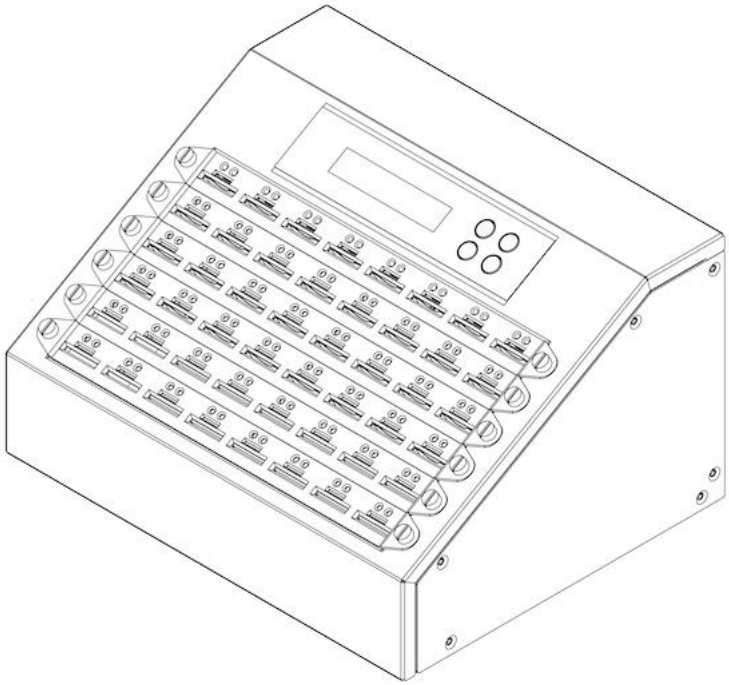
UReach

Intelligent 9

SD/microSD

Duplicator & Sanitizer

User Manual v A.02



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Product Disclaimer

U-Reach is not accountable for any incidental or consequential damages, which includes, but is not constrained to property harm, loss of time or data from use of a U-Reach product, or any other damages attributable to product malfunction or failure (including without limitation, those attributable to: (1) reliance of the materials provided, (2) costs of product replacement, (3) loss of use, data or profits, (4) delays or business interruptions, (5) and any principle of legal responsibility, arising out of or in reference to the use or overall performance or from delays in servicing or lack of ability to render service) of any U-Reach product. U-Reach makes every effort to ensure proper operation of all products. However, the customer is responsible to affirm that out of the U-Reach product meets the customer's quality requirement. The customer further acknowledges that fallacious operation of U-Reach product and/or software program, or hardware issues, can cause loss of data, defective formatting, or data loading. U-Reach will make efforts to resolve or repair any issues recognized by customer either within the warranty period or on a time and materials basis.

Specifications and features subject to change without notice or obligation.

Warranty

U-Reach provides a basic one-year parts and labor warranty for all of its products (excluding cables, adapters, and other consumable items). An optional extended warranty is also available for an added cost. Telephone and email support is available for the life of the product as defined by U-Reach.

All warranties will be restricted and defined by the market region from which customers purchased.

Piracy Statement

U-Reach accepts no responsibility for copyright infringement or misuse of any U-Reach equipment. Copying all forms of data: audio, video, or software without the permission of the copyright holder is illegal. It is the sole responsibility of the user to ensure that the legal copyrights of the copyright owners are respected.

Before You Start

Important Notice

- Carefully read the entire manual before operating.
- Never turn off the power while the firmware is updating.
- Devices will operate at high temperature during high-speed tasks. Please wear protective gloves to prevent burns when handling devices.
- Devices working in high temperature may cause it to slow down or even shut down. Please make sure the devices are not overheated.
- Ensure machine and operator are properly grounded to prevent ESD.
- Make sure the source device is correct and functioning.
- Equal capacity of source and target is recommended for guaranteed data consistency.
- Using the Copy+Compare function provides the most flawless duplication.
- Damage incurred due to noncompliance with U-Reach operating instructions will void the warranty.
- Store the equipment safely when not in use and keep out of the reach of children.
- Use only approved, stable power sources.
- Use product only in a clean, dry, dust free, and ventilated area. Liquids or foreign debris can severely damage your duplicator.
- It is typical for the machine to heat up during operation.
- While in use, do not move the duplicator or remove devices.
- Static electricity may cause duplication error. Please pay attention to the duplicator's environment and operator's equipment. Purchasing static electricity elimination equipment to avoid static electricity shock while in high static electricity areas.
- If you want to change your Log password, please keep your password in a safe place in case you lose it. Please understand that the manufacturer does not provide password reset service due to the consideration of personal privacy.

Notice Symbols

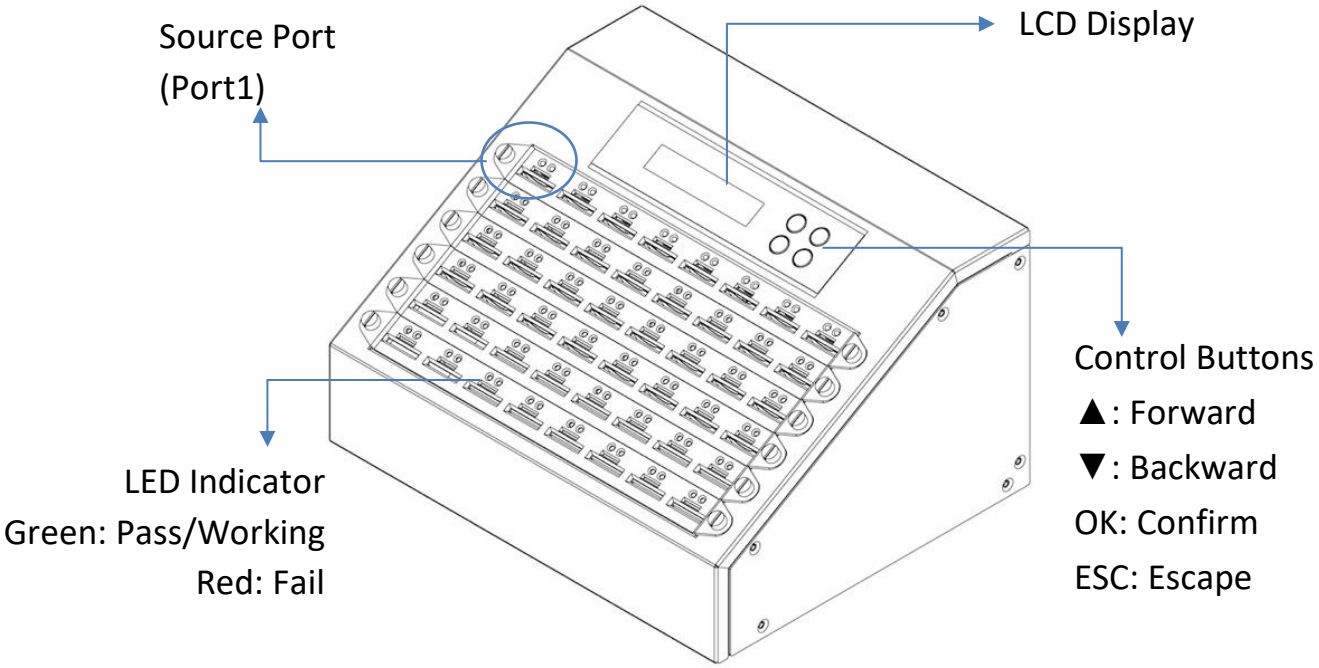
Special items, procedures, or notes to be observed prior to use.

Note	Refers to related duplicator operations, special details, tips, or suggestions for operational effectiveness.

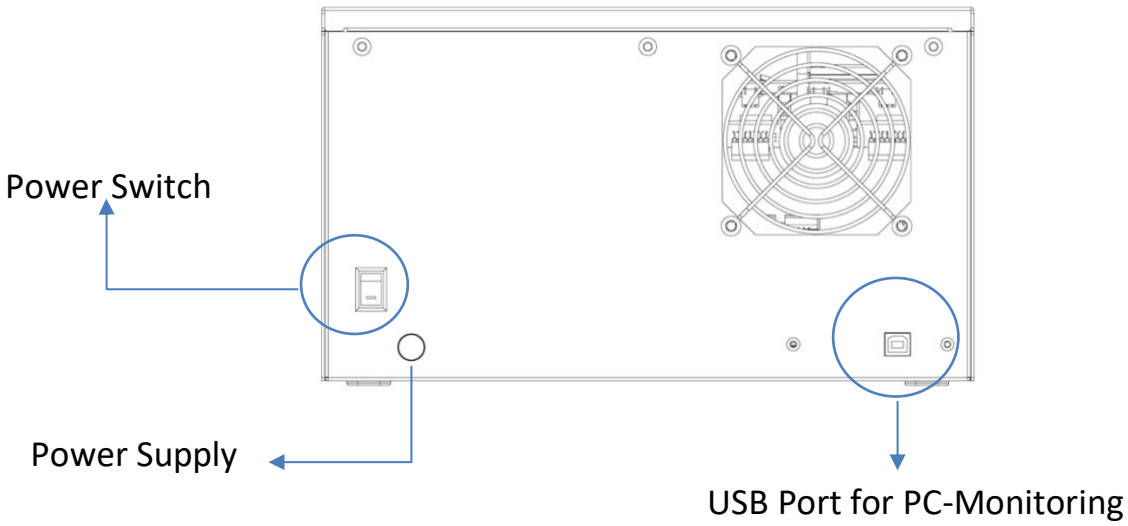
Caution	Refers to procedures that need to be adhered to or precautions.

Product Introduction

Front View



Back View



Package

Duplicator x 1

12V DC Adaptor x 1

Power Cord x 1

User Manual x 1

USB Cable for
PC Link x 1

PC-Link Software
Disc x 1

Power Adapter

Each model may require a different power adapter per its need. The following reference table illustrate adapter requirements for each series.

Reference table (ComboSD/ MicroSD)

Ports	Adapter	Adapter volume needed when copying SD/microSD
8-48	12V 5A	1
60-120	12V 9A	1

Function Table

*Below functions and features subject to change without notice.

<table>
<tr><th>Function</th><th colspan="2">Description</th></tr>
<tr><td>1. Copy</td><td colspan="2">Data or whole media duplication only.</td></tr>
<tr><td>2. Compare</td><td colspan="2">Bit-for-bit comparison between the source and target flash medias.</td></tr>
<tr><td>3. Copy & Compare</td><td colspan="2">First copies, then compares the target to the source once duplication is completed.</td></tr>
<tr><td rowspan="11">4. Media Check</td><td colspan="2">4.1 H3 Safe
Checks the flash’s quality by reading it. This safe check will not change the flash’s content or format.</td></tr>
<tr><td colspan="2">4.2 H5 RW
Checks the flash’s quality by reading and writing. This function will change the flash’s content and format.</td></tr>
<tr><td colspan="2">4.3 H6 SafeRW
Checks the flash’s quality by writing and reading its empty space. This function will not change the flash’s content or format.</td></tr>
<tr><td colspan="2">4.4 Setup Range %
Sets the flash’s checking range percentage.</td></tr>
<tr><td colspan="2">4.5 Setup Range MB
Sets the flash’s checking range in MB.</td></tr>
<tr><td colspan="2">4.6 Set Error Limit
Sets the error tolerance range when checking the flash. (Units: Sector/KB/MB)</td></tr>
<tr><td colspan="2">4.7 Minimum Read Speed
Sets the minimum read speed criteria for H3/H5/H6 checking.</td></tr>
<tr><td colspan="2">4.8 Minimum Write Speed
Sets the minimum write speed criteria for H5/H6 checking.</td></tr>
<tr><td colspan="2">4.9 Low Speed Tolerance Time
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<tr><td rowspan="3">4.10 Set Capacity Limit
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<tr><td>4.10.2 Set Lower Limit</td></tr>
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<tr><td></td><td colspan="2">4.11 Set Loop Count
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<tr><td colspan="2">5.2 System Info.
This feature will show system information, such as, model number and software version.</td></tr>
<tr><td rowspan="11">6. Utility</td><td rowspan="4">6.1 Do Format</td><td>6.1.1 Auto Format
Auto formats media to FAT16 or 32.</td></tr>
<tr><td>6.1.2 FAT16 Format
Formats media to FAT16.</td></tr>
<tr><td>6.1.3 FAT32 Format
Formats media to FAT32.</td></tr>
<tr><td>6.1.4 Set FAT 16 Cluster Size
Sets FAT16 Cluster size.</td></tr>
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Sets FAT 32 Cluster size.</td></tr>
<tr><td colspan="2">6.2 Measure Speed
Measures the flash reading and writing speed. This function will damage the format and content.</td></tr>
<tr><td colspan="2">6.3 Capacity Check
Checks real capacity of the flash.</td></tr>
<tr><td colspan="2">6.4 Quick Erase
Erases flash media content. It will keep the FAT format.</td></tr>
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Fully erases, bit for bit, data on flash, including format and content.</td></tr>
<tr><td colspan="2">6.6 DoD Erase
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<tr><td colspan="2">6.7 System Update
System firmware update via the flash media.</td></tr>
<tr><td colspan="2">6.8 Calc. Checksum / Calc. CRC64
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<tr><td colspan="2">6.9 A2 Fake Picker
Checks if a USB contains fake capacity.</td></tr>
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<tr><td></td><td colspan="2">6.10 Release Protect SD (Available in Golden Series)
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<tr><td rowspan="6">7. Setup</td><td colspan="2">7.1 Start-up Menu
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<tr><td rowspan="2">7.2 Copy Area</td><td>7.2.1 System and Files
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<tr><td>7.2.2 Whole Media
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<tr><td colspan="2">7.3 Button Sound
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<tr><td colspan="2">7.4 Target Tolerance
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<tr><td colspan="2">7.5 Asynchronous
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<tr><td></td><td colspan="2">7.8 Auto Start After Fill Device
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<tr><td></td><td colspan="2">7.9 Check MID/OID/PNM Language
Verifies source and targets for the same MID/OID/PNM, prior to proceeding functions: Copy/ Compare/Copy&Compare.</td></tr>
<tr><td></td><td colspan="2">7.10 Language
Sets system language. (English or Japanese)</td></tr>
<tr><td></td><td colspan="2">7.11 Select Speed
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<tr><td></td><td colspan="2">7.12 Check WP Switch
The duplicator will detect if the writing-protection switch is on before any writing tasks.</td></tr>
<tr><td></td><td colspan="2">7.13 Purge Before Copy
Cleans out target device’s data and format first, and then runs</td></tr>
</table>

	the “Copy” process.	
	7.14 Monitor Device After Copy Allows user to set a device status check after duplication.	
	7.15 Adjust Clock ***(Available in Golden Series)*** Adjusts the time clock displayed on LCD monitor.	
	7.16 Use Port 2 as Compare Source ***(Available in Golden Series)*** Double-source setting. When this function is enabled, Port 2 will become the comparison source.	
	7.17 Minimum Speed Allows user to disable or set minimum threshold speed.	
	7.18 Advanced Setup	**7.18.1 LED in Factory Mode** LED has “Traditional” and “Factory” mode. They can be switched on or off.
		7.18.2 Erase Master Port Allows user to erase the source port or not.
		7.18.3 Do Erase, Format Before Copy ***(Available in Golden Series)*** Sets automatic erase and format before duplication.
	7.19 Set to Default Reverts everything back to original manufacturer settings.	
8. Burn-In ***(Available in Golden Series)***	**8.1 Burn-In (Copy+Comp)** Performs Burn-in test on USB targets by copying & comparing the source.	
	8.2 Burn-In (Auto Data) Automatically performs the Burn-in test on USB targets.	
	8.3 Set Burn Time Sets the Burn-In test duration.	
	8.4 Set Loop Count Sets the Burn-In test loop count. Each test loop contains a writing & comparing test.	
	8.5 Set Test Range Sets the flash card test range.	
	8.6 Set Bad Limit Sets the Burn-In test error tolerance.	
	8.7 Set Data Pattern Sets the burn-in test writing pattern.	

	8.8 Compare Count Per Loop Sets the data reading count per loop.	
	8.9 Power Off Between Loop Sets the power off time between each data writing and reading loop.	
	8.10 Compare Count Per Copy Sets the burn-in test data reading count per loop. (copy+compare)	
9. Log Manager ***(Available in Golden Series)***	**9.1 Out Today Report** Outputs today's log records.	
	9.2 Out Recent Report Outputs recent log records.	
	9.3 Out Period Date Outputs log records for user defined time periods.	
	9.4 Advanced Function *Access to this function requires a password*	**9.4.1 Clear ALL Log** Clears all log records with password entry.
		9.4.2 Setup Password Sets the password for clearing log records.
10. Normal Write Protect ***(Available in Golden Series)***	**10.1 Copy** Copies data from the source to targets, then sets targets with write protection.	
	10.2 Copy+Compare Copies data from the source to targets then compares and set targets with write protection.	
	10.3 Show Protect Info Displays protection info on a single port.	
	10.4 Set Card Protect Sets write protection on targets.	
11. Permanent Write Protect ***(Available in Golden Series)***	**11.1 Copy** Copies data from the source to targets, then sets targets with write protection.	
	11.2 Copy+Compare Copies data from the source to targets, then compares and set targets with write protection.	
	11.3 Show Protect Info Displays protection info on a single port.	
	11.4 Set Card Protect Sets write protection on targets.	

Function Description

1. Copy

Step 1: Prepare source and target devices.

Note	Recommendation: Target device(s)' capacity must be equal to or larger than the source device capacity.

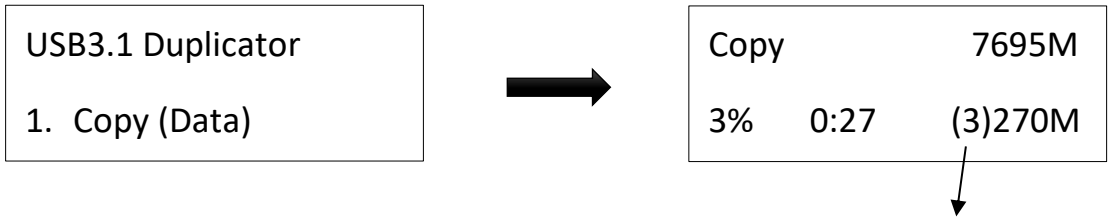
Step 2: Insert source and target devices.

Step 3: Proceed to copy.

Scroll to select "1. Copy", then press "OK" to start the duplication process.

Note	The number of working/connected targets will be displayed on LCD. Press "OK" to start.

The information below states what is displayed on the LCD during duplication.



(3) indicates Port #3 is the slowest.

Note	• Before duplication, select the data area at "7.2 Copy area" • Press ▲▼ together for 5 seconds to stop operation on the slowest device. • Press "ESC" for 5 seconds to stop all the copy jobs.

Caution	It is recommended to reboot the machine after manually stopping the copy.

Step 4: Copy Completed!

The quantity of passed or failed target device(s) and the copied duration will be displayed on the LCD after duplication completes.

Note	• If flash card is removed during copy process, the system will stop immediately, and red light will illuminate to notify user the copy has failed. Removing the flash card during copy is strongly discouraged as it will damage the flash card. • Backup the data on target flash cards before starting the copying process as any pre-existing data will be lost once copy is complete.

2. Compare

The compare function checks the accuracy of copy result. Scroll to select "2. Compare", then press "OK" to start the verification process.

3. Copy+Compare

Sequentially automates from Function 1, Copy to Function 2, then Compare.

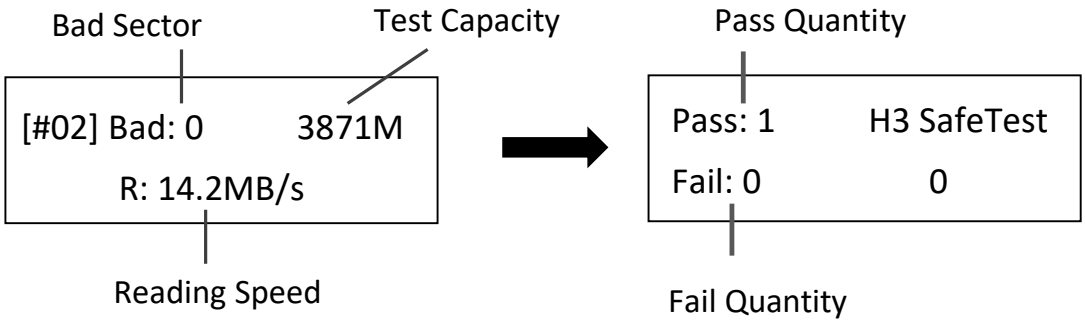
Scroll to select "3. Copy+Compare", then press "OK" to start the automated duplication and verification process.

4. Media Check

Note	• Functions mentioned with “Overwrite” will change the content and format of flash media, please do not execute this function if there is important data stored in it. • You can set the checking range in [4. Media Check >> Setup Range]. • To protect source data, the system default setting will not execute this function on the master device.

4.1 H3 Safe

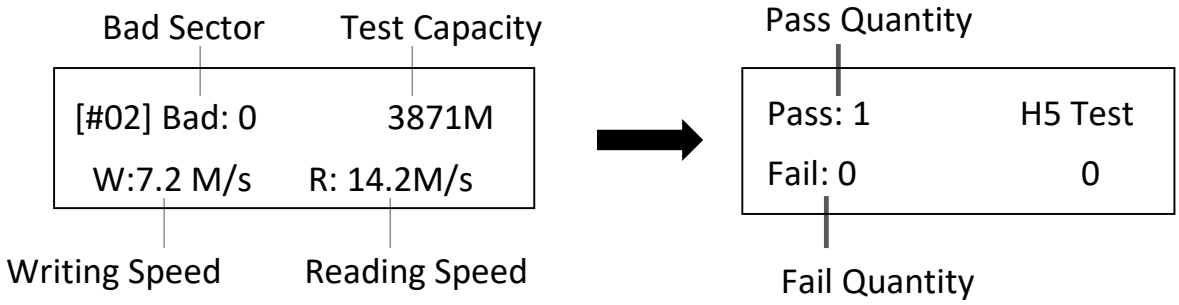
This function reads the flash media to assess its quality. After executing this function, the flash’s bad sector quantity and reading speed will be displayed.
Use the ▲▼ buttons to view the status of each port.



Note	• This function will not alter the content or format. • You can set the checking range in [4. Media Check >> Setup Range].

4.2 H5 Test

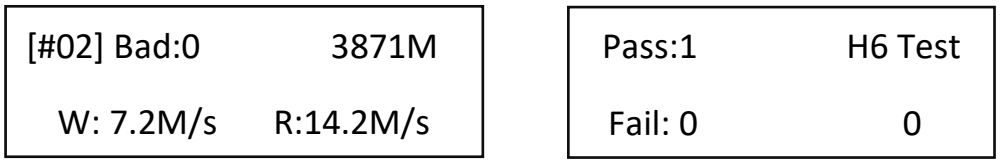
This function performs a read and write test to determine the flash's quality. The flash's original data will be erased during this test. Use the ▲▼buttons to view the status of each port.



Note	The flash device will be formatted at FAT 16/32 once testing is complete.

4.3 H6 Test

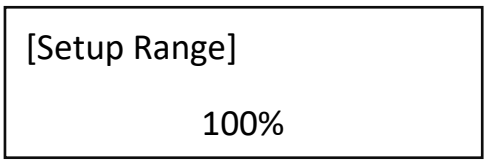
This function performs a read and write test on the empty space to determine the flash's quality. The flash's original data will not be erased during this test.



Note	• This function supports FAT16/32 format only. • This function will NOT alter the flash's content.

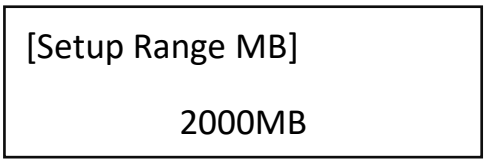
4.4 Setup Range %

This function sets the quality check capacity range. Use the ▲▼buttons to set the range from 1 to 100%. The higher the percentage, the longer it takes.



4.5 Setup Range MB

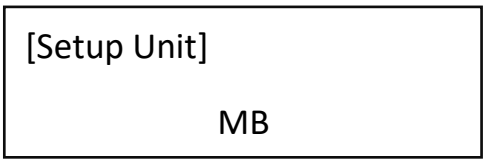
This function sets the quality check capacity range in MB. Use the ▲▼buttons to set the range from 1MB to 9000MB.

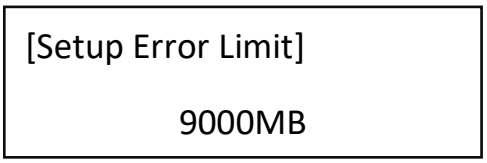


Note	The duplicator will abide by whichever was set last if both Range% and Range MB are set.

4.6 Setup Error Limit

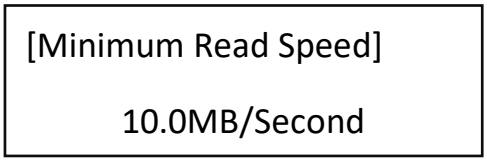
This function sets the error tolerance range while checking the flash. Use the ▲▼ buttons to set the error limit value. Select units to use (KB or MB), then select the value.





4.7 Minimum Read Speed

This function can be used to select the flash media whose reading speed is too slow. Users can set an expected minimum reading speed for media check, so the flash media that doesn’t reach the minimum speed value will be identified.



4.8 Minimum Write Speed

This function can be used to select the flash media whose writing speed is too slow. Users can set an expected minimum writing speed for media check, so the flash media that doesn't reach the minimum speed value will be identified.

[Minimum Write Speed]
10.0MB/Second

Note	When the red-light illuminates to indicate that an error has occurred, use the▲▼buttons to view the error information.

4.9 Low Speed Tolerance Time

Sets the tolerance time when flash does not reach the minimum speed from 10~99 seconds. The default value is 30 seconds.

4.10 Set Capacity Limit

This function is used to set the flash device testing capacity limit. Users can set an upper and lower limit of the flash capacity. To reset, select "clear limit".

[Set Capacity Limit]
1. Set Upper Limit

[Set Capacity Limit]
2. Set Lower Limit

4.11 Set Loop Count

Sets the testing loop count. Each test loop contains a writing & comparing test. Use the▲▼buttons to set the range from 0 to 10.

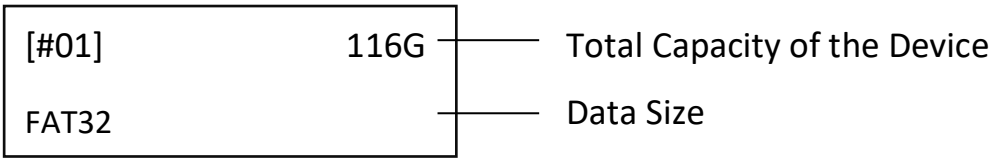
[Set Loop Count]
1

5. Information

5.1 SD Card Info.

This setting displays the flash media's basic information such as file format, content size, and total capacity.

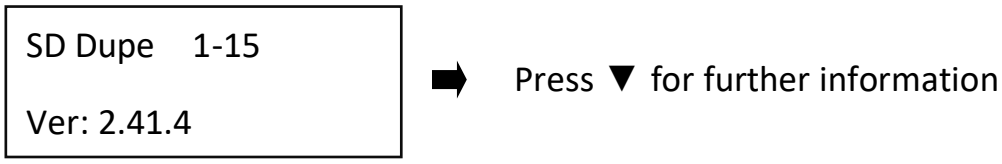
Use the ▲▼buttons to view the information of each flash media, source included.



Note	Using this function will not delete the flash media content or format.

5.2 System Info.

This function displays system information such as model number and software version.



6. Utility

6.1 Do Format

Note	The source port will not perform any formatting because this function will delete the flash media's data.

6.1.1 Auto Format

This function formats flash into FAT. Plug in the flash media and press "OK". The system will automatically detect its capacity, then format the media per its capacity.

- If the flash media format is already FAT16 or FAT32, the format function won't alter its original format.
- If the original flash media is not FAT format, i.e. NTFS, Linux or FAT multi-partition. The system will format per flash's capacity. If capacity is above 2GB, the system will format the flash to FAT32 and below 2GB, the system will format the flash to FAT16.

Capacity < 2GB	Format FAT16
Capacity > 2GB	Format FAT32

6.1.2 FAT16 Format

Sets the FAT16 format.

6.1.3 FAT32 Format

Sets the FAT32 format.

6.1.4 Set FAT16 Cluster Size

Sets the FAT16 cluster size.

6.1.5 Set FAT32 Cluster Size

Sets the FAT32 cluster size.

6.2 Measure Speed

This function measures the "read" and "write" flash media speed.

❶ Plug flash media into the slot, select function [3. Measure Speed], then press "OK" to start this function.

SD Duplicator 2. Measure Speed

[#02]	Read: 14.7MB Write: 7.0MB

❷ Use the▲▼keys to view the exact "Read" and "Write" flash media speed on each port.

Note	• To protect source data, the system will not execute “Measure Speed” on the master device. • The function may alter the format and data content of flash.

6.3 Capacity Check

This function can quickly check the real capacity if it’s claimed.

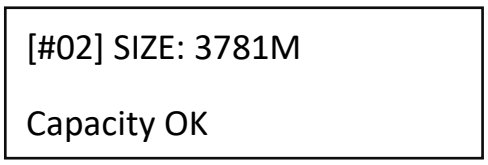
❶ Plug in flash media, select function [6.3 Capacity Check], then press "OK".

It will take about 3 seconds to determine the exact capacity.

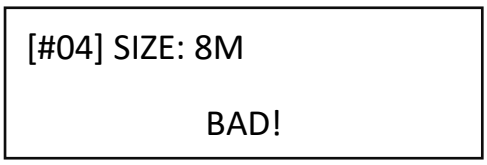
❷ System will show the checking result by use of Green/Red LED light.

❸ Use the ▲▼buttons to check the status of each slot.

Green Light: Capacity OK



Red Light: Error

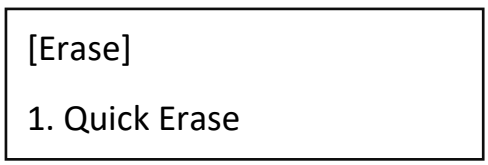


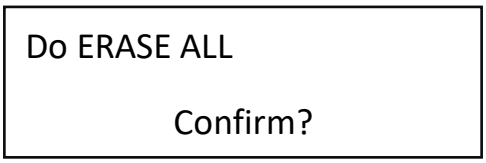
Note	• This function supports asynchronous operation; you can continually plug and unplug flash media without having to push any buttons. • The function may alter the data content and format of flash. • To protect source data, the system will not run a Capacity Check on the master device. • When the red error light illuminates, you can use the ▲▼to view error information.

6.4 Quick Erase

This function erases flash data while keeping the format if the original flash format is FAT16/32. Use the ▲▼buttons to view status, progress, and information.

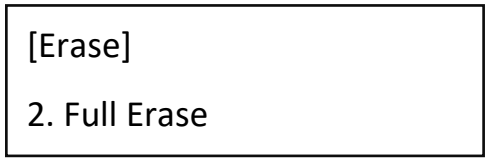
Note	Quick erase function will erase only FAT 16/32 formatted devices.

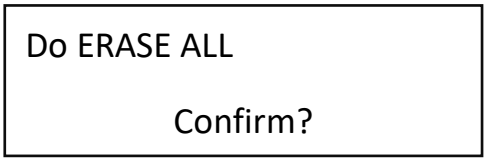




6.5 Full Erase

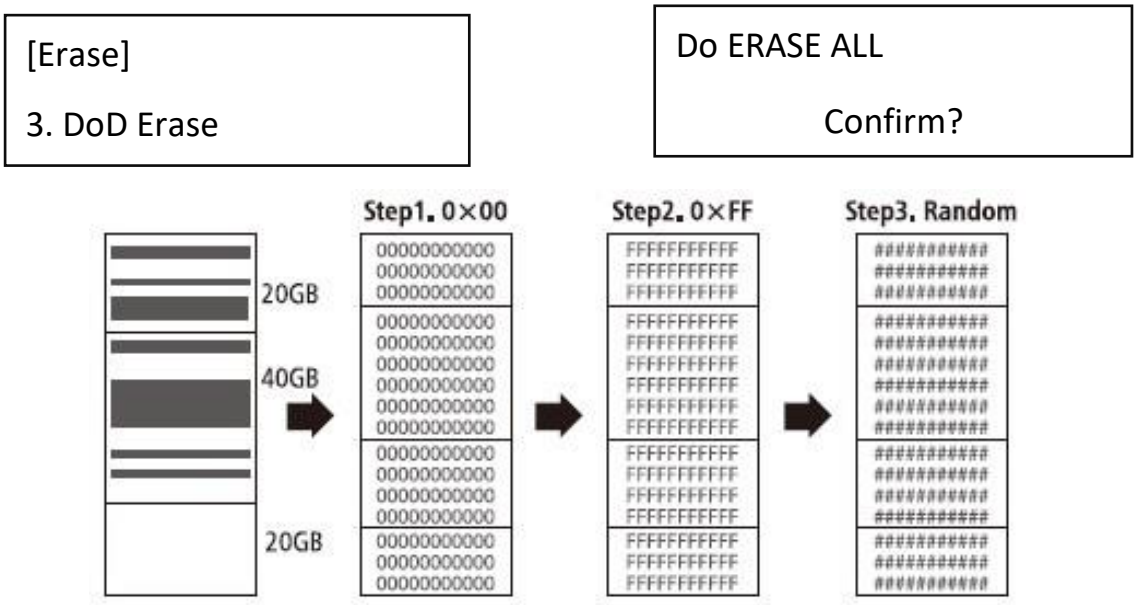
Completely erases the entire flash media, including format and content. This task takes longer. Pressing <ESC> during this process will abandon the task, but the original format and content will no longer be readable.





6.6 DoD Erase

DoD Erase complies with the U.S.A. Department of Defense (DoD 5220) standards by erasing the flash three times, which guarantees that data is completely scrubbed.



Note	Use the ▲▼buttons to view the status of each port during erase.

6.7 System Update

Step 1: Prepare a Flash drive for update.

Connect a Flash drive to PC. Download the latest firmware, unzip the BIOS firmware, then save it to the root directory in the Flash drive.

Note	The format must be: FAT16 or FAT32.

Step 2: Proceed to update firmware.

Connect the Flash drive to the source port of the duplicator. Scroll to select "6.7 Update BIOS", then press "OK" to start the firmware update process.

Caution	The firmware update process may take longer than 5 minutes. Please do not disrupt power or process during BIOS update. If interrupted, the system will become useless. U-Reach will not be held responsible for any damages.

6.8 Calc. Checksum / Calc. CRC64

This function will count the Hash value for the source port. The checksum value is an easy way to double check the source data is correct.

Caution	User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

6.9 A2 Fake Picker

Checks the capacity of each device as it's claimed. A2 failure means the real capacity is different from its claim.

Step 1: Execute the function.

Insert flash device in any port, select [6.9 A2 Fake Picker], then press "OK". Within 5-10 seconds, the system will determine the real capacity of flash and display the information on the LCD monitor.

Step2: Check the status of each port.

When the red error light illuminates, you can use the ▲▼to view error information.

6.10 Release Protect SD *(Available in Golden Series)*

Below functions release write protected SD card(s) which is set by [10. Normal Write Protect]. Insert flash device in any port, scroll to [6.10 Release Protect SD], then press "OK". Within 5-10 seconds, the system will release write protected SD card(s).

Note	• This function is not executable on the source port. • Data will be deleted after releasing write protection. • The SD card(s) which is set by [11. Permanent Write Protect] is not available to release write protect.

7. Setup

7.1 Start-up Menu

Sets which function is displayed powered on. The default setting is "1. Copy".

7.2 Copy Area Settings

❶ System and Files

Also known as "Quick Copy". The source's format is automatically analyzed and if it's recognizable, such as, FAT 16/32/64, NTFS, or Linux ext. 2/3/4, the system will copy the data only, rather than the entire flash.

Note	If the file format is not recognized, the whole flash card, including empty space, will be copied even if you specify copy area in "System and Files".

❷ Whole Media

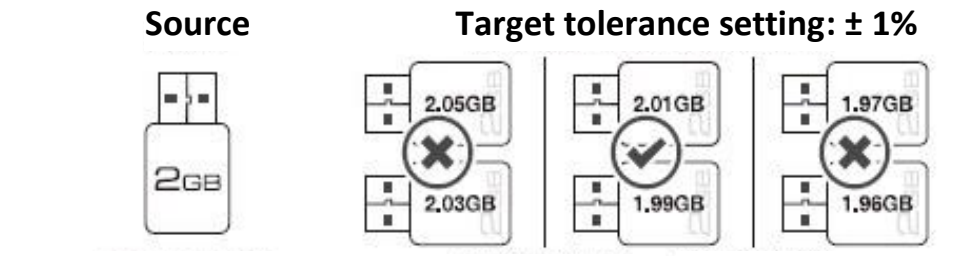
The system will copy the whole flash card, including empty space and format. This function is useful when users want to copy the whole flash or have a flash source with an unknown format. "Whole media" copies take a bit longer to complete.

7.3 Button Sound

Controls whether to hear a sound when a button is pressed.

7.4 Target Tolerance

This function sets the capacities tolerance range between the source and target flash. If the capacity is outside the tolerance range, the copy will fail.
For example, if the target tolerance is set to "±1%", targets whose capacities are 2.02GB or more and 1.98GB or less will not be copied.



7.5 Asynchronous Settings

Users can activate Asynchronous copy by selecting “Enable” or deactivating it by selecting “Disable” For Asynchronous copy to run, the source’s data must be smaller than the system’s buffer memory and set to “Enable”. However, if set to “Disable”, regardless of content size, synchronous copy will be performed.

The conditions of executing “Asynchronous Copy”		
	DISABLE Asynchronous Copy	**ENABLE** Asynchronous Copy
Data **>** Buffer	✗	✗
Data **<** Buffer	✗	✓

Note	The buffer memory may vary depending on product model.

7.6 Check Before Copy

This setting checks if the target devices are capable for read and write.

Note	This function will modify the flash media’s content.

7.7 Power Off Time Between Copy+Compare

The use of this setting is highly advised as it prevents data loss due to unstable flash. Users can set the time gap of power supply between copy and compare. The time gap can be set from 0 to 15 seconds. The default is "3".

7.8 Auto Start After Fill Device

Sets auto start of copy/compare task upon insertion of all targets. Users can also choose to

confirm tasks first by pressing “Ok”.

7.9 Check MID/OID/PNM

Enable [7.9 Check MID/OID/PNM] to verify source and targets for the same MID/OID/PNM, prior to proceeding functions: Copy/Compare/Copy&Compare.

7.10 Language

Sets the system’s language. (English or Japanese)

7.11 Select Speed

There are 5 transmission speed options:

- Slowest Mode
- Slower Mode
- Normal Mode (Default)
- Faster Mode
- Fastest Mode

Use a good quality flash media that supports a faster mode. If unsure about the flash quality or notice a high copy/compare failure rate, use a slower transmission speed. The default setting is “Normal Mode”.

7.12 Check WP Switch

Use "Do Check" or "Do Not Check " to determine if the SD card was switched to write protected mode. "Do Check" mode verify if write protection is on before any writing mission, such as Capacity Check, Measure Speed and H5 RW Check.

Note	If you select “Do NOT check WP switch,” the system will still perform a writing operation on your SD card even if you have locked the WP switch.

7.13 Purge Before Copy

This setting clears out the target devices’ content and format before copying.

Note	This function will erase the flash media’s data and format.

7.14 Monitor Device After Copy

Allows user to set a device status check after duplication. The settings could show different results because each device has various settings.

For example, if a device is set to power off automatically after “complete” command, then user must set “Do NOT Check” to make sure the LCD keeps the copy result for reference.

[Monitor Device After Copy]
Do NOT Check

Total	OK: 10	NG: 0
12:48	OK: 10	NG: 10

In this case, if set at “Do Check”, the copied device will power off automatically after Copy job completes and the LCD will back to the previous job.

[Monitor Device After Copy]
Do Check

1. Copy (Data)

7.15 Adjust Clock *(Available in Golden Series)*

Adjusts the duplicator’s time clock displayed on the LCD monitor.

7.16 Use Port 2 as Compare Source *(Available in Golden Series)*

This function designates Port 1 as the copy source and Port 2 as the compare source. This double-source setting can eliminate duplication errors caused by a worn source when using [3. Copy+Compare]. This guarantees maximum reliability and 100% duplication accuracy.

Note	Use [3. Copy+Compare] function to ensure copy accuracy.

❶ Select [7. Setup], then choose pick "Use Port 2 as Compare Source".

[Use Port 2 as Compare Source]
Disable

❷ "Enable" or "Disable" this function.

Note	• Make sure both sources contain identical content. • Despite Port 2 becoming a source, there are some functions that Port 2 doesn’t support, such as the erase, H5 test, and speed measuring functions.

7.17 Minimum Speed

Allows user to disable or set minimum threshold speed during Copy and Compare. Users can set the speed value amongst 0～30 MB/s. The system will fail if any device does not achieve minimum speed.

7.18 Advanced Setup *(Available in Golden Series)*

□ Function [7.18.1 LED in Factory Mode]

Set LEDs in Traditional or Factory mode.

[LED in Factory Mode]
Traditional Mode

- Traditional Mode (Default): Green lights on after press “OK” and successfully detecting devices.
- Factory Mode #1: All lights off after press “OK” and successfully detecting devices.
- Factory Mode #2: All lights on after press “OK” and successfully detecting devices.

□ Function [7.18.2 Erase Master Port]

This function allow user to enable or disable the source port for sanitization.

[Erase Master Port]
Disable

□ Do Erase, Format Before Copy

Set to “Enable” or “Disable” automatic erase and format prior to duplication. The default is “Disable”.

[Do Erase, Format Before Copy]
Disable

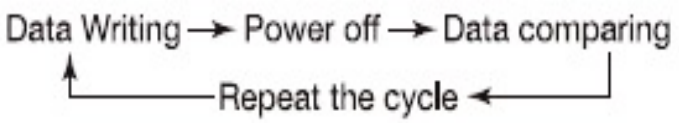
Caution	To prevent erasing the source data when the setting is enabled, it will automatically default back to [DISABLE] after reboot.

7.18 Set to Default

Restores original default settings.

8. Burn-In *(Available in Golden Series)*

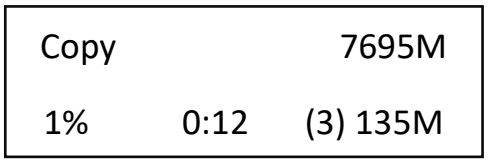
Burn-In is the most useful flash configuration method. The Burn-In test contains three steps: data writing, power off, and data comparing (reading). Users can set writing loop, compare loop, power off time, and writing pattern as needed.

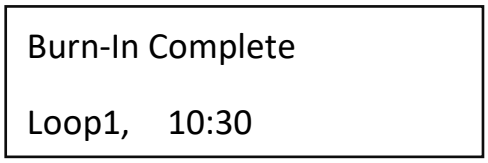


Note	Write protected devices do not support burn-in function.

8.1 Burn-In (Copy+Comp)

The Burn-In test on flash targets continually copies & compares source data. You could view related settings in the table below. The duplicator would abide by the last setting picked if users chose both “Burn Time” and “Loop Count.”





8.1 Burn In (Copy&Comp)	8.3 Set Burn Time
Prepare one Physical Source.	8.4 Set Loop Count
	8.6 Set Bad Limit
	8.9 Power Off Between Loop
	8.10 Compare Count Per Copy

8.2 Burn-In (Auto Data)

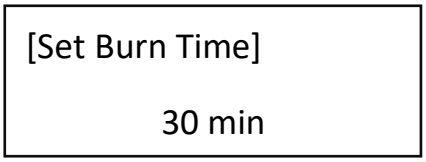
The Burn-In test on flash targets continually copies & compares source data. You could view related settings in the table below. The duplicator will abide by the last setting picked if users chose both “Burn Time” and “Loop Count.”

8.2 Burn-In (Auto Data)	8.3 Set Burn Time
No physical Source needed. Choose [8.7 Set Data Pattern] to automatically run test.	8.4 Set Loop Count
	8.5 Set Test Range
	8.6 Set Bad Limit
	8.7 Set Data Pattern
	8.8 Compare Count Per Loop
	8.9 Power Off Between Loop

Note	This function does not require a source device. The system will defer to user’s “Set Data Pattern” settings.

8.3 Set Burn Time

User can set the Burn-In test interval. The test time ranges from 30 mins to 30 days.



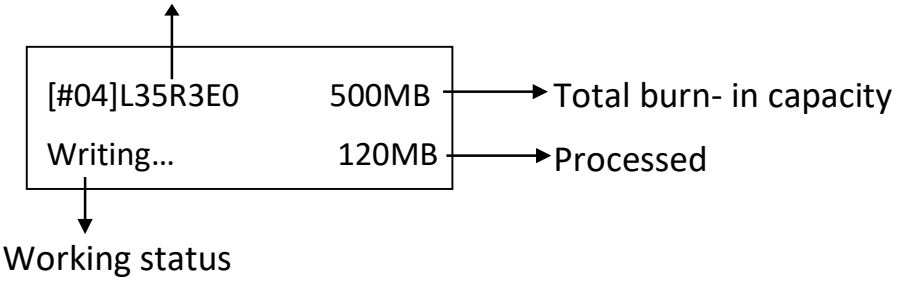
8.4 Set Loop Count

Sets the flash media's Burn-in test loop quantity. Each loop contains 3 processes: writing, power off, and comparing. The loop quantity can be set from 0 to 99999.

L35: The 35th Loop.

R3: The 3th compare in the 35th loop.

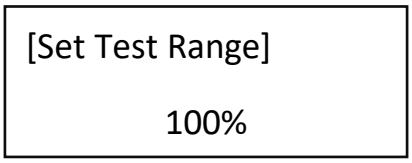
E0: Total error quantity.



Note	• Loop 0 is equal to Loop 99999 • The duplicator will abide by the last setting picked if users chose both "Burn Time" and "Loop Count."

8.5 Set Test Range

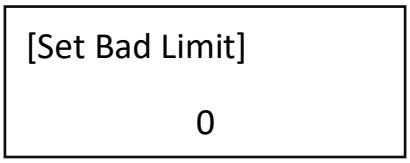
Sets the flash media test range. The range can be set from 1% to 100%.



Note	"Test Range" setting is only available in [8.2 Burn-In (Auto Data)].

8.6 Set Bad Limit

Sets the error tolerance. Tolerance can be set from 1-10000 bad sectors. The system will count per whole test, not per loop.



8.7 Set Data Pattern

Sets the Burn-In test writing value. There are two data patterns:

- Auto Pattern: The default value will be used during burn-in test. Default value is random repetition of FF and 00.
- User Defined: Users can manually indicate which value to use during burn-in test. The setting is only 1 byte.

Note	“Data Pattern” setting is only available in [8.2 Burn-In (Auto Data)].

8.8 Compare Count Per Loop

Sets the compare count in each loop during Auto Data burn-in test. The default setting is one compare (reading) test per loop.

Note	“Compare Count Per Loop” setting is only available in [8.2 Burn-In (Auto Data)].

8.9 Power Off Between Loop

Sets the power off time range between loops. This can be set from 0 to 15 seconds.

8.10 Compare Count Per Copy

Sets the compare count in each loop during Copy & Compare burn-in test. The default setting is one compare (reading) test per loop.

Note	Can only be set in [8.1 Burn-In (Copy+Compare)].

9. Log Manager *(Available in Golden Series)*

The Log Report Management Tool assists users with monitoring, recording, and managing the entire duplication process. By displaying detailed information for each port, this tool helps to identify the slowest writing device that in turn, keeps the operation running efficiently. Please refer to “How to Use Event Log? “(P.36) for details.

10. Normal Write Protect *(Available in Golden Series)*

Caution	• SD/Micro write protection is an algorithm command adhering to the SD Association. This function would only work on SD or microSD card(s) that supports write protection. • Interrupting write protect process may damage your SD card(s).

Note	Only SDs with “normal write-protect” mode can be released. Please refer to the function [6.10 Release Protect SD].

SD card(s) with write protection cannot be erased, formatted, or deleted.

Step1: Prepare a source SD and target SD/MicroSD cards.

Step2: Plug in SD/MicroSD cards.

Step3: Scroll to [10. Normal Write Protect] and press “OK.” Select the 4 sub-functions.

10.1 Copy

Copies data from the source to targets and then set write protection on targets.

[Normal Write Protect]

1. Copy

Caution	If the sticks were originally protected, the system will automatically release protection, then copy.

10.2 Copy+Compare

Copies data from the source to targets, compares, then set the write protection on targets.

[Normal Write Protect]

2. Copy+Compare

Caution	If the sticks were originally protected, the system will automatically release protection, then copy+compare.

10.3 Show Protect Info.

Shows the status of protected SD card(s).

[Normal Write Protect]

3. Show Protect Info. ➡ Select Device

Device 1 ➡ Write Protect

Temporary

10.4 Set Card Protect

Sets write protection on targets.

[Normal Write Protect]

4. Set Card Protect ➡ Select Device

Device 1 ➡ Set Temporary

Complete!

Note	• This function is not executable on the source port. • It takes a few seconds to set write protection on all targets.

11. Permanent Write Protect *(Available in Golden Series)*

Caution	• SD/Micro write protection is an algorithm command adhering to the SD Association. This function would only work on SD or microSD card(s) that supports write protection. • Interrupting write protect process may damage your SD card(s).

Note	SD Card(s) set by “permanent write-protect” mode cannot be released.

SD card(s) with permanent write protection cannot be erased, formatted, or deleted.

Step1: Prepare a source SD and target SD/MicroSD cards.

Step2: Plug in SD/MicroSD cards.

Step3: Scroll to [11. Permanent Write Protect] and press “OK.” Select the 4 sub-functions.

11.1 Copy

Copies data from the source to targets and then set permanent write protection on targets.

[Permanent Write Protect]

1. Copy

11.2 Copy+Compare

Copies data from the source to targets, compares, then set the permanent write protection on targets.

[Permanent Write Protect]

2. Copy+Compare

11.3 Show Protect Info.

Shows the status of protected SD card(s).

[Permanent Write Protect]

3. Show Protect Info.

➡

Select Device

Device 1

➡

Write Protect

Permanent

11.4 Set Card Protect

Sets permanent write protection on targets.

[Permanent Write Protect] 4. Set Card Protect	➡	Select Device Device 1	➡	Set Temporary Complete!

Note	• This function is not executable on the source port. • It takes a few seconds to set write protection on all targets.

How to use PC-Monitoring

PC-monitoring is a convenient tool to monitor real-time status information such as: duplication progress, testing results, and operation log. These information are viewed on your computer screen. This section contains installation and operation instructions.

How to Launch PC-Monitoring:

Step 1: Copy “LV07B” to your PC.

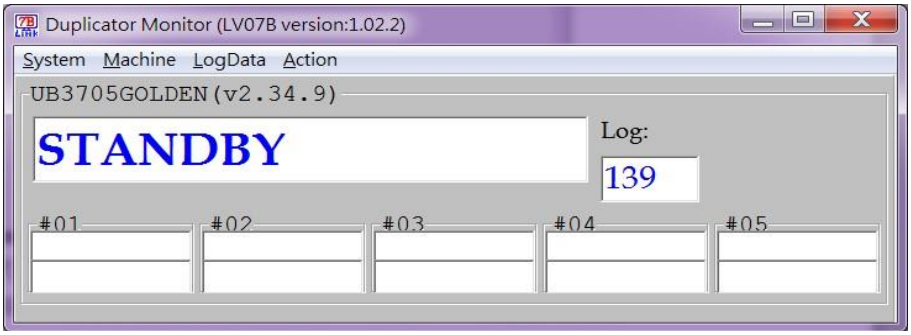
Step 2: Connect the USB cable from computer to the duplicator.

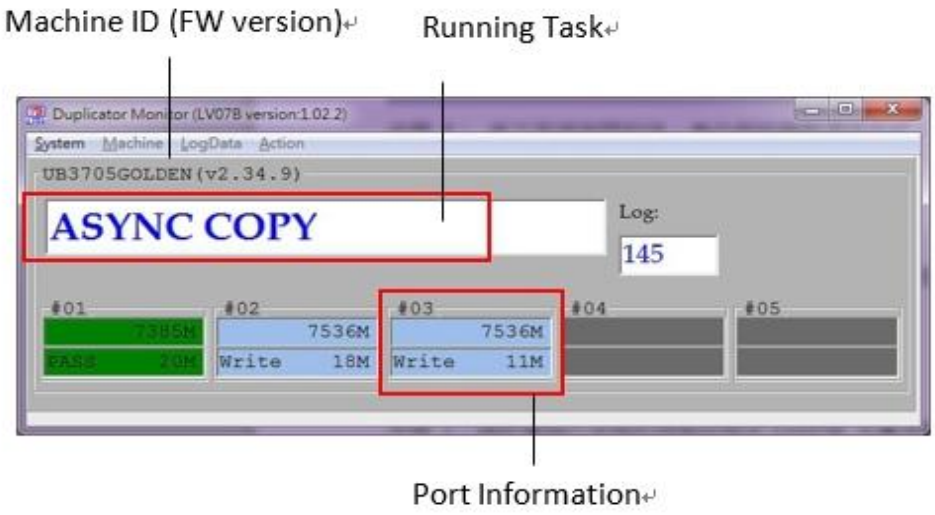
Step 3: Power On the duplicator.

Step 4: Launch LV07B by double clicking on software icon "LV07B ".

Caution	• Before Step 4, make sure the duplicator has completed boot-up. • There are configuration files when launching LV07B. Make sure you are launching the .exe file on the PC, and not with the provided U-Reach mini-CD software.

Step 5: When the below screen is shown, the duplicator has linked to the computer successfully and is ready to use the real-time monitoring function.





Step 6: If the screen above does not appear, please repeat steps 1 thru 4.

Note	If the system requests “Run the program as an Administrator”, right click “LV07B”, then set it in “Properties” > “Compatibility”.

How to Use Event Log?

The log manager is an excellent management tool for operation control purposes. It can record duplication operation, system, and targets information details.

1. Out Today Report

Step 1: Insert flash media into Port 1.

Step 2: Go to "Out Today Report" and press "OK" to output today's log records.

Step 3: Remove flash media and read the log report on PC.

2. Out Recent Report

Step 1: Insert flash media into Port 1.

Step 2: Go to "Out Recent Report" and press "OK" to output the log records from the last 28 days.

Step 3: Remove flash media and read the log report on PC.

3. Out Period Date

Step 1: Insert flash media into Port 1.

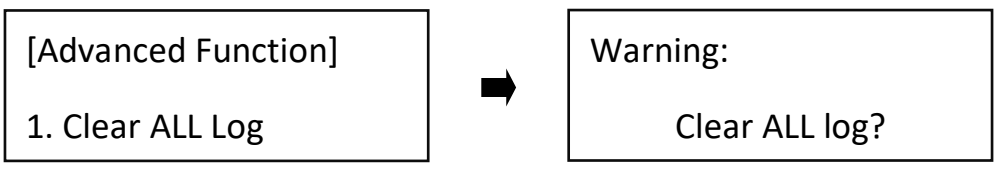
Step 2: Go to "Out Period Date" and press "OK" to output the log records from a specific date.

4. Advanced Function

Enter protective password to access advanced functions. The default password is "123456".

❶ Clear ALL Log

After entering the password, all the log records can be cleared from the duplicator.



Caution	Before using function “Clear ALL Log” during PC connection, please observe the following steps: 1. Close the PC-Link software (LV07B) or 2. Disconnect the duplicator from PC *The PC-Link software (LV07B) is designed to continuously record log reports. If user executes “clear log records” on the duplicator while LV07 is still running, the conflict between LV07 and duplicator might lead a serious system error.

❷ Setup Password

Setting a password ensures the duplicator’s log records are protected.

Note	• During your first linkage, please wait for a few minutes on PC to complete create the log database from duplicator. • The log manager can store up to 60,000 records. If the storage limit is exceeded, the system will automatically remove the oldest record and replace it with the newest. • Changing the default password is highly advised as to ensure record protection. • If you want to change your Log password, please keep your password in a safe place in case you lose it. Please understand that the manufacturer does not provide password reset service due to the consideration of personal privacy.

⊙ Explanation of Log Report – SD Series

F/W Ver: 2.37.1
Machine ID: 25080.16173.16089.59642.61440

Machine Info.

start No. = 5949
end No. = 6167

No. -----	Date	Time	Port	Result(Failure Location)	Function
0005993	2017-07-05	13:50:07	0010	FAIL(198656)	COPY+COMPARE(DATA,890.0MB)
0005994	2017-07-05	13:50:07	0011	FAIL(150016)	COPY+COMPARE(DATA,890.0MB)
0005995	2017-07-05	13:50:07	0012	FAIL(153600)	COPY+COMPARE(DATA,890.0MB)
0005996	2017-07-05	13:50:07	0013	FAIL(124928)	COPY+COMPARE(DATA,890.0MB)
0005997	2017-07-05	13:50:07	0014	FAIL(110592)	COPY+COMPARE(DATA,890.0MB)
0005998	2017-07-05	13:50:07	0002	PASS	COPY+COMPARE(DATA,890.0MB)
0005999	2017-07-05	13:50:07	0003	PASS	COPY+COMPARE(DATA,890.0MB)
0006000	2017-07-05	13:50:07	0004	PASS	COPY+COMPARE(DATA,890.0MB)
0006001	2017-07-05	13:50:07	0005	PASS	COPY+COMPARE(DATA,890.0MB)
0006002	2017-07-05	13:50:07	0006	PASS	COPY+COMPARE(DATA,890.0MB)
0006003	2017-07-05	13:50:07	0007	PASS	COPY+COMPARE(DATA,890.0MB)
0006004	2017-07-05	13:50:07	0008	PASS	COPY+COMPARE(DATA,890.0MB)

Execution Time	Capacity (Sectors)	[MID,OID,Name,Version]	Year-Month	S/N
00:11	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	369253363
00:10	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	101800670
00:09	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	287532881
00:07	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	369253387
00:06	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	287531966
05:47	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	287532877
05:47	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	287532883
05:47	7676.0MB(15720448)	[039,PH,SD08G,2.0]	2008-12	3850375928
05:47	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	101800664
05:47	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	287531960
07:46	1898.0MB(3887104)	[000, , ,0.0]	2011-01	3323671974
05:47	7695.0MB(15759360)	[116,JE,SDC ,1.0]	2013-11	101800679

⊙ Definition

Information	Item	Description
Log Output Information	Print Date	The output date of log report
	Model	The duplicator's model info.
	F/W Ver	The duplicator's firmware version
	Machine ID	The ID number of duplicator
	Start No	The beginning log record in the log report
	End No	The last log record in the log report
Operation Records	No.	The number of log record
	Date-Time	The time of each operation result
	Port	The specific interface of each operation
	Result	The final status of each operation
	Function	The function executed by user
	Run Time	The time of each operation process
Card Information	Target Information Capacity (Sector)	The capacity information of each target devices
	Model, Version, Serial No	The detailed information of flash devices
Functions	COPY	Synchronous Copy.
	Copy	Asynchronous Copy.
	COMPARE	Synchronous Compare.
	Compare	Asynchronous Compare.
	COPY+COMPARE	Synchronous Copy & Compare.
	Copy+Compare	Asynchronous Copy & Compare.
	H3 TEST	Executes H3 reading test.
	H5 TEST	Executes H5 reading & writing test.
	FORMAT AUTO	Formats the flash media automatically.
	FORMAT FAT16	Formats the flash media as FAT16.
	FORMAT FAT32	Formats the flash media as FAT32.
	CAPACITY CHECK	Capacity inspection of flash media.
	QUICK ERASE	Erases the flash media content.
	FULL ERASE	Completely erases flash data, including format and content.
	DoD ERASE	Erases flash three times, complying with USA Department of Defense (DoD) standard.
	Calc. CRC64 (USB/SD/MSD Only)	Calculates the CRC64 value of the source flash.

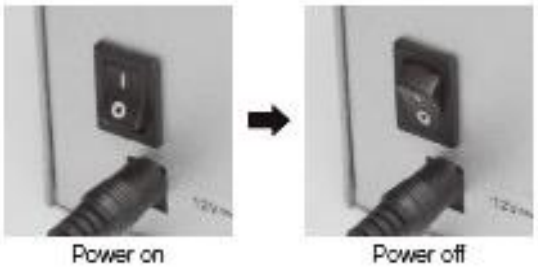
	A2 FAKE PICKER (USB/SD/MSD Only)	Checks if an SD/TF(MS) flash card contain fake capacity.
	BURN IN	Flash media durability test.
	(DATA,XXXXMB)	(Data Only Copy, Capacity of Data).
	(Whole,XXXXMB)	(Whole Media Copy, Capacity of Source Device).
	(10%) R:18.3M/S	(The percentage of inspection) Reading Speed.
	(15%) W:11.7M/S; R:21.7M/S	(The percentage of inspection) Writing Speed; Reading Speed

Maintenance Guide

Steps to replace socket

❶ Turn off power

Caution	For your safety, please turn off the power before inspecting or replacing the socket.



❷ Use your hand or a flat head screw driver to remove the faceplate screws.

Caution	Please use extreme caution while using a screwdriver to remove the screws as they can cause the screwdriver to slip.

❸ Remove the socket cover.

❹ Replace the damaged socket(s).

❺ Replace the socket cover

Q&A

Q1: What is the difference between Intelligent 9 Series flash duplicator and PC based duplicator?

A: There are four main differences:

❶ Multi-task processing capability: A professional flash duplicator can handle many flashes simultaneously during copy or check processes. Even if a PC boasts a powerful CPU, handling too many flashes at once typically proves to be too difficult, making a duplicator the logical choice.

❷ No risk of virus infection: Intelligent 9 Series flash duplicator is an embedded system, it only copies whatever is on the source. When the system is turned off, nothing will be left in the system. Hence, there will not be any risk of virus infection.

❸ Duplication accuracy: Intelligent 9 Series flash duplicator achieves flawless duplicates directly from the source to all its targets.

❹ Instant power on and off: There is no system boot up or shut down wait time with the Intelligent 9 Series flash duplicator which contributes to the fast and easy process.

Q2: Can the flash duplicator copy any kind of file format, i.e. NTFS?

A: Yes, our flash duplicator supports “Whole Area” function to copy whole flash media without formatting issues.

Q3: How do we know the data is correct after copy?

A: Use the [2. Compare] function to ensure duplication accuracy.

Q4: What should I do if I encounter a copy fail?

A:

❶ Double check that source capacity is not larger than the target capacity. [5.1 Flash info] function allows you to view the source and target’s data size and capacity.

❷ Ensure that your source flash media isn’t corrupt.

❸ If the flash quality is poor, copy results may be affected, to remedy this:

(1) [4. Media Check] will check both source and target’s quality.

(2) Use “Select Speed” to slow down the copy speed.

Q5. Is it possible to use an 8GB source copy to 16GB targets (source capacity less than target)?

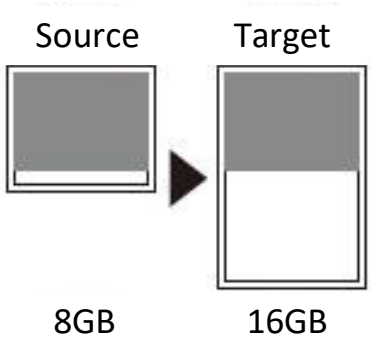
A: Yes, copying from 8GB to 16GB is doable, but the target becomes 8GB when read on PC. After duplication, the target’s FAT table will be identical to the source. You can restore its real capacity by re-formatting the device.

Q6. Is it possible to copy when there is a big difference between Source and Target's capacity? For example, a 8GB source copy to 16GB targets?

A: Yes, but the source data must be within the capacity of the target devices. However, due to capacity discrepancy, errors and lost data may occur. Using flash medias with the same capacity is strongly recommended.

❶ If Source capacity is SMALLER than the target, for example 8GB to 16GB:

Example:



Copy OK

Warning:

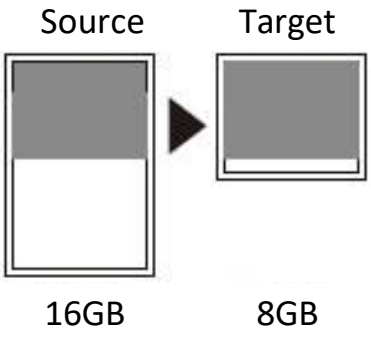
The target 16GB WILL BECOME 8GB WHEN READ ON PC. You can reset its 16GB capacity by reformatting the device.

Caution	When there is a big difference between target and source's capacity, such as 8GB to 32GB or 8GB to 16GB, there is a risk of target capacity, compatibility and format errors. It is strongly recommended that target and source be in close range of capacity.

❷ If source capacity is LARGER than the target, for example 16GB copy to 8GB:

▶ There are two results as shown in illustrations (1) and (2)

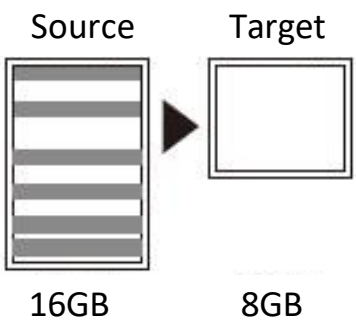
(1) When a content is within the target flash media's capacity.



Copy OK

Because the data is within the 8GB area.

(2) When the content is outside the target flash media's capacity.



Can't Copy

Because the data is outside of the 8GB area.

Caution	The copy will fail because the data was stored beyond the 8GB area. The duplicator will copy the data as is which means the location remains intact.

Specification

Series	Intelligent9 SD/microSD Duplicator		
Specifications	Operation Type	Stand-alone, FPGA-based operation (Non-PC based)	
	Supported Languages	English or Japanese	
	LCD Display	Backlit Monochrome LCD Display	
	LEDs	2 LED Indicators per Port (1 Red/ 1 Green)	
	Control Panel	4 Push Buttons (▲, ▼, OK, ESC)	
Features	Copy Modes	Quick Copy (Systems & Files Copy), Whole Media Copy, Asynchronous Duplication	
	Compare Function	Bit-by-bit data comparison	
	Diagnostic Modes	H3 Test (Read Test)/ H5 Test (Read and write test)/ H6 Test (Read and write test, only empty sectors/spaces)	
	Sanitization Modes	Quick Erase, Full Erase, and DoD Erase	
	Format Functions	Formats device to FAT16 or FAT32	
Special Features	Burn-in Test	Time ranges from 30 minutes to 30 days. *(Available in Golden Series)*	
	Log Report Management	Monitor real-time recordings and Log Reports via PC-link *(Available in Golden Series)*	
	Write Protection	Normal Write Protect *(Available in Golden Series)*	
		Permanent Write Protect *(Available in Golden Series)*	
	PC Monitoring	Real-Time status monitoring through PC	
	Supported Formats	Quick Copy: FAT16/32/64, Windows (NTFS), and Linux (Ext2/Ext3/Ext4)	
		Whole Media Copy: All Formats, including proprietary formats	
	Supported O/S	All (Windows, Mac, Linux, and other stand-alone systems)	
Hardware Specifications	Power Supply	12V DC Adapter	
	Temperature	Working	5°C ~ 45°C (41°F ~ 113°F)
		Storage	-20°C ~85°C (-4°F ~ 185°F)
	Humidity	Working	20% ~ 80%
		Storage	5% ~ 95%
	Certifications	FCC, CE, RoHS	

**Specifications subject to change without notice.*