



# ***Expanding Your Computer***

You can expand the capabilities of your computer by connecting other peripheral devices. When using a device, be sure to read the instructions accompanying the device together with the relevant section in this chapter.

This chapter gives guidelines on installing and using these devices:

- External monitor
- USB device
- Serial device
- IR device
- Bluetooth-capable device
- IEEE 1394 device
- Video capture device

## Connecting an External Monitor

If you want the benefits of a larger display screen with higher resolution, you can connect an external CRT monitor that supports the DVI interface to your computer.

Follow this procedure to connect an external monitor:

1. Make sure that the computer is not turned on.
2. Plug the DVI adapter to the computer's DVI-I port.



3. Plug the signal connector to the DVI adapter.
4. Plug the monitor's power cord into an electrical outlet.
5. To use the monitor, turn on the monitor before turning on the computer.
6. The monitor should respond by default. If not, you can switch the display to the monitor or to both (simultaneous display), or to multi-display by pressing **Fn+F9**.
7. You can change display settings through your operating system (**Display** Properties in Windows). See your operating system documentation or online help for specific information.

**CAUTION:** Do not disconnect the external monitor while the computer is in Standby mode or Hibernation mode. If no external monitor is connected when the computer resumes, the LCD remains blank and the output is not displayed.

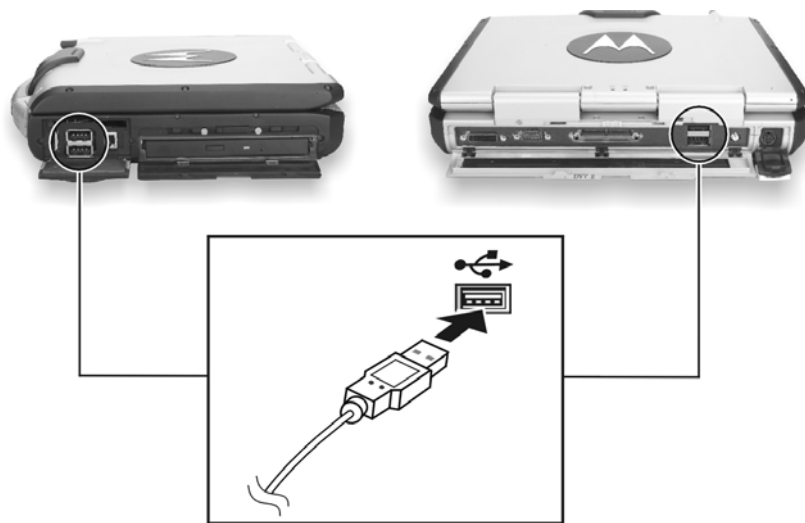
## Connecting a USB Device

**NOTE:** To take advantage of the USB 2.0 feature, the USB 2.0 driver supplied with your computer must be installed (see chapter 6).

Your computer has four USB ports that supports transfer rates up to 12 MB/s for USB 1.1 devices and 480 MB/s for USB 2.0 devices, such as digital camera, scanner, printer, modem, and mouse.

USB is specified to be an industry standard extension to the PC architecture. It supports “Plug-and-Play” technology so you can install and remove USB devices without turning off the computer. With its multiple connection capability, up to 127 devices can be connected in a daisy-chain configuration. In addition, you can use a USB hub that converts a single USB connector into multiple ports where USB devices can be connected.

To connect a USB device, simply plug the device cable to one of the USB ports.

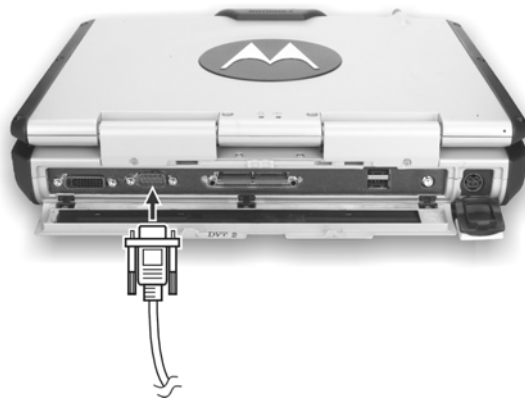


## Connecting a Serial Device

Your computer has a serial port for connecting a serial device such as an external modem.

Follow this procedure to connect a serial device:

1. Make sure the “COM1 Ports” item is set properly in the SCU program. (See “Components Menu” in Chapter 5 for information.)
2. Make sure the computer is not turned on.
3. Plug the device cable to the serial port on the rear of the computer.
4. Turn on the computer.



**NOTE:** Portable modems that derive power through the serial port cannot be used with the computer. Instead, use a modem that is powered by its own internal battery or external AC power.

## Connecting an IR Device

Your computer has an IR (infrared) port for connecting an infrared-equipped device wirelessly such as another computer, printer, or PDA (Personal Digital Assistant).

Follow this procedure to connect an IR device:

1. Under Windows, make sure that the IrDA Fast Infrared Port is set to HP HSDL-2300/3600. (See “How to Use the Driver CD” in Chapter 6 for information.)
2. Make sure that the “COM Ports” and its “Mode Setting For COM2” items are set properly in the SCU program. (See “Components Menu” in Chapter 5 for information.)
3. When using the IR port:  
Place the transmitting device where its IR port faces the IR port of your computer within the effective range – within  $\pm 20$ -degrees vertical angle and within  $\pm 20$ -degrees horizontal angle at no greater than 0.8~1.0 meter distance.  
Place the receiving device where the IR port of your computer faces its IR port within the effective range – within  $\pm 15$ -degrees vertical angle and within  $\pm 15$ -degrees horizontal angle at no greater than 0.8~1.0 meter distance.
4. To take advantage of the IR communications, you need a third party software.

**NOTES:** During infrared communication, take note of the following:

- Do not move the computer and IR device.
- Do not enter Standby mode.
- Do not use a cell phone or another IR device near the computer.
- Avoid strong light such as sunlight or fluorescent light.
- Disable the screen saver.



## Connecting a Bluetooth-compliant Device (option)

**NOTE:** To take advantage of the Bluetooth feature, the Bluetooth driver supplied with your computer must be installed (see chapter 6 for details).

Your computer has a Bluetooth port for connecting a Bluetooth-compliant device wirelessly. Bluetooth is a short-range wireless communications technology. Devices with Bluetooth capabilities can exchange information over a distance of about 10 meters (30 feet) without requiring a physical connection.

Unlike infrared, you do not need to line up the devices to beam information with Bluetooth. The devices only need to be within a range of about 10 meters. You can even beam information to a device in a different room, as long as it is within range.

You may use Bluetooth in the following ways:

- **Beam Information** – such as files, appointments, tasks, and contact cards, between devices that have Bluetooth capabilities. For example, if you and a co-worker each have a device with Bluetooth, you can beam items between your devices, such as files, contact cards, appointments, tasks, and so forth.
- **Create a dial-up modem connection** – between your device and a Bluetooth phone. You can then use the Bluetooth phone as a modem.

Bluetooth operates in three different modes:

- **On** – the Bluetooth radio is turned on and you can use Bluetooth features.
- **Off** – the Bluetooth radio is turned off. In this mode, you can neither send nor receive information by using Bluetooth. You might want to turn the radio off at times in order to conserve battery power, or in situations where radio use is prohibited, such as on airplanes and in hospitals.

- **Discoverable** – the Bluetooth radio is turned on, and all of the other Bluetooth devices within range (about 10 meters) can detect your device and attempt to beam information to it, establish a bond, or use a Bluetooth service. In this mode, other devices can detect your device whether or not a bond has been created; however, in order to receive a beam from another device, you must accept it on your device.

## About Bonds

A bond is a relationship that you create between your computer and another Bluetooth device in order to help exchange information in a secure manner. Creating a bond involves entering the same PIN on the two devices you want to bond. Once a bond is created, the devices need only have their Bluetooth radios turned on to exchange information; they do not need to be in discoverable mode.

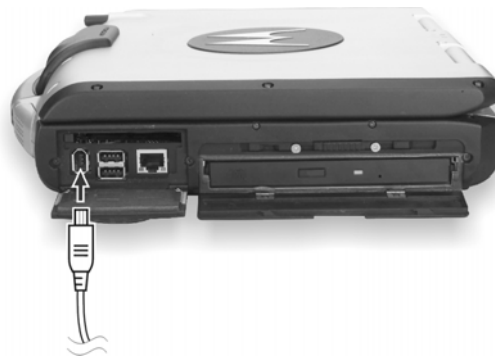
You need only create a bond once between two devices. Thereafter, they recognize the bond and are able to exchange information without your entering a PIN again.

## Connecting an IEEE 1394 Device

Your computer has an IEEE 1394 port on the right side of the computer for connecting 1394 devices.

IEEE 1394 is the next-generation serial bus standard, featuring high-speed data transfer, multi-channel communication link, and “Hot Plug” connectivity. It allows connection of up to 63 devices. The applications include not only computer peripheral devices such as scanner, printer and high-quality CCD, but also consumer electronic equipment such as DVCAM and VCR.

To connect an 1394 device, simply plug the device cable to the IEEE 1394 port of the system.

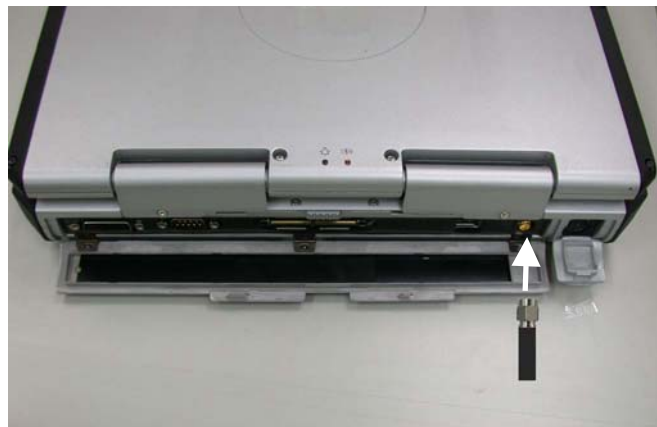


## Connecting a Video Capture Device

**NOTE:** To take advantage of the AV input port, the Video Capture driver supplied with your computer must be installed (see chapter 6 for details).

Your computer has an AV input port on the rear of the computer for connecting a video capture device such as high-quality CCD, as well as consumer electronic equipment such as DVCAM and VCR.

To connect a video capturing device, simply plug the device cable to the AV input port (conexant 878A PCI; BNC-type) of the system.



## System Memory Upgrade

You can upgrade your computer by changing system memory to a maximum of 1 GB on the two 200-pin PC2100 DDR SO-DIMM slots. However, to avoid damage during the installation procedure, please ask your dealer for help.

## ***Setup Configuration Utility (SCU)***

SCU is a program for configuring the BIOS (Basic Input/Output System) settings of the computer.

BIOS is a layer of software, called firmware, that translates instructions from other layers of software into instructions that the computer hardware can understand. The BIOS settings are needed by your computer to identify the types of installed devices and establish special features.

This chapter tells you how to use the SCU program.

# When and How to Use the SCU Program

## When to Use

You need to run the SCU program when:

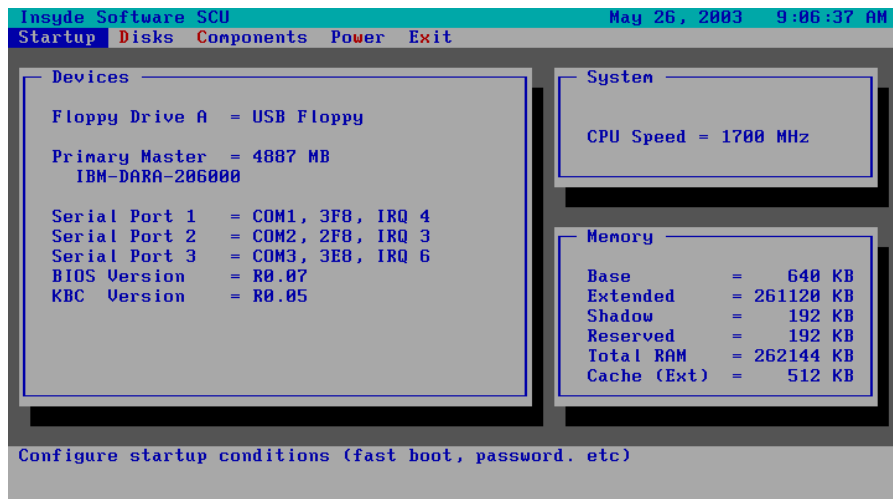
- You see an error message on the screen requesting you to run Setup.
- You want to restore the factory default settings.
- You want to modify some specific settings according to the hardware.
- You want to modify some specific settings to optimize system performance.

## Starting SCU

### NOTES:

- The Setup screens shown in this chapter are for your reference only. The actual items or settings on your computer may differ.
- The Setup program may have been updated after the publication of this manual.
- The settings you select in your operating system might override similar settings in Setup.

To run SCU, press **F2** when the prompt appears in the lower left corner of the screen during system startup. The prompt shows up on the screen for only a few seconds. You must press **F2** quickly. The SCU menu appears as shown next.



The menu can be divided into four areas:

- On the top line is the menu bar containing the titles of the available menus. Each menu title brings a specific menu.
- The center left column of the menu contains information regarding the current settings of the system. If you open a pull-down menu and select an item that provides multiple options, the left column will display a submenu where you can make further selections.
- The right column of the menu contains details of the CPU and system memory.
- The bottom lines of the menu provide keyboard instructions for moving around and making selections. When a menu item is highlighted, more detailed information is given.

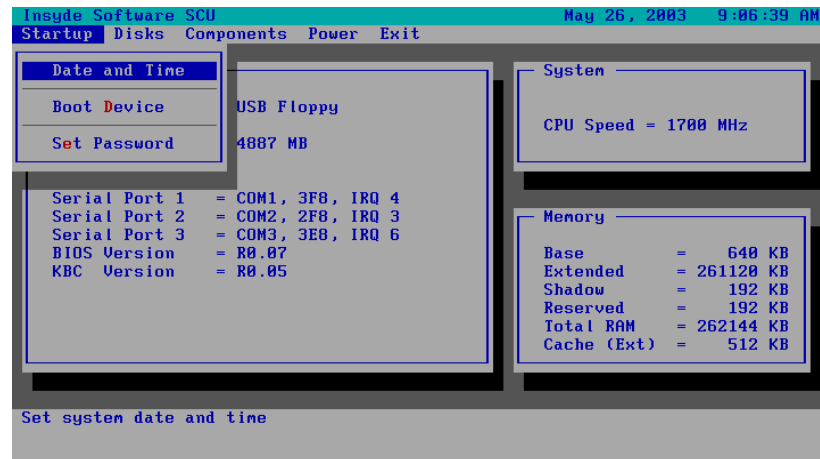
## Moving Around and Making Selections

A brief description of keyboard usage is listed next:

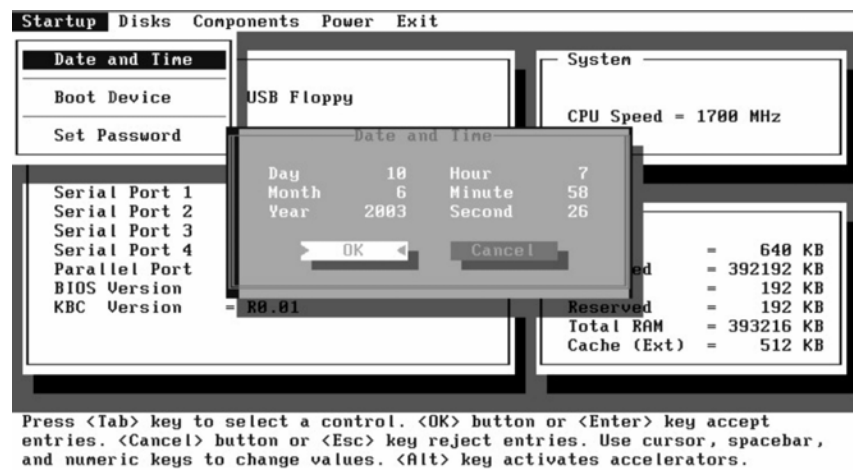
| Key   | Function                                                                                                                       |
|-------|--------------------------------------------------------------------------------------------------------------------------------|
| ←, →  | Selects a menu title.                                                                                                          |
| ↑, ↓  | 1) Selects an item or option.<br>2) Brings up/down the value.                                                                  |
| Enter | 1) Brings up the sub-menu when available.<br>2) Opens or closes the options window when an item is selected.                   |
| Tab   | Jumps from one item to another.                                                                                                |
| Esc   | 1) Exits the SCU program.<br>2) Returns to the previous menu if in a sub-menu.<br>3) Closes the options window if one is open. |

**NOTE:** You are advised to use the touchpad (if enabled) as it is more straightforward than using the keyboard.

# Startup Menu

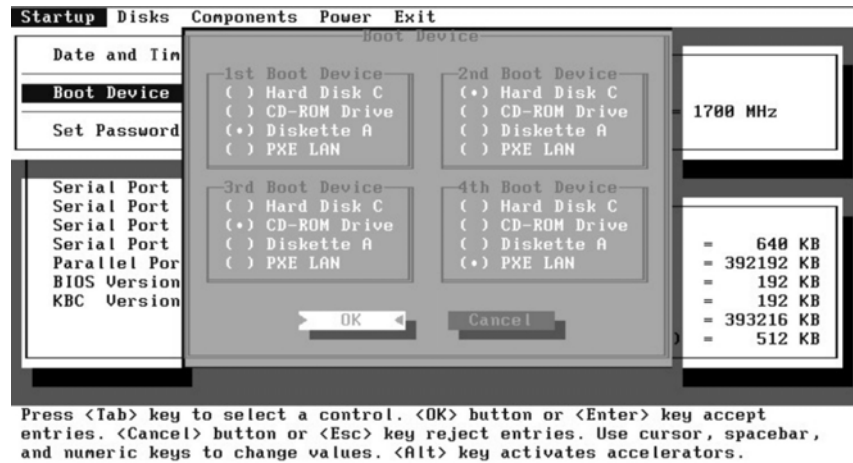


## Date and Time



Sets the system time (Hour, Minute, Second) and date (Month, Day, Year).

## Boot Device



Sets the first, second, third, and fourth booting device. The system will try to boot from the first device but if it is not available, will try the next boot device. If you set the first boot device to *PXE LAN*, the system will boot from the LAN server first. The options are *Hard Disk C*, *CD-ROM Drive*, *Diskette A*, and *PXE LAN*. The default setting is *Diskette A*, *Hard Disk C*, *CD-ROM Drive*, then *PXE LAN*.

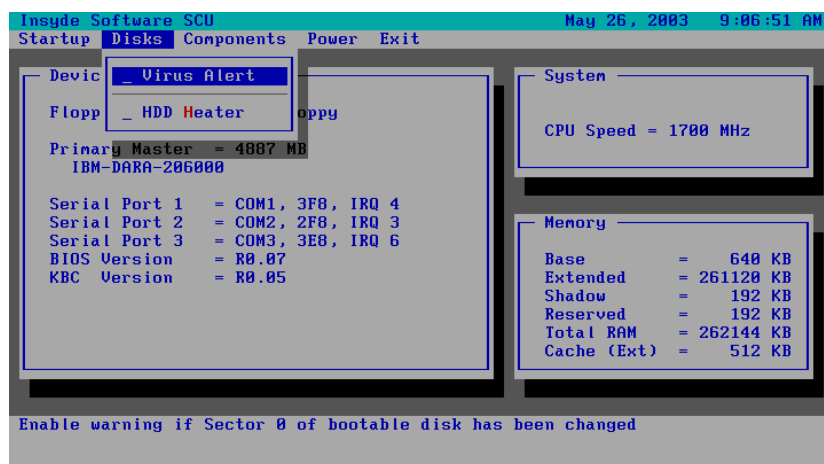
**NOTE:** If you set all booting options to the same device, then the computer will try to boot from that device only.

## Set Password



Allows you to set the password for your system. When typing the password, first make sure that **Num Lk** is off, then type the password in the entry fields and press **Enter**. Confirm your password by typing it again and pressing **Enter**. After setting, the password is always required to boot the computer.

## Disks Menu

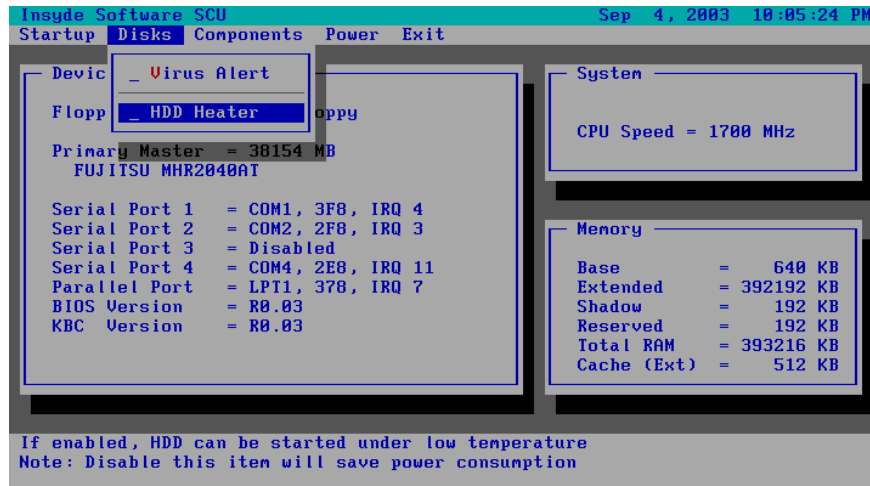


### Virus Alert

Sets if a warning message will appear when the hard disk boot sector (partition table) has been changed. A checkmark (✓) indicates enabled, while an underline ( \_ ) indicates disabled. The default setting is disabled.

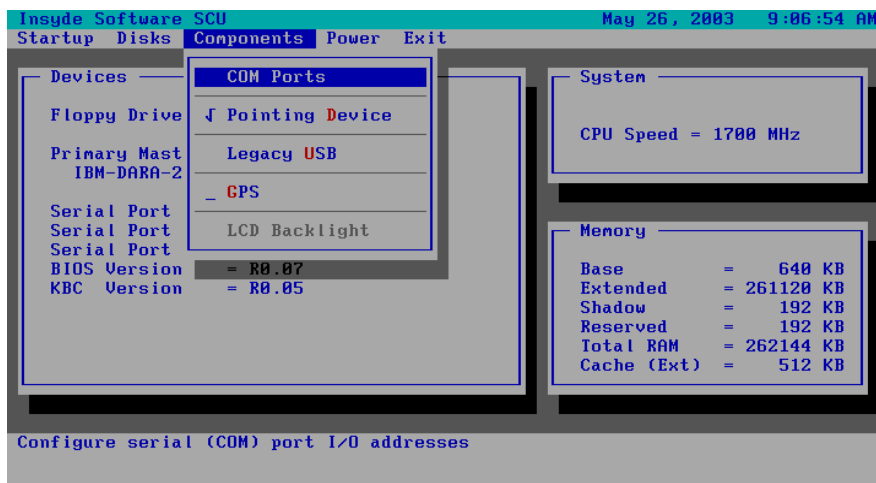
**CAUTION:** Set this item to disabled before installing an operating system, running Fdisk or Format program. Otherwise, the intended action will fail.

## HDD Heater



## Components Menu

The Components menu contains the I/O (Input/Output) configuration settings of the system.



## COM Ports



Allows you to configure the COM ports of the computer.

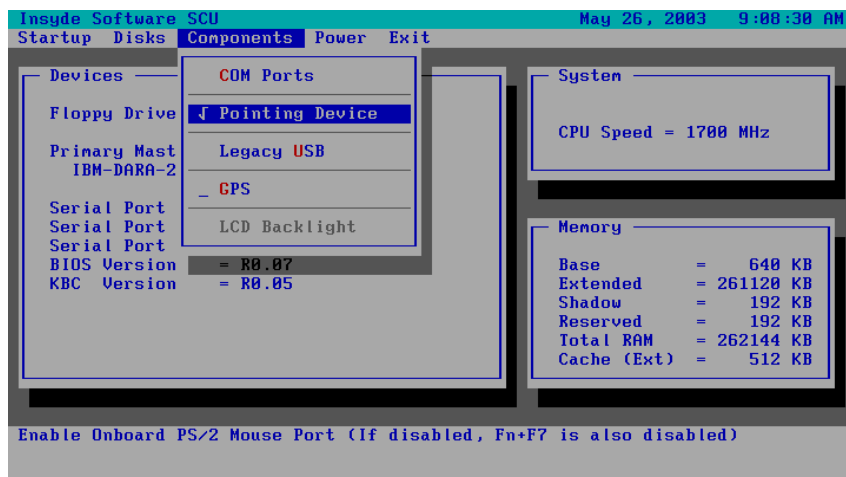
**COM1/2/3/4 Settings** sets the I/O (Input/Output) address and the Interrupt ReQuest line (IRQ) settings of the COM ports. The options are *Disabled*; *COM1, 3F8, IRQ4*; *COM2, 2F8, IRQ3*; *COM3, 3E8, IRQ6*; *COM4, 2E8, IRQ11*.

**Mode Setting for COM2** sets the communication compatibility mode according to the type of the IR device to be connected. The options are *IrDA (HPSIR)* and *Fast IR*. The default setting is *Fast IR*. This item is not valid for setting if the **COM1/2/3/4 Settings** item is set to *Disabled*.

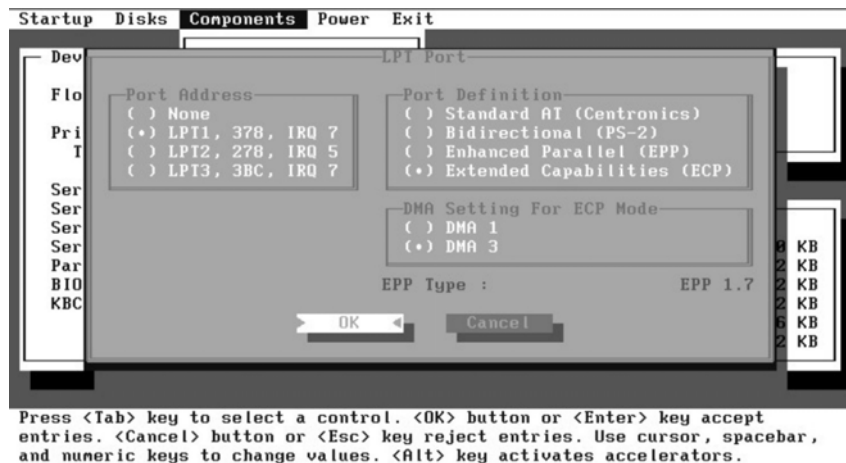
**DMA Setting For Fast IR** sets the DMA (Direct Memory Access) channel of the IR port in Fast IR mode. The options are *DMA 0*, *DMA 1*, and *DMA 3*. Default setting is *DMA 0*. This item is not valid for setting if the **Mode Setting for COM2** item is set to *IrDA (HPSIR)*.

## Pointing Device

This item enables or disables the touchpad. A checkmark (✓) indicates enabled, while an underline ( \_ ) indicates disabled. The default setting is disabled.



## LPT Port



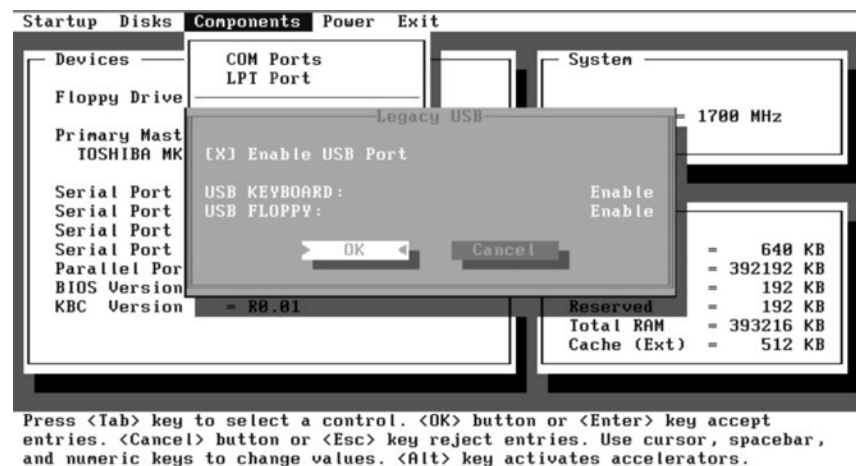
This item configures the parallel port of the computer.

**Port Address** sets the I/O address and the interrupt request line settings of the parallel port. The options are *None*; *LPT1, 378, IRQ 7*; *LPT2, 278, IRQ 5*; and *LPT3, 3BC, IRQ 7*. Default setting is *LPT1, 378, IRQ 7*.

**Port Definition** sets the operating mode for the parallel port according to the type of the parallel device to be connected. Your system supports EPP (Enhanced Parallel Port) and ECP (Extended Capabilities Port) standards, which turn the standard parallel port into a high-speed bi-directional peripheral port. The options are *Standard AT (Centronics)*, *Bidirectional (PS-2)*, *Enhanced Parallel (EPP)*, and *Extended Capabilities (ECP)*. Default setting is *Extended Capabilities (ECP)*. This item is not valid for setting if the **Port Address** item is set to *None*.

**DMA Setting For ECP Mode** sets the DMA (Direct Memory Access) channel of the ECP mode. The options are *DMA 1* and *DMA 3*. Default setting is *DMA 3*. This item is not valid for setting if the **Port Definition** item is not set to *Extended Capabilities (ECP)*.

## Legacy USB



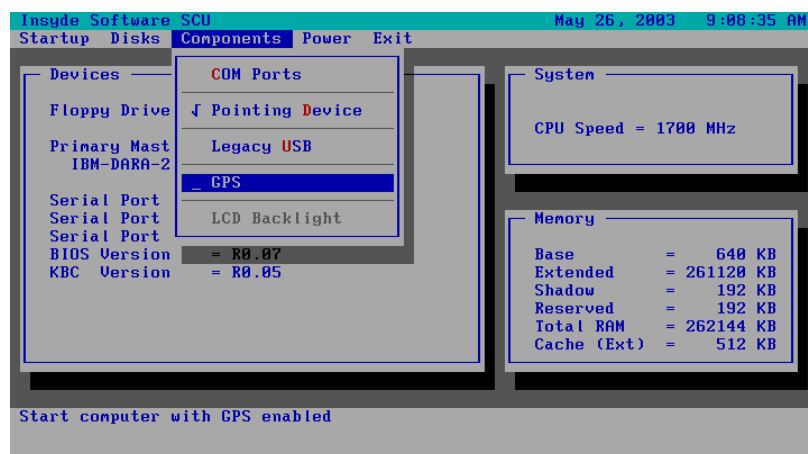
This item enables or disables the system's support for the USB port in DOS mode.

The **Enable USB Port** sub-item enables or disables the USB port in DOS mode. The options are enable and disable. A [X] mark indicates enable, while blank [ ] indicates disable. Default setting is enable.

The **USB Keyboard** sub-item enables or disables the USB keyboard in DOS mode. The options are *Enable* and *Disable*. Default setting is *Enable*. This item is not valid for setting if the **Enable USB Port** sub-item is disabled.

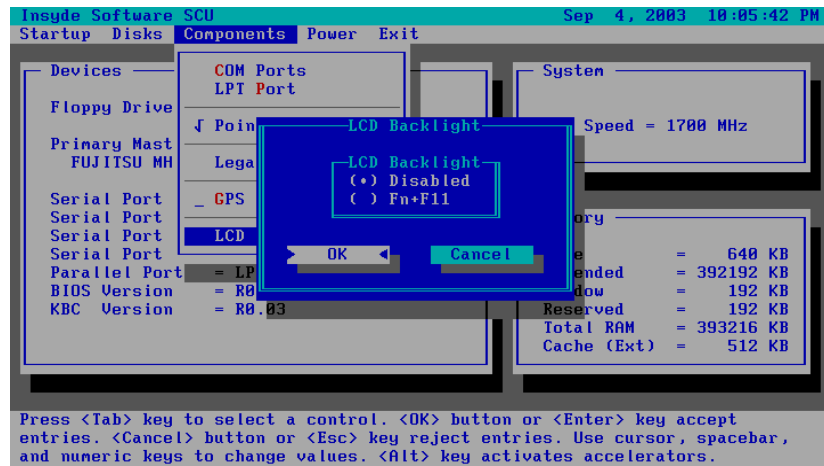
The **USB Floppy** sub-item enables or disables the USB floppy drive in DOS mode. The options are *Enable* and *Disable*. Default setting is *Enable*. This item is not valid for setting if the **Enable USB Port** sub-item is disabled.

## GPS

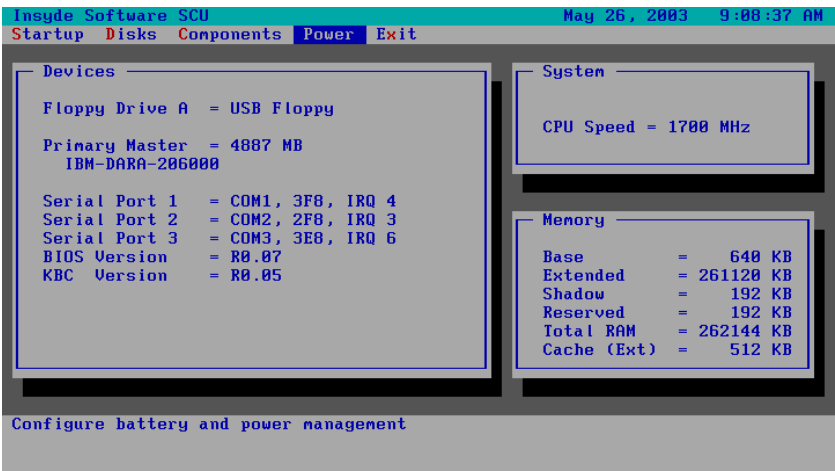


## LCD Backlight

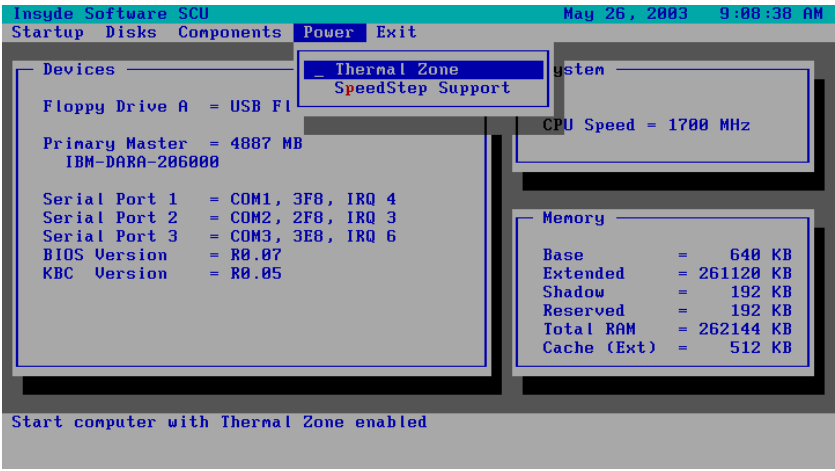
Fn+F11: Enabled/Disabled the LCD Backlight On/Off.



# Power Menu

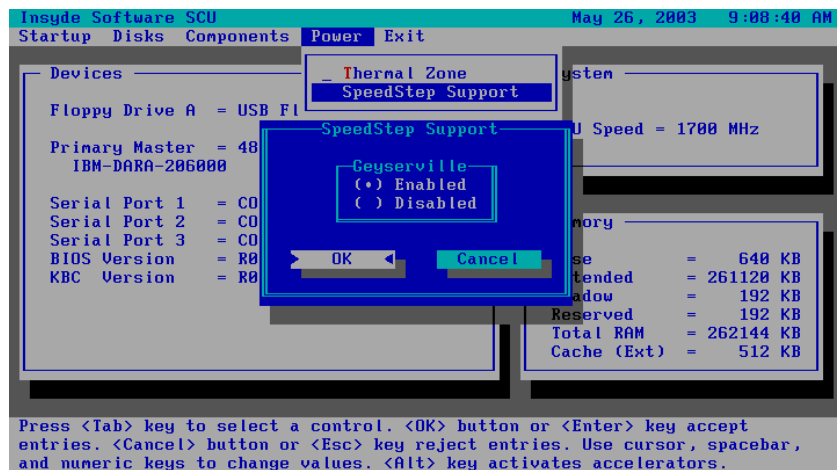


# Thermal Zone



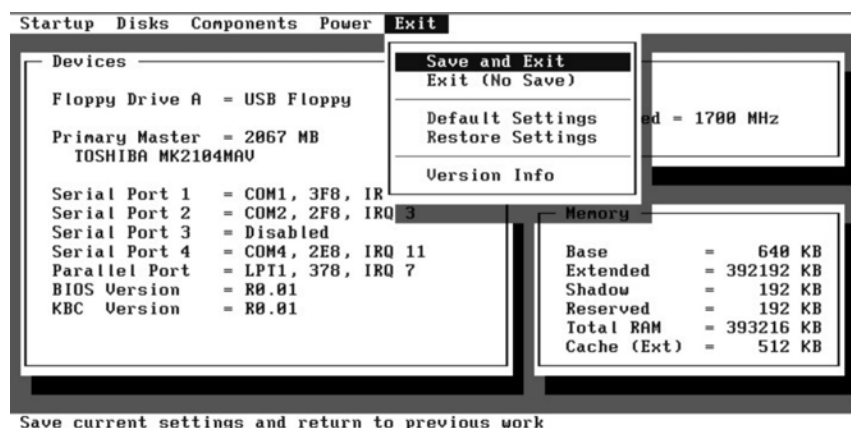
## SpeedStep Support

Enables or disables the Geyserville feature of the CPU. The Geyserville feature helps conserve battery life by decreasing the CPU's running speed under certain conditions while still maintaining a high performance. If this item is enabled, the CPU will automatically change its speed whenever necessary based on the "Power Scheme" setting in Windows's Control Panel. If this item is disabled, the CPU will always run in the lowest speed (600 MHz).



## Exit Menu

The Exit menu allows you to leave the SCU program. After finished with your settings, you must save and exit so that the new settings can take effect.



**Save and Exit** saves the changes you have made and exit the SCU program.

**Exit (No Save)** exits the SCU program without saving the changes you have made.

**Default Settings** loads factory default values for all the items.

**Restore Settings** restores previous values for all the items.

**Version Info** displays the BIOS version information.



## ***Installing Software Drivers***

To take full advantage of the unique features of your computer, some operating systems require custom software, known as drivers, to be installed.

If you purchased the computer with Windows pre-installed, your dealer may have already installed the drivers. If not, you need to install the drivers using the driver CD supplied with your computer.

This chapter describes how to install the drivers.

## How to Use the Driver CD

### NOTES:

- The drivers may have been updated after this manual was published. For driver upgrade, please contact your dealer.
- You can always find `README` or document files on the driver CD. These files contain the latest information from the software supplier. Please read the files together with this chapter.
- This driver CD supports Windows 2000 and Windows XP only.
- The available items may differ according to your computer model and operation system.

An autorun program is provided on the driver CD to help you easily install the drivers. As you insert the driver CD, the autorun program automatically starts. If you need to start the program manually, run the **Autorun.exe** program from the Setup directory of the driver CD.

The main screen appears as shown next:



## Installing Drivers for Windows 2000

To set up the necessary drivers for Windows 2000, click on “Windows 2K” on the initial screen. The following screen appears:

### Drivers on the First Page



To install the necessary driver, just click on the particular option and follow the onscreen instructions to continue and complete installation.

*Application*      Installs the Intel® Application Accelerator to improve performance of the storage sub-system and overall system performance. This software delivers improved performance through several ingredient technologies (components).

*Chipset*           Ensures the full function of the following drivers. Install this main chipset driver before installing the device drivers.

|                    |                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------|
| <i>DirectX 8.1</i> | Allows you to take full advantage of the multimedia applications.                                                    |
| <i>VGA</i>         | Allows you to select high-resolution displays with richer colors. It can drive LCD displays as well as CRT displays. |
| <i>Audio</i>       | Allows you to take full advantage of the audio subsystem.                                                            |

Upon clicking “Next Page,” the following screen appears:

## Drivers on the Second Page



|                    |                                                                                                                             |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <i>USB 2.0</i>     | Allows your system to connect to USB 2.0 devices.                                                                           |
| <i>LAN</i>         | Allows you to use the network function of the computer.                                                                     |
| <i>Touchpad</i>    | Allows you to take full advantage of the touchpad and the scroll button features.                                           |
| <i>Touchscreen</i> | Allows you to use your fingers as a pointing device on the LCD screen (refer to the next section for further instructions). |