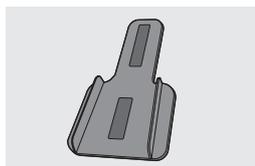
- AC adaptor: 1**
- CF-AA6373A



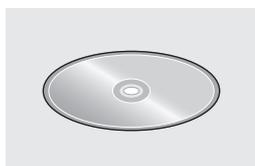
- AC cable: 1**
- For the U.S.A.
- K2CG3YY00181



- For Europe
- K2CMZYY00001



- Pedestal: 1**
- SFB0003



- DVD: 1**
- Driver software (⇒ 12)
- Operator guide
(This instruction)



- The illustrations and the actual product may be different.
- Product numbers supplied in these Operating Instructions are correct as of September 2015. These may be subject to change.
- **Do not use any other AC adaptors except the supplied one.**
- **Use the supplied AC cable, AC adaptor, and the dedicated USB cable. The unit and the PC may be damaged if accessories other than those supplied are used.**
- **The AC cable is dedicated to the unit. This should not be used for another device. In addition, the AC cable for another device should not be used for the unit.**

Optional accessories

The following optional accessories can be applied to the unit.

Product name	Product number
1.2 TB BD-R magazine	LM-BW12LB1G
600 GB BD-R magazine	LM-BW6LB1G
600 GB BD-RE magazine	LM-BX6B1G

- Product numbers provided in these Operating Instructions are correct as of September 2015. These may be subject to change.

For the latest information on the optional accessories, please refer to our catalog or website.
<http://panasonic.net/avc/archiver/lb-sc9/option.html>

Cautions for use

Handling the unit

To prevent damage to or malfunction of the unit, the following must be observed:

- Do not drop the unit or subject it to severe vibration or impact.
- Do not pour or spill liquid, such as tea or juice, on the unit.

Installation of the unit

- Do not leave or use the unit in a closed car, a place exposed to direct sunlight for a long period of time or a place near a heater.
- Install the unit in a location where “condensation” is unlikely to occur.
- Do not install the unit in an unstable location.
- Do not install the unit in the front of a PC fan.
- Do not place the units on top of each other.
- Do not place heavy objects on the unit.

Condensation

If you take out a cold glass bottle from a refrigerator and leave it for a while, water droplets will form on the bottle's surface. This phenomenon is called “condensation”.

- Conditions susceptible to “condensation”:
 - When the unit has experienced a drastic change in temperature (e.g., when it has been moved from a warm place to a cold place or vice versa, placed in a room that is being rapidly cooled or heated, or exposed directly to cool air from an air conditioning unit)
 - When the humidity in the room is high (e.g., when the room is steamy)
 - During rainy seasons
- Since “condensation” may cause malfunction, leave the unit turned off until it is adjusted to the temperature of the room (approximately 2-3 hours).

AC adaptor

Install the unit near an AC outlet so that a power disconnecting device (AC cable plug) can be accessed easily by hand.

- The unit consumes power when the AC adaptor is connected (⇒ 35). If the unit will not be used for a long time, we recommend disconnecting the power plug from the AC outlet in the interest of power conservation.
- Keep the prongs of the AC adaptor clean.

Cleaning the unit

Disconnect the unit from the attached equipment and unplug the AC adaptor, wipe the unit with a soft, dry cloth.

- When the unit is very dirty, use a damp cloth and then wipe the unit with a dry cloth.
- Do not use solvents, such as benzene, paint thinners, alcohol or kitchen detergent. It may cause deterioration of the outer case or paint will be removed.
- When you use wipes, follow the product instructions.

Transferring or discarding the unit

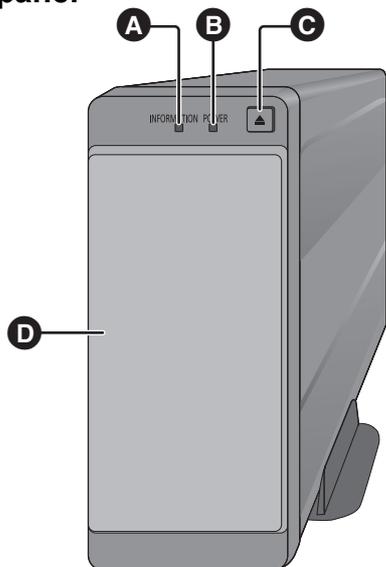
- When you wish to transfer or discard the PC that contains the driver software installed from the supplied DVD or the backup medium for the settings, we recommend reformatting the disc or physical destruction to prevent information leakage.
- When discarding the product, please follow the instructions of each local government.

Disclaimer

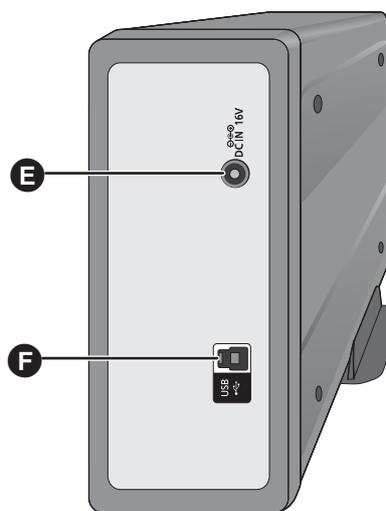
- Panasonic assumes no responsibility whatsoever for any cost for direct or indirect damage and data loss resulting from use of this software or any other fault during/after the warranty period.
- The management of data stored in the DATA ARCHIVER Magazine is the responsibility of the user. We advise you to verify operation before you use the unit and make sure that you have a backup of critical data.
- The driver software (supplied DVD) and the information contained in this document are subject to change without notice.
- Successful operation is not guaranteed on all PCs with the recommended operating environment.
- You are allowed to duplicate or modify the copyright work, such as various discs including music CDs, images and information on the Internet that is produced by using the unit, under copyright law for limited personal or household use (hereinafter "Personal Use").
- Except for personal use, any duplication or modification of the work without prior authorization of the copyright owners is prohibited by copyright laws. Also, the duplication of the works might be limited or prohibited according to the terms of the license agreements. Even if in terms of personal use, please follow the terms of the license agreements.

Functions of Components

Front panel



Rear panel

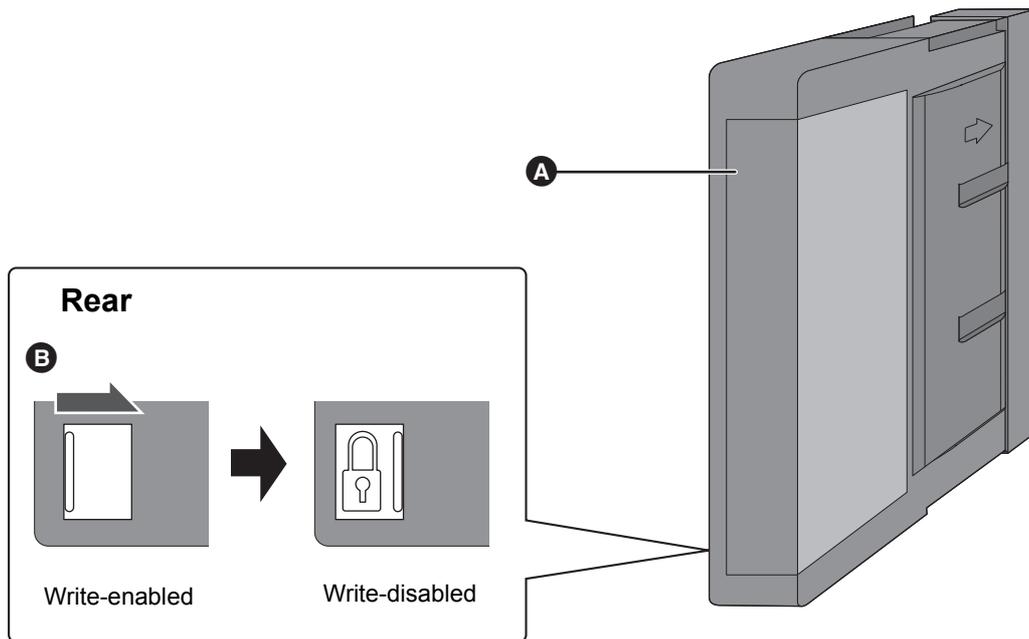


A	INFORMATION LED	<p>Indicates the operating state of the unit.</p> <ul style="list-style-type: none"> – Flashing (green): When the unit is accessing (When writing a file, or the magazine is loaded) – Flashing (red): When the unit can not access because of wrong unit placement. (⇒ 13) – Lights-up (red): When an anomaly or an error of the unit occurs.
B	POWER LED	<p>When power is turned on, lights up green.</p> <ul style="list-style-type: none"> • The unit turns on automatically when the AC adaptor is connected to the unit.
C	Eject button	Press the button to eject the magazine. (⇒ 15)
D	Magazine door	<p>Opens or closes when loading or ejecting a magazine.</p> <ul style="list-style-type: none"> • To prevent foreign matter such as any dust, be sure to close the magazine door except for loading or ejecting a magazine.
E	DC IN terminal	Connect to the AC adaptor (supplied) for the power supply.
F	USB port	Connect to the PC with the dedicated USB cable (supplied).

- When disconnecting the unit from the PC, always follow the procedures described in this instruction. (⇒ 16)
- Do not affix magnetic objects to the front panel. Cash cards or commute tickets may become unusable due to the magnetic fields.

Magazine

Use a supplied magazine or dedicated magazine (optional) for the unit. (⇒ 5)



A	Spine label area	<p>Attach the label included with the package to the magazine, if desired. Align and attach the label in the recessed area.</p> <ul style="list-style-type: none"> • Avoid wrinkles and bubbles when attaching the label. • Do not attach any metal material. • The label should be attached in the defined area. • Replace the label when dirty or when any part of the label is peeling. • Do not overlabel.
B	Write-protect switch	<p>Switch for preventing data from being erased or overwritten by mistake. Before loading a magazine into the unit, make sure that the write-protect switch at the rear of the magazine has been set in the correct position.</p> <ul style="list-style-type: none"> – Write-enabled: Slide the switch to the left (with no lock mark) – Write-disabled: Slide the switch to the right (with a lock mark) <ul style="list-style-type: none"> • After loading a magazine into the unit, you can check the status of Write-protect switch with a driver software. (⇒ 24)

Characteristics and types of magazine

■ Available magazine types

BD-R magazine	Product number: LM-BW12LB1G 1.2 TB recordable magazine
	Product number: LM-BW6LB1G 600 GB recordable magazine
BD-RE magazine	Product number: LM-BX6B1G 600 GB rewritable magazine (Designed for repeated use)

- Product numbers provided in these Operating Instructions are correct as of September 2015. These may be subject to change.

■ Features

- The magazine contains 12 BD-R or BD-RE discs and is designed to store large volumes of data on one recording medium.
- A file or folder, which is recorded in the write-once BD-R magazine or rewritable BD-RE magazine, can be deleted. However, the available space will not increase.
(Only when the rewritable BD-RE magazine is formatted, can the free space be increased.)
- When the free space is low on the write-once BD-R magazine, you may not be able to delete the recorded file/folder.

RFID tag

RFID tags are embedded in the magazines and the unit uses the tags to identify and manage magazines.

Do not attach any metal object or RFID to the unit or a magazine. Internal RFID tags may fail to read or write, and then cause a malfunction.

Handling and storing of the magazine

- For more information about the ambient temperature / humidity, refer to “Magazine” (⇒ 36).
- Store the magazine in its case in the vertical position (as a magazine illustration on a 9 page).
- Do not expose the magazine to water.
- Do not drop the magazine.
- Do not leave the magazine in high temperature and high humidity, or direct sunlight.
- Do not disassemble the magazine.
- Use or store the magazine in an environment without “condensation”.
- Do not place heavy objects on the magazine.
- Do not stack magazines on each other.

Advice for discarding a magazine

The file management information only changes when deleting or formatting the magazine and/or contents due to the features of connected devices and software drivers, thus the data in the magazine will not be deleted completely. The content of the RFID tag is also not deleted. To discard the magazine, physical destruction to prevent information leakage is recommended.

- The management of personal information recorded in the magazine is the responsibility of the user.

Preparation for installation and connection

Software operating environment

Before you connect the unit, the PC must meet the following requirements.

Make sure of the requirements before the installing and connecting the unit.

Operating system	Windows® 8.1 (32 bit/64 bit) Pro/Enterprise Windows® 7 (32 bit/64 bit) Professional/Ultimate/Enterprise SP1
CPU	To satisfy the OS requirement
Memory	To satisfy the OS requirement and 50 MB
Display	High Color (16 bit) or higher Display 800 x 600 or higher resolution monitor
Hard disc	5 GB or greater free space
Interface	USB3.0

(current as of September, 2015)

*Successful operation is not guaranteed on all PCs with the recommended operating environment above.

■ Check the USB standard of the PC

It is recommended that the unit should be connected to the PC which is compatible with USB3.0.

If other than USB3.0 is used, the data transfer speed may be slow, or it may not work with sufficient performance.

For details of USB the standards for your PC, please refer to the PC Operating Instructions.

Installation of the driver software

Before connecting the unit to a PC, the driver software (supplied DVD) should be installed in the PC.

- Before inserting the DVD, please close all other running applications.

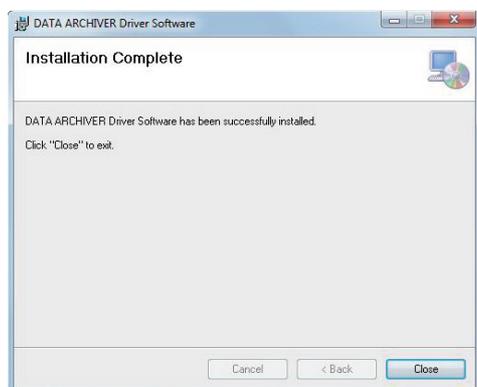
Operation procedures are described according to Windows 7.

Preparation

Check your PC's operating environment.

- Please read the Operating Instructions for your PC and "Software operating environment". (⇒ 11)

- 1 Turn on your PC.**
- 2 Insert the DVD (supplied) into your PC.**
- 3 Double-click the a driver software in the DVD corresponding to a bit version of your operating systems.**
 - A bit version of operating systems corresponds to a following driver software;
 - 32 bit: setup32_xxxx.msi
 - 64 bit: setup64_xxxx.msi
 ("xxxx" varies depending on the version)
- 4 Proceed with the installation according to the screen message.**
 - If the EldoS Corporation software installation screen appears during the installation, install the software according to the instructions on the screen.
 - When the installation of the driver software is complete, the following screen is displayed.



- 5 Click "Close" to exit the program.**

- 6 Restart the PC.**



If you wish to connect more than one unit to your PC, it is not necessary to install the driver software for the second and subsequent units.

■ Deletion of driver software

If you wish to uninstall the driver software, please follow these steps.

- 1 Turn on your PC.**
- 2 Select "Start" → "Control Panel" from the menu.**
- 3 When the menu screen appears, click "Uninstall a program".**
- 4 When the "Uninstall or change a program" screen appears, double-click "DATA ARCHIVER Driver Software".**
- 5 Proceed with the uninstallation according to the screen message**

After completing the uninstrallation, restart your PC.

■ Maintenance software

A "maintenance.exe" in the supplied DVD is a maintenance software for a customer support.

- When you double-click "maintenance.exe", the password screen appears. But you can not use the software.



- This driver software uses a software of EldoS Corporation.
- If Storlib Virtual Storage is added to the disk drive in Device Manager, do not change the settings. The unit may not operate properly, for example, the drive icon of the unit is not displayed.

If the settings have been changed, restart the computer.

Install the unit

The unit offers two placement options (vertical or horizontal) to choose from.

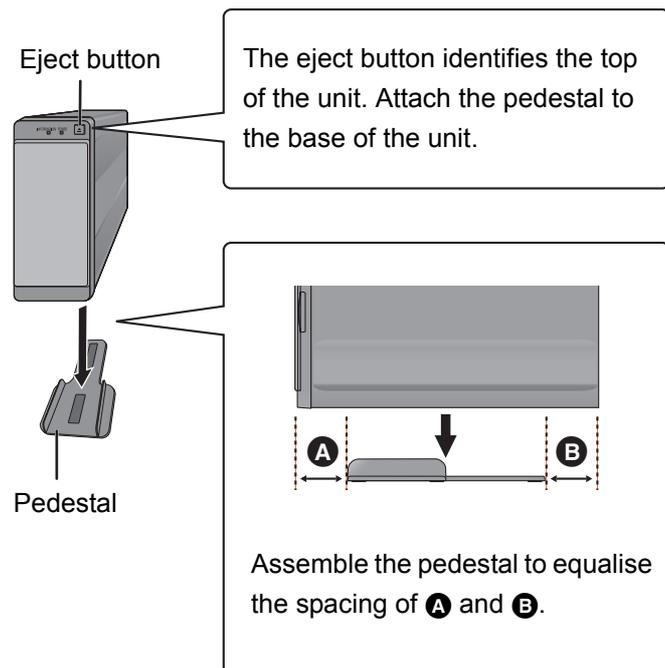
- Remove the magazine before moving the unit, even when the unit is being operated or reading the magazine, or the PC is turned off. Moving the unit with the magazine loaded may cause the unit to malfunction or the magazine to be damaged.

Vertical placement

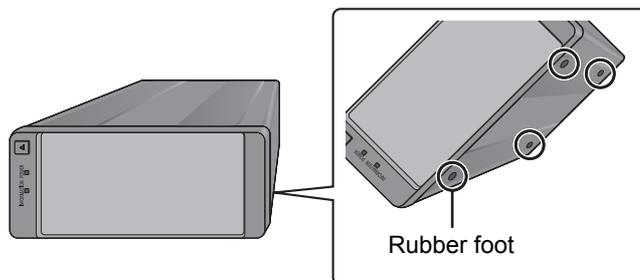
If the unit is placed in a vertical position, be sure to connect it to or disconnect it from a PC only when a pedestal (supplied) is attached to the unit. (⇒ 14, 16)

- Connecting the unit that is placed vertically without the pedestal to a PC may cause the unit to tip or fall when a cable or other objects are pulled.

■ How to attach the pedestal (supplied)



Horizontal placement

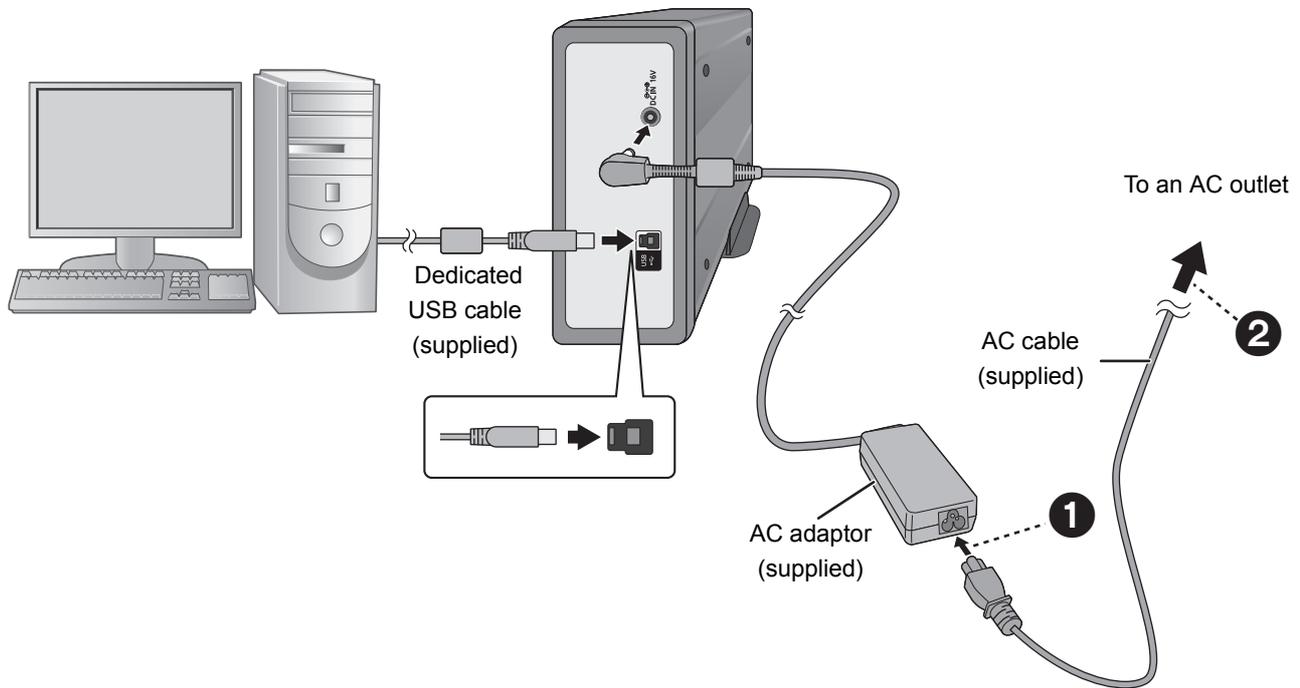


Place the unit by facing the side with the rubber feet down.



- Use the supplied pedestal in vertical installation.
- When using more than one unit of this product, do not stack them on each other.
- Do not place the unit in a position other than vertical (left) or horizontal (above) position. The INFORMATION LED (red) is flashing and you may not be able to access the magazine.

Connect to the PC



1 Connect the AC cable to the AC adaptor.

- Firmly insert the AC cable in the order of ① and ②.

2 Connect the AC adaptor to the DC IN terminal.

- After connection, the unit turns on automatically and the POWER LED will be lit. The INFORMATION LED (green) is flashing at the same time and then turns off.

3 Connect the PC and the unit with the dedicated USB cable (supplied).

- Be sure to check the orientation of the connector before connecting the USB port. Carefully insert the connector all the way in until it is firmly in place.



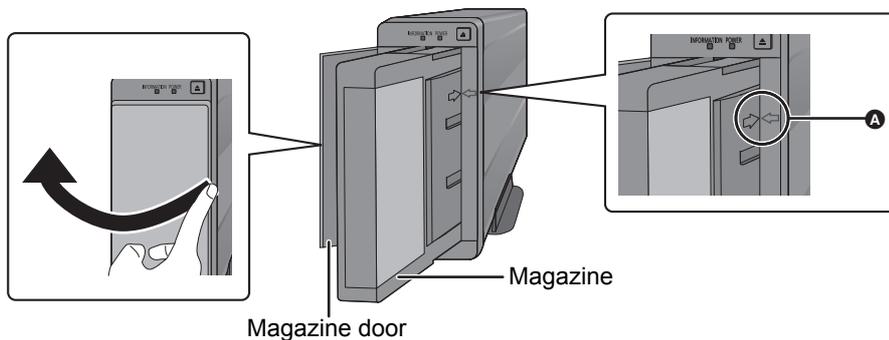
• Use the supplied AC cable, AC adaptor, and the dedicated USB cable. The unit and the PC may be damaged if accessories other than those supplied are used.

- The unit cannot be used by the power supply from a PC's USB terminals (USB bus power).
- The power is consumed when the power plug is connected to the AC outlet, or a dedicated USB cable is connected to a PC. When the unit is not in use for a long time, it is recommended to unplug the power plug from the AC outlet, and the dedicated USB cable from the PC for power saving.

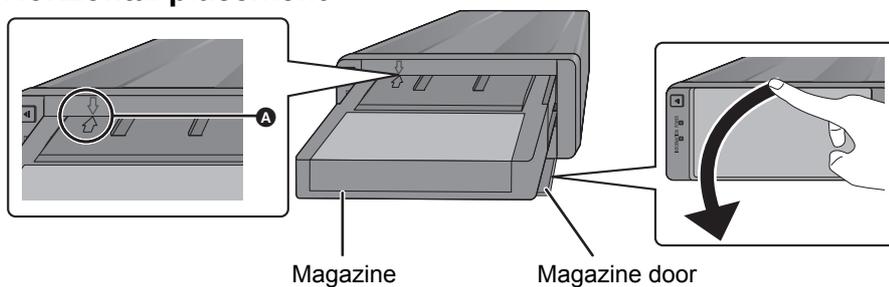
Load and eject a magazine

■ Load a magazine

Vertical placement



Horizontal placement



1 Open the magazine door.

- As the magazine door may come off when you handle it roughly, please open and close the door carefully.
- Do not open the magazine door with more force than is necessary.

2 Load a magazine into the unit.

- As shown in **A**, make sure that the edge “↑” of the magazine and the edge “↓” of the unit are facing each other, then gently press the center of the magazine until it is loaded in automatically.
- Do not load the magazine forcefully.
- After the magazine is loaded, the INFORMATION LED (green) of the unit will then be flashing. After the INFORMATION LED is off, the unit enables you to access the drive icon that is displayed in the Explorer.
(⇒ 17)

3 Close the magazine door.

■ Eject the magazine

1 Open the magazine door.

2 Press the eject button to retrieve the magazine.

Or eject the magazine from the PC by using the driver software (⇒ 20).

- It may take a few minutes to retrieve the magazine while the unit is accessing the magazine.

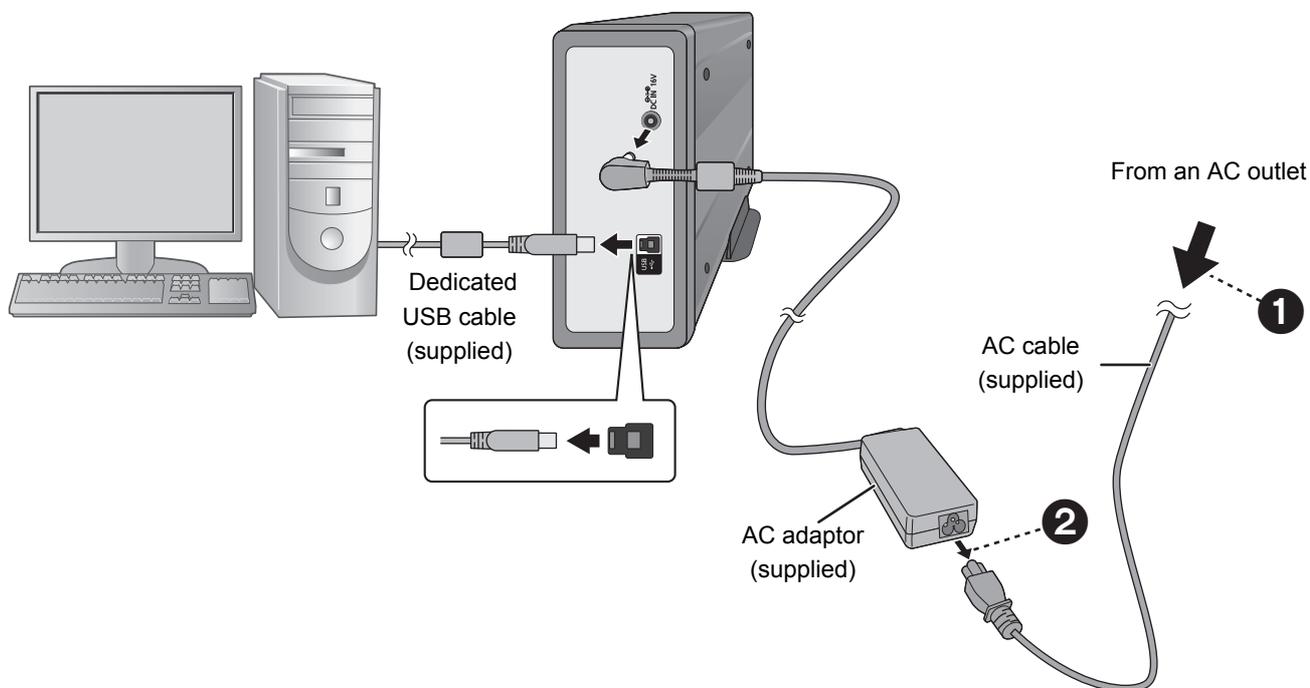
3 Close the magazine door.



- Do not load any object other than a magazine.
- **Do not change the placement of the unit (vertical or horizontal) when the magazine is loaded. It may cause device failure or damage to the magazine.**
- After loading magazine, it may take a few minutes before the INFORMATION LED (green) stops flashing.
- Eject the magazine completely if you wish to re-load the magazine after ejecting it.

Remove the unit from PC

When disconnecting the unit from the PC, make sure to follow the procedures described in these Operating Instructions.



- 1 Eject the magazine (⇒ 15).**
- 2 Disconnect the dedicated USB cable.**
- 3 Disconnect the AC adaptor from the unit.**
 - After disconnection, the unit turn off and POWER LED is off.
- 4 Unplug the power plug from the AC outlet.**
 - Unplug the AC cable in the order of **1** and **2**.



- Do not disconnect the dedicated USB cable while the magazine is being read or written. The file or folder that is being read or written may be damaged.
- Do not disconnect the dedicated USB cable or the AC adaptor when the magazine has been loaded in the unit. To prevent a damage of the recorded file or folder, unit sets a magazine's write-protection to "write-protection on". After reconnecting the dedicated USB cable or the AC adaptor you disconnected and removing a magazine, disconnect the cables from the unit.
- You can turn off your PC that is connected to the dedicated USB cable but the AC adaptor must remain connected to the unit when a magazine is in the unit.

Write the file or folder to a magazine

Files and folders can be written from PC to the magazine using the Explorer in Windows.

- The operating procedure is the same as for the standard Explorer.
- The INFORMATION LED (green) is flashing when the magazine file and folder access is available.

Operation procedure is described according to Windows 7.

Saving file/folder

Save file and folder in magazine.

Preparation

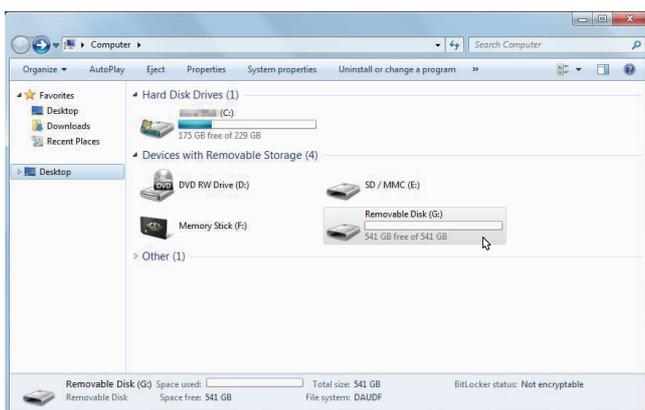
- Make sure that the driver software (supplied DVD) is installed. (⇒ 12)
- Connect the unit to your PC and then load the magazine. (⇒ 14, 15)
- Before loading a magazine into the unit, make sure that the write-protect switch at the rear of the magazine has been set to “Write-enabled”. (⇒ 9)

1 Double-click the “Computer” on the PC screen to open the Explorer.

- Please wait until the capacity is displayed for the drive icon in Explorer. It may take several minutes to display the capacity.

2 Double-click the Drive icon of the unit.

e.g., The Drive icon for the unit is “G”



3 Drag and drop the file or folder to be saved in the Explorer.

- When the flashing INFORMATION LED (green) turns off, the file or folder has been written completely.

Other file/folder operations

Creation and update of files and folders can be performed with the Windows standard Explorer besides the saving of files and folders.



- Files and folders will not be read or written correctly if the driver software has not been installed on the PC. Be sure to install the driver software.
- A file or folder, which is recorded in the write-once BD-R magazine or rewritable BD-RE magazine, can be deleted. However, the available space will not be increased. (Only when the rewritable BD-RE magazine is formatted can the free space be increased.)
- When the free space is low in the magazine, you may not be able to delete the recorded file/folder.
- According to conditions such as many files / folders are recorded, an available space may decrease.
- It may take time to access the magazine depending on the location to record files/folders on the disc in the magazine.
- Do not disconnect the dedicated USB cable while the magazine is being read or written. The file or folder that is being read or written may be damaged.
- While writing a file, don't change the unit position (vertical or horizontal position). Writing may stop. If you change the position, confirm whether the unit wrote the file correctly or not.
- When opening a file in the magazine directly from an application, some applications create a temporary file/folder in the magazine. In this case, it is recommended to copy the file or folder to a different location from the magazine and open it to avoid consuming the capacity of the magazine. The temporary file and folder may be created with a different name from the original one. Therefore, the file name you have not created may be shown in the file history, but this is not a problem.
- It may take time to access the files/folders in a magazine when accessing the magazine.
- It may take time to complete cancellation when cancelling the writing of files/folders.
- It may take time to access data while antivirus software is running.
- The progress bar of Explorer may not be displayed correctly.

Configuration and management of magazine

The unit and magazine can be configured and managed by the installed driver software. Use the “Utility” that can be selected by right-clicking the drive icon or the File/Folder icon of the unit.

Preparation

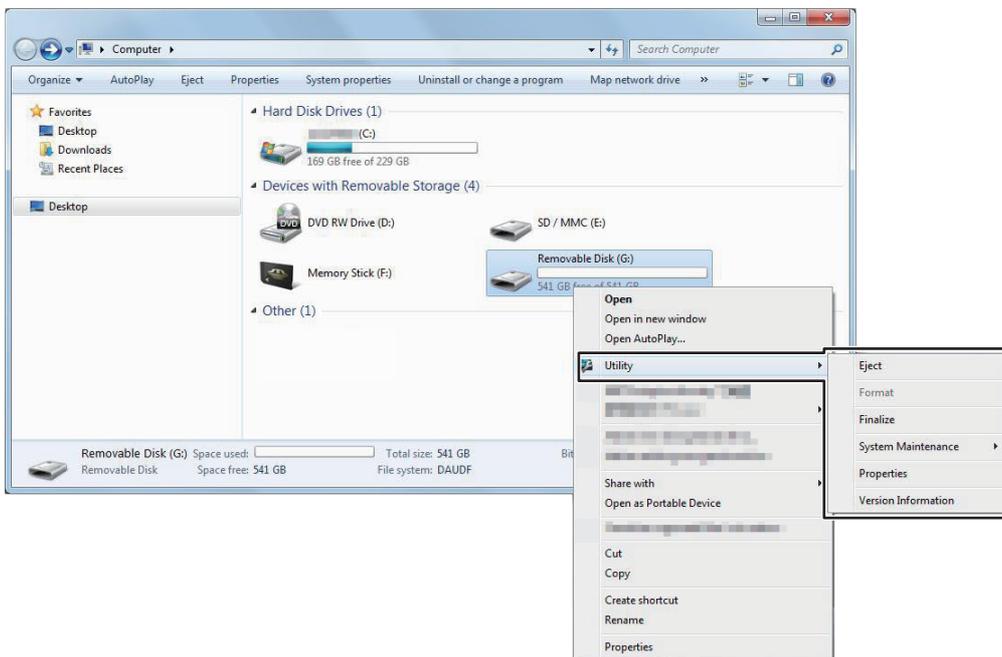
- Make sure that the driver software (supplied DVD) is installed. (⇒ 12)
- Connect the unit to your PC and then load the magazine. (⇒ 14, 15)

1 Double-click “Computer” on the PC screen to open the Explorer.

2 Right-click the Drive icon of the unit, and choose “Utility”.

The Utility menu is displayed as follows. For a listing of the Utility menu, please refer to page 19.

e.g., The Drive icon for the unit is “G”



■ Utility menu listing

Right-click the Drive icon of the unit, and choose “Utility”. The following menu will be displayed.

1st layer	2nd layer	3rd layer	Operation	
Utility	Eject	—	Eject the magazine from the unit. (⇒ 20)	
	Format	—	Delete (re-format) all files and folders that have been recorded on all discs in the magazine. (Only rewritable BD-RE magazine) (⇒ 20)	
	Finalize	—	Finalize all discs in the magazine. (Only write-once BD-R magazine) (⇒ 21)	
	System Maintenance	Firmware update		Update the firmware of the unit. (⇒ 21)
		Retrieve error log		Obtain the latest error log. (⇒ 22)
		Unlock write-protection due to anomaly detection		Unlock write-protection which a driver software automatically sets at an anomaly detection. (⇒ 22)
	Properties	Settings		Change or verify the write settings for files and folders. (⇒ 23)
		Drive information		Display unit configuration information. (⇒ 24)
		Magazine information		Display magazine information. (⇒ 24)
	Version Information	—	Display the current driver software version. (⇒ 24)	

■ Right-click the file or folder

Right-click the file or folder, and choose “Utility”. The following menu will be displayed.

1st layer	2nd layer	Operation
Utility	History	Even if a file or folder has been overwritten, you can copy or view the history or previous state of the file or folder. (⇒ 25)
	Show deleted files	Switch to view or hide deleted files/folders. (⇒ 25)

■ Eject

Eject the magazine from the unit.

- You can also press the eject button to retrieve the magazine. (⇒ 15)

Do not place objects in front of the unit. When an object is in front of the unit and the magazine door opens, it may collapse and cause damage or personal injury.

- 1 Open the magazine door.
- 2 Right-click the Drive icon of the unit.
- 3 Select “Utility” → “Eject” from the menu.
- 4 Click “Yes”.
 - When the flashing INFORMATION LED (green) turns off, ejection is complete.
 When eject completes successfully, the following screen is displayed.



- 5 Remove the magazine.
- 6 Close the magazine door.
- 7 Click “OK” to exit the program.



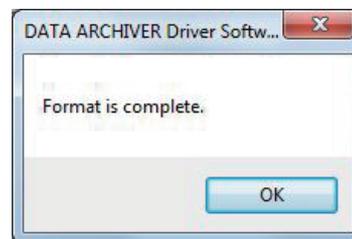
- While the unit is accessing the magazine, you can not remove the magazine by an eject operating.

■ Format

Delete (re-format) all files and folders that have been recorded on all discs in the magazine. (Only rewritable BD-RE magazine)

The contents of files and folders will be deleted and cannot be recovered after formatting. Please make sure in advance that you can format those.

- 1 Right-click the Drive icon of the unit.
- 2 Select “Utility” → “Format” from the menu.
- 3 Click “Yes”.
 - When the flashing INFORMATION LED (green) turns off, format is complete.
 When format completes successfully, the following screen is displayed.



- 4 Click “OK” to exit the program.



- The magazine is formatted automatically the first time you load it into the unit so the Utility format operation is not required.
- Write-once BD-R magazine cannot be formatted.
- Rewritable BD-RE magazine can be formatted, but only the file management information is deleted from the magazine, and the data will not be deleted completely.
- It may take time depending on the magazine condition.

Finalize

Finalize all discs in the magazine. (Only write-once BD-R magazine)

When the magazine has been finalized, it can be used for read-only and will no longer be able to record. Please make sure in advance that you can finalize those.

- 1 Right-click the Drive icon of the unit.
- 2 Select “Utility” → “Finalize” from the menu.
- 3 Click “Yes”.
 - When the flashing INFORMATION LED (green) turns off, finalization is complete. When finalization completes successfully, the following screen will be displayed.



- 4 Click “OK” to exit the program.



- It may take time depending on the magazine condition.

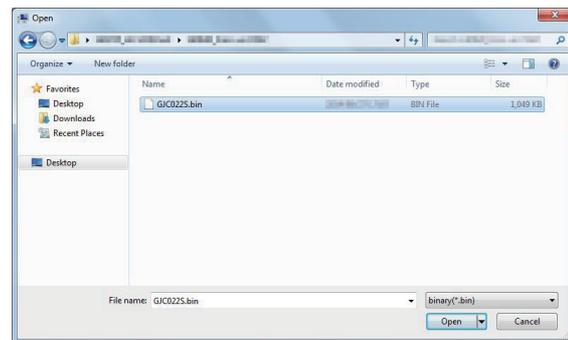
System Maintenance

Firmware update

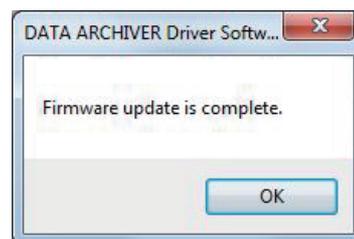
Update the firmware of the unit.

Remove the magazine and update the firmware.

- 1 Access the Panasonic website below via your PC.
<http://panasonic.net/avc/archiver/lb-sc9/support.html>
- 2 Download the latest update file to any location on your PC.
- 3 Right-click the Drive icon of the unit.
- 4 Select “Utility” → “System Maintenance” → “Firmware update” from the menu.
- 5 When the following screen appears, select the firmware you saved in the desired location.



- 6 Click “Open”.
 - After completing updating normally, following completion screen appears.



- 7 Click “OK” to exit the program.



- Do not unplug the unit's power supply during the update of the firmware.
- A utility operation is not allowed during firmware updates.

■ Properties Settings

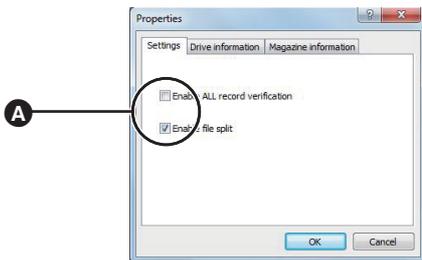
Change or verify the write settings for files and folders.

This setting is recorded in the PC.
If you connect to another PC, make this setting on another PC again.

- 1 Right-click the Drive icon of the unit.
- 2 Select “Utility” → “Properties” from the menu.

- The screen showing the “Settings” tab is displayed, and the following configurations can be changed or confirmed.
 - Enable ALL record verification ^{*1}
Switches Enable/Disable of All Verify mode at writing.
The default is “ALL Verify disabled”.
 - Enable file split ^{*2}
Switches Enable/Disable of file division.
The default is “File division enabled.”

To enable the setting, click the **A** checkbox.

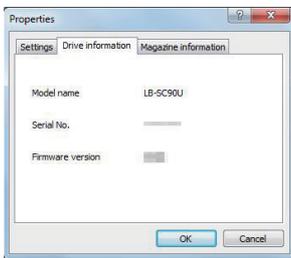


- *1 “ALL Verify disabled”:
While keeping the write performance to ensure appropriate writing quality for storing, verify only the required data under certain conditions.
- “ALL Verify enabled”:
Playback and check all written data to verify performance. The writing transfer rate is down to about half.
- *2 “File division disabled”:
If the file size to be written exceeds the available disc space, it is recorded on the next disc without dividing the file.
 - The original free disc space is no longer available.
 - File size exceeding the maximum recording capacity per single disc is not writable.
 - While writing a file, you cannot write another file. (An error of another file writing occurs.)
- “File division enabled”:
If the file size to be written exceeds the available disc space, the file will be divided and recorded on the other discs.
 - When opening a file in the magazine directly from an application, some applications take time to read the magazine and then the operation may be suspended. It is recommended to copy the file or folder to a different location from the magazine and then open the file.

Drive information

Display unit configuration information.

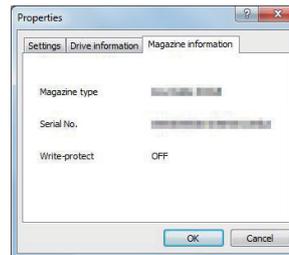
- 1 Right-click the Drive icon of the unit.
- 2 Select “Utility” → “Properties” from the menu.
- 3 Select the “Drive information” tab on the displayed screen.
 - The following information on the unit will be shown.
 - Model name
Displays the model name of the unit.
 - Serial No.
Displays the serial number of the unit.
 - Firmware version
Displays the current firmware version of the unit.



Magazine information

Display magazine information.

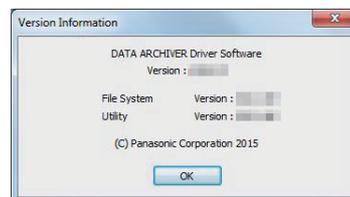
- 1 Right-click the Drive icon of the unit.
- 2 Select “Utility” → “Properties” from the menu.
- 3 Select the “Magazine information” tab on the displayed screen.
 - The following information on the magazine will be shown.
 - Magazine type
Displays the disc type inside of magazine and the capacity.
 - Serial No.
Displays the serial number of the magazine.
 - Write-protect
Allows you to confirm the write-protect switch’s condition of the magazine. (⇒ 9)
“Write-enabled” of the write-protect switch’s condition shows as “OFF”, “Write-disabled” shows as “ON”.



Version Information

Display the current driver software version.

- 1 Right-click the Drive icon of the unit.
- 2 Select “Utility” → “Version Information” from the menu.
 - The current driver software version will be shown.



Displaying/Reviewing file/folder history

If the magazine file/folder is overwritten, the previous version is available for display or review.

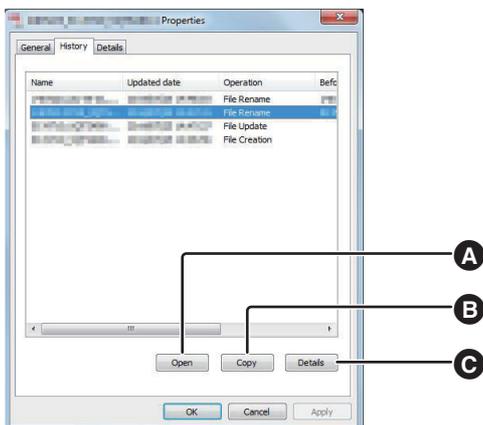
You can also display or review the original file/folder and its update history even if the file or folder has been deleted.

If a magazine has been formatted, the original files or folders and change history cannot be displayed.

■ History

The previous file/folder history is available for display or review.

- 1 Double-click the Drive icon of the unit.
- 2 Right-click the file or folder you saved.
- 3 Select “Utility” → “History” from the menu.
- 4 When the following Properties screen appears, click the “History” tab.
- 5 Select the old folder you wish to retrieve and click the button below.
 - Ⓐ Opens the old file you have selected
The file is opened as read-only.
 - Ⓑ Specifies the folder and copies the old file
You can not copy it to the magazine.
 - Ⓒ Checks the details of update history



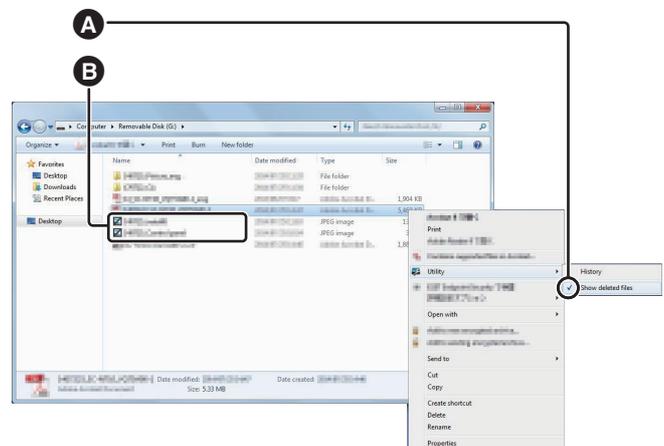
■ Show deleted files

Switch to view or hide deleted files/folders.

If you have enabled View, the deleted files/folders can be viewed with the existing files/folders in the magazine.

When “Show deleted files” is enabled, the magazine is changed to write-protected. All files/folders in the magazine will be read-only.

- 1 Double-click the Drive icon of the unit.
- 2 Right-click the file or folder you saved.
- 3 Select “Utility” → “Show deleted files” from the menu.
 - Switches to view or hide deleted files/folders.
When a check Ⓐ is showing, deleted files/folders Ⓑ can be viewed.



- Right-click the deleted files or folders, or if the files were overwritten, select “Utility” → “History” from the menu to display and review old files.
- If you wish to restore files/folders which have been deleted, copy the file or folder to a different location from the magazine and then copy it to the magazine.



- When a file / folder is updated, the update history is recorded. This consumes the capacity of the magazine

Updating the firmware and driver software

The firmware and driver software of the Data Archiver may be updated for operational improvements and the addition of new functions. Update in the following ways.

Preparation

Turn on the unit and the PC with the installed driver software (supplied DVD) and connect them. (⇒ 14)

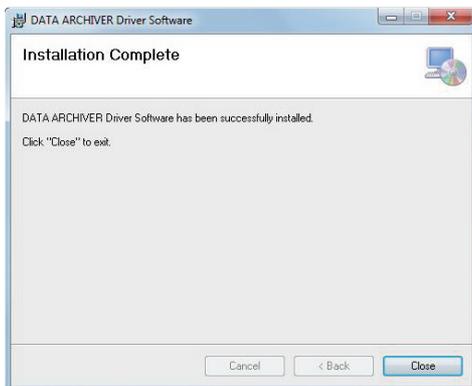
In order to update the firmware and driver software, eject the magazine.

Updating of the unit

For more information, please refer to “Firmware update” (⇒ 21).

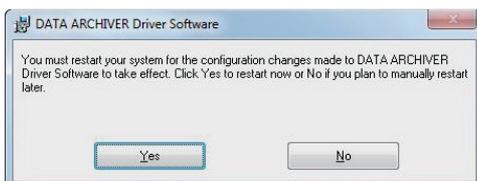
Updating the driver software

- 1 Uninstall the driver software on the PC.**
 - For more information, please refer to “Deletion of driver software” (⇒ 12).
- 2 Access the Panasonic website below via a PC.**
<http://panasonic.net/avc/archiver/lb-sc9/support.html>
- 3 Download the latest driver software to any location on your PC.**
 - Download a driver software corresponding to a bit version of operating systems.
- 4 Run the drive software you downloaded at step 3.**
- 5 Proceed with the installation according to the screen message.**
 - If the EldoS Corporation software installation screen appears during the installation, install the software according to the instructions on the screen.
 - When the installation of the driver software is complete, the following screen is displayed.



- 6 Click “Close” to exit the program.**

- 7 Restart the PC.**



- Do not unplug the unit’s power supply during the update of the firmware.
- A utility operation is not allowed during firmware updates.

Troubleshooting guide

Check the following items to try to resolve the problem.

If the problem remains unresolved, consult your dealer for instructions.

Installation or connection

Item	Problem	Cause/Solutions
○ Magazine problems		
Loading magazine in the unit	Magazine cannot be loaded fully.	→ Check the insert direction is correct and try again.
	The unit cannot recognize the magazine after the loading.	→ Check the installation status of this unit. (⇒ 13) → Check whether the foreign matter attaches to the magazine. → After disconnecting and reconnecting an AC cable plug of the unit to an AC outlet, remove and load the magazine. If the problem remains unresolved, consult your dealer for instructions.
Ejecting a magazine	Cannot eject the magazine by pressing an Eject button.	→ You may eject a magazine with an operation of a driver software. Try the operation. (⇒ 20) → After disconnecting and reconnecting an AC cable plug of the unit to an AC outlet, press an Eject button. If the problem remains unresolved, consult your dealer for instructions.
Volume, magazine	Controlling a maximum capacity of a magazine.	It is not supported.
	Using other than the supplied magazine or a dedicated magazine (optional).	It is not supported.
○ PC connection problems		
Recognition of the connection	OS does not recognize.	→ Check the cable and the connectivity.
Transfer rate	The transfer rate of the data is slow.	→ Check if a supplied USB cable is connected and the cable is securely connected

Operation

Item	Problem	Cause/Solutions
○ Power supply problems		
Cannot turn on the power	POWER LED does not light up.	→ Check if the AC adaptor is securely connected between the AC cable and the unit. When checking the cable, confirm that the power is not distributed to the cable. If the problem remains unresolved, consult your dealer for instructions.
After turning the unit on, PC does not recognize the unit as a drive.	OS does not recognize.	→ Check the cable and the connectivity. → After disconnecting and reconnecting an AC cable plug of the unit to an AC outlet, disconnect and reconnect the unit to your PC with a dedicated USB cable. If the problem remains unresolved, consult your dealer for instructions.
○ INFORMATION LED problems		
INFORMATION LED	Does not illuminate when an error is displayed on the PC.	→ Disconnect and reconnect an AC cable plug of the unit to an AC outlet. If the problem remains unresolved, consult your dealer for instructions.
○ Read/write problems		
Reading magazine	Does not read the recognized magazine.	→ Check if an error has occurred. If an error has occurred, check the error code and try the solutions. (⇒ 31)
Writing to magazine	Does not write even though the unit recognizes magazine.	→ Check if an error has occurred. If an error has occurred, check the error code and try the solutions. (⇒ 31) → When the magazine is finalized, you cannot write. Use another magazine. → Make sure the magazine's write-protection switch is set to write-protection off. → Check whether the magazine is write-protected due to enabling of "Show deleted files" (⇒ 25). If "Show deleted files" is enabled, then disable it.

Item	Problem	Cause/Solutions
○ Software problems		
Updating	Do not know how to obtain an update file.	→ For the update, refer to the following support site. http://panasonic.net/avc/archiver/lb-sc9/support.html
	Cannot update.	→ Check if Driver software is already installed on your PC. If installed, uninstall the Driver software and then re-install new one. (⇒ 12)
	Other	→ Obtain an update file again and try it.
After updating	Does not start up after the software update.	→ Consult your dealer for instructions.
Install	Cannot install Driver software.	→ Check if the OS's bit version corresponds to the Driver software's bit version. Ex. If your OS is Windows® 7 (64 bit); Install a 64 bit version of Driver software.
Accessing to the file / folder	Cannot write the file to an available space.	→ Check the following. ● Whether the folder is set as read only. ● Whether a cache capacity becomes short.
Utility operation	Cannot operate Utility.	→ Driver software are not installed correctly. Re-install it.
	Utility does not show	
○ Other problems		
Unit	Cannot operate the unit.	→ After installing a driver software and confirming the error log, try solutions. (⇒ 30)

Errors and warnings

If an error or a warning occurs during operation of the unit, a message will pop-up on the connected PC screen and will be recorded in the log.

- If a warning occurs, processing in progress is interrupted depending on the contents of the warning.

Action to be taken for an error or warning

If an error or warning occurs, check the error code or warning code in “List of error codes” (⇒ 31) or “List of warning codes” (⇒ 33) and take proper action in response to the error or warning. If the problem is not resolved or repairs are needed, please contact your vendor.

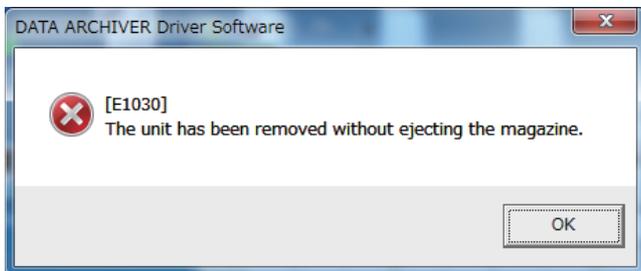
■ How to check errors or warning code

[The pop-up on the PC screen]

When an error or a warning occurs, the error or warning code and message is displayed in the pop-up window on the PC screen.

Acknowledge the code and message and select “OK” to close the pop-up screen.

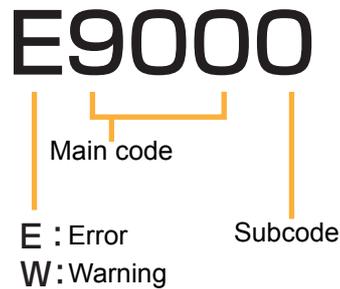
Display example



Check the error or warning history by “Retrieve error log” (⇒ 22).

[Elements of error and warning codes]

e.g.,



[Retrieve error log]

Check the history of errors or warnings by selecting “Retrieve error log” from the “Utility” menu (⇒ 22).

Display example

2015/01/01 10:00:00 [E9000] :System error

Error date*1 Error time*2 Error/Warning code Message*3

*1 Displays in the date format of the setting.

*2 Displays in 24-hour format regardless of the settings.

*3 Multiple lines will be displayed depending on the content.

List of error codes

Code	Action to be taken
E1000	Detected a failure of memory or a peripheral circuit in the unit. It needs to be repaired.
E1010	Internal temperature of the unit is high. →Remove the magazine from the unit and then try the operation again after a while.
E1020	Detected a software processing error in the unit. →After disconnecting and connecting a dedicated USB cable to your PC, try the operation again. →After disconnecting and reconnecting the unit to your PC and an AC adaptor, try the operation again.
E1030	The unit has been removed without ejecting the magazine. →After reconnecting the unit to your PC and removing the magazine, disconnect the unit from your PC.
E1040	Write operation failed. Another file is being written. →Try again after the files are written.
E2000	Detected a failure in the changer mechanics or a peripheral circuit in the unit. →Try the operation again. →After disconnecting and reconnecting the unit to your PC and an AC adaptor, try the operation again.
E2010	Changer mechanics or drive operation failed. →After disconnecting and connecting a dedicated USB cable to your PC, try the operation again. →After disconnecting and reconnecting the unit to your PC and an AC adaptor, try the operation again.
E2020	Communication with the RFID module in the unit failed. →After disconnecting and connecting a dedicated USB cable to your PC, try the operation again. →After disconnecting and reconnecting the unit to your PC and an AC adaptor, try the operation again.
E3000	Detected an error in the drive. Failure due to an abnormality in the media in the magazine or failure of the drive or drive peripheral circuit. →Try another magazine.
E3010	Write operation failed. Failure due to an abnormality in the media in the magazine or failure of the drive or drive peripheral circuit. →Try another magazine.
E3020	The record operation failed due to factors in both the drive system and the magazine. Recording to the magazine is inhibited. →Try another magazine.
E3030	Read operation failed. Failure due to an abnormality in the media in the magazine or failure of the drive or drive peripheral circuit. →Try another magazine.

Code	Action to be taken
E3040	RFID tag is anomalous. Recording to the magazine is inhibited. →Try another magazine.
E3050	Magazine format failed. →Try again from the beginning. If the system detects the same error, try another magazine.
E3060	Operation aborted because changes in the installation state were detected. →Return the unit to the original installation state. →If a Explorer error message is displayed, select Cancel and then try the operation with Explorer again.
E3070	Changer mechanics or drive operation failed. →Remove the magazine from the unit and load it again.
E4000	Magazine format failed. →Try again from the beginning. If the system detects the same error, try another magazine.
E4010	Magazine finalize failed. →Try again from the beginning. If the system detects the same error, disconnect and reconnect the dedicated USB cable from the PC and then try the operation again. →After disconnecting the unit from your PC and an AC adaptor and reconnecting to these, try the operation again.
E4020	Farm update failed. →Try again from the beginning. If the system detects the same error, disconnect and reconnect the dedicated USB cable from the PC and then try the operation again. →Disconnect and reconnect the unit from the PC and AC adapter, then try the operation again.
E4030	Error log retrieval failed. →Try again from the beginning. If the system detects the same error, disconnect and reconnect the dedicated USB cable from the PC and then try the operation again. →After disconnecting the unit from your PC and an AC adaptor and reconnecting to these, try the operation again.
E4040	History file open failed. →Try again from the beginning. If the system detects the same error, disconnect and reconnect the dedicated USB cable from the PC and then try the operation again. →After disconnecting the unit from your PC and an AC adaptor and reconnecting to these, try the operation again.
E4050	History file copy failed. →Try again from the beginning. If the system detects the same error, disconnect and reconnect the dedicated USB cable from the PC and then try the operation again. →After disconnecting the unit from your PC and an AC adaptor and reconnecting to these, try the operation again.
E4060	Setup failed. →Try again from the beginning. If the system detects the same error, disconnect and reconnect the dedicated USB cable from the PC and then try the operation again. →After disconnecting the unit from your PC and an AC adaptor and reconnecting to these, try the operation again.

- If the same error occurs after executing these actions repeatedly, it needs to be repaired. Please contact your vendor.

List of warning codes

Code	Action to be taken
W1010	Driver software update failed. →Refer to “Software problems” (⇒ 29) to take proper action.
W2000	This magazine is not supported. →Use the appropriate magazine.
W2010	Magazine loading/unloading failed. →Remove the magazine from the unit and then try the operation again.
W2011	Detected that the recording quality is not suitable for storage during the verification. →It is recommended to copy from the magazine to another magazine.
W3050	Format failed. →Magazine is write-protected. Set the write disable switch at the rear of the magazine to “Write-enabled”, then format the magazine.
W4000	Format failed. →Load a BD-RE magazine.
W4001	Format failed. →The magazine is being accessed. After access has finished, format the magazine.
W4002	Format failed. →The magazine is write-protected. Set the write disable switch at the rear of the magazine to “Write-enabled”, then format the magazine.
W4003	Format failed. →The magazine is write-protected due to anomaly detection. Execute “Unlock write-protection due to anomaly detection”, then format the magazine.
W4010	Finalize failed. →Load a BD-R magazine.
W4011	Finalize failed. →The magazine is being accessed. After access has finished, finalise the magazine.
W4012	Finalize failed. →Magazine is write-protected. Set the write disable switch at the rear of the magazine to “Write-enabled”, then finalise the magazine.
W4013	Finalize failed. →The magazine is write-protected due to anomaly detection. Execute “Unlock write-protection due to anomaly detection”, then format the magazine.
W4020	Farm update failed. →The magazine has been loaded. Eject the magazine.
W4021 W4022	Farm update failed. →Incorrect file. Select the correct file.
W4050	File copy failed. →The file cannot be copied into the magazine. Specify a location other than the magazine to save the file.

Code	Action to be taken
W4060	Setup failed. →The magazine is being accessed. After access has finished, change the magazine settings.
W4070	Magazine eject failed. →The magazine is being accessed. After access has finished, eject the magazine.

- If the alert occurs after executing these actions repeatedly, please contact your vendor.

Specifications

DATA ARCHIVER

Product number	USB interface model: LB-SC90U0U (for the U.S.A.) LB-SC90U0E1 (for Europe)
Power supply	DC 16 V (with the dedicated AC adaptor)
Power consumption (Including the AC adaptor)	In standby state: 1.4 W During recording: 5.6 W (at AC 120 V) 5.7 W (at AC 230 V)
AC cable	LB-SC90U0U: AC 120 V LB-SC90U0E1: AC 220 V to 240 V
Dimensions	Width: 68.5 mm (2 11/16") 97 mm (3 13/16") (including the pedestal) Height: 170 mm (6 11/16") (including the projecting parts) 174 mm (6 27/32") (including the pedestal and the projecting parts) Depth: 278 mm (10 15/16") (excluding the projecting parts)
Mass (weight)	Approx. 1.8 kg (3.97 lbs) (excluding the magazine and the AC adaptor) Approx. 2.2 kg (4.85 lbs) (including the magazine, but excluding the AC adaptor) Approx. 0.05 kg (0.1 lbs) (pedestal only)
Maximum transfer rate	18 MB/sec (with a BD-R magazine) 9 MB/sec (with a BD-RE magazine)
Compatible BD-R magazine	Product number: LM-BW12LB1G 1.2 TB recordable magazine Product number: LM-BW6LB1G 600 GB recordable magazine
Compatible BD-RE magazine	Product number: LM-BX6B1G 600 GB rewritable magazine (Designed for repeated use)

HF band RFID module	Frequency: 13.56 MHz Standard: Compliant with ISO/IEC 14443 (Type A)
Laser	Wavelength: 405 nm
Host interface	USB3.0
Ambient temperature /humidity	Operating Temperature: 10 °C to 40 °C (+50 °F to +104 °F) (Temperature gradient: 10 °C/h (+18 °F/h) or lower) Humidity: 20 % to 80 % RH (No condensation) Transportation Temperature: –20 °C to 60 °C (–4 °F to +140 °F) Humidity: 10 % to 90 % RH (No condensation)
Installation requirements	Front: Leave a space of at least 300 mm (11 13/16") (to load the magazine) Rear: Leave a space of at least 150 mm (5 29/32") (to accommodate the cables) Tilt: up to 3 ° (both left-right and front-back)

AC adaptor

Input voltage (AC)	AC 100 V to 240 V (excluding the AC cable)
Input frequency	50 Hz/60 Hz
Output voltage (DC)	DC 16 V
Output current rating	3.75 A

Magazine

Disc type	Product number: LM-BW6LB1G 600 GB recordable magazine
Storage capacity	600 GB (unformatted)
Maximum transfer rate	18 MB/sec
HF band RFID tag	Standard: Compliant with ISO/IEC 14443 (Type A)
Write protection	Mechanical write-protect switch
Dimensions of the spine label area	18.5 mm × 107.6 mm (23/32" × 4 15/64") (length × width)
Dimensions	Magazine 138.5 mm × 126 mm × 31 mm (5 15/32" × 4 31/32" × 1 7/32") (width × depth × height) Case 140 mm × 126 mm × 32 mm (5 17/32" × 4 31/32" × 1 9/32") (width × depth × height)
Mass (weight) (including the case)	Approx. 390 g (0.86 lbs)

Ambient temperature /humidity	Operating Temperature: 10 °C to 40 °C (+50 °F to +104 °F) (Temperature gradient: 10 °C/h (18 °F/h) or lower) Humidity: 20 % to 80 % RH (Gradient: 10 %/h or lower, no condensation)
	Storage Temperature: – 10 °C to 55 °C (+14 °F to +131 °F) (Temperature gradient: 15 °C/h (27 °F/h) or lower) Humidity: 5 % to 90 % RH (Gradient: 10 %/h or lower, no condensation)
	Transportation Temperature: – 20° C to 60° C (–4 °F to +140 °F) Humidity: 10 % to 90 % RH (No condensation)

1 TB=1,000,000,000,000 B
 1 GB=1,000,000,000 B
 1 MB=1,000,000 B
 1 kB=1,000 B

Appendix

Copyright

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Disposal of Old Equipment

Only for European Union and countries with recycling systems



This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste.

For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation. By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

Glossary

RFID

RFID is a method of reading and writing information using short-range wireless communication. RFID tags are embedded in the magazines, and an RFID reader/writer is embedded in the unit to manage magazine information.

Write-protect switch

Write-protect switch is a switch built into a magazine that prevents data from being accidentally deleted or overwritten.

Cache

The temporary storage area on HDD in order to speed up the access to the data in the magazine.

Temporary file/folder

File/Folder created by an application to save the work-in-progress data temporarily.

Driver software

Software to transfer the product and operational information of the archiver to the OS, so that the OS manages the archiver properly.

Before connecting the unit to a PC, the driver software (supplied DVD) should be installed in the PC.

Finalize

Post-processing to prevent additional writing. All discs in the magazine will be finalized for the unit.

Format

Initializing the magazine to be able to read or write the data. The driver software, which was installed from the supplied DVD, performs a format automatically according to the prescribed conditions after the registration of a new magazine in the unit.

Verify

Verifies that data has been written to the magazine correctly.

Write-protection

The write disable switch at the rear of the magazine can change the state of the magazine to "Write-disabled".

In addition, this means that "Write-protection" is automatically applied to the magazine when an abnormality is detected.

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