



**TRENDNET**



**User's Guide**

**TBW-104UB**

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# Introduction

The TBW-104UB is a class 1 Bluetooth v2.0 compliant USB adapter. This Bluetooth device utilizes Enhanced Data Rate (EDR) technology to support data rates up to 3Mbps. The TBW-104UB can communicate with other Bluetooth devices to form a "Piconet". The TBW-104UB provides a fully compliant Bluetooth system for data and audio applications.

The TBW-104UB features advanced wireless technology allowing it to coexist with 802.11b/g devices. The TBW-104UB utilizes EDR technology to communicate with other Bluetooth v2.0 standard compliant devices at high speed to provide various applications, such as Bluetooth ready DSC (digital camera), PDA data sync, mobile phone, Access Point, printer, keyboard, mouse, etc. The Bluetooth adapter can easily connect to your Bluetooth-enabled devices up to 100 meters away (depending on application environment and condition).

## Key Features

- Support full-speed Bluetooth operation with full Piconet support
- Bluetooth v2.0 compliant with EDR (Enhanced Data Rate)
- Backward compatible with Bluetooth v1.1 & v1.2
- Coexist with IEEE 802.11b/g devices
- Support AFH (Adaptive Frequency Hopping) and fast connection
- Up to 100 meters radio coverage distance (depending on application environment and condition)
- Up to 3 Mbps access data rate
- Low power consumption
- Bundled with the IVT BlueSoleil Software.

# Getting Started

## Package Contents

- TBW-104UB Advanced High Power Bluetooth USB Adapter
- Quick Installation Guide
- Utility & Driver CD-ROM
- USB 2.0 Cable



## Minimum System Requirements

- PC running Windows XP, 2000
- USB 1.1 or 2.0 Port
- Pentium 300 MHz processor or above
- 256 MB RAM or above
- 50MB free disk space on your hard drive
- CD-ROM drive

## Driver Installation

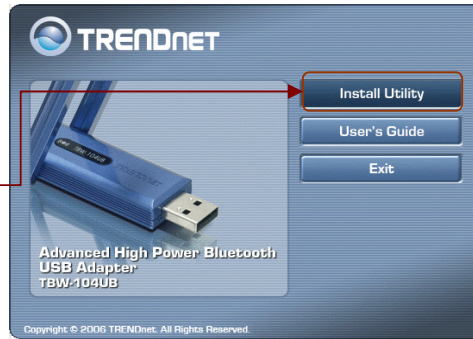
If you have any Bluetooth driver (software) previously installed on your computer or built-in Bluetooth adapter, please remove the driver and disable the Bluetooth adapter first!

1. Please insert the Utility & Driver CD into CD-ROM drive, and then follow the instructions below to install the Utility and Drivers.

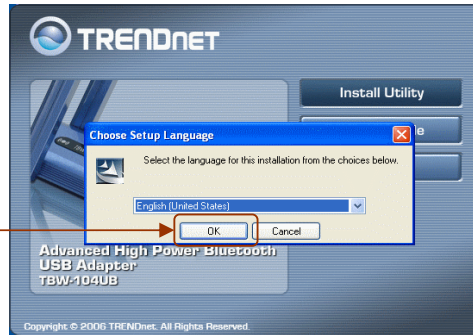
**Note: DO NOT connect the TBW-104UB USB adapter until instructed to do so.**

**Note: If the setup menu does not launch automatically, go to start -> run -> type in D:\setup, where "D" in "D:\setup" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard.**

1. Please click **Install Utility** to begin Bluetooth adapter installation.



2. Please select **Language** from the drop down menu and then click **OK**.



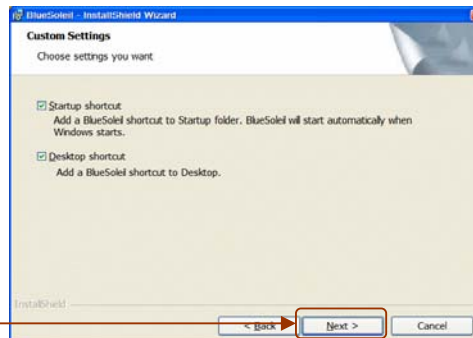
3. Please Click **Next**



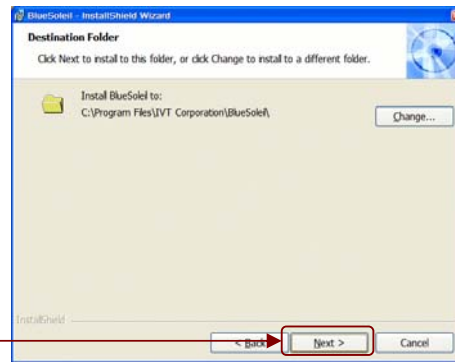
4. Please select **I accept the terms in the license agreement**. Click **Next**



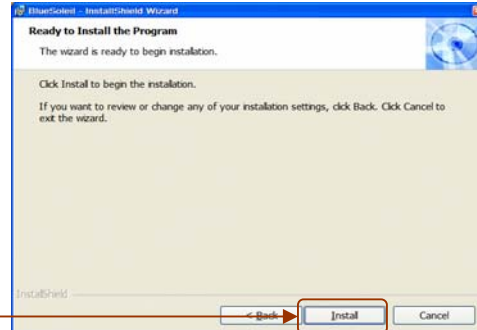
5. Please Click **Next**



6. Please Click **Next**



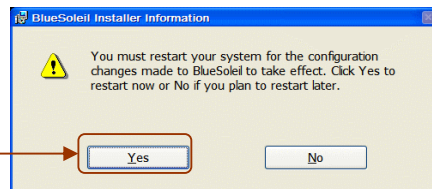
7. Click **Install**



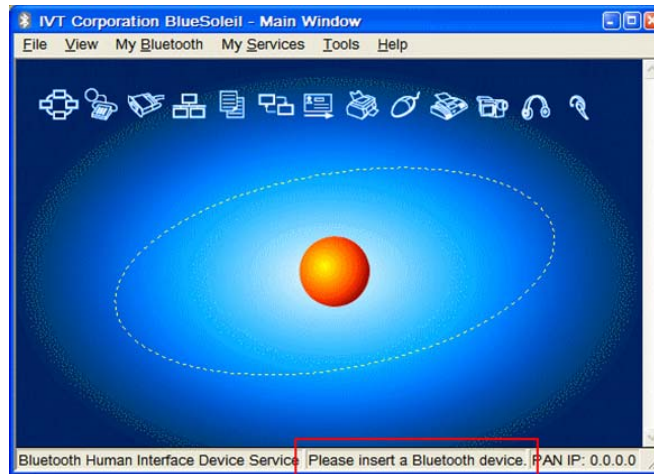
8. Disregard all popup Windows except for the installation Window shown to the right and click **Finish**



9. Please click **Yes** to restart your computer



2. After the computer restarts, the main BlueSoleil screen appears. A message appears in the BlueSoleil toolbar notifying the user to plug in the Bluetooth adapter.

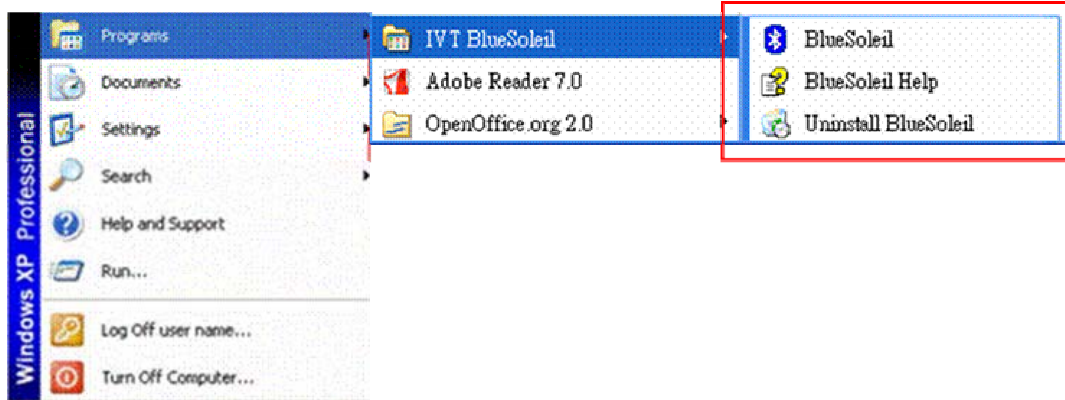


3. Please plug in the TBW-104UB. The drivers will install automatically.
4. After the completion of the driver installation, the Welcome to Bluetooth screen will appear. Assign your Windows system a device name and device type. In most cases, you should leave the security setting checked. Click OK.



# Applications Installed

After the completion of the driver and utility installation, the “**IVT BlueSoleil**” item will be added to Windows Start Menu Programs group.



- BlueSoleil: Main program
- BlueSoleil Help: BlueSoleil EDR Edition Online Help
- Uninstall BlueSoleil: Removes BlueSoleil driver



# BlueSoleil

BlueSoleil is a Windows-based software from IVT that allows your Bluetooth®-enabled desktop or notebook computer to connect wirelessly to other Bluetooth-enabled devices. BlueSoleil allows Windows users to wirelessly access a wide variety of Bluetooth-enabled digital devices, such as cameras, mobile phones, headsets, printers, and GPS receivers. You can also form networks and exchange data with other Bluetooth-enabled devices.

In order to connect and share services via Bluetooth wireless technology, two devices must support the same Bluetooth Profile(s) as well as opposite device roles (i.e., one must be the server, and the other must be the client). Bluetooth-enabled devices often support multiple profiles, and can perform different device roles simultaneously.

BlueSoleil supports the following Bluetooth profiles:

Bluetooth Functions (Profiles)	Client	Server
AV Headphone*	✓	✓
Basic Image Profile	✓	✓
Dial-Up Networking	✓	
Fax	✓	
File Transfer	✓	✓
Headset*	✓	✓
Human Interface Device	✓	
LAN access	✓	✓
Object Push	✓	✓
Personal Area Networking	✓	✓
Printer	✓	
Serial Port	✓	✓
Synchronization	✓	✓

# Main Windows

## Local Bluetooth Device

The **My Device** icon represents the local computer.

**Icon:**








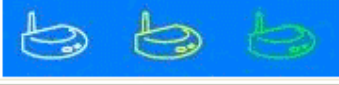









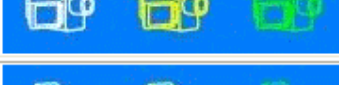



**Operations:**

- Move the mouse over a Bluetooth device to display its 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			

The following colors are used to indicate the status of the remote Bluetooth device:

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

#### Functions:

- 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

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		LAP	
FTP		SYNC	
OPP		HCRP	
HID		FAX	
BIP		AV	
Headset			

The following colors are used to indicate the status of the remote Bluetooth device:

- White- Idle. The normal state of the device.
- 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.

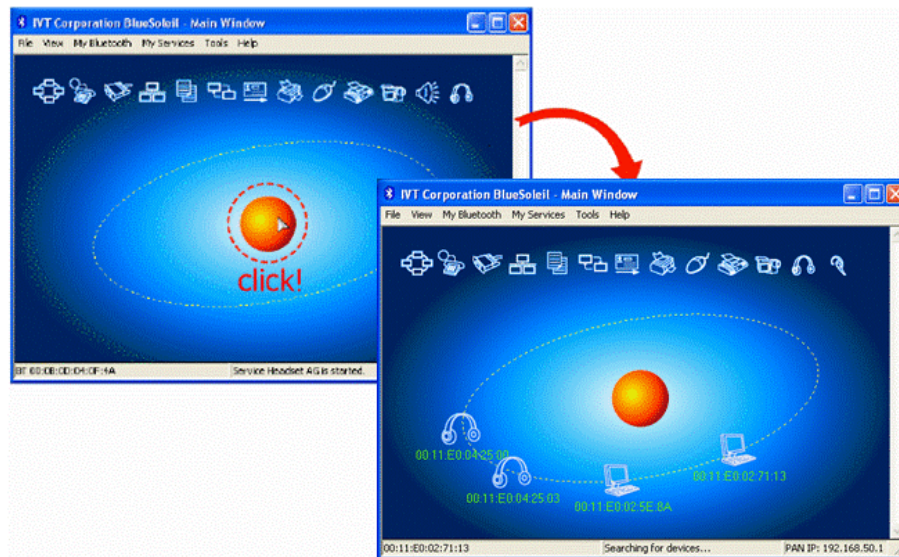
### Functions

- Move 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.

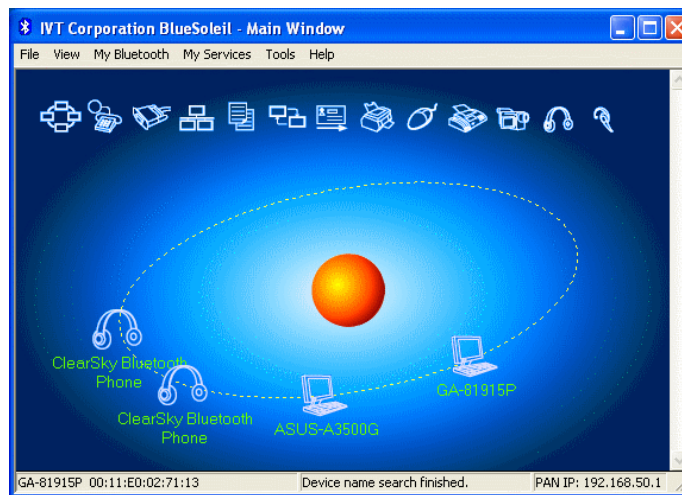
## Bluetooth Connection Management

To set up a Bluetooth connection, the remote device must be found first.

1. In the Main Window, click on the red ball to start the device search.



2. After a few seconds, an icon will appear around the center ball for each Bluetooth-enabled device detected.
3. Wait until BlueSoleil reports the name of each device.



4. If the device you want is not listed, make sure that the device is turned on and discoverable. Then try searching again.
5. Right click on your Bluetooth device and select Pair Device.
6. Type in a Passkey (for example: 0000. Please consult your Bluetooth device's manual for more information) and then click OK. Then put in the same Passkey on your Bluetooth device.
7. Double left-click on your Bluetooth device to show the available services. The available services will appear above in yellow.

8. Single click one of the services to make a connection.

## Security Configurations

### Pair / Unpair 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 the 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 will have a red check mark next to it.

##### Manually

In the Main Window, right click on the device icon and select Pair Device. In the Enter Bluetooth Passkey dialog box, 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 check mark next to it.

#### How to unpair with another device

##### Manually

Right-click on the Bluetooth device icon and select Unpair. The red check mark next to the device icon will disappear.

## General Security

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

### Security Level

- **Low:** Low level security allows other Bluetooth devices access to your device without entering a passkey. However, if the remote device requires a passkey to connect, then both devices need to exchange passkeys.

- **Medium:** Medium level security allows the user to assign the appropriate level of access for each specific service. For more details, see Local Services Security.
- **High:** High level security requires passkeys to 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.

# Appendix

## Specification

<b>Standard</b>	Class 1 Bluetooth v2.0 with EDR, backward compatible with Bluetooth v1.1 & v1.2
<b>Radio Frequency</b>	2.4~2.4835 GHz, ISM band
<b>Spread Spectrum</b>	Frequency Hopping and Adaptive Frequency Hopping
<b>Modulation</b>	GFSK, DQPSK (2Mbps) and 8DPSK (3Mbps)
<b>Data Rate</b>	Up to 3 Mbps
<b>RF Output Power</b>	Up to 17 dBm
<b>Receiving Sensitivity</b>	-90dBm at 0.1% BER
<b>Antenna</b>	One internal dipole antenna
<b>Profiles Support (vary with the software stack vendors).</b>	DUN (Dial-up Networking) FAX LAP (LAN Access Profile) SPP (Serial Port Profile) HID (Human Interface Device) HCRP (Hard Copy Cable Replacement Profile) FTP (File Transfer Profile) OPP (Object Push Profile) A2DP (Advanced Audio Distribution Profile) AVRCP (Audio/Video Remote Control Profile) GAVDP (Generic Audio/Video Distribution Profile) HSP (Headset Profile) PAN (Personal Area Networking) BIP (Basic Image Profile)



	<p>SYNC (Synchronization Profile)</p> <p>AV (Audio Video)</p>
<b>OS Support</b>	Windows 2000, XP
<b>Power Consumption</b>	<p>Typical: 95 mA</p> <p>Tx Max.: 136 mA @19 dBm</p> <p>Rx: Max: 45 mA</p> <p>Idle: 12 mA</p>
<b>Dimension</b>	71.25 (L) X 35.60 (W) X 11.25 (H) mm
<b>Environmental Condition</b>	<p>Operating Temperature: 0 ~50° C , Humidity:10 ~ 90%</p> <p>Storage Temperature: -20 ~70° C, Humidity:10 ~ 90%</p>
<b>Certifications</b>	FCC, CE

# Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

Bluetooth	Two years
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If a product does not operate as warranted above during the applicable warranty period, TRENDnet shall, at its option and expense, repair the defective product or deliver to customer an equivalent product to replace the defective item. All products that are replaced will become the property of TRENDnet. Replacement products may be new or reconditioned.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product through any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting TRENDnet office within the applicable warranty period for a Return Material Authorization (RMA) number, accompanied by a copy of the dated proof of the purchase. Products returned to TRENDnet must be pre-authorized by TRENDnet with RMA number marked on the outside of the package, and sent prepaid, insured and packaged appropriately for safe shipment.

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LIMITATION OF LIABILITY: TO THE FULL EXTENT ALLOWED BY LAW TRENDNET ALSO EXCLUDES FOR ITSELF AND ITS SUPPLIERS ANY LIABILITY, WHETHER BASED IN CONTRACT OR TORT (INCLUDING NEGLIGENCE), FOR INCIDENTAL,

CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF THE POSSIBILITY OF SUCH DAMAGES, AND LIMITS ITS LIABILITY TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT TRENDNET'S OPTION. THIS DISCLAIMER OF LIABILITY FOR DAMAGES WILL NOT BE AFFECTED IF ANY REMEDY PROVIDED HEREIN SHALL FAIL OF ITS ESSENTIAL PURPOSE.

Governing Law: This Limited Warranty shall be governed by the laws of the state of California.

Note: AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1-Year Warranty



# TRENDnet

## TRENDnet Technical Support

### US • Canada

**Toll Free Telephone:** 1(866) 845-3673

24/7 Tech Support



### Europe (Germany • France • Italy • Spain • Switzerland • UK)

**Toll Free Telephone:** +00800 60 76 76 67

English/Espanol - 24/7

Francais/Deutsch - 11am-8pm, Monday - Friday MET

### Worldwide

**Telephone:** +(31) (0) 20 504 05 35

English/Espanol - 24/7

Francais/Deutsch - 11am-8pm, Monday - Friday MET

## Product Warranty Registration

Please take a moment to register your product online.

Go to TRENDnet's website at <http://www.trendnet.com>

## TRENDnet

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USA