

Network User's Guide

C3400 C3530 MFP



Copyright Information

Copyright © 2008 by Oki Data Americas, Inc. All Rights Reserved

Document Information

Network User's Guide

C3400n and C3530 MFP

P/N 59387501, Revision 2.1

July, 2008

Disclaimer

Every effort has been made to ensure that the information in this document is complete, accurate, and up-to-date. The manufacturer assumes no responsibility for the results of errors beyond its control. The manufacturer also cannot guarantee that changes in software and equipment made by other manufacturers and referred to in this guide will not affect the applicability of the information in it. Mention of software products manufactured by other companies does not necessarily constitute endorsement by the manufacturer .

While all reasonable efforts have been made to make this document as accurate and helpful as possible, we make no warranty of any kind, expressed or implied, as to the accuracy or completeness of the information contained herein.

The most up-to-date drivers and manuals are available from the web site:

<http://www.okiprintingsolutions.com>

Trademark Information

Oki and Microline are registered trademarks of Oki Electric Industry Company Ltd.

Apple, Macintosh and Mac OS are registered trademarks of Apple Computers Inc.

Microsoft, MS-DOS and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Other product names and brand names are registered trademarks or trademarks of their proprietors.

Regulatory Information



This product complies with the requirements of the Council Directives 89/336/EEC (EMC), 73/23/EEC (LVD) and 1999/5/EC (R&TTE), as amended where applicable, on the approximation of the laws of the member states relating to Electromagnetic Compatibility, Low Voltage and Radio & Telecommunications Terminal Equipment.

Table of Contents

Notes, cautions and warnings	5
Network Configuration	6
Introduction	6
Specification	7
Self-diagnostic test	7
Default user name and password	7
Configuration utilities	8
Network Card Setup utility	9
Using a web browser	9
Adjusting printer settings	9
Using SNMP	12
Oki LPR printing utility (Windows only)	12
System Requirement	12
Installing the Oki LPR utility	12
Uninstalling the Oki LPR utility	13
Windows	14
Overview	14
Installation of TCP/IP protocol	14
Configuring Windows to use TCP/IP Networking	15
Windows 98/Me	15
Windows NT 4.0	15
Windows 2000	16
Windows XP	16
Configuring the network printer IP address	17
Launching the Network Card Setup utility	17
Starting the Network Card Setup utility	18
Manually configuring the IP address	18
Changing the Admin Password	18
Enable/Disable the Printer Web Page	19
Updating Environment Settings	19
Viewing the printer web page	19
Uninstalling the Network Card Setup utility	19
Configuring Windows to print to the network printer	20
Windows 98/Me	20
Windows NT 4.0	20
Windows 2000	21
Windows XP	23
Macintosh	25
Overview	25
Supported versions	25
Printing the configuration page	25
Network Card Setup utility for Mac OS 9	26
Launching the Network Card Setup utility	26

Setting the Printer Discovery settings	26
Changing the password	27
Enable/Disable the Printer Web Page	27
Quitting the network card setup utility	28
Network Card Setup utility for Mac OS X	29
Launching the Network Card Setup utility	29
Setting the Printer discovery settings	29
Changing the password	30
Enable/Disable the Printer Web Page	31
Quitting the network card setup utility	31
Configuring the network interface card	32
Troubleshooting	33
Self-diagnostic test	33
Printer does not print.	33
NG is printed in the self-diagnostic test	33
TCP/IP	33
Computer cannot find the network interface card	33
Cannot print with lpr	34
Web browser	34
Microsoft Internet Explorer	34
Netscape Navigator	34
Index	35

NOTES, CAUTIONS AND WARNINGS

NOTE

A note provides additional information to supplement the main text.

WARNING!

A warning provides additional information which, if ignored, may result in a risk of personal injury.

CAUTION!

A caution provides additional information which, if ignored, may result in equipment malfunction or damage.

ONLY USE GENUINE OKI ORIGINAL CONSUMABLES TO ENSURE THE BEST QUALITY AND PERFORMANCE FROM YOUR HARDWARE. NON-OKI ORIGINAL PRODUCTS MAY DAMAGE YOUR PRINTER'S PERFORMANCE AND INVALIDATE YOUR WARRANTY. SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. ALL TRADEMARKS ACKNOWLEDGED.

NETWORK CONFIGURATION

INTRODUCTION

This User's Guide explains the functionality of your printer's built in 100BASE-TX/10BASE-T network interface.

This network interface supports IEEE802.2, IEEE802.3, Ethernet-II and SNAP, and can detect those frame types automatically. The network interface also supports TCP/IP protocols.

The Network Interface Panel, for interconnection and producing self-diagnostic test and configuration printouts, located at the rear of the printer.

This section details the network interface specification and several software utilities.

SPECIFICATION

ITEM	SPECIFICATION
Frame Types	IEEE 802.2 IEEE 802.3 Ethernet-II, SNAP, AUTO
Network Interface	100BASE-TX 10BASE-T
Network Protocols	TCP/IP Network layer ARP, Session layer TCP, UDP Application layer LPR, HTTP, BOOTP, DHCP, SNMP.
Functions	Self-diagnostic test printing Monitoring and configuration by Web browser

SELF-DIAGNOSTIC TEST

With the printer power switched on, press the **TEST** button located on the Network Interface Panel (at the rear of the printer) for more than three seconds and then release. The self-diagnostic test results and configuration settings are printed.

On the first page of the Network Information that is printed out, under the heading "General Information" the MAC or Ethernet Address is given. For example:

MAC Address **00:80:87:D4:FA:00**

DEFAULT USER NAME AND PASSWORD

To apply configuration changes using a Web browser, you will be prompted for a username and password. The username is `'root'` and the default password is the last six characters of the Ethernet (MAC) address, e.g. `'D4FA00'` (any alpha characters must be in upper case).

You can change the root password to allow you to change settings and configure the printer through the Web browser. You can find instructions on how to change the password for the Network Card Setup sections for Windows or Mac.

CONFIGURATION UTILITIES

You can configure the network interface card (NIC) by using one of the following methods:

UTILITY	FEATURES	SYSTEM REQUIREMENTS
Network Card Setup	<p>Configure the Network Interface Card (NIC) by launching or installing the Network Card Setup utility. This utility allows you to:</p> <p>Enable/disable the Printer settings Web Page.</p> <p>Set IP address, Subnet Mask and Gateway for TCP/IP manually or by using DHCP.</p>	<p>Windows: Windows 9x/Me, Windows 2000 Advanced Server/ Professional or Windows NT Server 4.0/Work-station 4.0 and Windows XP running TCP/IP</p> <p>Mac: OS 9 to OS X 10.4.6</p>
Web Browser	<p>Configure the NIC and printer by using a Web browser such as Microsoft Internet browser or Netscape Navigator.</p>	<p>Microsoft Internet Explorer Version 5.5 and higher</p> <p>Netscape Navigator Version 6.2 and higher.</p> <p>Opera 6.0 and higher.</p> <p>Safari 1.2 and higher.</p> <p>Operating system that supports Web browser.</p>
SNMP	<p>The printer and network card can be controlled using third-party vendor developed SNMP application.</p>	<p>Third-party vendor developed SNMP application.</p>

NETWORK CARD SETUP UTILITY

The Network Card Setup utility allows you to carry out the following:

- > Set IP address, Subnet Mask and Gateway for TCP/IP manually or by using DHCP.
- > Launch the Printer Web Page.
- > Enable/disable the Printer Settings Web Page.
- > Restart your printer to ensure settings have been saved.

For full configuration options for your printer, access the Printer Web Page. For information on the Printer Web Page, see "Using a web browser" on page 9.

Support Configuration using the Network Card Setup utility requires a PC with Windows 9x/Me, Windows 2000 Advanced Server/Professional or Windows NT Server 4.0/Work-station 4.0 and Windows XP or a Mac with OS 9 or OS X. This utility can only be used on a computer that can be connected to the network with TCP/IP and located on the same segment as the printer.

To install and configure the Network Card Setup utility, see

- > **Windows:** "Launching the Network Card Setup utility" on page 17.
- > **Mac OS X:** "Network Card Setup utility for Mac OS X" on page 29.
- > **Mac OS 9:** "Network Card Setup utility for Mac OS 9" on page 26.

USING A WEB BROWSER

If you do not wish to launch or install the Network Card Setup utility, you can access the Printer Web Page directly through a web browser.

If the printer is connected to the network using TCP/IP, its settings and the printer menu settings can be configured using a Web browser, such as, Microsoft Internet Explorer Version 5.5 and higher, Netscape Navigator version 6.2 and higher, Opera 6.0 and higher, or Safari 1.2 and higher. There is no guarantee offered for other browsers. Refer to the relevant manuals for details of how to launch and use the browser.

ADJUSTING PRINTER SETTINGS

The network addresses used in this manual are shown as examples only. Network addresses used in your installation must be generated from your own network.

1. Launch the Web browser and enter the IP Address of the network interface card in "Address (Location/Position)" and press the **Enter**

key. You can find the IP Address on the Self-Diagnostic Test printout. The Printer Web Page is displayed.

NOTE:

On the web page you can view printer status, job lists and links. You can also configure the IP Address, Subnet Mask and Gateway for the network card. However, to configure printer settings, you need to log in as "root" and enter the correct password to be able to configure all items.

2. To access and adjust printer control settings, such as printer, network, security and maintenance, click the **Administrator Login** button in the left-hand pane.
3. Enter the username, "root" and password as the last six digits of the MAC address (uppercase).
4. As this is the first time logging into the Printer Web Page, the Printer Identification (basic setup) page is launched. You have two options:
 - You can enter the printer location, asset number, administrator name and select "Do not show this page again". Click **OK** to save these details. Allow a few seconds for the settings to save and the printer to restart automatically.
 - If you do not wish to enter any details, click **SKIP**.
5. The Printer Web Page with full menu options opens up. Browse the menu and update information as appropriate.

The following table outlines the menu options for the Printer Web Page.

MENU OPTION	DESCRIPTION
Status Printer Status Printer Information Network Information	View information relating to your printer status, consumables and network settings.
Printer General Printer Settings Print Menu Media Menu Color Menu Printer Configuration Menu Interface Memory Menu Information Print	View information on printing methods and quality and print off a status sheet. You can also adjust items such as: <ul style="list-style-type: none"> > media type, size and weight > color density and registration modes > data interface transfer speed and enable/disable software reset command and serial number.

MENU OPTION	DESCRIPTION
Network General Network Settings TCP/IP SNMP	View and adjust any network settings relating to your printer.
Job List Job Queue	Allows you to manage pending jobs for your printer.
Security Protocol ON/OFF Menu Lock Password Configuration	Change your password and apply access restrictions for your printer network.
Maintenance Reset/Restore	Reset your printer and restore default settings for your printer and Network Interface Card.
Links Links Edit Links	Add links for easy access to customer support and on-line information.

USING SNMP

The printer and network card can be managed via a standard SNMP management station. The network card supports SNMPv1, MIB-II and Oki Data Private MIB. To enable correct management from an SNMP management station, the Oki Data Private MIB needs to be added to that management station. Please refer to the SNMP manager documentation for more information on adding MIBs to SNMP management stations.

You can download the Oki Data Private MIB file from the Oki Printing Solutions website at <http://www.okiprintingsolutions.com>. Refer to the readme file in the "MIB" folder for further information.

The printer's trap address can be set in five places using TCP/IP.

Printer trap settings can be made through the Web browser.

OKI LPR PRINTING UTILITY (WINDOWS ONLY)

The Oki LPR Utility is for Oki printers which support TCP/IP. This utility allows for the printing of data to printers connected to a network via TCP/IP. The utility redirects printing data to the LPR port of the specified IP address.

SYSTEM REQUIREMENT

Windows XP/2000/Me/98/NT4.0/Windows Server 2003 with TCP/IP support and Oki printers that support TCP/IP.

The Oki LPR utility requires that the TCP/IP protocol is installed on your Windows operating system. To install the TCP/IP protocol, consult your Windows manual.

INSTALLING THE OKI LPR UTILITY

NOTE:

Windows XP/2000/NT 4.0 requires administrator privileges.

If you installed the printer driver using the "Install Driver" link on the product CD, Oki LPR may have already been installed. However, if you installed the driver using the "Add Printer wizard", carry out the following steps:

1. Insert the Software CD-ROM into the CD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **setup.exe** on the CD-ROM.
2. Select the appropriate setup language and click **I agree** to accept the terms of the Software Licence Agreement.
3. Select Software Utilities -> Install LPR utility.

4. In the "Choose Setup Language" dialog, select the appropriate language and click **OK**. The Oki LPR utility is displayed.
5. Click **Next**.
6. Click **Yes** to accept the Software Licence Agreement.
7. Verify "Destination" Folder and "Spool" Folder and click **Next**.
8. Select "Register in Startup" if you want automatic startup as Windows boots up. Select "Launch as minimized" if you want to startup in the Icon state. Click **Next**.
9. Verify the program folder name and click **Next**. The installation starts.
10. When the installation ends, the "Setup complete" screen is displayed. Check "Yes, I want to launch Oki LPR Utility now" and click **Finish**. Check "Yes, I want to view the ReadMe File". The Oki LPR utility starts.
11. You may be asked whether it is OK to change write permissions for the spool directory. Click **Yes** to allow the utility to be correctly installed.
12. Select Remote Print -> Add Printer.
13. Click **Discover...** to search for the IP address of a suitable printer on your network.
14. Click to highlight the printer you will use and click **OK**.
15. If your printer is not discovered, click **Cancel** and type the IP address directly at "IP Address:".
16. Click **OK**. A printer is added to the main window.

Refer to the On-line Help for information on how to use the utility.

UNINSTALLING THE OKI LPR UTILITY

1. To exit the Oki LPR Utility, select File -> Exit.
2. Select Start -> Programs -> Okidata -> Oki LPR Utility -> Uninstall Oki LPR Utility. You may find this under Start -> All Programs on Windows XP.
3. Click **Yes** when the "Confirm File Deletion" dialog is displayed. Deletion of the Oki LPR utility starts.
4. You may be asked whether you want to remove shared files. Click **Yes**.
5. When the deletion has finished, the "Uninstall Successfully Completed" screen is displayed. Click **OK**.

WINDOWS

OVERVIEW

This chapter provides guidelines on how to print over the network from various Microsoft Windows platforms. There are numerous ways of printing from Windows and the exact set-up will vary depending upon your environment. There are also numerous versions of Windows, which can be configured as either a client, server or both.

Although there are many variants of Windows, the principles of network printing remain the same. Microsoft provides On-line Help with all of their operating systems and this is a good reference point for the exact details of each configuration option within Windows.

The network printer supports TCP/IP protocols that can be used in conjunction with the Windows operating system.

INSTALLATION OF TCP/IP PROTOCOL

A number of printing options are available when using TCP/IP for Windows. The following table lists the options:

WINDOWS VERSION	METHOD
Windows 98/Me	Oki LPR Utility
Windows NT 4.0	Oki LPR Utility Microsoft LPR Utility
Windows 2000 or Windows XP	Oki LPR Utility Microsoft Standard TCP/IP Port 9100

The Oki LPR Utility is supplied on the CD-ROM with your printer. The other methods are built into Windows and displayed as options when using the Add Printer Wizard.

Although there are some differences in configuration options between the various Windows platforms, the procedure for printing using TCP/IP is the same.

1. Ensure that the TCP/IP protocol has been installed in Windows. This can be confirmed by checking the network settings from within the Control Panel. If TCP/IP has not been installed refer to the section below Installation of TCP/IP protocol.

2. If not already configured, a suitable IP address, Subnet Mask and Gateway address should be configured. If necessary, refer to Microsoft On-line Help.

CAUTION

The IP address entered must be unique and valid. Entering an incorrect IP address may cause severe network problems. You can check the address with the network administrator.

3. Restart the operating system.

CONFIGURING WINDOWS TO USE TCP/IP NETWORKING

WINDOWS 98/ME

1. Select Start -> Settings -> Control Panel.
2. In the Control Panel, double-click on the **Network** icon.
3. In the "Network" dialog box, click the Configuration Panel.
4. If "Client for Microsoft Networks" is not listed, click the **Add** button.
5. In the "Select Network Component Type" dialog box, select Protocol and click the **Add** button.
6. In the "Select Network Protocol" dialog box, select Microsoft from the list of manufacturers and select TCP/IP from the list of network protocols. Click **OK**.
7. Click **OK** in the "Network" dialog box. You may be prompted for the Windows installation CD-ROM.
8. Follow the remaining dialog box prompts.

WINDOWS NT 4.0

1. Select Start ->Settings -> Control Panel.
2. Double-click the **Network** icon.
3. In the "Network dialog box", click the "Protocols" tab.
4. If the TCP/IP Protocol is not listed, click the **Add** button.
5. In the "Select Network Protocol" dialog box, select "TCP/IP Protocol" and click **OK**.

6. The Windows NT installation CD-ROM may be required. Follow the remaining dialog box prompts.

WINDOWS 2000

1. Select Start -> Settings -> Network and Dial-up Connections.
2. Double-click the **Local Area Connection** icon. In the "Local Area Connection Status" dialog box, click the **Properties** button.
3. If the TCP/IP protocol is not listed, in the "Local Area Connection Properties" dialog box, click the **Install** button.
4. In the "Select Network Component Type" dialog box, select Protocol and click the **Add** button.
5. In the "Select Network Protocol" dialog box, select TCP/IP Protocol and click the **OK** button.
6. Click the **Close** button in the "Local Area Connection Properties" dialog box.
7. Click the **Close** button in the "Local Area Connection Status" dialog box.

WINDOWS XP

1. Select Start -> My Network Places -> View network connections.
2. Double-click the **Local Area Connection** icon and click **Properties** in the "Local Area Connection Status" dialog box.
3. If the Internet Protocol (TCP/IP) is not listed, click the **Install...** button.
4. In the "Select Network Component Type" dialog box, select Protocol then click the **Add...** button.
5. In the "Select Network Protocol" dialog box, select Internet Protocol (TCP/IP).
6. Click **OK**. The Windows XP installation CD-ROM may be required.
7. Follow the remaining dialog box prompts.

Once the protocol has been installed and configured in Windows, the next step is to configure the TCP/IP parameters in the network printer.

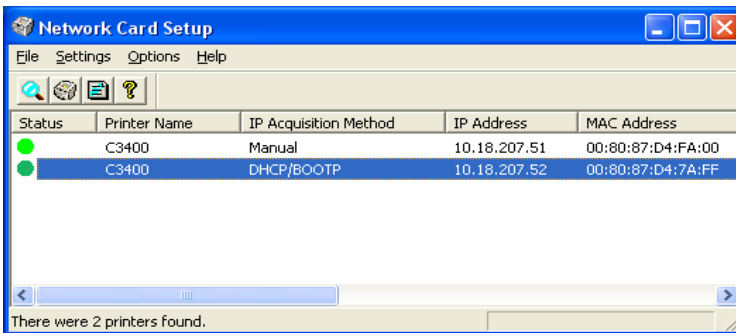
CONFIGURING THE NETWORK PRINTER IP ADDRESS

The Network Card Setup utility allows you to configure the network printer IP address and to view the Printer Web Page.

LAUNCHING THE NETWORK CARD SETUP UTILITY

The following steps describe how to launch and install the Network Card Setup utility:

1. Ensure that the printer is switched on and connected to the network.
2. Insert the Software CD-ROM into the CD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click `\setup.exe` (in the root directory) on the CD-ROM.
3. Select the appropriate language option and click **I Agree** to accept the terms of the Software Licence Agreement.
4. Select Software Utilities -> Install Network Card Setup. The Network Card Setup Installshield Wizard is displayed.
5. Click **Next**.
6. Select "I accept the terms of the licence agreement" and click **Next**.
7. On the "Select Launch Method" dialog, chose whether to "Launch it now without installing" or "Install now to use it". If you select "Install now to use it", click **Install** in the following dialog box.
8. The "Printer Discovery" message is displayed. When the printer is detected, the Network Card Setup utility launches, displaying the printer status and network information.



NOTE:

In the "Network Card Setup", the "IP Acquisition Method" may display as "Manual". This is because, when using the TCP/IP protocol in an environment without a DHCP server, you must assign the IP address manually. For instructions on how to do this, see "Manually configuring the IP address" on page 18.

Now that both Windows and the printer have been configured to use TCP/IP, the next step is to configure Windows to print to the network printer.

STARTING THE NETWORK CARD SETUP UTILITY

Once installed, you can launch the Network Card Setup utility by selecting Start -> Programs -> Okidata -> Network Card Setup.

MANUALLY CONFIGURING THE IP ADDRESS

If there is no DHCP protocol to automatically assign IP addresses to devices on your network, you might want to set the IP Address, Subnet Mask and Default Gateway Address for your printer manually.

1. In the "Network Card Setup" pane, click to select the printer.
2. Click the **Setting Printer** icon. The Setting Printer dialog appears.
3. Select "Manual". In the Details section, you can now edit the IP Address, Subnet Mask and Default Gateway Address.
4. Click **OK**. The "Admin Password Required" dialog appears.
5. Enter the password. The default password is the last 6 digits of the MAC Address (upper case).
6. Click **OK**. Allow a few seconds for the changes to save and the printer to automatically restart before the "Setup Completed" message box appears.

NOTE:

If your printer stops at any time, you can restart it by selecting Printer -> Restart Printer in the "Network Card Setup pane".

CHANGING THE ADMIN PASSWORD

To change the Admin Password for your printer:

1. Select Settings -> Change Password.
2. Enter the new password as requested.
3. Click **OK**. Allow a few seconds as the settings are saved and the printer automatically restarts.

ENABLE/DISABLE THE PRINTER WEB PAGE

To enable/disable access to the Printer Web Page from the Network Card Setup utility:

1. Select Settings -> Setting Printer.
2. Select the "Printer Web Page" tab and select "Printer Web Page - Disable" or "Printer Web Page - Disable".

3. Click **OK**. The "Admin Password Required" dialog box appears.
4. Enter the admin password as requested and click **OK**.
5. The "Setup Completed" message is displayed.

If you now try to view the Printer Web Page, an error message is displayed (containing instructions on how to enable the Printer Web Page again).

UPDATING ENVIRONMENT SETTINGS

To change how the Network Card Setup utility searches for printers. You can update the environment settings or the display options on the Network Card Setup utility:

1. Select Options -> Environment Settings.
2. You can apply the following changes:
 - Enter the IP Broadcast Setting and click **Add**.
 - Select or clear the "Search Local Subnets" check box.
 - Under the "Time Out" tab, modify the "Printer Discovery" and "Setting" intervals.
 - Under the "Display Item" tab, you can clear "Display Item Setting" check boxes to prevent them from appearing in the main "Network Card Setup" pane.
3. You can restore default settings by opening this dialog and clicking **Default**.

VIEWING THE PRINTER WEB PAGE

To view the printer web page, click on the "**View Web Page**" icon.

UNINSTALLING THE NETWORK CARD SETUP UTILITY

To uninstall the Network Card Setup utility:

1. Select Start -> Control Panel.
2. Select 'Oki Network Card Setup' and click **Remove**. This removes the Network Card Setup utility from your computer.
3. Restart your computer to ensure that the utility has been fully removed.

CONFIGURING WINDOWS TO PRINT TO THE NETWORK PRINTER

Once you have configured the Network Card Setup utility you must configure Windows to print to the network printer.

WINDOWS 98/ME

When printing using TCP/IP the Oki LPR utility use the following procedure:

1. When installing the driver, ensure it is installed as a local printer and not a network printer.
2. Ensure the appropriate printer driver has been installed in Windows.
3. Install the Oki LPR utility as described on [page 20](#) of this manual and add the printer installed earlier.

WINDOWS NT 4.0

NOTE:

NT 4.0 requires administrator privileges.

With Windows NT 4.0, you have two options for printing using TCP/IP. They are:

- > Oki LPR
- > Microsoft LPR

In order to use Microsoft LPR, it must first be installed into your operating system.

Oki LPR

To install this port, the following needs to be carried out.

1. Select Start -> Control Panel -> Add Printer -> My Computer.
2. Click **Next**.
3. Select Add Port.
4. Select LPR Port and click **OK**.
5. Under "Name or address of server providing lpd" type the host name or IP address of the host for the printer you are adding.
6. Under "Name of printer or print queue on that server" type the logical printer name '*lp*' and then click **OK**.
7. Follow the instructions on the screen to finish installing the LPR-compatible printer.

If the LPR port is not available, install the Microsoft TCP/IP Printing Service.
Insert the printer driver for Windows NT4.0.

1. Select Start -> Settings -> Control Panel.
2. Double-click the **Network** icon.
3. In the "Network" dialog box, click the "Services" tab.
4. If "Microsoft TCP/IP Printing" is not listed, click the **Add** button.
5. In the "Select Network Service" dialog box, select "Microsoft TCP/IP Printing" and click **OK**.
6. The Windows NT installation CD-ROM may be required. Follow the remaining dialog box prompts.

WINDOWS 2000

NOTE:

Windows 2000 requires administrator privileges.

With Windows 2000, there are four options for printing using TCP/IP.

- > OkiLPR
- > Standard TCP/IP Port using:
 - LPR
 - Port 9100

Oki LPR

To install the Oki LPR port, see "Oki LPR" on page 20.

Standard TCP/IP Port using LPR or Port 9100

NOTE:

In order to use Microsoft LPR, it must first be installed on your system.

To install this port, proceed as follows:

1. Select Start -> Settings -> Control Panel.
2. Open the "Printers" folder.
3. Double-click Add Printer and then select **Next**.
4. Select Local Printer, clear the "Automatically detect my printer" check box. Click **Next**.
5. Select "Create a new port" and, under "Type of Port:", select "Standard TCP/IP Port".

6. Click **Next**.
7. The "Add Standard TCP/IP Printer Port Wizard" is displayed. Click **Next**.
8. Click **Next**.
9. Under "Name or address of server providing LPD", enter the host name or IP address of your printer, for example, '192.168.1.31'. If the above IP address is entered, the Port Name will default to IP_192.168.1.31.
10. Click **Next**. A message is displayed indicating that additional port information will be required.
11. Under "Device Type", select Custom and click **Settings**.
12. Depending on whether you are installing the Windows Standard TCP/IP Port using LPR or Port 9100, enter the following details:
LPR
 - > Ensure "Protocol" is set to LPR.
 - > Under "Name of printer or print queue on that server" type 'lp'.**Port 9100:**
 - > Ensure "Protocol" is set to Raw.
 - > Ensure that the "Port Number" is 9100 and that "SNMP Status Enabled" is not selected.
13. Click **OK**.
14. Click **Finish** and follow the instructions on the screen to finish installing the printer.

WINDOWS XP

NOTE:

Windows XP requires administrator privileges.

With Windows XP, there are four options for printing using TCP/IP:

- > Oki LPR
- > Standard TCP/IP Port using:
 - LPR
 - Port 9100

Oki LPR

To install the Oki LPR port, see "Oki LPR" on page 20.

Standard TCP/IP Port using LPR or Port 9100

To install this port, proceed as follows:

1. Select Start -> Control Panel -> Printers and Faxes - Add a Printer.
2. Click **Next**.
3. Select "Local printer attached to this computer" and ensure that the "Automatically detect and install my Plug and Play printer" check box is not selected. Click **Next**.
4. Select "Create a New Port" and change "Type of Port:" to "Standard TCP/IP Port".
5. Click **Next**. The "Add Standard TCP/IP Printer Port Wizard" is displayed.
6. Click **Next** and enter the host name or IP address for the printer, for example, '192.168.1.31'. If the above IP address is entered, the Port Name will default to IP_192.168.1.31.
7. Click **Next**. "Additional Port Information Required" is displayed.
8. Under "Device Type", select Custom and click **Settings**.
9. Depending on whether you are installing the Windows Standard TCP/IP Port using LPR or Port 9100, enter the following details:

LPR

- > Set "Protocol" to LPR.
- > Under "LPR Settings", enter Queue Name: 'lp' and ensure that "SNMP Status Enabled" is not selected.

Port 9100

- > Set "Protocol" to Raw.
- > Ensure that the "Port Number" is 9100 and that "SNMP Status Enabled" is not selected.

- 10.** Click **OK**.
- 11.** Click **Next**.
- 12.** Click **Finish** and follow the instructions on the screen to finish installing the printer.

MACINTOSH

OVERVIEW

This guide is for administrators and it should be used in conjunction with the relevant Macintosh manual. Ensure that the latest Macintosh service packs are installed.

SUPPORTED VERSIONS

Macintosh operating systems OS 9 to OS X 10.4.6 are supported.

PRINTING THE CONFIGURATION PAGE

The printer's configuration page reports information that is required for Macintosh configuration. To print a configuration page, while the printer is switched on, press the **TEST** button on the Network Interface panel at the rear of the printer for three seconds and then release.

The first six characters of the Ethernet address are the same for all OkiLAN type network cards. The last six characters of the Ethernet address are unique to each card.

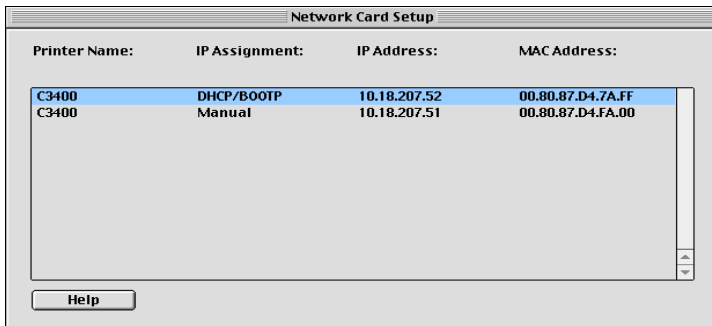
NETWORK CARD SETUP UTILITY FOR MAC OS 9

You can use the Oki Network Card Setup Utility (Macintosh) to assign an IP address and configure the network interface card. For more background information on the Network Card Setup Utility, refer to the "Network Card Setup utility" on page 9 and, on installation, the Network Card Setup utility On-line Help.

LAUNCHING THE NETWORK CARD SETUP UTILITY

Complete the following steps to launch the Network Card Setup utility on Mac OS 9:

1. Ensure that the printer is switched on and connected your computer and to the network.
2. Insert the Software CD-ROM into the CD-ROM drive and double-click on the CD icon on your desk-top.
3. Double-click Utilities -> Network Card Setup -> English -> Mac OS 9.
4. Double-click on the **Network Card Setup** icon. The "Discovering printers..." message appears. Once the printer is detected, the "Network Card Setup" pane launches, displaying the printer name and network information.



5. For more information about the Network Card Setup, follow the instructions outlined below or click the **Help** button in the "Network Card Setup" pane.

SETTING THE PRINTER DISCOVERY SETTINGS

To set the printer discovery search scope:

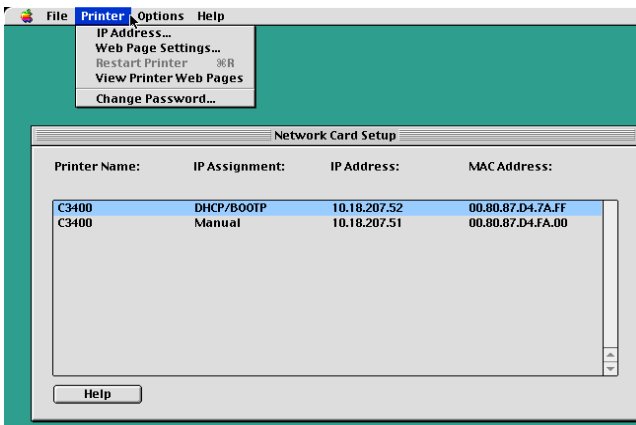
1. In the "Network Card Setup" pane, click to select the printer.
2. From the main menu, click Options -> Preferences.

3. Under "Printer Discovery Settings" enter the "IP Broadcast Settings" and click **Add**.
4. Ensure that "Search local subnets" is selected.
5. You can modify the "Timeout Settings" for the search scope. If you want to restore the original settings at any time, click the **Defaults** button.
6. Click **Save**.
7. To begin searching for printers, click File -> Discover Printers.

CHANGING THE PASSWORD

Complete the following steps to change the password for updating printer settings:

1. In the "Network Card Setup" pane, click to select the printer.
2. From the main menu, select Printer -> Change password. The "Change Password" dialog is displayed.



3. Enter the new password as requested and click **Save**. The new password is saved and the printer automatically restarts.

NOTE:

If your printer stops at any time, you can restart it by selecting Printer -> Restart Printer in the "Network Card Setup pane".

ENABLE/DISABLE THE PRINTER WEB PAGE

To enable/disable access to the Printer Web Page:

1. In the "Network Card Setup" pane, click to select the printer.

2. From the main menu, select Printer -> Web Page Settings.
3. Select Enable or Disable and click **Save**.
4. Enter your password and click **OK**. The "Settings updated successfully" message is displayed.
5. Click **OK**. The printer automatically restarts.

If you now try to view the Printer Web Page, an error message is displayed. If the Printer Web Page is disabled, this error message gives you the option to enable it.

QUITTING THE NETWORK CARD SETUP UTILITY

In the main menu, select File -> Quit.

NETWORK CARD SETUP UTILITY FOR MAC OS X

The built in Network Interface Card is also supported in the Macintosh OS X environment.

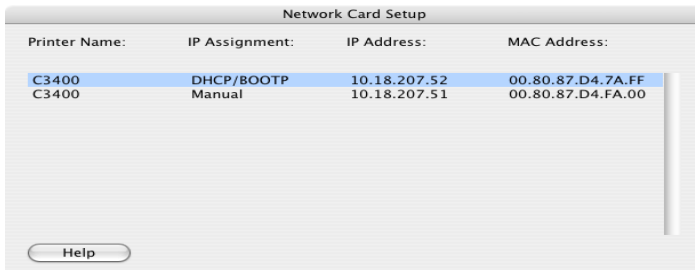
Run the installer on the driver CD to install the printer driver.

You can use the Oki Network Card Setup Utility (Macintosh) to assign an IP address and configure the network interface card. For more background information on the Network Card Setup Utility, refer to the "Network Card Setup utility" on page 9 and, on installation, the Network Card Setup utility On-line Help.

LAUNCHING THE NETWORK CARD SETUP UTILITY

Complete the following steps to launch the Network Card Setup utility on Mac OS X:

1. Ensure that the printer is switched on and connected your computer and to the network.
2. Insert the Software CD-ROM into the CD-ROM drive and click on the CD icon on your desk-top.
3. Double-click on Utilities -> Network Card Setup -> English -> Mac OS X.
4. Double-click on the Network Card Setup icon. The "Discovering printers..." message appears. Once the printer is detected, the "Network Card Setup" pane launches, displaying the printer name and network information.



5. For more information about the Network Card Setup, follow the instructions outlined below or click the **Help** button in the "Network Card Setup" pane.

SETTING THE PRINTER DISCOVERY SETTINGS

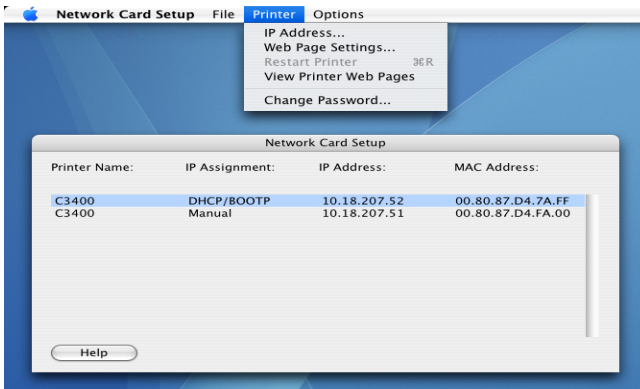
To set the printer discovery search scope:

1. In the "Network Card Setup" pane, click to select the printer.
2. From the main menu, click Options -> Preferences.
3. Under "Printer Discovery Settings" enter the "IP Broadcast Settings" and click **Add**.
4. Ensure that "Search local subnets" is selected.
5. You can modify the "Timeout Settings" for the search scope. If you want to restore the original settings at any time, click the **Defaults** button.
6. Click **Save**.
7. To begin searching for printers, click File -> Discover Printers.

CHANGING THE PASSWORD

Complete the following steps to change the password for updating printer settings:

1. In the "Network Card Setup" pane, click to select the printer.
2. From the main menu, select Printer -> Change password. The "Change Password" dialog is displayed.



3. Enter the new password as requested and click **Save**. The new password is saved and the printer automatically restarts.

NOTE:

If your printer stops at any time, you can restart it by selecting Printer -> Restart Printer in the "Network Card Setup pane".

ENABLE/DISABLE THE PRINTER WEB PAGE

To enable/disable access to the Printer Web Page:

- 1.** In the "Network Card Setup" pane, click to select the printer.
- 2.** From the main menu, select Printer -> Web Page Settings.
- 3.** Select Enable or Disable and click **Save**.
- 4.** Enter your password and click **OK**. The "Settings updated successfully" message is displayed.
- 5.** Click **OK**. The printer automatically restarts.

If you now try to view the Printer Web Page, an error message is displayed. If the Printer Web Page is disabled, this error message gives you the option to enable it.

QUITTING THE NETWORK CARD SETUP UTILITY

In the main menu, select File -> Quit.

CONFIGURING THE NETWORK INTERFACE CARD

You can configure the Network Interface Card, view your printer status and adjust printer settings through the Printer Web Page. To access the web page, ensure that your printer is connected to the network and type the printer IP address into a web browser.

Alternatively, you can access the Printer Web Page through the Network Card Setup utility as follows (Mac OS 9 and Mac OS X):

1. In the "Network Card Setup" pane, click to select the printer.
2. From the main menu, select Printer -> View Printer Web Page. The Printer Web Page opens up in your default web browser.
3. On the Printer Web Page, click on **Administrator Login**.
4. Enter your username ('root') and password (last six digits of the Mac address, upper case).
5. You can either enter the user details, click **OK** and select "Do not show this page again" or click **Skip**.
6. Browse through the menu on the left. To configure the Network Interface Card settings through the web browser, see "Using a web browser" on page 9.

TROUBLESHOOTING

The network addresses used in this manual are examples only. Network addresses used in your installation must be generated from your own network.

SELF-DIAGNOSTIC TEST

PRINTER DOES NOT PRINT

- > Check that your printer is switched on.
- > Check the printer status.
- > Ensure that the printer is connected to your computer.

NG IS PRINTED IN THE SELF-DIAGNOSTIC TEST

If NG is printed in the self-diagnostic test or a Flash ROM Check Registers NG:

1. Turn the printer off for 15 seconds and then on again.
2. Press the reset button, located close to the Network Interface Panel at the back of your printer, to re-initialize it.

TCP/IP

COMPUTER CANNOT FIND THE NETWORK INTERFACE CARD

Carry out the following procedures to verify the printer settings:

- > Turn the printer off for 15 seconds and then on again.
- > Confirm the network interface is enabled on the printer.
- > Check there is a response to the PING command.
- > Ensure that the network cable is correctly connected and that the green LED close to the printer's network interface is lit. If not, change the cable and try again.
- > Run the "Self-diagnostic test" on page 7.
- > Check the IP Address, Subnet Mask and Gateway are correct.
- > Ensure that the TCP/IP protocol is set to Enable.
- > Reset the network interface card to factory default settings.
- > If DHCP, BOOTP and RARP are not used, ensure they have been set to Disable.

CANNOT PRINT WITH LPR

Carry out the following procedures to verify the printer settings:

- > Turn the printer off for 15 seconds and then on again.
- > Check there is a response to the *ping* command.
- > Check the network cable is correctly connected.
- > Change the cable and try again.
- > Check the host name and IP address are configured in the workstation.
- > Check the printer port name is configured in the workstation. There are three port names: "*lp*", "*euc*" and "*sjs*". Use "*lp*" by default as "*euc*" and "*sjs*" are specific to PostScript printers.

WEB BROWSER

To prevent your web browser caching the printer web pages, carry out the following steps as appropriate for your web browser.

MICROSOFT INTERNET EXPLORER

1. Select Tools -> Internet Options.
2. Select the General tab and, in "Temporary Internet files", click **Settings**.
3. Under "Check for newer versions of stored pages", select "Every visit to the page".

NETSCAPE NAVIGATOR

1. Select Edit -> Settings.
2. Under "Details", click **Cache**.
3. Under "Document in cache is compared to document on network", select "Once per session".
4. If you change the window size of the browser immediately after changing the configuration, "Security information" may be displayed. In the dialog box, clear the "Display this message next time" check box.
5. Click **Submit**.

INDEX

Numerics

100BASE-TX 6

10BASE-T 6

E

Ethernet 6

I

IP Address 17

 configuring 17

 manual configuration 18

 Network Card Setup Utility 17

N

Network Card Setup 9

 Mac OS 9 26

 Mac OS X 29

 Windows 17

Network interface 6

 card (NIC) 8

 Panel 6

Network Interface Card 8

Network Interface Card (NIC) 8

 configuring for Mac 32

 configuring, Windows 17

NIC. See Network Interface Card (NIC)

P

password 7

S

Self-diagnostic test 7

SNMP 8

T

TCP/IP 15

 configuring 15

 Microsoft LPR 14

 Microsoft Standard 14

 Oki LPR 14

 Port 9100 14

 Windows 2000 16

 Windows NT 4.0 15

 Windows XP 16

TCPIP

 installing 14

Troubleshooting 33

 cache 34

 LPR 34

 self-diagnostic test 33

 TCP/IP 33

W

web browser 9