



User's Guide

TERABYTE UNLIMITED

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ASP Member

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Notices

Image for DOS was compiled using an unmodified version of Open Watcom, which can be found at www.openwatcom.org.

Technical Support Policy

Technical support is provided online. Software and documentation updates are available at www.terabyteunlimited.com.

- The Image for DOS home page, with software and documentation update information, and support resources, can be found at www.terabyteunlimited.com/image.html.
- A support knowledge base for all TeraByte Unlimited products, including Image for DOS, can be found at www.terabyteunlimited.com/kb.

Registered users can email their questions to support@terabyteunlimited.com, if no suitable resolution is found via the aforementioned support resources. If the issue is not resolved via email, telephone support may be provided.

Unregistered users will be provided technical support and product information through email only.

In all cases, TeraByte Unlimited reserves the right to refuse any communication method that would incur a cost.

Ombudsman Statement

This program is produced by a member of the Association of Shareware Professionals (ASP). ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products. Please contact the ASP Ombudsman online at www.aspshareware.com/omb.

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System Requirements

By default, Image for DOS relies on the BIOS for processing disk functions. If your computer's BIOS interface is limiting access to the hard drive, then Image for DOS will be affected by this limitation. You can have Image for DOS override the BIOS interface on most systems by using the `ATA` environment variable, as described in this user guide.

Hardware	<ul style="list-style-type: none">• IBM-compatible personal computer (i386 or newer)• 16-MB RAM• Writable CD or DVD drive (optional)
Software	<ul style="list-style-type: none">• MS-DOS or PC-DOS• XMS (HIMEM.SYS) (optional)

General Information

Image for DOS (often referred to simply as “IFD”) is a backup and restore program that is designed to function in the DOS operating environment. Image for DOS protects your system by creating a compressed or uncompressed “snapshot” of all *used areas* of your FAT, FAT32, NTFS, Ext2/3, or ReiserFS partition or volume. For other file systems, it saves and restores a compressed or uncompressed snapshot of *all sectors* in the partition or volume (i.e. both used and unused areas).

The snapshot backup created by Image for DOS is referred to as an “image”. The image backup can be written to a set of files on a hard drive, network drive, or directly to most USB 2, IEEE 1394, ATAPI CD-R/RW, or writable DVD drives. (Image for DOS can also work with drives that make use of ASPI drivers, if the appropriate DOS-based driver is provided.)

When you create the image, the file system and files are backed up exactly as they are on your drive at the time of the backup. That is, Image for DOS does not skip files or assume that some files—such as paging files—do not need to be backed up. Image for DOS works at the *sector* level, not at the *file* level.

After backing up with Image for DOS, your computer is protected from crashes, data loss, hardware problems, and malicious software (i.e. viruses), since you can restore the snapshot image whenever you need to.

If you need to restore individual files or folders from a backup, you can use the free TBIView add-on, available from www.terabyteunlimited.com or on your installation CD, if your purchase included one. (Please note that TBIView only runs under Windows.)

Image for DOS creates images that are fully compatible with the other TeraByte Unlimited imaging programs, such as Image for Windows, Image for Linux, and BootIt NG. The reverse is also true: Images created by other TeraByte Unlimited imaging programs are compatible with Image for DOS.

Image for DOS Usage Examples

Local Usage

Boot with your Image for DOS media (i.e. floppy diskette or CD/DVD), and backup your operating system partition. Store your image backups on a secondary hard drive partition, on an external hard drive, or on a CD/DVD disc. Then, when you need to restore, boot from your Image for DOS media again, and use Image for DOS to perform the restore operation.

Across a Network

Create a network-capable DOS diskette, and then use Image for DOS to create or restore the image file to or from a mapped network drive.

Use push technology (not included) to automatically start the backup or restore across a network.

With BootIt NG (a separate product offered by [TeraByte Unlimited](#))

Set up a special partition with batch files to restore certain partitions from a network or local drive. At the end of the batch file, have it run the DOS version of BootNow to boot some partition. Enable BootNow support in BootIt NG, and set up boot items to automatically run the correct batch file (via keystrokes). Now you can have a certain partition rebuilt and booted by just selecting the item from the boot menu.

With a Hidden Recovery Partition

Information on how to set up a hidden recovery partition can be found here:
<http://www.terabyteunlimited.com/kb/article.php?id=277>

Installing Image for DOS


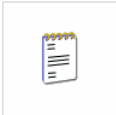


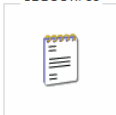
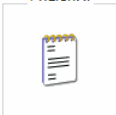

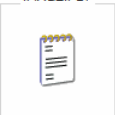
Image for DOS is not “installed” in the usual sense of the word. This is because it is a program that runs under the DOS environment, rather than under Windows. Instead, you run Image for DOS by creating a bootable floppy diskette or CD/DVD disc that contains the Image for DOS program. Then, you simply boot with that disc or diskette to run Image for DOS. Instructions for creating a bootable Image for DOS disc and/or diskette are provided below.

You have several options for preparing Image for DOS for use:

- If you use Windows, and wish to create a bootable Image for DOS disc or diskette, the recommended method is to use the MakeDisk utility, which is included with Image for DOS. (If needed, the MakeDisk utility can also be [downloaded separately](#).) Instructions on using MakeDisk are provided below.
- Regardless of the platform you are using, you can create a bootable DOS floppy diskette or CD/DVD disc, and copy the `IMAGE.EXE` file to that media. Instructions for creating a bootable floppy diskette are provided below.

Creating Bootable Image for DOS Media Using MakeDisk (Windows only)

1. Download Image for DOS, if you do not already have the latest version. There are two versions of Image for DOS that can be downloaded: The **unregistered trial version**, and the **registered version**.
 - Click [here](#) to download the **unregistered trial version**, if you *have not* purchased Image for DOS.
 - Click [here](#) to access a product download form for obtaining the **registered version**, if you *have* purchased Image for DOS. *You will need to provide your name, email address, and Image for DOS order number.*
2. Extract the contents of the Image for DOS ZIP archive to a folder of your choice.
 - If you are using a version of Windows that has a built-in compressed folders feature (e.g. Windows Me or Windows XP), you can double click the ZIP file and then use the **Extract all files** link shown in the left pane of Explorer to extract the contents. Alternatively, after opening the ZIP file, you can select all the files listed, and copy them to another folder to extract the contents. Please note that whichever foregoing method you use, the contents of the ZIP file *must* be extracted to another folder before proceeding.

			
CDBOOT.F35	FWLIC.TXT	IMAGE.EXE	IMAGE.PDF
			
LICENSE.TXT	MAKEDISK.CFG	MAKEDISK.EXE	REGISTER.TXT

CDBOOT.F35 is the file required to create a bootable CD/DVD. Image for DOS will look in the current directory for **CDBOOT.F35** during the creation of a CD/DVD, and use it to create a bootable disc.

FWLIC.TXT is the license agreement for TeraByte Unlimited freeware (in this case, the included MakeDisk utility).

IMAGE.EXE is the Image for DOS program.

IMAGE.PDF is a copy of this manual.

LICENSE.TXT is a copy of the Image for DOS license agreement.

MAKEDISK.CFG is the MakeDisk configuration file for Image for DOS.

MAKEDISK.EXE is the MakeDisk utility, which allows you to easily create bootable media to run Image for DOS.

REGISTER.TXT is an order form for Image for DOS, and is included in the trial version only.

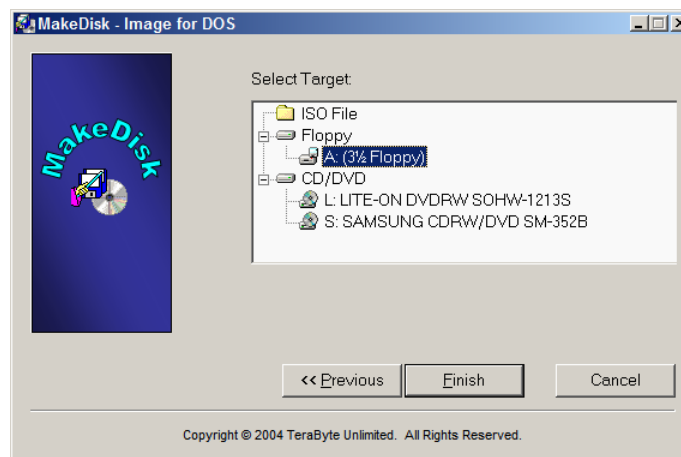
3. Run `MAKEDISK.EXE` from the folder of step 2. The MakeDisk welcome screen appears, as shown below.



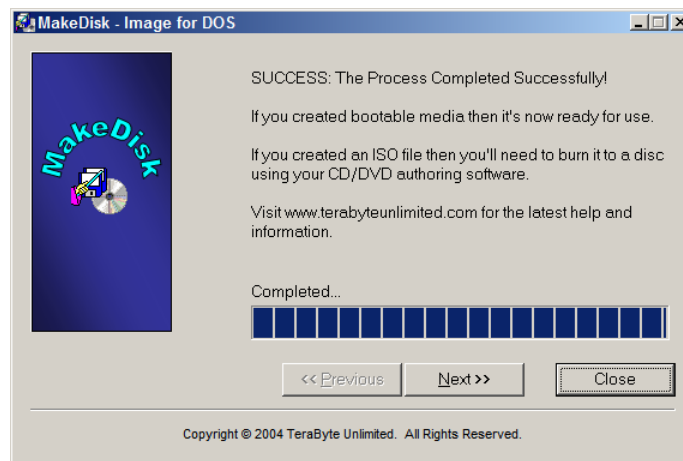
4. Click Next on the MakeDisk welcome screen. The Image for DOS license agreement screen appears, as shown below.



5. Read the Image for DOS license agreement, and if you accept it, select the "I accept the agreement" button and click Next. The "Select Target" screen appears, as shown below.



6. Choose the target that MakeDisk should use to create the bootable Image for DOS media.
 - If you choose the “ISO File” option, you must supply an ISO file name.
 - If you choose the “3 ½ Floppy” option, be sure to insert a floppy diskette before proceeding. **Note:** The entire contents of this floppy diskette will be overwritten.
 - If you choose the “CD/DVD” option, be sure to insert a *writable* CD or DVD disc before proceeding. **Note:** The entire contents of this disc will be overwritten.
 - MakeDisk can automatically overwrite CD-RW, and DVD+RW media. However, if you wish to use DVD-RW media, it must be either brand new, or fully blanked before being processed by MakeDisk. To fully blank the DVD-RW media, use your burning software’s “full erase” function. (The “quick erase” function will not work for this purpose.)
7. Click Finish, and respond to subsequent prompts as necessary. MakeDisk will then create your bootable media or ISO image. When it is done, the success screen should appear, as shown below.



8. Click Close on the MakeDisk “success” screen.
 - If you selected the “3 ½ Floppy” or “CD/DVD” option in step 6, you can now use that media to boot and run Image for DOS.
 - If you selected the “ISO File” option in step 6, you will have to use other CD/DVD authoring software to create a bootable disc from the ISO file.

Installing Image for DOS Manually (all platforms)

1. Download Image for DOS, if you do not already have the latest version. There are two versions of Image for DOS that can be downloaded: The **unregistered trial version**, and the **registered version**.
 - Click [here](#) to download the **unregistered trial version**, if you *have not* purchased Image for DOS.
 - Click [here](#) to access a product download form for obtaining the **registered version**, if you *have* purchased Image for DOS. *You will need to provide your name, email address, and Image for DOS order number.*
2. Extract the contents of the Image for DOS ZIP archive to a folder of your choice.
 - If you are using a version of Windows that has a built-in compressed folders feature (e.g. Windows Me or Windows XP), you can double click the ZIP file and then use the “Extract all files” link shown in the left pane of Explorer to extract the contents. Alternatively, after opening the ZIP file, you can select all the files listed, and copy them to another folder to extract the contents. Please note that whichever foregoing method you use, the contents of the ZIP file *must* be extracted to another folder before proceeding.
3. Create one of the following:
 - A bootable DOS floppy diskette, using the instructions provided under **Creating a Startup Diskette**, or using the distribution available from the [FreeDOS](#) site.
 - A bootable CD/DVD compilation, using the CD/DVD authoring software of your choice.
4. Copy the files `IMAGE.EXE` and `CDBOOT.F35` from the folder of step 2 to the bootable DOS floppy diskette, or the bootable CD/DVD compilation.
 - The bootable floppy diskette or CD/DVD disc can now be used to boot from and run Image for DOS.
 - If you are creating a bootable CD/DVD, proceed with the creation of the bootable disc at this point.

What is CDBOOT.F35?

The file `CDBOOT.F35` is used to make any CD or DVD you create with Image for DOS (or Image for Windows) bootable. Image for DOS is contained within `CDBOOT.F35`, allowing you to perform restore operations as needed.

If you use the trial version of Image for DOS (or Image for Windows) to create a bootable CD or DVD, you will be able to restore that image for 30 days. After that time, you will only be able to restore that image using a registered version of Image for DOS (or Image for Windows).

The registered copies of Image for DOS (and Image for Windows) have what is referred to as a full-use version of `CDBOOT.F35`. This full-use version allows you to not only boot with any CD or DVD you create with the software, but also to restore from any images contained on the applicable discs, free of any time restriction.

The trial version of Image for DOS includes a trial version of `CDBOOT.F35`. The registered version of Image for DOS includes a full-use version of `CDBOOT.F35`.

Please note that Image for DOS looks for `CDBOOT.F35` in the current directory of the DOS environment. (This may be of importance to you if you plan to use your own custom batch file with Image for DOS.)

Creating a Startup Diskette

If you do not have a copy of Windows XP or Windows 95/98/Me, you can visit the [FreeDOS](#) site to download a free DOS clone.

Creating a DOS Boot Diskette from Windows 95/98/Me

1. Insert a floppy diskette to format.
2. Click Start, then Settings, then Control Panel.
3. Double-click Add/Remove Programs.
4. Click on the **Startup Disk** tab.
5. Click the **Create Disk** button.

Creating a DOS Boot Diskette from Windows XP

1. Insert a floppy diskette to format.
2. Click **Start** and select **My Computer**.
3. Right-click the A: drive and select **Format**.
4. Check the box next to Create an MS-DOS startup disk.
5. Click **Start**.

Starting Image for DOS Automatically Upon Boot

To have Image for DOS run automatically when booting from diskette, use a text editor (e.g. Notepad) to create a file with only one line in it, as follows:

```
IMAGE . EXE
```

Save this file as A:\AUTOEXEC.BAT (assuming that A:\ is the path of your floppy drive).

If your diskette already has an AUTOEXEC.BAT file on it, add the line above to the end of the current contents of the file (on a new line).

Creating a Network Boot Diskette

If using Windows NT 4 Server, use the Network Client Administrator under Administrative Tools to create a network boot diskette.

If you don't have Windows NT 4 Server, you can download DSK3-1.EXE and DSK3-2.EXE from the Microsoft ftp site to obtain the Microsoft Network Client for MS-DOS (<ftp://ftp.microsoft.com/bussys/clients/MSCLIENT/>) to create your own network boot diskettes. You may have to search for a DOS driver for your network card.

You may want to also consider using Bart's Network Boot Disk located at <http://www.nu2.nu/bootdisk/network>. This disk is easy to set up, and there are quite a few DOS drivers available in one place.

If you experience very slow network speeds, try using the IOBS=A environment variable, as explained later in this document.

Running Image for DOS

Running Image for DOS from Bootable Media

1. Create the bootable floppy diskette or CD/DVD disc as outlined above.
2. Insert the media into the appropriate drive, and reboot.
 - In order to boot from a floppy diskette or CD/DVD, you may have to change the order in which boot devices are examined. This is done by going into your computer's BIOS, usually by pressing the Delete key when prompted.

Running Image for DOS from Windows 95 or 98

1. Download Image for DOS, if you do not already have the latest version. There are two versions of Image for DOS that can be downloaded: The **unregistered trial version**, and the **registered version**.
 - Click [here](#) to download the **unregistered trial version**, if you *have not* purchased Image for DOS.
 - Click [here](#) to access a product download form for obtaining the **registered version**, if you *have* purchased Image for DOS. *You will need to provide your name, email address, and Image for DOS order number.*
2. Extract the contents of the Image for DOS ZIP archive to a folder of your choice.
3. Create a shortcut to `IMAGE.EXE` on your Windows Desktop, by right clicking `IMAGE.EXE`, dragging it to the Desktop, and selecting "Create Shortcuts Here" from the menu that appears when you release the mouse button.
4. Right-click the shortcut and select **Properties**.
5. Select the **Program** tab.
6. Click the **Advanced** button.
7. Check the box next to **MS-DOS Mode**.
8. Click OK until you return to the Windows Desktop. The shortcut can now be used to run Image for DOS.

Backing Up Your System with Image for DOS

Things to Consider Before Backing Up

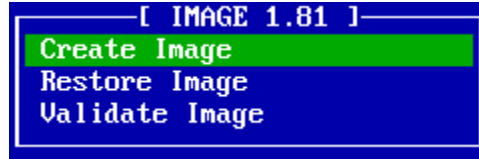
There are few hard-and-fast rules to follow when formulating a backup plan. What follows, therefore, is intended more as a set of examples to spur thought, than as concrete rules to abide by.

- Consider the destination for your backup. For example, if you will be backing up around 30-GB of data, you probably will not want to store the backup on a set of CD-R/RW discs, since the resultant backup will likely require 20 discs or more (based on an expected compression ratio of 40-60%). A better option in this case would be:
 - Backup to an alternate hard drive partition (and perhaps use the free add-on utility [BINGBURN](#) later to burn the backup to a set of DVD discs).
 - Backup to an external hard drive.
 - Backup directly to a set of DVD discs.
- Plan your backup with a restore strategy in mind. Some of your options are:
 - Save the backup directly to a set of bootable CD or DVD discs, as explained in this manual. To restore, simply boot with the restore disc, and use Image for DOS to perform the restore.
 - Save the backup to an alternate hard drive partition. To restore, run Image for DOS from a bootable floppy disk or CD/DVD disc. You can also use BootIt NG (a separate product offered by [TeraByte Unlimited](#)) to perform the restore.
- Strike your own balance between convenience and resiliency. Here are some simple ideas to consider:
 - Save your backups directly to an alternate hard drive partition, and then use the free utility [BINGBURN](#) to burn a secondary copy of the backup to a set of CD/DVD discs. Then, if you need to restore, you have the speed and convenience benefit of the backup stored on the hard drive. If things have really gone wrong and the primary copy of the backup is not available, you can fall back on the copy of the backup that has been saved on the CD/DVD discs.
 - Instead of always saving the backup to just one set of CD/DVD discs, keep two or more separate sets of backup discs, which will give you something to fall back on, if something should ever go wrong with the newest backup set.
 - If you are using multiple sets of backup CD/DVD discs, keep the newest set offsite, to guard against physical damage.

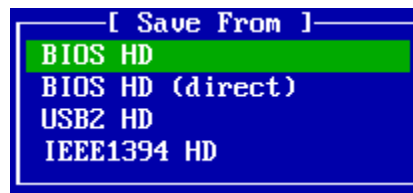
Backing up with Image for DOS

Note: You may use the Esc key to undo menu selections, and move back to the previous menu.

1. Run Image for DOS, as explained on page 13. The main Image for DOS window appears, as shown below.

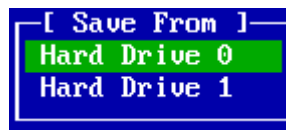


2. Use the arrow keys to select the “Create Image” menu item, and press Enter. The “Save From” window appears, as shown below.

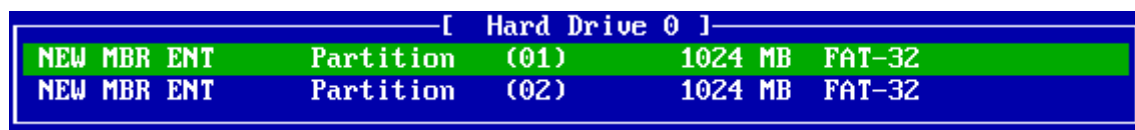


3. Select the access method you wish to use for the source hard drive:
 - **BIOS HD** -- Locates and accesses drives using the system BIOS. Please note that any problems or limitations inherent to the system BIOS will apply.
 - **BIOS HD (direct)** -- Attempts to locate the hard drive using the system BIOS, but then attempts to access it directly, bypassing the BIOS. This can sometimes be helpful in cases where performance with the "BIOS HD" option is very poor. In order to get the most out of this option when creating an image, you should select a partition--rather than a file--as the target for saving the image. (This advice applies to step 6 below.)
 - **USB2 HD** -- Examines the attached USB 2 controller, if any, for available high-speed hard drives.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
 - **IEEE1394 HD** -- Examines the attached IEEE 1394 controller, if any, for available hard drives.

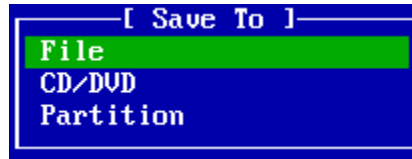
Once you make a selection, press Enter. The second “Save From” window appears.



4. Select the hard drive that contains the partition you wish to backup, and press Enter. The “Hard Drive n” window appears (where “n” is the applicable hard drive number).



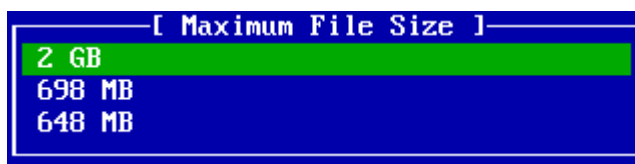
5. Select the partition you wish to backup, and press Enter. The “Save To” window appears.
 - You can press the left Shift key while selecting a partition to enable “raw mode” for the backup. With this option enabled, all sectors of the source partition will be copied, rather than only used sectors. You will be prompted to confirm activation of raw mode.



6. Select the destination for the backup file(s), before pressing Enter to proceed:
 - Select File if you would like to save the backup file(s) to a folder on a hard drive that has a drive letter assigned to it by DOS. The File option must be used when saving images to a mapped network drive.
 - If you are saving the image to a file, do not save it to the same partition you are backing up. If you do, the restored partition will be in an inconsistent state, which can compromise reliability.
 - You may indirectly access drives using UNC paths, if you first map the drive using the “net use x: \\server\share” command. Then, you would simply specify the path as usual (e.g. “x:\folder\file”, where “x:” is the mapped drive).
 - You do not have to supply a file extension—just the path and file name itself. The extension will be added automatically.
 - Select the CD/DVD option if you would like to save the backup file(s) to a bootable CD or DVD disc.
 - Image for DOS can automatically overwrite CD-RW, and DVD+RW media. However, if you wish to use DVD-RW media, it must be either brand new, or fully blanked before being used. To fully blank the DVD-RW media, use your burning software’s “full erase” function. (The “quick erase” function will not work for this purpose.)
 - Select the Partition option if you would like to save the backup file(s) to a partition that has not been assigned a drive letter by DOS. The Partition option is generally required, for example, when using Image for DOS to save images on NTFS partitions.
 - Regardless of which backup destination you select, note that Image for DOS automatically creates backup files with the .IMG extension first, and then creates additional numbered files extensions as necessary. For example, if your backup results in three image files, they will be named BACKUP.IMG, BACKUP.001, and BACKUP.002, in that order of creation. How many image files are created depends on how large the source data is, whether compression is used, and what “Maximum File Size” setting you use, as described in a later step.

7. The screen that appears next depends on what “Save To” option you selected above:
- If you selected the File option, enter a path and file name, using the MS-DOS 8.3 naming convention.
 - If you selected the CD/DVD option, you will be prompted to select an interface type:
 - **ATAPI:** Select this option if your CD/DVD drive is an ATAPI device, and none of the other selections apply. This is the most common option.
 - **ASPI:** Select this option if your CD/DVD drive will be accessed using an ASPI layer. (You must supply the ASPI driver for this option to work.)
 - **USB2:** Select this option if your CD/DVD drive is attached to a USB 2 controller.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
 - **IEEE1394:** Select this option if your CD/DVD drive is attached to an IEEE 1394 controller.
 - If you selected the Partition option, you will be prompted with “Save To” options that mirror the “Save From” options that were outlined in step 2 above. The final step in specifying the destination will involve providing a path and file name, using the MS-DOS 8.3 naming convention.
 - You may save the image to a directory other than root; however, in order to do so, you must create the directory structure beforehand, in an environment that supports the file system in use. Since the MS-DOS 8.3 naming convention will be used by Image for DOS, you may want to restrict each folder name to 8 characters or less.
 - If you are saving to a directory other than root, specify the path using the format “\folder1\folder2\filename”. Do not supply a drive letter, or a file extension.

Whichever “Save To” option you selected, you will come to the “Maximum File Size” screen.



8. Your selection on the “Maximum File Size” screen tells Image for DOS how large the backup file(s) that are created can be. For example, if the backup ends up being 3.5-GB in size overall, and you select the “2 GB” option, Image for Windows will create one 2.0-GB file, and one 1.5-GB file. The “698 MB” and “648 MB” selections are intended to create backup files that fit on 700-MB and 650-MB CD-R/RW discs, respectively. You can use this option, for example, if you are saving the backup file(s) to a hard drive initially, and will later burn them to a CD using the free TeraByte Unlimited utility [BINGBURN](#).

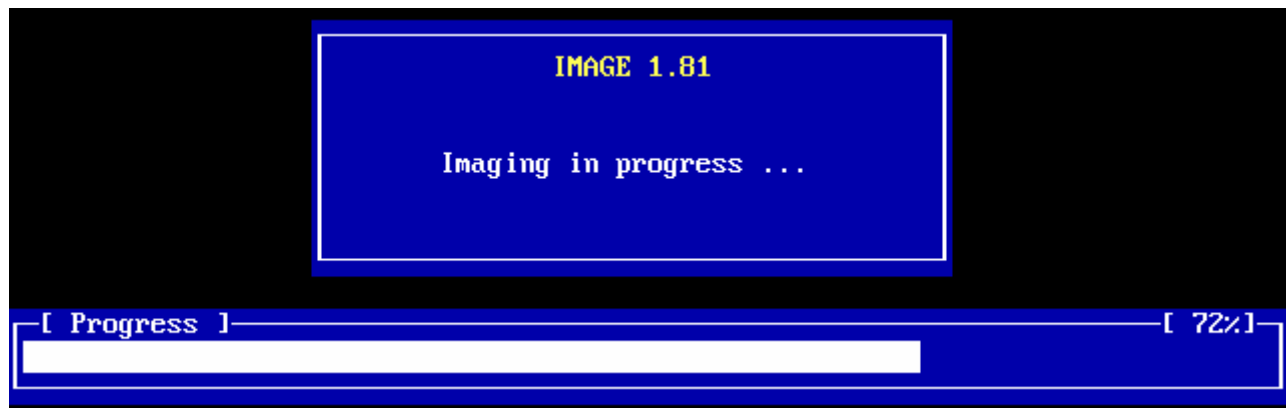
Once you make a selection for maximum file size, you will be asked if you want the backup files validated after creation.



Byte-for-Byte comparison (Y/N)?

9. If you respond with a “Y” for the first validation prompt, you will be asked if you would like the validation to be performed with a full byte-for-byte comparison of the source and backup data.
- If you perform only a basic validation (i.e. you respond “Y” to the first validation prompt, and “N” to the second), Image for DOS will perform internal consistency checks on the backup file(s), once they are created. Enabling this option increases the overall processing time, but can help ensure that the backup is reliable.
 - If you choose to have a full byte-for-byte validation performed (i.e. you respond “Y” to both validation prompts), Image for DOS will verify that every byte in the source data was backed up correctly, ensuring 100% accuracy. This option generally doubles the processing time of the overall backup operation, but is advisable to use where maximum reliability is required.

Once you respond to the image validation prompts, Image for DOS proceeds with the backup operation, and will provide an indication of the backup progress throughout (and also for the validation progress, if any).



The backup and validation operations may be interrupted at any point by pressing the Esc key. Image for DOS will ask you to confirm that you want to cancel before it interrupts the current operation.

When all operations are done, the completion screen will appear.

The process has completed successfully._

Restoring from a Backup with Image for DOS

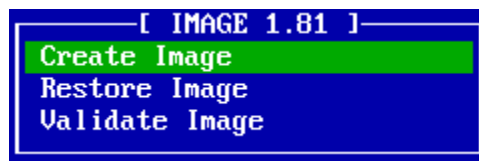
Please note the following, when preparing to perform a restore operation:

- When you are restoring an image, you cannot restore over the partition that contains the source image file.
- The restore target (whether a partition or an area of free space) must be large enough to accommodate the data from the source partition. The *minimal* amount of space required in the target is determined by the amount of space encompassed from the beginning of the source partition, to the last used area of the source partition. For example, if the partition backed up had 2 GB of data, and the last part of that data ended 15 GB from the start of the source partition, the target area would need to be at least 15 GB in size to accommodate the restore. This is true regardless of what the overall size of the source partition was.
- If the restore target (whether a partition or an area of free space) is larger than the source partition was, there will be an area of free space left over, unless the restore is performed via command line using the *x* parameter (as explained later in this manual).
- When you are booting from a restore CD/DVD, make sure the other CD/DVD drives do not also contain a bootable disc; otherwise the wrong CD/DVD drive may be used to boot.
- Since the hard drive order during the boot process may be different than it is while Windows is running, you may need to press a key when prompted, to access the interactive Image for DOS menu that will allow you to select the appropriate drive from which to restore.

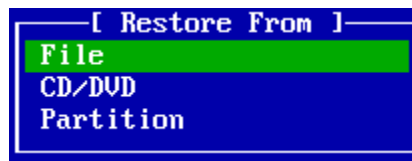
Restoring with Image for DOS

Note: You may use the Esc key to undo menu selections, and move back to the previous menu.

1. Run Image for DOS, as explained on page 13. The main Image for DOS window appears, as shown below.



2. Use the arrow keys to select the "Restore Image" menu item, and press Enter. The "Restore From" window appears, as shown below.



3. Select the source location of the backup file, before pressing Enter to proceed:
 - Select File if you would like to restore from a backup stored in a folder on a hard drive which has a drive letter assigned to it by DOS. The File option must be used when restoring images from a mapped network drive.
 - You may indirectly access drives using UNC paths, if you first map the drive using the "net use x: \\server\share" command. Then, you would simply specify the path as usual (e.g. "x:\folder\file", where "x:" is the mapped drive).

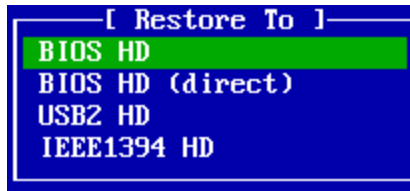
- Select the CD/DVD option if you would like to restore from a backup on CD or DVD disc.
 - Select the Partition option if you would like to restore from a backup on a partition that has not been assigned a drive letter by DOS. The Partition option is generally required, for example, when using Image for DOS to restore images stored on NTFS partitions.
 - If you are restoring from a directory other than root, specify the path using the format “\folder1\folder2\filename”. Do not supply a drive letter, or a file extension.
4. The screen that appears next depends on what “Restore From” option you selected above:
- If you selected the File option, navigate to and/or select the desired backup file, noting that the MS-DOS 8.3 naming convention is used.
 - If you selected the CD/DVD option, you will be prompted to select an interface type:
 - **ATAPI:** Select this option if your CD/DVD drive is an ATAPI device, and none of the other selections apply. This is the most common option.
 - **ASPI:** Select this option if your CD/DVD drive will be accessed using an ASPI layer. (You must supply the ASPI driver for this option to work.)
 - **USB2:** Select this option if your CD/DVD drive is attached to a USB 2 controller.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
 - **IEEE1394:** Select this option if your CD/DVD drive is attached to an IEEE 1394 controller.

Once you select a CD/DVD interface option, you will then have to select the specific drive from which to restore. Then you will be prompted to insert the first disc of the backup.

- If you selected the Partition option, you will be prompted with the following “Restore From” options, which ask you to select the access method you wish to use for the source hard drive:
 - **BIOS HD --** Locates and accesses drives using the system BIOS. Please note that any problems or limitations inherent to the system BIOS will apply.
 - **BIOS HD (direct) --** Attempts to locate the hard drive using the system BIOS, but then attempts to access it directly, bypassing the BIOS. This can sometimes be helpful in cases where performance with the "BIOS HD" option is very poor. In order to get the most out of this option when restoring an image, you should also select the “BIOS HD (direct)” option for the “Restore To” target as well. (This advice applies to step 5 below.)
 - **USB2 HD --** Examines the attached USB 2 controller, if any, for available high-speed hard drives.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
 - **IEEE1394 HD --** Examines the attached IEEE 1394 controller, if any, for available hard drives.

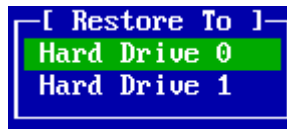
Once you make an access method selection, press Enter. Another “Restore From” window will appear, on which you need to select the source hard drive. Then, select the source partition on the “Hard Drive n” screen (where “n” is the applicable hard drive number). Finally, navigate to and/or select the desired backup file, noting that the MS-DOS 8.3 naming convention is used.

Whichever initial “Restore From” option you selected, you should now be at the “Restore To” screen.

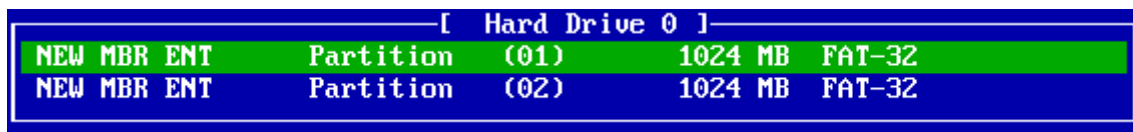


5. On the “Restore To” screen, select the access method you wish to use for the destination hard drive:
- **BIOS HD** -- Locates and accesses drives using the system BIOS. Please note that any problems or limitations inherent to the system BIOS will apply.
 - **BIOS HD (direct)** -- Attempts to locate the hard drive using the system BIOS, but then attempts to access it directly, bypassing the BIOS. This can sometimes be helpful in cases where performance with the "BIOS HD" option is very poor. In order to get the most out of this option when restoring an image, you should also select the “BIOS HD (direct)” option for the “Restore From” source as well. (This advice applies to step 4 above.)
 - **USB2 HD** -- Examines the attached USB 2 controller, if any, for available high-speed hard drives.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
 - **IEEE1394 HD** -- Examines the attached IEEE 1394 controller, if any, for available hard drives.

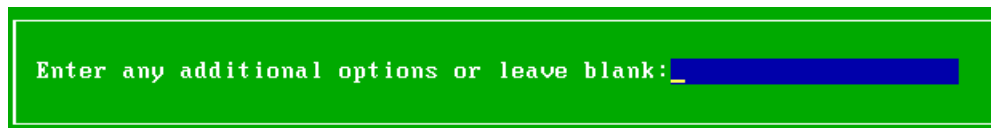
Once you make a selection, press Enter. The second “Restore To” screen appears.



6. Select the hard drive that contains the partition or free space you wish to restore to, and press Enter. The “Hard Drive n” window appears (where “n” is the applicable hard drive number).



7. Select the partition or free space entry you wish to restore to, and press Enter. You will be prompted to enter any additional options desired.



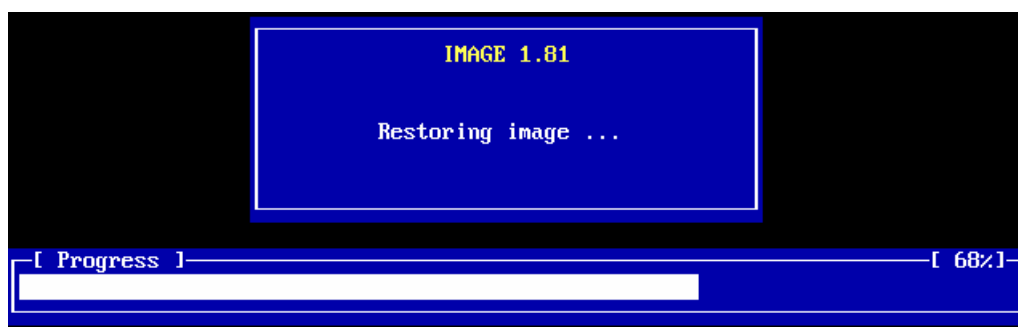
8. If you want to use any additional options for the restore, enter them as prompted. Otherwise, leave the text box empty and press Enter.

- The options that can be used here are A, Z, J, T, and X[mb]. These options can be used in combination, and may be listed in any order. For example:

JX10Z

For further explanation of the A, Z, J, T, and X[mb] options, please refer to the table titled “Image for DOS Command Line Options: Restore” in the “Image for DOS Command Line Options” section below.

- If the destination you selected in step 7 is a free space entry, the restore operation will begin immediately after you press Enter on the options window.
- If the destination you selected in step 7 is an existing partition, you will first be warned that the existing data will be overwritten, and will be asked to confirm before proceeding. Then, you will be asked if you would like to validate the image before the restore operation.
 - If you choose to have the image validated, Image for DOS will perform internal consistency checks on the backup file(s), prior to the restore operation. Enabling this option increases the overall processing time, but can help ensure that the restore will be reliable.



The restore and validation operations may be interrupted at any point by pressing the Esc key. Image for DOS will ask you to confirm that you want to cancel before it interrupts the current operation.

When all operations are done, the completion screen will appear.



9. Once the restore process completes, reboot the computer if you are prompted to do so.
 - **Note:** If you do not reboot when asked, the operating system will think the partition and file system is as it was before the restore. This could cause data corruption. You can override the reboot prompt by using the /RN switch during a command line restore, but only do this if you are an advanced user, and understand the potential ramifications of not rebooting.

Validating Backups with Image for DOS

Image for DOS provides you with the option to validate backups at the time of their creation, and also before any backup is restored. However, you can also perform this validation at any time afterward, using the instructions provided below.

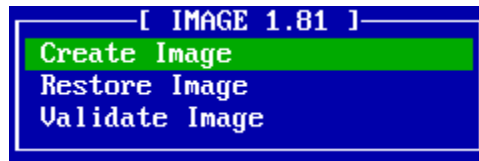
Validating a backup causes internal consistency checks to be performed on the backup file(s). This can help ensure that the backup will be reliable, should you ever need to restore from it.

Note: A byte-for-byte validation can only be performed as part of a backup operation. That is, the Validate operation described here can only perform a standard validation, not a byte-for-byte validation.

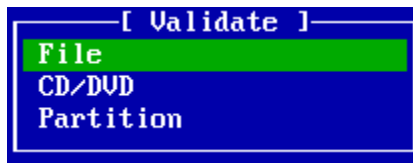
Validating a Backup with Image for DOS

Note: You may use the Esc key to undo menu selections, and move back to the previous menu.

1. Run Image for DOS, as explained on page 13. The main Image for DOS window appears, as shown below.



2. Use the arrow keys to select the "Validate Image" menu item, and press Enter. The "Validate" window appears, as shown below.



3. Select the location of the backup file you wish to validate, before pressing Enter to proceed:
 - Select File if you would like to validate a backup stored in a folder on a hard drive which has a drive letter assigned to it by DOS.
 - You may indirectly access drives using UNC paths, if you first map the drive using the "net use x: \\server\share" command.
 - Select the CD/DVD option if you would like to validate a backup on CD or DVD disc.
 - Select the Partition option if you would like to validate a backup on a partition that has not been assigned a drive letter by DOS. The Partition option is generally required, for example, when using Image for DOS to validate images stored on NTFS partitions.
4. The screen that appears next depends on what "Validate" option you selected above:
 - If you selected the File option, navigate to and/or select the desired backup file, noting that the MS-DOS 8.3 naming convention is used.
 - If you selected the CD/DVD option, you will be prompted to select an interface type:
 - **ATAPI:** Select this option if your CD/DVD drive is an ATAPI device, and none of the other selections apply. This is the most common option.

- **ASPI:** Select this option if your CD/DVD drive will be accessed using an ASPI layer. (You must supply the ASPI driver for this option to work.)
- **USB2:** Select this option if your CD/DVD drive is attached to a USB 2 controller.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
- **IEEE1394:** Select this option if your CD/DVD drive is attached to an IEEE 1394 controller.

Once you select a CD/DVD interface option, you will have to select the specific drive where the backup is located. Then you will be prompted to insert the first disc of the backup.

- If you selected the Partition option, you will be prompted with the following “Validate” options, which ask you to select the access method you wish to use for the hard drive that contains the backup to be validated:
 - **BIOS HD --** Locates and accesses drives using the system BIOS. Please note that any problems or limitations inherent to the system BIOS will apply.
 - **BIOS HD (direct) --** Attempts to locate the hard drive using the system BIOS, but then attempts to access it directly, bypassing the BIOS. This can sometimes be helpful in cases where performance with the "BIOS HD" option is very poor.
 - **USB2 HD --** Examines the attached USB 2 controller, if any, for available high-speed hard drives.
 - If your USB device does not appear at first, please try pressing the Esc key, waiting a few seconds, and selecting the “USB2 HD” option again.
 - **IEEE1394 HD --** Examines the attached IEEE 1394 controller, if any, for available hard drives.

Once you make an access method selection, press Enter. Another “Validate” window will appear, on which you need to select the hard drive containing the backup to be validated. Then, select the appropriate partition on the “Hard Drive n” screen (where “n” is the applicable hard drive number). Finally, navigate to and/or select the desired backup file, noting that the MS-DOS 8.3 naming convention is used.

Whichever location you select above, once you point Image for DOS to the backup file to be validated, the validation process begins automatically. The process may be cancelled at any time by pressing the Esc key. (Image for DOS will confirm before canceling.)

Deploying Your Image

Deploying an image means to restore it to a number of computers in an organization. Therefore, the information in this section does not apply to most home users.

Image for DOS does not change the SID of Windows NT/2000/XP/2003 systems. If you are using Image for deployment purposes and want to change the SID for Windows NT/2000/XP you should use the MS sysprep utility or you can download a free utility named NewSID,

You may want to set up the base machine so that the last partition ends at one track less than the actual end of the hard drive (around 8 MB less) to leave room for different brands or models of the same size hard drive.

You may also want to investigate the free [ImageAll](#) utility available from the TeraByte Unlimited web site.

See the following for more information on how to prepare for deployment:

Windows XP:

How to Prepare Images for Disk Duplication with Sysprep

<http://www.microsoft.com/WINDOWSXp/pro/using/itpro/deploying/duplication.asp>

Windows XP Professional How-to Articles for IT Pros

<http://www.microsoft.com/windowsxp/pro/using/itpro/default.asp>

Windows 2000:

Download for the Microsoft Windows 2000 Sysprep Tool

<http://www.microsoft.com/windows2000/downloads/tools/default.asp>

Deploying MS Windows 2000 Professional and MS Office 2000 Using Sysprep

<http://www.microsoft.com/technet/prodtechnol/windows2000pro/deploy/depopt/sysprep.mspx>

Using Sysprep to Duplicate Disks

http://www.microsoft.com/WINDOWS2000/techinfo/reskit/en/Deploy/dgcb_ins_izyl.htm

Windows NT:

Windows NT Workstation Deployment

<http://www.microsoft.com/networkstation/technicalresources/deployment/default.asp>

Running Image for DOS from the Command Line

You can run Image for DOS (`IMAGE.EXE`) from the command line. Be sure to separate the command line options with spaces, and enter in the order shown in the following examples. Use the `/?` command line parameter for additional command line options not explained in the following section.

Advanced Configuration

Image for DOS offers a number of advanced configuration options. These options may be specified in a user-created `IFD.INI` file, or using environment variables, specified on the command line or in a batch file. Some options may be specified using either method.

Please note that if a particular setting is specified in both the INI file and in an environment variable, the latter setting specified in the environment variable will take precedence.

Further explanation of the INI file format, and the use of environment variables, is provided below the following table of configuration options.

Option Name	Option Description	IFD.INI Examples	IFD Environment Variable
ATA	Image for DOS supports this option for backward compatibility. When enabled, It is equivalent to using the 'A' device modifier on the command line.	ATA=0 ATA=1 (Must be 0 or 1)	SET IFD=ATA
CDCMZ	If you experience errors or problems when a CD is being closed, then you may need to use this option.	CDCMZ=0 CDCMZ=1 (Must be 0 or 1)	SET IFD=CDCMZ
CDRS	Sets the CD read speed. For example: <code>CDRS:8</code> sets the read speed to 8X. These speeds are CD-based; multiply by 8 to approximate DVD speeds (e.g. to read a DVD disc at 2X, use <code>CDRS:16</code>).	CDRS=4 CDRS=8	SET IFD=CDRS:8
CDWS	Sets the CD write speed. For example: <code>CDWS:8</code> sets the write speed to 8X. These speeds are CD-based; multiply by 8 to approximate DVD speeds (e.g. to burn a DVD disc at 1X, use <code>CDWS:8</code>). Note: If you are having problems burning a reliable CD/DVD, you may need to slow the write speed down using this option.	CDWS=4 CDWS=8	SET IFD=CDWS:4
CONSOLE	Disables the Image for DOS graphical interface, and forces text-only mode. This option is only valid when Image for DOS is run from the command line, rather than interactively.	CONSOLE=0 CONSOLE=1 (Must be 0 or 1)	SET IFD=CONSOLE
IAR	Image Auto Response value. Set this to Y or N to auto respond to 'Y'es or 'N'o prompts and error messages. You can use <code>errorlevel</code> in a batch file to determine if the operation was successful or not.	IAR=Y IAR=N (Must be Y or N)	SET IFD=IAR:Y
IBXT	When using the Burn Extra Track option, you will not be prompted for the last CD during a restore. This option may not work with all CD or DVD drives.	IBXT=0 IBXT=1 (Must be 0 or 1)	SET IFD=IBXT
IGNVLAB	Ignores the use of volume labels. This can be useful when using ImageAll with an EMBR where you want the MPT entry names to stay the same.	IGNVLAB=0 IGNVLAB=1 (Must be 0 or 1)	SET IFD=IGNVLAB
IMSG	The contents of this variable are displayed below the progress bar during the image or restore process. The message must be less than 80 characters.	N/A	SET IMSG=Creating the image...

Option Name	Option Description	IFD.INI Examples	IFD Environment Variable
IOBS	If your network performance is slow due to bugs or compatibility issues with the DOS NIC drivers, set this option to determine if it will solve your performance issues. Set the value to A to automatically determine the best value or to 1, 2 or 3. For example: IOBS=A (if using the INI file) or IOBS:A (if using environment variables).	IOBS=A IOBS=1	SET IFD=IOBS:A SET IFD=IOBS:1
SEQVOLID	<p>This option only applies to volumes within an extended partition. When enabled, the SEQVOLID option allows you to specify the volume to be backed up to—or restored over—using sequence numbers, rather than the actual volume ID. The sequence numbers must be specified in hexadecimal form, and are determined by the order of the volumes within the extended partition, beginning at 1.</p> <p>To determine what volume ID to use with this option, first enable the option, and then either: (1) Use the interactive method as described under the section of this manual describing command line usage; or (2) Run the command line:</p> <p>IMAGE /Ln -</p> <p>Where n is the applicable hard drive number.</p>	SEQVOLID=0 SEQVOLID=1 (Must be 0 or 1)	SET IFD=SEQVOLID
TZ	This option sets the time zone to be used by Image for DOS. When you are saving images to NTFS partitions or CD/DVD discs, using the correct time zone will ensure that the date/time stamps of the image files will be correct when they are viewed within Windows. Please refer to http://www.terabyteunlimited.com/kb/article.php?id=260 for more information.	TZ=AAA[+/-]HBBB	SET TZ=AAA[+/-]HBBB
UHCI	Enables supports for most built-in USB 1.1 controllers (typically found on older computers).	UHCI=0 UHCI=1 (Must be 0 or 1)	SET IFD=UHCI
USBLIO	Enable this option if you are experiencing lock-ups when performing backup or restore operations to or from a USB 2.0 drive.	USBLIO=0 USBLIO=1 (Must be 0 or 1)	SET IFD=USBLIO

Image for DOS INI File

In order to apply settings to Image for DOS using the INI file, you must create a text file named `IFD.INI`, using a text editor such as Notepad. Image for DOS will look for `IFD.INI` in the current directory only.

Settings specified in `IFD.INI` do not need to be placed under a section name. Please refer to the example `IFD.INI` content provided below.

```
ATA=1
CDRS=16
```

Image for DOS Environment Variables

The format for Image for DOS environment variables is:

```
SET IFD=option1;option2:value;option3
```

As shown above, the `SET` command is used to establish Image for DOS environment variables. An example of batch script Image for DOS invocation is as follows:

```
set IFD=IBXT;CDWS:4
image.exe /c20x11 /cd1
set IFD=
```

This would backup partition ID 0x11 on hard drive 2 (`/c20x11`), and save the image to the CD/DVD drive number 1 (`/cd1`). It would also enable the “burn extra track” option (`IBXT`), and set the CD/DVD write speed (`CDWS`) to 4X (`CDWS:4`). (Command line options are explained below.)

Displaying a List of Environment Variables Currently in Effect

At the command line, enter the `set` command with no parameters:

```
set
```

Removing an Environment Variable

At the command line, enter the `set` command with no value. The following example removes “varname” from the environment:

```
set varname=
```

Image for DOS Command Line Options

All available command line options can be viewed by running `IMAGE.EXE` followed by the “/?” parameter, as follows:

```
image.exe /?
```

When running Image for DOS from the command line, you may need to include references to hard drive numbers, and/or partition IDs. To determine the correct hard drive number or partition ID, carry out steps 1 through 4 under the section titled **Backing Up with Image for DOS**, being sure to select the hard drive whose number and/or partition IDs you need to obtain. The hard drive number will then appear in the format “Hard Drive n” (e.g. “Hard Drive 0” or “Hard Drive 1”). The partition ID is shown in parenthesis in the middle of each partition description, and may consist of either two or four characters.

Note: Under certain configurations, hard drive numbers may be different in DOS than they are in Windows or other environments.

Image for DOS command line options are detailed in the table that follows.

Image for DOS Command Line Options: Backup		
IMAGE /C[F U A]hp[[V VB][J][R][W]] [/U] /CD[S]n d:\file.img hp:\file.img[;s]		
Option	Explanation	
Required Parameters		
/Chp	/Chp	h is source hard drive number (0 through 9) p is source partition ID
	/CFhp	Prefix “hp” with “F” if source is IEEE 1394 device
	/CUhp	Prefix “hp” with “U” if source is USB 2 device
	/CAhp	Prefix “hp” with “A” for direct hard drive access (equivalent to ATA environment variable and ATA=1 INI setting)
/CDn	/CDn	Save to CD/DVD drive number “n”
	/CDSn	Prefix “n” with “S” if destination CD/DVD uses ASPI driver
d:<path>\<file>	Save to drive letter “d”	
hp:\<path>\<file>	Save to destination hard drive number “h” and partition ID “p”	
Optional Parameters		
/U	No compression when creating image	
V	Validate the image after creating	
VB	Validate the image byte-for byte after creating	
J	Do not eject the CD/DVD disc when the backup is complete	
R	Perform per-disc validation (only applicable when saving to CD/DVD)	
W	Use raw mode (backup all sectors, rather than just used sectors)	
:[max file size]	Added to end of <path>\<file> to specify max backup file size:	
	0	Maximum backup file size 2.0 GB (the default if omitted)
	1	Maximum backup file size 698 MB
	2	Maximum backup file size 648 MB
	Msize	Custom maximum backup file size: size MB (2047 Max)
Usage Examples		
image.exe /C20x4VB /U E:\BACKUPS\WINDOWS;1 Backs up hard drive number 2, partition ID 0x4 (/C 20x4 VB) Saves to drive letter E:, under path and file name “\BACKUPS\WINDOWS” (E:\BACKUPS WINDOWS;1) Performs byte-for-byte validation (/C20x4 VB) Uses no compression (/U) Maximum file size will be 698 MB (E:\BACKUPS\WINDOWS; 1)		

image.exe /C10x5V /CD1

Backs up hard drive number 1, partition ID 0x5 (/C10x5V)
Saves to CD/DVD drive number 1 (/CD1)
Performs standard validation (/C10x5V)
Uses maximum compression (the default)
Maximum file size will be determined by destination CD/DVD media

image.exe /C00x1JR /CD2

Backs up hard drive number 0, partition ID 0x1 (/C00x1JR)
Saves to CD/DVD drive number 2 (/CD2)
Will not eject the CD/DVD disc when the backup is complete (/C00x1JR)
Performs per-disc validation (/C00x1JR)
Uses compression (the default)
Maximum file size will be determined by destination CD/DVD media

image.exe /C00x1 10x1:\DATA01\BACKUP

Backs up hard drive number 0, partition ID 0x1 (/C00x1)
Saves to hard drive number 1, partition ID 0x1, and path/file name "\DATA01\BACKUP" (10x1:\DATA01\BACKUP)
Performs no validation (the default)
Uses maximum compression (the default)
Maximum file size will be 2.0 GB (the default)

Additional Notes on Image for DOS Command Line Backups

- For most users, the partition ID will be a number from 1 through 4. For partition IDs of 9 or below, a single digit may be used in place of hexadecimal notation (e.g. 1 is equivalent to 0x1, and 5 is equivalent to 0x5).
- Volumes will be a number formatted as 0xPVV where P is the extended partition and VV is the volume number in hexadecimal from 01 to FF.
- If you are not sure what the partition or volume ID is, run Image for DOS without any parameters, choose the Backup option, and click Next. The screen that lists the partitions and volumes also will display the ID in parentheses as a hexadecimal number. You should prefix that number with a 0x on the command line, as shown in the examples above.
- Per-disc validation is only applicable when saving images to a CD or DVD drive. This option ensures that discs are readable after being written to, and verifies that the data on the disc appears to be the same as the data that was sent to the drive. Per-disc validation has the ability to detect media errors that may have occurred during the disc writing process. If an error is detected, you will be prompted to redo the failed disc. (Without this option enabled, you will only be notified of errors after the backup process is complete.)

Creating a Bootable CD/DVD Restore Disc

As long as the file CDBOOT.F35 is in the current directory, a bootable CD/DVD will be created when burning directly to a CD/DVD drive. However, the CDBOOT.F35 file will only be able to restore from an ATAPI CD/DVD drive on one of the IDE controllers. If you would like to restore from another device, you will need to create your own diskette image with the appropriate ASPI drivers and AUTOEXEC.BAT file to execute the image restore.

Image for DOS Command Line Options: Restore

IMAGE /R[[F|U|A][hd][id][J][N][T][V][A][X|Xmb][Z][M]] [/O|/C|/CR]
/CD[S|F|U]n[file]|d:\file.img|hp:\file.img

Option	Explanation	
Required Parameters		
/R	Indicates that a restore operation is to be performed	
/CDn[file]	/CDn[file]	Restore from CD/DVD drive “n” (specifying [file] is optional)
	/CDSn[file]	Prefix n with S if destination CD/DVD uses ASPI driver
	/CDFn[file]	Prefix n with F if source is IEEE 1394 device
	/CDUn[file]	Prefix n with U if source is USB 2 device
d:<path>\<file>	Restore from drive letter “d”	
hp:<path>\<file>	Restore from source hard drive number “h” and partition ID “p”	
Optional Parameters		
[hd]	[hd] is hard drive number (0 through 9)	
F[hd] U[hd] A[hd]	Prefix [hd] with F if target is IEEE 1394 device Prefix [hd] with U if target is USB 2 device Prefix [hd] with A for direct hard drive access (equivalent to ATA environment variable and ATA=1 INI setting)	
[id]	Partition ID that will be overwritten by the restore <ul style="list-style-type: none"> ○ Hex notation may be used if the partition ID (in hex) does not conflict with recognized command line options ○ Decimal notation may be used in all cases ○ If [id] is used, [hd] must also be present 	
/O	Overwrite existing data without warning (advanced users only) Cannot be used with /C or /CR options	
/C	Clear MBR and EMBR before restore (advanced users only) Cannot be used with /O option	
/CR	Clear MBR and EMBR, and restore NT signature (advanced users only) Cannot be used with /O option	
J	Do not eject the CD/DVD disc when the restore is complete (Note: Under Windows NT/2000/XP/2003, the drive tray will open when the restore begins, but will close automatically)	
N	Suppress prompt to reboot after restore (advanced users only)	
T	Write standard MBR after restore (similar to FDISK /MBR)	
V	Validate the image before restoring	
A	Set the restored partition active	
X	Expand the restored partition to fill leftover free space, if any	
Xmb	Expand the restored partition to fill leftover free space, if any, minus the number of megabytes specified by “mb”	
Z	Restore a Linux partition without changing the hard drive reference.	
M	Restore to the first block of free space on the destination drive that is large enough to accommodate the source partition	

Usage Examples

image.exe /R04VAX d:\system~1\monthl~1
Restores to destination hard drive number 0 (/R04VAX)
Restores over the partition with ID 4 (/R04VAX)
Restores from backup source d:\system~1\monthl~1 (the MS-DOS 8.3 naming convention is used)
Provides overwrite confirmation (the default)
Will not suppress reboot prompt (the default)
Will validate the backup before performing the restore (/R04VAX)
Will not clear MBR or EMBR (the default)
Will set the restored partition active (/R04VAX)
Will expand the restored partition to fill leftover free space, if any (/R04VAX)

image.exe /R /O /CD2backup

Restores over the same hard drive and partition that was originally backed up (because [hd] and [hd][id] options are not used)
 Restores from CD/DVD drive number 2 (/CD2backup)
 Restores the file named "backup" (/CD2**backup**) on CD/DVD drive number 2
 Does not provide overwrite confirmation (/O)
 Will not suppress reboot prompt (the default)
 Will not validate the backup before performing the restore (the default)
 Will not clear MBR or EMBR (the default)
 Will not set the restored partition active (the default)
 Will not expand the restored partition to fill leftover free space, even if present (the default)

image.exe /R1NV 10x1:\BACKUPS\MARCH

Restores to destination hard drive number 1 (/R1NV)
 Restores from hard drive number 1, partition ID 0x1, and path/file name "BACKUPS\MARCH" (10x1:\BACKUPS\MARCH)
 Provides overwrite confirmation (the default)
 Will suppress reboot prompt, even if reboot is required (/R1NV)
 Will validate the backup before performing the restore (/R1NV)
 Will not clear MBR or EMBR (the default)
 Will not set the restored partition active (the default)
 Will not expand the restored partition to fill leftover free space, even if present (the default)

Additional Notes on Image for DOS Command Line Restores

- The restored partition will go to the same hard drive number (unless overridden) and physical location on the drive as it was backed up from.
- If the source partition was a volume and there is now no extended partition at the original location, Image for DOS will attempt to create the original extended partition. If Image for DOS cannot create the extended partition, it will be restored as a primary partition.
- If the source partition was originally a primary partition, and an extended partition now encompasses that location, it will be restored as a volume.
- If an existing partition or volume occupies the same starting location as the partition to be restored, a warning message will be issued before overwriting that partition or volume. (Unless this warning message is suppressed, as described in the table above.)

Image for DOS Command Line Options: Validate

IMAGE /V /CD[S|F|U]n|d:\file.img|hp:\file.img

	Option	Explanation	
Validate Image	Required Parameters		
	/V	Indicates that a validation operation is to be performed	
	/CDn	/CDn	Validate backup on CD/DVD drive "n"
		/CDSn	Prefix n with S if source CD/DVD uses ASPI driver
		/CDFn	Prefix n with F if source is IEEE 1394 device
		/CDUn	Prefix n with U if source is USB 2 device
d:<path>\<file>	Validate backup on drive letter "d"		
hp:<path>\<file>	Validate backup on source hard drive number "h" and partition ID "p"		

Usage Examples**image.exe /V d:\system~1\month1~1**

Validates the backup file d:\system~1\month1~1 (the MS-DOS 8.3 naming convention is used)

Image.exe /V /CD1

Validates the backup mounted on CD/DVD drive number 1 (/CD1)

Image.exe /V /CDF2

Validates the backup mounted on IEEE 1394 CD/DVD drive number 2 (/CDF2)

Image.exe /V 20x3:\BKUP

Validates the backup file on hard drive number 2, partition ID 0x3, and path/file name "BKUP" (20x3:\BKUP)

Glossary

Hard Drive (HD, HDD)

A high-capacity, non-volatile, data storage device. Hard drives are typically installed inside a computer, out of sight.

Partition

A unique area of a hard drive that is allocated for use by a file system. A hard drive can contain many partitions.

File System

An organized structure that allows data to be stored and accessed by a file name. You can basically think of it as the filing system used by the operating system to store and retrieve your data. On a hard drive, the file system almost always resides in a partition.

Volume

Generally, this refers to any file system or device that is used to hold data, but here it also represents a specific partition that resides in an extended partition.

Extended Partition

A special type of partition that is divided in to one or more partitions called volumes.

Drive Letter

A single letter that represents a file system in Microsoft operating systems. Since a file system on a hard drive is almost always in a partition or volume, it also represents a partition or volume.

Logical Drive

A term used in Microsoft operating systems to describe the specific drive letters that point to volumes. In practical terms, it is the same thing as a drive letter.

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8. **GENERAL.**
 - (a) **ENTIRE AGREEMENT.** This Agreement constitutes the entire agreement between you and TeraByte in regard to the subject matter herein, and supersedes all previous and contemporaneous agreements, proposals and communications, written or oral between you and TeraByte. No amendment of this Agreement shall be effective unless it is in writing and signed by duly authorized representatives of both parties.
 - (b) **NON-WAIVER.** Waiver by TeraByte of any violation of any provision of this License shall not be deemed to waive any further or future violation of the same or any other provision.
 - (c) **LAW AND JURISDICTION.** This License and any dispute relating to the Software or to this License shall be governed by the laws of the United States and the laws of the State of Nevada, without regard to U.S. or Nevada choice of law rules. You agree and consent that jurisdiction and proper venue for all claims, actions and proceedings of any kind relating to TeraByte or the matters in this License shall be exclusively in courts located in Las Vegas, Nevada. If a court with the necessary subject matter jurisdiction over a given matter cannot be found in Las Vegas, then jurisdiction for that matter shall be exclusively in a court with the proper jurisdiction as close to Las Vegas as possible, and within Nevada if possible.
 - (d) **SEVERABILITY.** If any part or provision of this License is held to be unenforceable for any purpose, including but not limited to public policy grounds, then you agree that the remainder of the License shall be fully enforceable as if the unenforceable part or provision never existed.
 - (e) **NON-ASSIGNMENT.** You may not assign this License without the prior written consent of TeraByte, except as part of a sale of all or substantially all of the assets of your business.
 - (f) **NO THIRD PARTY BENEFICIARIES.** There are no third party beneficiaries of any promises, obligations or representations made by TeraByte herein.
 - (g) **HEIRS AND ASSIGNS.** This Agreement shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto, but nothing in this paragraph shall be construed as a consent by TeraByte to any assignment of this agreement except as provided hereinabove.
 - (h) **SURVIVAL.** The provisions of paragraphs 1(b)(iv), 1(b)(vii), 1(b)(ix), 2, 3 and 6 of this Agreement shall survive any termination or expiration of this Agreement.

Image for DOS – Order Form

Text version in file REGISTER.TXT (see web site for additional pricing information)

Send to:
TeraByte Unlimited
10220 Lazy Bear Street
Las Vegas, NV 89131

Registration Name:		Date:	
Mailing Address:		Phone #:	
		Phone #:	
		Fax #:	
E-mail Address:		PC Brand/CPU Type:	
Shipping Address:			
		Primary OS:	
How did you learn about Image for DOS?			
Description	Unit Price	Qty	Extended Price
Image for DOS	\$29.95		\$
			\$
			\$
			\$
			\$
Sub-Total			\$
Shipping and Handling Fees for orders not sent TO YOU via e-mail add \$9.95			\$
Nevada Residents add applicable sales tax			\$
TOTAL CHECK OR MONEY ORDER ENCLOSED*			\$

Check or Money Order must be drawn on a U.S. bank in U.S. Dollars.

If you do not have a US Checking account, you can send an international postal money order or have your bank issue a check on a U.S. bank in U.S. Dollars. Be sure to send this order form whichever method you choose.

Check mailed separately. (Please ask your bank to include your name on the memo line of the check.)