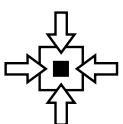




Network Guide



CONNECTIVITY



INFORMATION

PREFACE

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:
<http://www.okiprintingsolutions.com>

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NOTES, CAUTIONS AND WARNINGS

NOTE
A note provides additional information to supplement the main text.

CAUTION!

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

WARNING!

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

NETWORK CONFIGURATION

INTRODUCTION

Your machine incorporates a fast 100BASE-TX/10BASE-T network interface. This guide explains the functionality of the built in network interface. Access for interconnection and producing self-diagnostic test and configuration printouts is provided via an interface panel located at the rear of the machine.

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.

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

NOTE

Not all utilities, features or protocols are supported by every operating system. Please check with your User's Guide and support website for latest information.

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, DNS.
Functions	Self-diagnostic test printing Monitoring and configuration by Web browser

SELF-DIAGNOSTIC TEST

With the machine power switched on, press the TEST button located on the network interface panel (at the rear of the machine) 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 00:80:87:3B:3D:3C

The Ethernet address is therefore 00:80:87:3B:3D:3C

CONFIGURATION UTILITIES

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

UTILITY	FEATURES	SYSTEM REQUIREMENTS
Quick Setup	Configure the NIC by launching or installing the Quick Setup utility. This utility allows you to: Enable/disable the Printer settings Web Page. Set IP address, Subnet Mask and Gateway for TCP/IP manually or by using DHCP.	Windows: Windows 2000 Server/Professional Windows XP Home/Professional Windows XP Professional x64 Edition Windows Server 2003 Windows Server 2003 x64 Edition Windows Server 2008 Windows Server 2008 x64 Edition Windows Vista 32-bit Windows Vista 64-bit Windows 7 Windows 7 x64 Edition Windows Server 2008 R2
AdminManager	Configure the NIC in detail	Mac: Mac OS X 10.3.0 or greater You need to install Rosetta if using MAC OS X 10.6
Web Browser	Configure the NIC and printer by using a Web browser such as Microsoft Internet Explorer or Mozilla Firefox.	Microsoft Internet Explorer or similar.
Telnet	Configure the NIC using Telnet	Third-party vendor developed TELNET package. A TELNET Application is standard in Windows/UNIX and Linux
SNMP	The machine and network card can be controlled using third-party vendor developed SNMP application.	Third-party vendor developed SNMP application.

USING QUICK SETUP

Quick Setup utility allows you to configure the network interface easily and simply without installing any software packages.

You can configure the following:

- > Enable/disable TCP/IP, NetWare, EtherTalk, NetBEUI protocols.
- > Set IP address, Subnet Mask and Gateway for TCP/IP manually or by using DHCP.
- > Set NetWare mode and create Queue/Print Server/Printer objects.
- > Zone name and Port name for EtherTalk.

Configuration requires a PC with a supported Windows operating system. Refer to the table above for system requirements.

This utility can only be used on a PC that can be connected to the network with TCP/IP or IPX/SPX.

This utility must be used on a PC that is located on the same segment as the printer.

1. Insert the DVD-ROM into the DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **\setup.exe** (in the root directory) on the DVD-ROM.

2. Select the appropriate Language and click Next.
3. Select your printer model.
4. If you agree to the Software License Agreement, click Next.
5. Under Software Utilities, navigate to and select Install Network Card Setup and follow on-screen instructions.
6. Select your language.
7. Select **Oki Device Quick Setup** and follow the on-screen instructions.
8. Verify that the settings are correct, then click **Execute**.

The new settings are transmitted to the network card but it still operates with pre-transmission settings.

9. Click **Finish** to validate the new settings.
10. Switch the printer off for 15 seconds and on again.

USING ADMINMANAGER

NOTE

Not all utilities, features or protocols are supported by every operating system. Please check with your User's Guide and support website for latest information.

AdminManager is a powerful Microsoft Windows-based utility to configure all network interface functions easily and intuitively via a graphical user interface.

Configuration requires a PC with a supported Windows operating system running TCP/IP or IPX/SPX (NetWare).

This utility can only be used on a PC that can be connected to the network with TCP/IP or IPX/SPX and must be used on a PC that is located on the same segment as the printer.

INSTALLATION

1. Insert the DVD-ROM into the DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **\setup.exe** (in the root directory) on the DVD-ROM.
2. Select the appropriate Language and click **Next**.
3. Select your printer model.
4. If you agree to the Software License Agreement, click **Next**.
5. Under Software Utilities, navigate to and select **Install Network Card Setup** and follow on-screen instructions.
6. Select your language.
7. Select **Oki Device Standard Setup**.
8. If you want to install AdminManager on to your local drive, select **Install and Execute**. Otherwise, select **Execute from CD-ROM/DVD-ROM**. Follow the on-screen instructions.
9. To run AdminManager, check **Yes** for **Do you wish to execute AdminManager?** and click **Finish**. Otherwise check **No** and click **Finish**.

INTERFACE

Select **Start > Programs > Oki Setup Utility > Admin Manager**.

Printer Name	Model Name	Ethernet Address	IP Address
C8800	OkiLAN 8450e	00:80:87:CB:0E:AB	10.18.207.84
C9650	OkiLAN 8450g	00:80:87:02:D9:96	10.18.207.85
B4350	OkiLAN 8100e	00:80:87:14:79:9D	10.18.207.36
C610	OkiLAN 8450e	00:80:87:42:1B:95	10.18.207.91
ES3032	OkiLAN 8450e	00:80:87:6B:2A:EA	10.18.207.204
C9650	OkiLAN 8450g	00:80:87:6B:4E:9A	10.18.207.202
C5950	OkiLAN 8450e	00:80:87:EB:CC:4B	10.18.207.46
MB480	OkiLAN 8500e	00:80:87:3B:3D:DC	10.18.207.103
C5650	OkiLAN 8450e	00:80:87:3B:24:A7	10.18.207.109

9 Oki Devices are found in the network. E/A [00:80:87:3B:3D:DC] IP [10.18.207.103]

MENU	ITEM	FUNCTION
File	Search	Search printers in your network and list all printers.
	Exit	Exit the AdminManager Utility.
Status	System Status	Displays current NIC configuration. Configuration data can be saved as log file. <div data-bbox="997 967 1252 1406" data-label="Image"> <pre> 16:08:03 OkiLAN 8500e CU Firmware Version : 01.18 PU Firmware Version : 00.06.16 Network Firmware Version : 01.02 Web Remote Version : 01.02 TCP/IP Status IP Version : IPv4 IP Address : 10.18.207.103(AUTO) Subnet Mask : 255.255.255.0 Gateway Address : 10.18.207.1 DHCP/BOOTP : 10.18.207.11 DNS Server(Pri) : 10.18.207.11 DNS Server(Sec) : 0.0.0.0 Dynamic DNS : Disable Host Name : MB480-3B3DCC Domain Name : eval.net DDNS Registration Status : WINS Server(Pri) : 0.0.0.0 WINS Server(Sec) : 0.0.0.0 Scope ID : WINS Registration Status: The WINS server is not found. Number of subscriber : 0 EtherTalk Status Printer Name : MB480 Type Name : LaserPrinter Zone Name : Address : 65203 Node : 216 NBT/NetBIOS Status Short Device Name : MB480-3B3DCC Workgroup Name : PrintServer Comment : EthernetBoard OkiLAN 8500e Master Browser : MB480-3B3DCC (NBT) 16:08:03 pm1 Toner Not Installed Warning for Black OkiLAN 8500e [EA:00:80:87:3B:3D:DC] </pre> </div>
	List of Configuration Items	Displays current NIC configuration. Configuration data can be saved as log file. <div data-bbox="1034 1505 1268 1758" data-label="Image"> <pre> Admin Password ***** [TCP/IP] Use TCP/IP Protocol : ENABLE Use DHCP/BOOTP : ENABLE Use IPv6 : IPv4 IP Address : 10.18.207.103 Subnet Mask : 255.255.255.0 Default Gateway : 10.18.207.1 +DNS Server Setup Primary Server : 10.18.207.11 Secondary Server : 0.0.0.0 Use DDNS : DISABLE Domain name : eval.net +WINS Server Setup Primary Server : 0.0.0.0 Secondary Server : 0.0.0.0 Scope ID : 4848k Password Cables </pre> </div>

MENU	ITEM	FUNCTION
Setup	Oki Device Setup	Configure the network interface (NIC).
	Setup by HTTP	Launch the default browser in your environment to access the selected printer's web page. See "Using a web browser" on page 27.
	Setup by TELNET	Launch TELNET application in your environment to access the selected printer's TELNET port. See "Using TELNET" on page 29.
	Create NetWare Queue	Create a NetWare queue. <i>Note: Only visible when using Netware.</i>
	Delete NetWare Object	Delete NetWare object. <i>Note: Only visible when using Netware.</i>
	Reset	Reset the selected network interface card.
	Test Print	Print self-diagnostic test pages.
	IP Address Setup	Set static IP address of network interface card manually.
Option	Use TCP/IP Protocol	Enable TCP/IP protocol.
	Use IPX/SPX Protocol	Enable IPX/SPX protocol.
	Environment Setup	Set the Environment settings.
Help	About	Displays version of AdminManager

OKI DEVICE SETUP

NOTE

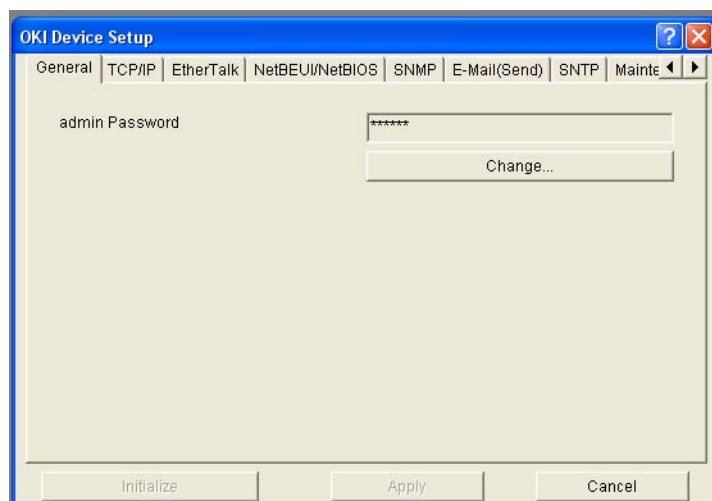
Not all utilities, features or protocols are supported by every product. Please check with your User's Guide and support website for latest information.

Device Setup allows you to configure the network interface. Type the root password (default value is the last 6 characters of the MAC address) to configure. Remember that the root password is case sensitive. If the MAC address contains any alpha characters, type them as upper case. Device Setup contains details for the following selectable tabs:

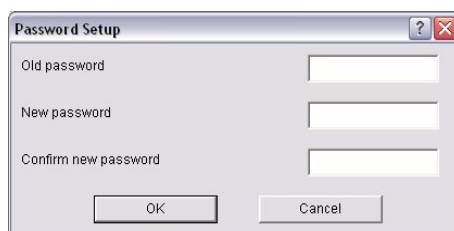
- | | |
|-------------------|---------------|
| > General | > SNTP |
| > TCP/IP | > Maintenance |
| > Ethernalk | > SSL/TLS |
| > NetBEUI/NetBIOS | > IEEE 802.1x |
| > SNMP | > LDAP |
| > E-Mail(Send) | > Kerberos |

The following section explains each tab's functionality. Depending on your printer, some items in the following explanation may not be displayed.

General Tab

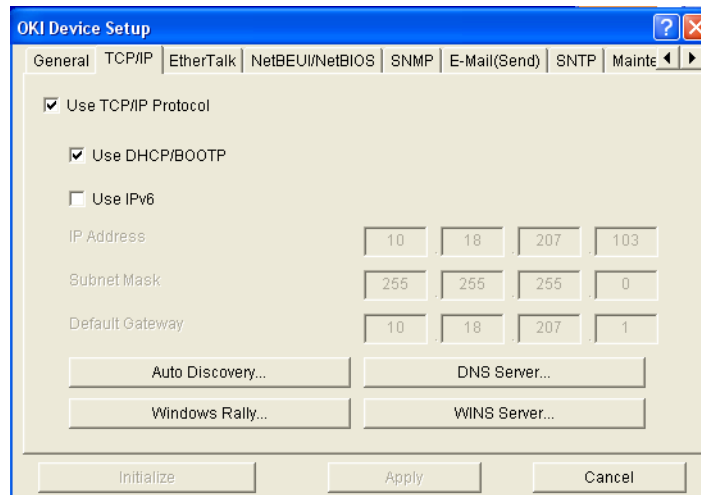


This allows you to set or change the root password used for Admin Manager, TELNET and FTP.



ITEM	EXPLANATION
Change root password	You can set/change the root password for AdminManager, TELNET and FTP.

TCP/IP Tab

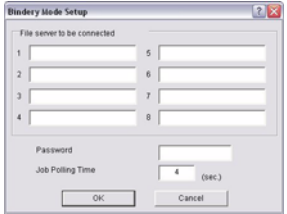
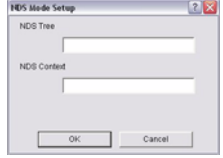
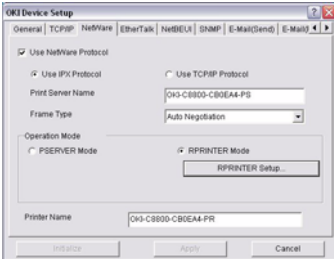
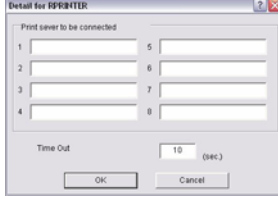


This allows you to configure TCP/IP related items.

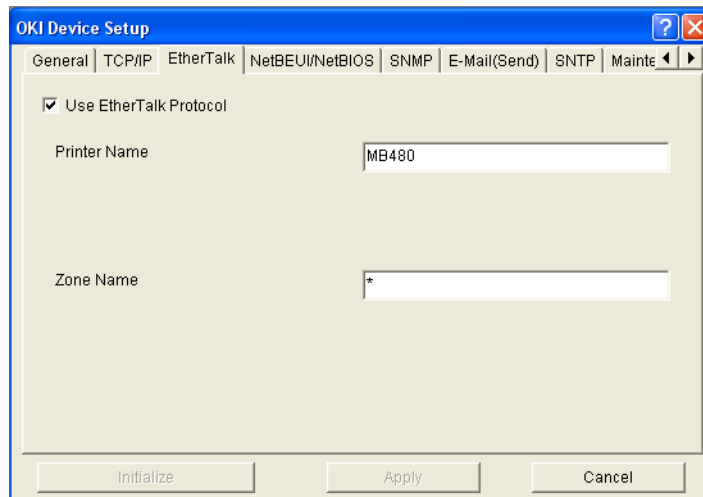
ITEM	EXPLANATION	
Use TCP/IP Protocol	Use DHCP/BOOTP	Check this item if IP address, subnet mask, default gateway and IP addresses for DNS primary server and secondary servers are retrieved from the DHCP or BOOTP server. Otherwise, uncheck.
	Use IPv6	Enables IPv6.
	IP Address	Set the IP address of the selected network interface card.
	Subnet Mask	Set the subnet mask of the selected network interface card.
	Default Gateway	Set the default gateway of the selected network interface card.
	Auto Discovery	Configure items related to Network PnP Use to select Network PnP and Bonjour, and to set device name.
DNS Server...	Set IP addresses for DNS primary and secondary servers.	
Windows Rally...	Use WSD Print Use LLTD	Check to enable/disable WSD Print. Check to enable/disable LLTD for network map function on windows Vista or later.
WINS Server	Set IP addresses for WINS primary and secondary servers and to enter scope ID.	

NetWare Tab

This is where you can configure NetWare related items.

ITEM	EXPLANATION	
Use NetWare Protocol	Set NetWare protocol as enabled/disabled.	
Use IPX Protocol / Use TCP/IP Protocol	Set protocol to use.	
Print Server Name	Set Print Server name.	
Frame Type	Set primary NetWare frame type.	
Operation Mode	Set NetWare mode.	
Check box beside Bindery Setup	Check if you want to use the Bindery mode and Bindery Setup button becomes available. If it is unchecked, the button is greyed out.	
Bindery Setup	Configure items related to Bindery mode. In this dialogue box, the following items can be configured: 	
	Password.	Set password for Print Server.
	Job Polling Time.	Set print job polling interval in seconds.
NDS Setup	Set NDS tree and context where Print Server was created. 	
RPRINTER Setup	Available if you select RPRINTER mode in Operation Mode. 	
	By selecting the RPRINTER button, this is displayed: Here you can specify print servers to which the printer can be connected. 	
	Time Out	Set duration from the last data's arrival to freeing of the port in seconds.
Printer Name	Set the NetWare printer object name.	

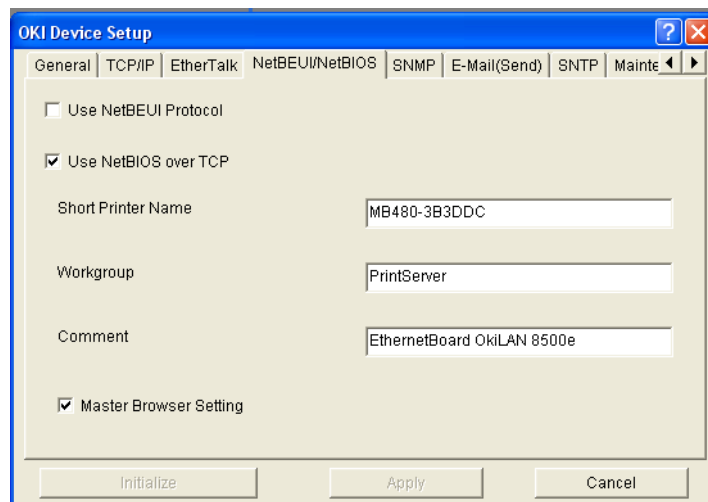
EtherTalk Tab



This allows you to configure EtherTalk related items.

ITEM	EXPLANATION
Use EtherTalk Protocol	Set EtherTalk protocol to enabled/disabled.
Printer Name	Set EtherTalk Printer object name.
Zone Name	Set the zone name to which the printer belongs.

NetBEUI/NetBIOS Tab

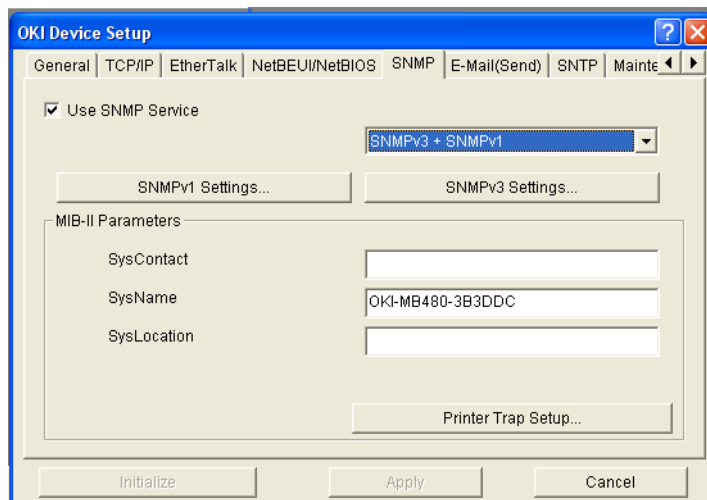


This allows you to configure NetBEUI/NetBIOS related items.


ITEM	EXPLANATION
Use NetBEUI Protocol	Set NetBEUI protocol to enabled/disabled.
Use NetBIOS over TCP	Set NetBIOS over TCP to enabled/disabled.
Short Printer Name	Set a name for the printer.
Workgroup	Set a work group name to which the printer belongs.
Comment	Set the comments for the printer (optional).
Master Browser Setting	Check to enable the Master Browser settings.

SNMP Tab

This allows you to configure SNMP related items.



ITEM	EXPLANATION	
Use SNMP Service	ENABLE or DISABLE the SNMP protocol.	
SNMPv3 + SNMPv1	Select from the drop-down box which (or both) of these to use.	
SNMPv1 Settings	SNMP Read & Write Community.	Enables these passwords to be changed.
SNMPv3 Settings	Enables Authorisation and Privacy (Encryption) setup to be done.	
SysContact	Set SysContact (printer manager) name.	
SysName	Set SysName (printer model name).	
SysLocation	Set SysLocation (the location where the printer is installed).	

ITEM	EXPLANATION	
Printer Trap Setup...	<p>By selecting the button, the following dialogue box is displayed:</p> <p>In the dialogue box, the following items can be configured:</p> 	
	Printer Trap Community Name	This community name is assigned to outgoing printer status traps such as off-line, paper out, etc.
	TCP#1–5	Set the IP addresses to which a Trap packet will be sent. You can set up to five IP addresses, with the following details: Printer Reboot Receive Illegal Online Offline Paper Out Paper Jam Cover Open Printer Error (any error)
	IPX	Set node address and network address to which a Trap packet will be sent. By selecting the button, the following dialogue box is displayed: In the dialogue box, the following items can be configured: Printer Reboot Receive Illegal Offline Online Paper Out Paper Jam Cover Open Printer Error (any error)

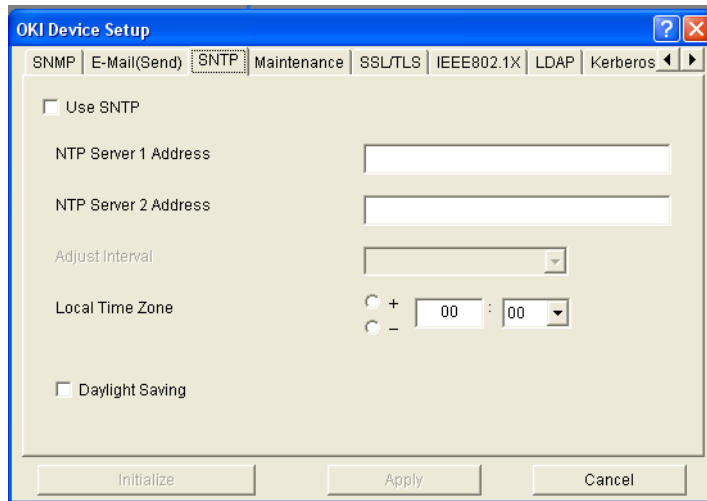
E-Mail (Send) Tab

This allows you to configure SMTP related items.

ITEM	EXPLANATION	
Use SMTP Transmit	Check to enable SMTP	
SMTP Server Name	Enter name of the SMTP server	
Printer E-Mail Address	Enter the printers e-mail address	
Destination Address 1 - 5	Set the following parameters:	
	Destination Address	Set E-Mail address to which email should be sent.
	Notify Mode	Select PERIOD or EVENT
When PERIOD is selected:		
Check time	Used to set the interval at which the selected events are checked. An e-mail will be sent at the specified interval for each event selected.	
Period mode	Set ENABLE/DISABLE for the events listed.	
When EVENT is selected:		
	Event Mode	Select: ENABLE (ON), DISABLE (OFF) or IMMEDIATE (NOWAIT) for the listed events. If ENABLE (ON) is selected, the check interval is settable in hours and intervals of 15 mins.
Attach Info...	Select whichever information is to be included in the e-mail.	
Comment...	Set up to four lines of text to be included with the e-mail as comments.	

ITEM	EXPLANATION	
Authentication...	Used to set the following security information:	
	SMTP Encryption Algorithm	Select required option from the drop-down menu. Select from: None, SMTPS, STARTTLS
	SMTP Authentication Method	Select required option from the drop-down menu. Select from: None, SMTP, POP
	User ID	Set the User ID for Authentication
	User Password	Set the User Password for Authentication.
Others...	Set the following:	
	SMTP Port Number	Set the SMTP port number (default is 25)
	Reply to address	Set the E-mail address used for the Reply to field in the mail header.

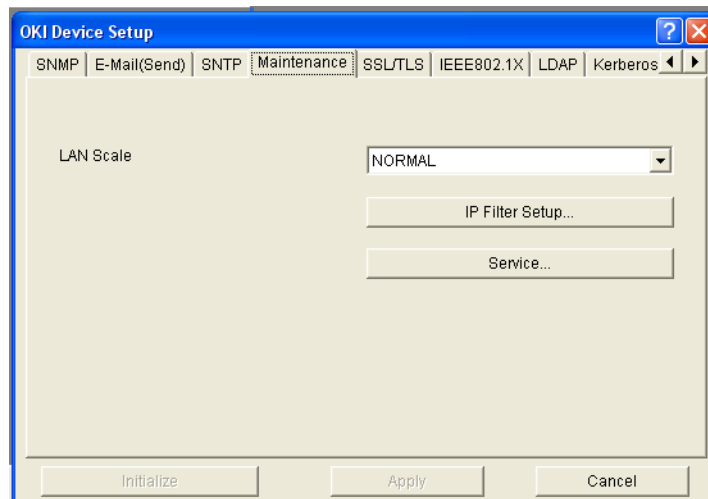
SNTP Tab



In this Tab, you can configure SNTP related items.

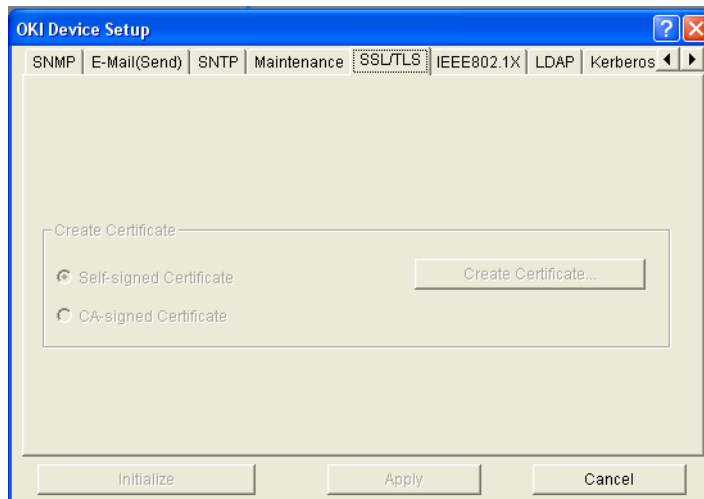
ITEM	COMMENTS
Use SNTP	Enable/disable SNTP (Simple Network Time Protocol).
NTP Server 1 Address	Set the IP address or host name for NTP Server 1.
NTP Server 2 Address	Set the IP address or host name for NTP Server 2.
Adjust Interval	Set the interval for sending time update requests to the server. Select 1 hour (the default), 12 hours or 24 hours.
Local Time Zone	Set the local time zone from -12:00 to +13:00. Minute interval is selectable from 00 (the default), 15, 30 or 45.
Daylight Saving	When this is selected, one hour is added to the local time.

Maintenance Tab



ITEM	COMMENTS	
LAN Scale	Select NORMAL (the default) or SMALL. Note: For small scale networks (with no routing), choose the SMALL setting. For more complex networks choose NORMAL .	
IP Filter Setup...	The following items can be configured:	
	Use IP Filter	Enable/disable IP Filtering. Default is disabled.
	Admin IP Address	Enter the printer's IP Address.
	IP Address Range	Set up to 10 IP Filter address ranges: IP Filter Range 1 through IIP Filter Range 10.
	Printing	Enable/disable printing of the specified IP address range. Default is disabled.
	Configuration	Enable/disable changing IP address ranges. Default is disabled.
Service...	The following features can be selected by clicking their check box. Use TCP/IP Protocol Use NetBEUI Protocol Use NetBIOS over TCP Use EtherTalk Protocol Use FTP Service Use Telnet Service Use Web Service Use IPP Service Use SNMP Service Use SMTP Transmit Use SNTIP Use encrypted communication for configuration data	

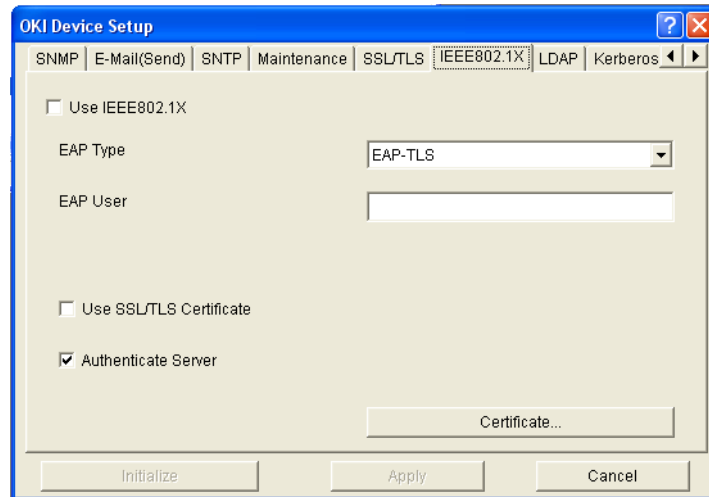
SSL/TLS Tab



ITEM	COMMENTS																		
Self-signed Certificate	For IPP encryption within an organisation's internal network (intranet).																		
Create Certificate...	When Self-signed Certificate is selected, the following items are configured:																		
	<table border="1"> <tr> <td>Common Name</td> <td>The printer's IP Address appears here.</td> </tr> <tr> <td>Organisation</td> <td>Enter the name of your organization.</td> </tr> <tr> <td>Organisation Unit</td> <td>Optional. Allows you to enter a subdivision or department name.</td> </tr> <tr> <td>Locality</td> <td>Enter the name of the city where the organization is located.</td> </tr> <tr> <td>State/Province</td> <td>Enter the state or province where the organisation is located.</td> </tr> <tr> <td>Country/Region</td> <td>Enter the country or region where the organisation is located.</td> </tr> <tr> <td>Key Exchange Method</td> <td>Select RSA (the default) or Diffie-Hellman(DSS).</td> </tr> <tr> <td>Key size</td> <td>Select 512, 1024 (the default), or 2048 bits.</td> </tr> <tr> <td>Term of Validity</td> <td>Enter a starting and ending date (month/date/year) for which the certificate is valid.</td> </tr> </table>	Common Name	The printer's IP Address appears here.	Organisation	Enter the name of your organization.	Organisation Unit	Optional. Allows you to enter a subdivision or department name.	Locality	Enter the name of the city where the organization is located.	State/Province	Enter the state or province where the organisation is located.	Country/Region	Enter the country or region where the organisation is located.	Key Exchange Method	Select RSA (the default) or Diffie-Hellman(DSS).	Key size	Select 512, 1024 (the default), or 2048 bits.	Term of Validity	Enter a starting and ending date (month/date/year) for which the certificate is valid.
Common Name	The printer's IP Address appears here.																		
Organisation	Enter the name of your organization.																		
Organisation Unit	Optional. Allows you to enter a subdivision or department name.																		
Locality	Enter the name of the city where the organization is located.																		
State/Province	Enter the state or province where the organisation is located.																		
Country/Region	Enter the country or region where the organisation is located.																		
Key Exchange Method	Select RSA (the default) or Diffie-Hellman(DSS).																		
Key size	Select 512, 1024 (the default), or 2048 bits.																		
Term of Validity	Enter a starting and ending date (month/date/year) for which the certificate is valid.																		

ITEM	COMMENTS	
CA-signed Certificate...	Used for web encryption to provide security when printing over the internet. Requires an outside certification service which must be purchased separately.	
Create Certificate...	When CA-signed Certificate is selected, the following items are configured:	
	Common Name	The printer's IP Address appears here.
	Organisation	Enter the name of your organisation.
	Organisation Unit	Optional. Allows you to enter a subdivision or department name.
	Locality	Enter the name of the city where the organization is located.
	State/Province	Enter the state or province where the organisation is located.
	Country/Region	Enter the country or region where the organisation is located.
	Key Exchange Method	Select RSA (the default) or Diffie-Hellman(DSS).
	Key size	Select 1024 (the default) or 2048 bits.

IEEE802.1X Tab



ITEM	COMMENTS	
Use IEEE802.1X	Check to Enable/disable.	
EAP Type	The following Extensible Authentication Protocols can be configured:	
	EAP-TLS	Selects Extensible Authentication Protocol - TLS.
	PEAP	Selects Protected Extensible Authentication Protocol - (includes Password).
	EAP User	Enter EAP User name.
	EAP Password	Enter EAP password.
Use SSL/TLS Certificate	Enable SSL/TLS certification.	
Authenticate server	Enable Server Authentication.	
Certificate	Client certificate	File: (User can specify). Password: (User can specify). Options to Import, Delete, View.
	CA certificate	File: (User can specify). Password: (User can specify). Options to Import, Delete, View.

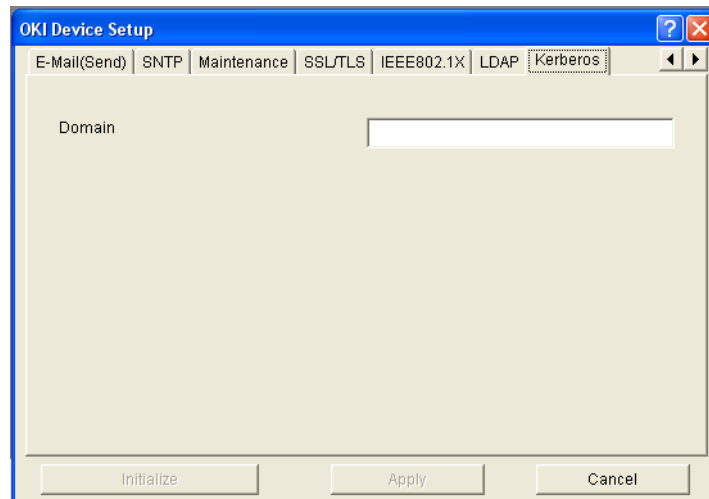
LDAP

The screenshot shows the 'OKI Device Setup' dialog box with the 'LDAP' tab selected. The fields are as follows:

- LDAP Server: [Empty text box]
- LDAP Port Number: [389]
- LDAP Timeout: [30]
- Maximum Entries: [100]
- Authentication Method: [Anonymous]
- Authentication User ID: [Empty text box]
- Authentication User Password: [Empty text box]
- Encryption Algorithm: [None]
- Search Filter...: [Search Filter... button]
- Buttons: [Initialize], [Apply], [Cancel]

ITEM	COMPONENTS	
LDAP Server	Enter LDAP Sever name.	
LDAP Port Number	Enter LDAP port number (default is 389).	
LDAP Timeout	Set LDAP Timeout (default is 30).	
Maximum Entries	Set Maximum entries (default is 100).	
Authentication Method	Select authentication method from the drop-down menu. Anonymous (default), Simple, Digest-MDS, Secure Protocol.	
Authentication User ID	Enter User ID.	
Authentication User Password	Enter user password.	
Encryption Algorithm	Select encryption algorithm from the drop-down menu. Select from: None (default), LDAPS, STARTTLS	
Search Filter...	Search root	Search root.
	Attribute	Name1: cn Name2: sn Name3: givenName Mail Address: mail
	Additional Filter	Enter additional detail (optional).

Kerberos

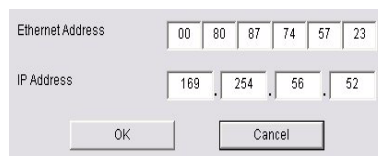


ITEM	COMMENTS
Domain	Enter Domain.

SETUP - IP ADDRESS SETUP

If you only use TCP/IP and the printer has not yet been configured, occasionally it may not be displayed on AdminManager. You can configure the IP address of the printer by this function.

1. Select **IP Address Setup** from the **Setup** menu.
2. Set **Ethernet Address** and **IP Address** then select **OK**.


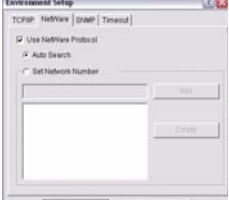
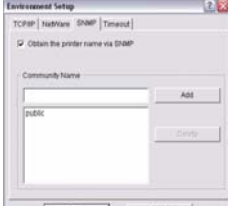



The Ethernet Address (MAC address) is displayed during the self-diagnostic test.

OPTION MENU

In the **Option** menu, the following items can be selected:

ITEM	EXPLANATION
Use TCP/IP Protocol	If this item is selected, AdminManager uses TCP/IP protocol to search/configure network interface cards.
Use IPX/SPX Protocol	If this item is selected, AdminManager uses IPX/SPX protocol to search/configure network interface cards.

ITEM	EXPLANATION
Environment Setup	<p>TCP/IP Tab</p> <p>Set broadcast addresses that are used to search printers using the TCP/IP protocol. If Use TCP/IP protocol is unchecked, the search will not be carried out using TCP/IP.</p> 
	<p>NetWare Tab</p> <p>Set network addresses that are used to search printers via NetWare protocol. If there are many NetWare file servers on your network, specify the network address to which the network card belongs. If Use NetWare protocol is unchecked, the search will not be carried out using NetWare, but if Auto Search is selected, AdminManager will search all networks that AdminManager can detect.</p> 
	<p>SNMP Tab</p> <p>Obtain the printer name via SNMP - Select Enter Community name. Add and Delete</p> 
	<p>TimeOut Tab</p> <p>Search Every: Set response waiting time from a network card in seconds.</p> <p>Time Out: Set time out between AdminManager and the network interface card in seconds.</p> <p>Retry: Set how many times the retry will be carried out between AdminManager and the network interface card.</p> 

HELP MENU

In the Help menu, **About** is available and shows revision information for AdminManager.

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. Refer to the relevant manuals for details of how to launch and use the browser. Refer also to [“Web browser” on page 53](#) for instructions on how to prevent your browser caching the printer web pages.

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 **aaaaaa**.

The root password can be changed to allow you to configure the printer by using a Web browser/TELNET/AdminManager. To change the root password from the web browser, select Change Password in the Admin Setup tab and follow the on-screen instructions.

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, refer to [“Self-diagnostic test” on page 6](#).

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 **aaaaaa**.
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
View Information Status Count Supplies Life Usage Report Network System	View information relating to your printer status, consumables and network settings.
Print Information Configuration Network Information File List PCL Font List PS Font List IBM PPR Font List EPSON FX Font List Error Log Demo Page (Select demo page) MFP Usage Report Supplies Status Report	Print configuration and report information.
Admin Setup System Setup PIN ID Network Setup Printer Setup Scanner Setup Fax Setup PCL Setup IBM PPR Setup EPSON FX Setup PS Setup Memory Setup Change Password Settings	View and adjust any admin settings relating to your machine. Change your password and apply access restrictions for your printer network. Reset your printer and restore default settings for your printer and Network Interface Card.
Printer Menu Tray Configuration Printer Adjust Print Position Adjust	View and adjust printer settings.
Copy Menu Job Build Scanning Copies Reduce/Enlarge Mode Density Input Tray Collate Duplex N-up Edge Erase Margin Shift Right Margin Shift Bottom	View and adjust copy settings.
Scanner Menu Scan to Email Scan to Network PC	View and adjust scan settings.
Fax Menu Auto Receive Mode Density Document Size	View and adjust fax settings.

MENU OPTION	DESCRIPTION
Calibration Adjust Color Density Adjust Color Registration	View and adjust colour density and registration modes.
Job List Settings	Allows you to manage pending jobs for your printer.
Links Links Edit Links	Add links for easy access to customer support and on-line information.

USING TELNET

CAUTION!

Please ensure a valid IP address for your network environment is used. Use of an incorrect IP address can cause serious problems on your network.

EXAMPLE TELNET CONFIGURATION

TELNET requires the print server to have a valid IP address configured. If the NIC already has an IP address configured, skip steps 1 to 3 below.

NOTE

The method of configuring commands may differ between workstations. Refer to the workstation's manual.

1. Use the PING command to confirm the connection with the network card.

Example

For IP address 172.168.20.127:

```
PING 172.168.20.127
```

If there is no reply, there is a problem with the configuration of the IP address (the IP address has been already set manually or by the DHCP/RARP server), or with the network. Reset the network interface card settings to the default and try to set a temporary IP address. If you still have the problem after resetting the network interface card, consult the network manager.

2. Enable TELNET protocol.
3. Login to the network card using TELNET.

NOTE

*The default username is **root** and the default password is the last six characters of the MAC address (any alpha characters must be in upper case).*

Example

For IP address 172.168.20.127

```
TELNET 172.168.20.127
```

You should see a sequence similar to the following example:

```
Trying 172.168.20.127
Connected to 172.168.20.127
Escape character is '^]'.
EthernetBoard OkiLAN PRINTER".
login: root
'root' user needs password to login.
password:
User 'root' logged in.
No. MENU (level.1)
-----
1:Status / Information
2:Printer Config
3:Network Config
4:Security Config
5:Maintenance
99:Exit setup
Please select (1-99)?
```

4. Enter the number of the item to be changed.
The details window for that item displays.
5. When the configuration is complete, select **Exit Setup** to save your change. To exit without saving your modification, select **Quit**.
6. Turn the printer off and on again.

NOTE

The network card continues to use pre-transmission settings until the printer is turned off and back on again.

USING SNMP

NOTE

Not all utilities, features or protocols are supported by every product. Please check with your User's Guide and support website for latest information.

The machine and network card can be managed via a standard SNMP management station. The network card supports SNMPv1, SNMPv3, SNMPv3+v1, 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.

NOTE

The Oki Data Private MIB file can be found in the MIB folder on the DVD-ROM or support website. Please refer to the readme file for further information.

The printer's trap address can be set in five places using TCP/IP and in one place with IPX. Printer trap settings can be made with TELNET and a web browser.

MANAGEMENT UTILITY - PRINTSUPERVISION (WINDOWS ONLY)

NOTE

Not all utilities, features or protocols are supported by every product. Please check with your User's Guide and support website for latest information.

PrintSuperVision is a Windows server application designed for managing and monitoring printing devices connected to a network. The core application is server-based and is accessible from any browser enabled device connected to the network.

For full details of how to install and use PrintSuperVision, please refer to the PrintSuperVision Configuration Guide which is available on the support website.

OKI LPR PRINTING UTILITY (WINDOWS ONLY)

NOTE

Not all utilities, features or protocols are supported by every product. Please check with your User's Guide and support website for latest information.

The Oki LPR Utility is a utility that allows printing data to printers connected to the network via TCP/IP. It is an alternative method of connecting printers instead of using the Microsoft TCP/IP port; however, the Oki LPR utility offers some additional and very useful features:

- > **Displays printer status** - print job status can be viewed, paused or cancelled.
- > **Download files directly to the printer** - send PRN or PostScript files directly to the printer.
- > **Redirect print jobs** - send print jobs to other printers if the original printer is busy or has an error.
- > **Multicast printing** - send the same print job to many printers simultaneously¹.

SYSTEM REQUIREMENT

Operating systems with TCP/IP support and Oki printers that support TCP/IP.

INSTALLING THE OKI LPR UTILITY

NOTE

Some Operating Systems require administrator privileges in order to make changes.

1. Insert the DVD-ROM into the DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **setup.exe** on the DVD-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**.
4. In the **Choose Setup Language** dialog, select the appropriate language and click **OK**.
The Oki LPR utility is displayed.
5. Click **Next**.
6. Verify **Destination** Folder and **Spool** Folder and click **Next**.

1. The printers all have to be of the same model.

7. 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**.
8. Verify the program folder name and click **Next**.
The installation starts.
9. When the installation ends, the **Setup complete** screen is displayed. Check **Yes, I want to launch Oki LPR Utility now** and click **Finish**.
10. 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 machine on your network.
14. Highlight the machine you will use and click **OK**.
15. If your machine is not discovered, click **Cancel** and type the IP address directly at **IP Address:**.
16. Click **OK**. A machine 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**.

If a file that has been added after installation exists in the folder to install the OkiLPR utility or the folder to spool, you cannot delete the folder. Delete any unwanted files before running **Uninstall OkiLPR Utility**.

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.

INSTALLING A NETWORK PRINTER

There are two ways to set up a Network Printer:

- > Install automatically, using the **Oki Driver Installer**
- > Install it yourself using the **Add Printer Wizard**

USING THE OKI DRIVER INSTALLER

The Oki Driver Installer program searches for compatible printers on the Network, then installs and configures the printer drivers with the correct port settings automatically.

Using the Oki Driver Installer program, you can install to the following connected printer types:

- > Locally connected printers
 - > USB port
 - > Parallel port
- > Networked printers
 - > Directly connected (peer-to-peer) printers via TCP/IP. The Microsoft standard TCP/IP is installed and configured to use Port 9100 with the printer's IP address.
 - > Printers not directly connected, but shared via a PC (Client Server)

Why use the Oki driver installer?

- > Automatically discovers printers on the Network (TCP/IP)
- > Installs driver and correctly assigns the appropriate port and IP address
- > Allows easy configuration and sharing of the printer with other Network users
- > Automatically configures the printer driver with the appropriate hardware device options such as storage device, duplex unit, additional paper tray, etc. (via the Oki Network Extension software)

USING THE ADD PRINTER WIZARD

Method summary:

The following table shows the different ways to connect to the printer (port types).

	WINDOWS 2000	WINDOWS XP	WINDOWS VISTA/ SERVER 2003/ SERVER 2008/7
Windows Rally	NO	NO	YES
Windows standard TCP/IP	YES	YES	YES
Oki LPR	YES	YES	YES
IPP	YES	YES	YES
NETBEUI	YES	YES	NO

About the different methods

Windows Rally

Windows Rally is an automated "Plug-n-Play" type utility that allows users to discover and configure network devices effortlessly.

Windows standard TCP/IP port

The standard TCP/IP port simplifies connecting to remote printers using the TCP/IP protocol. A computer that acts as a print server must run the TCP/IP protocol in order to print.

Can be configured to use either LPR or RAW (e.g. Port9100).

OKiLPR

Used to connect your printer over TCP/IP using an LPR port.

OKiLPR also includes useful tools enabling you to download PS and PRN files directly to your printer and automatically redirect jobs to other printers on the network.

IPP

The IPP (Internet Printing Protocol) defines a standard protocol for printing as well as managing print jobs, media, resolution etc.

NetBEUI

NetBEUI (NetBios Extended User Interface) is a protocol that was designed for use in small workgroups or LANs. Within Windows NetBEUI is used for file and printer sharing between computers. It provides a simple method of printing, but it does have limitations, and is not as robust as TCP/IP or IPX. Typically it is employed in small business or home networks.

CONFIGURING THE NETWORK PRINTER IP ADDRESS

The Network Card Setup utility allows you to configure the network printer IP address, Subnet Mask and Gateway.

NOTE

It will not be necessary for printers connected to a network using DHCP to use this setup method.

Some steps may not display depending on the network protocols installed.

1. Ensure that the printer is switched on and connected to the network.
2. Insert the Software DVD-ROM into the DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **setup.exe** (in the root directory) on the DVD-ROM.
3. Select the appropriate Language and click **Next**.
4. Select your printer model.
5. If you agree to the Software Licence Agreement, click **Next**.
6. Under Software Utilities navigate to and select **Install Network Card Setup** and follow on-screen instructions.
7. Select your language.
8. Select **OKI Device Quick Setup** and follow the on-screen instructions.
9. Select the appropriate network card, using the Ethernet address to identify it, and click **Next**.

The Ethernet address (MAC Address) is displayed on the configuration map, refer to ["Self-diagnostic test" on page 6](#).

Using TCP/IP protocol

When using lpr in UNIX and other TCP/IP environments, please select **Yes**. To use in a TCP/IP environment, an IP address should be assigned to the Ethernet card.

If **Yes** has been selected and TCP/IP is the only working protocol and the IP address has not already been assigned, you can either obtain an IP address automatically or assign an IP address.

When **Obtain an IP address automatically** is selected, the device IP address will be automatically assigned by the DHCP server. In an environment without a DHCP server, please assign the IP address manually.

If you are **manually** assigning an IP address, you need to enter:

- > An IP address
- > Subnet mask
- > Gateway address

10. Click **Next**.
11. Select your preferred protocol.
12. When the settings are correct, click **Execute**. The new settings are transmitted to the network card but it still operates with pre-transmission settings.
13. Click **Finish** to validate the new settings.
14. Switch the printer off for 15 seconds and on again.

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.

15. Select **Start > All Programs > OKI Setup Utility > AdminManager**.

The "Printer Discovery" message is displayed. When the printer is detected, the Network Card Setup utility launches, displaying the printer status and network information.

UNINSTALLING THE NETWORK CARD SETUP UTILITY

To uninstall the Network Card Setup utility:

1. Select **Start > Control Panel**.
2. Select **Add or Remove Programs**.
3. Select **AdminManager (Oki Setup Utility)** and click **Remove**. This removes the Network Card Setup utility from your computer.
4. Restart your computer to ensure that the utility has been fully removed.

MAC OS X

OVERVIEW

This section is for administrators and it should be used in conjunction with the relevant Mac OS X manual. Please ensure your Mac has the latest Mac OS X updates installed.

PRINTING THE CONFIGURATION PAGE

The printer's configuration page reports information that is required for Macintosh configuration. Refer to ["Self-diagnostic test" on page 6](#) for details on how to print a configuration page.

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.

SETTING UP A NETWORK PRINTER

1. If the printer does not have an IP Address, use the Printer Setup Utility to assign an IP address. See ["Setup Utility interface" on page 39](#).

To do this, you will need to know the printer's MAC address. This can be found on the print server's network summary printout. See ["Self-diagnostic test" on page 6](#).

2. Install the printer driver software. This copies the printer driver files to the correct location on your MAC OS X system.
3. Make a connection to the printer by using USB, Bonjour, TCP/IP, or Apple Talk. See ["Connecting to your printer" on page 45](#).
4. If required, enable hardware device options such as additional paper trays, duplex unit or storage device. See ["Configuring printer hardware options" on page 46](#).

You can start the utility directly from the DVD or if you plan to use the utility later, copy it to your Mac's hard disk.

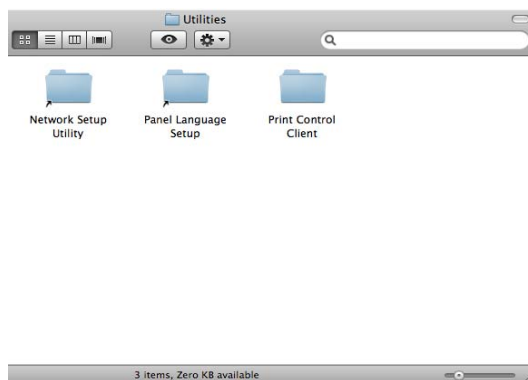
NETWORK SETUP UTILITY

You can use the Network Card Setup Utility to:

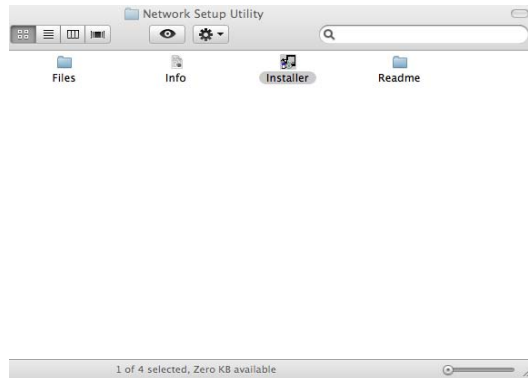
- > Assign IP addresses and modify TCP/IP settings
- > Configure settings for Network, EtherTalk, NetBEUI and SNMP

The Setup Utility is a powerful MACOS-based utility for configuring all print server functions using a graphical user interface.

1. Insert the DVD into the DVD-ROM drive.
2. Navigate to the **Utilities** folder and select **Network Setup Utility**.



3. Open the Network Setup Utility folder and double-click **Installer**.



4. Select the destination directory, then click **Next**.



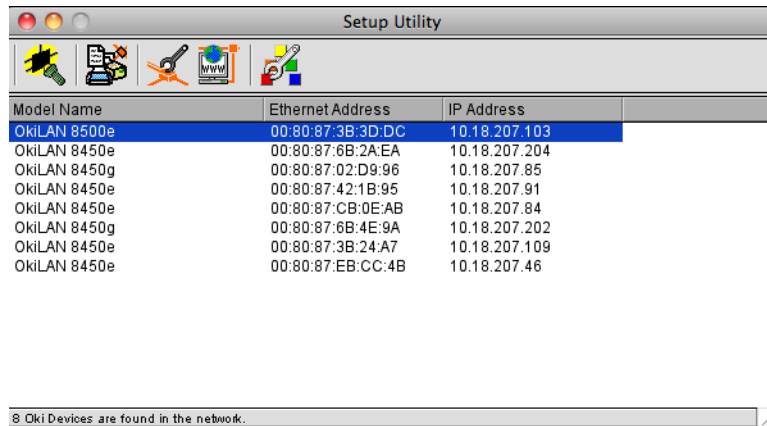
5. Ensure the **Yes** option is selected to activate the utility, then click **Finish**.



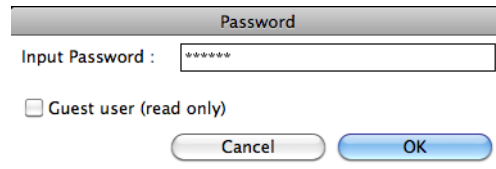
SETUP UTILITY INTERFACE

The Setup Utility auto-discovers Oki compatible network cards.

1. Select the correct printer NIC to configure, click Setup icon.



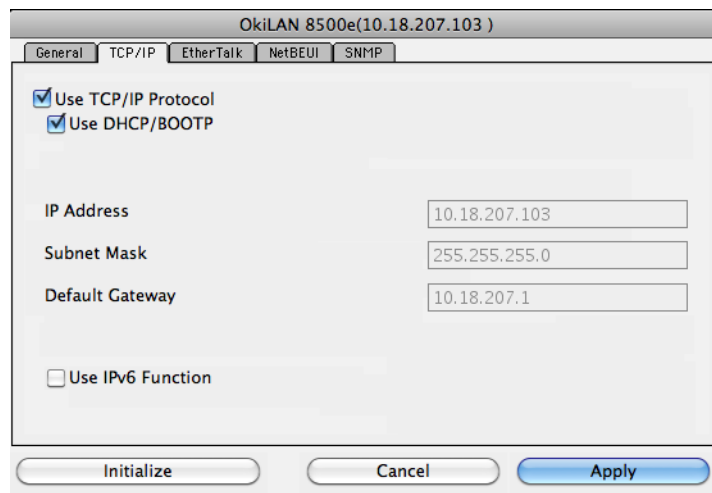
2. At the prompt, enter Admin password.



NOTE

The default admin password is the last six digits of the MAC Address, minus any punctuation marks: e.g., for a MAC (Ethernet) Address of 00:80:87:3B:3D:DC, the password would be 3B3DDC. Password is case sensitive.

3. Select the TCP/IP tab and assign your printer's IP address.

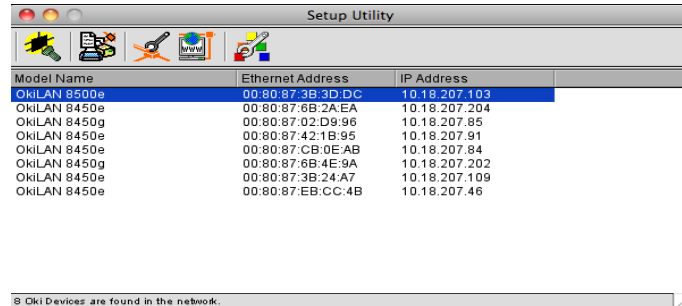


4. Click **Apply**.

MENU OPTIONS

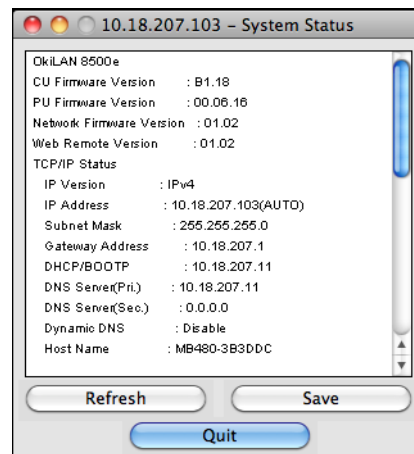
Discover Printers

Locates and lists all printers in your network, which have an OKI compatible network card installed.



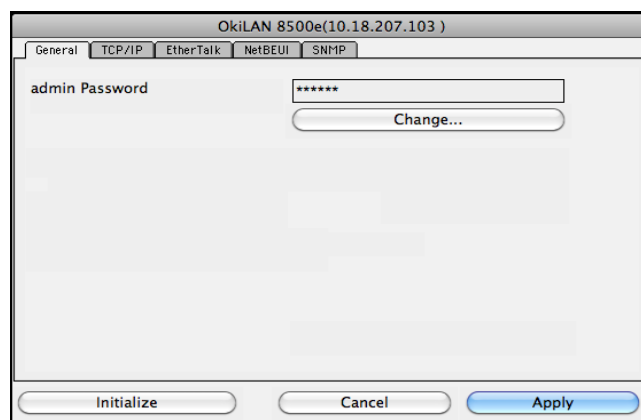
System Status

Displays the network card summary details.



OKI DEVICE SETUP

General Tab



The General tab allows you to change the admin password.

1. Click **Change**.

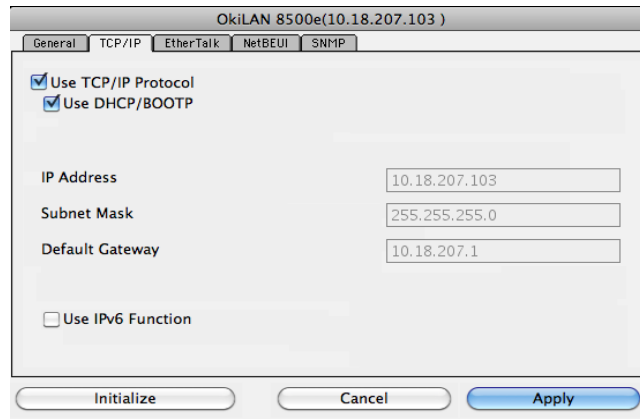
2. Enter the current value, then enter the new value and re-enter it under **Confirm**

NOTE

The default admin password is the last six digits of the MAC Address, minus any punctuation marks. e.g., for a MAC (Ethernet) Address of 00:80:87:3B:3D:DC, the password would be 3B3DDC. Password is case-sensitive.

3. Click **OK**.
4. Click **Apply**.

TCP/IP tab



ITEM	COMMENTS
Use TCP/IP Protocol	Enable/disable TCP/IP protocol.
Use DHCP/BOOTP	Click to select this item if the IP address, subnet mask, default gateway and IP addresses for DNS primary server and secondary servers are retrieved from the DHCP or BOOTP server.
IP Address	Set the IP address of the selected network interface card.
Subnet Mask	Set the subnet mask of the selected network interface card.
Default Gateway	Set the default gateway of the selected network interface card.
Use IPv6 Function	Use to enable/disable IPv6.

Netware Tab

ITEM	COMMENTS	
Use NetWare Protocol	Enable/disable NetWare protocol.	
Print Server Name	Set a Print Server name.	
Frame Type	Set the primary NetWare frame type.	
Operation Mode	Select the NetWare mode: PSEVER Mode (the default) RPRINTER Mode	
Bindery Setup	Configure Bindery mode items, including:	
	File Server to be connected.	Specify up to 8 file servers to connect.
	Password.	Set a password for the Print Server.
	Job Polling Time	Set the print job polling interval in seconds.
NDS Setup	Set the NDS Tree and Context where the Print Server was created.	
Printer Name	Set the NetWare printer object name.	

EtherTalk tab

OkiLAN 8500e(10.18.207.103)

General TCP/IP EtherTalk NetBEUI SNMP

Use EtherTalk Protocol

Printer Name: MB480

Zone Name: *

Initialize Cancel Apply

ITEM	COMMENTS
Use EtherTalk Protocol	Enable/disable EtherTalk protocol.
Printer Name	Set the EtherTalk Printer object name.
Zone Name	Set the name of the zone to which the print server belongs.

NetBEUI tab

ITEM	COMMENTS
Use NetBEUI Protocol	Enable/disable NetBEUI protocol.
Short Printer Name	Set a name for the print server.
Workgroup	Set a name for the work group to which the print server belongs.
Comment	Set the comments for the print server.

SNMP tab

ITEM	COMMENTS
SysContact	Set the printer manager name.
SysName	Set the printer model name.
SysLocation	Set the location where the printer is installed.

Configuration via HTTP

NOTE

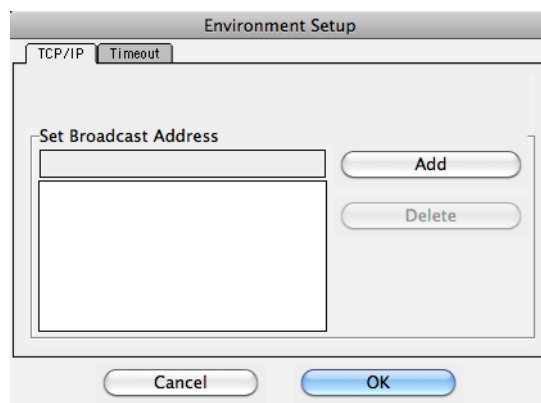
To apply configuration changes using a web browser, you will be prompted for a username and password. The username is **root** and the default password is **aaaaaa**.

You can configure your network utility via the printer web page.



Environment Setup

Use this to configure the utility preferences for broadcast addresses for TCP/IP protocol and Time Out.



TCP/IP Tab

ITEM	COMMENTS
Set Broadcast Address	Set broadcast addresses that are used to search Oki network interface cards using the TCP/IP protocol.
Add	Click Add to add the address to the list in the box.
Delete	Select an address in the box, then click Delete to remove it.

Timeout Tab

ITEM	COMMENTS
Set Timeout: Printer Search	Search Every (20-180sec) Set the response waiting time from the network card in seconds. Default is 30 seconds.
Set Timeout: Data Send/Receive	Time Outs (1-60sec) Set time out between AdminManager and the network interface card in seconds. Default is 5 <i>seconds</i> . Retry (1-5) Sets how many times AdminManager will retry to transmit/receive data to/from the network interface card. Default is 3 retries.

CONNECTING TO YOUR PRINTER

NOTE

The steps below are for Snow Leopard (10.6) and Leopard (10.5) Operating Systems. The principle of connecting to your printer is the same, though the steps may vary for different Operating Systems. Please refer to the readme file on the driver DVD.

SNOW LEOPARD (10.6) AND LEOPARD (10.5)

USB

1. Choose **Apple Menu > System Preferences > Print & Fax**.
 2. If the printer is already in the list of printers, click "-" to remove it.
-

NOTE

This is necessary as Leopard may not be using the correct printer driver files.

3. Click "+" to add a new printer.
 4. Ensure the Default tab is selected and select your printer from the list.
 - > Your printer is displayed as type **USB** in the list of available printers.
 - > Ensure that the **Print Using:** selection matches your printer. If **Generic PostScript Printer** is displayed, select a driver that matches.
 5. Click **Add**.
 6. Click **Configure...** and ensure the hardware options displayed match your printer.
-

NOTE

Hardware options are not configured automatically.

The printer is added to the list of printers.

7. Restart your computer.

Bonjour

1. Choose **Apple Menu > System Preferences > Print & Fax**.
2. Click "+".
3. Select your printer model from the Default Browser.
4. Click **Add...**

5. Depending on the connection type, you may be prompted to configure any additional printer hardware options. If your printer has options such as a storage device or second tray, switch on the relevant options.

AppleTalk (Leopard only)

NOTE

AppleTalk is not supported in Snow Leopard.

1. Choose **Apple Menu > System Preferences > Print & Fax**.
2. Click "+".
3. Select your printer model from the Default Browser.
4. Click **Add...**
5. Depending on the connection type, you may be prompted to configure any additional printer hardware options. If your printer has options such as a storage device or second tray, switch on the relevant options.

TCP/IP Connection

1. Choose **Apple Menu > System Preferences > Print & Fax**.
2. Click "+".
3. Click the **IP Printer** button.
4. From the Protocol menu, choose **Line Printer Daemon – LPD**.
5. Enter the printer's IP address in **Address**.
To find the printer's IP address, you can print a configuration page from the printer's operator panel. Refer to "[Self-diagnostic test](#)" on page 6.
6. Check the correct PPD file for your printer is selected in the Print Using menu.
7. Click **Add**.
8. You will be prompted to configure any additional printer hardware options. If your printer has options such as a storage device or second tray, switch on the relevant options. Refer to "[Configuring printer hardware options](#)" on page 46.

CONFIGURING PRINTER HARDWARE OPTIONS

NOTE

Applies to IP and Rendezvous network connections only.

If you have added additional hardware, for example additional paper trays, to your printer these must be enabled in the printer driver.

1. Choose **Apple Menu > System Preferences > Print & Fax**.
2. Click the **Printers** menu, and choose **Show Info**.
3. From the popup menu, select **Installable Options**.
4. Select any options appropriate to your hardware, and click **Apply Changes**.

UNIX

NOTE

Not all utilities are provided for every operating system. Please check with your support website for latest information. This section applies to devices which support PCL or Postscript.

OVERVIEW

The printer supports many protocols such as LPD, FTP, TELNET, SNMP and IPP, and works within the UNIX environment.

To use the network card within the UNIX environment, the following steps are required:

CONFIGURATION

NETWORK INTERFACE CARD SETTING

The first step in installing the network card under UNIX is to set up the IP address, Subnet Mask and Gateway. This section explains one way to set them up from a UNIX workstation.

- > The network addresses used in this manual are shown as examples only. Network addresses used in your installation must be generated for your own network.
- > Log in as root to change the configuration of the printer.
- > If an incorrect IP address, Subnet Mask or Gateway is entered, the network may go down or other damage may occur. Check the address with your network manager.

The following explanation uses Sun Solaris 2.8 (Solaris 8) as an example. The actual commands may differ between versions of UNIX, so refer to the workstation manuals for more information.

NOTE

If you do not have superuser rights, the network manger should conduct the configuration.

1. Log in as root to the workstation.
2. If the printer does not have an IP address already assigned, use the *arp* command to set a temporary IP address.

Example: for IP address 192.68.20.127 and network card address 00:80:87:01:00:D2

```
# arp -s 192.168.20.127 00:80:87:01:00:D2 temp
```

The Ethernet address (MAC address) 00:80:87:01:00:D2 in the above example can be determined from the network card self-diagnostic test.

3. Use the *ping* command to confirm the connection with the network interface card.

Example: for IP address 192.168.20.127

```
# ping 192.168.20.127
```

If there is no reply, there is a problem with the configuration of the IP address (the IP address has already been set manually or dynamically), or with the network. Reset the network interface card settings to default and try to set a temporary IP address.

If you still have the problem after resetting the network interface card, consult the network manager.

4. Login to the network interface card using TELNET.

Example: Logging in to IP address 192.168.20.127

```
#telnet 192.168.20.127
Trying 192.168.20.127
Connected to 192.168.20.127
Escape character is '^'.
EthernetBoard 8100e TELNET server
login: root
`root` user needs password to login.
password: <CR>
User `root` logged in.
No. Message Value (level .1)
1 : Setup TCP/ IP
2 : Setup SNMP
3 : Setup NetWare
4 : Setup EtherTalk
5 : Setup NetBEUI
6 : Setup printer trap
7 : Setup SMTP (Email)
9 : Maintenance
10 : Setup printer port
11 : Display status
12 : IP Filtering Setup
97 : Network Reset
98 : Set default (Network)
99 : Exit setup
Please select (1- 99)?
```

5. Type 1 and press the **Enter** key. Perform the following settings:

```
Please select (1- 99)? 1
No. Message Value
1 : TCP/ IP protocol : ENABLE
2 : IP address : 192.168.20.127
3 : Subnet Mask : 255.255.255.0
4 : Gateway address : 192.168.20.1
5 : RARP protocol : DISABLE
6 : DHCP/ BOOTP protocol: DISABLE
7 : Auto IP Address : DISABLE
8 : DNS Server (Pri.) : 0.0.0.0
9 : DNS Server (Sec.) : 0.0.0.0
10 : root password : "*****"
11 : Auto Discovery Setup
99 : Back to prior menu
Please select (1- 99)?
```

6. Logout from the network interface card. Turn the printer off for about 15 seconds and on again to validate the settings.

LPD printing

Line Printer Daemon (LPD) is the most common protocol for printing with TCP/IP to a network printer. Refer to the workstation's manual for details of `lpr` and `lp` commands. The following explanation in this section uses the printing of print file **test.prn** with printer name *Myprinter_lp* as an example.

Logical printers

The printer's network interface includes three logical printers.

- > lp must be used for printing a file created using the printer driver.
- > sjis must be used for printing a text file of Shift JIS Kanji code.
- > euc must be used for the printing a text file of the EUC Kanji code.

LOGICAL PRINTER	PRINTER FUNCTION
lp	For direct output
sjis	For Shift JIS Kanji converted output
euc	For EUC Kanji converted output

- > sjis and euc function only as PostScript printers.

BSD-based UNIX

Print using the **lpr** command.

```
# lpr Pmyprn_lp test.prn
```

If the **lprm** command is used, the print job is cancelled.

Example: To delete a print job (Job ID 123) on the myprn_lp

```
# lprm Pmyprn_lp 123
```

Verify the printer status using the **lpq** command.

The result of **lpq** may not be displayed correctly depending on UNIX operating system specification.

```
# lprm myprn_lp
```

System V-based UNIX

Print using the **lp** command.

```
# lp -d myprn_lp_lp test.prn
```

Delete a print job using **cancel** command.

Example: To delete a print job (Job ID 456) in the myprn_lp

```
# cancel myprn_lp -456
```

Verify the printer status using the **lpstat** command.

```
# lpstat
```

The result of **lpstat** may not be displayed correctly depending on UNIX operating system specification (e.g. Solaris 2.x).

FTP printing

FTP (File Transfer Protocol) is used for transferring a file with TCP/IP. If the print data is sent to a logical printer via FTP, it is printed.

Refer to the workstation's manual for details of the ftp command. The following explanation uses print file *test.prn* with printer name **myprn_lp** as an example.

LOGICAL DIRECTORIES

The printer's network interface includes three logical directories.

- > **lp** must be used for printing a file created using the printer driver.
- > **sjis** must be used for printing a text file of Shift JIS Kanji code.
- > **euc** must be used for the printing a text file of the EUC Kanji code

LOGICAL DIRECTORY	PRINTER FUNCTION
lp	For direct output
sjis	For Shift JIS Kanji converted output
euc	For EUC Kanji converted output

- > **jis** and **euc** function only as PostScript printers.
- > You can not send data to the root directory.

1. Log in to the network interface card.

When printing with ftp, use any values for name and password. However, if the user name is root, the password set under TELNET or the utility is required. See the appropriate section for details.

*Example: Logging in with host name **myprn** (or IP address 192.168.20.127).*

```
# ftp myprn (or ftp 192.168.20.127)
Connected to myprn
220 EthernetBoard 8100e Ver 01.50 FTP Server
Name (myprn:<none>) : root
331 Password required.
Password:<CR>
230 User Logged in
ftp>
```

The network card logical directory structure is hierarchical. Move to the logical directory; it is not possible to output print data to the root directory.

2. Move to the preferable logical directory using the `cd` command.

Example: moving to the `lp` directory and confirming the current directory.

```
ftp> cd /lp
250 Command OK.
ftp> pwd
257 "/lp" is current directory
ftp>
```

3. Configure the transfer mode.

There are two types of transfer mode: BINARY mode, in which the file content is output as it is and ASCII mode, which converts the LF code to the CR+LF code. If a binary file converted by the printer driver is transferred, the transfer mode has to be BINARY mode.

Example: Changing transfer mode to binary mode and verifying the current mode:

```
ftp> type binary
200 Type set to I.
ftp> type
Using binary mode to transfer files.
ftp>
```

4. Transfer the print data to the network card using the put command. Two methods of file transfer using the put command are available.

Example: Transferring print data test.prn

```
ftp> put test.prn
```

Example: Transferring print data specified by absolute path/users/test/test.prn

```
ftp> put /users/test/test.prn /lp
```

5. Logout from the network card using the quit command.

```
ftp> quit
```

Three states can be verified using the quote command stat: the IP address, login user name and transfer mode. In addition, printer status can be verified by specifying the directory after the stat (lp, sjis, euc).

Example: Displaying network card status

```
ftp> quote stat
211-FTP server status:
Connected to: 192.168.20.10.000.00
User logged in: root
Transfer type: BINARY
Data connection: Closed.
211 End of status.
ftp>
```

Example: Displaying the network card status (directory name: lp)

```
ftp> quote stat /lp
211-FTP directory status:
Ready
211 End of status
ftp>
```

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 6](#).
- > 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 AND FTP

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 *sjis*. Use *lp* by default as *euc* and *sjis* are specific to PostScript printers.

WEB BROWSER

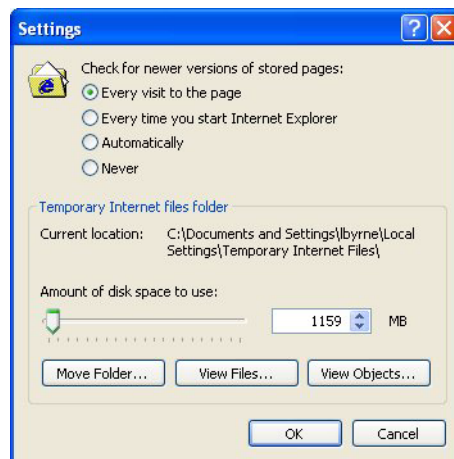
If you are using the Web browser to configure your printer settings, but do not see the most recent settings displaying on the Web page, you should temporarily switch off your browser's page caching. To prevent your web browser caching the printer web pages, carry out the following steps as appropriate for your web browser.

NOTE

Keeping this setting enabled all the time may slow down web browsing. You may want to revert back to the browser default setting once you have finished using the printer web page.

MICROSOFT INTERNET EXPLORER

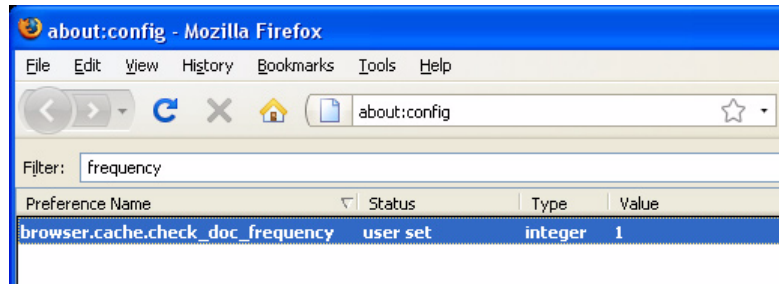
1. Select **Tools > Internet Options**.
2. Select the General tab and, in **Temporary Internet files**, click **Settings**.
3. Under **Check for newer versions of stored pages**, select **Every visit to the page**.
4. Click **OK**.



MOZILLA FIREFOX

1. In the Firefox address bar, type ***about:config***.
2. In the Filter field, type ***frequency***.
3. Double click on the entry ***browser.cache.check_doc_frequency***.
4. Change the Value to **1**.
 - > 0: Check once per browser session
 - > 1: Check every time I view the page
 - > 2: Never check (always use cached page)
 - > 3 (default): Check when the page is out of date (automatically determined)

5. Click **OK**.



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