

BootItTM Next Generation

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Installation and Getting Started Guide



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ASP Member

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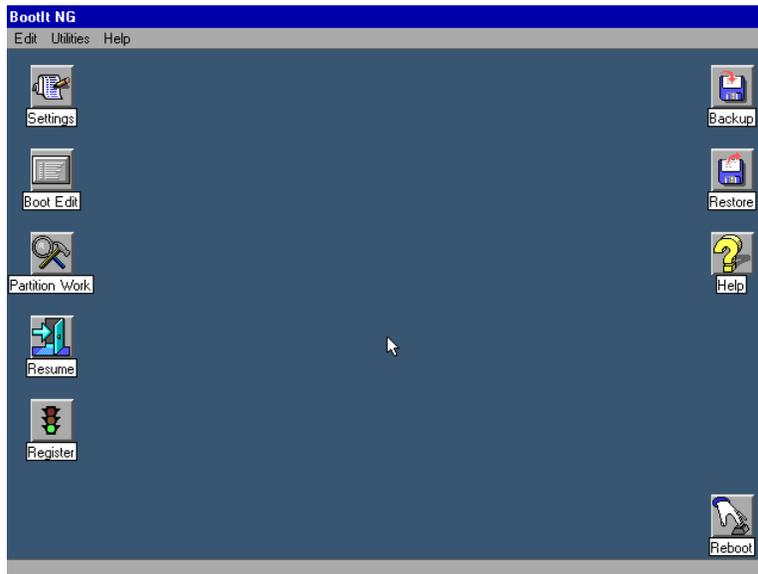
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What Can You Do With BootIt NG

- Create over 200 primary partitions (if desired).
- Configure detailed boot items to fit your needs.
- Boot from any partition or volume on up to eight hard drives.
- Boot multiple operating systems from a single FAT or FAT32 partition.
- Logically swap the boot hard drive to look like the first.
- Logically swap floppy drives.
- Boot from the A: or B: drive on the fly.
- Resize FAT, FAT32, and NTFS partitions without data loss.
- Convert between FAT and FAT32 without data loss.
- Format FAT or FAT32 partitions/volumes.
- Create volumes in extended partitions.
- Setup users and passwords.
- Create compressed images of your partitions.
- And much, much more . . .



Orders

If you continue to use BootIt NG beyond 30 days, you must purchase a "full-use" license for it. It is illegal to continue using BootIt NG beyond 30 days without a "full-use" license. Once you have purchased a "full-use" license the software is considered "registered".

You can purchase the "full-use" license on-line by clicking on the Purchase link at <http://www.terabyteunlimited.com> or you can use the order form included on page 34 and in a separate file named "REGISTER.TXT".

Limitations

BootIt NG relies on the BIOS for processing disk functions. If your computer BIOS limits access to the hard drive for any reason and no Master Driver Table (MDT) driver is available to correct the limitation, BootIt NG will also be limited. BootIt NG supports BIOS LBA Mode and Interrupt 13h extensions. The BIOS "large" mode is not supported.

System Requirements

100% IBM-compatible personal computer with an i80386-compatible microprocessor, 16MB RAM, VGA, diskette drive, and a BIOS accessible hard drive.

Before You Begin

TeraByte Unlimited has taken every effort to make BootIt NG as safe as possible; however, it is not possible to provide a 100 percent guarantee of safety.

It is extremely important that you do not use any partitioning software (such as FDISK) if you are not limiting the number of primary partitions (Limit Primaries Option). If you ignore this warning you are taking a serious risk of data corruption.

Before using BootIt NG on any system for the first time, BACK UP ALL DATA on ALL HARD DRIVES. It's better to be safe than sorry.

It's always a good idea to have a system disk, such as a DOS boot diskette or Windows 95 Startup Diskette, which can be used to boot your system should something ever go wrong. You should configure the diskette to give you all the functionality you may need. This includes adding any drivers or utilities as well as configuring the configuration files.

To create a DOS boot diskette, use the DOS FORMAT A:/S command. You should also copy the following external commands to the diskette: SYS, FDISK, FORMAT, ATTRIB, and DEBUG. If you think you may need access to your CD ROM drive or another device then be sure to copy the required drivers to the diskette. Windows 95/98/ME users can use the "Startup Disk" tab (in Control Panel, Add/Remove Programs) to create the diskette.

Getting Started

- 1) Make sure you have read the previous section titled "Before You Begin" (see page 5).
- 2) Visit <http://www.terabyteunlimited.com> to make sure you have the latest version of BootIt NG, as well as the latest support information.
- 3) If you need to create a system diskette (such as a DOS boot diskette or Windows 95/98/ME Startup Diskette), do so now.
- 4) Backup all the data on all of your hard drives.
- 5) Create the installation diskette by following the steps in installation step 1 (see page 7).
- 6) Install/upgrade BootIt NG on your hard drive by following the steps in installation step 2 (see page 8).
- 7) Read the "BootIt NG overview for first time users" section (see page 11).
- 8) Read through the "Using BootIt NG" section (see page 13).
- 9) If you are going to activate the FAT Multi-OS option on a partition, read the "Using the Multi-OS Feature" section (see page 23).
- 10) Refer to the "Generic Installations" section (page 27) for some examples of how to install operating systems.

STEP 1: Make the Boot Diskette

Installation of BootIt NG is a two-step process. First you will create the installation diskette, and then you will use that diskette to install BootIt NG to your hard drive. Visit www.terabyteunlimited.com to make sure you have the latest version of this software as well as for any additional information and help.

The BOOTITNG.ZIP package will only contain the 3.5" diskette image. If you need the 5.25" disk image then visit: <http://www.terabyteunlimited.com> Before beginning the installation of BootIt NG make sure you have read the previous section titled "Before you Begin" (see page 5).

The following instructions will guide you through the first step of the installation process. This step creates the installation diskette. Windows users may use the File Manager and Win9x/ME/NT/2k users the Windows Explorer to execute the steps listed.

You will need one formatted diskette that matches the floppy drive A: of the computer that will have BootIt NG installed. If you are installing on multiple machines, each machine should have its own diskette (and license).

- 1) Extract the BOOTITNG.ZIP file to its own directory.
- 2) Change to the directory used in step 1.
- 3) For non-Linux users:

Type BOOTITNG then press <enter> or Windows users can double click on BOOTITNG.EXE.

For Linux users:

If you accept the license agreement then you can use the dd or cp command to create the diskette. To do so, make sure the diskette is NOT mounted and you are signed on as root then type:
cp DISKIMG3.DAT /dev/fd0 **or** dd if=DISKIMG3.DAT of=/dev/fd0 bs=1024

You can now skip the rest of the steps in this section and proceed with "Installation STEP 2"

- 4) If you have accepted the terms, select the correct diskette drive from the menu and press <enter>. You will be prompted to insert the diskette and press enter when ready.
- 5) Insert the diskette in to the correct diskette drive and press enter. After about a minute it will confirm either that the installation diskette was created or that the diskette is bad.
- 6) If the diskette was bad, get a new formatted diskette and repeat the appropriate steps; otherwise, you're done with step one.

Once you have successfully created the installation diskette, you can proceed with step two on the next page.

STEP 2: Install to Hard Drive

The following instructions will guide you through the second step of the installation process. This step installs BootIt NG to your hard drive.

Boot from the Installation Diskette

- 1) Make sure your system boot up sequence is A:/C: and not C:/A:. This information is found in the CMOS setup. You should also disable the boot sector virus protection option. If you leave the virus protection option enabled then it will just get in the way.
- 2) Shut down and turn off your computer.
- 3) Insert the BootIt NG installation diskette in your A: drive then turn on your computer.
- 4) If your system boots up as it normally does, see step 1, otherwise BootIt NG will start to load from the diskette.

If you are upgrading a prior version of BootIt 2.x/Lite/Direct or an existing installation of BootIt NG then skip to the appropriate section below.

New Installations

- 1) At the *Welcome to setup* prompt click the OK button.
- 2) Setup gives you the option of enabling more than four primary partitions.
 - a. If you choose yes then you must only partition your hard drives using BootIt NG.
 - b. If you choose no then you can continue to use any other partitioning software such as FDISK.
- 3) Setup asks if you want to manually choose the partition or have setup choose it for you. You should normally click on yes to have setup choose the partition for you. If you click on no then you will have to perform a manual installation.
- 4) Setup asks if you want to install BootIt NG to its own partition. Installing BootIt NG to its own partition requires unpartitioned space and takes up one primary partition which could be an issue if you chose not to enable support for more than 4 primary partitions.

Click on your choice. If setup can't accommodate your choice, it will notify you later and give you the option to change it.

- 5) Setup indicates it has all the information it needs. Click OK to begin copying files to the hard drive.

Upgrading from Previous BootIt Products

When you install BootIt NG over the top of an existing BootIt product, it will use your existing partition and volumes names.

For BootIt 2.x users, setup will also upgrade your existing AutoMenu file to be the "default" menu in BootIt NG. Items that boot to a volume are not updated and you must recreate them.

For BootIt Lite users, a new menu will be automatically created but you must reconfigure the menu to boot your existing groups or special configurations. Multi-OS volumes are not supported in BootIt NG.

- 1) At the Welcome to setup prompt, click the OK button.
- 2) Setup asks if you want to manually choose the partition or have setup choose it for you. You should normally click on yes to have setup choose the partition for you. If you click on no then you will have to perform a manual installation.
- 3) Setup indicates it has all the information it needs. Click OK to begin copying files to the hard drive.

For BootIt Lite users, after installation and reboot, activate the Multi-OS option from the Partition Work utility for each primary partition that you need to use groups on. Then, reconfigure the Boot Menu to use your existing groups.

Upgrading an existing BootIt NG Installation

- 1) At the Floppy Diskette Menu click on the Upgrade BootIt NG radio button then press OK.
- 2) At the Welcome to setup prompt, click the OK button.
- 3) Setup asks if you want to manually choose the partition or have setup choose it for you. Click on yes to have setup choose the partition for you.
- 4) Setup indicates it has all the information it needs. Click OK to begin copying files to the hard drive.

Manual Installation

During setup you are asked if setup should choose the partition or if you want to manually choose it. Normally you should let setup choose the partition but here are the instructions for manually choosing the partition.

- 1) When you click on the No button to indicate you want to manually choose the partition, a message is displayed that indicates you must ensure that an Extended Master Boot Record (EMBR) exists on HD0 and on the drive chosen for installation.

Click OK to close that message.

- 2) The "Work with Partitions" dialog is displayed with a new "Setup" button in the lower right corner. The setup button will only appear if you've entered the "Work with Partitions" dialog during setup.

From this dialog you must ensure that HD0 has an EMBR:

- a. Make sure the HD0 radio button is clicked
- b. If the Create EMBR button is enabled then click on it and it will change to Undo EMBR that means the EMBR exists for HD0.
If the partition you're going to create or use is not on hard drive 0 then you must also create an EMBR on that drive by:
 - 1) Making sure the radio button of the HD you are installing to is clicked.
 - 2) If the Create EMBR button is enabled then click on it.

Now that the EMBR exists where it needs to, you can highlight the partition for installation. It must be a FAT, FAT32, or EMBRM type of primary partition. If one doesn't exist, you can create and format it at this time. (EMBRM, or the Extended Master Boot Record Manager, is the partition where BootIt NG is installed and active.)

If the setup button is grayed out then it means that HD0 does not have an EMBR, the current drive does not have an EMBR, or the partition you highlighted is not a FAT, FAT32, or EMBRM type.

If the setup button is not grayed out then click on it to continue with setup.

- 3) Setup indicates it has all the information it needs. Click OK to begin copying files to the hard drive.

Finishing up Installation

- 1) Create a copy of the installation diskette and keep it in a safe place. You will need the installation diskette to recover from any problems or situations that may arise in the future. Use the disk copy feature of one of your operating systems to create a backup. If your installation diskette is ever updated or a new one used you should update your backup diskette also.
- 2) If your BIOS has the ability to change the boot sequence to C:/A: it is recommended that you change it to boot from the C: drive first. If you have a CDROM drive you may want to setup the sequence to be C/CDROM/A for use of the "Next Device" option.

BootIt NG Overview for First-Time Users

To understand BootIt NG, lets first see how your system boot process normally works, and then what BootIt NG and the EMBR changes.

The first sector of your hard drive is called the Master Boot Record or MBR. The MBR contains two things: a table that defines the partitions on your hard drive (called the partition table) and the code to transfer control to the first sector (called the boot sector) of one of the partitions. The partition table can contain up to four entries. Each entry contains information on where the partition begins and ends as well as a flag to mark the active (or bootable) partition and the type of file system being used in the partition.

When control is given to the code in the MBR, it will look at each of the four partitions for the one that is marked active. It will load the boot sector of that partition and transfer control to the boot sector code.

Boot sectors are operating and file system specific. The area for the code in the boot sector has just enough space to look for a certain file, read it in and transfer control. The name of the file is hard coded in the boot sector code. For instance, the boot sector for MS DOS will look for a file called IO.SYS.

There is a special type of primary partition called an extended partition. This type of partition contains logical partitions called volumes.

What the Extended Master Boot Record (EMBR) specification does is extend the function of the current MBR type of processing.

The EMBR contains a block of code called the EMBR Loader and three tables; one for partition information, one for boot file information, and one for information on drivers that may need to be loaded on your system. Each of these tables can contain up to 255 entries. Only the table with partition information is discussed here.

The table in the EMBR that contains partition information is called the Master Partition Table or MPT. It is used instead of the partition table.

BootIt NG allows you to create boot items in which you choose partitions from the MPT and place them into the partition table on the fly (See Figure 1). Operating systems and utilities only see what is placed into the partition table. (At some point when an operating system is loading it will look at the MBR partition table and assign access to any of the partitions/volumes it recognizes.) Therefore, you cannot use any utilities that will expand or move a partition if it only recognizes the MBR partition table. The only time you can use such a utility is when you have the "Limit Primaries" option enabled in BootIt NG.

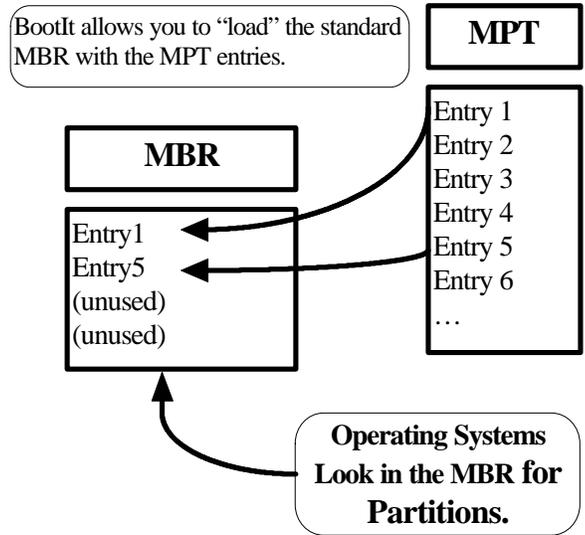


Figure 1

Using BootIt NG

The following shortcut keys work with most dialogs in BootIt NG:

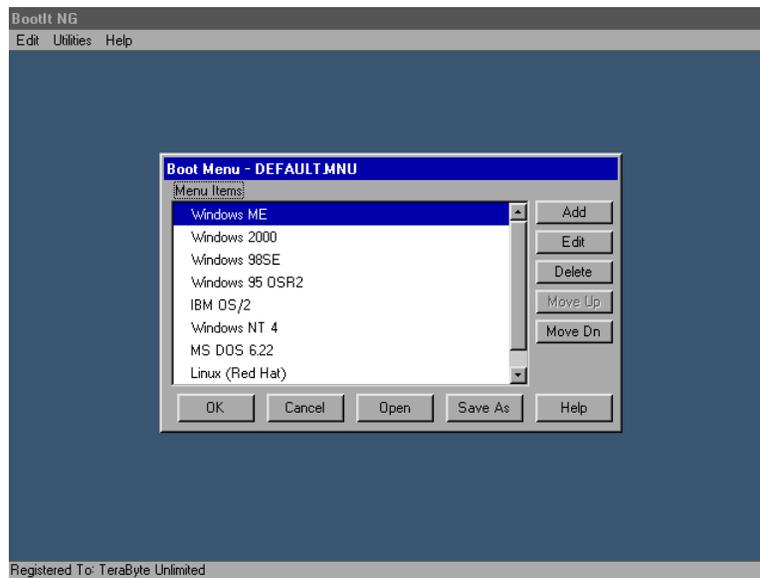
Esc: Cancel, F1: Help, F10: OK/Close/Apply, Ins: Add/Create/Fill, Del: Delete/Clear.

For the desktop:

Alt-S: Settings, Alt-E: Boot Edit, Alt-W: Partition Work, F10: Resume, Alt-B: Backup, Alt-R: Restore

The Boot Menu

There are two types of boot menus. The "Normal Boot Menu" which displays the specific "boot items" configured for it and the "Direct Boot Menu" which displays all partitions which haven't been disabled. You will normally want to use the "Normal Boot Menu" especially if you have enabled support for more than four primary partitions.



The "Normal" Boot Menu

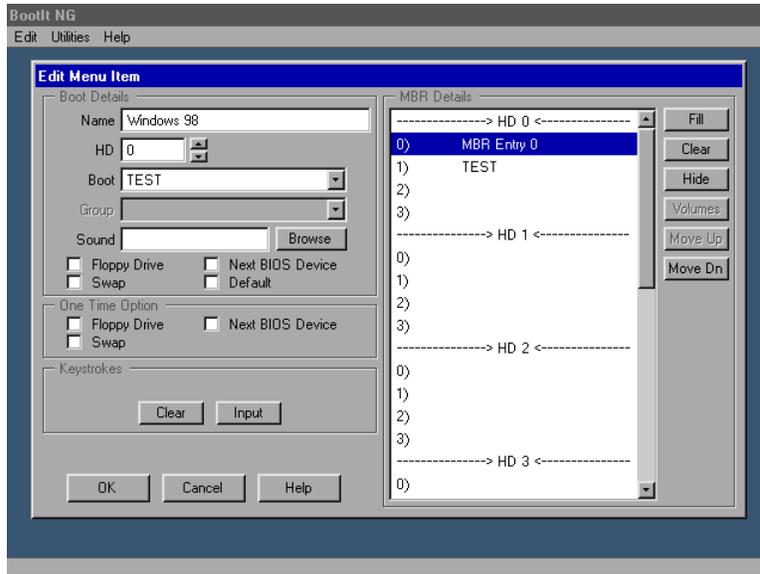
The "Normal Boot Menu" ("Boot Menu") displays the items configured for it. All you need to do is double click an entry to boot from it.

The menu is setup by clicking the Maintenance button on the boot menu then clicking the "Boot Edit" button or "Boot Menu" from the edit menu to display the Boot Menu dialog. The name of the menu being edited is displayed in the title bar.

From this dialog you can rearrange the order of the items by using the "Move Up" and "Move Dn" buttons, create a new menu item by clicking on the "Add" button, Edit an existing menu item by highlighting it and clicking on the

"Edit" button, or delete an item by highlighting it and clicking on the "Delete" button.

If you click the Add or Edit buttons you are taken to the "Edit Menu Item" dialog. The fields on that dialog are defined below:



Boot Details

- Name: This is the name that will be displayed in the boot menu.
- HD: The hard drive number starting at zero of the hard drive containing the partition/volume to boot.
- Boot: The name of the partition or volume to boot.
- Group: For Multi-OS partitions this is the group to use.
- MBR Files: For non Multi-OS partitions this is the captured MBR file to use, if any. MBR Files are rarely needed or used.
- Sound: The name of the sound file to play when this item is booted.
- Floppy Drive: Boot from a floppy drive (The boot partition will be the active partition).
- Swap: Enable swapping when booting this item.
- Next BIOS Device: Boot from the next BIOS device.
- Default: Make this item the default.

One-Time Options

These options operate the same as the "Boot Details" section but are turned off after being used.

Keystrokes

This option will allow you to enter up to 15 keystrokes to be played back when booting this item. The keystrokes are buffered and carried forward as if you had typed them in yourself.

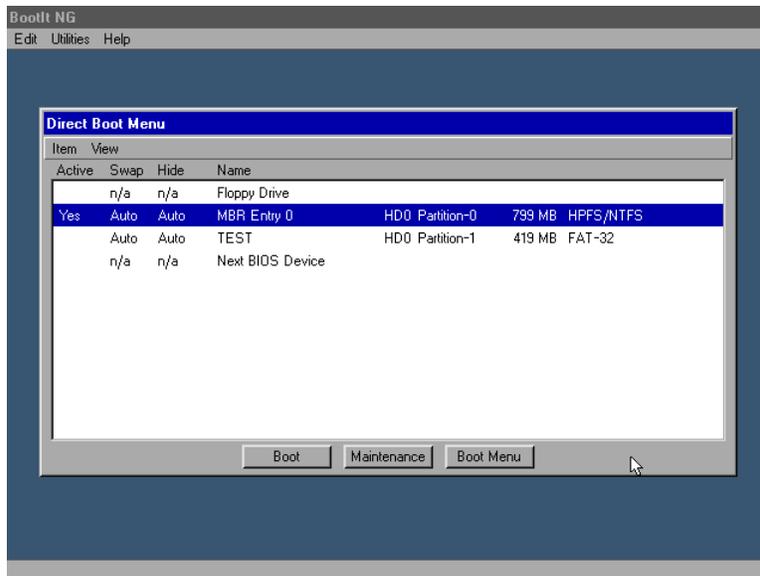
MBR Details

This is the area where you indicate what partitions/volumes should be hidden/unhidden and where each partition should be in the MBR partition table when booting this option. At minimum the boot partition must be "loaded" to the MBR (See Figure 1). To add partitions to the MBR Details list, highlight the position, then click on the fill button or press the insert key.

You can also use the volumes button to hide individual volumes. To do so, highlight an extended partition from the list and click the volumes button. You should take care to not hide the last FAT/FAT32 volume as DOS thru Windows 98 has a bug that causes problems mounting partitions if the last volume of an extended partition is not a recognized FAT or FAT32 partition.

The Direct Boot Menu

From the Direct Boot Menu all you need to do is double click an entry to boot from it. The Active, Swap, Hide columns of the menu indicate the setting for that partition/volume unless partitions are not limited. If partitions are not limited then booting from the Direct Boot Menu will only make the partition being booted visible; all other partitions will be hidden.



The active column indicates if the partition or volume is set active. Most of the time the active primary partition on HD0 will be the C: drive. When you are installing a new operating system to a new partition you should normally make sure that the installation partition is set active or the installation may go to some other partition that is marked active. You can use the space bar to set the active partition.

The Swap column indicates if the hard drive being booted will be swapped with HD0. In other words, if you boot a partition on HD1 (the second hard drive) with the swap option on, then BootIt NG will swap that hard drive with HD0 so that HD1 is now HD0 and (the real) HD0 is now HD1. You should note that the swapping is done at the BIOS level and once an operating system boots in protected mode it may ignore the BIOS, in effect undoing the swap. You can use the F4 key to cycle through the options for this column or use the item menu.

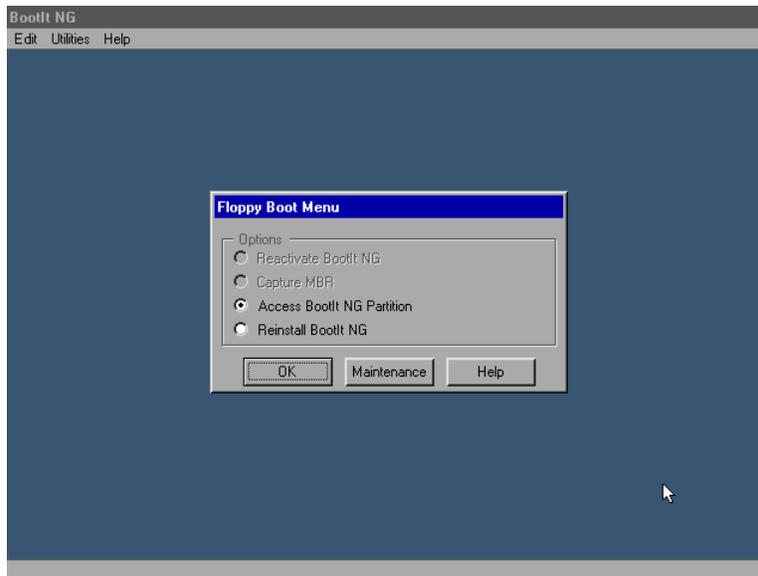
The Hide column indicates how and what partitions will be hidden. You can use the F6 key to cycle through the options or use the item menu. The options for this column are Auto, All, None, Some, As-Is. When set to anything other than As-Is, volumes are always unhidden. "Auto" mode lets BootIt NG determine which partitions to hide automatically. If set to "All" then all partitions except the boot partition are hidden. "None" indicates that none of the existing partitions should be hidden. "Some" hides all but one primary partition per hard drive. "As-Is" does no hiding or unhiding of partitions or volumes.

When booting from the floppy diskette or next BIOS device the swap and hide options are determined by the active partition.

To use the next device option to boot from your CDROM drive, you should set your BIOS boot sequence to have the CDROM immediately after the hard drive.

The Floppy Boot Menu

The floppy boot menu appears when you boot with the BootIt NG installation diskette after BootIt NG has been installed. The menu has the following options:



Reactivate BootIt NG

Using this option reactivates BootIt NG. BootIt NG can become deactivated after installing a new operating system like Windows 95/98/ME/2K. It may have also been deactivated by using the deactivate option on the uninstall dialog.

Capture MBR

Most users won't have a need to capture the MBR. If you have a special operating system or need to use a special MBR then use this option to capture it before Reactivate BootIt NG. Once captured you can use it in the boot items you create for the "Normal" Boot Menu.

Access BootIt NG Partition

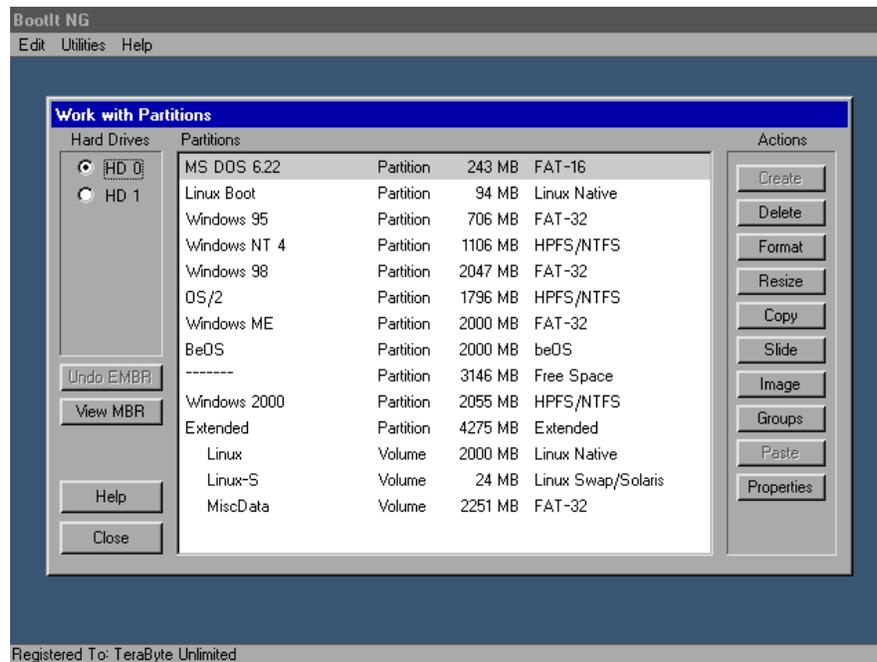
This option mounts and changes the current drive to be the BootIt NG partition on the hard drive. This enables you to use files or other items that may only exist on the hard drive partition. It allows you to still access the hard drive partition if the partition is deleted. If you move the EMBRM partition after installation, you should reinstall BootIt NG to update the pointers on the installation diskette.

Upgrade or Reinstall BootIt NG

Choosing this option starts the BootIt NG Setup.

Working with Partitions

The Work With Partitions dialog is accessed via the Partition Work button on the desktop or the Partitions option on the edit menu.

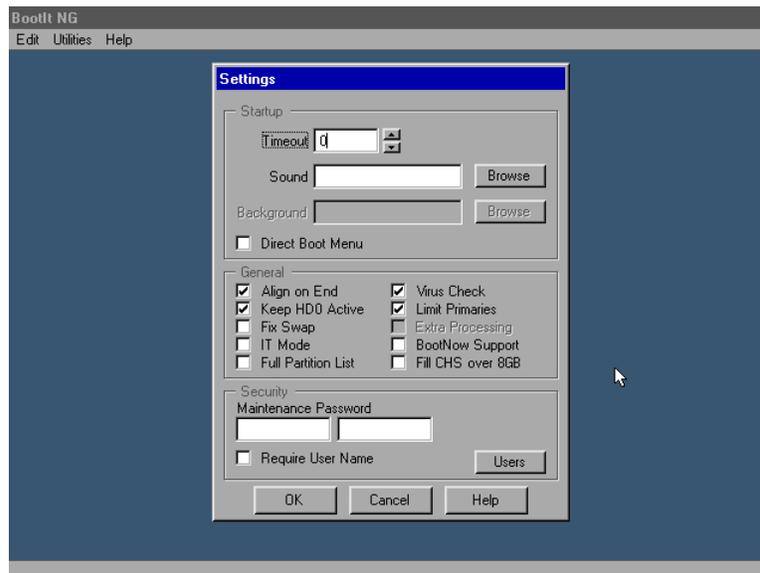


- To create a new partition or volume; highlight a free space entry and click the Create button.
- To delete an existing partition or volume; highlight it, then click on the Delete button.
- To undelete a partition or volume you previously deleted (without using one of the clearing options), highlight the free space entry, then click on the Undelete button. If the partition or volume recovered is not the correct one then you should delete it using the "Clear Boot Sector" option and chose undelete again.
- To format a partition or volume; highlight it, then click the Format button. If the Format button is grayed out, then it means that formatting is not supported for that type of file system.
- To resize a partition or volume; highlight it, then click the Resize button.
- To convert to/from a FAT/FAT32 file system; highlight the existing partition or volume and click the Resize button. Change the radio button to the file system desired and click OK.
- To copy a partition or volume; highlight it then click the Copy button. "Copy Pending" is displayed on the bottom of the dialog. Select a free space block as the destination and then click the Paste button.
- To move or slide a partition or volume; highlight it, then click the Slide button.

- To create a compressed image of a partition or volume; highlight it then click on the Image button. "Paste Pending for Image" is displayed on the bottom of the dialog. Select a free space block, a FAT/FAT32 partition or volume, or a CD-R/RW drive as the destination then click on the Paste Button. NOTE: If you are pasting to a free space volume then be sure it's not the last volume in the extended partition when you boot DOS/Win9x/WinME; you should make sure a FAT or FAT32 volume is last.
- To restore a compressed image of a partition or volume; highlight the existing compressed partition or volume, or a CD drive and click on the Image button. "Paste Pending for Image" is displayed on the bottom of the dialog. Select a free space block or an existing partition large enough to contain the restored image and then click the Paste button.
- To view the properties of the partition or volume; highlight it then click on properties.

Setup of Users and Options

To change settings or maintain users, click the Settings button on the desktop or the Settings option on the edit menu.



Startup Items

Timeout: Set this to the number of seconds to wait for user input before automatically booting. If set to zero then no timeout will occur.

Sound: The sound file that will be played when the boot menu is first displayed.

Direct Boot Menu: Check this box if you want the Direct Boot Menu to be the default menu displayed.

General Items

- Align on End: Most users should just leave this checked.
- Keep HD0 Active: Required by most new BIOS's when booting from a hard drive other than HD0.
- Fix Swap: Enable this option if your system locks up when you use the swap option. Note: Win9x may run in compatibility mode if this option is enabled.
- IT Mode: In this mode the GUI is not displayed and the system boots directly to the default boot item or last boot item if no default is found. It should only be used with the "normal" "default" boot menu. Hold down the Insert key during the initial boot of your system to display the boot menu.
- Full Partition List: If enabled, then the full list of partitions will be displayed when creating a new partition or volume; otherwise an abbreviated list is displayed.
- ATAPI CD Support: Enables imaging to/from an ATAPI CD-R/RW drive that is attached to the standard ATA primary or secondary controller
- Virus Check: A simple check for possible viruses is performed on boot up. If a possible virus is detected, you should use your anti-virus program with the latest updates to check for viruses. If none are found, you can disable this option to suppress the warning message.
- Limit Primaries: This option has a profound effect on how BootIt NG operates. If the Limit Primaries option is on then you are limited to having the normal maximum of four primary partitions. You can also continue to use other partitioning software such as FDISK. If the Limit Primaries option is NOT on then you can have more than four primary partitions but you should NOT use any partitioning software except for BootIt NG. This option will be grayed out and disabled if any of your existing hard drives has more than four primary partitions.
- Use Volume Label: Uses the volume label of a FAT/FAT32/HPFS partition as the name. If the name of a FAT/FAT32 file system is changed then the volume label is also changed.
- BootNow Support: If you are planning on using the separate freeware program "BootNow" from TeraByte Unlimited then you should enable this option.
- Fill CHS over 8GB: Most users won't need to concern themselves with this option. If this option is enabled then the ending CHS values for partitions and volumes over 8GB will be filled in with the maximum values allowed; otherwise it uses the current disk geometry to calculate the correct values.

Burn Extra Track: Enable this option to write the image summary data to CD one as track two when directly imaging to CD. When burned this way, you won't have to insert the last CD before beginning the restore.

NOTE: This option may not work correctly with your device; if you should receive any write or read errors when creating or verifying then you should disable this option.

Security

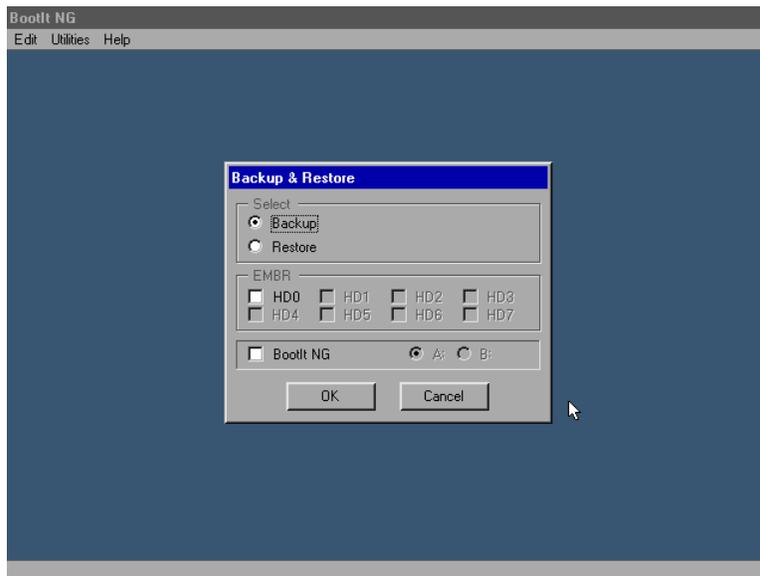
Maintenance Password: The password required to exit a boot menu to the desktop. Enter the password twice to verify its input.

Require User Name: If this option is checked, then when the system is booted a user name and password must be entered.

The Users Button: This button displays the user maintenance dialog. From that dialog you can add, delete, or edit users. Each user can be assigned their own "normal" Boot Menu and Direct Boot menu options. If a special user named "any" is created with no password then that user will be logged on automatically unless the insert key is held down on startup.

Backup/Restore

Using this option you can backup or restore the EMBR information (entire first track) on any hard drive you check. You can also use it to backup/restore the BootIt NG Files.



To backup, click the backup radio button, then check the checkboxes of the hard drives you want to have the first track backed up for. If you also want to copy the BootIt NG Files to a diskette, check that check box too.

Once all backup selections are made, click on OK; all checked hard drives will have the EMBR backed up to the partition with BootIt NG, then if you have also chosen to backup the BootIt NG Files, those files plus the other BootIt NG files are copied to diskette.

To restore, click the restore radio button and then check the checkboxes of what you want to restore. Note that the entire EMBR (first track) is restored if you choose to restore one to a hard drive. This includes the MBR.

Image Sets

Image sets are a set of partitions/volumes to be imaged one after the other. The name of an image set is the name of the file you create. This file will have the .IMS extension handled automatically.

Once you create/open the image set, you can then maintain the items via the add, edit, delete buttons on the right hand side. All items need to contain a source hard drive, source partition, destination hard drive, destination partition, file name, and maximum file size.

All images created using the image set feature will need to be created as files on a FAT or FAT32 partition. The source and destination must be different.

Once setup, the start button can be used to execute the process manually or you can use 'BootNow' and the new /ims= switch to automatically schedule execution.

Sound - Creating/Using

A sound file is nothing more than a text file with an extension of SND.

The format of the sound file is as follows; note: capitalization/spacing is not important and the x in the examples represents a number.

cycles=x (optional-must be first) - number of times to cycle the entire routine.

Fx Frequency to play (in hertz)

FRx|xSxLx Frequency range to play. First x is starting frequency, x after '|' is ending frequency. S is optional and is the step frequency rate (default=1). L is also optional, it is the latency delay in milliseconds between frequency step. (default=0)

Dx Delay in milliseconds. (1000 milliseconds = 1 second)

N No sound. Turns sound off.

Here's a sample routine that will play 2000hz for .5 seconds, pause with no sound for 1 second, then play 500hz to 2000hz stepping 10hz with a delay of

.005 seconds between steps, then do the same thing only from 2000hz to 500hz:

F 2000 D 500 N D 1000

FR 500 | 2000 S 10 L 5

FR 2000 | 500 S 10 L 5

To install a sound file you created:

- 1) Copy the file to a diskette
- 2) From the "Settings" or "Boot Item" dialog, click on the browse button next to sound.
- 3) Type in A:*.SND and press enter twice to display a list of files on the diskette.
- 4) Select the sound file you want to use/copy.

Using the Multi-OS Feature

The Multi-OS feature of BootIt NG allows you to install more than one operating system in the same primary partition. BootIt NG only supports Multi-OS in a FAT or FAT32 primary partition.

To enable this feature you must check the "Multi-OS" check box when creating the partition or, after it is created, in the properties dialog available through the "Work with Partitions" dialog.

Once enabled, you can install another operating system into the same partition (but different directory) as another one. When you reboot, BootIt NG will detect the new operating system and create a new boot menu option for it. If BootIt doesn't detect the new operating system then you can manually capture the required files by using the "Groups" button from the "Work with Partitions" dialog.

If you want to add, remove, or change the handling of any of the files associated with a group, then you should highlight the Multi-OS partition in the "Work with Partitions" dialog and click the Groups button.

You should note that some operating systems use the same directory structure for some of its files that could cause some files to be overwritten. For example, both Windows 95 and 98 use the \PROGRAM FILES directory for an Accessories folder. So even if you had Windows 95 installed in \WINDOWS and installed Windows 98 to \WIN98, Windows 98 setup could overwrite the files in the Accessories folder. To solve this you could have installed Windows 98 to its own drive letter (D:\WINDOWS for example). In this case you still need the Multi-OS feature because Windows 98 will install its boot files on the C: drive and the rest would be installed to the D: drive. The Multi-OS feature protects the Windows 95 boot files on C: and creates a new set for Windows 98.

Uninstalling BootIt NG

- 1) If you do not have primaries limited then the first step to uninstalling is to make sure you have no more than 4 primary partitions per hard drive. You can use the "Work with Partitions" dialog to delete any extra primary partitions.
- 2) From the Utilities Menu choose the Uninstall option.
- 3) Check the "Remove BootIt NG" check box.
- 4) If you want to also remove all groups and captured OS files then check the "Remove Group/Captured OS Files" check box.
- 5) Click OK.

BootIt NG has now been uninstalled. The first primary partition of HD0 has been marked active. If your system boots the incorrect partition or won't boot at all then you can use FDISK to set the correct partition active. You can also use the BootIt NG floppy diskette to set the correct partition active by doing the following:

1. Boot from the BootIt NG Installation diskette.
2. Click the cancel button to enter "maintenance mode".
3. Click on the Partition Work button.
4. Click on the View MBR button.
5. Highlight the partition you want active and click on the Set Active button.
6. Click on the apply button.

Operating Systems

Most of this section has been moved to the website. Please refer to <http://www.terabyteunlimited.com/help.html> for more information.

DOS

Files and file positions required for boot (not including any compression drivers):

MS DOS	
Position	File Name
1	IO.SYS
2	MSDOS.SYS
0	COMMAND.COM
0	AUTOEXEC.BAT
0	CONFIG.SYS

PC DOS	
Position	File Name
1	IBMBIO.DOS
2	IBMDOS.COM
0	COMMAND.COM
0	AUTOEXEC.BAT
0	CONFIG.SYS

Windows 95/98

Files and file positions required for boot (not including any compression drivers):

Position	File Name
1	IO.SYS
2	MSDOS.SYS
0	COMMAND.COM
0	AUTOEXEC.BAT
0	CONFIG.SYS

Windows NT

Files and file positions required for boot:

Position	File Name
0	NTLDR
0	BOOT.INI
0	NTDETECT.COM
0	NTBOOTDD.SYS

Notes:

NTBOOTDD.SYS is usually only used with SCSI hard drives. It is a copy of the driver renamed to NTBOOTDD.SYS.

OS/2

Files and file positions required for boot:

Position	File Name
0	AUTOEXEC.BAT
0	CONFIG.SYS

Notes:

Actually, the system files for OS/2 are OS2KRNL, OS2LDR, OS2LDR.MSG, OS2RAS, OS2VER, OS2BOOT, and WP ROOT.SF. If you were going to install more than one version of OS/2 in the same partition then you would need to do something with these files.

Generic Installations

Here is an example on how to setup a Multi-OS partition. Other generic examples on setting up an OS in its own partition are also given. Be sure you have read the Getting Started section of this document (page 6) so that you have some understanding of what is going on.

Enabling Multi-OS on a Partition

Assumes partition already contains an OS, using the normal boot menu.

- 1) Install BootIt NG.
- 2) Click the Maintenance button on the boot menu.
- 3) Click the Partition Work Button on the desktop.
- 4) Highlight the existing partition.
- 5) Click the properties button.
- 6) Rename it to whatever you wish. For the example, I'll assume it's named "My C Drive".
- 7) Check the Multi-OS check box.
- 8) Click the OK button to apply the changes.
- 9) If BootIt NG recognizes the installed operating system, a new group and menu configuration item is created. If not, you can use the groups button to add the files/group manually (see the Using the Multi-OS Feature section in this document)
- 10) If you had an existing boot item configured you can now edit the boot menu and either delete the previous entry or add the group name to it.

Dedicated Boot Primaries or Multi-OS Installations

Installing the bulk of a MS OS on another HD or drive letter. This also applies to installing a MS OS to a Volume. The difference between dedicated primaries and Multi-OS installations is that using Multi-OS you can share the boot partition (step 1 to many step 2's) whereas with dedicated primaries the pair of partitions (step 1 and step 2) are always different.

- 1) Create (if needed) a Partition for the OS on HD0 using the Work with Partitions dialog. You can create the partition small as possible, which is going to be depending on the OS. 5MB may be enough. Leave the format option checked. If using Multi-OS: Place a check in the "Multi-OS" check box.
- 2) Create (if needed) the main OS partition or volume using the Work with Partitions dialog. (Leave the format option checked)
- 3) Create a boot menu item for the new OS partition. Click on the "Boot Edit" button on the desktop and then the add button to add a new menu item. Select the partition you created in step 1 as the boot partition. Highlight an entry under MBR Details for the correct HD and then click on the Fill button. Choose the main OS partition from the list. Place a check in the "Next BIOS Device" or "Floppy Drive" check

box under the "One Time Option" section that matches the OS installation boot media. Click Ok twice to save the new item.

- 4) Click on the resume button.
- 5) Insert the OS installation media.
- 6) Boot the new boot item you created (step 3).
- 7) The OS Setup starts; choose the existing (main OS) partition you created on hard drive 1 as the installation drive.
- 8) That's it-you're done. The OS boots from the partition on HD0 (step 1) and transfers itself over to main OS partition (step 2).

Some operating systems (such as Windows 95) will deactivate BootIt NG. If that is the case all you need to do is boot with your BootIt NG installation diskette and run the Reactivate BootIt NG option.

Single Partition (the most common choice)

An example of installing an OS in its own single partition (Using the "Normal" boot menu)

- 1) Install BootIt NG.
- 2) Create a Partition for your OS using Work with Partitions Dialog.
- 3) Create a new menu item for booting the new partition. Click the "Boot Edit" button on the desktop then the add button to add the new item to the boot menu. Choose the partition you created in step 2 as the boot partition. If the OS boot media for installation is not a diskette then if the drive to boot that media is set to boot after your hard drive, check the "Next BIOS Device" option under the "One Time Option" section. Click OK twice to save the entry and return to the desktop.
- 4) Click the resume button on the desktop.
- 5) Insert your installation media.
- 6) Boot the boot item you just created (step 3). If a "One Time Option" was NOT set then depending on the partition, it will either display a message saying that there is no operating system installed on the partition or that the partition is not bootable and the option to boot from the floppy instead. Hit the appropriate key to continue.
- 7) The installation media will now be booted and you can begin installation to the C: drive.
- 8) If you don't have partitions limited under settings, then you should usually use the advanced or custom installation choices to make sure the installation routine doesn't try to create a new partition. Remember that the OS and system tools only see the partitions that are in the MBR, so if it creates or moves a partition it may put it right on top of an existing one that is not currently in the MBR partition table. You can however create or move volumes in an extended partition provided that the actual extended partition doesn't get moved or expanded.
- 9) That's it-you're done. Some operating systems (such as Windows 95) will deactivate BootIt NG. If that is the case, all you need to do is boot with your BootIt NG installation diskette and choose the Reactivate BootIt NG option.

One common configuration is to have multiple primary partitions (one for each operating system) and one common (shared) extended partition for data. To do this you indicate the boot partition and then add the extended partition to the MBR for each boot menu configuration.

For more information and/or OS specific information, see the help/info page at www.terabyteunlimited.com/help.html

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BootIt NG Order Form

Text version in file REGISTER.TXT

Remit To:
 TeraByte Unlimited
 1350 Town Center Dr. #1049
 Las Vegas, NV 89144

Registration Name: _____ Date: _____

Mailing Address: _____ Phone #: _____

_____ Phone #: _____

_____ Fax #: _____

E-Mail Address: _____ PC Brand/CPU Type: _____

Shipping Address: _____ Hard Drive Type: IDE EIDE SCSI

_____ Primary OS: _____

How did you learn about BootIt NG: _____ Floppy Drive Size(s):3.5" 5.25"

Description	Unit Price	Qty	Extended Price
BootIt Next Generation	\$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.)

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