

User Guide

1:5 HDD Duplicator Pro (HDUSI5TDR)

www.addonics.com

v3.1.11

Technical Support

If you need any assistance to get your unit functioning properly, please have your product information ready and contact Addonics Technical Support at:

Hours: 8:30 am - 6:00 pm PST

Phone: 408-453-6212

Email: <http://www.addonics.com/support/query/>

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Basic Instructions

Note: Make sure that the capacity of the target hard disk is equal or larger than the source hard disk.

For example, on the label of the hard drives, it might identify both drives as 80GB but the actual size differs. And when this type of drives are used on the HDD duplicator, when you start duplicating, you will receive a “Target Not Ready” error. To resolve this issue, you need to decrease the drive size of the source drive. To do this, navigate to: 6.Setup > 6.2Copy Size and use the button arrows to decrease the drive size of the source drive by increments of 1%.

I. Installing drive into the HDD Duplicator

For installing a hard drive on the various enclosures that come with the HDD duplicator, refer to the bundled enclosure installation guides.

Step 1

Once the hard drive is installed on the drive enclosure, slide in the **Source drive** into the drive bay. Push down the handle and using the key provided, turn the key lock to the Lock position. This will secure the drive and turn on the power to the hard drive.

Step 2

Slide in the **Target drive** into the drive bay. Push down the handle and using the key provided, turn the key lock to the Lock position. This will secure the drive and turn on the power to the hard drive.

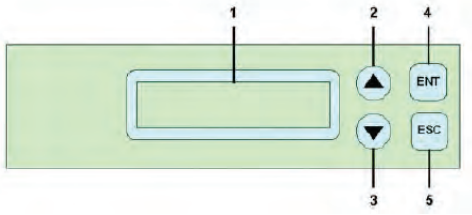
II. Connecting the power cable and powering on

- a. Connect the power cord provided from the wall outlet to the back of the tower.
- b. A main power switch is located at the back of the tower. Turn the switch on. Another auxiliary switch is located on the front of the tower.
- c. Push the auxiliary switch button to turn on the HDD duplicator.

III. The Duplicator Panel

There are four buttons and an LCD on the panel of HDD Duplicator.

- 1 – LCD shows a function or a message.
- 2 – it is used to scroll up function menus.
- 3 – it is used to scroll down function menus.
- 4 – it is used to execute a function.
- 5 – it is used to cancel a function.



IV. Duplicating a drive

When the duplicator powers on, it initializes and goes through the steps below

Shows the firmware version

```

HD Duplicator
1-1 Ver:
  
```

Initialize SDRAM's status..

```

Initialize SDRAM
  
```

Detect Drives' status.

```

Detect Drives
  
```

Shows the first function:

```

1. Copy HD
  
```

Copy HDD copies data directly from the source hard disk to the target hard disk.

Press ENT button to begin copy. The system will auto-detect the hard disks and show the following info on the LCD.

```

Copy-36MB/s 0%
235.7GB 1 : 48
  
```

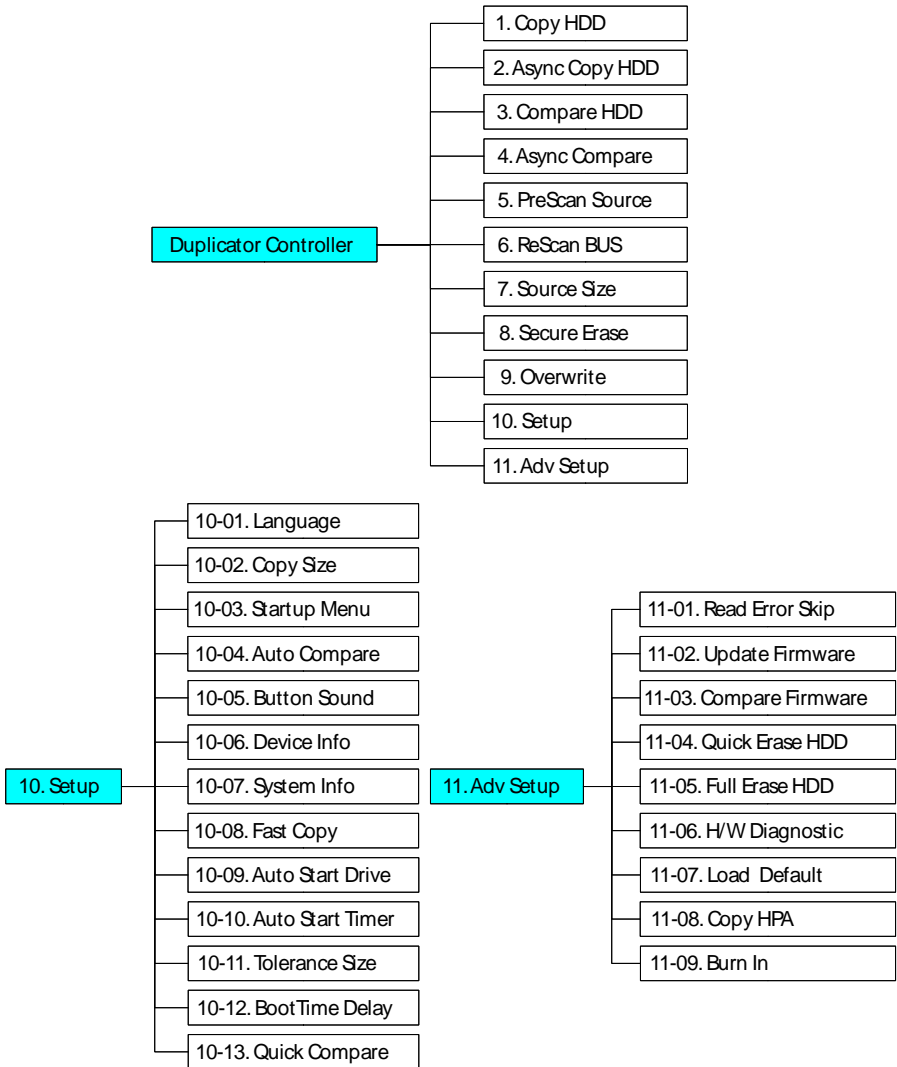
The LCD will show the following info during the copying process: remaining time, completed percentage. The copy speed, capacity and time will vary depending on the source hard disk. Once the copying process is complete the LCD will display the following results.

```

Copy HD
OK :
  
```

Functions

The copy controller has 11 functions in total, with the 11th (Adv Setup) being a hidden system function that only appears when the ESC key is pressed for 2 seconds until there is a beep. These are shown below.



Copy HDD

Copy HDD copies data directly from the source hard disk to the target hard disk. Please make sure that the capacity of the target hard disk is equal or larger than the source hard disk.

Choose option 1 from the menu:

```
1. Copy HDD
HDD:11 232.9GB
```

Press **ENT** to begin copy. The system will auto-detect the hard disks and show the following copying info on the LCD.

```
Copy-36MB/s 0%
232.9GB 00:00:00
```

The LCD will show the following info during the copying process: elapsed time, completed percentage. The copy speed, capacity and time will vary depending on the source hard disk. Once the copying process is complete the LCD will display the following results.

```
Copy HDD
OK: 11 Fail: 0
```

Async Copy HDD

This option is used to specify the size of the source for simplifying further copying operations.

Choose option 2 from the menu:

```
2. Async Copy HDD
HDD:10 232.9GB
```

Press **ENT**. Before the start of the reproduction, if the console detects that a hard drive capacity is less than source, then the LCD will show the corresponding channel number.

```
8
Space Not Enough
```

And then automatically copies. The LCD will display the following info.

```
Acopy-36MB/s 0%
232.9GB 00:00:00
```

If the replication process to continue to add additional hard disk device, LCD will only show the last completed percentage.

Once the copying process is complete the LCD will display the following results.

```
Async Copy HDD
OK: 11 Fail: 0
```

Compare

Compare HDD is used to see if the data on a source hard disk is identical to the target hard disk after the Copy HD operation.

Choose option 3 from the menu:

3. Compare HDD
HDD: 11 232.9GB

Press **ENT** to begin the comparison. The LCD will display the following info.

Comp-23MB/s 0%
232.9GB 00:00:00

Once the comparison is complete the LCD will display the following info as well as the amount of data on the source hard disk.

Compare OK:11
Fail: 0 Di :0

Async Compare

Compare HDD is used to see if the data on a source hard disk is identical to the target hard disk after the Copy HDD operation. While compare process is on-going, allows you to plug-in additional target drives and comparison will automatically start for the added target drive.

Choose option 4 from the menu:

4. Async Compare
HDD: 11 232.9GB

Press **ENT**

to begin the async comparison. The LCD will display the following info.

ACmp-23MB/s 0%
232.9GB 00:00:00

If the comparison process continues to add additional hard disk device, LCD will only show the last completed percentage.

Once the copying process is complete the LCD will display the following results.

Compare OK:11
Fail: 0 Di :0

PreScan Source

PreScan HDD is used to check if the source hard disk can be accessed properly. It also tests the read speed.

Choose option 5 from the menu:

5. PreScan Source
HDD : 11 232.9GB

Press **ENT**

to begin scan. The LCD will display the following info

Scan-90MB/s 1%
230.6GB 00:00:27

Once the scan is complete, the LCD will display the corresponding results

PreScan OK!

ReScan Bus

ReScan Bus allows swapping the source or target in and out without having to reboot the system.

Choose option 6 from the menu:

6. ReScan BUS

Press **ENT** to re-scan hardware. The LCD will display the following info.

Re-Scan BUS NOW?
Yes

When the scan is complete the LCD will display the following info.

Bus re- scan OK!

Source Size

Source Size is used to show the capacity of the source.

Choose option 7 from the menu:

7. Source Size

Press **ENT** and the LCD will show the following info.

HDD:Hitachi
Size:232.9GB

Then press **ENT** and the LCD will show the data's size info.

HDD:Hitachi
Data:200.9GB

Secure Erase

Secure Erase is used to wipe the data of the hard disk, it will erase all of HDD of duplicator (included Source HDD).

Choose option 8 from the menu:

8. Secure Erase

Press **ENT** to access option. By default it is set to No. Use the Up and Down arrow keys to choose Yes.

Wipe all data.
Continue? No

Press **ENT** and the LCD will show the following info.

In Process
Elapsed 01:00

Overwrite

Overwrite is used to overwrite the data of the hard disk, it will erase all HDDs connected to the duplicator (including Source HDD). There are 3 sub-options: One pass, 3 pass and 7 pass.

Choose option 9 from the menu:

9. Overwrite

Press **ENT** to access option. By default it is One pass Use the Up and Down arrow keys to choose other options.

9-01. Overwrite
One pass

Press **ENT** to access option. By default it is set to No. Use the Up and Down arrow keys to choose Yes.

Wipe all data.
Continue? No

Press **ENT** and the LCD will show the following info.

In Process
Elapsed 01:00

Setup

Setup allows various system settings to be changed. There are 12 sub-options: Language, Copy Size, Startup Menu, Auto Compare, Button Sound, Device Info, System Info, Fast Copy, Auto Start Drive, Auto Start Timer, Tolerance Size and Boot Time Delay.

Choose option 8 from the menu:

10. Setup

Language

This option is used to select the system's language support. By default this is set to English. Press **ENT** to change the Language settings.

Language
English

Copy Size

This option is used to specify the size of the source hard disk for simplifying further copying operations.

10-02. Setup
Copy Size

Press **ENT** and the LCD will display a detailed list of options as shown below

Copy Size
100%~1% (*MB)

Use the Up and Down arrow keys to choose different copy sizes. The system will offer their corresponding percentages so the user can specify the amount to copy from the source hard disk. Press **ENT** to confirm and save the changes.

Startup Menu

This option allows you to set an option other than "Se up" to be displayed as the first available option on the menu every time you start the system.

10-03. Setup
Startup Menu

Press **ENT** then use the Up and Down arrow keys to choose other options. By default the first menu option is Copy HDD.

Startup Menu
1. Copy HDD

Auto Compare

This option automatically compares the source hard disk with the target hard disk after a copy operation is completed.

10-04. Setup
Auto Compare

Press **ENT** to access option. By default it is set to Off. Use the Up and Down arrow keys to choose On.

Auto Compare
Off

Button Sound

This option is used to control the sound of a button when you press it.

10-05. Setup
Button Sound

Press **ENT** and the LCD will display the following info. Use the Up and Down arrow keys to choose whether button sound is on or off.

Button Sound
On

Device Info

This option is used to display the details of all hard disks connected to the copy controller.

10-06. Setup
Device Info

Press **ENT** and the LCD will display each hard disk' information in order as shown below.

0 Source CH: 0
Hitachi 232.9GB

System Info

This option displays system information.

10-07. Setup
System Info

Fast Copy

This option displays Fast Copy. Fast Copy only copies data on the source drive to the target drives. Currently only supports FAT, FAT32, NTFS, HFS, Ext2 and Ext3 partitions.

10-08. Setup
Fast Copy

Press **ENT** and the LCD will display the following info. Use the Up and Down arrow keys to choose whether fast copy is on or o . (This function currently only e e ctive in FAT, FAT32, NTFS, HFS, Ext2 and Ext3 partitions.)

Fast Copy
On

Auto Start Drive

This option is used to display to copy automatically once you insert HDD on target port.

10-09. Setup
Auto Start Drive

Press **ENT** to enter the following gure. The default is O . Use the Up and Down arrow keys to choose 1-11.

Auto Start Drive
O

Auto Start Timer

This option is used to set the period of time when the duplicator starts copying automatically once you insert HDD on target port. Default is set at OFF, use the arrows to choose time.

10-10. Setup
Auto Start Timer

Press **ENT** to enter the following **g**ure. The default is **O** . Use the Up and Down arrow keys to choose 5 Sec-50 Sec.

Auto Start Timer
O

Tolerance Size

This option is used to set the tolerance in terms of percentage difference between the source and target capacity. This is to ensure that when the target drive is smaller than the source drive, the duplication process will not start.

10-11. Setup
Tolerance Size

Press **ENT** to enter the following **g**ure. The default is **O** . Use the Up and Down arrow keys to choose 1MB~100MB of source.

Tolerance Size
1MB

BootTime Delay

This option is used to set boot delay time.

10-12. Setup
BootTime Delay

Press **ENT** to enter the following **g**ure. The default is 5 sec. Use the Up and Down arrow keys to choose 0~99 sec.

BootTime Delay
5 sec

Quick Compare

This option is used to set the size of each comparison unit.

10-13. Setup
Quick Compare

Press **ENT** to enter the following **g**ure. The default is **O** . Use the Up and Down arrow keys to choose 1 Byte/1K/10K/100K/1MB/10MB/100 Mbytes. (In order to improve the accuracy of pure data can maintain the default settings.)

Quick Compare
O

Adv Setup

Adv Setup offers expert users access to more advanced system settings. To access this option, hold down the **ESC** key for two seconds until it appears.

11. Adv Setup

Read Error Skip

This function sets the system to ignore any errors during the copying process. Normally if there is an error during copying a warning is displayed on the LCD. By using this function, users can also copy a HDD with errors.

11-01. Adv Setup
Read Error Skip

Press **ENT** to enter the following screen. By default this option is set to OFF. Use the up and down buttons to enable or disable this option.

Read Error Skip
O

Update Firmware

This function is used to update the system's firmware. Download the latest version of the firmware from the Internet at www.addonics.com. For the complete instructions, visit the firmware update webpage or view the instructions found later in this manual.

11-02. Adv Setup
Update Firmware

Compare Firmware

This function is used to compare the current system firmware version with the new version the user is upgrading to. This ensures that the downloaded firmware is the latest version. The message "Last update F/W" indicates that it is the latest version.

11-03. Adv Setup
Compare Firmware



Searching F/W ...
Please Wait ...



Last update F/W
OK!

Quick Erase HDD

This function is used to quickly erase all data on the HDD. Please backup any important data before using this function.

11-04. Adv Setup
Quick Erase HDD

Press **ENT** to enter the following screen. Use the Up and Down buttons to select the HDD to erase.

Quick Erase HDD
ALL/Target CH:*

Press **ENT** again and the LCD will prompt you to confirm the erase operation.

All data will be
lost,Erase? No

Full Erase HDD

This function is used to full erase all data on the HDD. Please backup any important data before using this function.

11-05.Adv Setup
Full Erase HDD

Press **ENT** to enter the following screen. Use the Up and Down buttons to select the HDD to erase.

Quick Erase HDD
ALL/Target CH:*

Press **ENT** again and the LCD will prompt you to confirm the erase operation.

All data will be
lost,Erase? No

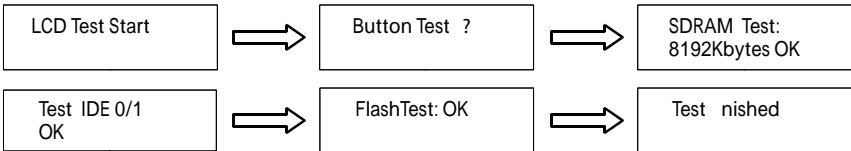
H/W Diagnostic

Press **ENT** to enter the following screen. This function is used to check that the system is operating normally.

11-06.Adv Setup
H/W Diagnostic

Press **ENT** again to enter the following screen. The LCD will cycle through the test categories as they are performed. The LCD display is tested first, the control panel is tested next (requires manual operation), then followed by the system's internal diagnostics, hardware connection test then the RAM and SD Flash test. All test results are shown on the LCD. This is a simple way to verify that the system is operating normally.

Press **ENT** and the system will begin the tests as shown below.



Once the system diagnostics have been completed the "Test finished" message will appear on the LCD.

Load Default

Press **ESC** to return to the main menu then use the **ENT** button to select. This function resets all settings to their factory default. This function helps the system recover from errors caused by an illegal operation.

11-07. Adv Setup
Load Default

Press **ENT** to enter the following screen. Use the Up and Down buttons to confirm reset to factory defaults.

Load Default
Con g? Yes

If Load Default OK, this will be displayed on the LCD as shown below.

Load Default
Ok

Copy HPA

If this function is set to "ON", the system will completely copy the data in a source HDD's host protected area.

11-08. Adv Setup
Copy HPA

The default is "OFF". Use the **ENT**, Up and Down buttons to change this to "On".

Burn In

This function is used to burn test the system reliability.

11-09. Adv Setup
Burn In

Press **ENT** to enter the following screen.

Burn In Mode
Copy & Compare

Use the Up and Down buttons to choose Compare, Async Copy & Cmp and Async Compare, then press **ENT** to confirm.

Basic Troubleshooting

LCD

If the LCD blank after the device is turned on, check that the power cable is properly connected and that the power supply is on.

Error Message

When the system is running a copy operation or hardware diagnostics, if the operation is manually terminated by pressing ESC an error message will be shown by the LCD. This may lead to an illegal operation and cause the device to stop reminding. If this happens, the device must be restarted.

Hard Disk

If unable to read the hard disk please check that the data and power cables are properly connected.

Keys

If pressing the keys on the front panel produces no response from the system, the keys may have malfunctioned. Please check the control panel to see if the wiring has come loose.

Firmware Upgrade

The device can be updated to new versions of firmware through CD/DVD-ROM. If unable to update the firmware, check that the firmware was downloaded correctly. A failed firmware upgrade may cause the duplicator to become inoperable. If the system is working normally, do not attempt this operation. If the system is already experiencing problems, please contact your distributor for repairs.

Startup/Shutdown

Do not suddenly turn off the power while the system is performing an operation. After shutting down normally, wait a moment (usually around 2 seconds) before starting the system again so it can run its self-diagnostics.

About Copy HPA

The HPA (Host Protected Area) is a hidden data region defined in ATA/ATAPI-4. This area is not usually accessible to software. The SATA HDD Duplicate Controller supports the copying of data from this hidden area.

Drive is locked (cannot be initialized after the SECURE ERASE or OVERWRITE)

1. Place drive in the source slot
2. Execute "PreScan" function for 1 minute
3. Press "ESC" key until you see "User Abort" on the LCD screen
4. Now remove the drive from the duplicator and connect it to your system, the HDD should be recognized and be able to initialize again

Error Messages List

NO#	Error Messages	Description	Applied to
1	Source Drive Not Exist!	No source HDD exist during operating	Copy, Async Copy, Compare, Async Compare, PreScan Source, Source Size, Copy Size, Tolerance Size
2	User Abort!	Cancel operating	Any function and any time
3	No Drive Exist	No HDD exist during operating	Device Info
4	X Space Not Enough Target Drive Space Not Enough	When source capacity is small than target	Copy, Compare
5	X Space Not Enough Target Drive Fail!	When source capacity is small than target	Async Copy, Async Compare
6	PreScan Fail	Lose SATA connection during copy or bad sector on HDD	PreScan Source
7	Source Drive Read Fail!	Lose target SATA connection on source port during copy or bad sector on source HDD	Copy, Async Copy, Compare
8	Target Drive Write Fail!	Lose target SATA connection on target port during copy	Copy
9	Target Drive Read Fail!	Lose target SATA connection on target port during comparing	Compare
10	Target Drive Fail	Lose target SATA connection on target port during async comparing	Async Copy, Async Compare
11	Target Drive Not Exist!	No HDD exist during operating	Overwrite
12	One pass One pass failed	Lose SATA connection on SATA port during Overwrite	Overwrite
13	3 pass pass 1 failed	Lose SATA connection on SATA port during Overwrite	Overwrite
14	7 pass 5220.22-M pass 1 failed	Lose SATA connection on SATA port during Overwrite	Overwrite

If you hear the warning signal while the copying function is executing (a beep every 5 seconds), the LCD screen will display the problem status; you may press any button to return to the copy progress screen.

Firmware Update Procedure

(Requires one hard drive containing the firmware file):

1. Create a 50MB HDD partition with FAT/FAT32 or NTFS file system on any SATA hard drive
2. Download the firmware and unzip the file to .BIN file format
3. Copy the .BIN file onto the 50 MB partition of the HDD
4. Insert this drive to the Source slot of the duplicator. For subsystem, connect the drive to the Source SATA port
5. Select "Firmware Update" function under the "Setup" or "Advanced Setup" menu and press **ENT** to do the update. To access the "Advanced Setup", hold onto the **ESC** button for 5 seconds. The new option will appear
6. Once completed, it will reboot and show you the new firmware version

Notes:

SECURE ERASE - HDD duplicator sends a **WIPE** command to the hard drive. This command fills 00 string to entire HDD

OVERWRITE - There are three options: One pass, 3 passes and 7 passes 5220.22-M. The duplicator writes a string of pattern over the entire disk one time, three times or seven times. (5220.22-M is the DoD standard for drive sanitization)

Please note that some drives may become locked and cannot be initialized after the **SECURE ERASE** or **OVERWRITE**. Should this happen, use the following procedures to unlock the drive:

1. Place drive in the source slot
2. Execute "PreScan" function for 1 minute
3. Press "**ESC**" key until you see "User Abort" on the LCD screen
4. Now remove the drive from the duplicator and connect it to your system, the HDD should be recognized and be able to initialize again

CONTACT US

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