KV Series Rack Mount CRU HDD Duplicator

User Guide

v A.01

v A.01.1

Index

Disclaimer of Warranties

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The manufacturer also disclaims any liability for any loss or damage due to not being able to perform its undertakings or provide any of the services attributable to any events or circumstances beyond our control. Users agree and accept all statements above as soon as purchasing our products.
 The information present in this manual is subject to change without prior notice.

Notice

Important Notice

- Read the complete operation instruction carefully contributes to 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 noncompliance with theses operating instructions.
- Store the equipment safely when not in used and keep out of the reach of children and 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.

Product Overview

This is a bulky and amazing easy expandable CRU HDD Duplicator. When a KV500 was hook up with any other unit of KV500 or KV600, it will immediately become a machine with larger target ports. For example, when a KV500, a 4-target duplicator, link with a KV600 (6-target-port), within seconds, it become a 10 targets HDD duplicator. No need of any setup or software install, just so simple and easy. This HDD duplicator, KV series, is a high-end industrial standard hard disk duplicator that makes HDD duplication fast and easy. There is no computer or additional software required. Support high data transfer speed. The three different copy modes (System and Files, All Partition and Whole HDD) can satisfy various needs of duplication.

Features

Flexibility to expand target without slowing down speed

Just a simple hookup to link each single unit together to easily expand the machine targets

Rack Mount Enclosure Design

Firm for use. Easy to install and expand the machine by piling up all the duplicators in a server cabinet.

Ultra-High Speed

Ultra-high speed based on real testing.

Extendable Productivity

It can easily like by daisy chain technology. User can either use it as 1 to 4 or link up to 1 to 254 targets.

Auto Power Control System

Protect the HDD from damage during removal from the duplicator.

Quick Copy Mode

This mode can identify the HDD formats of FAT, NTFS, Mac(HFS, HFS+, HFSX) and Linux. It will only copy the data and system contained area, which can highly enhance the copying efficiency.

Erase Methods

Quick Erase, Full Erase, DoD Erase, 7-Pass Erase and Secure Erase.

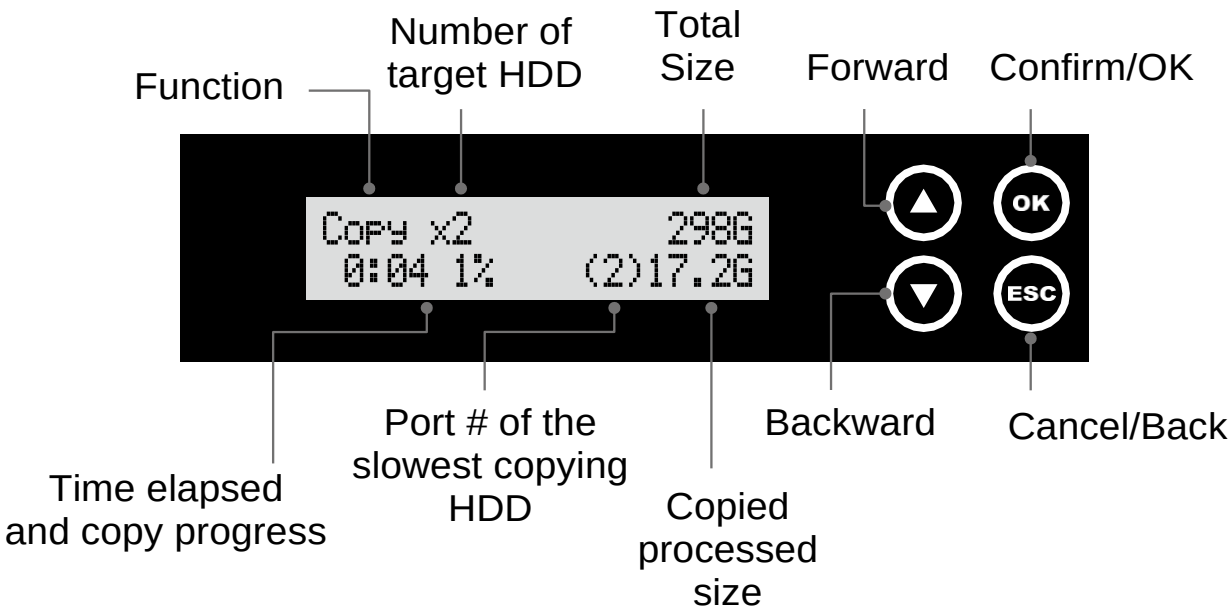
Copy Modes

The four different copy modes to meet different work situation needs, System and Files, All Partitions, Whole HDD, Percentage Copy.

Hardware Overview

Appearance

LCD Configuration



How to Extend Targets

- Using internal cable links up to 254 ports.
- The first tower of the linkage controls the operation.

The First System

The Second System

The Third System

Function Table

Function	Description	
1. Copy	Copy data from source HDD 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 able to enable/ disable erase of source HDD at function 6.7.2	4.1 Quick Erase Erase the INDEX of HDD, and take very short time.	
	4.2 Full Erase Erase the whole HDD.	
	4.3 DoD Erase Erase HDDs 3 times complying with USA Department of Defense (DoD) standard.	
	4.4 DoD EraseComp Erase HDDs 3 times complying with DoD standard and compare once bit-by-bit to check if data is completely erased.	
	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.	
5. Utility	5.1 Show Disk Info Shows HDD's basic information such as HDD model name and capacity.	
	5.2 Update System	5.2.1 Update BIOS To update the system firmware via the HDD.
		5.2.2 Create Update HDD To format the HDD with a 2GB FAT partition in order to quickly

			save firmware in the HDD.
	5.3 System Info. This function will show information of the duplicator system, including controller model number and software version.		
6. Setup	6.1 Start-up Menu Select which function is shown first when the system is turned on.		
	6.2 Copy Area Setup copy mode.		System and Files Set to copy source HDD's data area only.
			All Partitions Set to copy source HDD's.
			Whole HDD Set to copy the whole source HDD.
			Percentage(%) Set up percentage range of HDD for copy.
	6.3 Skip Error Set to ignore error of source HDD while copying. (0-65535 or unlilmited)		
	6.4 Minimum Speed Set to check HDDs' minimum speed as 10, 20, 30~300MB/Sec or don't check.		
	6.5 Check Source Minimum Speed Set to check minimum speed including source HDDs or not.		
	6.6 Language Select preferred language.		
	6.7 Advanced Setup	6.7.1 Unknown Format	6.7.1.1 Copy Unknown Copy unknown area when the device cannot identify the format.

			6.7.1.2 Skip Unknown Skip to copy unknown area when the device cannot identify the format.
		6.7.2 Erase Master Setup to erase source HDD or not.	**6.7.2.1 Disable** Disable erase source HDD.
			6.7.2.2 Enable Enable erase source HDD.
		6.7.3 Erase Pattern	**6.7.3.1 ONE Byte** A random character to be written into every byte.
			6.7.3.2 Big Random Data A set of random character to be written into a set of area.
		6.7.4 Wait HDD Time Auto start time after plugging in HDD. Able to set from 0 to 30 seconds.	
		6.7.5 Transfer Rate Select the proper transfer rate UDMA2-7. 7 is the fastest.	
		6.7.6 Stop Motor Time Set the time waited for the motor to stop from 1-~20 seconds after	

		executing funciotn.
		6.7.7 Adjust Clock Adjust system time clock on LCD screen.
	6.8 Restore Default Back to original manufacturer setting.	
7. Log Manager	**7.1 Advanced Function**	**7.1.1 Clear ALL Log** Clean out the log records after entering password.
		7.1.2 Setup Password Set up the password for cleaning log records.

Reminder

Before You Start

- ⊙ Make sure to use stable power supply.
- ⊙ Please use at clean & dry environment.
- ⊙ Make sure to use stable power supply.
- ⊙ 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 normal.
- ⊙ Eliminate Static electricity:
- 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 stay in high static electricity.
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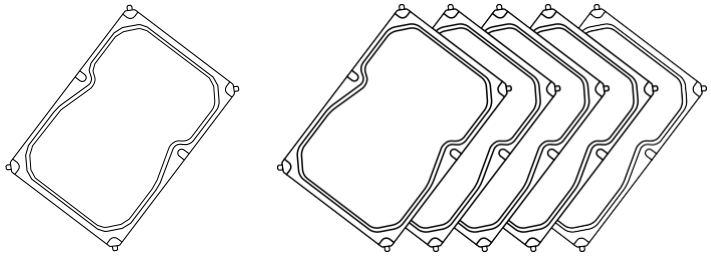
Functions

1. Copy

Step 1: Prepare source and target devices.



Source HDD Target HDD

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

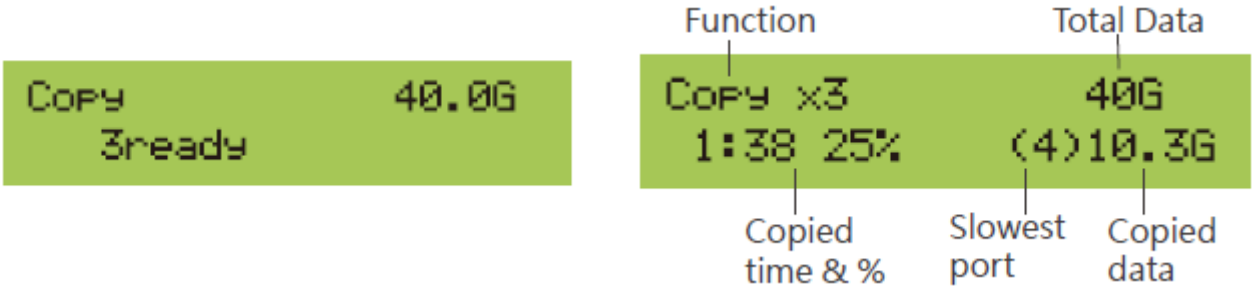
Step 2: Connect source and target devices.

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.



Caution	It is recommended to reboot the machine after manually stopping the copy.

Note	● Press “▲▼” together for 5 seconds to stop operation on the slowest device. ● Press “ESC” for 5 seconds to stop all the copy jobs. ● It is recommended to reboot the machine after manually stopping the copy.

Step 4: Copy Completed!
Quantity of copy OK/Fail and duplication time would show on LCD after duplication completes.

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 7 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 6.8.2 to enable source port erasing.

Step 2: Enter function "4. Erase"

Scroll to select "4. Erase", then press "OK" to view the 7 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	If Secure Erase process is interrupted, the device will be locked. Please execute again and wait until it finishes.

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.

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 Disk Info

This function will display basic information such as device model, name, capacity, etc…
Scroll to select "5.1 Disk 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.

❶ Through USB Port

Step 1: Prepare a USB drive for update.
Connect a USB drive to a PC. Download the latest firmware provided by U-Reach 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. U-Reach will not be held responsible for any damages.

❷ Through Source Port

Step 1: Prepare a device for update.

Connect a device to the source port. Scroll to select "5.2.2 Create BIOS Format”, 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 U-Reach 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. U-Reach 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.

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.

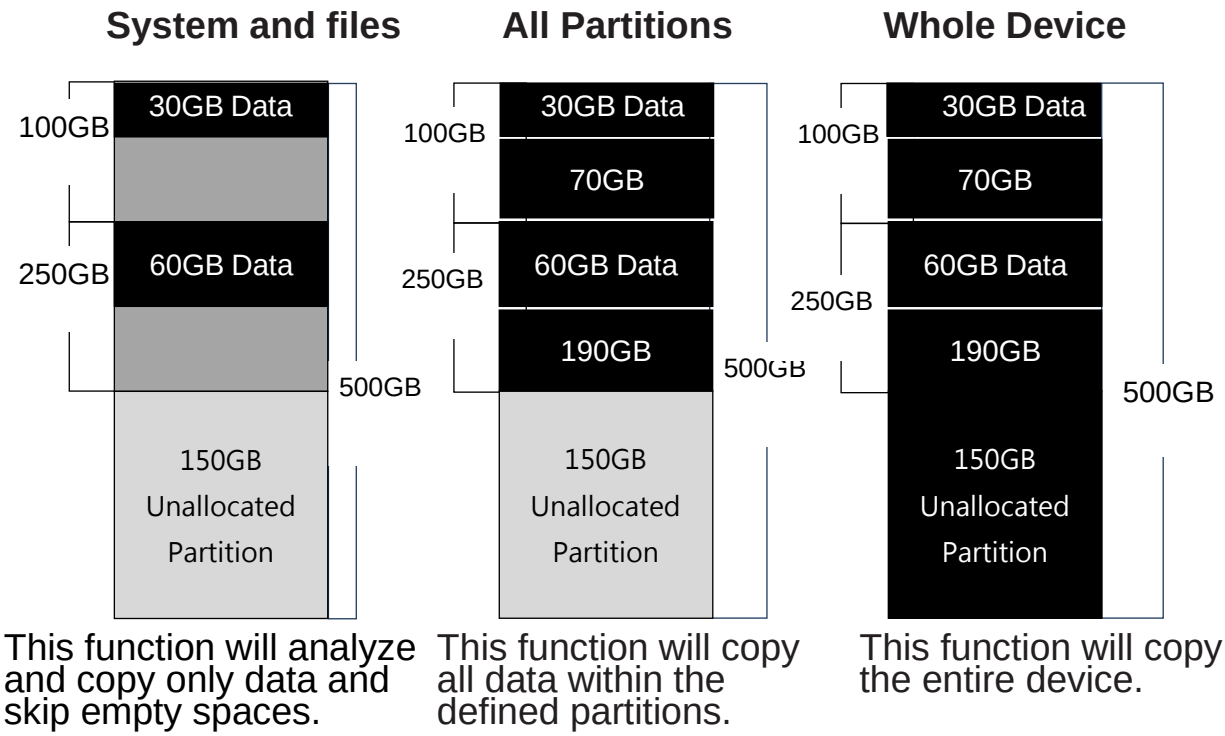
6.2 Copy Area

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

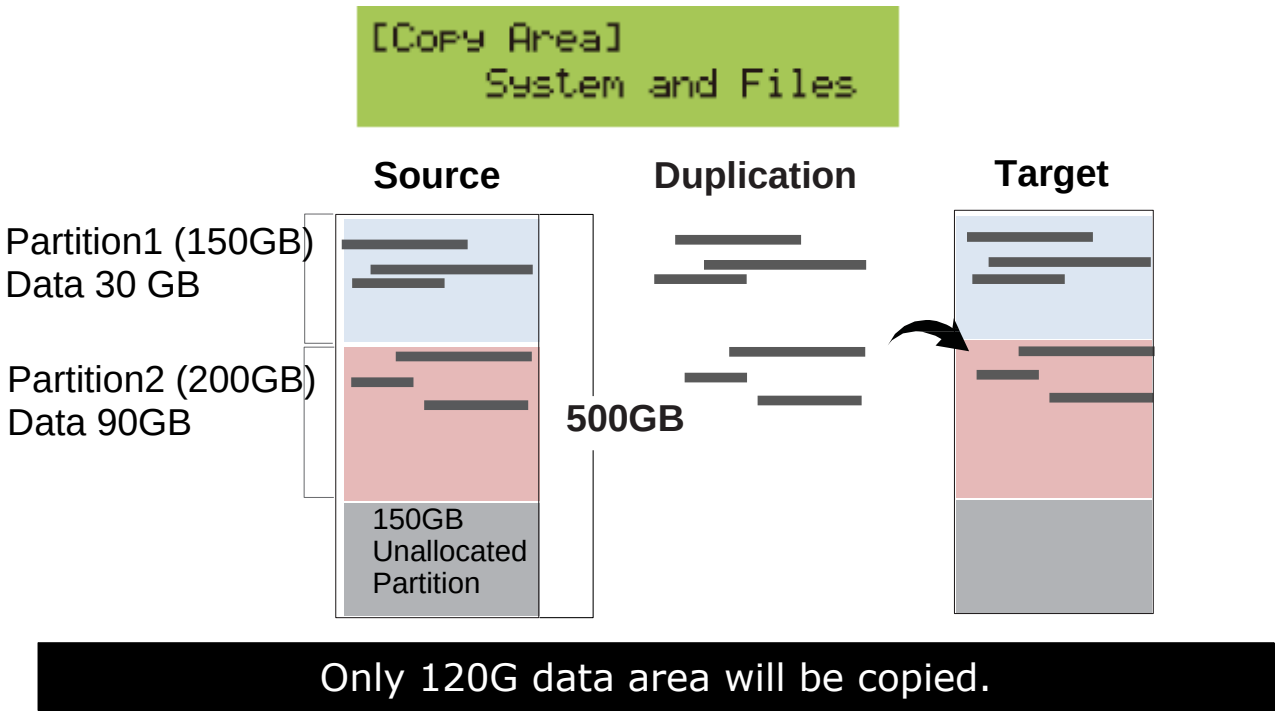
Please consider the following settings before proceeding with copy or compare:

- 6.2 Copy Area
- 6.4 Skip Error
- 6.5 Minimum Speed
- 6.6 Check Source Minimum Speed
- 6.7.1 Unknown Format

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

❶System and Files

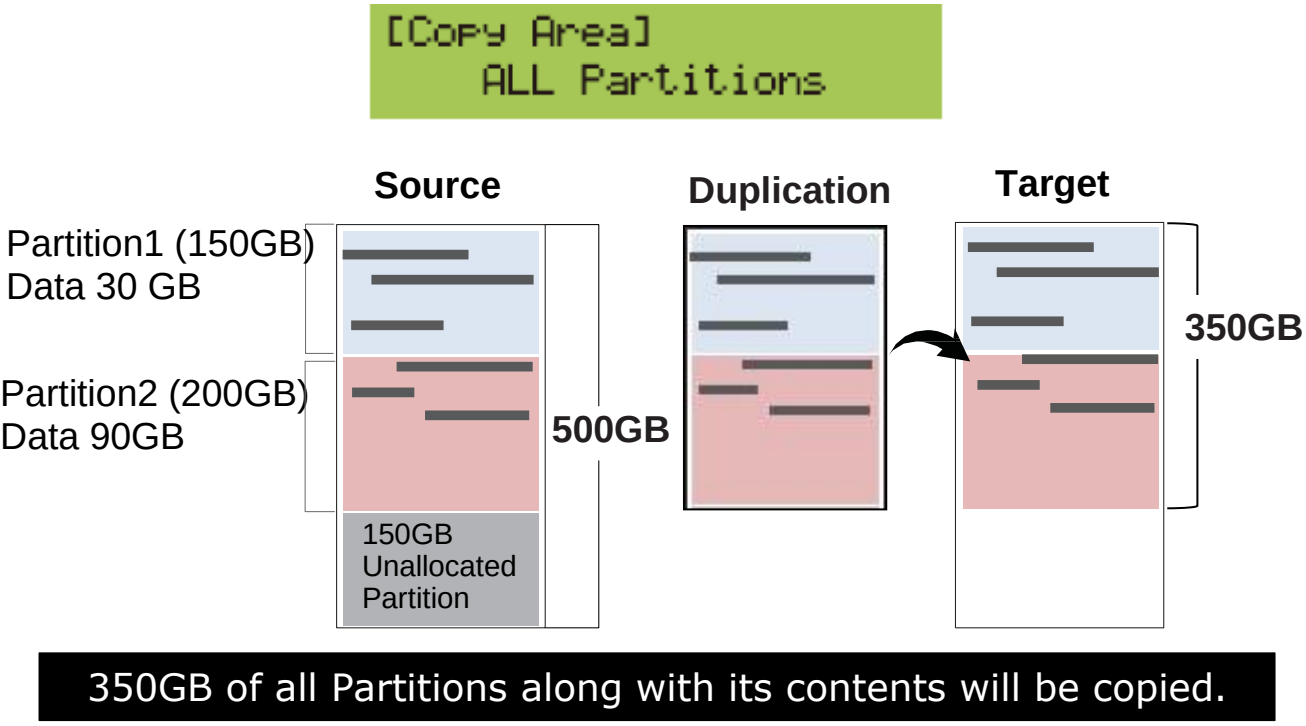
Copies data and skips empty space. Only supports standardized formats.
Scroll to select "System and Files", then press "OK" to save the copy method.
Allows user to copy source device's System and Files, instead of the entire device. The system will analyze the source device and identify the data area to copy. If the source device's data is within the target device's capacity, the copy will be processed.
FAT16/32/64, NTFS, EXT2/EXT3/EXT4, and HFS/HFS+/HFSX are supported in this copy mode.



❷All 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.

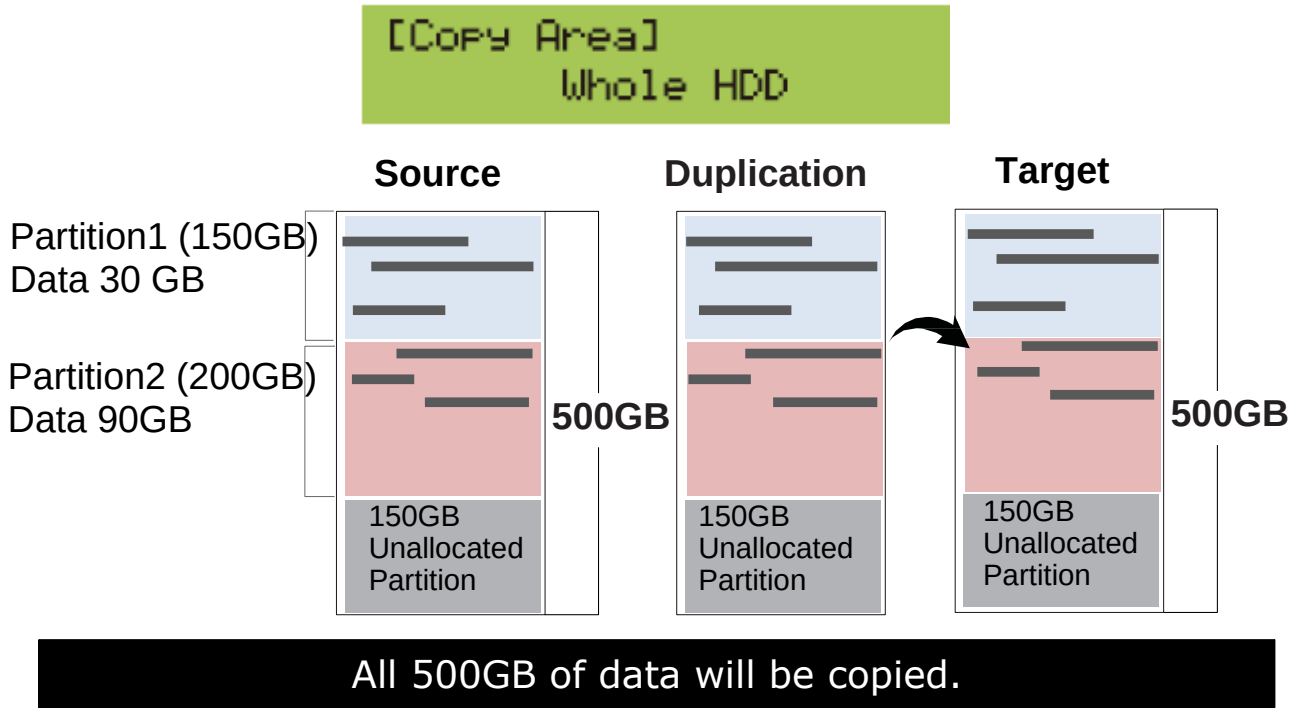


❸Whole Device

Copies all source data bit by bit.

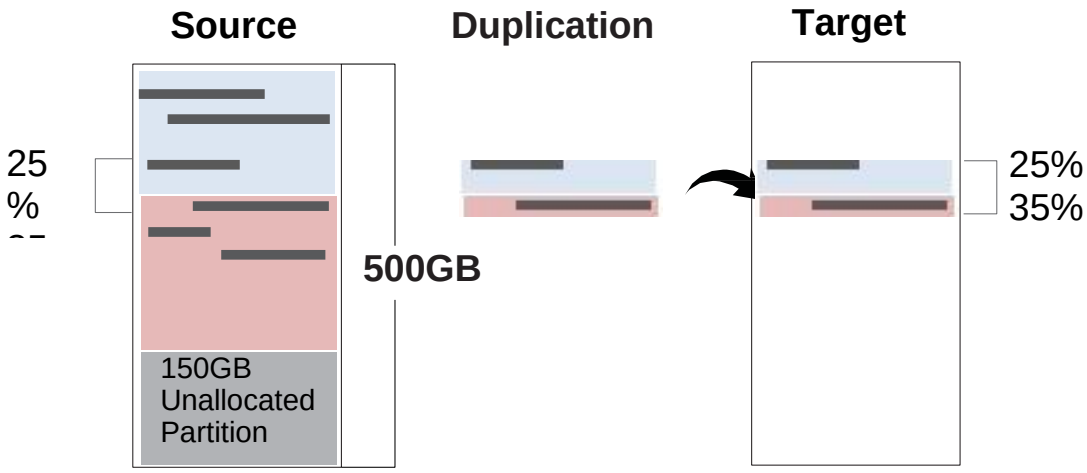
Scroll to select "Whole Device", then press "OK" to save the copy method.

Copies the whole source device, irrespective of content, format, partition or empty space. This mode does not analyze the data.



❹Percentage (%)

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 Skip Error

Skips bad sectors during Copy/ Compare/ Erase.
Scroll to select "6.3 Skip Bad Sectors”, 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.

Caution	The “Copy+Compare” function is advised for enhanced copy accuracy.

6.4 Minimum Speed

Allows user to disable or set minimum threshold speed during Copy/ Compare/ Erase.
Scroll to select "6.4 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.

6.5 Check Source Minimum Speed

Allows user to enable or disable the 1st port speed check during Copy/ Compare/ Erase.
Scroll to select "6.5 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 "6.4 Minimum Speed."

6.6 Language

Select English or Japanese.
Scroll to select "6.6 Language”, then press "OK.” Then scroll through to select the desired language.

6.7 Advanced Setup

6.7.1 Unknown Format

This function only works with “6.2 Copy Area >> System and Files.”
Scroll to select "6.7.1 Unknown Format”, then press "OK”.
Unknown format includes all forms of modified and proprietary data and partitions.

❶ Copy Unknown

Copy unknown format(s).
Scroll to select "6.7.1 Unknown Format >> Copy Unknown”, then press "OK" to save this setting.

❷ Skip Unknown

Skip unknown format(s).
Scroll to select "6.7.1 Unknown Format >> Skip Unknown”, then press "OK" to save this setting.

6.7.2 Erase Master

This function allows user to enable or disable the source port for sanitization.
Scroll to select "6.7.2 Erase Master”, then press "OK.” Then scroll through to select one of two settings.

❶ Disabled

Devices connected to source port cannot be erased.
Scroll to select "6.7.2 Erase Master >> Disabled”, then press "OK" to save this setting.

❷ Enabled

Devices connected to source port can be erased.
Scroll to select "6.7.2 Erase Master >> Enabled”, then press "OK" to save this setting.

6.7.3 Erase Pattern

Scroll to select "6.7.3 Erase Pattern”, then press "OK”. Then scroll through to select one of two settings.

❶ One Byte

Random character written per byte.
Scroll to select "6.7.3 Erase Pattern >> One Byte”, then press "OK” to save this setting.

❷ Big Random Data

Random character written in a set of area.
Scroll to select "6.7.3 Erase Pattern >> Big Random Data”, then press "OK" to save this setting.

6.7.4 Wait HDD Time

Sets device power up buffer time prior to copy, erase, etc...
Scroll to select "6.7.4 Wait HDD Time”, then press "OK" to set buffer time from 3 to 30 seconds. The default is 15 seconds.

6.7.5 Transfer Rate

Allows user to select the transfer rate.
Scroll to select "6.7.5 Transfer Rate”, then press "OK". Select the desired transfer mode from UDMA2 to 7. The default is UDMA7.

6.7.6 Stop Motor Time

Sets device power down buffer time when tasks are completed.
Scroll to select "6.7.6 Stop Motor Time”, then press "OK" to set buffer time from 1 to 20 seconds. The default is 5 seconds.

6.7.7 Boot Password

Sets password for bootup.
Scroll to select "6.7.7 Boot Password”, press "OK," and select the password by "▲,▼ and OK."

6.8 Restore Defaults

Restores all settings back to manufacturer defaults.
Scroll to select "6.8 Restore Defaults”, then press "OK" to restore settings back to manufacturer defaults.

7. Log Manager

7.1 Advanced Function

This menu allows user to access several submenus.
Scroll to select "7.1 Advanced Function", then press "OK" access submenus.
Default password: 123456

7.1.1 Clear All Log

Clear all log records.
Scroll to select "7.1.1 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 (LV07H) or 2. Disconnect the duplicator from PC *The PC-Link software (LV07H) is designed to continuously record log reports. If user executes “clear log records” on the duplicator while LV07H is still running, the conflict between LV07H and duplicator might lead a serious system error.

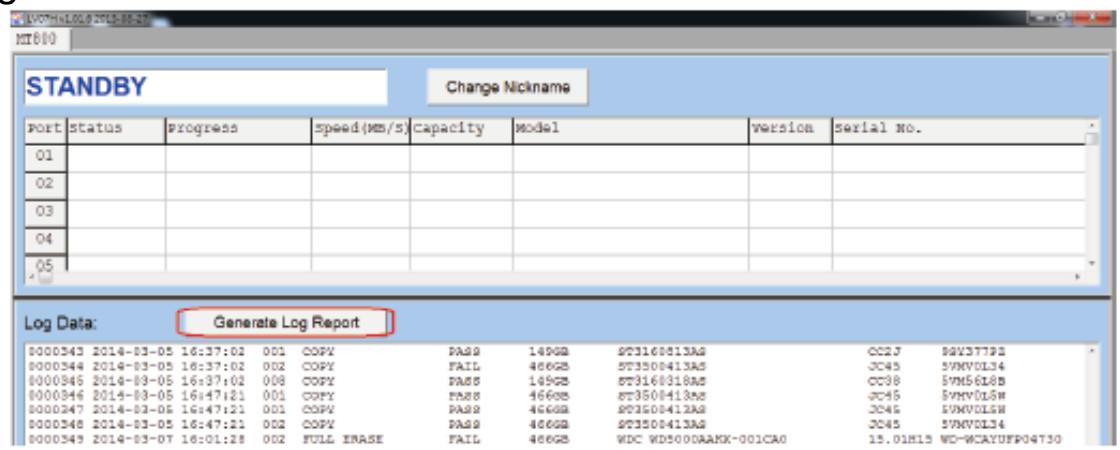
7.1.2 Setup Password

Allows password change.
Scroll to select "7.1.2 Password Setup”, then press "OK" to change to desired password.

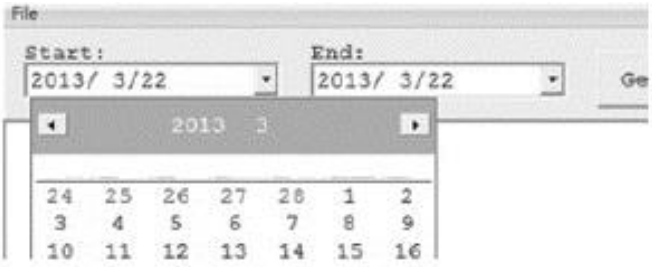
How to Export Log Reports

The Log Report Management Tool assists users with monitoring, recording and managing the entire duplication process. By displaying detailed information for each port, this tool helps to identify the slowest writing device that in turn, keeps the operation running efficiently.

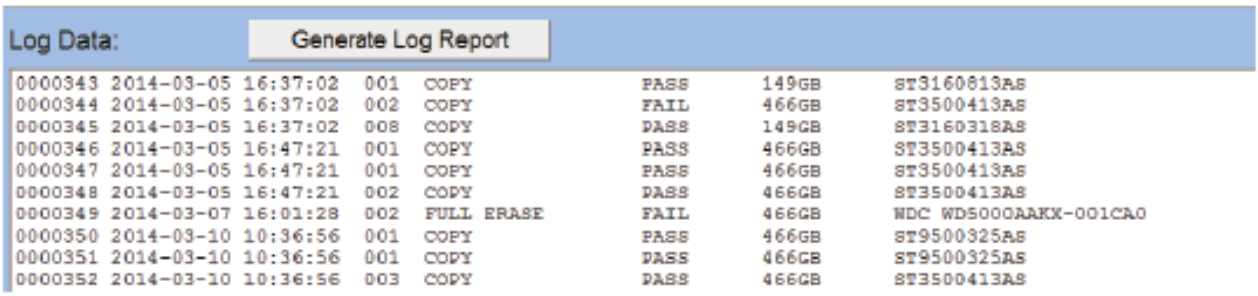
Step 1: Click <Generate Log Report> in the field of LV07H screen <Log Data>.



Step 2: Select Date Range.
After entering <Open Report>, select the date range for log report.

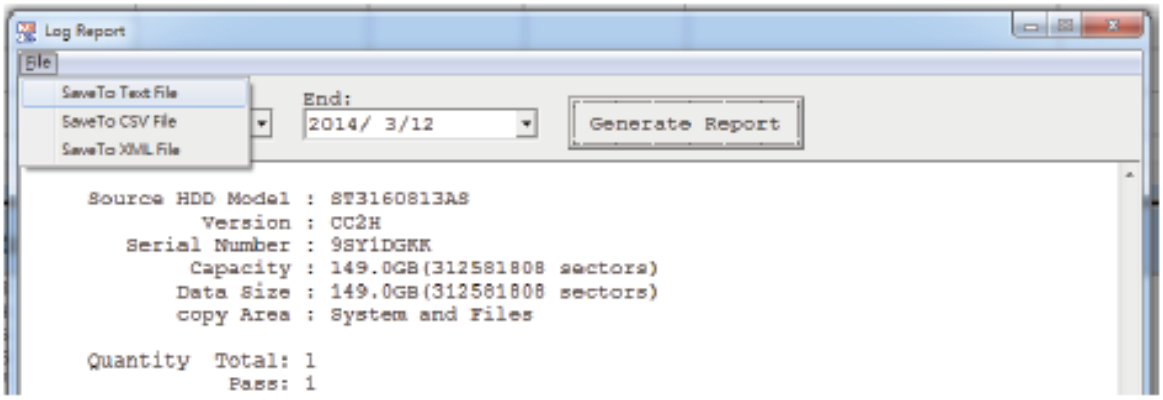


Step 3: Generate Report.
After selecting the date range, click <Generate Report> to generate log report. The duplicator can record up to 30,000 records of operational information off the device. Each device operation is saved as one record. For example, 26 records will be recorded if data is copied from 1 device to 25 devices.



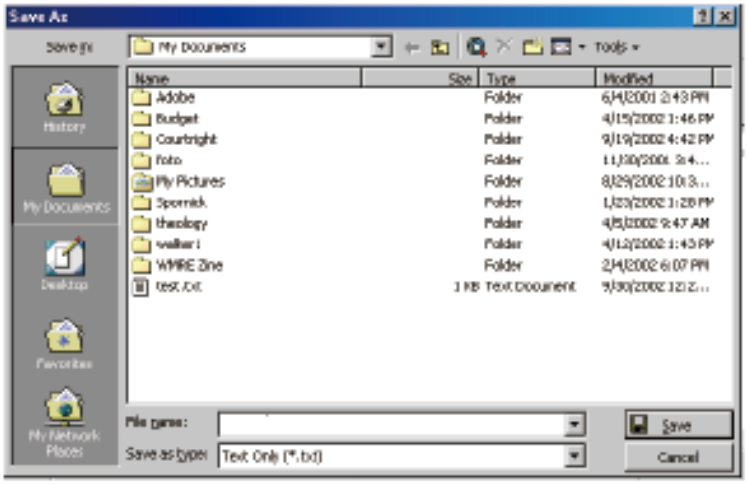
Note	If there is no record saved on the selected date, or record has been wiped out, the program would show "No match records!"

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 files types to choose from when saving a Log Report: .txt, .csv, .xml, or .pdf.

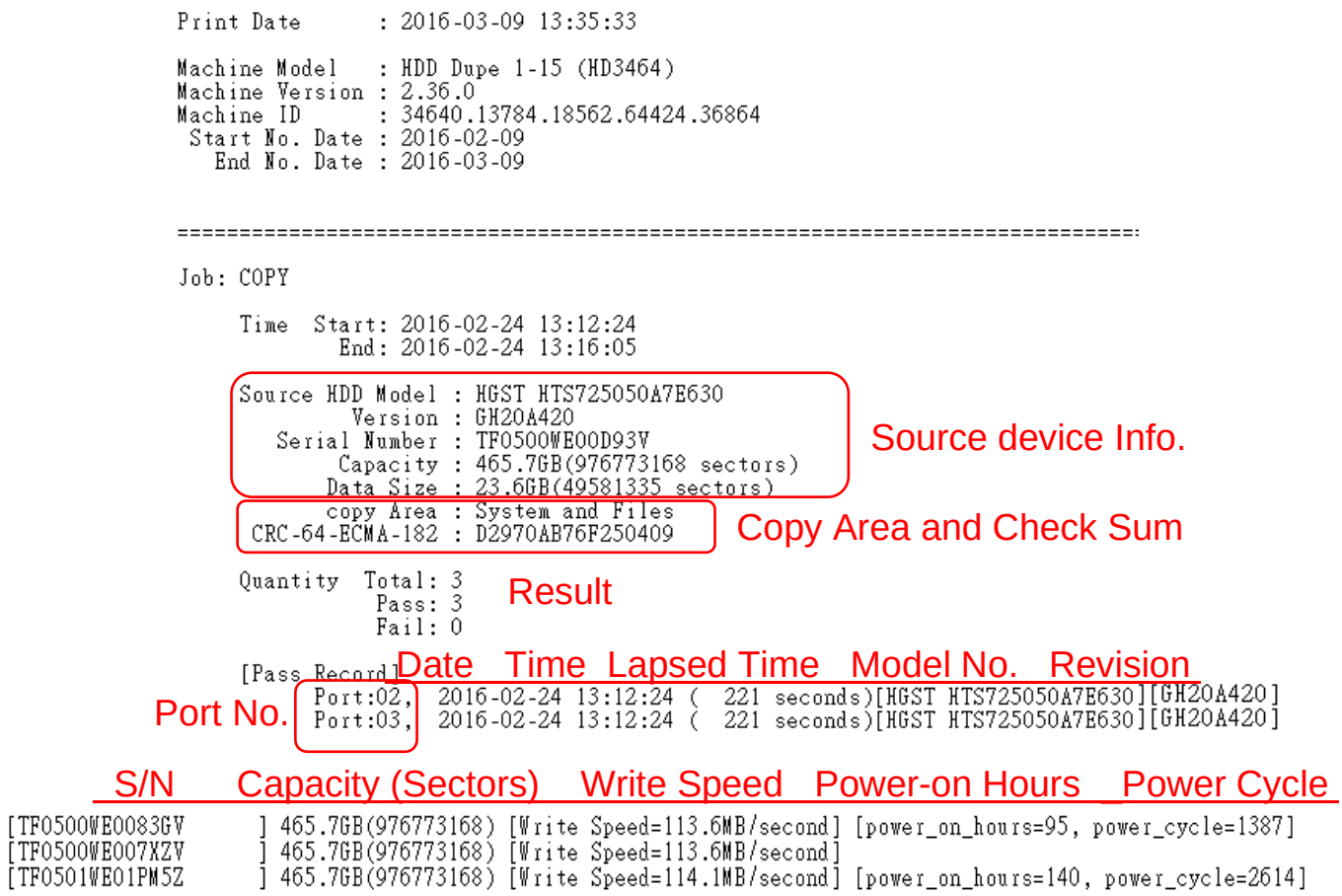
Step 5: Save Log to the Specific Location.
Specify a name and location to save the log.



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.)

Log Report Diagram



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.

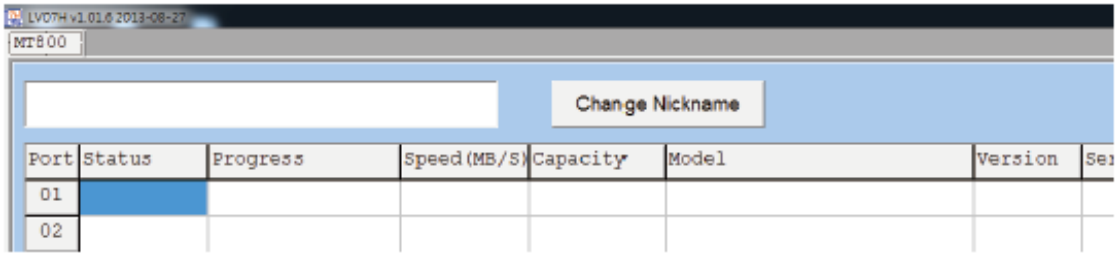
Step 2: Connect USB cable from computer to the duplicator.

Step 3: Power On the duplicator.

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

Caution	1. Before Step 4, make sure the duplicator has completed boot-up. 2. There are configuration files when launching LV07H. Make sure you are launching the .exe file on the PC, and not with the provided U-Reach 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.



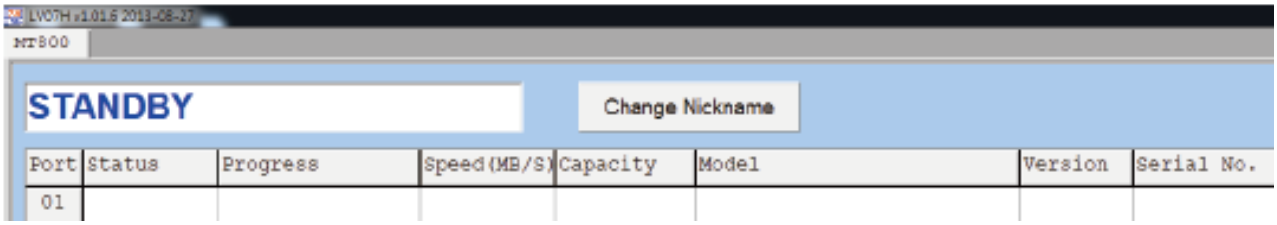
Step 6: If the screen above does not appear, please repeat steps 1 thru 4.

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

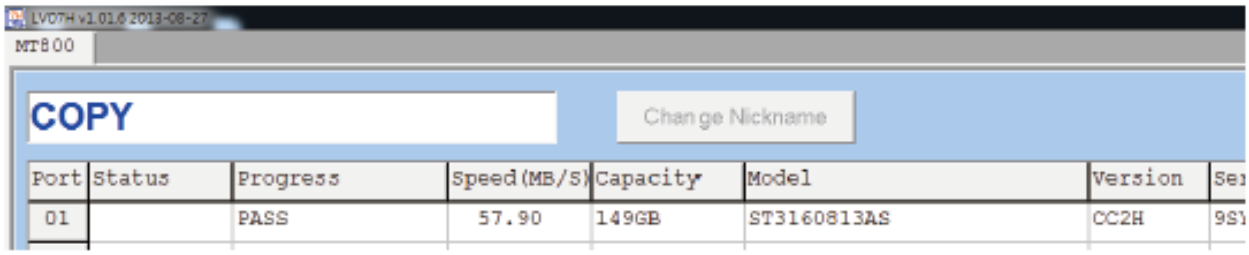
Note	Please select only one computer to do all PC-Monitoring. This will prevent PC from operating other tasks simultaneously as PC-Monitoring information can rapidly synchronize.

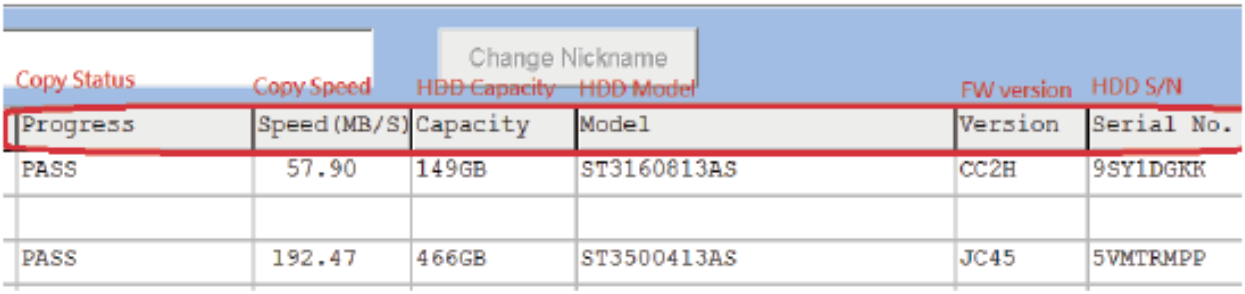
Step 1: When duplicator status indicates it's online, open the monitoring screen. The program is ready to work when the status displays "STANDBY".



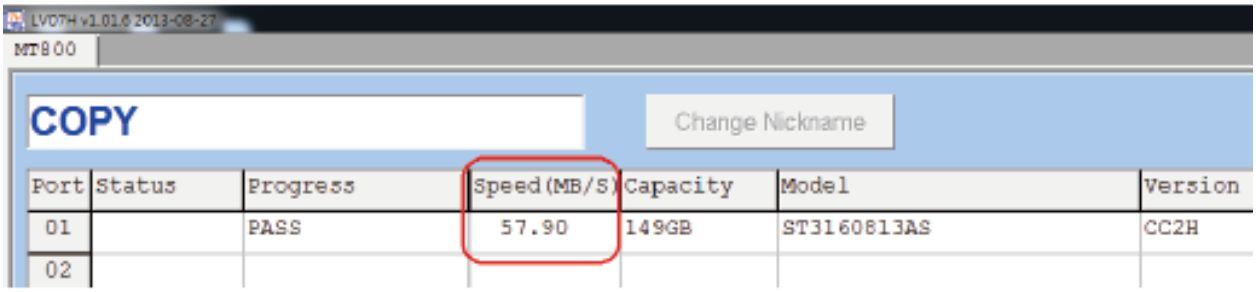
Step 2: Execute a "Copy/Compare" on the duplicator.
After connecting source & target devices to the duplicator and executing a task, the program will display all related device information. It captures detailed information from each device via PC-Monitoring, e.g. device model, S/N, copy speed, etc. It 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.



FAQ

Questions of duplicators	Solution
LCD shows "HDD Too Small"	1. The capacity of source HDD is bigger than target HDD. E.g., copy 500GB HDD to 250GB HDD.
	2. The capacity of source and target are the same, but internal capacity might be slightly different.
What OS does duplicator support?	Duplicator copies any kinds of OS
Can duplicator copy IDE HDD, SSD, mSATA, etc?	Yes, it can. As long as adaptor can adopt to SATA interface.
How long does it take to duplicate?	For example, if the duplicator supports 18GB/min copy speed. It's around 2 min to copy Win8 OS(approx 12GB)
How big the capacity of HDD does duplicator support?	Duplicator supports up to 6TB HDD, and MBR/GBT format HDD
Can I interupt the copy task while it is not finished?	Yes, the program (copy, compare and erase) can be stopped while it is in processing by pressing ESC for aobut 3~4 seconds
Will it be safe if I remove the HDD right after copy process?	Yes, the device will automatically cut off power of each port to protect HDD during removal from the duplicator. The power of each port will be only be output when the operation is started.
What kind of format does duplicator support?	FAT16/32/64, ext2/3, NTFS, HFS, HFS+, HFSX are supported for Systems and Files Copy. If copy the format other than those above, it transfers to All Partition Copy.

Specification

Product Name	Rack Mount CRU HDD Duplicator	
Model	KV500C	KV600C
Target	4	6
	Expandable up to 254 targets	
Display	2x20 backlight Monochrome LCD	
Control Button	4 Keys (▲ /Up, ▼ /Down, OK/Confirm, ESC/Exit)	
Compatible HDD	CRU HDD	
Comapre Mode	Bit-for-bit data comparison	
Erase Mode	Quick Erase, Full Erase, DoD Erase, 7- Pass and Secure Erase	
Copy Format	Quick Copy: FAT16/32/64, NTFS, Linux (Ext2/3/4), HFS/HFS+/HFSX	
	All Partitions/Whole HDD Copy/Percentage Copy : All Formats	
Advanced Format	Skip Bad sector copy by self-setting tolerance Support MBR, GPT, advanced format HDD (18TB above)	
PC Monitoring	PC monitoring for real-time status	
OS Supported	All (Windows, Linux, RAID, Other stand-alone systems)	
Power Supply	Automatic power control Adjustable voltage 115V~240V, 50/60Hz.	
Temperature	Storage temperature: -20ºC ~85ºC	
	Working temperature: 5ºC ~45ºC	
Humidity	Storage humidity: 5%~95%	
	Working humidity: 20%~80%	
Certifications	FCC, CE, RoHS	

**Specifications are subject to change without notice.*