1.0

MDC Bluetooth + 56K Modem

User's Guide &

Manual

Bluetooth\Modem Combo Card

Portable of module

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:

1) The transmitter module may not be co-located with any other transmitter or antenna.

As long as conduction above is met, further <u>transmitter</u> test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions <u>can not be met</u> (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID <u>can not</u> be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

<u>**End Product Labeling**</u>

The final end product must be labeled in a visible area with the following:
"Contains TX FCC ID: NLF-MDCBTSC1

<u>**Manual Information That Must be Included**</u>

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the users manual of the end product which integrate this module.

The users manual for OEM integrators must include the following information in a prominent location " IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements. The antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Index

1.Introduction:

HAMR5603 from **Smart Link** is the first in a series of V.90 host modem drivers optimized for Mobile Daughter Card (MDC) specifications. **HAMR5603** adds V.90 modem, fax and telephony features to chipsets from **Silicon Labs.** This complete solution, using a single board layout, is certifiable in most countries worldwide. Its small form factor makes it ideal notebook environments. The following is product features of MDC modem.

2.Features:

Data Modem

• 56 Kbps (K56Flex and V.90)

• V.34 (4.8 Kbps to 33.6 Kbps)

• V.32 bis (4.8 Kbps to 14.4 Kbps)

• V.22 bis (50 bps to 2.4 Kbps)

• V21, Bell 103 / Bell 212

• V.42 bis/MNP 5 data compression

• V.42/MNP 2-4 error correction

• Virtual Com port with a throughput of up to 460.8 Kbps

• Hayes AT Command set

• TIES escape code

Fax Modem Standard

Send and receive rates up to 14.4 kbps, V.17, V.29, V.27ter

Telephony Services

• Country Select

- TAM

System Requirements

- Pentium based (233 MHz and above)

- Windows 95 or Windows 98,WindowsME,Windows2000 ,Windows XP

- MDC Slot

- 8 Mbytes RAM (Drivers occupy ~ 1MB)

Bus Interface

Compliant to Intel Mobile Audio/Modem Daughter Card Specification 1.0

Hardware

- Primary/Secondary Operating Modes

Software

- TAPI

- Multimedia API

- AT command set standard

Power Management

Supports ACPI Power Management and wake-up on ring.

3.Mechanical:

Line Interface

Connected to RJ-11 on motherboard through connector.

Dimension

45.0 mm x 27.0 mm x 4.7 mm (L*W*H)

4.Driver installation:

Before install this modem driver please make sure your PC or Notebook soundcard driver is ready.

-Windows 98 installation:

Insert this HAMR56 or SmartRiser56 modem (Here in after we call it "the Device")   into your PC or Notebook MDC slot and power on.

1.After start, please check device manager from control panel, you will see an exclamation mark on PCI Card this device, please select this device and click **"Properties"**.

2. Select **"Reinstall Driver"**.

PCI Card Properties

General | Driver | Resources

PCI Card

Device type: Other devices
Manufacturer: None specified.
Hardware version: 160

Device status

The drivers for this device are not installed (Code 28.).To reinstall the drivers for this device, click Reinstall Driver

Reinstall Driver

Device usage
□ Disable in this hardware profile
☑ Exists in all hardware profiles

OK   Cancel
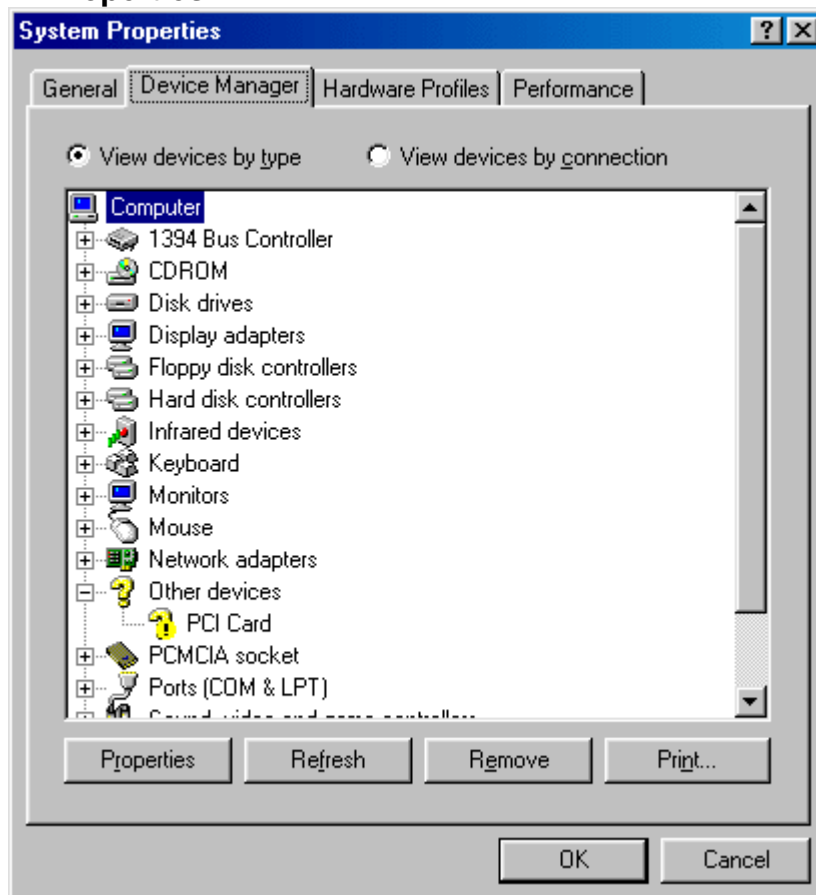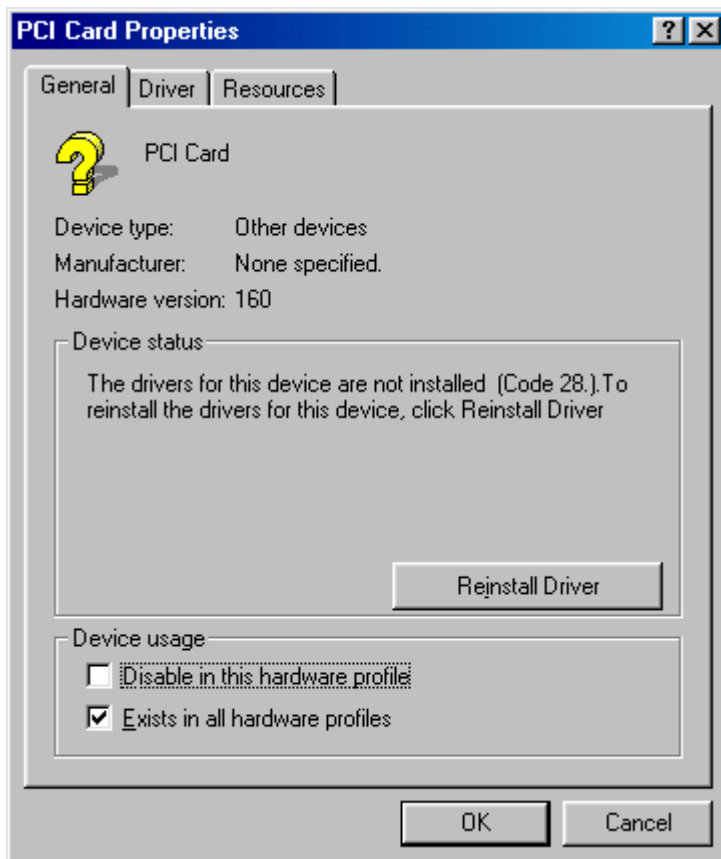
3. System will popup **"Update Device Driver Wizard"** window, and click **"Next"**.

Update Device Driver Wizard

This wizard searches for updated drivers for:

PCI Card

A device driver is a software program that makes a hardware device work.

Upgrading to a newer version of a device driver may improve the performance of your hardware device or add functionality.

< Back   Next >   Cancel
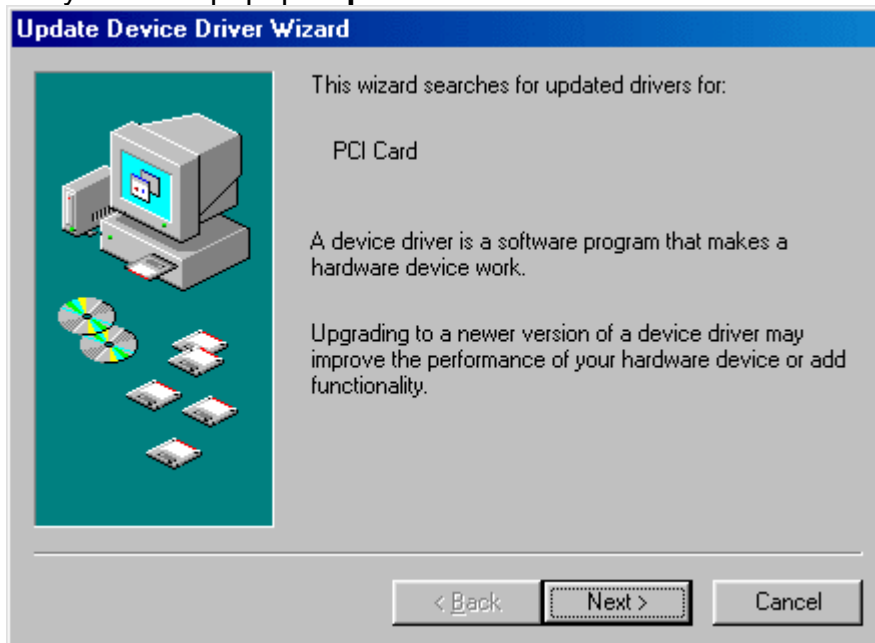
4.Select **"Search for the best driver for your device. (Recommended)"** and click **"Next"**.
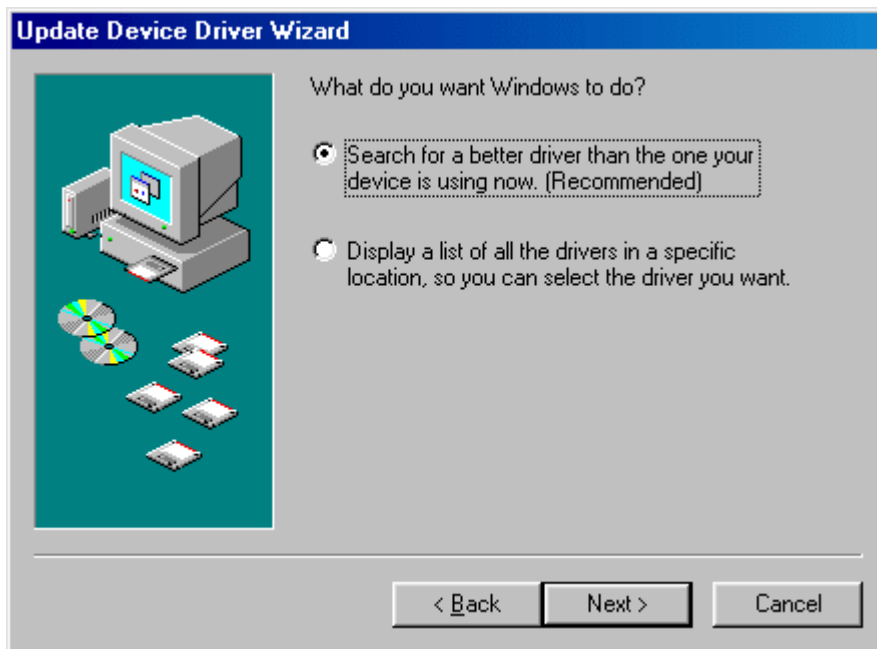
5.Insert the driver disk and select the driver location, then click **"Next"**.
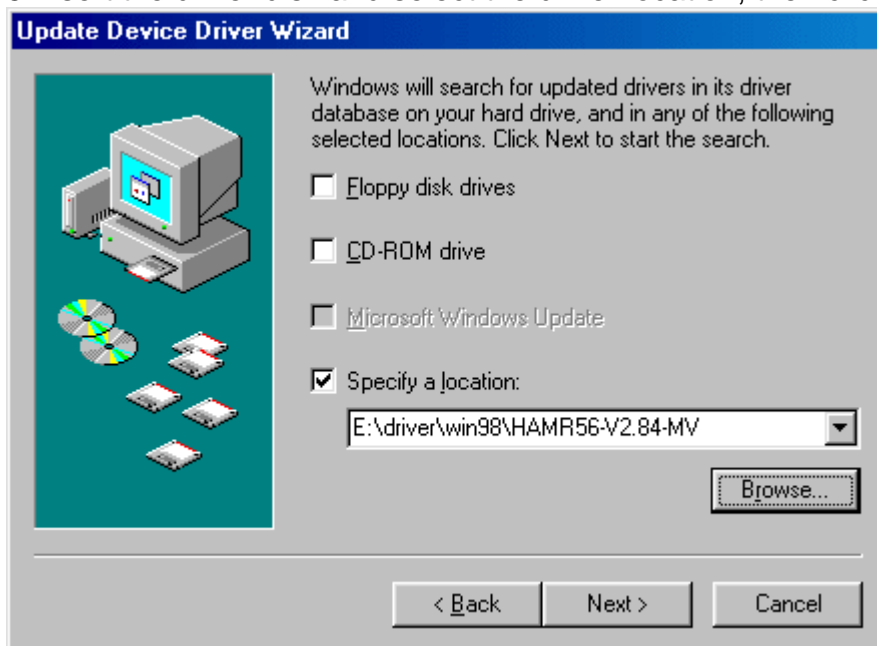
6.Windows 98 will search and recognize the driver of the Device. Click **"Next"**.
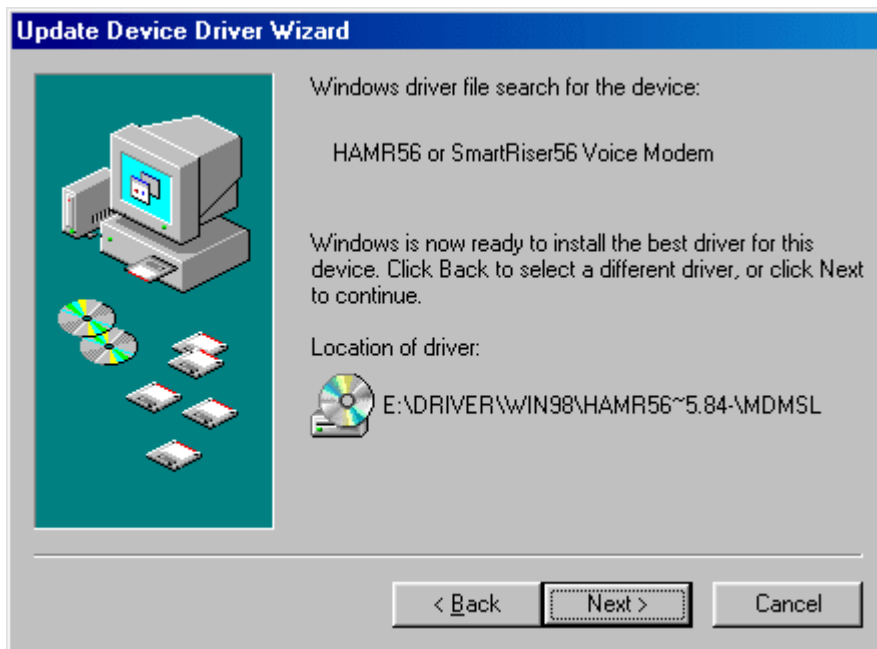
7. Windows will automatically copy the driver files and related files into your system. After copying the driver files, the device installation is completed. Click **"Finish"**, and this device is ready to use.
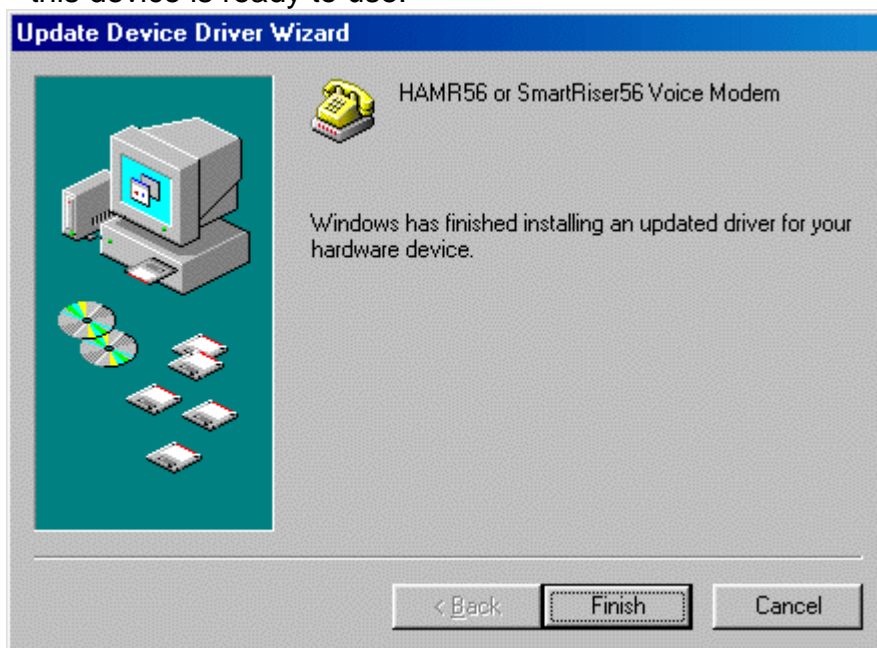
-Windows ME installation :

Insert this device into your PC or Notebook MDC slot and power on.
1.After start, please check device manager from control panel, you will see an exclamation mark on PCI Card this device, please select this device and click **"Properties"**.

2.Select **"Reinstall Driver"**.

PCI Card Properties

General | Driver | Resources

PCI Card

Device type: Other devices
Manufacturer: None specified.
Hardware version: 160

Device status
The drivers for this device are not installed (Code 28.).To
reinstall the drivers for this device, click Reinstall Driver

[Reinstall Driver]

Device usage
☐ Disable in this hardware profile
☑ Exists in all hardware profiles

[OK]   [Cancel]
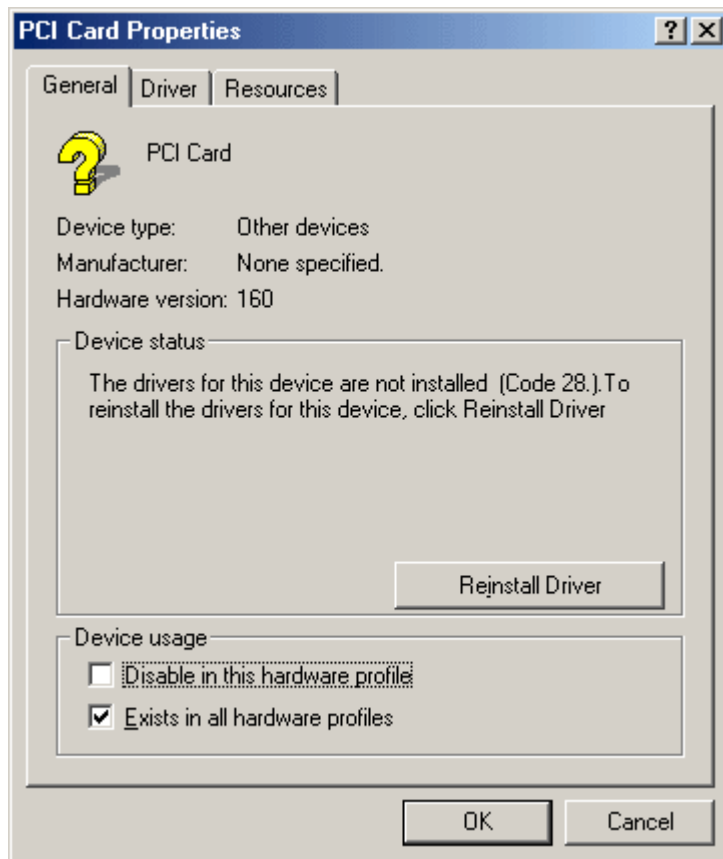
3.System will popup **"Update Device Driver Wizard"** window, select **"Specify the
location of the drivers"** and also select **"Specify the location"**, then click **"Next"**.

Update Device Driver Wizard

This wizard searches for updated drivers for:

PCI Card

Windows can search for and install an updated driver to
replace the one currently being used by your hardware. Or,
you can specify the location of another driver.

What would you like to do?

○ Automatic search for a better driver (Recommended)

◉ Specify the location of the driver (Advanced)

[< Back]   [Next >]   [Cancel]

4.Select **"Search for the best driver for your device. (Recommended)"** Insert the
driver CD or diskette, then select the driver location by keying the driver path.
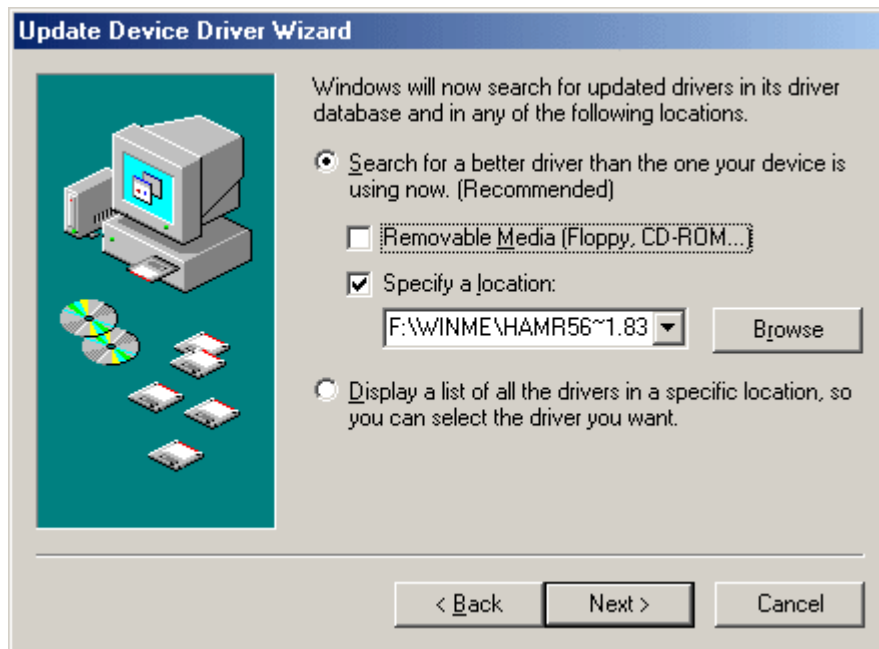
5.Then   Windows ME will automatically copy the driver files and related files into the
system.

6.After copying the driver files, the device installation is completed. Click **"Finish"**, to
close **"Update Device Driver** Wizard", and this device is ready to use.

Update Device Driver Wizard
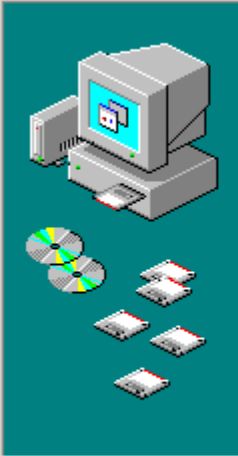
AMR Modem Device

Windows has finished installing an updated driver for your hardware device.

< Back   Finish   Cancel

-Windows 2000 installation

Insert this HAMR56 or SmartRiser56 modem (Here in after we call it "the Device") into
   your PC or Notebook MDC slot and power on.
1.After start, please check device manager from control panel, you will see an
   exclamation mark on PCI Card this device, please select this device and click
   "Properties".
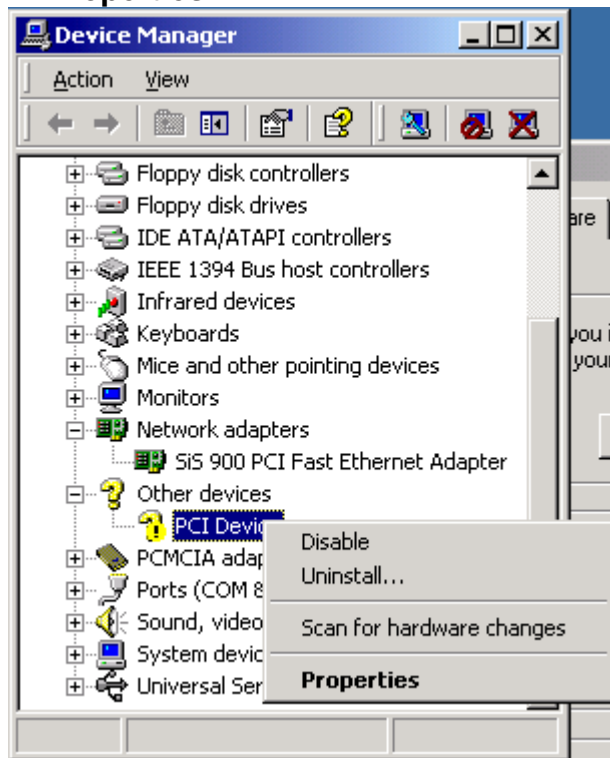
2. Select **"Update Driver"**.
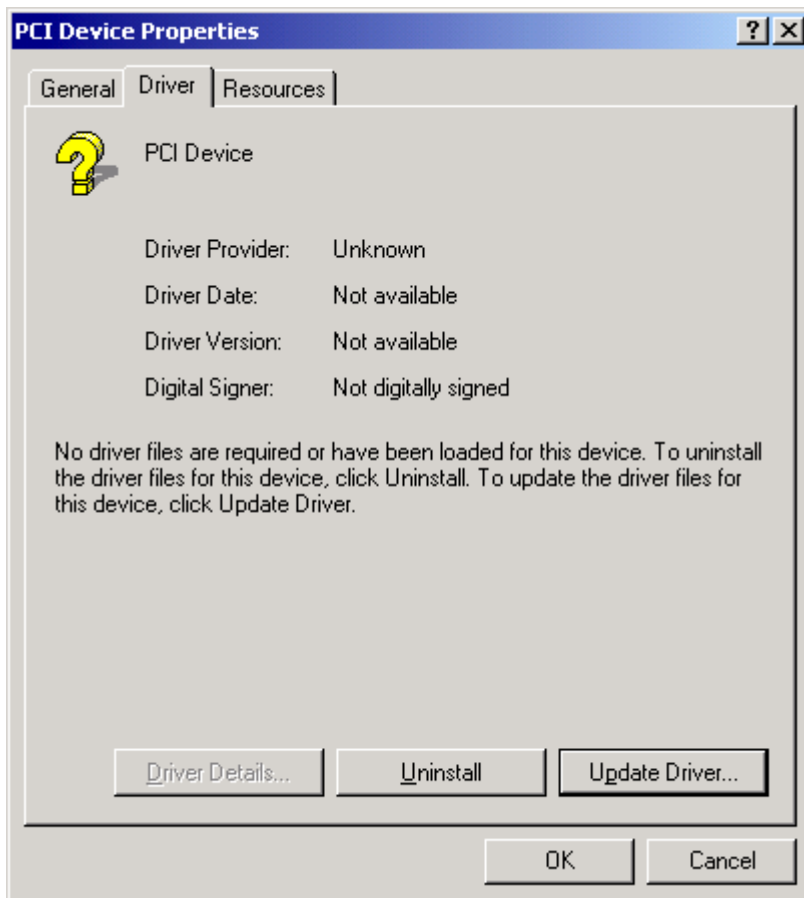
3.System will popup **"Update Device Driver Wizard"** window then click **"Next"**.

4.Please select **"Search for a suitable driver for my device (recommended)"** then click **"Next"**.

5.Insert the driver disk and select the **"Specify a location"** then click **"Next"**.

6.Keyin the driver path (the path is E:\driver\win2000\HARMR5600-V2.83K-MV-Win2K), then click **"Next"**.

7.Windows 2000 will search and recognize the driver of the device and click **"Next"**.
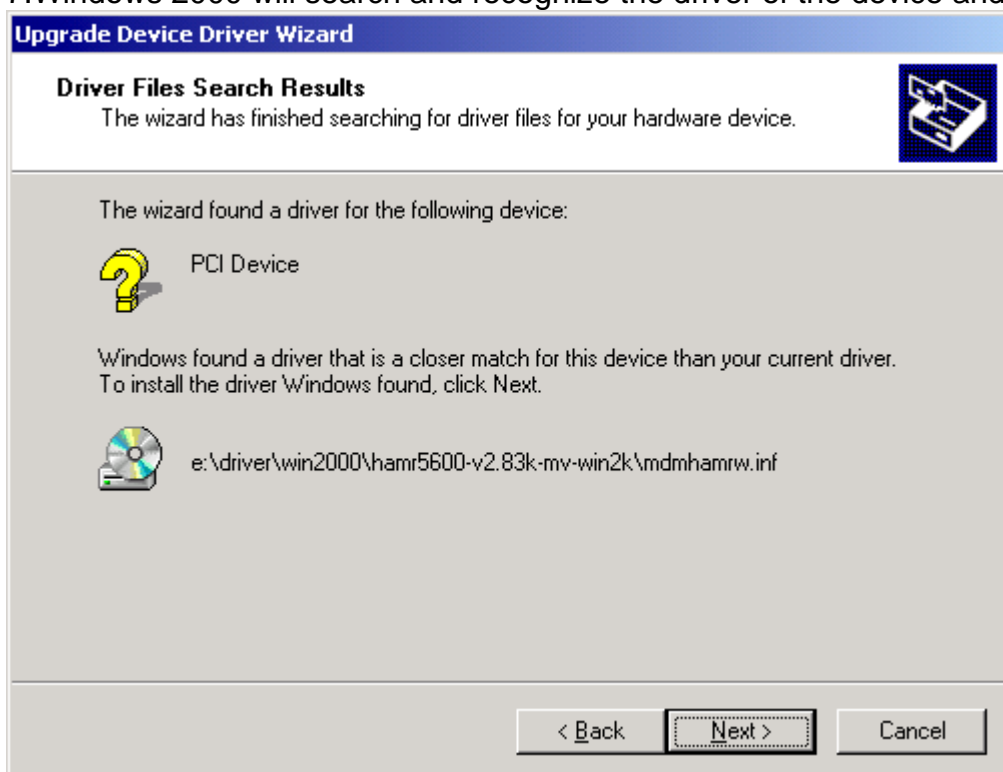
8.Windows will automatically copy the driver files and related files into the system. The Windows shows **"Digital Signature not Found",** click **"Yes"** to continue.
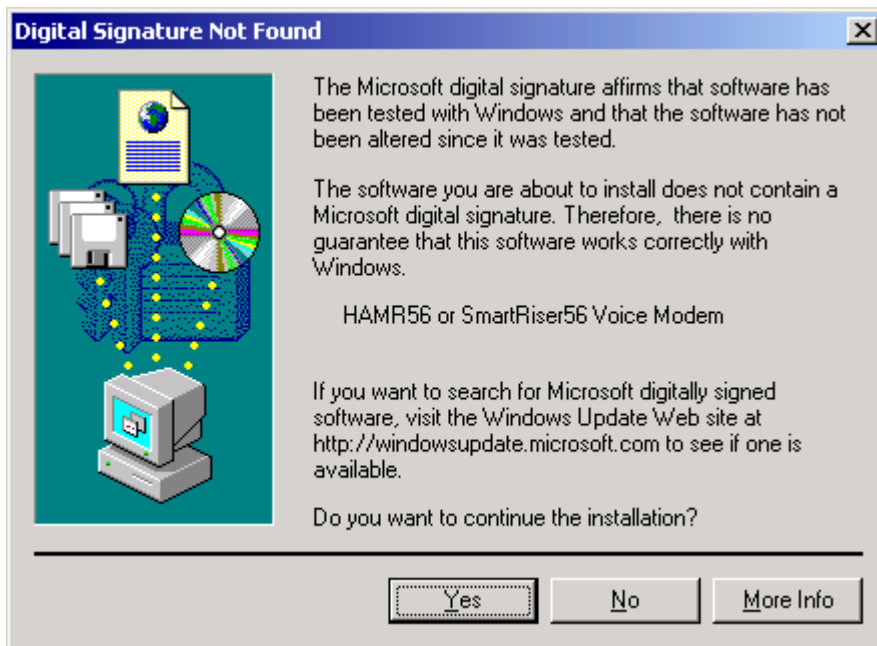
9.After copying the driver files, the device installation is completed please click **"Finish"**.

5.Uninstall :

1. Uninstall this device please remove this device from your PC or notebook, then from Start-->Settings-->Control Panel select Add/Remove Programs, in Add/Remove Programs Properties select "**HAMR56 or SmartRiser56 modem**" and click "**Add/Remove**".
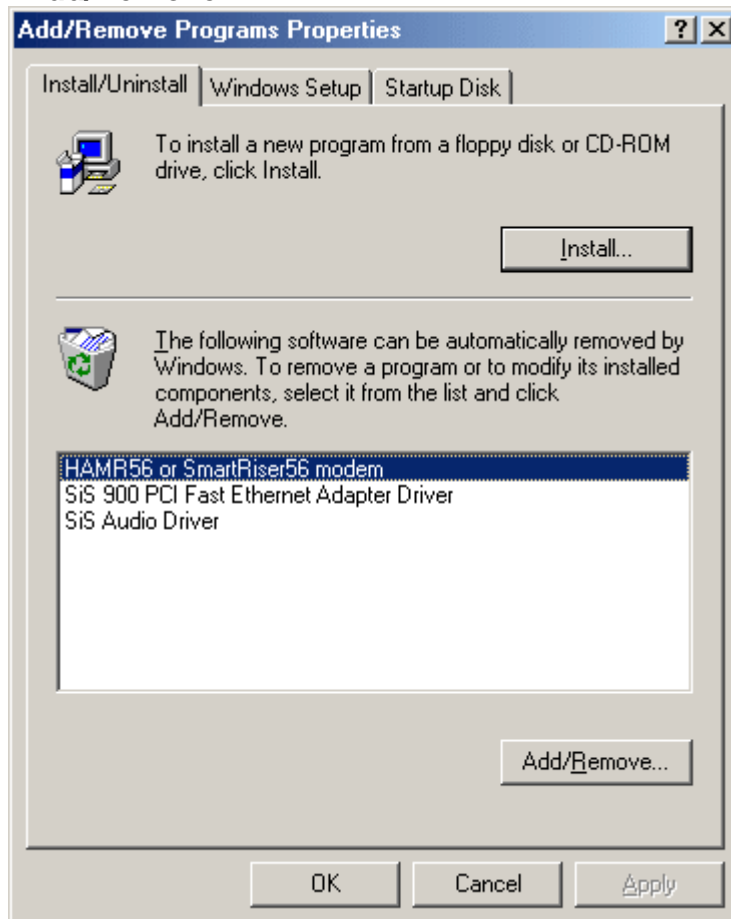
2.System will popup "**Uninstall HAMR56 or SmartRiser56 modem**" this window please click "**YES**".
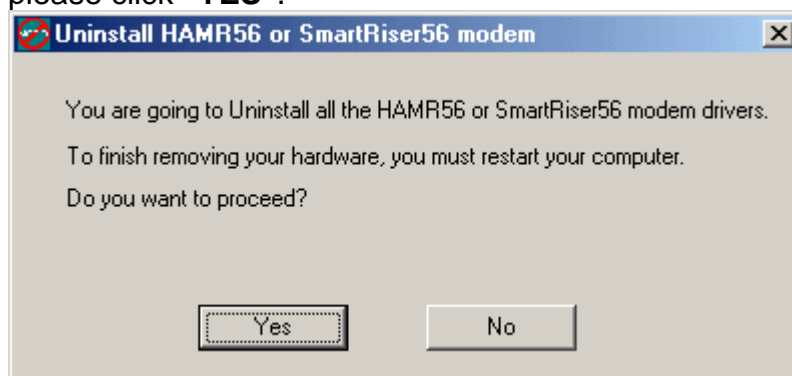
3.Then click "OK" system will restart, after restart driver will removed.

UnInstall

You must restart your computer in order to complete installation.
Close all open applications and choose one of the options bellow:

- ⦿ Restart the computer automatically now
- ○ Shut down the computer automatically to replace the modem

[OK]
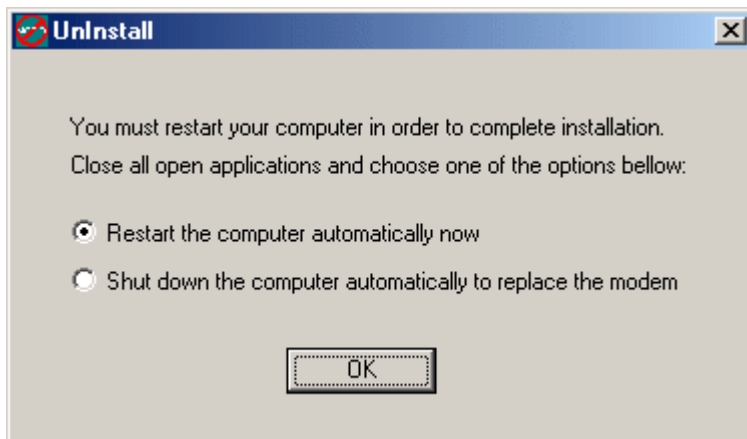
6.Installing Bluetooth software for Windows

(1) Place installation CD into PC and setup should launch automatically.
If setup does not launch, use Windows Explorer to navigate to the appropriate CD-ROM drive and run **"Bsetup"**.
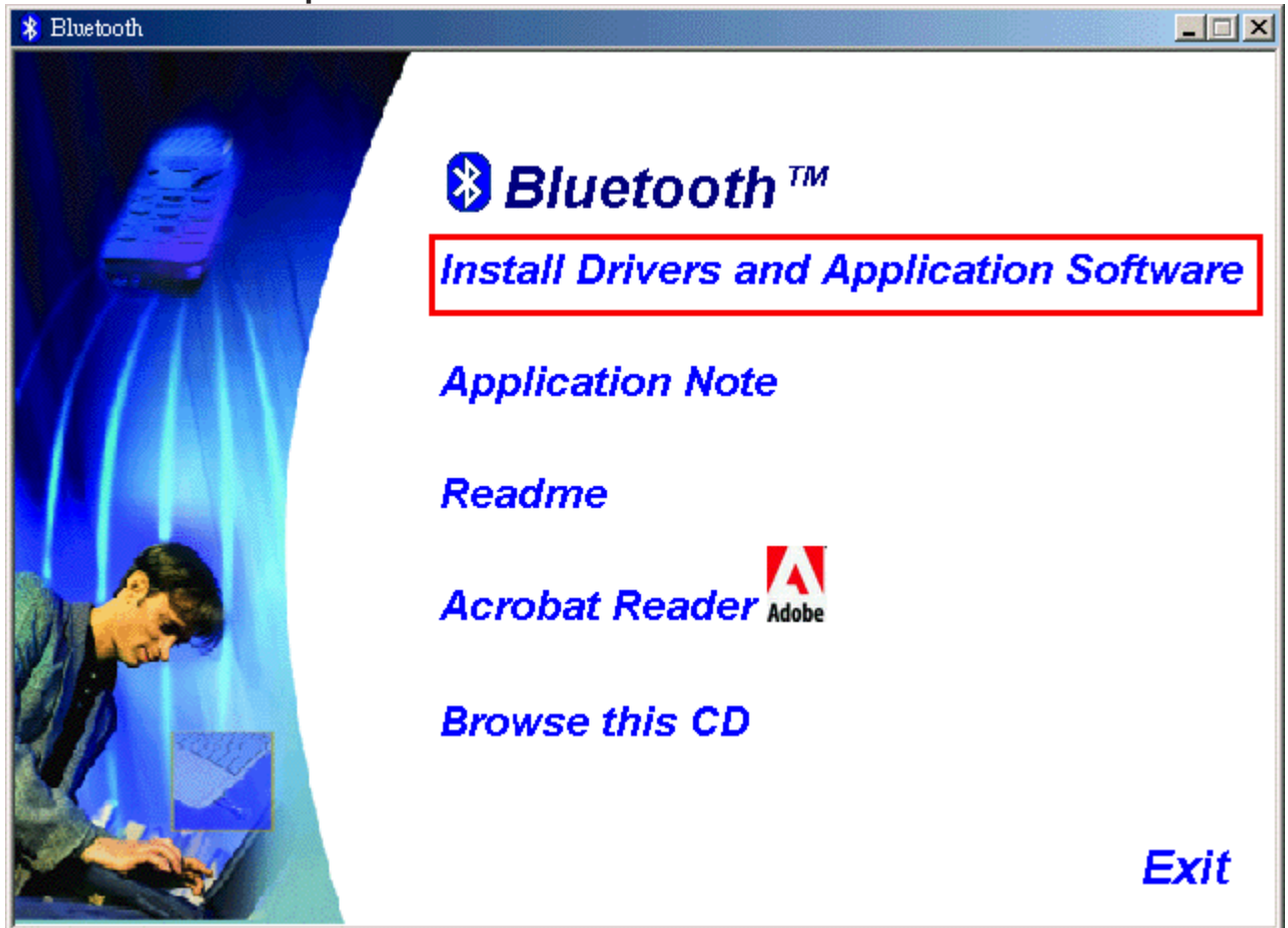
(2) Please select your device and O.S..

Install Drivers and Application Software

USB Dongle :
NOTE : Please install the application software
before plug in the Bluetooth USB Adapter

Windows 98/ME/2000/XP

CF Bluetooth :
NOTE : Please insert and install CF Bluetooth Driver
before installing Bluetooth Software

Windows 98/ME/2000/XP

WinCE 3.0 & PocketPC 2002

Back   Exit
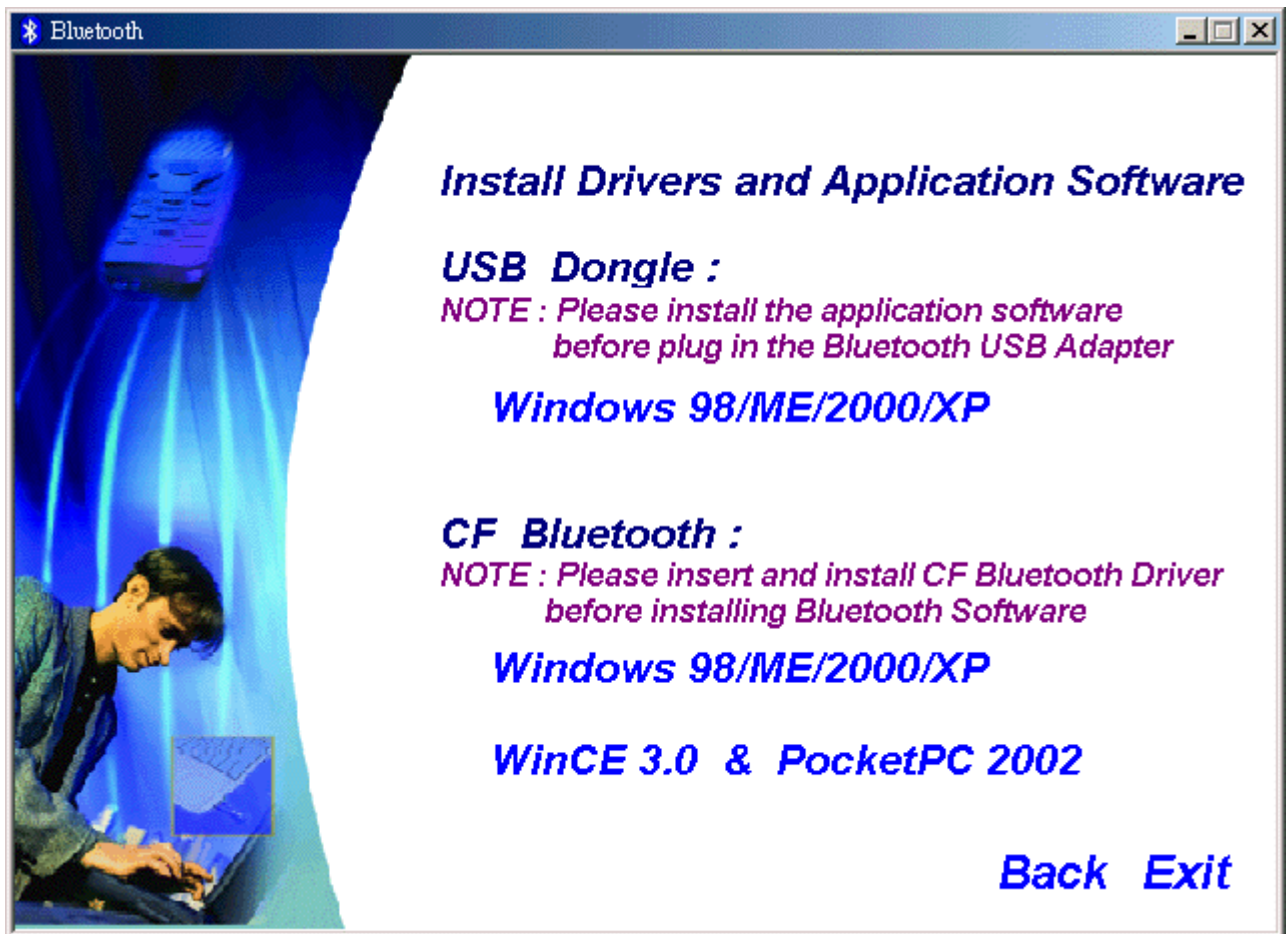
(3) Complete these steps to install Bluetooth software:
(4) Exit all applications.
(5) InstallShield Wizard setup dialog box will automatically be displayed. If the setup program doesn't startup automatically, manually start the setup program by double clicking Bsetup.exe.
(6) Follow the instructions on screen:
(7) On the *Welcome* screen, click the **Next** button.

(8) When the *License Agreement* screen is displayed, read the License Agreement, then click the radio button to the left of **"I accept the terms in the license agreement"** and click the **Next** button.
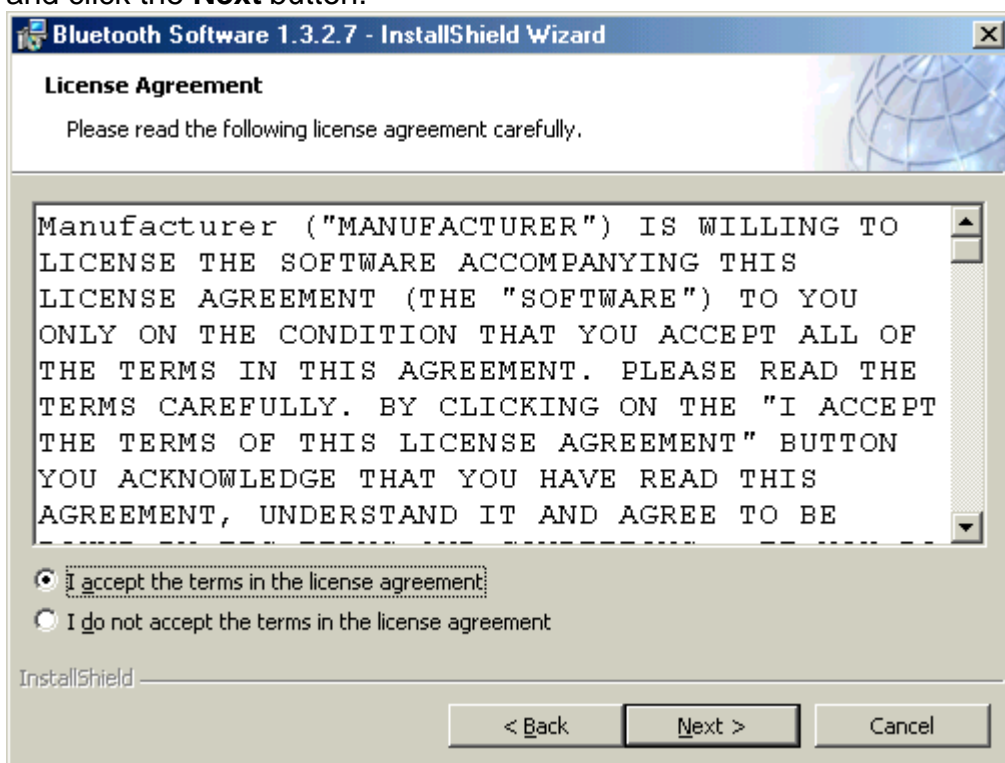
(9) You can choose the destination folder in your system, If you do not want to change the destination folder please click **Next**.
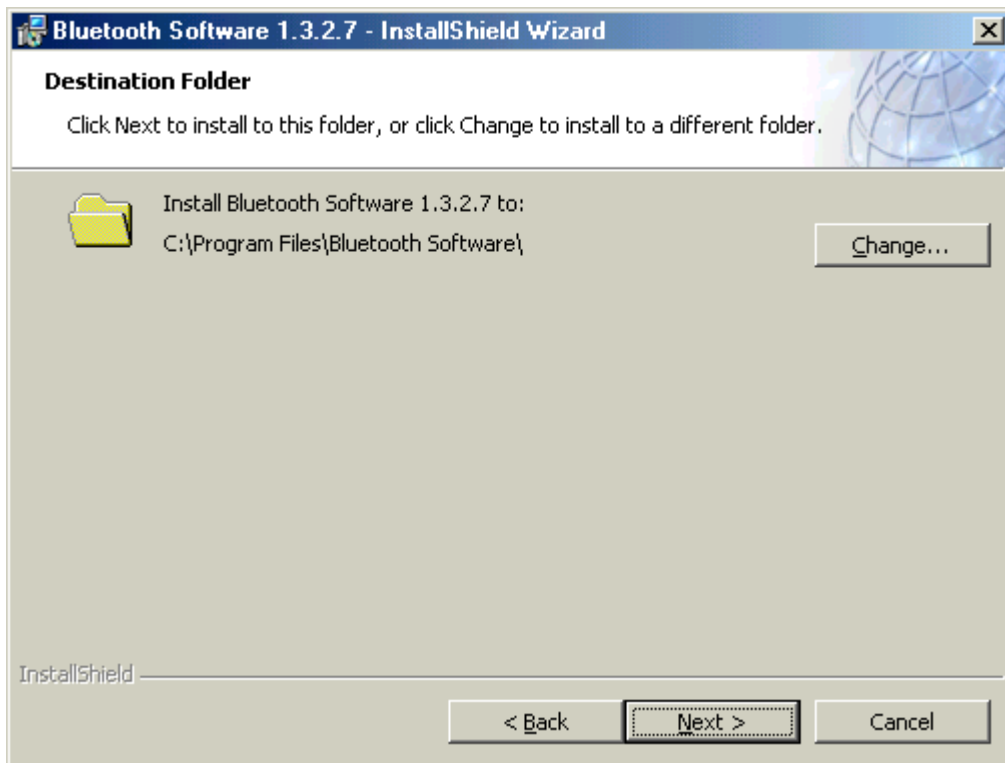
(10) On the *Destination Folder* screen, click the **Change** button to browse to a new destination folder for the Bluetooth software. Otherwise, click the **Next** button to accept the default folder.
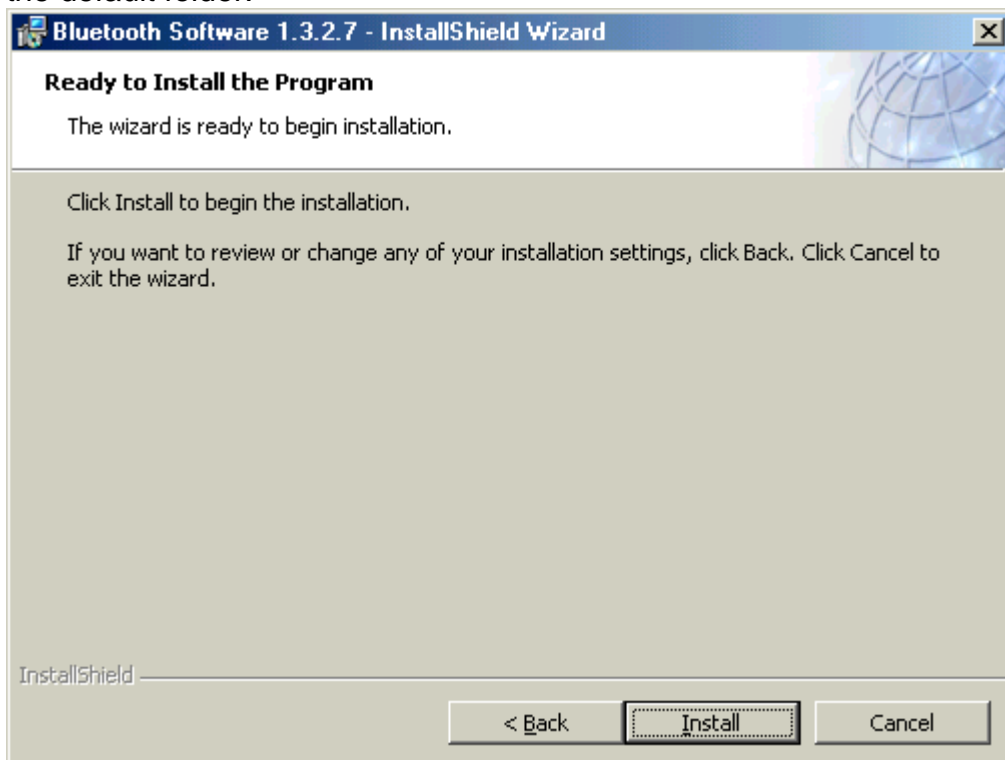
(11) The system is ready to install the Bluetooth software. If you need to review or change any settings, click the **"Back"** button. Click the **"Cancel"** button to exit the Wizard. Otherwise, click the **"Install"** button.

(12) For Windows 2000/XP users, system will popup a **"Driver Signature Notice"**, please click the **"OK"** button.
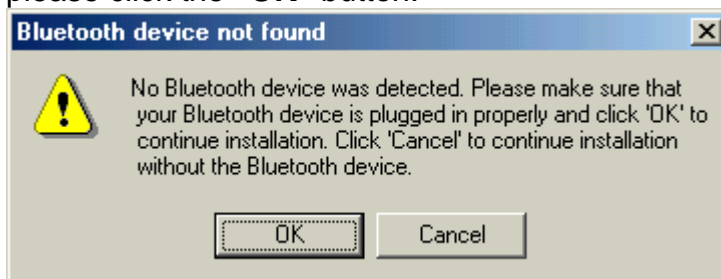
(13) During the installation, system will detected your Bluetooth device please make sure your Bluetooth device is plugged in properly and click "**OK**" to continue installation, or you can click "**Cancel**" to continue installation without the Bluetooth device.
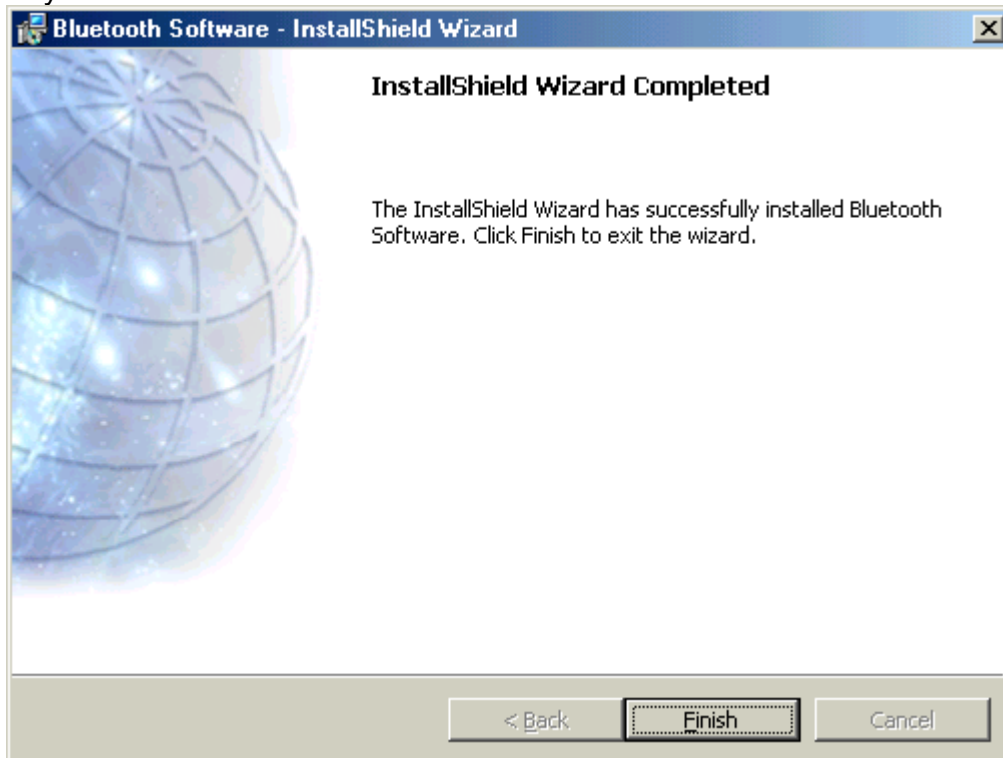
(14) Installation completed please click "**Finish**".
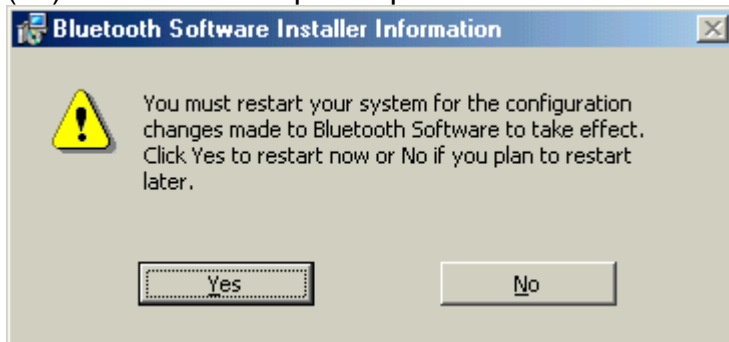
(15) Click **"Yes"** to restart your computer. If you plan to restart later, click **"No"**.

(16) After reboot and Windows comes back up again, insert your USB Bluetooth adapter into the PC's USB port, if you haven't done so during the installation, and the system will install the driver for your device automatically.

(17) Do not reboot. Your device is now ready to be used.

(18) **To start Bluetooth:** in the Windows system tray, right-click the Bluetooth icon and select "**Start Bluetooth Device**". The Bluetooth icon is blue in color with a white insert when Bluetooth is running.
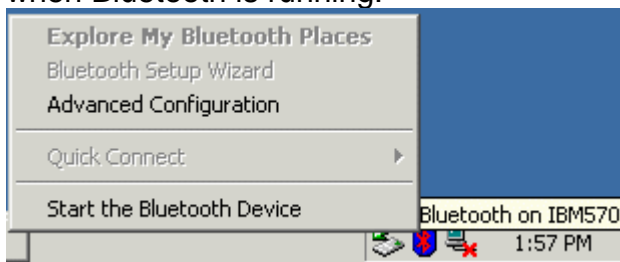
(19) **To stop Bluetooth:** in the Windows system tray, right-click the Bluetooth icon and select

"**Stop Bluetooth Device**". The Bluetooth icon is blue in color with a red insert when Bluetooth is stopped.
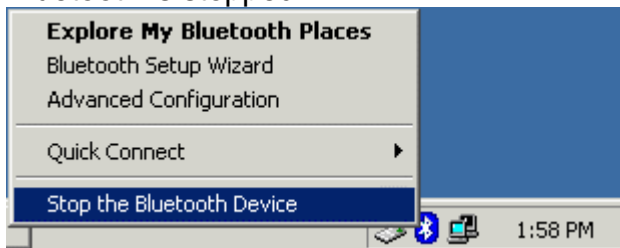
Create a connection from the Bluetooth icon in the system tray

In the Windows system tray, right-click the Bluetooth icon, select Quick Connect and then the Bluetooth service that you wish to use.

If this computer has created a connection to the desired type of service in the past, the options on the shortcut menu are:

- The name(s) of any device(s) with which prior connections to this type of service have been established. Select a name from the list to re-establish connection.
- Other Devices-Select this option to search for additional devices that potentially provide the desired service, select a device from the list, and then click Connect.

If this computer has never created a connection to this type of service, the only option on the shortcut menu is "Find Devices". Select this option to search for devices that potentially provide the desired service, select a device from the list, and then click Connect.

Create a connection using the Bluetooth Setup Wizard
(1) From Bluetooth Explorer

- Right-click My Bluetooth Places and select Bluetooth Setup Wizard or
- From the Bluetooth menu, select Bluetooth Setup Wizard

From the Windows system tray: right-click the Bluetooth icon and select **Bluetooth Setup Wizard**.
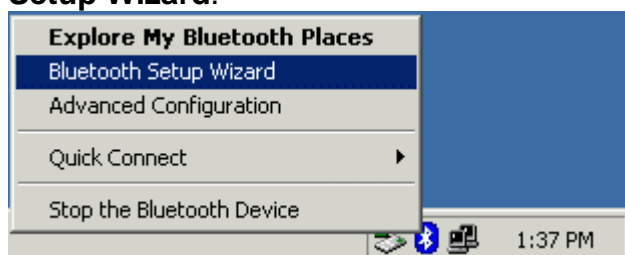
(2) The "Initial Bluetooth Configuration Wizard" will pop up. Click "Next" to the next page.
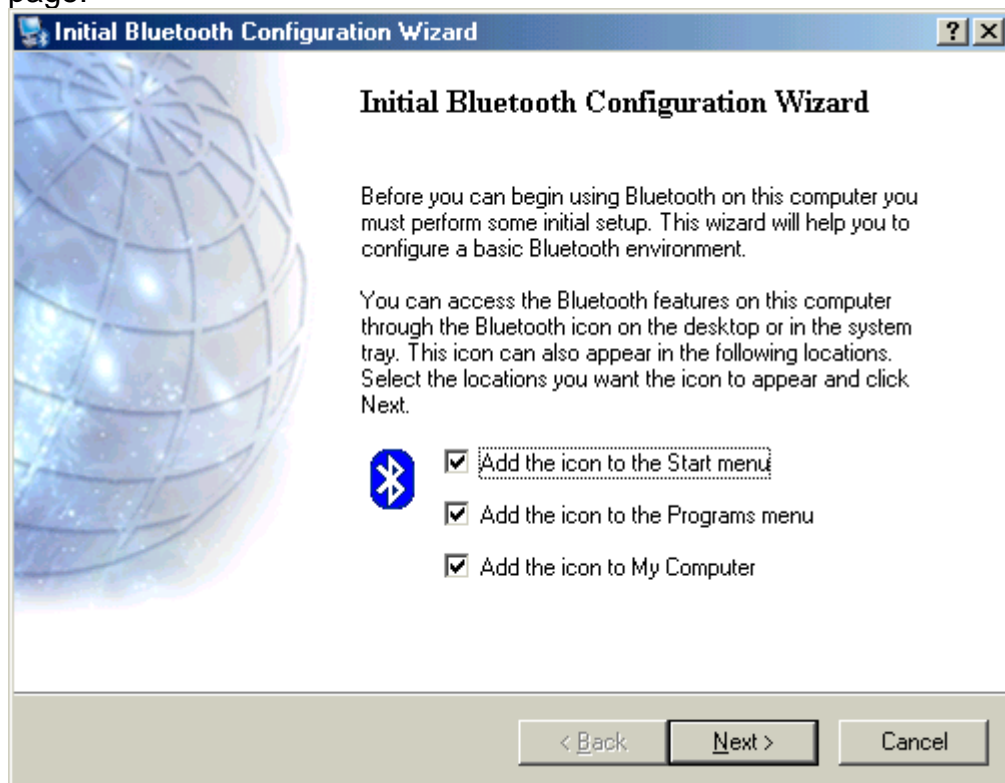
(3) Follow the wizard's on-screen instructions to configuration your Bluetooth device.
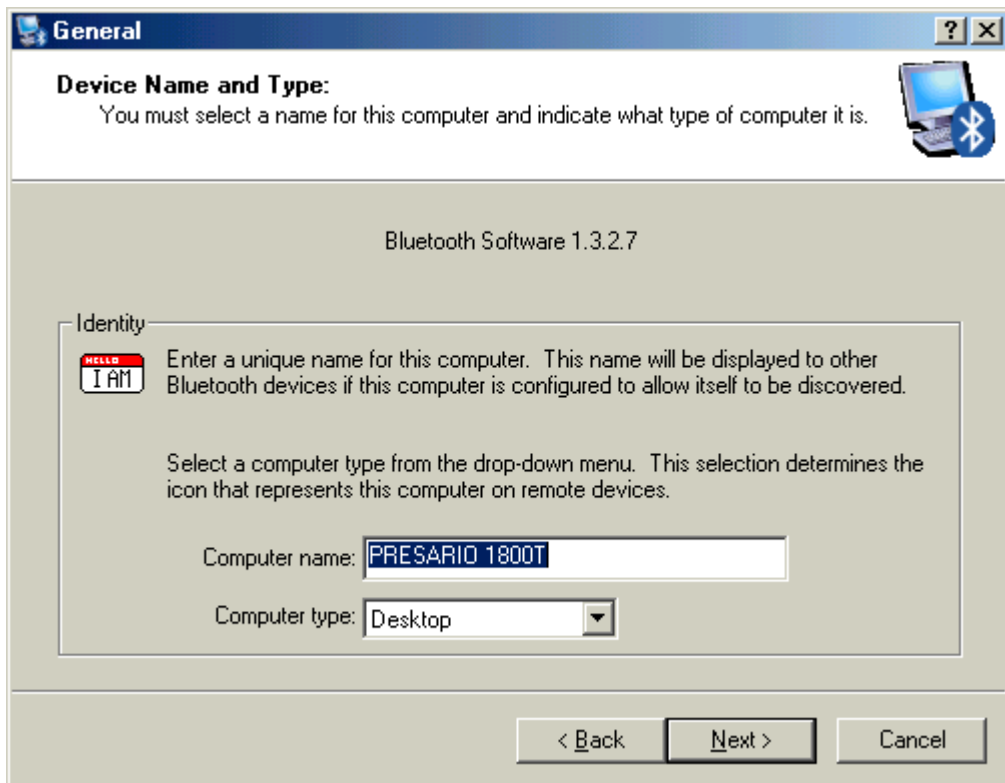
(4) Click "Next" to configure the Bluetooth service, you may skip the process by clicking "Skip".
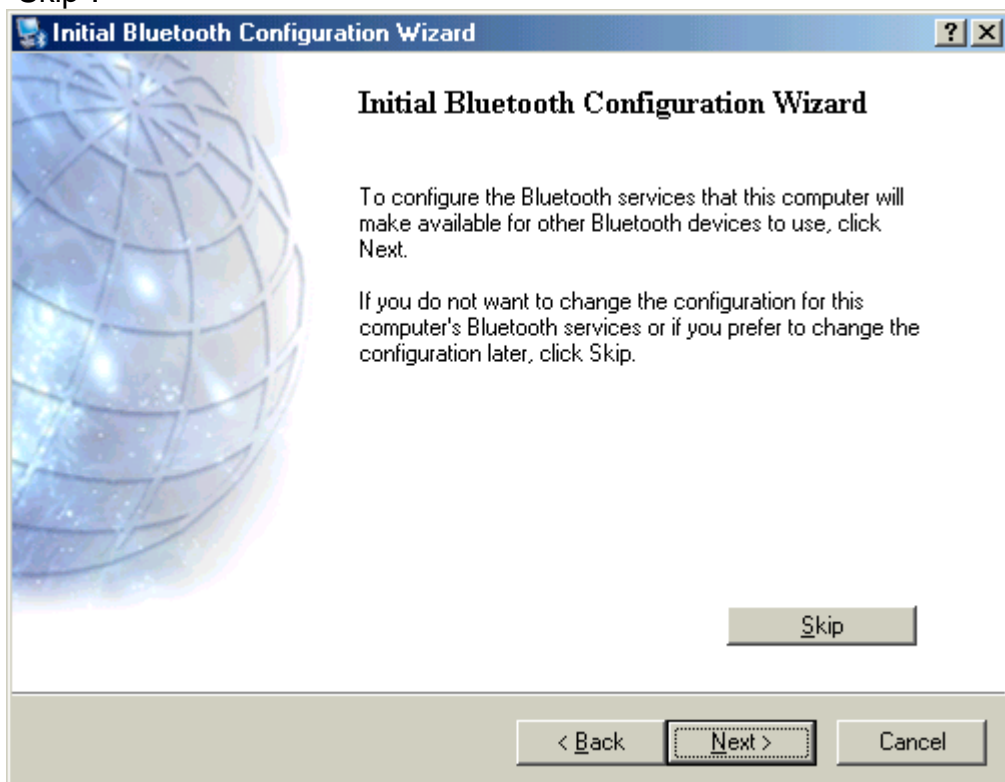
(5) Click "Next" to the next page.
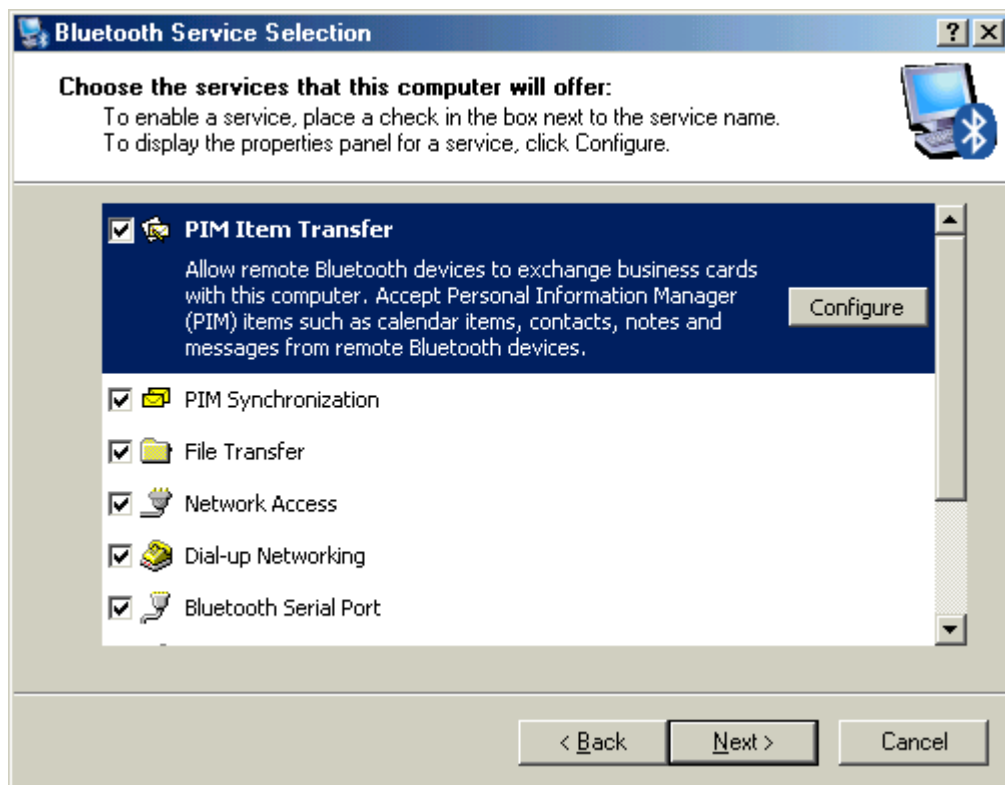
The services supported by Bluetooth are:

- **Bluetooth Serial Port-**a wireless connection between two devices. This connection can be used by applications as though a physical serial cable connected the devices.
- **Dial-up Networking-**allows a device to use a modem that is physically attached to another Bluetooth device.
- **Fax-**allows a device to send a fax using a remote Bluetooth cell phone, modem, or computer.
- **File Transfer-**allows a device to perform file system operations on another Bluetooth device; browse, open, copy, etc.
- **Headset-**allows a Bluetooth headset to be used as the audio input/output mechanism for another Bluetooth device, such as a computer or cell phone.
- **PIM Item Transfer-**allows two Bluetooth devices to exchange Personal Information Manager data such as business cards, calendar items, email messages, and notes.
- **PIM Synchronization-**allows two Bluetooth devices to synchronize Personal Information Manager data.
- **Network Access-**allows a device to access a Local Area Network via a second Bluetooth device that is physically connected to the network or allows a remote device to become part of an ad hoc network provided by the Bluetooth server.
- **Audio Gateway-**allows the microphone/speakers on Bluetooth device (typically a computer) to be used as the audio input/output mechanism for a remote Bluetooth device, such as a cell phone.

All Bluetooth servers do not necessarily provide all of these services. For example, network gateways may provide only the Network Access service.
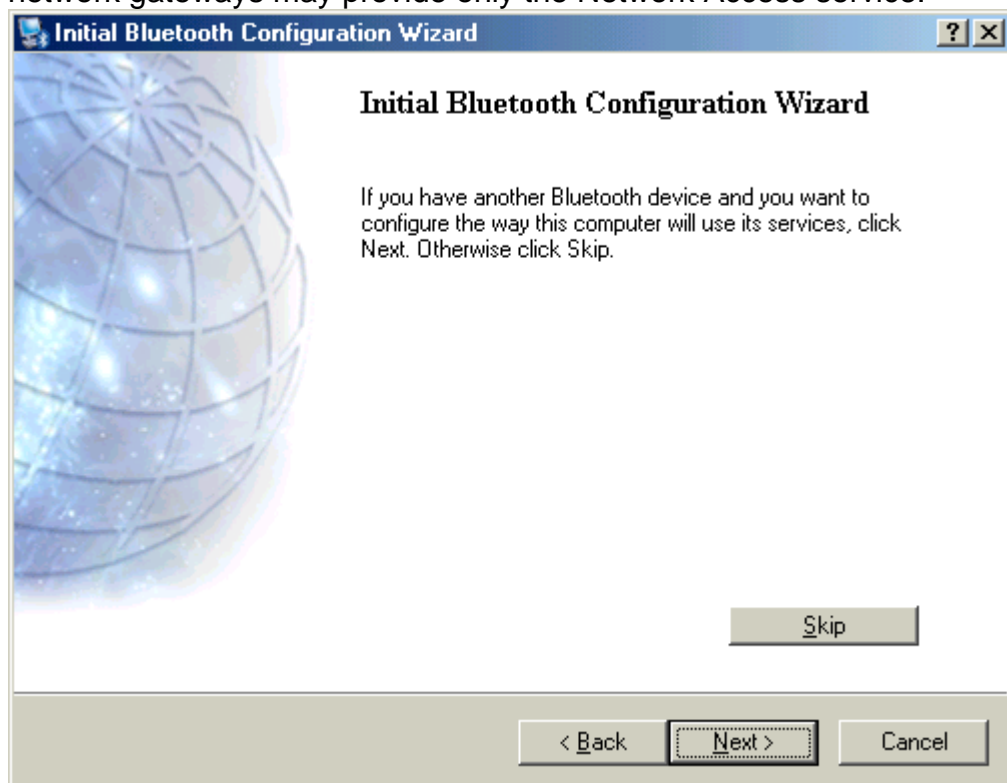
FIND A SERVICE

The process of determining the services that a device provides is called Service Discovery.

You can follow the wizard's on-screen instructions to find a service to use or click **"Skip"** button to skip this step.

To initiate a Service Discovery, in the Folders pane of My Bluetooth Places, right-click a device name and select Discover Available Services from the shortcut menu.

Bluetooth services are those things that this computer can do for remote Bluetooth devices. For example, if this computer allows a remote Bluetooth device to send a fax using a fax modem that is physically attached to this computer, then this computer is providing the Bluetooth fax service. Some services are hardware dependant; this computer cannot provide the fax service unless it has a physical fax modem, for example. Some Bluetooth services use virtual hardware. The Bluetooth Serial Port service, for example, does not use a physical port on this computer. Instead, it creates virtual serial ports that Windows applications can see and use as if they were actual physical ports. Each Bluetooth service that this computer is capable of providing can be started automatically when Bluetooth starts. Each service can be setup to require security measures before allowing a remote Bluetooth device to connect. Bluetooth services require a Bluetooth application on the remote device; services and applications usually have coinciding names; i.e., there is a Bluetooth Fax Service and a Bluetooth Fax Application.

To check if you Bluetooth device is up and working properly

From the Bluetooth menu, select "**Advanced Configuration**".
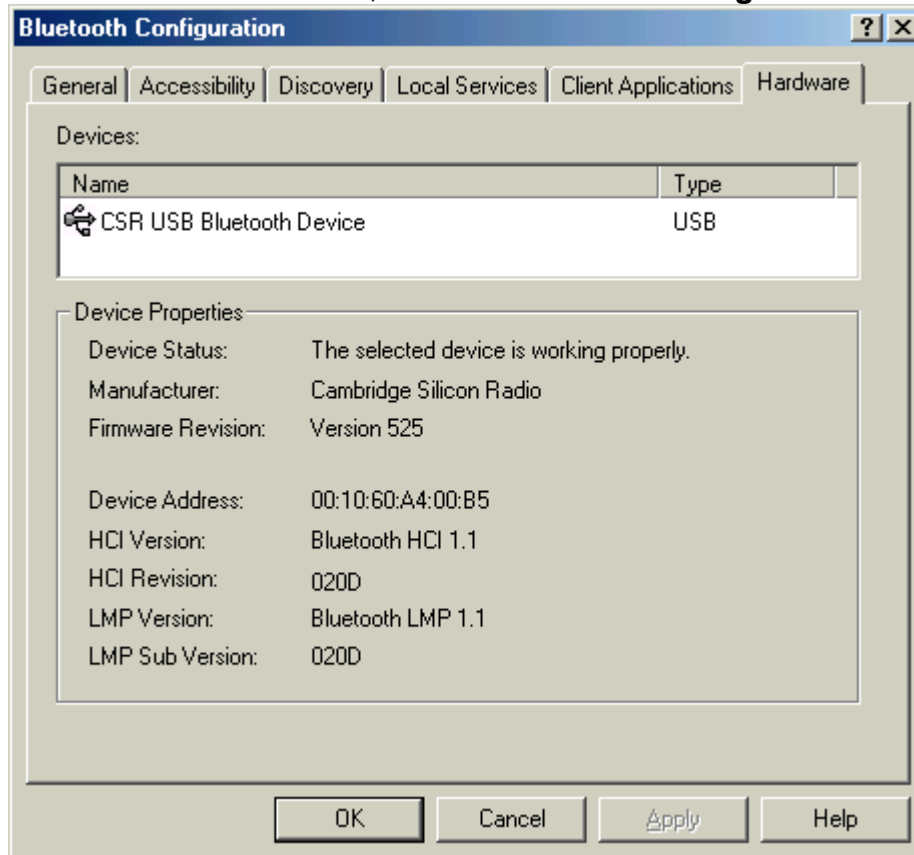
Under the **"Hardware"** tab, verify the Bluetooth address is present along with the driver and firmware version info.

If such information is not present, please unplug then plug in the USB adapter to initiate the driver.

For CF Bluetooth card, please reboot the system with the CF Bluetooth card securely inserted in the PCMCIA slot.

Repeat the installation steps for other USB adapters or CF card on other PCs.

Periodic Search for Devices

Bluetooth can be configured to automatically search for devices on a regular basis (Bluetooth Configuration Panel > Discovery tab). One of the advantages of Bluetooth is the mobility that the wireless connections allow. However, mobility means that devices may move in or out of connection range during the time between the automatic updates performed by Bluetooth. To be certain that the displayed list of devices in the neighborhood is current, or if automatic periodic inquiry is not enabled, force an update of the device list using the technique described in Search for Devices, above.
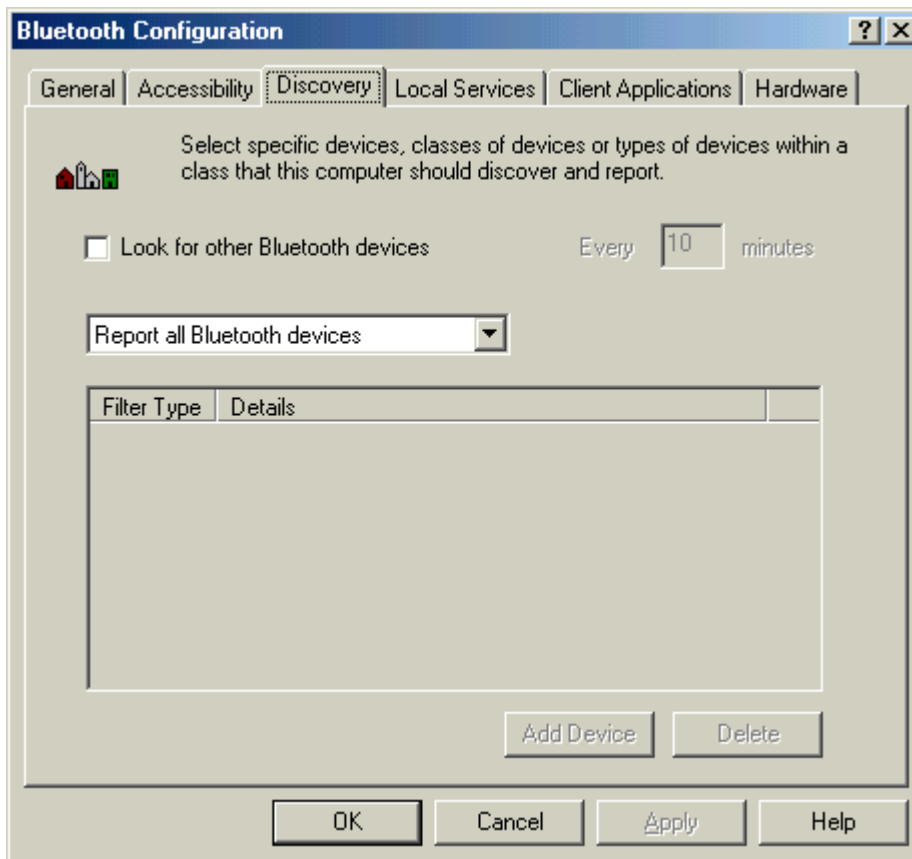
1.1 Icons used for Bluetooth devices and services

Bluetooth icons provide at-a-glance feedback about a device or service's status by changing appearance.

The Bluetooth icon in the Windows system tray provides feedback about Bluetooth status.

Basic Bluetooth Icon

Device Icons for Windows 9x, Me and 2K

Device Icons for Windows 9x, Me and 2K			
Name	Normal	Connected	Paired
Audio Gateway			
Desktop			
Headset			
Laptop			
Modem			
Network Access Point			
Personal Digital Assistant			
Printer			
Telephone			
Unknown			

Service Icons for Windows 9x, Me and 2K

Service Icons for Windows 9x, Me and 2K			
Name	Normal	Connected	Not Available*
Audio Gateway			
Dial-up Networking			
Fax			
Headset			
Network Access			
PIM Item Transfer			
PIM Synchronization			
Public Folder			
Serial Port			
*Services may be unavailable because they are in use or because the necessary hardware is not installed.			

Device Icons for Windows XP

Device Icons for Windows XP			
Name	**Normal**	**Connected**	**Paired**
Audio Gateway			
Desktop			
Headset			
Laptop			
Modem			
Network Access Point			
Personal Digital Assistant			
Printer			
Telephone			
Unknown Device			

Service Icons for Windows XP

Service Icons for Windows XP			
Name	Normal	Connected	Not Available*
Audio Gateway			
Dial-up Networking			
Fax			
Headset			
Network Access			
PIM Item Transfer			
PIM Synchronization			
Public Folder			
Serial Port			

*Services may be unavailable because they are in use or because the necessary hardware is not installed.

NOTE: Only available services are displayed in the menus.