

SAS Series

1 to 1 SAS/SATA
Sanitizer and Duplicator

User Manual

v A.02

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Product Disclaimer

The manufacturer is not accountable for any incidental or consequential damages, which includes, but is not constrained to property harm, loss of time or data from use of our product, or any other damages attributable to product malfunction or failure (including without limitation, those attributable to: (1) reliance of the materials provided, (2) costs of product replacement, (3) loss of use, data or profits, (4) delays or business interruptions, (5) and any principle of legal responsibility, arising out of or in reference to the use or overall performance or from delays in servicing or lack of ability to render service) of any our product. The manufacturer makes every effort to ensure proper operation of all products. However, the customer is responsible to affirm that out of our product meets the customer's quality requirement. The customer further acknowledges that fallacious operation of our product and/or software program, or hardware issues, can cause loss of data, defective formatting, or data loading. The manufacturer will make efforts to resolve or repair any issues recognized by customer either within the warranty period or on a time and materials basis.

Specifications and features subject to change without notice or obligation.

Warranty

The manufacturer provides a basic one-year parts and labor warranty for all of its products (excluding cables, adapters, and other consumable items). An optional extended warranty is also available for an added cost. Telephone and email support is available for the life of the product as defined by us.

All warranties will be restricted and defined by the market region from which customers purchased.

Piracy Statement

The manufacturer accepts no responsibility for copyright infringement or misuse of any our equipment. Copying all forms of data: audio, video, or software without the permission of the copyright holder is illegal. It is the sole responsibility of the user to ensure that the legal copyrights of the copyright owners are respected.

Before You Start

Important Notice

- Carefully read the entire manual before operating.
- Make sure the source device is correct and functioning.
- Equal capacity of source and target is recommended for guaranteed data consistency.
- Using the Copy+Compare function provides the most flawless duplication.
- Damage incurred due to non-compliance with U-Reach operating instructions will void the warranty.
- Store the equipment safely when not in use and keep out of the reach of children.
- Please turn off duplicator before replacing sockets.
- Never turn off the power while the firmware updates.
- Use only approved, stable power sources.
- The power supply has overload protection. When it is overloaded and shutdown, please unplug the power cord for 2 minutes for discharging.
- Use product only in a clean, dry, dust-free, and ventilated area. Liquids or foreign debris can severely damage your duplicator.
- It is typical for the machine to heat up during operation.
- While in use, do not move the duplicator or remove HDDs.
- Static electricity may cause duplication error. Please pay attention to the duplicator's environment while operating equipment. Purchasing electricity elimination equipment helps avoid shock.
- Devices will operate at high temperatures during selected tasks.
- Wear protective gloves to prevent burns when handling devices.
- Ensure machine and operator are properly grounded to prevent ESD.

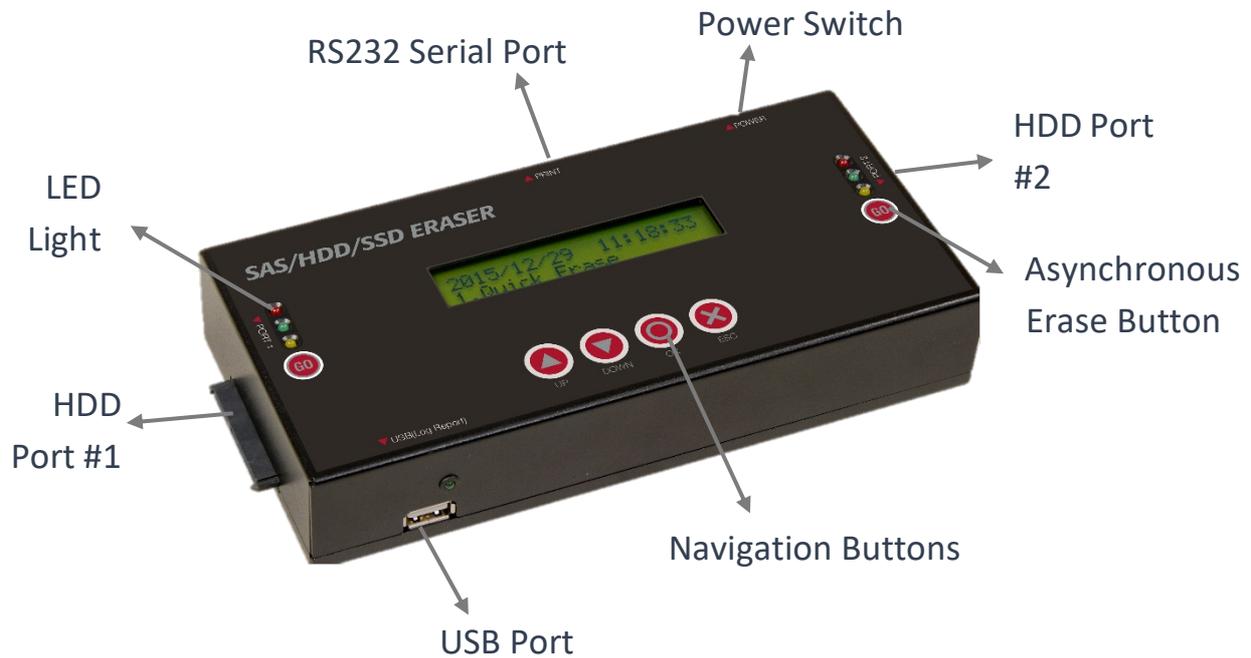
Notice Symbols

Special items, procedures, or notes to be observed prior to use:

Note	Refers to related duplicator operations, special details, tips, or suggestions for operational effectiveness.
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Caution	Refers to procedures that need to be adhered to or precautions.
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Product Overview



- **HDD Port #1:** Connect HDD for copy source or erase.
- **HDD Port #2:** Connect HDD for copy target or erase.
- **LED Light:** Red(error), Green steady(pass), Green flashing(working), Yellow(Powered, do not remove HDD)
- **USB Port:** Connect USB drive for exporting log report.
- **RS232 Serial port:** Connect to a printer, print out real-time erase report.



Function Table

Function	Item & Description
1. Quick Erase	Erases the index table only.
2. Full Erase	Erases the entire device capacity. Complies with NIST 800-88 Standards.
3. DoD Erase	3-Pass erases the entire device capacity. Complies with DoD5220.22-M Standards.
4. DoD EraseComp	3-Pass erases the entire device capacity and verifies. Complies with DoD5220.22-M Standards.
5. Secure Erase	7-Pass erases the entire device capacity. Complies with DoD5220.22-M(ECE) Standards.
6. 7 Pass Erase	Performs by sending ATA commands to the device(s) requiring complete purging of data by its internal methods, which conforms to NIST 800-88 standards. If you interrupt the secure erase process, your device(s) will be unusable.
7. Utility	7.1 Copy Copies source device to connected target device(s). Refer to function 8.2 Copy Area for 5 different copy modes.
	7.2 Compare Verifies target device(s) bit by bit to the master device.
	7.3 Copy+Compare Automates copy and compare by first duplicating and then verifying all the data, bit by bit.
	7.4 Show Disk Info. Displays connected device(s) detail information.
	7.5 Show System Info. Displays information of the duplicator system, including controller model number and firmware version.

	<p>7.6 System Update Updates system firmware.</p>	
8. Setup	<p>8.1 Start-up Menu Displays connected device(s) detail information.</p>	
	8.2 Copy Area (Copy Modes)	<p>System and Files Copies only data and skips empty spaces. Supports only NTFS, FAT16/32/64, HFS/HFS+/HFSX, and EXT2/3/4.</p>
		<p>All Partitions Copies all partitions and data, unallocated partitions not included.</p>
		<p>Whole HDD Copies all data and partitions including proprietary formats.</p>
		<p>Percentage (%) Copies the defined capacity percentage that operators set. (0%-99%)</p>
		<p>Sector Copy Copies the defined LBA that operators set.</p>
	<p>8.3 Skip Errors Sets the number of bad sectors to skip. (0-65535 or unlimited)</p>	
	8.4 Erase Pattern	<p>One Byte Writes a random character per byte.</p>
		<p>Big Random Data Writes a set of random characters into a set area.</p>
	<p>8.5 Mark After Erase Creates watermark on the device(s) after erase job is completed.</p>	
<p>8.6 Restore Default Restores system back to factory defaults.</p>		

9. Log Manager	9.1 Out Today Report Outputs today's log data.	
	9.2 Out Recent Report Outputs recent log data.	
	9.3 Out Period Date Outputs a set period of log data.	
	9.4 Advanced Function Default password: 123456	9.4.1 Clear ALL Log Clears all log records.
		9.4.2 Setup Password Allows password change.
9.4.3 Adjust Clock Sets time and date.		
9.4.4 Add Watermark at text File Creates watermark on the log report.		

**Above functions and features are subject to change without notice.*

Function Introduction

Before Erase

Please choose the appropriate erase method when you like to dispose or re-use the HDDs. You can set the following settings before erasing:

- I. Set Erase mode
- II. Set Erase Pattern → 8.4 Erase Pattern

Caution

It will erase the data in the HDD, please make sure you back up all important data before using this function.

Start to Erase

Step 1: Prepare HDDs

Prepare HDDs for disposal.

Step 2: Place HDDs

Insert HDDs for disposal into target ports.

Step 3: Select erasing methods between function 1-6.

Use ▲ ▼ to select the erasing method, and then press "OK". Data Erase will proceed.

Note

1. During erasing, press ▲ ▼ to view the status of each port. Press "OK" to see the details for each port.
2. After erasing, connect the device and press "Go" button to start a new erasing job.

1. Quick Erase

This function will ONLY erase the index of the HDD. It is the quickest way to erase the HDD.

2. Full Erase

This function will erase the whole sectors on the target HDD. It will take longer

than quick erase. Complies with NIST800-88 Standards.

3. DoD Erase

This function complies with the U.S.A. Department of Defense (DoD5220.22-M) standard to fully erase the HDD three times bit by bit to overwrite HDD data and guarantees data will not be recoverable. This DoD erase method will erase HDD over each sector three times: the first time with zeros (0x00), second time with FF (0xFF) and the third time with random characters.

4. DoD Erase & Compare

Besides DoD erase 3 times, this function will also execute comparison to make sure the random bit is correctly written.

Note

1. The erasing duration of DoD Erase mode is 3 times longer than full erase mode.
2. The duration of DoD EraseComp is 4 times longer than full erase mode.

5. Secure Erase

This function sends an ATA Secure Erase command. It overwrites every single track on the hard drive with "00". Even HPA/DCO or other hidden data areas can be erased all together.

Note

If you want to cancel execution of Copy/Compare/Erase, you can press "ESC" for few seconds to stop the task.

Caution

The user is responsible for verifying the targets' quality. Please pick a few completed targets for testing in a mass production environment for QC.

6. 7-Pass Overwrite

This mode is a DOD 7-pass and complies with the DoD5220.22-M (ECE) standard. It fully erases the HDD 7 times bit by bit to overwrite HDD data and

guarantees data is not recoverable. The 7-Pass Erase mode spends 7 times longer than full erase mode.

7. Utility

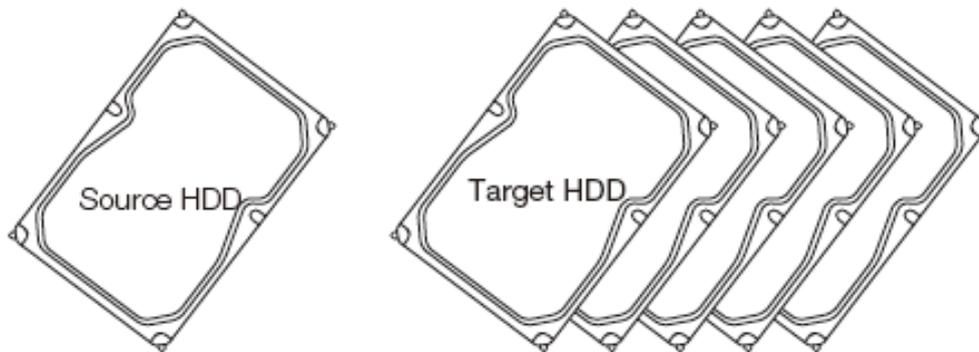
7.1 Copy

The copy function copies data from source HDD to target HDD. You can select "8.2 Copy Area" before copy.

Step 1: Prepare Source & Targets

Prepare a source HDD and target HDDs.

(It's strongly recommended that the source and target are the same capacity.)



Caution

Various adapters are required to copy devices with different interfaces, e.g., IDE, eSATA, mSATA, etc.

Step 2: Connect Source & Targets

Connect source HDD to source port, target HDDs to Target ports.

Step 3: Enter Function "7.1 Copy"

Use ▲ ▼ to select "7.1 Copy", and then press "OK". Duplication will start.

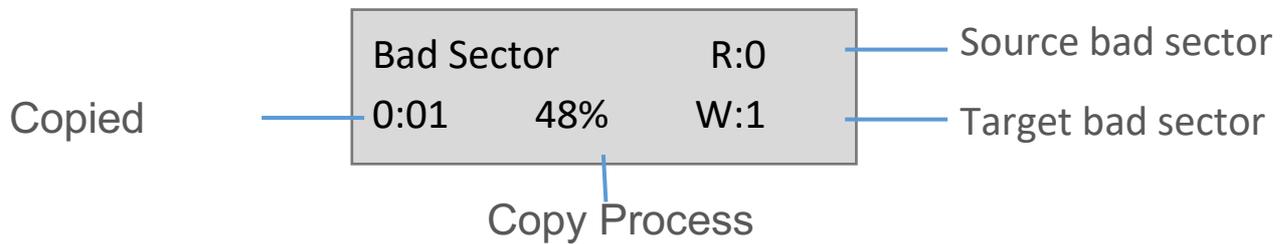
The information below shows on the LCD during duplication.

Copy Process

Function	Copy	224M	Total Data
Copied Time	0:02	85%	190M

Copy Process

(if there is any bad sector)

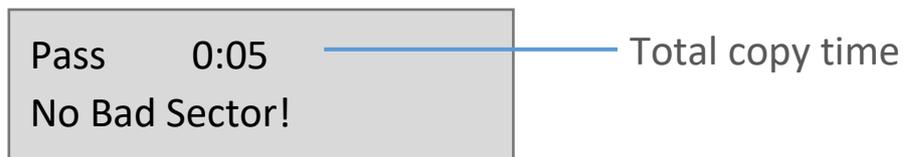


Step 4: Completion!

The copy result (Pass/Fail), total copy time and bad sectors will show on LCD.

Copy Result

Pass



Fail



Note

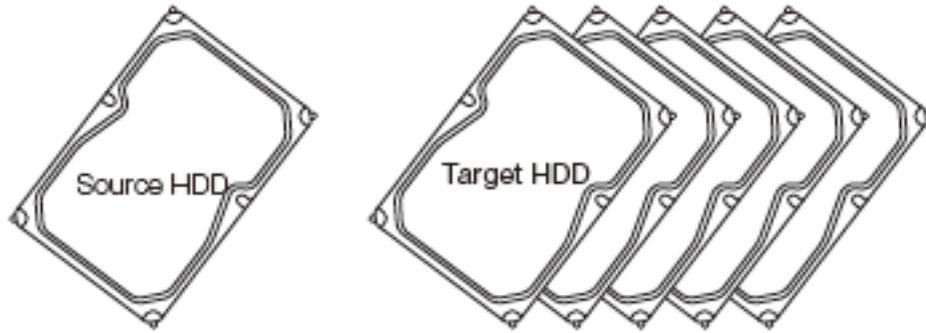
The default setting of error counter is 0. If users want to adjust the accepted error sectors of the HDD, they can set "8.3 Skip Error".

7.2 Compare

The compare function is used to check if the data on source HDD is identical to target HDD after duplication.

Step 1: Prepare Source and Targets

Prepare the source HDD and target HDDs to compare after duplication is completed.



Step 2: Connect Source and Targets

Connect the source HDD to Source port, target HDDs to Target ports.

Step 3: Enter "7.2 Compare"

Use ▲ ▼ to select "7.2 Compare" then press "OK". Data compare will proceed.

Step 4: Completion!

The result (Pass/Fail) and time will show on LCD after comparison completes.

Caution

The user is responsible for verifying the targets' quality. Please pick a few completed targets for testing in a mass production environment for QC.

7.3 Copy+Compare

The Copy+Compare function makes copies first and then compares copied HDDs with source HDD to confirm the accuracy.

Note

It is recommended to execute Compare after Copy to confirm the accuracy. Users can use the function "7.3 Copy+Compare".

7.4 Show Disk Info.

This function will display basic information such as device model, name, capacity, etc. Scroll through to view connected device(s) by port number order.

7.5 Update System

Step 1: Prepare a USB drive for update.

Connect a USB drive to a PC. Download the latest firmware provided by

supplier's technical support, unzip the BIOS firmware, then save it to the root directory in the USB drive.

Note The USB's format must be: FAT16 or FAT32.

Step 2: Proceed to update firmware.

Connect USB drive to the USB port in front of the duplicator. Scroll to select "5.2.1 Update BIOS", then press "OK" to start the firmware update process.

Caution The firmware update process may take longer than 5 minutes. Please do not disrupt power or process during BIOS update. If interrupted, the system will become useless. The manufacturer will not be held responsible for any damages.

7.6 System Info.

This function shows information about the duplicator including model name and firmware version.

SAS/SATA Dup 1-1
Ver: 2.43.6

8. Setup

8.1 Start-up Menu

This function allows user to select the default function to display during equipment initialization.

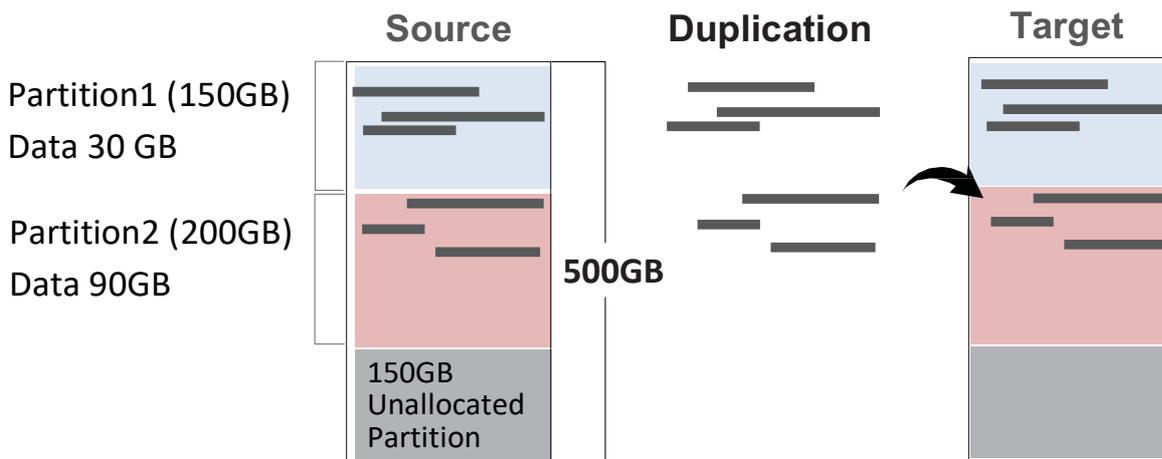
8.2 Copy Area

Users can set the copy area of source HDD. Appropriate copy area can greatly reduce operation time and provide better efficiency.

① System and Files (Quick Copy data area only)

This setting will copy source HDD's System and Files instead of the whole HDD. The system will analyze the source HDD and identify the data area to copy. As long as the source HDD's data is within the target HDD's space, the copy will be

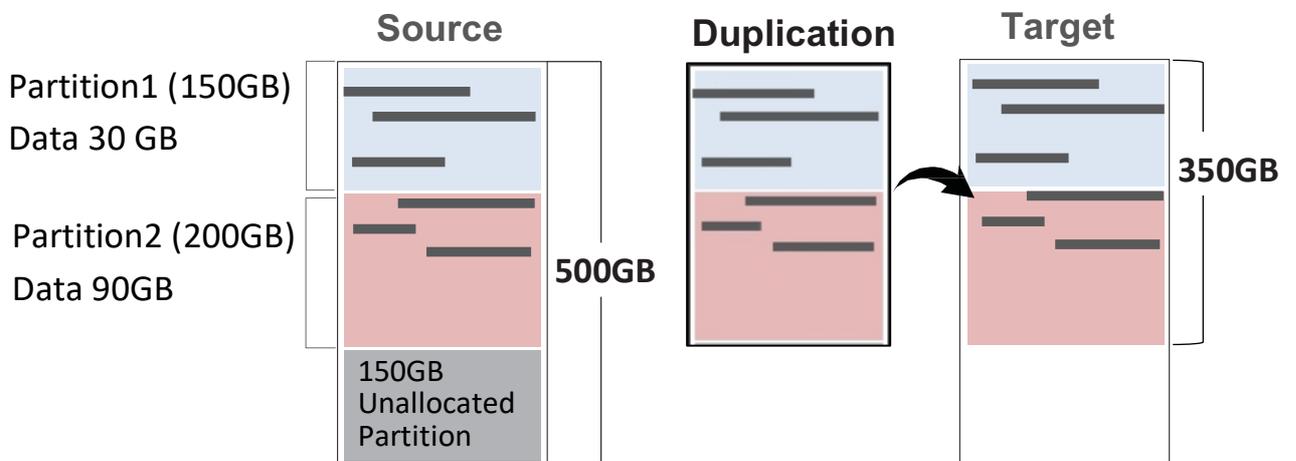
processed. FAT16/32/64, NTFS, ext2/3/4, HFS/HFS+/HFSX are supported for this copy mode.



Only 120G data area will be copied.

② ALL Partitions

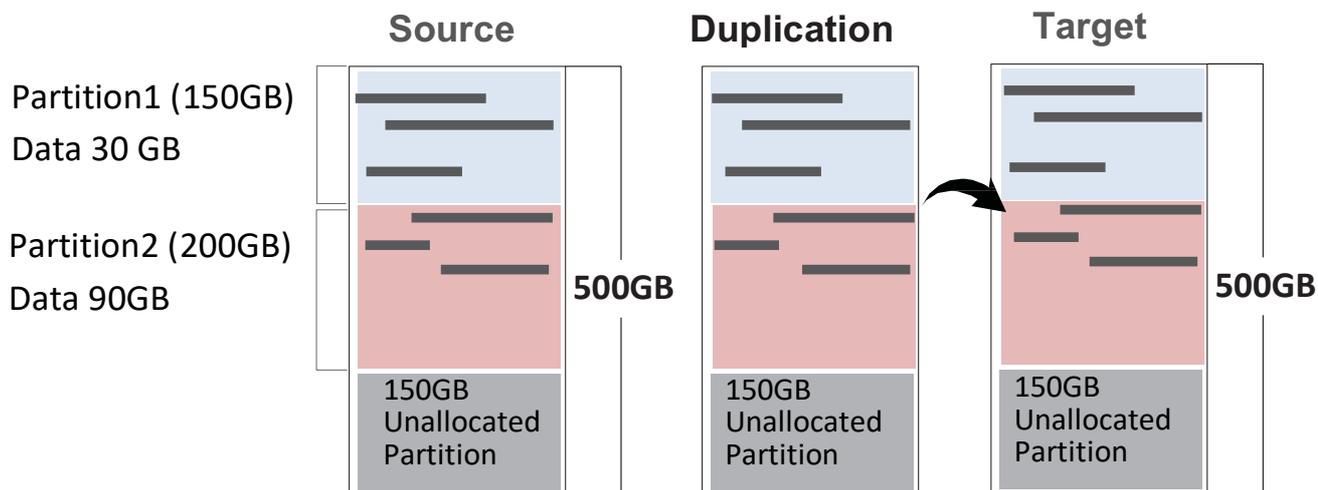
Copies all the partitions bit by bit whether or not there is existing data. The capacity of target HDDs must be bigger than the partitions' required capacity.



350GB of all Partitions along with its contents will be copied.

③ Whole HDD

Copies the whole source HDD, no matter the content, format, partition or empty space. This mode does not analyze the data.

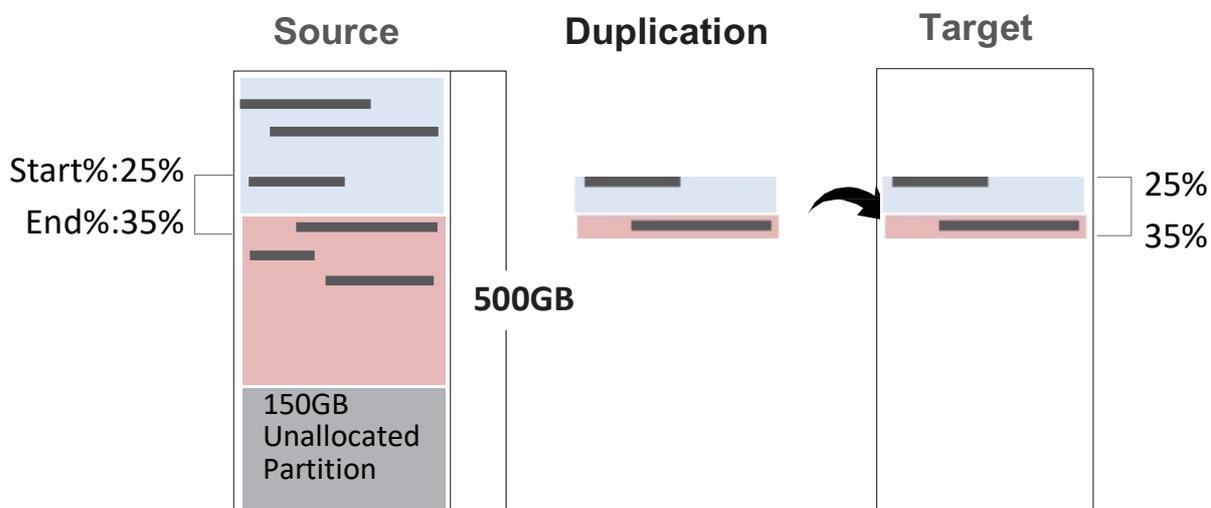


All 500GB of data will be copied.

④ Percentage (%)

Defines the selected percentage range of source HDD.

Set “Start Percentage” and “End Percentage” for copy area.

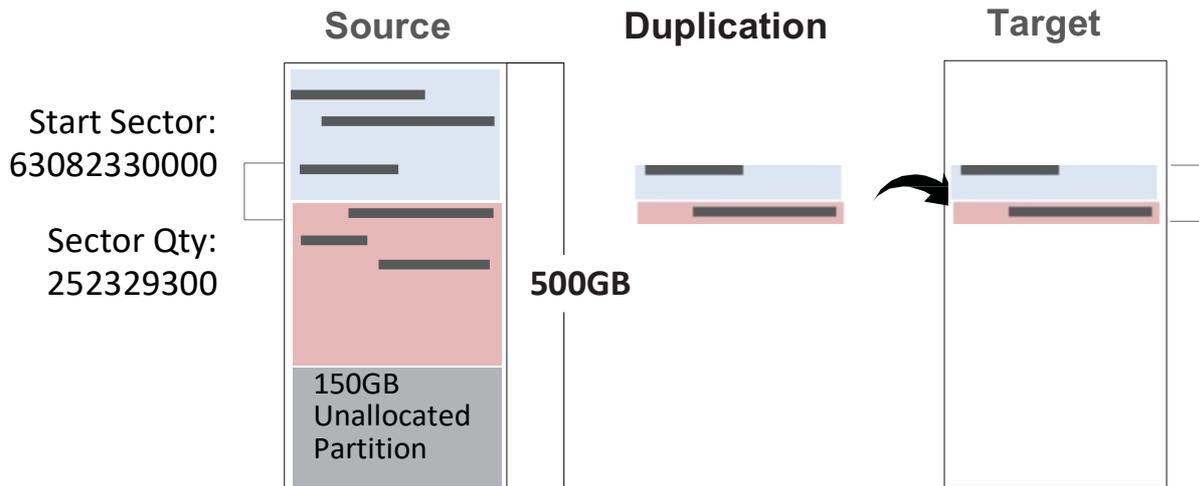


Only copies the selected area.

⑤ Sector Copy

Defines the selected sector range of source HDD.

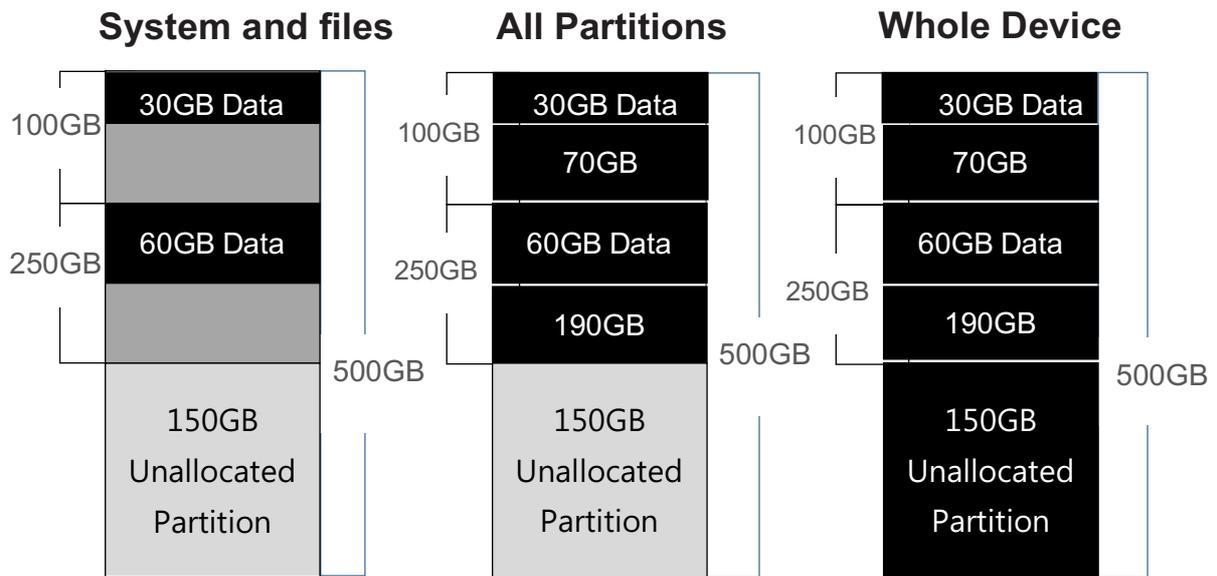
Set “Start Sector (LBA)” and “Sector Qty” for sector range.



Only copies the selected area.

How to select the proper copy area?

Example: There are two partitions in one 500G HDD.



This function will analyze and copy only data and skip empty spaces.

This function will copy all data within the defined partitions.

This function will copy the entire device.

8.3 Skip Errors

This function sets the number of errors you would like to skip during copy / compare / erase process. The default is 0. You can choose 0-65535 or unlimited.

8.4 Erase Pattern

Enable to select overwrite data pattern mode during erase.

- ONE Byte

[00] or a fixed character will be written into every byte.

- Big Random Data

Random character written in a set of area.

8.5 Mark After Erase

Creates watermark on the device(s) after erase job is completed. This watermark will show when executing "7.4 Show Disk Info." and can be printed out when connecting to a thermal printer.

8.6 Restore Default

Select to go back to the manufacturer's default setting.

9. Log Manager

Scroll to select from "9.1-9.3", then press "OK" to output log report to a USB drive.

9.1 Out Today Report

Outputs current day log report.

9.2 Out Recent Report

Outputs recent log report

9.3 Out Period Report

Outputs recent log report

9.4 Advanced Function

This menu allows user to access several submenus.

Scroll to select "9.4 Advanced Function", then press "OK" access submenus.

Default password: 123456

9.4.1 Clear All Log

Clear all log records.

9.4.2 Password Setup

Allows password change.

Note

If you want to change your Log password, please keep your password in a safe place in case you lose it. Please understand that the manufacturer does not provide password reset service due to the consideration of personal privacy.

9.4.3 Adjust Clock

Change time and date.

9.4.4 Add Watermark at text File

Creates watermark on the log report. The log report can be checked by software (iSecuLog.exe) to prevent modifying.

**Specifications subject to change without notice.*