Network Interface Board Type2000(Option)

Quick Configuration Guide

Read this manual carefully before you use this product and keep it handy for future reference.
For safety, please follow the instructions in this manual.

Introduction

This manual contains detailed instructions on the operation and maintenance of this machine. To get maximum versatility from this machine all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the Safety Information before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

Important

Parts of this manual are subject to change without prior notice. In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Trademarks

NetWare® is a registered trademark of Novell, Incorporated. Windows® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

Macintosh® is a registered trademark of Apple Computer, Incorporated.

All other products referenced are trademarks or registered trademarks of their respective companies.

Other product names used herein are for identification purposes only and might be trademarks of their respective companies. We disclaim any and all rights in those marks.

Warning:

Use of controls or adjustment or performance of procedures other than those specified in this manual might result in hazardous radiation exposure.

Notes:

Some illustrations might be slightly different from your machine.

Certain options might not be available in some countries. For details, please contact your local dealer.

How to Read this Manual

Symbols

In this manual, the following symbols are used:

⚛️Important

If this instruction is not followed, paper might be misfed, originals might be damaged, or data might be lost. Be sure to read this.

📝 Note

This symbol indicates precautions for operation, or actions to take after misoperation.

🔍Reference

This symbol indicates a reference.

【 　 】

Keys that appear on the machine's panel display.

Keys and buttons that appear on the computer's display.

【 　 】

Keys built into the machine's operation panel.

Keys on the computer's keyboard.

Features

The Network Interface Board Type 2000 includes the following features:

- 10/100 Mbps Ethernet Interface
- 10BaseT / 100BaseTX Auto Detection
- Multiple Protocol support
- HTTP Server for Management with a Browser
- DHCP Support for Automatic IP Address Assignment
- SNMP Support

The Network Interface Board Type 2000 enables printers to communicate over an Ethernet network with many different network operating systems, including NetWare, Macintosh, UNIX, and Windows.

The status page of the NIB will be automatically printed in the following cases:

- when the printer is turned on.
- when the NIB is reset.

This feature can be disabled with the MAP utility or by connecting to the NIB address with a browser.

To disable this feature, check **[Configure Status Page]** in the "Network Administration" screen, and remove the check from the box for **[Print Status Page on Start-up]**.

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Manuals for this Machine

This Guide's Role

This Quick Configuration Guide provides concise software configuration instructions allowing an experienced system administrator to get the NIB up and running quickly.

For more complete instructions or for printing or configuration options not covered in this guide, please refer to the Owner's Manual.

To ensure safe and efficient operation of the machine, all users should read and follow the instructions contained in the following manuals.

❖ **Quick Installation Guide**
   Describes the procedures for installing your printer.

❖ **Operating Instructions**
   Describes the procedures and necessary information on setting up and using your printer and its optional equipment. For information on setting IP parameters, see "Configuring the Printer for the Network with the Operation Panel" in this manual.

❖ **Network Interface Board Type 2000 Owner's Manual**
   Provides detailed software configuration instructions for the Network Interface Board Type 2000.

❖ **Network Interface Board Type 2000 Quick Configuration Guide**
   Provides concise software configuration instructions allowing an experienced system administrator to get the NIB up and running quickly. (This Manual)

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- Lesen Sie die deutsche Bedienungsanleitung, die zusammen mit dem Drucker ausgeliefert wurde und Installationsanweisungen in deutscher Sprache enthält. (Nur in Europa)

- Les instructions d'installation en français sont fournies dans le Manuel d'utilisation en français qui accompagne l'imprimante. (Europe uniquement)

- Per le istruzioni di installazione in Italiano, fare riferimento al manuale di istruzioni in Italiano fornito con la stampante. (Solo Europa)

- De Nederlandse installatie-instructies kunt u vinden in de Nederlandse gebruikshandleiding die bij de printer wordt geleverd (alleen Europa).

- Consulte el manual de instrucciones en español que se entrega con la impresora para saber cómo llevar cabo el proceso de instalación. (Sólo en el modelo europeo)

- Se den svenska användarhandboken som medföljer skrivaren för installationsanvisningar på svenska. (Enbart Europa)

- Se den norske håndboken som følger med skriveren for betjeningsinstruksjoner. Her finner du også installasjonsinstruksjoner på norsk. (gjelder bare Europa)

- For installationsvejledning på dansk. se da den danske betjeningsvejledning, der leveres med printeren (kun Europa)

- Katso suomenkielisiä asennusohjeita kirjoittimen suomenkielisestä käyttöohjeesta. (Vain Eurooppa)

- A nyomtató telepítésére vonatkozó magyar nyelvű utasítást a Használati utasítás kézikönyve tartalmazza. (Csak Európa)

- Viz český Návod k použití, který je součástí dodávky tiskárny a který obsahuje pokyny k instalaci v češtině. (Pouze v Evropě)

- Instrukcje dotyczące instalacji w języku polskim znajdziesz w polskim podręczniku "Instrukcja obsługi", który dostarczany jest razem z drukarką. (Tylko w krajach europejskich)

- Para as instruções de instalação em Português, consulte o manual de Instruções de Operação para Português que é juntamente fornecido com a impressora (só na Europa).

- Lesen Sie die im CD-ROM erhaltene Kurzanleitung für die Konfiguration der Netzwerk-Schnittstellenplatine. (Nur in Europa)

- Se référer au fichier sur le CD-ROM fourni avec l'imprimante pour consulter le Guide de Configuration Rapide pour La Carte Interface Réseau en français (Europe uniquement).

- Fare riferimento al file del CD-ROM fornito con la stampante per consultare la Guida rapida di configurazione per la Scheda di interfaccia di rete in italiano (solo in Europa).

- De file van de Configuratiewegwijzer voor de Netwerkinterfacekaart in het Nederlands kunt u vinden op de CD-ROM die bij de printer wordt geleverd (alleen Europa)

- Consulte el archivo en el CD-ROM que se entrega con la impresora para ver la Guía de configuración abreviada para la Tarjeta de interfaz de red en Español (sólo Europa)

- Se filen på den CD-ROM som medföljer skrivaren för snabbguiden för konfigurering av Network Interface Board på svenska. (Enbart Europa)

- Se filen på den CD-ROM som følger med skriveren for konfigurerings-veiledningen for Grensesnittkort for Nettverk på norsk. (gjelder bare Europa)

- For lynguiden til konfiguration af Netværkskort på dansk, se filen på den CD-ROM, der leveres med printeren. (kun Europa)

- Katso kirjoittimen mukana toimitetulta CD-ROMilta verkkokortin konfigurointitietoja suomeksi.(Vain Eurooppa)

- A magyar nyelvű hálózati interfész kártya gyors konfigurációs útmutatóját lásd a nyomtatóhoz tartozó CD ROM file-ban. (Csak Európa)

- Přečtěte si Stručný návod ke konfiguraci desky sít'ového rozhraní (v češtině) v souboru na CD-ROM, který je součástí dodávky tiskárny. (Pouze v Evropě)

- Skróconą instrukcję konfiguracji interfejsu sieciowego w języku polskim znajdziesz na pliku na CD-ROM-ie, który dostarczany jest razem z drukarką. (Tylko w krajach europejskich)

- Consulte o ficheiro no CD-ROM que vem juntamente com a impressora para ver o (só na Europa).

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1. Getting ready for the Software Installation

This CD-ROM contains the support programs for the installation and configuration for your printer's Network Interface Board Type 2000.

You can select any of the programs listed in the Configuration Programs.

Configuration Programs

The CD-ROM includes the following utilities.

❖ **MAP**
Web-based configuration utility.

❖ **IPX-Peer to Peer**
IPX Peer to Peer printing software

❖ **IP-Peer to Peer**
IP Peer to Peer printing software

❖ **BOOTP Lite**
Used to configure the IP parameters of the NIB

❖ **NWSetup**
NetWare Print Service Configuration

Accessing the Configuration Programs

A Insert the CD-ROM in the CD-ROM drive.

The main screen appears.

Note

❒ If Adobe Acrobat Reader 3.0 is not installed, click on **[Install Adobe Acrobat Reader 3.0]**.

B Click on [CD ROM Contents].

The "CD-ROM table of contents" screen appears.

C Click on [Installation/Configuration Programs].

The "Configuration Programs" screen appears.⟹ P.18 *"Installing Peer to Peer Printing (IP)"* , P.20 *"Installing Peer to Peer Printing (IPX)"*

2. NetWare® Configuration

NWSetup:NetWare Print Server Configuration

NWSetup lets you do the entire setup procedure for Novell NetWare and your NIB using only one program.

Note
❒ Make sure that the printer containing the NIB is on. If the target machine is powered down NWSetup will be unable to see the NIB.
❒ Be sure to turn the printer off and on after changing the network configuration.

This program combines the following configuration steps:

A **Lets you set up the Novell file servers and print servers for NetWare printing, instead of using NetWare utilities.**

B **Allows you to set up your printers with NIBs for network printing.**

Install NWSetup

A **Insert the CD-ROM in the CD-ROM drive.**

B **In Windows 95/98 or NT4.0, click on [Start] and select [Run].**

C **Type <Drive>:\Nwsetup\Setup.exe (where <Drive> is your CD-ROM) and click on [OK].**

D **The setup program installs the necessary files.**

Launch NWSetup

A **Click on [Start] on the Task bar, point to NwSetup.**

B **Click on the NWSETUP submenu.**

A list of Network Interface Boards is displayed.

Select a Print Server

From the list of Network Interface Boards.

⇒ Refer to online help for additional information about the fields on this screen.

A Double-click on the target NIB.

The first "Print Server Settings" screen appears.

Most of the fields will be configured automatically.

Fill in the following fields with the appropriate information.

❖ **Print Server Name**
The name that the NIB uses to log into NetWare.

❖ **Print Queue Scan Rate**
The number of seconds the NIB waits before polling print queues for a new print job.

❖ **Ethernet Frame Type**
Sets the default frame type that is used by the NetWare protocol stack.

❖ **Print Server Password**
Asterisks in this field indicate that a password is needed to log into Net-Ware and the Network Interface Board.

❖ **Change Password**
Clicking on this button brings up a dialog box allowing you to set or change the password.

B Click on [Next] to continue.

The second "Print Server Settings" screen appears.

Again, most of the fields will be configured automatically.

Fill in the following fields with the appropriate information.

❖ **Enable NDS Mode**
Indicates whether or not the NIB supports Directory Services.

❖ **Preferred NDS Context**
The NDS directory context which the NIB uses to login to the network.

❖ **Preferred NDS Tree**
The NDS tree which the NIB uses to login to the network.

❖ **Enable Bindery Mode**
Determines whether the NIB services the network in Bindery mode.

*⁄ **Note**
❒ If this field is not enabled, then the Primary Server field will not be enabled.

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❖ **Primary File Server**
Specifies the file server that the NIB uses as the primary file server.

C **Click on [Next] to continue.**
The "Port 1" screen appears.

Creating and Adding the Print Queues

Most of the fields will be configured automatically.

Edit the following fields with the appropriate information.

⇒ Refer to online help for additional information about the fields on this screen.

A **From the Port 1 screen.**

❖ **Enable Printer box**
Click to place a check in this box. If it is not checked, the remaining screens will not be enabled.

❖ **Printer Name**
The name of the printer. Note: this is a read only field.

❖ **Queues Serviced by Printer**
This field contains a list of queues that are serviced by the printer.

B **Click on [Add Queue] to add a queue.**
The Add Queue to Printer screen appears.

❖ **Connection/Server**
This list menu is used to select a server connection.

❖ **Context**
This field allows you to specify an NDS context for the queue.

❖ **Queue**
Lists all of the queues available on the currently selected connection.

C **Click on [Create Queue] to create a new queue.**
The Create Queue screen appears.

❖ **Queue Name**
Input the name of the new queue.

❖ **File Server Volume**
The volume in which the queue will be created.

❖ **NDS Context**
The context in which the queue will be created.

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D **Click on [OK] to finish creating the new queue.**

Return to the Add Queue to Printer screen.

E **In the Add Queue to Printer screen in the Queue field you can see the queue that you just created.**

F **Select the new queue and click on [OK].**

The queue is added and you return to the Port 1 screen.

Add a New User or Group

Most of the fields will be configured automatically.

Fill in the following fields with the appropriate information.

⇒ Refer to online help for additional information about the fields on this screen.

A **In the Port 1 screen, click on [Add User].**

The "Add User/Groups" screen appears.

❖ **Connection**
This lists all of the file servers that you can connect to.
Select the appropriate connection.

❖ **NDS Context**
Specifies the NDS context to use when generating a list of users.

❖ **Users/Groups**
Lists the users and groups available on the currently selected connection.
Select the user/group that you want to add.

❖ **Delay in seconds for first message**
Indicates how long the NIB should wait before sending a notification message that an error condition has been detected.

❖ **Delay in seconds for repeat messages**
Indicates how long the NIB should wait before sending a repeat notification of an error condition.

✐ **Note**
❒ The NIB supports notify function only in Bindery Mode.

B **Click on [OK] to apply the settings.**

Return to the Port 1 screen.

The users/groups that you selected will be visible in the Users/Groups Notified by Printer field.

Configure the Notify Settings

Most of the fields will be configured automatically.

Fill in the following fields with the appropriate information.

⇒ Refer to online help for additional information about the fields on this screen.

A In the Port 1 screen, double-click on an item in the Users/Groups Notified by Printer field.

The Notify Settings screen appears.

Use this screen to set up the notify function for a user or group.

❖ **User/Group name**
This is the name of the current user/group.
This is a read only field.

❖ **Delay in seconds for first message**
Indicates how long the NIB should wait before sending a notification message that an error condition has been detected.

❖ **Delay in seconds for repeat messages**
Indicates how long the NIB should wait before sending a repeat notification of an error condition.

✐ **Note**
❒ The NIB supports notify function only in Bindery Mode.

B Click on [OK] to apply these settings.

Return to the Port 1 screen.

C Click on [Next] to Continue.

The Setup Complete screen appears.

D Click on [Finish] to apply and save the configuration settings.

PCONSOLE:NetWare Print Server Configuration

NetWare 3.x Configuration

Login as Supervisor and start PCONSOLE.

✎ Note

❒ Be sure to turn the printer off and on after changing the network configuration.

Define the Print Queue

A **If a Print Queue already exists which will be assigned to the printer skip to step B.**

The Available Options menu is the first menu to appear.

B **Select Print Queue Information and press the 【ENTER】 key.**

The Print Queue menu appears.

C **Press the 【INSERT】 key.**

D **Type a name for the new queue to be serviced by the NIB and press the 【ENTER】 key.**

E **Press the 【ESC】 key to return to the Available Options screen.**

Define the Print Server

A **From the Available Options Menu, select Print Server Information and press the 【ENTER】 key.**

The Print Servers screen appears.

B **Press the 【INSERT】 key.**

C **Type the NIB Print Server name and press the 【ENTER】 key.**

The Print Servers screen appears.

✎ Note

❒ The default Printer Server name is RDP_ followed by the six-digit serial number of the NIB, e.g. RDP_123456.

❒ The serial number is listed on the bottom of the NIB and is displayed on the NIB box.

❐ If the NIB has already been installed, the Novell Print Server Name can be found on the power-up network status page under Novell Network Information.

Define the Printer

A **From the Print Servers screen. Select the name of the new print server and press the 【ENTER】 key.**

The Print Server Information screen appears.

B **Select Print Server Configuration menu and press the 【ENTER】 key.**

C **Select Printer Configuration and press the 【ENTER】 key.**

D **Select Printer 0 and press the 【ENTER】 key.**

The Printer 0 configuration screen appears.

E **Select the Type field and press the 【ENTER】 key.**

The Printer Types screen appears.

F **Select Remote/Other Unknown and press the 【ENTER】 key.**

The Printer 0 configuration screen appears.

G **Press the 【ESC】 key to exit.**

H **Select Yes and press the 【ENTER】 key to save the changes.**

I **Press the 【ESC】 key to return to the Printer Server Configuration menu.**

Assign the Print Queue

A **From the Printer Server Configuration menu select Queues Serviced by Printer and press the 【ENTER】 key.**

The Define Printers screen appears.

B **Select the desired printer and press the 【ENTER】 key.**

A new screen appears.

C **Press the 【ENTER】 key.**

The Available Queues screen appears.

D **Select the queue and press the 【ENTER】 key.**

E **Input a priority level. (level 1 is recommended).**

F **Press the 【ESC】 repeatedly until the Exit confirmation screen appears.**

G **Select Yes and then press the 【ENTER】 key to exit PCONSOLE.**

NetWare 4.x Configuration

Login as Supervisor and start PCONSOLE.

Note

❒ Be sure to turn the printer off and on after changing the network configuration.

Define Print Queue

A **From the Available Options Menu, select Print Queues and press the 【ENTER】 key.**

The Print Queues screen appears.

B **Press the 【INSERT】 key.**

C **Input the name of the new Print Queue and press the 【ENTER】 key.**

D **Input the volume name where the print queue will reside and press the 【ENTER】 key.**

If you want to browse for a volume, press the 【INSERT】 key.

E **A list of volumes appears. Select the volume you want to use and press the 【ENTER】 key.**

You are returned to the Print Queues screen, and the new queue is visible.

F **Press the 【ESC】 key to return to the Available Options screen.**

Define the Print Server

A **From the Available Options screen, select Print Servers and press the 【ENTER】 key.**

The Printer Servers screen appears.

B **Press the 【INSERT】 key.**

C **Input the NIB print server name and press the 【ENTER】 key.**

Note

❒ The default Printer Server name is RDP_ followed by the six-digit serial number of the NIB, e.g. RDP_123456.

❒ The serial number is listed on the bottom of the NIB and is displayed on the NIB box.

❒ If the NIB has already been installed, the Novell Print Server Name can be found on the power-up network status page under Novell Network Information.

D **You are returned to the Print Servers screen, and the new server name is visible.**

E **Press 【ESC】 to return to the Available Options screen.**

Define the Printer

A **From the Available Options screen, select Printers and press the 【ENTER】 key.**

The Printers screen appears.

B **To add a new printer, press the 【INSERT】 key.**

C **Input the name of the new printer and press the 【ENTER】 key.**

D **You are returned to the Printers screen, and the name of the new printer is visible.**

E **Select the Printer you wish to define and press the 【ENTER】 key.**

The Printer configuration screen appears.

Fill in the fields according to the specifications of the printer.

Assign the Print Queue

A **From the Printer configuration screen select Print queues assigned and press the 【ENTER】 key.**

The Print Queue screen appears.

B **Press the 【INSERT】 key.**

The Object, class screen appears

C **Select the printer queue to be added and press the 【ENTER】 key.**

D **You are returned to the Print Queue screen, the printer queue that you selected is now visible on this list.**

E **Press the 【ESC】 key repeatedly until the Exit confirmation screen appears.**

F **Select Yes and then press the 【ENTER】 key to exit PCONSOLE.**

Configuring the IP/IPX MAP Utility

1 **Click on [Start] on the Task bar.**

2 **Point to Programs.**

3 **Point to MAP and select MAP Setup.**

Map Setup dialog appears.

4 **Select the appropriate boxes to choose IP or IPX based printers.**

5 **Input the maximum number of hops for IP Search.**

6 **Click on [OK] to close this dialog box.**

3. Windows 95/98 Configuration

What is Windows 95/98 Peer to Peer Printing?

The peer to peer printing software that is included with the NIB allows Windows 95/98 PCs to communicate directly with network attached printers. A network server, such as NetWare or Windows NT, is not required for peer to peer printing.

The peer to peer printing software must be installed on each PC that will use peer to peer printing. Once peer to peer printing software is installed, all NIBs on the network automatically appear in the list of available printer ports.

The peer to peer printing software can also be used in networks where servers are present; however, often the server print services are utilized instead. Server based print services offer centralized printing management and spooling and do not require software (other than the printer driver) to be installed on each PC.

🖉 Note
❒ Be sure to turn the printer off and on after changing the network configuration.

🔎 Reference
For information on setting IP parameters, see "Configuring the Printer for the Network with the Operation Panel" in the Operating Instructions that comes with your printer.

Installing Peer to Peer Printing (IP)

The IP Protocol is required for peer to peer printing.

IP is not installed by default when Windows 95/98/NT is first installed, but it can be easily.

A **Insert the CD-ROM in the CD-ROM drive.**

The main screen appears.

✎ **Note**

❒ If Adobe Acrobat Reader 3.0 is not installed, click on **[Install Adobe Acrobat Reader 3.0]**.

B **Click on [CD ROM Contents].**

The "CD-ROM table of contents" screen appears.

C **Click on [Installation/Configuration Programs].**

The "Configuration Programs" screen appears.

D **Click on [Windows 95 and NT IP Peer to Peer Printing].**

The "Windows 95/98 and NT IP the Peer to Peer Printing" screen appears.

This screen describes the functions of this utility.

E **At the bottom of the screen, click on the blue word "here" to begin installing.**

The "Welcome" screen appears.

F **Click on [Next] to continue.**

The "Installation Notes" screen appears.

G **Click on [Yes] to continue installation.**

The "Choose Destination Directory" screen appears.

H **Click on [Browse] to set a different directory.**

The default installation folder is C:\PROGRAM FILES\P2P-IP.

I **Click on [Next] to continue.**

The "Select Program Folder" screen appears.

This allows you to set the name of the folder that contains the shortcut links inside the Program Folder.

J **Input the name that you wish to see in the Program Folder and click on [OK].**

The files are then copied to your computer in the specified directories.

The "Information" screen appears.

⓫ Click on [OK] to complete the installation.

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☼For manual installation

Follow these steps to install the software on your operating system (Windows95/98 or NT 4.0).

① Insert the CD in the CD-ROM drive.

② Close all the applications that are currently running.

③ Click on **[Start]** on the task bar, and click on **[Run]**.

④ Type <Drive>:\IP-p2p\Setup.exe (where <Drive> is your CD-ROM).

⑤ Click on **[OK]**.
   The "Welcome" screen appears.

The remaining steps are identical to ⓰- ⓫ above. ⇒ P.18 *"Installing Peer to Peer Printing (IP)"*

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Installing Peer to Peer Printing (IPX)

The IPX Protocol is required for peer to peer printing.

IPX is not installed by default when Windows 95/98/NT is first installed, but it can be easily.

A **Insert the CD-ROM in the CD-ROM drive.**

The main screen appears.

> Note
> ❒ If Adobe Acrobat Reader 3.0 is not installed, click on **[Install Adobe Acrobat Reader 3.0]**.

B **Click on [CD ROM Contents].**

The "CD-ROM table of contents" screen appears.

C **Click on [Installation/Configuration Programs].**

The "Configuration Programs" screen appears.

D **Click on [Windows 95 and NT IPX Peer to Peer Printing].**

The "Windows 95/98 and NT IPX Peer to Peer Printing" screen appears.

This screen describes the functions of this utility.

E **At the bottom of the screen, click on the blue word "here" to begin installing.**

The "Welcome" screen appears

F **Click on [Next] to continue.**

The "Installation Notes" screen appears.

G **Click on [Yes] to continue installation.**

The files are then copied to your computer in the specified directories.

The "Installation Complete" screen appears.

H **Click on [Finish] to complete the installation.**

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❈For manual installation

Follow these steps to install the software on your operating system (Windows95/98 or NT 4.0).

① Insert the CD in the CD-ROM drive.

② Close all the applications that are currently running.

③ Click on **[Start]** on the task bar, and click on **[Run]**.

④ Type <Drive>:\IPX-p2p\Setup.exe (where <Drive> is your CD-ROM).

⑤ Click on **[OK]**.
The "Welcome" screen appears.

The remaining steps are identical to 🖪 - 🖪 above. ⇒ P.20 *"Installing Peer to Peer Printing (IPX)"*

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Select the Printer Port

The peer to peer printing software should be installed on each Windows 95/98/ NT 4.0 PC that will use peer to peer printing services.

If the printer driver has not already been installed, please install it before continuing with the following instructions.

⚡Important

❐ The printer driver must be installed before selecting the printer port.

A **Use the Add Printer Wizard to add a LOCAL printer.**

B **Use the drivers that come with the printer.**

C **When the Add Printer Wizard asks you to select a port select the name of the printer that you want to use.**

D **Select the Print Test Page option when you complete the installation.**

✎ Note

❐ The default name for IPX is in the format RDP_ and the serial number of the NIB, e.g. RDP_167532.

❐ The default name for IP is displayed by the IP address of the NIB.

Peer to peer printing configuration is complete.

Print jobs will now be directed to the NIB when the current printer driver is used.

4. Dynamic Host Configuration Protocol (DHCP)

Dynamic Host Configuration Protocol (DHCP)

If you prefer to use DHCP for IP address assignment, it can be enabled with the MAP utility or by connecting to the NIB address with a browser. The enable/ disable DHCP setting may be found in the Setup TCP/IP section under the Protocols heading.

The Dynamic Host Configuration Protocol (DHCP) provides a mechanism for delivering IP configuration parameters, including IP address, Subnet mask and default gateway, to devices (hosts) on an IP network. A DHCP server manages the pool of available IP addresses and grants device requests for an IP address.

At power-up, the NIB broadcasts a DHCP request for an IP address. If a DHCP server is present the request will be processed, and an IP address will be returned to the NIB. Upon receipt of the IP address, the NIB resets, and prints a network status page. The network status page will list the new IP address (and Subnet mask and default gateway). Once an IP address has been assigned to the NIB; it will no longer broadcast DHCP requests.

⚠️**Important**

❒ NIB IP address assignment with DHCP will only work when the NIB does not have an existing IP address.

The DHCP server may grant a temporary IP address, called a temporary lease or temporary reservation, which expires after a period, or may grant a permanent or unlimited lease or reservation which does not expire.

Devices that are granted a temporary lease will be notified before the lease expires and asked if they would like to extend the lease. The NIB will continue extending its lease indefinitely (unless prohibited by your DHCP server configuration) and thus maintain a consistent IP address.

⚠️**Important**

❒ If the NIB is not turned on or is not connected to the network during the period when the DHCP server is sending requests to extend the lease, the lease will not be extended. The DHCP server will cancel the lease and may assign the IP address to another device. Therefore, it is highly recommended to explicitly specify the NIB lease as permanent or unlimited in your DHCP server configuration.

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5. Windows NT Configuration

Windows NT Configuration

There are several options for setting up printing in a Windows NT environment.

- If a NetWare server is present, NetWare print services may be used by following the NetWare Configuration instructions in this guide.
- Peer to peer print services may be used by following the Windows 95/98 instructions in this guide, but are only available for Windows NT 4.x, not for Windows NT 3.51.
- LPR print services may be used via TCP/IP by following the instructions in this section.

Windows NT printing is very flexible. It is possible to configure the individual Windows NT or Windows 95/98 workstations to print using a different protocol than the Windows NT server. For example, a Windows NT server could be configured to print to a NIB via TCP/IP using the instructions in this section. The NIB could then be designated as shared on the NT server, allowing workstations to print via the NT server using a different protocol (such as the default Net-BEUI).

The Optimum Windows NT printing configuration depends upon the particular environment and user and administrator experience and preferences. Generally, the LPR printing over TCP/IP covered in the following instructions is the best choice for environments where TCP/IP is already in use.

Note
❐ Be sure to turn the printer off and on after changing the network configuration.

TCP/IP Required Components

The Windows NT system performing the NIB configuration must have the TCP/IP protocol installed. The following steps describe how to check for and, if necessary, add the required TCP/IP components.

Windows NT4.0

A **Click on the Windows [Start] button; select Settings and Control Panel.**

B **Double click on Network and select the Protocols tab.**

If TCP/IP Protocol is not in the list of Network Protocols, click on Add to install it.

C **Select the Services tab.**

If either Microsoft TCP/IP Printing or Simple TCP/IP Services is not on the list of Network Services, click on **[Add]** to install them.

D **Click on [Close] when all protocols and services have been added.**

If the TCP/IP protocol has just been added, Windows will prompt for the IP address and other TCP/IP parameters.

The new protocols and services will not be available until the system is restarted.

NIB TCP/IP Configuration

A utility called BOOTPL32 is used to configure the IP parameters on the NIB.

Note
❒ The BOOTPL32 utility does not work on a system configured as a DHCP server.

🔎 Reference
For information on setting IP parameters, see "Configuring the Printer for the Network with the Operation Panel" in the Operating Instructions that comes with your printer.

A Insert the CD-ROM included.

B In Windows NT 4.0, click on the Windows Start button and select Run.

C Type <Drive>:\MAP\BOOTPL32.EXE (where <Drive> is your CD-ROM) and click OK to launch the utility.

D Select Configure from the Admin menu.

❶ **Enter the IP parameters.**

❷ **Enter the IP address to assign to the NIB.**

❸ **Enter the Subnet mask.**

If unsure of the correct Subnet mask and the first number in the IP address is from 192 to 254, then use 255.255.255.0 as the Subnet mask.

❹ **Enter the Default Gateway address (the router's IP address) or leave blank.**

❺ **Enter the Hardware address of the NIB.**

This address is listed on the power-up network status page under Network Address, for example, 00:40:AF:12:34:23.

Please enter it as it appears on the status page.

The status pages (a printer status page NIB) may also be printed using the front panel of the printer.

E Click on Go to send the new settings to the NIB.

After a few minutes (usually between 1 and 2 minutes, but possibly up to 5 minutes on very large or busy networks), the NIB will reset and print its network status page.

The new IP parameters will be listed in the TCP/IP Network Information section of the status page.

If the status page doesn't print, recheck the Hardware Address entry in BOOTPL32.

Once the status page prints, the new IP address may also be verified by selecting Verify from the Admin menu.

Setting Up LPR Printing

If the printer driver has not already been installed, please install it before continuing.

In the following instructions, some field or dialog names may vary depending on the NT release pack in use.

Windows NT4.0

1 **Click on the Windows Start Button and select Settings, and the Printers.**

2 **Right click on the appropriate printer and select Properties.**

3 **On the Ports tab, click on Add Port.**

4 **Double click on LPR Port in the list of available printer ports.**

5 **In the Name or address of host providing lpd: field, enter the IP address of the NIB (that was assigned with BOOTPL32).**

6 **In the Name of printer or print queue on that server: field, enter PORT1 and click on [OK].**

7 **Click on Close to close the Printer Ports dialog.**

The NIB IP address is now displayed and currently selected on the list of ports.

8 **If the printer is to be shared, click on the Sharing tab, select Shared and enter the Share name.**

9 **Click on [OK] when finished.**

Selecting a Shared Printer

This section briefly describes the steps for setting up client access to a shared printer.

❖ **Windows 95/98**
In the Printer Properties on the Details tab, click the Add Port button and browse the network for the shared printer.

❖ **Windows NT4.0**
Add a new printer (with Add Printer), select Network Printer Server rather than My Computer and choose the shared printer from the shared printers list.

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UNIX Configuration

UNIX printing utilizes a line printer daemon (lpd) to direct jobs to the printer. With printer-based lpd, the NIB acts as the line printer daemon host and accepts print jobs directly.

TCP/IP configuration of the NIB is needed for all versions of UNIX. Please refer to the NIB Owner's Manual for lpd configuration.

✐ Note
❒ Be sure to turn the printer off and on after changing the network configuration.

₽Reference
For information on setting IP parameters, see "Configuring the Printer for the Network with the Operation Panel" in the Operating Instructions that comes with your printer.

Setting the IP Address

The NIB IP address may be initially set in a variety of ways; including with the MAP utility when a NetWare server is present, with the UNIX bootp daemon, with rarp, or with the standard UNIX command line utility, arp.

The following instructions use arp, but the other methods may be used instead, depending on user preference.

For directions on using one of the other methods, please refer to the NIB Owner's Manual.

1 **Turn the printer off and then on and wait for the power-up network status page to print.**

2 **Add an entry to the hosts file (usually etc/hosts) that includes the printer's name and the IP address.**

For example, to name the printer and associate it with an IP address of 197.42.211.5, place the following entry in the hosts file:197.42.211.5 <Printer-Name>

3 **At the UNIX command prompt,**

type: arp -s <desired_IP_address> <NIB_Ethernet_address>

(The Ethernet address is listed on the network status page as Network Address.)

For example, arp -s 197.42.211.5 00:40:AF:13:A2:70

D At the UNIX command prompt, type: ping <desired_IP_address>

For example, ping 197.42.211.5 The NIB will not respond to this ping command, but will read the IP address.

E After a few minutes (usually between 1 and 2 minutes, but possibly up to 5 minutes on very large or busy networks), the NIB will reset and print its network status page.

The new IP address will be listed in the TCP/IP Network Information section.

If the status page doesn't print, recheck the NIB's Ethernet address entry in the arp command.

Once the status page prints, the new IP address may also be verifies with the ping command.

Setting Other TCP/IP Parameters

Once the IP address is set, the NIB can be configured via telnet or with a standard web browser.

The following steps describe configuration with a standard browser.

For instructions of configuring via telnet, refer to the NIB Owner's Manual.

A In the browser, connect to http://<NIB_IP_address>

For example, http://197.42.211.5

B At the NIB's Home Page, click on Network Configuration.

C Many of the configuration options are password protected.

The default password is: sysadm

The password is case sensitive.

To change the password, select Change Password in the System column.

D Select Setup TCP/IP in the Protocols column and change the settings as appropriate.

If unsure of the correct Subnet mask, and the first number in the NIB's IP address is from 192 to 254, then use 255.255.255.0 as the Subnet mask.

E Type the sysadm password in the appropriate box and click Accept Settings.

After a few seconds, the screen should report that the update was successful.

Click the Back Arrow icon twice to return to the Network Configuration page.

F Optional: Click on Configure Status Page in the Printer column to define power-up status page settings, e.g. disabling the power-up status page.

G The changes made to the NIB do not take effect until the unit is reset.

Click on Reset in the System column and click Reset Unit.

After a few seconds the screen should report that the unit was reset.

TCP/IP configuration is now complete.

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