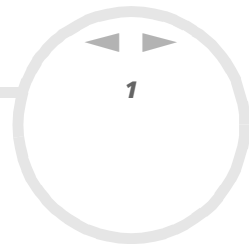# *Wireless LAN PC Card*

PCWA-C100 - Microsoft® Windows® XP Home Edition/Professional

SONY®

Notice

Owner's record

The model and serial numbers are located on the backside. Record the serial number in the space provided below. Refer to the below numbers whenever you call your Sony dealer regarding this product.

Model No. PCWA-C100
Serial No._____

Regulatory information

This product complies with the European Directive 1999/5/EC (R&TTE Directive).

This product complies with EN55022 Class B and EN55024 for use in the following areas: residential, commercial and light-industrial.

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables not longer than 3 metres (9.8 feet).

$C\epsilon 0122 \textcircled{!}$

In some countries the use of the Wireless LAN Access Point is restricted. Before using it, make sure you have read the Wireless LAN regulation flyer.

About the supplied software

The supplied software is supplied pursuant to the applicable end user license agreement.

❑ Copyright laws prohibit reproducing the software or the software manual in whole or in part, or renting the software without the permission of the copyright holder.

❑ In no event will SONY be liable for any financial damage or loss of profits, including claims made by third parties, arising out of the use of the software supplied with this product.

❑ In the event a problem occurs with this software as a result of defective manufacturing, SONY will replace it or issue a refund; however, SONY bears no other responsibility.

❑ The software provided with this product cannot be used with equipment other than the equipment designated to be used with the software.

❑ Please note that, due to continued efforts to improve quality, the software specifications may be changed without notice.

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Wireless LAN PC Card

Safety information

Warning

❑ Opening the unit, for whatever reason, could lead to damages that are not covered by the guarantee.

❑ To prevent fire or shock hazard, do not expose your Sony Wireless LAN PC Card to rain or moisture.

✍ The illustrations in this manual may differ from the actual software.

Explanations in this manual assume that you are familiar with basic operations of Windows. For instructions on how to use your computer and operating system, please refer to their respective manuals.
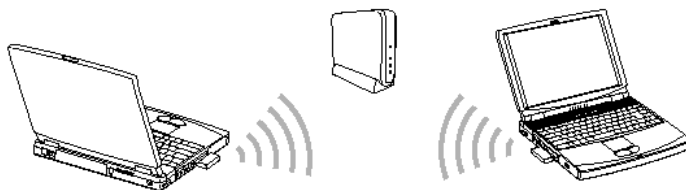
Overview

What you can do with your Wireless LAN PC Card

You can build a Wireless LAN (Local Area Network) using the PCWA-C100 Wireless LAN PC Card. The Wireless LAN PC Card can be used with or without the PCWA-A200 Wireless LAN Access Point, hereinafter referred to as the Access Point. With the Access Point, you can build a wireless LAN between multiple computers equipped with the Wireless LAN PC Card and access to the Internet. You can achieve direct communication (Peer to Peer mode) between computers without using the Access Point.

★ Although you can connect up to 49 client computers to a wireless LAN, the maximum recommended amount is 16 or less.

Communication through the Access Point

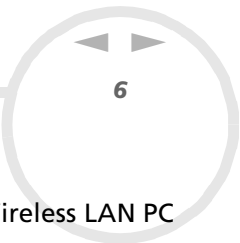## Direct communication between computers (Peer to Peer mode)

About the supplied software

The Wireless LAN PC Card is delivered with the following software:

❑ Wireless Palette: You can set up a computer containing the Wireless LAN PC Card for communications with the Access Point, display the communication status, and switch between Access Points when multiple Access Points are present.

❑ Basic Access Point Setup Utility (Basic Setup Utility): You can set up the Access Point for Internet access. This dialog-driven utility covers basic setup procedures for Internet access.

❑ Custom Access Point Setup Utility (Custom Setup Utility): You can make advanced configurations of the Access Point. You can specify optional features for Internet access with this utility.

❑ Access Point Firmware Upgrade Utility: This is the software for upgrading Access Point firmware.
If you are using an old version, some functions will be unavailable. For example, the DSL Modem (PPPoE) mode cannot be selected, and roaming cannot be used. In this case, it is recommended that you upgrade both your Access Point firmware and Wireless LAN Utility.
From the **Start** menu, select **All Programs**, **Wireless LAN**, then **Access Point Firmware Upgrade Utility** or **Access Point Firmware Upgrade Utility** online Help.

Wireless LAN PC Card

Task flow

To build a wireless LAN environment, you must configure both the Access Point and the Wireless LAN PC Card.
The required tasks depend on the state of your Access Point and Wireless LAN PC Card. The table below lists their states and tasks required for building a wireless LAN environment.

If you are already using a Sony Wireless LAN product, make sure you check the product's version.

		New Wireless LAN PC Card	*Wireless LAN PC Card in use*
Access Point	New	1. Connect the Access Point. See **Connections** in the Access Point Operating Instructions manual. 2. Insert the Wireless LAN PC Card into a computer, set up the Windows-based environment and install software. See Inserting the Wireless LAN PC Card (page 11) and following sections in this manual. 3. Establish communication with the Access Point. 4. Install the software. 5. Configure the Access Point using the Basic Setup Utility.	1. Connect the Access Point. See **Connections** in the Access Point Operating Instructions manual. 2. Establish communication with the Access Point. 3. Configure the Access Point using the BasicSetup Utility. See Setting up the Access Point (page 19) and following sections in this manual.
	In use	1. Insert the Wireless LAN PC Card into a computer, set up the Windows-based environment and install the software. See Inserting the Wireless LAN PC Card (page 11) and following sections in this manual. 3. Establish communication with the Access Point. 4. Install the software.	To communicate with an Access Point previously used in another wireless LAN environment from a computer containing the Wireless LAN PC Card: 1. Establish communication with the Access Point.

System requirements

❑ A computer answering to the following minimum system requirements:

  ❑ CPU: Intel® Pentium® 233Mhz with MMX® technology or later

  ❑ RAM: 64 MB or more with Microsoft® Windows® 98 Second Edition, Microsoft® Windows® Millennium Edition or Microsoft® Windows® 2000 Professional: 64 MB or more

  ❑ RAM: 128 MB or more with Microsoft® Windows® XP Home Edition or Professional.

❑ CD-ROM drive

❑ Default built-in PCMCIA Type II slot

❑ Operating system: For best results, use a computer with one of the preinstalled operating systems below.

  ❑ Microsoft® Windows® 98 Second Edition

  ❑ Microsoft® Windows® Millennium Edition

  ❑ Microsoft® Windows® 2000 Professional

  ❑ Microsoft® Windows® XP Professional

  ❑ Microsoft® Windows® XP Home Edition

❑ (Does not operate under Microsoft® Windows® 3.1, 95, 98 or NT. Also, operation is not guaranteed under all upgraded environments.)

❑ Display: SVGA (800 x 600 pixels) and above, [supports High Color (16 bit) and above]

✍ We do not assure trouble-free operation for all computers answering to these system requirements.

The Wireless LAN Access Point PCWA-A200 is required to gain access to the internet using this Wireless LAN technology.

An Internet Service Provider (ISP) is required for Internet access.

About this manual

This manual explains the operation of the Wireless LAN PC Card and the installation and setup of the supplied software. For details on using the Wireless Palette and the Custom Access Point Setup Utility software supplied with the Wireless LAN PC Card, please refer to the software's Help files.

When using the Access Point, connect and configure the Access Point as explained in the Operating Instructions included with the Wireless LAN Access Point.

About the online help

The Wireless LAN PC Card has three Help files:

❑ Wireless Palette Help

❑ Custom Access Point Setup Utility Help

❑ Upgrade Manual
The Upgrade Manual explains procedures for upgrading the Access Point's firmware, the Wireless LAN PC Card Driver, and the Basic/Custom Access Point Setup Utility.

✍ When using the Access Point, connect and configure the Access Point as explained in the Operating Instructions included with the Wireless LAN Access Point.

Selecting a topic from the contents

To select a topic from the contents, proceed as follows:

From the **Contents** list, select the topic you want to consult.

Searching for information by using a keyword
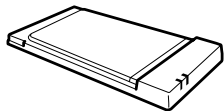
To search for a topic using a keyword, proceed as follows:

1 To search using a keyword, select the **Index** tab from the **Help** dialog box.
The **Keyword list** appears.

2 Enter the keyword you want to apply, or scroll down the **Keyword list**.

3 Select a topic, and then click **Display**.
Topics related to the keyword appear.
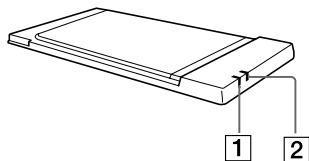
Getting started

Unpacking your wireless LAN PC Card

Your Wireless LAN PC Card is delivered with the following items:

❑ Wireless LAN PC Card

❑ PC card case
❑ CD-ROM (Setup disc - including an Operating Instructions manual)

Locating the indicators

1	DATA indicator	Lights up when data is exchanged
2	LINK indicator	Lights up while your computer is connected to the Wireless LAN.

Description of the indicators

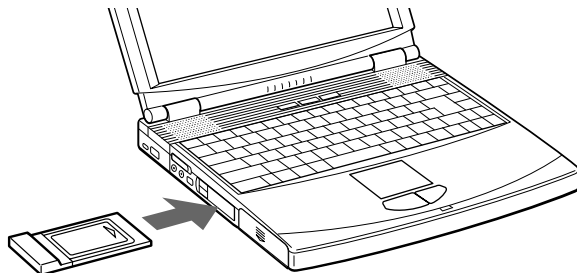| Data	Link	Description
Flashing (green)	Lit (green)	Normal communications.
Fast Flashing (green)	Lit (green)	Peer to Peer mode.
Off	Lit (green)	The PC Card is powered, but no communication is taking place.
Flashing at 10 sec intervals		The PC Card is operating, but no connection is established.
Off		The PC Card is powered off.

Inserting the Wireless LAN PC Card

This section explains how to insert and remove the Wireless LAN PC Card from your computer. You do not need to turn off your computer when inserting the Wireless LAN PC Card.

To insert your Wireless LAN PC Card, proceed as follows:

1   Remove the PC Card slot protector from the computer. (Some computers contain the PC Card slot protector to prevent damage to the slot while not in use.)
2   Insert the Wireless LAN PC Card into the PC Card slot.
    Push the Wireless LAN PC Card into the slot until it is firmly seated. Inserting the card will extend the eject button.
    If the card does not fit easily, do not force it in. Take the card out and try reinserting it.

✍ If your computer has two PC card slots, insert the Wireless LAN PC Card into the top slot. Inserting it into the bottom slot blocks the top slot with its antenna.

Before using the Wireless LAN PC Card, turn off System Suspend mode or System Hibernation mode using the PowerPanel software. While the computer is in System Suspend mode or System Hibernation mode, the Wireless LAN PC Card may not be recognized when it is removed and reinserted.

Removing the Wireless LAN PC Card

To remove the Wireless LAN PC Card, proceed as follows:

1   Close the software that uses the Wireless LAN.
2   Stop **PC Card Services** using the taskbar.
3   Remove the Wireless LAN PC Card, following the instructions in your computer's manual.

Setting up the connection environment

This section explains how to set up the software for building a wireless LAN environment with the Access Point.

To set up the connection environment, proceed as follows:

1 Establish a communication with the Access Point.
Register the Access Point on each computer in the wireless LAN and establish wireless communication with the Access Point. Perform settings 1-4 on each computer in the wireless LAN.

2 Set the computer and workgroup name for each computer used in the wireless LAN.

3 Install the required software.

4 Use the Wireless Palette to establish communication with the Access Point.

5 Define the Access Point settings by using the Basic Setup Utility. Do this for each computer in the Wireless LAN.
Now you can set up the wireless LAN environment.

Establishing communication with the Access Point

On every computer you want to connect to the wireless LAN, establish the communication with the Access Point.
Before attempting to establish a wireless LAN environment:

❏ Check the six-digit Access Point ID on the bottom surface of the Access Point.

ID:123456 SN:00UT12345678
PN:012756

❏ Install and connect the Access Point. (Refer to **Access Point Operating Instructions manual**.)

❏ Insert the Wireless LAN PC Card into the computer.

To establish the communication with the Access Point, proceed as follows:

1 From the **Start** menu, select **Connections**, then click **Wireless Network Connection**.
The **Connect to wireless network** dialog box appears.

2 Enter the Encryption key in the **Network key** text box and click **Connect**.
You are connected to the Access Point.

Setting the computer name and workgroup

Computer names are displayed on the status indication window of the Wireless Palette.

To set the computer and workgroup name, proceed as follows:

1 From the **Start** menu, select **Control Panel**.
The **Control Panel** window appears.

2 Double-click the **System** icon.
The **System Properties** dialog box appears.

3 Click the **Computer Name** tab, then click **Modify**.
The **Identification Changes** dialog box appears.

4 Specify the Computer name and Workgroup for your computer.
Assign a unique name of up to 15 alphanumeric characters to every computer connected to the same LAN. Duplication of names will result in various problems, such as Wireless Capsule sending files to both computers.
The Workgroup indicates the name of a group of computers sharing files. Assign the same workgroup name for all computers that share files.

5 Click **OK**.
The **Reboot this computer for the changes to take effect** message is displayed.

6 Click **OK**.
The **System Properties** dialog box appears.

7 Click **OK**, then click **Yes** to restart the computer.

Installing software

Before installing the applications:

❑ Install and connect the Access Point

❑ Insert the Wireless LAN PC Card

❑ Quit all Windows® programs

Once you set up your Windows®-based environment, install the Wireless Palette, the Basic Setup Utility, and the Custom Setup Utility software.

To install these applications, proceed as follows:

1 From the **Start** menu, click **Run**.
The **Run** dialog box appears.

2 Enter the name of the installer.

❑ If the computer has an internal CD-ROM drive, enter **E:\SETUP.EXE**. (**E** indicates the name of the internal CD-ROM. Your CD-ROM drive may be identified with a different letter.)

❑ If you have copied the Wireless LAN folder from the supplied CD-ROM to your computer's hard disk, enter the file name and its location. (example: **C:\Temp\WirelessLAN\SETUP.EXE**)

3 Click **OK**.
The **Wireless LAN Utility Setup** dialog box appears.

4 Click **Next**.
The **License Agreement** dialog box appears.

5 Read the agreement and click **Yes** to accept.
The **Choose Destination Location** dialog box appears.

6 Select the folder where you want to install the software and click **Next.**
The **Setup Type** dialog box appears.

7 Select **Standard** then click **Next**.
The software installation begins.
After a short while, **the InstallShield Wizard Complete** dialog box appears. Make sure to select **Yes, I want to restart my computer now**.

8 Click **Finish**.
Installation is complete and your computer restarts.If you want to install the software into another folder, click **Browse** and select the folder or enter the folder name directly.

Modifying the installed software

You can install/uninstall a specific software application.

To install a specific application, proceed as follows:

1 Display the **Wireless LAN Utility Setup** dialog box.

2 Select **Modify** then click **Next**.
The **Select Components** dialog box appears.

3 Select the software applications you want to install, then click **Next**.
The software installation begins and the **Maintenance Complete** dialog box appears after installation is complete.

4 Click **Finish**.

★ To uninstall a specific software application, deselect the application you want to uninstall.

Starting software

To start the software, proceed as follows:

Select **Programs**, **Wireless LAN** from the **Start** menu and then select the software you want to launch.

Uninstalling software

Before proceeding, close the Wireless LAN Utility and the help files.

To uninstall software, proceed as follows:

1   From the **Start** menu, click **Control Panel**.
The **Control Panel** window appears.

2   Double-click the **Add/Remove Programs** icon.
The **Add/Remove Programs** dialog box appears.

3   Select **Wireless LAN Utility** from the list of currently installed programs, then click **Change/Remove**.
The **Wireless LAN Utility Setup** dialog box appears.

4   Select **Remove**, and then click **Next**.
The **Confirm File Deletion** dialog box appears.

5   Click **OK**.
When the **Locked file detected** dialog box appears, click **Reboot**. The computer restarts once uninstallation is completed and all previously used files are deleted.
If the **Shared file detected** dialog box appears, it is recommended that you click **No** to keep shared files.

6   Click **Close**.

Wireless LAN PC Card

Verifying communication with the Access Point

To verify communication with the Access Point, proceed as follows:

1 Double-click the **Reception level indicator** icon on the taskbar.
The **Wireless Pallete status** window appears.

2 Verify the Network name for the Access Point.
The Nickname identifies the Access Point with which the computer has a connection. Verify that the Nickname you entered, is displayed.
The Network name for the connected Access Point appears.
The **Reception level indicator** (/ /) indicates the condition of the communications with the Access Point. indicates the optimum communication. When or is displayed, no communications are taking place between the Access Point and the computer. Check the Access Point configuration. For more information, consult the online help.

3 Verify the Computer Name.
The computer name is the name that you specified.

✍ The reception level indicator icon may also appear as or . If or appears, no communications are taking place with the Access Point. Check the Access Point's configuration. For further information, refer to the Wireless Palette Help file.

Setting up the Access Point

You can change the Access Point settings by using the Basic Setup Utility. Changes to the settings may also be made by using the Custom Setup Utility. This operation must be performed on a single computer on the wireless LAN.

❑ To launch the Custom Setup Utility, click the **Start** button and select **All Programs**, **Wireless LAN**, then **Custom Access Point Setup Utility**.

❑ When using the roaming function, you cannot change settings using the **Basic Access Point Setup Utility**. Please use the **Custom Access Point Setup Utility**. For information on the usage of the **Custom Access Point Setup Utility**, see its Help.

To set up the Access Point, proceed as follows:

1 From the **Start** menu, select **Programs**, **Wireless LAN**, and then **Basic Access Point Setup Utility**. The **Basic Setup Utility** starts.

2 Make sure that the displayed Access Point ID is the one belonging to the Access Point that you want to configure, then enter the **Setup Password** and click **Scan**. By default, **public** appears as the **Setup Password**.
The Access Point ID is a six-digit number on the label attached on the bottom surface of the Access Point. If the displayed Access Point ID is different from the one on the label, enter the correct ID.

ID:123456 SN:00UT12345678
          PN:012756

3 If an error message appears, click **OK** and make sure that:

❑ The **Access Point** is powered.

❑ The **correct Access Point ID** is displayed.

❑ The password is correct.

❑ The Access Point and the computer are located within a rage of up to 100 m (330 feet).

4 Repeat step 2.

5 In **Common Parameters**, select the Channel Number and enter the Encryption Key.
Select the channel that the Access Point uses for wireless communications. You can use Channel 1, 4, 7, or 10.
Enter any 5 characters of the ASCII character set (letters, numbers, and symbols) for the Encryption Key. Using the Wireless Palette, enter the same Encryption Key on every computer in the wireless LAN, as specified for the Access Point.

❑ If there are two or more Access Points close together, assign a unique channel number to avoid radio interference.

❑ The factory-default Encryption Key of the access point is the last five digits of the Access Point ID.

❑ In order to prevent unauthorized external access, it is strongly recommended that you change the Encryption Key. However, be sure to write down the new Encryption Key so that you will not forget it.

6 Select the access method to the Internet, and then click **Next**.
Select a destination to connect the Access Point. Available options are Cable Modem, LAN, DSL (PPPoE) Modem and Local Only. The dialog box that appears next, depends on your selection.
If you have accidentally selected a wrong access method, click **Back** and select the correct one.
In order to make a PPPoE connection via the DSL modem, select the **DSL Modem (PPPoE)** mode. If you are using the DSL modem but your Internet service provider does not support PPPoE, select the **Cable Modem** mode. If your DSL modem is a router type modem, select the **LAN** mode. Consult your Internet service provider about PPPoE support and DSL modems.

✍ If you are using the Access Point and are connecting within an existing LAN that already has a DHCP server, do not use the Local Only connection mode. Select Cable Modem or LAN connection modes instead.
When the Wireless LAN Access Point is using Local Only connection mode, the Access Point acts as a DHCP server.
An Access Point that is connected to a LAN that has another DHCP server may experience the following problem while using the Local Only connection mode:
A client computer within the LAN may acquire an invalid IP address from the Access Point, not from the regular DHCP server. If this happens, the client computer may not be able to access the network because the IP address supplied by the Access Point is a private IP address (10.0.1.2 - 17, by default). Contact your network administrator before connecting a Wireless LAN Access Point to an existing LAN.

Cable modem, LAN and local only:

When the Confirmation dialog box appears, proceed as follows:

1 Confirm that the Access Point connection mode is correct and click **Next**.
Notes are displayed regarding the selected mode. Read them carefully.

2 Click **Upload**.
The settings are uploaded to the Access Point. Please wait until the **Access Point's Power** indicator turns green.

3 When the confirmation dialog box appears, click **Finish** to exit.

✍ If you select Cable Modem or LAN, set up the device for an Internet connection.

DSL Modem (PPPoE) mode:

When the Enter DSL Modem (PPPoE) Connection Parameters dialog box appears, proceed as follows:

1 Enter the Account ID and Password provided by your Internet service provider, then choose the **Connection Mode** option from the drop-down list.

❑ Your Internet service provider may specify the DNS server(s). In this case, enter the DNS Server information into the DNS Server 1 and DNS Server 2 fields.

❑ In Connection Mode, you can choose the method of connecting to the Internet. If you choose **Always Connected**, the Access Point will connect to the Internet and stay connected. If you choose **Auto Connect**, the Access Point will automatically connect to the Internet when you check your email or run the Web browser. It will automatically disconnect after some period of time has passed with no data transmitted through the Internet. The time before disconnection can be set in Hangup After.

❑ Some Internet service providers specify a service name. In that case, enter the service name using the Custom Access Point Setup Utility.

2 Click **Next**.
The settings made in the **Enter DSL Modem (PPPoE) Connection Parameters** dialog box are displayed.

3 Make sure that you have made the correct settings, then click **Next**.
Notes are displayed regarding the DSL Modem (PPPoE) mode. Read them carefully.

4 Click **Upload**.
The settings are uploaded to the Access Point. Please wait until the Access Point's power indicator turns green.
When the confirmation dialog box appears, click **Finish** to exit.
This completes the software setup. The Wireless LAN environment is complete. Now you can copy a file from another computer on the Wireless LAN or connect to the Internet.

Transferring files using drag and drop (WirelessCapsule)

You can transfer files to other computers that are connected to the Wireless LAN by dragging and dropping them on the Wireless Palette. This function is called the **WirelessCapsule**.

To transfer files to other computers connected to the Wireless LAN, proceed as follows:

Right-click the **Reception level indicator** icon 🔳 on the taskbar, click on **Capsule Setup** to view the **WirelessCapsule Setup** screen and make sure that **Enable the WirelessCapsule** is selected (the icon may also appear as 🔳 or 🔳 .)

For the operations on the sending computer, proceed as follows:

1 Double-click the **Reception level indicator** icon 🔳 on the taskbar.
The **Wireless Palette status** screen appears, showing up to 8 computers that are connected to the LAN. If the WirelessCapsule is enabled, the display appears as shown below.

❑ Your computer:
White (with a yellow dot)

❑ Other computers whose WirelessCapsule is enabled: White

❑ Other computers whose WirelessCapsule is disabled: Blue

2 If the WirelessCapsule is disabled, all computers are displayed in blue.

3 If the destination computer of the transfer does not appear, click 🔳 to display it.

4 Drag the file you want to transfer on the name of the computer to which you want to transfer it.
The **Transmission confirmation** screen is displayed.

❑ If the **Confirm before sending** check box is not selected in the **WirelessCapsule Setup** screen, the file will be transferred as it is without displaying the confirmation screen.

❑ If you drag and drop a file on the Access Point, it will be transferred to all computers that have file reception enabled on the same Wireless LAN system. When you drag and drop a file on the Access Point, **Broadcast** is displayed on the destination.

5 The following restrictions apply when transferring files using drag and drop.

❑ If you send a file with the **read-only** attribute, the **read-only** attribute is lost when the file arrives at the receiving computer.

❑ Folders cannot be transferred.

❑ The maximum total size of files that can be transferred is approximately 100 MB.

❑ The maximum number of files that can be transferred is 256.

❑ File transfer is not possible if the amount of available hard disk drive space at the destination is less than 175 MB.

❑ File transfer is not possible if files are named using double-byte characters (such as those used in Japanese and Chinese.)

6 Confirm the destination and the filename and click **OK**.
The name of the destination computer changes to yellow. The name of the Access Point also changes to yellow when you drag and drop (Broadcast) a file on the Access Point.

For the operations on the receiving computer, proceed as follows:

1 When a file is received, the name of the sending computer changes to yellow.

2 Double-click the name of the computer on the Wireless Palette.
File reception begins. When necessary, move the file to the appropriate location or copy it.

★ Files that are received are transferred to the **WirelessCapsule** folder.

★ When you first start the Wireless Palette, the **WirelessCapsule** folder is created directly below the startup drive. However, you can change that through settings.

★ Right-click the **Reception level indicator** icon 📶 on the taskbar, click on **Capsule Setup** to view the **WirelessCapsule Setup** screen. (The icon may also appear as ▄ or 📶).

★ If the name of the file to be received is the same as the name of a file in the **WirelessCapsule** folder, that file is overwritten by default. However, if you select **Save with different** option, that file will be saved under a different name.

Connecting to the Internet

Connecting to the Internet

When you are through with all settings described in Setting up the connection environment , you can connect to the Internet.

LAN (ISDN Router):

To connect to the Internet, proceed as follows:

1 Start your browser and make the connection through your ISDN router (For details, see the ISDN router manual). The connection is made to your provider.

2 Launch your Web browser.
A Web site is displayed.

Cable modem/DSL modem (PPPoE):

To connect to the Internet, proceed as follows:

Launch your Web browser.
A home page is displayed. The cable modem holds open the connection to the Internet. When the computer is connected to the Access Point, it is also connected to the Internet.

✍ Check your modem's ability to make an Internet connection.

Additional information

Precautions

❑ Do not drop or cause mechanical shock to the Wireless LAN PC Card, as this may damage the unit.

❑ Do not place the Wireless LAN PC Card where it will be exposed to the following conditions:

   ❑ unstable surface;

   ❑ high humidity or poor ventilation;

   ❑ ecxcessive dust;

   ❑ direct sunlight or extreme heat;

   ❑ closed cars;

   ❑ magnetized location (near magnets, speakers or televisions);

   ❑ locations exposed to frequent vibration;

   ❑ locations where the transmissions of radio waves may be obstructed by metal or concrete walls.

❑ If the Wireless LAN PC Card is moved directly from a cold location to a warm location, or if it is placed in a very damp environment, moisture may condense on the parts inside. The Wireless LAN PC Card may not operate properly if moisture condensation occurs.

❑ Clean the casing with a soft cloth, lightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine as it may damage the finish of the casing.

Getting Help

This section describes how to get help and support from Sony, as well as troubleshooting tips for your Wireless LAN PC Card.

Sony's support options

Sony provides several support options for your computer.

Documentation supplied with your product

❑ Getting Started booklet;
❑ PCWA-C100 Wireless LAN PC Card Operating Instructions (CD-ROM);
❑ Safety regulations flyer.

Other sources of information

❑ Online Help files;
❑ VAIO-Link website: if you have any problem with your wireless LAN products, you can access the VAIO-Link website. Go to: http://www.vaio-link.com

Troubleshooting

Read the Troubleshooting section of this guide before contacting VAIO-Link. Also, in **Wireless Palette Help and Custom Access Point Setup Utility Help**, there is a troubleshooting section where frequently asked questions are summarized.

Accessing the Wireless Palette Help and Custom Access Point Setup Utility Help:

Troubleshooting is provided in the **Additional Information** section of the Help files.

✍ Troubleshooting in the **Wireless Palette Help** and the **Custom Access Point Setup Utility Help** contain the same information.

On the overall wireless communications

My computer does not detect the Wireless LAN PC Card.

❑ The Wireless LAN PC Card may not be properly inserted into the PC card slot of your computer. Check that the Wireless LAN PC Card is inserted in the proper direction, then push it in as far as it will go.

Other computers on the wireless LAN are not displayed.

❑ You did not enter the password when Windows® started. Enter the user name and the password requested on Windows startup, then log on the **LAN**.

❑ The Windows®-based environment is not properly set up.

❑ No other computers are logged on the wireless LAN.

I cannot access the Internet.

❑ The Access Point is not connected. Follow the instructions in the Access Point Operating Instructions to connect it properly.

❑ The Wireless LAN PC Card is not properly inserted into your computer. See the instructions in this manual to insert it properly.

❑ Communication between the Access Point and your computer are not established. Check the communication status using the Wireless Palette.

❑ The Access Point is not properly configured. Configure the Access Point with the connection mode of your choice using one of the Access Point setup utilities.

❑ The Access Point and your computer are too far apart [more than approximately 100 m (330 feet)]. When the Wireless Palette shows the ⚠ icon, move your computer closer to the Access Point.

The data transfer speed is slow.

❑ There is radio interference with another Access Point. Try assigning another channel number using one of the Access Point setup utilities.

❑ There are too many clients logging on the Access Point. Try later.

I cannot remember the Encryption Key.

Proceed as follows:

1 Set the Access Point in the Software Reset mode.
2 Change the Encryption Key using the **Access Point Setup Utility**.
For further information about the **Software Reset mode**, see the **Troubleshooting** section of the **Wireless Palette Help** file or the **Custom Access Point Setup Utility Help** file.

I cannot restore communication with the Access Point even after performing a software reset.

To reset the Access Point, proceed as follows:

1 Use the Access Point Firmware Upgrade Utility to restore the factory configuration of the Access Point. In order to reset:
   ❑ Connect the Access Point to the power supply while pressing the reset switch on the bottom side of the Access Point.
   ❑ Release the switch when the orange POWER indicator lights on.
2 Use the Wireless Palette to register the settings of the Access Point and establish communications with it.
3 Use the Access Point Setup Utility to make settings for the Access Point.

The Wireless Palette still shows the previous computer name after a change.

❑ The Access Point has not yet recognized the new computer name. Click the Nickname of the Access Point in the **Tool Box** window of the Wireless Palette, then click **Select**. If the correct information is displayed, click **OK**.

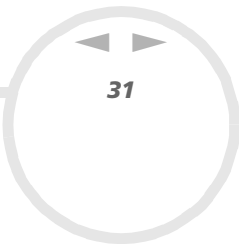**The communication band is supposed to be 11 Mbps, but MPEG2 data transfer fails.**

❑ 11 Mbps is a logical value. The actual value is approximately 4 to 5 Mbps. This occurs with almost all IEEE 802.11 compliant products. The high-speed stream transfer of MPEG2 may cause a reduction of communication band.

No communication is available even though my computer is located within 100 m (330 feet) of the Access Point.

❑ The actual communication distance depends on the installation site and surrounding conditions. Move your computer closer to the Access Point.

The data transfer speed has become slower.

❑ The actual data transfer speed may change depending on the distance and quality of the link. The data transfer speed is 11 Mbps (maximum) but may fall to 5.5 Mbps, 2 Mbps, or 1 Mbps in certain conditions.

Specifications

Protocol support	TCP/IP NetBEUI compliant
Standard	IEEE802.11b/IEEE802.11
Radio frequency	2.4 GHz
Modulation method	DS-SS (IEEE802.11 compliant)
Encryption (WEP)	64-bit encryption (40-bit shared key)
Power requirements	5 V AC (supplied from the computer through the PC card adapter)
Current	Peak current at transmission: 280 mA Peak current at reception: 180 mA
Connector	PC card slot Type-II
Dimensions (approx.)	Approx. 118 · 5 · 54 mm (Antenna height: 8.7 mm)
Mass	Approx. 55 g (approx. 2 oz)
Operating temperature	5°C to 35°C (41°F to 95°F) (not condensed)
Environment temperature	-20°C to 60°C (-4°F to 140°F) (not condensed)

Wireless LAN PC Card

Glossary

Channel number	The frequency used for wireless communications. Wireless communications are available only among client computers and Access Points that use the same channel.
Client	A computer connected to a LAN (Local Area Network). Is also called a client computer.
DHCP (Dynamic Host Configuration Protocol)	DHCP allows network administrators centrally manage and automate assignment of IP addresses within a network environment.
DNS (Domain Name System)	A system that translates host names into IP addresses. Networks that use the TCP/IP protocol, such as the Internet, use a set of numbers like 192.168.0.1 (IP address) to identify a computer. However, since the IP address is rather hard to memorize, DNS was developed to allow a name like www.sony.com to identify a computer for convenience. DNS servers manage these translations from host names into IP addresses.
Encryption Key	IEEE802.11-compliant security system. Using the Encryption Key as the password, only client computers and Access Points that have the same ID and password may log on to the same wireless LAN for file sharing.
LAN (Local Area Network)	A network, which is accessible only to its members, unlike the Internet which is open to an unlimited number of people. A LAN may be built for different purposes. For example, you can build an office LAN that is accessible only to members of the same department or a home LAN that is accessible only to family members.
PPPoE (PPP over Ethernet)	PPPoE is a software protocol that uses a DSL modem to access the Internet. With PPPoE, the client does not set a static IP address. Instead, an IP address is assigned dynamically whenever the client accesses the Internet.

Protocol	The formal specifications that define the procedures for computers to follow when transmitting and receiving data.
TCP/IP (Transmission Control Protocol/Internet Protocol)	TCP is a connection-oriented protocol for establishing reliable, sequenced data transfer. TCP ensures that data reaches its destination. IP assembles and addresses data packets for transmission to their network destinations.
WAN (Wide Area Network)	A network that interconnects remote LANs through the Internet or telephone lines.