SELECT-IT

Safely Run Multiple Operating Systems



User Guide

Select-It User Guide

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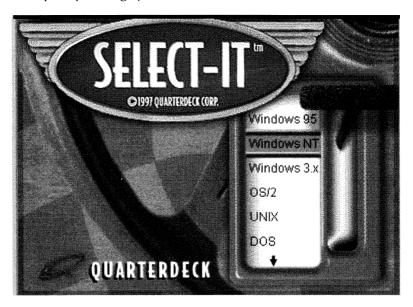




Introduction

Welcome to Select-It

Welcome to Quarterdeck Select-It, the easiest way to run multiple operating systems on one PC.



Select-It can help you:

- ▼ Juggle multiple operating systems with the touch of a button
- Migrate to a new operating system without risk, because you keep your familiar, reliable operating system while exploring the new
- Save money on hardware, because you do not have to buy separate computers for each operating system



- Eliminate tedious and risky system configuration file re-editing
- Create separate DOS and Windows environments. For example, you can keep DOS to play games and Windows 95 as your main desktop. No more juggling files and boot disks
- Evaluate and compare several operating systems
- Protect a computer from unauthorized use
- Protect a computer's Master Boot Record from viruses
- Demonstrate cross-platform software on one computer

Most importantly, you do not have to be a computer wizard to use Select-It. Select-It automatically detects all operating systems on your computer and creates a start-up menu of boot selections.

Basic Concepts

This section introduces some basic concepts to illustrate how Select-It works. If you are already familiar with OS management software, skip to "Using the Select-It OS Manager" on page 13.

PCs can run many operating systems, such as DOS, Windows 95, Windows NT, OS/2, versions of UNIX such as Linux and Solaris, and many others. Typically, multiple operating systems are unable to coexist with each other on one PC. Installing a new operating system often leaves an existing operating system unusable. Select-It provides a way to run several operating systems on one computer by giving you a choice at boot time.

Introduction to Disk Partitions

In using your computer, you have probably become familiar with the letters associated with various hard disks and floppy drives. A: typically represents a floppy drive, and C: is typically the hard drive from which you boot your computer.

Since the data on your computer are stored in files, a good way to think of the drive letters on your computer is to visualize them as representing file drawers in which your files are stored. Since simply throwing all of your files into a single file drawer makes it hard to locate or identify a specific file, DOS and Windows let you use directories to provide a further level of organization, just like different folders help you organize information in a single drawer.

Even folders can become hard to work with as you accumulate more and more folders and files on your system. Each time you want to locate a specific file, you have to find the appropriate folder, then search through that folder for the right file. If you add additional, larger hard drives, finding files can become even more difficult.

To make it easier to work with large hard drives and greater numbers of folders and files, DOS and Windows let you subdivide your hard drive into additional **partitions**. Partitions are like additional drawers in a filing cabinet – they provide additional, logical ways of dividing up the space you already have and using it more efficiently. Partitions help you access your files more efficiently in two primary ways:

- by providing an additional level for organizing data on your hard drive, partitions can make it easier to find a specific file or application
- by speeding up access to specific files or folders. If you create multiple partitions on a single hard drive, each partition is smaller than the total amount of space available on your hard drive. Your computer can usually locate information in a small partition faster than if it has to search your entire hard drive



Most hard drives consist of a single partition which is named C:. If you add other drives to your system, they are named D:, E:, and so on. Each partition on your hard drive is associated with a letter just like the drives themselves. The letters that are initially associated with the hard and floppy drives in your computer actually refer to single, large partitions that represent all of the space available on those drives.

Different Types of Partitions

ax primp A PC will only permit a maximum of four primary partitions on a disk. A maximum of four partitions on a disk was fine when disk sizes were smaller but may not be very efficient on today's systems, where disk drive sizes of one gigabyte and greater are common. To get around this limitation, you can identify one partition as an "extended" partition, in which you can subsequently create additional, **logical partitions**. Logical partitions do not occupy a specific portion of your disk, but exist within other (extended) partitions.

Systems running DOS, Windows 3.x, and Windows 95 recognize and use several different types of partitions:

- primary a physical portion of your disk from which DOS, Windows 3.x, or Windows 95 can boot when you start or restart your computer. Your C: drive is always a primary partition
- extended a physical partition that can be divided into multiple, logical sections that your operating system will see as partitions. An extended partition cannot contain boot information, since this type of partition is only recognized after you have booted an operating system
- ▼ logical a portion of an extended partition that the operating system recognizes as an actual partition. Logical partitions can only be identified by your system after the extended partitions in which they are located are identified. Logical partitions cannot contain boot information for your system.

What Happens at Boot Time

Booting a computer does just what the term implies: it pulls the computer up by its bootstraps — transforming it, via the Basic Input/Output System (BIOS), from an inanimate piece of hardware to a useful host of tools.

When your computer is first switched on, the BIOS conducts a Power On Self Test (POST) which consists of a series of tests to ensure that all the hardware is working properly. If the POST fails, the system is halted with an on-screen or audible error signifying a hardware failure. If the POST is passed, the BIOS accesses and reads the first 512 bytes on the first physical drive in the system, drive 0. These 512 bytes of data collectively make up the Master Boot Record (MBR).

MBP

The BIOS loads a Master Boot Program (MBP) which contains all the information needed to "boot up" your computer:

- executable code which locates and executes the operating system boot files
- a basic set of information on the overall type and size of the hard disk
- the master partition table, which contains information on the location and size of each of the four possible, principle partitions that can be created on any hard drive



Only physical drive 0 (the first identified physical drive in any computer) is bootable. The drive you normally see identified as drive C: is the only drive to contain a Master Boot Record with a master boot program; all other physical drives have only the MBR and no MBP.

The MBP checks the MBR and master partition table to make sure both contain the proper information and are readable. If they are valid, it loads itself into an unused portion of memory and reads the master partition table. Using the information in the master partition table, it locates the current active primary partition, and loads that partition's boot record into memory.



The partition boot record, which is identical in structure and size to the MBR, is located at the first 512 bytes of the first starting sector location of the active primary partition. Like the MBR, this boot record contains a program virtually identical to the MBP, called the bootstrap routine. It is the bootstrap that loads the operating system installed on the active primary partition and "boots" the computer.

All PC-based operating systems come with utilities that allow you to create partitions. However, these included utilities only allow one single primary partition to be created and made active. This is where partitioning software and Select-It come in.

What Select-It Does

During installation, Select-It replaces the current MBR with its own copy containing a special Master Boot Program which loads Select-It. Select-It starts in place of the default operating system and provides access to its boot management functions. The installation process saves a copy of the original Master Boot Record to the file SELIT.HIS in the event that it is later required.

Normally, the installation of operating systems is limited, as in the case of Windows 95's or Windows NT's dual-boot option. This, again, is due to the limitations in most operating system partitioning utilities, which allow only one primary and active partition to be created. Using non-destructive third-party partitioning software, such as Quarterdeck's Partition-It, you can create up to four primary partitions on a single physical drive by resizing current partitions and creating new primary partitions.

Once the partitions are created, you can make each partition active and then install a different operating system onto each.



Select-It was specifically designed to provide simple and reliable multiple operating system support by using separate partitions for each operating system. While Select-It will support multiple operating systems on a single partition, it is not easy to create such a setup and we recommend that multiple OS configurations on a single partition be left to more experienced users. Select-It was not designed to detect multiple OS boot configurations on a single partition automatically; however, it will automatically detect and set boot options for a Windows 95/MS-DOS dual-boot configuration.

Once all partitions have been configured and all desired operating systems stored, Select-It scans each disk's partition table and detects all bootable operating systems. Each operating system will be presented on the Select-It Boot Options menu and will allow you to choose which operating system to boot.

How Select-It Creates the Boot Options Menu

To create a boot option, Select-It saves all the boot files required by the operating system and stores them in a corresponding subdirectory under the main Select-It directory.

For example, to create a menu selection for MS-DOS 6.0, Select-It copies the MS-DOS files IO.SYS, MSDOS.SYS, DBLSPACE.BIN, COMMAND.COM, AUTOEXEC.BAT, and CONFIG.SYS into a new subdirectory called DOS60.



What Happens When You Select an Operating System

When you select an operating system, Select-It loads the appropriate boot record into memory. It then transfers the appropriate files to the root directory of the boot partition, if applicable, making that primary partition the current DOS boot record. The DOS boot record then loads and executes the appropriate operating system files.

Once the operating system is running, Select-It unloads itself from memory in exactly the same manner as the MBR does during normal boot operations. At this point, only the operating system is loaded and active; Select-It is no longer loaded or running.

The computer then runs the selected operating system until you reboot. The operating system is never affected by Select-It and Select-It uses no resident memory.

When you want to use another operating system, simply reboot and make another selection.

Compatible with almost any operating system for Intel microprocessors, Select-It enables several different operating systems to coexist peacefully on one PC.

System Requirements

Select-It has the following system requirements:

- ▼ Intel 80386 DX or higher
- ▼ MS-DOS 5.0 (or Windows 95) or higher; PC DOS 6.1 or higher; or Novell DOS 7 or Caldera OpenDOS 7.01 or higher. No DRDOS versions are supported

- ▼ 5MB of free hard disk space required for a DOS-based install, 7MB for a Windows 95 install. Copies of each operating system's system files will take about 700Kb of disk space
- ▼ 4MB of RAM required (8MB recommended with Windows 95). After you select an operating system, Select-It uses no resident memory

Supported Software Environments

Select-It can boot to the following operating systems:

- ▼ MS-DOS 5.0 7.10
- ▼ PC DOS 6.1, 6.3, 7.0
- Novell DOS 7.0
- ▼ Caldera OpenDOS 7.1
- Windows 95
- ▼ Windows NT 3.51, 4.0 (Server or Workstation)
- Windows 3.1 (Is not a bootable operating system in itself, but can be accessed through DOS)
- ▼ OS/2 2.1x, 3.0, 4.0, 4.0 Warp Server
- ▼ Sun Solaris 2.51
- ▼ Linux

Select-It supports the following disk compression software:

- ▼ DoubleSpace
- ▼ DriveSpace (16-bit in MS-DOS 6.22; 32-bit in Windows 95)
- Stacker 4.0 or greater



About This Guide



For instructions on installing Select-It, see the Select-It Installation Guide.

This user guide is organized as follows:

Chapter 1 — Using the Select-It OS Manager

Explains how to start Select-It and select an operating system.

Chapter 2 — Configuring the Select-It OS Manager

Explains how to add, copy, and delete operating system selections on the Boot Options screen; set up multiple configurations for any operating system; secure your computer; and customize Select-It to meet your personal preferences.

Chapter 3 — Select-It Advanced Utilities

Explains how to transfer key system files to a partition, have your computer ignore particular disk drives, back up a Master Boot Record or primary DOS boot sector, view partition and Master Boot Record information, and create a recovery disk.

Chapter 4 — Troubleshooting

Includes troubleshooting flowcharts to help examine and correct any problems. Explains how to restore a Master Boot Record or primary DOS boot sector, and reactivate Select-It after installing an operating system.

Chapter 5 — Example Select-It Configurations

Provides detailed instructions on setting up various Select-It configurations.



Select-It runs in your computer at a very low level to prevent any operating system from running before it does. For this reason, some of its functions (namely adding, deleting, copying, and re-ordering boot option entries) can only be used at the pre-boot level. However, you may use either the pre-boot or Windows 95 interface for any operation other than those listed above.

This manual describes how to use Select-It at the pre-boot level and notes any differences that apply to Windows 95.

Symbols

This user guide uses the following symbols:



Indicates a noteworthy point.



Indicates important information.



Indicates that there is more information about a topic elsewhere – in this User Guide, the online help, or even on the Internet.



Indicates a tip — a useful way of using a feature.





Using the Select-It OS Manager



See the included Installation Guide for instructions on installing Select-It.

To start Select-It:

Turn on or reboot your computer.

If Select-It's Password Security feature is enabled, you will be asked to enter a user ID and password. For more information, see "Securing Your Computer" on page 29.



Select-It's installation makes changes to your computer's master boot record. Many anti-virus software packages interpret any change to the master boot record as evidence of a possible virus. If, after installing Select-It, an anti-virus program displays a message indicating that it has detected a change to the master boot record, simply continue — do not repair or reject Select-It's changes. Doing so may overwrite or destroy the changes you have made to your disk using Select-It.

The Select-It Boot Options screen appears. This screen will reflect the operating systems installed on your computer.



Navigating in Select-It

Select-It displays dialog boxes at the pre-boot level and in DOS, and windows in Windows 95, for making selections and entering information.

Table 1 provides a quick summary of navigation techniques using the keyboard at the pre-boot level.

Table 1: Navigating in Select-It

ACTION	KEYSTROKE
Move up or down and highlight an item	Up or Down Arrow key
Toggle between items	Spacebar
Select an entry	Tab, then Enter
Save all changes and return to the previous screen	Enter
Return to the previous screen without saving changes	Esc
Display context-sensitive help	F1
Move between text fields	Tab

Selecting an Operating System

Once you install Select-It and reboot your computer, Select-It automatically detects any installed operating systems and adds them to the Boot Options screen. It will ask you to confirm each selection. From then on, all installed operating systems appear on the Boot Options screen. See the included *Installation Guide* for more information on how Select-It creates the Boot Options screen.



If a currently installed operating system does not appear on the Select-It Boot Options screen, you can add it. See "Changing the Boot Options Screen" on page 19 for instructions on adding a selection.

To select a boot option:

 Press the Up or Down arrow key until the operating system you want to boot is highlighted, then press Enter.



To start Windows 95 or Windows NT in a troubleshooting mode, highlight the OS on the Boot Options screen, then press F8. Typically, for troubleshooting purposes, you should choose Safe Mode for Windows 95 or VGA Mode for Windows NT. For information on the other options, see your Windows 95 or Windows NT documentation.

Select-It start-up messages appear momentarily and then the operating system appears.



You can have Select-It start a particular operating system automatically. See "Starting a Boot Option Automatically" on page 40.



Exiting an Operating System

To exit one operating system and boot another:

- 1 Exit the operating system as you normally would, then restart the computer using the reset button or power switch.
- When the Boot Options screen appears, highlight an operating system, then press **Enter** to start it.

To reboot to the same operating system:

- 1 Exit the operating system as you normally would, then restart the computer using the reset button or power switch.
- When the Boot Options screen appears, press **Enter** to start the operating system.

Uninstalling Select-It

Select-It can uninstall itself, if you should ever want to remove it from your computer. Uninstalling Select-It will replace the Select-It master boot record with the original, pre-Select-It master boot record. Any changes made to hard disk partitions are preserved. Select-It's configuration settings are deleted.



Select-It needs to write to the hard drive boot record to uninstall itself, which might cause an anti-virus program to interrupt the uninstallation with a warning message. If you are running an anti-virus program, you should disable it temporarily before uninstalling Select-It. For more information, see your anti-virus program's documentation.

You should uninstall Select-It from the same environment in which it was installed. For example, if you installed Select-It under Windows 95, you must also uninstall it from Windows 95 to ensure a thorough removal of all files and system changes.

To uninstall Select-It:

- 1 From the DOS prompt, change to the Select-It directory, type **SETUP**, press **Enter**, then select **Uninstall Select-It**.
 - In Windows 95, click **Start/Programs/Quarterdeck Select-It/Uninstall**.
- 2 Press Enter to confirm that you want to uninstall Select-It and restore the master boot record to its original state.
- 3 Reboot your computer.





Configuring the Select-It OS Manager

In this chapter you will learn how to:

- Add, copy, delete, and rearrange boot options on the Boot Options screen
- ▼ Have Select-It start a boot option automatically
- ▼ Set up a system administrator (if desired)
- ▼ Give users permission to use the computer
- Set user passwords to restrict access to some or all boot options
- Select a screen saver and boot sound

Changing the Boot Options Screen

Select-It configures itself optimally and typically does not require additional configuration. This section explains how to modify the Boot Options screen, should you choose to do so. You will learn how to add a new boot option, base a new boot option on an existing selection, change a boot option's description and icon, rearrange the order of the boot options on the Boot Options screen, and delete a boot option from the screen.



Adding a Boot Option

By default, Select-It automatically detects new operating systems installed on local drives each time the computer is started. Select-It offers to add any operating system it finds to the Boot Options screen.



You can turn the automatic detection of new operating systems off. See "Enabling and Disabling Automatic Detection of Operating Systems" on page 39.

This section describes how to add a new boot option to the Boot Options screen. You can use this option when:

- ▼ Select-It does not detect an operating system's presence and does not add it to the Boot Options screen automatically. For example, if you have another installation of Windows 95 on a different partition, Select-It will not detect the second instance. You could use the following procedure to add it to the Boot Options screen.
- ▼ You accidentally delete an operating system boot option and you want to add it back to the Boot Options screen without going through the full automatic operating system detection process.

To add a boot option selection to the Boot Options screen (pre-boot only):

1 In the Boot Options screen, press **Insert**.

The Select New Operating System Option dialog lists all operating system types. Table 2 shows your choices.

Table 2: Operating System Selections

CHOOSE	TO CREATE A BOOT OPTION FOR
Create DOS Selection	MS-DOS, PC DOS, Caldera OpenDOS, Novell DOS, Windows 3.x (see note below)
Create Windows 95 Command Selection	MS-DOS 7.0, MS-DOS 7.1
Create Windows 95 GUI Selection	Windows 95
Create Windows NT Selection	Workstation and Server editions of Windows NT 4.0 and 3.51
Create Non-FAT Selection	Operating systems that use a non-File Allocation Table (FAT) file system as their native file system, such as OS/2 or Solaris.
	NOTE: Select-It might identify a Linux swap partition as a Sun Solaris partition, because they share the same partition ID: 82. You should only accept Sun Solaris if it is installed on your computer and Select-It reports it in the correct partition.



To add Windows 3.x as a boot option selection, choose the **Create DOS Selection** option. Next, use the Boot Option Editor (described in "Editing a Boot Option Description" on page 23) to add a batch command that will launch Windows 3.x to the selection's AUTOEXEC.BAT file.



- Select an operating system type, then press Enter. The operating system must be installed on your computer. See "Installing an Operating System" in the included Installation Guide.
 - Select-It scans your computer for an operating system that matches your choice, then asks whether the operating system it found is the one you want to add.
- 3 To add the operating system, press **Enter**.
 - The New Boot Option Setup dialog appears, if the operating system is FAT-based.
- 4 Edit the name and description, if desired, or just press **Enter** to accept the fields as shown.

Select-It saves all vital files required by the operating system into a Select-It subdirectory on the hard drive then adds the new selection to the Boot Options screen.

Creating a Boot Option Based on an Existing Boot Option

This section describes how to create a boot option selection that is slightly different from the original.

For example, suppose your laptop needs a different configuration for portable and network use. You can use this option to copy the configuration you use on the road and edit the startup files to adapt it for network use. When you use the copy option, Select-It copies the vital operating system files, including any CONFIG.SYS and AUTOEXEC.BAT files. You can then edit these files to create a new selection on the Boot Options screen that starts the operating system using slightly different startup information.

To copy a boot option selection:

- In the Boot Options screen, highlight the boot option you wish to copy, then press **Ctrl+C**.
 - If Select-It's Password Security features are enabled, your user account may not have the necessary rights. For more information, see "Assigning a System Administrator" on page 31.
- 2 Choose **Ye**s when asked if you are sure you want to copy the selection.
 - Select-It copies the existing boot option and places it just below the original.

To change the entry, see the next section.

To edit the selection's startup files, see "Editing Startup Files" on page 26.

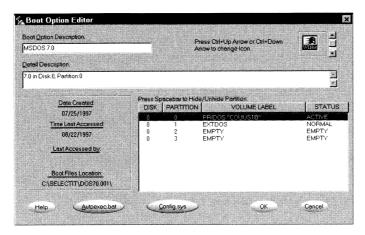
Editing a Boot Option Description

To customize Select-It's Boot Options screen, use Select-It's Boot Option Editor, which lets you:

- Change a boot option's descriptions
- Change a boot option's icon displayed in the Boot Options screen
- ▼ Hide a partition from other operating systems when this option is booted
- ▼ Edit a boot option's AUTOEXEC.BAT and CONFIG.SYS files, if applicable



Select-It's Boot Option Editor provides an easy way to make these changes.



To edit a boot option selection (pre-boot and Windows 95):

◆ In the Boot Options screen, highlight the boot option, then press **Ctrl**+**E**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Boot Option Editor**, click the boot option you wish to modify, then click **Edit**.

If Select-It's Password Security feature is enabled, your user account may not have the necessary rights. For more information, see "Assigning a System Administrator" on page 31.

In addition to providing ways to change a boot option's description, icon, startup files, and partition information, the Boot Option Editor displays the following information:

- The date the boot option was created
- ▼ The date and time of the last boot option access
- ▼ Which user accessed the boot option last (if Password Security is enabled)
- ▼ The directory where Select-It stores copies of the boot option's boot files (if applicable)

Editing the Short Description

Select-It uses the operating system name and version to describe the boot option, for example, MSDOS 6.22. You can change the selection name to make it more descriptive.

To edit the short description:

- 1 Type a new description over the old. The description may be up to 40 alphanumeric characters.
- 2 Press **Enter** or click **OK** to save the description.

Editing the Detailed Description

When Select-It creates a new boot option, it uses the operating system name, version, and location for the default detailed description, for example, MSDOS 6.22, Disk: 0, Partition: 4. You can add to this description; however, we recommend that you do not delete the disk and partition number locations, because they are useful in identifying where the boot option's operating system is located. The detailed description is only displayed in the Boot Option Editor screen.

To add or edit a detailed description:

- 1 In the Detailed Description field, type up to 255 alphanumeric characters.
 - If you want to create a new line in the description, press **Ctrl+Enter**.
- 2 Press **Enter** or click **OK** to save the description.

Changing the Icon

You can select from a variety of icons for the boot option. You cannot add your own icons.

To change the boot option's icon:

◆ Scroll through the icons. When the icon you want appears, press **Enter** or click **OK**.



Editing Startup Files

The Boot Option Editor provides a way to edit the AUTOEXEC.BAT and CONFIG.SYS files. If these files do not exist, you can use the following procedures to create new ones.



This feature will only edit the CONFIG.SYS and AUTOEXEC.BAT of a DOS-based operating system. It will not, for example, edit OS/2's CONFIG.SYS.

To edit or create a CONFIG.SYS or AUTOEXEC.BAT file:

1 At the Boot Option Editor screen, press **Alt+C** for CONFIG.SYS or **Alt+A** for AUTOEXEC.BAT at the pre-boot level.

In Windows 95, click **Config.sys** or **Autoexec.bat**.

A text editor appears. Table 3 on page 26 summarizes the editor commands for the pre-boot level editor.

- 2 Edit or create the file.
- 3 Press **F2** (pre-boot level) or click **Save** (Windows 95) to save the changes and return to the Boot Option Editor. The changes will take effect when you boot the operating system.

Table 3: Using the Text Editor at pre-boot

ACTION	Press
Undo typing	Ctrl+Backspace
Delete selection or delete current character	Del
Delete previous character	Backspace
Toggle between overwrite and insert	Insert
Save changes and exit	F2
Exit without saving changes	F3

Hiding Partitions

A partition is a portion of your hard drive that DOS or Windows can address using a letter. For more information, see "Introduction to Disk Partitions" on page 3. Hiding an operating system's partition makes the partition inaccessible when it is booted into the boot option. You might need to hide an operating system's partition to:

- Protect files in a partition from access
- Prevent a new operating system you are installing from detecting an older version or a conflicting operating system

For example, if you hide MS-DOS 6.22 located in partition 0 on disk 0, then boot into Windows located in partition 3 on disk 0, Windows will no longer recognize partition 0 or its contents. All MS-DOS 6.22 files on partition 0 will be hidden and inaccessible for as long as you use Windows.



Partition-It users: Use Select-It to hide or unhide partitions. Select-It's settings will override any hide/unhide operations made by Partition-It.

To hide a partition in a boot option:

- 1 In the Boot Option Editor, select the partition you wish to hide.
 - You will not be able to hide the active partition or a partition containing the boot options operating system files.
- 2 Press **Spacebar** to toggle the partition's status from normal to hidden.
- 3 Press Enter or click OK.

To make the partition visible, repeat this procedure.



Deleting a Boot Option (pre-boot only)

Deleting a boot option removes it from the Boot Options screen along with the boot option's corresponding Select-It subdirectory. It does not affect the operating system or the underlying partition's contents. Select-It requires at least one operating system selection be present to operate; therefore, you cannot delete the last operating selection on the screen.

To delete a boot option (pre-boot only):

- 1 In the Boot Options screen, highlight the desired boot option then press **Delete**.
- 2 Choose Yes when asked if you are sure you want to delete the entry.



If you mistakenly delete a boot option selection, press **F5** to perform a one-time operating system detection. If Select-It's Password Security feature is enabled, you may not have sufficient rights to perform this operation. Select-It will find the operating system and ask if you want to add it to the Boot Options screen.

Rearranging the Selections (pre-boot only)

The Boot Options screen lists the boot options in the order in which they were created. If you wish, you can rearrange the order of the boot options on the screen.

To move a boot option (pre-boot only):

Press the Ctrl+Up or Ctrl+Down Arrow keys to move a boot option up or down one location in the Boot Options list.

Securing Your Computer

Select-It's Password Security feature provides several options to prevent unauthorized access to any or all operating systems on a computer. You can use Select-It's security features to

- Assign a system administrator. The administrator can restrict access to some or all operating systems and view, change, and delete user access to the system.
- ▼ Disable floppy drives.
- ▼ Disable the automatic detection of new operating systems when the computer is booted.



While Select-It's Password Security feature provides a good level of protection against unauthorized use, it does not make a system bulletproof. Administrators who need protection against sophisticated system break-ins should use dedicated security measures.

Enabling and Disabling Security

You can customize Select-It's security features to suit your needs. Your security system can be as simple as turning password protection off when your laptop is at home and on when you hit the road, or as sophisticated as assigning individual users access to specific operating systems.



Once you turn the security features on, you will need to enter a valid user ID and password each time you boot the computer.

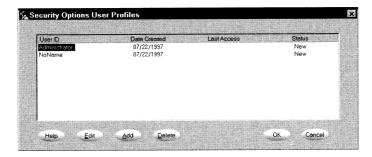


To turn Password Security on:

1 From the Boot Options screen at the pre-boot level, press Alt+S.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Security Options**.

The Security Options screen appears, with the Administrator user ID highlighted.



- 2 Press Ctrl+E (pre-boot) or click Edit (Windows 95).
 The Administrator Options screen appears.
- **3** Select **Enable Password Security**.
- 4 Press **Spacebar** or click the check box to place a check mark in the box.
- 5 Press Enter or click OK.

The next step is to assign a system administrator. See "Assigning a System Administrator" on page 31.

To turn Password Security off:

- 1 From the Boot Options screen at the pre-boot level, press **Alt+S**.
 - In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Security Options**.
- 2 Press Ctrl+E (pre-boot) or click Edit (Windows 95).
 The Administrator Options screen appears.
- 3 Select Enable Password Security to remove the check mark.
- 4 Press **Spacebar** or click the check box to remove the check mark.
- 5 Press Enter or click OK.

Assigning a System Administrator

The system administrator can grant users access to specific operating systems to prevent system security breaches by unauthorized persons. In addition, the system administrator can disable floppy drive access and turn off the automatic detection of operating systems.

To assign a system administrator:

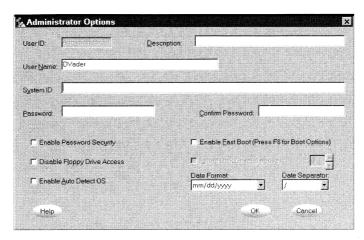
1 From the Boot Options screen at the pre-boot level, press **Alt+S**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Security Options**.

The Security Options screen appears, with the Administrator user ID highlighted.



Press Ctrl+E (pre-boot) or click Edit (Windows 95).The Administrator Options screen appears.



3 In the User Name field, type the administrator's user name, which can be up to 40 alphanumeric characters.



You cannot change or delete the Administrator user ID, only modify its properties.

- 4 In the Description field, type a description of the administrator, for example, Head of MIS. The description can be up to 40 alphanumeric characters.
- 5 (Optional) In the System ID field, type whatever you would like to describe the computer's owner or computer; for example, Property of Test Lab, Serial Number 89456. The description can be up to 60 alphanumeric characters. This description will appear in the Boot Options and Help About screens. For more information, see "Personalizing the Boot Options Screen" on page 46.

6 In the Password field, type a password. The password may be 6 to 10 alphanumeric characters and is not case-sensitive.



Steps 6 and 7 set an administrator-level password, which allows access to the computer and all Select-It configuration screens and options. When you enable the security features and set this password, you must always type a valid user ID and password before you may use the computer. Be sure to select a password that you will be able to remember but that others will not be able to figure out.

- 7 In the Confirm Password field, retype the password.
- 8 Press Enter or click OK to save the changes. For information on the other Administrator Options, see Table 4 below.



If you forget or misplace the administrator password, call Quarterdeck Technical Support.

Table 4: Administrator Options

OPTION	SEE
Enable Password Security	"Enabling and Disabling Security" on page 29
Enable Auto Detect OS	"Enabling and Disabling Automatic Detection of Operating Systems" on page 39
Disable Floppy Drive Access	"Disabling Floppy Drives" on page 38
Enable Fast Boot	"Bypassing the Boot Options Screen" on page 41
Ignore Disk Drive(s) above x	"Ignoring Disk Drives" on page 42



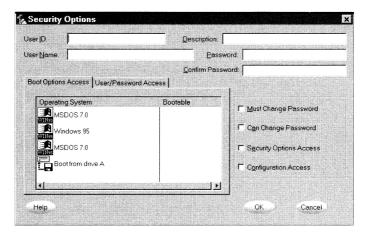
Adding Users

A user profile specifies which operating systems and Select-It screens various users may access, and also sets their user ID, password and their user ID and password expiration dates. The system administrator can assign up to 40 user profiles.

To add a user:

1 From the Security Options screen, press **Insert** (pre-boot) or click **Add** (Windows 95).

The Security Options screen appears.



- 2 Type the user ID in the User ID field. The user ID may be up to 13 alphanumeric characters and is not case-sensitive.
- 3 In the Description field, type a description of the user, for example, Account Executive. The description may be up to 40 alphanumeric characters.

- 4 In the User Name field, type the user's real name. The user name may be up to 30 alphanumeric characters and is not case-sensitive.
- In the Password field, type a password. The password may be 6 to 10 alphanumeric characters and is not case-sensitive.
- 6 In the Confirm Password field, retype the password.

Setting Password and User Expiration Dates

If you wish, you can limit the length of time, or the number of accesses, for which a user ID is valid. By default no expiration dates are assigned to user IDs.

To set password and user expiration dates:

- In the Security Options screen, select the User/ Password Access tab.
- 2 Type the number of days that the password will be valid.
- 3 Type the date on which the password will expire in the same regional format that was in use when Select-It was installed, for example, MM/DD/YYYY or DD.MM.YYYY
- 4 Type the number of times the user can log in with the password before access is denied.
- Type the number of days that the user ID will be valid, the date on which the user ID will expire, and the number of times the user can log in with the user ID before access is denied.
- 6 Press Enter or click OK.



The password and user expiration features may be used together or separately. When used together, the password will expire when the earliest expiration point is reached. When only one of the two fields is set, the password will expire when that particular condition has been reached.



Setting User Password Permissions

The system administrator can give users permission to change their passwords whenever they like, or make them change their passwords upon logging in.

To make a user change the password upon logging in:

 In the Security Options screen, select Must Change Password.

The user will be asked to change the password upon logging in. After the user changes the password, this option will be reset and the check mark will disappear.

To give a user permission to change the password:

 In the Security Options screen, select Can Change Password.

Letting Someone Other than the Administrator have Administrator Rights

The system administrator can give specific users security access, configuration access, or both. These options should only be enabled for a user who will control the system in the system administrator's absence.

A user who has been granted security access can access the Security Options screen and all subsequent screens, excluding the Administrator Options screen. This allows the user to edit user IDs, but not the Administrator ID and password.

A user who has been granted configuration access can access Select-It's Boot Defaults screen and the Boot Option Editor screen. This allows the user to change Select-It's boot settings. To give a user access to the security options:

In the Security Options screen, select Security Option Access.

To give a user access to the configuration options:

In the Security Options screen, select Configuration Access.

Specifying Which Boot Options a User May Access

The system administrator can set which operating systems each user can access. This option is only in effect if the Enable Password Security option is enabled. See "Enabling and Disabling Security" on page 29.

To specify which operating systems the user can access:

- 1 In the Security Options screen, select the **Boot Options**Access tab.
- 2 Scroll through the list of boot options, then select all boot options the user may access by pressing the Spacebar (pre-boot) or double-clicking (Windows 95).

Deleting a User

To delete a user:

- 1 In the Security Options User Profiles screen, select the user, then select **Delete**.
- Select Yes when asked if you are sure you want to delete the user.



Disabling Floppy Drives

The system administrator can disable all floppy drives, preventing a user from

- Installing new software from a floppy disk
- Copying information to a floppy disk
- ▼ Introducing a virus via a floppy disk
 In Windows, if an attempt is made to access the floppy
 drive, a warning will appear, stating that the floppy disk
 is unformatted and will fail any format operations.



When floppy drive access is disabled, Select-It convinces the operating system at bootup that the disk is a 180Kb disk. It does not modify any CMOS settings but instead maintains a flag in memory indicating that the floppy drive is an unsupported capacity.

This setting should only be used if you are absolutely certain that access to a floppy disk is not required.

To disable the floppy drives:

1 From the Boot Options screen at the pre-boot level, press **Alt+S**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Security Options**.

The Security Options screen appears.

Press Ctrl+E (pre-boot) or click Edit (Windows 95).The Administrator Options screen appears.

- 3 Select **Disable Floppy Drive Access**.
- 4 Reboot the computer.



This will not restrict a user from using a floppy disk to boot the system before Select-It is loaded. To prevent this capability requires changing settings in the system's CMOS. Consult your PC's documentation on this procedure.

Enabling and Disabling Automatic Detection of Operating Systems

When the computer starts, Select-It automatically checks for new operating systems. If it detects one, it will ask if you want to add it to the Boot Options screen. Disabling this feature prevents unauthorized system use and saves a couple of seconds when the computer boots. Once disabled, Select-It will not detect any new operating system unless F5 is used to perform a one-time operating system detection.

To enable or disable the automatic detection of operating systems:

- 1 From the Boot Options screen at the pre-boot level, press **Alt+S**.
 - In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Security Options**.
 - The Security Options screen appears, with the Administrator User ID highlighted.
- 2 Press Ctrl+E (pre-boot) or click Edit (Windows 95).
 The Administrator Options screen appears.
- 3 Uncheck Enable Auto Detect OS on Boot to disable automatic detection, or check the box to enable the automatic detection.



Customizing Select-It

There are several ways to customize Select-It; for example, you can personalize the Boot Options screen, select a default boot option, choose a screen saver, and so on.

Starting a Boot Option Automatically

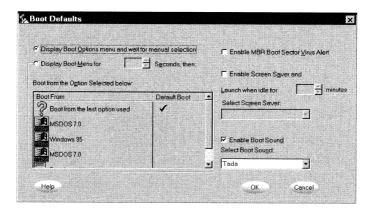
When the computer starts, Select-It displays the Boot Options screen until you select a boot option. You can have Select-It display the Boot Options screen for a few seconds, then automatically start a boot option if you do not make a selection.

To start a boot option automatically:

From the Boot Options screen at the pre-boot level, press **Alt+D**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Boot Defaults**.

The Boot Defaults screen appears.



- 2 Select Display Boot Menu For 10 Seconds, then:.
- 3 Select the number of seconds that will elapse before the operating system boots. We recommend 10 seconds.

4 Select the boot option you want to launch at startup. You can also select **Boot from the last option used** to have your computer start with the boot option that was in use the last time you shut down the computer.

The next time you turn the computer on, a timer on the Boot Options screen will count the seconds until the boot option will be launched. You can press any key to cancel the timer, then select a boot option manually.



If you want to disable the automatic launching of a boot option, go back to the Boot Defaults screen and select **Display Boot Options Menu and wait** for manual selection.

Bypassing the Boot Options Screen

The Fast Boot option allows Select-It to bypass the Boot Options screen at startup and boot the default boot option as defined on the Boot Defaults screen. When you enable this feature to bypass the Boot Options screen, Select-It still pauses for four seconds before starting the default boot option. This gives you the opportunity to press the F8 key to display the Boot Options screen if you wish.

This feature is most useful when you need to:

- ▼ Boot directly to the most commonly used boot option.
- ▼ Optimize a memory management program, such as QEMM-386, to ensure that the computer boots the same operating system files and system configuration.



When the Password Security feature is enabled, Fast Boot is disabled.



To bypass the Boot Options screen:

1 From the Boot Options screen at the pre-boot level, press **Alt+S**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It, Select-It Configuration/Security Options**.

The Security Options screen appears.

- Press Ctrl+E (pre-boot) or Edit (Windows 95).The Administrator Options screen appears.
- 3 Select Enable Fast Boot.

The next time you start the computer, the message "Starting Fast Boot Selection..." appears momentarily, then the default boot option starts.



To turn this feature off and have Select-It display the Boot Options screen, press **F8** when the computer starts, then repeat steps 1 through 3. Step 3 will clear the check mark from the check box.

Ignoring Disk Drives

Rarely, some operating systems will not boot or function properly when there is more than one primary partition. To get around this limitation, Select-It provides a way to prevent an operating system from recognizing a drive beyond a workable number.

To have Select-It ignore one or more disk drives:

1 From the Boot Options screen at the pre-boot level, press **Ctrl+S**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It, Select-It Configuration/Security Options**.

The Security Options screen appears with the Administrator user ID highlighted.

2 Press Ctrl+E.

The Administrator Options screen appears.

3 Press Tab until **Ignore Disk Drive(s) above** [] is highlighted, then type the number of the last physical drive to recognize. All drive numbers following this number will be ignored. The number must correspond to the physical drive number, not to a partition. The maximum number is 9. This is zero-based; to ignore a second physical hard disk, set this number to 0.

Selecting a Boot Sound

You can select from a variety of boot sounds that alert you when the Boot Options screen appears.

To select a boot sound:

1 From the Boot Options screen at the pre-boot level, press **Alt+D**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Boot Defaults**.

The Boot Defaults screen appears.

- 2 Select Enable Boot Sound.
- To select a boot sound, scroll through the available boot sounds until the one you want appears. You can press **Spacebar** to sample the boot sound.



The boot sound is issued from the PC's internal speaker, not from an audio card. No volume control is available for the boot sound.



Using a Screen Saver

You can select from a variety of screen savers that run when no operating system has been selected and the computer is idle.

To turn a screen saver on:

1 From the Boot Options screen at the pre-boot level, press **Alt+D**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Boot Defaults**.

The Boot Defaults screen appears.

- 2 Select Enable Screen Saver and...
- 3 Select the number of minutes that will elapse before the screen saver appears. We recommend 1 minute.
- 4 To select a screen saver, scroll through the available screen savers until the one you want appears. You can press **Spacebar** to preview the screen saver. After the preview, press **Spacebar** again to return to the Boot Defaults screen.



To disable the screen saver, deselect **Enable Screen Saver and...**

Using Virus Detection

When the computer starts, Select-It checks for changes to the Master Boot Record. Changes might indicate that a virus has installed itself into the DOS boot sector. If Select-It finds an unexpected change to the Master Boot Record, we recommend that you run a more thorough virus check using an anti-virus program. You can turn Select-It's virus check off. By default, Select-It enables this setting.



If Select-It detects an unexpected change to the Master Boot Record and you do not have an anti-virus program on your computer, you should restore the default Master Boot Record as described in "Restoring the Default Master Boot Record" on page 71 to prevent your computer from possible infection.

To turn virus detection off:

- From the Boot Options screen at the pre-boot level, press **Alt+D**.
 - In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Configuration/Boot Defaults**.
 - The Boot Defaults screen appears.
- 2 Deselect Enable MBR Boot Sector Virus Alert.



Personalizing the Boot Options Screen

The Boot Options screen displays personalized information. By default, it displays "This system belongs to" and the name under which Select-It was registered. You can change this to whatever you like.



You might consider adding information that could identify and recover a lost or stolen computer because this information appears on the screen before a boot option is selected.

To personalize the information in the Boot Options screen:

1 From the Boot Options screen at the pre-boot level, press **Alt+S**.

In Windows 95, click Start/Programs/Quarterdeck Select-It/Select-It Configuration/Security Options.

The Security Options screen appears, with the Administrator user ID highlighted.

- Press Ctrl+E (pre-boot) or click Edit (Windows 95).The Administrator Options screen appears.
- 3 Select **System ID**, then type a system description of up to 40 alphanumeric characters.



Select-It Advanced Utilities

In this chapter you will learn how to:

- ▼ View information about the partitions in your computer
- ▼ View your computer's Master Boot Record
- ▼ Create or update a Master Boot Record recovery disk
- ▼ Transfer essential system files to a partition
- ▼ Back up a primary DOS boot sector

Viewing Partition Information

Select-It provides a way to display partition table attributes for each primary and extended partition on your computer. A *primary partition* is a physical partition on your hard drive that is defined by the partition table. Primary partitions are bootable. Extended partitions, which contain their own partition tables, can be further divided up into logical drives.



For more information on partitions, see "Introduction to Disk Partitions" on page 3.

To view Partition Information:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click Start/Programs/Quarterdeck Select-It/Select-It Utilities.

You will be asked to enter a password if one is required.



2 Select Display Partition Information, then press Enter.

The Partition Information screen appears. Each line displayed describes one partition on the disk(s).

Table 5: The Partition Information Screen

Disk	The physical disk number.
Part	The partition number from 0 to 3.
Act	The partition's status: Active, as indicated by the letter A in the column, means you can boot from it; blank means you cannot boot from it. A hard disk can have up to four physical partitions (one of which can be an extended partition), but only one of these can be active at a given time. If you wish to set a certain partition as active before uninstalling Select-It, this can be done here.
Туре	The type of partition or file system for that partition, for example: PRIDOS for primary DOS, EXTDOS for extended DOS, FAT32 for a 32-byte File Allocation Table, EMPTY for an empty partition, UNKNOWN for an unidentifiable partition type, and HIDDEN for a hidden partition.
Start (Cyl HD Sec)	The true physical starting location of the partition, broken down by cylinder, head, and sector (see note below).
End (Cyl HD Sec)	The true physical ending location of the partition, broken down by cylinder, head, and sector (see note below).
Size (MB)	The total size of the partition in megabytes.



Some system BIOSes use logical block addresses to extend the physical start and end locations. The Partition Information screen shows only the true physical locations, not logical locations.

Viewing a Partition's Boot Sector

A partition's boot sector can load the operating system's files and boot the operating system. If you have a need to view a partition's boot sector, this feature will assist you.

To view the partition's boot sector:

Select the partition to view, then select View.



Select-It can only show a partition's boot sector for non-FAT file systems, such as HPFS or NTFS, in binary format.

To view the partition's boot sector in a binary format:

- 1 Select the partition to view, then select **Binary View**.
- 2 To return to the Advanced Options screen, select **Back** (DOS) or **OK** (Windows 95).

Transferring Essential System Files to a Partition (DOS only)

This feature copies essential system files such as COMMAND.COM, IO.SYS, and MSDOS.SYS from a bootable floppy disk to the currently active DOS partition and makes it bootable. This would be used on occasions when you encounter an error message regarding missing operating system files or if the primary DOS boot record is corrupt. This function will only transfer DOS-based operating system files, including Windows 95.



To transfer essential system files to an active partition (DOS only):

- From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.
 - If necessary, Select-It will prompt for a password.
- 2 Select Transfer System Files, then press Enter.
 Select-It warns that the operating system files on the floppy disk should match the current operating system on the partition.
- Insert a bootable floppy disk that contains the current operating system's boot files in drive A:, then press Enter.
 - Select-It copies the system files to the first sector of the partition. The partition's boot record now points to the location of the system files in the root and loads them at boot time.
- 4 Press **Enter**, then reboot your computer.

Viewing the Master Boot Record

The Master Boot Record is a special 512-byte area located in sector 1, track 0 of drive 0. The computer's BIOS looks in the Master Boot Record as the place to start the software booting process.

To view the Master Boot Record:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Utilities**.

If required, you will be asked to enter a password.

2 Select Master Boot Record Information.

The Master Boot Record appears.



The Save and Restore buttons on this screen can save a Master Boot Record to or restore a Master Boot Record from a file. These features are intended for advanced users only and should be used with caution. Improper use could result in lost data.

Creating a Master Boot Record Recovery Disk

In the event of a system failure an MBR recovery disk can be used to restore the MBR to its default state. Use this procedure to create a Master Boot Record recovery disk if you did not create one when you installed Select-It or misplaced the one you created. You can boot your computer from this disk in the event of a system failure. For more information, see the included *Installation Guide*.



Creating a Master Boot Record recovery disk is different from saving the default Master Boot Record as described on page 53, because the former saves more than the Master Boot Record. The recovery disk includes all track 0 information plus all operating system files for booting.

To create a Master Boot Record recovery disk, Select-It takes a "snapshot" of the information contained in track 0 and saves it to a floppy disk.



If you create a Master Boot Record recovery disk after installing Select-It, it will contain the current Master Boot Record and not the Master Boot Record that existed prior to Select-It's installation.



To create a Master Boot Record recovery disk:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Utilities**.

You will be asked to type a password, if one is needed.

- 2 Select Create MBR Recovery Disk.
- 3 Insert a blank floppy disk in drive A:, then press **Enter**.



This operation will erase all data on the floppy disk.

- Press **Enter** to continue.

 Select-It copies the MBR recovery files to the disk.
- 5 Press **Enter** to return to the Advanced Options screen.

Updating a Master Boot Record Recovery Disk

Use this procedure to update a Master Boot Record recovery disk after making changes to the system's configuration after Select-It installation. The MBR recovery disk should be updated each time a change is made to any partition. You can boot your system from this disk in the event of a system failure.

To update a Master Boot Record recovery disk:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Utilities**.

You will be asked for a password if one is necessary.

- 2 Select Update MBR Recovery Disk.
- 3 Insert the MBR recovery disk in drive A:, then press **Enter**.

Select-It warns that the operation will erase all data on the floppy disk.

- 4 Press Enter to continue.
 Select-It updates the MBR recovery files on the disk.
- 5 Press **Enter** to return to the Advanced Options screen.

Backing Up a Primary DOS Boot Sector

The primary DOS boot sector is identical to the Master Boot Record in structure and function, except that it is located at sector 1 of the specified cylinder and head number for each primary partition. This record loads the operating system files and boots the system.

Use this procedure to back up the current active primary partition boot sector for disk 0 (the physical drive 0 or boot drive). Select-It stores the starting cylinder and head location of the partition on a floppy disk. You can use this disk to restore the boot sector information to the exact location from which it was backed up should anything destroy the original record.



Select-It can recover a lost or corrupted active primary DOS boot sector only if you store it in advance — before problems appear. If you do experience any problems, see Chapter 4.



To back up a primary DOS boot sector:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Utilities**.

2 Select Backup Primary DOS Boot Sector.

Select-It recommends you store the boot sector information on a floppy disk in drive A:.

3 To save the information on a floppy disk, insert a blank floppy disk in drive A:, then press **Enter**.

To save the information in another location, type the path name then press **Enter**.

Select-It saves the boot sector information in a file with the file extension .SEC.

4 Press **Enter** to return to the Advanced Options screen.



You may want to consider using a file name of 8 characters or fewer for this file. This will ensure that it is available even when Windows 95 is not.



Troubleshooting

This chapter contains flowcharts to assist you in troubleshooting any Select-It problems that may possibly occur. In addition, you will also learn how to:

- Modify Windows NT's BOOT.INI file to the correct Windows NT partition after adding or deleting partitions.
- ▼ Reactivate Select-It after installing a new operating system.
- Restore the default Master Boot Record and a primary DOS boot sector.
- Use the Master Boot Record recovery disk, and manually uninstall Select-It.

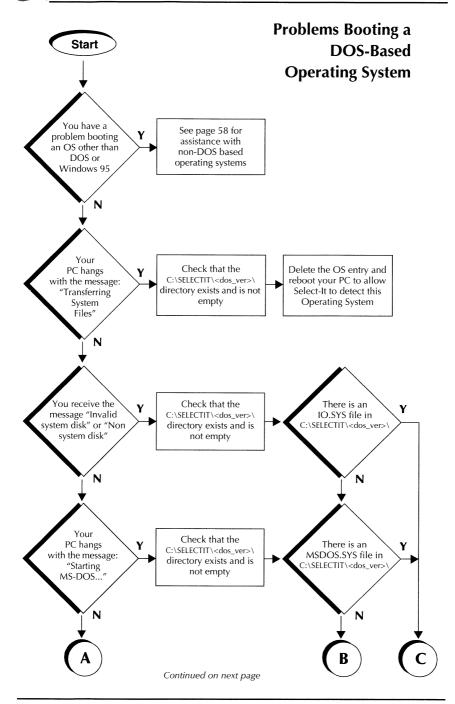
Overview

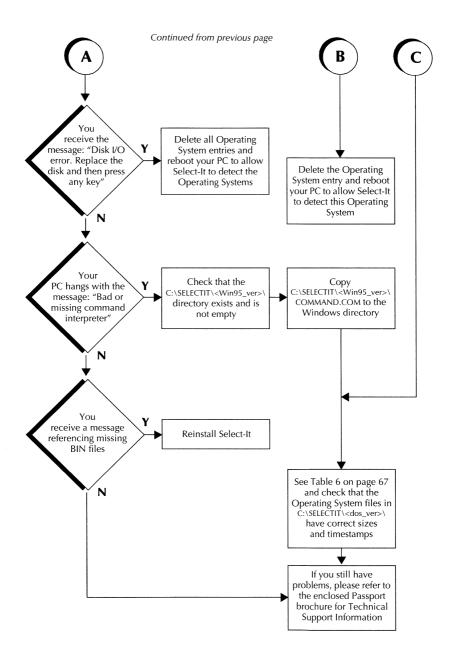
We hope you never experience problems using Select-It. However, if you do, please write down the steps performed prior to and leading up to the problem.

Using the Flowcharts

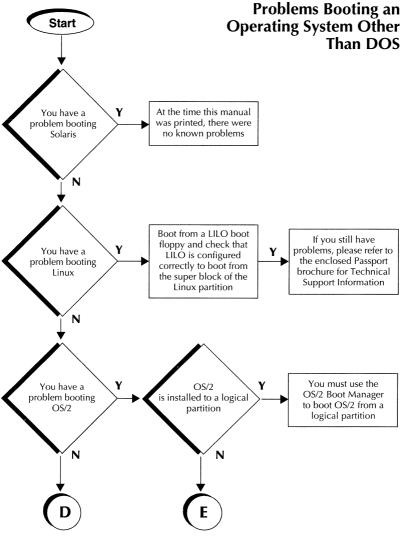
You can use the following flowcharts to troubleshoot any problems you may be experiencing with Select-It. In the event that the flowcharts do not cover your problem, please take notes in case it becomes necessary to call Technical Support.



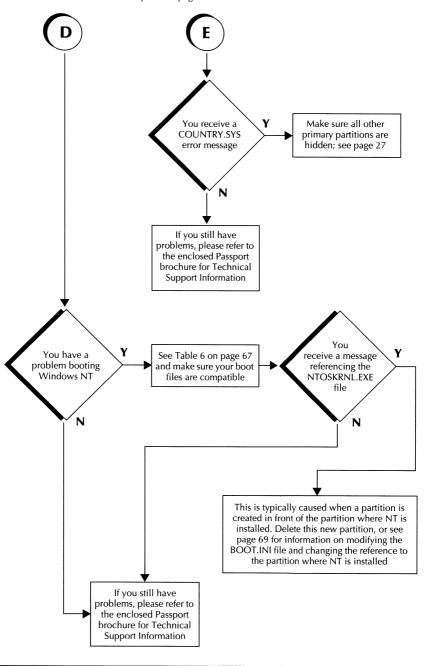




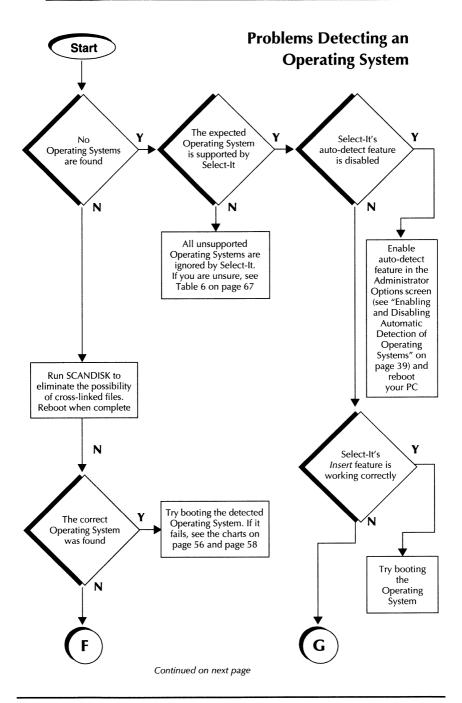


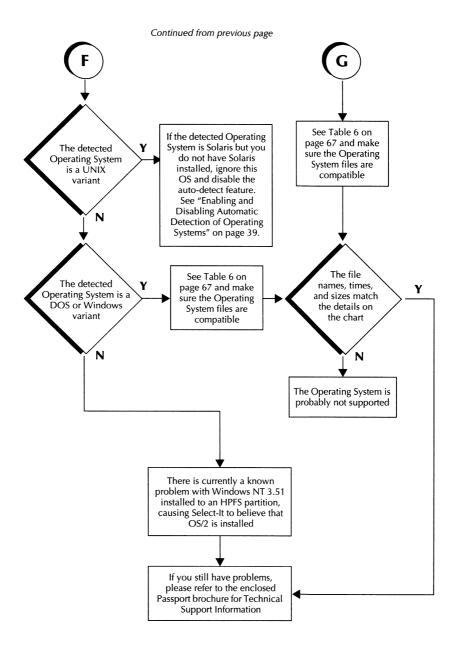


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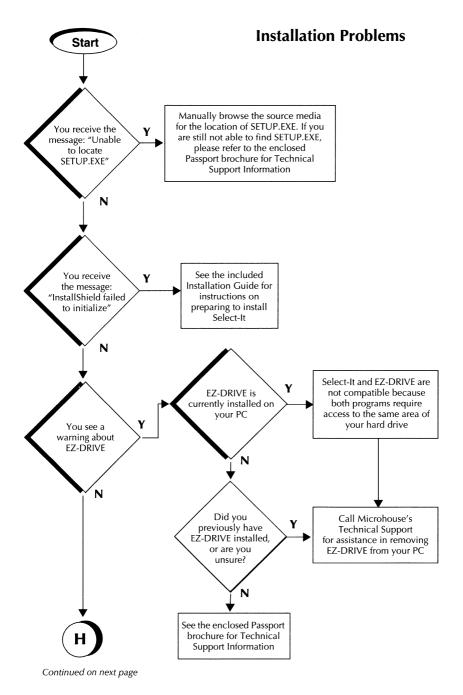


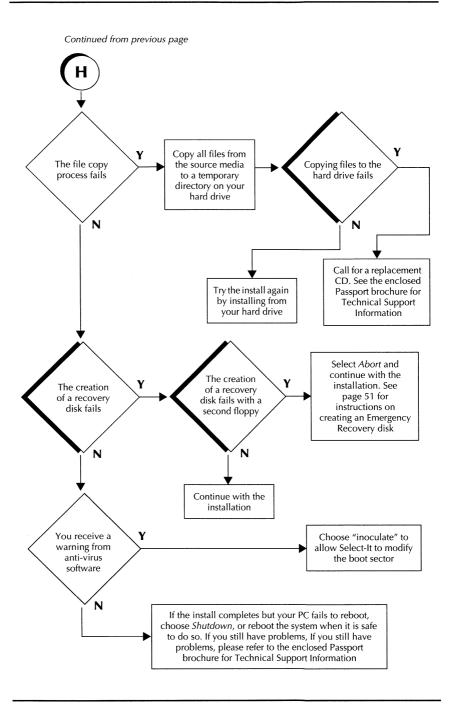




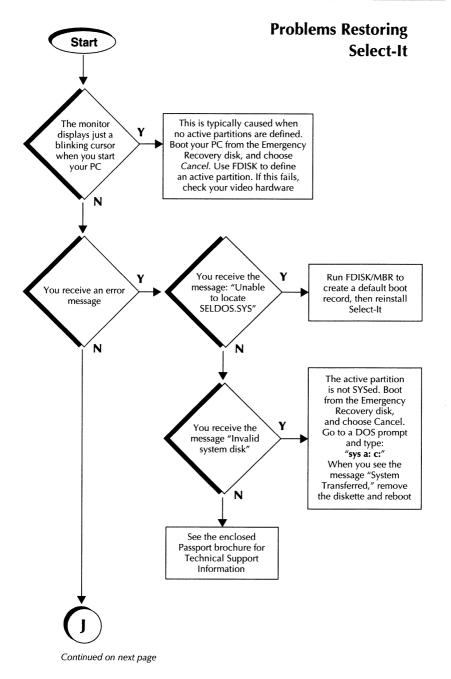








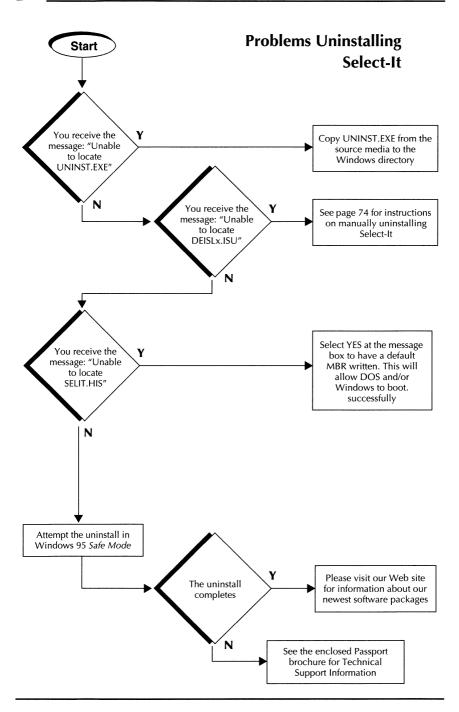




Continued from previous page An To re-enable Operating System Select-It is Select-It, make sure the automatically currently installed partition Select-It is starts when you on your PC installed on is active; boot your PC you may have to use FDISK to activate the correct partition. At a Ν DOS prompt, run C:\SELECTIT\SETUP, and select Update, or reinstall Select-It Reinstall Select-It See the enclosed Passport brochure for

Technical Support Information





Compatible Operating Systems

Table 6 lists the operating systems that are supported by Select-It. Refer to this table if you are having trouble detecting or booting an operating system. The table lists the system files, sizes, and timestamps so you can verify that the proper files are installed in an operating system's directory.

Table 6: Operating Systems Supported by Select-It

OPERATING SYSTEM	FILES NEEDED	FILE SIZES (BYTES)	FILE TIMESTAMPS
MS-DOS 5.00	io.sys	33,430	12.00
	command.com	47,845	12.00
	msdos.sys	37,394	12.00
MS-DOS 6.00	io.sys	40,470	6.00
	command.com	52,925	6.00
	msdos.sys	38,138	6.00
MS-DOS 6.20	io.sys	40,566	6.20
	command.com	54,619	6.20
	msdos.sys	38,138	6.20
MS-DOS 6.21	io.sys	40,566	6.21
	command.com	54,619	6.21
	msdos.sys	38,138	6.21
MS-DOS 6.22	io.sys	40,774	6.22
	command.com	54,645	6.22
	msdos.sys	38,138	6.22
MS-DOS 7.00	io.sys	220,148	9.50
	command.com	92,870	9.50
	msdos.sys	greater than 1,024	n/a
MS-DOS 7.10	io.sys	214,836	11.11
	command.com	93,812	11.11
	msdos.sys	greater than 1,024	n/a
PC DOS 6.10	ibmio.com	40,774	12.00
	ibmdos.com	38,138	12.00
	command.com	52,589	12.00



Table 6: Operating Systems Supported by Select-It

OPERATING SYSTEM	FILES NEEDED	FILE SIZES (BYTES)	FILE TIMESTAMPS
PC DOS 6.30	ibmio.com	40,758	1.00
	ibmdos.com	37,174	1.00
	command.com	54,654	1.00
PC DOS 7.00	ibmio.com	40,614	13.00
	ibmdos.com	37,066	13.00
	command.com	52,956	13.00
Novell DOS 7.00	ibmio.com	27,880	7.00
	ibmdos.com	29,684	7.00
	command.com	56,081	7.00
Caldera OpenDOS 7.01	ibmio.com	27,880	7.01
	ibmdos.com	30,081	7.01
	command.com	55,077	7.01
Windows NT 3.51	ntdetect.com	26,640	n/a
	ntldr	148,320	n/a
Windows NT 4.00	ntdetect.com	26,800	n/a
	ntldr	155,984	n/a



For operating systems using Microsoft compression software, DBLSPACE.BIN or DRVSPACE.BIN may also be required.

Modifying the BOOT.INI File



You should only follow this procedure if the troubleshooting flowchart "Booting A Non-DOS Operating System" has referred you here.

To modify the BOOT.INI file:

- 1 Boot from floppy disk, or from another partition, to get to a DOS prompt.
- 2 At the C:\> prompt, make a copy of BOOT.INI and call it BOOT.BAK.
- 3 Issue the ATTRIB -S -R \BOOT.INI command to make the file editable, then edit BOOT.INI in your favourite text editor. A file similar to the following will appear:

[boot loader]

Timeout=0

Default=multi(0)disk(0)rdisk(0)**partition(2)**\WINNT40

[operating systems]

multi(0)disk(0)rdisk(0)**partition(2)**\WINNT40="Windows NT4.0" multi(0)disk(0)rdisk(0)**partition(2)**\WINNT40="Windows NT 4.0 VGA mode" /basevideo

C:\="Microsoft Windows 95"

4 If you added a partition before Windows NT, increment all numbers following the word "partition" by one. If you deleted a partition, decrement the numbers. The numbers should all point to the same partition number.



In some situations, this procedure sets BOOT.INI's Time-out value to a non-zero value (typically 9 seconds). To disable the Boot menu and boot directly into Windows NT, change the Timeout value to 0.

5 When you have completed all the changes you wish to make, save the file, and reset BOOT.INI's attributes by issuing the following command:

ATTRIB +R +S \BOOT.INI



Updating Select-It After Installing An Operating System

Some operating systems will disable Select-It by overwriting Select-It's Master Boot Record during their installation. For example, this happens when you install Windows 95 with Select-It already installed, because the Master Boot Record will now locate, load, and execute the boot record for the new installation and bypass Select-It.

If Select-It is installed on your computer but the Boot Options screen does not appear when your computer boots, use this procedure to reactivate it.

To reactivate Select-It after installing an operating system:

- Boot DOS or Windows 95 from a floppy disk or the hard drive. If you just installed OS/2 or NT in the DOS partition, boot from a DOS floppy disk — do not use the DOS box from within the operating system.
- 2 From the DOS prompt, change to the Select-It subdirectory on the hard drive, type **SETUP**, then press **Enter**.

The Setup screen appears.

- 3 Select **Update**, then press **Enter**.
 - Select-It copies files back to the root directory and updates the master boot record to point to Select-It.
- 4 Select **OK**, then reboot your computer.
 - The Select-It Boot Options screen appears.

Restoring the Default Master Boot Record

Use this procedure to restore the default pre-Select-It Master Boot Record. The default Master Boot Record is the standard MBR used by all DOS-based FAT file system operating systems, such as MS-DOS, PC DOS, and Windows 95.

Restoring the default MBR has no effect on your partition table structure or system configuration. Your current partition table is not affected unless it is corrupted or invalid.

This procedure is identical to executing the FDISK /MBR command. If Select-It is installed on your system, restoring the default MBR will simply load the previously accessed operating system.

To restore the default Master Boot Record:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click **Start/Programs/Quarterdeck Select-It/Select-It Utilities**.

You will be asked for a password, if one is needed.

2 Select Set Default Master Boot Record, then press Enter.

Select-It asks if you are sure.

3 Press Enter.

Select-It restores the MBR and informs you whether the restore was successful.



If restoring the default MBR fails for any reason, be sure to write down the error message exactly as it is displayed and review the troubleshooting information, or contact Technical Support.



4 Reboot the computer. If asked whether you were expecting a change to the MBR, say **Yes**.

In Windows 95, click **OK** to return to the Advanced Utilities screen, then reboot the computer. If asked whether you were expecting a change to the MBR, answer **Yes**.



To reset Select-It after restoring the default MBR, see "Updating Select-It After Installing An Operating System" on page 70.

Restoring a Primary DOS Boot Sector

Use this procedure to restore the current active primary partition boot sector for disk 0 (the physical drive 0 or boot drive) if it is corrupted and the primary partition will not boot. Select-It restores the boot sector information to its original location (unless you change it). When you restore the primary DOS boot sector, you are replacing the boot record at the cylinder, head, and sector for the active partition. This information loads and executes the operating system assigned to this partition.



You cannot restore the primary DOS boot sector unless you have made a backup of it prior to restoring. Also, you should not attempt to restore a primary DOS boot sector that does not correspond to the partition table structure of your current active primary partition. If you modify your active primary DOS partition in any way, you should immediately make a new backup copy.

If you replace the boot sector with one that is not identical in structure, your computer may become unbootable.

To restore a primary DOS Boot Sector:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, click Start/Programs/Quarterdeck Select-It/Select-It Utilities.

You will be asked for a password, if one is needed.

2 Select **Restore Primary DOS Boot Sector**, then press **Enter**.

Select-It asks for the location of the backup.

- 3 Type the backup file's location.
- 4 Press Enter.

Select-It restores the boot sector information.

- 5 Press **Enter** to return to the Advanced Utilities screen (DOS), or click **OK** to return to the Advanced Utilities screen (Windows 95).
- 6 Reboot your computer. If asked whether you were expecting a change to the Master Boot Record, answer **Yes**.

Restoring from the MBR Recovery Disk

This section describes how to restore the Master Boot Record and track 0 information to their states that were current when the recovery disk was made. It will not uninstall Select-It, but it will disable it.

To restore the Master Boot Record and Track 0 Information:

1 From the DOS prompt, change to the Select-It directory, type **SLUTIL**, then press **Enter**.

In Windows 95, select **Start/Programs/Quarterdeck Select-It/Select-It Utilities**.

Enter a password if so prompted.



- Select Restore from MBR Recovery Disk, then press Enter.
- 3 Insert the MBR recovery disk in drive A:, then press **Enter**.
 - Select-It restores the Master Boot Record track 0 information.
- 4 Press **Enter** to return to the Advanced Utilities screen (DOS), or click **OK** to return to the Advanced Utilities screen (Windows 95).
- 5 Reboot your computer. If asked whether you were expecting a change to the Master Boot Record, answer **Yes**.

Manually Uninstalling Select-It

Select-It can uninstall itself, as described in "Uninstalling Select-It" on page 16. In the event that the uninstall program fails, the following steps will remove Select-It from your system and make it bootable.



This method of uninstalling Select-It is recommended only for advanced users. These steps will affect how your system boots. If you are unsure of what you are doing, please contact Quarterdeck Technical Support for assistance.

- 1 Use Select-It to boot into your usual operating system, for example, Windows 95. The operating system you choose will be the one that boots by default after Select-It is uninstalled.
- 2 Use the FDISK /MBR command to write a default Master Boot Record. Users of Novell DOS or Caldera OpenDOS will need to run FDISK and select the option to write a default Master Boot Record.

- 3 Remove the entire Select-It directory (typically C:\SELECTIT or <HOST>:SELECTIT on a system using drive compression), including sub-directories, using Windows Explorer or your favourite file management software.
 - In Windows 95, select **Start/Find/Files or Folders...**, then search for "**Quarterdeck Select-It**" (include the quotation marks). Delete the folder that appears in the results box. In Windows 3.x, minimize the program group, select it, then press **Del**. This will remove the icons for the program from the desktop.
- 4 From the root of the hard drive, remove the following files only. These files are hidden by default, so you may need to change your file manager's setting to be able to display hidden files:
 - SELDOS.SYS, SLTEDIT.EXE, SELIT.EXE, SELIT_x.DAT where *x* represents a number, typically 0.
- 5 Reboot your computer. Select-It is removed and your computer will boot into the operating system you were in when you started this procedure.





Example Select-It Configurations

In this chapter you will learn:

- ▼ How Select-It works with OS-specific boot managers
- What happens when Select-It is installed onto a compressed hard disk
- Ways to secure a computer for use with multiple users
- How to set up multiple DOS and Windows configurations

Examples of Implementing Select-It

Select-It installs onto any computer that has MS-DOS (5.0 or above, or PC DOS 6.1 and higher) and/or Windows 95 installed. On rebooting the computer after installing Select-It, SELDOS.SYS starts Select-It, which searches all partitions for bootable operating systems and offers to create boot options for each one it finds. Depending on the operating system, Select-It may need to boot an OS-specific boot manager instead of booting directly into the actual operating system. Be sure not to delete any previously installed operating system-specific boot managers in case Select-It needs to reference them. Examples of when Select-It may boot an OS-specific boot manager are:

Linux—If LILO is found in the MBR, Select-It will move it to the Linux partition's boot sector (superblock). Select-It offers a Linux boot option, and actually boots LILO in the Linux boot sector. Boot Linux from LILO.



- ▼ OS/2—If OS/2 is installed into a logical partition or a partition on a disk other than disk 0, the OS/2 Boot Manager is required to boot OS/2. If found, Select-It will create a boot option to the OS/2 Boot Manager, from which OS/2 on a logical or second disk can be booted.
- ▼ Solaris—Select-It will create a boot option for Solaris, and will boot OS Loader when the boot option is chosen. Boot Solaris by choosing its partition in OS Loader.

Example — Installing Select-It onto a computer that has Windows 95 [C:] and OS/2 [D:HPFS] installed

Suppose you have OS/2's Boot Manager on partition 0, Windows 95 on partition 1, and OS/2 on partition 2. The computer currently boots to OS/2's Boot Manager, and all partitions are **primary**.

1 Boot to OS/2's Boot Manager, then choose to boot the Windows 95 partition.

The computer boots into Windows 95.

2 Insert the Select-It installation media, and in Windows 95, complete the Select-It installation. Setup asks to restart the computer.

3 On reboot, Select-It finds and offers to create boot options for the following operating systems:

OS/2 Boot Manager in disk 0, partition 0

DOS 7.0 in disk 0, partition 1

Windows 95 in disk 0, partition 1

OS/2 in disk 0, partition 2

Boot from drive A:

Note that Select-It found and created a boot option for OS/2 because OS/2 is installed into a primary partition in disk 0 and is bootable. In this case, Select-It can boot OS/2 directly, and the OS/2 Boot Manager boot option can be safely deleted. If OS/2 were installed to a logical partition or a partition not on disk 0, Select-It would not have found the partition. In this case it is necessary to use the OS/2 Boot Manager boot option for booting OS/2.

Example — Installing Select-It onto a Compressed Hard Disk

When SelectIt is installed to a computer using DriveSpace or DoubleSpace compression, the setup process will automatically detect the compression software and prompt to install into the host (uncompressed) partition. Though drive letters are swapped when other operating systems are loaded, compression drivers cannot load when Select-It runs. Select-It can only be installed to an uncompressed drive because it is the only drive available at boot time. On a system using compression, C: is actually a compressed volume file (CVF) on drive H:. Select-It must be installed to H:, the host partition. Note that the drive letter for the host partition may not be H:; typical values are H: and J:.

Example — Installing another version of DOS on a Windows 95 system.

When Windows 95 is installed onto a computer running DOS version 6.22 or earlier, it creates a Boot Menu that allows booting the previous version of DOS. The reverse is not true: installing DOS onto a computer running Windows 95 will boot only DOS, and not allow access back to Windows 95. While it is possible to use FDISK to boot between DOS and Windows 95 if they are installed into different primary partitions, Select-It offers a much quicker and easier method for switching between DOS/Windows 3.1x and Windows 95.



For this example, suppose you install DOS 6.22 and Windows 3.1 onto a computer that has Windows 95 installed. Windows 95 is on partition 0; install DOS and Windows 3.1 onto a newly created partition. Install Select-It to create boot options to switch easily between the two operating systems.

- 1 Boot to Windows 95.
- 2 Since Windows 3.1 will be installed to partition 1, use on-the-fly partitioning software, such as Quarterdeck Partition-It, to create a new primary partition. Make sure the new partition is primary FAT12 or FAT16, not FAT32. (FDISK cannot be used to create more than one primary partition.)
- 3 Use partitioning software, such as FDISK or Quarterdeck Partition-It, to make the new blank partition active.
- 4 Insert the DOS 6.22 boot diskette into the floppy drive, and reboot the computer. Follow the installation instructions to install DOS 6.22 onto the computer.
- 5 Install Windows 3.1 onto the computer. The Windows 3.1 setup process will find the Windows 95 directory on D: and offer to install into that directory. Instead, choose to install Windows 3.1 into a directory on C: (like C:\WIN31).
- 6 You can now perform one of the following steps: Install Select-It into Windows 3.1. After rebooting, Select-It will find and offer to create boot options for DOS and Windows 95.

-or-

Use partitioning software (like FDISK or Quarterdeck Partition-It) to set the first partition active, then reboot the computer into Windows 95. It is more advantageous to boot into Windows 95 before installing Select-It, because the Select-It's Windows 95 utilities will be installed if you install Select-It into Windows 95.

- 7 When the Select-It installation completes, reboot the computer. Select-It will find and offer to create boot options for the following operating systems:
 - ▼ DOS 7.0 in disk 0, partition 0
 - ▼ Windows 95 in disk 0, Partition 0
 - ▼ MS-DOS 6.22 in disk 0, partition 1
 - ▼ Boot from drive A:

If you wish, you can now create a separate boot option for Windows 3.1 by following the instructions in the example below titled "Creating separate boot options for DOS and Windows 3.x".



When booting MS-DOS or Windows, the partition containing the boot files is always assigned the letter C:. Therefore, when you choose to boot the Windows 95 boot option, the Windows 95 directory is on C:, and the Windows 3.1 directory is on D:. When you boot Windows 3.1, the Windows 3.1 directory is on drive C:, and the Windows 95 directory is on drive D:.

User Security Configuration Examples

Select-It's Password Security feature, when enabled, controls user access to operating systems and partitions. By creating separate user accounts for each user and copying boot options, each user may be granted separate and unique access rights.



Example — Creating a partition only the Administrator can access

If people other than the primary user use a computer, important or confidential data may be at risk of being deleted or viewed by other users. To secure important or confidential data, you can create a partition that is only visible and usable when the primary user logs in.

The following procedure creates and hides partition D: to store important data. The Administrator account can access this partition, but another user "Phil" cannot see or access the partition.

- 1 In Partition-It, create a new partition for the purpose of storing important data. See the *Partition-It User Guide* for more information on creating a new partition.
- 2 In Select-It's Administrator Options screen, enable Password Security.
- 3 In the Administrator Options screen, assign an Administrator password. Be sure to remember this password.
- 4 In Boot Options, copy a boot option, and change the name of this boot option to "Phil's boot option" to differentiate it from the original boot option.
- In Boot Option Editor, hide the newly created partition by changing its status from Normal to Hidden.
- 6 In Security Option User Profiles, add a new user; this will open the Security Option User Editor.
- 7 In Security Option User Editor, name this user account Phil, and assign a password to the account.
- 8 Place a check mark next to the newly created boot option "Phil's boot option" and press Enter to save this new account. Give Phil his user ID and password.

After following the procedure above, the newly created partition will be visible when the Administrator boots the original boot option, but Phil will only have access to "Phil's boot option," in which the new partition is hidden. When the administrator boots, C: and D: will be visible in DOS and Explorer. When Phil boots the computer using his user ID and password, only C: will appear in DOS and Explorer.

Example — Creating different operating system rights for two users

Select-It can be configured so that one user can only boot one operating system, but another user can boot two or more operating systems. To do this, the Administrator creates two user accounts, and supplies the two users with the user ID and password for their respective accounts. From Select-It's Security screen, the Administrator allows one account access only to the Windows 95 boot option, while giving the other account access to both boot options in the Boot Options dialog.

Example: Windows 95 and Windows NT are installed on the computer. Limit the user account "Phil" to Windows 95, but grant "Diane" access to both Windows 95 and Windows NT.

- In the Administrator Options screen, enable Password Security.
- 2 In the Administrator Options screen, assign an Administrator password. Be sure to remember this password.
- 3 In Security Option User Profiles, add a new user.
- 4 In Security Option User Editor, name this user account Phil, and assign a password.



- 5 Place a check mark next to "Windows 95," and press Enter to save this new account.
- 6 Add another user account with the username "Diane," and assign a password.
- 7 Place check marks next to "Windows 95" and "Windows NT," then press Enter to save it.

Now reboot the computer and log in using the "Diane" account and password. Note that Windows 95 and Windows NT are selectable. Log in using the "Phil" account and password; Windows 95 is the only option available.

Example - Creating a data partition for each user

If several users share a computer at home or at work, and each likes to store files and games, you can set up separate data partitions for each user and hide all other user's partitions to the user who logged in. A user's data are available only to that user and the Administrator. This can be a convenient way to back up or clean up one user's data. When a user is finished with the computer, just copy or delete everything in the appropriate partition.

This example creates a separate data partition for each person who stores data on the computer. Only two users — Diane and Phil — are given their private partitions for now, but more can be added later.

- 1 Use Partition-It to create two new partitions at the end of the hard drive. For more information on how to use Partition-It, see the *Partition-It User Guide*.
- 2 In Select-It's Administrator Options, enable Password Security.

- 3 In Boot Options, copy a boot option, and change the name of this boot option to "Diane's boot option" to differentiate it from the original boot option.
- 4 In Boot Option Editor, hide the data partition to be used by Phil by changing its status from Normal to Hidden. Diane's partition should retain the status of Normal, since this is the partition Diane will use.
- 5 In Boot Options, copy the original boot option, and change the name of the new boot option to "Phil's boot option".
- 6 In Boot Option Editor, hide the data partition to be used by Diane by changing its status from Normal to Hidden. Phil's partition should retain the status of Normal, since this is the partition Phil will use.
- 7 In Security Option User Profiles, add a new user.
- 8 In Security Option User Editor, name this user account Diane, and assign a password. Place a check next to the boot option "Diane's boot option" so that this is the only boot option Diane can boot, and press Enter to save it.
- 9 In Security Option User Profiles, add another new user.
- 10 In Security Option User Editor, name this user account Phil, and assign a password. Place a check next to the boot option "Phil's boot option" so that this is the only boot option Phil can boot, and press Enter to save it.
- 11 Give Diane and Phil their user IDs and passwords, and tell them to use the data partition D: to store their data.

To test this configuration, log in using Diane's user ID and password, and notice that though two or more separate data partitions exist, only one data partition D: is visible. Log in using Phil's user ID and password to verify that the other data partition is visible. Both users will see C: and D:, but the D: partition is actually a different partition for each user. To add more users, simply create another data partition, boot option, and user account following the steps above.



Boot File Configuration Examples

Copying boot options and modifying their subdirectories' boot files is an easy way to set up multiple driver configurations. This section provides three examples of boot file modification.

Example - Creating multiple instances of Windows 95

You can install separate instances of Windows 95 into separate partitions, or install more than one instance into the same partition. If you install Windows 95 into a different drive or directory, the Registry and configuration files are kept separate, so all instances of Windows 95 are unique, and can be configured differently.

Select-It will not automatically find more than one installation of Windows 95. You must press **Insert** to add another Windows 95 boot option manually on another partition. When you press **Insert**, Select-It performs a more comprehensive search, and will find all bootable instances of a particular operating system on the computer. You can then choose to create the boot option that corresponds to the instance of Windows you wish to boot. Change the names of the boot options to reflect the instance they boot, and choose the appropriate boot option in Select-It to boot an instance of Windows 95.

DOS Boot File Configuration Examples

You can use Select-It to boot between several different DOS configurations by creating alternate CONFIG.SYS and AUTOEXEC.BAT files. Some common uses for this type of configuration are:

- Creating alternate memory managers (QEMM386.SYS vs. HIMEM.SYS)
- ▼ Enabling and disabling a CD-ROM drive in DOS
- ▼ Having a "clean" boot for testing purposes

- Setting DOS gaming configurations
- Selecting network support vs. no network support in DOS
- ▼ Selecting virus scan vs. no virus scan
- ▼ Booting to DOS or Windows 3.x

One of the most common uses for copying boot options and modifying the configuration files is to have one boot option that boots DOS and one boot option that boots Windows 3.x. By default, if you have Windows 3.x installed, the Select-It will automatically create a boot option for DOS, and boot Windows only if the correct command was in the AUTOEXEC.BAT file when the boot option was created.

Example — Creating a boot option that excludes a virus scan

Suppose you have an anti-virus program installed, and when you start your computer each morning it scans for viruses. You reboot your computer often during the day, and the virus scanning process takes a couple minutes. You can create a boot option that loads Windows but does not load the anti-virus scanning software, so that you do not have to wait for the scan to complete each time you reboot.

- 1 In Boot Options, copy the Windows boot option, and change the name of this boot option to "Windows No Scan" to differentiate it from the original boot option.
- 2 With the new boot option highlighted in Boot Options, choose to Edit the boot option.
- 3 In Boot Option Editor, choose Edit AUTOEXEC.BAT. This opens the file that is saved in this boot option's subdirectory, not the file on the root of C:. Remark out the line that loads the DOS scanning portion of the anti-virus software. For more help on finding and remarking out the correct line, contact the software manufacturer. Save changes and exit the editor.



Now reboot the computer and choose to boot the "Windows – No Scan" boot option. Note that Windows boots, but the DOS scan does not take place, saving time when a virus scan is not necessary.

Example — Creating separate boot options for DOS and Windows 3.x

- 1 In Boot Options, copy the current DOS boot option, and change the name of this boot option to "Windows" to differentiate it from the original boot option.
- 2 Highlight the original "DOS" boot option in Boot Options, then choose to Edit the boot option.
- In Boot Option Editor, choose Edit AUTOEXEC.BAT. This opens the file that is saved in this boot option's subdirectory, not the file on the root of C:. If the line "WIN" or "WIN.COM" appears in the file, remark out the line by typing "REM" (with a space after the M) in front of the line. Save changes and exit the editor. (For more help on finding and remarking out the correct line, contact Microsoft).
- 4 Highlight the new "Windows" boot option in Boot Options, then choose to Edit the boot option.
- In Boot Option Editor, choose Edit AUTOEXEC.BAT.
 This opens the file that is saved in this boot option's subdirectory, not the file on the root of C:. If the line "WIN" or "WIN.COM" is not in the file, add the word "WIN" as the last line of the file. Save changes and exit the editor. (For more help on finding and remarking out the correct line, contact Microsoft.)

Now reboot the computer, and note that choosing the original DOS boot option will boot your computer into DOS. Booting the new Windows boot option will start Windows.



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