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Technology



Copywriter Flash Duplicator Series

User's Manual

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Introduction

The Copywriter Flash Duplicator allows you to make fast copies of USB flash cards. This series is available in 3, 7, or 11 copy configuration.

What's Included

When unpacking your Copywriter Flash Duplicator system, the following items should be included:

- Copywriter Flash Duplicator
- Users Manual (this document) and Starter Kit
- Power Cord

If any of these items are missing, please contact your distributor or Microboards Technology Technical Support:

United States

PH: 952-556-1639

FAX: 952-556-1628

support@microboards.com

www.microboards.com

Europe

PH: +44 (0) 845 230 7800

www.microboards.co.uk

Japan

PH: 03-3561-2266

www.microboards.co.jp

Please have the Model and Serial Number of your Copywriter Flash Duplicator available when contacting Technical Support.

Installation

- Connect the power cable to the Copywriter Flash Duplicator and plug in to a protected power outlet strip or UPS power supply.
- Turn on power to the duplicator.
- The system will go through initialization and then display: 1. Copy.
- The system is now ready to use.

Loading and Unloading Flash Cards

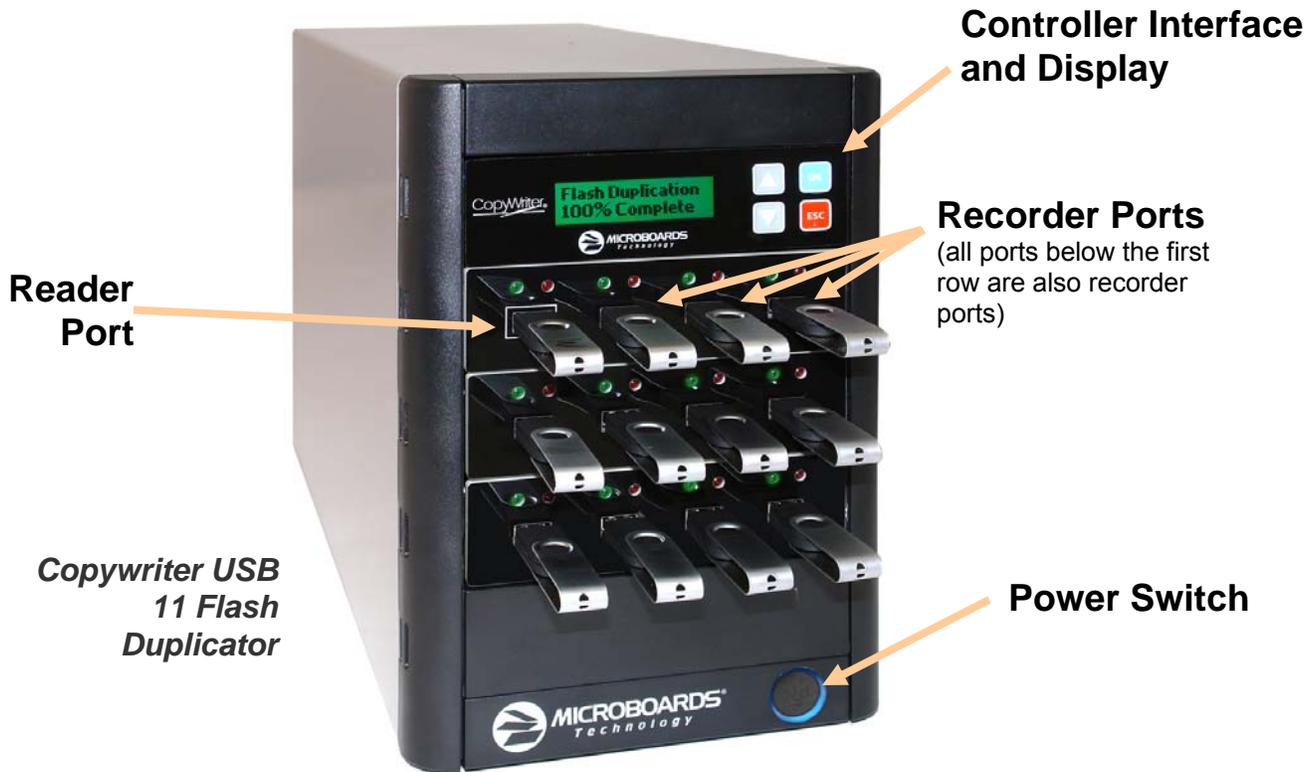
You should never unload any card that is in use by the duplicator. If the green LED above the port is flashing, the card is in use.

USB Flash

To load USB flash cards, slide the card into the port. If it does not slide in easily, flip the USB card over and try again.

To unload USB flash cards, simply pull them out of the port.

Hardware Description



The Copywriter Flash Duplicator consists of a reader port, 3, 7, or 11 flash drive ports and Controller module.

The master card will always be inserted into the **TOP LEFT** port, which is outlined.

The blank cards will always be inserted into the remaining ports.

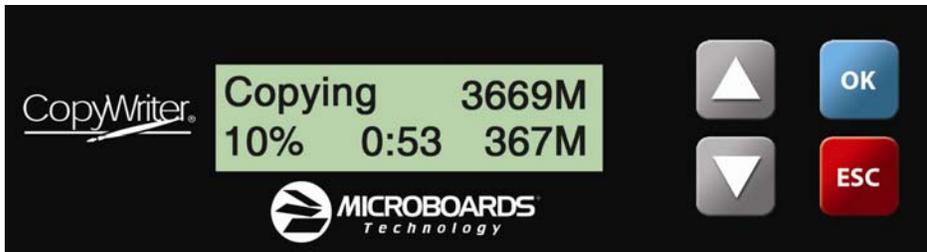
The green LEDs above each port will flash when in use or will stay solid green after a successful duplication. The red LED above each port will light when an error on that card occurs.

The LCD display will show the different menu selections and also information pertaining to the recording process. Here is a typical example of what is displayed during the COPY process:

Displays the function being performed, such as Copying or Comparing

Shows the size of the Master

▲ Navigate through the menu options
▼



OK Accept the menu item showing

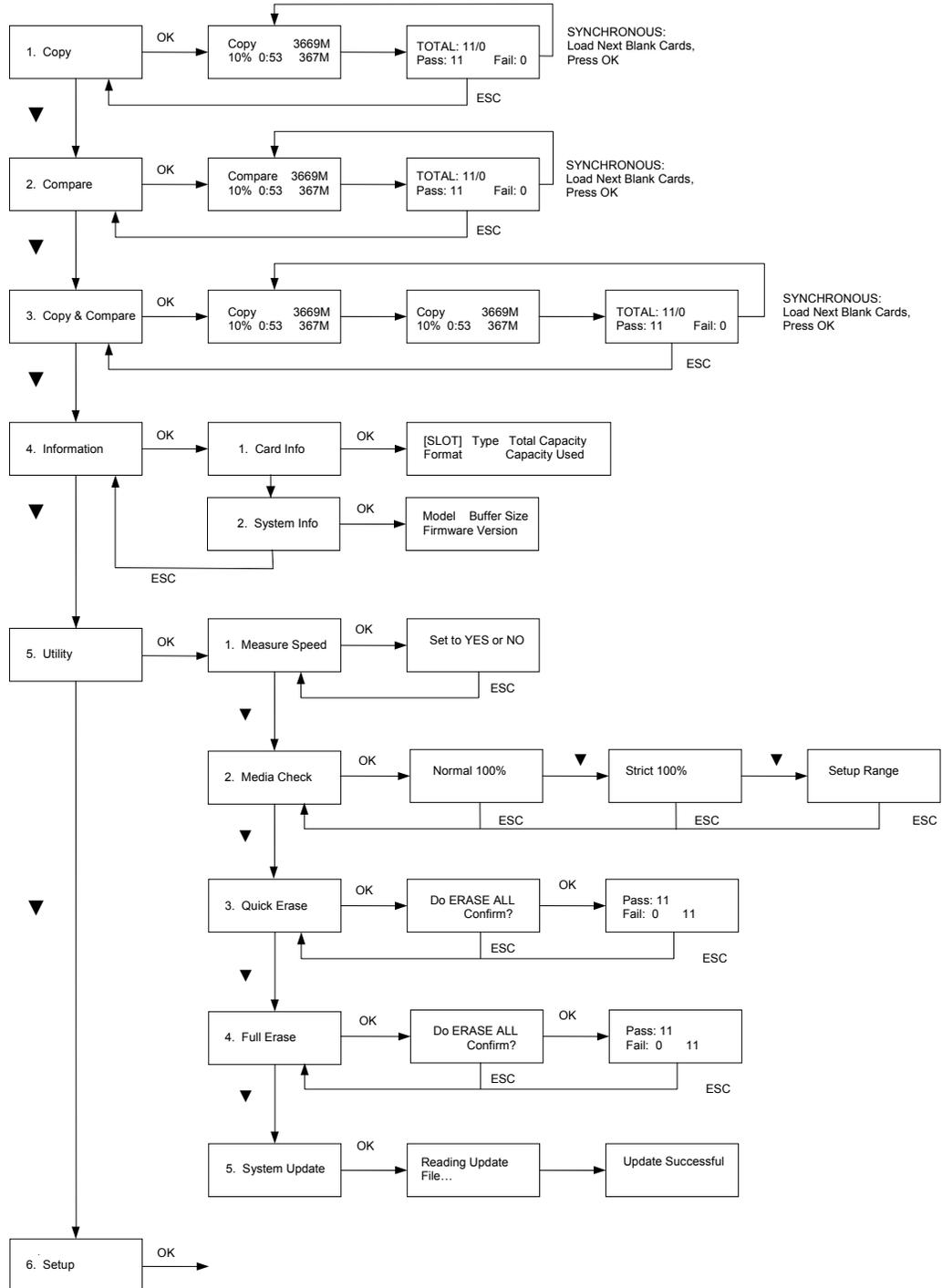
ESC Exit from the menu item showing

Displays the completed percentage

Displays the amount of time passed

Shows how much data has been copied

Main Menu Flowchart



Main Menu

There are 6 different Main Menu items for the Copywriter Flash Duplicator: Copy, Compare, Copy & Compare, Information, Utility, and Setup. For the Setup options, please refer to page 9.

These instructions refer to using 11 USB recorder ports (available only in the USB 11 Flash Duplicator), but the instructions will not differ when using any of the Copywriter Flash Duplicators. Any Copywriter Flash Duplicator model will operate using any number of the available recorder ports.

Copy

The Copy function is used to copy our master card to the blank cards. The steps taken will be different if you are in Asynchronous or Synchronous duplication.

Asynchronous Duplication

The Copywriter Flash Duplicator will automatically copy Asynchronously if the source content is less than the duplicator's memory buffer size, which is displayed during boot-up. The **Analyze Source** setting in the Setup menu must be set to **ON** to enable Asynchronous Duplication (see page 10).

When the **Analyze Source** setting is **ON** and the source is smaller than the duplicator's buffer size, the source card will first be read from the Reader port into the internal memory. The internal memory contents will then be compared to the source contents. Once the compare is complete, duplication will begin from the internal memory to the target cards.

USB(3747M)	219M
Reading: 124M	

Once the source has been read into the internal memory and successfully compared, the source card can be removed from the Reader port. You can then use the Reader port as a Recorder port until a new master card needs to be duplicated.

While in Asynchronous mode, each blank flash card will be written to the moment the duplicator recognizes the card. As each card finishes, the LED above that card will stop flashing and can be removed and replaced. Once the new card is recognized, duplication to that card will automatically begin.

The display will show you how many cards have been successfully duplicated, how many have failed, and how many are currently being duplicated.

Pass: 27	Working
Fail: 0	12

Asyn Hold Time Setting

Since the Reader port will be usable as a recorder port once the source has been read and confirmed in the duplicator's internal memory, there is the risk that a new source card will be placed in the Reader port while an Asynchronous duplication is in progress, which the duplicator will then overwrite with the stored data.

The **Asyn Hold Time** setting will help prevent this from occurring (see page 10). This setting allows you to specify the amount of time the duplicator will wait with no detected target cards before exiting an Asynchronous duplication job.

Please note that *all* ports must be empty, not simply finished duplicating before this setting is effective. Leaving the source card in the Reader port will also keep the duplicator in Asynchronous duplication mode.

When there are no target cards detected, you will be asked if you want to exit the Copy mode for the current saved source data. Press the **OK** button to return to the Main Menu, or **ESC** to continue with the same saved source data .

Wait Too Long Exit?

Synchronous Duplication

If the entire source content cannot be stored in the memory buffer, Synchronous duplication will be required.

Place your master card into the reader port and your blank cards into the recorder ports.

Copy		3669M
10%	0:53	367M

Press the **OK** button on the controller interface. If all recorder ports are filled, duplication will begin. If not, the display will show how many target cards are in place; press **OK** again to begin duplication to the loaded target cards.

The data will now be copied to the blank cards.

TOTAL:	11/0		
Pass:	11	Fail:	0

When the job is completed, the green LED above the recorder ports will show a steady green and the cards can be removed.

When each Synchronous duplication cycle completes, you must replace all cards and press the **OK** button to restart duplication.

Compare

The Compare function is used to compare the master card with the copied cards. Like Copy, Compare can be performed Asynchronously or Synchronously.

Place your master card into the reader port and your copied cards into the recorder ports.

Press the **OK** button on the controller interface. The duplicator will now compare the master and copied cards. When completed, the display will read:

TOTAL:	11/0		
Pass:	11	Fail:	0

Copy & Compare

The Copy and Compare function will perform both operations, one after the other. If the Copy portion passes without errors, the system will automatically start the Compare process. Like Copy, Copy & Compare can be performed Asynchronously or Synchronously.

Place your master card into the reader port and your blank cards into the recorder ports. Press the **OK** button on the controller interface.

The duplicator will first copy the master card to the blank cards.

When the Copy completes, the unit will start the Compare process. If Asynchronous duplication is being performed, the LED will blink quickly above each card as the Copy phase is in progress. During the Compare phase, the LED will blink slowly.

When the job is completed, the totals will be provided.

Information

The Information function displays information on each card placed in the card ports as well as the System Information.

Card Info

Press the **OK** button and the card in the reader port is analyzed before the information is displayed. The top line indicates the port, the type of card, and the total capacity of the card. The second line indicates the format and the used capacity of the card. Press the **▼▲** buttons to access each card port.

[01]	USB	3858M
FAT32		3669M

System Info

Press the **OK** button to view the Controller model, the Buffer size, and the Firmware version of the duplicator.

Controller	Buffer
Firmware Version	

Utility

The Utility function is available for erasing inserted cards and updating the Duplicator firmware.

Measure Speed

The Measure Speed function can be turned on to measure the exact speed of the flash read and write.

Media Check

This function checks the media quality, and can be set to 3 different levels: Normal 100%, Strict 100%, and Setup Range. Regardless of the setting, if the check detects a read or write error, the LED for that flash card will show red.

Normal 100% will use bit 0 to perform a write and read to examine the flash quality.

Strict 100% will use bits 0 and 1 to perform a write and read to examine the flash quality.

Setup Range allows you to specify the percentage of the flash media that gets checked. The range can be set from 1% to 100%.

Quick Erase

This will perform a quick erase on any card inserted into any port, **including the reader port**. Do not run the erase function with your master card in the duplicator.

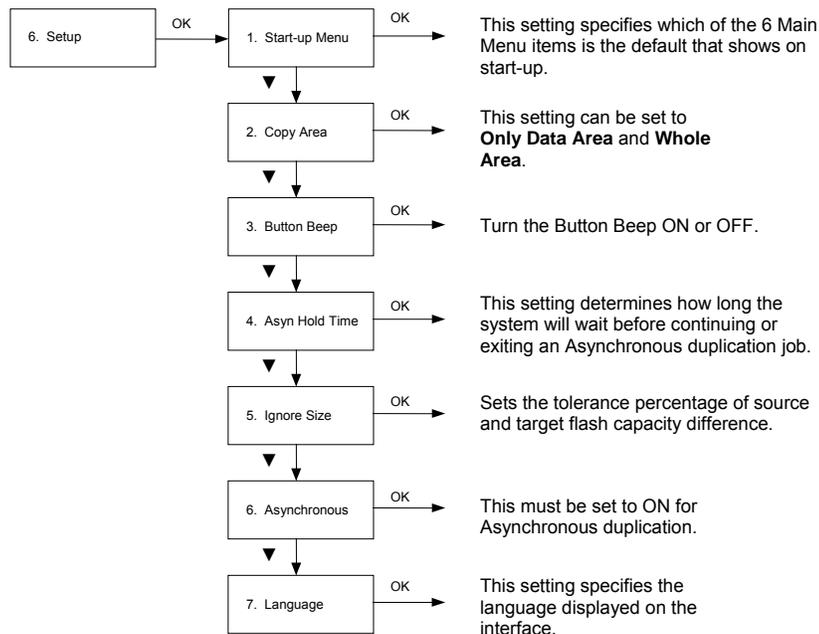
Full Erase

This will perform a full erase on any card inserted into any port, **including the reader port**. Do not run the erase function with your master card in the duplicator.

System Update

This will update the system firmware from the card in the Reader port. Do not attempt to perform an update unless directed to by Technical Support.

Setup Menu Flowchart



Setup Menu

The Setup function gives you access to some of the default settings used by the Copywriter Flash Duplicator.

Startup Menu

The Startup Menu selection allows you to select the main menu item that appears when the Copywriter Flash Duplicator starts up. The default setting is **1. Copy**. Main Menu items 1 through 6 can be selected.

Copy Area

Only Data Area

With the Copy Area setting selected as **Only Data Area**, the system will automatically analyze the source flash card's file format. If the file format is FAT16/32, NTFS, Linux (Ext2, Ext3) file system which the duplicator recognizes then the system will only copy the content data instead of copying the whole flash card including the empty space. For example a 2GB flash card which is FAT32 file format and has only 50 MB of data inside, the system will only copy that specific 50MB of data. Which will only take a few seconds to copy the source.

With the Copy Area setting selected as **Whole Media**, the system will copy the whole flash card, including the empty space and format. This function is used when you have a flash source which has an unknown file format and you don't want the system to be confused by such a format.

Button Beep

This setting allows you to turn **ON** or **OFF** the beep produced when the buttons are pressed. The default setting is **ON**.

Asyn Hold Time

This setting allows you to specify the amount of time the duplicator will wait before exiting an Asynchronous duplication job. If there are no target cards detected, then the duplication will exit in that time period. Options are: OFF, 5 seconds, 10 seconds, 20 seconds, 30 seconds, 40 seconds, 50 seconds, 1 minute, 5 minutes, 10 minutes, and 20 minutes.

This setting has no effect on Synchronous duplication.

Ignore Size

This setting allows you to determine how closely the capacity of the target cards match the capacity of the source card. Options are: NO IGNORE (cards must be the same capacity), percentages ranging from 1% to 50%, or DON'T CARE ("Size doesn't matter").

This setting is intended for flexibility if the source card is a low-capacity card. Any attempt to duplicate more data than the target card's capacity will fail.

Asynchronous

If this setting is **ON** and the source's file format is one that can be analyzed, the source card is read at the start of the copy process to determine the capacity of the data to be copied. The amount of capacity duplicated will equal the size of the source data rather than the capacity of the entire card. FAT12, FAT16, and FAT32 file formats can be analyzed.

This setting must be set to **ON** for the Asynchronous Duplication to operate.

If your source is in a file format that can't be analyzed, such as NTFS, this setting must be **OFF** for duplication to occur.

If this setting is **OFF**, the entire capacity of the source card will be duplicated to the target cards, resulting in longer duplication times.

Language

Sets the language on the display. The default is English.

Troubleshooting and Frequently Asked Questions

Is there any limitation for copy file format?

You can use "Only Data Area" to copy FAT16/32, NTFS, Linux (ext3) format, it will only copy the data, and therefore the copy speed will be quicker.

If you want to copy other formats, it can use "Whole Area" to copy whole Flash; the format of the flash will not be a considered.

How do I know the data is a true copy of the master?

The duplicator has CRC check capability and the ability to compare the copies to the master.

Why would the copied data fail during the compare when the data is present on the copy?

The Flash chip maybe unstable, which may cause the duplication to pass but for the compare to fail.

What should I do if I encounter a copy failure?

The issues may be either your source or your blank cards.

- Make sure the source content size is not greater than the target content size. Use the **SD/USB/CF Info** function to check the source/target flash content size and data size.
- Use a PC to double check the source data.
- If the Flash chip onto which you are copying the data is unstable, it will effect the copy process. Use the **Media Check** function to verify the card's stability.

Why does the copy speed seem slow?

The USB duplicator can reach 35MB/sec, but if you find the copy speed is slow it may be the flash quality that is effecting the speed of the copy. You can use the Measure Speed function to test the Flash real speed.

Specifications

Model	Recorder Ports	Card Format	Dimensions, inches (H x W x D)	Weight
CFD-USB-03	3	USB	7 x 7.5 x 11	10 lbs
CFD-USB-07	7	USB	7 x 7.5 x 11	11 lbs
CFD-USB-11	11	USB	11 x 7.5 x 17	17 lbs

Contact Information

For technical questions or support issues, please contact Microboards Technology technical support at:

United States

PH: 952-556-1639

FAX: 952-556-1628

support@microboards.com

www.microboards.com

Europe

PH: +44 (0) 845 230 7800

www.microboards.co.uk

Japan

PH: 03-3561-2266

www.microboards.co.jp

Please have the Model and Serial Number of your Copywriter Flash Duplicator available when contacting Technical Support.

Appendix 1: List of Functions

- 1 Copy
- 2 Compare
- 3 Copy & Compare
- 4 Information
 - 4.1 Card Information
 - 4.2 System Information
- 5 Utility
 - 5.1 Quick Erase
 - 5.2 Full Erase
 - 5.3 System Update
- 6 Setup
 - 6.1 Startup Menu
 - 6.2 Analyze Source
 - 6.3 Button Beep
 - 6.4 Asyn Hold Time
 - 6.5 Ignore Size
 - 6.6 Language (default is English)