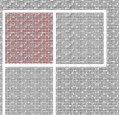


TBW-107UB

User Guide

Micro Bluetooth® USB Adapter



1. Introduction

Perfect for your home or office with this dongles which allows you to connect with your entire Bluetooth device such as phones, PCs, PDA, Printer, Laptop, web pad... and so on. Eliminate proprietary cables, and allow mobile user to connect to mobile operating devices wirelessly and effortlessly.

The dongle is fully compliant with the Bluetooth v2.1 specification and backward-compatible with Bluetooth version 1.1 or 1.2 standards. Moreover, it supports the new Bluetooth Enhanced Data Rate (EDR), providing raw bandwidth of 3 Mbps for wireless applications.

Features

- Compliant with Bluetooth v2.1 specification with EDR (Enhanced Data Rate) support
- Backward compatible with Bluetooth v1.1 and v1.2 devices
- Up to 3Mbps Access Data Rate and Low Power consumption
- Compatible with Windows 2000/XP/Vista/7 operating systems
- Built-in 128-bit encryption of secured data communications
- Enable computers to connect Bluetooth-enabled devices such as printers, headset, audio/video, basic images, PDAs, and mobile phone
- Compliant with Class 1 (TBW-106UB) or Class 2 (TBW-107UB) Bluetooth operations
- Trouble-free Plug & Play installation
- Support OHCI and UHCI host interface
- Portable, light weight and mini size

Package Contents

- TBW-106UB or TBW-107UB
- Multi-Language Quick Installation Guide
- Driver & Utility CD-ROM

2. installation

1. System Requirements

- At least 500MB of free disk.
- Windows 7/Vista or Windows XP.

2. Installing BlueSoleil

2.1 Before installing

Uninstall the earlier version of BlueSoleil you installed on your computer: Click **Start** -> **Control Panel** to open Control Panel, and then choose **Uninstall a program**. Select BlueSoleil in the program list and uninstall it.

Note: Bluetooth adapter can be remained plugged or unplugged during the installation.

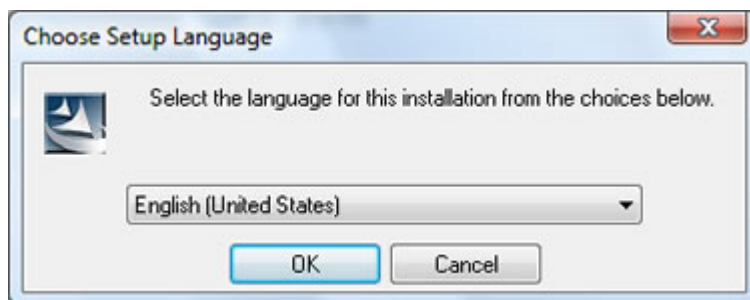
2.2 Installing BlueSoleil

2.2.1. Insert BlueSoleil installation CD into the CD-ROM.

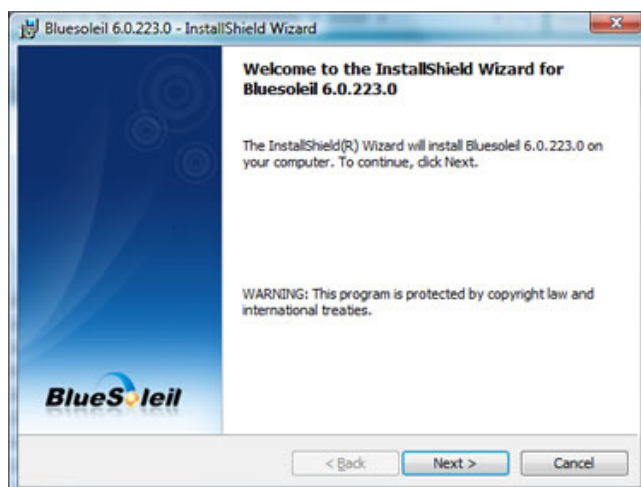
2.2.2. Double-click setup.exe to start installation.



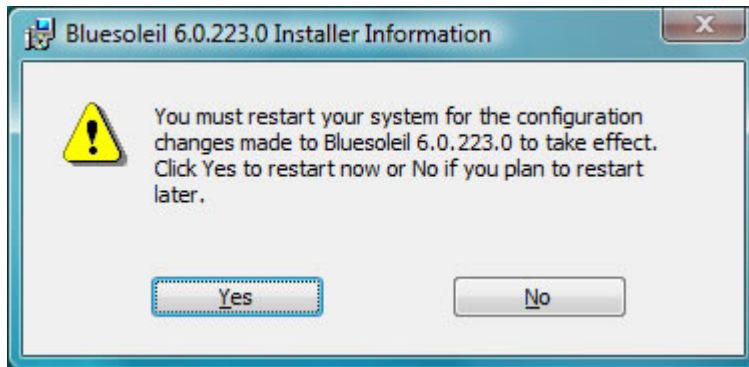
2.2.3. Choose the setup language.



2.2.4. Follow the instructions on the screen.



2.2.5. Restart your computer.




Note: If you do not restart, some operations may be abnormal.

3. Uninstalling BlueSoleil

BlueSoleil can only be removed from Control Panel. For detailed instructions, please refer to "step 3.1 before installing" in this guide.

4. Getting Started

4.1 Starting BlueSoleil

Double click "**Bluetooth Places**" icon on the desktop  or right-click the Bluetooth icon in the system tray and select "**Explore Bluetooth Places**".

4.2 Search remote Bluetooth Devices

Make the devices discoverable first. Double-click **Search Devices** icon and then Bluetooth devices will appear in the window.

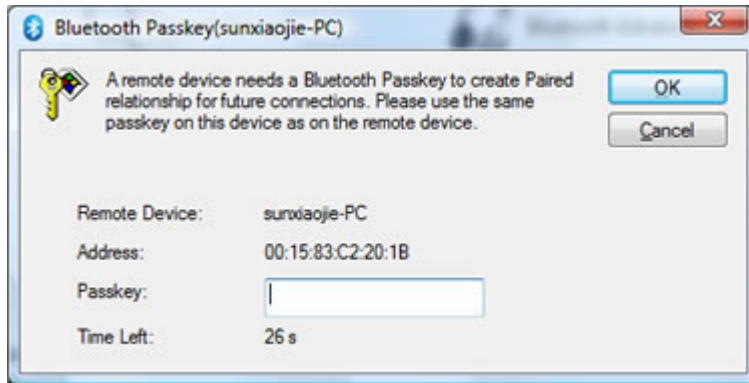
4.3 Search Services

Double-click the device icon to enter the device's subfolder. Services supported by the device will appear in the window automatically. If not, double-click **Search Services** icon to refresh.

4.4 Establish a connection

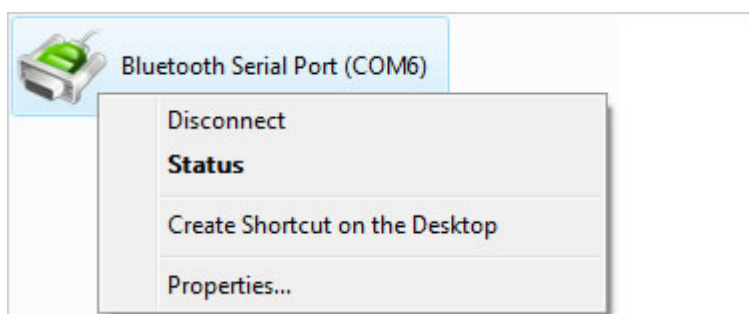
Double click a service icon to initiate a connection.

You might be prompted to enter a passkey to authenticate. Enter the same passkey on both sides, or enter the specific one provided by the device manufacture on your computer side only. On BlueSoleil side, the dialog box as shown in the following picture will pop up for you to enter a passkey.



4.5 Terminate a connection

Right-click the connecting remote service icon, and select **Disconnect**.



3. User Guides

Local *Bluetooth* Device

The Local *Bluetooth* enabled device, known as "**My Device**", represents the user's computer that is running BlueSoleil.

Icon:






















Operations:

- Hover mouse to display the local *Bluetooth* device's name or address (if without name).
- Click on the red ball to start or stop searching for *Bluetooth* devices in range.
- Right-click on the red ball to display a pop-up menu of related operations (e.g., General Inquiry, My Services, Security, etc.).

Remote *Bluetooth* Devices

Remote devices are other *Bluetooth* enabled devices that are in the *Bluetooth* radio range of your local device. BlueSoleil uses different icons to indicated different types of remote devices..

Icons

Devices	Icon	Devices	Icon
Personal Computer		Laptop	
Modem		Mobile	
PDA		LAN Access Point	
Keyboard		Mouse	
Microphone		HiFi Audio	
Loud Speaker		Headset	
Printer		Scanner	
FAX		Camera	
Game bar		Server	
Unknown device			

Icon Meanings

Remote devices can be in any of three states, which BlueSoleil indicates with

different colors.


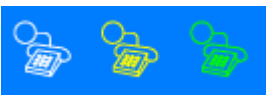










- White- Idle. The normal state of the device.
- Yellow- Selected. You have selected the device.
- Green- Connected. The device is connected to your computer.

Operations

- Single-click on the icon to select.
- Double-click on the icon to search for the services supports by the remote Bluetooth device.
- Right-click on the icon to display a pop-up menu of related operations (e.g. Refresh Services, Pair Devices, Connect, etc.).

Bluetooth Service Buttons of Remote Device

Service buttons at the top of the Main Window represent a range of *Bluetooth* services potentially supported by Remote Devices.

Services	Button Image	Services	Button Image
PAN		DUN	
SPP		Advanced Audio	
FTP		SYNC	
OPP		HCRP	
HID		FAX	
BIP		Headset	

Icon Meanings

There are 3 states for the service icons, indicated by different colors.

- White- Idle. The normal state.
- Yellow- Available. The *Bluetooth* service is available on the selected remote device.
- Green- Connected. The *Bluetooth* service is active in a connection with the remote device.

Operations

- Hover your mouse over the service icon to display the name of the service.
- Single-click on the service icon to connect.
- Right-click on the service icon to display a pop-up menu of related operations.

Local Service Status

The local service status can be viewed from the **Local Service Status** dialog box.

Right click whichever local service icon in service window and select the **Status...** on the pop-up menu.

The **Local Service Status** dialog will be displayed.

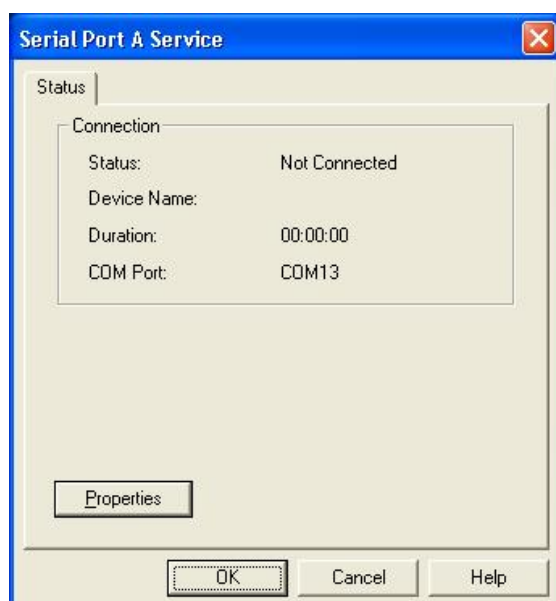


Figure1: Local Service Status (e.g. Serial Port A service)

Connection:

Status: Whether the local service is connected.

Device Address: Display the *Bluetooth* address of remote device which connect to the service.

Duration: The time elapsed since the connection was set up.

COM Port: The virtual *Bluetooth* COM ports connected by remote device.

PAN Service Status dialog is different from others.

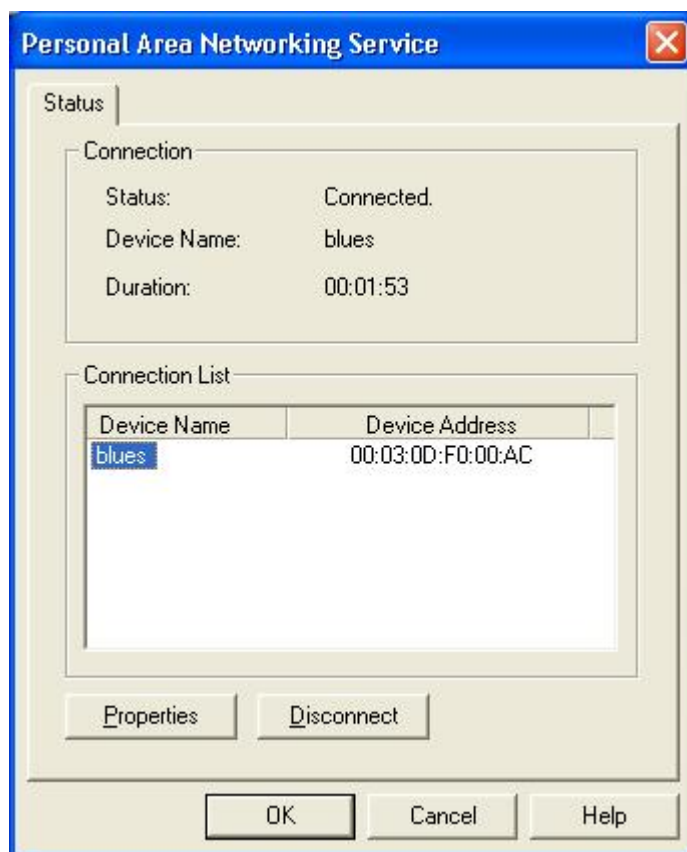


Figure2: Local Service Status (PAN)

Connection:

Status: Whether the local service is connected.

Device Name: Display the name of remote device which connects to the service.

Duration: The time elapsed since the connection was set up.

Connection List:

Display the names and addresses of remote devices which connect to the PAN Service.

Local Service List

The Local Service List displays all the *Bluetooth* services supported by the local computer. Use this screen to start/stop services.

Services	Icons	Services	Icons
PAN		SPP	
OPP		FTP	
SYNC		BIP	
Audio Sink			

Icon Meanings

There are 3 states for the local *Bluetooth* services, indicated by different icon colors.

- White- Idle. The service has not been started.
- Yellow- Started. The local *Bluetooth* service has been started.
- Green- Connected. Some remote device has connected to the service.

Operations

- Single-click on the icon to select the service.
- Double-click on the icon to Start/Stop a service.
- Right-click to display a pop-up menu of related operations.

Menus

BlueSoleil contains the following six menus:

File Menu

- **Hide** --- Hide the BlueSoleil window. Connections can still run when the window is hidden.
- **Always on Top** --- Keep BlueSoleil window always on top.
- **Exit** --- Exit BlueSoleil.

Note: You can also exit BlueSoleil by right-clicking on the task tray icon at the bottom of your screen. In the pop-up menu, click Exit.

View Menu

- **Main Window** --- Show the BlueSoleil Main Window.
- **Service Window** --- Show the BlueSoleil Service Window.
- **Arrange Devices** --- Arrange all remote devices by Device Name, Device Address or Device Type.
- **Refresh Devices** --- Refresh the list of remote devices detected by BlueSoleil.

Note: *If you select Refresh Devices, the list of previously detected devices will not be cleared. To initiate a new device search that will first clear the list, press F5.*

My Bluetooth Menu

- **Bluetooth Device Discovery** --- Search for other *Bluetooth* enabled devices in range.

- **Bluetooth Service Discovery** --- Browse for the services of the selected remote device.
- **Security** --- Configure the security setting of the local device (e.g. passkey requirement, data encryption, etc.).
- **Properties** --- Configure the properties of the local device (e.g. device name, accessibility, etc.).

My Services Menu

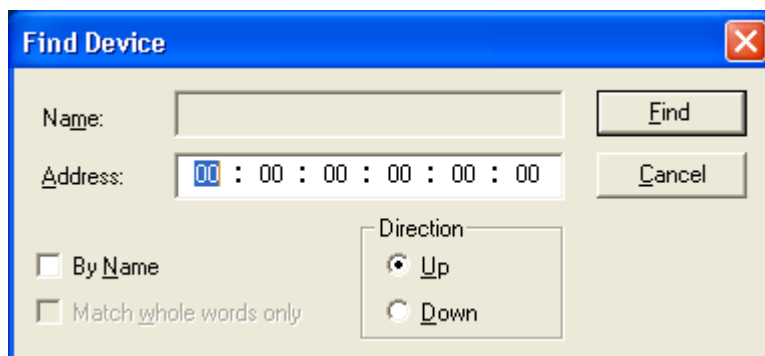
- **Starts Service** --- Start the selected local *Bluetooth* service.
- **Stop Service** --- Stop the selected local *Bluetooth* service.
- **Status** --- View the status of the selected local *Bluetooth* service.
- **Properties** --- Configure the properties of the local *Bluetooth* services (e.g., automatic connections, shared file locations, etc.).

Tools Menu

- **Find Device** --- Click to find a device, by either of two search criteria. (Figure 1)
 - By *Bluetooth* Device Address:

Enter a *Bluetooth* device address, in standard format: (xx:xx:xx:xx:xx:xx), and click on the **Find** button. The device with the specified address will appear highlighted in the **Main Window**.
 - By Name:

Check the By Name checkbox, enter the Name of the device, and click on the Find button. The device with the specified name will appear highlighted in the Main Window.



- Figure 1 Find Device
- **Add New Device** --- Add a remote device by entering its *Bluetooth* device address. (Figure 2)

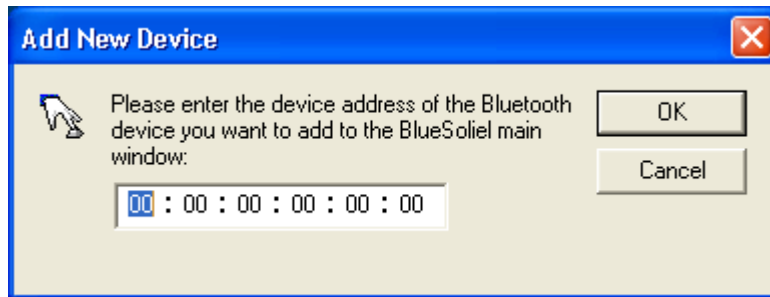


Figure 2 Add New *Bluetooth* Device

- **Add Device From History** --- Add a remote device from history list. (Figure 3)
 - (1) **Add:** Add the selected device to the **Main Window**.
 - (2) **Delete:** Delete the selected device from the history list.

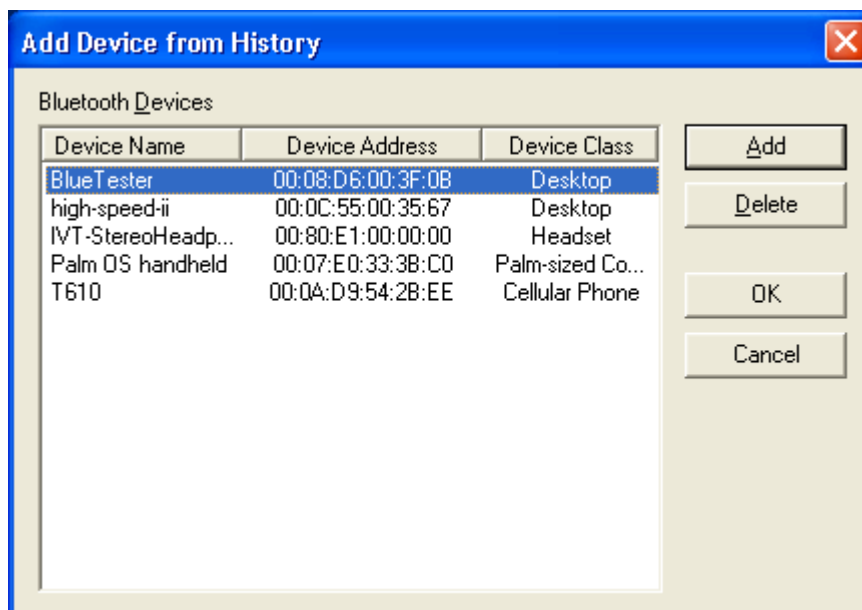


Figure 3 Add Device from History

- **Configurations-> Quick Connect** --- If desired, assign a remote device to automatically connect with whenever an application opens a specified *Bluetooth* serial port.
 - (1) **Assign:** Assign a device to the selected port.
 - (2) **Remove:** Remove the Auto-Connection device assignment for the selected port.

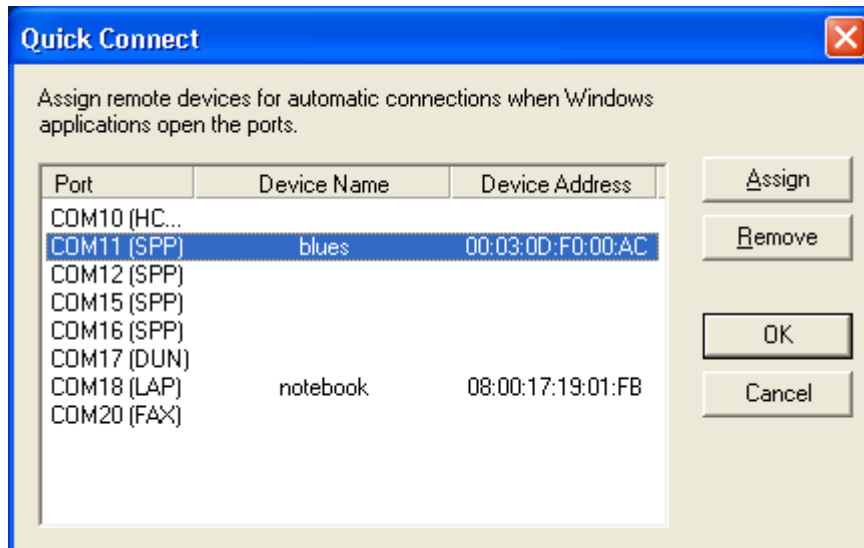


Figure 4 Quick Connect

- **Configurations->Unplug HID** --- Remove Human Interface Devices from BlueSoleil. (Figure 5)

Unplug: Unplug the selected HID device.

When you first connect the HID device to your computer, BlueSoleil sets up the devices so that they will automatically reconnect in case the connection is ever broken. After you unplug an HID device, it will no longer automatically reconnect to your computer.

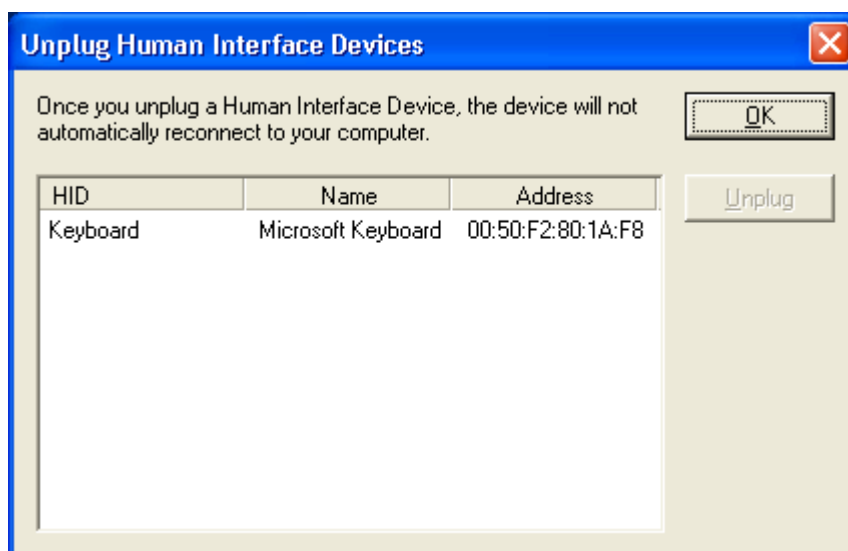


Figure 5 Unplug HID Device

- **My Bluetooth Device** --- Advanced hardware configuration, recommended for advanced users only. Please refer to [Hardware Configuration](#) for more details.
- **Options** --- Enable/Disable some other features like making BlueSoleil starts up with Windows, auto-checking online update or enable/disable prompts when doing some operations by checking/unchecking the related option.

- **Startup:**

(1) **Start BlueSoleil when I start Windows** --- BlueSoleil will start up with Windows if this option is enabled.

(2) **Check for updates automatically** --- A prompt will pop up to inform user checking update from BlueSoleil web site once BlueSoleil starting up.

Note: The checking update function is enabled by default.

- **Others:**

(1) **Prompt me before adding a "Quick Connect" item** --- Inquiry if adding a new [Quick Connect](#) item once establishing a new outgoing [SPP](#) connection.

(2) **Prompt me before stopping a service to connect out** --- Inquiry if stopping local service before connecting out. It only applies to [PAN](#) and [Synchronization](#) profiles.

(3) **Support VoIP Instant Messengers** --- Inquiry if supporting [VoIP](#) function.

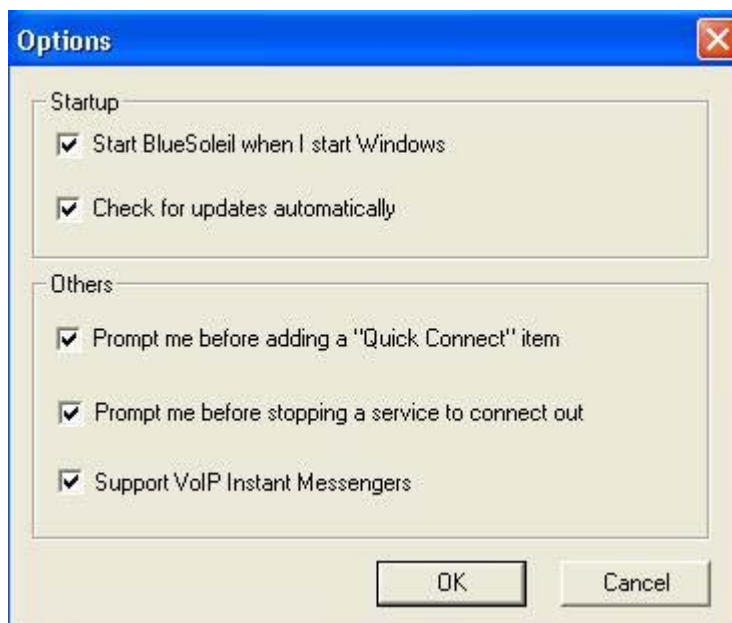


Figure 6: Options




Help Menu

- **Contents and Index** --- Access BlueSoleil Online Help.
- **Check for Update** --- Access BlueSoleil web site to check if any update available.
- **Online Support** --- Find a solution or report a problem online.
- **About BlueSoleil** --- Information about your version of BlueSoleil.

Bluetooth status Icon

There are three statuses of Bluetooth icon in the system tray.

Icon Meaning

-  --- BlueSoleil starts up, but Bluetooth is not active.
-  --- BlueSoleil starts up and Bluetooth is active.
-  --- There are existing Bluetooth connections.

Right-click Popped-up Menu

- **Display** --- Display the BlueSoleil main window on the desktop.
- **Show messages** --- Check whether to display the tip messages on the right corner.
- **Support VoIP** --- Check if BlueSoleil supports VoIP function.
- **Exit** --- Exit BlueSoleil program.

Find Remote Devices

To set up a *Bluetooth* connection, the remote device must be found first. There are 3 ways to find remote devices in BlueSoleil.

Inquire Device

1. Single-click the red ball in the main window to start inquiry.

2. *Bluetooth* devices within the radio range will be shown around the center ball.
3. Wait for a few seconds until the names of all the devices are obtained.

Add Device from History List

The devices which had been found or connected can be added from the history device list directly.

1. Select menu **Tools | Add Device from History...** The **History** dialog box pops up.
2. Select the device from the list and click button **Add**, the device will be added to the main window.

Add a New Device by Entering Device Address

If the device cannot be found by **Inquiring**, you can enter the device address to add the device.

1. Select menu **Tools | Add New Device...** The **Add New Device** dialog pops up.
2. Enter the *Bluetooth* device address and click button **OK**, the device will be added to the main window.

Note: *The device type will be unknown if add it by inputting its Bluetooth address.*

Connect and Disconnect

Connect

1. Select a remote device and double click it to browse its services.
Bluetooth passkey may be asked if security level of either side is set to high and they are not paired devices.
After service browsing, the services the remote device supports are highlighted by changing the color of the service buttons on the top of the main window.
2. Single click one of the service button to connect.
After connection is setup, the remote device and the service button will turn green.

Note: Users can right click the remote device icon or the service button to pop up operation menu for connection.

Disconnect

Method 1: Select the remote device, right click the service button. On the popup menu, select **Disconnect**.

Method 2: Right click the device icon. On the pop-up menu, select **Disconnect | (the connection you want to disconnect)**.

Method 3: For FTP and Synchronization connection, close the operation window, the connection will be disconnected.

Method 4: Disconnect from the remote device directly.

Method 5: If the local *Bluetooth* device is removed or the remote device is powered off, all the connections will be disconnected. If the remote device moves out of the radio range, all the connections with the remote device will be disconnected in 1 minute.

Connect via Shortcuts

After a connection is set up, users can generate a shortcut on Windows desktop. Users can connect later using the shortcut without device inquiry and service browsing steps.

Shortcuts apply to Personal Area Networking, Dial-Up network, Headset and AV.

Steps

1. Save shortcut

After connected, right click the device icon; select the **Save Connection as Shortcut** on the popup menu.

2. Execute the shortcut on desktop.

Remote Device Status

The remote device status can be viewed from the **Remote Device Status** dialog box.

Right click the remote device icon and select the **Status...** on the popup menu. The **Remote Device Status** dialog box will be displayed.

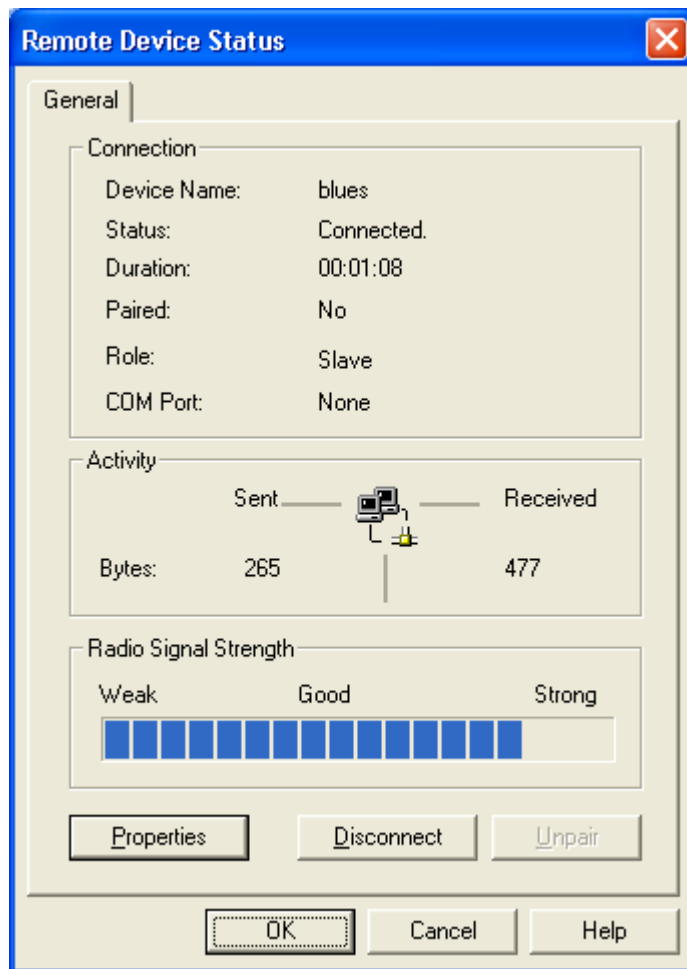


Figure 1 Remote Device Status

- **Connection:**
 - Device Name: The remote *Bluetooth* device's name.
 - Status: Whether the remote device is connected to the local device.
 - Duration: The time elapsed since the connection was set up.
 - Paired: Whether this device is paired with the local device.
 - Role: The *Bluetooth* Master/Slave role of the remote device for this connection.
 - COM Port: The virtual *Bluetooth* COM ports used for the connection(s), especially for DUN, FAX, SPP, and LAP.
- **Activity:**
 - The amount of the data sent and received.

- **Radio Signal Strength:**
This is the RSSI of the remote device. This index indicates the radio quality between the remote device and the local device. If the radio signal is too weak, the data transferring speed will be slow.
- **Properties Button:**
Display the remote device's properties.
- **Disconnect Button:**
Disconnect one of the connection(s) between the remote device and the local device.
- **Unpaired Button:**
Remove the paired relationship between the remote device and the local device.

Remote Device Properties

The remote device's properties can be viewed from the **Remote Device Properties** dialog box.

Right click the remote device icon and select the **Properties...** on the popup menu. The **Remote Device Properties** dialog will be displayed.

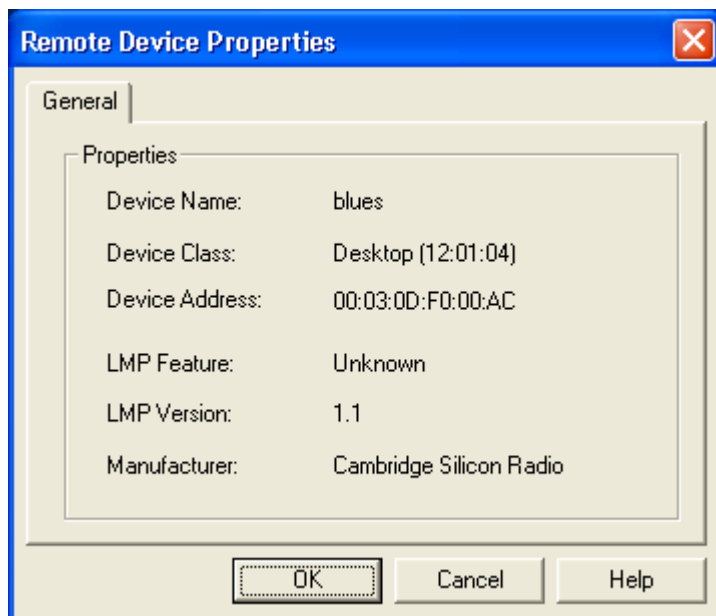


Figure 1 Remote Device Property Dialog

Device Name: The remote *Bluetooth* device's name.

Device Class: The remote device's device class. *Bluetooth* devices are classified by

device type, such as Desktop, Laptop, Headset, LAN Access Point, and other enabled devices.

Device Address: The remote device's *Bluetooth* device address.

LMP Feature: The features that the remote device supports.

LMP Version: The version of the LMP firmware of the remote device.

Manufacturer: The manufacturer of the remote device.

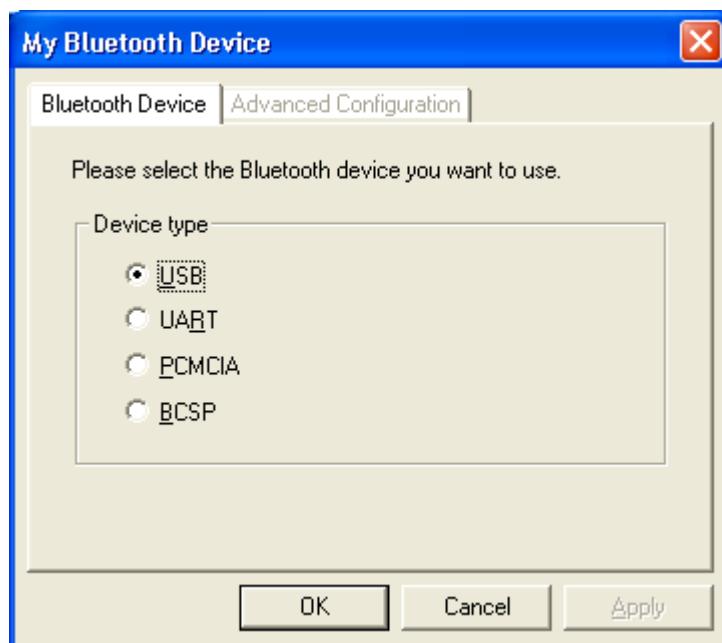
Hardware Configuration

BlueSoleil supports the following kinds of *Bluetooth* radio adapters: USB, CompactFlash card (UART or BCSP).

To access the hardware configuration screens, click **Tools | My Bluetooth Device...**,

- **Bluetooth Device**

Select the type of *Bluetooth* enabled device that you plan to use, either a USB adapter or a CompactFlash (CF) card. (Figure 1).



- Figure 1 Select *Bluetooth* Device

- **Advanced Configuration**

The **Advanced Configuration** page will be enabled only if you selected CF card in the *Bluetooth* Device screen. Use the *Advanced Configuration* screen to

configure detailed parameters including COM Port, Baud Rate, Byte Size, Parity, Stop Bits, and Flow Control.

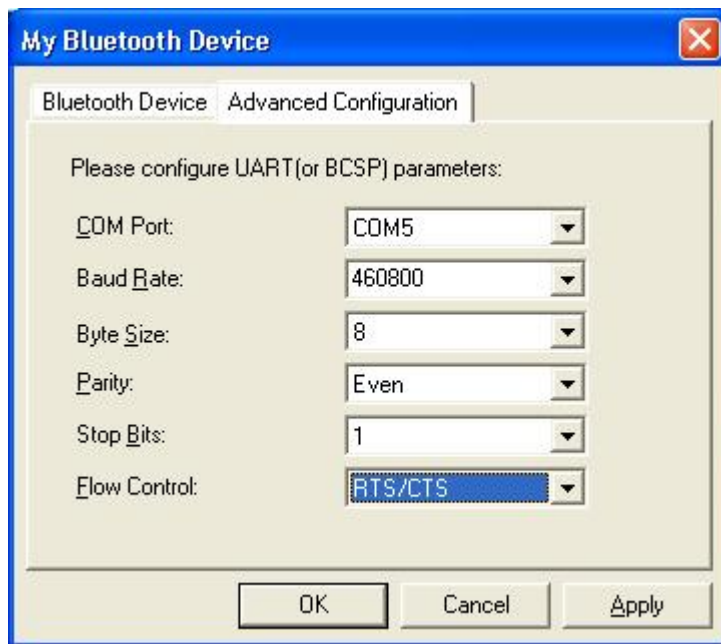


Figure 2 Advanced Configurations for UART Hardware Device

Properties Configuration

To configure the properties of your local device, click **My Bluetooth | Device Properties...**,

General

- Device Name

The local device's name, which will be shown to other *Bluetooth* enabled devices.

- Device Type

The device's type of your local computer (i.e., Desktop, Laptop or Server)

- Device Address

The address of the local device; Every *Bluetooth* enabled device has a unique address.



Figure 1 General Properties Page

Accessibility

Connecting Mode

- **Connectable:** Permits other *Bluetooth* enabled devices to connect with your computer.
- **Non-Connectable:** Prohibits other *Bluetooth* enabled devices from connecting with your computer.

Discovery Mode

- **General Discoverable:** Permits other *Bluetooth* enabled devices to detect your computer.
- **Limited Discoverable:** Permits other *Bluetooth* enabled devices to detect your computer with Limited Inquiry.
- **Non-Discoverable:** Prohibits other *Bluetooth* enabled devices from detecting your computer.

Bonding Mode (Pairing Mode)

- **Accepts Bonding:** Allow other *Bluetooth* enabled devices to pair with your computer. If the other device initiates a pairing procedure with your computer, each device must enter the same passkey before they will be paired.
- **Does Not Accept Bonding:** Rejects pairing attempts initiated by other *Bluetooth* enabled devices.

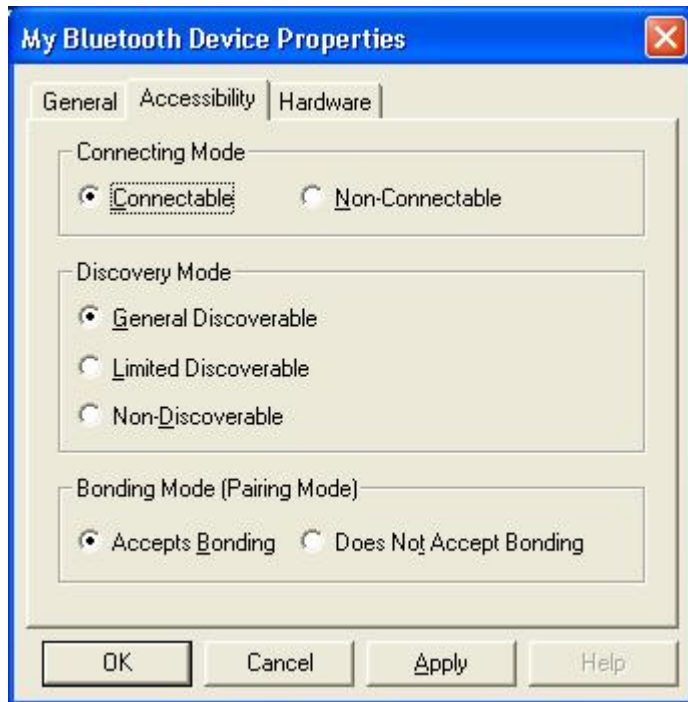


Figure 2 Accessibility Properties Page

Hardware

View information about your *Bluetooth* hardware.

- **Manufacturer:** The manufacturer of the local *Bluetooth* device.
- **HCI Version:** The HCI version of the local *Bluetooth* device.
- **HCI Revision:** The HCI revision of the local *Bluetooth* device.
- **LMP Version:** The LMP version of the local *Bluetooth* device.
- **LMP Subversion:** The LMP subversion of the local *Bluetooth* device.



Figure 3 Hardware Properties Page

Pair / Un-pair Devices

Once a remote device has paired with your computer by exchanging passkeys, passkeys will no longer be required for further connections between your computer and the device.

How to pair with another device

- **Automatically**
If a passkey is required for connection, the devices will be paired automatically the first time they successfully exchange passkeys and connect. After a device has successfully paired with your computer, the remote device icon in the Main Window will have a red checkmark next to it.
- **Manually**
In the Main Window, right click on the device icon, and in the pop-up menu, select **Pair Device**. In the **Enter Bluetooth Passkey** dialog, enter the same passkey that you enter on the remote device. After a device has successfully paired with your computer, the remote device icon will have a red checkmark next to it.

How to un-pair with another device

- **Manually**

In the Main Window, right-click on the device icon, and in the pop-up menu, selects Unpaired. The red checkmark next to the device icon will disappear.

General Security

To access the security configuration screen, click **My Bluetooth | Security...**

Security Level

- **Low**

If checked, other devices will be able to access your device freely without entering a passkey.

However, if the remote device requires a passkey to connect, then both devices need to exchange passkeys.

- **Medium**

The medium level is service level security; you can assign the appropriate level of access for each specific service.

- **High**

If checked, passkeys must be exchanged for every incoming and outgoing connection, unless the two devices have already paired in the past.

Bluetooth Passkey

- **Set Default Passkey**

Use this setting to set a default passkey for all connections. BlueSoleil will use this passkey whenever one is required.

Data Encryption

- **Enable Data Encryption**

If checked, the data transmitted will be encrypted.

Paired Devices Management

To access the device security configuration screen, click **My Bluetooth | Security** and click on the Devices tab.

Paired Devices List Box

This screen lists devices which have already paired with the local device.

Remove Pairing Button

Click to remove the pairing relationship between the selected device and the local device.

Authorize Services Button

Click to select which services you authorize the selected paired device to use. A list of local services will appear. Select the services you wish to allow the remote device to use, and then click OK.

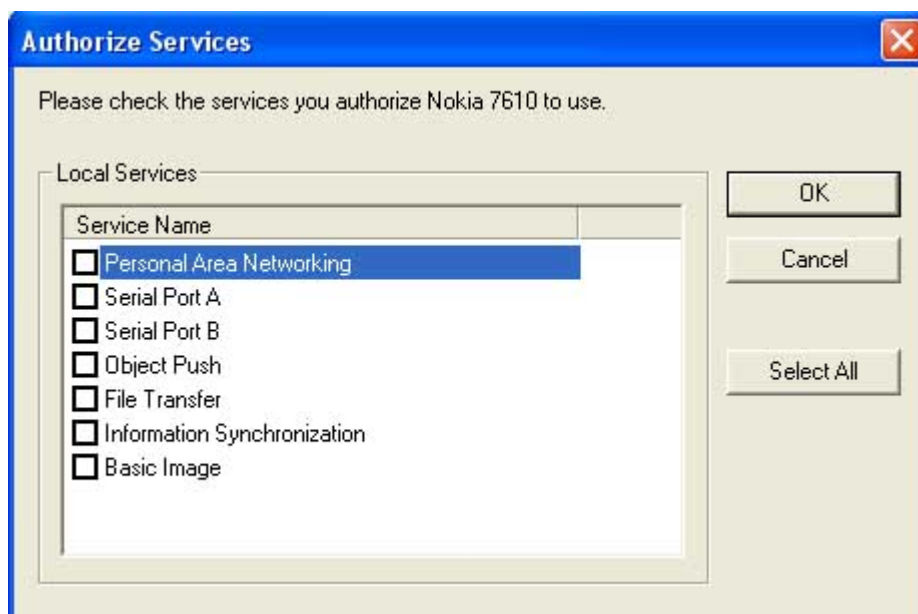


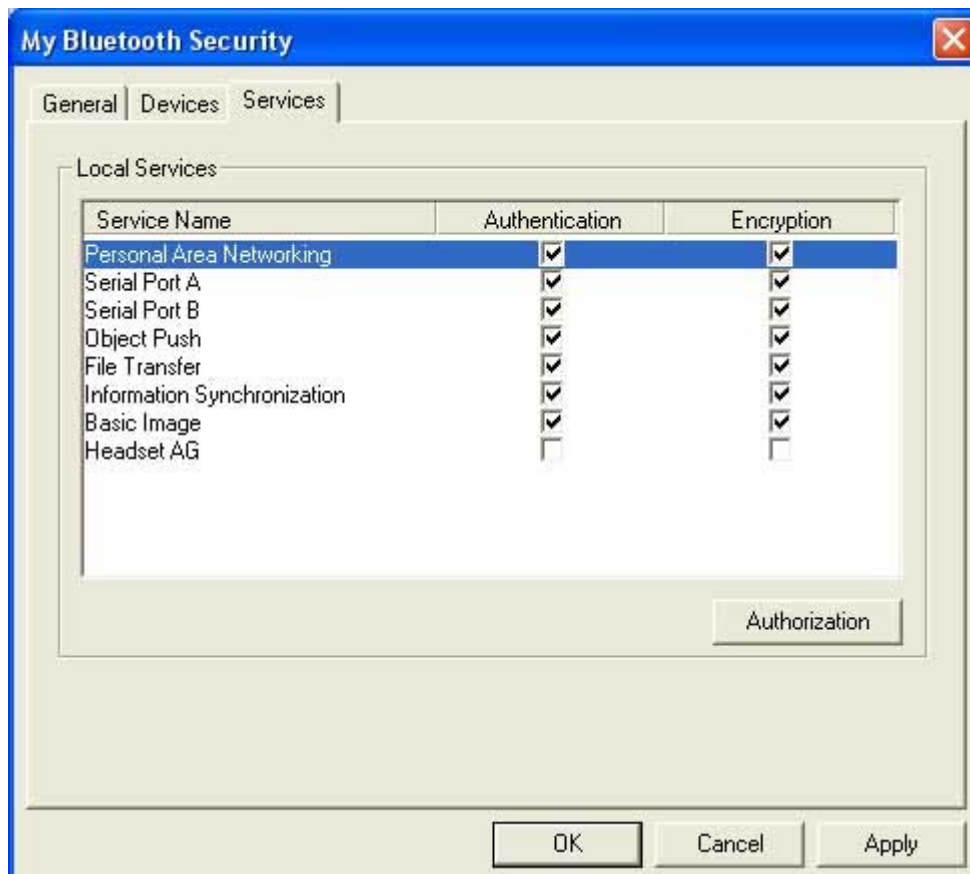
Figure 1 Authorize Services

Note:

- The screen will only list the local services that require authentication. The local services that do not require authentication can be accessed freely.
- The Authorization button is enabled only when the Security Level is set to Medium.

Local Services Security

To access the local services security configuration screen, click **My Bluetooth | Security** and click on the Services tab. You can only configure security for local services when the Security Level is set to Medium.



Local Services:

- **Authentication**

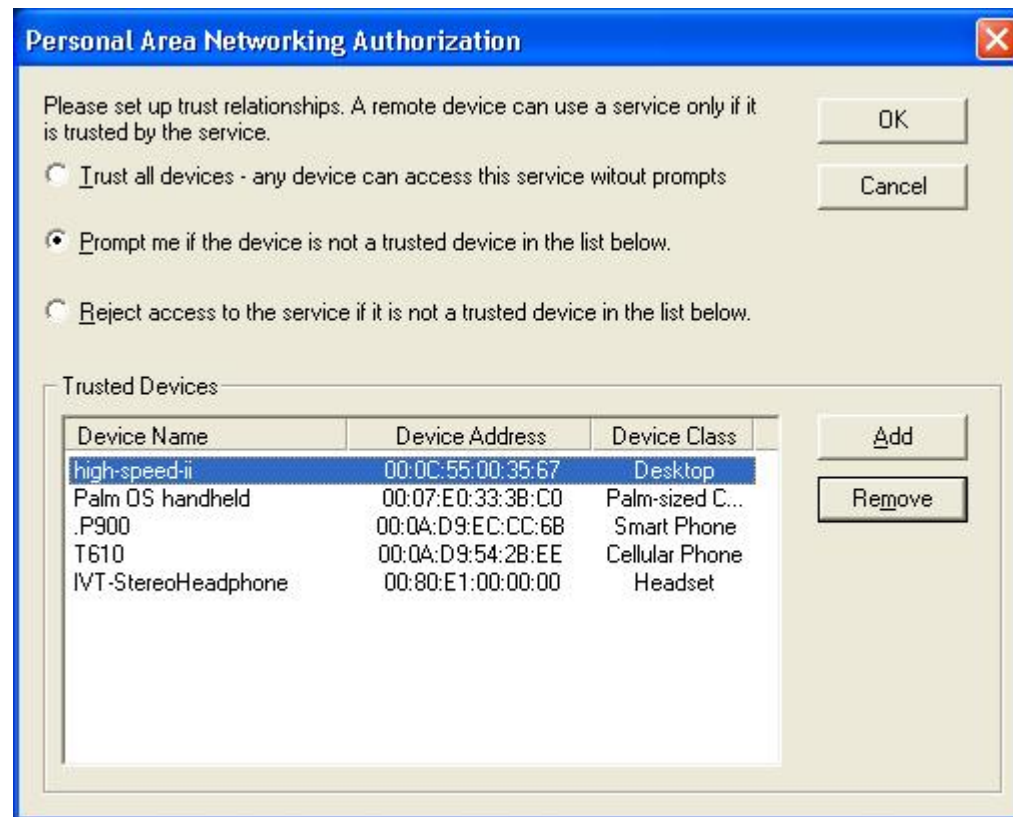
If checked, a passkey is required whenever a remote device attempts to connect with this service.

- **Encryption**

If checked, data transmitted between devices for this service will be encrypted.

Authorization Button:

Click to select the devices you wish to allow to use the selected service.



In the **Service Authorization** screen, enter the following settings:

- **Trusted Devices**

Select to trust devices listed in this screen to use the selected service on your device.

A device can freely access the service from your local device when trusted. Click **Add/Remove** to edit the device list.

- **Trust all devices**

Connection requests will be accepted from every device.

- **Prompt to user if the device is not a trusted device of this service**

If a non-trusted device attempts to access the service, a dialog will appear to allow you to accept or reject the connection.

- **Reject the device to use the service if it is not a trusted device of this service**

If a non-trusted device attempts to access the service, the connection will be rejected automatically without informing the user.

Notes: *If a device is trusted for a service, it may connect to this service on your local device without informing you.*

4. FAQ

What can Bluetooth do?

- Dial-up to Internet wirelessly via Bluetooth modem or Bluetooth mobile phone.
- Connect to LAN via LAN Access devices or PAN bridges.
- Share Internet connection to other Bluetooth computers.
- Connect computers wirelessly via PAN, LAP, SPP or FTP.
- Print documents wirelessly to Bluetooth printer.

How can I find my Bluetooth device information?

Right click my device -> Select **Properties....** In the **My Bluetooth Device** dialog box, there are device name, device address, device manufacturer, device HCI and LMP (Link Manager Protocol) versions and editions.

What is my Bluetooth device name, and how to change it?

My Bluetooth device name is the name of USB dongle inserted to my computer. It is your Bluetooth identifier and will be shown to other Bluetooth devices. You can change it in the **My Bluetooth Device** dialog box by modifying **Device Name** in the **General** Property sheet.

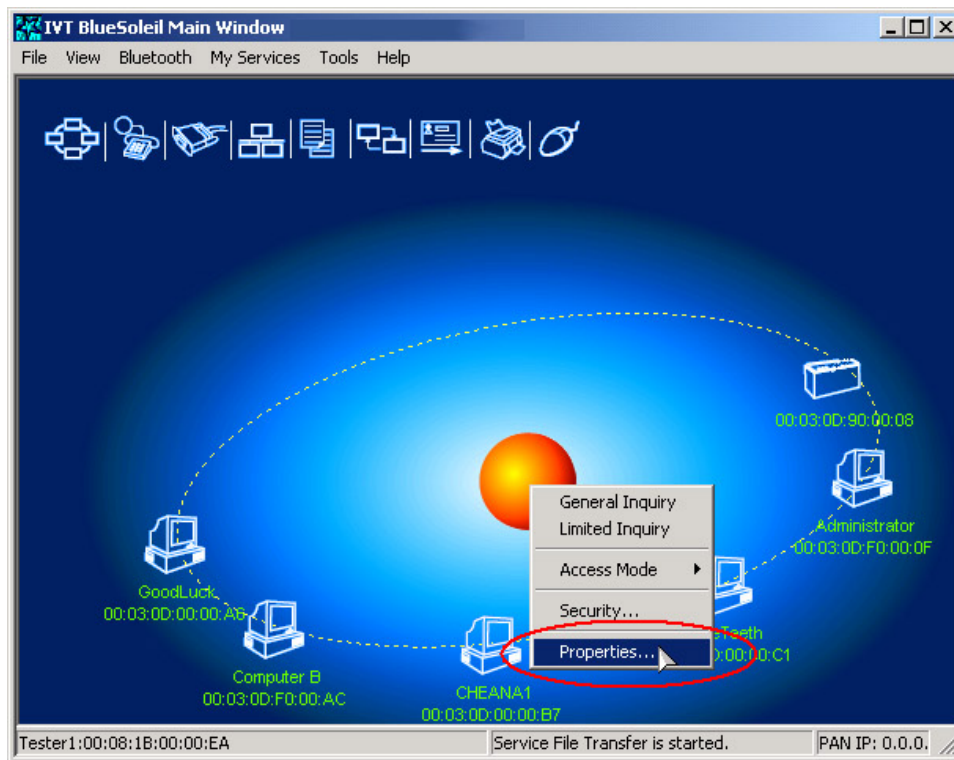


Figure 1 right click My Device and select Properties

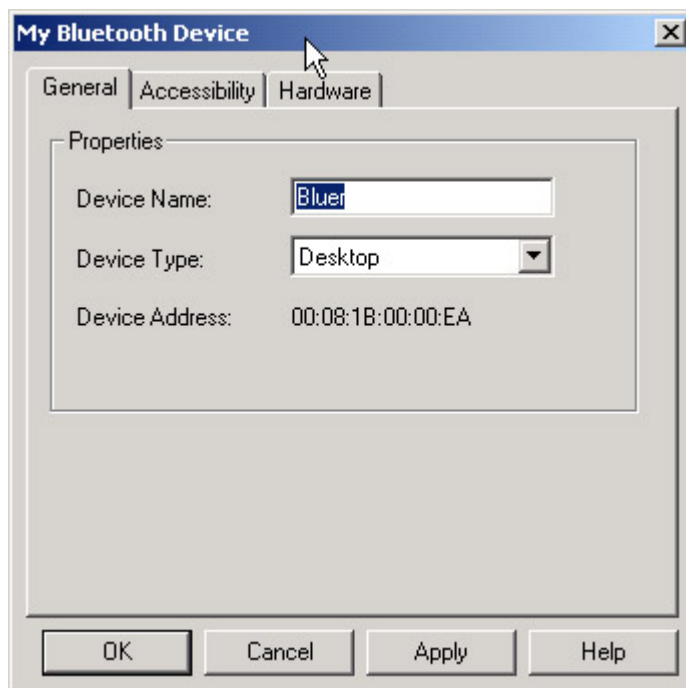


Figure 2 My Bluetooth Device dialog

Can't find the remote device services?

- Verify whether the remote device is within the radio range.

- Verify that whether the remote device is in connectable mode. If the remote device is set to non-connectable, other devices cannot connect to it, and service cannot be found.
- Check whether the remote device has connections already.
Currently, some Bluetooth devices do not support scatter net. That is, the device has limitations in supporting connection among multi-devices at the same time. It is recommended that users try to connect point to point if the connection cannot be set up.
- Verify whether both sides have input the right Bluetooth passkey if any side is at security level High.
The Bluetooth passkey must be the same at both sides. If both sides have set Fixed Passkey (the default passkey) and the passkeys are different, the connection cannot be set up with the authentication failure error.

How Bluetooth passkey works? If I change the fixed passkey, will it affect the paired devices?

Bluetooth passkey is used in authentication procedure for Bluetooth security purpose. When remote device connects to your computer, he has to offer the same Bluetooth passkey as what you input. If the Bluetooth passkeys from two sides are same, connection can be setup. A paired relationship is established on both sides. There is no need to input passkey for the next time of connection. Any side can delete the paired relationship. Changing fixed passkey will not affect the existed paired relationship.

How to protect my services from other's unauthorized usage?

- Set **Security Level to High**.
- Do not start the services you are not using.
- If you start PAN or LAP service, do not share your important folders in the windows explorer. When other Bluetooth computers connect to your computer via PAN or LAP, your shared windows folder will be able to be accessed to other computers.

5. Specification

General Radio	Bluetooth Class I: 70 ~ 100 meters (in open space) Carrier Frequency: 2.4 ~ 2.483GHz Data Rate: Up to 3Mbps (The maximum operating range depends on the environmental
Bluetooth Standard	Bluetooth v2.1 + EDR
Spread Spectrum	FHSS (Frequency Hopping Spread Spectrum)
Modulation Method	GFSK (1Mbps), π/4-DQPSK (2Mbps) 8DPSK (3Mbps)
I/O Interface	USB V2.0
Input Power	DC 5V, USB Power
Sensitivity	-82 dBm (typical), GFSK
RF Output Power	4 ~ -6 dBm (typical), GFSK
System Support	Windows 7/Vista/XP/2000 (The product is driven by the bundled IVT BlueSoleil Bluetooth software or Windows XP SP2 Bluetooth stack)
Dimensions	19.0 * 12.0 * 5.5 mm
LED Indicator	Single LED
Advantage Functions	Serial Port Profile Dial Up Networking Profile File Transfer Profile Human Interface Device Profile Hardcopy Cable Replacement Profile Headset Profile Object Push Profile Synchronization Profile LAN Access Profile (only available in Windows) FAX Profile (only available in Windows)
Bounded Bluetooth Software	IVT BlueSoleil (Language Supported: English, Simplified Chinese, Traditional Chinese, Japanese, Korean, French, Italian,

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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.