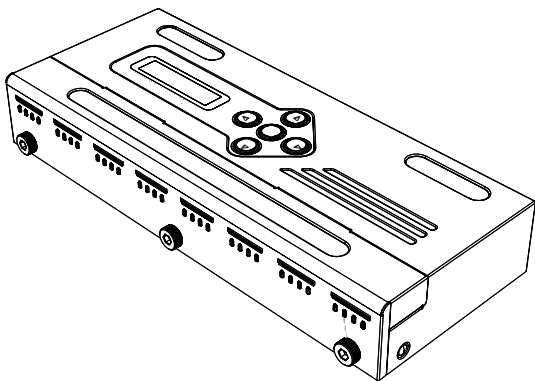




Product-No: 61798
User manual no: 61798-a
www.delock.com

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Package Contents



SD Card Duplicator



AC Power Cord

Introduction

The SD Card Duplicator is designed to meet SD card content duplication & verification manufacturing needs.

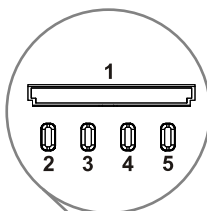
The duplicator features high-performance, independently operating SD card slots by one master source to eight target slots supporting mainstream SD cards with various form factors including SD, mini SD and micro-SD card.

The duplicator offers Auto, Mirror and File mode of both Copy and Verify operations suitable for various applications.

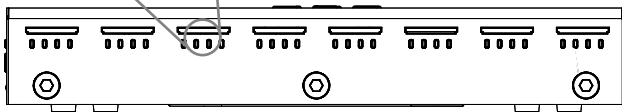
Features

- ☑ 1x Master + 8x Target Independent SD Slots
- ☑ Support SD ver. 3.0, SDHC and SDXC cards
- ☑ Copy and Verify Speeds up to 22 MB/s
- ☑ Auto / Mirror / File mode of Copy / Verify operation
- ☑ 2x RS232 interface for daisy-chain connection up to 8 units
- ☑ Replaceable SD card slot module

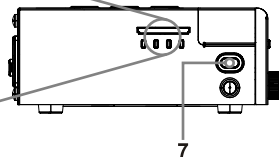
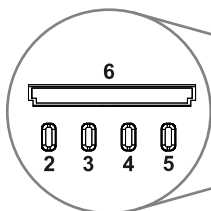
Front Panel Overview



- 1 : Target SD Slot (Slot 1-8) -**
Insert SD card to be copied here
- 2 : RED Indicator -**
Slot NG indicator
- 3 : GREEN Indicator -**
Slot OK indicator
- 4 : BLUE Indicator -**
Slot card initialized indicator
- 5 : AMBER Indicator -**
Slot activity / busy indicator

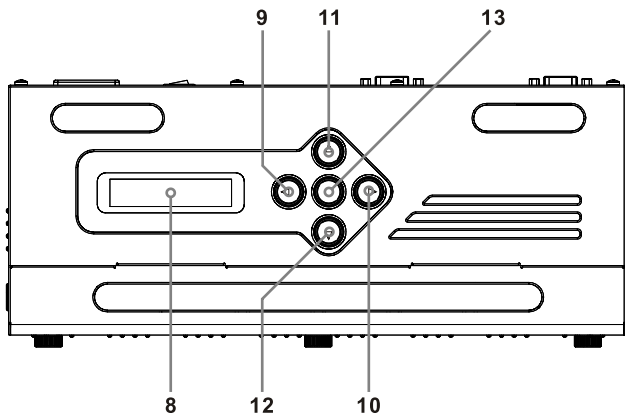


Left Panel Overview



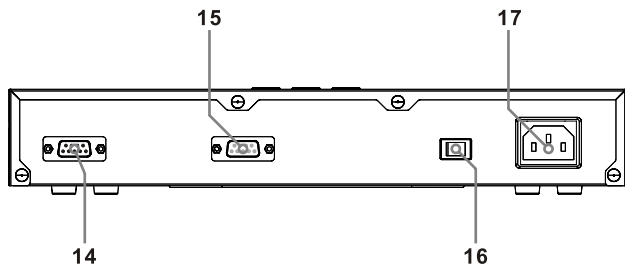
- 6 : Source SD Slot -**
Insert SD card with original content here
- 7 : START Button -**
Press this button to immediately start operation
(Repeat last operation) (Default as COPY)

Top Panel Overview



- 8 : Display Screen -**
Display operation/menu information
- 9 : LEFT Button -**
Press this button to toggle option
- 10 : RIGHT Button -**
Press this button to toggle option
- 11 : UP Button -**
Press this button to scroll up option/operation menu
- 12 : DOWN Button -**
Press this button to scroll down option/operation menu
- 13 : ENTER Button -**
Press this button to select option/begin operation

Rear Panel Overview

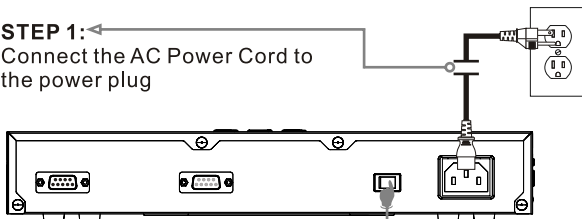


- 14 : RS232-0 -**
Connect to previous (controller) unit
- 15 : RS232-1 -**
Connect to next (controlled) unit
- 16 : Power Switch -**
Toggle this switch to turn on/off
- 17 : AC Power Jack -**
To connect AC power cord here

Operation Instructions

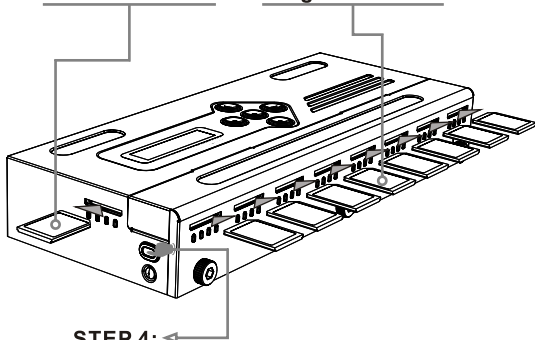
Operation of the SD Card Duplicator is easily done by simply power up, insert source SD card, insert target SD cards and press START button.

STEP 1:
Connect the AC Power Cord to the power plug



STEP 2:
Turn on the Power Switch

STEP 3:
Insert Source SD Card and Target SD Cards



STEP 4:
Press the **START Button**

Option Setup

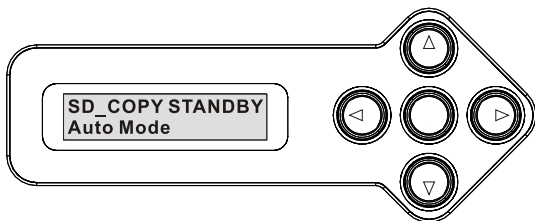
The option/operation menu can be scrolled and toggled by the five push buttons on the top panel.
Press the UP/DOWN button to scroll up or down menu items.
Press the LEFT/RIGHT button to toggle selected option item.
Press the ENTER button to return to default value or begin selected operation.

Menu

The menu items of the option / operation menu is listed and described below:

MENU ITEM	OPTION	DESCRIPTION	DEFAULT
COPY GO!		Start COPY operation.	<i>IDLE</i>
VRFY GO!		Start VERIFY operation.	<i>IDLE</i>
FORMAT GO!		Start format target card operation.	<i>IDLE</i>
Verify	<i>ON / OFF</i>	Verify content after copy.	<i>ON</i>
Mode	<i>Auto</i>	Automatic partition size adjusting target reformat plus partition copy and/or verify operation.	<i>Auto</i>
	<i>File</i>	Automatic partition size adjusting target reformat plus file copy and/or verify operation.	
	<i>Mirror</i>	Complete partition sector by sector mirroring copy and/or verify operation.	
Rewrite	<i>ON / OFF</i>	Rewrite target at verify error.	<i>ON</i>
Erase	<i>ON / OFF</i>	Erase target before write data.	<i>ON</i>
RETRY CNT -	<i>0 - 9</i>	Number of RETRY verifying data error.	<i>5</i>

Auto Mode



Auto Mode automatically scan source SD card and copy/verify only those space occupied by user data.

Use target SD card with the same labeled capacity as the source SD card in Auto Mode. The Auto Mode of the duplicator allows target cards with +/- 5% capacity variation from source cards.

In Auto Mode, the duplicator automatically adjusts partition size to fully utilize storage space of target card.

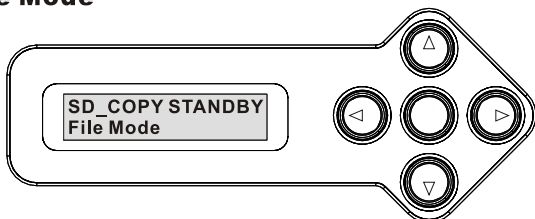
At the meant time, the duplicator automatically identifies storage area that is occupied by user data in the source card.

Only the storage area occupied by user data are copied and verified to reduce overall operation duration. Therefore Auto Mode is usually the best suitable mode of choice for various applications.

However, only when the source SD card is formatted as FAT 16/32 file system is supported by Auto Mode.

It is recommended to use Auto Mode, when source and target SD cards are with the same labeled capacity and are formatted to FAT 16/32 file systems.

File Mode



File Mode browse source SD card root directories and subfolders and copy/verify all file automatically.

This allows target card with different capacity from source card to be supported. Source card must be formatted under FAT16/32 file system.

In File Mode Copy operation, the target cards are first being re-formatted to the same file system as the source card while utilizing all storage space available.

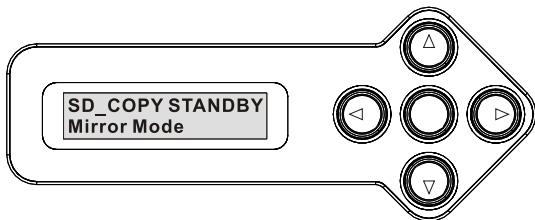
And then browse root directory and sub-folders and copy each file found onto the target cards. This allows the target cards with different capacities to be supported.

(However, target card shall be supported by the source card formatted file system.)

In File Mode Verify operation, browse root directory and sub-folders. Mark each file found and try to open file with the same file name within the same directory in the target cards. If the corresponding file is found file verify operation is performed and then continue to next file or directory until all files and directories are verified.

It is recommended to use File Mode, when source and target cards are with different labeled capacity and are formatted to FAT 16/32 file systems.

Mirror Mode

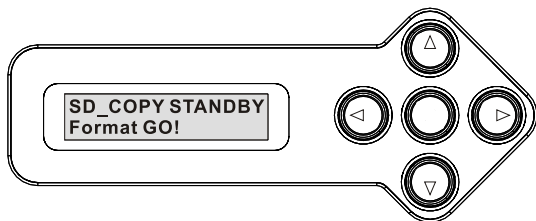


Mirror Mode copy entire source SD card content onto target SD cards in exact sector by sector, byte by byte mirroring manner.

This allows source card with multiple partitions or partitions formatted to file system other than FAT16/32 to be copied and/or verified.

It is recommended to use Mirror Mode, when sector-by-sector, byte-by-byte exactness of new copies are required.

Format GO!



Scrolling option/operation menu to "Format Go!" and then press ENTER button to start Format operation.

The Format operation offers a quick and easy way to simultaneously format multiple SD cards.

Insertion of source SD card to source slot is not required in Format operation.

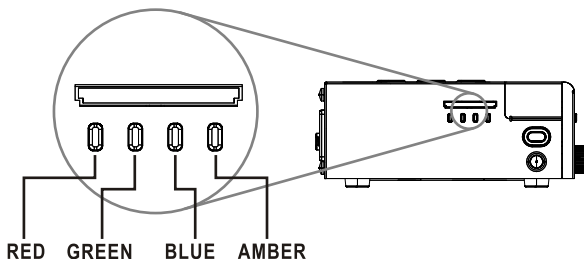
When source slot is empty, the duplicator will automatically detect each target SD cards capacity and rebuild MBR, partition table as well as file system as required by SD card standards.

When a source SD card is inserted into the source slot, the duplicator will format each target SD card and rebuild MBR, partition table as well as file system to the same information automatically according to those available from the source SD card.

It is recommended to use Auto Mode, when source and target SD cards are with the same labeled capacity and are formatted to FAT 16/32 file systems.

LED Indications

Beneath each SD slots, there are four indicators indicating operation status of the SD slots.

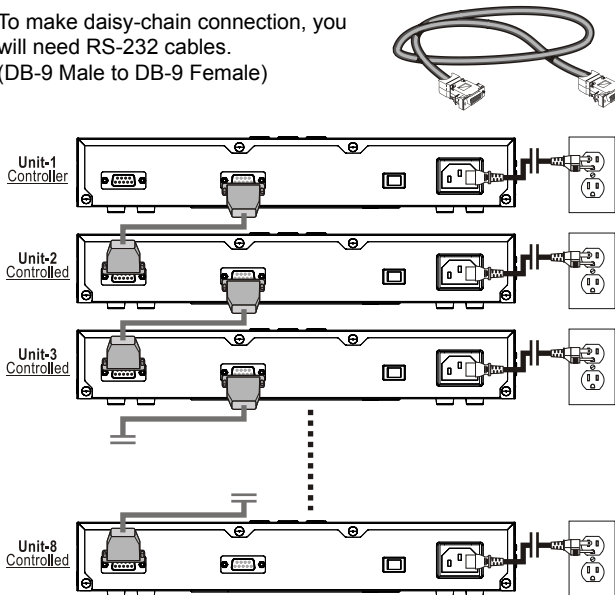


INDICATOR	DESCRIPTION
RED	Error. Indicate SD card initialize error, read/copy/erase timeout, data verify error, or insufficient target SD card capacity.
GREEN	Operation completed successfully.
BLUE	SD card detected and initialized.
AMBER	SD card being accessed; do not remove SD card.

Daisy-Chain Connection

Through the two RS-232 connectors on the rear panel of the duplicator, a daisy-chain connection up to 8 units can be made.

To make daisy-chain connection, you will need RS-232 cables.
(DB-9 Male to DB-9 Female)



In the daisy-chain, the unit which is only connected to RS232-1 will be Unit-1 (the controller) and all the other unit's control buttons will be deactivated.

Please also be noted that every unit in the daisy-chain needs its own source SD card.

Troubleshooting

Symptom	Solution
Duplicator Does Not Power On	<ol style="list-style-type: none">1. Check power cord.2. Check power switch.
Source SD Slot Error	<ol style="list-style-type: none">1. Remove and reinsert source SD card.2. Use another SD card as source.3. Replace source SD card slot module.
Target SD Slot Error	<ol style="list-style-type: none">1. Remove and reinsert target SD card.2. Target SD card capacity is insufficient.3. Use another SD card as target.4. Replace target SD card slot module.
Amber led continuously ON	<ol style="list-style-type: none">1. Target SD card copy/erase error.2. Power off/on duplicator, reformat target SD card and then retry copy operation.3. Use another SD card as target.

Specifications

Power Requirements	AC 100/220V ~ 60Hz, 0.5A
SD Card Slots	x1 source, x8 target
SD Standards	SD ver. 3.0
Display	16x2 Backlit LCD
Operation Temperature	0 °C ~ 70 °C
Duplicator Weight	1080g
Duplicator Dimensions	L 293 * W128 * H50 (mm)