



SSD HDD Duplicator & Eraser
300MB/sec (18GB/min)

User Manual

Version E

Index

Product Disclaimer	1
Warranty	1
Piracy Statement	1
Notice & Reminder	2
Safety Precautions	2
Preparation Tips before You Start.....	3
Notice Symbols	3
Function Table.....	4
Product Overview	6
Product Features.....	7
Hardware Overview	8
Start to Copy	9
Setup before Copy/Compare.....	11
Troubleshooting When Duplication Fails.....	14
Confirm Accuracy by Comparison	15
Data Sanitization	16
Setting of Erase Function	17
Other Settings	19
BIOS Update.....	21
Specification Table	22

⌘ Product Disclaimer

The manufacturer is not accountable for any incidental or consequential damages, which includes, but not constrained to property harm, loss of time or data from use of a The manufacturer product, or any other damages attributable to product malfunction or failure of (including without limitation, those attributable to: (1) reliance at 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 on 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 the manufacturer.

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

⌘ Piracy Statement

The manufacturer accepts no responsibility for copyright infringement or misuse of 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.

⌘ Notice & Reminder

Important Notice

- Read the complete operation instructions carefully, contributes to a better operation.
- Make sure the source device is correct and workable.
- To guarantee data consistency, we highly recommend the capacity of source and targets should be the same.
- It is strongly suggested to use "Copy+Compare" to achieve a perfect duplication.

⌘ Safety Precautions

- The warranty will expire if damage is incurred resulting from non-compliance with these operating instructions.
- Store the equipment safely when not in use and keep out of the reach of children/infants.
- Please turn off the power before replacing the socket.
- Never turn off the power while processing the firmware update.
- Use only approved power sources.
- The product is only suitable for operation in dry, dust free, clean environment. Do not allow liquids or foreign objects to enter. Failure to do so may severely damage your duplicator.

⌘ Preparation Tips before You Start

- Make sure to use stable power supply.
- Please use in a clean & dry environment.
- Please keep the environment well ventilated.
- When the duplicator operates, it is normal for the machine to heat up.
- Please do not move the duplicator during operation to ensure better operation.
- Please do not remove HDDs during operation to avoid damage.
- Please use power supply of its original manufacturer to ensure working safety.
- Static electricity may cause duplication error. Please pay attention to the duplicator environment and operators' equipment. It is recommended to purchase static electricity elimination equipment to avoid static electricity shock when in high static electricity environment.

⌘ Notice Symbols

Special items, procedures, or notes should be noticed by users before operation.

● **Note:**

Note	Refers to related operations on the duplicator, special details, tips to know, suggestions or more effective operation.
------	---

● **Caution:**

Caution	Refers to operations that need to be followed or to be cautious to avoid mistakes.
---------	--

⌘ Function Table

Function	Description
1. Copy	Copy data from source devices to targets. (There are four copy modes for selection at function 6.2)
2. Compare	Comparison between the source and targets to make sure copy accuracy.
3. Copy + Compare	Execute compare function automatically after copy
4. Erase It is capable to enable/disable erase of source HDD at function 6.4.2	4.1 Quick Erase Erase the device's Table Index.
	4.2 Full Erase Erase the whole device(s).
	4.3 DoD Erase Erase device(s) 3 times complying with DoD 5220.22-M standards.
	4.4 DoD EraseComp Erase device(s) 3 times complying with DoD standards and verifies bit-by-bit to check if data is completely erased.
5. Utility	5.1 Show Disk Info Displays device's basic information such as HDD model name and capacity.
	<div> <div>5.2 Update System</div> <div> 5.2.1 Update BIOS To update the system firmware via a USB pen drive or a HDD. </div> <div> 5.2.2 Create Update HDD To format the HDD with a 2GB FAT partition in order to quickly save firmware in the HDD. </div> </div>
	5.3 System Info. This function will show information of the duplicator system, including controller model number and software version.
	5.4 Get Checksum This function will count Checksum value at each port.

6. Setup	6.1 Copy Area Setup copy mode.	6.1.1 System and Files Set to copy source HDD's data area only.	
		6.1.2 All Partitions Set to copy source HDD's.	
		6.1.3 Whole HDD Set to copy the whole source HDD.	
		6.1.4 Percentage (%) Set up percentage range of HDD for copy.	
		6.2 Skip Error Set to ignore error of HDD while COPY / COMPARE. (0-65535 or unlimited)	
	6.3 Language Select preferred language.		
	6.4 Advanced Setup	6.4.1 Unknown Format	Copy Unknown Copy unknown area when the device cannot identify the format.
			Skip Unknown Skip to copy unknown area when the device cannot identify the format.
		6.4.2 Erase Master Setup to erase source HDD or not.	Disable Disable erase source HDD.
			Enable Enable erase source HDD.
		6.4.3 Erase Pattern It will affect all the ERASE functions.	ONE Byte A random character to be written into every byte.
			Big Random Data A set of random characters to be written into a set of area.
		6.4.4 Wait HDD Time The time tolerance for HDD initialize. Able to set from 3 to 30 seconds.	
		6.4.5 Transfer Rate Select the proper transfer rate UDMA2-7. 7 is the fastest.	
		6.4.6 Stop Motor Time Set the time waited for the motor to stop from 1-~20 seconds after executing function.	
		6.5 Restore Default Back to original manufacturer setting.	

*Above functions and features subject to change without notice.

⌘ Product Overview

The Super1 Series is an ultra-high speed duplicator, and each SATA port is independent. That's why no matter how many targets running, it has the same performance of transmission speed, far beyond PC-based duplicators.

The Super1 Series HDD duplicator is specially designed for professional use. The smart Quick Copy (System and Files) mode supports FAT16/32/64, NTFS(Windows), ext2/3/4(Linux), HFS/HFS+/HFSX (Mac) formats and can copy only data contained area, which therefore highly increases the production efficiency. Furthermore, the innovated design of interface can help you easily swap HDDs during operation, reduce the time and effort while repairing.

Complies with the U.S. Department of Defense's erasing standard (DoD5220.22 M). It is important to make sure the data inside the disregarded HDD will not be retrieved and can be safely transferred.

⌘ Product Features

Auto Power Control System

Protect the HDD from any damage during the insertion and removal from the duplicator.

Ultra High Speed

Ultra high transmission speed for each port operating individually.

Quick Copy Mode

Support FAT16/32/64, NTFS(Windows), ext2/3/4(Linux), HFS/HFS+/HFSX (Mac) formats. It will only copy the data and system area, which can highly enhance the copying efficiency.

4 Kinds of Copy Areas

Four copy modes to meet different requirements: Systems and Files, All Partition, Whole HDD, and Percentage Copy.

3 Kinds of Erase Methods

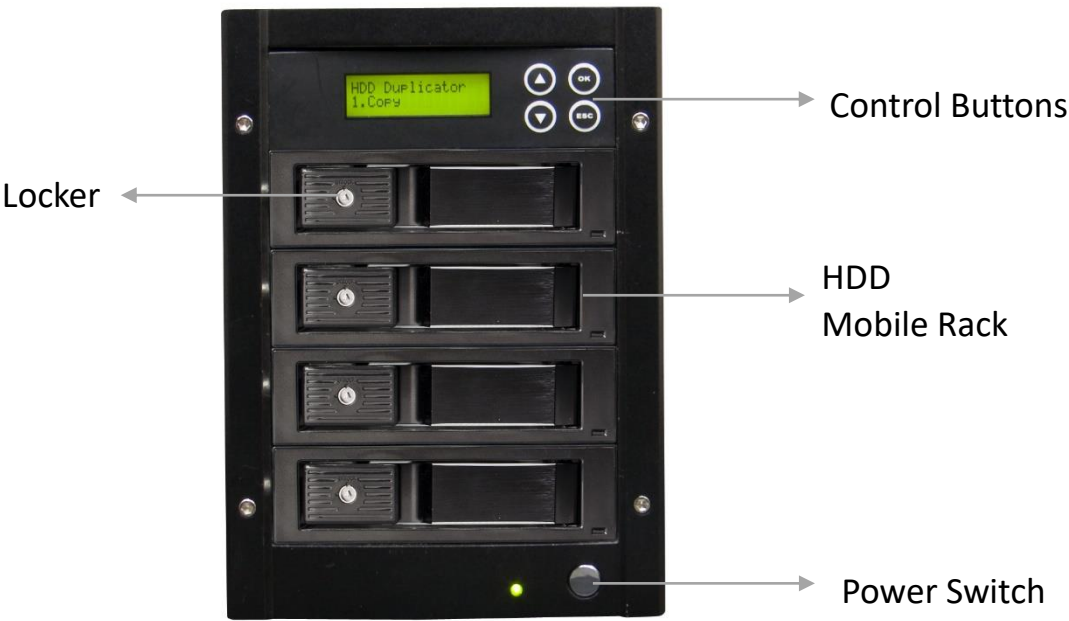
Quick Erase, Full Erase, DoD Erase.

Ultra High Speed Data "Compare"

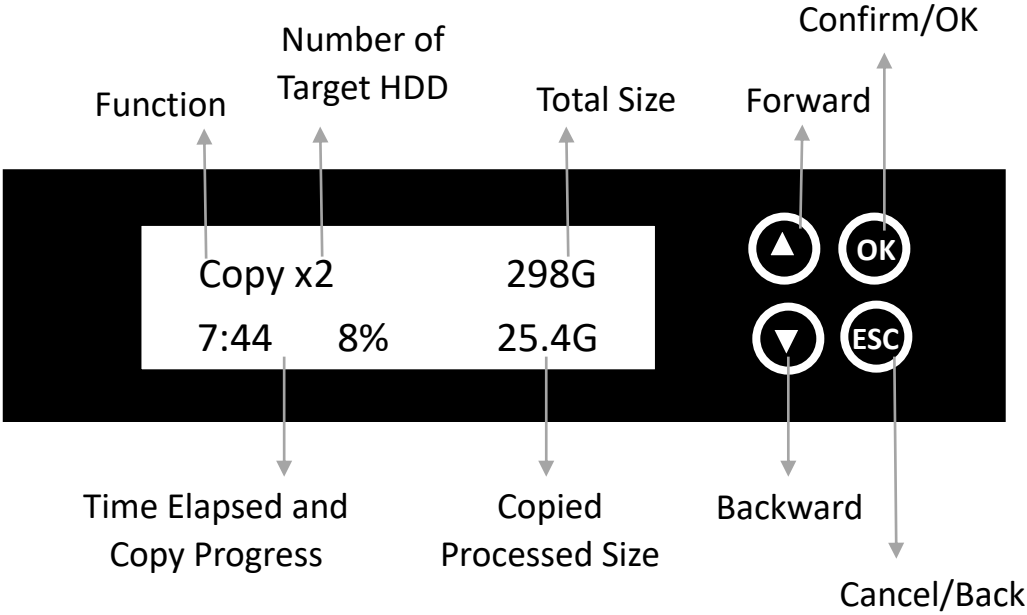
The very special hardware bit-by-bit "Compare" function is the most secure way to guarantee 100% accuracy of data duplication.

⌘ Hardware Overview

Example: 1-3 Model



LCD Configuration

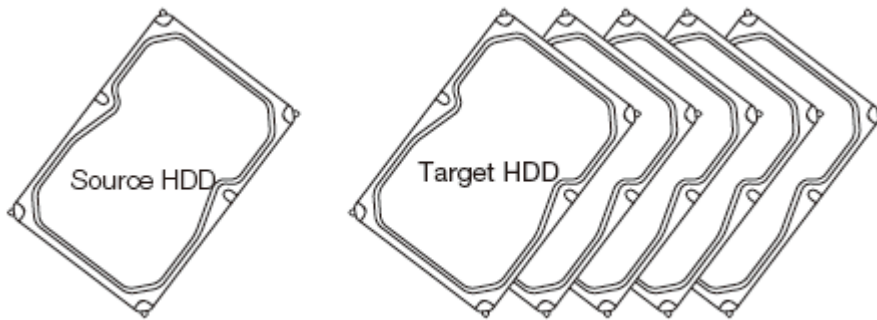


⌘ Start to Copy

Step 1: Prepare Source & Targets

Prepare a source HDD and target HDDs.

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



Caution Required adapters to copy SSDs and 2.5" HDDs.

Step 2: Place Source & Targets

Place source HDD at source port, target HDDs to other ports.

Step 3: Enter Function "1.Copy"

Use ▲ ▼ to select "1.Copy", and then press <OK>. Duplication will start to proceed.

Note

1. If the user set "6.4.4 Wait HDD Time" at 3-30 seconds, the machine will start duplicating automatically after HDDs initialize.
2. If the user set "6.4.4 Wait HDD Time" at "wait key to start," need to press <OK> to start duplication.

The information below shows on LCD during duplication.

Copy	298G
2 ready	

Function	Total Data
Copy x2	76.6G
7:44 33%	25.4G
Copied Time & %	Copied Data

Step 4: Completion!

Quantity of copy Pass/Fail, duplication time, and checksum value will show on LCD after duplication completes. During process of duplication, every port captures in real-time message shown on LCD and a calculated CRC64 when complete.

Pass	Fail	Duplication Time
P:2	F:0	29:14
D254A1F430094C8F		
CRC64		

Note CRC64: During duplication, each port will simultaneously record written message and compare CRC64 between source and targets. The result will show light in red(fail) or green(pass).

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

How to skip bad sectors?

Enter function "6.Setup→6.3 Skip Error", you can set the number of bad sectors that you accept to skip during Copy / Compare process. If the HDD is very critical for content correctness, it is strongly recommended to keep the skip error to be "0".

[Skip Error]
0

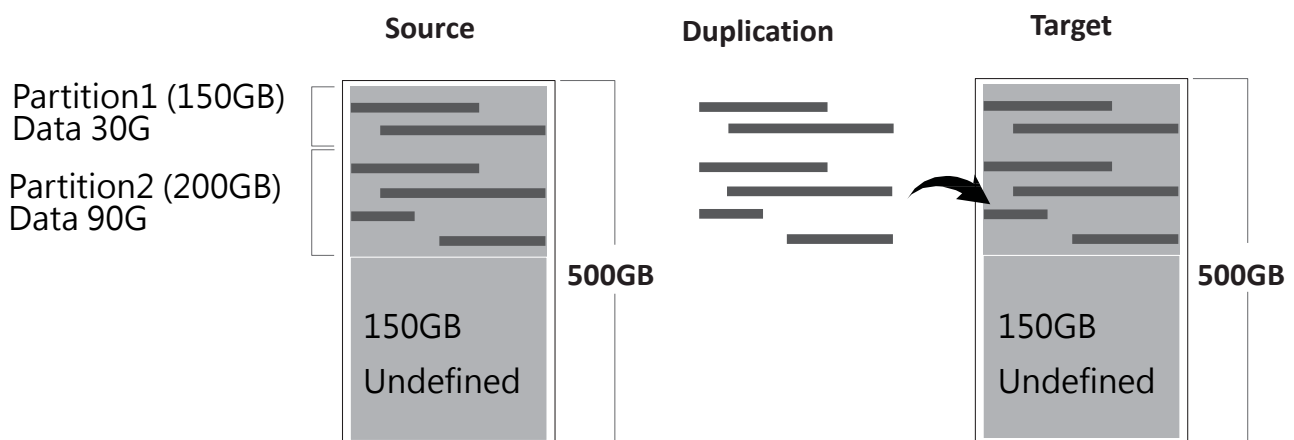
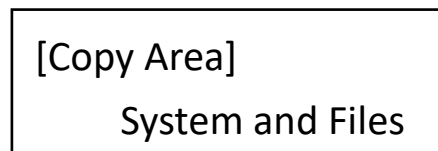
⌘ Setup before Copy/Compare

I. Set Copy Area of Source HDD

Appropriate copy area can greatly reduce operation time and have better efficiency. There are four copy modes with different copy areas, please go to function "Copy Area".

❶ System and Files: (Quick Copy data area only)

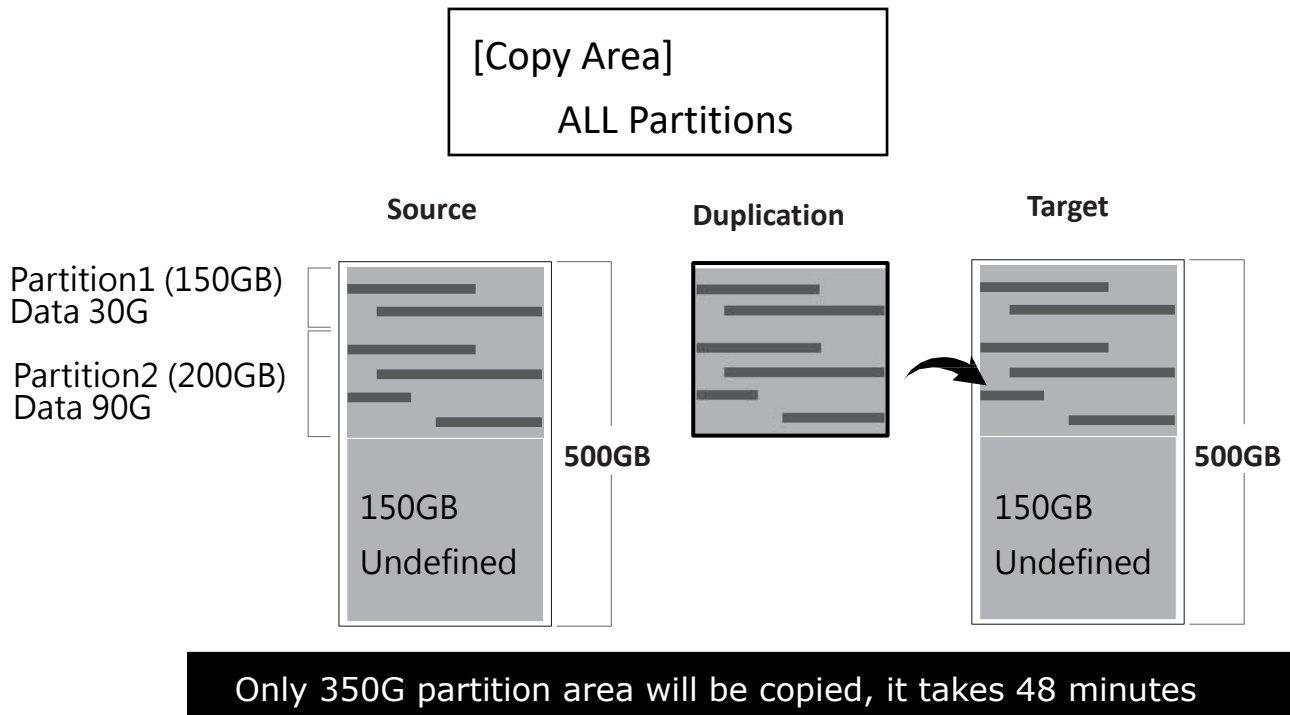
It will copy source HDD's System and Files instead of the whole HDD. The system will analyze the source HDD and identify the data area to copy. As long as the source HDD's data is within the target HDD's space, the copy will be processed. FAT16/32/64, NTFS, ext2/ext3/ext4, HFS/HFS+/HFSX are supported for this copy mode.



Only 120G data area will be copied, it takes 12 minutes

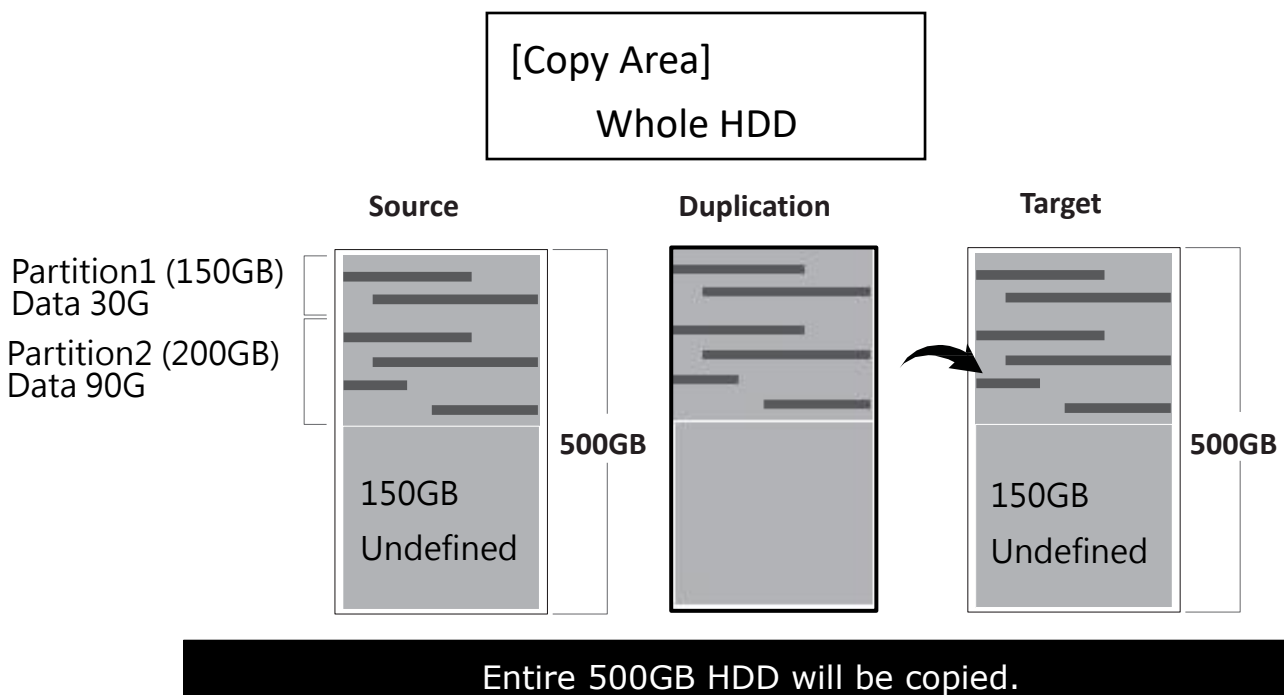
② ALL Partitions

Copy all of the partitions area bit-by-bit no matter if there is data that exists or not. The capacity of target HDDs have to be bigger than the partition required capacity.



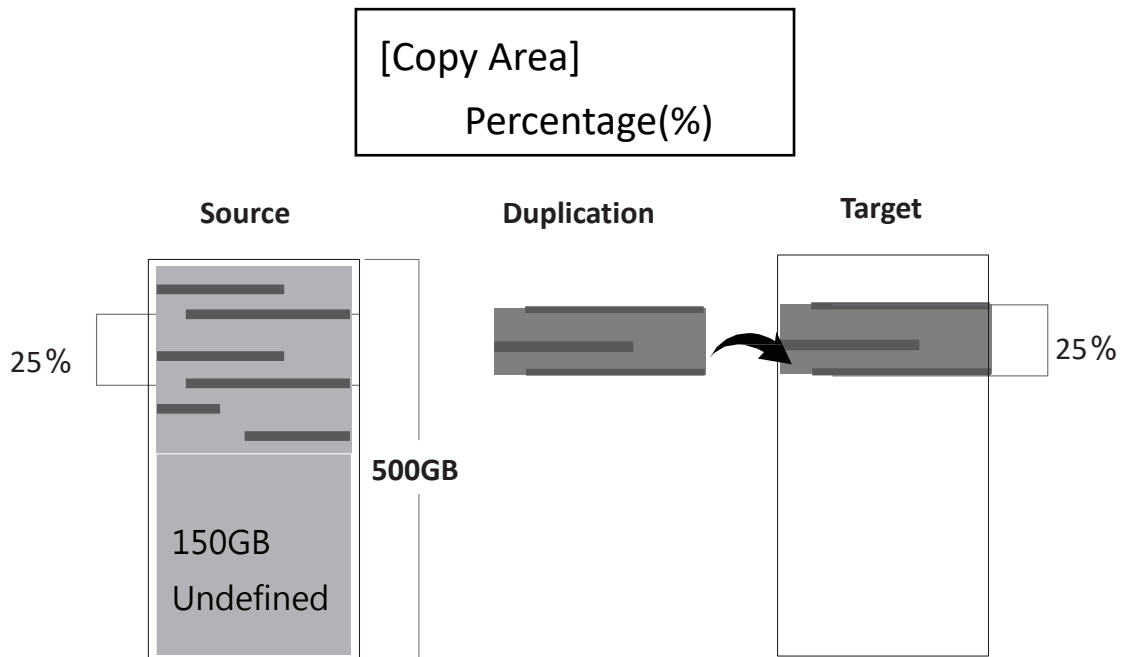
③ Whole HDD

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



④ Percentage (%)

Copy the selected percentage range of source HDD.

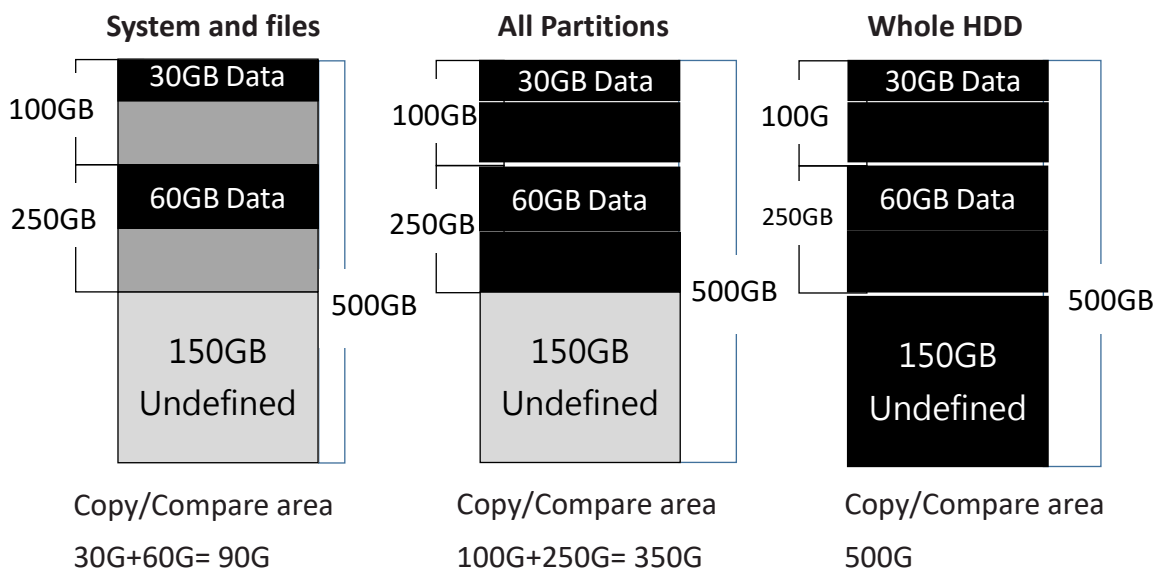


Only copies the selected area, other area or data will not be copied.

Caution It is recommended to execute Compare after Copy to confirm the accuracy. It is recommended to copy data by function "3.Copy+Compare".

How to select the proper copy area?

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



II. Set Tolerance of Bad Track

Select function "6.2 Skip Error" to set the number of error that you accept to skip during tasks process. If the HDD is very critical for content correctness, it is strongly recommended to keep the Skip Error to be "0". Set bad sectors from 0 to 65535 or unlimited.

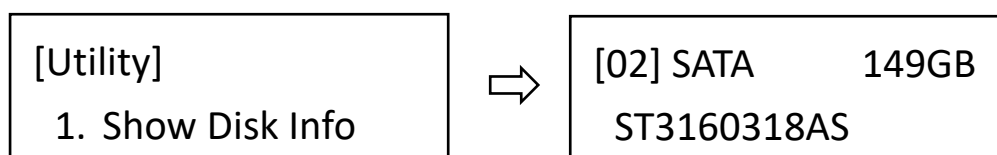
[Skip Error] 0

Note The settings of "Skip Error" will count both Source and Target HDDs. If any HDD reach the error tolerance, it will become Fail.

⌘ Troubleshooting When Duplication Fails

- Check if too many bad tracks on HDDs can cause duplication failures.
Check the setting of function "6.2 Skip Error".
- Make sure all HDDs are properly and firmly connected.

Go to "5.1 Show Disk Info" and press ▲ ▼ to check HDD info.

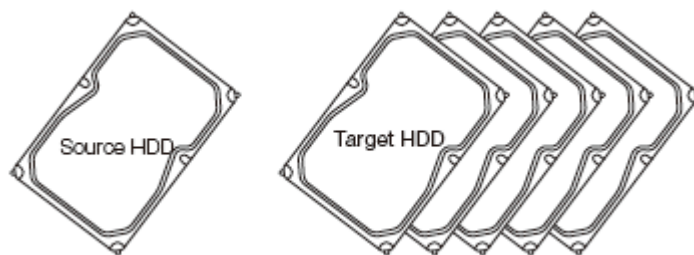


- Make sure the capacity of source HDD is smaller than target.

⌘ Confirm Accuracy by Comparison

Step 1: Prepare Source and Targets

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



Step 2: Place Source and Targets

Place the source HDD to source port, target HDDs to rest of the ports.

Step 3: Enter "2.Compare"

Note It is recommended to execute Compare and Copy to confirm the accuracy.

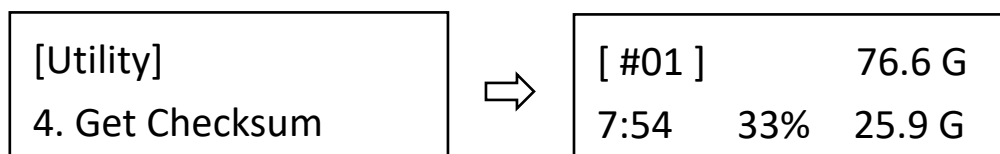
Use ▲ ▼ to select "2.Compare" then press <OK>. Data compare will proceed.

How to compare the data by checksum value?

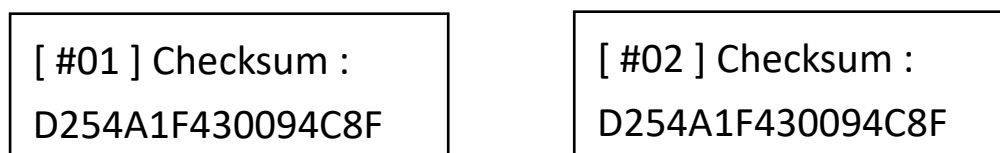
Execute function "5.4 Get Checksum." It will count CRC64 on each port.

Press ▲ ▼ to check the result of each port.

Processing:



Result:



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

⌘ Data Sanitization

Caution 1.It will erase the data in HDD, please make sure you backup all important data before using this function.
2.To cancel operation of any erasing mode, press <ESC> key and hold continuously for 3 seconds to exit any erasing tasks.

Step 1: Prepare HDDs

Prepare HDDs for disposal.

Step 2: Place HDDs

Insert HDDs for disposal into target ports.

Note Function "6.4.2 Erase Master" is to determine erase source HDD or not. The default setting is "Disable" disposal source HDD.

Step 3: Enter function "4. Erase"

Use ▲ ▼ to select the mode of erasing method, and then press <OK>. Data Erase will proceed.

Note During erasing, press ▲ ▼ to view the status of each port. Press <OK> to see the details for each port, including write speed and percentage of completion.

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

⌘ Setting of Erase Function

There are several erase methods:

Quick Erase, Full Erase, DoD Erase, DoD Erase & Compare,

I. Quick Erase

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

[Erase]

1. Quick Erase

II. Full Erase (Entire HDD Area)

The function will erase the whole sectors on the target HDD. It will take longer time than quick erase. Complies with NIST800-88 Standards.

[Erase]

2. Full Erase

III. DoD Erase (DoD5220.22 M)

This is to comply with the U.S.A. Department of Defense (DoD5220) standard to fully erase the HDD three times bit-by-bit to overwrite HDD data and guarantees data not 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.

[Erase]

3. DoD Erase

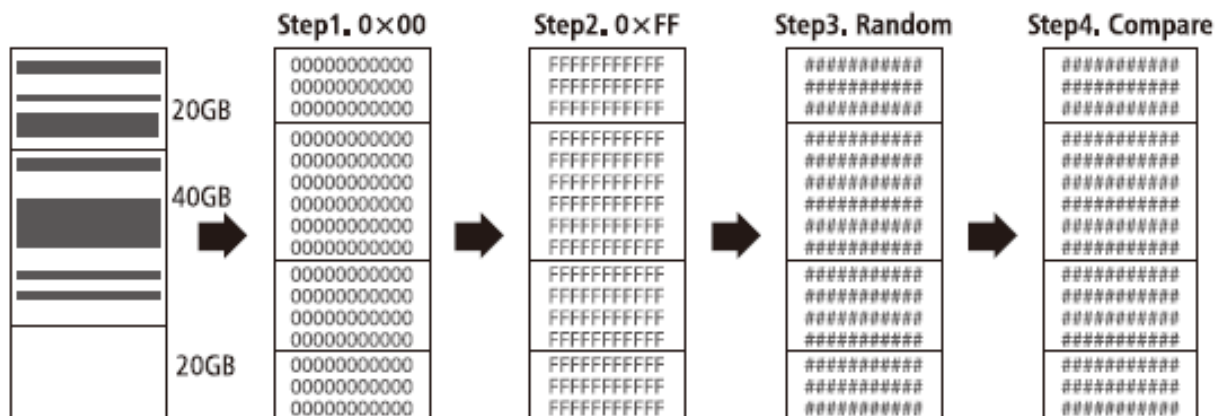
IV. DoD Erase & Compare (DoD5220.22 M)

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

[Erase]

4. DoD EraseComp

DoD EraseComp Method:



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.

Caution

Please DO NOT disrupt DoD Erase during operation. Otherwise, it might cause error on reading the HDDs which cannot be identified by the duplicators and computers. If fails, please execute DoD erase mode again.

How to select erase pattern?

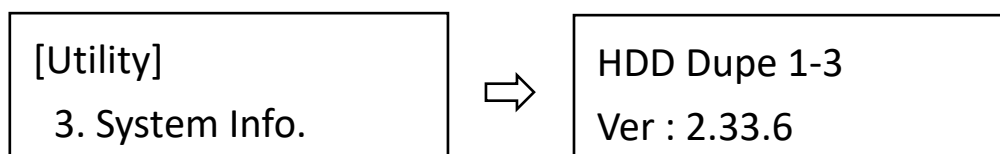
The erasing settings enable to select overwrite data pattern at “6.4.3Erase Pattern”. It will affect the following erase mode: (1) Quick erase (2) Full erase (3) 3rd loop overwrite method of DoD erase.

Settings	LCD Display	Example
❶ One byte – Overwrite by one fixed data	[Erase Pattern] ONE Byte	3737373737 3737373737 3737373737 3737373737 3737373737 3737373737 3737373737 3737373737
❷ Big random data – Overwrite by random data	[Erase Pattern] Big Random Data	26AE891DFA 74519D55C1 E6621457EA 48AAB68901 DD51473DB AA9A82BBE1 55713C4850 9CBFFA1457

⌘ Other Settings

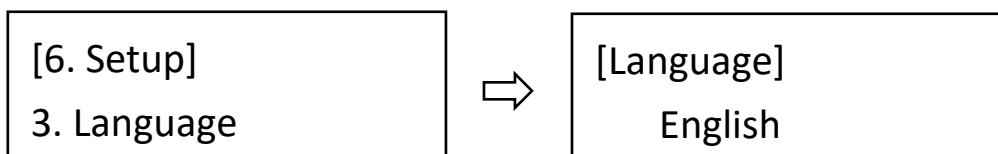
I. How to check the system firmware version?

Enter function "5.3 System Info" and press <OK>, the firmware version shown on the screen.



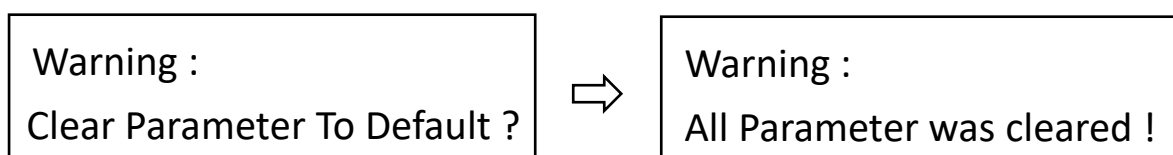
II. How to change interface language?

Enter function "6.3 Language" to change. Select preferred language, English or Japanese.



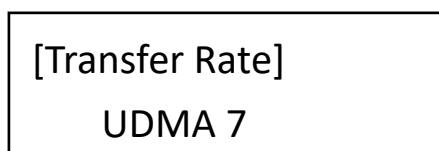
III. How to restore all settings back to factory default?

Enter function "6.8 Restore Default" and press <OK>. The system will clear all parameter back to the original factory default settings.



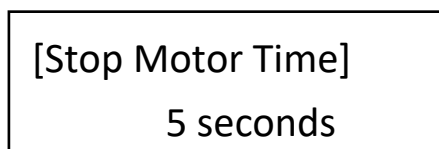
IV. How to setup HDD transfer rate on the machine?

Enter function "6.7.8 Transfer Rate." Select proper transfer rate from UDMA 2~7. The default is UDMA 6.



V. How to setup motor stopping time on the machine?

Enter function "6.4.6 Stop Motor Time." When tasks are finished, the machine will auto stop motor. The users can set auto stopping time from 1 to 20 seconds. The default is 5 seconds.



⌘ BIOS Update

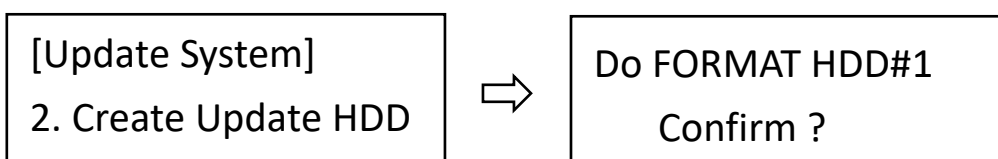
Update by HDD

Step 1: Create an Update HDD

Place one HDD to the duplicator. Select function "5.2.2 Create Update HDD".

Step 2: Format BIOS HDD

Click <OK> to format the BIOS hard disk. One FAT, 2GB partition will be formatted in HDD. That would reduce searching time, and speed up firmware update.



Caution The data saved in this HDD will be erased.

Step 3: Download Firmware

Connect the BIOS HDD to PC. Download the latest firmware from PC. Unzip BIOS, and save it to the root directory.



Step 4: Enter "Update BIOS"

Place the BIOS HDD into source port (first port). Enter function "5.2.1 Update BIOS". Update will take about a one minute to complete.

[Update System]
1. Update BIOS

Caution Please do not disrupt during BIOS update, otherwise it would cause irretrievable error on duplicator. We are not held responsible for any damage.

⌘ Specification Table

Series	Super1 Series SATA HDD Duplicator	
Compatible HDD Interface	Interface without adapter: 3.5" SATA HDD	
	Interface via optional adapter: SSD and 2.5" SATA HDD	
	HDD compatible: All major HDDs brands, 2.5"/3.5" SATA SSD	
OS	OS supported: All (Windows, Linux, RAID, other stand-alone systems)	
Operation Type	Stand-alone operation	
Display	Backlight monochrome LCD display	
Status LED	LED(Red/Blue) on each slot	
Keys	4 push keys (▲ / UP, ▼ / Down, OK / Confirm, ESC / Exit)	
Copy Function	Quick Copy (System & Files area): Support FAT16/32/64, NTFS, Linux (EXT2/ EXT3/ EXT4), Mac (HFS/HFS+/HFSX), GPT, Dynamic	
	ALL Partitions/ Whole HDD/ Percentage Copy: support all formats	
Compare	High speed bit-by-bit data comparison	
Erase	Quick Erase, Full Erase, DoD Erase	
Temperature	Working temperature	5°C~45°C (41°F~113°F)
	Storage temperature	-20°C~85°C (-4°F~185°F)
Humidity	Working humidity: 20%~80%; Storage humidity: 5%~95%	
Certification	FCC, CE, RoHS	

*Specifications subject to change without notice.