

DiskClon dc3000

User Guide



DiskClon dc3000

Copyright © 2004~2008 by Clonix,Ltd. All rights reserved.

Preface

All programs, data, manuals and documents included in Clonix products are protected by law on copyright and computer software. Software and hardware certifications of Clonix are included in product package prescribes restriction for their use, so make sure to read them.

All programs, data, manuals and documents included in Clonix products are not permitted to modified, re-processed , sold and re-distributed for any purpose.

0 Contents

Index

0. CONTENTS	3
INDEX	3
OVERVIEW FOR DISKCLON.....	4
MAIN FUNCTIONS FOR DISKCLON	5
FEATURES FOR DISKCLON.....	6
INSTRUCTION BEFORE INSTALLATION	7
1. POWER ON	8
2. DISK CLONING	9
PREPARATION FOR DISK CLONING	9
DISK CLONING	10
3. DISK BACKUP	18
PREPARATION FOR DISK BACKUP	18
DISK BACKUP.....	19
4. DISK WIPE.....	21
PREPARATION FOR DISK WIPE.....	21
DISK WIPE.....	22
5. DISK CHECK.....	24
DISK CHECK	24

Overview for DiskClon

Thanks for purchasing DiskClon product

DiskClon is a world class disk duplicating solution developed for the first time in Korea, which enables hard disk with OS such as Windows XP, Windows Vista to be cloned at high speed.

In addition, it also has Wipe function which enables content of hard disks to be completely erased when they are recycled or destroyed.

It is developed based on next generation interface, SATA II / SAS interface.

A. Use for hard disk copy

- Production solution for Enterprise producing PC, UMPC, server and etc.
- Production solution for Enterprise producing POS, ATM and etc
- Production solution for Enterprise with frequent maintenance
- Maintenance solution for school, PC room, government office and etc.
- Source disk copy function for national intelligent organization, criminal investigation office and etc.

B. Use for completely erasing hard disk

- For recycling /destroying computers which were used for Enterprise.
- For recycling /destroying computers used for military organization, national security organization in which important information is treated.
- For recycling /destroying computers for government organization.

Main functions for DiskClon

■ Quick Disk Cloning

DiskClon is able to duplicate up to 16 hard disks at world highest speed, 4.2 GB / Min

■ Perfect Disk Wipe

DiskClon quickly and completely deletes data on hard disk. Safe recycling of is possible as DiskClon erases data completely.

■ Support for Various Interfaces such as SATA II / SAS

DiskClon basically supports SATA II / SAS interfaces, and also supports IDE or SCSI disk by attaching an additional interface.

■ Log Record

It is able to record operation factors such as hard disk models, speed and time. The log can be transferred to Server through a serial port or network.

■ Disk as an Image File

DiskClon, differently from conventional hardware typed devices, is able to store a whole disk into files by backup. In addition, stored images are perfectly compatible with Winclon product group of Clonix.

■ Image Based Disk Cloning

DiskClon uses either a backup image file or a source hard disk for Disk Cloning. Disk can be duplicated even without the source disk.

■ Image File Distribution over Network

With NetClon, a network based backup/restore/cloning solution. DiskClon can be transferred image files conveniently and quickly over network.

■ Automatic partition readjustment

If a target disk size is larger than the source disk one, DiskClon resizes partitions for entire target disk space to be used.

Features for DiskClon

- Support for Vista
- Disk Backup
- Easy and Convenient Windows-based Interface even for Novices.
- Supports for various file systems including FAT16/FAT32/NTFS/Ext2,3/ReiserFS and etc.
- Supports for various disks including SATA I / SATA II / SAS / IDE / SCSI
- Quick and Convenient Disk Cloning with Dedicated Jig
- File and Log Transfer over Network
- Small and Light Aluminum Case Compared with Other Heavy Hardware Device.
- Upgradable Hardware and Software,

Instruction before Installation

Be sure to check the following before using DiskClon

- DiskClon needs a keyboard/mouse/monitor
- DiskClon is running within 110~240 voltages, and it may be necessary to adjust voltages depending on the models.
- Make sure to check that all parts and products included in package are delivered.
- Be careful not to disassemble equipment, as in that case technical support is not guaranteed.
- If use of unauthorized interface or jig causes problems, technical support is not guaranteed
- Be sure to use SATA / SAS / power cables which are provided by Clonix.

1 Power ON

In order to turn on power of DiskClon, push and release power button in the right of rear side, and then WinPE boot begins. As the following initializing processes are executed after DiskClon starts, it takes a few seconds or minutes for finishing them.

- **Invoking Device Driver**
- **Communication Initialization**
- **Hard Disk Power Initialization**

Following screen appears after DiskClon is executed.



[Description 1] Main screen when DiskClon normally starts

[Description 2] By selecting left menu, each function is executed. Following menus are supported.

■ **Disk Cloning (It may not be supported depending on the products)**

: duplicates hard disk.

■ **Disk Backup (It might not be supported depending on the products)**

: backs up disk to files.

■ **Disk Wipe**

: deletes all disk data so as not to be reversible.

■ **Disk check**

: compares a target disk to the source disk in order to find out whether it is normally copied.

■ **Settings**

: sets up environmental variables.

2. Disk Cloning

Preparation for Disk Cloning

DiskClon duplicates simultaneously up to 15 target disks from the source disk or 16 disks from backup image files at very high speed.

In case that disk size is different to each other, duplication is performed by following conditions.

Case A. In case that a target disk is larger than the source disk

All disk contents are identically duplicated, and the last partition for target disk is automatically extended up to the difference from the source disk.

Ex) Source disk is 300GB, target disk is 500GB

Source disk (300GB)

B	80G	0GB	12	B	100G
---	-----	-----	----	---	------

Target disk (500GB)

B	80G	0GB	12	300GB
---	-----	-----	----	-------

Case B. In case that a target disk is smaller than the source disk

In case that a target disk is smaller than the source disk, target disk may not be duplicated.

Ex) Source disk is 500GB, Target disk is 400GB

Source disk (500GB)

B	80G	0GB	12	300GB
---	-----	-----	----	-------

Target disk (400GB)

B	80G	0GB	12	200GB
---	-----	-----	----	-------

Successful cloning satisfies that the half of last partition size on the source disk should be smaller than the last partition size on a target disk. For example, in case B, duplication is possible as $300\text{GB}/2$ is smaller than 200GB. However this rule is applicable only when last partition has almost no data.

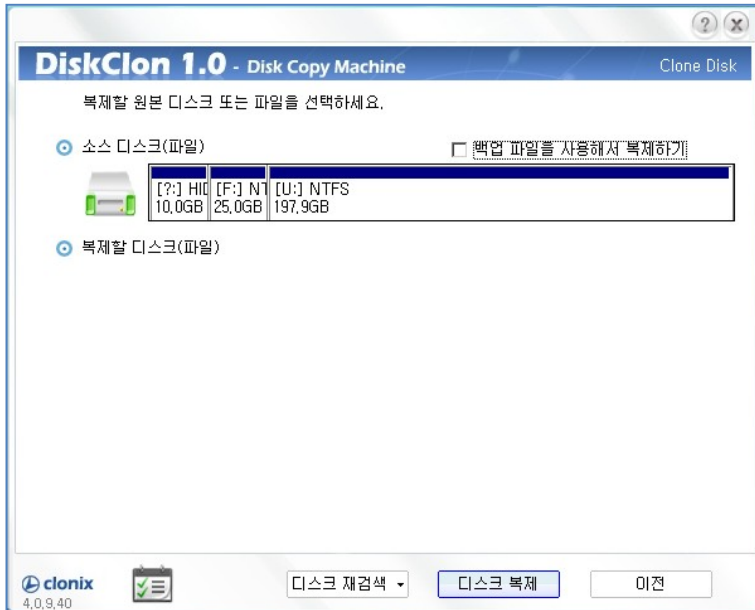
Disk Cloning

In order to enter into disk cloning menu, following options are available.

[Option 1] Press start button in the foreside of DiskClon device.

[Option 2] Select start menu in DiskClon GUI.

STEP 1. Entering into the initial screen



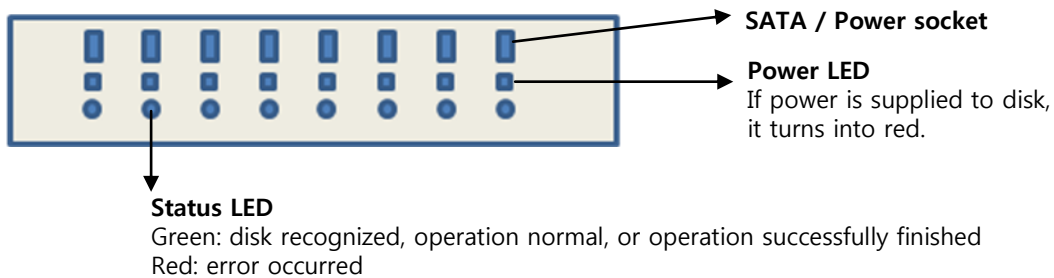
[Description 1] Screen for entering into the initial screen in DiskClon.

There are two duplicating options.

[Option 1] Cloning from the source disk (up to 15 disks can be duplicated simultaneously)

[Option 2] Cloning from a backup image (up to 16 disks can be duplicated simultaneously)

While disks are being duplicated, the status of each disk is checked from LED located in upper side of DiskClon.



1. Cloning from the Source Disk

In order to duplicate the source disk, do the following procedures.

[Procedure 1] Equip DiskClon with jig. Disk cables may be necessary if the jig not provided.

[Procedure 2] Press start button in the foreside of DiskClon, or click [Disk Cloning] in GUI.

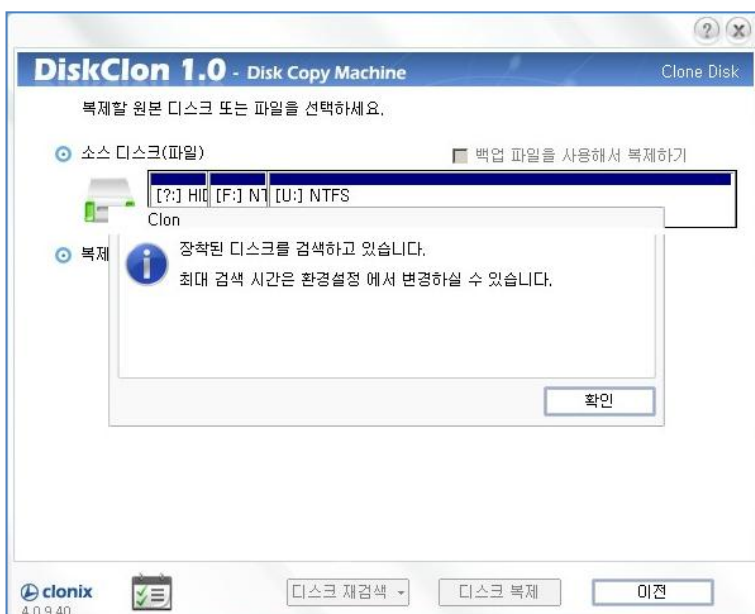
[Procedure 3] Unplug disks from DiskClon. (Since power is automatically off after cloning, it's safe.)

STEP 1. Starting disk copy

There are two options to duplicate disk.

Option 1: Press start button in front side of DiskClon.

Option 2: Press Disk Cloning button in GUI.



When Disk Cloning starts, DiskClon starts to search attached disk after power is turned on.

Searching time ranges from 10 to 30 seconds, and maximum searching time is set up in [Settings] menu.



Make sure to connect cables to hard disk in advance before starting cloning. In case that cables are connected to disk after starting cloning, hard disk may not be recognized.

STEP 2. Disk Cloning

1 소스 디스크(파일) 백업 파일을 사용해서 복제하기

[?:] HD	[G:] N	[U:] NTFS
10,0GB	25,0GB	197,9GB

2 복제할 디스크(파일)

Master 232 GB

<input checked="" type="checkbox"/>	Disk 2	232 GB	[SAMSUNG HD250HJ, SOUSJDPB02528]
<input checked="" type="checkbox"/>	Disk 3	232 GB	[SAMSUNG HD250HJ, SOUSJDWQ209775]
<input checked="" type="checkbox"/>	Disk 4	232 GB	[SAMSUNG HD250HJ, SOUSJDWQ209773]
<input checked="" type="checkbox"/>	Disk 5	232 GB	[SAMSUNG HD250HJ, SOUSJDWQ209774]
<input checked="" type="checkbox"/>	Disk 6	232 GB	[ST325031 OAS, 6RY959NR]
<input checked="" type="checkbox"/>	Disk 7	232 GB	[ST325031 OAS, 6RY9515Q]
<input checked="" type="checkbox"/>	Disk 8	232 GB	[ST325031 OAS, 6RY959L3]

3 4214.7MB/m [70.2 MB/s] 1896 / 5288 MB 00 : 27 / 01 : 15

복제중..

clonix 4.0.9.40

디스크 재검색 | 디스크 복제 | 취소

Indicates status of source disk

Indicates disk information, the length of bar is dependent on disk size.

Indicates current proceeding status

Screen above indicates cloning status.

[Description 1] [Source disk (file)] indicates status of the source disk which currently duplicates.

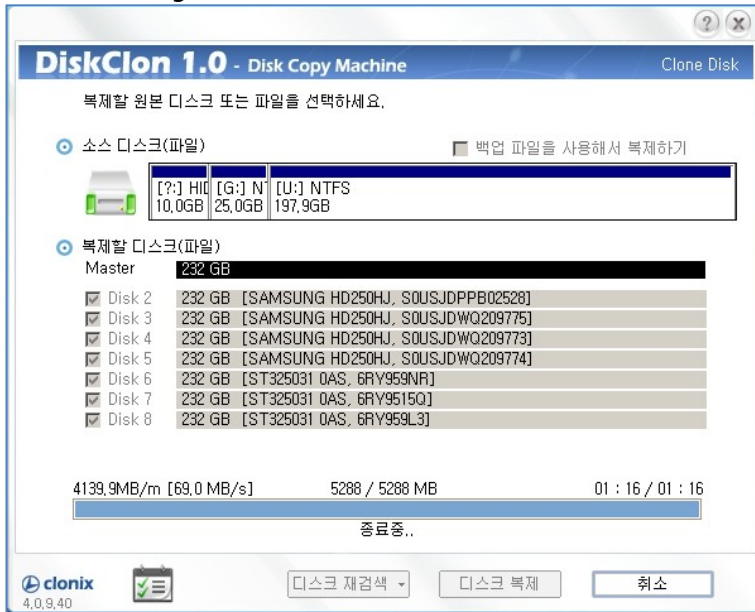
[Description 2] [Disk to be duplicated (file)] shows the source disk with black highlights and target disks with gray highlights. Each disk has a disk size / model / disk serial number. Each disk size is shown as bar. If problems occur during duplication, the gray bar for relevant disk becomes red one.

[Description 3] indicates current proceeding status. **4214.7 MB/m [70.2MB/s]** indicates current duplicating speed, which means 4214.7 MB disk cloning per minute and 70.2MB disk cloning per second. **1896 / 5280 MB** indicates that 1896MB out of total 5280 MB is currently being duplicated. **00:27 / 01:15** Indicates that 27 seconds of total expected elapsed time 1 minute and 15 seconds is being taken.



More details for backup can be checked in log viewing screen.
For viewing log screen, click icon located in lower left corner

STEP 3. Cloning to be ended

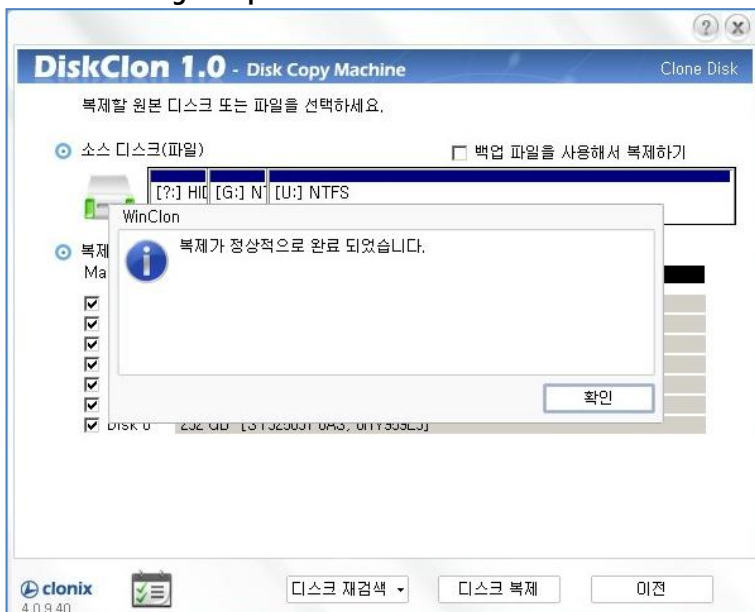


Above screen shows cloning to be being ended.

DiskClon performs following operations to complete cloning.

- Separate disk from system safely.
- Turn off power after all disk drives are safely separated.

STEP 4. Cloning Complete



Above screen shows cloning completion.

2. Cloning from backup image

To duplicate disk from backup image, following procedures are available.

[Procedure 1] Check [Cloning with an image file] in the screen.

[Procedure 2] Select a source image file by pressing file selection icon.

[Procedure 3] After disks are equipped, press start button in the front side or [Disk Cloning] button.

[Sequence 4] After cloning ends and power supplied to each disk is automatically turned off, separate hard disk from system safely.

STEP 1. To select a image



Select an image to duplicate.

[Description 1] Check [Cloning with an image file], and file selection will be appeared as [2].

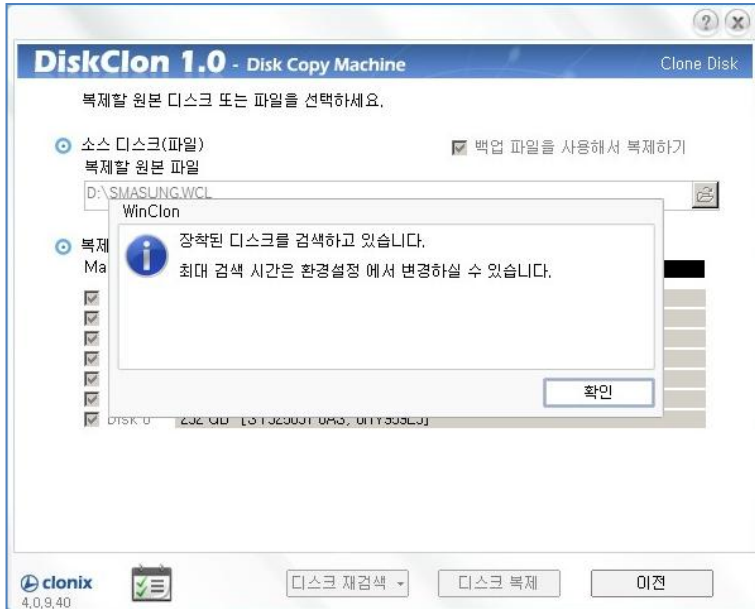
[Description 2] Select image file by pressing file selection button in [2]. Make sure to use disk image only backed up by WinClon or DiskClon.

STEP 2. To start Cloning

There are two options for disk duplication.

Option 1: Press start button in front side of DiskClon

Option 2: Press disk cloning button in GUI.

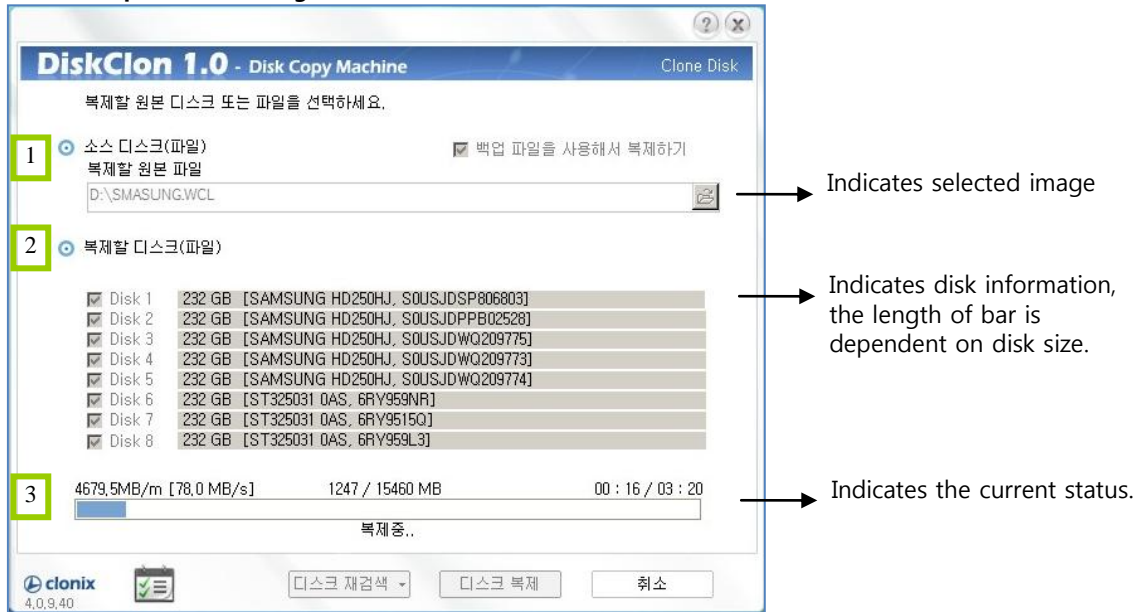


When disk cloning starts, hard disk power is turned on, and system searches equipped disks. Searching time ranges from 10 to 30 seconds, and maximum searching time is changeable in [Settings].



Image cloning uses all disk slots (1~16). Please be careful to remove source disk in slot 1.

STEP 3. To proceed cloning



Screen above indicates disks being duplicated.

[Description 1] [Source disk (file)] indicates source image to duplicate.

[Description 2] [Disk (file) to be copied] indicates disk with gray highlights to be being duplicated. . Each disk has a disk size / model / disk serial number. Each disk size is shown as bar. If problems occur during duplicating, the gray bar for relevant disk becomes red one.

[Description 3] indicates current proceeding status. **4679.5 MB/m [78.0MB/s]** indicates current duplicating speed, which means 4679.5 MB disk cloning per minute and 78MB disk cloning per second. **1247 / 15460 MB** indicates that 1247MB of total 15460 MB is currently being duplicated. **00:16 / 03:20** indicates that 16 seconds of total expected elapsed time 3 minutes and 20 seconds is being taken.



For detailed information of backup result, see log viewing screen.

For viewing log screen, click icon located in lower left corner of screen.

STEP 4. To complete cloning

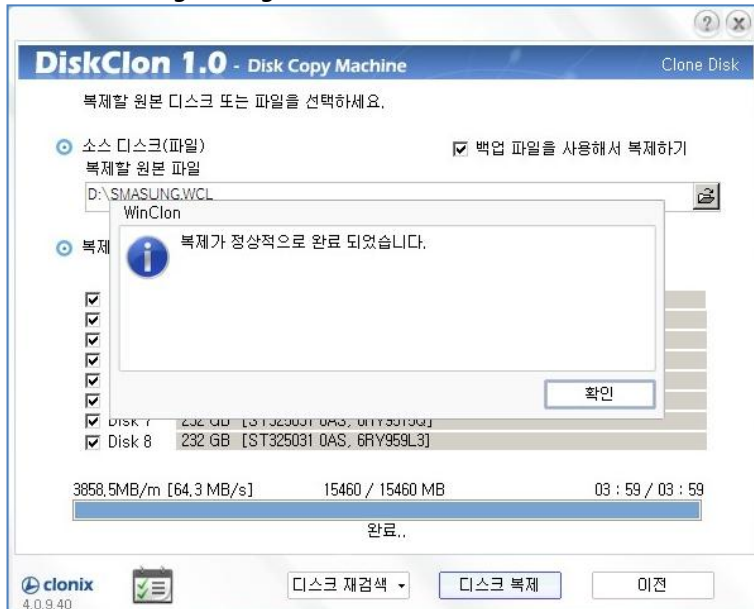


Screen above shows cloning to end

To complete cloning, DiskClon performs following operations.

- It removes drive from system completely.
- It turns off disk power after all drivers are safely removed.

STEP 5. Cloning Ending



Above screen describes cloning end.

3. Disk backup

Preparation for Disk Backup

In order to backup the source disk into file by using DiskClon, make sure that the file system of the source disk is normal. Even for unused partitions, proceed backup after formatting them.

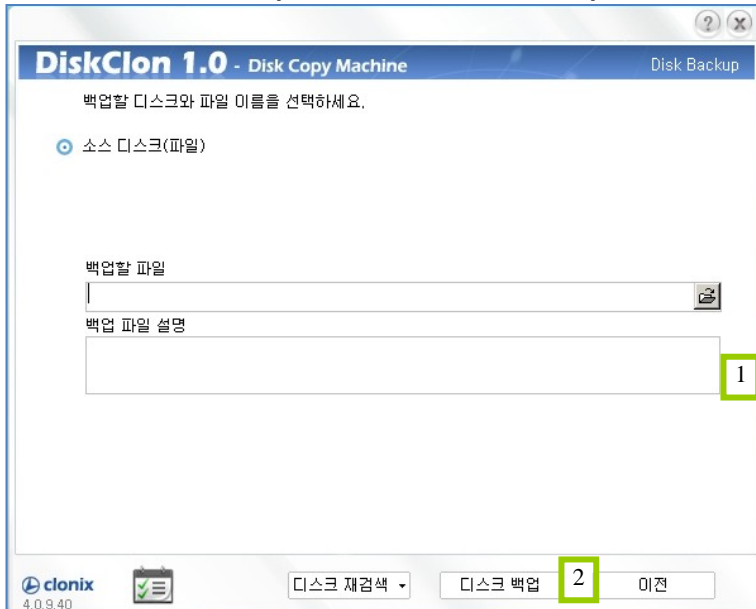


Backup proceeds only against source disk (slot 1). Please check whether source disk is normal and there is sufficient storage space.

Disk Backup

In order to enter into the disk backup menu, press [Disk Backup] in the main screen.

STEP 1. To select a file path and a name for backup

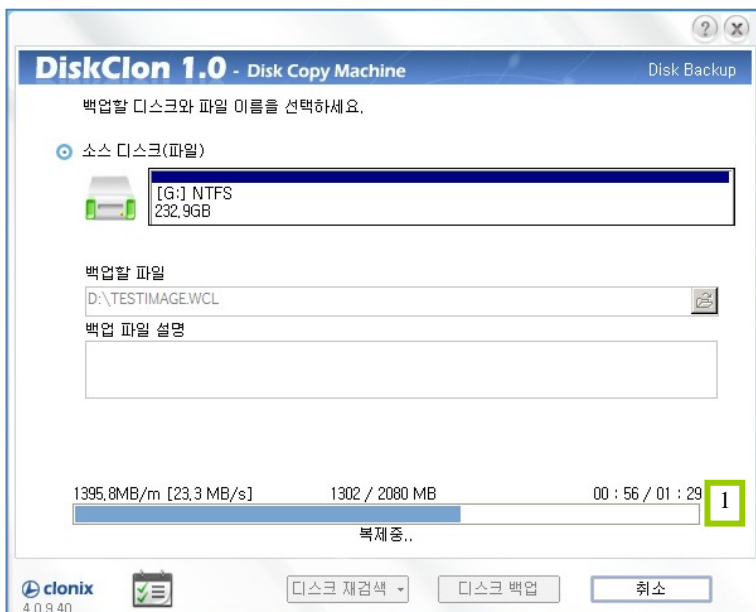


[Description 1] Select a file path by pressing the path selection icon in [File to be backed up].

[Description 2] Simple description is shown at [Description for backup files].

[Description 3] After the path is selected, press the [Disk Backup] button.

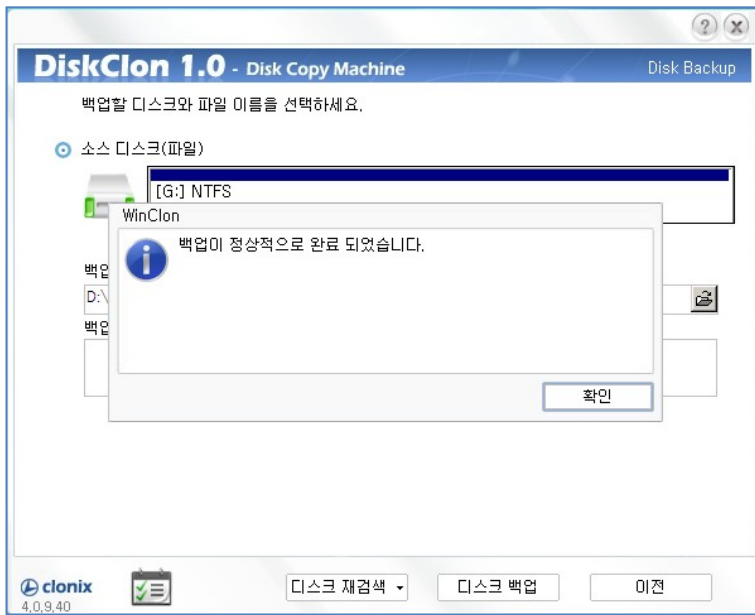
STEP 2 To proceed backup



The screen describes backup is proceeding.

[Description 1] indicates backup proceeding status.

STEP 3 Backup is completed



Above screen describes backup is completed.

Disk is able to be restored with a backup image.

4. DISK Wipe

Preparation for Disk Wipe

After disks are deleted by DiskClon, they cannot be recovered. Therefore, be careful to start Disk Wipe.



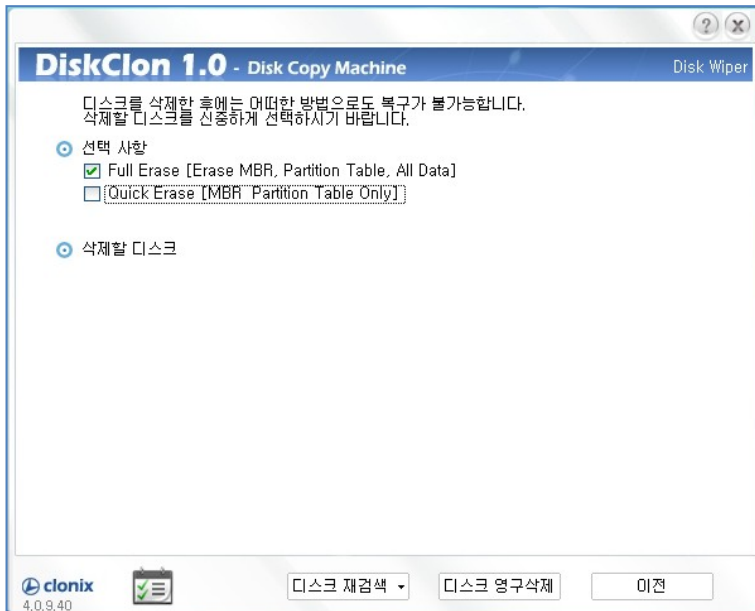
For Disk Wipe, the source disk (slot 1) is also wiped out.

By pressing the start button in front side of DiskClon, it will proceed without asking "yes" or "no"!

Disk Wipe

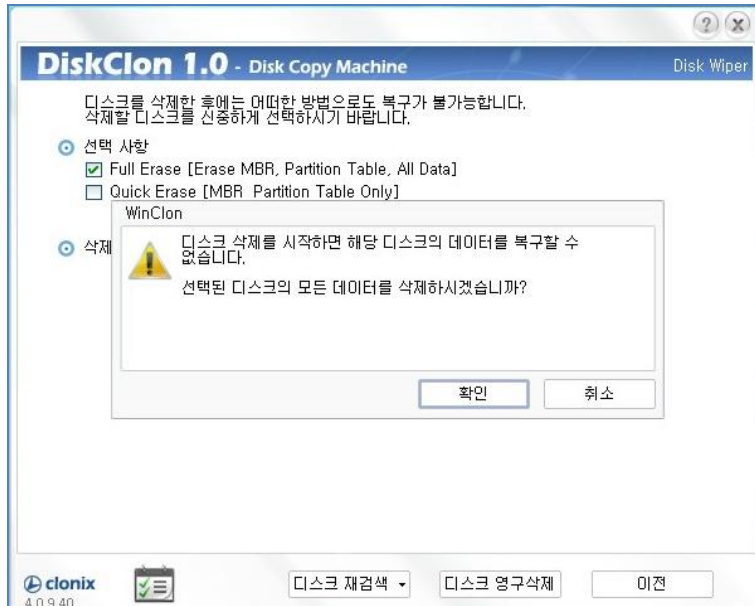
In order enter into the Disk Wipe menu, click [Disk Wipe] in the main menu.

STEP 1. To select Disk Wipe options



Select a Disk Wipe option.

STEP 2 To start Disk Wipe



[Caution 1] Pressing the start button in the fore side of DiskClon will proceed to delete a disk.

STEP 3 To proceed to delete disks



Screen above indicates the Disk Wipe proceeding status.

[Description 1] indicates disk that is currently being deleted.

[Description 2] indicates the current proceeding status. **4667.4 MB/m [77.8 MB/s]** indicates the current wiping speed, which means 4667.4 MB disk deleting per minute or 77.8 MB disk deleting per second. **7390 / 238475 MB** indicates that 7390MB of total 238475 MB is being wiped. **01:35 / 01:15:00** indicates that 1 minute and 35 seconds of total 1 hour and 15 minute is being taken for Disk Wipe.

5. Disk Check

Disk Check

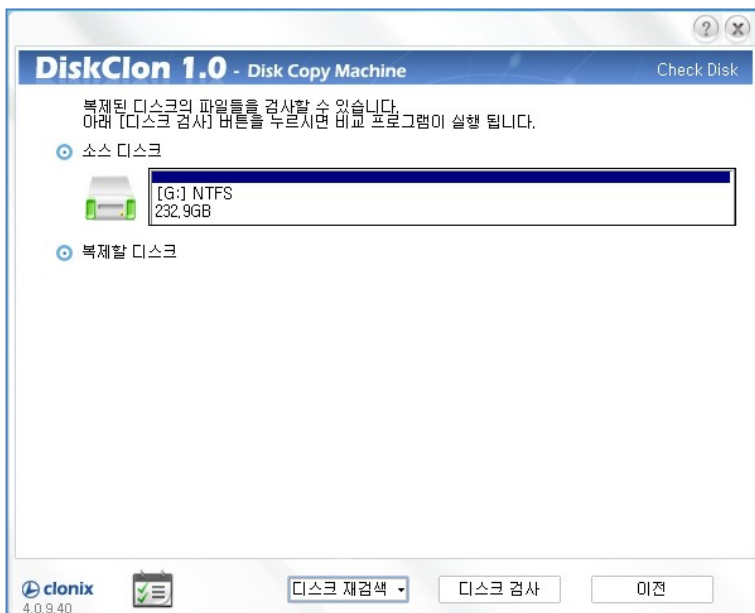
In order to check whether Disk Cloning is normally finished after duplicating the source disk by DiskClon, you can compare the source disk and cloned disks by pressing [Disk Check] in below screen.

For Disk Check, do the following procedures.

- Search equipped disks.
- Select only one disk to be compared with the source disk from among detected disks.
- Do disk check again and recognize only the selected disk, then disk comparison is automatically performed.

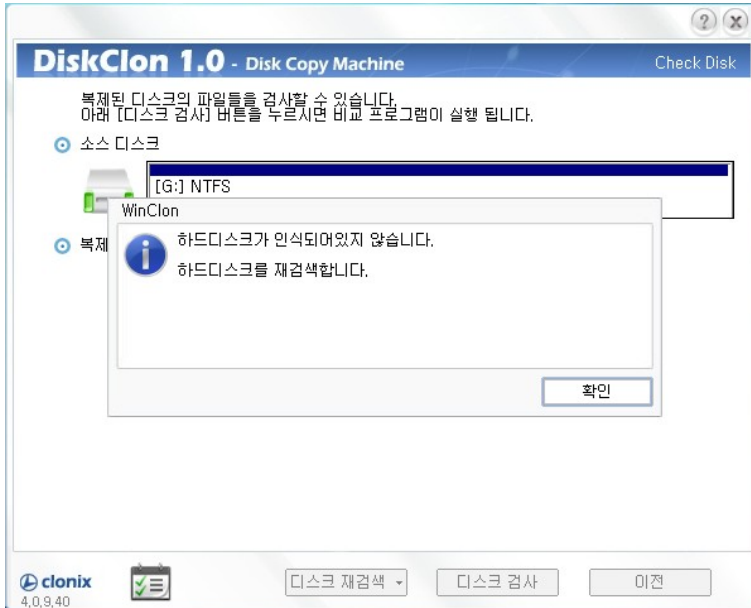
In order to enter into the Disk Check menu, click [Disk Check] menu in the main screen.

STEP 1. To start Disk Check

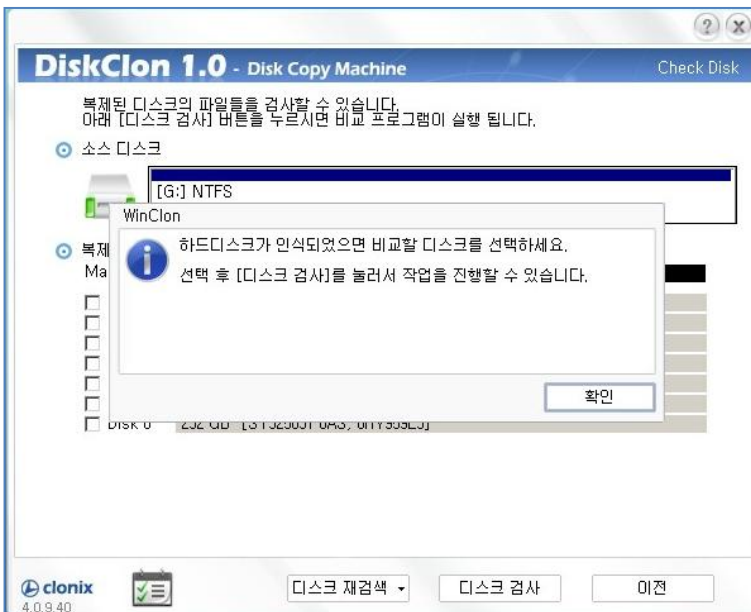


[Disk Check] start Disk Check by pressing [Disk Check] button.

STEP 2. To search disk

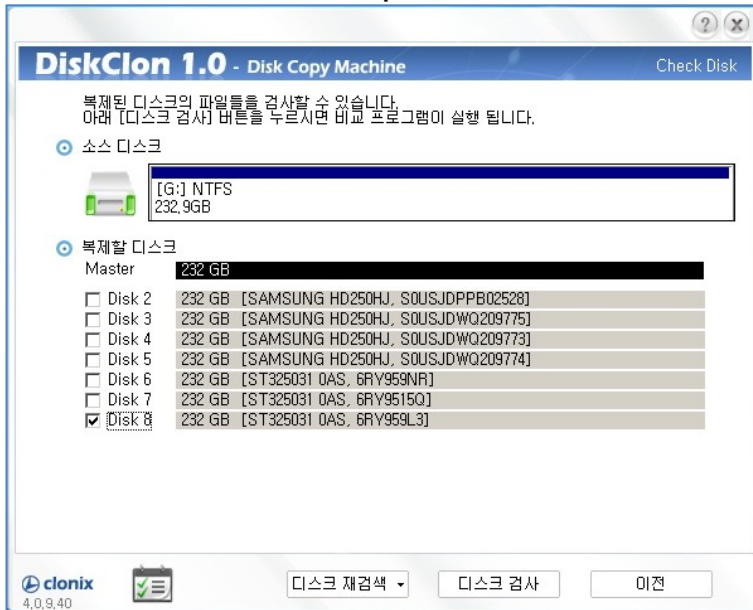


If disk is not detected, it automatically searches disk.



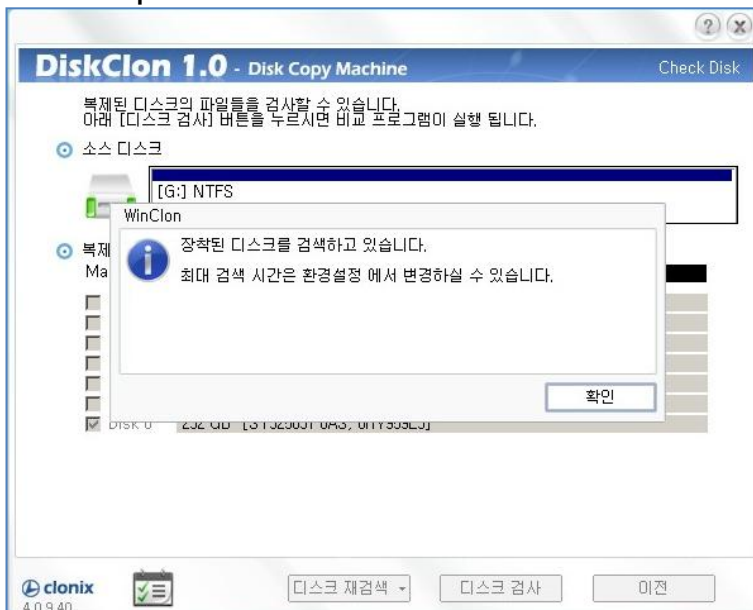
[Step 1] After DiskClon searches disk, close the message window by clicking [OK] button.

STEP 3. To select disk to be compared

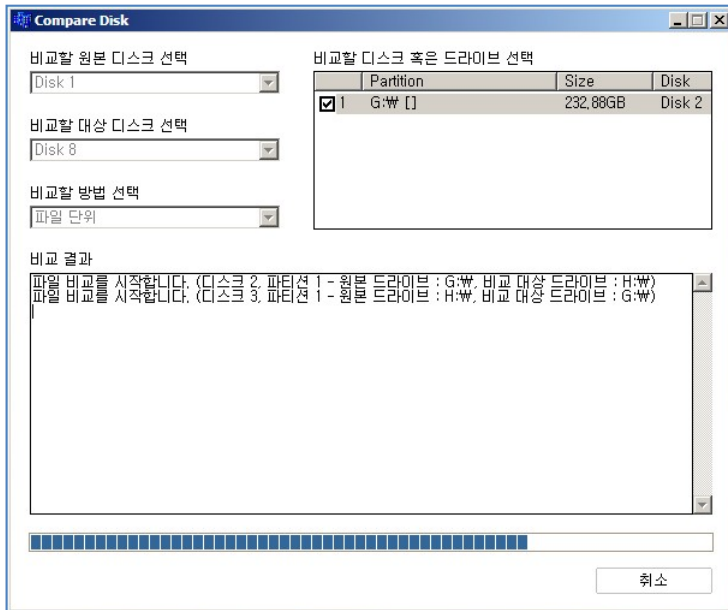


After marking a check box right next to a disk to be compared, click [Disk Check] button. Make sure to select only one disk for comparison.

STEP 4. To proceed Disk Check

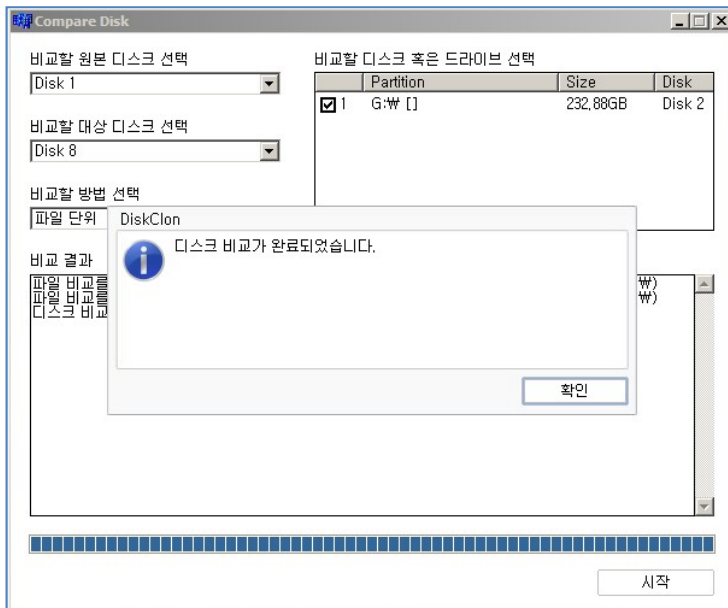


After clicking [Disk Check], search the target disk again for disk checking. After searching the hard disk, Disk checking process will be automatically executed.



Above screen shows that disks are currently being compared.
Below window indicates the result of Disk Check.

STEP 5. Disk check is completed



Disk Check is completed.
After verifying the result of Disk Check, close the program.