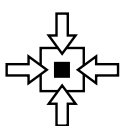# OKI
PRINTING SOLUTIONS

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

CONTENTS

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.

NETWORK CONFIGURATION

INTRODUCTION

Your printer incorporates a fast 100BASE-TX/10BASE-T network interface. This guide explains the functionality of the built in network interface. Access for interconnection is provided via an interface panel 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.

Also, the interface supports major protocols such as TCP/IP and IPX/SPX (NetWare).

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

You should set the emulation in the Printer Menu settings to Auto or PS before printing the configuration map.

> *NOTE*
> *This guide is written to cover a number of products and as such may contain information about features that your product does not have installed or does not support.*
>
> *Operating system support varies between products. Please check with your support website for latest information.*
>
> *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 V4, V6 IEEE 802.1x Network layer: ARP, RARP, IP, ICMP Session layer: TCP, UDP Application layer: LPR, FTP, TELNET, HTTP, HTTPS, IPP, BOOTP, DHCP, SNMP v1, SNMP v3, DNS, DDNS, SMTP, Port9100, POP3, SLP, WINS, Windows Rally, Bonjour IPX/SPX (NetWare) Remote printer mode (up to eight file servers and 32 queues) Print server mode over IPX/SPX (up to eight print servers) Encrypted password supported in print server mode EtherTalk NetBEUI NetBIOS, WINS LDAP Kerberos Windows Rally SSL/TL IPSec
Functions	Self-diagnostic test printing Banner supported Monitoring and configuration by Web browser Printer status notification by E-Mail

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.

CONFIGURATION SETTINGS

Refer to your User Guide for details on how to print a configuration map. Alternatively, if your printer is fitted with a test button (located on the network interface panel at the rear of the machine); with the printer power switched on, press the test button for more than three seconds and 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 Address is given. For example:

```
MAC ADDRESS 00:80:87:84:E3:F1
```

The Ethernet address is therefore: 00:80:87:84:E3:F1

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 easily and simply without installing any software packages into your system. You can set 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.	**Windows:** Windows 2000 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 & 64-bit) Windows Server 2008R2 Windows 7 (32-bit & 64-bit) (TCP/IP protocol or IPX/SPX protocol should be installed). **Mac:** Mac OS X 10.2 or greater You need to install Rosetta if using Mac OS X 10.6
Admin Manager	Configure the NIC in detail.	
Web Browser	Configure the NIC and printer by using a Web browser such as Microsoft Internet browser or Mozilla Firefox.	Microsoft Internet Explorer or similar.
Telnet	Configure the NIC using TELNET.	Third-party vendor developed TELNET client package. A TELNET Application is standard in Windows/UNIX/Linux.
SNMP	The printer 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 (see above), 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.

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

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

2. If you agree to the User License Agreement, click **Next**.

3. Select the appropriate language and follow the on-screen instructions.

4. Navigate to and select **Network Card Setup**.

5. Select the "**Install**" link.

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 (see) 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.
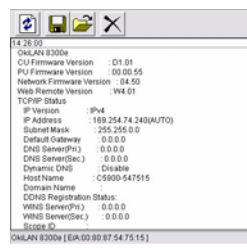
INSTALLATION

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

2. Select the appropriate language.

3. Navigate to and select **Network Card Setup**.

4. Select the "**Install**" link.

5. Select your language.

6. Select **Oki Device Standard Setup**.

7. If you want to install AdminManager on to your local drive, select **Install and Execute**. Otherwise, select E**xecute from CD-ROM/DVD-ROM**. Follow the on-screen instructions.

8. 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**.
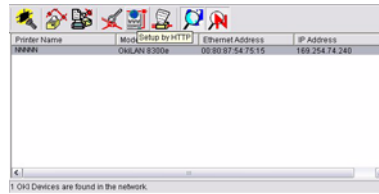
MENU	ITEM	FUNCTION
File	Search	Search printers in your network and list all printers.
Status	Printer Status	Current printer status is displayed:
	System Status	Displays current NIC configuration. Configuration data can be saved as log file.
	List of Configuration Items	Displays current NIC configuration. Configuration data can be saved as log file.
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.
	Setup by TELNET	Launch TELNET application in your environment to access the selected printer's TELNET port.
Setup	Create NetWare Queue	Create a NetWare queue. *Note: Only visible when using Netware.*
	Delete NetWare Object	Delete NetWare object. *Note: Only visible when using Netware.*
	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.

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   > SNMP   > IEEE 802.1x
> TCP/IP   > POP   > NetWare
> SMTP   > Ethertalk   > Maintenance
> NetBEUI/NetBIOS > SSL/TLS   > SNMP
> LDAP   > Kerberos   > SNTP
> E-Mail(Send)   > E-Mail(Receive)

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

General Tab
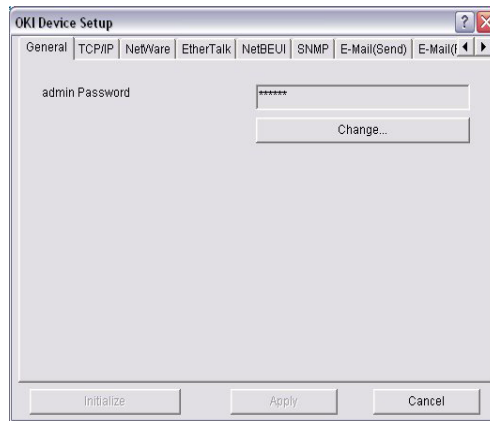
This allows you to set or change the root password used for Admin Manager, TELNET and FTP.
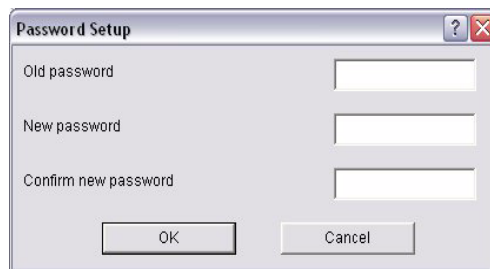
ITEM	EXPLANATION
Change root password	You can set/change the root password for AdminManager, TELNET and FTP.

TCP/IP Tab
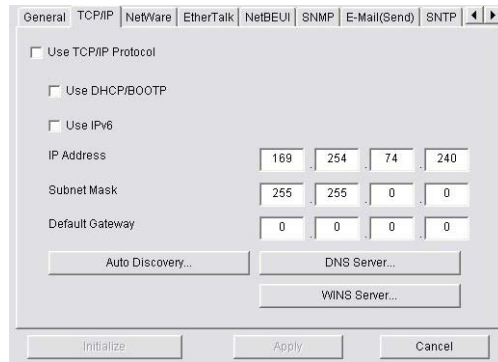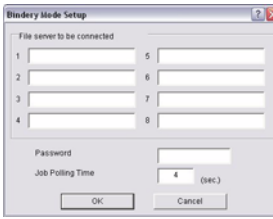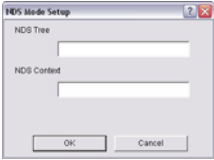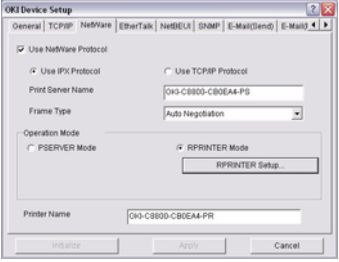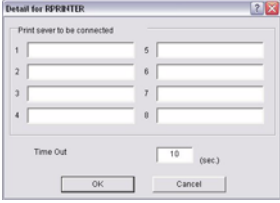
This allows you to configure TCP/IP related items.

ITEM	EXPLANATION	
Use TCP/IP Protocol	Set TCP/IP protocol as enabled/disabled.	
	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
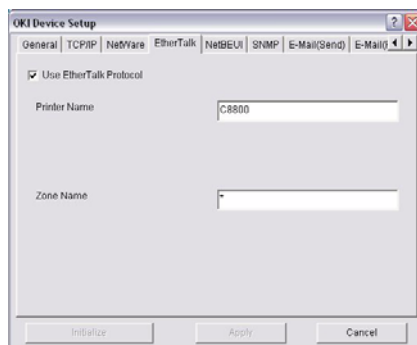

This allows you to configure EtherTalk related items.

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
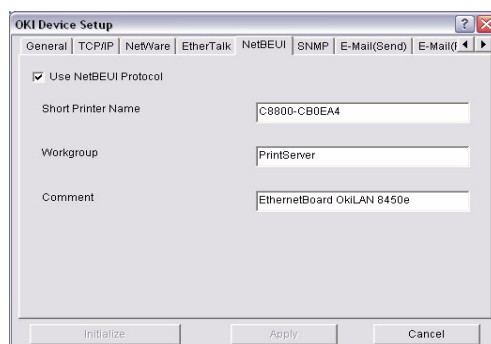
This allows you to configure NetBEUI/NetBIOS related items.

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).

SNMP Tab

This allows you to configure SNMP related items.

ITEM	EXPLANATION	
Use SNMP Service	ENABLE or DISABLE the SNMP protocol.	
SNMPV1+V3	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).	
Default TTL	Set TTL (Time To Live) value.	
Printer Trap Setup...	By selecting the button, the following dialogue box is displayed: In the dialogue box, the following items can be configured:	
	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 On-Line Off-Line Paper Out Paper Jam Cover Open Printer Error (any error)

ITEM	EXPLANATION	
	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 On-Line Off-Line 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 ON/OFF for the events listed.
When EVENT is selected:		

ITEM	EXPLANATION	
	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.	
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	Check to Enable SMTP Authentication.
	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.

E-mail (Receive) Tab
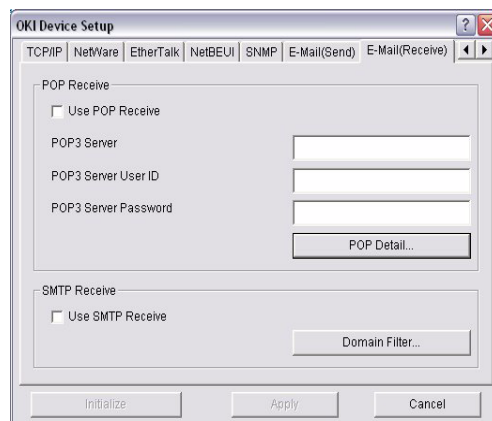
Some printers support an email reception function (SMTP/POP3) allowing the printer to print PDF and text files attached to emails. If this tab is not displayed, your printer does not support the function.

ITEM	COMMENTS
Use POP Receive	Enable/disable receiving E-Mail via POP3.
POP3 Server	Set the IP address or host name of the POP3 server.
POP3 Server UserID	Set User ID for POP3 server.
POP3 Server Password	Set a password for the POP3 server.

ITEM	COMMENTS	
POP Detail...	Set the following:	
	Use APOP	Select if you want to use APOP.
	POP3 Port Number	Set the port number for APOP (default is 110).
	Mail Polling Time	Set interval to retrieve E-Mail(s) from the POP3 server. Selectable values, OFF, 1min, 5min (default), 10min, 30 min, 60 min.
	POP Encryption Algorithm	Select required option from the drop-down menu. Select from: None, POP3S, STARTTLS
Use SMTP Receive	Enable/disable SMTP receive.	
Domain Filter...	Set the following:	
	Use Domain Filter	Enable/disable domain filtering.
	Filter Policy	Select ACCEPT (the default) or DENY.
	Domain Filter	Define up to five domain filters.

SNTP Tab
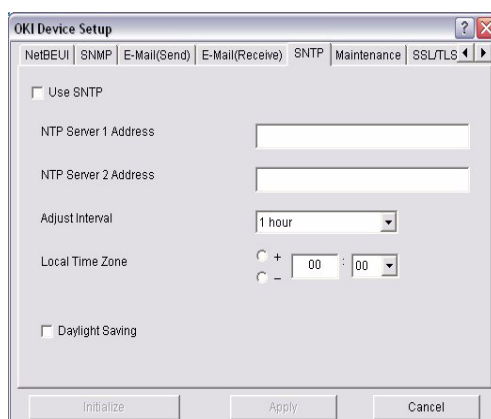
In this Tab, you can configure SNTP related items.

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 NetWare Protocol Use EtherTalk Protocol Use FTP Service Use Telnet Service Use Web Service Use SNMP Service Use POP3 Protocol Use SNTP Use IPP Service Use SNMTP Use SNMP Service Use SMTP Transmit Use encrypted communication for configuration data	

SSL/TLS Tab
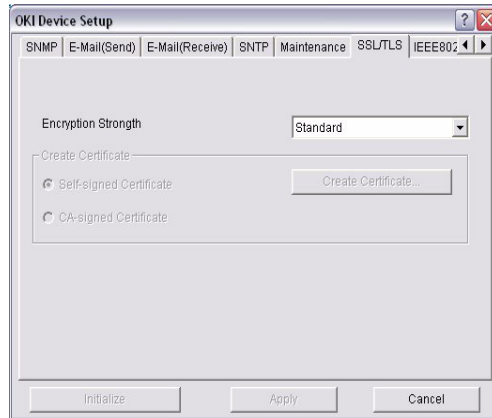
ITEM	COMMENTS	
Encryption Strength/ Cipher Level	Set the strength of encryption: Strong = highest security, slowest speed Standard = medium security, medium speed Weak = least security, fastest speed	
Self-signed Certificate	For IPP encryption within an organisation's internal network (intranet).	
Create Certificate...	When Self-signed Certificate is selected, the following items are configured:	
	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	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

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
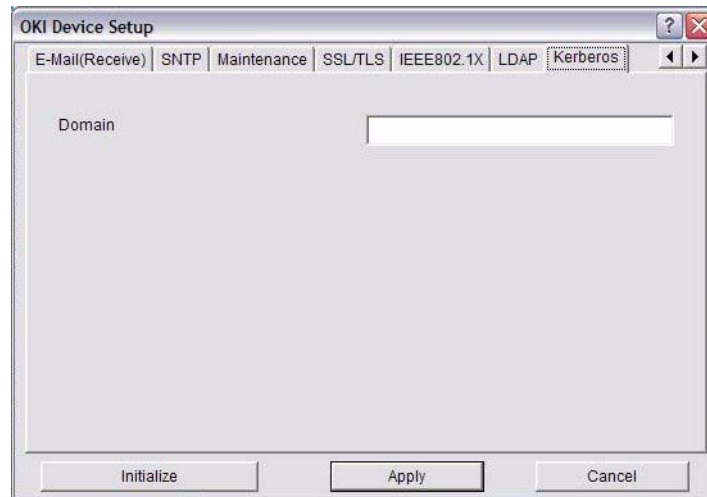
ITEM	COMMENTS
Domain	Enter Domain.

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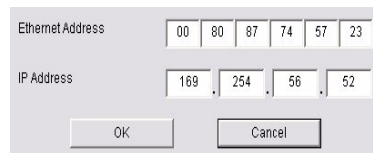
The Ethernet Address (MAC address) is displayed during the self-diagnostic test.

OPTION MENU

In the **Option** menu, the following item 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	**TCP/IP Tab** 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.
	NetWare Tab Set network addresses that are used to search printers via NetWare protocol. If there any 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.
	SNMP Tab Obtain the printer name via SNMP - Select Enter Community name. Add and Delete
	TimeOut Tab **Search Every**: Set response waiting time from a network card in seconds. **Time Out**: Set time out between AdminManager and the network interface card in seconds. **Retry**: Set how many times the retry will be carried out between AdminManager and the network interface card.

HELP MENU

In the Help menu, **About** is available as well as revision information for **AdminManager**.

USING 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 56 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*.

> *NOTE*
> *To apply configuration changes using AdminManager, the username is root and the default password is the last six characters of the Ethernet (MAC) address (any alpha characters must be in upper case).*

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, select **Password Configuration** in the Maintenance 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. Configure the IP Address, Subnet Mask and Gateway for the network card. Launch the Web browser, enter the IP Address of the network interface card in **Address (Location/Position)** and press the **Enter** key.

The Printer Status screen is displayed.

2. Select a tab and items to be changed in the left frame. You need to log in as "root" to be able to configure all items. Non-root users cannot configure all items.

USING TELNET

<div style="background-color:orange">

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.

</div>

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, MIB-II, Oki Data Private MIB and SNMP V3. 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 information on adding MIBs to SNMP management stations.

> *NOTE*
> *The Oki Data Private MIB file can be found in the MIB folder on the CD-ROM/ DVD-ROM or the 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 support website for latest information.*
>
> > *For full details of how to install and use PrintSuperVision (v3.6), please refer to the PrintSuperVision Configuration Guide, which is available on the support website.*

PrintSuperVision is a web-based application for managing printing devices connected to a network. It consists of two parts:

> A web application based on Microsoft web server (Internet Information Server, IIS or Personal WEB Server, PWS), that provides the user interface.

> A monitoring program (PrintSuperVisor) that runs all the time, collecting data and saving it in a database for statistical reports and sending E-Mail alerts based on the saved configuration.

PrintSuperVision requires the .NET environment to be installed on the PC on which it runs. The supplied installer will install this if necessary.

PrintSuperVision's main functions are:

> Maintaining the list of printing devices and organising them in logical groups.

> Initially discovering and configuring printers connected to the network.

> Locating printers visually on maps.

> Monitoring devices over time and saving data for statistical reports.

> Sending email alerts when events occur that affects the functionality of printers.

> Statistical reports about usage of printers.

> Tracking maintenance data related to printers.

> Identifying part numbers of consumable items for use with your printer.

> Integrating with Oki Data's on-line web support (for US and Canada).

> PrintSuperVision can even manage printers on another network provided a copy of PrintSuperVision is also running on that network.

SYSTEM REQUIREMENT

Refer to the ReadMe files on the CD-ROM/DVD-ROM for details.

Supported Browsers

The PrintSuperVision application can be accessed from most Windows, Macintosh, Unix, and Linux desktops.

PrintSuperVision works best when used with Internet Explorer.

Supported Printers

PrintSuperVision provides general management information for printers connected to the network. For Oki printers, additional details, reports and added features are available.

While the printer properties are displayed in PrintSuperVision, only a few of the printer settings can be set. For setting any other printer settings, a hyperlink to the printer's web page is provided in PrintSuperVision.

INSTALLING PRINT SUPERVISION

This section describes installing Print SuperVision from the supplied CD-ROM/DVD-ROM.

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

1. Insert the CD-ROM/DVD-ROM into the CD-ROM/DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **setup.exe** on the CD-ROM/ DVD-ROM.

2. Select **Software Utilities**.

3. Select **Install PrintSuperVision**.

4. When installation ends, the Setup complete screen is displayed. Click **Finish**.

5. Now you should select: **Start > Programs > PrintSuperVision > PrintSuperVision** or double-click the **PrintSuperVision** icon on the desktop for the PrintSuperVision server.

6. For PrintSuperVision client, access http://server IP address or host name/ PrintSuperVision from the Web browser. If you change the port number you should add port number. Example: http://192.168.20.127/PrintSuperVision:8080.

7. PrintSuperVision has an on-line help facility.

UNINSTALLATION

To uninstall PrintSuperVision, either:

Select **Start>Programs>PrintSuperVision>Uninstall PrintSuperVision**,

or…

From **Control Panel,** select **Add/Remove Programs,** select **PrintSuperVision** from the index window and click **Add/Remove**.

When the uninstallation is completed, close **Add/Remove Programs**.

In some cases, an empty **Okidata/PrintSuperVision/** directory may be left behind. Delete the directory manually.

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.*

Oki LPR 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 simultaneously[1].

---

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

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 CD-ROM/DVD-ROM into the CD-ROM/DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **setup.exe** on the CD-ROM/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 Oki LPR utility**.

4. In the **Choose Setup Language** dialog, select the appopriate 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. Check **Register in Startup** if you want automatic startup as Windows boots up. Check **Launch as minimized** if you want to startup in the Icon state and 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**.

11. Check **Yes, I want to view the ReadMe File** if you want to read **Readme**.

    The OkiLPR utility will start.

12. 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.

13. Select **Remote Print > Add Printer**.

14. Click **Discover…** to search for the IP address of a suitable printer on your network.

15. Highlight the printer you will use and click **OK**.

16. If your printer is not discovered, click **Cancel** and you can type the IP address directly at **IP Address:**.

17. Click **OK**. A machine is added to the main window.

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

UNINSTALLATION

1. To exit the Oki LPR Utility, select **File > Exit**.

2. Select **Start** > **Programs** > **Okidata** > **OkiLPR Utility** > **Uninstall OkiLPR Utility**.

You may find this under **Start** > **All Programs** in Windows XP.

3. Click **Yes** when the "Confirm File Deletion" dialog is displayed.

Deletion of the OkiLPR utility starts.

4. When the deletion has finished, the **Uninstall Complete** 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**.

MICROSOFT 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 are 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.

> *NOTE*
> *Not all utilities, features or protocols are supported by every operating system. Please check with your support website for latest information.*

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:

1. Locally connected printers

    > USB port

    > Parallel port

2. 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	NO
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 pinters 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

Use the Standard Set-up Utility to configure the IP Address, Subnet Mask and Gateway.

NOTES
It will not be necessary for printers connected to a network using DCHP 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 CD-ROM/DVD-ROM into the CD-ROM/DVD-ROM drive. The Setup Utility starts automatically. If it does not start, double-click **setup.exe** (in the root directory) on the CD-ROM/DVD-ROM.

3.   Select the appropriate language.

4.   If you wish to proceed, click to agree to the User Licence Agreement.

5.   Navigate to and select **Network Card Setup**.

6.   Select the "**Install**" link.

7.   Select the appropriate 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 .

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.

UNIX

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>
```

Mac OS X

Overview

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

To get the best results from your printer, install the Postscript Printer Description (PPD) file supplied with your printer and use this to customise the Apple PostScript driver that is built-in to the OS X. Features provided by the PPD file include:

> Supported paper types

> Paper trays

> Printer resolution

> Printer colour matching

NOTE

> *The PPD file must be installed using the Oki Driver Installer to ensure that all essential files are copied.*

> *Not all utilities, features or protocols are supported by every operating system. Please check with your support website for latest information.*

Setting up a network printer

1. If the printer does not already have an IP address, use the Printer Setup Utility to assign an IP address. See "The printer setup utility interface" on page 44.

   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 "Configuration settings" on page 7.

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 USB, TCP/IP, Rendezvous or AppleTalk. See "Connecting to your printer" on page 50.

4. If required, enable hardware device options such as additional paper trays, duplex unit or storage device. See "Configuring printer hardware options" on page 54.
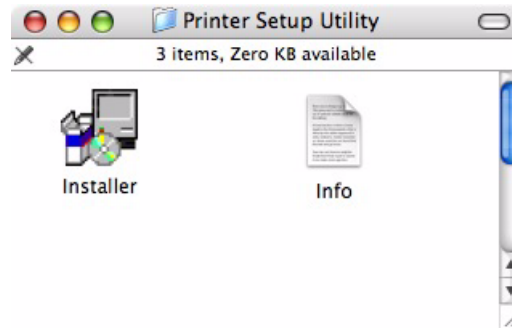
Printer setup utility

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

Installing the printer setup utility

1. Insert the CD/DVD into the CD-ROM/DVD-ROM drive.

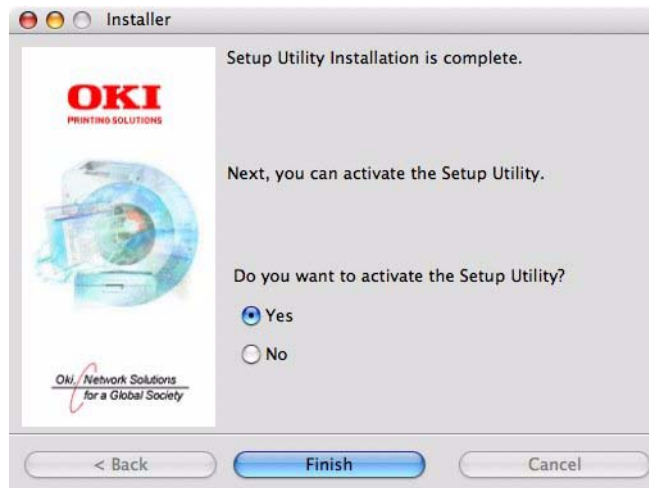2. Navigate to the Utilities folder.

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

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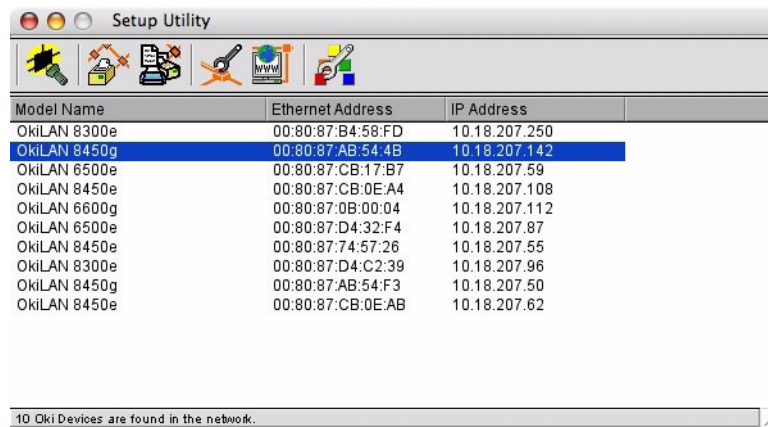

5. Ensure the **Yes** option is selected to activate the utility, then click **Finish**.

THE PRINTER SETUP UTILITY INTERFACE

The Printer Setup Utility auto-discovers Oki compatible network cards.

1. Select the correct printer NIC to configure, click **Setup menu** then choose **Oki Device Setup**.
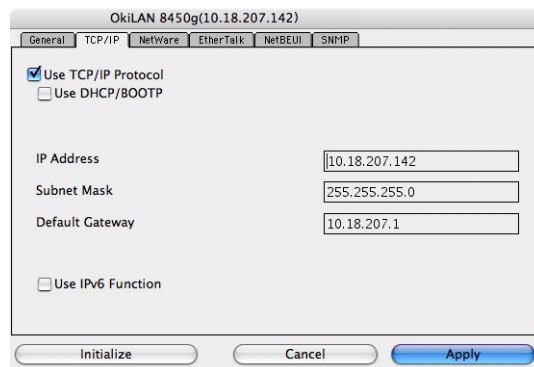

2. At the prompt, enter the Admin password.

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:A4:55:79, the password would be A45579.

---

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.

Printer status monitor

Displays the current status of the printer.

Printer NIC card summary/System status

Displays the network card summary details.

Change settings/Oki device setup

Use this to configure the network card settings (requires Admin password).

General Tab

The General tab allows you to change the admin password.
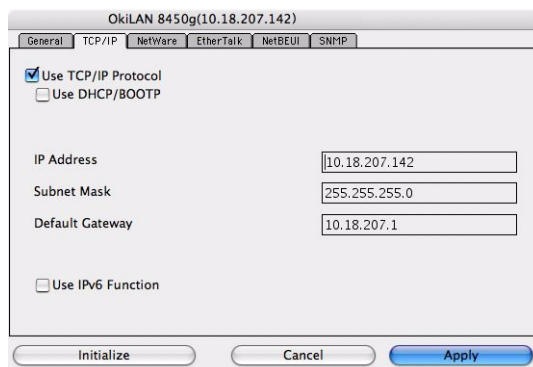
1. Click **Change**.

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:A4:55:79, the password would be A45579.*

3. Click **OK**.

4. Click **Apply**.

TCP/IP Tab

OkiLAN 8450g(10.18.207.142)

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: PSERVER 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

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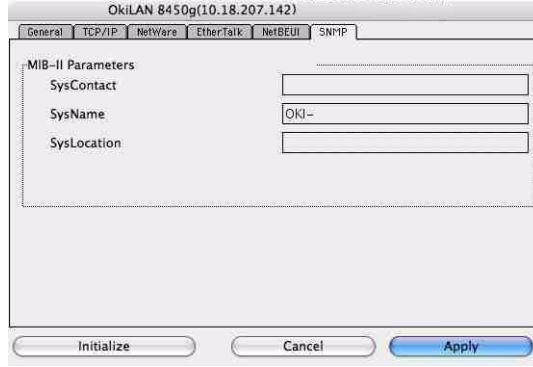
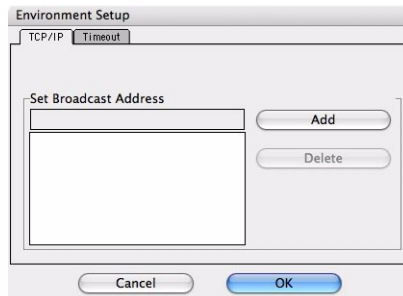| ITEM	COMMENTS
SysContact	Set the printer manager name.
SysName	Set the printer model name.
SysLocation	Set the location where the printer is installed.

Open web browser/Configuration via HTTP

Displays the printer web page.

Change utility preferences/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 *seconds*. **Retry (1-5)** Sets how many times AdminManager will retry to transmit/receive data to/from the network interface card. Default is 3 retrie*s*.

CONNECTING TO YOUR PRINTER

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**.
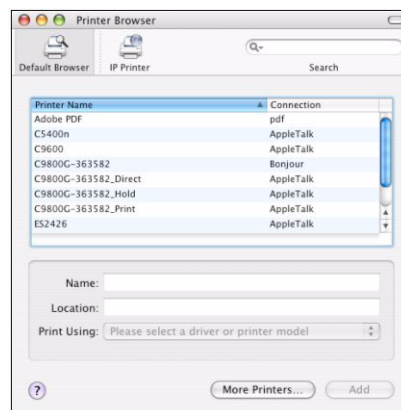
5. Enter the printer's IP address in **Address**.

   To find the printer's IP address, you can print a configuration page from the printer's operator panel. Refer to "Configuration settings" on page 7.

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.

TIGER (10.4)

Bonjour, AppleTalk or USB

1. Launch Printer Setup Utility

   This is located in the **Applications** > **Utilities** folder.

2. Click **Add...**.

3. Select your printer model from the Default Browser.

4. Click **Add**.

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

5. Quit Printer Setup Utility.

TCP/IP Connection

1. Launch Printer Setup Utility

   This is located in the **Applications** > **Utilities** folder.

2. Click **Add...**.

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**.
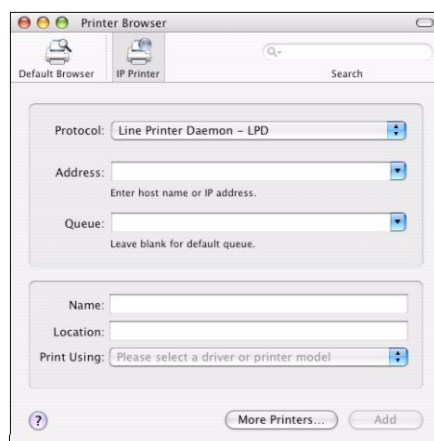
To find the printer's IP address, you can print a configuration page from the printer operator panel. Refer to "Configuration settings" on page 7.

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 hard disk or second tray, switch on the relevant options.

9. Click **Continue**.

10. Quit **Printer Setup Utility**.

PANTHER (10.3) AND JAGUAR (10.2)

Rendezvous

> *NOTE*
> > *This utility is called Print Center on Mac OS X 10.2.x.*
>
> > *If your printer is already listed, your Mac may already have discovered the printer before you installed the Oki software. In this case, the printer may be using the incorrect PPD file or may not have the correct hardware options configured. You should delete the printer, quit Printer Setup Utility, and re-launch the utility before continuing.*

If you have not already done so, run the Oki software installer before following the steps below.

1. Start the Printer Setup Utility.

This is located in the **Applications > Utilities** folder.

2. Click **Add…**.

3. From the pop-up menu, choose **Rendezvous**.

4. Select the printer you wish to connect to.

5. Click **Add**.

6. Click the Printer Setup Utility menu, and choose **Quit Printer Setup Utility**.

After adding the printer, you should configure printer hardware options. Refer to "Configuring printer hardware options" on page 54.

IP CONNECTION

If you have not already done so, run the Oki software installer before following the steps below.

1. Start the Printer Setup Utility.

This is located in the **Applications** > **Utilities** folder.

> *NOTE*
> *> This utility is called Print Center on Mac OS X 10.2.x.*
>
> *> If your printer is already listed, your Mac may already have discovered the printer before you installed the Oki software. In this case, the printer may be using the incorrect PPD file or may not have the correct hardware options configured. You should delete the printer, quit Printer Setup Utility, and re-launch the utility before continuing.*

2. Click **Add…**.

3. Click the pop-up menu and choose **IP Printing**.

4. Click the **Printer Type** menu and choose **LPD/LPR**.

5. Enter the printer's IP address.

To find the printer's IP address, you can print a configuration page from the printer's operator panel. Refer to the User's Guide for details.

The Configuration pages are printed. The printer's IP address is shown under the Network section on the left-hand side of the first sheet.

6. Enter the queue name. If you do not know the queue name, leave it as **Use Default Queue on Server**.

7. Click the pop-up menu and choose your printer model.

8. Click **Add**.

9. Click the Printer Setup Utility menu, and choose **Quit Printer Setup Utility**.

After adding the printer, you should configure printer hardware options. Refer to .

AppleTalk connection

If you have not already done so, run the Oki software installer before following the steps below.

1. Start the **Printer Setup Utility**.

This is located in the **Applications** > **Utilities** folder.

> *NOTE*
> *This utility is called Print Center on Mac OS X 10.2.x.*

2. Click **Add…**.

3. From the pop-up menu, choose **AppleTalk**.

4. Select the printer you wish to connect to.

5. Click **Add**.

6. Click the **Printer Setup Utility** menu, and choose **Quit Printer Setup Utility**.

USB connection

If you have not already done so, run the Oki software installer before following the steps below.

1. Start the Printer Setup Utility.

This is located in the **Applications > Utilities** folder.

> *NOTE*
> *> This utility is called Print Center on Mac OS X 10.2.x.*
>
> *> If your printer is already listed, your Mac may already have discovered the printer before you installed the Oki software. In this case, the printer may be using the incorrect PPD file or may not have the correct hardware options configured. You should delete the printer, quit Printer Setup Utility, and re-launch the utility before continuing.*

2. Click **Add Printer…**.

3. From the pop-up menu, choose **USB**.

4. Choose a printer to connect to.

5. Click **Add**.

6. Click the Printer Setup Utility menu, and choose **Quit Printer Setup Utility**.

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. Start the **Printer Setup Utility**.

This is located in the **Applications** > **Utilities** folder.

> *NOTE*
> *This utility is called Print Center on Mac OS X 10.2.x.*

Ensure that your printer model is selected.

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**.

PRINTING THE CONFIGURATION PAGE

The printer's configuration page reports information that is required for Macintosh configuration. Refer to "Configuration settings" on page 7 for details on how to print a configuration page.

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

> *NOTE*
> *Not all utilities are supported by every operating system. Please check with your support website for latest information.*

TROUBLESHOOTING

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

SELF-DIAGNOSTIC TEST

PRINTER DOES NOT PRINT

Ensure the printer emulation is set to *PS* or *Automatic*.

NG IS PRINTED IN THE SELF-DIAGNOSTIC TEST OR FLASH ROM CHECK REGISTERS NG

Turn the printer off for 15 seconds and then on again.

Press the reset button on the rear panel, close to the network interface to re-initialize it.

TCP/IP

COMPUTER CANNOT FIND THE NETWORK INTERFACE CARD

> 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.

> Check 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.

> Check the IP Address, Subnet Mask and Gateway are correct.

> Check 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

> 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.

INCORRECT USER NAME ON THE BANNER PAGE

If printing with *lpr*, the user name printed is unknown and the filename printed is the Spool file name.

If printing with FTP, the user name printed is the user name entered during FTP login and the file name printed is the transmitted file name. If the print directory name is indicated in the *put* command, the file name is not printed. The printer name printed is the logical directory name.

WEB BROWSER

To prevent your web browser caching the printer web pages, carryout 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.*
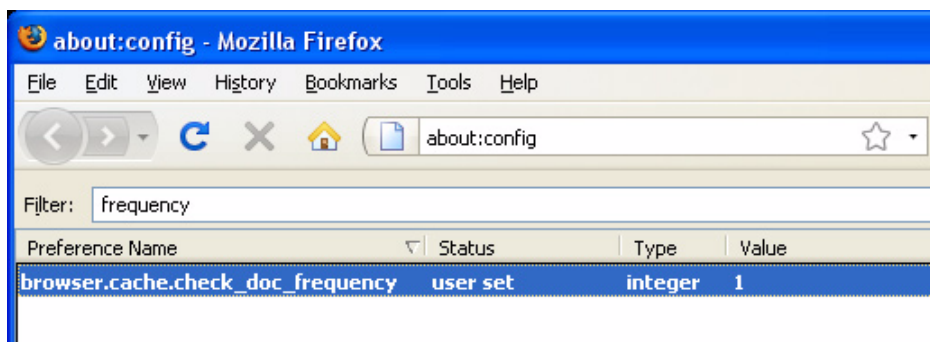
MICROSOFT INTERNET EXPLORER

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**.
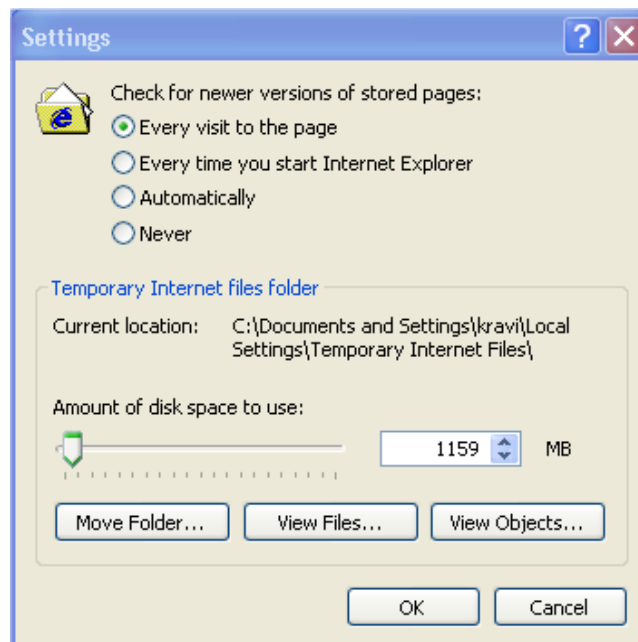
MOZILLA FIREFOX

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**.