

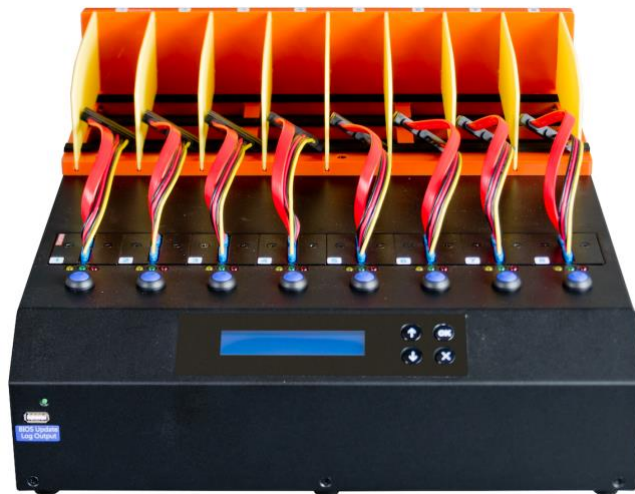


MTS-SAS-V3 Series

SATA/SAS

Duplicator and Sanitizer

User Manual vA.03



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Product Disclaimer

U-Reach 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 a U-Reach 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 U-Reach product. U-Reach makes every effort to ensure proper operation of all products. However, the customer is responsible to affirm that out of the U-Reach product meets the customer's quality requirement. The customer further acknowledges that fallacious operation of U-Reach product and/or software program, or hardware issues, can cause loss of data, defective formatting, or data loading. U-Reach 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

U-Reach 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 U-Reach.

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

Piracy Statement

U-Reach accepts no responsibility for copyright infringement or misuse of any U-Reach 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 our 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 the socket.
- Never turn off the power while the firmware updating.
- 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 discharge.
- 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 and 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

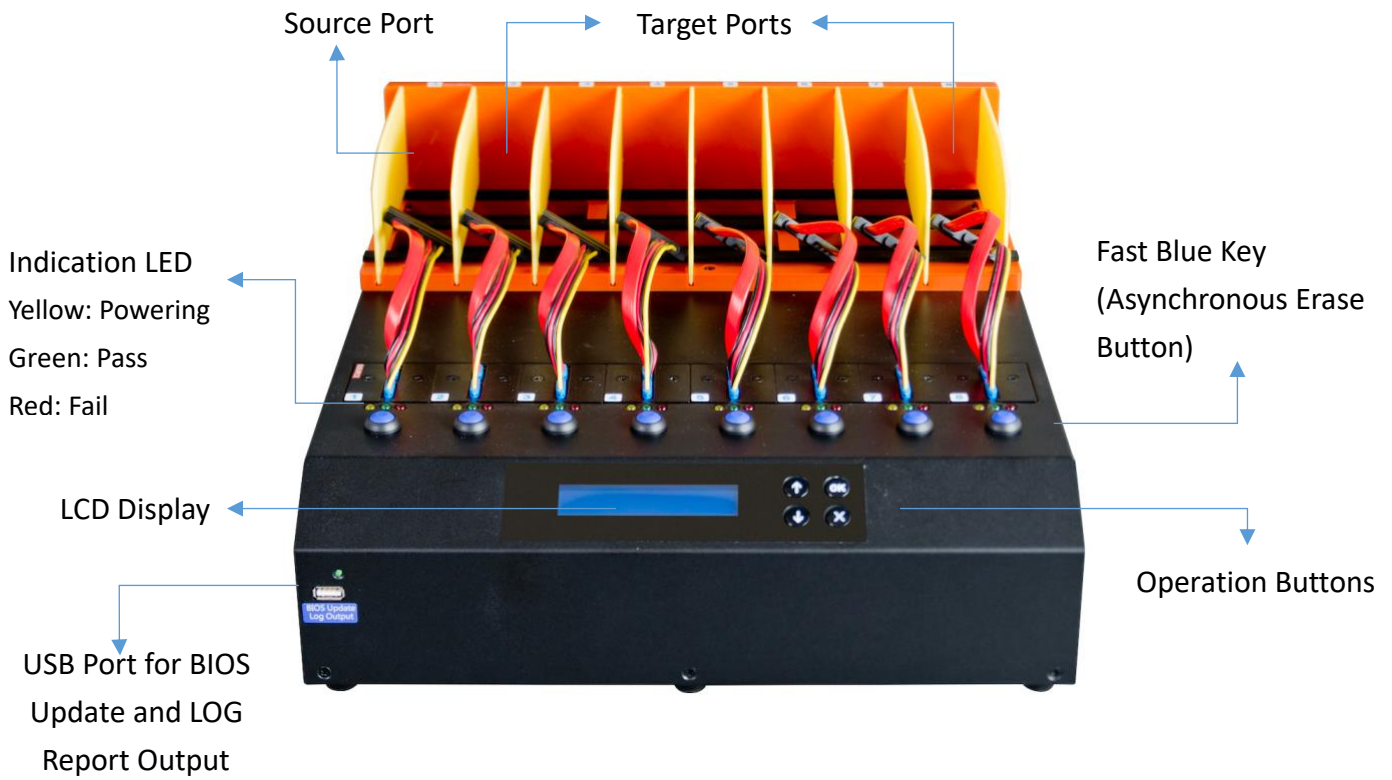
Refers to related duplicator operations, special details, tips, or suggestions for operational effectiveness.

Caution

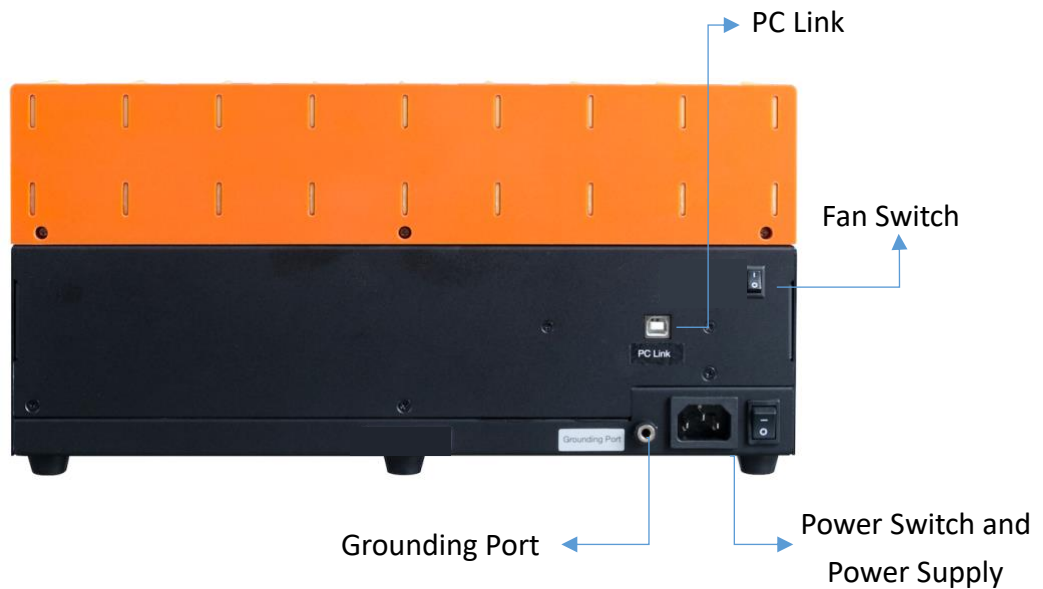
Refers to procedures that need to be adhered to or precautions.

Product Overview

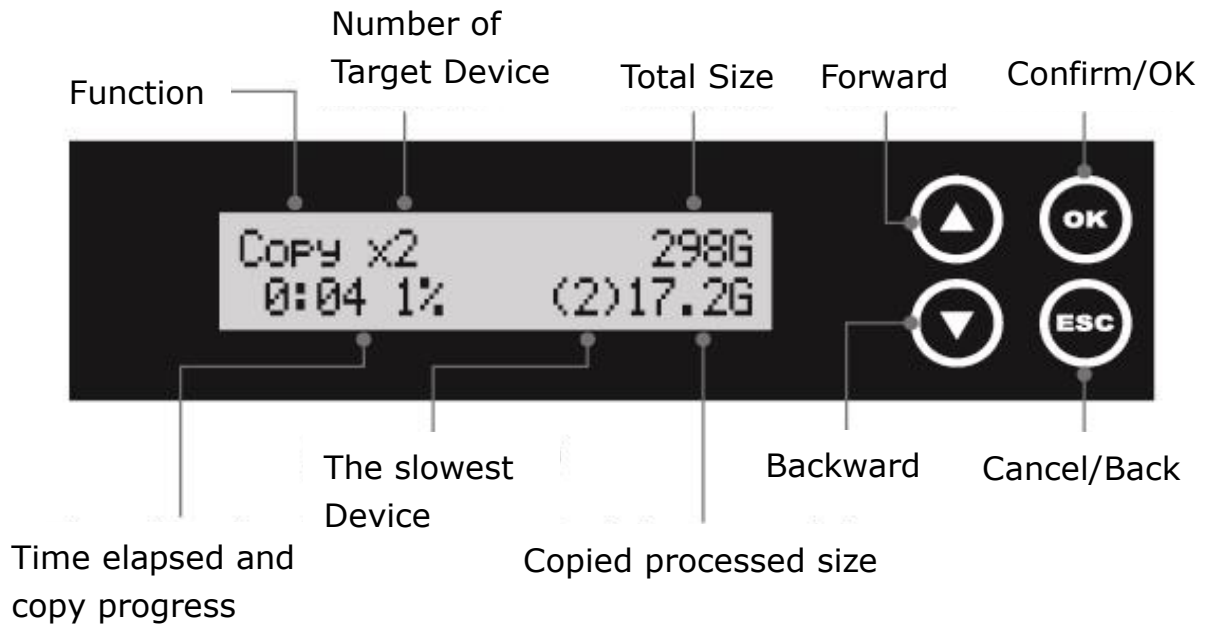
• Front View



• Back View



- **LCD Configuration**



Functions Table

Function	Descriptions
1. Copy	Copies data from source device to targets. (There are four copy modes in function "6.2 Copy Area")
2. Compare	Compares the source and targets to ensure copy accuracy.
3. Copy +Compare	Automatically launches compare function after copy is completed.
4. Erase	4.1 Quick Erase Erases device(s)' index table.
	4.2 Full Erase Erases entire device(s), complying with NIST 800-88 Standards.
	4.3 DoD Erase Erases device(s), complying with DoD 5220.22-M Standards.
	4.4 DoD EraseComp Erases device(s), complying with DoD 5220.22-M Standards and verifies complete erasure.
	4.5 7-Pass Erase Erases device(s) 7 times complying with DoD 5220.22-M(ECE) Standards.
	4.6 Secure Erase Erases the non-loadable areas complying with NIST 800-88 Standards.
	4.7 Enhanced Secure Erase Erases devices that support this feature.
	4.8 NSA Erase Erases device(s) complying with NSA Standards.
	4.9 US Army AR380-19 Erases device(s) complying with "Army Regulation 380-19" by the US Army.
	4.10 Sanitize Block Erase Erases the non-loadable areas complying with NIST 800-88 Standards for SAS SSD(s).
	4.11 Sanitize Purge

	Erases the non-loadable areas complying with NIST 800-88 Standards for SAS hard disk drive(s).	
	4.12 SAS Low Level Format Format SAS hard drive(s).	
5. Utility	5.1 Show Device Info. Displays basic information such as device model, name, capacity, etc.	
	5.2 Update System	5.2.1 Update BIOS Updates system firmware by any device at the source port or through the USB port.
		5.2.2 Create Update HDD Prepares by formatting the device to a 2GB FAT partition to accept firmware file.
	5.3 System Info. Displays system information such as controller, model number, software version, etc.	
	5.4 Verify HDD Scans device for any bad sectors by reading and writing.	
	5.5 Strict Verify HDD Scans device for any bad sectors by reading and writing two times.	
	5.6 Unlock HDD Unlocks the HDD that has not completed Secure Erase so that the HDD can continue to be used.	
	5.7 Calc. MD5 Value Calculates the MD5 value of the source port's media.	
	5.8 Calc. SHA256 Value Calculates the SHA256 value of the source port's media.	
6. Setup	6.1 Start-up Menu Sets default function to display during equipment initialization.	
	6.2 Copy Area	System and Files Copies data and skips empty space. Only supports standard formats.
		ALL Partitions Copies all partitions and data, unallocated partitions not included.

	<p>Whole HDD Copies all source data, bit by bit.</p>
	<p>Percentage (%) Sets percentage of source capacity to copy.</p>
	<p>6.3 Copy GPT Backup Area Enable this function to copy the end GPT format.</p>
	<p>6.4 Skip Errors Skips bad sectors during Copy/Compare/Erase.</p>
	<p>6.5 Minimum Speed Allows user to disable or set minimum threshold speed during Copy/Compare/Erase.</p>
	<p>6.6 Check Source Minimum Speed Allows user to enable or disable the 1st port speed check during Copy/Compare/Erase.</p>
	<p>6.7 Language Sets preferred language.</p>
	<p>6.8 Delete Disk Signature After Copy No</p>
	<p>Yes Do not copy the disk signature onto target devices.</p>
	<p>6.9.1 Unknown Format Allows user to copy or skip unknown format(s).</p>
	<p>6.9.2 Erase Master Allows user to erase the source port or not.</p>
	<p>6.9.3 Erase Pattern Sets whether to overwrite data in one-byte or Big random data.</p>
	<p>6.9.4 Skip Erase Errors Skips bad sectors during Erase.</p>
	<p>6.9.5 Wait HDD Time Sets device power-up buffer time when tasks are initiated. Able to set from 5 to 99 seconds.</p>
	<p>6.9.6 Timeout Time Sets the amount of time the duplicator should wait for the device(s) to respond.</p>
6.9 Advanced Setup	

		<p>6.9.7 Timeout Retry Sets how many times the duplicator should try if there is no response from the device(s).</p>								
		<p>6.9.8 Lock Key Locks keys only allowing “OK/ESC” buttons to function. (System reboot is required)</p>								
	<p>6.9.9 Copy HPA Area</p>	<table border="1"> <tr> <td data-bbox="799 416 970 607"> <p>Do Not Copy HPA</p> </td> <td data-bbox="970 416 1463 607"> <p>Keep Target HPA Does not copy HPA data, but keeps target device’s original HPA setting.</p> </td> </tr> <tr> <td data-bbox="799 607 970 797"></td> <td data-bbox="970 607 1463 797"> <p>Clear Target HPA Does not copy HPA data and clears target device’s HPA setting.</p> </td> </tr> <tr> <td data-bbox="799 797 970 965"></td> <td data-bbox="970 797 1463 965"> <p>Setting Target HPA Copies HPA setting from source device to target.</p> </td> </tr> <tr> <td data-bbox="799 965 970 1122"></td> <td data-bbox="970 965 1463 1122"> <p>Copy and Setting Copies HPA setting and data from source device to target.</p> </td> </tr> </table>	<p>Do Not Copy HPA</p>	<p>Keep Target HPA Does not copy HPA data, but keeps target device’s original HPA setting.</p>		<p>Clear Target HPA Does not copy HPA data and clears target device’s HPA setting.</p>		<p>Setting Target HPA Copies HPA setting from source device to target.</p>		<p>Copy and Setting Copies HPA setting and data from source device to target.</p>
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	<p>Copy and Setting Copies HPA setting and data from source device to target.</p>									
	<p>6.9.10 Clear HPA at ERASE</p>	<table border="1"> <tr> <td data-bbox="799 1122 970 1234"> <p>Clear HPA Setting</p> </td> <td data-bbox="970 1122 1463 1234"> <p>Clears HPA setting during erase.</p> </td> </tr> <tr> <td data-bbox="799 1234 970 1346"> <p>Keep HPA Setting</p> </td> <td data-bbox="970 1234 1463 1346"> <p>Keeps original HPA setting during erase.</p> </td> </tr> </table>	<p>Clear HPA Setting</p>	<p>Clears HPA setting during erase.</p>	<p>Keep HPA Setting</p>	<p>Keeps original HPA setting during erase.</p>				
<p>Clear HPA Setting</p>	<p>Clears HPA setting during erase.</p>									
<p>Keep HPA Setting</p>	<p>Keeps original HPA setting during erase.</p>									
		<p>6.9.11 Mark After Erase Creates watermark on the device(s) after erase job is completed.</p>								
		<p>6.9.12 Transfer Rate Allows user to select from UDMA2 to UDMA7. The UDMA7 is the fastest.</p>								
		<p>6.9.13 Stop Motor Time Sets device power down buffer time when tasks are completed.</p>								
		<p>6.9.14 Verify After Erase Automatically verified when performing the following erasures, Full Erase, 7-PASS Erase, Sanitize Block Erase, and Sanitize Purge.</p>								

		<p>6.9.15 Erasing complete with bad sectors, LED display Mode Sets the color of the LED light that is displayed if there are bad blocks detected after erasure.</p>
	<p>6.10 Restore Default Reinstates manufacturer settings.</p>	
7. Log Manager	<p>7.1 Out Today Report Outputs today's log data.</p>	
	<p>7.2 Out Recent Report Outputs recent log data.</p>	
	<p>7.3 Out Period Date Outputs a set period of log data.</p>	
	<p>7.4 Advanced Function Default password: 123456</p>	<p>7.4.1 Clear ALL Log Clears all log records.</p>
		<p>7.4.2 Setup Password Allows password change.</p>
<p>7.4.3 Adjust Clock Sets time and date.</p>		
<p>7.4.4 Add Watermark at text File Creates watermark on the log report.</p>		

Functions

1. Copy

Step 1: Prepare source and target devices.

Note Recommendation: Target device(s)' capacity must be equal to or larger than the source device capacity.

Step 2: Connect source and target devices.

Step 3: Proceed to copy.

Scroll to select "1. Copy", then press "OK" to start the duplication process.

Note The number of working/connected targets will be displayed on LCD. Press "OK" to start.

The information below states what is displayed on the LCD during duplication.

Copy	40.0G	Function	Total Data
3ready		Copy x3	40G
		1:38 25%	(4) 10.3G
		Copied	Slowest
		Time & %	Port Copied
			Data

Note ● Press “▲▼” together for 5 seconds to stop operation on the slowest device.

Step 4: Copy Completed!

The quantity of passed or failed target device(s), the copied duration, and CRC64 will be displayed on the LCD after duplication completes.

```
Pass:3 Fail:0 8:00  
CRC:7073923CEBDF7B58
```

Note CRC64: During duplication, each port will simultaneously record written data and compare CRC64 between source and targets. The result will be conveyed with a green light (pass) or a red light (fail).

2. Compare

Proceed to verify device(s).

Scroll to select "2. Compare", then press "OK" to start the verification process.

Note The number of working/connected targets will be displayed on the LCD. Press "OK" to start.

3. Copy+Compare

Sequentially automates from Function 1, Copy to Function 2, Compare.

Scroll to select "3. Copy+Compare", then press "OK" to start the automated duplication and verification process.

Caution

User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

4. Erase

There are 13 submenu modes.

Caution

Please back up all important data before using this function.

Step 1: Connect device(s) for sanitizing.

Note

Source Port is disabled for erasing. Go to 6.9.2 to enable source port erasing.

Step 2: Enter function "4. Erase"

Scroll to select "4. Erase", then press "OK" to view the 8 erase modes.

Step 3: Select an Erase Function.

Here are a couple tips to see port details during erase:

- Press "▲" or "▼" to view real-time status of each port.
- Press "OK" to view the details of each port.

Step 4: Erase Completed

Here are a few tips to perform or stop an Erase job.

- Press "Asynchronous Erase Button" to start a new Erase job.
- Press "Asynchronous Erase Button" for 5 seconds to stop a single port.
- Press "ESC" for 5 seconds to stop all the erase jobs.

Caution

User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

4.1 Quick Erase

This function will erase the index table from the connected device(s).

Scroll to select "4.1. Quick Erase", then press "OK" to start the erasing process.

4.2 Full Erase

This function will erase all data per NIST 800-88 Standards on the connected device(s).
Scroll to select "4.2 Full Erase", then press "OK" to start the erasing process.

4.3 DoD Erase

This function will erase all data per DoD 5220.22-M Standards on the connected device(s).
Scroll to select "4.3 DoD Erase", then press "OK" to start the erasing process.

4.4 DoD EraseComp

This function will erase all data per DoD 5220.22-M Standards, then compare erasure of the connected device(s).
Scroll to select "4.4 DoD EraseComp", then press "OK" to start the erasing and verifying process.

4.5 7-Pass Erase

This function will erase device(s) 7 times complying with DoD 5220.22-M(ECE) Standards.
Scroll to select "4.5 7-Pass Erase", then press "OK" to start the erasing process.

4.6 Secure Erase

This function erases the non-loadable areas complying with NIST 800-88 Standards.
Scroll to select "4.6 Secure Erase ", then press "OK" to start the erasing process.

Caution

During the secure erase process, do not interrupt the erasure operation, as it may render the hard drive unreadable by the computer. You will need to perform the secure erase process again before the device can be used.

4.7 Enhanced Secure Erase

This function erases devices that supports this feature.
Scroll to select "4.7 Enhanced Secure Erase", then press "OK" to start the erasing process.

Caution

During the enhanced secure process, do not interrupt the erasure operation, as it may render the hard drive unreadable by the computer. You will need to perform the enhanced secure erase process again before the device can be used.

4.8 NSA Erase

This function will erase device(s) complying with NSA Standards.
Scroll to select "4.8 NSA Erase", then press "OK" to start the erasing process.

4.9 US Army AR 380-19

This function will erase device(s) complying with Army Regulation 380-19 by the US Army. Scroll to select "4.9 US Army AR 380-19", then press "OK" to start the erasing process.

4.10 Sanitize Block Erase

This function will erase the non-loadable areas of SAS SSD(s) complying with NIST 800-88 Standards.

Scroll to select "4.10 Sanitize Block Erase ", then press "OK" to start the erasing process.

Caution

During the Sanitize Block Erase process, do not interrupt the erasure operation, as it may result in the hard drive being unreadable by the computer. You will need to complete the Sanitize Block Erase process again before the device can be used.

4.11 Sanitize Purge

This function will erase the non-loadable areas of SAS hard disk drive(s) complying with NIST 800-88 Standards.

Scroll to select "4.11 Sanitize Purge," then press "OK" to start the erasing process.

Caution

During the Sanitize Purge process, do not interrupt the erasure operation, as it may result in the hard drive being unreadable by the computer. You will need to complete the Sanitize Block Erase process again before the device can be used.

4.12 SAS Low Level Format

This function will perform low level format of the SAS hard disk drive(s). Upon completion, the data on the SAS hard drive will be cleared.

Scroll to select "4.12 SAS Low Level Format," then press "OK" to start the erasing process.

Caution

During the SAS Low Level Format process, do not interrupt the erasure operation, as it may result in the hard drive being unreadable by the computer. You will need to complete the SAS Low Level Format process again before the device can be used.

5. Utility

This menu contains submenus related to device information, system information and updates.

Scroll to "5. Utility", then press "OK" to view the submenus.

5.1 Show Device Info

This function will display basic information such as device model, name, capacity, etc...

Scroll to select "5.1 Show Device Info", then press "OK" to view the connected device(s).

Then scroll through to view connected device(s) by port number order.

5.2 Update System

There are 2 system update methods.

① Through USB Port

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. We will not be held responsible for any damages.

② Through Source Port

Step 1: Prepare a device for update.

Connect a device to the source port. Scroll to select "5.2.2 Create Update HDD", then press "OK" to start the format process. This will format the device to a 2GB FAT32 Partition.

Step2: Download Firmware

Connect this device to PC. Download the latest firmware provided by supplier's technical support, unzip the BIOS firmware, then save it to the root directory in the device.

Note Ensure that the device does not have any bad sectors.

Step3: Proceed to update firmware.

Connect this device to the source port. 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. We will not be held responsible for any damages.

5.3 System Info

This function will display basic information such as controller, model number, software version, etc.

Scroll to select "5.3 System Info", then press "OK" to view all information.

5.4 Verify HDD

This function scans device for any bad sectors by reading and writing. Scroll to select "5.4 Verify HDD", then press "OK" to initiate process. Then scroll through to view connected device(s) by port order.

5.5 Strict Verify HDD

This function scans device for any bad sectors by reading and writing two times. Scroll to select "5.5 Strict Verify HDD", then press "OK" to initiate process. Then scroll through to view connected device(s) by port order.

5.6 Unlock HDD

Unlocks the HDD that has not completed Secure Erase so that the HDD can continue to be used.

5.7 Calc. MD5 Value

This function will count the MD5 value for the source port. The MD5 value is an easy way to double check the source data is correct.

5.8 Calc. SHA256 Value

This function will count the SHA256 value for the source port. The SHA256 value is an easy way to double check the source data is correct.

Caution

User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

6. Setup

This menu contains submenus related to device information, system information and updates.

Scroll to select "6. Utility", then press "OK" to view the submenus.

6.1 Start-up Menu

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

Scroll to select "6.1 Start-up Menu", then press "OK." Then scroll through the available menus for startup.

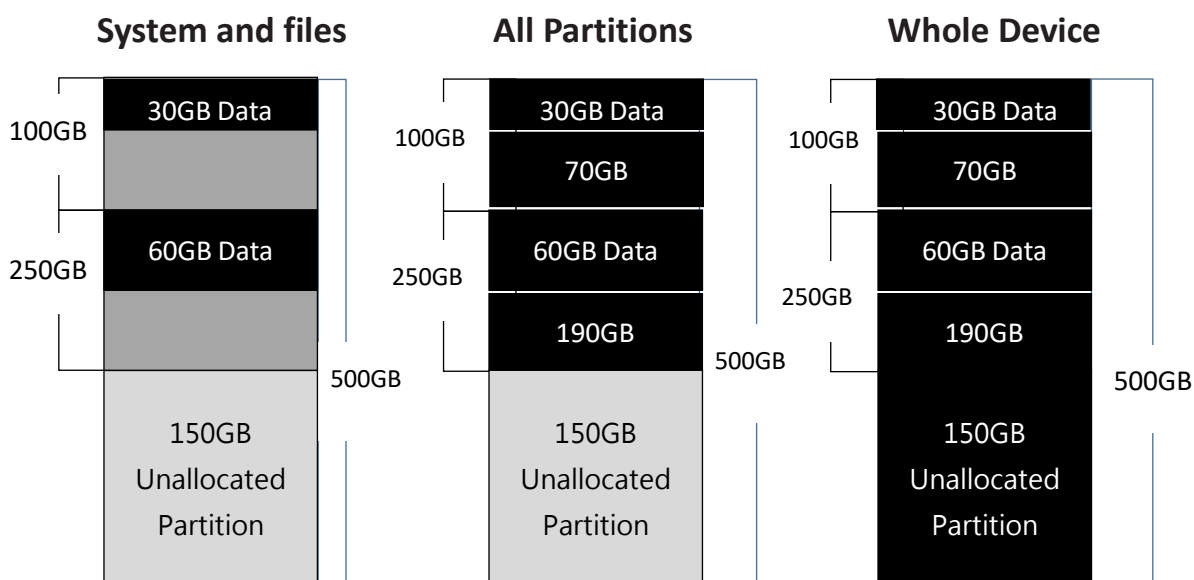
6.2 Copy Area

There are 4 submenu modes.

Scroll to select "6.2 Copy Area", then press "OK." Then scroll through to select one of the four copy methods.

- **Selecting the Proper Copy Modes**

Example: There are two defined partitions in a 500GB device. The charts below illustrate what portion would be duplicated.



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.

- **Copy and Compare Preparations**

Please consider the following settings before proceeding with copy or compare:

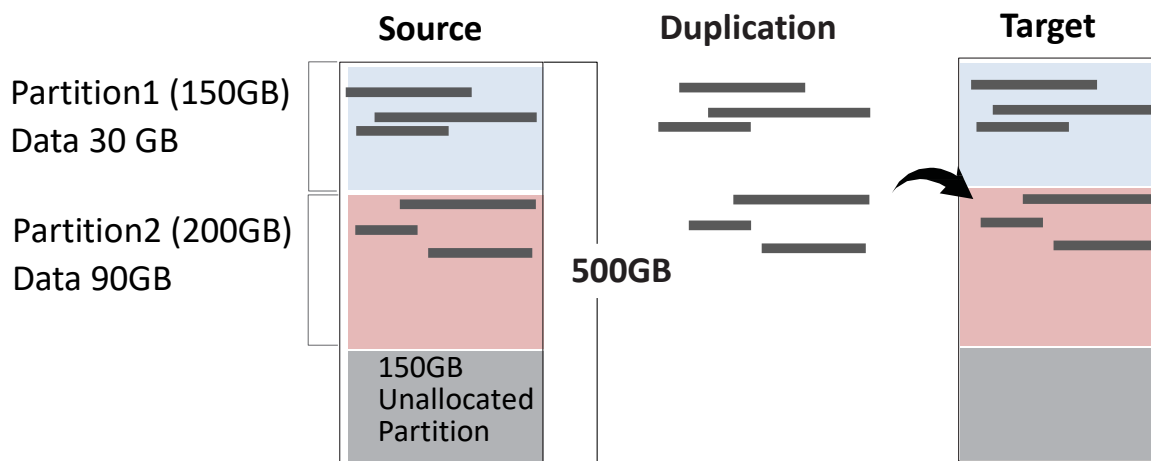
- **6.2 Copy Area**
- **6.4 Skip Errors**
- **6.5 Minimum Speed**
- **6.6 Check Source Minimum Speed**
- **6.9.1 Unknown Format**
- **6.9.9 Copy HPA Area**

Using appropriate copy modes can greatly reduce operation time and increase efficiency. There are four copy modes with different copy methods.

- **1 System and Files**

Copies data and skips empty space. Only supports standardized formats.

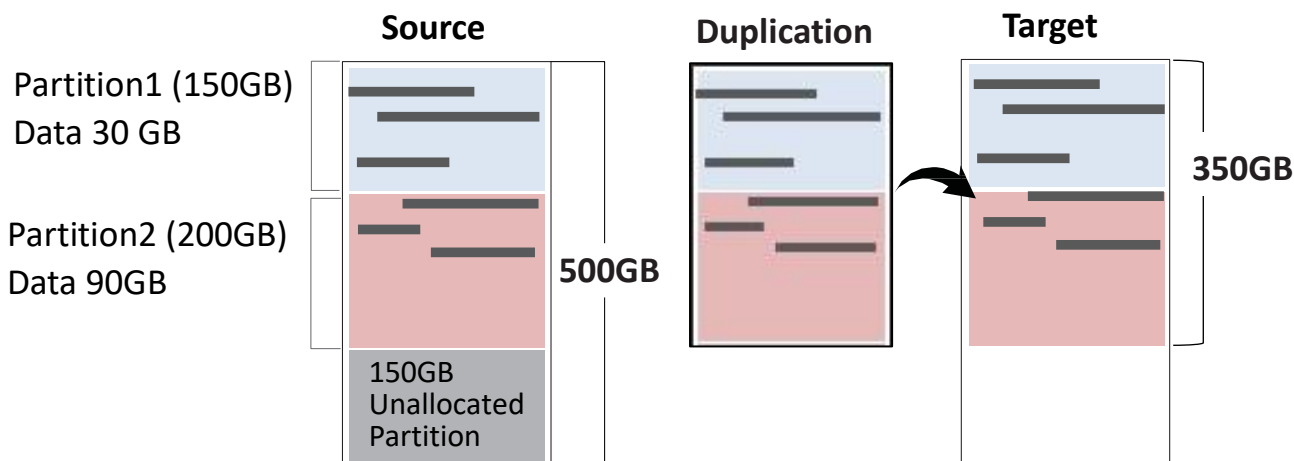
Scroll to select "System and Files", then press "OK" to save the copy method. Allows user to copy source device's System and Files, instead of the entire device. The system will analyze the source device and identify the data area to copy. If the source device's data is within the target device's capacity, the copy will be processed. FAT16/32/exFAT, NTFS, EXT2/EXT3/EXT4/lvm, and HFS/HFS+/HFSX are supported in this copy mode.



Only 120G data area will be copied.

2 All Partitions

Copies all partitions and data, unallocated partitions not included. Scroll to select "All Partitions", then press "OK" to save the copy method. The target device's capacity must be equal to or larger than the source device's capacity.

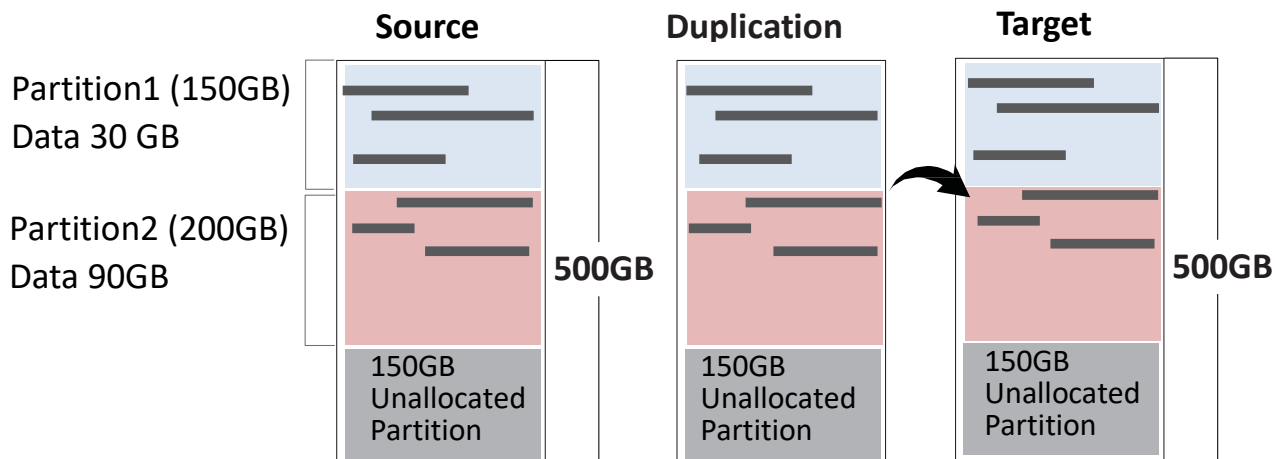


350GB of all Partitions along with its contents will be copied.

3 Whole HDD

Copies all source data bit by bit.

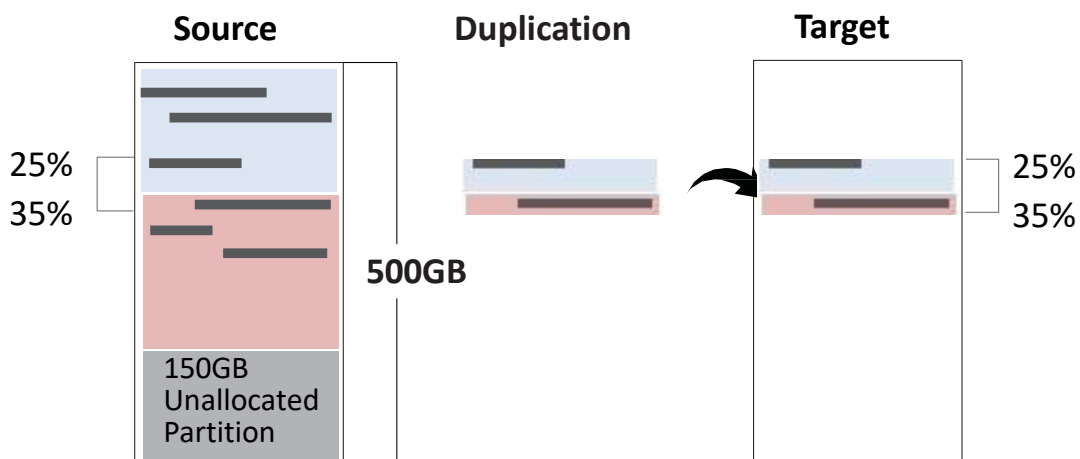
Scroll to select "Whole HDD", then press "OK" to save the copy method.
 Copies the whole source device, irrespective of content, format, partition, or empty space.
 This mode does not analyze the data.



All 500GB of data will be copied.

④ Percentage (%)

Select percentage of source capacity to copy.
 Scroll to select "Percentage", set the upper and lower %, then press "OK" to save the copy method.

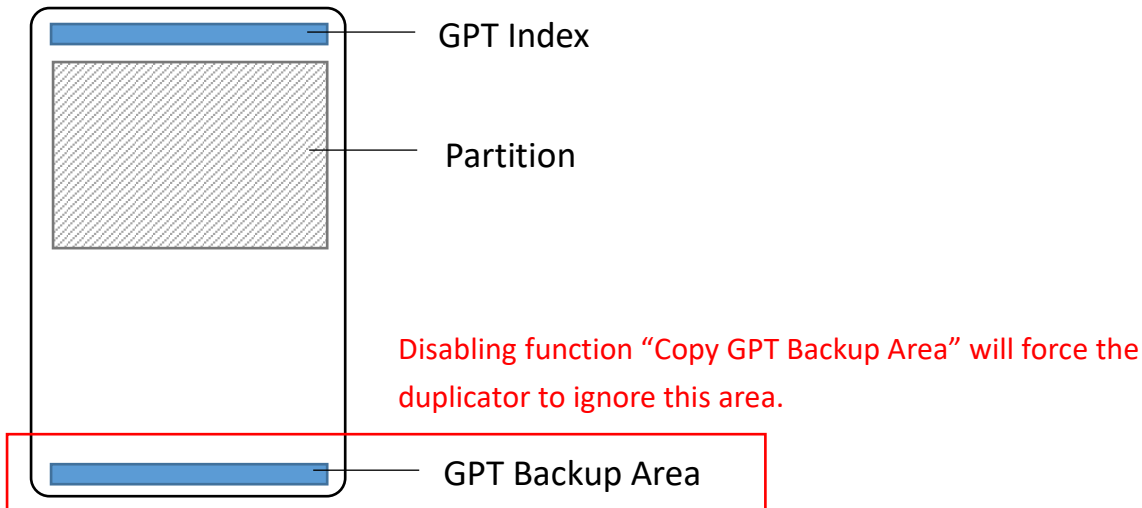


Only copies the selected area.

6.3 Copy GPT Backup Area

Disabling this function allows the duplicator to copy from big capacity device to small capacity device(s).

Caution The partition size of the source HDD must be smaller than target capacity.



Caution If function is disabled, the target HDD will reconstruct the GPT Backup Area by Windows system. It may require the HDD to restart in order to work.

6.4 Skip Errors

Skips bad sectors during Copy/ Compare/ Erase.

Scroll to select "6.4 Skip Errors", then press "OK" to scroll through the available values for skipping bad sectors. If the device data is critical and needs to be a full clone, it is recommended to set "Skip Error" at "0." Bad sectors can be set as unlimited or at a value from 0 to 65,535.

6.5 Minimum Speed

Allows user to disable or set minimum threshold speed during Copy/ Compare/ Erase.

Scroll to select "6.5 Minimum Speed", then press "OK" to set desired minimum threshold speed. The system will fail if any device does not achieve minimum speed. Users can choose "Don't Care" or set the speed value amongst 10/20/40/60~300MB/second.

6.6 Check Source Minimum Speed

Allows user to enable or disable the 1st port speed check during Copy/ Compare/ Erase.

Scroll to select "6.6 Check Source Minimum Speed", then press "OK" to enable or disable speed analysis of the source port. This setting will follow the threshold speed defined in function "6.5 Minimum Speed."

6.7 Language

Select English, Japanese, Spanish.

Scroll to select "6.7 Language", then press "OK." Then scroll through to select the desired language.

6.8 Delete Disk Signature After Copy

Set at "Yes" means do not copy the disk signature part.

This function is for Windows only. Windows will only recognize one device if you connect two or more with the same disk signature.

Caution

"Compare" function will always Fail if "Delete Disk Signature After Copy" is set at "Yes."

6.9 Advanced Setup

6.9.1 Unknown Format

This function only works with "6.2 Copy Area >> System and Files."

Scroll to select "6.9.1 Unknown Format", then press "OK".

Unknown format includes all forms of modified and proprietary data and partitions.

① Copy Unknown

Copy unknown format(s).

Scroll to select "6.9.1 Unknown Format >> Copy Unknown", then press "OK" to save this setting.

② Skip Unknown

Skip unknown format(s).

Scroll to select "6.9.1 Unknown Format >> Skip Unknown", then press "OK" to save this setting.

6.9.2 Erase Master

This function allows user to enable or disable the source port for sanitization.

Scroll to select "6.9.2 Erase Master", then press "OK." Then scroll through to select one of two settings.

① Disabled

Devices connected to source port cannot be erased.

Scroll to select "6.9.2 Erase Master >> Disabled", then press "OK" to save this setting.

② Enabled

Devices connected to source port can be erased.

Scroll to select "6.9.2 Erase Master >> Enabled", then press "OK" to save this setting.

6.9.3 Erase Pattern

Scroll to select "6.9.3 Erase Pattern", then press "OK". Then scroll through to select one of two settings.

① One Byte

Random character written per byte.

Scroll to select "6.9.3 Erase Pattern >> One Byte", then press "OK" to save this setting.

② Big Random Data

Random character written in a set of area.

Scroll to select "6.9.3 Erase Pattern >> Big Random Data", then press "OK" to save this setting.

6.9.4 Skip Erase Errors

Skip source bad sectors during Erase. Bad sectors can be set as unlimited or at a value from 0 to 65,535.

Scroll to select "6.9.4 Skip Erase Errors", and press "OK" to scroll through the available values for skipping bad sectors.

6.9.5 Wait HDD Time

Sets device power up buffer time prior to copy, erase, etc...

Scroll to select "6.9.5 Wait HDD Time", then press "OK" to set buffer time from 5 to 99 seconds. The default setting is 60 seconds.

6.9.6 Timeout Time

Sets the amount of time the duplicator should wait for the HDD device(s) to respond.

Timeout time can be set as unlimited or at a value from 1 to 30 minutes. The default setting is 1 minute.

6.9.7 Timeout Retry

Sets how many times the duplicator should try if there is no response from the device(s).

Timeout retry can be set as unlimited or at a value from 1 to 4 times. The default setting is 1 time.

6.9.8 Lock Key

This function allows users to enable or disable the 4 control panel buttons.

Scroll to select "6.9.8 Lock Key", then press "OK" to access available settings.

① Disabled

Scroll to select "6.9.8 Lock Key >> Do NOT Lock Key", then press "OK" to save this setting.

② Enabled

Scroll to select "6.9.8 Lock Key >> Do Lock Key", press "OK," then reboot the system to activate the setting.

6.9.9 Copy HPA Area

This menu contains submenus related to HPA Copy Modes

Scroll to select "6.9.9 Copy HPA Area", then press "OK" to view the submenus. The default setting is "Copy and Setting".

① Do Not Copy HPA

This menu contains submenu settings from which users can select.

Scroll to select "6.9.9 Copy HPA Area >> Do Not Copy HPA", then press "OK" view submenu settings.

● Keep Target HPA

Does not copy HPA data, but keeps target device 's original HPA setting.

Scroll to select "Keep Target HPA", then press "OK" to save this setting.

● Clear Target HPA

Does not copy HPA data and clears target device's HPA setting.

Scroll to select "Clear Target HPA", then press "OK" to save this setting.

② Setting Target HPA

Copies HPA setting from source device to target.

Scroll to select "6.9.9 HPA Copy Modes >> Setting Target HPA", then press "OK" to save this setting.

③ Copy and Setting

Copies HPA setting and data from source device to target.

Scroll to select "6.9.9 HPA Copy Modes >> Copy and Setting", then press "OK" to save this setting.

Caution

HPA function "Copy and Setting" may change the original parameter of target devices. To reset it, user must set "6.9.10 Clear HPA at Erase >> Clear HPA Setting" and then execute "4. Erase."

6.9.10 Clear HPA at Erase

Sets to clear HPA setting during erase.

Scroll to select "6.9.10 Clear HPA at Erase", then press "OK" to save this setting.

① Clear HPA Setting

Clears HPA setting and data during erase.

Scroll to select "6.9.10 Clear HPA at Erase >> Clear HPA Setting", then press "OK" to save this setting.

② Keep HPA Setting

Keeps original HPA setting and data during erase.

Scroll to select "6.9.10 Clear HPA at Erase >> Keep HPA Setting", then press "OK" to save this setting.

6.9.11 Mark After Erase

Creates watermark on the device(s) after erase job is completed. This watermark will show when executing "5.1 Show Device Info." The default setting is "Disable".

6.9.12 Transfer Rate

Allows user to select the transfer rate.

Scroll to select "6.9.12 Transfer Rate", then press "OK". Select the desired transfer mode from UDMA2 to 7. The default setting is UDMA7.

6.9.13 Stop Motor Time

Sets device power down buffer time when tasks are completed.

Scroll to select "6.9.13 Stop Motor Time", then press "OK" to set buffer time from 1 to 20 seconds. The default is 3 seconds.

6.9.14 Verify After ERASE

Automatically verified when performing the following erasures, Full Erase, 7-PASS Erase, Sanitize Block Erase, Sanitize Purge. Users can choose "Disable" or 100% Verify, NIST800-88 10% Verify, NIST800-88 15% Verify, NIST800-88 20% Verify.

6.9.15 Erasing complete with bad sectors, LED display Mode

Sets the color of the LED light that is displayed if there are bad blocks detected after erasure. The default color is red and green, but it can be further configured to change to green.

6.10 Restore Defaults

Restores all settings back to manufacturer defaults.

Scroll to select "6.10 Restore Defaults", then press "OK" to restore settings back to manufacturer defaults.

7. Log Manager

This menu allows users to access several submenus.
 Scroll to select "7. Log Manager", then press "OK" access submenus.

I. Log Report Diagram

Print Date : 2023-10-03 14:29:27

```
Machine Model : SAS/SATA Dup (HD4884SAS)
Machine Version : 2.54.1
Machine ID : 48841.00004.11532.10281.26708(00042D0C28296854)
Start No. Date : 2023-10-03
End No. Date : 2023-10-03
```

Machine Information

```
[Setup Parameter about COPY]

Copy Area: System and Files
Copy GPT Backup Area: Do NOT Copy
Delete Disk Signature After Copy: No
Unknown Format: Skip Unknown
Copy HPA Area: Setting Target HPA
Minimum Speed: 300 MB/second
Skip Errors: unlimited
```

Setting Value

Job: COPY

```
Time Start: 2023-10-03 11:33:22
End: 2023-10-03 11:37:10
```

```
Source HDD Model : Apacer AS340 120GB
Version : AP613PE0
Serial Number : 652F079317BF00070894
Capacity : 111.7GB(234441648 sectors)
Data Size : 9.7GB(20480000 sectors)
copy Area : System and Files
CRC-64-ECMA-182 : A7E33DB577C8E5CD
```

1.Source Device Information
 2.Copy Area and Checksum

```
Quantity Total: 6
Pass: 6
Fail: 0
```

Result

```
[Pass Record]
Port:04, 2023-10-03 11:33:22 ( 214 seconds) SSD[CT250MX500SSD1]

[M3CR043 ][2135E5CC9235] 232.8GB(488397168) [Write Speed=440.5MB/second]
01 2F 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Raw Read Error Rate = 0
05 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Reallocated Sector Count = 0
09 32 00 64 64 25 00 00 00 00 00 00 00 00 00 00 Power-On Hours Count = 37
0C 32 00 64 64 07 0B 00 00 00 00 00 00 00 00 00 Drive Power Cycle Count = 3031
AB 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Program Fail Count = 0
AC 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Erase Fail Count = 0
AD 32 00 5B 5B 77 00 00 00 00 00 00 00 00 00 00 Wear Leveling Count(ID:173) = 119
AE 32 00 64 64 5D 00 00 00 00 00 00 00 00 00 00 Unexpected Power Loss = 93
B4 33 00 00 00 26 00 00 00 00 00 00 00 00 00 00 Unused Reserved Block Count (total) = 38
B7 32 00 64 64 2B 00 00 00 00 00 00 00 00 00 00 Runtime Bad Block (total) = 43
B8 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Initial Bad Block Count = 0
BB 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Uncorrectable Error Count = 0
C2 22 00 4A 36 1A 00 00 00 2E 00 00 00 00 00 00 Drive Temperature = 26 degree C
C4 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Erase Failure Block Count = 0
C5 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Read Failure Block Count (Uncorrectable Bit Errors) = 0
C6 30 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Total Count of Read Sectors = 0
C7 32 00 64 64 12 00 00 00 00 00 00 00 00 00 00 Total Count of Write Sectors = 18
CA 30 00 5B 5B 09 00 00 00 00 00 00 00 00 00 00 Total Count of Error Bits from Flash, Erase Fail Count = 9
CE 0E 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Minimum Erase Count = 0
D2 32 00 64 64 00 00 00 00 00 00 00 00 00 00 00 Vibration During Write = 0
F6 32 00 64 64 06 14 79 A1 02 00 00 00 00 00 00
F7 32 00 64 64 C2 7B A3 05 00 00 00 00 00 00 00
F8 32 00 64 64 D2 DD 63 00 00 00 00 00 00 00 00
```

Pass Record, including Date, Time, Lapsed Time, Model No., Revision No., S/N, Capacity(Sectors), Write Speed, S.M.A.R.T. Info

7.2 Out Recent Report

Outputs recent log report

Scroll to select "7.2 Out Recent Report", then press "OK" to output log report to a USB drive.

7.3 Out Period Date

Outputs recent log report

Scroll to select "7.3 Out Period Report", then press "OK" to output log report to a USB drive.

7.4 Advanced Function

This menu allows user to access several submenus.

Scroll to select "7.4 Advanced Function", then press "OK" access submenus.

Default password: 123456

7.4.1 Clear All Log

Clear all log records.

Scroll to select "7.4.1 Clear All logs", then press "OK" to clear all log records.

Caution

Before using function "Clear ALL Log" when connected to PC, please observe the following steps:

1. Close the PC-Link software (LV07) or 2. Disconnect the duplicator from PC

*The PC-Link software (LV07) is designed to continuously record log reports. If user executes "clear log records" on the duplicator while LV07 is still running, the conflict between LV07 and duplicator might lead a serious system error.

7.4.2 Setup Password

Allows password change.

Scroll to select "7.4.2 Setup Password", then press "OK" to change to desired password.

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.

7.4.3 Adjust Clock

Change time and date.

Scroll to select "7.4.3 Adjust Clock", then press "OK" to adjust the time and date.

7.4.4 Add Watermark at text File

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

Note

Contact our technical team for details.

III. Output Log Reports through LV07H Program.

After finishing all tasks, press <ESC> key, the LV07H status will return to STANDBY.

Step 1: Click <Generate Log Report> in the field of LV07H screen <Log Data>.

Step 2: Select Date Range.

After entering <Open Report>, select the date range for log report.

Step 3: Generate Report.

After selecting the date range, click <Generate Report> to generate log report. Each device operation is saved as one record. For example, 26 records will be recorded if data is copied from 1 device to 25 devices.

Note

If there is no record saved on the selected date, or record has been wiped out, the program would show "No match records!"

Step 4: Save Log as Text File.

At the top-left of Log Data screen, select <File> then <Save to Text File>.

Note

There are 4 file types to choose from when saving a Log Report:
.txt, .csv, .xml, or .pdf.

Step 5: Save Log to the Specific Location.

Specify a name and location to save the log.

Step 6: To Complete Output Log Reports.

After successfully creating and saving the log, the report will be in the folder in which it was saved.

Caution

30,000 logs can be saved at one time. One device record is equal to one recorded log.
(E.g. duplication from 1 device to 21 devices will be recorded to 21 logs.)

Real time PC-Monitoring

Real time PC-Monitoring is a convenient tool to monitor real-time status of each working port, such as duplication progress, testing results, and operation log. These can all be viewed on your computer screen.

How to Launch PC-Monitoring:

Step 1: Copy "LV07H" to your PC.

Step 2: Connect USB cable from computer to the duplicator.

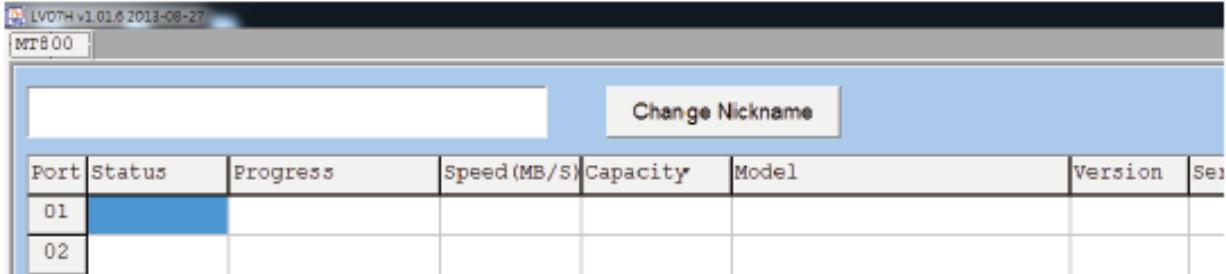
Step 3: Power On the duplicator.

Step 4: Launch LV07H by double clicking on software icon "LV07H".



Caution Before Step 4, make sure the duplicator has completed boot-up.
There are configuration files when launching LV07H. Make sure you are launching the .exe file on the PC, and not with the provided mini-CD software.

Step 5: When the below screen is shown, the duplicator has linked to the computer successfully and is ready to use real-time monitoring function.



Step 6: If the screen above does not appear, please repeat steps 1 thru 4.

Note If the system requests “Run the program as an Administrator”, right click “LV07H”, then set it in “Properties” > “Compatibility”.

Using the PC-Monitoring Feature

Note Please select only one computer to do all PC-Monitoring. This will prevent PC from operating other tasks simultaneously as PC-Monitoring information can rapidly synchronize.

Step 1: When duplicator status indicates it’s online, open the monitoring screen. The program is ready to work when the status displays “STANDBY”.

Step 2: Execute a “Copy/Compare” on the duplicator.

After connecting source & target devices to the duplicator and executing a task, the program will display all related device information. It captures detailed information from each device via PC-Monitoring, e.g., device model, S/N, copy speed, etc. It also records all operational progress.

Note Copy speed varies during operation.

Step 3: After duplication, the program will display the average speed of each device.

Specifications are subject to change without notice.