

# **Wireless LAN Card WLI2-CF-S11 User's Manual**

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## ■ Precautions for radio signals

- The wireless LAN card WLI2-CF-S11 has been approved for conformity to the engineering standards as the wireless facility for a radio station with the low power data communication system based on the Wireless Telegraphy Act. Therefore, use of this LAN card does not require any radio station license.
  
- Never use the WLI2-CF-S11 near the magnetic field around a microwave oven or in an area where static electricity and/or radio noise is generated. The radio signals may not be normally transmitted in these areas.
  - \* When the WLI2-CF-S11 is used near a wireless printer buffer (BUFFALO's RYP-G or similar products by other manufacturers) that use radio signals around 2.4 GHz, the processing speed of both devices may be adversely affected.
  
- As the WLI2-CF-S11 has been approved for conformity to the engineering standards, the following may be regarded as unlawful.
  - Disassembling/remodeling the WLI2-CF-S11
  - Removing the approval label from the rear of the WLI2-CF-S11
  
- When it is necessary to set a radio channel other than the initial setting in the WLI2-CF-S11, use the same frequency band as the following equipment or wireless stations
  - Industrial, scientific, or medical equipment
  - Radio station for mobile identification used such as on a manufacture line in a factory
    - ① On-premise radio station (requiring a license)
    - ② Specific low power radio station (requiring no license)
  
- Operating the WLI2-CF-S11 may cause interference with the above equipment or radio stations. Thus, take precautions for the following points
  - 1 Before using the WLI2-CF-S11, verify that no on-premise radio station for mobile identification or no specific low power radio station is operating near the WLI2-CF-S11.
  - 2 If an event of interference should be taken place by the WLI2-CF-S11 with an on-premise radio station for mobile identification,

immediately change the frequency for this product to prevent the interference.

- 3 If you notice any trouble such as an event of interference caused by the WL12-CF-S11 with a specific radio station for mobile identification, contact your nearest sales representative.

Operating frequency band	2.4GHz
Modulation method	DS-SS
Assumed interference distance	40 m or less
Frequency changeability	Uses the entire bandwidth, and can avoid the "on-premise radio station" and "specific lower power radio station" bands.

# Foreword

Thank you for purchasing BUFFALO's wireless LAN card WLI2-CF-S11. The WLI2-CF-S11 is installed for wireless LAN communication in computers equipped with a CompactFlash slot (type II) or PC card slot (type II).



Read this manual carefully before using the wireless LAN card to ensure correct operation.

## ■ For your safety, be sure to follow the instructions given below.







The following describes the instructions to avoid harming yourself, other people, and properties, and to ensure safe operation of this product. Be sure to read and understand them thoroughly before using this product. This manual also contains instructions concerning general operation of the computer system to which this product is connected as well as those concerning the product.

Please take note that our warranty will not cover any failures and problems of the computer, any losses and failures of data, or failures and problems of this product caused by misuse.

## Meanings of warning signs

 Warning	Failure to follow the instructions shown with this sign may result in a hazard or serious injury to the user.
 CAUTION	Failure to follow the instructions shown with this sign may result in injury to the user or property damage.

## ■ Meanings of symbols

	This indicates warnings and cautions. Specific instructions are given in or around $\triangle$ . (E.g.,  Exercise care to avoid an electric shock.)
	This indicates prohibited matters. Specific instructions are given in or around $\circ$ . (E.g.,  Do not disassemble.)
	This indicates compulsory rules. Specific instructions are given in or around $\bullet$ . (E.g.,  Disconnect the plug from the receptacle.)

### **WARNING**



No  
disassembly

Do not disassemble or modify the product.  
It may cause fire or electric shock.



Unplugging

Turn off the power to the computer and peripheral devices immediately and unplug them if you drop the product or it receives a severe physical shock. If you continue using them under such circumstances, a short circuit resulting in fire or electric shock may occur. Please contact your nearest sales representative.



Compulsory

Be sure to observe instructions by manufacturers of personal computers and peripherals when installing and using this product.



Unplugging

Turn off the power to the computer and peripheral devices immediately and unplug them if smoke or heat is generated. If you continue using them under such circumstances, a short circuit resulting in fire or electric shock may occur. Please contact your nearest sales representative.



## CAUTION



Compulsory

Never touch this product with wet hands when the power cable of this product is connected to the power outlet. It will cause electric shock.



Compulsory

Touch something made of metal (a door knob or aluminum window frame, for example) and release static electricity before touching the product to avoid damage caused by static electricity.

Static electricity generated around the human body may damage this product or delete or damage digital data.



Compulsory

Follow the local rules or regulations when disposing of this product.

Inquire of your local government about the applicable rules or regulations.



Compulsory

Be sure to create backup files on other media (floppy disk, MO disk, etc.) for your data on the hard disk.

We recommend that you create two backup copies of critical data, one before and one after the original data is updated. Data may be deleted or damaged when

- Data may be deleted or damaged when:
- Incorrect operation is performed.
- Data is affected by static electricity or electrical noise.
- Hardware is mechanically damaged or under maintenance.
- Your computer is turned on immediately after being turned off.
- Hardware is damaged in a natural disaster.


Note that We shall not be liable for any damages arising from loss or damage of digital data in any case.

## Using this manual


The following describes the notational conventions used in this manual. Please use care for the marks and notations to use this manual effectively.

### ■ Editorial marks and notations


#### Caution mark

 **Caution** Describes cautions when handling the product. If these instructions are not observed, injuries or mechanical damage may occur.

#### Note mark

 **Note** Describes supplementary information or items which should be understood when handling the product.

#### Reference mark

 **Reference** Indicates the page(s) containing related information.

- Descriptions enclosed by square brackets [ ] apply to the name of a menu, button, textbox, or checkbox to be selected during operation.
- Descriptions enclosed by double quotation marks " " primarily apply to the software, dialog box, message, or a title of a section to be referenced during operation.
- As a general rule, this manual primarily refers to the BUFFALO's wireless LAN card as the WLI-CF-S11G, a packet PC or handheld PC with Windows CE as a Windows CE device, and a personal computer with Windows Me/98/2000 as a Windows computer.
- As a general rule, this manual refers to a Windows CE device and a Windows computer each equipped with the BUFFALO's wireless LAN card as a wireless LAN computer.
- This manual clearly distinguishes between a cabled 10BASE-T/100BASE-TX LAN and a non-cabled LAN as follows  
Wired LAN·····LAN connected by cables  
Wireless LAN···LAN using wireless communication  
Note that these are not general terms and are used only for descriptions in this manual.

- All rights for this manual are owned by BUFFALO. No part of this manual may be transmitted, reproduced, or revised without permission from BUFFALO.
- Product names of other companies used in this manual are trademarks or registered trademarks of the respective companies.  
Trademark symbols <sup>TM</sup>, ®, © are not indicated in this manual.
- Specifications, design, and other descriptions included in this manual are subject to change without notice.

This manual is carefully prepared, however, feel free to contact your nearest sales representative if you have any questions or problems.

This product should be used as a general OA device in offices or at home. BUFFALO does not accept any liability if the product is used other than as a general OA device.

- Do not use this product for any device or system which requires high safety such as a medical device or any system which is directly or indirectly related to maintaining human life.
- If this product is used for any device or computing system which requires more reliability than general OA devices, please make sure that you take any necessary actions to ensure safety and prevent system malfunctioning.
- Be sure to follow the operation method described in this manual. In particular, never use this product in such a way as violating the method described as a caution.



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- 3.3 Connecting to the Network ..... 66

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# Chapter 1

## Before Operation

### ■ Overview

This chapter contains the outline of the product and the contents of the package. Be sure to read them so that you can smoothly proceed with the preparatory operations without trouble.



### 1.1 Product Outline

- About wireless LAN card WLI2-CF-S11 ..... 10 Page
- Wireless LAN network configuration ..... 12 Page

### 1.2 Contents of Package and Component Names

## 1.1 Product Outline

Please be aware of the following points before using the wireless LAN card WLI2-CF-S11.

### ■ About the wireless LAN card WLI2-CF-S11

The wireless LAN card WLI2-CF-S11 is installed for use in computers equipped with a Compact Flash slot (type II) or PC card slot (type II).

### Features

- 2.4 GHz low power data communication system (certification not required).
- Direct sequence spread spectrum (DS-SS) technology ensures high noise resistance.
- IEEE802.11b compliant, with a data rate of 11 Mbps even on a wireless LAN.
- Effective range is shown below;
  - 11 Mbps transmission: 160 m outdoors (estimated)
    - 50 m indoors (1) (estimated)
    - 25 m indoors (2) (estimated)
  - 2 Mbps transmission: 400 m outdoors (estimated)
    - 90 m indoors (1) (estimated)
    - 40 m indoors (2) (estimated)
  - 1 Mbps transmission: 550 m outdoors (estimated)
    - 115 m indoors (1) (estimated)
    - 50 m indoors (2) (estimated)
- ※ Indoors (1): .....Office with few obstacles  
Indoors (2): .....Office with many obstacles
- ※ The effective range is adversely affected by the operating environment. It may be reduced in the following locations.
  - Within a reinforced concrete building such as a condo, or a house with a metal frame
  - Near large metal furniture

- 40-/128-bit WEP compatible. (For more information, see "About WEP (Wired Equivalent Privacy) - Recommendation of Encryption -" on page 13.)
- ※ When using 128-bit WEP, all access points need to be compatible with the 128-bit WEP. (40-bit WEP and 128-bit WEP cannot be used at the same time.)

The WLI2-CF-S11 card can be used in computers with the compatible operating systems listed below.

## Applicable Computers

Personal computers equipped with a Compact Flash slot (type II) or PC card slot (type II) listed below.

- Pocket PC
- Handheld PC
- IBM AT compatible PC (OADG compliant)
  - ※ Installation of the card in a PC card slot (type II) requires the BUFFALO's card adapter WLI-CF-OP available separately.



- BUFFALO's print server LSP Series and network diagnostic tool NetSeeker are not supported.
- The Suspend/Resume feature is not supported.
- Dual-processor machine is not supported.

## Operating System

- ※ Windows CE3.0 (Handheld PC 2000, Packet PC), Windows ME/98/2000
- ※ The ACPI feature in Windows Me/98/2000 is not supported.

## ■ Wireless LAN network configuration

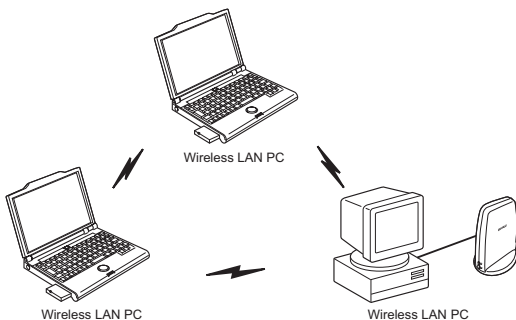
The following two methods are available for PC communications with the wireless LAN card.

**Note** This product can communicate with BUFFALO's LAN products, third-party wireless LAN products with Wi-Fi certified, and AirPort(\*).

※ Communication with AirPort requires BUFFALO's AirStation.

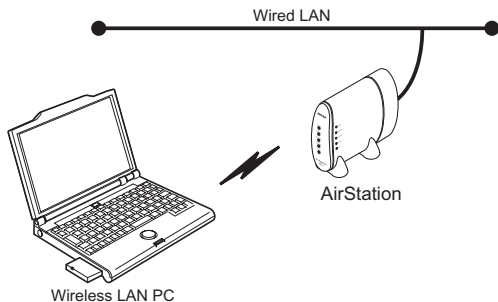
### <<Communicating with wireless LAN computers>>

You can configure the wireless LAN only network of the wireless LAN computers with BUFFALO's wireless LAN cards/adapters.



## ◀ Communicating via AirStation ▶

You can connect to the Internet or communicate with computers on the wired LAN via BUFFALO's AirStation.



### ■ WEP (Wired Equivalent Privacy) - Recommendation of Encryption

Since the wireless LAN card communicates using radio waves, radio packets could be intercepted and analyzed outside. To ensure transmission security, it is recommended to set a password called 'WEP' in the radio packets during communication.

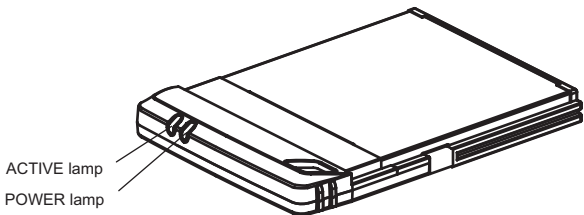
This card allows two types of WEP; 40-bit WEP and 128-bit WEP. Setting 128-bit WEP (13 alphabetic characters or 26 hex digits) assures higher security. However, when communicating with a wireless LAN product compatible only with 40-bit WEP (5 alphabetic characters or 10 hex digits), it is necessary to set the 40-bit WEP in this product.

※ For the WEP (encryption) setting in the AirStation, refer to the manual included in the AirStation.

## 1.2 Contents of Package and Component Names

The items listed below are included in the package. Please check the package and contact your nearest sales representative if any items are missing.

- Wireless LAN card ..... 1



Name	Function
POWER lamp	ON (green): During operation
ACTIVE lamp	ON (green): During data send/receive

- AirNavigator CD..... 1
- WLI2-CF-S11 User's Manual (this document)..... 1
- User registration card, warranty..... 1

### Note

- Be sure to read any additional information sheets provided in the package.



# Chapter 2 Windows CE Settings

## ■ Overview

This chapter describes how to make the settings for connecting your Windows CE device to a wireless LAN.

.....

### 2.1 Making the Wireless LAN Card Available

- Step 1** Before installing the wireless LAN card ..... 18 page
- Step 2** Installing the wireless LAN card drivers ..... 18 page
- Step 3** Installing the wireless LAN card ..... 20 page

### 2.2 Preparing for Connecting to the Network

- Step 4** Checking the "IP address" ..... 21 page

### 2.3 Connecting to the Network

- Step 5** -a Communicating via AirStation ..... 23 page
- Step 5** -b Communicating with wireless LAN computers ..... 27 page

Follow the procedure in the illustration below to connect your Windows CE device to a wireless LAN.

Making the wireless LAN card available (from page 18)

### Step 1

Connect a Windows computer and your Windows CE device via Microsoft ActiveSync.

### Step 2

Install the wireless LAN card drivers in the Windows computer.

Preparing for connecting to the network (from page 21)

### Step 4

Check the "IP address."

Connecting to the network (from page 23)

### Step 5 -a, b

Make the settings for access to the network.

- a. AirStation
- b. Wireless LAN computers

**Step 3**

Install the wireless LAN card in the Windows CE device.

To make the Air-Station settings, refer to the AirStation manual.

## 2.1 Making the Wireless LAN Card Available

Install the wireless LAN card to connect your Windows CE device to a wireless LAN.

### Step 1 Before installing the wireless LAN card

#### Microsoft ActiveSync

Connect the Windows CE device and the Windows computer using Microsoft ActiveSync so that you can install the wireless LAN card drivers. For how to use ActiveSync, refer to the manual included in the Windows CE device.

### Step 2 Installing the wireless LAN card drivers

Follow the procedure below to install the wireless LAN card drivers.

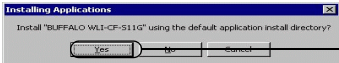
- Insert the "AirNavigator CD" into the CD-ROM drive of the Windows computer.



Be sure to use the latest AirNavigator CD of version 3.62 or later. Note that the AirStation may include an AirNavigator CD of earlier version than 3.62.

**Caution** When you insert the "AirNavigator CD" into the CD-ROM drive, the Simple Installation Wizard window may automatically appear. In this case, click [ Exit ] to close.

2 Double-click the [CFS11G] folder in the CD-ROM, and then the [CESETUP] file.

3  **1 Select**  
Click [Yes].

4 When the message "Application Downloading Complete" appears, click [OK].

**Note** The message "Please check your mobile device screen to see if additional steps are necessary to complete this installation." appears, but you do not need to do so here.

5 Turn off the Windows CE device.

Now you have completed the installation of the wireless LAN card drivers.

### Step 3 Installing the wireless LAN card

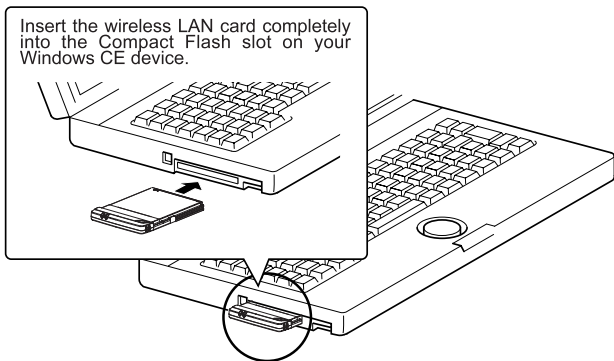
Install the wireless LAN card in the Compact Flash slot (type II) of the Windows CE device.

#### Precautions for installation/removal

- Be sure to handle the Windows CE device and its peripherals in such a way as described in the manual of each unit.
- Make sure that the Windows CE device is turned off before installing/removing the wireless LAN card in/from that device.
- Completely remove any dust from the connectors.
- Never touch the connector portion of the wireless LAN card.
- Use great care for the connector location of the wireless LAN card when installing the card in the Windows CE device. The connector may be damaged if it is forced.

### Installing the wireless LAN card in the Windows CE device

Follow the instructions in the illustration below when installing the wireless LAN card in the Windows CE device.



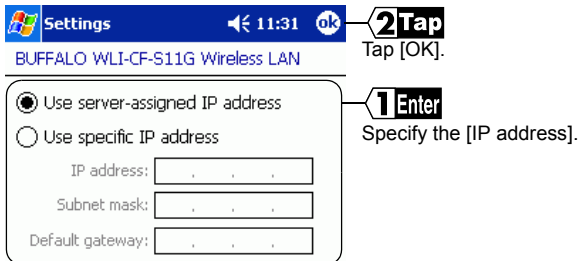
## 2.2 Preparing for Connecting to the Network

After installing the wireless LAN card in the Windows CE device, prepare for connecting to the network.

**Reference** For detailed information, refer to the manual included in the Windows CE device or open the Windows CE Help.

### Step 4 Checking the "IP address"


- 1 When the wireless LAN card is successfully installed, the Windows CE device is automatically turned on to display the window shown below.



- When a DHCP server exists within the network (e.g., when the DHCP server function of the AirStation is used), select [Use server-assigned IP address].
- To manually set the IP address, select [Use specific IP address]. Inquire the IP address, Subnet mask, and Default gateway from your network administrator.

⇒ Continued on next page

- For the IP address setting, see "I don't know how to assign the IP address" on page 122 in Chapter 5.

 **Caution** If Wireless LAN Card is not operating normally, the message of the meaning "Input the device driver name of this card." is displayed.

Refer to "**Step 2** Installing the wireless LAN card drivers" and install driver again.

### **To make the AirStation settings**

With the AirStation manual, make the AirStation settings on a wireless LAN computer excepting a Windows CE machine.

- ※ When you make the AirStation settings using the "AirNavigator CD," be sure to use the latest version of 3.62 or later.

### **To directly connect to the wireless LAN**

Make the settings on the Windows CE device according to **Step 5** on page 23 and subsequent.



## 2.3 Connecting to the Network

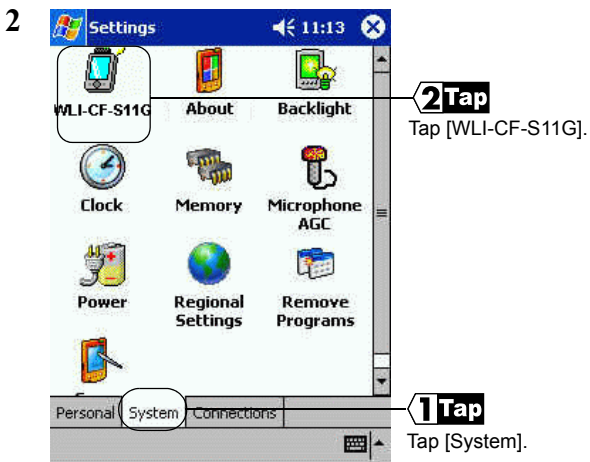
Upon completion of necessary settings, you can connect to the network. There are two methods for connecting the Windows CE device to the network as shown below.

- Communicating via AirStation **Step 5 -a**
- Communicating with wireless LAN computers **Step 5 -b**

### Step 5 -a Communicating via AirStation

To make communications using the AirStation, make the settings in the Windows CE device as described below.

1 Select [Start]-[Settings].



⇒ Continued on next page

3



Profile: **Default** ▼

Mode: Infrastructure ▼

SSID: ANY ▼

Transmit Rate: Fully Automatic ▼

Power Save Enabled

AdHoc Channel: 11 ▲▼

Defaults

Undo

Apply

**1 Enter**

Make a configuration if necessary.

**2 Tap**

Tap [Apply].

Link	Configuration	Encryption	About	
				A ▲

The settings are saved with a text typed in the [Profile] field as a name.

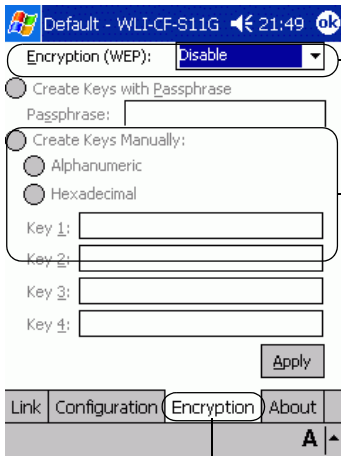
Select Infrastructure for [Mode].

Input the ESS-ID of the target AirStation to [SSID]. The initial setting of the AirStation ESS-ID shows the last six digits of the MAC address of the AirStation plus "GROUP" (upper-case).

Select Fully Automatic for [Transmit Rate].

Do not put a checkmark for [Power Save Enabled] as it may disable normal communication.

4

**2 Select**

Select the WEP type (40-bit or 128-bit) if encryption with WEP is used in the network. If the AirStation is still in the initial state, no encryption is set. Select Disable in this case.

**3 Enter**

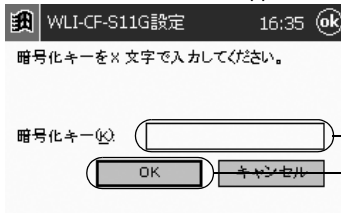
Select [Create Keys Manually] and input an encryption key to the Key 1 field.

- To use a hexadecimal value, directly input to the Key 1 field.
- To use a character string, tap [Alphanumeric] (see below).

**1 Tap**

Tap [Encryption].

《To use a character string for the encryption key》  
The window shown below appears.

**1 Enter**

Input a character string to the [暗号化キー] field.

**2 Tap**

Tap [OK].  
The window in Step 4

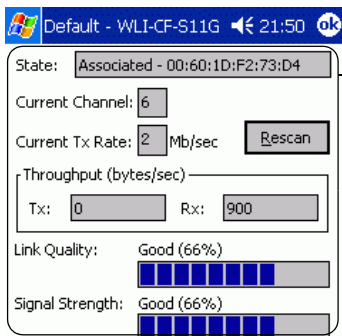
**5** Tap [Apply].

⇒ Continued on next page

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WindowsCE編

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**2 Check**

You can check the wireless-side MAC address, current radio channel, current transmission rate, data communication status, link quality, and signal strength of the connected AirStation. When "Associated" appears for the [State], the connection to the AirStation is successfully complete.

**1 Tap**

Tap [Link].

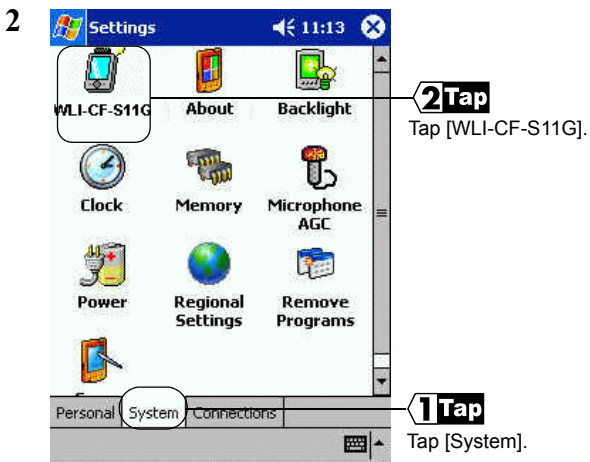
**Note**

If you cannot communicate with the AirStation, check the ESS-ID and WEP settings of the AirStation, and then repeat from Step 1.

## Step 5 -b Communicating with wireless LAN computers

When communicating with wireless LAN computers using Microsoft ActiveSync, it is necessary to make the Windows CE device settings shown below.

1 Select [Start]-[Configure].



⇒ Continued on next page

3



Profile: **Default**

Mode: Pseudo AdHoc

SSID: ANY

Transmit Rate: Fully Automatic

Power Save Enabled

AdHoc Channel: 11

Defaults Undo **Apply**

**1 Enter**

Make a configuration if necessary.

**2 Tap**

Tap [Apply].



The settings are saved with a text typed in the [Profile] field as a name.

Select Pseudo AdHoc for [Mode].

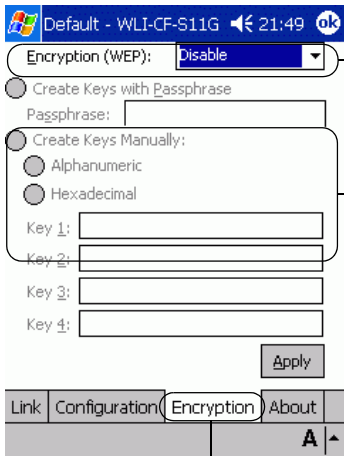
You do not have to input data to [SSID].

Select Fully Automatic for [Transmit Rate].

Do not put a checkmark for [Power Save Enabled] as it may disable normal communication.

Select the same channel as the communicated wireless LAN computers for [AdHoc Channel].

4



**2 Select**

Select the WEP type (40-bit or 128-bit) if encryption with WEP is used in the network. If the AirStation is still in the initial state, no encryption is set. Select Disable in this case.

**3 Enter**

Select [Create Keys Manually] and input an encryption key to the Key 1 field.

- To use a hexadecimal value, directly input to the Key 1 field.
- To use a character string, tap [Alphanumeric] (see below).

**1 Tap**

Tap [Encryption].

《To use a character string for the encryption key》

The window shown below appears.

1. Input a character string to the [encryption key] field.
2. Tap [OK].

3. The window in Step 4 appears.

**5** Tap [Apply].

⇒ Continued on next page

2

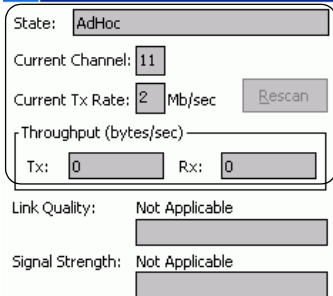
WindowsCE編

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**3 Tap**

Tap [OK].



**2 Check**

You can check the connection mode (AdHoc), current radio channel, current transmission rate, and data communication status.

The link quality and signal strength will not be displayed.



**1 Tap**

Tap [Link].

Now you can communicate with the computers set in the same radio channel.

**▶ Reference** For the ActiveSync setting, refer to the ActiveSync manual or Help.



# Chapter 3

## Windows Me/98 Settings

### ■ Overview

This chapter describes how to make the settings for connecting your Windows Me/98 computer to a wireless LAN.

.....

### 3.1 Making the Wireless LAN Card Available

- Step 1** Before installing the wireless LAN card 34 page
- Step 2** Installing the wireless LAN card .....40 page
- Step 3** Installing the wireless LAN card drivers .....43 page
- Step 4** Confirming that the installed wireless LAN card is normally operating .....48 page

### 3.2 Preparing for Connecting to the Network

- Step 5** Confirming "TCP/IP" and "Client for Microsoft Networks" .....50 page
- Step 6** Adding "File and printer sharing for Microsoft Networks" .....57 page
- Step 7** Checking the computer name and workgroup name .....58 page
- Step 8** Installing Client Manager .....59 page

### 3.3 Connecting to the Network

- Step 9** -a Communicating via AirStation .....63 page
- Step 9** -b Communicating with wireless LAN computers .....65 page
- Step 10** Making your computer shared .....67 page
- Step 11** Starting communication .....68 page

Follow the procedure in the illustration below to connect your Windows Me/98 computer to a wireless LAN.

Making the wireless LAN card available (from page 34) -----

### Step 1

Check the configuration of the drives on your Windows computer and confirm that its PC card driver operates normally.

### Step 2

Install the wireless LAN card in the Windows computer.

Preparing for connecting to the network (from page 52) -----

### Step 5

Confirm that the "TCP/IP" and "Client for Microsoft Networks" are installed.

### Step 6

Add "File and printer sharing for Microsoft Networks."

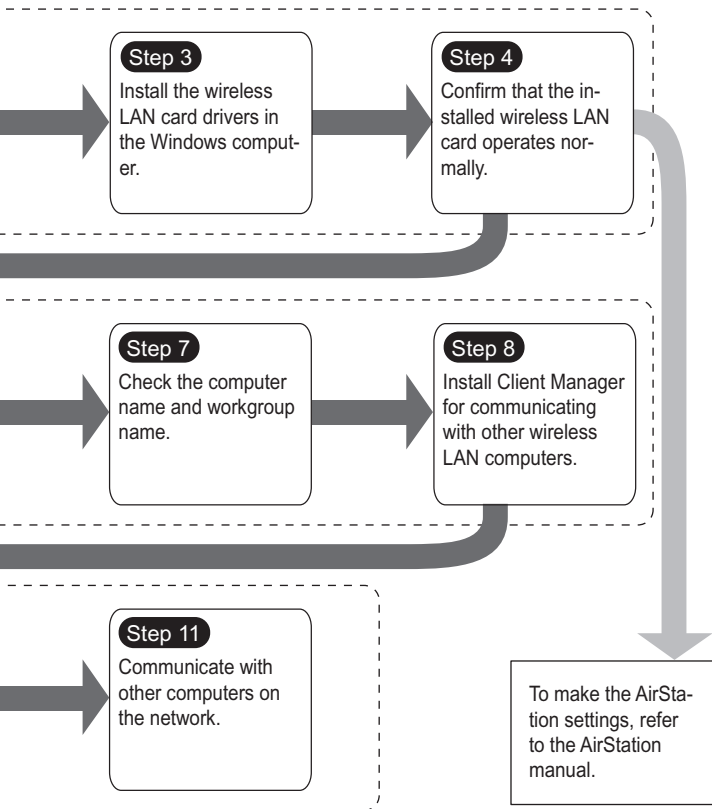
Connecting to the network (from page 66) -----

### Step 9 -a, b

Make the settings for access to the network.  
a...AirStation  
b...Wireless LAN computers

### Step 10

Make the wireless LAN computer shared.



## 3.1 Making the Wireless LAN Card Available

Install the wireless LAN card to connect your Windows Me/98 computer to a wireless LAN.

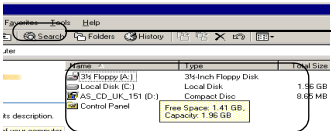
### Step 1 Before installing the wireless LAN card

#### Checking the configuration of your drives

Follow the procedure below to check the configuration of the drivers on your Windows computer in which the wireless LAN card will be installed. The following procedure uses Windows Me for example.

- 1 Turn on the computer to boot Windows.
- 2 Double-click [My Computer] on Desktop.

3



The screenshot shows the 'My Computer' window in Windows Me. The window title is 'My Computer'. The menu bar includes 'File', 'View', and 'Help'. The address bar shows 'E:\'. The toolbar includes 'Search', 'Folders', 'History', and 'View'. The main area displays a list of drives with columns for 'Name', 'Type', and 'Total Size'. A tooltip is visible over the 'AS\_CD\_UK\_151 (D:)' drive, showing 'Free Space: 1.41 GB' and 'Capacity: 1.96 GB'. A callout box with the number '1' and the word 'Select' points to the 'View' menu, with the text 'Select [View]-[Detail]'. Another callout box with the number '2' and the word 'Check' points to the drive list, with the text 'Check the drive names listed in the window.'

Name	Type	Total Size
3 1/2 Floppy (A:)	3 1/2-Inch Floppy Disk	
Local Disk (C:)	Local Disk	1.96 GB
AS_CD_UK_151 (D:)	Compact Disc	8.66 MB
Control Panel		




Free Space: 1.41 GB  
Capacity: 1.96 GB

**1 Select**  
Select [View]-[Detail].

**2 Check**  
Check the drive names listed in the window.

These displayed drive names will be necessary in the subsequent procedures. Be sure to take note of these drive names in the table on the upper right of the next page.

## Drive names on your computer

Drive Type	Icon	Drive Name (e.g.)
3.5" FDD		(A:)
HDD (local disk)		(C:)
CD-ROM		(D:)

### Note

If your computer has only one PC card slot

If the CD-ROM drive is connected via the PC card to a computer with only one PC card slot, the CD-ROM drive and this wireless LAN card cannot be used at the same time. Execute the following steps before installing the PC card driver.

- 1 Connect the CD-ROM drive to the computer.
- 2 Insert the "AIRCONNECT Series Driver CD" into the CD-ROM drive.
- 3 Create a new folder (directory) on the hard disk, and copy all files from the CD-ROM to that folder.

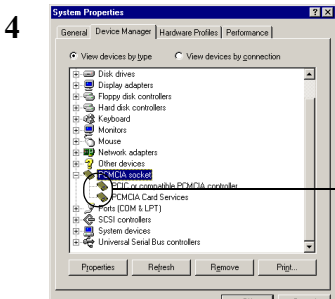
When you are prompted for the "AIRCONNECT Series Drier CD" during installation, specify the folder to which the files were copied in the above Step 3.

⇒ Continued on next page

## Checking the PC card driver

Follow the procedure below to verify that the PC card driver on the computer in which the wireless LAN card will be installed is operating normally.

- 1 Right-click [My Computer] on Desktop.  
Click [Properties].
- 2 Click the [Device Manager] tab.
- 3 Click the "+" mark on the left of [PCMCIA socket].



**1 Check**  
Confirm that the "x" mark is not indicated for the icon under [PCMCIA socket].

**Note** The displayed PCMCIA socket name varies with the computer model.

If such an error mark as "!" or "x" is not indicated, the PC card driver is operating normally.

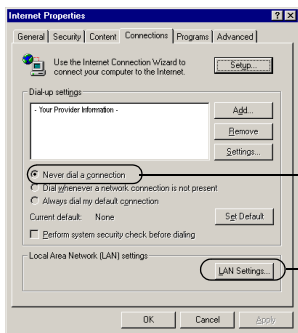
**Caution** If the icon displayed under [PCMCIA socket] appears with the ! or x mark, refer to the manual included in the computer and activate the PC card driver.

## Checking the browser settings (only for using the AirStation)

When you use the AirStation, invalidate the dial-up settings and proxy settings under the browser settings.

The following procedure uses Internet Explorer 5.0 or later for example.

- 1 Select [Start]-[Settings]-[Control Panel].
- 2 Double-click [Internet Options].
- 3 Double-click the [Connections] tab.
- 4



### 1 Click

When the provider information is listed in the [Dial-up settings] area, click the  mark on the left side of [Never dial a connection] below the area to put a dot mark.

### 2 Click

Click [LAN settings] in the "Local Area Network (LAN) settings" area.

⇒ Continued on next page

## 5 Confirm the items with a checkmark.

For memorandum, put a checkmark for the same items below.

- Automatically detect settings
- Use automatic configuration script
- Use a proxy server
- Bypass proxy server for local addresses

## 6 Upon completion of confirming the items with the checkmark, remove the checkmark from all the items.

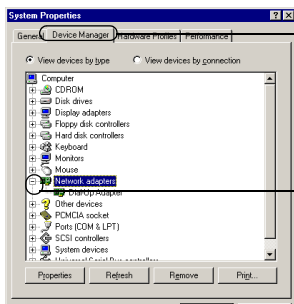
## Checking the network adapter

Confirm the current settings of the network function.

### 1 Select [Start]-[Settings]-[Control Panel].

### 2 Double-click [System].

### 3



**1 Click**

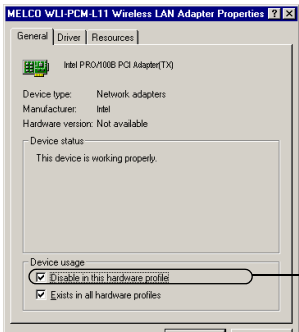
Click [Device Manager].

**2 Click**

With [View devices by type] selected, click the "+" mark on the left side of [Network adapters]. The current adapters are listed.



- 4** Disable a LAN board or card if any name.  
If there is no LAN board or card name listed, proceed to Step 5.



**1 Click**

Put a checkmark for "Disable in this hardware profile."


- 5** If any name beginning with "AOL" is found under [Device Manager]-[Network adapters], disable it in the same manner as Step 4.
- 6** Click [OK] to close the [Device Manager].




If you have disabled any driver in Steps 4 and/or 5, restart the computer.

## **Step 2** Installing the wireless LAN card

The wireless LAN card can be installed/removed in/from the computer which is in the ON state.

 **Caution** If your computer is equipped with a power management function that automatically cuts power supply to the computer when it is left idle for a certain period, turn the function off. The wireless LAN card may be disabled if the power management function starts.

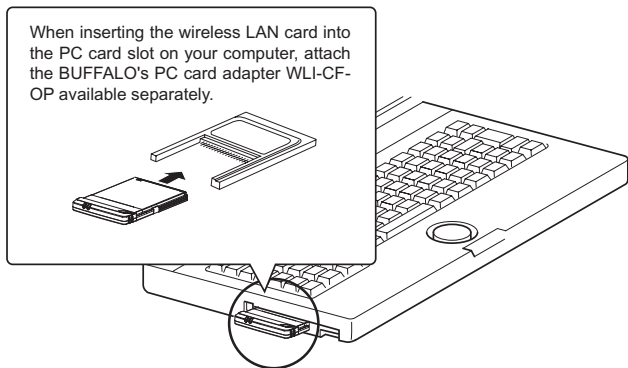
Refer to the manual provided with the computer for details on the power management function.

 **Caution** Precautions for installation/removal

- Be sure to handle the computer and its peripherals in such a way as described in the manual of each unit.
- Completely remove any dust from the connectors.
- Never touch the connector portion of the wireless LAN card.
- Use great care for the connector location of the wireless LAN card when installing the card in the computer. The connector may be damaged if it is forced.
- The wireless LAN card can be inserted and removed with the computer turned on (Hot Swap feature). However, you should set the wireless LAN card in a safely removable state on Windows before removing it. See "When removing the wireless LAN card" on page 42.

## Installing the wireless LAN card in a notebook computer

Follow the instructions in the illustration below when installing the wireless LAN card in a notebook computer.

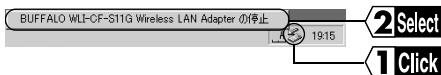


When your computer is equipped with two card slots  
As this wireless LAN card has a protruding section for the built-in antenna, the upper slot may be blocked when the lower one is occupied with this card.  
Place this wireless LAN card in the upper slot.

**Note** When removing the wireless LAN card

Follow the procedure below to remove the wireless LAN card when the computer is running. The following procedure uses Windows ME for example.

- 1 Click the removal icon  in the task tray, and select "Stop BUFFALO WLI-CF-S11G Wireless LAN Adapter."



- ※ The removal icon may be [ ] on Windows 98.
  - ※ The message displayed when you click the icon varies with the Windows version.
  - ※ If you cannot find the icon, see the Windows Help.
- 2 When the message "The 'BUFFALO WLI-CF-S11G Wireless LAN Adapter' device can now be safely removed from the system." is displayed, click [OK].
    - ※ The message to be displayed varies with the Windows version.
  - 3 Remove the wireless LAN card from the computer.

### Step 3 Installing the wireless LAN card drivers

Please check the configuration of the drives on your computer (page 34) before installing the drivers.

In addition, confirm that the PC card driver is normally operating on your computer (page 36).


The procedure for installing the wireless LAN card drivers varies with Windows Me/98. Use the procedure applicable to your computer as shown below.

Windows ME user :

See <<Windows ME>> below.


Windows 98 user :


See <<Windows 98>> on page 46.

 **Note** Turn on the computer.


#### 《WindowsMe》


- 1 The installed wireless LAN card is recognized and the [Add New Hardware Wizard] window appears.

 **Caution** If the Wizard window does not appear, see "The wireless LAN card installation window does not appear." on page 102 in Chapter 5.


- 2  Insert the "AirNavigator CD" into the CD-ROM drive.

⇒ Continued on next page

 Be sure to use the latest AirNavigator CD of version 3.62 or later. Note that the AirStation may include an AirNavigator CD of earlier version than 3.62.

 When you insert the "AirNavigator CD" into the CD-ROM drive, the AirNavigator Menu window may automatically appear. In this case, click [Exit] to close the window.

- 3**
1. Select [Automatic Search for a better driver (recommended)].
  2. Click [Next].

 If the "Copying Files..." window appears, take the following steps before proceeding to Step 4.

1. "D:\CFS11G" (when the CD-ROM drive is "D:").
2. Click [OK].

- 4** When the message "Windows has finished installing the new hardware device." appears, click the [Finish] button.

- 5**  Eject the "AirNavigator CD" from the CD-ROM drive.

- 6** When the message "Do you want to restart your computer now?" appears, click [Yes].  
The computer restarts.

- 7 1. Enter your "User name" and "Password."
2. Click [OK].

The above window may not appear, but it is not a problem.

The password field may be left empty.

When you enter a password for the first time, the entered character string will be registered as your password.

Since the password is case-sensitive, use great care when you enter the password.

When you click [Cancel], you cannot connect to the network. Be sure to click [OK].

Now you have completed the installation of the wireless LAN card drivers.

Proceed to " **Step 4** Confirming that the installed wireless LAN card is normally operating" on page 50.

## 《Windows98》


- 1 The installed wireless LAN card is recognized and the [Add New Hardware Wizard] window appears.  
Click [Next].




**Caution** If the Wizard window does not appear, see "The wireless LAN card installation window does not appear." on page 102 in Chapter 5.

- 2 1. Select [Search your best driver for your device (recommended)].  
2. Click [Next].

- 3  Insert the "AirNavigator CD" into the CD-ROM drive.

 Be sure to use the latest AirNavigator CD of version 3.62 or later. Note that the AirStation may include an AirNavigator CD of earlier version than 3.62.

 When you insert the "AirNavigator CD" into the CD-ROM drive, the AirNavigator Menu window may automatically appear. In this case, click [Exit] to close the window.

- 4 1. Select "Specify location..."  
2. Enter "D:\CFS11G" (when the CD-ROM drive is "D:").  
3. Click [Next].
- 5 1. Confirm that "BUFFALO WLI-CF-S11G Wireless LAN Adapter" is displayed.  
2. Click [Next].
- 6 When the message " Please insert the disk labeled 'Windows 98 CD-ROM', and then click OK. " appears, take the following steps before proceeding to Step 6.
  - 1 Insert the Windows 98 CD-ROM into the CD-ROM drive.  
Click [OK].



- 2 Enter "D:\WIN98" to the "Copy files from" field (when the CD-ROM drive is "D:").  
Click [OK].

7 Click [Finish]

8 When the message "Do you want to restart your computer now?" appears, click [Yes].  
The computer restarts.

9 Enter your "User name" and "Password."  
Click [OK].

The above window may not appear, but it is not a problem.

The password field may be left empty.

When you enter a password for the first time, the entered character string will be registered as your password.

Since the password is case-sensitive, use great care when you enter the password.

When you click [Cancel], you cannot connect to the network. Be sure to click [OK].

Now you have completed the installation of the wireless LAN card drivers.

Proceed to " **Step 4** Confirming that the installed wireless LAN card is normally operating" on page 50.

## **Step 4** Confirming that the installed wireless LAN card is normally operating

Upon completion of the installation of the wireless LAN card drivers, confirm that the installed wireless LAN card is normally operating by using the procedure below.

- 1** Right-click [My Computer] on Desktop.  
Click [Properties].
- 2** Click the [Device Manager] tab.
- 3** Confirm that "BUFFALO WLI-CF-S11G Wireless LAN Adapter" is displayed under [Network adapters] without any error mark ("x" or "!") indicated.

When "BUFFALO WLI-CF-S11G Wireless LAN Adapter" is displayed without any error mark ("x" or "!"), your wireless LAN card is normally operating.

### **If no driver name is listed or an error mark ("x" or "!") is indicated**

Your installed wireless LAN card is not normally operating in this case. See "I want to uninstall the wireless LAN card" on page 106 in Chapter 5, and then uninstall and re-install the wireless LAN card drivers.

#### **To make the AirStation settings**

Refer to the AirStation manual to make the AirStation settings.

## 3.2 Preparing for Connecting to the Network

Upon completion of confirming that the installed wireless LAN card is normally operating, prepare for connecting to the network.

This section describes how to make the settings in the following operating environment. Use the settings on the computer to be connected to the network for reference.

- OS..... WindowsMe
- Protocol..... TCP/IP
- Client..... Microsoft Network Client
- Service..... File and printer sharing for Microsoft Networks

**Reference** For detailed information, refer to the manual provided with Windows Me/98 and Help file.

### Step 5 Confirming "TCP/IP" and "Client for Microsoft Networks"

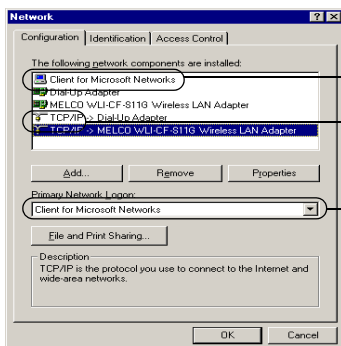
For example, the procedure below applies to the Windows Me computer.

- 1 Start your computer.
- 2 Select [Start]-[Settings]-[Control Panel].
- 3 Double-click [Network].
- 4 Confirm that "TCP/IP" and "Client for Microsoft Networks" are displayed in the [The following network components are installed:] field of the [Configuration] window.

**Note** When "TCP/IP" is not displayed, see Caution on page 56 to add the TCP/IP.

When "Client for Microsoft Networks" is not displayed, see Caution on page 58 to add Microsoft Network Client.

《When only the wireless LAN card is installed》



**1 Check**

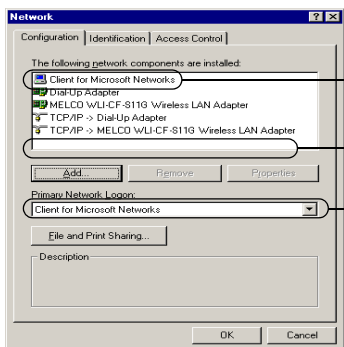
Confirm that "TCP/IP" and "Client for Microsoft Networks" are listed.

**2 Check**

Confirm that "Client for Microsoft Networks" is displayed.

⇒ Continued on next page

《When dial-up adapters and/or other LAN boards are installed》



**1 Check**

Confirm that "TCP/IP" and "Client for Microsoft Networks" are listed.

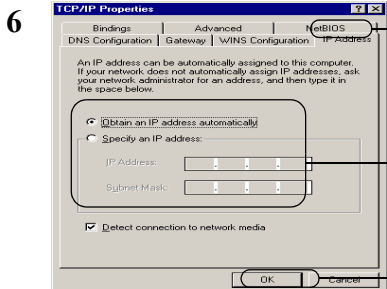
**2 Check**

Confirm that "Client for Microsoft Networks" is displayed.

The following appears in the "The following network components are installed:" field. However, this does not imply any problem.

"TCP/IP->BUFFALO WLI-CF-S11G Wireless LAN Adapter"

- 5 1. Select "TCP/IP."
2. Click [Properties].



**1 Select**

Click the "IP Address" tab.

**2 Enter**

Enter the IP address.

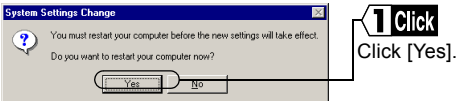
**3 Click**

Click [OK].

- When a DHCP server exists within the network (e.g., when the DHCP server function of the AirStation is used), select [Obtain IP Address Automatically].
- To manually set the IP address, select [Specify an IP address]. Inquire the IP address and Subnet mask from your network administrator.
- For the IP address setting, see "I don't know how to assign the IP address" on page 122 in Chapter 5.

**7** When the window in Step 5 appears again, click [OK] to close the "Network" window.

**8**



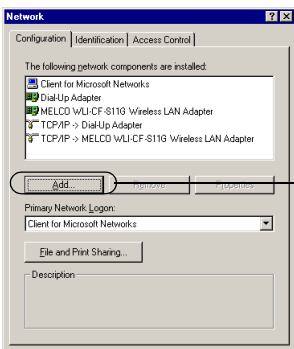
**1 Click**  
Click [Yes].

**9** Windows Me will restart.

Now you have completed the TCP/IP settings on the computer which will use a wireless LAN.

**Caution** If "TCP/IP" is not displayed, use the procedure below to add the TCP/IP.

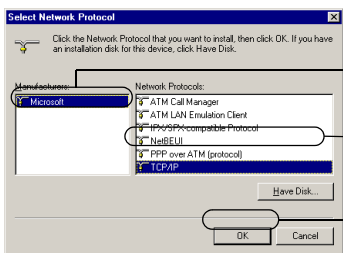
1



**1 Click**  
Click [Add].

1. Select [Protocol].
2. Click [Add].

3



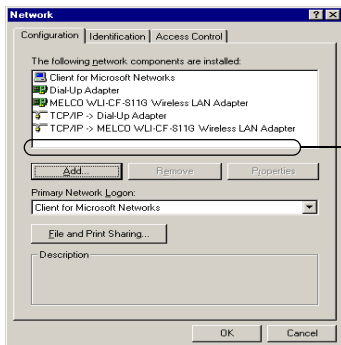
**1 Select**  
Select "Microsoft" for [Manufacturers].

**2 Select**  
Select "TCP/IP" for [Network Protocols].

**3 Click**  
Click [OK].

3

4

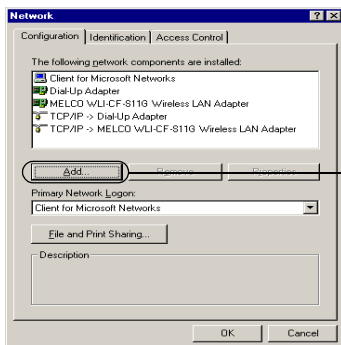


1 Check

Confirm that the TCP/IP has been added.

When "Client for Microsoft Networks" is not displayed, use the procedure below to add the Microsoft Network Client.

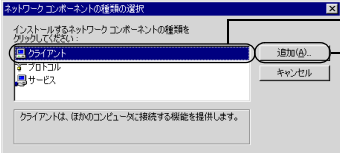
1



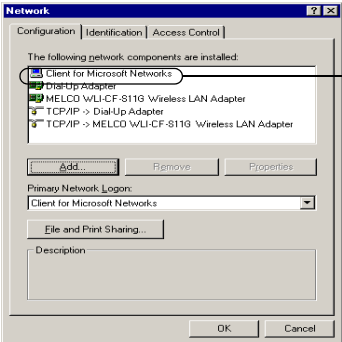
1 Click

Click [Add].



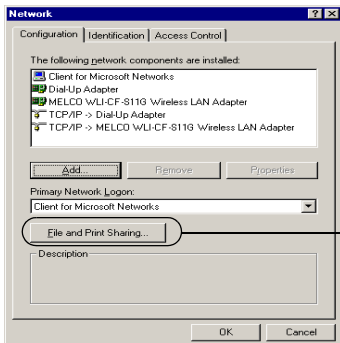
- 2
- 
- 1 **Select**  
Select [Client].
- 2 **Click**  
Click [Add].

- 3
1. Select "Microsoft" for [Manufacturers].
  2. Select "Client for Microsoft Networks" for [Network Clients].
  3. Click [OK].

- 4
- 
- 1 **Check**  
Confirm that the Microsoft Network Client has been added.

## Step 6 Adding "File and printer sharing for Microsoft Networks"

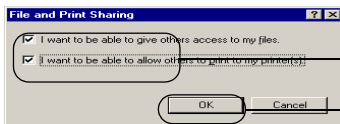
1



**1 Click**

Click [File and Print Sharing].

2

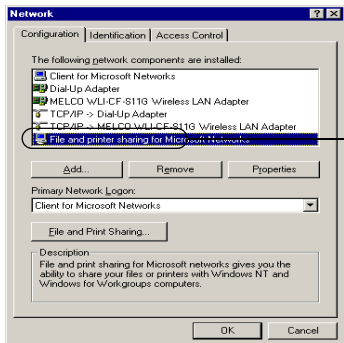


**1 Click**

Click the checkbox to put a checkmark for both "I want to be able to give others access to my files." and "I want to be able to allow others to print to my printer(s)."

**2 Click**

Click [OK].



### 1 Check

Confirm that "File and printer sharing for Microsoft Networks" has been added.

## Step 7 Checking the computer name and workgroup name

### 1 Click the [Identification] tab.

Check the [Computer name],[Workgroup],and [Computer Description]. Click [OK].

It is recommended to use alphanumeric characters for the [Computer name] and [Workgroup].



If a specific character such as a period (.) is included, the computer may fail in connecting to the network.



The same workgroup name must be assigned to all the computers included in the network.


⇒ Continued on next page


## **Step 8** Installing Client Manager


"Client Manager" is a tool for communicating with wireless LAN computers directly or via AirStation. It is necessary to install Client Manager in all wireless LAN computers.

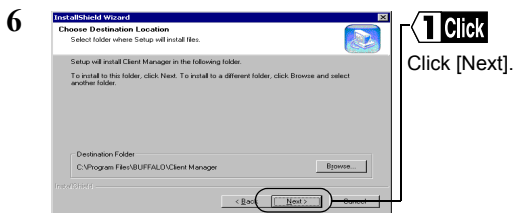
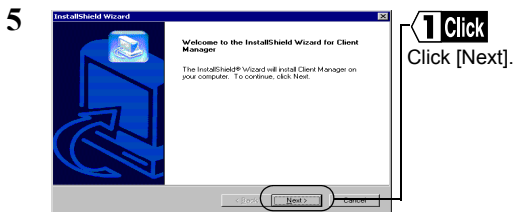
Use the procedure below to install Client Manager.

- 1  Insert the "AirNavigato CD" into the CD-ROM drive.

 **Caution** Be sure to use the latest AirNavigato CD of version 3.62 or later. Note that the AirStation may include an AirNavigator CD of earlier version than 3.62.

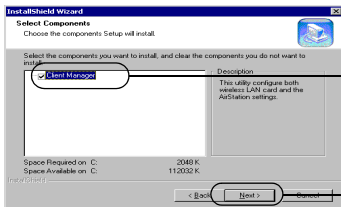
 **Caution** When you insert the "AirNavigato CD" into the CD-ROM drive, the AirNavigator menu window may automatically appear. In this case, proceed to Step 4.

- 2 Double-click [My Computer] on Desktop.
- 3 Double-click the CD-ROM icon (  )
- 4 1. Select [Install the Client Manager].  
2. Click [Next].



⇒ Continued on next page

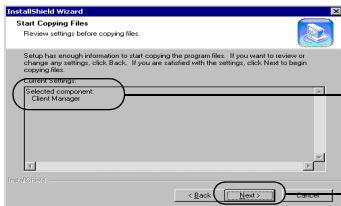
7



**1 Select**  
Select "Client Manager"

**2 Click**  
Click [Next].

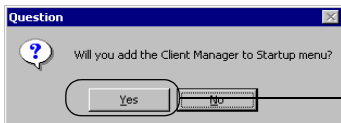
8



**1 Check**  
Reconfirm the component to be installed.

**2 Click**  
Click [Next].  
Copying the files required for the installation will start.

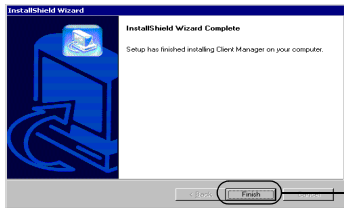
9



**1 Click**  
Click [Yes].  
Client Manager will be registered in the Startup menu.

Click [No] when you do not wish to add Client Manager to the Startup menu.

10



**1 Click**

Click [Finish].

Now you have completed the Client Manager installation process.

## To uninstall Client Manager

- 1 Select [Start]-[Settings]-[Control Panel].
- 2 Double-click "Add/Remove Programs."
- 3 Select "Client Manager" and click [Add/Remove].
- 4 Select "Remove" and click [Next].
- 5 When the message "Do you want to completely remove the selected application and all of its components? " appears, click [OK].
- 6 When the "InstallShield Wizard Complete" window opens, click [Finish].

3

Windows Me/98 備註

## 3.3 Connecting to the Network

Upon completion of computer settings, you can connect your computer to the network. There are two methods for connecting the computer to the network as shown below.

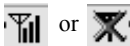
- Communicating via AirStation **Step 9** -a
- Communicating with wireless LAN computers **Step 9** -b

### Step 9 -a Communicating via AirStation

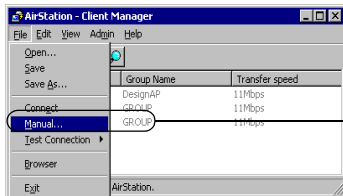
To make communications using the AirStation, set the ESS-ID using Client Manager.

- 1 Select [Start]-[Programs]-[AirStation Utility]-[Client Manager].

If the icon below appears in the task tray in the lower right on the screen, you can double-click that icon to start Client Manager.



2

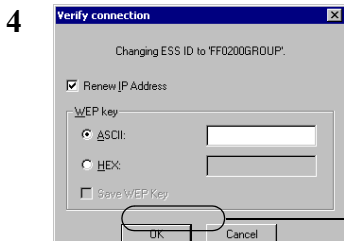


**1 Select**  
Select [File]-[Manual].



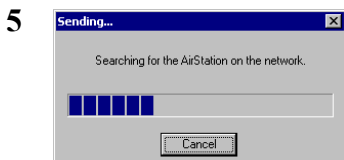
- 3 1. Select "11Mbps Communication over AirStation" in the "Network Mode" field.
2. Enter the AirStation ESS-ID to the "ESS-ID" field.
3. Click [OK].

The initial setting of the AirStation ESS-ID shows the last six digits of the MAC address of the AirStation plus "GROUP" (upper-case).



**1 Click**  
Click [OK].

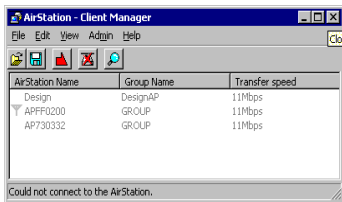
Enter an "WEP Key" if encryption with WEP is used in the network. If the AirStation is used in the initial state, no encryption is set. Leave the area empty in this case.



AirStation retrieval will be started.

⇒ Continued on next page

6



When this window appears, the access to the AirStation is successful.

**Note** When the access to the AirStation is successful, the AirStation indication turns from gray to black so that the antenna mark (▼) appears.

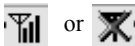
**Note** After the computer has succeeded in connecting to the AirStation, a slower data rate such as "2Mbps" may be displayed in the "Transfer speed" column. In this case, the correct data rate will appear when the practical communication starts.

## Step 9 -b Communicating with wireless LAN computers

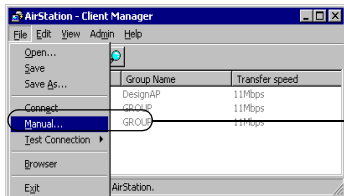
When communicating with wireless LAN computers, manually set a radio channel using Client Manager.

1 Select [Start]-[Programs]-[AirStation Utility]-[Client Manager].

If the icon below appears in the task tray in the lower right on the screen, you can double-click that icon to start Client Manager.

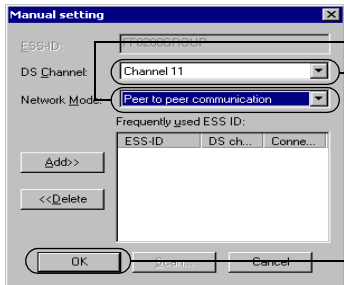


2

**1 Select**

Select [File]-[Manual].

3

**1 Select**

Select "Peer to peer communication" in the "Network Mode" field.

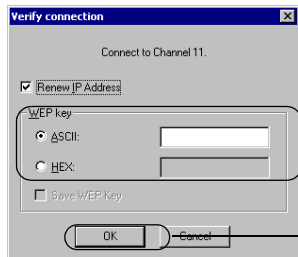
**2 Select**

Select the same channel as the other computers that you wish to communicate

**3 Click**

Click [OK].

4

**1 Enter**

Enter an "WEP Key" if encryption with WEP is used in the network. If the initial settings are used, no encryption is set. Leave the area empty in this case.

**2 Click**

Click [OK].

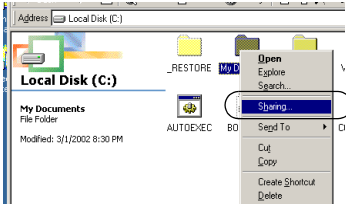
Now you have completed the radio channel configuration procedure.

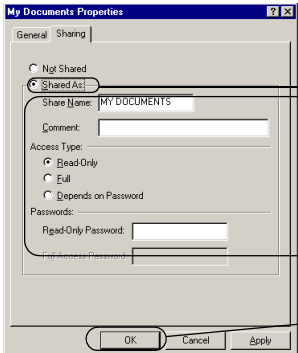
## Step 10 Making your computer shared

Upon completion of wireless LAN channel configuration, make the settings for sharing the drives and folders in your computer so that any computer on the network can use them.

The example here describes the procedure for sharing [My Document] in Windows Me.

- 1 Double-click [My Computer] on Desktop, and then the C: drive icon.

- 2  **1 Click**  
Right-click [My Documents], and select [Sharing] from the menu.

- 3  **1 Click**  
Click [Shared As] .  
**2 Check**  
Check or change, if necessary, "Share Name," "Comment," "Access Type," and "Passwords."  
**3 Click**  
Click [OK].

**▶Reference** For details on "Share Name," "Comment," "Access Type," and "Passwords," see "Setting window for sharing in Windows Me/98" on page 133 in Chapter 6.

- 4 Upon completion of sharing setting, the [My Documents] icon changes as shown below.



Now you have completed the setting for sharing [My Documents].

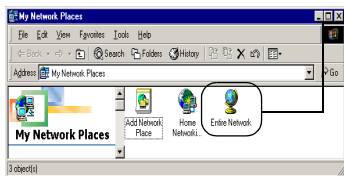
## Step 11 Starting communication

Upon completion of setting for sharing the drives and folders, you can access a computer on the network.

- 1 Double-click [My Network] on Desktop.

In Windows 98, double-click the [Network Computer] icon, and proceed to Step 4.

2



1 Click

Double-click [Entire Network].

⇒ Continued on next page

- 3 Double-click the workgroup name icon.

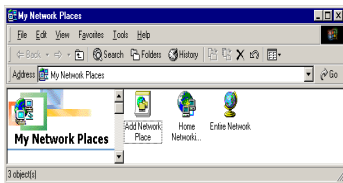
All computers connected on the network are listed.



When your target computer is not listed, see "Other computers are not listed (during communication without the AirStation)" on page 114 in Chapter 5.

- 4 Double-click the icon of your target computer.
- 5 Double-click your target folder.

- 6 All available folders and files in the selected folder are listed so that you can open, create, or update a file in them.



**Note**

All available folders and files in the selected folder are listed so that you can open, create, or update a file in them.