Océ
cx2100

Printing for Professionals



Please read this manual thoroughly before using this machine on your network.
You can view this manual in PDF format from the CD-ROM at any time, please keep the CD-ROM in a convenient place for quick and easy reference at all times.
You can also download the manual in PDF format and the latest drivers from the Océ USA web site (http://www.oceusa.com).

Network

User's Guide

Definitions of warnings, cautions, and notes

We use the following icon throughout this User's Guide:



Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

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Under the supervision of Océ North America Document Printing Systems, this manual has been compiled and published, covering the latest product's descriptions and specifications.

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IMPORTANT NOTE

- This product is approved for use in the country of purchase only. Do not use this product outside the country of purchase as it may violate the wireless telecommunication and power regulations of that country.
- Windows® XP in this document represents Windows® XP Professional, Windows® XP Professional x64 Edition and Windows® XP Home Edition.
- Windows® Server 2003 in this document represents Windows® Server 2003 and Windows® Server 2003 x64 Edition.

Océ numbers

IMPORTANT

For technical and operational assistance, you must call the country where you purchased the machine. Calls must be made ***from within*** that country.

Océ Technical Support

In USA	1-800-243-5556
In Canada	1-866-462-4478

Internet address

Océ USA web site: http://www.oceusa.com

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1 Introduction

Overview

The cx2100 can be shared on a 10/100 Mb wired or IEEE 802.11b/802.11g wireless Ethernet network using the internal network print server. The print server supports various functions and methods of connection depending on the operating system you are running on a network supporting TCP/IP. These functions include printing, scanning, PC Fax send, PC Fax receive, Remote Setup and Status Monitor. The following chart shows what network features and connections are supported by each operating system.

Operating Systems	Windows® 2000 Windows® XP Windows® XP Professional x64 Edition Windows Vista®	Windows Server® 2003 Windows Server® 2003 x64 Edition	Mac OS® X 10.2.4 or greater
10/100BASE-TX Wired Ethernet (TCP/IP)	✔	✔	✔
IEEE 802.1b/g Wireless Ethernet (TCP/IP)	✔	✔	✔
Printing	✔	✔	✔
BRAdmin Light	✔	✔	✔
BRAdmin Professional [1]	✔	✔	
Web Based Management (web browser)	✔	✔	✔
Internet Printing (IPP)	✔	✔	
Scanning	✔		✔
PC Fax Send	✔		✔
PC Pax Receive	✔		
Remote Setup	✔		✔
Status Monitor	✔		✔
Driver Deployment Wizard	✔	✔	

[1] BRAdmin Professional is available as a download from http://www.oceusa.com.

To use the cx2100 through a network, you need to configure the print server, and set up the computers you use.

For Wireless Users:

To achieve optimum results with normal every day document printing, place the cx2100 as close to the network access point (or router) as possible with minimal obstructions. Large objects and walls between the two devices as well as interference from other electronic devices can affect the data transfer speed of your documents.

Due to these factors, wireless may not be the best method of connection for all types of documents and applications. If you are printing large files, such as multi-page documents with mixed text and large graphics, you may want to consider choosing wired Ethernet for a faster data transfer, or USB for the fastest throughput speed.

Although the Océ cx2100 can be used in a both wired and wireless network, only either one of the connection methods can be used at a time.

Network features

Your cx2100 has the following basic network functions.

Network printing

The print server provides printing services for Windows® 2000/XP, Windows Vista® and Windows Server® 2003 supporting the TCP/IP protocols and Macintosh® (Mac OS® X 10.2.4 or greater) supporting the TCP/IP protocols.

Network scanning

You can scan documents over the network to your computer (See *Network Scanning* in the Software User's Guide).

Network PC Fax

You can directly send a PC file as a PC Fax over your network (See *PC-FAX Software for Windows® and Sending a Fax for Macintosh®* in the Software User's Guide for a complete description). Windows® users can also PC Fax receive (See *PC-FAX receiving* in the Software User's Guide).

Fax to server

The Fax to Server feature allows the machine to scan documents and send them via a separate fax server. Unlike Internet fax or I-Fax, the Fax to Server feature utilizes a server to send the documents as fax data over phone or T-1 lines.

Management utilities

BRAdmin Light

BRAdmin Light is a utility for initial setup of the Océ network connected devices. This utility can search for Océ products on your network, view the status and configure basic network settings, such as IP address. The BRAdmin Light utility is available for Windows® 2000/XP, Windows Vista® and Windows Server® 2003 and Mac OS® X 10.2.4 or greater. For installing BRAdmin Light on Windows®, please see the Quick Setup Guide provided with the machine. For Macintosh® users, BRAdmin Light will be installed automatically when you install the printer driver. If you have already installed the printer driver, you don't have to install it again.

For more information on BRAdmin Light, visit us at http://www.oceusa.com.

BRAdmin Professional (for Windows®)

BRAdmin Professional is a utility for more advanced management of network connected cx2100 devices. This utility can search for Océ products on your network, view the status and configure the network settings from a computer running Windows® system. BRAdmin Professional has additional features from BRAdmin Light.

For more information and downloading, visit us at http://www.oceusa.com.

Remote Setup

The Remote Setup software allows you to configure network settings from a Windows® or Macintosh® (Mac OS® X 10.2.4 or greater). (See *Remote Setup* in the Software User's Guide).

Web Based Management (web browser)

The Web Based Management allows you to monitor the Océ cx2100 status or change some of its configuration settings using a web browser.

Note

We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

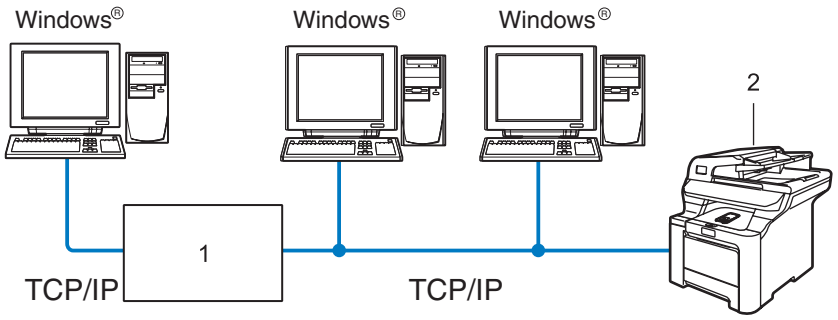
Types of network connections

Network connection example

Generally there are two types of network connections. Peer-to-Peer and Network Shared environment.

Peer-to-Peer printing using TCP/IP

In a Peer-to-Peer environment, each computer directly sends and receives data to each device. There is no central server controlling file access or printer sharing.



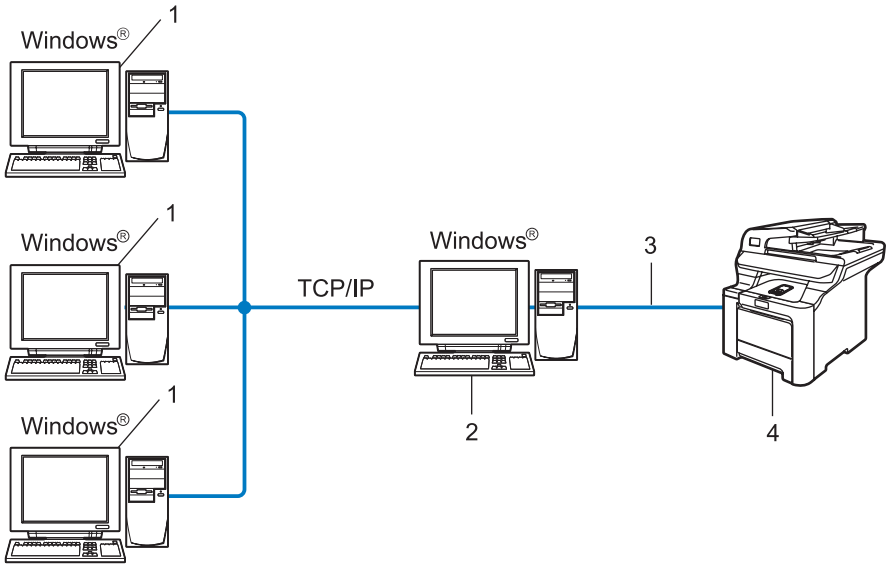
1 Switch or Router

2 Network printer (your machine)

- In a smaller network of 2 or 3 computers, we recommend the Peer-to-Peer printing method as it is easier to configure than the Network Shared printing method described on the following page. See *Network Shared printing* on page 6.
- Each computer must use the TCP/IP Protocol.
- The cx2100 needs to have an appropriate IP address configuration.
- If you are using routers, the Gateway address must be configured on the computers and the cx2100.
- The cx2100 can also communicate with Macintosh®. (TCP/IP compatible operating systems)

Network Shared printing

In a Network Shared environment, each computer sends data via a centrally controlled computer. This type of computer is often called a “Server” or a “Print Server”. Its job is to control the printing of all print jobs.



1 Client computer

2 Also known as “Server” or “Print server”

3 TCP/IP or USB (where available)

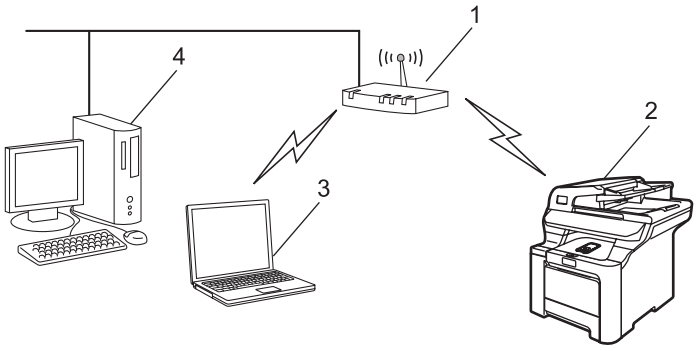
4 Printer (your machine)

- In a larger network, we recommend a Network Shared printing environment.
- The “server” or the “print server” must use the TCP/IP print protocol.
- The cx2100 needs to have an appropriate IP address configuration unless the machine is connected via the USB interface at the server.

Wireless network connection example

Connected to a wireless capable computer with an access point on the network (Infrastructure mode)

This type of network has a central access point at the heart of the network. The access point can also act as a bridge or a gateway to a wired network. When the Océ wireless machine (your machine) is part of this network, it receives all print jobs via an access point.



1 Access point

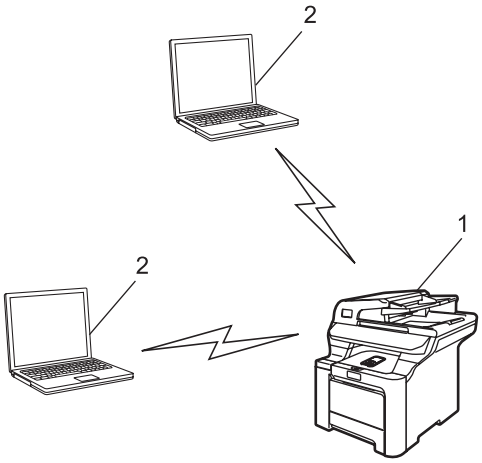
2 Wireless network printer (your machine)

3 Wireless capable computer communicating with the access point

4 Wired computer connected to the access point

Connected to a wireless capable computer without an access point on the network (Ad-hoc mode)

This type of network does not have a central access point. Each wireless client communicates directly with each other. When the Océ wireless machine (your machine) is part of this network, it receives all print jobs directly from the computer sending the print data.

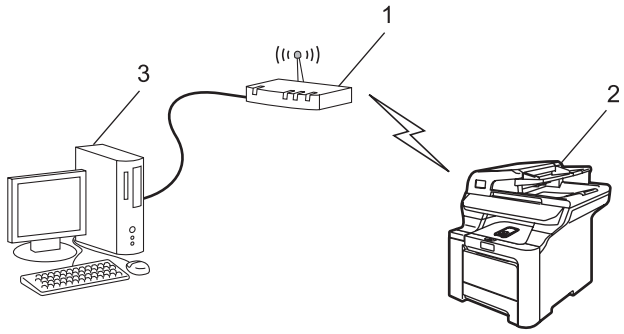


1 Wireless network printer (your machine)

2 Wireless capable computer

An access point is on the network, but the computer is not wireless capable

This type of network has a central access point at the heart of the network. The access point is connected to a computer which is not wireless capable with the Ethernet cable. When the Océ wireless machine (your machine) is a part of this network, it receives all print jobs via an access point.



1 Access point

2 Wireless network printer (your machine)

3 Wired computer connected to the access point

Protocols

TCP/IP protocols and functionalities

Protocols are the standardized sets of rules for transmitting data on a network. Protocols allow users to gain access to network connected resources.

The print server used on this Océ product supports the TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

TCP/IP is the most popular set of protocols used for communication such as Internet and E-mail. This protocol can be used in almost all operating systems such as Windows®, Macintosh® and Linux.

The following TCP/IP protocols are available on this Océ product.

Note

- You can configure the protocol settings by using the HTTP (web browser). See *Using Web Based Management (web browser) to change the print/scan settings* on page 17.
- For the protocols of the security features, see *Security protocols* on page 135.

DHCP/BOOTP/RARP

By using the DHCP/BOOTP/RARP protocols, the IP address can be automatically configured.

Note

To use the DHCP/BOOTP/RARP protocols, please contact your network administrator.

APIPA

If you do not assign an IP address manually (using the control panel of the machine or the BRAdmin software) or automatically (using a DHCP/BOOTP/RARP server), the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

DNS client

The Océ print server supports the Domain Name System (DNS) client function. This function allows the print server to communicate with other devices by using its DNS name.

LPR/LPD

Commonly used printing protocols on a TCP/IP network.

SMTP client

Simple Mail Transfer Protocol (SMTP) client is used to send E-mails via Internet or Intranet.

Port9100

Another commonly used printing protocol on a TCP/IP network.

IPP

The Internet Printing Protocol (IPP Version 1.0) allows you to print documents directly to any accessible printer via the internet.

mDNS

mDNS allows the Océ print server to automatically configure itself to work in a Mac OS® X Simple Network Configured system. (Mac OS® X 10.2.4 or greater).

Telnet

The Océ print server supports Telnet server for command line configuration.

SNMP

The Simple Network Management Protocol (SNMP) is used to manage network devices including computers, routers and Océ network ready machines in a TCP/IP network.

LLTD

The Link Layer Topology Discovery protocol (LLTD) lets you locate the cx2100 easily on the Windows Vista® **Network Map**. Your cx2100 will be shown with a distinctive icon and the node name. The default setting for this protocol is Off.

You can active LLTD using the BRAdmin Professional utility software. Visit the download page for your model at http://www.oceusa.com to download BRAdmin Professional.

Web server (HTTP)

The Océ print server is equipped with a built in web server that allows you to monitor its status or change some of its configuration settings using a web browser.

Note

We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

FTP

The File Transfer Protocol (FTP) allows the cx2100 to scan black and white or color documents directly to an FTP server located locally on your network or on the internet.

LDAP

Lightweight Directory Access Protocol (LDAP) allows the cx2100 to search for information such as fax numbers and E-mail addresses from an LDAP server.

IPv6

This machine is compatible with the IPv6, the next generation internet protocol.

For more information on the IPv6 protocol, visit http://www.oceusa.com.

2 Configuring your machine for a network with an Ethernet cable connection

Overview

Before using your cx2100 on your network, you must install the Océ software and also configure the appropriate TCP/IP network settings on the machine itself. To do this, we recommend that you use the automatic installer on the Océ CD-ROM as this will guide you through the software and network installation.

If you do not wish to use the automatic installer, or you do not understand some of the terms used by the automatic installer, refer to the remainder of this chapter for more information.

Note

If you do not wish to, or are unable to use the automatic installer or any of Océ's software tools, you can also use the machine's control panel to change network settings. For more information, see *Control panel setup* on page 76.

IP addresses, subnet masks and gateways

To use the machine in a networked TCP/IP environment, you need to configure the IP address and subnet mask. The IP address you assign to the print server must be on the same logical network as your host computers. If it is not, you must properly configure the subnet mask and the gateway address.

IP address

An IP address is a series of numbers that identifies each computer connected to a network. An IP address consists of four numbers separated by dots. Each number is between 0 and 255.

- Example: In a small network, you would normally change the final number.

  192.168.1.1, 192.168.1.2, 192.168.1.3

How the IP address is assigned to your print server:

If you have a DHCP/BOOTP/RARP server in your network (typically a UNIX®/Linux or Windows® 2000/XP, Windows Vista® or Windows Server® 2003 network) the print server will automatically obtain its IP address from the DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

Note

On smaller networks, the DHCP server may be the router.

For more information on DHCP, BOOTP and RARP, see *Using DHCP to configure the IP address* on page 169, *Using BOOTP to configure the IP address* on page 170 and *Using RARP to configure the IP address* on page 171.

If you do not have a DHCP/BOOTP/RARP server, the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255. For more information on APIPA, see *Using APIPA to configure the IP address* on page 171.

If the APIPA protocol is disabled, the IP address of the cx2100 print server is 192.0.0.192. However, you can easily change this IP address number to match with the IP address details of your network. For information on how to change the IP address, see *Setting the IP address and subnet mask* on page 13.

Subnet mask

Subnet masks restrict network communication.

■ Example: Computer1 can talk to Computer 2

- Computer 1

  IP Address: 192.168.1.2

  Subnet Mask: 255.255.255.0

- Computer 2

  IP Address: 192.168.1.3

  Subnet Mask: 255.255.255.0

Note

0 denotes that there is no limit to communication at this part of the address.

In the above example, we can communicate with anything that has an IP address that begins with 192.168.1.x.

Gateway (and router)

A gateway is a network point that acts as an entrance to another network and sends data transmitted via the network to an exact destination. The router knows where to direct data that arrives at the gateway. If a destination is located at an external network, the router transmits data to the external network. If your network communicates with other networks, you may need to configure the Gateway IP address. If you do not know the Gateway IP address then contact your Network Administrator.

Setting the IP address and subnet mask

Using the BRAdmin Light utility to configure your machine for the network printer

BRAdmin Light

The BRAdmin Light utility is designed for initial setup of the Océ network connected devices. It also can search for Océ products in a TCP/IP environment, view the status and configure basic network settings, such as IP address. The BRAdmin Light utility is available for Windows® 2000/XP, Windows Vista®, Windows Server® 2003 and Mac OS® X 10.2.4 or greater.

How to configure your machine using the BRAdmin Light utility

Note

- Please use the BRAdmin Light utility version that was supplied on the CD-ROM with your Océ MFP. You can also download the latest BRAdmin Light utility version from http://www.oceusa.com.
- If you require more advanced printer management, use the latest version of BRAdmin Professional utility that is available as a download from http://www.oceusa.com. This utility is only available for Windows® users.
- If you are using Personal Firewall software, disable it. Once you are sure that you can print, re-start your Personal Firewall software.
- Node name: Node name appears in current BRAdmin Light. The default node name of the network card in the printer is “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address) (up to 15 characters).
- The default password for print servers is “**access**”.

1. Start the BRAdmin Light utility.

   - For Windows® 2000/XP, Windows Vista® and Windows Server® 2003 users

     Click **Start** / **All Programs** [1] / **Oce** / **BRAdmin Light** / **BRAdmin Light**.

     [1] **Programs** for Windows® 2000 users

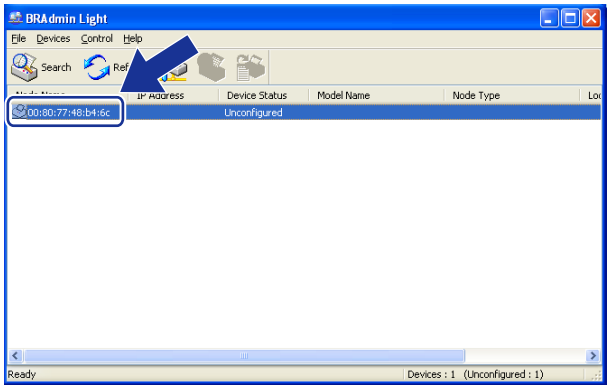
   - For Mac OS® X 10.2.4 or greater users

     Double-click **Mac OS X** or **Macintosh HD** (Startup Disk) / **Library** / **Printers** / **Oce** / **Utilities** / **BRAdmin Light.jar** file.

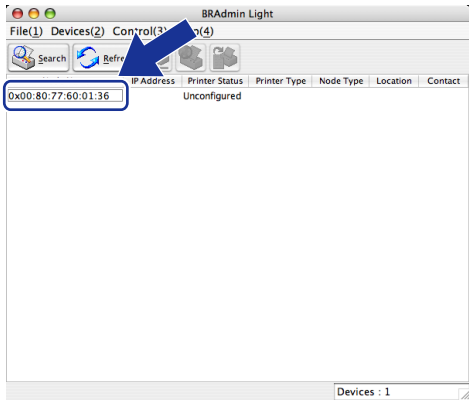
2. BRAdmin Light will search for new devices automatically.

3 Double-click the unconfigured device.

Windows®



Macintosh®

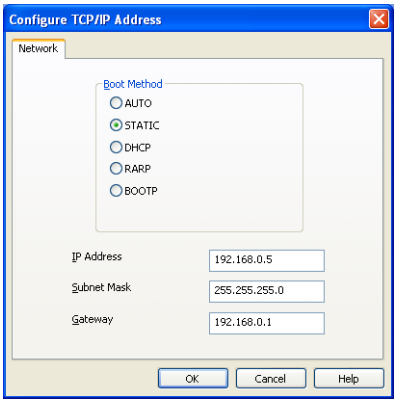


Note

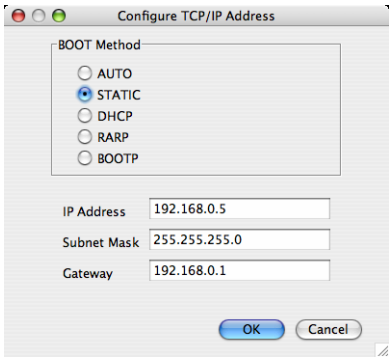
- If the print server is set to its factory default settings without using a DHCP/BOOTP/RARP server, the device will appear as **Unconfigured** in the BRAdmin Light utility screen.
- You can find the node name and Ethernet address by printing the Network Configuration List. See *Printing the Network Configuration List* on page 104 for information on how to print the Network Configuration List on your print server.

4 Choose **Static** from **Boot Method**. Enter the **IP address**, **Subnet Mask** and **Gateway** (if needed) of your print server.

Windows®



Macintosh®



5 Click **OK**.

6 With the correctly programmed IP address, you will see the Océ print server in the device list.

Using the control panel to configure your machine for a network

You can configure your machine for a network using the control panel LAN menu. See *Control panel setup* on page 76.

Using other methods to configure your machine for a network

You can configure your machine for a network using other methods. See *Other ways to set the IP address (for advanced users and administrators)* on page 169.

Changing the print server settings

Using the BRAdmin Light utility to change the print server settings

1. Start the BRAdmin Light utility.
   - For Windows® 2000/XP, Windows Vista® and Windows Server® 2003 users

     Click **Start** / **All Programs** [1] / **Oce** / **BRAdmin Light** / **BRAdmin Light**.

     [1] **Programs** for Windows® 2000 users
   - For Mac OS® X 10.2.4 or greater users

     Double-click **Mac OS X** or **Macintosh HD** (Startup Disk) / **Library** / **Printers** / **Oce** / **Utilities** / **BRAdmin Light.jar** file.
2. Choose the print server which you want to change the settings.
3. Choose **Network Configuration** from the **Control** menu.
4. Enter a password. The default password is “**access**”.
5. You can now change the print server settings.

Note

If you want to change more advanced settings, use the BRAdmin Professional utility that is available as a download from http://www.oceusa.com.

Using the control panel to change the print server settings

You can configure and change the print server settings using the control panel LAN menu. See *Control panel setup* on page 76.

Using Web Based Management (web browser) to change the print/scan settings

A standard web browser can be used to change your print server settings using the HTTP (Hyper Text Transfer Protocol).

Note

- We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.
- To use a web browser, you will need to know the IP address of the print server.

1. Type “http://printer’s IP address/” into your browser. (where “printer’s IP address” is the printer’s IP address or the node name)
   - For example:

     `http://192.168.1.2/` (if the printer’s IP address is 192.168.1.2.)

     `http://BRN123456/` (if the printer’s node name is BRN123456.)

Note

If you have edited the hosts file on your computer or are using a Domain Name System (DNS), you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address).

2. Click **Network Configuration**.
3. Enter a user name and a password. The default User Name is “**admin**” and the default Password is “**access**”.
4. Click **OK**.
5. You can now change the printer server settings. If you want to configure the protocol settings, click **Configure Protocol**.

Note

If you change the protocol settings, restart the printer after clicking **Submit** to activate the configuration.

Using the Remote Setup to change the print server settings (not available for Windows Server® 2003)

Remote Setup for Windows®

The Remote Setup application allows you to configure network settings from a Windows® application. When you access this application, the settings on your machine will be downloaded automatically to your PC and displayed on your PC screen. If you change the settings, you can upload them directly to the machine.

1. Click the **Start** button, **All Programs** [1], **Oce**, **cx2100**, then **Remote Setup**.

   [1] **Programs** for Windows® 2000 users

2. Enter a password. The default Password is “**access**”.
3. Click **TCP/IP**.
4. You can now change the print server settings.

Remote Setup for Macintosh®

The Remote Setup application allows you to configure network setting from a Macintosh® application. When you access this application, the settings on your machine will be downloaded automatically to your Macintosh® and displayed on your Macintosh® screen. If you change the settings, you can upload them directly to the machine.

1. Double click the **Mac OS X** or **Macintosh HD** (Startup Disk) icon on your desktop, **Library**, **Printers**, **Oce**, then **Utilities**.
2. Double click the **Remote Setup** icon.
3. Enter a password. The default Password is “**access**”.
4. Click **TCP/IP**.
5. You can now change the print server settings.

3 Configuring your machine for a wireless network

Overview

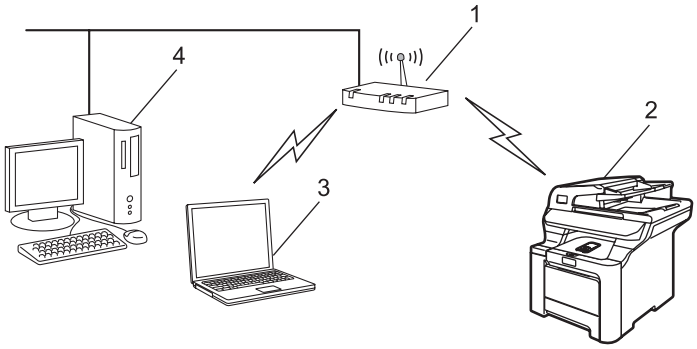
To connect your machine to your wireless network, you need to follow the steps in the Quick Setup Guide. We recommend that you use the Setup Wizard from the machine's control panel LAN menu. By using this method, you can easily connect your machine to your wireless network. Please follow the instructions in the supplied Quick Setup Guide.

Please read this chapter for more details on how to configure the wireless network settings. For information on TCP/IP settings, see *Using the BRAdmin Light utility to configure your machine for the network printer* on page 13. Then, in *Network printing from Windows®: basic TCP/IP Peer-to-Peer printing* on page 110 and *Network printing from Macintosh®* on page 117, you will learn how to install the network software and drivers into the operating system running on your computer.

Confirm your network environment

Wireless network connection example

Connected to a wireless capable computer with an access point on the network (Infrastructure mode)



1 Access point

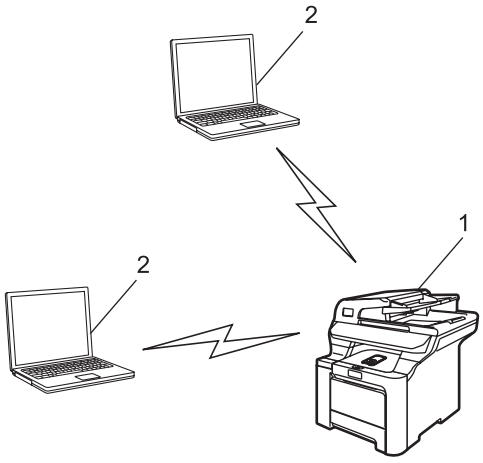
2 Wireless network printer (your machine)

3 Wireless capable computer communicating with the access point

4 Wired computer connected to the access point

Connected to a wireless capable computer without an access point on the network (Ad-hoc mode)

This type of network does not have a central access point. Each wireless client communicates directly with each other. When the Océ wireless MFP (your machine) is part of this network, it receives all print jobs directly from the computer sending the print data.

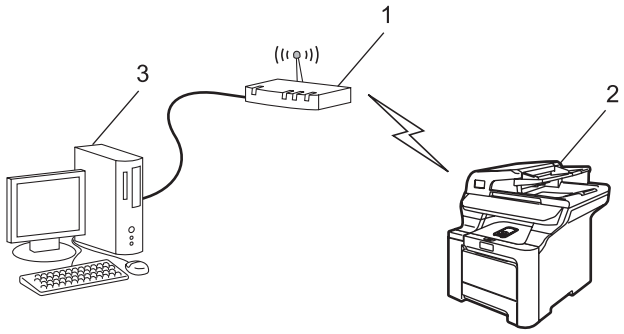


1 Wireless network printer (your machine)

2 Wireless capable computer

An access point is on the network, but the computer is not wireless capable

This type of network has a central access point at the heart of the network. The access point is connected to a computer which is not wireless capable with the Ethernet cable. When the Océ wireless MFP (your machine) is a part of this network, it receives all print jobs via an access point.



1 Access point

2 Wireless network printer (your machine)

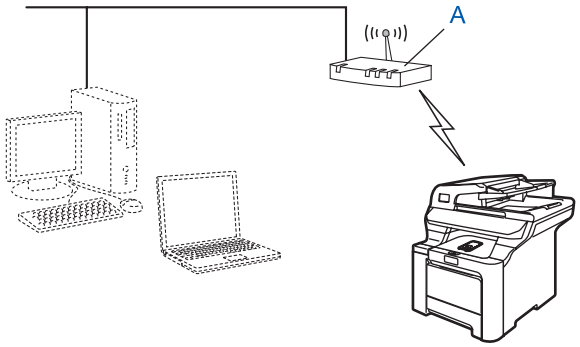
3 Wired computer connected to the access point

Confirm your network environment

The setup process will be different depending on your network environment

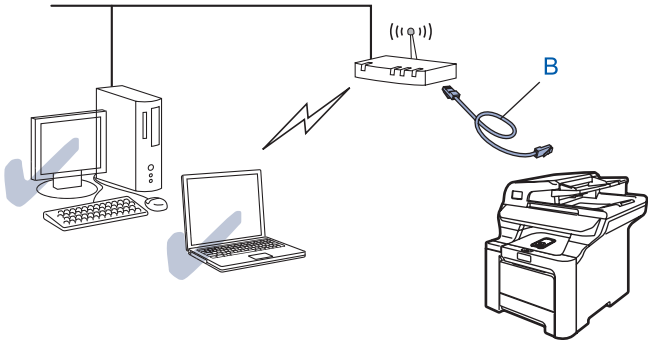
Configuration using SecureEasySetup™

If your wireless access point (A) supports SecureEasySetup™, you do not need to use a computer to configure the printer. The access point (router) and your machine can automatically negotiate using the SecureEasySetup™ procedure.



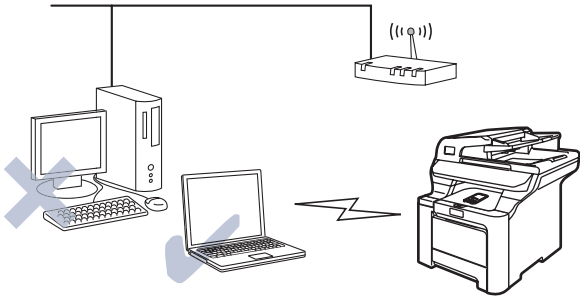
Configuration temporarily using a network cable

If there is an Ethernet Hub or Router in the same network as the wireless access point of your machine, you can temporarily connect the Hub or Router to the machine using an Ethernet cable (B), this is an easy way to configure the machine. You can then remotely configure the machine from a computer on the network.



Configuration using a wireless computer.

If your computer has wireless capability, you will need to change the wireless settings of the computer to Ad-hoc mode so you can directly connect and configure the machine.



Wireless network terms and concepts

When you configure the wireless network machine, you must ensure that your wireless network machine is configured to match the settings of the existing wireless network. This section provides some of main terms and concepts of these settings, which may be helpful when you configure the wireless network machine.

SSID (Service Set Identifier) and channels

You need to configure the SSID and a channel to specify the wireless network you want to connect to.

SSID

Each wireless network has its own unique network name and it is technically referred to as SSID or ESSID (Extended Service Set Identifier). The SSID is a 32-byte or less value and is assigned to the access point. The wireless network devices you want to associate to the wireless network should match the access point. The access point and wireless network devices regularly send wireless packets (referred to as a beacon) which has the SSID information. When your wireless network device receives a beacon, you can identify the wireless network that is close enough for the radio waves to reach your device.

Channels

Wireless networks use channels. Each wireless channel is on a different frequency. When configuring your Océ device to work in a wireless network, you must set it to the channel that is used on the wireless network that you are connecting to. There are up to 14 different channels that can be used when using a wireless network. However, in many countries the number of channels available are restricted. For further information, see *Ethernet wireless network* on page 176.

Authentication and encryption

Most wireless networks use some kind of security settings. These security settings define the authentication (how the device identifies itself to the network) and encryption (how the data is encrypted as it is sent on the network). If you do not correctly specify these options when you are configuring your Océ wireless MFP, it will not be able to connect to the wireless network. Therefore care must be taken when configuring these options. Please refer to the information below to see which authentication and encryption methods your Océ wireless MFP supports.

Authentication methods

The cx2100 supports the following methods:

- Open system

  Wireless devices are allowed access to the network without any authentication.

- Shared key

  A secret pre-determined key is shared by all devices that will access the wireless network.

  The cx2100 uses the WEP keys as the pre-determined key.

- WPA-PSK/WPA2-PSK

  Enables a Wi-Fi® Protected Access Pre-shared Key (WPA-PSK/WPA2-PSK), which enables the Océ wireless machine to associate with access points using TKIP for WPA-PSK or AES for WPA-PSK and WPA2-PSK encryption (WPA-Personal).

- LEAP

  Cisco® LEAP (Light Extensible Authentication Protocol) has been developed by Cisco Systems, Inc. which uses user ID and password for authentication.

Encryption methods

Encryption is used to secure the data that is sent over the wireless network. The cx2100 supports the following encryption methods:

- None

  No encryption method is used.

- WEP

  By using WEP (Wired Equivalent Privacy), the data is transmitted and received with a secure key.

- TKIP

  TKIP (Temporal Key Integrity Protocol) provides per-packet key mixing a message integrity check and re-keying mechanism.

- AES

  AES (Advanced Encryption Standard) is Wi-Fi® authorized strong encryption standard.

- CKIP

  The original Key Integrity Protocol for LEAP by Cisco Systems, Inc.

Network key

There are some rules for each security method:

■ Open system/Shared key with WEP

This key is a 64-bit or 128-bit value that must be entered in an ASCII or hexadecimal format.

64 (40) bit ASCII:	Uses 5 text characters. e.g. “WLLAN” (this is case sensitive)
64 (40) bit hexadecimal:	Uses 10 digits of hexadecimal data. e.g. “71f2234aba”
128 (104) bit ASCII:	Uses 13 text characters. e.g. “Wirelesscomms” (this is case sensitive)
128 (104) bit hexadecimal:	Uses 26 digits of hexadecimal data. e.g. “71f2234ab56cd709e5412aa2ba”

■ WPA-PSK/WPA2-PSK and TKIP or AES

Uses a Pre-Shared Key (PSK) that is 8 or more characters in length, up to a maximum of 63 characters.

■ LEAP

Uses User ID and Password.

- User ID: up to a maximum of 63 characters
- Password: up to a maximum of 31 characters

Configuring your machine for a wireless network

There are three methods to configure your wireless network machine; by using the machine control panel (recommended), using the SecureEasySetup™ software and using the automatic installer application on the CD-ROM.

Using the Setup Wizard from the control panel

You can configure your print server by using the `Setup Wizard` function. This is located in the `LAN` menu on the machine's control panel. See to the steps below for further information.

IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Write down the wireless network settings of your access point or wireless router.
   - SSID (Service Set ID or Network name)
   - WEP key (if needed)
   - WPA-PSK (if needed)
2. Plug the AC power cord into an AC outlet. Turn the power switch on.
3. Press **Menu** on the control panel of the cx2100.
4. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
5. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Setup Wizard`.
   Press **OK**.
7. If the following message appears, press ▲ or ▼ to choose `On`, then press **OK**. The wired network interface will become inactive with this setting.

   ```
   72.WLAN
     WLAN Enable?
   ▲    On
   ▼    Off
   Select ▲▼ or OK
   ```

8. The machine will search for your network and display a list of available SSIDs. You should see the SSID you wrote down earlier. If the machine finds more than one network use ▲ or ▼ key to choose your network, then press **OK**. Go to ⓬.
   If your access point is set to not broadcast the SSID, you will have to manually add the SSID name. Go to ❾.

9 Choose <New SSID> using ▲ or ▼.
Press **OK**. Go to ⓾.

10 Enter a new SSID. (For information how to type text, see *Entering Text* on page 186.)
Press **OK**.

11 Press ▲ or ▼ to choose Infrastructure.
Press **OK**. Go to ⓬
If you chose Ad-hoc, go to ⓭.

12 Choose the Authentication method using ▲ or ▼, and press **OK**.
If you chose Open System, go to ⓭.
If you chose Shared Key, go to ⓮.
If you chose WPA/WPA2-PSK, go to ⓱.
If you chose LEAP, go to ⓲.

13 Choose the Encryption type, None or WEP using ▲ or ▼, and press **OK**.
If you chose None, go to ⓴.
If you chose WEP, go to ⓮.

14 Choose the key option; KEY1, KEY2, KEY3, KEY4 using ▲ or ▼, and press **OK**.
If you chose the key which shows **********, go to ⓯.
If you chose a blank key, go to ⓰.

15 If you want to change the key you chose in ⓮, press ▲ or ▼ to choose Change. Press **OK**. Go to ⓰.
If you want to keep the key you chose in ⓮, press ▲ or ▼ to choose Keep. Press **OK**. Go to ⓴.

16 Enter a new WEP key. Press **OK**. Go to ⓴. (To manually enter the text, see *Entering Text* on page 186)

17 Choose the Encryption type, TKIP or AES using ▲ or ▼. Press **OK**. Go to ⓳.

18 Enter the user name and press **OK**. Go to ⓳. (To manually enter the text, see *Entering Text* on page 186)

19 Enter the password and press **OK**. Go to ⓴. (To manually enter the text, see *Entering Text* on page 186)

20 To apply the settings, choose Yes. To cancel, choose No.
If you chose Yes, go to ㉑.
If you chose No, go back to ❽.

21 The machine starts to connect to the wireless device you have chosen.

22 If your wireless device is connected successfully, the display shows Connected for 2 seconds and configuration is completed.
If the connection failed, the display shows Connection NG for 2 seconds. See *Wireless network troubleshooting* on page 166.

Using the SecureEasySetup™ software to configure your machine for a wireless network

The SecureEasySetup™ software allows you to configure the wireless network easier than configuring it manually. By pushing a button on the wireless router or access point, you can complete setup and secure the wireless network. Your router or access point must also support SecureEasySetup™. See the user's guide for your wireless LAN router or access point for instructions on how to use the SecureEasySetup™ mode.

IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

Note

Routers or access points that support SecureEasySetup™ have the SecureEasySetup™ symbol as shown below.



1. Plug the AC power cord into an AC outlet. Turn the power switch on.
2. Place the cx2100 close to the SecureEasySetup™ router or access point (less than 5m/16 feet).
3. Push the SecureEasySetup™ button on your wireless router or access point. See the user's guide for your wireless router or access point for instructions.
4. Press **Menu** on the control panel of the cx2100.
5. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
6. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
7. Press ▲ or ▼ to choose `SecurEasySetup`.
   Press **OK**.

8 If the following message appears, press ▲ or ▼ to choose `On`, then press **OK**. The wired network interface will become inactive with this setting.

```
72.WLAN
  WLAN Enable?
▲    On
▼    Off
Select ▲▼ or OK
```

9 The wireless network connection status using the SecureEasySetup™ software will be displayed; `Connecting WLAN`, `Connected` or `Connection NG`.
`Connecting WLAN` is displayed when the print server is trying to make connections to your router or access point. Wait till either `Connected` or `Connection NG` is displayed.
`Connected` is displayed when the print server is successfully connected to your router or access point. You can now use your machine in a wireless network.
`Connection NG` is displayed when the print server has not successfully connected to your router or access point. Try starting from ❷ again. If the same message is displayed again, reset the print server back to the default factory settings and try again.

Using the Océ automatic installer application on the CD-ROM to configure your machine for a wireless network

See *Wireless configuration for Windows*® on page 32 and *Wireless Configuration for Macintosh*® on page 57 for information on how to use the Océ automatic installer application on the CD-ROM we have provided with the machine.

Changing the print server settings

Once you have configured your machine for a wireless network, you can change the wireless settings using the BRAdmin Professional utility, the Remote Setup software or the control panel on the front of the cx2100.

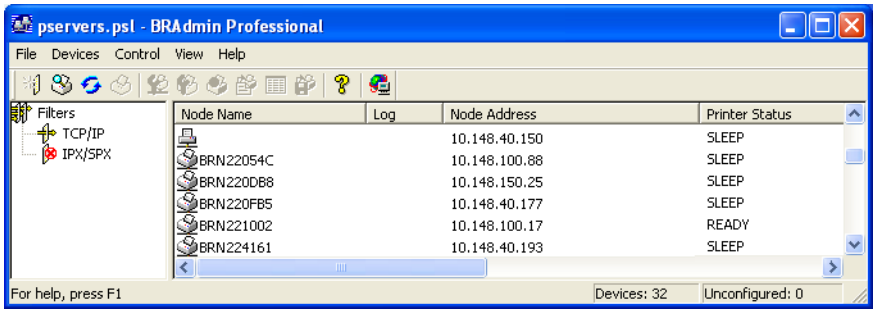
Using the BRAdmin Professional utility to change the wireless settings (for Windows®)

Note

- Please use the latest version of the BRAdmin Professional utility that is available as a download from http://www.oceusa.com. This utility is only available for Windows® users.
- If you are using Personal Firewall software, disable it. Once you are sure that you can print, re-start your Personal Firewall software.
- Node name: Node name appears in current BRAdmin Professional window. The default Node name is “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address) (up to 15 characters).

1. Start the BRAdmin Professional utility (from Windows® 2000/XP, Windows Vista® or Windows Server® 2003), by clicking **Start** / **All Programs** [1] / **Administrator Utilities** / **BRAdmin Professional Utilities** / **BRAdmin Professional**.

   [1] **Programs** for Windows® 2000 users



2. Choose **TCP/IP** in the left frame of the main BRAdmin window.
3. Choose the print server which you want to configure, in the right frame of the main BRAdmin window.
4. Choose **Configure Wireless Setting** from the **Control** menu.
5. Enter a password. The default password is “**access**”.
6. You can now change the wireless settings.

Note

- If the print server is set to its factory default settings without using a DHCP/BOOTP/RARP server, the device will appear as APIPA in the BRAdmin Professional utility screen.
- You can find the node name and Ethernet address (**Node Address** above) by printing out the Network Configuration List. See *Printing the Network Configuration List* on page 104 for information on how to print the Network Configuration List on your print server.

Using the control panel to change the print server settings

You can configure and change the print server settings using the control panel LAN menu. See *Control panel setup* on page 76.

Using the Remote Setup to change the print server settings

Remote Setup for Windows®

The Remote Setup application allows you to configure network settings from a Windows® computer. When you access this application, the settings on your machine will be downloaded automatically to your PC and displayed on your PC screen. If you change the settings, you can upload them directly to the machine.

1. Click the **Start** button, **All Programs** [1], **Oce**, **cx2100**, then **Remote Setup**.

   [1] **Programs** for Windows® 2000 users

2. Enter a password if you have set it.
3. Click **TCP/IP (WLAN)**.
4. You can now change the print server settings.

Remote Setup for Macintosh®

The Remote Setup application allows you to configure network setting from a Macintosh®. When you access this application, the settings on your machine will be downloaded automatically to your Macintosh® and displayed on your Macintosh® screen. If you change the settings, you can upload them directly to the machine.

1. Double click the **Mac OS X** or **Macintosh HD** (Startup Disk) icon on your desktop, **Library**, **Printers**, **Oce**, then **Utilities**.
2. Double click the **Remote Setup** icon.
3. Enter a password if you have set it.
4. Click **TCP/IP (WLAN)**.
5. You can now change the print server settings.

Using other methods to configure your machine for a wireless network

You can configure your machine for a wireless network using other methods. See *Other ways to set the IP address (for advanced users and administrators)* on page 169.

4 Wireless configuration for Windows®

The following instructions will install your cx2100 in a network environment using the Océ automatic installer application for Windows® in the CD-ROM we have provided with the machine.

You can also setup your machine using the machine's control panel which we recommend. You can find instructions in the supplied Quick Setup Guide or see *Configuring your machine for a wireless network* on page 19.

Configuration in Infrastructure mode

For Windows® 2000 Professional/XP or Windows Vista®

IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Turn on the machine by plugging in the power cord.
2. Press **Menu**, **7**, **2**, **6**. Using ▲ or ▼, choose `On` and press **OK**.

```
72.WLAN
  6.WLAN Enable
▲     On
▼     Off
Select ▲▼ or OK
```

3. Turn on your computer.

Note

Before configuration, if you are using Personal Firewall software, disable it. Once you are sure that you can print after the installation, restart your Personal Firewall software.

4. Put the supplied CD-ROM into your CD-ROM drive. If the model name screen appears, choose your machine. If the language screen appears, choose your language.

5 The CD-ROM main menu will appear. Click **Install Other Drivers or Utilities**.



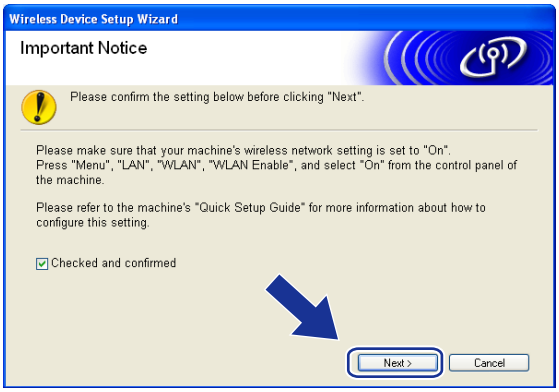
Note

If this window does not appear, use Windows® Explorer to run the start.exe program from the root folder of the Océ CD-ROM.

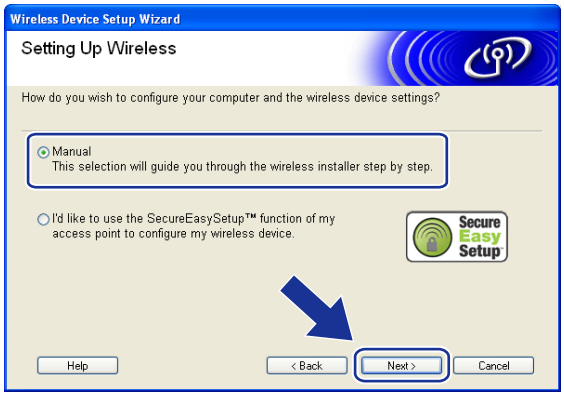
6 Click **Wireless LAN Setup Wizard**.



7 Read the **Important Notice** and click **Next**.



8 Choose **Manual** and then click **Next**.



9 For configuration, it is recommended that you temporarily connect your Océ wireless MFP directly to a free port on your access point, hub or router using a network cable.

- If you can temporarily connect with a network cable:

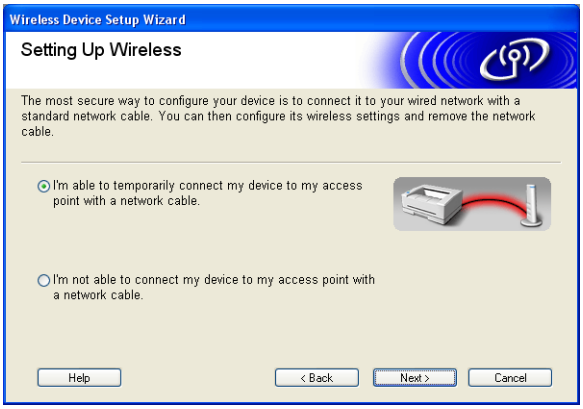
  Choose **I'm able to temporarily connect my device to my access point with a network cable** and then click **Next**.

  Go to ⓾.

- If you do not have a network cable or cannot temporarily connect the Océ wireless MFP to your access point:

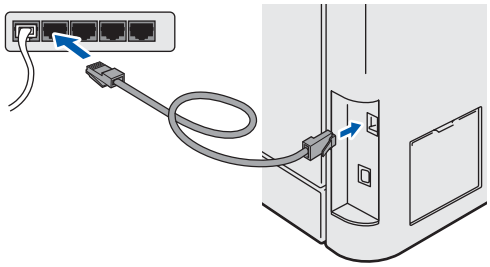
  Choose **I'm not able to connect my device to my access point with a network cable** and then click **Next**.

  Go to ⓫.

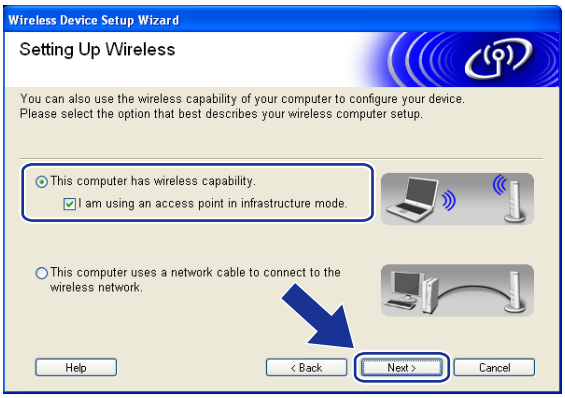


10 Connect the Océ wireless MFP to your access point using a network cable and click **Next**. Go to ⓮

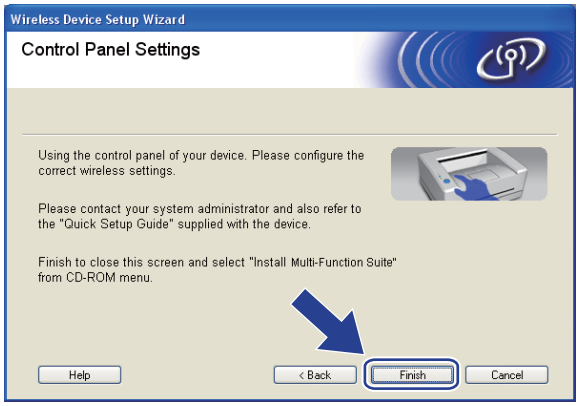




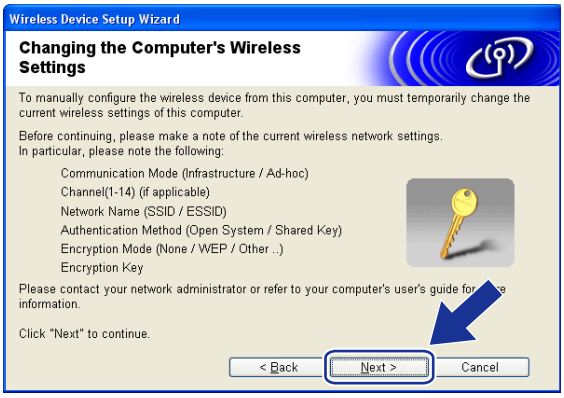
⓫ If you choose **This computer has wireless capability.**, check **I am using an access point in infrastructure mode**, and then click **Next**. Go to ⓬



If you are using a wired computer, choose **This computer uses a network cable to connect to the wireless network.**, you must configure the wireless settings from the control panel. Click **Finish** and follow the on-screen instructions to complete the setup. See *Using the Setup Wizard from the control panel* on page 25.



⑫ You need to temporarily change your computer's wireless settings. Please follow the on-screen instructions. Please make sure you take notes on all the settings such as SSID or channel of your computer. You will need them to return your computer back to its original wireless settings.



Item	Record the current wireless computer settings
Communication mode: (Infrastructure/Ad-hoc)	
Channel:	
Network name: (SSID/ESSID)	
Authentication method: (Open system/Shared key/WPA-PSK/WPA-PSK2/LEAP)	
Encryption: (None/WEP/TKIP/AES/CKIP)	
Encryption key:	

⑬ To communicate with the un-configured wireless machine, temporarily change the wireless settings on your computer to match machine's default settings shown on this screen. Click **Next**.



Note

- If a message to restart your computer appears after the wireless settings have been changed, restart your computer and then go back to step 4 and continue with the install skipping steps 11, 12 and 13.
- For Windows Vista® users:
  You can temporarily change the wireless settings on your computer, following the steps below:

  1 Click **Start** and then **Control Panel**.

  2 Click **Network and Internet** and then **Network and Sharing Center** icon.

  3 Click **Connect to a network**.

  4 You can see the SSID of the wireless machine in the list. Choose **SETUP** and click **Connect**.

  5 Click **Connect Anyway** and then **Close**.

  6 Click **View status** of **Wireless Network Connection (SETUP)**.

  7 Click **Details...** and check the **Network Connection Details**. It may take a few minutes to change from 0.0.0.0. to 169.254.x.x IP address to be shown on screen (where x.x. are numbers between 1 and 254).
- For Windows® XP SP2 users:
  You can temporarily change the wireless settings on your computer, following the steps below:

  1 Click **Start** and then **Control Panel**.

  2 Click **Network and Internet Connections** icon.

  3 Click **Network Connections** icon.

  4 Choose and right click **Wireless Network Connection**. Click **View Available Wireless Networks**.

  5 You can see the SSID of the wireless machine in the list. Choose **SETUP** and click **Connect**.

  6 Check the **Wireless Network Connection** status. It may take a few minutes to change from 0.0.0.0. to 169.254.x.x IP address to be shown on screen (where x.x. are numbers between 1 and 254).

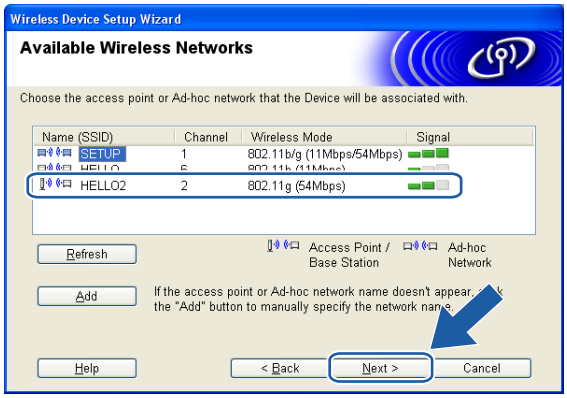
14 The following list appears. If the list is blank, check if the access point and the machine are powered on, and then click **Refresh**. Choose the machine you wish to configure, and click **Next**.



Note

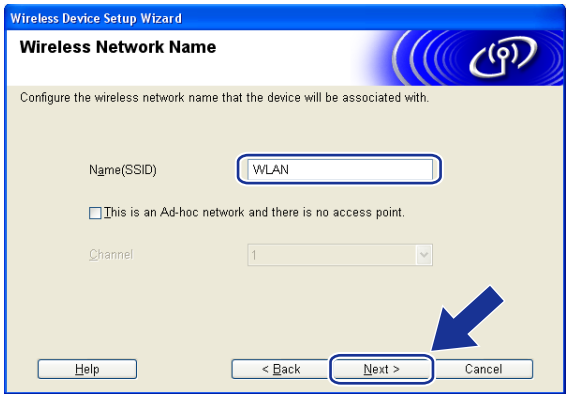
The default node name of the NC-xxxx (where “xxxx” is your model name) is “BRNxxxxxx” or “BRWxxxxxx” (where “xxxxxx” is the last six digits of Ethernet address).

15 The wizard will search for wireless networks available from your machine. Choose the access point you wish to associate the machine with, and then click **Next**.



Note

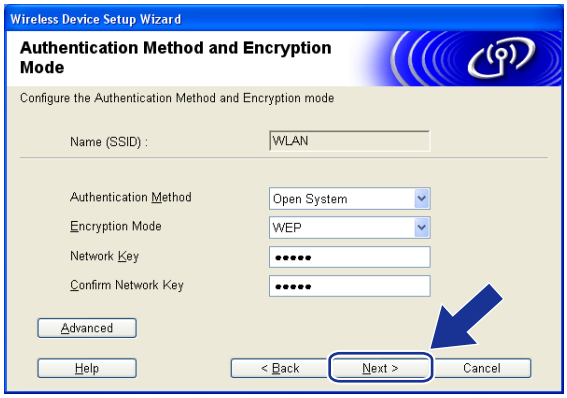
- If your access point is set to not broadcast the SSID you can manually add it by clicking the **Add** button. Follow the on-screen instructions for entering the **Name (SSID)** and the Channel number.
- If the list is blank, check that the access point has power and is broadcasting the SSID, and then see if the machine and the access point are within range for wireless communication. Then, click **Refresh**.
- "SETUP" is the default SSID of the machine. Do not choose this SSID.



16 If your network is not configured for Authentication and Encryption, the following screen will appear. To continue configuration, click **OK** and go to ⓲.



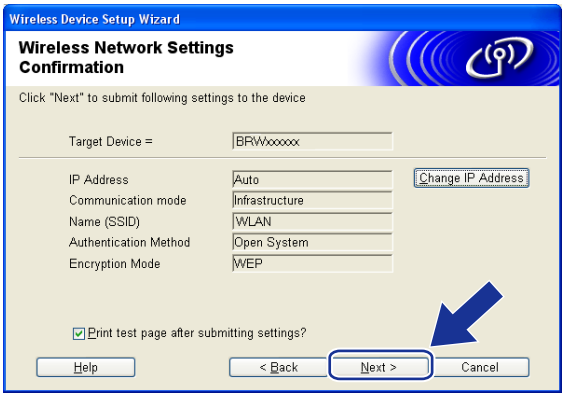
17 If your network is configured for Authentication and Encryption, the following screen will appear. When configuring your Océ wireless machine, you must ensure that it is configured to match the Authentication and Encryption settings of your existing wireless network. Choose the **Authentication Method** and **Encryption Mode** from the pull-downs in each setting box. Then enter the **Network key** and click **Next**.



Note

- If you want to set more than one WEP key, click **Advanced**.
- If you do not know the Authentication or Encryption settings for network, contact your network administrator.

18 Click **Next**. The settings will be sent to your machine. The settings will remain unchanged if you click **Cancel**.



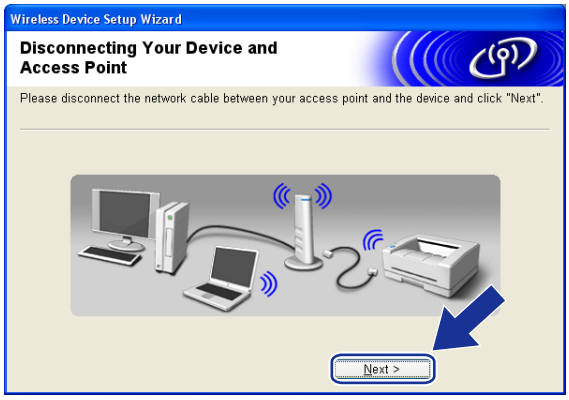
Note

If you want to manually enter the IP address settings of your machine, click **Change IP Address** and enter the necessary IP address settings for your network.

⓳ Follow the on-screen instructions.

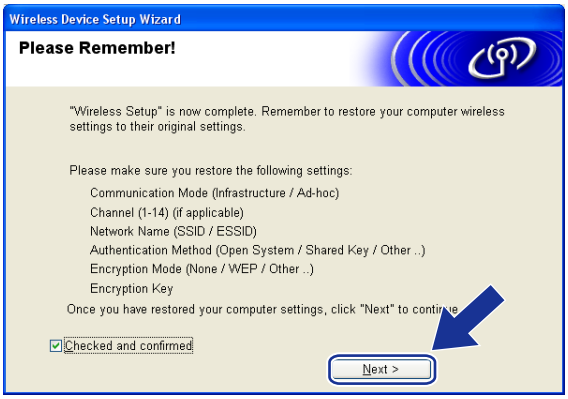
■ If you chose **I'm able to temporarily connect my device to my access point with a network cable** in ❾:

Disconnect the network cable between your access point (hub or router) and the machine, and click **Next**. Go to ⓴.



■ If you chose **This computer has wireless capability** in ⓫:

Using the information you recorded in ⓬, return the wireless settings of your computer back to their original settings. Click **Next**.



20 You have completed the wireless setup. Click **Finish**. If you would like to continue installing drivers and software necessary for operating your device, please choose **Multi-Function Suite** from CD-ROM menu.



Configuration with an access point that supports SecureEasySetup™

For Windows® 2000/XP or Windows Vista®

IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Turn on the machine by plugging in the power cord.
2. Press **Menu**, **7**, **2**, **6**. Using ▲ or ▼, choose `On` and press **OK**.

```
72.WLAN
  6.WLAN Enable
▲    On
▼    Off
Select ▲▼ or OK
```

3. Turn on your computer.

Note

Before configuration, if you are using Personal Firewall software, disable it. Once you are sure that you can print after the installation, restart your Personal Firewall software.

4. Put the supplied CD-ROM into your CD-ROM drive. If the model name screen appears, choose your machine. If the language screen appears, choose your language.
5. The CD-ROM main menu will appear. Click **Install Other Drivers or Utilities**.



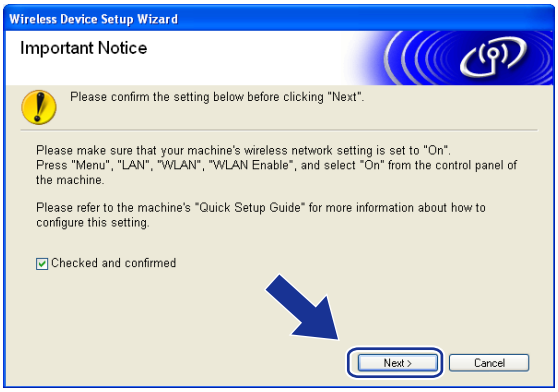
Note

If this window does not appear, use Windows® Explorer to run the start.exe program from the root folder of the Océ CD-ROM.

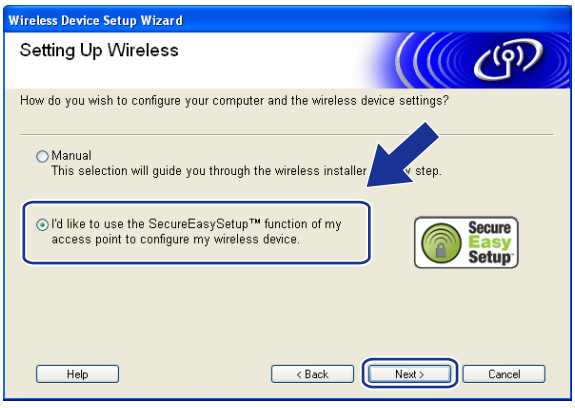
6 Click **Wireless LAN Setup Wizard**.



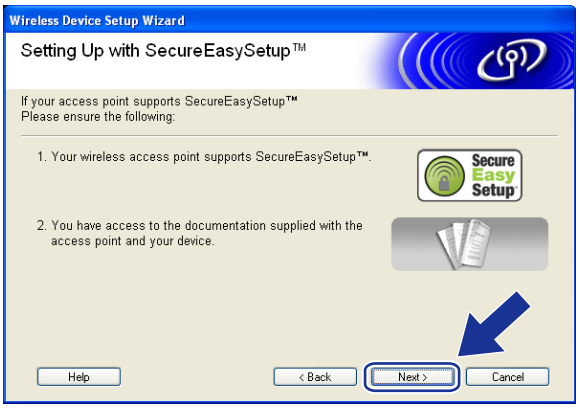
7 Read the **Important Notice** and click **Next**.



8 Make the following selection and click **Next.**



9 Confirm the on-screen message and click **Next.**



10 Refer to the instruction manual that came with your access point to set the SecureEasySetup™ mode of your access point.

11 Put the machine in SecureEasySetup™ mode.
Press **Menu**, **7**, **2**, **3** for `SecurEasySetup`.

Note

If the LCD shows `Connection NG`, please try again.

12 Click **Finish.**



13 The configuration is finished. Relocate the machine to a location that is within range of your access point.

14 You have completed the wireless setup. If you would like to continue installing drivers and software necessary for operating your device, please choose **Multi-Function Suite** from CD-ROM menu.

Configuration in Ad-hoc mode

For Windows® 2000 Professional/XP or Windows Vista®

IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Turn on the machine by plugging in the power cord.
2. Press **Menu**, **7**, **2**, **6**. Using ▲ or ▼, choose `On` and press **OK**.

```
72.WLAN
  6.WLAN Enable
▲    On
▼    Off
Select ▲▼ or OK
```

3. Turn on your computer.

Note

Before configuration, if you are using Personal Firewall software, disable it. Once you are sure that you can print after the installation, restart your Personal Firewall software.

4. Put the supplied CD-ROM into your CD-ROM drive. If the model name screen appears, choose your machine. If the language screen appears, choose your language.
5. The CD-ROM main menu will appear. Click **Install Other Drivers or Utilities**.



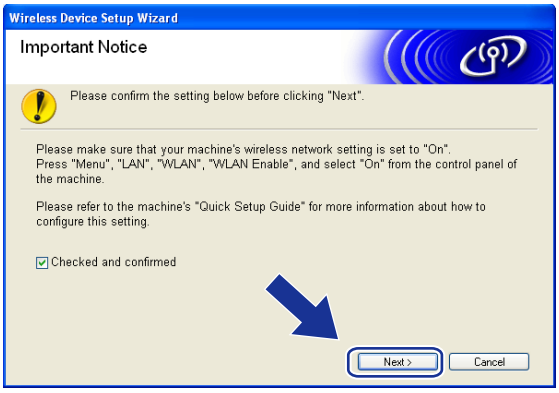
Note

If this window does not appear, use Windows® Explorer to run the start.exe program from the root folder of the Océ CD-ROM.

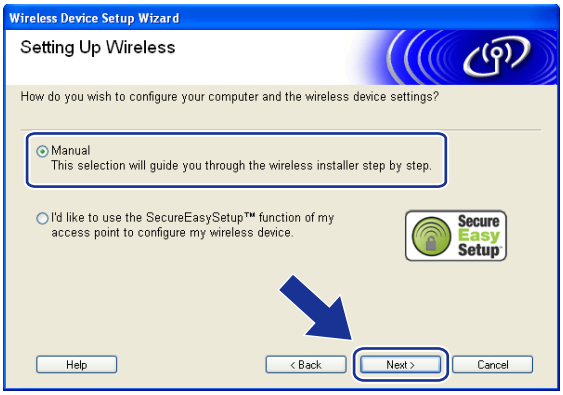
6 Click **Wireless LAN Setup Wizard**.



7 Read the **Important Notice** and click **Next**.



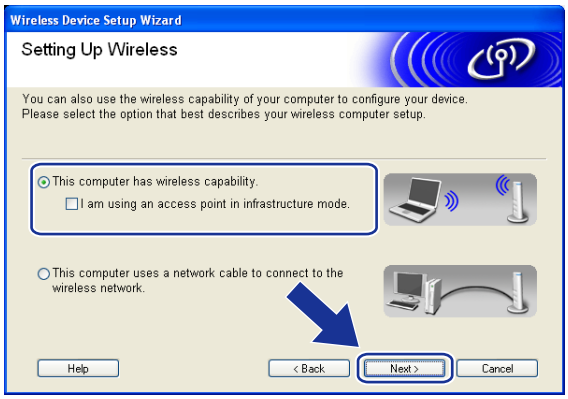
8 Choose **Manual** and then click **Next**.



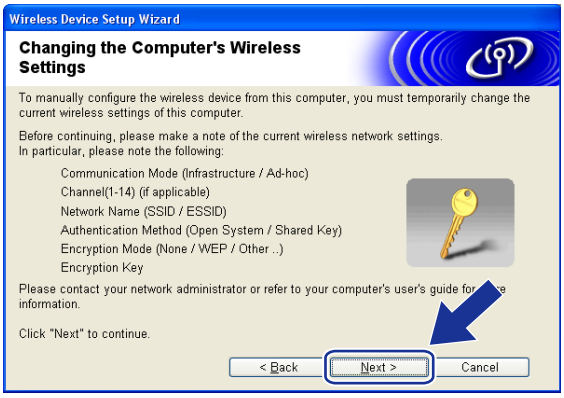
9 Choose **I’m not able to connect my device to my access point with a network cable**. Click **Next**.



10 Choose **This computer has wireless capability**, and make sure **I am using an access point in infrastructure mode** is not checked. Click **Next**.



⓫ You need to temporarily change your computer's wireless settings. Please follow the on-screen instructions. Please make sure you take notes on all the settings such as SSID or channel of your computer. You will need them to return your computer back to its original wireless settings.



Item	Record the current wireless computer settings
Communication mode: (Infrastructure/Ad-hoc)	
Channel:	
Network name: (SSID/ESSID)	
Authentication method: (Open system/Shared key/WPA-PSK/WPA-PSK2/LEAP)	
Encryption: (None/WEP/TKIP/AES/CKIP)	
Encryption key:	

⓬ To communicate with the un-configured wireless machine, temporarily change the wireless settings on your computer to match machine's default settings shown on this screen. Click **Next**.



Note

- If a message to restart your computer appears after the wireless settings have been changed, restart your computer and then go back to step 4 and continue with the install skipping steps 9, 10 and 11.
- For Windows Vista® users:
  You can temporarily change the wireless settings on your computer, following the steps below:

  1 Click **Start** and then **Control Panel**.

  2 Click **Network and Internet** and then **Network and Sharing Center** icon.

  3 Click **Connect to a network**.

  4 You can see the SSID of the wireless machine in the list. Choose **SETUP** and click **Connect**.

  5 Click **Connect Anyway** and then **Close**.

  6 Click **View status** of **Wireless Network Connection (SETUP)**.

  7 Click **Details...** and check the **Network Connection Details**. It may take a few minutes to change from 0.0.0.0. to 169.254.x.x IP address to be shown on screen (where x.x. are numbers between 1 and 254).

- For Windows® XP SP2 users:
  You can temporarily change the wireless settings on your computer, following the steps below:

  1 Click **Start** and then **Control Panel**.

  2 Click **Network and Internet Connections** icon.

  3 Click **Network Connections** icon.

  4 Choose and right click **Wireless Network Connection**. Click **View Available Wireless Networks**.

  5 You can see the SSID of the wireless machine in the list. Choose **SETUP** and click **Connect**.

  6 Check the **Wireless Network Connection** status. It may take a few minutes to change from 0.0.0.0. to 169.254.x.x IP address to be shown on screen (where x.x. are numbers between 1 and 254).

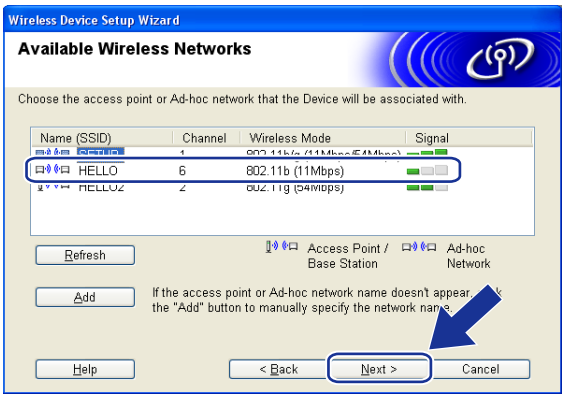
⓭ The following list appears. If the list is blank, check if the machine is powered on, and then click **Refresh**. Choose the machine you wish to configure, and click **Next**.



Note

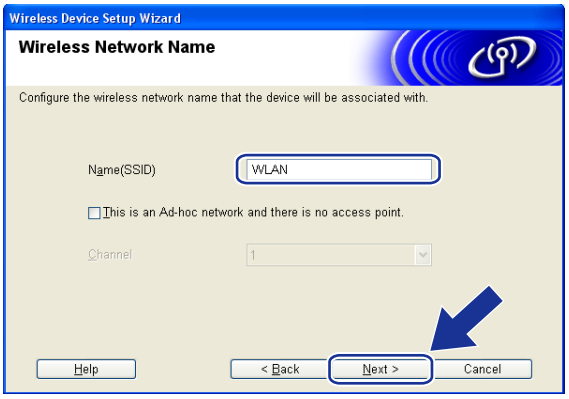
The default node name of the NC-xxxx (where “xxxx” is your model name) is “BRWxxxxxx” (where “xxxxxx” is the last six digits of Ethernet address).

⓮ The wizard will search for wireless networks available from your machine. Choose the Ad-hoc network you wish to associate the machine with, and then click **Next**.
If no Ad-hoc wireless networks are available, you need to create a new wireless network. Go to ⓱.



Note

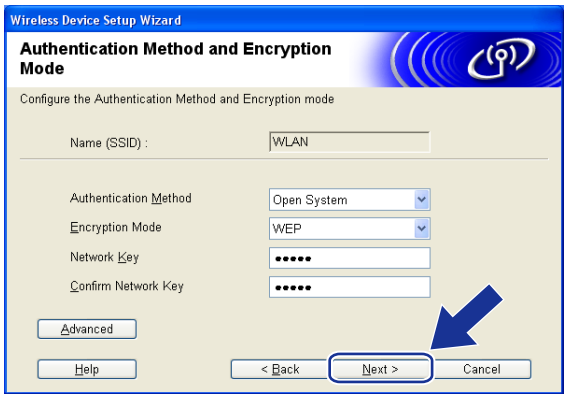
- If your target Ad-hoc network is not broadcasting the SSID name and does not appear on the list, you can manually add it by clicking the **Add** button. Follow the on-screen instructions for entering the **Name (SSID)** and the **Channel** number.
- If the list is blank, check if the machine is within range for wireless communication. Then, click **Refresh**.



15 If your network is not configured for Authentication and Encryption, the following screen will appear. To continue configuration, click **OK** and go to ⓲.



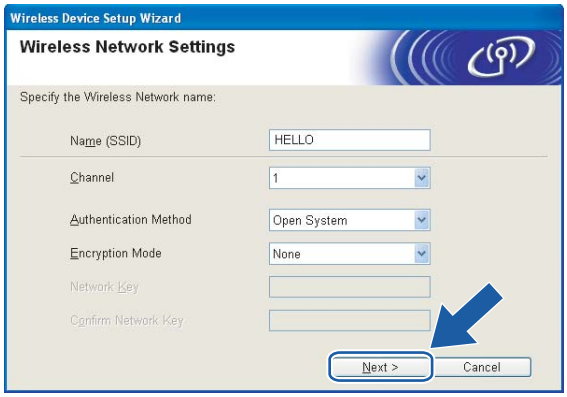
16 If your network is configured for Authentication and Encryption, the following screen will appear. When configuring your Océ wireless machine, you must ensure that it is configured to match the Authentication and Encryption settings of your existing wireless network. Choose the **Authentication Method** and **Encryption Mode** from the pull-downs in each setting box. Then enter the **Network key** and click **Next**. Go to ⓲.



Note

- If you want to set more than one WEP key, click **Advanced**.
- If you do not know the Authentication or Encryption settings for network, contact your network administrator.

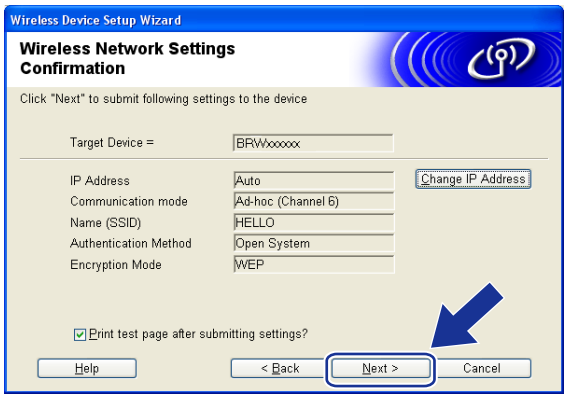
17 Enter a new SSID name and choose the **Authentication Method** and **Encryption Mode** from the pull-downs in each setting box. Then enter the **Network key** and click **Next**.



Note

If you do not know the Authentication or Encryption settings for network, contact your network administrator.

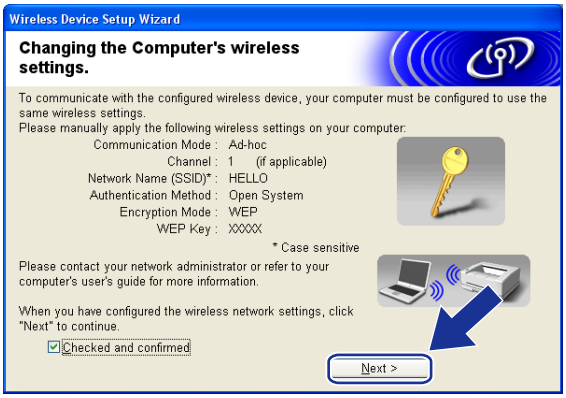
18 Click **Next**. The settings will be sent to your machine. The settings will remain unchanged if you click **Cancel**.



Note

If you want to manually enter the IP address settings of your machine, click **Change IP Address** and enter the necessary IP address settings for your network.

19 To communicate with the configured wireless device, you must configure your computer to use same wireless settings. Manually change the wireless settings on your computer to match the machine's wireless settings shown on this screen. Click **Next**.
(The settings shown on this screen are for example only. Your settings will not be the same.)



20 You have completed the wireless setup. Click **Finish**. If you would like to continue installing drivers and software necessary for operating your device, please choose **Multi-Function Suite** from CD-ROM menu.



5 Wireless Configuration for Macintosh®

The following instructions will install your cx2100 in a network environment using the Océ automatic installer application for Macintosh® in the CD-ROM we have provided with the machine.

You can also setup your machine using the machine's control panel which we recommend. You can find instructions in the supplied Quick Setup Guide or see *Configuring your machine for a wireless network* on page 19.

Configuration in Infrastructure mode

For Mac OS®X 10.2.4 or greater

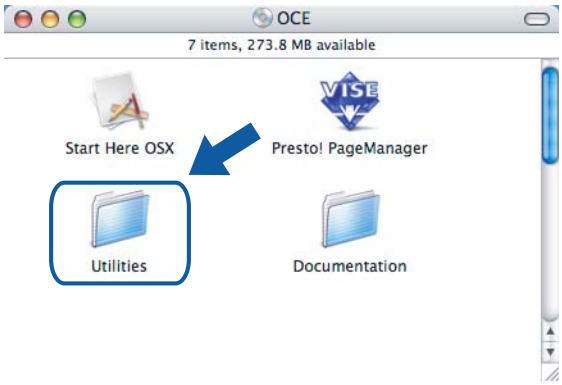
IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Turn on the machine by plugging in the power cord.
2. Press **Menu**, **7**, **2**, **6**. Using ▲ or ▼, choose `On` and press **OK**.

```
72.WLAN
  6.WLAN Enable
▲     On
▼     Off
Select ▲▼ or OK
```

3. Turn on your Macintosh®.
4. Put the supplied CD-ROM into your CD-ROM drive.
5. Double-click the **Utilities** icon and then **Wireless Device Setup Wizard**.



6 Read the **Important Notice** and click **Next**.



7 Choose **Manual** and then click **Next**.



8 For configuration, it is recommended that you temporarily connect your Océ wireless MFP directly to a free port on your access point, hub or router using a network cable.

- If you can temporarily connect with a network cable:

  Choose **I'm able to temporarily connect my device to my access point with a network cable** and then click **Next**.

  Go to ❻.

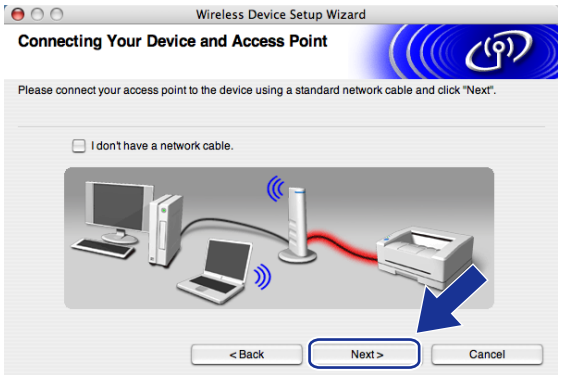
- If you do not have a network cable or cannot temporarily connect the Océ wireless MFP to your access point:

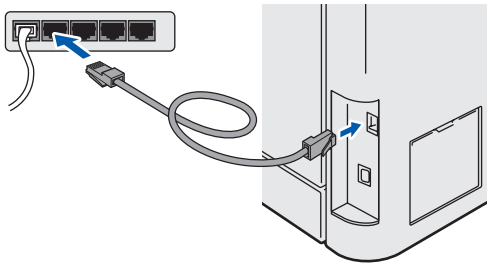
  Choose **I'm not able to connect my device to my access point with a network cable** and then click **Next**.

  Go to ❿.



9 Connect the Océ wireless MFP to your access point using a network cable and click **Next**. Go to ⓭





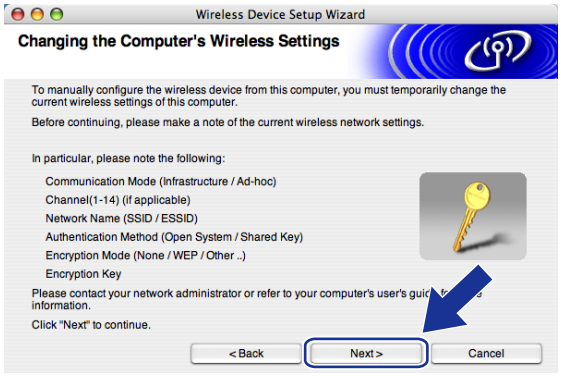
⑩ If you choose **This computer has wireless capability.**, check **I am using an access point in infrastructure mode**, and then click **Next**. Go to ⑪



If you are using a wired computer, choose **This computer uses a network cable to connect to the wireless network.**, you must configure the wireless settings from the control panel. Click **Finish** and follow the on-screen instructions to complete the setup. See *Using the Setup Wizard from the control panel* on page 25.

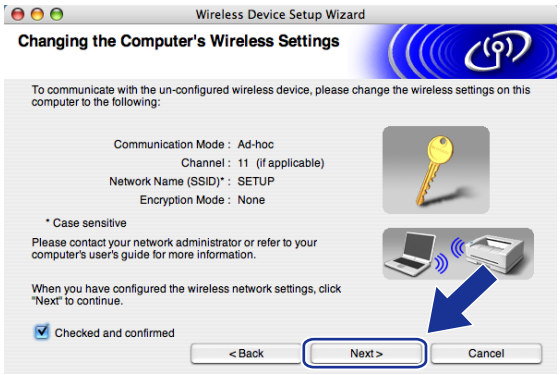


11 You need to temporarily change your computer's wireless settings. Please follow the on-screen instructions. Please make sure you take notes on all the settings such as SSID or channel of your computer. You will need them to return your computer back to its original wireless settings.



Item	Record the current wireless computer settings
Communication mode: (Infrastructure/Ad-hoc)	
Channel:	
Network name: (SSID/ESSID)	
Authentication method: (Open system/Shared key/WPA-PSK/WPA-PSK2/LEAP)	
Encryption: (None/WEP/TKIP/AES/CKIP)	
Encryption key:	

12 To communicate with the un-configured wireless machine, temporarily change the wireless settings on your computer to match machine's default settings shown on this screen. Click **Next**.



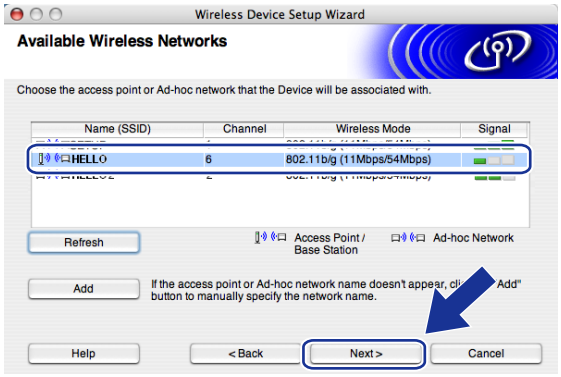
13 The following list appears. If the list is blank, check if the access point and the machine are powered on, and then click **Refresh**. Choose the machine you wish to configure, and click **Next**.



Note

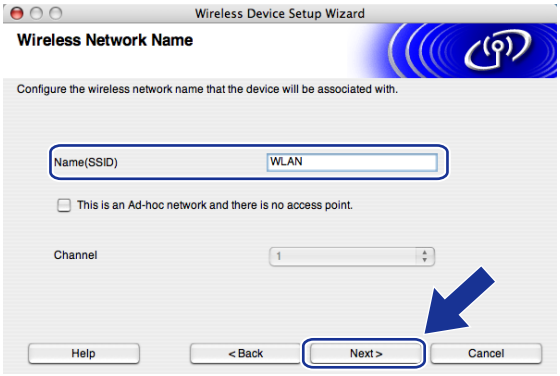
The default node name of the NC-xxxx (where “xxxx” is your model name) is “BRNxxxxxx” or “BRWxxxxxx” (where “xxxxxx” is the last six digits of Ethernet address).

14 The wizard will search for wireless networks available from your machine. Choose the access point you wish to associate the machine with, and then click **Next**.



Note

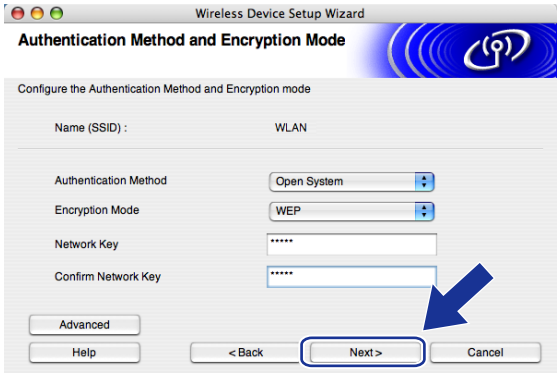
- If your access point is set to not broadcast the SSID you can manually add it by clicking the **Add** button. Follow the on-screen instructions for entering the **Name (SSID)** and the Channel number.
- If the list is blank, check that the access point has power and is broadcasting the SSID, and then see if the machine and the access point are within range for wireless communication. Then, click **Refresh.**
- "SETUP" is the default SSID of the machine. Do not choose this SSID.



15 If your network is not configured for Authentication and Encryption, the following screen will appear. To continue installation, click **OK** and go to 17.



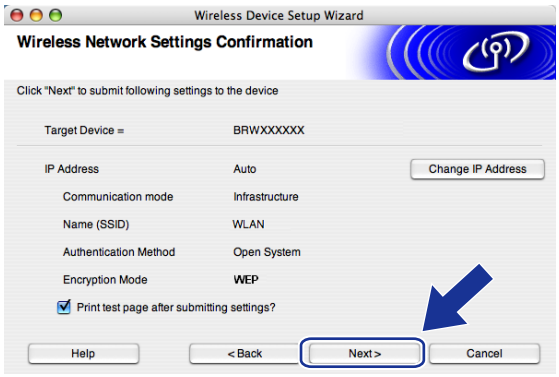
16 If your network is configured for Authentication and Encryption, the following screen will appear. When configuring your Océ wireless machine, you must ensure that it is configured to match the Authentication and Encryption settings of your existing wireless network. Choose the **Authentication Method** and **Encryption Mode** from the pull-downs in each setting box. Then enter the **Network key** and click **Next**.



Note

- If you want to set more than one WEP key, click **Advanced**.
- If you do not know the Authentication or Encryption settings for network, contact your network administrator.

17 Click **Next**. The settings will be sent to your machine. The settings will remain unchanged if you click **Cancel**.



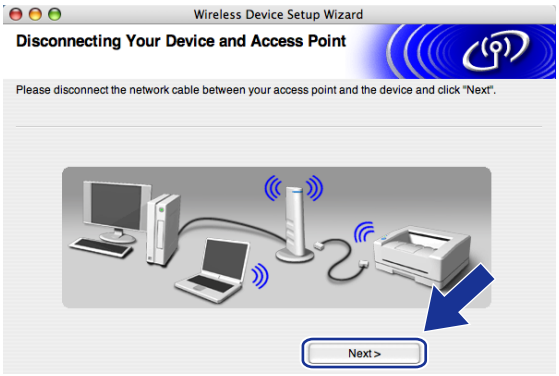
Note

If you want to manually enter the IP address settings of your machine, click **Change IP Address** and enter the necessary IP address settings for your network.

⓲ Follow the on-screen instructions.

- If you chose **I'm able to temporarily connect my device to my access point with a network cable** in ❽:

  Disconnect the network cable between your access point (hub or router) and the machine, and click **Next**. Go to ⓳.



- If you chose **This computer has wireless capability** in ❿:

  Using the information you recorded in ⓫, return the wireless settings of your computer back to their original settings. Click **Next**.



⓳ You have completed the wireless setup. Click **Finish**. If you would like to continue installing drivers and software necessary for operating your device, please choose **Start Here OSX** from CD-ROM menu.



Configuration with an access point that supports SecureEasySetup™

For Mac OS®X 10.2.4 or greater

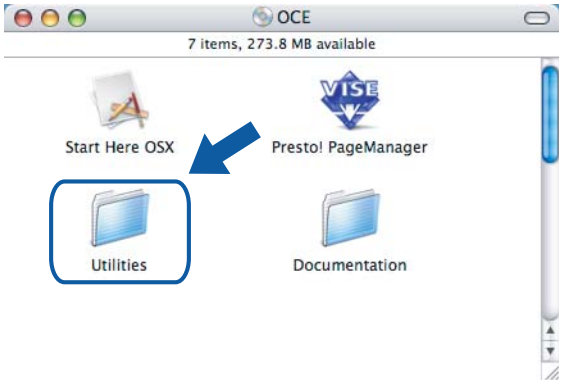
IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Turn on the machine by plugging in the power cord.
2. Press **Menu**, **7**, **2**, **6**. Using ▲ or ▼, choose `On` and press **OK**.

```
72.WLAN
  6.WLAN Enable
▲    On
▼    Off
Select ▲▼ or OK
```

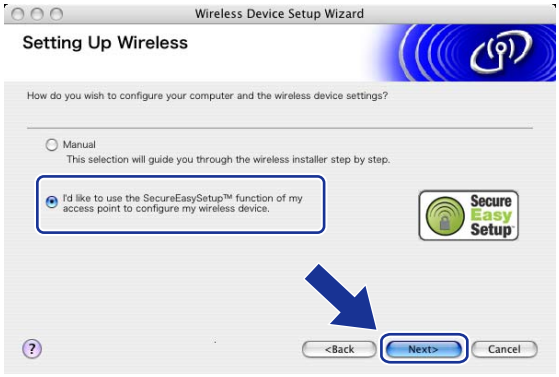
3. Turn on your Macintosh®.
4. Put the supplied CD-ROM into your CD-ROM drive.
5. Double-click the **Utilities** icon and then **Wireless Device Setup Wizard**.



6 Read the **Important Notice** and click **Next**.



7 Make the following selection and click **Next.**



8 Confirm the on-screen message and click **Next.**



9 Refer to the instruction manual that came with your access point to set the SecureEasySetup™ mode of your access point.

10 Put the machine in SecureEasySetup™ mode.
Press **Menu**, **7**, **2**, **3** for `SecurEasySetup`.

Note

If the LCD shows `Connection NG`, please try again.

11 Click **Finish.**



12 The configuration is finished. Relocate the machine to a location that is within range of your access point.

13 You have completed the wireless setup. If you would like to continue installing drivers and software necessary for operating your device, please choose **Start Here OSX** from CD-ROM menu.

Configuration in Ad-hoc mode

For Mac OS®X 10.2.4 or greater

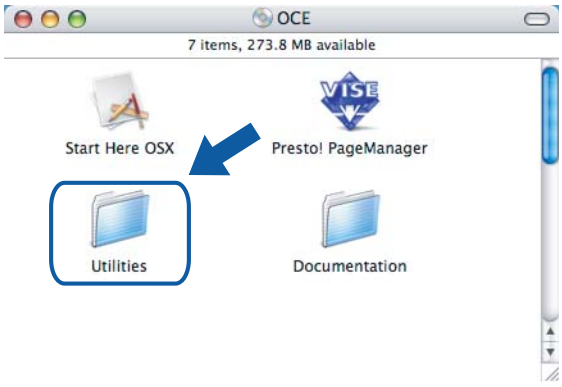
IMPORTANT

If you have previously configured the wireless settings of the machine, you must reset the network LAN settings before you can configure the wireless settings again. Press **Menu**, **7**, **0** for `Factory Reset`, `Reset` and choose `Yes` to accept the change. The machine will restart automatically.

1. Turn on the machine by plugging in the power cord.
2. Press **Menu**, **7**, **2**, **6**. Using ▲ or ▼, choose `On` and press **OK**.

```
72.WLAN
  6.WLAN Enable
▲    On
▼    Off
Select ▲▼ or OK
```

3. Turn on your Macintosh®.
4. Put the supplied CD-ROM into your CD-ROM drive.
5. Double-click **the Utilities icon and then Wireless Device Setup Wizard**.



6 Read the **Important Notice** and click **Next**.



7 Choose **Manual** and then click **Next**.



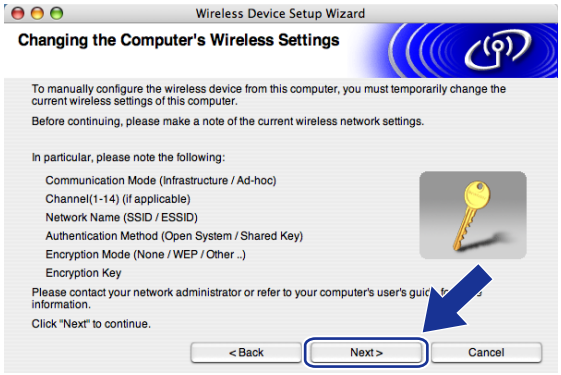
8 Choose **I'm not able to connect my device to my access point with a network cable**. Click **Next**.



9 Choose **This computer has wireless capability**, and make sure **I am using an access point in infrastructure mode** is not checked. Click **Next**.



10 You need to temporarily change your computer's wireless settings. Please follow the on-screen instructions. Please make sure you take notes on all the settings such as SSID or channel of your computer. You will need them to return your computer back to its original wireless settings.



Item	Record the current wireless computer settings
Communication mode: (Infrastructure/Ad-hoc)	
Channel:	
Network name: (SSID/ESSID)	
Authentication method: (Open system/Shared key/WPA-PSK/WPA-PSK2/LEAP)	
Encryption: (None/WEP/TKIP/AES/CKIP)	
Encryption key:	

⓫ To communicate with the un-configured wireless machine, temporarily change the wireless settings on your computer to match machine's default settings shown on this screen. Click **Next**.



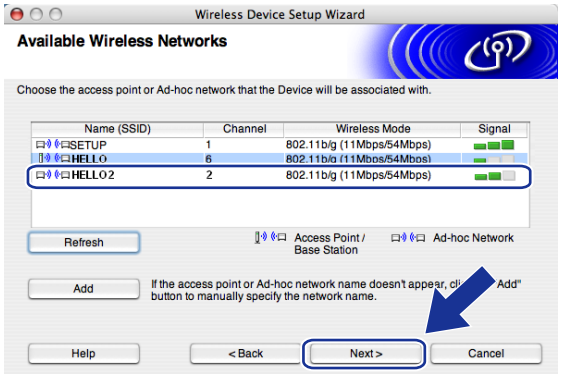
⓬ The following list appears. If the list is blank, check if the machine is powered on, and then click **Refresh**. Choose the machine you wish to configure, and click **Next**.



Note

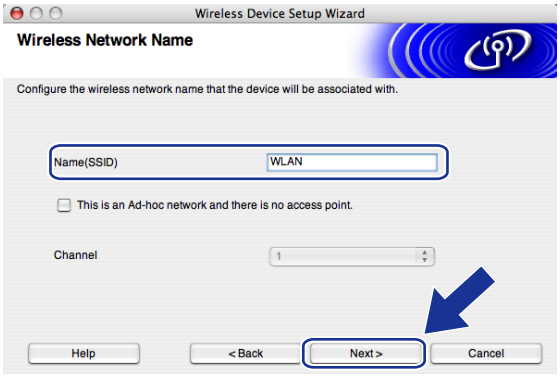
The default node name of the NC-xxxx (where "xxxx" is your model name) is "BRWxxxxxx" (where "xxxxxx" is the last six digits of Ethernet address).

⓭ The wizard will search for wireless networks available from your machine. Choose the Ad-hoc network you wish to associate the machine with, and then click **Next**.
If no Ad-hoc wireless networks are available, you need to create a new wireless network. Go to ⓯.



Note

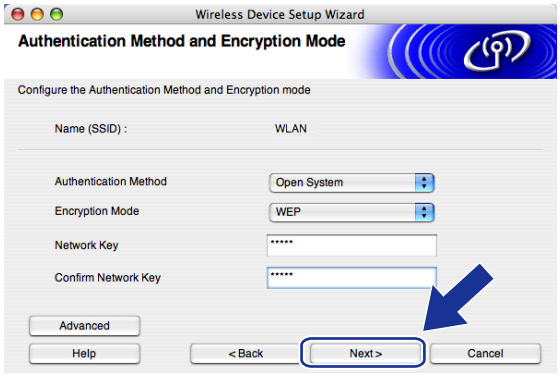
- If your target Ad-hoc network is not broadcasting the SSID name and does not appear on the list, you can manually add it by clicking the **Add** button. Follow the on-screen instructions for entering the **Name (SSID)** and the **Channel** number.
- If the list is blank, check if the machine is within range for wireless communication. Then, click **Refresh**.



14 If your network is not configured for Authentication and Encryption, the following screen will appear. To continue installation, click **OK** and go to ⓰.



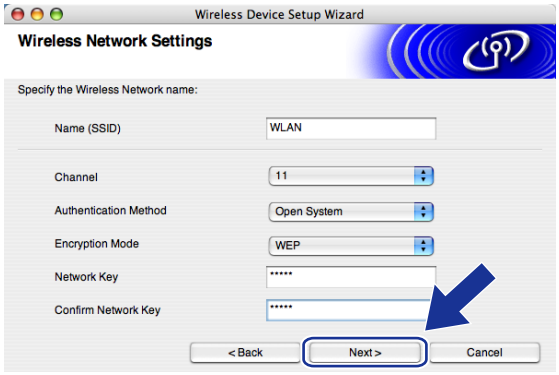
15 If your network is configured for Authentication and Encryption, the following screen will appear. When configuring your Océ wireless machine, you must ensure that it is configured to match the Authentication and Encryption settings of your existing wireless network. Choose the **Authentication Method** and **Encryption Mode** from the pull-downs in each setting box. Then enter the **Network key** and click **Next**. Go to ⓱.



Note

- If you want to set more than one WEP key, click **Advanced**.
- If you do not know the Authentication or Encryption settings for network, contact your network administrator.

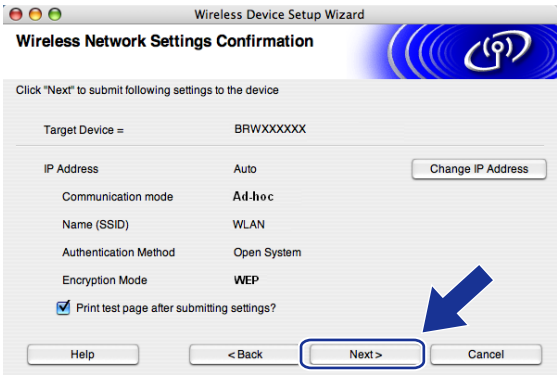
16 Enter a new SSID name and choose the **Authentication Method** and **Encryption Mode** from the pull-downs in each setting box. Then enter the **Network key** and click **Next**.



Note

If you do not know the Authentication or Encryption settings for network, contact your network administrator.

17 Click **Next**. The settings will be sent to your machine. The settings will remain unchanged if you click **Cancel**.



Note

If you want to manually enter the IP address settings of your machine, click **Change IP Address** and enter the necessary IP address settings for your network.

18 To communicate with the configured wireless device, you must configure your computer to use same wireless settings. Manually change the wireless settings on your computer to match the machine's wireless settings shown on this screen. Click **Next**.
(The settings shown on this screen are for example only. Your settings will not be the same.)



19 You have completed the wireless setup. Click **Finish**. If you would like to continue installing drivers and software necessary for operating your device, please choose **Start Here OSX** from CD-ROM menu.



6 Control panel setup

LAN menu

Before using your Océ product in a network environment, you need to configure the correct TCP/IP settings.

In this chapter, you will learn how to configure the network settings using the control panel, located on the front of the machine.

The LAN menu selections of the control panel allow you to set up the cx2100 for your network configuration. Press **Menu**, then press ▲ or ▼ to choose LAN. Proceed to the menu selection you wish to configure. See *Function table and default factory settings* on page 181.

Please note that the machine is supplied with the BRAdmin Light utility and Remote Setup applications for Windows® and Macintosh®, which also can be used to configure many aspects of the network. See *Changing the print server settings* on page 16 for a wired connection or *Changing the print server settings* on page 29 for a wireless connection.

TCP/IP

If you connect the machine with the Ethernet cable to your network, use the Wired menu selections. If you connect the machine to a wireless Ethernet network, use the WLAN menu selections.

This menu has ten sections: BOOT Method, IP Address, Subnet Mask, Gateway, Node Name, WINS Config, WINS Server, DNS Server, APIPA and IPv6.

BOOT Method

This selection controls how the machine obtains an IP address. The default setting is Auto.

Note

- If you do not want your print server configured via DHCP, BOOTP or RARP, you must set the BOOT Method to Static so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems. To change the BOOT Method, use the machine's control panel, BRAdmin Professional utility, Remote Setup or Web Based Management (web browser).
- You cannot change the BOOT method using the BRAdmin Light utility that was supplied on the CD-ROM with your Océ product. Please use the latest BRAdmin Professional utility that is available as a download from http://www.oceusa.com. This utility is only available for Windows® users.

1. Press **Menu**.
2. Press ▲ or ▼ to choose LAN.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose Wired.
   (For Wireless) Press ▲ or ▼ to choose WLAN.
   Press **OK**.
4. Press ▲ or ▼ to choose TCP/IP.
   Press **OK**.

5 Press ▲ or ▼ to choose `BOOT Method`.
Press **OK**.

6 Press ▲ or ▼ to choose `Auto`, `Static`, `RARP`, `BOOTP` or `DHCP`.
Press **OK**.

- If you chose `Auto`, `RARP`, `BOOTP` or `DHCP`, go to ❼.
- If you chose `Static`, go to ❽.

7 Enter how many times the machine tries to obtain the IP address. We recommend you to enter 3 or more.
Press **OK**.

8 Press **Stop/Exit**.

Auto mode

In this mode, the machine will scan the network for a DHCP server, if it can find one, and if the DHCP server is configured to allocate an IP address to the machine, then the IP address supplied by the DHCP server will be used. If no DHCP server is available, then the machine will scan for a BOOTP server. If a BOOTP server is available, and it is configured correctly, the machine will take its IP address from the BOOTP server. If a BOOTP server is not available, the machine will scan for a RARP server. If a RARP server also does not answer, the IP Address is scanned through APIPA facility, see *Using APIPA to configure the IP address* on page 171. After it is initially powered ON, it may take a few minutes for the machine to scan the network for a server.

Static mode

In this mode the machine's IP address must be manually assigned. Once entered the IP address is locked to the assigned address.

RARP mode

The Océ print server IP address can be configured using the Reverse ARP (RARP) service on your host computer. For more information on RARP, see *Using RARP to configure the IP address* on page 171.

BOOTP mode

BOOTP is an alternative to RARP that has the advantage of allowing configuration of the subnet mask and gateway. For more information on BOOTP, see *Using BOOTP to configure the IP address* on page 170.

DHCP mode

Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server in your network (typically a UNIX®, Windows® 2000/XP, Windows Vista® network) the print server will automatically obtain its IP address from a DHCP server and register its name with any RFC 1001 and 1002 compliant dynamic name services.

IP Address

This field displays the current IP address of the machine. If you have chosen a BOOT Method of Static, enter the IP address that you wish to assign to the machine (check with your network administrator for the IP address to use). If you have chosen a method other than Static, the machine will attempt to determine its IP address using the DHCP or BOOTP protocols. The default IP address of your machine will probably be incompatible with the IP address numbering scheme of your network. We recommend that you contact your network administrator for an IP address for the network the unit will be connected on.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `IP Address`.
   Press **OK**.
6. Press **1** to choose `Change`.
7. Enter the IP address.
   Press **OK**.
8. Press **Stop/Exit**.

Subnet Mask

This field displays the current subnet mask used by the machine. If you are not using DHCP or BOOTP to obtain the subnet mask, enter the desired subnet mask. Check with your network administrator for the subnet mask to use.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Subnet Mask`.
   Press **OK**.
6. Press **1** to choose `Change`.

7. Enter the Subnet Mask address.
   Press **OK**.

8. Press **Stop/Exit**.

Gateway

This field displays the current gateway or router address used by the machine. If you are not using DHCP or BOOTP to obtain the gateway or router address, enter the address you wish to assign. If you do not have a gateway or router, leave this field blank. Check with your network administrator if you are unsure.

1. Press **Menu**.

2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.

3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.

4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.

5. Press ▲ or ▼ to choose `Gateway`.
   Press **OK**.

6. Press **1** to choose `Change`.

7. Enter the Gateway address.
   Press **OK**.

8. Press **Stop/Exit**.

Node Name

You can register the machine name on the Network. This name is often referred to as a NetBIOS name; it will be the name that is registered by the WINS server on your network. Océ recommends the name “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address) (up to 15 characters).

1. Press **Menu**.

2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.

3. (For Wired) Press▲ or▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.

4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.

5. Press ▲ or ▼ to choose `Node Name`.
   Press **OK**.
6. Press **1** to choose `Change`.
7. Enter the Node Name.
   Press **OK**.
8. Press **Stop/Exit**.

WINS Config

This selection controls how the machine obtains the IP address of the WINS server.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `WINS Config`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Auto` or `Static`.
   Press **OK**.
7. Press **Stop/Exit**.

Auto

Automatically uses a DHCP request to determine the IP addresses for the primary and secondary WINS servers. You must set the BOOT Method to Auto for this feature to work.

Static

Uses a specified IP address for the primary and secondary WINS servers.

WINS Server

Primary WINS Server IP Address

This field specifies the IP address of the primary WINS (Windows® Internet Naming Service) server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service.

Secondary WINS Server IP Address

This field specifies the IP address of the secondary WINS server. It is used as a backup to the Primary WINS server address. If the Primary server is unavailable, the machine still can register itself with a secondary server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service. If you have a primary WINS server, but no secondary WINS server, simply leave this field blank.

1. Press **Menu**.
2. Press▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `WINS Server`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Primary` or `Secondary`.
   Press **OK**.
7. Press **1** to choose `Change`.
8. Enter the WINS Server address.
   Press **OK**.
9. Press **Stop/Exit**.

DNS Server

Primary DNS Server IP Address

This field specifies the IP address of the primary DNS (Domain Name System) server.

Secondary DNS Server IP Address

This field specifies the IP address of the secondary DNS server. It is used as a backup to the Primary DNS server address. If the Primary server is unavailable, the machine will contact the Secondary DNS server. If you have a primary DNS server, but no secondary DNS server, simply leave this field blank.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `DNS Server`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Primary` or `Secondary`.
   Press **OK**.
7. Press **1** to choose `Change`.
8. Enter the DNS Server address.
   Press **OK**.
9. Press **Stop/Exit**.

APIPA

The setting of On will cause the print server to automatically allocate a Link-Local IP address in the range (169.254.1.0 - 169.254.254.255) when the print server cannot obtain an IP address through the BOOT Method you have set (see *BOOT Method* on page 76). Choosing Off means the IP address doesn't change, when the print server cannot obtain an IP address through the BOOT Method you have set.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.

4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `APIPA`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

IPv6

This machine is compatible with IPv6, the next generation internet protocol. If you want to use the IPv6 protocol, choose `On`. The default setting for IPv6 is `Off`.

For more information on the IPv6 protocol, visit http://www.oceusa.com.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `TCP/IP`.
   Press **OK**.
5. Press ▲ or ▼ to choose `IPv6`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Note

After you choose IPv6 `On`, this setting will be applied to both the wired and wireless LAN interface.

Ethernet (wired network only)

Ethernet link mode. Auto allows the print server to operate in 100BASE-TX full or half duplex, or in 10BASE-T full or half duplex mode by auto negotiation.

You can fix the server link mode to 100BASE-TX Full Duplex (100B-FD) or Half Duplex (100B-HD) and 10BASE-T Full Duplex (10B-FD) or Half Duplex (10B-HD). This change is valid after the print server has been reset (default is `Auto`).

Note

If you incorrectly set this value, you may not be able to communicate with your print server.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Wired`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Ethernet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Auto`, `100B-FD`, `100B-HD`, `10B-FD` or `10B-HD`.
   Press **OK**.
6. Press **Stop/Exit**.

Setup Wizard (wireless network only)

The **Setup Wizard** guides you through the wireless network configuration. For more information, see *Using the Setup Wizard from the control panel* on page 25.

SecureEasySetup (wireless network only)

The SecureEasySetup™ software allows you to configure the wireless network easier than configuring it manually. By pushing a button on the wireless router or access point, you can complete setup and secure the wireless network. Your router or access point must also support SecureEasySetup™. See *Using the SecureEasySetup™ software to configure your machine for a wireless network* on page 27.

WLAN Status (wireless network only)

Status

This field displays the current wireless network status; `Active(11b)`, `Active(11g)`, `Wired LAN Active`, `WLAN OFF` or `Connection NG`.

1. Press **Menu.**
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `WLAN Status`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Status`.
   Press **OK**.
6. The current wireless network status will be displayed; `Active(11b)`, `Active(11g)`, `Wired LAN Active`, `WLAN OFF` or `Connection NG`.
7. Press **Stop/Exit**.

Signal

This field displays the current wireless network signal strength; `Strong`, `Medium`, `Weak` or `None`.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `WLAN Status`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Signal`.
   Press **OK**.
6. The current wireless network signal strength will be displayed; `Strong`, `Medium`, `Weak` or `None`.
7. Press **Stop/Exit**.

SSID

This field displays the current wireless network SSID. The display shows up to 32 characters of the SSID name.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `WLAN Status`.
   Press **OK**.
5. Press ▲ or ▼ to choose `SSID`.
   Press **OK**.
6. The current wireless network SSID will be displayed.
7. Press **Stop/Exit**.

Comm.Mode

This field displays the current wireless network communication mode; `Ad-hoc` or `Infrastructure`.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `WLAN Status`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Comm.Mode`.
   Press **OK**.
6. The current wireless network communication mode will be displayed; `Ad-hoc` or `Infrastructure`.
7. Press **Stop/Exit**.

Set to Default

The `Set to Default` allows you to reset each wired or wireless settings to the default. If you want to reset both wired and wireless settings, see *Restoring the network settings to factory default* on page 103.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. (For Wired) Press ▲ or ▼ to choose `Wired`.
   (For Wireless) Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Set to Default`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Reset` or `Exit`.
   Press **OK**.
6. Press **Stop/Exit**.

Wired Enable (wired network only)

If you want to use the wired network connection, set `Wired Enable` to `On`.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Wired`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Wired Enable`.
   Press **OK**.
5. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
6. Press **Stop/Exit**.

WLAN Enable (wireless network only)

If you want to use the wireless network connection, set `WLAN Enable` to `On`.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `WLAN`.
   Press **OK**.
4. Press ▲ or ▼ to choose `WLAN Enable`.
   Press **OK**.
5. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
6. Press **Stop/Exit**.

Setup Internet (of Setup IFAX menu)

This menu has nine selections: **Mail Address**, **SMTP Server**, **SMTP Port**, **Auth. for SMTP**, **POP3 Server**, **POP3 Port**, **Mailbox Name**, **Mailbox Pwd** and **APOP**. As this section requires you to enter a lot of text characters, you may find that it is more convenient to use your favorite web browser to configure these settings. (See *Web Based Management* on page 122. For more details about Internet fax, see *Internet fax* on page 126.)

You can also access the character you want by repeatedly pressing the appropriate number key using the machine's control panel. For more information, see *Entering Text* on page 186.

Mail Address

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Mail Address`.
   Press **OK**.
6. Press **1** to change. Enter the mail address.
   Press **OK**.
7. Press **Stop/Exit**.

SMTP Server

This field displays the node name or IP address of an SMTP mail server (outgoing E-mail server) on your network.

(Ex, “mailhost.ocemail.net” or “192.000.000.001”)

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `SMTP Server`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Name?` or `IP Address?`.
   Press **OK**.
7. Enter the SMTP server address.
   Press **OK**.
8. Press **Stop/Exit**.

SMTP Port

This field displays the SMTP port number (for outgoing E-mails) on your network.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `SMTP Port`.
   Press **OK**.
6. Enter the SMTP port number.
   Press **OK**.
7. Press **Stop/Exit**.

Auth. for SMTP

You can specify the security method for E-mail notification. For details on security methods for E-mail notification, see *Security methods for E-mail notification* on page 135.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Auth. for SMTP`.
   Press **OK**.
6. Press ▲ or ▼ to choose `None`, `SMTP-AUTH` or `POP bef. SMTP`.
   Press **OK**.
7. If you chose `None` or `POP bef. SMTP` in ❻, go to ⓫.
   If you chose `SMTP-AUTH` in ❻, go to ❽.
8. Enter the account name for SMTP authentication.
   Press **OK**.
9. Enter the account password for SMTP authentication.
   Press **OK**.
10. Enter the account password again.
    Press **OK**.
11. Press **Stop/Exit**.

POP3 Server

This field displays the node name or IP address of the POP3 server (incoming E-mail server) used by the cx2100. This address is necessary for the Internet fax features to function correctly.

(Ex, “mailhost.ocemail.net” or “192.000.000.001”)

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `POP3 Server`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Name?` or `IP Address?`.
   Press **OK**.
7. Enter the POP3 server address.
   Press **OK**.
8. Press **Stop/Exit**.

POP3 Port

This field displays the POP3 port number (for incoming E-mails) used by the cx2100.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `POP3 Port`.
   Press **OK**.
6. Enter the POP3 port number.
   Press **OK**.
7. Press **Stop/Exit**.

Mailbox Name

You can specify a mailbox name on the POP3 server where the internet print jobs are to be retrieved.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Mailbox Name`.
   Press **OK**.
6. Enter the user account name assigned to the cx2100 that will login to the POP3 server.
   Press **OK**.
7. Press **Stop/Exit**.

Mailbox Pwd

You can specify password on the POP3 server where the internet print jobs are to be retrieved.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Mailbox Pwd`.
   Press **OK**.
6. Enter the user password assigned to the machine that will login to the POP3 server. Please note that this password is case sensitive.
   Press **OK**.
7. Enter the password again.
   Press **OK**.
8. Press **Stop/Exit**.

Note

To set for no password, enter a single space.

APOP

You can enable or disable the APOP (Authenticated Post Office Protocol).

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Internet`.
   Press **OK**.
5. Press ▲ or ▼ to choose `APOP`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Setup Mail RX (of Setup IFAX menu)

This menu has five selections: **Auto Polling**, **Poll Frequency**, **Header**, **Del Error Mail** and **Notification**.

Auto Polling

When set to On, the machine automatically checks the POP3 server for new messages.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail RX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Auto Polling`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Poll Frequency

Sets the interval for checking for new messages on the POP3 server (default is `10Min`).

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail RX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Poll Frequency`.
   Press **OK**.
6. Enter the polling frequency.
   Press **OK**.
7. Press **Stop/Exit**.

Header

This selection allows the contents of the mail header to be printed when the received message is printed.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail RX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Header`.
   Press **OK**.
6. Press ▲ or ▼ to choose `All`, `Subject+From+To` or `None`.
   Press **OK**.
7. Press **Stop/Exit**.

Del Error Mail

When set to On, the machine automatically deletes error mails that the machine can not receive from the POP server.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail RX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Del Error Mail`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Notification

The notification feature allows a confirmation of receipt message to be transmitted to the sending station when the I-Fax has been received.

This feature only works on I-Fax machines that support the “MDN” specification.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail RX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Notification`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On`, `MDN` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Setup Mail TX (of Setup IFAX menu)

This menu has three selections: **Sender Subject**, **Size Limit** and **Notification**.

Sender Subject

This field displays the subject that is attached to the Internet fax data being sent from the cx2100 to a computer (default is “`Internet Fax Job`”).

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail TX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Sender Subject`.
   Press **OK**.
6. If you want to change the Sender Subject, press ▲ or ▼ to choose `change` to change the Sender Subject.
   Press **OK**. Go to ❼.
   If you don’t want to change the Sender Subject, choose `Exit`.
   Press **OK**. Go to ❽.
7. Enter the subject information.
   Press **OK**.
8. Press **Stop/Exit**.

Size Limit

Some E-mail servers do not allow you to send large E-mail documents (the System Administrator will often place a limit on the maximum E-mail size). With this function enabled, the machine will display `Out of Memory` when trying to send E-mail documents over 1 Mbyte in size. The document will not be sent and an error report will be printed. The document you are sending should be separated into smaller documents that will be accepted by the mail server. (For your information, a 42 page document based on the ITU-T Test Chart #1 test chart is approximately 1 Mbyte in size.)

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail TX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Size Limit`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Notification

The notification feature allows a confirmation of receipt message to be transmitted to the sending station when the I-Fax has been received.

This feature only works on I-Fax machines that support the “MDN” specification.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Mail TX`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Notification`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Setup Relay (of Setup IFAX menu)

This menu has three selections **Rly Broadcast**, **Relay Domain** and **Relay Report**. For more information on Relay Broadcast, see *Relay broadcasting* on page 129 of this User's Guide.

Rly Broadcast

This function allows the machine to receive a document over the Internet, and then relay it to other fax machines through conventional analog landlines.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Relay`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Rly Broadcast`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Relay Domain

You can register the Domain Names (Max. 10) that are allowed to request a Relay Broadcast.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Relay`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Relay Domain`.
   Press **OK**.
6. Press ▲ or ▼ to choose `Relay`(01 - 10).
   Press **OK**.
7. Enter the Relay Domain name for the Domain that is being allowed to request a Relay Broadcast.
   Press **OK**.
8. Press **Stop/Exit**.

Relay Report

A Relay Broadcast Report can be printed at the machine that will act as a Relay Station for all Relay Broadcasts.

Its primary function is to print reports of any relayed broadcasts that have been sent through the machine. Please note: In order to use this function, you must assign the relay domain in the “Trusted Domains” section of the Relay function settings.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Setup IFAX`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Setup Relay`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Relay Report`.
   Press **OK**.
6. Press ▲ or ▼ to choose `On` or `Off`.
   Press **OK**.
7. Press **Stop/Exit**.

Scan to E-mail (E-mail server)

You can select the default color file type for the Scan to E-mail (E-mail server) function.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Scan to E-mail`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Color 150 dpi`, `Color 300 dpi`, `Color 600 dpi`, `B&W 200 dpi` or `B&W 200x100 dpi`.
   Press **OK**.
5. Press ▲ or ▼ to choose `PDF` or `JPEG` if you chose `Color 150 dpi`, `Color 300 dpi` or `Color 600 dpi` in ❹.
   Press ▲ or ▼ to choose `PDF` or `TIFF` if you chose `B&W 200 dpi` or `B&W 200x100 dpi` in ❹.
   Press **OK**.
6. Press **Stop/Exit**.

Note

For how to operate Scan to E-mail (E-mail server), see *Network Scanning* of the Software User’s Guide on the CD-ROM.

Scan to FTP

You can choose the default color file type for the Scan to FTP function.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Scan to FTP`.
   Press **OK**.
4. Press ▲ or ▼ to choose `Color 150 dpi`, `Color 300 dpi`, `Color 600 dpi`, `B&W 200 dpi` or `B&W 200x100 dpi`.
   Press **OK**.
5. Press ▲ or ▼ to choose `PDF` or `JPEG` if you chose `Color 150 dpi`, `Color 300 dpi` or `Color 600 dpi` in ❹.
   Press ▲ or ▼ to choose `PDF` or `TIFF` if you chose `B&W 200 dpi` or `B&W 200x100 dpi` in ❹.
   Press **OK**.
6. Press **Stop/Exit**.

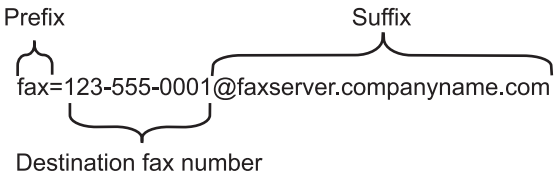
Note

For how to operate Scan to FTP, see *Network Scanning* of the Software User's Guide on the CD-ROM.

Fax to Server

The Fax to Server feature allows the machine to scan a document and send it over the network to a separate fax server. The document will then be sent from the server as fax data to the destination fax number over standard phone lines. When the Fax to Server feature is set to ON all automatic fax transmissions from the machine will be sent to the fax server for fax transmission. You can continue to send a fax directly from the machine using the manual fax feature (For more information, see *Sending a fax manually* in the User's Guide).

To send a document to the fax server the correct syntax for that server must be used. The destination fax number must be sent with a prefix and a suffix that match the parameters used by the fax server. In most cases the syntax for the prefix is "fax=" and the syntax for the suffix would be the domain name of the fax server E-mail gateway. The suffix must also include the "@" symbol at the beginning of the suffix. The prefix and the suffix information must be stored in the machine before you can use the fax to server function. Destination fax numbers can be saved in the One-Touch or Speed Dial locations or entered using the dial pad (up to 20 digit numbers). For example if you wanted to send a document to a destination fax number of 123-555-0001 the following syntax would be used.



Note

Your fax server application must support an E-mail gateway.

Setting Fax to Server to On

You can store the prefix/suffix address for the fax server in the machine.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Fax to Server`.
   Press **OK**.
4. Press ▲ or ▼ to choose `On`.
   Press **OK**.
5. Press ▲ or ▼ to choose `Prefix`.
   Press **OK**.
6. Enter the prefix using dial pad.
7. Press **OK**.
8. Press ▲ or ▼ to choose `Suffix`.
   Press **OK**.

9. Enter the suffix using dial pad.
10. Press **OK**.
11. Press **Stop/Exit**.

Note

You can enter the prefix and suffix address using up to a total of 40 characters.

How to operate

1. Place the document in the ADF or on the scanner glass.
2. Enter the fax number.
3. The machine will send the message over a TCP/IP network to the fax server.

Time Zone

This field displays your country time zone. The time shown is the time difference between your country and Greenwich Mean Time. For example, the Time Zone for Eastern Time in the USA and Canada is UTC-05:00.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Time Zone`.
   Press **OK**.
4. Press ▲ or ▼ to choose the time.
   Press **OK**.
5. Press **Stop/Exit**.

Windows® Time Zone setting

You can see the time difference for your country by using the Time Zone setting in Windows®.

1. For Windows Vista®:
   Click the **Start button**, **Control Panel**, **Date and Time**, and then **Change time zone**.
   For Windows® XP and Windows Server® 2003:
   Click the **Start button**, **Control Panel**, **Date and Time**, and then select **Time Zone**.
   For Windows® 2000:
   Click the **Start button**, **Settings**, **Control Panel**, **Date/Time**, and then select **Time Zone**.
2. Change the data and time. Verify your time zone settings from the pull-down menu (this menu displays the time difference from GMT).

Restoring the network settings to factory default

If you wish to reset the print server back to its default factory settings (resetting all information such as the password and IP address information), please follow these steps:

Note

This function restores all wired and wireless network settings to the factory default.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `LAN`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Factory Reset`.
   Press **OK**.
4. Press **1** to choose `Reset`.
5. Press **1** to choose `Yes` for reboot.
6. The machine will re-start. You can now reconnect the network cable and configure the network settings to work with your network.

Printing the Network Configuration List

Note

Node name: Node name appears in the Network Configuration List. The default node name is “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address) (up to 15 characters).

The Network Configuration List prints a report listing all the current network configuration including the network print server settings.

1. Press **Menu**.
2. Press ▲ or ▼ to choose `Print Reports`.
   Press **OK**.
3. Press ▲ or ▼ to choose `Network Config`.
   Press **OK**.
4. Press **Black Start** or **Color Start**.

7 Driver Deployment Wizard (Windows® only)

Overview

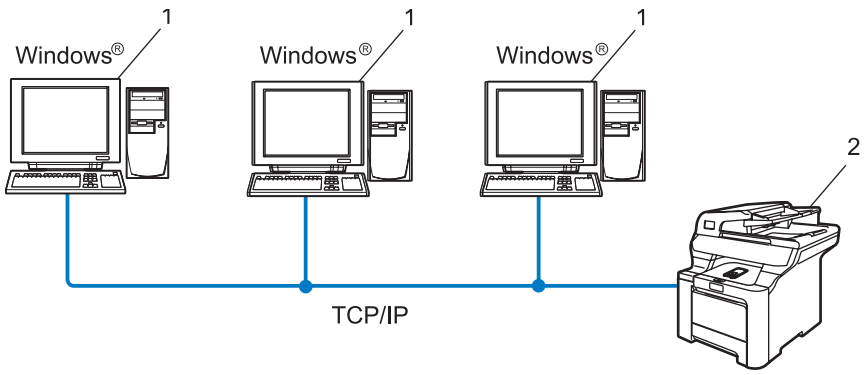
The Driver Deployment Wizard software can be used to ease the installation or even automate the installation of network connected printers. The Driver Deployment Wizard can also be used to create self running executable files which when run on a remote PC, completely automate the installation of a printer driver. The remote PC does not have to be connected to a network.

Connection methods

The Driver Deployment Wizard supports the two connection methods.

Peer-to-peer

The device is connected to the network but each user prints directly to the printer WITHOUT printing through a central queue.

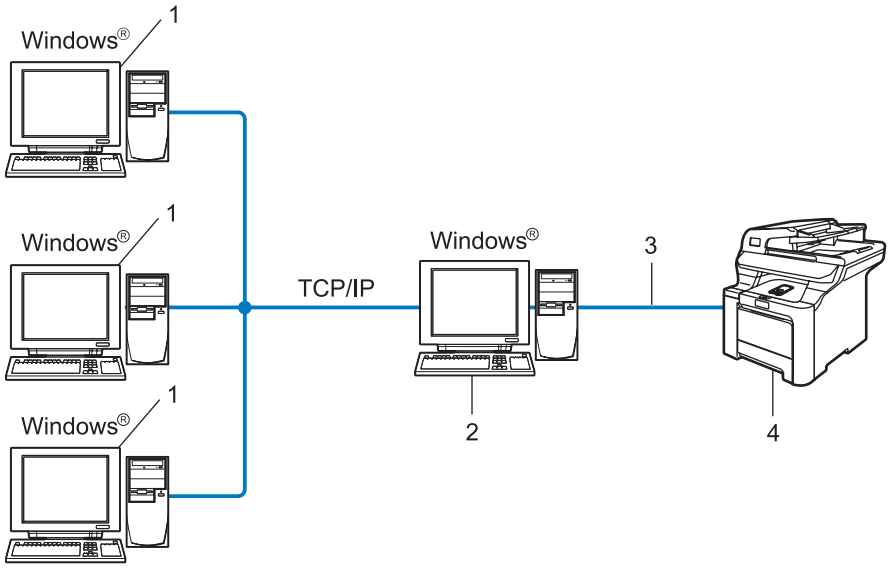


1 Client Computer

2 Network printer (your machine)

Network Shared

The device is connected to a network and a central print queue is used to manage all print jobs.



1 Client computer

2 Also known as “Server” or “Print Server”

3 TCP/IP or USB

4 Printer (your machine)

How to install the Driver Deployment Wizard software

1. Put the supplied CD-ROM into your CD-ROM drive. If the model name screen appears, choose your machine. If the language screen appears, choose your language.
2. The CD-ROM main menu will appear. Click **Install Other Drivers or Utilities**.
3. Choose the **Driver Deployment Wizard** installation program.

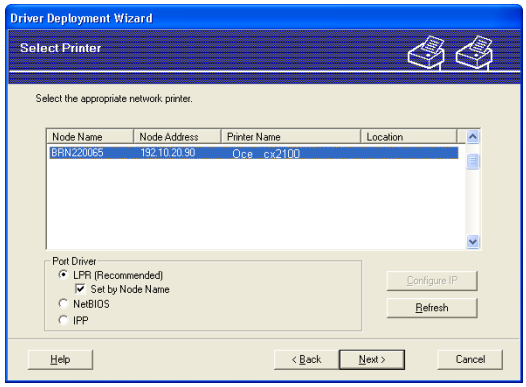
Note

For Windows Vista®, when the **User Account Control** screen appears, click **Continue**.

4. Click **Next** in response to the Welcome message.
5. Read the license agreement carefully. Then follow the on-screen instructions.
6. Click **Finish**. Now the Driver Deployment Wizard software has been installed.

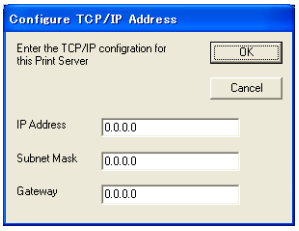
Using the Driver Deployment Wizard software

1. When you run the Wizard for the first time you will see a welcome screen. Click **Next**.
2. Choose **Printer**, and then click **Next**.
3. Choose your connection type to the printer that you want to print to.
4. Choose the option you require, and follow the on-screen instructions.
   If you choose **Oce Peer-to-Peer Network Printer**, the following screen is displayed.

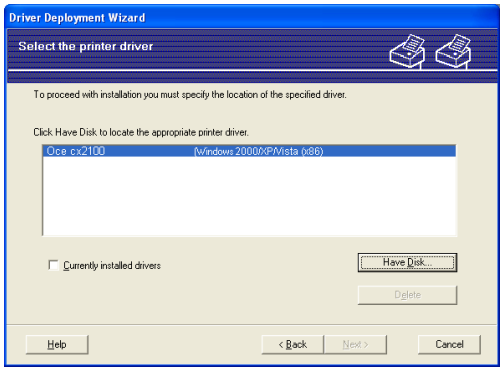


■ Setting the IP Address

If the printer does not have an IP address, the Wizard will allow you to change the IP address by selecting the printer from the list and by selecting the **Configure IP** option. A dialogue box then appears which allows you to specify information such as the IP address, subnet mask and also the gateway address.

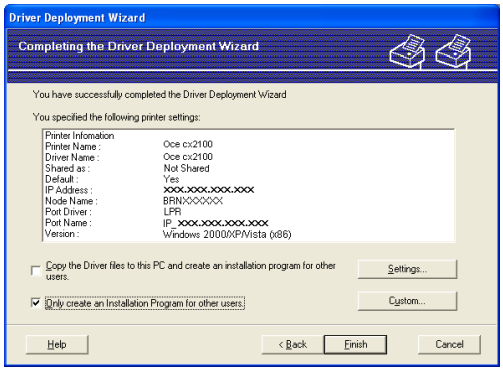


5. Choose the printer you wish to install, and then click **Next**. If the driver you wish to use is not installed on your computer, click **Have Disk** and then specify the path of the printer driver.



6 Click **Next** after you choose the correct driver.

7 A summary screen will appear. Confirm the settings of the driver.



■ Creating an executable file

The Driver Deployment Wizard software can also be used to create self running .EXE files. These self-running .EXE files can be saved to the network, copied to a CD-ROM, a floppy disc or even E-mailed to another user. Once run, the driver and its settings are automatically installed without any user intervention.

- **Copy the Driver files to this PC and create an installation program for other users.**

  Choose this option if you wish to install the driver onto your computer and also create a self-running executable file for use with another computer using the same operating system as your own.

- **Only Create an Installation Program for other users.**

  Choose this option if the driver is already installed on your computer and you wish to create a self-running executable file without again installing the driver on your own computer.

Note

If you work in a "queue" based network and you create an executable file for another user who does not have access to the same printer queue that you define into the executable file, the driver when installed on the remote computer will default to LPT1 printing.

8 Click **Finish**. The driver is automatically installed to your computer.

8 Network printing from Windows®: basic TCP/IP Peer-to-Peer printing

Overview

If you are a Windows® user and want to print using the TCP/IP protocol in a Peer-to-Peer environment, please follow the instructions in this chapter. This chapter explains how to install the network software and the printer driver which you will need to be able to print using your network printer.

Note

- You must configure the IP address on your machine before you proceed with this chapter. If you need to configured the IP address, see *Setting the IP address and subnet mask* on page 13 first.
- Verify the host computer and print server are either on the same subnet, or that the router is properly configured to pass data between the two devices.
- If you are connecting to a Network Print Queue or Share (printing only), see *Installation when using a Network Print Queue or Share (printer driver only)* on page 174 for installation details.
- The default password for print server is "**access**".

For Windows® users (Windows® 2000/XP, Windows Vista® and Windows Server® 2003)

By default, Windows® 2000/XP, Windows Vista® and Windows Server 2003 systems install the necessary print software to enable you to print. This section describes the most commonly used configuration, Standard TCP/IP Port printing. These Windows® systems can also print via the Internet using the IPP protocol. For more information, see *Internet printing for Windows®* on page 112.

If you have already installed the printer driver, jump to *Printer driver already installed* on page 111.

Configuring the standard TCP/IP port

Printer driver not yet installed

1. Put the supplied CD-ROM into your CD-ROM drive. If the model name screen appears, choose your machine. If the language screen appears, choose your language.
2. The CD-ROM main menu will appear. Click **Install Other Drivers or Utilities**.
3. Click **Printer Driver (Only, for Network)**.
4. Click **Next** in response to the Welcome message. Follow the on-screen instructions.
5. Choose **Standard Installation** and click **Next**.
6. Choose **Oce Peer-to-Peer Network Printer**, and then click **Next**.

7 Follow the on-screen instruction, and then click **OK**.

Note

Contact your administrator if you are not sure about the location and name of the printer on the network.

8 Continue through the wizard clicking **Finish** when complete.

Printer driver already installed

If you have already installed the printer driver and wish to configure it for network printing, follow these steps:

1 For Windows Vista®:
Click the **Start** button, **Control Panel**, **Hardware and Sound**, and then **Printers**.
For Windows® XP and Windows Server® 2003:
Click the **Start** button and choose **Printers and Faxes** windows.
For Windows® 2000.
Click the **Start** button and choose **Settings** and then **Printers**.

2 Right click on the printer driver you wish to configure, and then choose **Properties**.

3 Click the **Ports** tab and click **Add Port**.

4 Choose the port that you wish to use. Typically this would be **Standard TCP/IP Port**. Then click the **New Port...** button.

5 The **Standard TCP/IP Port Wizard** will start.

6 Enter the IP address of your network printer. Click **Next**.

7 Click **Finish**.

8 Close **Printer Ports** and **Properties** dialog box.

Other sources of information

See *Configuring your machine for a network with an Ethernet cable connection* on page 11 and *Configuring your machine for a wireless network* on page 19 to learn how to configure the IP address of the printer.

9 Internet printing for Windows®

Overview

Windows® 2000/XP, Windows Vista® and Windows Server® 2003 users can print using TCP/IP using the standard Network Printing software and IPP protocol software built into any Windows® 2000/XP, Windows Vista® and Windows Server® 2003 installation.

Note

- You must configure the IP address on your printer before you proceed with this chapter. If you need to configure the IP address, see *Chapter 2* first.
- Verify the host computer and print server are either on the same subnet, or that the router is properly configured to pass data between the two devices.
- The default password for print servers is "**access**".
- This print server also supports the IPPS printing, see *Printing documents securely using IPPS* on page 139.

IPP printing for Windows® 2000/XP, Windows Vista® and Windows Server® 2003

Use the following instructions if you wish to use the IPP printing capabilities of Windows® 2000/XP, Windows Vista® and Windows Server® 2003.

For Windows Vista®

1. Click the **Start** button, **Control Panel**, **Hardware and Sound**, and then **Printers**.
2. Click **Add a printer**.
3. Choose **Add a network, wireless or Bluetooth printer**.
4. Click **The printer that I want isn't listed**.
5. Choose **Select a shared printer by name** and then enter the following in the URL field: http://printer's IP address:631/ipp (where "printer's IP address" is the printer's IP address or the node name.)

Note

If you have edited the hosts file on your computer or are using a Domain Name System (DNS), you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as "BRNxxxxxx" for a wired network or "BRWxxxxxx" for a wireless network (where "xxxxxx" is the last six digits of the Ethernet address).

6 When you click **Next**, Windows Vista® will make a connection with the URL that you specified.

■ If the printer driver has already been installed:

1 You will see the printer selection screen in the **Add Printer Wizard**. Click **OK**.

If the appropriate printer driver is already installed on your computer, Windows Vista® will automatically use that driver for use. In this case, you will simply be asked if you wish to make the driver the default printer, after which the Driver installation wizard will complete. You are now ready to print.

2 Go to ⓫.

■ If the printer driver has NOT been installed:

One of the benefits of the IPP printing protocol is that it establishes the model name of the printer when you communicate with it. After successful communication you will see the model name of the printer automatically. This means that you do not need to inform Windows Vista® about the type of printer driver to be used.

Go to ❼.

7 If your printer is not in the list of supported printers, click **Have Disk**. You will then be asked to insert the driver disk.

8 Click **Browse** and choose the appropriate Océ printer driver that is contained in the CD-ROM or in the network share. Click **Open**.

9 Click **OK**.

10 Specify the model name of the printer. Click **OK**.

Note

- When the **User Account Control** screen appears, click **Continue**.
- If the printer driver that you are installing does not have a Digital Certificate you will see a warning message. Click **Install this driver software anyway** to continue with the installation. The **Add Printer Wizard** will then complete.

11 You will see the **Type a printer name** screen in the **Add Printer Wizard**. Check the **Set as the default printer** check box if you want to use this printer as the default printer, and then click **Next**.

12 To test the printer connection, click **Print a test page**, and then click **Finish** and the printer is now configured and ready to print.

For Windows® 2000/XP and Windows Server® 2003

1. For Windows® XP and Windows Server® 2003:
   Click the **Start** button and choose **Printers and Faxes**.
   For Windows®2000:
   Click the **Start** button and choose **Settings** and then **Printers**.

2. For Windows® XP and Windows Server® 2003:
   Click **Add a printer** to start the **Add Printer Wizard**.
   For Windows® 2000:
   Double click the **Add Printer** icon to start the **Add Printer Wizard**.

3. Click **Next** when you see the **Welcome to the Add Printer Wizard** screen.

4. Choose **Network Printer**.
   For Windows® XP and Windows Server® 2003:
   Choose **A network printer, or a printer attached to another computer**.
   For Windows® 2000:
   Choose **Network Printer**.

5. Click **Next**.

6. For Windows® XP and Windows Server® 2003:
   Choose **Connect to a printer on the Internet or on a home or office network** and then enter the following in the URL field:
   http://printer's IP address:631/ipp
   (where "printer's IP address" is the printer's IP address or the node name.)
   For Windows® 2000:
   Choose **Connect to a printer on the Internet or on your intranet** and then enter the following in the URL field:
   http://printer's IP address:631/ipp
   (Where "printer's IP address" is the printer's IP address or the node name).

Note

If you have edited the hosts file on your computer or are using a Domain Name System (DNS), you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as "BRNxxxxxx" for a wired network or "BRWxxxxxx" for a wireless network (where "xxxxxx" is the last six digits of the Ethernet address) (up to 15 characters).

7 When you click **Next**, Windows® 2000/XP and Windows Server® 2003 will make a connection with the URL that you specified.

- If the printer driver has already been installed:

  1 You will see the printer selection screen in the **Add Printer Wizard**.
  If the appropriate printer driver is already installed on your computer, Windows® 2000/XP and Windows Server® 2003 will automatically use that driver for use. In this case, you will simply be asked if you wish to make the driver the default printer, after which the Driver installation wizard will complete. You are now ready to print.

  2 Go to ⓬.

- If the printer driver has NOT been installed:

  One of the benefits of the IPP printing protocol is that it establishes the model name of the printer when you communicate with it. After successful communication you will see the model name of the printer automatically. This means that you do not need to inform Windows® 2000/XP and Windows Server® 2003 about the type of printer driver to be used.

  Go to ❽.

8 The driver installation starts automatically.

Note

If the printer driver that you are installing does not have a Digital Certificate you will see a warning message. Click **Continue Anyway** to continue with the installation.

9 Click **OK** when you see the **Insert Disk** screen.

10 Click **Browse** and choose the appropriate Océ printer driver that is contained in the CD-ROM or in the network share. Click **Open**.

11 Click **OK**.

12 Check **Yes** if you want to use this printer as the default printer. Click **Next**.

13 Click **Finish** and the printer is now configured and ready to print. To test the printer connection, print a test page.

Specifying a different URL

Please note that there are several possible entries that you can enter for the URL field.

http://printer's IP address:631/ipp

This is the default URL and we recommend that you use this URL. Please note the **Get More Info** option will not display any printer data.

http://printer's IP address:631/ipp/port1

This is for HP® Jetdirect® compatibility. Please note the **Get More Info** option will not display any printer data.

http://printer's IP address:631/

Note

If you forget the URL details, you can simply enter the above text (http://printer's IP address/) and the printer will still receive and process data.

Where "printer's IP address" is the printer's IP address or the node name.

- For example:

  `http://192.168.1.2/` (if the printer's IP address is 192.168.1.2.)

  `http://BRN123456/` (if the printer's node name is BRN123456.)

Other sources of information

See *Chapter 2* of this User's Guide to learn how to configure the IP address of the printer.

10 Network printing from Macintosh®

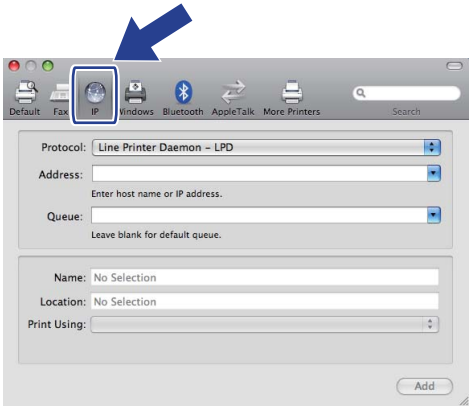
Overview

This chapter explains how to configure the BR-Script 3 (PostScript® 3™ language emulation) printer driver on a Network using Mac OS® X 10.2.4 or greater. For more information on how to install the Océ standard printer driver on a Network, see the Quick Setup Guide included with the printer.

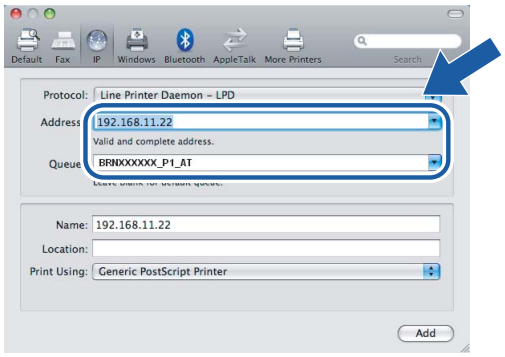
How to choose the BR-Script 3 printer driver (TCP/IP)

For Mac OS® X 10.5

1. Turn the power of the machine ON.
2. From the **Apple** menu, choose **System Preferences**.
3. Click **Print & Fax**.
4. Click **+** button to add your machine.
5. Choose **IP**.



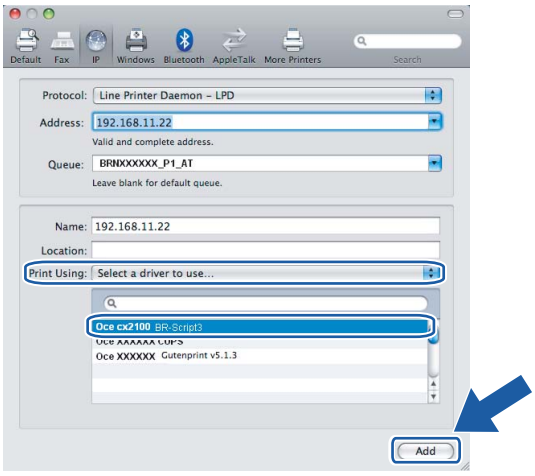
6. Enter the IP address of the printer into the **Address** box.



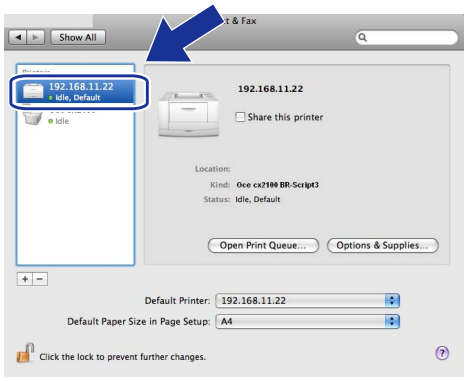
Note

- The Network Configuration List will allow you to confirm the IP address. For more information on how to print the configuration page, see *Printing the Network Configuration List* on page 104.
- When specifying the **Queue** name, use the value “brnxxxxxxxxxxxx_at”.

7 From the Print Using pull-down list choose **Select a driver to use**, and then from the printer model pull-down list choose your model. For example, choose **Oce cx2100 BR-Script3**, and then click **Add**.



8 From the **Default Printer** pull-down list choose your model to set as the default printer. The printer is now ready.

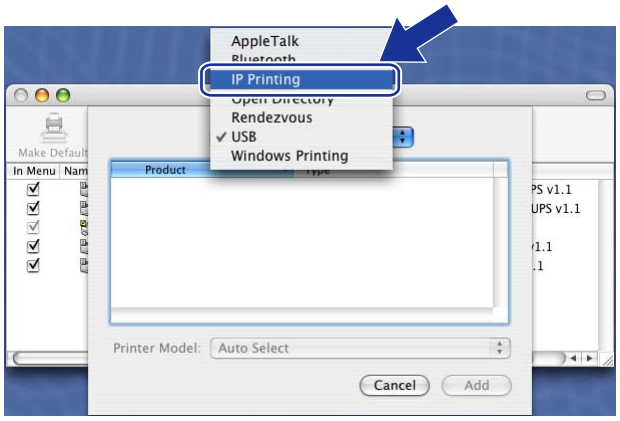


10

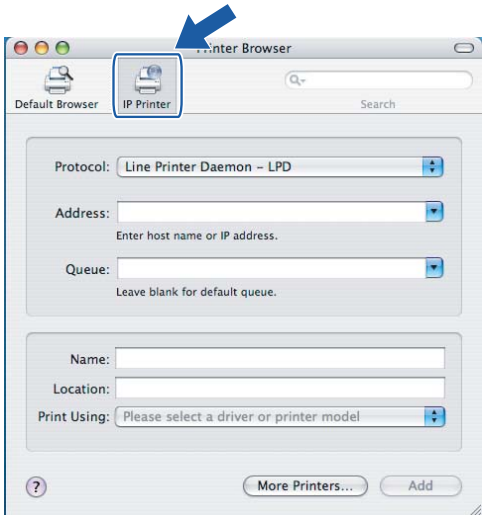
For Mac OS® X 10.2.4 to 10.4.x

1. Turn the power of the machine ON.
2. From the **Go** menu, choose **Applications**.
3. Open the **Utilities** folder.
4. Double click the **PrinterSetupUtility** icon. (Mac OS® X 10.2.x users, click the **Print Center** icon.)
5. Click **Add**.
6. (Mac OS® X 10.2.4 to 10.3.x) Choose **IP Printing**.
   (Mac OS® X 10.4) Choose **IP Printer**.

(Mac OS® X 10.2.4 to 10.3.x)

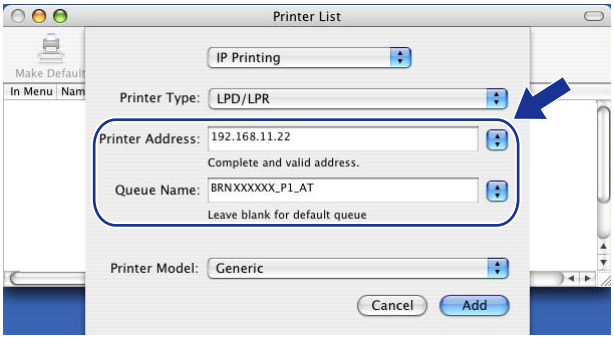


(Mac OS® X 10.4)

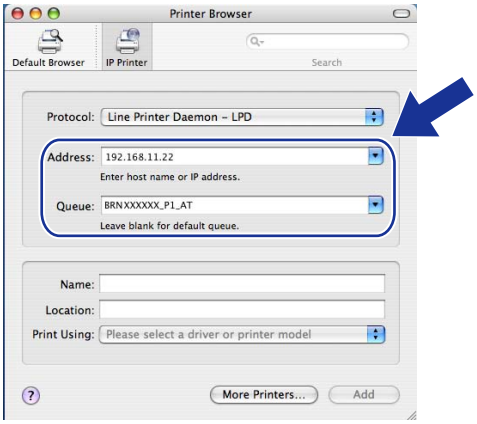


7 (Mac OS® X 10.2.4 to 10.3.x) Enter the IP address of the printer into the **Printer Address** box.
(Mac OS® X 10.4) Enter the IP address of the printer into the **Address** box.

(Mac OS® X 10.2.4 to 10.3.x)



(Mac OS® X 10.4)

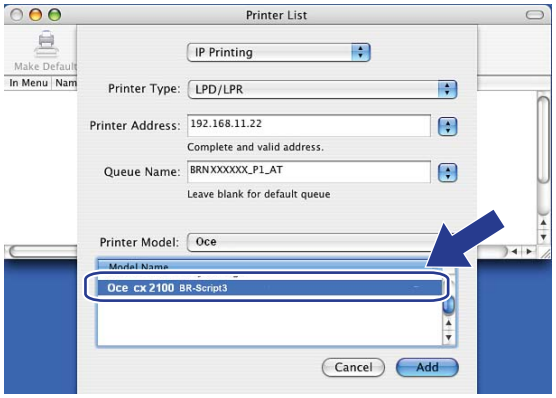


Note

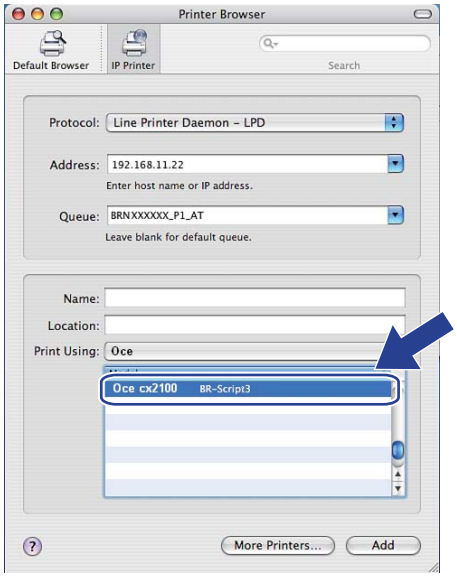
- The Network Configuration List will allow you to confirm the IP address. For more information on how to print the configuration page, see *Printing the Network Configuration List* on page 104.
- When specifying the **Queue Name**, use the value “brnxxxxxxxxxxxx_at”.

8 From the **Printer Model** pull-down list choose your model. For example, choose **Oce cx2100 BR-Script3**.

(Mac OS® X 10.2.4 to 10.3.x)



(Mac OS® X 10.4)



9 Click **Add** and the printer will be available from the **Printer List**.

Other sources of information

See *Chapter 2* of this User's Guide to learn how to configure the IP address of the printer.

11 Web Based Management

Overview

A standard Web Browser can be used to manage your machine using the HTTP (Hyper Text Transfer Protocol). You can get the following information from a machine on your network using a web browser.

- Printer status information
- Change Fax configuration items, such as General Setup, Quick-Dial settings and Remote Fax
- You can also change network settings such as TCP/IP information.
- Configure Scan to FTP
- Configure LDAP
- Software version information of the machine and print server
- Change network and machine configuration details

Note

We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

You must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.

- To learn how to configure the IP address on your machine, see *Configuring your machine for a network with an Ethernet cable connection* on page 11.
- You can use a web browser on most computing platforms, for example, Macintosh® and UNIX® users are also able to connect to the machine and manage it.
- You can also use the BRAdmin Light and the BRAdmin Professional utilities to manage the printer and its network configuration.

How to connect to your machine using a Browser

Type “http://printer’s IP address/” into your browser (where “printer’s IP address” is the printer’s IP address or the node name.)(You can also use the NetBIOS name of the printer server, if you are in a Microsoft domain/Workgroup environment). Enter the DNS name of the machine if connecting to a network that uses the DNS protocol.

For Macintosh® users, you can have easy access to Web Based Management System by clicking the machine icon on **Status Monitor** screen. For more information, see *Chapter 7 Status Monitor* of the Software User’s Guide on the CD-ROM.

Password information

Web Based Management offers two levels of password access. Users are able to access to the **General Setup**, **Fax Settings**, **Copy Settings**, **Printer Settings** and **USB Direct I/F**. The default user name for User is “**user**” (case sensitive) and the default password is “**access**”.

Administrators are able to access all settings. The login name for the Administrator is “**admin**” (case sensitive) and the default password is “**access**”.

Changing the Scan to FTP configuration using a Browser

You can configure and change the following Scan to FTP settings using a web browser. Click **Administrator Settings** on the cx2100 web page, and then click **Scan to FTP**. See *Chapter 4* of the Software User’s Guide for more details on Scan to FTP.

- **Profile Name** (Up to 15 characters)
- **Host Address** (FTP server address)
- **Username**
- **Password**
- **Store Directory**
- **File Name**
- **Quality** (**Color 150**, **Color 300**, **Color 600**, **B&W 200** and **B&W 200x100**)
- **File Type** (**PDF**, **JPEG** or **TIFF**)
- **Passive Mode** (**On** or **Off**)
- **Port Number**

Changing the LDAP configuration using a Browser

You can configure and change the LDAP settings using a web browser.

- **LDAP Enable/Disable**
- **LDAP Server Address**
- **Port** (The default port number is 389.)
- **Timeout for LDAP**
- **Authentication**
- **Username**
- **Password**
- **Search Root**
- **Attribute of Name (Search Key)**
- **Attribute of E-mail**
- **Attribute of Fax Number**

12 LDAP operation

Overview

The LDAP protocol allows you to search for information such as fax numbers and E-mail addresses from your server. You can configure LDAP settings using a web browser.

Changing the LDAP configuration using a Browser

You can configure and change LDAP settings using a web browser. For more information, see *Changing the LDAP configuration using a Browser* on page 124.

LDAP operation using the control panel

1. Press **Search/Speed Dial**.
2. Enter initial characters for your search by using the dial pad.

Note

- You can enter up to 15 characters.
- For more information on using the dial pad, see *Entering Text* on page 186.

3. Press **Search/Speed Dial** or **OK**.
   The LDAP search result will be shown on LCD before the local address book search result with ▶. If there is no match on the server and the local address book, the LCD will show `No Contact Found` for 2 seconds.
4. Press ▲ or ▼ to scroll until you find the name you are looking for.
   To confirm details of the result information, highlight the result and press ▶.
5. Press **OK**.
   If the result includes both a fax number and an E-mail address, the machine will prompt you to press ▲ or ▼ to choose either a fax number or an E-mail address.
6. Press **OK**.
7. Load your document and press **Black Start** or **Color Start**.

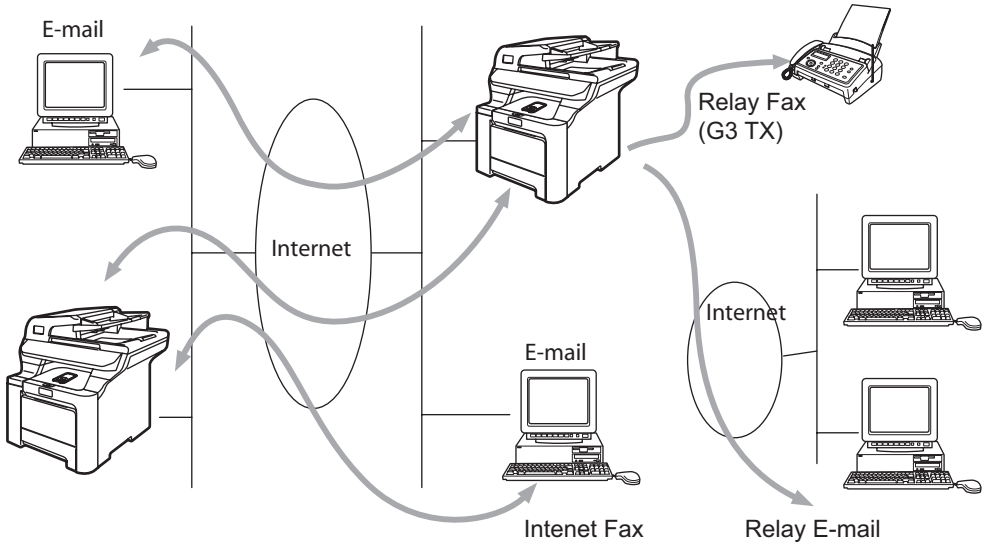
Note

- The LDAP function of this machine supports LDAPv3.
- You need to use Simple Authentication to communicate with your LDAP server.
- SSL/TLS is not supported.
- For more information, visit us at http://www.oceusa.com.

13 Internet fax

Overview

Internet faxing (I-Fax) allows you to send and receive fax documents using the Internet as the transport mechanism. Documents are transmitted in E-mail messages as attached TIFF-F files. This means that computers are also able to receive and send documents, providing that the computer has as an application that can generate and view TIFF-F files, you can use Microsoft® Imaging or a TIFF-F viewer application. Any documents sent via the machine will automatically be converted into a TIFF-F format. If you wish to send and receive messages to and from your machine, your mail application on the computer must be able to support the MIME format.



Note

I-Fax is available in Black & White only.

Getting connected

Before sending or receiving an Internet fax you must configure your cx2100 to communicate with your network and mail server. You must ensure the following: a correctly configured IP address for your machine, an E-mail address for your machine, the mail server(s) IP address, mailbox name and password for your cx2100. If you are unsure of any of these items, please contact your systems Administrator. For details of how to configure this information, see *Web Based Management* on page 122.

Control panel key functions

Shift + 1

Used to change input mode. You can use dial pad keys as Standard alphabet character keys.

Dial Pad

Used to enter Standard Alpha characters (26 letters), as well as @. space ! “ # % & ’ () + / : ; < > = ? [ ] ^ - $, * _ and Numbers.

◄ or ►

Moves the LCD cursor to the left or right when you enter text.

OK

Used to store multiple numbers.

Black Start or Color Start

Begins transmitting the document.

Stop/Exit

Deletes entered data and stops the scanning or transmitting process.

One Touch
Search/Speed-Dial

These functions work the same way as with conventional machine’s.
However, please note that you cannot use chain dialling for E-mail address.

Shift + Black Start or Color Start

Used to receive E-mail from the POP3 server manually.

Sending an Internet fax

Sending an Internet fax is the same as sending a normal fax. If you have already programmed the addresses of the destination Internet fax machines as One Touch or Speed-Dial locations, you can send the Internet fax by loading the document into the machine, use the Fax **Resolution** key to set the preferred resolution and select a Speed-Dial number and pressing **Black Start** or **Color Start**.

If you wish to manually enter the Internet fax address load the document into the machine and press **Shift** and **1** simultaneously to change into the “alphabet” dialling mode.

To manually enter the Internet fax address, see *Entering Text* on page 186.

Manually entering text

Press **Shift** and **1** simultaneously to change into the “alphabet” dialling mode.

You can use the Dial Pad to dial the E-mail address. For more information, *Entering Text* on page 186.

Please note that also you can connect to the machine using a web browser and specify the E-mail address information through Web Based Management. *Web Based Management* on page 122 for more information.

As you enter the Internet fax address, the address will appear character by character on the LCD panel. If you specify more than 22 characters, the LCD panel will scroll the name to the left character by character. You can enter up to 60 characters.

Press **Black Start** or **Color Start** to send the document.

After the document is scanned, it is transmitted to the recipient Internet fax machine automatically via your SMTP server. You can cancel the send operation by pressing the **Stop/Exit** button during scanning. After the transmission is finished, the machine will return to standby mode.

Some E-mail servers do not allow you to send large E-mail documents (the system administrator will often place a limit on the maximum E-mail size). You can enable the Limit Size of the Sent Mail feature. The machine will display `Out of Memory` when trying to send E-mail documents over 1 Mbyte in size. The document will not be sent and an error report will be printed. The document you are sending should be separated into smaller documents that will be accepted by the mail server. You can enable this feature through the Web Management utility or the LAN function mode.

Receiving E-mail or Internet fax

There are 2 ways you can receive E-mail messages:

- POP3 receiving (manually initiated)
- POP3 receiving at regular intervals

Using POP3 receiving the machine must poll the E-mail server to receive the print jobs. This polling can occur at set intervals (for example, you can configure the machine to poll the E-mail server at 10 minute intervals) or you can manually poll the server by pressing the **Shift** + **Black Start** or **Color Start** button.

If your machine starts to receive E-mail print jobs, the LCD panel will reflect this activity. For example, you will see `Receiving` on the LCD panel followed by “xx E-mail(S)”. If you press the **Shift** + **Black Start** or **Color Start** buttons to manually poll the E-mail server for E-mail print jobs and there are no mail documents waiting to be printed, the machine will display `No Mail` on the LCD panel for two seconds.

If your machine is out of paper when receiving data, the received data will be held in the machine's memory. This data will be printed automatically after paper is re-inserted into the machine. (For European, Asian and Oceanic machines, Memory receive must be switched “ON”.)

If the received mail is not in a plain text format or an attached file is not in the TIFF-F format, the following error message will be printed: “ATTACHED FILE FORMAT NOT SUPPORTED. FILE NAME:XXXXXX.doc” If the received mail is too large, the following error message will be printed: “E-MAIL FILE TOO LARGE. If Delete POP Receive Error Mail is ON (default)” then error mail is automatically deleted from the E-mail server

Receiving an Internet fax to your computer

When a computer receives an Internet fax document, the document is attached to a mail message that informs the computer that it has received a document from an Internet fax. This is notified in the subject field of the received mail message.

If the computer to which you wish to send a document is not running Windows® 2000/XP, Windows Server® 2003 or Windows Vista® operating system, please inform the computer's owner that they must install some software that can view TIFF-F files.

You can use “Microsoft® Imaging” that is supplied with Windows® 2000/XP, Windows Server® 2003 and Windows Vista®.

Forwarding received E-mail and fax messages

You can forward received E-mail or standard fax messages to another E-mail address or fax machine. Received messages can be forwarded via E-mail to a computer or Internet fax. They can also be forwarded via standard phone lines to another machine.

The setting can be enabled using the web browsers or through the machine front panel. The steps for configuring fax forward can be found in the User’s Guide supplied with your machine.

Please see the User’s Guide included with the machine to check that this feature is supported.

Relay broadcasting

This function allows the cx2100 to receive a document over the Internet, and then relay it to other fax machines through conventional telephone lines.

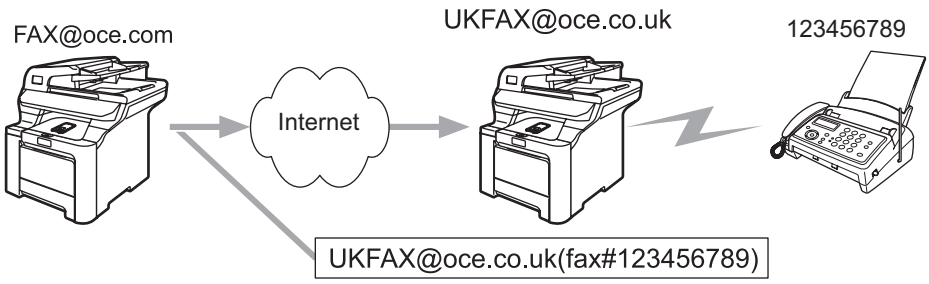
If you wish to use your machine as a relay broadcast device, you must specify the domain name that you trust at the machine, in other words, the portion of the domain after the “@” sign.

A trusted domain refers to the E-mail address. For example, if the other party’s address is bob@oce.com, then we identify the domain as oce.com. If the E-mail address is jack@oce.co.uk, then we identify the domain as oce.co.uk.

Use care in selecting a trusted domain since any user on a trusted domain will be able to send a relay broadcast. You can register up to 10 domain names.

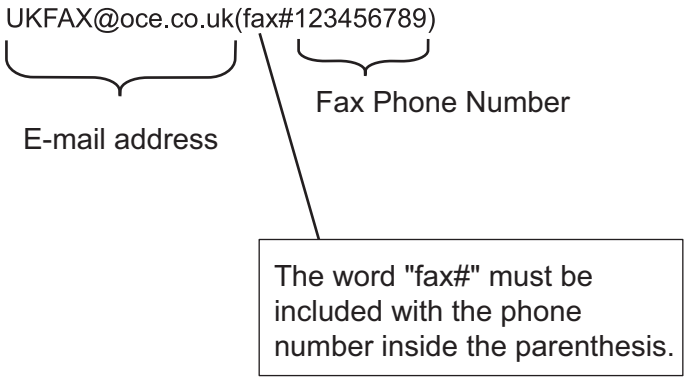
Relay broadcast can support the relay of a document up to a maximum of 48 fax machines through conventional telephone lines.

Relay broadcast from a machine



In this example, your machine has an E-mail address of FAX@oce.com, you wish to send a document from this machine to another machine in England with an E-mail address of UKFAX@oce.co.uk, this machine will then forward the document to a standard fax machine using a conventional telephone line. If your E-mail address is FAX@oce.com, you must configure a trusted domain name of oce.com on the machine in England that will broadcast the document to the conventional fax machine. If you do not enter the domain name information, then the machine in the middle (the machine that will broadcast the document) will not trust any internet jobs that it receives from the machine in the @oce.com domain.

After the trusted domain is set you can send the document from your machine [I.E. FAX@oce.com] by entering the E-mail address of the machine [I.E. UKFAX@oce.co.uk] that will forward the document followed by the phone number of the fax that will receive the document. The following is an example of how to enter the E-mail address and phone number

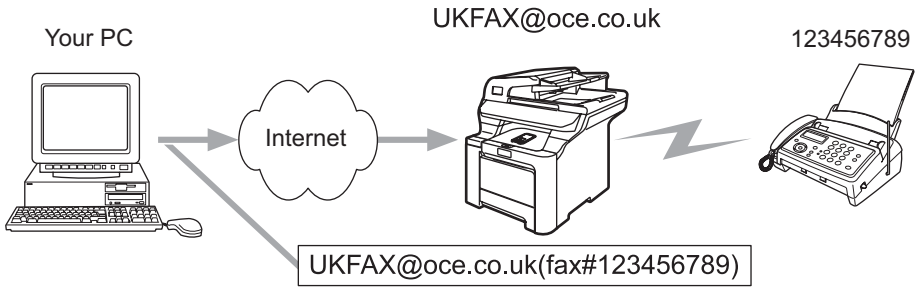


Sending to multiple phone numbers:

If you want to have the document relayed to more than one standard fax machine the address can be entered using the following method:

1. Enter the phone number of the first Fax machine UKFAX@oce.co.uk(fax#123).
2. Press **Menu**.
3. Enter the phone number of the second Fax machine UKFAX@oce.co.uk(fax#456).
4. Press **Black Start** or **Color Start**.

Relay broadcast from a computer



You can also send E-mail from your computer and have it relayed to a conventional fax machine. The method of entering the phone number of the conventional fax machine that will receive the relayed E-mail will vary depending on the mail application you are using. The following are some examples of different mail applications:

Some E-mail applications do not support sending to multiple phone numbers. If your E-mail application cannot support multiple phone numbers you will only be able to relay to one fax machine at a time.

Enter the address of the relay machine and phone number of the fax in the “TO” box using the same method used when sending from an machine.

UKFAX@oce.co.uk(fax#123456789)

Outlook 97/98/2000/2002/2003:

For Outlook 97/98/2000/2002 and 2003 the address information must be entered into the address book as follows:

Name: fax#123456789

E-mail address: UKFAX@oce.co.uk

TX Verification Mail

Transmission Verification Mail supports two separate functions. Verification Mail for sending allows you request notification from the receiving station that the I-Fax or E-mail was received and processed. Verification Mail for receiving allows you to transmit a default report back to the sending station after successfully receiving and processing an I-Fax or E-mail.

To use this feature you must set the `Notification` option within the `Setup Mail RX` and `Setup Mail TX` options.

Setup Mail TX

You can set the Notification option in the Setup Mail TX option to either On or Off. When switched to On an additional field of information is sent with the image data. This field is named “MDN”.

MDN (Mail Disposition Notification):
This field requests the status of the I-Fax/E-mail message after delivery through the SMTP (Send Mail Transfer Protocol) transport system. Once the message has arrived at the receiving station this data is used when the machine or user reads or prints the received I-Fax or E-mail. For example, if the message is opened for reading or is printed the receiving station sends back a notification to the original sending machine or user.

The receiving station must support the MDN field in order to be able to send a notification report, otherwise the request will be ignored.

Setup Mail RX

There are three possible settings for this option On, MDN or Off.

Receive Notification “On”

When switched to “On” a fixed message is sent back to the sending station to indicate successful reception and processing of the message. These fixed messages depend on the operation requested by the sending station.

Report messages consist of:

SUCCESS: Received From <mail address>

Receive Notification “MDN”

When switched to “MDN” a report as described above is sent back to the sending station if the originating station sent the “MDN” field to request confirmation.

Receive Notification “Off”

Off switches all forms of receive notification Off, no message are sent back to the sending station regardless of the request.

Error mail

If there is a mail delivery error while sending an Internet fax, the mail server will send an error message back to the machine and the error message will be printed. If there is an error while receiving mail, an error message will be printed (Example: “The message being sent to the machine was not in a TIFF-F format.”).

Important information on Internet fax

Internet fax communication on a LAN system is basically the same as communication via E-mail; however, it is different from fax communication using standard phone lines. The following is important information for using Internet fax:

- Factors such as the receiver's location, structure of the LAN system, and how busy the circuit (such as the internet) is, may cause the system to take a long time to send back an error mail. (normally 20 sec. to 30 sec.).
- In the case of transmission through the Internet, due to its low level of security, we recommend that you use standard phone lines to send confidential documents.
- If the receiver's mail system is not compatible with the MIME format, you cannot transmit a document to the receiver. Depending on receiver's server, there may be some cases in which the error mail will not be sent back.
- If the size of a document's image data is huge, there is a possibility of unsuccessful transmission.
- You cannot change font and character size of Internet mail that you received.

14 Security features

Overview

In today's world there are many security threats to your network and the data that travels over it. Your cx2100 employs some of the latest network security and encryption protocols available today. These network features can be integrated into your overall network security plan to help protect your data and prevent unauthorized access to the machine. This chapter explains various security protocols supported and how to configure them.

Security terms

- CA (Certificate Authority)

  A CA is an entity that issues digital certificates (especially X.509 certificates) and vouches for the binding between the data items in a certificate.

- CSR (Certificate Signing Request)

  A CSR is a message sent from an applicant to a CA in order to apply for issue of a certificate. The CSR contains information identifying the applicant, the public key generated by the applicant and the digital signature of the applicant.

- Certificate

  A Certificate is the information that binds together a public key with an identity. The certificate can be used to verify that a public key belongs to an individual. The format is defined by the x.509 standard.

- Digital signature

  A Digital signature is a value computed with a cryptographic algorithm and appended to a data object in such a way that any recipient of the data can use the signature to verify the data's origin and integrity.

- Public key cryptosystem

  A Public key cryptosystem is a modern branch of cryptography in which the algorithms employ a pair of keys (a public key and a private key) and use a different component of the pair for different steps of the algorithm.

- Shared key cryptosystem

  A Shared key cryptosystem is a branch of cryptography involving algorithms that use the same key for two different steps of the algorithm (such as encryption and decryption).

Security protocols

The Océ print server supports the following security protocols.

Note

How to configure the protocol settings, see *Using Web Based Management (web browser) to change the print/scan settings* on page 17.

SSL (Secure Socket Layer) / TLS (Transport Layer Security)

These security communication protocols encrypt data to prevent security threats.

Web server (HTTPS)

The internet protocol that the Hyper Text Transfer Protocol (HTTP) uses SSL.

IPPS

The printing protocol that the Internet Printing Protocol (IPP Version 1.0) uses SSL.

Security methods for E-mail notification

The Océ print server supports the following security methods for E-mail notification.

Note

How to configure the settings of security methods, see *Using Web Based Management (web browser) to change the print/scan settings* on page 17.

POP before SMTP (PbS)

The user authentication method for sending E-mail from a client. The client is given permission to use the SMTP server by accessing the POP3 server before sending the E-mail.

SMTP-AUTH (SMTP Authentication)

SMTP-AUTH expands SMTP (the Internet E-mail sending protocol) to include an authentication method that ensures the true identity of the sender is known.

APOP (Authenticated Post Office Protocol)

APOP expands POP3 (the Internet receiving protocol) to include an authentication method that encrypts the password when the client receives E-mail.

Configuring the protocol settings

You can enable or disable each protocol and security method using Web Based Management (web browser).

Note

We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. To use a web browser, you will need to know the IP address of the print server.

1. Start your web browser.
2. Type http://printer's IP address/ into your browser (where "printer's IP address" is the printer's IP address or the node name).
   - For example:

     `http://192.168.1.2/` (if the printer's IP address is 192.168.1.2.)

Note

If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen on the printer settings page. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as "BRNxxxxxx" for a wired network or "BRWxxxxxx" for a wireless network (where "xxxxxx" is the last six digits of the Ethernet address) (up to 15 characters).

3. Click **Network Configuration**.
4. Enter a user name and a password. The default User Name is `admin` and the default Password is `access`.
5. Click **OK**.
6. Click **Configure Protocols**.
   Now you can configure the protocol settings.

Note

If you change the protocol settings, restart the printer after clicking **Submit** to activate the configuration.

Managing your network printer securely

To manage your network printer securely, you need to use the management utilities with security protocols.

Secure Management using Web Based Management (web browser)

To use the HTTPS protocol, the following printer settings are required.

- A certificate and private key must be installed in the printer. For how to install a certificate and private key, see *Creating and installing a certificate* on page 142.
- The HTTPS protocol must be enabled. To enable the HTTPS protocol, see *Configuring the protocol settings* on page 136.

Note

We recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. To use a web browser, you will need to know the IP address of the print server.

1. Start your web browser.
2. Type “https://Common Name/” into your browser. (Where “Common Name” is the Common Name that you assigned for the certificate, such as an IP address, node name or domain name. For how to assign a Common Name for the certificate, see *Creating and installing a certificate* on page 142.)
   - For example:

     `https://192.168.1.2/` (if the Common Name is the printer’s IP address)

     `https://BRNxxxxxx/` (if the Common Name is the printer’s node name)

Note

If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address).

3. You can now access the printer using HTTPS.

Note

Disable the Telnet, FTP and TFTP protocols. Accessing the machine using these protocols is not secure. For how to configure the protocol settings, see *Using Web Based Management (web browser) to change the print/scan settings* on page 17.

Secure Management using BRAdmin Professional (for Windows®)

To use the BRAdmin Professional utility securely, you need to follow the points below.

- We strongly recommend to use the latest version of the BRAdmin Professional utility that is available as a download from http://www.oceusa.com. If you use an older version of BRAdmin [1] to manage your Océ devices the user authentication will not be secure.
- If you want to avoid access to your printer from older versions of BRAdmin [1], you need to disable the access from older versions of BRAdmin [1] from **Advanced Setting** of **SNMP** on **Configure Protocol** page by using Web Based Management (web browser). See *Using Web Based Management (web browser) to change the print/scan settings* on page 17.
- Disable the Telnet, FTP and TFTP protocols. Accessing the machine using these protocols is not secure. For how to configure the protocol settings, see *Using Web Based Management (web browser) to change the print/scan settings* on page 17.
- If you use BRAdmin Professional and Web Based Management (web browser) together, use Web Based Management with HTTPS protocol. See *Secure Management using Web Based Management (web browser)* on page 137.
- If you are managing a mixed group of older print servers and the new NC-6500h or NC-7300w print server with BRAdmin Professional, we recommend using a different password in each group. This will ensure security is maintained on the print server.

[1] BRAdmin Professional older than Ver. 2.80, BRAdmin Light for Macintosh® older than Ver. 1.10

Printing documents securely using IPPS

To print documents securely over the internet, you can use the IPPS protocol.

Note

- Communication using IPPS cannot prevent unauthorized access to the printer server.
- IPPS is available for Windows® 2000/XP, Windows Vista® and Windows Server® 2003.

To use the IPPS protocol, the following printer settings are required.

- A certificate and private key must be installed in the printer. For how to install certificate and private key, see *Creating and installing a certificate* on page 142.
- The HTTPS protocol must be enabled. To enable the HTTPS protocol, see *Configuring the protocol settings* on page 136.

The basic steps for IPPS printing are the same as IPP printing. For detailed information, see *Internet printing for Windows®* in Chapter 9.

Specifying a different URL

Please note that there are several possible entries that you can enter for the URL field.

https://Common Name/ipp

This is the default URL and we recommend that you use this URL. Please note the **Get More Info** option will not display any printer data.

https://Common Name/ipp/port1

This is for HP® Jetdirect® compatibility. Please note the **Get More Info** option will not display any printer data.

Note

If you forget the URL details, you can simply enter the above text (https://Common Name/) and the printer will still receive and process data.

Where “Common Name” is the Common Name that you assigned for the certificate, such as an IP address, node name or domain name. For how to assign a Common Name for the certificate, see *Creating and installing a certificate* on page 142.

- For example:

  `https://192.168.1.2/` (if the Common Name is the printer’s IP address.)

  `https://BRNxxxxxx/` (if the Common Name is the printer’s node name.)

Using E-mail notification with user authentication

To use the E-mail notification function via secure SMTP server that requires a user authentication, you need to use POP before SMTP or SMTP-AUTH method. These methods prevent an unauthorized user from accessing the mail server. You can use Web Based Management (web browser), and BRAdmin Professional to configure these settings.

Note

You need to match the settings of POP3/SMTP authentication with one of the E-mail servers. Contact your network administrator or your internet service provider about the configuration before using.

How to configure the POP3/SMTP settings using Web Based Management (web browser).

1. Start your web browser.
2. Type “http://printer’s IP address/” into your browser (where “printer’s IP address” is the printer’s IP address or the node name.).
   - For example:

     `http://192.168.1.2/` (if the printer’s IP address is 192.168.1.2.)

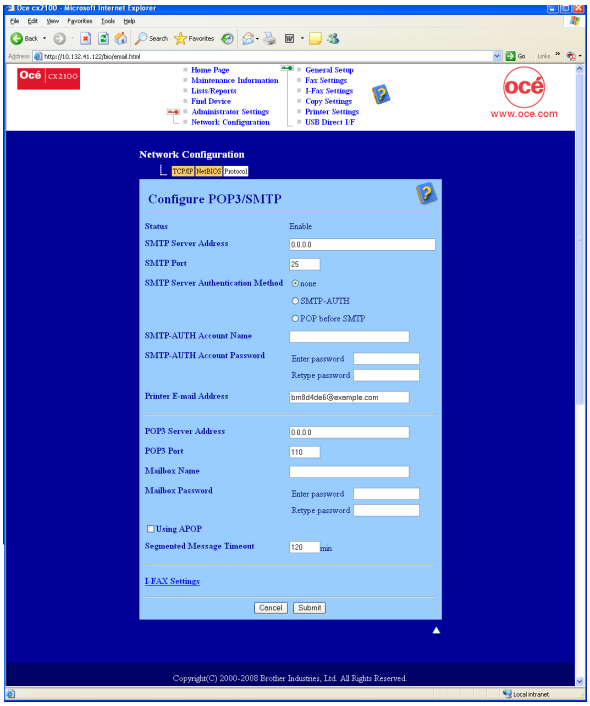
     `http://BRN123456/` (if the printer’s node name is BRN123456.)

Note

If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address).

3. Click **Network Configuration**.
4. Click **Configure Protocol**.
5. Click **Advanced Setting** of **POP3/SMTP**.

6 You can configure the POP3/SMTP settings on this page.



Note

- You can also change the SMTP port number using Web Based Management. This is useful if your ISP (Internet Service Provider) implements the “Outbound Port 25 Blocking (OP25B)” service, and you are not using the ISP’s SMTP server. By changing the SMTP port number to a specific number which your SMTP server decide (for example, port 587), you can still send an E-mail via the SMTP server you currently use. You will also need to check **SMTP-AUTH** of **SMTP Server Authentication Method** to enable the SMTP server authentication.
- If you can use both POP before SMTP and SMTP-AUTH, we recommend choosing SMTP-AUTH.
- If you choose POP before SMTP for the SMTP Server Authentication Method, you need to configure the POP3 settings. You can also use the APOP method.
- For more information, see the Help text in the Web Based Management.
- You can also confirm whether the E-mail settings are correct after configuration by sending a test E-mail.

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7 After configuring, click **Submit**. The Test E-mail Send/Receive Configuration dialog appears.

8 Follow the instructions on-screen if you want to test with the current settings.

Creating and installing a certificate

The Océ print server allows you to use SSL/TLS communication by configuring a certificate and corresponding private key. This print server supports two certification methods. A self-signed certificate and a certificate that is issued by a CA (Certificate Authority).

■ Using self-signed certificate

This print server issues its own certificate. Using this certificate, you can easily use the SSL/TLS communication without having a certificate from a CA. See *Creating and installing a self-signed certificate* on page 144.

■ Using a certificate from a CA

There are two methods for installing a certificate from a CA. If you already have a CA or if you want to use a certificate from an outside trusted CA:

- When using a CSR (Certificate Signing Request) from this print server. See *Creating CSR and installing a certificate* on page 156.
- When importing a certificate and a private key. See *Import and export the certificate and private key* on page 158.

Note

- If you are going to use SSL/TLS communication, we recommend that you contact your system administrator before using.
- This print server stores only one pair of a certificate and a private key that you installed or previously imported. This printer overwrites the certificate and the private key if you install a new one.
- When you reset the print server back to its default factory settings, the certificate and the private key that are installed will be deleted. If you want to keep the same certificate and the private key after resetting the print server, export them before resetting and re-install them. See *How to export the certificate and private key* on page 159.

This feature can be configured using Web Based Management (web browser) only. Follow these steps to access the configure certificate page using Web Based Management.

1. Start your web browser.
2. Type “http://printer’s IP address/” into your browser. (where “printer’s IP address” is the printer’s IP address or the node name.)

   ■ For example:

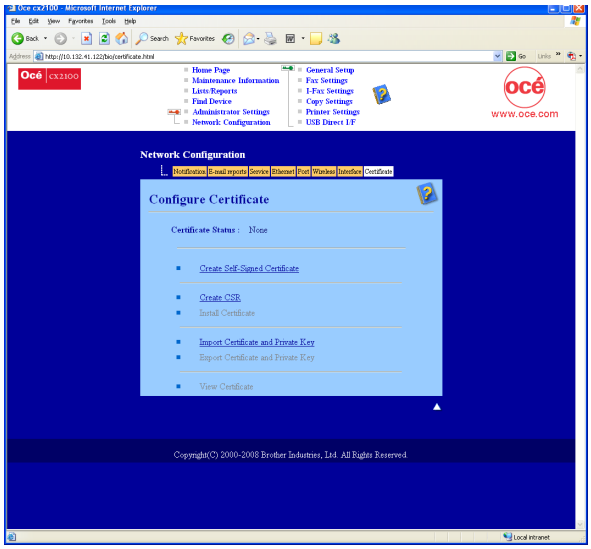
   `http://192.168.1.2/` (if the printer’s IP address is 192.168.1.2.)

   `http://BRN123456/` (if the printer’s node name is BRN123456.)

Note

If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server. As the print server supports TCP/IP and NetBIOS, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen in the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as “BRNxxxxxx” for a wired network or “BRWxxxxxx” for a wireless network (where “xxxxxx” is the last six digits of the Ethernet address).

3. Click **Network Configuration**.
4. Enter a user name and a password. The default User Name is “**admin**” and the default Password is “**access**”.
5. Click **OK**.
6. Click **Configure Certificate**.
7. You can configure the certificate settings from the screen below.



Note

- The functions that are grayed and unlinked indicate they are not available.
- For more information on configuration, see the Help text in the Web Based Management.

Creating and installing a self-signed certificate

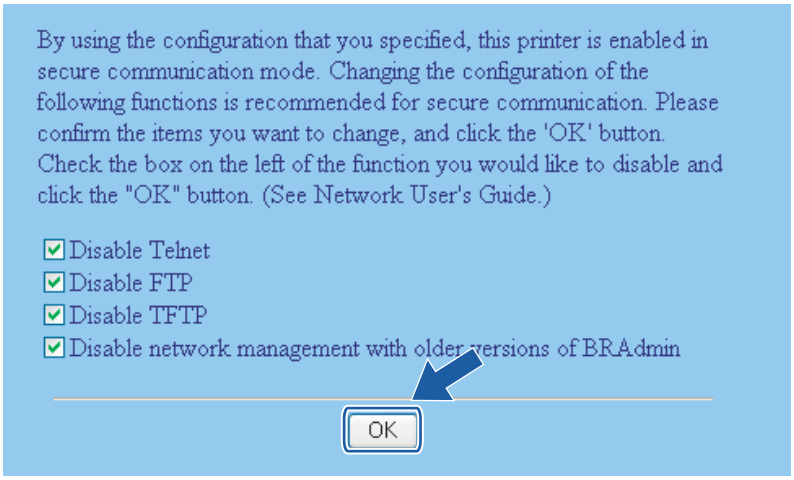
How to create and install a self-signed certificate

1. Click **Create Self-Signed Certificate** on the **Configure Certificate** page.
2. Enter a **Common Name** and a **Valid Date**, then click **Submit**.

Note

- The length of the **Common Name** is less than 64 bytes. Enter an identifier such as an IP address, node name or domain name to use when accessing this printer through SSL/TLS communication. The node name is displayed by default.
- A warning will pop-up if you enter a different name in the URL than the **Common Name** that was used for the self-signed certificate.

3. Now the self-signed certificate is created successfully. Check the box on the left of each function you want to disable, and then click **OK**.



Note

- We recommend disabling the Telnet, FTP, TFTP protocols and the network management with older versions of BRAdmin [1] for secure communication. If you enable them, the user authentication is not secure.
- A check box only appears for an individual protocol or the older BRAdmin utility if they are already enabled.

[1] BRAdmin Professional older than Ver. 2.80, BRAdmin Light for Macintosh® older than Ver. 1.10.

4. Restart the printer to activate the configuration.
5. Now the self-signed certificate is saved in your printer memory. To use SSL/TLS communication, the self-signed certificate also needs to be installed on your computer. Proceed to the next section.

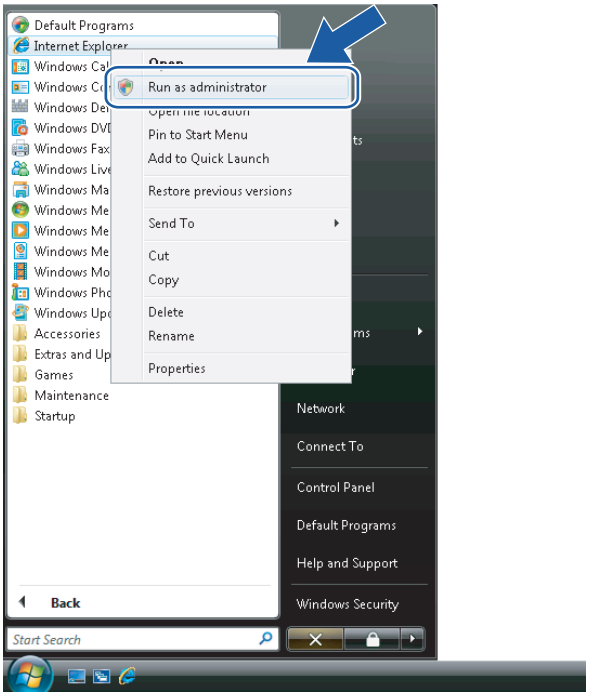
How to install the self-signed certificate on your computer

Note

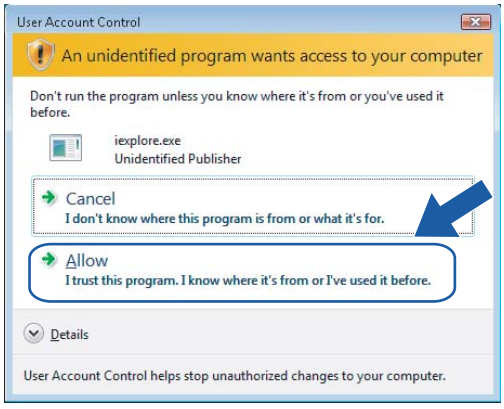
The following steps are for Microsoft Internet Explorer. If you use another web browser, follow the help text of the web browser itself.

For Windows Vista® users that have administrator rights

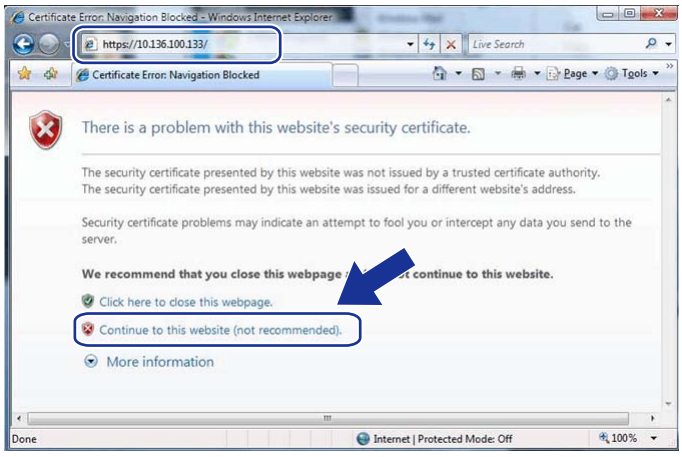
1. Click **Start** and **All Programs**.
2. Right click **Internet Explorer**, and then click **Run as administrator**.



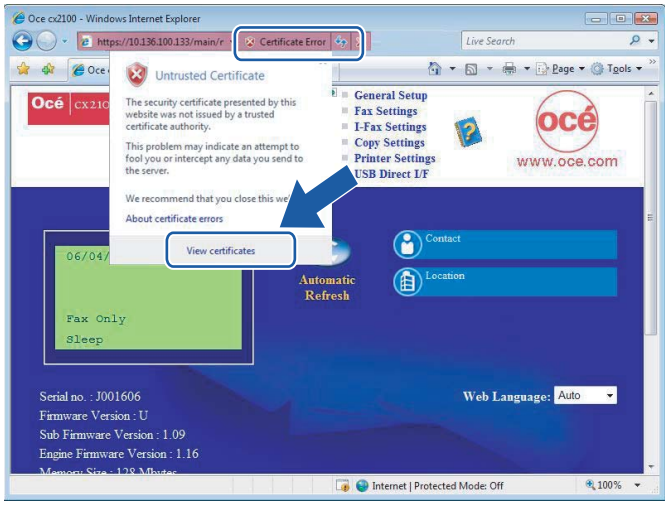
3. Click **Allow**.



4 Type “https://printer’s IP address/” into your browser to access your printer (where “printer’s IP address” is the printer’s IP address or the node name).
Then, click **Continue to this website (not recommended)**.

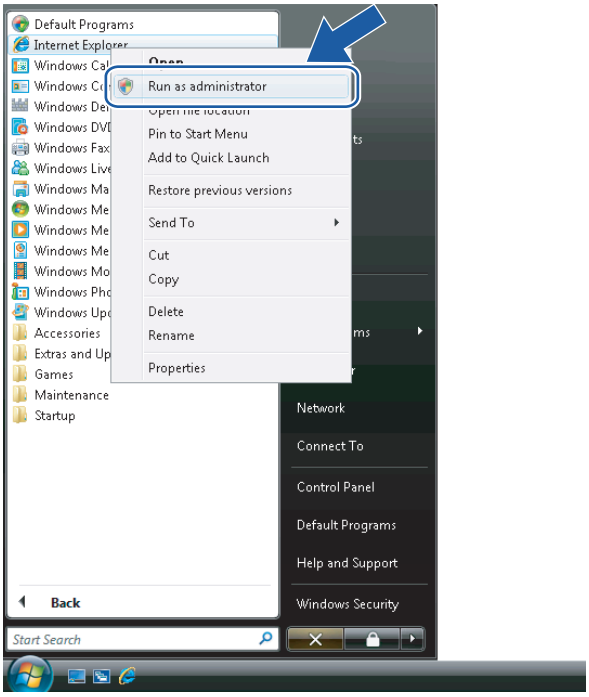


5 Click **Certificate Error**, and then click **View certificates**. For the rest of the instructions, follow the steps from ❹ on page 153.

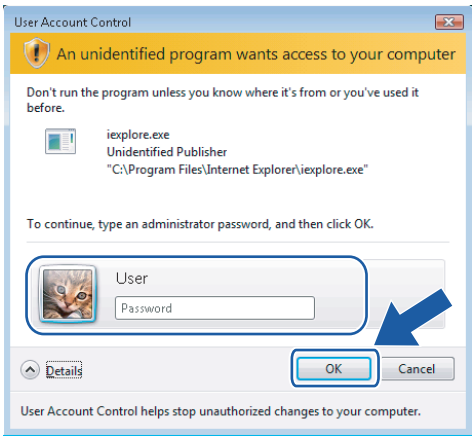


For Windows Vista® users that do not have administrator rights

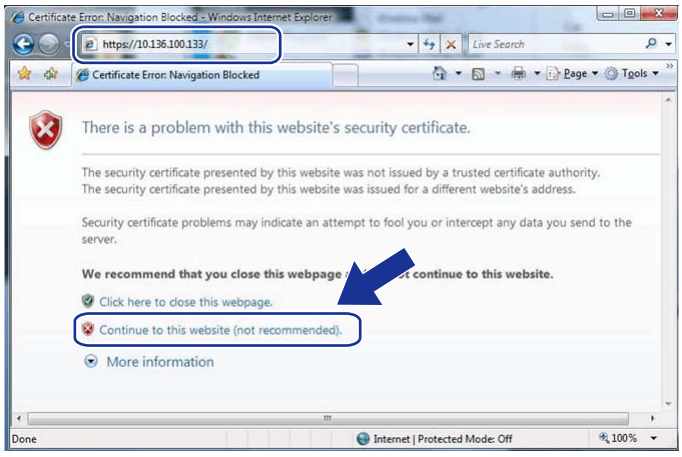
1. Click **Start** and **All Programs**.
2. Right click **Internet Explorer**, and then click **Run as administrator**.



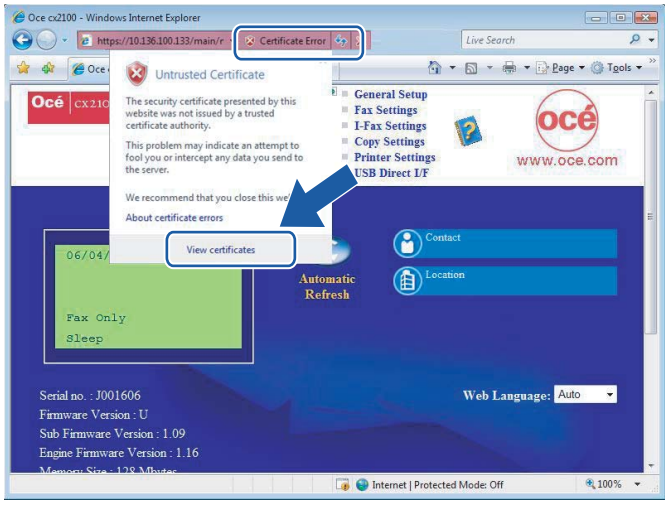
3. Choose the Administrator that you want to install with and enter the administrator password, and then click **OK**.



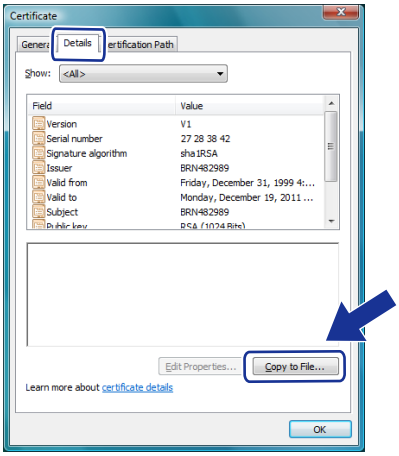
4 Type “https://printer’s IP address/” into your browser to access your printer (where “printer’s IP address” is the printer’s IP address or the node name).
Then, click **Continue to this website (not recommended)**.



5 Click **Certificate Error**, and then click **View certificates**.



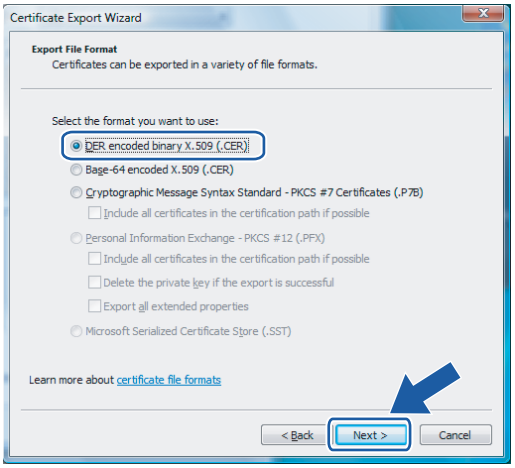
6 Choose the **Details** tab, and then click **Copy to File...**.



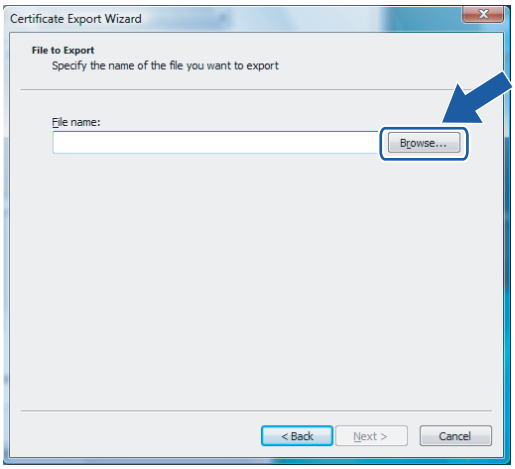
7 Click **Next**.



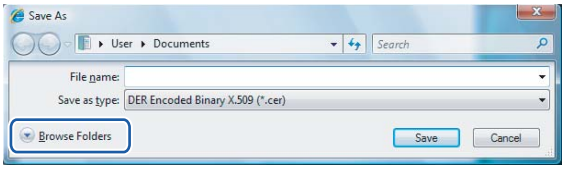
8 Make sure that **DER encoded binary X.509 (.CER)** is chosen, and then click **Next**.



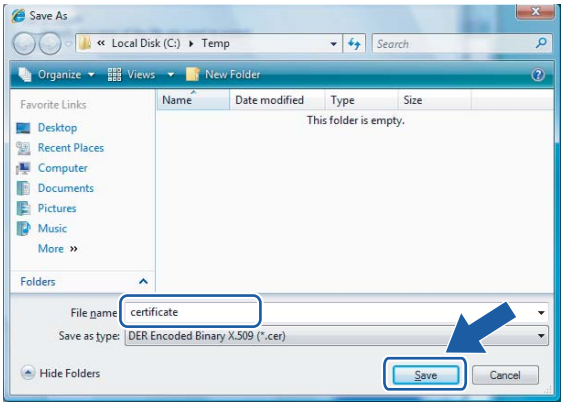
9 Click **Browse...**.



⑩ Click **Browse Folders**.



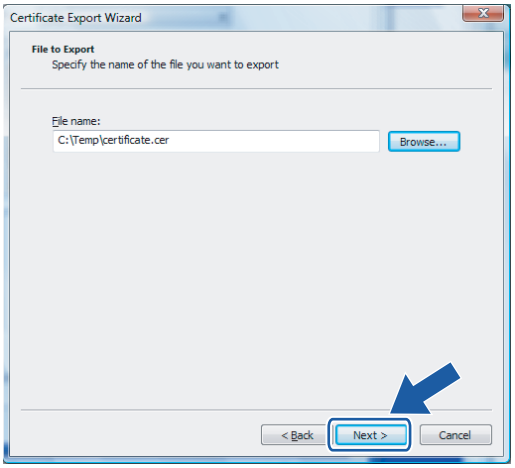
⑪ Choose a folder you want to save the certificate file in and enter a file name, and then click **Save**.



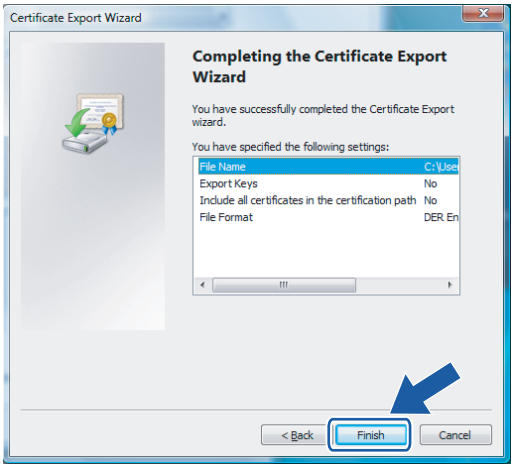
Note

If you choose **Desktop**, the certificate file is saved to the Desktop of the Administrator that you chose.

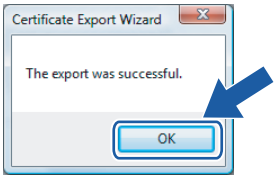
⑫ Click **Next**.



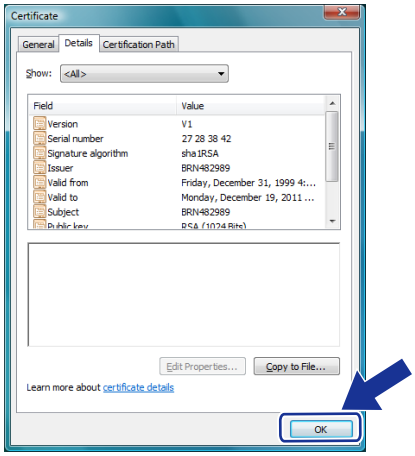
13 Click **Finish**.



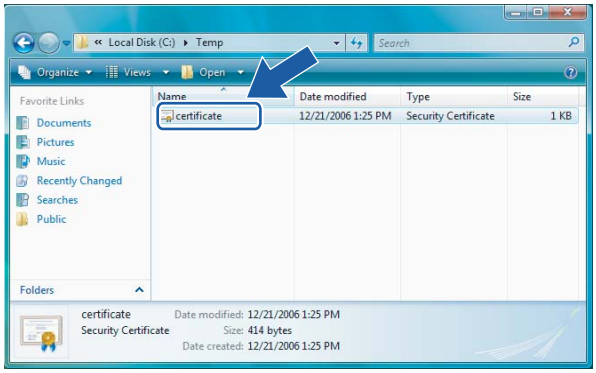
14 Click **OK**.



15 Click **OK**.



16 Open the folder that you saved the certificate file in ⓫ and double-click the certificate file. For the rest of the instructions, follow the steps from ❹ on page 153.

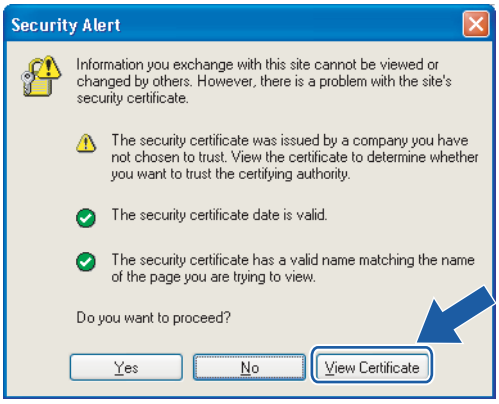


For Windows® 2000/XP and Windows Server® 2003 users

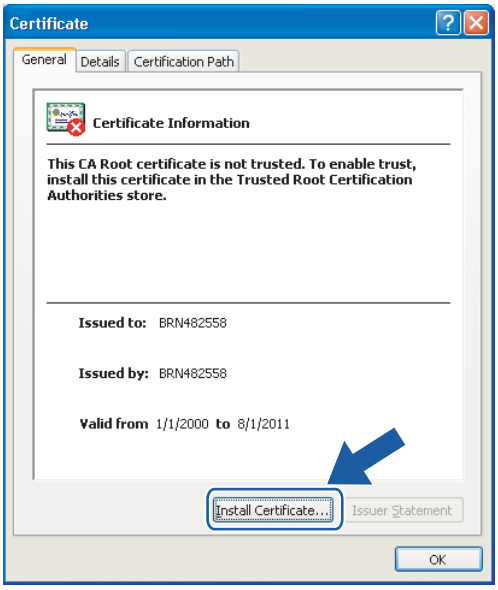
1 Start your web browser.

2 Type “https://printer’s IP address/” into your browser to access your printer (where “printer’s IP address” is the IP address or the node name that you assigned for the certificate).

3 When the following dialog appears, click **View Certificate**.



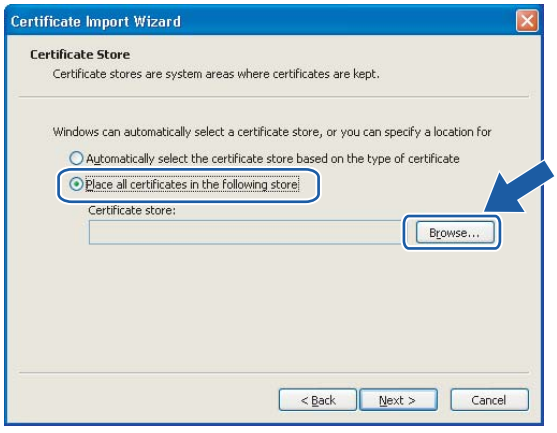
4 Click **Install Certificate...** from the **General** tab.



5 When the **Certificate Import Wizard** appears, click **Next**.



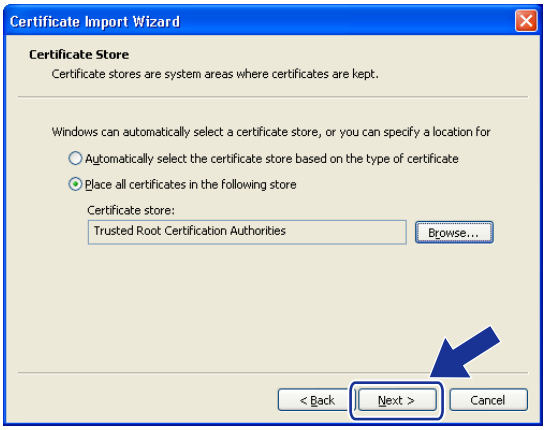
6 Choose **Place all certificates in the following store** and then, click **Browse...**.



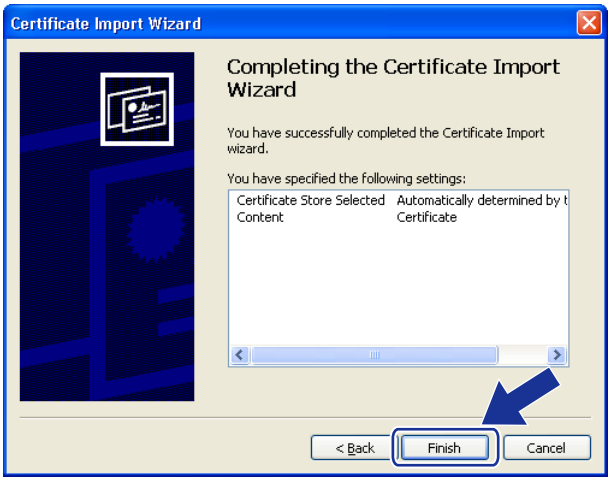
7 Choose **Trusted Root Certification Authorities** and then, click **OK**.



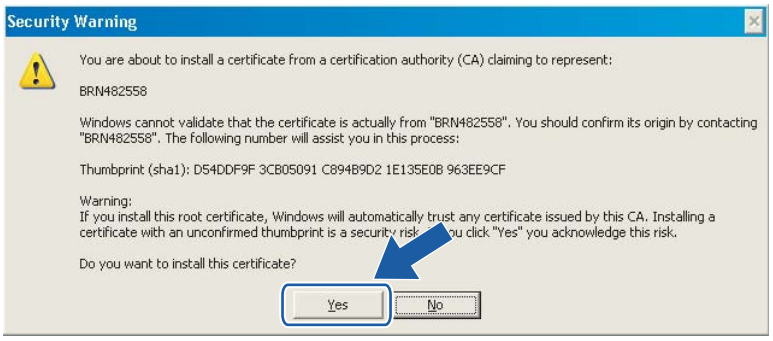
8 Click **Next**.



9 Click **Finish**.



⑩ Click **Yes**, if the fingerprint (thumbprint) is correct.



Note

The fingerprint (thumbprint) is printed on the Network Configuration List. To learn how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104.

⑪ Click **OK**.



⑫ Now the self-signed certificate is installed on your computer, and the SSL/TLS communication is available.

Creating CSR and installing a certificate

How to create the CSR

1. Click **Create CSR** on the **Configure Certificate** page.
2. Enter a **Common Name** and your information, such as **Organization**. Then click **Submit**.

Note

- We recommend that the Root Certificate from the CA be installed on your computer before creating the CSR.
- The length of the **Common Name** is less than 64 bytes. Enter an identifier such as an IP address, node name or domain name to use when accessing this printer through SSL/TLS communication. The node name is displayed by default. The **Common Name** is required.
- A warning will pop-up if you enter a different name in the URL than the **Common Name** that was used for the certificate.
- The length of the **Organization**, the **Organization Unit**, the **City/Locality** and the **State/Province** is less than 64 bytes.
- The **Country/Region** should be an ISO 3166 country code composed of two characters.

3. When the contents of the CSR appear, click **Save** to save the CSR file to your computer.
4. Now the CSR is created.

Note

- Follow your CA policy regarding the method to send a CSR to your CA.
- If you are using **Enterprise root CA** of Windows Server® 2003, we recommend using the **Web Server Certificate Template** when creating the certificate.

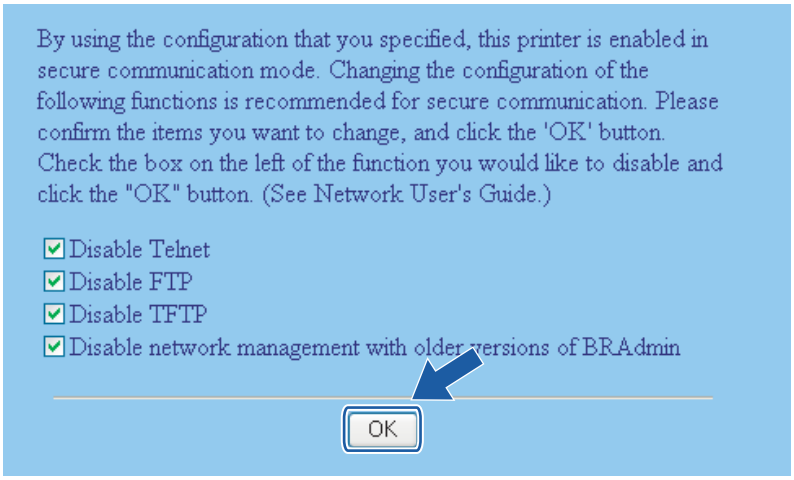
How to install the certificate to your printer

When you receive the certificate from a CA, follow the steps below to install it into the print server.

Note

Only a certificate issued with this printer's CSR can be installed.

1. Click **Install Certificate** on the **Configure Certificate** page.
2. Specify the file of the certificate that has been issued by a CA, and then click **Submit**.
3. Now the certificate is created successfully. Check the box on the left of each function you want to disable, and then click **OK**.



Note

- We recommend disabling the Telnet, FTP, TFTP protocols and the network management with older versions of BRAdmin [1] for secure communication. If you enable them, the user authentication is not secure.
- A check box only appears for an individual protocol or the older BRAdmin utility if they are already enabled.

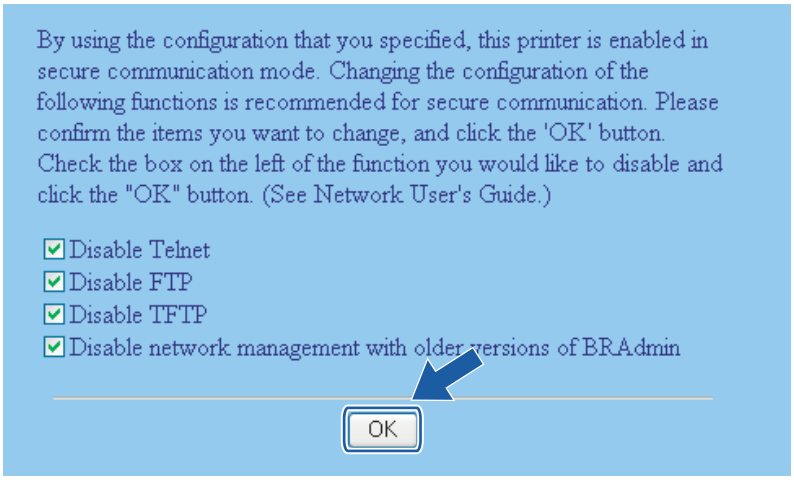
[1] BRAdmin Professional older than Ver. 2.80, BRAdmin Light for Macintosh® older than Ver. 1.10.

4. Restart the printer to activate the configuration.
5. Now the certificate is saved in your printer. To use SSL/TLS communication, the Root Certificate from the CA needs to be installed on your computer. Contact your network administrator about installation.

Import and export the certificate and private key

How to import the certificate and private key

1. Click **Import Certificate and Private Key** on the **Configure Certificate** page.
2. Specify the file that you want to import.
3. Enter the password if the file is encrypted, and then click **Submit**.
4. Now the certificate and private key are imported successfully. Check the box on the left of each function you want to disable, and then click **OK**.



Note

- We recommend disabling the Telnet, FTP, TFTP protocols and the network management with older versions of BRAdmin [1] for secure communication. If you enable them, the user authentication is not secure.
- A check box only appears for an individual protocol or the older BRAdmin utility if they are already enabled.

[1] BRAdmin Professional older than Ver. 2.80, BRAdmin Light for Macintosh® older than Ver. 1.10.

5. Restart the printer to activate the configuration.
6. Now the certificate and private key are imported to your printer. To use SSL/TLS communication, the Root Certificate from the CA needs to also be installed on your computer. Contact your network administrator about the installation.

How to export the certificate and private key

1. Click **Export Certificate and Private Key** on the **Configure Certificate** page.
2. Enter the password if you want to encrypt the file.

Note

If a blank password is used, the output is not encrypted.

3. Enter the password again for confirmation, and then click **Submit**.
4. Specify the location where you want to save the file.
5. Now the certificate and private key are exported to your computer.

Note

You can import the file that you exported.

15 Troubleshooting

Overview

This chapter explains how to resolve typical network problems you may encounter when using the machine. If, after reading this chapter, you are unable to resolve your problem, please visit the Océ USA web site at: http://www.oceusa.com.

This chapter is divided into the following sections:

- General problems
- Network print software installation problems
- Printing problems
- Scanning and PC Fax problems
- Protocol-specific troubleshooting
- Wireless network specific troubleshooting

General problems

CD-ROM is inserted, but does not start automatically

If your computer does not support Autorun, the menu will not start automatically after inserting the CD-ROM. In this case, execute **start.exe** in the root directory of the CD-ROM.

My computer cannot find the machine/print server
I cannot make a necessary connection to the machine/print server.
My machine/print server does not appear in the window of Remote Setup, BRAdmin Light or BRAdmin Professional

- For Windows®

  The firewall setting on your computer may be rejecting the necessary network connection to the machine. In this case, you will need to disable the Firewall on your computer and re-install the drivers.

  Windows® XP SP2 users:

  1. Click the **Start** button, **Control Panel**, **Network and Internet Connections**.
  2. Click **Windows Firewall**.
  3. Click the **General** tab. Make sure that **Off (not recommended)** is selected.
  4. Click **OK**.

Note

After the Océ software package is installed, re- ‘enable again your Firewall.

Windows Vista® users:

1. Click the **Start** button, **Control Panel**, **Network and Internet**, **Windows Firewall** and click **Change settings**.
2. When the **User Account Control** screen appears, do the following.
   - Users who have administrator rights: Click **Continue**.
   - For users who do not have administrator rights: Enter the administrator password and click **OK**.
3. Click the **General** tab. Make sure that **Off (not recommended)** is selected.
4. Click **OK**.

Note

After the Océ software package is installed, enable again your Firewall.

- For Macintosh®

  Re-select your machine in the DeviceSelector application located in **Mac OS X** or **Macintosh HD** (Startup Disk)/**Library**/**Printers**/**Oce**/**Utilities** or from the model pull-down list of ControlCenter3.

Network print software installation problems

The Océ print server is not found during the setup of the network print software or from the installation of the printer driver of the cx2100 in Windows®.

The Océ print server is not found using the Simple Network Configuration capabilities of Mac OS® X.

Make sure you have completed the IP address setting of the Océ print server according to Chapter 2 of this User's Guide before installing the network print software or printer driver.

- For a network with an Ethernet cable connection

  Make sure you have completed the IP address setting of the Océ print server according to Chapter 2 of this User's Guide before installing the network print software or printer driver.

- For a wireless network

  Make sure you have completed the IP address setting and wireless network settings of the Océ print server according to Chapter 3 of this User's Guide before installing the network print software or printer driver.

Check the following:

1. Make sure that the machine is powered on, is on-line and ready to print.
2. (For wired network) Check to see if there is any LED activity. Océ print servers have two LEDs on the back panel of the machine. The upper green LED shows Link/Activity (Received/Transmit) status. The lower orange LED shows Speed status.
   - No light: If the upper LED is off, then the print server is not connected to the network.
   - The upper LED is green: The Link/Activity LED will be green if the print server is connected to a Ethernet network.

- The lower LED is orange: The Speed LED will be orange if the print server is connected to a 100BASE-TX Fast Ethernet network.
- The lower LED is off: The Speed LED will be off if the print server is connected to a 10BASE-T Ethernet network.

3 Print the Network Configuration List and check if the settings such as IP address settings are correct for your network. The problem may be the result of a mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the print server, and make sure that no other nodes on the network have this IP address. For information on how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104.

4 Verify that the print server is on your network as follows:

- **For Windows®**

  Try pinging the print server from the host operating system command prompt with the command: Click **Start**, **All Programs** [1], **Accessories** then choose **Command Prompt**.

  [1] **Programs** for Windows® 2000 users

  ```
  ping ipaddress
  ```

  Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).

- **For Mac OS® X 10.2.4 or greater**

  1. From the **Go** menu, choose **Applications**.
  2. Open the **Utilities** folder.
  3. Double click the **Terminal** icon.
  4. Try pinging the print server from the Terminal window:
     `ping ipaddress`
     Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).

5 If you have tried ❶ to ❹ above and it does not work, then reset the print server back to the default factory settings and try from the initial setup again. For information on how to reset to the default factory settings, see *Restoring the network settings to factory default* on page 103.

6 (For Windows®)
If the installation failed, the Firewall on your computer may be blocking the necessary network connection to the machine. In this case, you will need to disable the Firewall on your computer and re-install the drivers. For how to disable the Firewall, see *General problems* on page 160. If you are using a personal Firewall software, see the User's Guide for your software or contact the software manufacturer.

Printing problems

Print job is not printed

Make sure the status and configuration of the print server. Check following:

1. Make sure that the machine is powered on, is on-line and ready to print.
2. Print the Network Configuration List of the machine and check if the settings such as IP address settings are correct for your network. The problem may be the result of mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the print server. And make sure that no other nodes on the network have this IP address. For information on how to print the Network Configuration List, see *Printing the Network Configuration List* on page 104.
3. Verify that the print server is on your network as follows:

   ■ **For Windows®**

   1 Try pinging the print server from the host operating system command prompt with the command:

   ```
   ping ipaddress
   ```

   Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).

   2 If a successful response is received, then proceed to *Windows® 2000/XP, Windows Vista® and Windows Server® 2003 IPP troubleshooting* on page 167. Otherwise, proceed to ❹.

   ■ **For Mac OS® X 10.2.4 or greater**

   1 From the **Go** menu, choose **Applications**.

   2 Open the **Utilities** folder.

   3 Double click the **Terminal** icon.

   4 Try pinging the print server from the Terminal window:

   ```
   ping ipaddress
   ```

   Where `ipaddress` is the print server IP address (note that in some instances it can take up to two minutes for the print server to load its IP address after setting the IP address).

4. If you have tried ❶ to ❸ above and it does not work, then reset the print server back to the default factory settings and try from the initial setup again. For information how to reset to the default factory settings, see *Restoring the network settings to factory default* on page 103.

Error during printing

If you try to print while other users are printing large amounts of data (e.g. many pages or color pages with high resolution), the printer is unable to accept your print job until the ongoing printing is finished. If the waiting time of your print job exceeds a certain limit, a time out situation occurs, which causes the error message. In such situations, execute the print job again after the other jobs are completed.

Scanning and PC Fax problems

The network scanning feature does not work in Windows®
The network PC Fax feature does not work in Windows®

Firewall settings on your PC may be rejecting the necessary network connection. Follow the instructions below to disable the Firewall. if you are using a Personal Firewall software, see the User's Guide for your software or contact the software manufacturer.

Windows® XP SP2 users:

1. Click the **Start** button, **Control Panel**, **Network and Internet Connections** and then **Windows Firewall**. Make sure that **Windows Firewall** on the **General** tab is set to On.
2. Click the **Advanced** tab and **Settings...** button of **Network Connection Settings**.
3. Click the **Add** button.
4. To add port 54925 for network scanning, enter the information below:
   1. In **Description of service**: Enter any description, for example, "Océ Scanner".
   2. **In Name or IP address (for example 192.168.0.12) or the computer hosting this service on your network**: Enter "Localhost".
   3. In **External Port number for this service**: Enter "54925".
   4. In **Internal Port number for this service**: Enter "54925".
   5. Make sure **UDP** is selected.
   6. Click **OK**.
5. Click the **Add** button.
6. To add port 54926 for network PC Fax, enter the information below:
   1. In **Description of service**: Enter any description, for example, "Océ PC Fax".
   2. In **Name or IP address (for example 192.168.0.12) or the computer hosting this service on your network**: Enter "Localhost".
   3. In **External Port number for this service**: Enter "54926".
   4. In **Internal Port number for this service**: Enter "54926".
   5. Make sure **UDP** is selected.
   6. Click **OK**.
7. If you still have trouble with your network connection, click the **Add** button.
8. To add port 137 for network scanning, network printing and network PC Fax receiving, enter the information below:
   1. In **Description of service**: Enter any description, for example, "Océ PC Fax receiving".
   2. In **Name or IP address (for example 192.168.0.12) or the computer hosting this service on your network**: Enter "Localhost".
   3. In **External Port number for this service**: Enter "137".
   4. In **Internal Port number for this service**: Enter "137".
   5. Make sure **UDP** is selected.
   6. Click **OK**.

9 Make sure if the new setting is added and is checked, and then click **OK**.

Note

After the Océ software package is installed, re-enable your Firewall.

Windows Vista® users:

1 Click the **Start** button, **Control Panel**, **Network and Internet**, **Windows Firewall** and click **Change settings**.

2 When the **User Account Control** screen appears, do the following.

- Users who have administrator rights: Click **Continue**.
- For users who do not have administrator rights: Enter the administrator password and click **OK**.

3 Make sure that **on (recommended)** is selected on the **General** tab.

4 Click the **Exceptions** tab.

5 Click the **Add port...** button.

6 To add port 54925 for network scanning, enter the information below:
1. In **Name**: Enter any description, for example, “Océ Scanner”.
2. In **Port number**: Enter “54925”.
3. Make sure **UDP** is selected.
4. Click **OK**.

7 Click the **Add port...** button.

8 To add port 54926 for network PC Fax, enter the information below:
1. In **Name**: Enter any description, for example, “Océ PC Fax”.
2. In **Port number**: - Enter “54926”.
3. Make sure **UDP** is selected.
4. Click **OK**.

9 Make sure that the new setting is added and is checked, and then click **Apply**.

10 If you still have trouble with your network connection such as network scanning or printing, check **File and Printer Sharing** box in the **Exceptions** tab and then click **Apply**.

Note

After the Océ software package is installed, re-enable your Firewall.

Wireless network troubleshooting

Wireless setup problems

The Océ print server is not found during setup by the Wireless Device Setup Wizard.

1. Make sure that the machine is powered on, is on-line and ready to print.
2. Move your computer closer to the cx2100 and try again.
3. Reset the print server back to its default factory settings and try again. For the information how to reset to the factory default settings, see *Restoring the network settings to factory default* on page 103.

Why do I have to change my machine's network setting to "Wired LAN" during setup although I am trying to setup Wireless LAN?

If you are using Windows® 98/98SE/Me/2000, Mac OS® X 10.2.4 or greater or your computer is connected to the wireless network using a network cable, it is recommended you temporarily connect the machine to your access point, hub or router using a network cable. You will also need to change your machine's network setting to wired LAN temporarily. Your machine's network setting will be changed to wireless LAN during the course of the setup.

- For Windows®:

  See *Using the Setup Wizard from the control panel* on page 25 or *Wireless configuration for Windows®* on page 32.

- For Macintosh®:

  See *Using the Setup Wizard from the control panel* on page 25 or *Wireless Configuration for Macintosh®* on page 57.

Wireless connection problem

The wireless network connection is sometimes disabled.

The wireless network connection status is affected by the environment where the Océ printer and other wireless devices are located. The following conditions may cause connection problems:

- A concrete or metal framed wall is installed between the cx2100 and the access point.
- Electric appliances such as televisions, computer appliances, microwave ovens, intercoms, mobile/cellular phones and the battery chargers and AC power adapters are installed close to your network.
- A broadcast station or high-tension wire is located close to your network.
- A nearby fluorescent light is being switching on or off.

Protocol-specific troubleshooting

Windows® 2000/XP, Windows Vista® and Windows Server® 2003 IPP troubleshooting

I want to use a different Port number other than 631.

If you are using Port 631 for IPP printing, you may find that your firewall may not let the print data through. If this is the case, use a different port number (port 80), or configure your Firewall to allow Port 631 data through.

To send a print job using IPP to a printer using Port 80 (the standard HTTP port) enter the following when configuring your Windows® 2000/XP, Windows Vista® and Windows Server® 2003 system.

`http://ipaddress/ipp`

The “Go to printer’s Web site” option in Windows® XP and Windows Vista® is not working
The “Get More Info” option in Windows® 2000 and Windows Server® 2003 is not working

If you are using a URL of:

`http://ipaddress:631 or http://ipaddress:631/ipp`,

the **Get More Info** option in Windows® 2000/XP, Windows Vista® and Windows Server® 2003 will not function. if you wish to use the **Get More Info** option, use the following URL:

`http://ipaddress`

This will then force Windows® 2000/XP, Windows Vista® and Windows Server® 2003 to use Port 80 to communicate with the Océ print server.

Web browser troubleshooting (TCP/IP)

1. If you can not connect to the print server using your web browser it may be worth checking the Proxy Settings of your browser. Looking in the Exceptions setting and if necessary, type in the IP address of the print server. This will stop your computer from trying to connect to your ISP or proxy server every time you wish to look at the print server.

2. Make sure that you are using the proper web browser, we recommend Microsoft Internet Explorer 6.0® (or greater) or Firefox® 1.0 (or greater) for Windows® and Safari™ 1.0 for Macintosh®. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use. We recommend you upgrade to Safari™ 1.2 or greater to enable JavaScript. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

LDAP troubleshooting

If you are having trouble connecting to a Windows® LDAP server, please contact your Network Administrator and check the LDAP Security Options.

For more information, please visit http://www.oceusa.com.

A Appendix A

Using services

A service is a resource that can be accessed by computers that wish to print to the Océ print server. The Océ print server provides the following predefined services (do a SHOW SERVICE command in the Océ print server remote console to see a list of available services): Enter `HELP` at the command prompt for a list of supported commands.

Service (Example)	Definition
BINARY_P1	TCP/IP binary, NetBIOS service
TEXT_P1	TCP/IP text service (adds carriage return after each line feed)
PCL_P1	PCL® service (switches PJL-compatible printer to PCL® mode)
BRNxxxxxx_P1	TCP/IP binary
BRNxxxxxx_P1_AT	PostScript® service for Macintosh®
POSTSCRIPT_P1	PostScript® service (switches PJL-compatible printer to PostScript® mode)

Where “xxxxxx” is the last six digits of the Ethernet address (for example, BRN310107_P1).

Other ways to set the IP address (for advanced users and administrators)

For information on how to configure your machine for a network using the BRAdmin Light utility, see *Setting the IP address and subnet mask* on page 13.

Using DHCP to configure the IP address

The Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server in your network, the print server will automatically obtain its IP address from the DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

Note

If you do not want your print server configured via DHCP, BOOTP or RARP, you must set the BOOT Method to static so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems. To change the BOOT Method, use the machine’s control panel `LAN` menu, BRAdmin application, Remote Setup or Web Based Management (web browser).

Using BOOTP to configure the IP address

BOOTP is an alternative to RARP that has the advantage of allowing configuration of the subnet mask and gateway. In order to use BOOTP to configure the IP address make sure that BOOTP is installed and running on your host computer (it should appear in the `/etc/services` file on your host as a real service; type `man bootpd` or refer to your system documentation for information). BOOTP is usually started up via the `/etc/inetd.conf` file, so you may need to enable it by removing the "#" in front of the bootp entry in that file. For example, a typical bootp entry in the /etc/inetd.conf file would be:

```
#bootp dgram udp wait /usr/etc/bootpd bootpd -i
```

Depending on the system, this entry might be called "bootps" instead of "bootp".

Note

In order to enable BOOTP, simply use an editor to delete the "#" (if there is no "#", then BOOTP is already enabled). Then edit the BOOTP configuration file (usually `/etc/bootptab`) and enter the name, network type (1 for Ethernet), Ethernet address and the IP address, subnet mask and gateway of the print server. Unfortunately, the exact format for doing this is not standardized, so you will need to refer to your system documentation to determine how to enter this information (many UNIX® systems also have template examples in the bootptab file that you can use for reference). Some examples of typical `/etc/bootptab` entries include: ("BRN" below is "BRW" for a wireless network.)

```
BRN310107 1  00:80:77:31:01:07 192.168.1.2
```

and:

```
BRN310107:ht=ethernet:ha=008077310107:\
ip=192.168.1.2:
```

Certain BOOTP host software implementations will not respond to BOOTP requests if you have not included a download filename in the configuration file. If this is the case, simply create a null file on the host and specify the name of this file and its path in the configuration file.

As with RARP, the print server will load its IP address from the BOOTP server when the printer is powered on.

Using RARP to configure the IP address

The Océ print server's IP address can be configured using the Reverse ARP (RARP) facility on your host computer. This is done by editing the `/etc/ethers` file (if this file does not exist, you can create it) with an entry similar to the following: ("BRN" below is "BRW" for a wireless network.)

```
00:80:77:31:01:07    BRN310107
```

Where the first entry is the Ethernet address of the print server and the second entry is the name of the print server (the name must be the same as the one you put in the `/etc/hosts` file).

If the RARP daemon is not already running, start it (depending on the system the command can be `rarpd`, `rarpd -a`, `in.rarpd -a` or something else; type `man rarpd` or refer to your system documentation for additional information). To verify that the RARP daemon is running on a Berkeley UNIX® based system, type the following command:

```
ps -ax | grep -v grep | grep rarpd
```

For AT&T UNIX®-based systems, type:

```
ps -ef | grep -v grep | grep rarpd
```

The Océ print server will get the IP address from the RARP daemon when the printer is powered on.

Using APIPA to configure the IP address

The Océ print server supports the Automatic Private IP Addressing (APIPA) protocol. With APIPA, DHCP clients automatically configure an IP address and subnet mask when a DHCP server is not available. The device chooses it's own IP address in the range 169.254.1.0 through to 169.254.254.255. The subnet mask is automatically set to 255.255.0.0 and the gateway address is set to 0.0.0.0.

By default, the APIPA protocol is enabled. If you want to disable the APIPA protocol, you can disable it using control panel of the machine. For more information, see *APIPA* on page 82.

If the APIPA protocol is disabled, the default IP address of a Océ print server is 192.0.0.192. However, you can easily change this IP address number to match with the IP address details of your network.

Using ARP to configure the IP address

If you are unable to use the BRAdmin application and your network does not use a DHCP server, you can also use the ARP command. The ARP command is available on Windows® systems that have TCP/IP installed as well as UNIX® systems. To use ARP enter the following command at the command prompt:

```
arp -s ipaddress ethernetaddress
ping ipaddress
```

Where `ethernetaddress` is the Ethernet address (MAC address) of the print server and `ipaddress` is the IP address of the print server. For example:

■ **Windows® systems**

Windows® systems require the dash “-” character between each digit of the Ethernet address.

```
arp -s 192.168.1.2 00-80-77-31-01-07
ping 192.168.1.2
```

■ **UNIX®/Linux systems**

Typically, UNIX® and Linux systems require the colon “:” character between each digit of the Ethernet address.

```
arp -s 192.168.1.2 00:80:77:31:01:07
ping 192.168.1.2
```

Note

You must be on the same Ethernet segment (that is, there cannot be a router between the print server and operating system) to use the arp -s command.

If there is a router, you may use BOOTP or other methods described in this chapter to enter the IP address.If your administrator has configured the system to deliver IP addresses using BOOTP, DHCP or RARP your Océ print server can receive an IP address from any one of these IP address allocation systems. In which case, you will not need to use the ARP command. The ARP command only works once. For security reasons, once you have successfully configured the IP address of a Océ print server using the ARP command, you cannot use the ARP command again to change the address. The print server will ignore any attempts to do this. If you wish to change the IP address again, use a Web Based Management (web browser), Telnet (using the SET IP ADDRESS command) or factory reset the print server (which will then allow you to use the ARP command again).

Using the Telnet console to configure the IP address

You can also use the Telnet command to change the IP address.

Telnet is an effective method to change the machine's IP address. But a valid IP address must already be programmed into the print server.

Type `Telnet <command line>` at the command prompt of the system prompt, where `<command line>` is the IP address of the print server. When you are connected, push the Return or Enter key to get the "**#**" prompt. Enter the password "**access**" (the password will not appear on the screen).

You will be prompted for a user name. Enter anything in response to this prompt.

You will then get the `Local>` prompt. Type `SET IP ADDRESS ipaddress`, where `ipaddress` is the desired IP address you wish to assign to the print server (check with your network administrator for the IP address to use). For example:

```
Local> SET IP ADDRESS 192.168.1.3
```

You will now need to set the subnet mask by typing `SET IP SUBNET subnet mask`, where `subnet mask` is the desired subnet mask you wish to assign to the print server (check with your network administrator for the subnet mask to use). For example:

```
Local> SET IP SUBNET 255.255.255.0
```

If you do not have any subnets, use one of the following default subnet masks:

255.0.0.0 for class A networks

255.255.0.0 for class B networks

255.255.255.0 for class C networks

The leftmost group of digits in your IP address can identify the type of network you have. The value of this group ranges from 1 through 127 for Class A networks (e.g., 13.27.7.1), 128 through 191 for Class B networks (e.g.,128.10.1.30), and 192 through 255 for Class C networks (e.g., 192.168.1.4).

If you have a gateway (router), enter its address with the command `SET IP ROUTER routeraddress`, where routeraddress is the desired IP address of the gateway you wish to assign to the print server. For example:

```
Local> SET IP ROUTER 192.168.1.4
```

Type `SET IP METHOD STATIC` to set the method of IP access configuration to static.

To verify that you have entered the IP information correctly, type `SHOW IP`.

Type `EXIT` or Ctrl-D (i.e., hold down the control key and type "D") to end the remote console session.

Installation when using a Network Print Queue or Share (printer driver only)

Note

- You must configure the IP address on your machine before you proceed with this section. If you have not configured the IP address, see *Configuring your machine for a network with an Ethernet cable connection* on page 11 first.
- Verify the host computer and print server are either on the same subnet, or that the router is properly configured to pass data between the two devices.
- Before installation, if you are using Personal Firewall software (e.g. Windows Firewall), disable it. Once you are sure that you can print, re-start your Personal Firewall software.

1. Start the CD-ROM installation menu program according to the Quick Setup Guide.
2. Choose the model name and your language (if necessary), and then click **Install Other Drivers or Utilities**.
3. Click **Printer Driver (Only, for Network)**.
4. Click **Next** in response to the Welcome message. Follow the on-screen instructions.
5. Choose **Standard Installation** and click **Next**.
6. Choose **Network Shared Printer**, and then click **Next**.
7. Choose your printer's queue, and then click **OK**.

Note

Contact your administrator if you are not sure about the location and name of the printer in the network.

8. Click **Finish**.

B Appendix B

Print server specifications

Ethernet wired network

Network Board Model name	TBD	
LAN	You can connect your machine to a network for Network Printing, Network Scanning, PC Fax and Remote Setup. [1] [2]	
Support for	Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server® 2003 x64 Edition [2] Mac OS® X 10.2.4 or greater	
Protocols	TCP/IP for IPv4:	ARP, RARP, BOOTP, DHCP, APIPA (Auto IP), WINS, NetBIOS name resolution, DNS resolver, mDNS, LPR/LPD, Custom Raw Port/Port9100, IPP, IPPS, FTP server, SSL/TLS, POP before SMTP, SMTP-AUTH, Telnet, SNMPv1, HTTP/HTTPS server, TFTP client and server, SMTP client, APOP, LLTD responder, Raw Port (PC scanner), FTP client, LDAP, POP3
	TCP/IP for IPv6:	(Turned off as default) NDP, RA, DNS, mDNS, LPR/LPD, Custom Raw Port/Port9100, IPP, IPPS, FTP server, SSL/TLS, POP before SMTP, SMTP-AUTH, Telnet, SNMPv1, HTTP/HTTPS server, TFTP client and server, SMTP client, APOP, LLTD responder, Raw Port (PC scanner), LDAP, POP3
Network type	Ethernet 10/100 BASE-TX Auto Negotiation (Wired LAN)	
Management utilities [3]	BRAdmin Light for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003, Windows Server® 2003 x64 Edition and Mac OS® X 10.2.4 or greater BRAdmin Professional for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server® 2003 x64 Edition	

1 PC Fax Send for Mac®

2 Printing only for Windows Server® 2003

3 BRAdmin Professional is available as a download from http://www.oceusa.com

Ethernet wireless network

Network board model name	TBD	
LAN	You can connect your machine to a network for Network Printing, Network Scanning, PC Fax and Remote Setup [1] [2].	
Support for	Windows® 2000 Professional, Windows® XP,	
	Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server® 2003 x64 Edition	
	Mac OS® X 10.2.4 or greater	
Protocols	TCP/IP for IPv4:	ARP, RARP, BOOTP, DHCP, APIPA (Auto IP), WINS, NetBIOS name resolution, DNS resolver, mDNS, LPR/LPD, Custom Raw Port/Port9100, IPP, IPPS, FTP server, SSL/TLS, POP before SMTP, SMTP-AUTH, Telnet, SNMPv1, HTTP/HTTPS server, TFTP client and server, SMTP client, APOP, LLTD responder, Raw Port (PC scanner), FTP client, LDAP, POP3
	TCP/IP for IPv6	(Turned off as default) NDP, RA, DNS, mDNS, LPR/LPD, Custom Raw Port/Port9100, IPP, IPPS, FTP server, SSL/TLS, POP before SMTP, SMTP-AUTH, Telnet, SNMPv1, HTTP/HTTPS server, TFTP client and server, SMTP client, APOP, LLTD responder, Raw Port (PC scanner), LDAP, POP3
Management utilities	BRAdmin Light for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003, Windows Server® 2003 x64 Edition and Mac OS® X 10.2.4 or greater	
	BRAdmin Professional for Windows® 2000 Professional, Windows® XP, Windows® XP Professional x64 Edition, Windows Vista®, Windows Server® 2003 and Windows Server® 2003 x64 Edition [3]	
Network type	IEEE 802.11 b/g (Wireless LAN)	
Frequency	2412-2472 MHz	
RF channels	US/Canada	1-11
	Japan	802.11b: 1-14, 802.11g: 1-13
	Others	1-13
Communication mode	Infrastructure, Ad-hoc (802.11b only)	
Data rates	802.11b	11/5.5/2/1 Mbps
	802.11g	54/48/36/24/18/12/11/9/6/5.5/2/1 Mbps
Link distance	70m (233 ft.) at lowest data rate (The distance rate will vary upon environment and other equipment location.)	

Network security	SSID/ESSID, 128 (104) / 64 (40) bit WEP, WPA/WPA2-PSK (TKIP/AES), LEAP (CKIP)

1 PC Fax Send for Mac®

2 Only printing for Windows Server® 2003

3 BRAdmin Professional is available as a download from http://www.oceusa.com

Computer requirements

Minimum System Requirements and Supported PC Software Functions								
Computer Platform & Operating System Version		**Supported PC Software Functions**	**PC Interface**	**Processor Minimum Speed**	**Minimum RAM**	**Recommended RAM**	**Available Hard Disk Space**	
							For Drivers	**For Applications**
Windows® Operating System	Windows® 2000 Professional [4]	Printing, PC Fax [3], Scanning	USB, Ethernet, Wireless 802.11 b/g	Intel® Pentium® or equivalent	64 MB	256 MB	150 MB	310 MB
	Windows® XP Home [1] [4] Windows® XP Professional [1] [4]				128 MB			
	Windows® XP Professional x64 Edition [1]			AMD Opteron™ AMD Athlon™ 64 Intel® Xeon® with Intel® EM64T Intel® Pentium® 4 with Intel® EM64T or equivalent	256 MB	512 MB		
	Windows Vista® [1]			Intel® Pentium® 4 or equivalent 64-bit supported CPU	512 MB	1 GB	500 MB	500 MB
	Windows Server® 2003	Printing	Ethernet	Intel® Pentium® III or equivalent	256 MB	512 MB	50MB	Not available
	Windows Server® 2003 x64 Edition			AMD Opteron™ AMD Athlon™ 64 Intel® Xeon® with Intel® EM64T Intel® Pentium® 4 with Intel® EM64T or equivalent				
Macintosh® Operating System	Mac OS® X 10.2.4 or greater	Printing, PC Fax send [3], Scanning	USB [2], Ethernet, Wireless 802.11 b/g	PowerPC G4/G5, Intel® Core™ Solo/Duo, PowerPC G3 350MHz	128 MB	160 MB	80 MB	400 MB

1 For WIA, 1200x1200 resolution. Océ Scanner Utility enables to enhance up to 19200 x 19200 dpi.

2 Third party USB ports are not supported.

3 PC Fax supports black and white only.

4 PaperPort™ 11SE supports Microsoft® SP4 or higher for Windows® 2000 and SP2 or higher for XP.

Authentication and encryption for wireless users only

Authentication method

The cx2100 supports the following methods:

- Open system

  Wireless devices are allowed to access the network without any authentication.

- Shared key

  A secret pre-determined key is shared by all devices that will access the wireless network. The cx2100 uses the WEP keys as the pre-determined key.

- WPA-PSK/WPA2-PSK

  Enables a Wi-Fi® Protected Access Pre-Shared Key (WPA-PSK), which enables the Océ wireless machine to associate with access points using TKIP for WPA-PSK or AES for WPA-PSK and WPA2-PSK (WPA-Personal).

- LEAP

  Cisco® LEAP (Light Extensible Authentication Protocol) has been developed by Cisco Systems, Inc. and enables the Océ wireless product to associate with access points using CKIP and CMIC encryptions.

Encryption methods

Encryption is used to secure the data that is sent over the wireless network. The cx2100 supports the following encryption methods:

- WEP

  By using WEP (Wired Equivalent Privacy), the data is transmitted and received with a secure key.

- TKIP

  TKIP (Temporal Key Integrity Protocol) provides per-packet key mixing a message integrity check and re-keying mechanism.

- AES

  AES (Advanced Encryption Standard) is Wi-Fi® authorized strong encryption standard.

- CKIP

  The original Key Integrity Protocol for LEAP by Cisco Systems, Inc.

Network key

There are some rules for each security method:

■ Open system/Shared key with WEP

This key is a 64-bit or 128-bit value that must be entered in an ASCII or hexadecimal format.

- 64 (40) bit ASCII:

  Uses 5 text characters. e.g.“WSLAN” (this is case sensitive).

- 64 (40) bit hexadecimal:

  Uses 10 digits of hexadecimal data. e.g.“71f2234aba”

- 128 (104) bit ASCII:

  Uses 13 text characters. e.g.“Wirelesscomms” (this is case sensitive)

- 128 (104) bit hexadecimal:

  Uses 26 digits of hexadecimal data. e.g.“71f2234ab56cd709e5412aa2ba”

■ WPA-PSK/WPA2-PSK and TKIP or AES

Uses a Pre-Shared Key (PSK) that is 8 or more characters in length, up to a maximum of 63 characters.

■ LEAP

Uses User ID and Password.

- User ID: Less than 64 characters in length.
- Password: Less than 32 characters in length.

Function table and default factory settings

The factory settings are shown in Bold with an asterisk.

Main Menu	Submenu	Menu Selections		Options
7.LAN	1.Wired	1.TCP/IP	1.BOOT Method	**Auto***
				Static
				RARP
				BOOTP
				DHCP
			2.IP Address	[000-255]. [000-255]. [000-255]. [000-255] [1]
			3.Subnet Mask	[000-255]. [000-255]. [000-255]. [000-255] [1]
			4.Gateway	[000-255]. [000-255]. [000-255]. [000-255]
			5.Node Name	BRNXXXXXX
			6.WINS Config	**Auto***
				Static
			7.WINS Server	(Primary)
				000.000.000.000
				(Secondary)
				000.000.000.000
			8.DNS Server	(Primary)
				000.000.000.000
				(Secondary)
				000.000.000.000
			9.APIPA	**On***
				Off
			0.IPv6	On
				Off*
		2.Ethernet	—	**Auto***
				100B-FD
				100B-HD
				10B-FD
				10B-HD

Main Menu	Submenu	Menu Selections		Options
7.LAN (continued)	1.Wired (continued)	3.Set to Default	1.Reset	—
			2.Exit	—
		4.Wired Enable		**On*** Off
	2.WLAN	1.TCP/IP	1.BOOT Method	**Auto*** Static RARP BOOTP DHCP
			2.IP Address	[000-255]. [000-255]. [000-255]. [000-255] [1]
			3.Subnet Mask	[000-255]. [000-255]. [000-255]. [000-255] [1]
			4.Gateway	[000-255]. [000-255]. [000-255]. [000-255]
			5.Node Name	BRWXXXXXX
			6.WINS Config	**Auto*** Static
			7.WINS Server	(Primary) 000.000.000.000 (Secondary) 000.000.000.000
			8.DNS Server	(Primary) 000.000.000.000 (Secondary) 000.000.000.000
			9.APIPA	**On*** Off
			0.IPv6	On **Off***
		2.Setup Wizard	—	—
		3.SecurEasySetup	—	—

Main Menu	Submenu	Menu Selections		Options
7.LAN (continued)	2.WLAN (continued)	4.WLAN Status	1.Status	Active(11b) Active(11g) Wired LAN Active WLAN OFF Connection NG
			2.Signal	Strong Medium Weak None
			3.SSID	—
			4.Comm.Mode	Ad-hoc Infrastructure
		5.Set to Default	1.Reset	—
			2.Exit	—
		6.WLAN Enable		On **Off***
	3.Setup IFAX	1.Setup Internet	1.Mail address	—
			2.SMTP Server	Name? (Up to 64 characters) IP Address? [000-255].[000-255]. [000-255]. [000-255]
			3.SMTP Port	[00001-65535]
			4.Auth. for SMTP	**None*** SMTP-AUTH POP bef. SMTP
			5.POP3 Server	Name? (Up to 64 characters) IP Address? [000-255].[000-255]. [000-255]. [000-255]
			6.POP3 Port	[00001-65535]

Main Menu	Submenu	Menu Selections		Options
7.LAN (continued)	3.Setup IFAX (continued)	1.Setup Internet (continued)	7.Mailbox Name	—
			8.Mailbox Pwd	—
			9.APOP	On **Off***
		2.Setup Mail RX	1.Auto Polling	**On*** Off
			2.Poll Frequency	10 Min
			3.Header	All Subject+From+To **None***
			4.Del Error Mail	**On*** Off
			5.Notification	On MDN **Off***
		3.Setup Mail TX	1.Sender Subject	—
			2.Size Limit	On **Off***
			3.Notification	On **Off***
		4.Setup Relay	1.Rly Broadcast	On **Off***
			2.Relay Domain	RelayXX:
			3.Relay Report	On **Off***
	4.Scan to E-mail	—	Color 150 dpi Color 300 dpi Color 600 dpi	(If you chose color option) **PDF*** JPEG
			B&W 200 dpi B&W 200x100 dpi	(If you chose B&W option) **PDF*** TIFF

Main Menu	Submenu	Menu Selections		Options
7.LAN (continued)	**5.Scan to FTP**	—	Color 150 dpi Color 300 dpi Color 600 dpi	(If you chose color option) **PDF*** JPEG
			B&W 200 dpi B&W 200x100 dpi	(If you chose B&W option) **PDF*** TIFF
	6.Fax to Server	—	—	On **Off***
	7.Time Zone	—	—	UTC-XX:XX
	0.Factory Reset	**1.Reset**	—	1.Yes 2.No
		2.Exit	—	—

[1] On connection to the network, the machine will automatically set the IP address and Subnet Mask to value appropriate for your network.

Entering Text

When setting certain menu selections, such as the Station ID, you will need to type text characters. The dial pad keys have letters printed on them. The keys: **0**, **#** and ✳ do not have printed letters because they are used for special characters.

Press the appropriate dial pad key the required number of times to access the characters below:

■ For setting an E-mail address, `Scan to FTP` menu options and `Setup IFAX` menu options (**Menu**, **7**, **3**)

Press Key	one time	two times	three times	four times	five times	six times	seven times	eight times
1	@	.	/	1	@	.	/	1
2	a	b	c	A	B	C	2	a
3	d	e	f	D	E	F	3	b
4	g	h	i	G	H	I	4	g
5	j	k	l	J	K	L	5	j
6	m	n	o	M	N	O	6	m
7	p	q	r	s	P	Q	R	S
8	t	u	v	T	U	V	8	t
9	w	x	y	z	W	X	Y	Z

■ For setting other menu selections

Press Key	one time	two times	three times	four times
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	Q	R	S
8	T	U	V	8
9	W	X	Y	Z

Inserting spaces

To enter a space in a fax number, press ▶ once between numbers. To enter a space in a name, press ▶ twice between characters.

Making corrections

If you entered a letter incorrectly and want to change it, press ◀ to move the cursor to the incorrect character, and then press **Clear/Back**.

Repeating letters

To enter a character on the same key as the previous character, press ▶ to move the cursor right before pressing the key again.

Special characters and symbols

Press ✳, **#** or **0**, and then press ◀ or ▶ to move the cursor to the symbol or character you want.
Press **OK** to choose it. The symbols and characters below will appear depending on your menu selection.

Press ✳	for	(space) ! " # $ % & ' ( ) ✳ + , - . / €
Press **#**	for	: ; < = > ? @ [ ] ^ _ ¥ ~ ` | { }
Press **0**	for	(For USA) Á À Ã Â Ç É È Ê Ë Í Î Ï Ó Õ Ô Ö Œ Ú Ù Û 0
		(For Canada) À Â Ç É È Ê Ë Î Ï Ô Œ Ú Ù Û 0

C Appendix C

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OpenSSL statements

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