Carry HDD Mini Duplicator V1.0

PRO368(I-3)

High Speed Portable HDD Duplicator

User Guide

EN

2014/6/24

Disclaimer of Warranties

All UREACH flash duplicators are made specifically for data backup with legal authorities from copyright owners. Any unauthorized action of copyright is strictly prohibited, and UREACH-INC disclaims all warranties or representations of illegal actions by users.

UREACH-INC also disclaims any liability for any of losses or damages due to not be 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.

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, strongly suggest the capacity of source and targets should be the same.
- It is strongly suggest to use “Copy+Compare” to achieve a perfect duplication.

Safety Precautions

- The warranty will expire if damage is incurred resulting from non-compliance with theses operating instructions.
- Store the equipment out of the reach of children and infants.
- Please turn off the power before replace 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.

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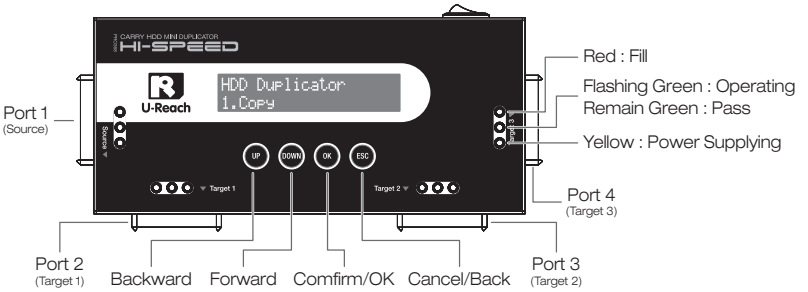
1 Features

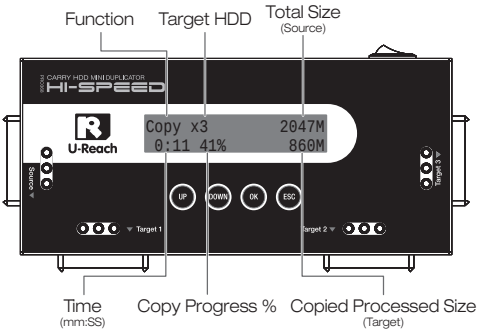
- High copy speed supports up to 250MB/second.
- Support reading/writing speed measuring function.
- Show the detailed information of HDD and its quality.
- Auto power control system helps to protect the HDD from any damage during the insertion and removal from the duplicator.
- Support compatibility of multiple interfaces via external adapters:2.5”/3.5” IDE HDD, mSATA SSD , eSATA , iVDR , microSATA , CF, cFAST, SSD. Support HDD interfaces: 1.8" / 2.5"/ 3.5" SATA HDD and SSD.
- Support 4 different duplication mode: Quick Copy (System and Files), All Partitions, Whole HDD, and Percentage.
- Quick Copy mode supports formats: FAT16/32/64, NTFS, Linux (Ext2Ext3/ Ext4), HFS/HFS+/HFSX, GPT, and Dynamic HDD. All Partitions and Whole HDD support all kinds of formats.
- Support 4 ways of sanitization: Quick Erase, Full Erase, DoD Erase and Secure Erase.
- Automatically detect and show the bad sector quantities of HDDs.
- Light weight for easy carrying.

2 Product Overview

2.1 System Overview



2.2 LCD Configuration



3 Function Table

Function	Description	
1. Copy	To copy source HDD to multiple target HDDs. Refer to function [6.1 Copy Area] for 4 different copy modes selection.	
2. Compare	To compare data bit for bit between source and target HDDs.	
3.Copy +Compare	It makes copy first and then compare target HDD with source HDD to ensure data correctness.	
4. Erase	4.1 Quick Erase To erase HDD's index table only, it takes short time to execute this function.	
	4.2 Full Erase To erase the whole HDD content.	
	4.3 DoD Erase To erase HDDs three times complying with USA Department of Defense (DoD) standard. It takes 3 times longer than full erase.	
	4.4 DoD EraseComp To erase HDDs three times complying with USA Department of Defense (DoD) standard and bit by bit to check if data is completely erased. It takes 4 times longer than full erase.	
	4.5 Secure Erase The international authorized high standard Secure Erase function. It is able to erase the area which is not loadable.	
5. Utility	5.1 Show Disk Info.	5.1.1 Model Number To show HDD's model number.
		5.1.2 Version of Firmware To show HDD's firmware version.
		5.1.3 Serial Number To show the serial number of HDD.
		5.1.4 Device Power Cycle To show the count of HDD's turning on and off.
		5.1.5 Power-on Hours To show the total hours of HDD power-on.
		5.1.6 Reallocation Event Count It represents the count of failing to save data.
		5.1.7 Off-Line Scan Uncorrectable Sector Count To show the sector volume that is uncorrectable when scanned off-line. The more the uncorrectable sector volume is, the more serious the HDD's damage is.
		5.1.8 Seek Error Rate To show the error rate of searching for data. It can represent the damage rate of data stored in the HDD.
		5.1.9 Temperature To show the temperature of HDD.

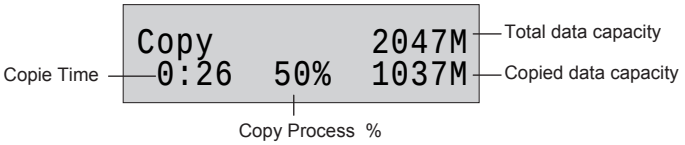
5. Utility	5.2 Update System	5.2.1 Update BIOS To update the system firmware via the HDD.	
		5.2.2 Create Update HDD To format the HDD with a 2GB FAT partition in order to quickly save the new firmware in the HDD.	
	5.3 System Info. This function will show information of the duplicator system, including controller model, number and software version.		
	5.4 Read Speed To show the speed of reading.		
	5.5 Write Speed To show the speed of writing.		
6. Setup	6.1 Copy Area	6.1.1 System and Files To copy source HDD's data area only.	
		6.1.2 ALL Partitions To copy source HDD's all partitions.	
		6.1.3 Whole HDD To copy the whole source HDD.	
		6.1.4 Percentage(%) To copy percentage range of source HDD.	
	6.2 Skip Error Set to ignore error of source HDD while copying.		
	6.3 Language English / Japanese / Chinese		
	6.4 Advanced Setup	6.4.1 Unknown Format	6.4.1.1 Copy Unknown Copy unknown area when the device cannot identify the format.
			6.4.1.2 Skip Unknown Skip copy unknown area when the device cannot identify the format.
		6.4.2 Erase Master Setup to erase source HDD or not.	6.4.2.1 Disable Disable erase source HDD.
			6.4.2.2 Enable Enable erase source HDD.
		6.4.3 Erase Pattern	6.4.3.1 ONE Byte A random character to be written into every byte.
			6.4.3.2 Big Random Data A set of random character to be written into a set of area.
		6.4.4 Wait HDD Tim Auto start time after plugging HDD.	

6. Setup	6.4 Advanced Setup	6.4.5 Transfer Rate Select the proper transfer rate from UDMA2~UDMA7.
		6.4.6 Stop Motor Time Auto running time after stopping motor.
	6.5 Restore Default Back to original manufacturer setting.	

1 Copy

It copies data from the source HDD to the target HDD. Please ensure you have selected the copy mode require before executing the copying process. Refer to function [6.1 Copy Area] for details.

Copy Process



Copy Result

Note The default setting is the quick copy mode “System and Files”.

2 Compare

It is used to check if the data on the target HDD is identical to the source HDD after the duplication is finished.

3 Copy+Compare

It executes the copying first, and then it compares the target copied with the source to check the correctness of the duplication.

4 Erase

There are Quick Erase, Full Erase, DoD Erase, DoD EraseComp , and Secure Erase, totally 5 kinds of erasing modes. Select the appropriate erase method when you would like to dispose or reuse the HDDs.

Note	• Users can go to Function [6.4.2 Erase Master] to select if erasing the source HDD. The default setting is “Disable” to erase the source HDD. • This function can be stopped while processing by pressing [ESC] for about 3~4 seconds.

4.1 Quick Erase

This function only erases the HDD index. It is the quickest way to erase HDD. It will damage the data in the HDD. Please make sure you backup all important data before using this function.

4.2 Full Erase

This function will erase all HDD sectors. It will take longer time than quick erase. It will damage the data in HDD, please make sure you backup all important data before using this function.

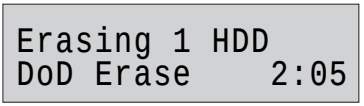
4.3 DoD Erase

This is to comply with the U.S.A. Department of Defense (DoD 5220) standard to fully erase the HDD three times bit by bit to rewrite HDD and guarantee all data is erased. It will damage the data in HDD, please make sure you backup all important data before using this function.

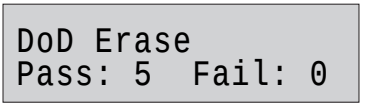
Steps of DoD Erase:

The system will start executing DoD Erase after pressing OK.

Erasing.



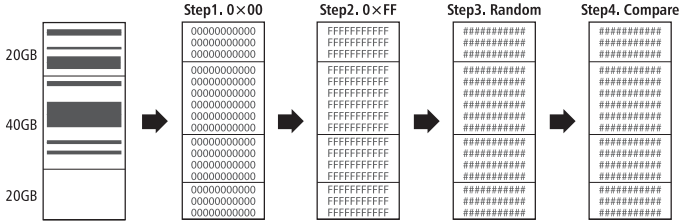
The system will show the result after finishing.



4.4 DoD Erase Comp

As well as DoD erase, this function will also execute compare function to make sure the random bit was correctly written. This function erases each sector of the HDD three times: the first time with zeros (0x00), second time with 0xFF and the third time with random characters, performs a bit by bit check to see if data is completely erased. It will damage the data in HDD, please make sure you backup all important data before using this function.

DoD EraseComp Method



**The erasing time of DoD Erase mode is three times longer than Full Erase mode, and the time of DoD EraseComp is four times longer than Full Erase mode.

❖ The erasing time of DoD Erase mode is three times longer than Full Erase mode, and the time of DoD EraseComp is four times longer than Full Erase mode.

4.5 Secure Erase

The international authorized high standard Secure Erase function. It overwrites every single track on the hard drive with "00". Even PA/DCO or other data area which are not able to load, can be erased all together.

Note	Please do not disrupt during Secure Erase, otherwise it would cause irretrievable error on HDD, which turns the HDD unusable.

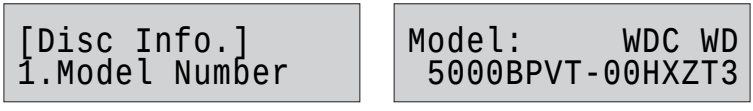
5 Utility

5.1 Show Disc Info.

The function will show basic information of both source and target HDDs.

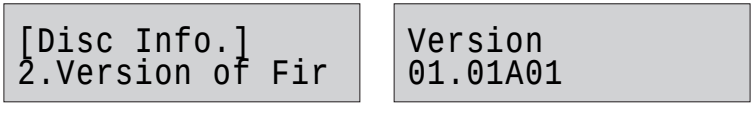
5.1.1 Model Number

This function is to show HDD's model number.



5.1.2 Version of Firmware

This function is to show HDD's firmware version.

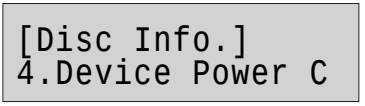


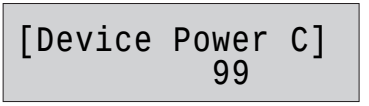
5.1.3 Serial Number

This function is to show the serial number of HDD.

5.1.4 Device Power Cycle

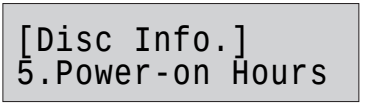
This function is to show the count of HDD's turning on and off.

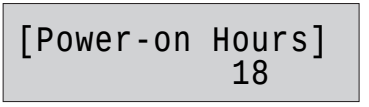




5.1.5 Power-on Hours

This function is to show the total hours of HDD powering-on.





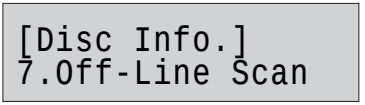
5.1.6 Reallocation Event Count

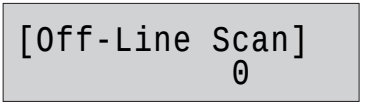
This function is to show the count of reallocating event.

When the HDD fails to save data, it will need to redefine the location to store data. Therefore, more count of reallocation event represents more error times.

5.1.7 Off-Line Scan Uncorrectable Sector Count

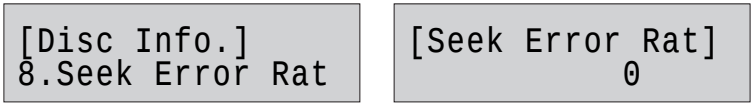
This function is to show the sector volume that is uncorrectable when scanned off-line. The more the uncorrectable sector volume is, the more serious the HDD's damage is.





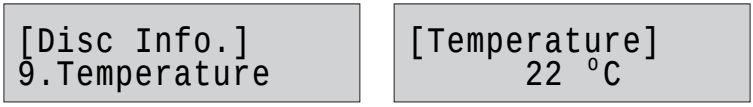
5.1.8 Seek Error Rate

This function is to show the error rate of searching for data. It can represent the damage rate of data stored in the HDD.



5.1.9 Temperature

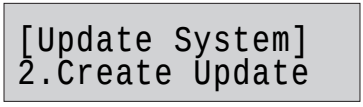
This function is to show the temperature of HDD.



5.2 Update System

This function is to execute firmware updating of system.
You can follow the following steps to update the system firmware.

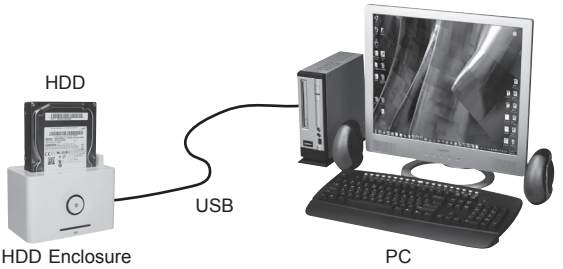
▻ **Select Function [5.2.2 Create Update HDD]**



▻ **Create Update HDD (create a 2GB FAT partition)**

(The purpose is because 2GB FAT HDD Partition can speed up the update process.)

▻ **Download the BIOS from the PC to your HDD.**



▻ **Plug the HDD into Port 1of the duplicator, select Function 5.2.1 to update BIOS, and wait for about 1 minute to finish the update process.**

```
[Update System]
1.Update BIOS
```

5.3 System Info.

This function shows the duplicator information such as model name and firmware version.

```
HDD Dupe 1-1
Ver: 2.31.0
```

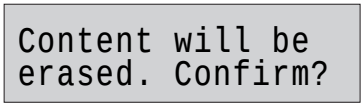
5.4 Read Speed

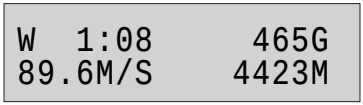
This function is to measure the reading speed of the HDD by reading the whole HDD.

```
R  2:30      465G
89.0M/S    12.8G
```

5.5 Write Speed

This function is to measure the writing speed of the HDD by writing the whole HDD.





Note	This function will delete the content in HDD, so please make sure you have backup data before executing this function.

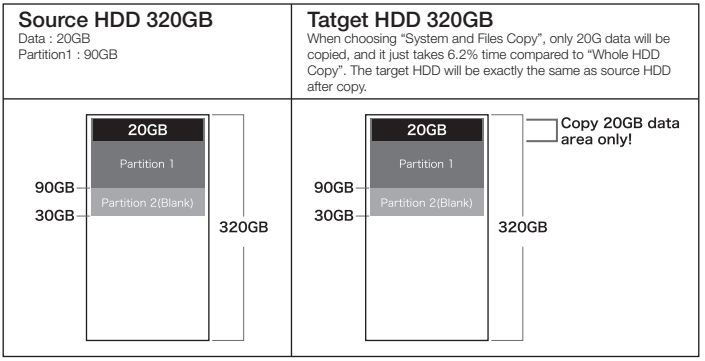
6 Setup

6.1 Copy Area

This setting is to select the copy mode you would like to use.

6.1.1 System and Files

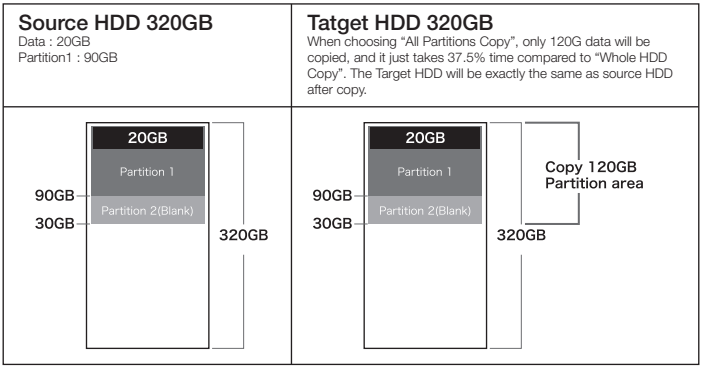
It copies the source HDD's System and Files instead of the whole HDD. The system will analyze the source HDD and identify the data area to copy. As long as the source HDD's data within the target HDD's free space, the copy will be processed.



Note System and Files only supports FAT, NTFS, and LINUX (ext2/ ext3/ ext4).

6.1.2 All Partitions

This mode will copy all of the partitions areas bit by bit including the free space.

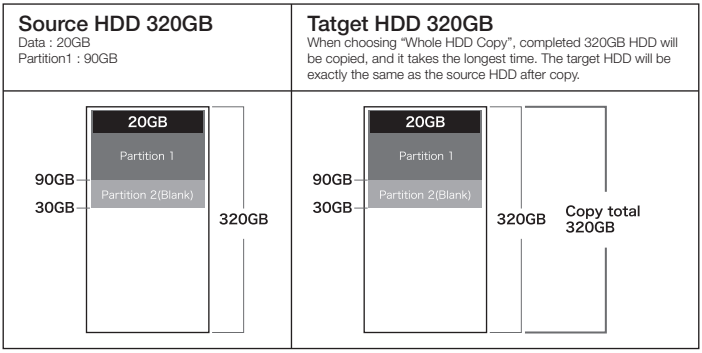


Note The capacity of target HDD has to be larger than the capacity of all partitions of the source HDD.

6.1.3 Whole HDD

This mode will copy the entire HDD, regardless of content, format, partition or free space. This mode will take much more time to duplicate the source HDD completely.

```
[Copy Area]
Whole HDD
```

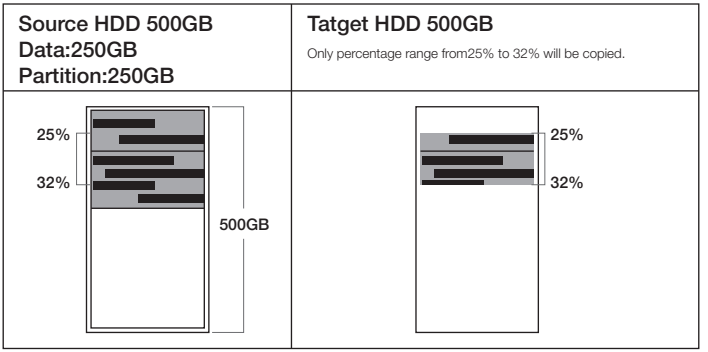


Note	After copy, the remaining space in the copied HDD can be used by PC for further partitioning.

6.1.4 Percentage(%)

This mode will copy the percentage selected of source HDD. Only copy the selected area, other area or data will not be copied. Duplication time is affected by "transfer rate of HDD".

```
[Copy Area]
 Percentage(%)
```



6.2 Skip Error

This function sets the volume of errors that is acceptable for you to skip during the copy process.

```
[Skip Error]
        0
```

Note	If it's critical that there are no errors on the HDD, then the error counter should be set to 0.

6.3 Language

Select preferred language.

6.4 Advanced Setup

6.4.1 Unknown Format

This function is used to select if copying the areas with unknown format.

6.4.1.1 Copy Unknown

The setting copies all the unknown area even if the format is not identified.

6.4.1.2 Skip Unknown

The setting skips the unknown format area during copy process.

6.4.2 Erase Master

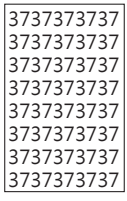
This function is to set if erasing the source or not when executing erasing function.

6.4.3 Erase Pattern

Select different erase method during the third time writing data for functions [4.3 DoD Erase] and [4.4 DoD EraseComp].

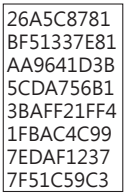
6.4.3.1 ONE Byte

A random character to be written into every byte.



6.4.3.2 Big Random Data

A set of different random character to be written into a set of area.
This erase pattern method is safer for preventing from data recovered.

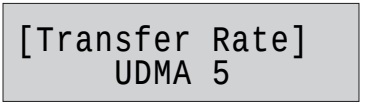


6.4.4 Wait HDD Time

You can select auto-start time after plugging in HDD, able to set the waiting time from 0 to 30 seconds.

6.4.5 Transfer Rate

You can select the best transfer rate from UDMA 2 to UDMA7 for your HDD duplication process. If you are not confident on the HDD quality or you find a high failure rate on copy or compare. It is recommended to slow down the UDMA mode.



6.4.6 Stop Motor Time

When the system finishes executing functions, the motor won't stop running immediately. This function is used to set the time of motor stopping after finishing function executing from 1 to 20 seconds.

6.5 Restore Default

This function is to go back to the manufacturer's default setting.

Chapter ③ - Specification

Product Name		Carry Mini Super High Speed HDD Dupe.
Product Number		PRO368
Targets		1:3 (4-port)
Transfer Speed		250MB/sec
Support HDD Interface		1.8"/2.5"/3.5" SATA HDD and SSD
Display		2x16 Monochrome LCD
Control Button		4 push buttons(▲ , ▼ , OK, ESC)
Compatible HDD/SSD		All major brand of 2.5"/3.5" IDE HDD, mSATA SDD, eSATA, microSATA, iVDR, CF, cFAST, USB3.0
Duplication Mode		1.System and Files 2.All Partitions 3.Whole HDD 4.Percentage
Support OS		All (Windows, Linux, RAID, etc)
Support Format		Quick copy (System and Files): FAT16/24/32/64, NTFS, Linux (Ext2/ Ext3/ Ext4), HFS/HFS+/HFSX, GPT, Dynamic HDD
		All Partitions/ Whole HDD: Supports all format
Capacity		Up to 15TB
Power Supply/ Consumption		100V-240V, 50/60Hz, 60W
Temperature	**Working**	5 ºC ~45ºC
	Storage	-20 ºC ~85 ºC
Humidity	**Working**	20%~80%
	Storage	5%~95%

❖ The actual specification may subject to change without notice.

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