SONY

Operating Instructions

Wireless LAN PC Card
PCWA-C150S

WARNING
To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Owner's Record

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

Model No. PCWA-C150S

Serial No._____

CAUTION

Any changes or modifications not expressly approved in this manual could void your warranty.

FCC ID: AK8PCWAC150S

Exposure to Radio Frequency Radiation.

The radiated output power of the Wireless LAN PC Card is far below the FCC radio frequency exposure limits.

Nevertheless, the Wireless LAN PC Card shall be used in such a manner that the potential for human contact during normal operation is minimized.

NOTE:

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 or communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to 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 or more 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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class B limits may be attached to this computer product. Operation with non-compliant peripherals is likely to result in interference to radio and television reception.

All cables used to connect peripherals must be shielded and grounded. Operation with cables, connected to peripherals, that are not shielded and grounded, may result in interference to radio and television reception.

If you have questions about this product, call the Sony Customer Information Service Center at 1-888-476-6972; or write to the Sony Customer Information Service Center at 12451 Gateway Boulevard, Fort Myers, FL 33913. The number below is for FCC-related matters only.

Declaration of Conformity

Trade Name: Sony

Model No: PCWA-C150S

Responsible Party: Sony Electronics Inc.

Address: 680 Kinderkamack Road,
                  Oradell, NJ 07649 USA

Telephone: 201-930-6972

This phone number is for FCC-related matters only.

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.

Safety Information
WARNING

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

• Do not use this equipment on hospital premises. Doing so may cause medical devices to malfunction.

• If using the equipment near a pacemaker, make sure it is at least 9 inches (22 cm) away from the pacemaker.

• Do not use this equipment in an aircraft, as doing so could cause the aircraft's equipment to malfunction. Make sure you remove the equipment from the PC card slot before carrying your computer onto an aircraft.

• Do not use this equipment outdoors.

• Install and connect this product by following descriptions in its Operating Instructions and Quick Start Guide before using it.

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

This equipment should be installed and operated with minimum distance 20 cm between the radiator and body (excluding extremities: hands, wrist and feet).

Users are not permitted to make changes or modify the system in any way.

• Indoor use only.

• This device is made for use in the USA and Canada only.

For the customs in Canada

• This class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions; (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. To prevent radio interference to the lisenced service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

The term "IC" before the equipment certification number only signifies that Industry Canada technical specifications were met.

Pour les utilisateurs au Canada

• Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt a accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif. Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilise a l'intérieur et devrait être place loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installe a l'extérieur, il doit faire l'objet d'une licence.

Le terme "IC" avant le numéro d'homologation ne signifie seulement que les normes d'Industrie Canada ont été respectées.

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 at SONY's option or issue a refund; however, SONY bears no other responsibility.

• The software provided with this product cannot be used with equipment other than that which is designated for use with.

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

Notes:
- The user interface of the Sony supplied software may differ slightly from that shown in this manual.
- This manual is written based on the assumption that you are familiar with basic operations of the Windows operating system. For computer operations, refer to manuals that come with your computer.
- In this manual, Microsoft® Windows® Me is referred to as Windows Me.
- In this manual, Microsoft® Windows® 2000 Professional is referred to as Windows 2000.
- In this manual, Microsoft® Windows® XP Professional and Microsoft® Windows® XP Home Edition are referred to as Windows XP.

Table of contents

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Overview

What you can do with your Wireless LAN PC Card

You can build a wireless LAN using the Wireless LAN PC Card PCWA-C150S (subsequently referred to as "Wireless LAN PC Card"). Equipping multiple computers with a Wireless LAN PC Card and installing the supplied software enables the computers to communicate and exchange data without needing any physical connection.

There are two basic configuration modes for a wireless LAN. In "Infrastructure Mode", communication is routed through a separately available 2.4 GHz Wireless LAN Access Point (subsequently referred to as "Access Point"). In "Peer-to-Peer Mode", no Access Point is used and the computers communicate directly with each other. When an Access Point with an Internet connection is used, the computers in the wireless LAN can gain access to the Internet.

Note

This product is a 2.4 GHz Wireless LAN PC Card conforming to the IEEE 802.11b standard. It is not compatible with products conforming to other standards (such as the IEEE 802.11a standard for 5 GHz wireless LANs).

ϔ Tips

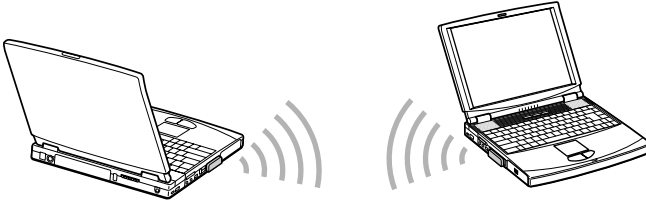- For details regarding functions and operation of the Access Point, please refer to its documentation.
- For information about file and printer sharing in a network environment, see Windows Help.

Communication through Access Point (Infrastructure Mode)
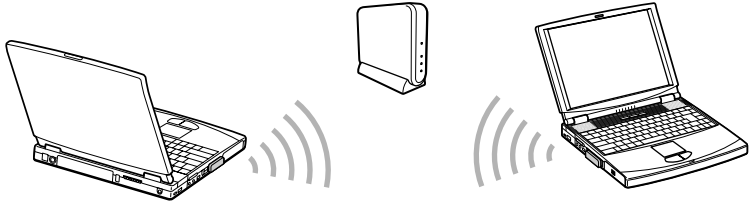
Direct communication between computers (Peer-to-Peer Mode)

ϔ **Tips**

For details about peer-to-peer connections with Windows XP, see Windows XP Help.

About the supplied software

The Wireless LAN PC Card comes with the following software.

Client Manager

Utility software for displaying the communication status of the Wireless LAN PC Card.

Normally, the software operates in the background and shows the communication status using an icon in the system tray (notification area in Windows XP). In operating systems other than Windows XP, the Client Manager is also used to change network settings of the computer and switch networks.

Basic procedures for using Client Manager are explained in this manual.

PCWA-C150S Wireless LAN PC Card Driver

This is required for operation of the Wireless LAN PC Card.

ϔ Tip   When using the Sony Wireless LAN Access Point PCWA-A200

The folder "A200Setup" on the supplied CD-ROM contains software for making PCWA-A200 settings. For details, see the PDF file contained in the folder "manual" under the "A200Setup" folder. To display PDF files, Adobe Acrobat Reader is required.

System requirements

☐ A computer satisfying the following requirements

CPU: MMX Pentium 233 MHz and above

RAM: With Windows Me/Windows 2000: 64 MB or more

With Windows XP: 128 MB or more

CD-ROM drive

Default built-in PCMCIA Type II slot

☐ Operating system

Microsoft® Windows® Millennium Edition

Microsoft® Windows® 2000 Professional Edition

Microsoft® Windows® XP Home Edition

Microsoft® Windows® XP Professional Edition

Note

Correct operation in an OS upgrade environment is not assured, except for factory provided Windows XP upgrade packages for Sony VAIO series computers.

☐ Display

High color (16 bit color) and above, 800×400 pixels and above

Notes

- We do not assure trouble-free operation for all computers satisfying the above system requirements.
- For Internet access via the wireless LAN, an IEEE 802.11b compliant 2.4 GHz Wireless LAN Access Point (available separately) is required.
- An Internet Service Provider (ISP) is required for Internet access.

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About this manual

Note

When using an Access Point, first connect and configure the Access Point as explained in its documentation.

This manual explains the operation of the Wireless LAN PC Card and the installation and setup of the supplied Client Manager software. For details on using the Client Manager, refer to the software's Help files.

Opening the Help files

To use the Client Manager Help, proceed as follows.

1 While Client Manager is running, right-click the Client Manager icon ⌐ in the system tray (notification area in Windows XP).

ღ **Tip**

The appearance of the icon changes according to the wireless signal strength. For details, see "Checking the communication status" on page 50.

2 In the shortcut menu that appears, point to Help, then click Contents.

Selecting a topic from the contents

From the contents list, click on the desired topic.

Searching using a Keyword

To search using a keyword, select the Index tab from the Help dialog box.

The keyword list appears.

Enter the keyword you want to apply, or scroll down the keyword list.
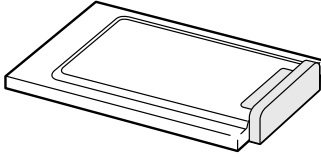
Select a topic, then click Display.

Topics related to the keyword appear.

Unpacking

Your Wireless LAN PC Card comes with the following items.

• Wireless LAN PC Card

• CD-ROM (Setup disc)

• Read This First

• Quick Start Guide

• Warranty card

• Other printed materials

Installing the software

• Install and connect the Access Point.

• Quit all Windows programs.

Note

In Windows 2000 and Windows XP, only users with administrator privileges can install software. If you have logged onto Windows 2000 with a user account not listed in "Administrators" or onto Windows XP with a user account not defined as "computer administrator", you will be asked to input a user account name and password for an account with administrator privileges when you attempt to install the software. In such a case, enter the required information before proceeding.

1 In Windows Explorer or My Computer, double-click the installer file for Client Manager.

• If your computer has an internal CD-ROM drive or you can use an external CD-ROM drive while the Wireless LAN PC Card is inserted: Click on "Setup.exe" on the CD-ROM.

• If you copied the Wireless LAN folder from the supplied CD-ROM to your hard disk as described on page 20: Click Setup.exe in the folder on the hard disk.

Note

Depending on computer settings, Setup.exe may be displayed as just Setup. If several files with the same name appear in the folder, double click the one with the following icon.

2 Click Next.

The License Agreement dialog box appears.

3 Read the agreement and click Yes to accept.

The Choose Destination Location dialog box appears.

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4 Check that the displayed folder is the one where you want to install the software and click Next.

Select Program Folder dialog box is displayed.

ϔ Tip

If you want to install the software into another folder, click Browse and select the folder or directly enter the folder name.

5 Click Next.

ϔ Tip

If you want to change the program folder, select the folder from the Existing Folders list or directly enter the folder name into the Program Folder field.

6 Without placing a check mark in the check box, click Finish.

Proceed to "Installing the driver software" (page 20).

Starting the software

Note

Do not start the Client Manager before having installed the driver.

From the Start menu, point to Programs (All Programs in Windows XP), Wireless LAN, and then click Client Manager.

ϔ Tip

The Client Manager is also included in the Startup folder, so that it will start automatically when booting Windows.

Uninstalling the software

Windows Me

1 From the Start menu, point to Settings, then click Control Panel.

Control Panel appears.

2 Double-click the Add/Remove Programs icon.

The Add/Remove Programs Properties dialog box appears.

☼ Tip

If the Add/Remove Programs icon is not shown, select "View all Control Panel options".

3 Select "Sony Wireless LAN Client Manager" from the list of automatically removable software, then click Add/Remove.

The Confirm File Deletion dialog box appears.

4 Click OK.

The software uninstall process is carried out.

5 Click OK to close the Add/Remove Programs Properties dialog box.

Control Panel is shown again.

6 Click ✖ to close Control Panel.

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Windows 2000

In Windows 2000, only users with administrator privileges can uninstall software. If you have logged onto Windows 2000 with a user account not listed in "Administrators", you will be asked to input a user account name and password for an account with administrator privileges when you attempt to uninstall the software. In such a case, enter the required information before proceeding.

1 From the Start menu, click Settings — Control Panel.

Control Panel appears.

2 Double-click the Add/Remove Programs icon.

The Add/Remove Programs dialog box appears.

3 From the Currently installed programs list, select "Sony Wireless LAN Client Manager", then click Change/Remove.

The Confirm File Deletion dialog box appears.

4 Click OK.

The software uninstall process is carried out.

5 Click Close to close the Add/Remove Programs dialog box.

Control Panel is shown again.

6 Click ✖ to close Control Panel.

Windows XP

In Windows XP, only users with administrator privileges can uninstall software. If you have logged onto Windows XP with a user account not defined as "computer administrator", you will be asked to input a user account name and password for an account with administrator privileges when you attempt to uninstall the software. In such a case, enter the required information before proceeding.

1 From the Start menu, point to Settings, then click Control Panel.

Control Panel appears.

2 Click Add or Remove Programs (double-click if the Control Panel "Classic View" is selected).

The Add or Remove Programs dialog box appears.

3 From the Currently installed programs list, select Sony Wireless LAN Client Manager, then click Change/Remove.

The Confirm File Deletion dialog box appears.

4 Click OK.

The software uninstall process is carried out.

5 Click Close to close the Add or Remove Programs dialog box.

Control Panel is shown again.

6 Click ✕ to close Control Panel.

Installing the driver software

Note

Before installing the driver software, install the supplied utility software. For details on installing the supplied utility software, see "Installing software" on page XX.

Installing the driver software

The installation procedure varies depending on the CD-ROM drive availability when the Wireless LAN PC Card inserted.

Note

If your computer has only one PC card slot, and your CD-ROM drive must be connected through it, copy the Wireless LAN folder from the supplied CD-ROM into the hard disk before inserting the Wireless LAN PC Card. The following steps use the Temp folder in the C drive as an example.

If you can use the CD-ROM drive while the Wireless LAN PC Card is inserted, the following steps are not required. Begin installation starting from step 1 on page xx, xx or xx.

1 Connect the CD-ROM drive to the computer and insert the supplied CD-ROM into the drive.

2 Copy the Wireless LAN folder in the CD-ROM to the Temp folder in your hard disk using Windows Explorer.

3 Remove the CD-ROM drive from the PC card slot.

Windows Me

1 Insert the supplied CD-ROM into the CD-ROM drive.

Note

If your computer has two PC card slots and your CD-ROM drive must be connected through one of them, connect the CD-ROM drive to the bottom slot.

2 Insert the Wireless LAN PC Card into the PC card slot.

The Add New Hardware Wizard appears.

ϔ Hint

See "Inserting the Wireless LAN PC Card" on page XX about how to insert the Wireless LAN PC Card in your computer.

3 Select Specify the location of the driver, then click Next.

4 Select Specify a location, then click Browse.

5 Select the folder containing the driver, then click OK.

- When installing from the supplied CD-ROM in a CD-ROM drive connected to the computer:
  Select the "1WinMe" folder on the CD-ROM.

- When installing after copying the contents of the supplied CD-ROM to a hard disk:
  Select the "1WinMe" folder under the folder into which you copied the CD-ROM contents.

6 Click Next to begin the search.

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7 Click Next to begin driver installation.

Wait for installation to complete. A new display screen appears when installation is complete.

8 Click Finish.

The Add/Edit Setup Profile dialog box appears.

9 Click Cancel.

10 Restart the computer.

Windows 2000

Note

In Windows 2000, only users with administrator privileges can install drivers. Log onto Windows 2000 with a user account listed in "Administrators".

ϔ Tip

For details on installing the Wireless LAN PC Card, see "Inserting the Wireless LAN PC Card" on page 36.
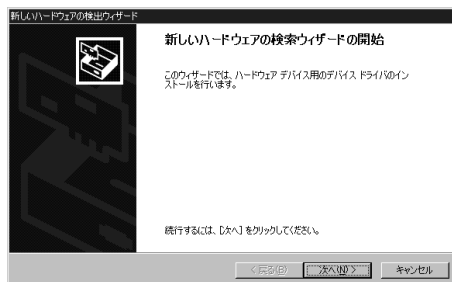
1 Insert the supplied CD-ROM into the CD-ROM drive.

Note

If your computer has two PC card slots and your CD-ROM drive must be connected through one of them, connect the CD-ROM drive to the bottom slot.

2 Insert the Wireless LAN PC Card into the PC card slot.

The Found New Hardware Wizard appears.

3 Click Next.

4 Confirm that "Search for a suitable driver for my device" is selected, then click Next.

5 Select Specify a location, then click Next.

6 Click Browse.

7 Select the folder containing the driver, then click Open.

- When installing from the supplied CD-ROM in a CD-ROM drive connected to the computer:
  Select the "2Win2k" folder in the WirelessLAN folder on the CD-ROM.

- When installing after copying the contents of the supplied CD-ROM to a hard disk:
  Select the "2Win2k" folder under the folder into which you copied the CD-ROM contents.

8 Click OK to begin search.

9 Click Next to begin driver installation.

10 Click Finish.

The Add/Edit Configuration Profile dialog box appears.

11 Click Cancel.

12 Restart the computer.

Windows XP

1 Insert the supplied CD-ROM into the CD-ROM drive.
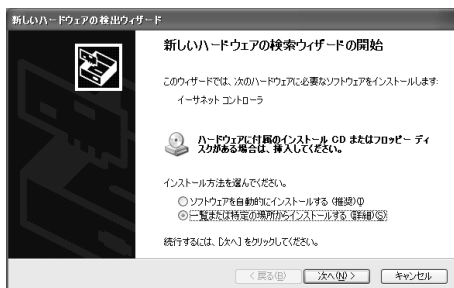
Note

If your CD-ROM drive is connected to the computer via a PC Card slot and your computer has two PC Card slots, use the bottom slot for the CD-ROM drive.

2 Insert the Wireless LAN PC Card.

The "Find New Hardware Wizard" appears.

☼ Tip

For details on installing the Wireless LAN PC Card, see the section "Inserting the Wireless LAN PC Card" (page 36).

3 Select Install from a list or specific location (Advanced) and click Next.

4 Check Include this location in the search and click Browse.

5 Select the folder which contains the driver and click OK.

- When installing from the supplied CD-ROM in a CD-ROM drive connected to the computer:
  Select the "3WinXP" folder on the CD-ROM.

- When installing after copying the contents of the supplied CD-ROM to a hard disk:
  Select the "3WinXP" folder under the folder into which you copied the CD-ROM contents.

6 Click Next to begin the search.

7 Click Finish.

Verifying the installation

To verify that the Wireless LAN PC Card driver has been installed, perform the following steps.

Windows Me:

1 From the Start menu, point to Settings, then click Control Panel.

Control Panel appears.

2 Double-click the "System" icon.

The System Properties dialog box appears.

ツ Hint

If System is not displayed, click "view all Control Panel options."

3 Click the Device Manager tab.

4 Select View Devices by type.

5 Double-click Network adapters.

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6 Double-click Sony PCWA-C150 Wireless PC Card.

The Sony PCWA-C150 Wireless PC Card Properties dialog box appears.

Note

The Wireless LAN PC Card is not working properly if the following occurs:

• The Sony PCWA-C150 Wireless PC Card is represented in the Device Manager list by a yellow question mark or exclamation point.

→ Click Sony PCWA-C150 Wireless PC Card, and click Remove to uninstall the Wireless LAN PC Card driver. Then, reinstall the Wireless LAN PC Card driver.

• Double-clicking Network adapters does not display the Sony PCWA-C150 Wireless PC Card.

→ Remove the Wireless LAN PC Card from the computer, and reinsert it. Then, reinstall the Wireless LAN PC Card driver.

• Double-clicking Other devices displays the Sony PCWA-C150 Wireless PC Card.

→ Click Sony PCWA-C150 Wireless PC Card, and click Remove to uninstall the Wireless LAN PC Card driver. Then, reinstall the Wireless LAN PC Card driver.

7 Confirm that the message "This device is working properly" is displayed under Device status.

Note

If the message "This device is working properly" is not displayed, the Wireless LAN PC Card is not working properly. In this case, repeat steps 1 to 5, and click Sony PCWA-C150 Wireless PC Card. Then click Remove to uninstall the Wireless LAN PC Card driver. Next, restart the computer, and reinstall the Wireless LAN PC Card driver.

8 Click OK.

You are returned to the System Properties dialog box.

9 Click OK.

You are returned to Control Panel.

10 Double-click the "PC Card (PCMCIA)" icon.

The PC Card (PCMCIA) dialog box appears.

11 Confirm that Sony PCWA-C150 Wireless PC Card is displayed under Socket Status.

Note

If Sony PCWA-C150 Wireless PC Card is not displayed in the PC Card (PCMCIA) Properties dialog box, the Wireless LAN PC Card is not working properly. Repeat steps 1 through 4. Click Sony PCWA-C150 Wireless PC Card then click Remove to remove the driver. Click Yes to restart the computer. When the computer restarts, repeat from step 2 in "Installing the driver software" on page XX.

12 Click OK.

The PC Card (PCMCIA) Properties dialog box closes.

13 Click ✖.

Control Panel closes.

Windows 2000:

1 From the Start menu, point to Settings, then click Control Panel.

Control Panel appears.

2 Double-click the "System" icon.

The System Properties dialog box appears.

3 Click the Hardware tab, then click Device Manager.

The Device Manager window appears.

4 From the View menu, click Devices by type.

5 Double-click Network adapters.

6 Double-click Sony PCWA-C150 Wireless PC Card.

The Sony PCWA-C150 Wireless PC Card Properties dialog box appears.

7 Confirm that the message "This device is working properly" is displayed under Device status.

Note

If the message "This device is working properly" is not displayed, the Wireless LAN PC Card is not working properly. In this case, repeat steps 1 to 5, and right-click Sony PCWA-C150 Wireless PC Card. Then click Remove to delete the Wireless LAN PC Card driver. Next, restart the computer, and reinstall the Wireless LAN PC Card driver.

8 Click OK.

You are returned to the Device Manager window.

9 Click ✖.

You are returned to the System Properties dialog box.

10 Click OK.

You are returned to Control Panel.

11 Click ✖.

Control Panel closes.

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Windows XP:

1 From the start menu, click Control Panel.

Control Panel appears.

2 Double-click System.

The System Properties dialog box appears.

💡 **Hint**

If the System icon is not displayed, click "Switch to Classic View".

3 Click the Hardware tab, then click Device Manager.

The Device Manager window appears.

4 From the View menu, click Devices by type.

5 Double-click Network adapters.

6 Double-click Sony PCWA-C150 Wireless PC Card.

The Sony PCWA-C150 Wireless PC Card Properties dialog box appears.

Note

The Wireless LAN PC Card is not working properly if the following occurs:

- The Sony PCWA-C150 Wireless PC Card is represented in the Device Manager list by a yellow question mark or exclamation point.
  - → Right-click Sony PCWA-C150 Wireless PC Card, and click Uninstall to delete the Wireless LAN PC Card driver. Then, reinstall the Wireless LAN PC Card driver.
- Double-clicking Network adapters does not display the Sony PCWA-C150 Wireless PC Card.
  - → Remove the Wireless LAN PC Card from the computer, and reinsert it. Then, reinstall the Wireless LAN PC Card driver.
- Double-clicking Other devices displays the Sony PCWA-C150 Wireless PC Card.
  - → Right-click Sony PCWA-C150 Wireless PC Card, and click Uninstall to delete the Wireless LAN PC Card driver. Then, reinstall the Wireless LAN PC Card driver.

7 Confirm that the message "This device is working properly" is displayed under Device status.

Note

If the message "This device is working properly" is not displayed, the Wireless LAN PC Card is not working properly. In this case, repeat steps 1 to 5, and right-click Sony PCWA-C150 Wireless PC Card. Then click Uninstall to delete the Wireless LAN PC Card driver. Next, restart the computer, and reinstall the Wireless LAN PC Card driver.

8 Click OK.

You are returned to the Device Manager window.

9 Click ×.

You are returned to the System Properties dialog box.

10 Click OK.

You are returned to Control Panel.

11 Click ×.

Control Panel closes.

Uninstalling the Wireless LAN PC Card driver

To uninstall the Wireless LAN PC Card driver, perform the following steps.

👉 Hint

Refer to the Quick Start Guide for instructions on how to install the Wireless LAN PC Card driver.

Windows Me:

1 From the Start menu, point to Settings, then click Control Panel.

Control Panel appears.

2 Double-click the "System" icon.

The System Properties dialog box appears.

👉 Hint

If System is not displayed, click "view all Control Panel options".

3 Click the Device Manager tab.

4 Select Devices by type.

5 Double-click Network adapters, then click Sony PCWA-C150 Wireless PC Card, and click Remove.

The Confirm Device Removal dialog box appears.

6 Click OK.

The message "To finish removing your hardware, you must restart your computer. Do you want to restart your computer now?" appears.

7 Remove the Wireless LAN PC Card from its slot, and click Yes.

The system restarts. This completes removal of the driver.

Windows 2000:

1 From the Start menu, point to Settings, then click Control Panel.

Control Panel appears.

2 Double-click the "System" icon.

The System Properties dialog box appears.

3 Click the Hardware tab, then click Device Manager.

The Device Manager window appears.

4 From the View menu, click Devices by type.

5 Double-click Network adapters.

6 Double-click Sony PCWA-C150 Wireless PC Card.

The Sony PCWA-C150 Wireless PC Card Properties dialog box appears.

7 Click the Driver tab, then click Uninstall.

The Confirm Device Removal dialog box appears.

8 Click OK.

You are returned to the Device Manager window.

9 Click ![x].

You are returned to the System Properties dialog box.

10 Click OK.

You are returned to Control Panel.

11 Click ![x].

The Control Panel closes.

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Windows XP:

1 From the start menu, click Control Panel.

Control Panel appears.

2 Double-click System.

The System Properties dialog box appears.

Hint

If the System icon is not displayed, select "Switch to Classic View".

3 Click the Hardware tab, then click Device Manager.

The Device Manager window appears.

4 From the View menu, click Devices by type.

5 Double-click Network adapters.

6 Double-click Sony PCWA-C150 Wireless PC Card.

The Sony PCWA-C150 Wireless PC Card Properties dialog box appears.

7 Click the Driver tab, then click Uninstall.

The Confirm Device Removal dialog box appears.

8 Click OK.

You are returned to the Device Manager window.

9 Click ✕.

You are returned to the System Properties dialog box.

10 Click OK.

You are returned to the Control Panel.

11 Click .

The Control Panel closes.
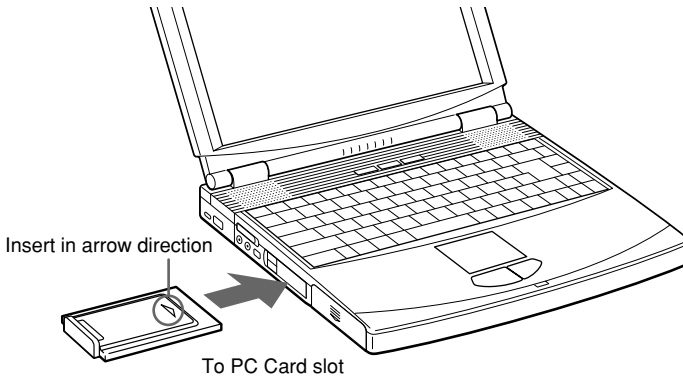
Inserting the Wireless LAN PC Card

This section explains how to insert the Wireless LAN PC Card in your computer and how to remove it.

You do not need to turn off your computer when inserting the Wireless LAN PC Card.

Insert the Wireless LAN PC Card into the PC Card slot of the computer.

Push the Wireless LAN PC Card into the slot until it is firmly seated.

Notes

• When inserting the Wireless LAN PC Card, grasp it at the antenna base or both sides. If you hold the card by the protruding part of the antenna, the card may be damaged.

• If the card does not fit easily, do not force it in. Take the card out and try reinserting it.

• There may be some computers where the Wireless LAN PC Card cannot be inserted, due to insufficient depth or irregular shape above the PC Card slot.

Insert in arrow direction

To PC Card slot

Notes

• If your computer has two PC Card slots, insert the Wireless LAN PC Card into the top slot. If inserted into the bottom slot, the antenna of the Wireless LAN PC Card will block the top slot.

• In some computer models, the Memory Stick slot may be blocked while the Wireless LAN PC Card is inserted.

• Set up your computer so that it does not go into System Suspend mode or System Hibernation mode while the Wireless LAN PC Card is used.

• If the Wireless LAN PC Card is removed in System Suspend mode or System Hibernation mode, it may not be recognized properly when reinserted. Do not remove or insert the Wireless LAN PC Card in System Suspend mode, System Hibernation mode, or while the computer is in the idle state.

To remove the Wireless LAN PC Card

1 Close the software that uses the wireless LAN (Client Manager).

2 Stop the Wireless LAN PC Card according to the documentation of your computer.

3 Remove the Wireless LAN PC Card according to the documentation of your computer.

Grasp the card at both sides and carefully pull it out of the slot.
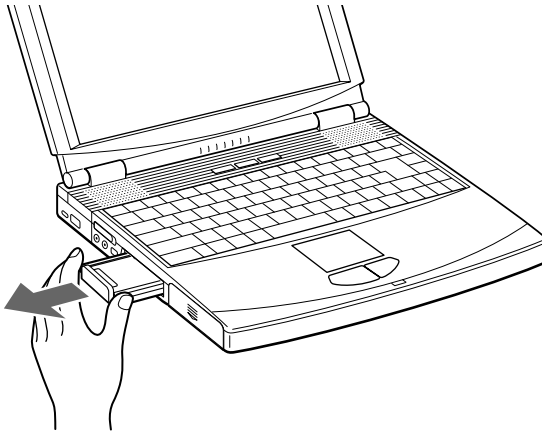
Setting up the connection environment

Windows Me or Windows 2000

### Establishing communication with the Access Point

This section describes how to make settings for communication with an Access Point. When not using an Access Point, see "Making communication settings for Peer-to-Peer Mode" on page 44.

Before making the settings, the following tasks must be completed:

• Wireless LAN PC Card must be inserted in the computer.

• The Access Point must be installed at a distance that will allow communication with the computer where the Wireless LAN PC Card is inserted, and the Access Point must be turned on. For details, see the documentation of the Access Point.

• Check the Network Name (also called SSID) and the Data Security (also called WEP or Encryption) settings at the Access Point. For details about these settings, consult your network administrator. When using the Access Point in the factory default condition, the settings are listed in the documentation of the Access Point.
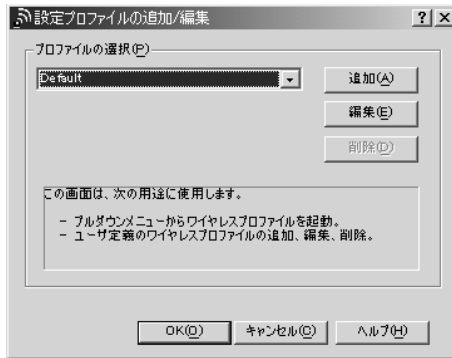
1 Click the Client Manager icon on the taskbar.
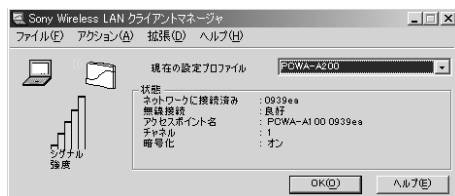
The Client Manager window appears.

2 From the Actions menu, select Add/Edit Configuration Profile.

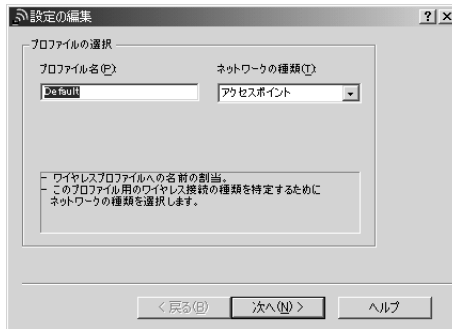The Add/Edit Configuration Profile dialog box appears.

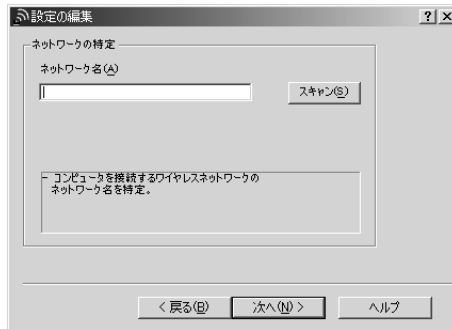**3** Click Add Profile.

The Edit Configuration dialog box appears.

ϔ **Tip**

To edit an existing profile, click Edit Profile.

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4 Enter an alphanumeric name for the profile in the Profile Name field (symbols are also allowed). Verify that Access Point is selected in the list at right, and click Next.

The window shown below appears.

5 In the Network Name field, enter the same Network Name as set at the Access Point. You can also click Scan to search for Access Points in the communication range.

Note

The Network Name is case sensitive. Be sure to use the same upper case/lower case spelling as at the Access Point.

Tip

- If you leave the Network Name field blank, the computer will attempt to connect to an arbitrary Access Point within range. If you enter "ANY" (all in upper case) in the Network Name field, the computer will attempt to connect to all Access Points within range.
- If the Scan button is grayed out, Access Point search cannot be carried out. Enter the Network Name set at the Access Point.

6 From the Network Name Scan <??> dialog box, select the Access Point to which you want to connect, and Click OK.

7 Click Next.

The window shown below appears.
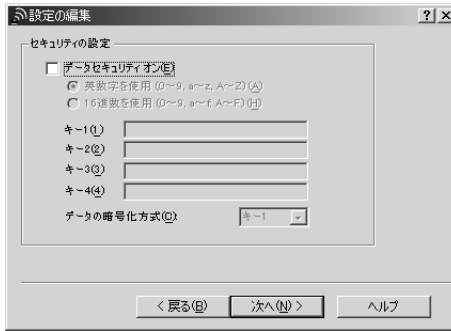
8 If Data Security (also called WEP or Encryption) is enabled at the Access Point, make matching settings for the Wireless LAN PC Card, as described below.

Notes

- Input is case sensitive. Be sure to use the same upper case/lower case spelling as at the Access Point.
- The Data Security function serves to prevent unauthorized access to the network. If Data Security is not enabled at the Access Point, it is strongly recommended that you enable it after having checked that communication can be established. For details about changing the settings of the Access Point, see the documentation of the Access Point. After changing the settings of the Access Point, use Client Manager again to change the settings for the Wireless LAN PC Card accordingly.

҉ **Tip**

When using the Sony Wireless LAN Access Point PCWA-A200, refer to the folder "manual" under the folder "A200Setup" on the supplied CD-ROM. This folder contains a PDF file that explains how to make settings for the PCWA-A200. To display PDF files, Adobe Acrobat Reader is required.

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1. Place a check mark in Enable Data Security.

2. Select the input method for the key (password for connecting to an Access Point with Data Security enabled): Use Alphanumeric Characters (0 - 9, a - z, A - Z) or Use Hexadecimal (0 - 9, a - f, A - F).

Note

If the Access Point still uses the factory default key, it is strongly recommended that you change it after having checked that communication can be established. After changing the settings of the Access Point, use Client Manager again to change the settings for the Wireless LAN PC Card accordingly. For details about changing the settings of the Access Point, see the documentationof your Access Point.
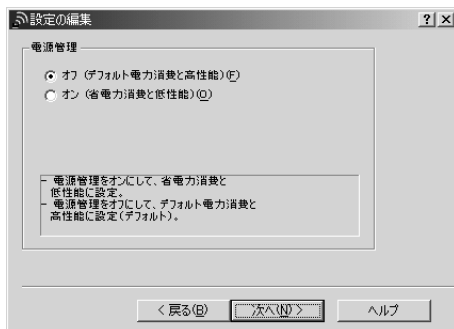
3. In the field Key 1, Key 2, Key 3, or Key 4, input the encryption key set at the Access Point, and select the field where you have input the key from the Data Security Encryption <??> drop-down list.

💡 **Tip**

Usually, Key 1 will be used. The PCWA-A200 also uses Key 1.

9 Click Next.

The window shown below appears.

10 Set Power Management to Off (Default power consumption
and high performance) <??> or On (Low power consumption
and reduced performance) <??>, and click Next.

The window shown below appears.
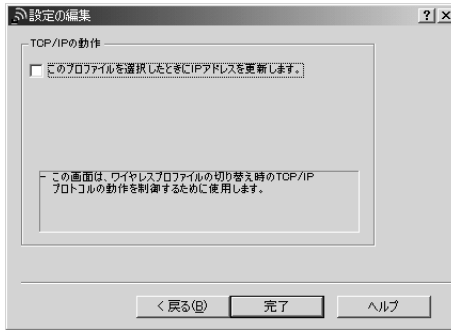
11 When using one Wireless LAN PC Card for multiple
networks (such as in the workplace and at home), place a
checkmark in Update IP address when this profile is
selected <??>, and click Finish.

The Add/Edit Configuration Profile dialog box reappears.

12 Click OK to close the Add/Edit Configuration Profile dialog
box.

The Client Manager window reappears.

13 Click OK to close the Client Manager window.

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Making communication settings for Peer-to-Peer Mode

1 Click the Client Manager icon on the taskbar.

The Client Manager window appears.

2 From the Actions menu, select Add/Edit Configuration Profile.

The Add/Edit Configuration Profile dialog box appears.
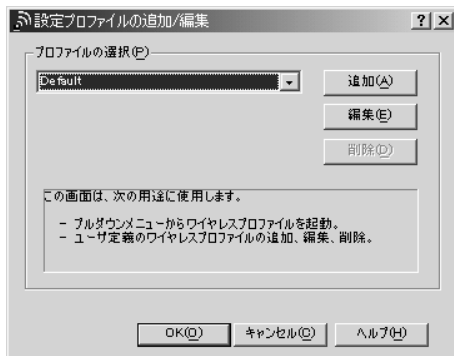
3 Click Add Profile.

The Edit Configuration dialog box appears.

♡ **Tip**

To edit an existing profile, click Edit Profile.

4 Enter a desired alphanumeric name into the Profile Name field (symbols are also allowed).

5 In the drop-down list at right, select peer-to-peer, then click Next.

The window shown below appears.
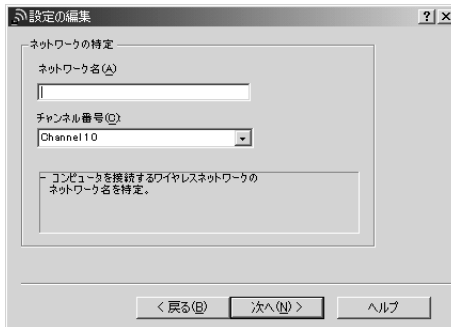
6 To create a new network, enter a desired alphanumeric name into the Network Name field (symbols are also allowed). To connect to an existing network, enter the name of that network.

Note

The Network Name is case sensitive. Be sure to use the correct upper case/lower case spelling.

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7 Select the channel number from the Channel Number <??> drop-down list.

Note

When creating a new network, you can select any channel number.

♀ Tip

When connecting to an existing network, the channel number is selected automatically.

8 Click Next.

The window shown below appears.
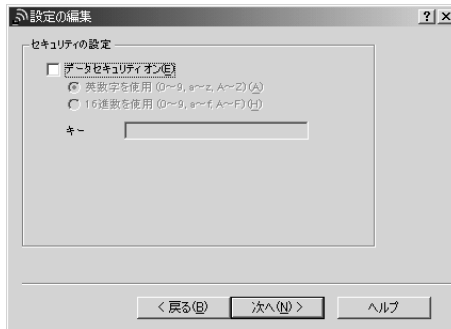
9 When creating a new network, and when connecting to an existing network where Data Security (also called WEP or Encryption) is enabled, make the following settings.

Note

• Place a check mark in Enable Data Security.

• The Data Security function serves to prevent unauthorized access to the network. If Data Security is not enabled, it is strongly recommended that you enable it.

1. Place a check mark in Enable Data Security.

2. Select the input method for the key (password for connecting to a network with Data Security enabled): Use Alphanumeric Characters (0 - 9, a - z, A - Z) or Use Hexadecimal (0 - 9, a - f, A - F).

3. Enter the encryption key in the Key field.

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10 Click Next.

The window shown below appears.
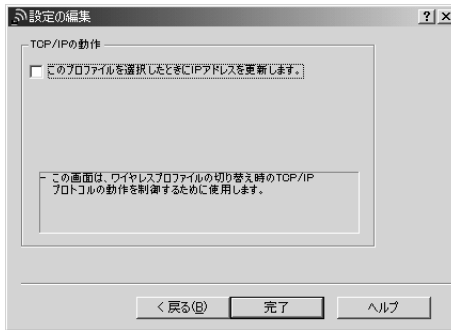
11 When using one Wireless LAN PC Card for multiple networks (such as in the workplace and at home), place a checkmark in Update IP address when this profile is selected <??>, and click Finish.

The Add/Edit Configuration Profile dialog box reappears.

12 Click OK to close the Add/Edit Configuration Profile dialog box.

13 Click OK to close the Client Manager window.

Windows XP

Establishing communication with the Access Point

This section describes how to make settings for communication with an Access Point. For information on settings when not using an Access Point, see Windows XP Help.

Before making the settings, the following tasks must be completed:

• Wireless LAN PC Card must be inserted in the computer.

• The Access Point must be installed at a distance that will allow communication with the computer where the Wireless LAN PC Card is inserted, and the Access Point must be turned on. For details, see the documentation of the Access Point.

• Check the Network Name (also called SSID) and the Data Security (also called WEP or Encryption) settings at the Access Point. For details about these settings, consult your network administrator. When using the Access Point in the factory default condition, the settings are listed in the documentation of the Access Point.

Note

Before configuring the Wireless LAN PC Card, perform the following steps to confirm that the Use Windows to configure my wireless network settings check box is selected. This option is selected as the default setting.

To confirm that the Use Windows to configure my wireless network settings check box is selected:

1. From the Start menu, select Control Panel, then double-click Network Connections.

2. Right-click Wireless Network Connection, and click Properties.

3. Click the Wireless Network tab.

4. Confirm that the Use Windows to configure my wireless network settings check box is selected. If it is not selected, select the checkbox.

1 Right-click "Wireless Network Connection" in the notification area of the taskbar. In the shortcut menu that appears, select View Available Wireless Networks.

The Connect to Wireless Network dialog box appears.
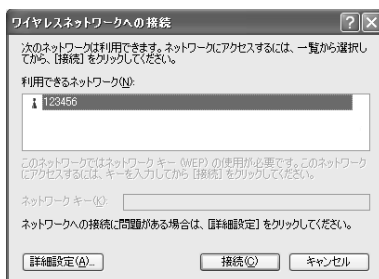
2 Click the Access Point to which you want to connect.

3 If Data Security (also called WEP or Encryption) is enabled at the Access Point, enter the encryption key in the Network key field.

- Input is case sensitive. Be sure to use the same upper case/lower case spelling as at the Access Point.

- The Data Security function serves to prevent unauthorized access to the network. If Data Security is not enabled at the Access Point, it is strongly recommended that you enable it after having checked that communication can be established. For details about changing the settings of the Access Point, see the documentation of the Access Point.

- After changing the settings of the Access Point, change the settings for the Wireless LAN PC Card accordingly.

ϔ **Tip**

When using the Sony Wireless LAN Access Point PCWA-A200, refer to the folder "manual" under the folder "A200Setup" on the supplied CD-ROM. This folder contains a PDF file that explains how to make settings for the PCWA-A200. To display PDF files, Adobe Acrobat Reader is required.

4 Click Connect.

The computer connects to the Access Point.

ϔ **Tip**

For details on making the connection, see Windows XP Help.

Checking the communication status

Checking the wireless signal strength

The communication status is shown by the Client Manager icon in the system tray (notification area in Windows XP).

Client Manager icon

Meaning of icon appearance		
(Green)	=	Excellent
(Green)	=	Good
(Yellow)	=	Fair
(Yellow)	=	Weak signal
(Red)	=	Out of range
(No color)	=	Operating in Peer-to-Peer Mode

Client Manager menus
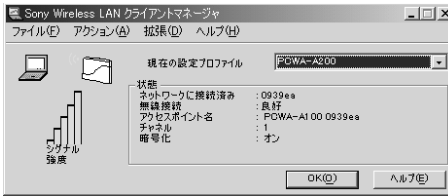
File menu

Enable Radio / Disable Radio

Enables or disables wireless communication.

Close Window

Closes the Client Manager window.

Actions menu

Add/Edit Configuration Profile

Serves for creating a new profile or editing an existing profile. In Windows XP, the connection function built into Windows XP is used, and this function is not available.

Select Configuration Profile

Serves for selecting an existing profile from a submenu. The selected profile is indicated by a preceding (●). In Windows XP, the connection function built into Windows XP is used, and this function is not available.

Advanced menu

Card Diagnostics

Performs a test of the software and hardware.

Link Test

Tests the communication status of the connected network. If the other link components (Access Point or other computer in Peer-to-Peer Mode) do not support this capability, the function is not available.

Site Monitor

Displays a site monitor screen which shows the communication status for all networks within range.

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Precautions

Safety

Do not drop or cause a mechanical shock to the 5GHz Wireless LAN PC Card PCWA-C500, as this may damage the unit.

Installation

Do not expose the Wireless LAN PC Card to the following conditions:

- Unstable surfaces
- High humidity or poor ventilation
- Excessive dust
- Direct sunlight or extreme heat
- Closed cars
- Magnetized location (near magnets, speakers, or televisions)
- Locations exposed to frequent vibration
- Locations where the transmission of radio waves may be obstructed by metal plates or concrete walls

Operation

If the Wireless LAN PC Card is moved directly from a cold location to a warm locations, 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.

Cleaning

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 benzene as it may damage the finish of the casing.

Specifications

Getting help

Protocol support
TCP/IP compliant

Standard
IEEE802.11a/IEEE802.11

Radio frequency
2.4 GHz

Modulation method
DS-SS (IEEE802.11 compliant)

General
Power requirements
    3.3 V/5 V (supplied from the computer
    through the PC card adapter)
Current
    Peak current at transmission: 560 mA
    Peak current at reception: 400 mA
Connector
    PC Card Card Type-II
Dimensions
    Approx. $2.12 \times 0.2 \times 3.54$ inches
    (Approx. $54 \times 5 \times 90$ mm) (w/h/d)
    (Antenna height: 0.47 inches (Approx. 12 mm))
Mass
    Approx. 1.23 oz (Approx. 35 g)
Operating temperature
    41°F to 95°F (5°C to 35°C) (not condensed)
Environment temperature
    -4°F to 140°F (-20°C to 60°C) (not
    condensed)

Supplied accessories
See "Unpacking" on page xx.

Design and specifications are subject to change
without notice.

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

About Sony's Support Options

Sony provides several support options for
your Wireless LAN PC Card. When you
have questions about your Wireless LAN
PC Card and its related software, check
these options for answers:

❐ **This Operating Instructions**
   explains how to use your Wireless LAN
   PC Card.

❐ **The Sony Wireless LAN PC Card
   support Web site
   http://www.sony.com/
   wirelesslansupport/** provides the
   latest information on your Wireless
   LAN PC Card. On this Web site, you
   will find:

   • Answers to Frequently Asked
     Questions (FAQs)

   • An electronic version of the
     Operating Instructions

   • Help files

   • Installation information

   • Software upgrades

❐ **The Sony e-mail support service**
   answers your questions by electronic
   mail. Just send your question in an e-
   mail message and a customer service
   representative will reply. To send a
   question to Sony e-mail support, fill out
   the e-mail form at
   **http://www.sony.com/
   wirelesslansupport/**

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❏ **The Sony fax-back service** provides you with answers to commonly asked questions. You can use this automated service to request a list of available topics then select the topics you want to receive. To contact the Sony fax-back service, call **1-877-760-7669**.

❏ **The Sony Customer Information Services Center** offers information about your Access Point, Wireless LAN PC Card, and other Sony products that work with your computer. To contact the Sony Customer Information Services Center, **call 1-877-760-7669. Open 24 hours/day, 7 days/week**. Getting Help

Glossary

Channel number

The frequency used for wireless communications. Wireless communications are possible only among client computers and Access Points that use the same channel.

Data Security

IEEE 802.11 compliant security system (also called WEP or Encryption). Using the encryption key as the password, only client computers and Access Points that have the same key may log onto the same wireless LAN.

Encryption key

See the explanation of Data Security

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.

TCP/IP (Transmission Control Protocol/Internet Protocol)

TCP is a connection-oriented protocol (a set of specifications that define the procedures for computers to follow when transmitting and receiving data). Because the Internet uses TCP/IP, a computer can only connect to the Internet when the TCP/IP protocol is installed on it.

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Troubleshooting

If there is an apparent problem with the system, check the points listed below. If you still cannot resolve the problem after performing these checks, contact Sony Customer Information Services.

Symptom	Cause/Remedy
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 the 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 onto the LAN. The Windows network environment is not properly set up. → Check the Windows network settings. For details, see Windows Help. No other computers are logged onto the wireless LAN.
Cannot access the Internet.	The Access Point is not connected to the Internet. → Connect the Access Point to the Internet, as described in the documentation of the Access Point. Wireless LAN PC Card is not inserted in the computer. → Insert the card, as described in "Inserting the Wireless LAN PC Card" on page 36. Communication between the Access Point and the computer is not established. → Use Client Manager to check the communication status. The Access Point is not properly configured. → Configure the Access Point according to its documentation. The Access Point and the computer are too far apart. → Reposition the computer within 100 m (330 feet) of the Access Point, in direct line of sight.
Data transfer speed is slow.	There is radio interference with another Access Point. → Try assigning another channel number to the Access Point. There are too many clients logging on to the Access Point. → Try later.

Symptom	Cause/Remedy
Forgot the encryption key.	→ Return Access Point to factory default settings and then configure it again. For details on how to do this, see the documentation of the Access Point.
Transfer rate is 11 Mbps, but MPEG2 data do not transfer without interruption.	11 Mbps is a theoretical value. Under real-world conditions, transfer rate will normally be in the range of 4 - 5 Mbps. This is true for all IEEE 802.11b compliant systems. The bandwidth available with wireless communications may not be sufficient for high-volume streaming data such as MPEG2.
Communication fails although the computer is located within 100 m (330 feet) of the Access Point.	The actual communication distance depends on various factors such as installation site conditions, presence of obstacles, etc. → Move the computer closer to the Access Point.
Link test results in many dropped messages.	The Access Point and the computer are too far apart. → Move the computer closer to the Access Point. File transfer is in progress on the network. → During transfer of large files, performance may temporarily drop. Repeat the test when the network is not being used for file transfer. There is radio interference. → If there is another wireless station nearby using the same channel, try changing the channel number. → If a Bluetooth enabled wireless device is being used nearby, stop using it at the same time. A microwave oven is being used nearby. → A microwave oven may also have an adverse effect on communication performance. Do not use it at the same time. **Notes** • When more than 2% messages are dropped, communication performance will be seriously affected. At 5% and higher, most applications will have trouble functioning. • Perform the link test for at least 1 minute continuously (minimum 200 messages) to ensure meaningful results.

Additional information

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Symptom	Cause/Remedy
Cannot connect to the network.	The Access Point and the computer are too far apart. ➔ Move the computer closer to the Access Point. Communication settings are incorrect. ➔ Check the settings for Network Name, Data Security, Profile, etc.
An error message indicating a conflict between network components is displayed.	Check the versions of related software and hardware, and obtain updates if required. To check the version, right-click the Client Manager icon on the taskbar, and select Help — Version Info from the submenu.

❒ **The Sony e-mail support service** answers your questions by electronic mail. Just send your question in an e-mail message and a customer service representative will reply. To send a question to Sony e-mail support, fill out the e-mail form at **http://www.sony.com/wirelesslansupport/**

❒ **The Sony fax-back service** provides you with answers to commonly asked questions. You can use this automated service to request a list of available topics and then select the topics you want to receive. To contact the Sony fax-back service, call **1-877-760-7669**.

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Open 24 hours/day, 7 days/week.

http://www.sony.net/
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