MFD12 FLASH COPIER

User Manual

V1.10 1107

2014/10/20

COPYSTAR & BACKUP STORAGE CORPORATION

jasmine

Table of Contents

1. ***INTRODUCTION*** 2
2. ***FEATURES*** 2
3. ***SPECIFICATION*** 3
4. ***OPEN BOX*** 4
5. ***APPEARANCE*** 4
   - *5.1 MFD12 FRONT VIEW* 4
   - *5.2 MFD12 BACK VIEW* 5
6. ***PANEL*** 6
   - *6.1 DUPLICATING* 6
7. ***FUNCTION TREE*** 7
8. ***MAIN FUNCTION*** 8
   - *8.1 BRIEF COPY* 8
   - *8.2 RESIZE COPY* 8
   - *8.3 DISK COPY* 8
   - *8.4 VERIFY* 8
   - *8.5 ERASE* 9
   - *8.6 DIAG.* 9
   - *8.7 SETUP* 9
9. ***SETUP MANUAL*** 10
   - *9.1 SET TO DEFAULT* 10
   - *9.2 UPDATE FIRMWARE* 10
   - *9.3 FORMAT UPDATE DISK* 10
   - *9.4 SET COPY* 10
   - *9.5 SET COMPARE* 11
   - *9.6 SET QUICK ERASE* 11
   - *9.7 BRIEF IMMEDIATE* 11
   - *9.8 OPTIMIZE LOG TAB* 12
   - *9.9 SET DOD ERASE* 12
     - 9.9.1 [000]ERS DOD CYCLES 12
   - *9.10 SKIP READ ERROR* 12
   - *9.11 NO CAP CHECK* 13
   - *9.12 HPA CEHCK* 13
   - *9.13 DCO CHECK* 13
   - *9.14 CHECK SUM CHECK* 14
   - *9.15 SET SMART CHECK* 14
   - *9.16 SMART WARNING* 15

9.17 BTN. SOUND 15
9.18 SHOW EXE TIME 15
9.19 SHOW BINAEY BASE 15
9.20 CMD TIME OUT 16
9.21 TRANS. SIZE 16
9.22 MAX UDMA MODE 16
9.23 SET WRITE PAT. 16
9.24 DEVICE INFO 16
9.25 SYSTEM INFO 17
9.26 TOTAL COPY COUNT 17
9.27 BURN IN 17
9.28 DIAGNOSTIC SETUP 17
9.28.1 SET DIAG SMART 17
9.28.2 SET WRITE TEST 17
9.27.3 SET READ TEST 18
9.27.4 SET RANDOM READ 18
9.27.5 SET RANDOM WRT 18
9.27.6 SET DIAG. PAT. 18
9.29 LANGUAGE 18
9.29.1 ENGLISH 18
9.28.2 TRADITIONAL 19

1. INTRODUCTION

Congratulations on your purchase of the MFD-12 from COPYSTAR.

The MFD-12 is a high speed, stand-alone Industry Flash duplicator that can simultaneously clone up to 12 Flash drives. The duplicator has many advanced features for the Industry Flash Duplication, MFD-12 Supports various Flash Memory including SATA DOM(SATA Slim) 7 pin or 22 pin, CFAST, IDE DOM (IDE Slim), M-SATA, M.2..

The MFD-12 Duplicator the content of a Master Flash Drive to up to 12 drives simultaneously. With ultra fast copy speeds of up to 9GB/min, the NFD-12 is one of the fastest cloning Flash systems available.

2. FEATURES

- *Up to **9GB/min** transfer rates.*
- *MFD-12 Supports various Flash Memory including SATA DOM(SATA Slim) 7 pin or 22 pin, CFAST, IDE DOM (IDE Slim), M-SATA, M.2.(NGFF).*
- *Simultaneously clone up to 11 Flash drives.*
- *Supports all standard Industry Flash drives. Master & Target drives can be different sizes, brands and models.*
- *Various Copy&Compare Modes of Operation*

  (1) DISK COPY :

  Used to COPY/COMPARE the whole drives with SECTOR BY SECTOR and support ALL FILE SYSTEM & O.S. SYSTEM.

  (2) BRIEF COPY :

  Used to COPY/COMPARE only Data Area and skip no data area, and support Win 8, Win 7, Win Vista, Win 2000/98/95, MAC 10.X, Ubuntu, Fedora, Red Hat, FAT12/16/21/64, exFAT, NTFS, HFS, HPFS, EXT 1/2/3/4, XFS, GPT, LVM, UFS,

HPA.

(3) RESIZE COPY:

RESIZE mode is used to copy between Source and Target drives of different capacities. The Resize mode allows for copying from a smaller capacity Source to larger capacity Target drives. Resize copy supports the following file systems: FAT, FAT32, NTFS.

- *Supports HPA(Host Protection Area) & DCO(Device Configuration Overlay) hidden partition.*
- *Supports very strict bit to bit data verify.*
- *Supports completed erase functions.*
- *Support LBA 64 bit addressing and support more than 6TB capacity at least.*
- *Log and Graphic UI Monitoring, it supports to print & store detail operation event log and also offers a friendly graphic user interface to monitor all copy channels status and results.*
- *Standalone, easy operation.*

3. SPECIFICATION

Model	*MFD12*	
Copy Channel	*11*	
Power	*200W*	
Weight	*5kgs*	
Dimension	*45.8X26.6X12.8(cm)*	
Input	*8 Push Button*	
Display	*20 X 2 TEXT LCD*	
Voltage	*100V~240V 50/60Hz*	
Environment	*Operation Temperature 10℃ ~ 35℃* *Operation Humidity 5%~90%*	*Operation Temperature 41℉~122℉* *Operation Humidity 15%~90%*

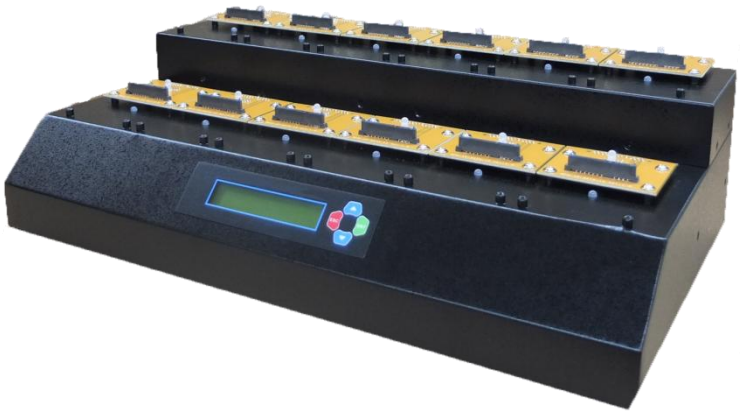
4. OPEN BOX

If any of the following items are missing, please contact the COPYSTAR and replacement parts will be shipping to you ASAP.

- *MFD12 Flash Duplicator* *X1*
- *AC Power Cord* *X1*
- *User Manual* *X1*

5. APPEARANCE

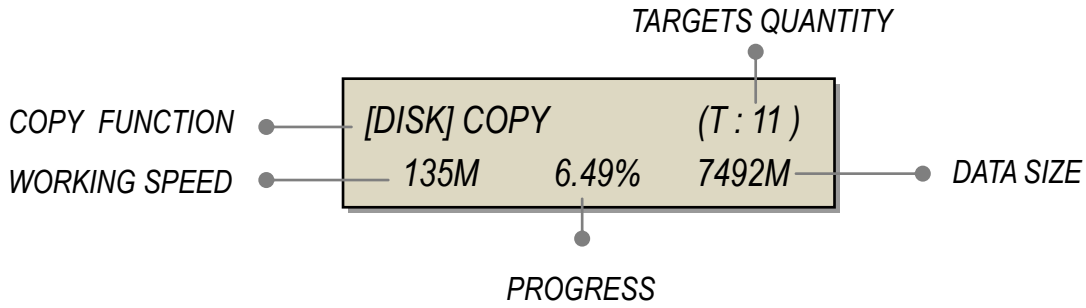
5.1 MFD12 FRONT VIEW



5.2 MFD12 BACK VIEW

6. PANEL

6.1 DUPLICATING



7. FUNCTION TREE

8. MAIN FUNCTION

8.1 BRIEF COPY

BRIEF mode copies only the sectors that contain data and skips any blank sectors. This mode is the fastest copy mode; it support the following system Win 8, Win 7, Win Vista, Win 2000/98/95, MAC 10.X, Ubuntu, Fedora, Red Hat, FAT12/16/21/64, exFAT, NTFS, HFS, HPFS, EXT 1/2/3/4, XFS, GPT, LVM, UFS, HPA. RIEF

8.2 RESIZE COPY

RESIZE mode is used to copy between Source and Target drives of different capacities. The Resize mode allows for copying from a smaller capacity Source to larger capacity Target drives. Resize copy supports the following file systems: FAT, FAT32, NTFS. If the Source is not formatted as a supported file system then the duplicator will automatically switch to FULL mode. When duplicating in Resize mode, Target drives should all be the same capacity.

8.3 DISK COPY

DISK Copy mode copied drives sector by sector from the Source to the Targets, and support all major OS formats and unknown file system. This DISK Copy mode will take more time than the other copy mode; this is because it will copy the whole sectors of the Flash. The time will be increased base on the drive's capacity.

8.4 VERIFY

VERIFY will check all connected flash drives and determine if they are readable. The verification operation will check any flash drive connected to a Target port and verifies that all sectors on the Flash are readable.

8.5 ERASE

ERASE deletes all information on any connected Target Flash drives by writing zeros into each sector of the hard drive, sector by sector.

8.6 DIAG.

The Diagnostic feature allows you to run tests to verify the health of your target flash drives.

8.7 SETUP

To enter the SETUP menu, from the Main menu press Up/Down key to select SETUP and press ENT key.

9. SETUP MANUAL

9.1 SET TO DEFAULT

Restore MFD-12 to default value.

9.2 UPDATE FIRMWARE

Update MFD-12 firmware.

9.3 FORMAT UPDATE DISK

The FORMAT UPDATE DISK operation allows you to format a flash drive in FAT 32. This flash drive can be used to store new firmware for upgrading machine.

- *To format a flash drive in FAT 32*

1. Connect the flash drive you want to format as a FAT32 drive to the duplicator's source port.

2. In the SETUP menu, navigate to FORMAT UPDATE DISK and then tap the ENT button. To format the flash drive.

3. You will receive a message asking you to confirm formatting the flash drive. tap the ENT button or proceed or tap the ESC button to cancel.

Once the format has completed you will receive a message confirming that the format was successful.

9.4 SET COPY

The SET COPY option allows you to enable or disable the Copy operation. Tap the 'ENT' button to change this option's setting.

- *[■] – Copy enabled (default).*
  DISK , BRIEF or RESIZE modes will perform a Copy operation.
- *[ ] – Copy disabled.*
  FULL, BRIEF or RESIZE modes will not perform a Copy operation.

Note: To perform a Copy & Compare operation, set both the SET COPY and SET COMPARE options.

9.5 SET COMPARE

The SET COMPARE option allows you to enable or disable the Compare operation. Tap the 'ENT' button to change this option's setting.

- *[ ] – Compare disabled (default).*
  FULL, BRIEF or RESIZE modes will not perform a Compare operation.
- *[■] – Compare enabled.*
  FULL, BRIEF or RESIZE modes will perform a Compare operation.

Note: To perform a Copy & Compare operation, set both the SET COPY and SET COMPARE options.

9.6 SET QUICK ERASE

Simply erase all the data on the hard drive.

9.7 BRIEF IMMEDIATE

BRIEF IMMEDIATE is used to change the analytical method in Brief mode.

- *The analyze source and copy work with the same time in Brief mode.*
- *The duplicator analyzes the source first; and then starts to copy data into the Targets.*

- ***The default value is Disable.***

For some source drives, it will take a very long time to analyze it, so enable BRIEF IMMEDIATE is able to save more time during Brief copy.

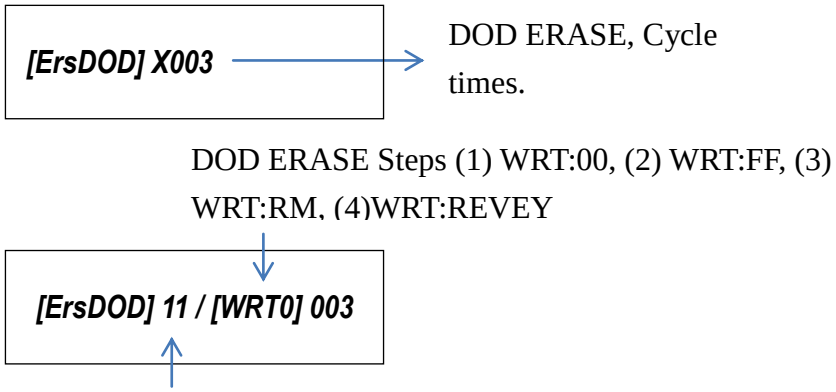
9.8 OPTIMIZE LOG TAB

It allowed to optimize log table and make the copy more effective.

9.9 SET DOD ERASE

9.9.1 [000]ERS DOD CYCLES

ERASE deletes all information on any connected Target flash drives by writing zeros and /or specific patter into each sector of the flash drive, sector by sector.



When enabled " SET DOD ERASE", the function name will be replaced from ERASE to ErsDOD on the main operation manual.

9.10 SKIP READ ERROR

The SKIP READ ERROR option allows you to enable or disable error skipping during FULL, BRIEF and RESIZE modes. Tap the 'ENT' button to change this option.

- *[ ] – Disabled (default). When an error is detected while reading from the Source, the duplicator will cancel the current process.*
- *[☐] – Enabled. When an error is detected while reading from the Source, the duplicator will skip the bad sector on the Source and fill it with a zero on the Target. ◦*

9.11 NO CAP CHECK

The duplicator has a built in capacity check function which will check the capacity of the Master drive and the Target drive(s) during Full or Brief copy processes and determine whether the drives' capacities are the same.

Tap the 'ENT' button to change this option's setting.

- ***[ ]*** *– No Capacity Check is disabled (default). When a Full or Brief copy process is executed the system will check the capacity between the Master and Target hard drive(s) to determine whether the capacity is the same. If the capacity is different the copy process will be cancelled.*
- ***[☐]*** *– No Capacity Check is enabled. When a Full or Brief copy process is executed the system will not check the capacity between the Master and Target hard drive(s) and start the copy*

TARGET TOO SMALL !   ***ESC→NO, ENT→YES***

9.12 HPA CEHCK

The Host Protected Area (HPA), sometimes referred to as the Hidden Protected Area, is a partition on the hard drive that is not normally visible to an operating system. Tap the 'ENT' button to change this option's setting.

- ***[ ]*** *– HPA Check is disabled (default). The system will not check for HPA partitions.*
- ***[☐]*** *– HPA Check is enabled. When HPA CHECK is enabled the duplicator will support Host Protection Areas. When you duplicate a Master Flash that contains HPA, the system will detect the HPA partition, unlock it, copy the area and then re-lock the area once duplication is complete.*

Note: When you view Device Info (see section) if the drive info displays an 'H' in the upper right corner then the device contains a hidden Host Protected Area.

9.13 DCO CHECK

The Device Configuration Overlay (DCO), sometimes referred to as the Hidden

Protected Area, is a partition on the hard drive that is not normally visible to an operating system. Tap the 'ENT' button to change this option's setting.

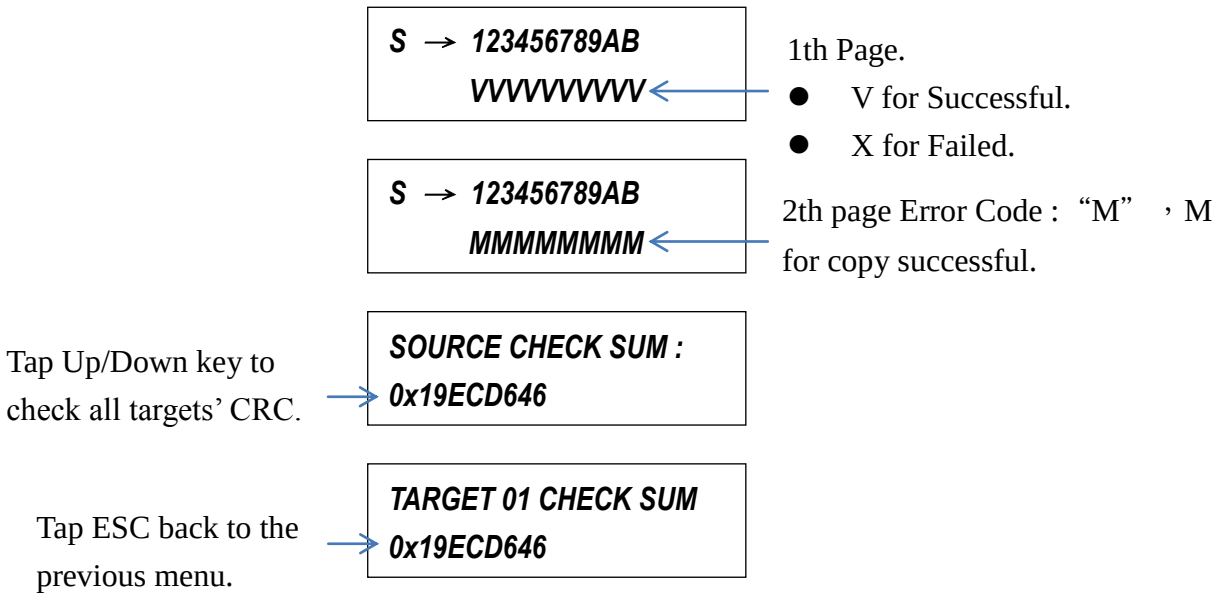
- *[ ] – DCO Check is disabled (default). The system will not check for DC partitions.*
- *[☐] – DCO Check is enabled. When DCO CHECK is enabled the duplicator will support DCO partition. When you duplicate a Master Flash that contains DCO, the system will detect the DCO partition, unlock it, copy the area and then re-lock the area once duplication is complete.*

9.14 CHECK SUM CHECK

CHECK SUM CHECK is used to generate a CRC code between Master and Target(s) after copy process completed.

CHECK SUM CHECK is able to work with the FULL or BRIEF copy at the same time. It will not take extra time to do it.

If you want to check the CRC of the Source/Target(s), Hold ENT KEY one more second and navigate UP/ DOWN to check each hard drive.



9.15 SET SMART CHECK

S.M.A.R.T.(Self Monitoring Analysis and Reporting Technology) is a monitoring system in hard disk drives and solid-state drives that detects and reports on various indicators of drive reliability.

If the drivers do not qualify by SMART CHECK , the drives will be rejected by the duplicator.

9.16 SMART WARNING

The SMART WARING option allows you to configure the system check the disk with S.M.A.R.T. function in different level [0] ,[1],[2].

That detects and reports on various indicators of drive reliability, with the intent of enabling the anticipation of hardware failures before copy.

- *Level [0]: S.M.A.R.T. data indicates a possible imminent drive failure, may only notify the user and keep going copy.*
- *Level [1]: S.M.A.R.T. data indicates a possible imminent writing error only, the system will reject this drive and then copy another.*
- *Level[2]: Whatever S.M.A.R.T. data indicates any error, the system will reject this drives.*

9.17 BTN. SOUND

Disable/Enable key bee sound.

9.18 SHOW EXE TIME

The SHOW EXE TIME option allows you to enable or disable whether the total execution time for an operation is displayed on the LCD screen. The total execution time will be displayed after an operation has completed.

- *Enabled. The total execution time is displayed.*
- *(*)Disabled (default). The total execution time is not displayed.*

9.19 SHOW BINAEY BASE

Show Binary Base, it allows to show device's capacity from Decimal to Binary.

- *The default value is Decimal.*

9.20 CMD TIME OUT

CMD TIME OUT, it allows to enable Error Handling Process when happened Read/Write error on the device. It will be according to the setting numbers to retry the device.

9.21 TRANS. SIZE

TRANS. SIZE is allowed to change the data transfer size from 4KB to 16MB.

9.22 MAX UDMA MODE

The MAX UDMA MODE option allows you to configure the maximum transfer speed allowed. Tap the 'ENT' button to change this option. The MAX UDMA M ODE can be set as 0 – 6. The MAX UDMA MODE is set to 6 by default.

9.23 SET WRITE PAT.

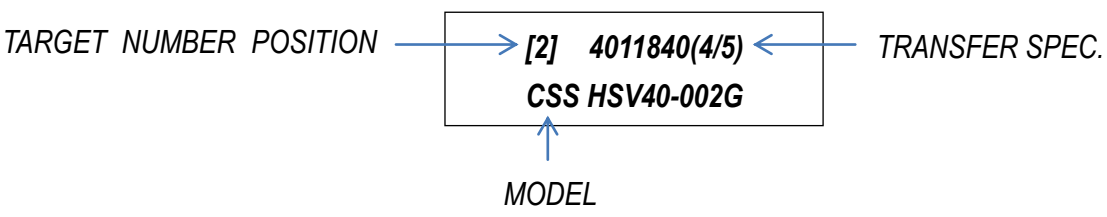
SET WRITE PAT. is used to define the data pattern that you want to write to all sectors of your Target drives during an Erase operation.

The Write Pattern can be set to E5,F6,00,FF,C9,5A,A5,AA,RM(Random Pattern).

- *The default value is 0x00.*

9.24 DEVICE INFO

DEVICE INFO allows you to view information about any device currently connected to the port.



9.25 SYSTEM INFO

Display MFD-12 Version.

9.26 TOTAL COPY COUNT

TOTAL COPY COUNT keeps track of the total number of successful and unsuccessful duplications produced by the system. This is a running count that includes all copy modes. Tap the 'ENT' button to view the total copy count.

Total Pass : 00000000
Total Bad : 00000000

9.27 BURN IN

The BURN IN function allows the system to perform a Copy, Compare, Verify, Erase or Load function continuously to stress test for endurance, reliability and stability.

9.28 DIAGNOSTIC SETUP

9.28.1 SET DIAG SMART

The S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is a monitoring for ATA hard drives to detect and report on various indicators of reliability.

- *Enable S.M.A.R.T. feature.*
- *Disable S.M.A.R.T. feature.*

9.28.2 SET WRITE TEST

Checks the ability to write data to sectors on the target flash drives for a period

time.

9.27.3 SET READ TEST

Checks the ability to read data to sectors on the target flash drives for a period time.

9.27.4 SET RANDOM READ

Checks the ability to random write data to sectors on the target flash drives for a period time.

9.27.5 SET RANDOM WRT

Checks the ability to random read data from sectors on the target flash drives for a period time.

9.27.6 SET DIAG. PAT.

SET DIAG. PAT. is used to define the data that you want to written to all sectors of your Target flash drives during an Write Test operation. Tap the 'ENT' button to change this option's setting. Tap the 'ENT' button to confirm your selection again. Tap the "ESC" for escape.

9.29 LANGUAGE

9.29.1 ENGLISH

Push Up or Down button to change English or Chinese, and push ENT for confirmation.

Push ESC to escape.

9.28.2 TRADITIONAL

Push Up or Down button to change English or Chinese, and push ENT for confirmation.

Push ESC to escape.