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System Setup Program: Dell[™] Dimension[™] 4100 System Reference



Overview

Each time you turn on or restart your computer system, the computer compares the hardware installed in the computer to the hardware listed in the configuration information stored in nonvolatile random-access memory (NVRAM) on the system board. If the computer detects a discrepancy between the two, it generates error messages that identify the incorrect configuration settings. The computer then prompts you to enter the system setup program to correct the setting.

You can use the system setup program as follows:

- To change the system configuration information after you add, change, or remove any hardware in your computer
- To set or change user-selectable options for example, the user password

Dell recommends that you write down the system setup program screen information for future reference.

The system setup screens are organized as follows:

- At the top is a menu bar for accessing the main program screens.
- The box on the left side of each screen lists options that define the installed hardware in the computer. Fields beside the options contain settings or values. You can change those that are enclosed in brackets. Values that are grayed out contain status information reported by the system.
- The box on the right side of each screen displays help information for the option with a currently highlighted field.
- The bottom right area lists keys and their functions for the currently displayed screen.

The menu bar provides access to the following screens:

- Main screen Provides settings for the basic computer configuration
- Advanced screen Provides detailed settings for some computer features
- <u>Security screen</u> Provides indications and settings for system password and setup password
- Boot screen Provides information about which device boots the computer
- Exit screen Provides selections for saving and loading the configurations and options

In addition to these screens, options identified by a right arrow provide access to submenus.

Entering the System Setup Program

- 1. Turn on (or restart) your computer.
- 2. When the blue Dell logo appears, press .

If you wait too long and the operating system begins to load into memory, *let the system complete the load operation*. Then shut down the computer and try again.

Main Screen

| Main Advanced | Security Boot | Exit |
|-------------------------|---------------------|---|
| BIOS Version | Axx | Item Specific Help |
| Processor Type | Intel® Pentium® III | [] |
| Processor Speed | 800 MHz | |
| System Bus Frequency | 133 MHz | |
| Cache RAM | 512 KB | |
| Service Tag | 12ABC | |
| Total Memory | 64 MB | |
| Memory Bank 0 | 64 MB [PC133] | |
| Memory Bank 1 | Not Installed | |
| Processor Serial Number | [Disabled] | ↔ Select Menu ↑↓ Select Item |
| System Time: | 00:00:00 | Enter Select 🕨 Submenu |
| System Date: | M0/DY/YR | F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help |

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Table 1. Main Screen Menu Options

| Option | Function |
|--------------|--|
| BIOS Version | Displays the version of the BIOS being used. |

| Processor Type | Displays the type of microprocessor installed. | |
|--|---|--|
| Processor Speed | Displays the internal speed of the microprocessor. | |
| System Bus Frequency | Displays the external speed of the microprocessor. | |
| Cache RAM | Displays the cache random access memory. | |
| Service Tag | Displays the service tag for the computer. | |
| Total Memory | Displays the total computer memory. | |
| Memory Bank 0 | Displays the memory size and type in memory bank 0. | |
| Memory Bank 1 | Displays the memory size and type in memory bank 1. | |
| Processor Serial Number | sor Serial Number Displays the serial number of the microprocessor when set to Enabled . Disabled (default) turns off this feature. | |
| System Time | Resets the time on the computer's internal clock. | |
| System Date | Resets the time on the computer's internal calendar. | |
| NOTE: The Glossary defines abbreviations and acronyms. | | |

Advanced Screen

| Main Advanced Security Boot Ex | at |
|---|--|
| Setup Warning Setting items on this menu to incorrect values may cause your system to malfunction | Item Specific Help |
| Boot Configuration Peripheral Configuration IDE Configuration Diskette Configuration Event Log Configuration Video Configuration | ↔ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help |

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Table 2. Advanced Screen Menu Options

| Option | Function |
|--------------------|---|
| Boot Configuration | Displays the Boot Configuration submenu. |

| Peripheral Configuration | Displays the Peripheral Configuration submenu. | |
|---|---|--|
| IDE Configuration | Displays the IDE Configuration submenu. | |
| Diskette Configuration | Displays the Diskette Configuration submenu. | |
| Event Log Configuration | Displays the Event Log Configuration submenu. | |
| Video ConfigurationDisplays the Video Configuration submenu. | | |
| NOTE: The <u>Glossary</u> defines abbreviations and acronyms. | | |

Boot Configuration Submenu

| Advanced | | |
|--|-----------------------|--|
| Plug and Play OS Reset Conf Data Numlock | [Yes] [No] [On] | Item Specific Help → Select Menu ↑↓ Select Item Enter Select ▶ Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help |

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Table 3. Boot Configuration Submenu Options

| Option | Function |
|------------------|---|
| Plug and Play OS | Determines whether the computer is configured to support Plug and Play devices from the operating system or from the system BIOS. Leave this option set to Yes so the operating system handles all Plug and Play operation. |
| | NOTES: Be sure that this option is set to No before running Dell Diagnostics. Otherwise, some diagnostics may incorrectly fail. |
| | The system setup program automatically checks the configuration of a Simple Boot Flag-compatible operating system at power-on self-test (POST). Depending on its configuration, the system setup program may automatically set this option to No or Yes . |

| Reset Config Data | Permits resetting Plug and Play configuration data to default values. Yes resets the data; No (default) retains the current Plug and Play settings. If set to Yes , configuration data reverts to default values the next time the computer boots. This option automatically reverts back to the No setting. | |
|--|--|--|
| Numlock | Selects power on state for Numlock. | |
| NOTE: The Glossary defines abbreviations and acronyms. | | |

Peripheral Configuration Submenu

| Advanced | | | |
|--|------------------------|-----------------------|---------------------------------|
| Serial Port A: Parallel Port: | [Auto] [Auto] | | Item Specific Help |
| Mode: | [Bi-Directional] | | |
| Onboard Audio Device Onboard LAN Device | [Enabled] [Enabled] | | |
| Legacy USB Support | [Enabled] | | |
| | | | |
| | | ++ + | Select Menu |
| | | Enter | Select Item Select 🍉 Submenu |
| | | F9 | Setup Defaults |
| | | F10 | Save and Exit |
| | | ESC Fl | Help |

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Table 4. Peripheral Configuration Submenu Options

| Option | Function | |
|---------------|--|--|
| Serial Port A | Configures the serial port. Set this option to Auto (default), Enabled , or Disabled . Depending on the port setting, you can set the following additional options: | |
| | Base I/OIf port is set to Enabled, available I/O addressesAddressare 3F8, 3E8, 2F8, and 2E8. | |
| | Interrupt If port is set to Enabled, available interrupts are IRQ3 and IRQ4. | |
| Parallel Port | Configures the parallel port. Set this option to Auto (default), Enabled , or Disabled . Depending on the port setting, you can set the following additional options: | |

| | Mode | If port is set to Auto or Enabled , available modes are Output Only , Bi-Directional (default), ECP , and EPP . |
|---|---|---|
| | NOTE: See the device manufacturer's documentation for information on which mode to use before changing this setting. Base I/O If port is set to Enabled, available I/O addresses are Address 378 (default), 278, and 228 | |
| | | |
| | Interrupt | If port is set to Enabled , available interrupts are 7 and 5 . |
| Onboard Audio Device | Appears only on computers with an optional built-in audio controller and sets the controller to either Enabled (default) or Disabled . | |
| Onboard LAN Device | Appears only on computers with an optional built-in NIC and sets the NIC to either Enabled (default) or Disabled . | |
| Legacy USB Support | Set to Enabled (default) to allow support for legacy USB. Set to Disabled if legacy USB support is not desired. | |
| NOTE: The <u>Glossary</u> defines abbreviations and acronyms. | | |

IDE Configuration Submenu

| Advanced | | |
|--|--|--|
| IDE Controller | [Both] | Item Specific Help |
| Primary IDE Master Primary IDE Slave Secondary IDE Master Secondary IDE Slave | [WDC WD204BA] [Not Installed] [CRD-8480C] [Not Installed] | |
| | | ← Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help |

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Table 5. IDE Configuration Submenu Options

| Option | Function | |
|--|--|--|
| IDE Controller | Configures the integrated primary and secondary EIDE controllers and detects the types of drives attached to them. If set to Primary , Secondary , or Both , the designated controller(s) are enabled, and the types of drives attached are displayed. If set to either Primary or Secondary , the other controller is not enabled and the IRQ it normally uses becomes available. If set to Disabled , the system cannot detect any drives attached to the controllers and displays None for all four IDE drive options. | |
| Primary IDE Master | Identifies the first drive attached to the primary EIDE interface, usually the boot hard drive. See Primary IDE Master Submenu. | |
| Primary IDE Slave | Identifies the second drive attached to the primary EIDE interface, usually a second hard drive. The format of this submenu is the same as the one described in Primary IDE Master Submenu. | |
| Secondary IDE Master | Identifies the first drive attached to the secondary EIDE interface, if there is one. The format of this submenu is the same as the one described in Primary IDE Master Submenu. | |
| Secondary IDE Slave | Identifies the second drive attached to the secondary EIDE interface, usually a CD, CD-RW, or DVD drive. The format of this submenu is the same as the one described in <u>Primary IDE Master Submenu</u> . | |
| NOTE: The Glossary defines abbreviations and acronyms. | | |

Primary IDE Master Submenu

Advanced Primary IDE Master Item Specific Help [Auto] Type: Select Menu +++ ţ† Select Item Enter Select 🕨 Submenu Setup Defaults F9 F10 Save and Exit ESC Exit Fl Help

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Table 6. Primary IDE Master Submenu Options

| Option | Function |
|--|---|
| Туре | Specifies the type of hard drive. Settings for this option are User , Auto , CD-ROM , ATAPI Removable , Other ATAPI , IDE Removable , and None . |
| NOTE: The Glossary defines abbreviations and acronyms. | |

Diskette Configuration Submenu

| | Dell Dimension 4100 S | etup |
|-------------------------|-----------------------|--|
| Advanced | | |
| Diskette Configuration | | Item Specific Help |
| Diskette Controller: | [Enabled] | |
| Floppy A: | [1.44/1.25 MB 3 1/2″] | |
| Diskette Write Protect: | [Disabled] | |
| | | |
| | | ↔ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help |

Table 7. Diskette Configuration Submenu Options

| Option | Function |
|---|--|
| Diskette Controller | Configures the floppy drive interface. Options are Enabled (default) and Disabled . |
| Floppy A | Selects the floppy drive type from Not Installed , 360 KB 5 1/4 ", 1.2 MB 5 1/4 ", 720 KB 3 1/2 ", 1.44/1.25 MB 3 1/2 ", or 2.88 MB 3 1/2 ". |
| Diskette Write Protect | Protects a floppy disk from being written to when set to Enabled . When this option is set to Disabled (default), the floppy disk is not protected unless the write-protect tab is in place. |
| NOTE: The <u>Glossary</u> defines abbreviations and acronyms. | |

Event Log Configuration Submenu

Dell Dimension 4100 Setup Advanced Event Log Configuration Item Specific Help [Space Available] Event Log Event Log Validity [Valid] View Event Log Clear All Event Logs [No] Event Logging [Enabled] Select Menu Mark Events As Read +++ ţ† Select Item Enter Select 🕨 Submenu F9 Setup Defaults Save and Exit F10 ESC Exit Help Fl

Table 8. Event Log Configuration Submenu Options

| Option | Function | |
|--|--|--|
| Event Log | Displays the space available for the event log. | |
| Event Log Validity | Displays the validity of the event log. | |
| View Event Log | Press <enter> to view the event log.</enter> | |
| Clear All Event Logs | Clears all event logs when the computer restarts if set to Yes . Retains the event log information if set to No (default). | |
| Event Logging | Enables or disables event logging. | |
| Mark Events As Read | Press <enter>, and then select Yes or No to mark DMI events as either read or unread.</enter> | |
| NOTE: The Glossary defines abbreviations and acronyms. | | |

Video Configuration Submenu

| Advanced | |
|--|---|
| Video Configuration | Item Specific Help |
| AGP Aperture Size [64 MB] Primary Video Adapter [AGP] | |
| | ← Select Menu ↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help |

Table 9. Video Configuration Submenu Option

| Option | Function |
|---|--|
| AGP Aperture Size | Sets the AGP aperture size to either 64 MB (default) or 32 MB. |
| Primary Video Adapter | Supports the Windows® 98 and Windows 2000 multiple-monitor feature. Select AGP (default) to specify the AGP video card as the primary video adapter. Select PCI to specify a PCI video card as the primary video adapter. |
| NOTE: The <u>Glossary</u> defines abbreviations and acronyms. | |

Security Screen

| Main | Advanced | Security | Boot | Exi | t | |
|------------------------|---------------------------|----------------|------------------------|-----|---------------------------------------|--|
| Security | | | | | | Item Specific Help |
| Superviso User Pass | r Password I: word Is: | s: Not Not | Installed Installed | 1 | | |
| Set Super Set User | visor Passwo) Password | d [Ent [Ent | er] er] | | | |
| | | | | | ↑↓ Enter F9 F10 ESC F1 | Select Menu Select Item Select Submenu Setup Defaults Save and Exit Exit Help |

Table 10. Security Screen Options

| Option | Function |
|---|---|
| Supervisor Password Is | Indicates whether a supervisor password has been assigned. |
| User Password Is | Indicates whether a user password has been assigned. |
| Set Supervisor Password | Sets and confirms a supervisor password. If a supervisor password is set, a User Access Level option appears that enables you to set the user access level as Full (default), Limited , No Access , or View Only . |
| Set User Password | Sets and confirms a user password. |
| NOTE: The <u>Glossary</u> defines abbreviations and acronyms. | |

Boot Screen

| Main Advanced Secur | rity Boot Ex | it |
|--|--|--|
| Quiet Boot Quick Boot | [Enabled] [Disabled] | Item Specific Help |
| Restore on AC/Power Loss: On LAN On PME | [Last State] [Power On] [Stay Off] | |
| lst Boot Device 2nd Boot Device 3rd Boot Device 4th Boot Device | [Floppy] [ARMD-FDD] [ARMD-HDD] [ATABL CD ROM] | |
| 5th Boot Device 6th Boot Device 7th Boot Device | [AHA2940] [OPTION ROM] [Disabled] | ← Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setum Defaults |
| IDE Drive Configuration | | F10 Save and Exit ESC Exit F1 Help |

Table 11. Boot Screen Options

| Option | Function |
|------------------------------|---|
| Quiet Boot | Enabled (default) displays the Dell logo during POST. Disabled displays the normal POST messages. |
| Quick Boot | When set to Enabled , this option shortens POST by eliminating some tests. If set to Disabled (default), all POST tests occur. |
| | NOTE: The system setup program automatically checks the configuration of a Simple Boot Flag-compatible operating system at POST. Depending on its configuration, the system setup program may automatically set this option to Enabled or Disabled . |
| Restore on AC/ Power Loss | Determines what state the computer enters when AC power is restored after a power loss. Settings are as follows: |
| | Last State (default) — Computer returns to the state it was in when power was lost. |
| | Stay Off — Computer stays off when power is restored; you must press the power button to turn on the computer. |
| | • Power On — Computer turns on when power is restored. |
| On LAN | Determines what state the computer enters when a LAN wake-up event occurs. Settings are Power On (default) and Stay Off . |
| On PME | Determines what state the computer enters when a PCI Power Management Enable wake-up event occurs. Settings are Power On and Stay Off |

| | (default). | | | | | |
|--------------------------------------|--|--|--|--|--|--|
| 1st Boot Device | Determines which device the computer tries to boot from first. Use the up- or down-arrow key to highlight one of the following settings: | | | | | |
| | • Floppy | | | | | |
| | • ARMD FDD | | | | | |
| | • ARMD HDD | | | | | |
| | • IDE-HDD | | | | | |
| | • ATAPI CDROM | | | | | |
| | OPTION ROM | | | | | |
| | Disabled | | | | | |
| 2nd Boot Device — 7th Boot Device | Determines which device the computer tries to boot from if it cannot boot from the previous boot device in the list. Settings for this option are the same as for 1st Boot Device . If you select Disabled for any of these devices, no further boot devices appear on the list. | | | | | |
| | NOTE: The computer displays only the bootable devices that are installed. Therefore, you may see less than seven settings in this option. | | | | | |
| IDE Drive Configuration | Determines the primary master IDE, primary slave IDE, secondary master IDE, and secondary slave IDE drive boot order. | | | | | |
| NOTE: The <u>Glossa</u> | $r_{\underline{Y}}$ defines abbreviations and acronyms. | | | | | |

Exit Screen

| Main | Advanced | Security | Boot | Exi | it | |
|--|---|----------|------|-----|---------------------------------------|---|
| Exit S Exit D Load S Load C Save C Discar | aving Changes iscarding Chan etup Defaults ustom Defaults ustom Defaults d Changes | ges | | - | : | Item Specific Help |
| | | | | | ↑↓ Enter F9 F10 ESC F1 | Select Menu Select Item Select > Submenu Setup Defaults Save and Exit Exit Help |

Table 12. Exit Screen Options

| Option | Function | | | |
|---|--|--|--|--|
| Exit Saving Changes | Saves any changes you have made, exits the system setup program, and restarts the computer. | | | |
| Exit Discarding Changes | Discards any changes you have made, exits the system setup program, and restarts the computer. | | | |
| Load Setup Defaults | Discards any changes you have made and reverts all options to their defaults, but does not exit the system setup program. | | | |
| Load Custom Defaults | Loads settings saved using Save Custom Defaults option. | | | |
| Save Custom Defaults | Saves any changes you have made, but does not exit the system setup program. | | | |
| Discard Changes | Discards any changes you have made and reverts all options to their last saved settings, but does not exit the system setup program. | | | |
| NOTE: The <u>Glossary</u> defines abbreviations and acronyms. | | | | |

Clearing NVRAM

To clear NVRAM for all devices and restart the computer:

- 1. Enter the system setup program.
- 2. Press the right-arrow key to move to the **Advanced** menu.

- 3. Select the Boot Configuration submenu by pressing <Enter>.
- 4. Press the down-arrow key to highlight **Reset Config Data.** Then change the setting to **Yes** (see <u>Table 3</u>).
- 5. Press <F10> to exit the program and restart the computer.

Enabling the Processor Serial Number

The Intel® Pentium® III microprocessor includes a processor serial number feature designed to provide additional user security and manageability benefits. By default, this feature is disabled on Dell computers to protect your privacy. However, it can be enabled through the **Processor Serial Number** option in the system setup program.

NOTICE: Do not change this setting by any means other than the system setup program. Otherwise, your computer may become unusable.

- 1. Enter the system setup program.
- 2. When the **Main** screen appears, use the down-arrow key to highlight the **Processor Serial Number** option, and then press <Enter>.
- 3. Select **Enabled** from the menu, and then press <Enter>.
- 4. Use the right-arrow key to highlight **Exit**, and then press <Enter>.
- 5. When prompted to confirm the changes you made, press <Enter>.
- 6. The computer restarts with the processor serial number feature enabled.
- W NOTE: The processor serial number feature remains enabled until you disable it in the system setup program.

To disable the processor serial number feature, repeat steps 1 through 5, selecting **Disabled** in step 3.

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