

Using the Microsoft Bluetooth Stack

Microsoft's Service Pack 2 for Windows XP includes its own Bluetooth stack. The stack has limited support for Bluetooth applications compared to other Windows-based implementations, but covers most of the applications that the average user will require, including:

- Printing
- Transferring Data between PDAs and Mobile Phones
- Connections to Serial devices (cable replacement)

On the positive side, the stack is more tightly integrated than other stacks, and most users will find it more than adequate for their needs.

Microsoft has taken the sensible approach of setting the default security levels of Bluetooth to a high level. This means that some applications may not work in the same way that they do with other Bluetooth software. This document explains how to perform everyday Bluetooth tasks with the Microsoft stack.

Installing the Microsoft Bluetooth Stack

The Bluetooth software is automatically installed when you upgrade to Service Pack 2 of Windows XP. It is activated as soon as you plug in a Microsoft compliant USB Bluetooth adapter.

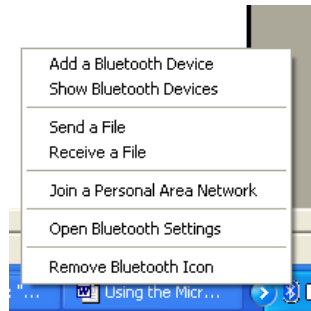
*Note: Microsoft's Bluetooth stack **does not** work with PCMCIA cards*

Note: You should always use the same USB port for your adaptor. Windows XP installs a new set of drivers for each port, which means that the settings it presents to other applications, such as COM ports are unique (and different) for each USB port.

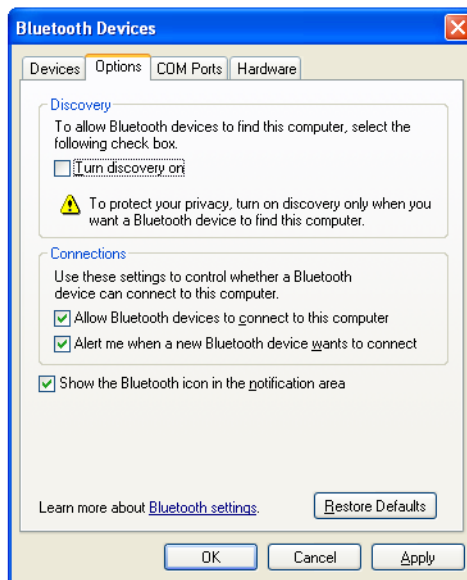
When you plug in your Bluetooth adaptor for the first time Windows will detect it and install the Bluetooth stack. At this point it will ask you to give your PC a name. This is the name that other devices will see if you make your PC visible to them. Use a name that is memorable. You should also give a sensible name to all of your other Bluetooth devices. (Phones and PDAs should be given names.

It is not normally possible to give a name to a headset, carkit or GPS device.)

Once the USB adaptor is installed you will see a Bluetooth icon on the task bar at the bottom right of the screen. If you click on it (both right and left click work the same way), you will get a list of options.



If you do not have a Bluetooth icon, open up **Control Panel** and **Bluetooth Devices**. Go to the **Options** Tab and check the final box on the page – “**Show the Bluetooth icon in the notification area**”.

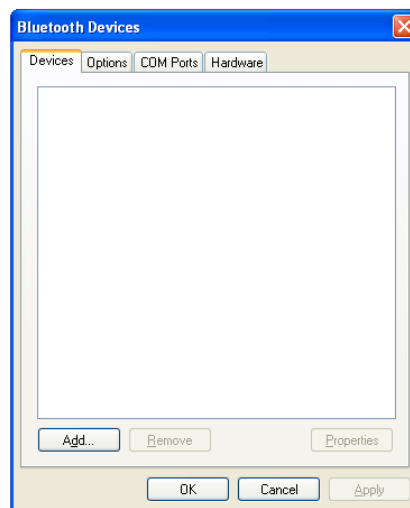


Pairing your Bluetooth devices

Pairing is a feature of Bluetooth that allows devices to make secure connections. Although you do not always need to pair devices to exchange data, if you are likely to send information between them on a regular basis it is a good idea to do so.

If you want to use Bluetooth applications such as Nokia's Data Suite or other phone management software then you **MUST** pair them with your PC.

To pair a device using the Microsoft stack you need to click on the Bluetooth Icon in the task bar and then select **Add a Device**.



Click **Add**. Read the instructions, and once you've done these, check the box **My device is set up and ready to be found** and press **Next**.



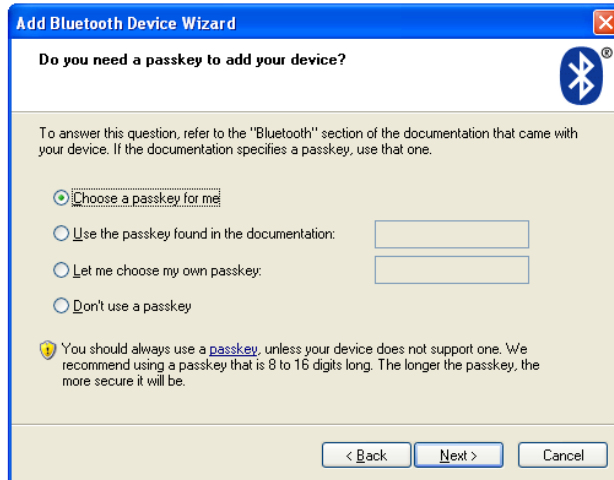
Your PC will then start looking for Bluetooth devices that are discoverable and within range. This may take up to a minute. You will then be given a list of the devices that have been found. If your phone or PDA does not appear on the list then it is probably because it has been set up as hidden or non-discoverable. Dig out the manual (that thing you didn't get around to reading) and find out how to make it visible. Then try again by pressing **Search Again**.

Once your device has appeared on the list, highlight it and press **Next**.

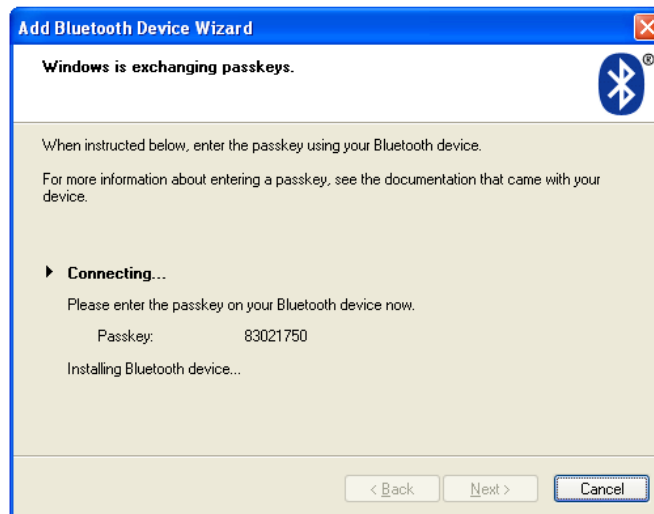


To ensure a secure connection between the devices, you will need to enter a passkey on both the other Bluetooth device and your PC. This is used to generate a secure code that will be used to authenticate the device and your PC every time they connect to each other. For phones and PDAs you can make this passkey up yourself. You don't need to remember it – it is only ever needed the first time you pair the devices.

To make things easier (and more secure) Windows can generate a random number for you to use as the passcode. Choose that option (**Choose a passkey for me**) and press **Next**.



Windows will display the number for you to enter in your Bluetooth device:



Enter this into your phone or PDA and then press OK. If the pairing is successful you will see the final screen on your PC, confirming that the devices have been paired.

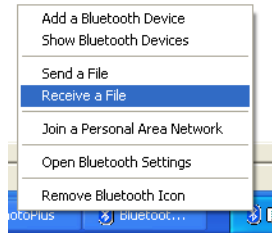


At this stage Windows XP assigns two COM ports to your Bluetooth device – one for incoming and one for outgoing connections. You will need to use these if you run communications programs that connect your PC to your Bluetooth devices. Typical applications include PC Suite for Nokia and Sony Ericsson handsets and Easy Studio for Samsung handsets.

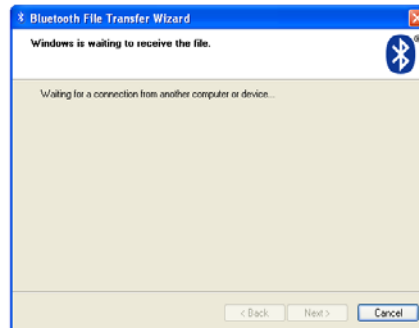
Sending Data from your phone.

The Microsoft stack protects your PC by making it invisible to other devices. However it still allows you to send information and files from a Phone or PDA, but you need to initiate the transfer from your PC.

To do this, click on the Bluetooth icon in the system tray and select **Receive File**.



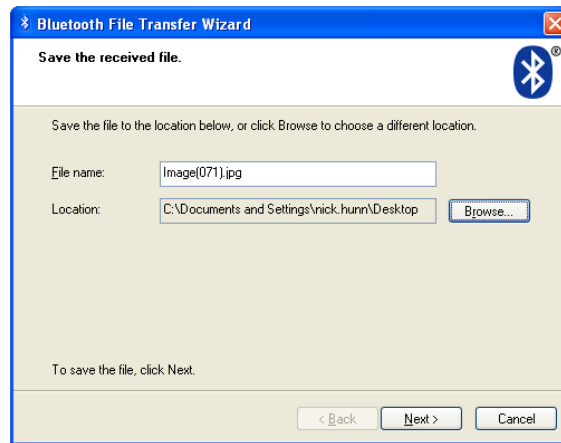
Windows XP now makes your PC discoverable for a limited time, and also enables the file receive software. Once this is complete it shows the ready to receive screen.



Now select the picture or file you want to send from your phone, and select the option to send it via Bluetooth. You should see a list of devices on your phone. If your PC is not there, press **Search again** or **More devices** on your phone until it appears, at which point press **Send**.

Note: Windows XP only allows access for a limited time. If your phone cannot find your PC it may be because you've taken too long. Check that the PC is still displaying the "Waiting for a connection" screen.

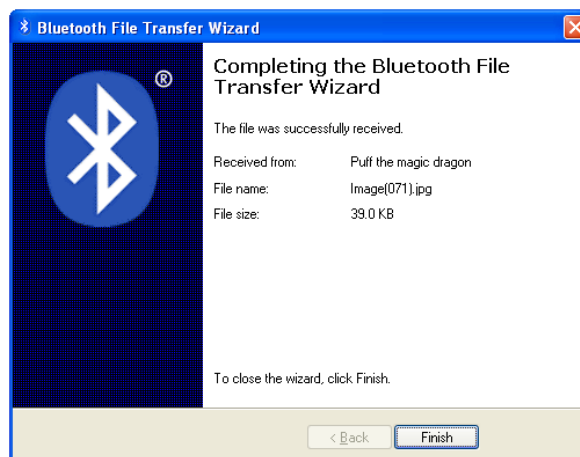
Once you initiate the transfer from your phone or PDA, your PC will detect the file and ask where you want it to be stored:



Use **Browse** to change the location if you desire. Then press **Next** and the file will be accepted on your PC.

Note: Your virus checker may not scan files received via Bluetooth. It is a good idea to reserve a directory for incoming files and perform a virus check on this directory before opening them.

Once the file transfer has completed, Windows will display information about the received file.

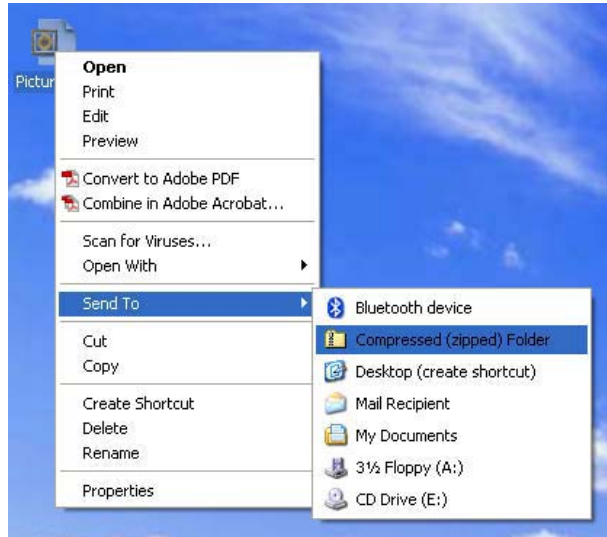


Note: This is the only way of receiving files using the Windows XP Bluetooth stack. If you make the PC permanently discoverable you will still need to initiate File Receive from the Bluetooth Icon.

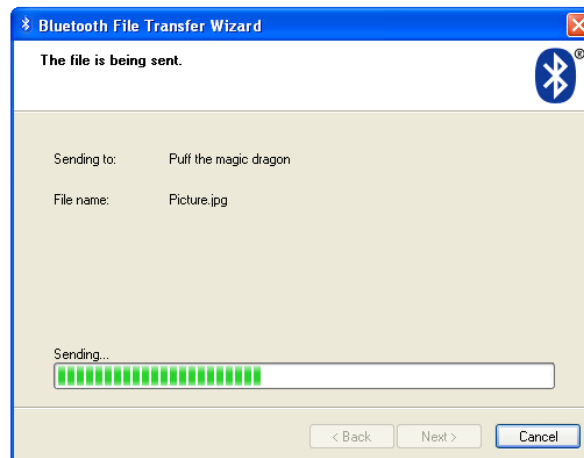
Sending files from your PC

It's very easy to send files to another Bluetooth device with the Microsoft stack. Just right click on the file you want to send, then select **Send To >** and **Bluetooth Device**. You can select a file from your desktop or a file list in Windows Explorer.

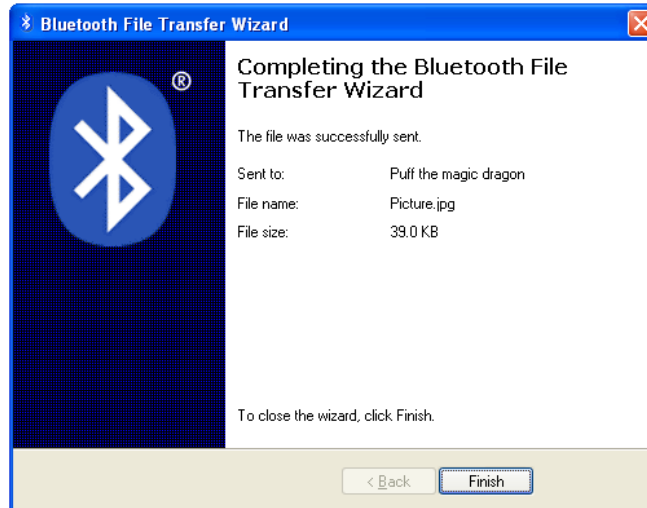
Note: You cannot currently send from the File, Send menus in Word, Exchange or other Office programs.



Windows will display a list of the devices that have been set up already (paired). Select the device you want to send the file to, or **Browse** to find other devices. (Other devices must be discoverable or set to **Show to all**). Then press Next.



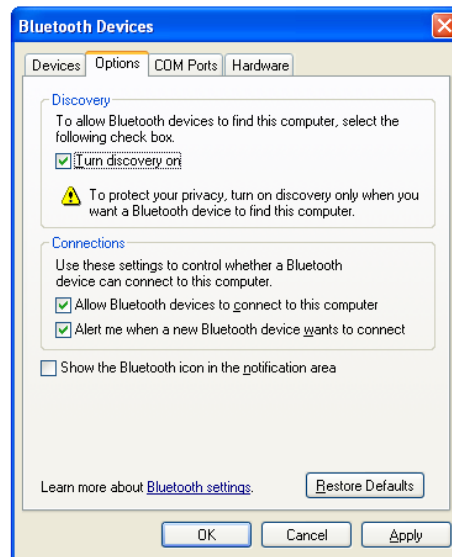
If you had requested a passkey should be used, you will be prompted to enter this on your Bluetooth device. Once the transfer is complete, Windows will finish the Transfer Wizard and display details of the transfer.



You can also send a file by clicking on the Bluetooth icon in the tray and selecting **Send a File**. This will bring up the browse screen, where you can select the file you wish to send.

Making your PC discoverable

The Microsoft stack defaults to keeping your PC invisible. This is the safest way of operating Bluetooth on a PC. However, some applications may require the PC to be in discoverable mode. To change this, go to **Control panel** and click on **Bluetooth devices**, then choose the **Options** tab.



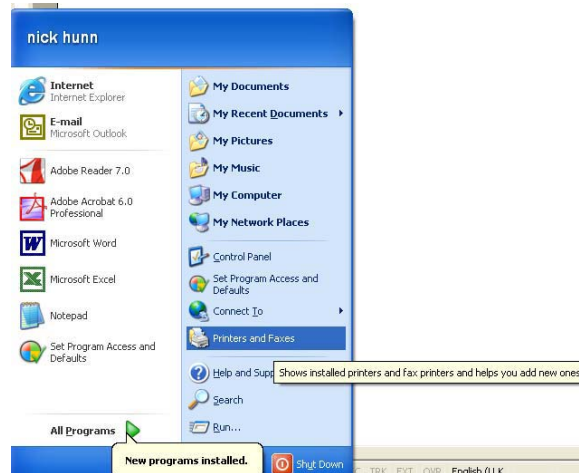
Select the **Turn discovery on** box and click **OK**.

Note: Setting your PC to discoverable will not allow you to automatically accept incoming file transfers. To do this you will need to run Receive File from the Bluetooth Icon.

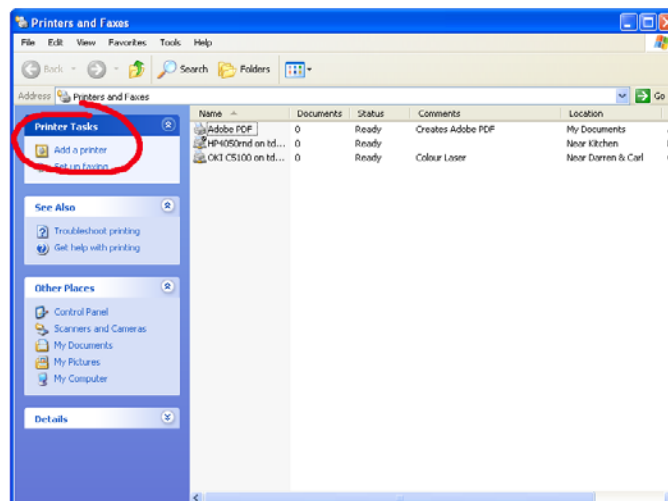
Printing to a Bluetooth Printer

Windows XP makes Bluetooth printing MUCH easier. However, you need to think ahead and set up the Bluetooth printer from the Printers menu. For some reason you're not allowed to find a Bluetooth printer from the normal Print screen within applications. Here's how to do it:

Press **Start** and select the **Printers and Faxes** option:



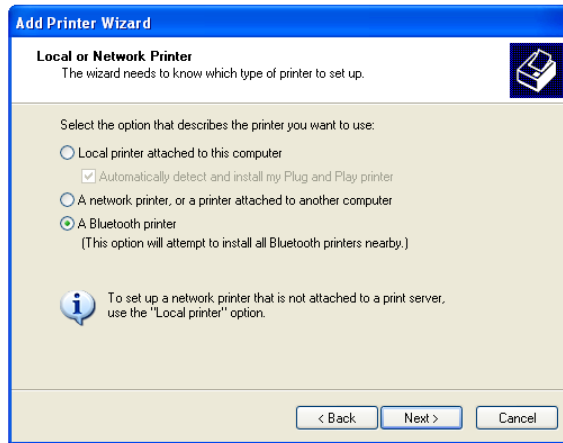
When the Printers and Faxes screen is displayed, click on **Add a printer**.



The Windows XP Add Printer wizard is started.

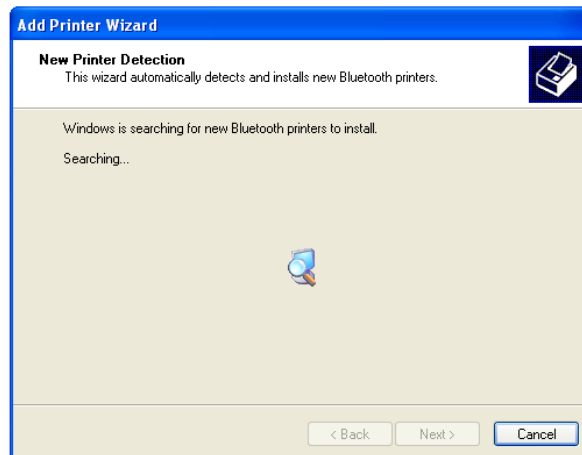


Click **Next** to go to the selection screen.



Check the **A Bluetooth Printer** Option and click **Next**.

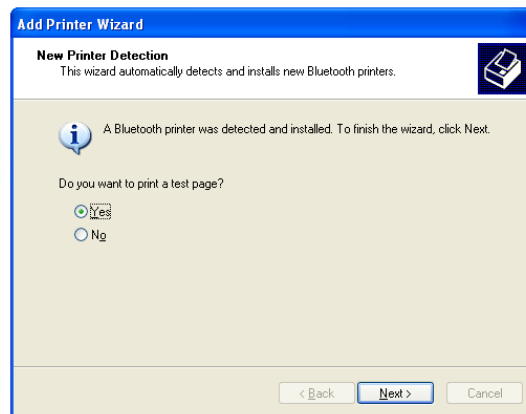
The PC will search for any available Bluetooth printers. Make sure that they are turned on.



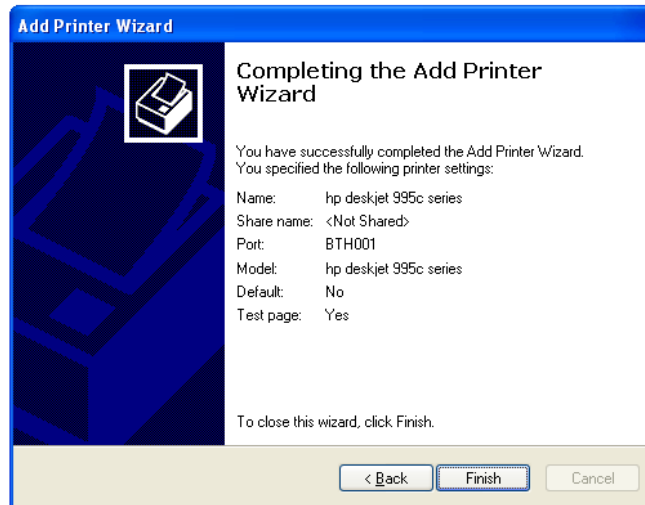
During the search process, Windows will try and install drivers for each Bluetooth printer it detects. This can make it quite a lengthy and tedious process. If the driver is not already installed on your PC, then you will need to supply an installation disk or download the driver from the internet before completing the add printer wizard.

IMPORTANT: Bluetooth Printers that were manufactured before 2004 may not be compatible with the Microsoft Bluetooth stack. For Windows XP to use a Bluetooth printer it must be capable of supporting the HCRP (Hard Copy Cable Replacement) profile. Check your printer's specification. Some Bluetooth printers can be upgraded – please contact the manufacturer.

At the end of the wizard, you will be asked if you want to print a test page. Say **YES**. It's a lot easier to check whether it works at this stage rather than later on.

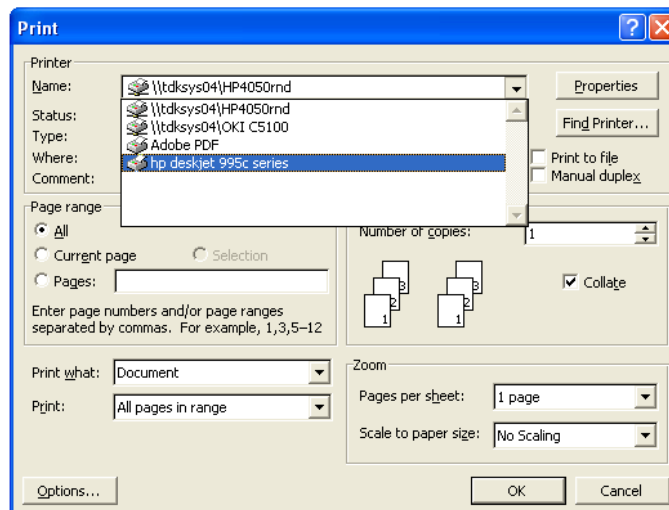


For some reason the page may not be printed until you've clicked **Finish** on the Completing the Add Printer Wizard Page. So click **Finish**.



Note: If more than one Bluetooth printer of the same type is discovered, it may not be obvious which is which. If in doubt try a test print to each one in turn.

Next time you print, the Bluetooth printer will be listed in the Printer selection. Choose the Bluetooth printer you require.



Note: Windows does not identify printers as being Bluetooth, and does not remove them from the print list when they are out of range. This means that you need to remember the model number of Bluetooth printers. You may also find that you are printing to a device that is not within range.

WARNING. Because there is a wireless link to the printer, you may inadvertently connect to a printer in another room. If in doubt try printing a test page.

+++

BlueRadios has provided these notes to assist Bluetooth users who want to use the integrated Microsoft stack in Windows XP.

BlueRadios does not supply or provide support for Microsoft's Bluetooth stack. Any additional support questions should be directed to Microsoft.

BLUETOOTH is a trademark owned by Bluetooth SIG, Inc., U.S.A.