Installation and Setup Guide   *Part No. 1H9613*

KODAK Network Interface Card

KODAK XLS 8400 PS Printer
KODAK XLS 8600/8600 PS Printer

KODAK DIGITAL SCIENCE^M **8650/8650 PS Color Printer**

KODAK DIGITAL SCIENCE^M **Desktop Color Proofer 9000**

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About this Guide

This guide provides information about installing and configuring the KODAK Network Interface Card (Network Interface Card) with the following printers:

- KODAK XLS 8400 PS Printer

- KODAK XLS 8600/8600 PS Printer

- *Kodak Digital Science*^{TM} 8650/8650 PS Color Printer

- *Kodak Digital Science*^{TM} Desktop Color Proofer 9000

NOTE: *The Kodak Digital Science*^{TM} Desktop Color Proofer 9000 is shipped with its own user's guide. Refer to the user's guide for the proofer for details on hardware configuration, illustrations of the proofer, and instructions for using the operator control panel. This generic guide should suffice, however, for jumper settings and functional configuration details for the proofer.

This guide is intended for system administrators or others responsible for configuring, maintaining, and troubleshooting computers and peripherals in networked environments. It assumes an understanding of networking and experience working with Macintosh, Windows and/or UNIX platforms.

This guide does not describe how to operate the printer or proofer. For this information, refer to the appropriate user's guide.

Using this Guide

This guide is structured to walk a system administrator through networked printer installation procedures using one or more IPX, AppleTalk or TCP/IP protocols. The various sections take the administrator through installing hardware and software, installing printer driver/export software for PostScript and Raster modes of operation, and the specifics that are relevant to each workstation platform. There are additional sections for general printing information as well as troubleshooting techniques.

1 *Feature Overview*

Network Interface Card Features

The Network Interface Card connects printers directly to Ethernet™ networks utilizing IPX, AppleTalk, and TCP/IP protocols in support of Novell® NetWare® 3.x, Netware® 4.x, MS-DOS, Windows 3.x, Windows 95, Windows NT 3.51, Windows NT 4.0, UNIX BSD and UNIX System V environments. Connectivity is accommodated by 10BaseT or 10Base2 Ethernet cabling.

After you install the Network Interface Card, you can print using the print utilities or drivers standard to your network type along with Kodak supplied PostScript printer drivers for PostScript mode printing and/or Adobe Photoshop Export Module drivers for Raster mode printing. For other possible solutions, refer to "Getting Help."

The Network Interface Card has the following features:

- Connects printers directly to Ethernet networks.

- Uses 10BaseT (RJ-45/twisted pair) or 10Base2 (BNC/coax/ThinNet) Ethernet cabling for network connectivity.

- Simultaneously supports NetWare IPX, TCP/IP, and AppleTalk protocols.

- Prints directly to the networked printer from Macintosh, Windows NT 3.51, Windows NT 4.0, UNIX BSD, and UNIX System V platforms.

- Prints indirectly to the networked printer from Macintosh, MS-DOS, Windows 3.x, Windows 95, Windows NT 3.51, Windows NT 4.0, UNIX BSD, UNIX System V and VMS platforms with the assistance of Novell NetWare, 3.x, Novell Netware 4.x, Windows NT 3.51, Windows NT 4.0, UNIX BSD, and/or UNIX System V servers.

Features of the Network Interface Card with Novell NetWare

- Is defined as a standard NetWare interface and is accessed with NetWare print utilities.

- Configures servers and queues using PCONSOLE.

- Uses standard NetWare print utilities

- Services up to 16 queues on 16 NetWare file servers

Features of the Network Interface Card with AppleTalk

AppleTalk protocol may be used by Macintosh, Novell, and Windows NT systems.

NOTE: Printing in raster mode using AppleTalk is possible from a Macintosh only.

- From the Macintosh, the Network Interface Card operates as an AppleTalk node on Ethernet. The printer emulates a LaserWriter. In PostScript mode, select the printer from the Chooser, and print to it as if printing to a LaserWriter. In Raster mode, select the printer from the export module, and print to it.

- For non-Macintosh systems using AppleTalk, only PostScript printing is supported. Raster mode printing can only be accomplished with IPX or TCP/IP print queues.

The following are features of the Network Interface Card when it is used with AppleTalk:

- Operates as an AppleTalk node on Ethernet.

- Emulates a LaserWriter in PostScript mode. Advertises itself as a Kodak_Raster device in Raster mode.

- Supports both EtherTalk Phase 1 and Phase 2.

- Operates in multizone networks.

- Supports printing indirectly for AppleTalk networks connected with routers to Ethernet networks.

- Supports printing indirectly for AppleTalk networks connected with routers to Ethernet networks.

- Supports Apple's LaserWriter drivers versions 7.1 and above as well as the Adobe drivers.

- Supports the standard AppleNamer utility.

- Plug and play installation if you use the default settings.

Features of the Network Interface Card with TCP/IP

- The Network Interface Card was designed as a direct network interface for printers in TCP/IP environments with systems that support the line printer daemon (lpd). The card works with UNIX systems, Windows NT, Windows PC/TCP compatible software such as PC/TCP FTP, and VMS^{TM} systems that support lpd.

- Systems that support TCP/IP and lpd can print to the card using lpr/lp commands. Systems can be configured using an LPR port, an IP address, and a queue named ps.

- The Network Interface Card supports both PostScript and Raster Mode printing with TCP/IP.

- Kodak does not develop PostScript drivers or export modules for UNIX platforms. However, other vendors do provide solutions in support of Kodak printers which support various UNIX, Windows, and Macintosh platforms and interfaces. For more information, refer to the Kodak web site at http://www.kodak.com. Look for information under Product Information/Technical Information/System & Software Solutions, and search by product category.

Network Interface Card/Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card/printer, the workstation platform(s) that will be used for creating and sending print jobs to the printer, and any servers that will be used to spool and manage jobs sent to corresponding printer queues.

Section 2: Install the hardware for the Network Interface Card in the Kodak printer.

Section 3: Install the software for the Network Interface Card.

NOTE: It is not necessary to install any software for the Network Interface Card for AppleTalk.

Section 4: Configure network printer parameters if necessary. Some are programmable from the printer's front display/control panel, and others are programmable by downloading PostScript language command files.

NOTE: We recommend that you use the default parameters initially until the printer functions on your network.

Section 5: Determine printer modes of operation (PostScript and or Raster) to be used based on the model of printer that was purchased. Install corresponding PostScript and/or Raster mode software. Refer to appropriate platform specific sections based on their anticipated use as print servers and/or user workstations.

For print servers (indirect printing), configure the printer on a pertinent server platform using the desired protocol.

For user workstations, configure the printer to use a server's print queue (indirect printing), or to print directly (direct printing) if possible to the printer using the desired protocol.

2 Installing the Hardware

You may choose to have Kodak Service install the Network Interface Card in the printer for a fee. This fee covers hardware installation only; network setup tasks are still your responsibility.

If you want to install the Network Interface Card yourself, instructions are provided in this section. You are responsible, however, for any damage that occurs if you install the Network Interface Card yourself.

NOTE: *The Kodak Digital Science*^{TM} Desktop Color Proofer 9000 is shipped with its own user's guide for the Network Interface Card. Refer to that guide for hardware configuration details, illustrations of the proofer, and instructions for using the operator control panel.

Package Contents

The following items are included in the package for the Network Interface Card. This package does not include Macintosh or Windows PostScript drivers or Raster export modules. This software is included with the purchase of each printer.

- Network Interface Card
- 3.5 inch diskette - Utilities for Novell NetWare
- 3.5 inch diskette UNIX TCP/IP Utilities.

NOTE: This UNIX tar formatted disk cannot be read on a PC platform.

- antistatic strap
- User's Guide
- 2 labels with the Ethernet hardware address

Requirements

To install the Network Interface Card, you need the following:

- appropriate Ethernet cabling
- Phillips-head screwdriver

Getting Ready to Install the Network Interface Card

Before you install the Network Interface Card, do the following steps:

1. Write the Ethernet address needed for the installation in the space provided below. It is located on the underside of the Network Interface Card, on the front of the bracket, and on the box the card is shipped in.

    Keep this guide handy in case you need to reconfigure or add more printers to your system.

    00 40 C8 __ __ __ __ __ __

2. Turn off and unplug the printer.
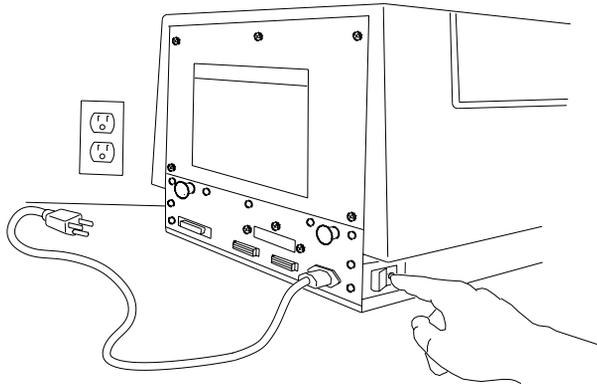
3. Attach the wrist portion of the antistatic strap to your wrist. Attach the other end of the strap to the metal plate on the back of the printer.
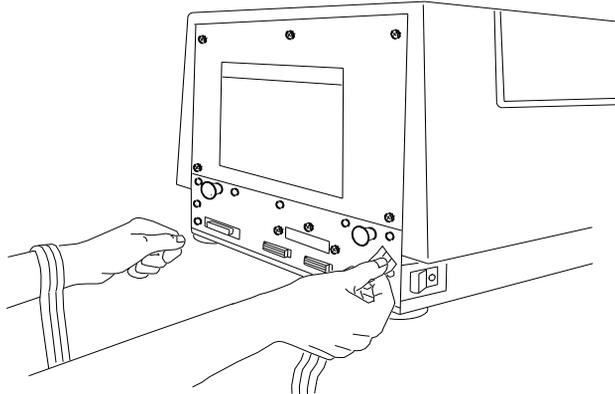
CAUTION: **Wear the antistatic strap when you open the back of the printer, remove the Network Interface Card from the antistatic bag, and install the card in the printer. Wearing the antistatic strap helps to prevent damage to the printer and the Network Interface Card.**

4. Using the Phillips-head screwdriver, remove the five screws on the back of the printer.
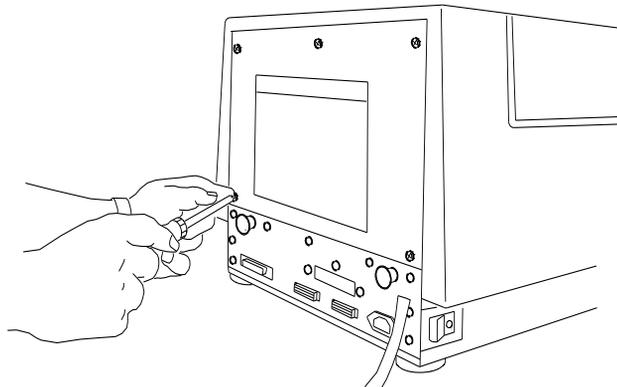
5. Grasp the two black handles on the metal plate. Slowly pull the drawer out about six inches.
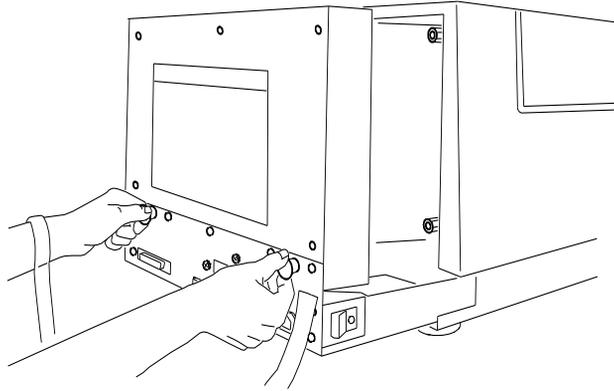
6. Using the Phillips-head screwdriver, remove the three screws which hold the slot cover for the Network Interface Card in place. Remove the slot cover and set it aside.
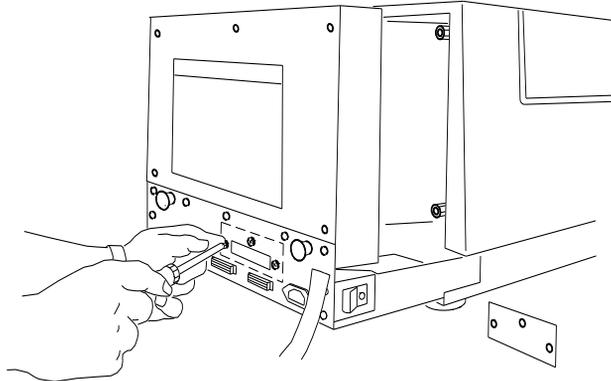
7. Remove the Network Interface Card from the antistatic bag.

Making the Jumper Selections

JP1/JP2 Factory Settings (Both Jumpers On)

JP1 and JP2 are two small black jumpers near the right side in the middle of the Network Interface Card. When the card is shipped, each jumper is positioned across both sets of pins (ON). This allows for both remote Telnet diagnostic monitoring and normal operation/printing with 10BaseT.

Cable Autodetection (Both Jumpers Off)

The connection autosensing feature automatically senses the presence of a 10BaseT connection. If no 10BaseT connection is sensed, a 10Base2 (BNC) connection is assumed. However, Telnet capability is disabled.

JP1/JP2 - selection of cable connection manually

Telnet and cable autodetection modes are the recommended use of the JP1/JP2 jumpers.

However, the cable type can also be selected manually. The jumpers are positioned to match the locations of the two ports. If you look at the Network Interface Card ports on the back of the printer, the right port is for twisted pair, 10BaseT (RJ45) cabling. The right jumper corresponds to that connector and is labeled JP1. The left port is for ThinNet, 10Base2 (BNC) cabling. The left jumper corresponds to that connector, and is labeled JP2.

- For manual selection, lift the jumper for the appropriate cable connector up and off the pin and then push it back down over both pins. This specifies the particular connector that will be in use.

NOTE: Move only the jumper for the cable connector type that will be used. The other jumper must remain on one pin.

The enlarged view in the illustration shows the jumper labeling as viewed from behind the printer looking toward the front.
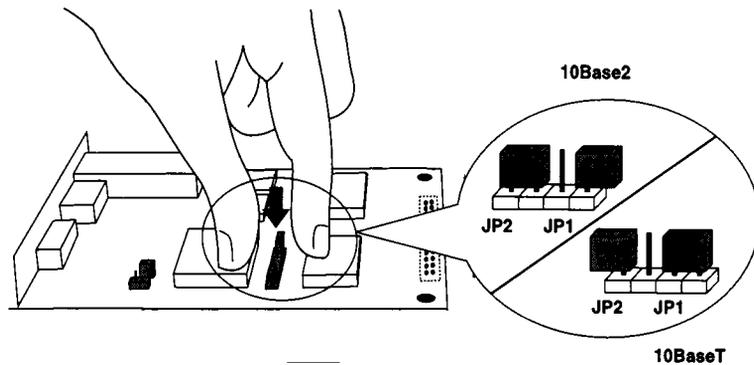
LINK Jumper Selection (Non-10BaseT)

NOTE: Complete these steps only if link test integrity needs to be enabled and your cabling is non-10BaseT.

If you have non-10BaseT twisted pair cabling, such as AT&T or HP STARLAN, you may need to enable the link test integrity function from the 10BaseT transceiver by changing the LINK jumper on the Network Interface Card.

1. Find the small black jumper labeled "LINK" near the right front side of the Network Interface Card.

   This is the LINK jumper. When the Network Interface Card is shipped, this jumper is positioned on only one of the two pins. This specifies that the link test integrity is disabled.

2. Lift the black jumper up and off the pin and then push it back down over both pins.

See the illustration below for LINK jumper enabled/disabled positions.
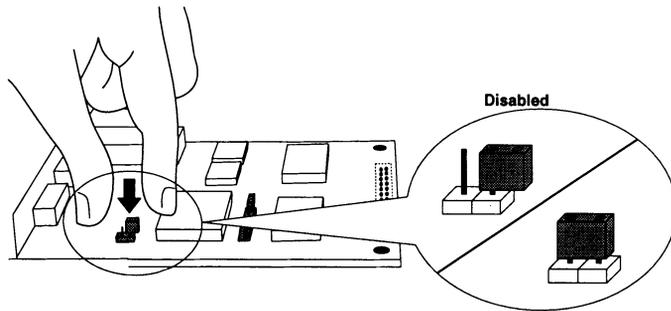
Installing the Network Interface Card

Do the following steps to install and seat the Network Interface Card:

1. Hold the card so that the connector is on the bottom and the cable receptacles are toward you.
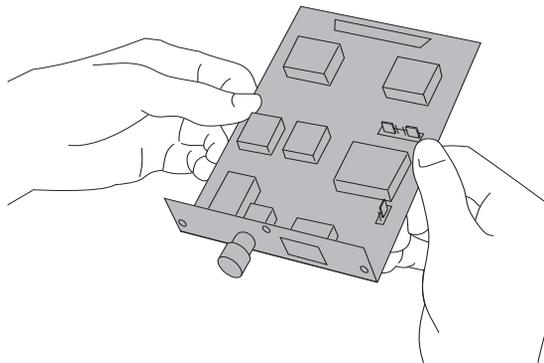
2. Tilt the card at about a 30-degree angle, and slide the front into the slot you opened.

The cable receptacles should extend through the front of the slot.
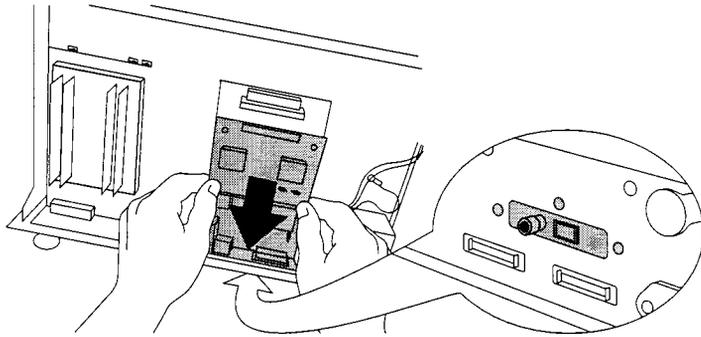
3. Seat the card by positioning the connector on the bottom of the card against the receptacle on the mother board. Press it gently into place.
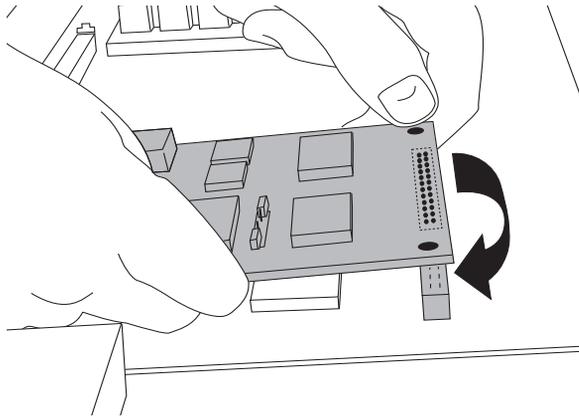
4. Secure the card connector plate to the printer connector plate by replacing the three screws you removed from the slot cover.

Finishing up

Finish up the installation by closing the printer:

1. Grasp the black handles on the back of the printer and slide the back of the printer in.

2. Using the Phillips-head screwdriver, replace the five screws you removed.

3. Attach the Ethernet cable to the appropriate connector on the Network Interface Card.
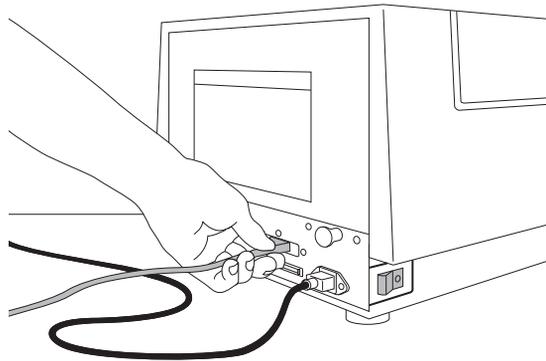
4. Plug in the printer, and turn it on. Make sure the power light illuminates on the display panel.

5. When the printer completes initialization and the front display/ control panel displays the message "READY," check the LEDs for the Network Interface Card for the following indications. The LEDs are located on the back of the printer.

   • The yellow LED should be on and stable indicating correct 10BaseT connectivity between the printer and the Network Interface Card and the network hub switch.

NOTE: Check the condition of the yellow light only if you are using 10BaseT. It has no validity for ThinNet connections.

   If the yellow light does not illuminate or is unstable, check for proper 10BaseT connectivity.

If the connectivity is correct and the yellow light blinks or does not illuminate, the Network Interface Card may be defective.

NOTE: The condition of the green LED is relevant for both 10BaseT and 10Base2 connectivity.

- Check that the green LED blinks intermittently as a detection of network traffic. If the green light does not blink intermittently, the Network Interface Card could be defective.

3   Installing Software for the Network Interface Card

Two diskettes are included in the kit for the Network Interface Card. One is Utilities for Novell NetWare and the other is Utilities for UNIX TCP/IP.

Installing Software for the Network Interface Card with Novell IPX

The following files are provided on the Utilities for Novell NetWare diskette:

- KSETUP.EXE for creating a Novell Configuration file.

NOTE: Refer to "Novell NetWare" for specific instructions on creating and editing the IPX KSETUP configuration file.

- README instructions for defining a primary server. Refer to "Printer Parameters" for specific details regarding the primary/preferred server.

- PSSERVER.PS for defining a primary server by editing a PostScript file (<filename>.ps) that can be downloaded to the printer in PostScript mode.

- RSSERVER.EXE for defining a primary server and creating a Raster file (RSSERVER.RS) that can be downloaded to the printer in Raster mode.

- CNTL_D file must be appended to the PSSERVER.PS/ RSSERVER.EXE file that is downloaded through the parallel printer port.

Installing Software for the Network Interface Card with AppleTalk

It is not necessary to install software to use the Network Interface Card with AppleTalk. Utilities are provided with Macintosh-Kodak printer software, however, that allow you to replace default AppleTalk related parameters with custom names. To minimize problems, we recommend that a printer be brought up on the network utilizing its default parameters before you define custom parameters.

Installing Software to Configure the Network Interface Card for TCP/IP

Windows NT

It is not necessary to install software to use the Network Interface Card with Windows NT systems. Configuring printers on specific NT platforms using TCP/IP is discussed in platform specific sections of this manual.

UNIX

A diskette is provided with UNIX TCP/IP Utilities. This UNIX tar formatted disk cannot be read on a PC platform.

The contents of the diskette include:

- INSTALL.SH for installing a printer on a UNIX workstation.

- INTERFACES folder with INSTALL.SH resources.

NOTE: On UNIX systems, run the INSTALL.SH script (as "root/admin") to install the printer.

System V UNIX

The INSTALL.SH script should accommodate most System V systems. If you encounter problems, consult the documentation provided with specific System V UNIX platforms for the use of AdminTool and lpadmin utilities/syntax for accessing a remote print server queue by the name of "ps."

4 Network Printer Parameters

This section discusses parameters within the printer related to IPX, AppleTalk and TCP/IP network protocols and methods for modifying parameters from both Macintosh and PC platforms.

We recommend that you use the default parameters where applicable and especially when troubleshooting configuration problems.

Modifying Printer Parameters

You can change some parameters from the printer's front display/control panel and others by downloading PostScript command jobs to the printer. You can download PostScript command files by doing the following:

- From a Macintosh over a Network or by using LocalTalk—You can download the pertinent control <filename>.ps using the LaserWriter Font Utility.

- From Windows through a network port—With DOS commands, you can map a network queue to an LPT port by using Capture with Windows 3.x or Netlink with Windows NT \SERVER\ QUEUE LPT# and then download the pertinent control <filename>.ps using COPY <filename>.ps LPT#.

  This method is suggested assuming that a network connection to the printer already exists and that you are using a PC that supports network port mapping to an LPT port.

- From Windows through a parallel port—With DOS commands, you can download the pertinent control <filename>.ps using COPY <filename>.ps LPT#.

Printer Parameters - Factory Default

If some parameters have been changed from the defaults and you find it necessary to return to factory default parameters, you can reset the printer to factory defaults using the printer's front display/control panel by using the following procedure. This resets all changeable parameters such as AppleTalk name, AppleTalkZone, IP address, and preferred server name. Refer to the appropriate sections of this manual for more information.

NOTE: If you are setting up a *Kodak Digital Science^(TM)* Desktop Color Proofer 9000, refer to the user's guide for the Network Interface Card shipped with the proofer for specific instructions on using the operator control panel.

1. Press *Setup/Select* on the display panel when "READY" appears in the panel.
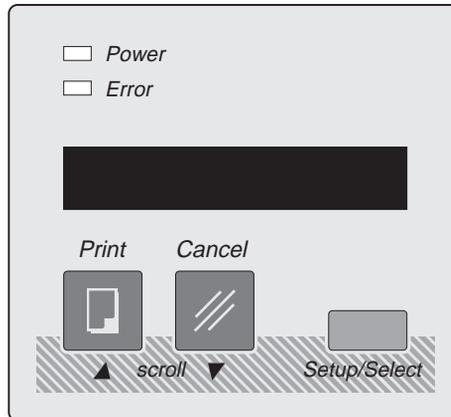
2. Press "▼" until SETUP: DEFAULTS appears.

3. Press *Setup/Select* to select "SETUP: DEFAULTS."

4. Press *Setup/Select* to select "DEFAULTS: FACTORY."

5. Press *Setup/Select* to select "FACTORY: RESET."

Wait for reset/initialization to finish before you attempt other operations.

Printer Parameters - General

Ethernet Address

Default: Factory Programmed in the form of 00:40:C8:xx:xx:xx

The Ethernet hardware address is programmed into the Network Interface Card at the factory and cannot be modified by users. This address is necessary for properly naming the kxxxxxx setup file.

Mode

Default: PrintServer(ps)

The mode is always PrintServer, and it cannot be modified by users.

Printer Parameters - IPX (Novell Netware)

FrameType

Default: AutoSelect

In AutoSelect mode, the printer tries the various frametypes available until it receives a response from an IPX server. From that point, the printer only uses the frametype that was successful.

Use the following procedure to select a specific printer IPX frametype from the printer's front display/control panel. If your network has multiple file servers that use different frame types, you may want to select the frametype that the primary server will use. Selectable frametypes are:

- AutoSelect 802.2
- AutoSelect 802.3
- Ethernet 2
- SNAP

NOTE: If you are setting up a *Kodak Digital Science*^{TM} Desktop Color Proofer 9000, refer to the user's guide for the Network Interface Card shipped with the proofer for specific instructions on using the display/control panel.

1. Press *Setup/Select* on the display/control panel when "READY" appears in the panel.
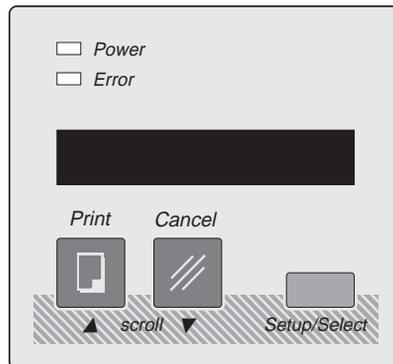
2. Press "▼" until SETUP: PORTS appears.

3. Press *Setup/Select* to access the SETUP: PORTS submenu.

4. Press "▼" until PORTS: IPX appears.

5. Press *Setup/Select* to access the list of frametypes.

6. Press "▼" until the appropriate frametype appears.

   The current setting is identified by an asterisk (*).

   The available choices are 802.2, 802.3, SNAP, Ethernet II, and AutoSelect.

7. Press *Setup/Select* to choose the frame type.

8. Press "▼" until IPX: EXIT appears.

9. Press "▼" until SETUP: EXIT appears.

10. Press *Setup/Select*.

Primary/Preferred Server

The primary or preferred server is the name of the file server that contains the KSETUP configuration file for Novell environments. In most environments it may not be necessary to define a preferred server (factory default setting). If you have any problems, you should define the preferred server as a troubleshooting precaution.

NOTE: In environments with hundreds of servers, the printer logs in to the preferred server instantly (seconds) instead of potentially searching through hundreds of servers (minutes) to find the KSETUP file. In an environment with only one server, you may find it necessary to define that server as the preferred server.

The following utilities are provided with your Novell Utilities diskette for downloading a primary server name to your printer:

- PSSERVER.PS for defining a primary server with the printer in PostScript mode.

- RSSERVER.EXE for defining a primary server with the printer in Raster mode.

- CNTL_D file must be appended to the configuration files that are downloaded through the parallel printer port.

If a Macintosh system is available on the network, these Windows utility files could be transferred to the Macintosh and then downloaded to the printer over the network using the LaserWriter Downloader Utility. This method avoids the additional necessity for a parallel I/F to the printer from a PC.

Primary Server For PostScript Printers

To define the primary NetWare server for a PostScript printer in PostScript mode, do the following steps:

1. Edit the PSSERVER.PS file from the Utilities for Novell diskette.

2. In the third line of the file, replace the phrase "PUT YOUR SERVER NAME HERE" with the name of the primary NetWare server where the KSETUP configuration file resides.

   Make sure that the ( ) in (PUTYOURSERVERNAMEHERE) are not removed.

NOTE: The primary server name is case sensitive.

3. Save and exit the file.

4. Send the file to the printer through a port such as the parallel port. The following command is an example of sending the file to the printer using the parallel port. The CNTL_D file is found on the Utilities for Novell diskette and is only necessary if the file is downloaded using the parallel port.

   COPY PSSERVER.PS + CNTL_D LPT1:

5. Once the file has been sent to the printer, power cycle the printer to allow the change to take effect.

Primary Server for Raster Printers

To define the primary NetWare server for a Raster printer, do the following steps:

1. Execute the RSSERVER program from the Utilities for Novell diskette by typing RSSERVER at the command line.

2. Respond to the prompts from the program.

   An output file named RSSERVER.RS is created.

3. Send the file to the printer through a port such as the parallel port. The following command is one example of sending the file to the printer when using the parallel port. The CNTL_D file is found on the Utilities for Novell diskette and is only necessary if the file is downloaded using the parallel port.

   COPY RSSERVER.RS + CNTL_D LPT1:

4. When the file has been sent to the printer, power cycle the printer to allow the change to take effect.

Printer Parameters - AppleTalk

AppleTalk Name

Default AppleTalk names are the equivalent of specific printer product names.

Defaults:

'Kodak XLS 8400 PS'

'Kodak XLS 8600' or 'Kodak XLS 8600 PS'

'Kodak DS 8650' or 'Kodak DS 8650 PS'

'Kodak DS DCP 9000'

Utilities For Printers in PostScript Mode

- The Namer— Macintosh utility used to rename the printer in PostScript mode. This is the printer name as it appears as a PostScript printer in the Chooser or similar PC/AppleTalk Zone-Name window.

- Set_Printer_Name.ps—utility which renames the printer in PostScript mode. This is the printer name as it appears as a PostScript printer in the Chooser or similar PC/AppleTalk Zone-Name window. Edit the file to modify the name parameter, save the file, and download the file to the printer.

Utilities For Printers in Raster Mode

Kodak Raster Printer Utility— Macintosh utility used to rename the printer in Raster mode. This is the printer name as it appears when using the specific printer's export module in conjunction with Adobe Photoshop.

AppleTalk Zone

Default: * (Physical Zone assigned to cable segment)

We recommend that you use the default zone. The only time you would use a different zone name is if the default physical zone were subdivided into logical zones.

If there are routers on your network, the printer is assigned to the default zone named by the router.

Each time the printer initializes, it attempts to acquire the zone name that is defined in the printer's nonvolatile RAM. If it cannot find it, the printer is placed in a default zone. If there are routers on your network, the printer acquires its zone name from the router.

The printer must be operating in PostScript mode when you change the zone. Once the procedure is complete, the zone is applicable for both PostScript and Raster modes.

Set_EtherTalk_Zone.PS—Utility which renames the printer zone in PostScript mode. This is the zone that the printer appears in as a PostScript printer in the Chooser or similar PC/AppleTalk Zone-Name window. Edit the file to modify the zone parameter, save the file, and download the file to the printer.

Edit the file so that your zone name is substituted for "YourZoneNameGoesHere." No other parts of the file should be altered. Be careful not to insert any nonprinting characters in this file, or errors will occur during the download. If there are syntax errors in the file, the printer returns an error message through the LaserWriter Font Utility and the zone name are not changed.

Changing the Printer's Zone

1. Make sure the printer is in PostScript mode.

2. Open the Set_EtherTalk_Zone.PS file on the Macintosh Printer Driver installation disk.

The file opens in TeachText.

3. Replace "YourZoneNameGoesHere" in the following line with the name of your zone.

NOTE: Do not remove the parentheses from the command.

(%EtherTalk_NV)<</EtherTalkZone (YourZoneName-GoesHere)>> setdevparams

4. Save the file, and quit.

5. Select the LaserWriter 7.x icon in the Chooser.

NOTE: LaserWriter 7.x is included with Kodak software.

6. Open the LaserWriter Font Utility.

7. Select "Download PostScript File" from the Utilities menu.

8. Double-click on the Set_EtherTalk_Zone.PS file.

The new zone name remains in the printer's nonvolatile memory.

To verify that the printer is located in the new zone, open the Chooser and click on the appropriate zone. If the download was successful, the printer appears in that zone's list of printers.

Get_EtherTalk_Zone.PS - Retrieves the currently defined zone. It is only useful with the Macintosh's LaserWriter Font Utility that saves the information returned in a PostScript.log file.

AppleTalk Phase

Default AppleTalk names are the equivalent of specific printer product names:

Default: Phase 2

Optional: Phase 1

Changing the Phase

NOTE: If you are setting up a *Kodak Digital Science*[TM] Desktop Color Proofer 9000, refer to the User's Guide for the Network Interface Card shipped with the proofer for specific instructions on using the operator control panel.

The default phase setting is EtherTalk Phase 2. To change the phase, do the following steps:

1. Press Setup/Select on the display panel when "READY" appears in the panel.
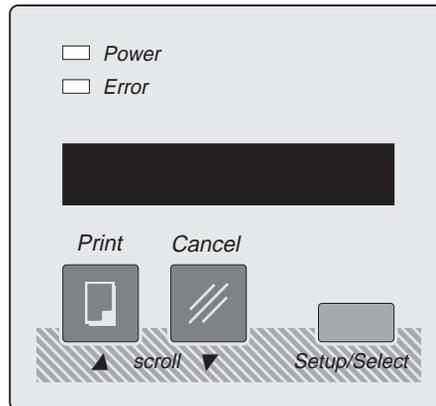
2. Press " ▼ " until "SETUP:PORTS" appears.

3. Press *Setup/Select* to access the "SETUP:PORTS" submenu.

4. Press " ▼ " until "PORTS:ETHERTALK" appears.

5. Press *Setup/Select* to access the "PORTS:ETHERTALK" submenu.

6. Press "▼" until "ETHERTALK:VERSION" appears.

7. Press *Setup/Select.*

8. Press "▼" until the version you want appears (VER:1 or VER:2).

   The currently selected version is indicated by an asterisk (*).

9. Press *Setup/Select.*

10. Press "▼" until "VER:EXIT" appears.

11. Press *Setup/Select.*

12. Press "▼" until "ETHERTALK:EXIT" appears.

13. Press "▼" until "SETUP:EXIT" appears.

14. Press *Setup/Select.*

Printer Parameters - TCP/IP

IP Address

Default: 000.000.000.000

If you are on an isolated, nonconformant IP network with no intent to connect to the internet, you can make up IP addresses. If you were to choose 100.100.100.001 for the printer/Network Interface Card IP address, any other devices on your IP subnet should also start with 100.100.100; for example, 100.100.100.002 or 100.100.100.003.

The IP Address is programmed from the printer's front control/display panel. It may be necessary to turn the printer off and on after you set up the address for the Network Interface Card to register it.

Assigning the Internet address

Do the steps below to enter the Internet (IP) address for the card:

1. Press *Setup/Select* on the display panel when "READY" appears on the panel.
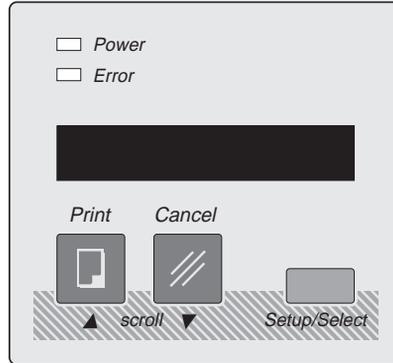
2. Press " ▼ " until "SETUP:PORTS" appears.

3. Press *Setup/Select*.

4. Press " ▼ " until "PORTS:TCP/IP" appears.

5. Press *Setup/Select* to access the" PORTS:TCP/IP" submenu.

6. Press *Setup/Select* to access a screen that allows you to enter the address.

   The address is represented as four groups of three digits, each separated by periods; for example, nnn.nnn.nnn.nnn. The cursor is positioned in the left most digit.

7. Enter the address as follows:

   Press " ▲ " to increment the number in that position by one.

   Press " ▼ " to move the cursor to the next digit to the right.

8. When you finish entering the address, press *Setup/Select*.

9. Press " ▼ " until "TCP/IP:EXIT" appears.

10. Press " ▼ " until "SETUP:EXIT" appears.

11. Press *Setup/Select.*

NOTE: If you are setting up a *Kodak Digital Science^{TM}* Desktop Color Proofer 9000, refer to the User's Guide for the Network Interface Card that came with the proofer for instructions on using the display/control panel.

5 *Installing the Software for Kodak Printers*

The software referred to here is the software that comes with every printer and not the software that comes with the Network Interface Card. Refer to the specific sections for instructions on installing software for the Network Interface Card.

Printing in PostScript and Raster Modes

For PostScript and Raster printer models such as the *Kodak Digital Science* 8650 PS Color Printer, install the Kodak PostScript Driver and the Export Module for Adobe Photoshop.

Installation procedures vary for different platforms. It may be necessary to run Kodak-provided install/setup scripts, move PPD or PDF files or export modules to appropriate application folders, or install software as part of an Add/Create Printer procedure.

Refer to the README files included with specific Kodak printers for information on installing printer drivers and export modules. Also, refer to the platform specific sections listed at the end of this section for more information on installing printer drivers and configuring printers on print servers and/or user workstations.

Configuring Printer Software on Print Servers

Novel NetWare 3.x, 4.x Servers	Refer to Section 6
Windows NT 3.5, 4.0 Servers	Refer to Sections 9, 10
UNIX Servers	Refer to Section 12

Configuring Printer Software on Workstations

Windows 3.x	Refer to Section 7
Windows 95	Refer to Section 8
Windows NT 3.51 and NT 4.0	Refer to Sections 9, 10
Macintosh	Refer to Section 11
UNIX	Refer to Section 12

Printing in Raster Mode

For printers that only print in Raster mode such as the *Kodak Digital Science* 8650 Color Printer, you need only install the Export Module for Adobe Photoshop.

6 Novell NetWare

Network Interface Card/Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card/printer, the workstation platform to be used for creating and sending print jobs to the printer, and any servers to be used to spool and manage jobs sent to corresponding printer queues.

Section 2: Install the hardware for the Network Interface Card in the Kodak printer.

Section 3: Install the software for the Network Interface Card.

NOTE: It is not necessary to install software to use the Network Interface Card with AppleTalk.

Section 4: Configure the network printer parameters, if necessary. Some are programmable from the printer's front display/control panel, and others are programmable by downloading PostScript command files.

NOTE: We recommend that default parameters be used initially until the printer is functional on your network.

Section 5: Determine printer modes of operation, PostScript and/or Raster, to be used based on the model of printer. Install the corresponding PostScript and/or Raster mode software. Refer to appropriate platform specific sections based on their anticipated use as print servers and/or user workstations.

For print servers (indirect printing), configure the printer on a pertinent server platform using the desired protocol.

For user workstations, configure the printer to use a Novell server's print queue (indirect printing).

Novell NetWare - Overview

You should be familiar with the system administrative tasks for your system including the PCONSOLE utility. You may configure the printer for use with Novell NetWare using Novell's standard IPX protocol or with Novell NetWare using AppleTalk protocol. Refer to the "AppleTalk-Novell" section for more information.

With NetWare, the printer operates as a print server and reads requests from NetWare servers. The printer can service 16 queues on 16 file servers and poll successive queues every second.

You can print to the printer with standard Novell print utilities such as NPRINT or from Microsoft Windows applications.

Novell NetWare IPX - Overview

To use Novell IPX, you must create a configuration file using the KSETUP.EXE utility included on the Novell utilities diskette.

If you have more than 20 servers, we recommend that you specify a primary server (server with KSETUP file) so that the Network Interface Card can do a more efficient search for the server/KSETUP file.

The default frametype setting is AUTOSELECT. You may have to specify a specific IPX FrameType from the printer's front control/display panel if you have servers using different frametypes. Complete the remaining server and queue configuration steps using the Novell PCONSOLE utility.

When using Novell IPX, one user license is required because the printer/Network Interface Card logs into the server being serviced.

Novell NetWare AppleTalk - Overview

To use Novell's AppleTalk Print Services (ATPS), an ATPS.CFG file must be edited appropriately to define an AppleTalk printer name and corresponding zone.

Novell AppleTalk Advantages over Novell IPX

The use of Novell ATPS does not require configuration steps using PCONSOLE, steps to specify a primary server, or steps to specify a frametype. ATPS does not require a user license, and performance differences between the use of IPX and AppleTalk are negligible. Refer to the documentation for AppleTalk, Novell NetWare for more information.

The disadvantage of using Novell AppleTalk over Novell IPX is that you cannot print in Raster mode using ATPS over the Novell server. Only Macintosh systems can printer in Raster mode using AppleTalk.

NOTE: Novell AppleTalk only recognizes the printer when it is in PostScript mode. Raster mode printing cannot be accommodated. You must set up an IPX queue to support both PostScript and Raster mode printing.

Novell NetWare - IPX - 3.x/4.x Servers

Novell NetWare IPX - Printer Parameters

You may set up or modify network printing parameters over Novell NetWare IPX for frametype and preferred server. Frametype is set up from the printer's front display/control panel and by downloading a PostScript command file to set up a preferred server.

It should not be necessary to modify these parameters from factory defaults of Frametype = AutoSelect and Preferred Server = Undefined. This function is provided for efficiency in varying customer environments.

Refer to "Network Printer Parameters" for information on setting up all printer parameters for the various protocols.

Creating and Editing the IPX KSETUP Configuration File

Some procedures in this section vary, depending on whether you are running Novell NetWare 3.x or 4.x. Complete the procedures appropriate for your site.

You must create a configuration file using the KSETUP.EXE program from the Novell Utilities diskette. This configuration file should reside on only one file server. You can modify the file as necessary to change the queues or servers that the printer services.

Upon startup, the printer tries to read a configuration file from the available servers. If a primary server is defined, it will start with that server. It looks in the \login\kodak directory for a file named kxxxxxx, where xxxxxx are the last six digits of the Network Interface Card's Ethernet address.

NOTE: For printers in PostScript mode, make a test print; and make a note of the hardware address of the installed Network Interface Card.

Do the following steps to create the KSETUP configuration file:

1. Log in to the file server as ADMIN in the main context.

2. Change to the \login directory on the file server.

3. Create a Kodak directory by entering the command:

   md kodak

4. Change to the new directory by entering the command:

   cd kodak

5. Insert the Utilities for Novell setup disk into the A drive. Copy the Utilities for Novell setup disk into the directory by entering the command

   copy a:*.*

6. Run the KSETUP program using the command syntax below:

   KSETUP /e=<NICaddress> /s=<server> /q=<queue> / p=<printserver>

   where

   <NICaddress> is the last six digits of the printer's Ethernet Network Interface Card's hardware address.

   <server> -is the name of the file server.

   <queue> -is the name of the print queue the printer will service.

   <printserver> -is the name of the printer/Network Interface Card.

   NetWare 3.X: <printserver>

   <printserver> can be anything you want to call the printer.

NetWare 4.X: <printserver>

<printserver> is defined by combining the letter K with the last six digits in the printer's Ethernet Network Interface Card address.

For example, if your printer's Network Interface Card Ethernet address is 00:40:C8:02:EE:44, the file server is FSERVER, the print queue is PTRQ, and the print server name is K02EE44, you would enter the following

KSETUP /e=02EE44 /s=FSERVER /q=PTRQ /p=k02EE44

This command would add the following line to the configuration file called K02EE44:

FSERVER:PTRQ:K02EE44:::

7. If more than one file server sends files to the printer or if more than one queue is set up on a file server, use a text editor to modify the configuration file and add a line similar to the one below for each server and/or queue.

   <File Server Name>: <Queue Name>: <Print Server Name>:::

   Additional KSETUP file lines might look like:

   FSERVER:PTRQ2:K02EE44:::

   FSERVER2:PTRQ:K02EE44:::

Creating Novell NetWare Print Servers and Queues

The Network Interface Card logs in to NetWare file servers and attaches to NetWare print queues. It then prints the jobs that it can read from the server.

To print with the Network Interface Card, you must define the card as a print server. You can create new queues or pick existing queues and then enable the print server, the Network Interface Card, to service the queues.

The following example creates a print server: ps1 (K123458 for NetWare 4.x) and a queue: lp1 on the server: raisa. You could create subsequent queues on raisa that use the same print server, ps1. The printer can serve multiple queues on any server.

Defining the Network Interface Card as a Print Server

Do the following steps to define the Network Interface Card in the printer as a print server. You only need to do this once on each file server that will access the printer.

1. Log in to the file server as SUPERVISOR/ADMIN in the main context, then run the NetWare PCONSOLE utility.

2. For **NetWare 3.X,** go to Step 3.

    For **NetWare 4.X:**

    At the PCONSOLE main menu, press *F4* to switch to bindery mode.

    If a message tells you that you cannot switch to Bindery mode, you may not be logged in as ADMIN or do not have the Bindery Context set up on the server.

    To verify and/or set up Bindery Context, check for or add the following line to the SYS: \SYSTEM\AUTOEXEC.NCF file on the 4.x server:

    Set Bindery Context = O = <Organizational Unit>

    where <Organizational Unit> is specific for your site.

3. For **NetWare 3.X,** select Print Server Information from the main menu.

    For **NetWare 4.X,** select Print Servers from the main menu.

```
+-----------------------------------+
|         Available Options         |
+-----------------------------------+
|                                   |
|  Change Current File Server       |
|  Print Queue Information          |
|  Print Server Information         |
|                                   |
+-----------------------------------+
```
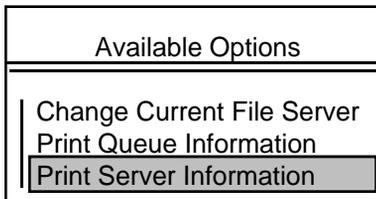
4. Click on *Insert* to create a print server.

5. Enter the name for the print server.

   The name must be the same one you used as <printserver> when running KSETUP to set up the configuration file.

   For **NetWare 3.X,**you might enter something like PS1.

   For **NetWare 4.X,** you MUST enter something like K123456. (The letter K followed by the last six digits of the printer's Ethernet Network Interface Card address.)

6. Press *Esc* to return to the PCONSOLE main menu.

Defining Novell NetWare Print Queues

Do the following steps to define queues you want the printer to serve.

1. For **NetWare 3.X**, select "Print Queue Information" from the main menu.

   For **NetWare 4.X**, select "Print Jobs" from the main menu.

```
┌─────────────────────────────┐
│      Available Options      │
├─────────────────────────────┤
│  Change Current File Server │
│  Print Queue Information    │
│  Print Server Information   │
└─────────────────────────────┘
```
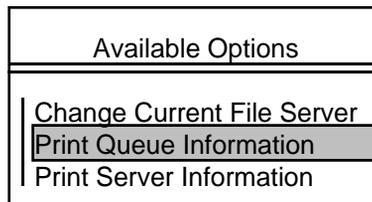
2. Click on *Insert* to insert a new queue, and enter the new queue name.

   Whether you are creating a new queue or changing an existing queue, the print queue name must be the same as the name you used for <queue> when running the KSETUP program.

NOTE: You can select an existing queue or enter a new name; for example, *lp1*.

3. For **NetWare 3.X**, press *Enter* to view Print Queue details.

For **NetWare 4.X**, select "Print Queue" from the Print Jobs menu.

4. For **NetWare 3.X**, select "Queue Servers".

   For **NetWare 4.X**, select "Status" and "Print Server."

5. Press *Insert* to display the Queue Server Candidates.

6. Select the server you want to serve the queue, and press *Enter*.

7. Press *Esc* to exit PCONSOLE.

   Repeat this procedure for each queue you want the printer to serve.

NOTE: When using PCONSOLE, you must specify the same queue name and printer name that was used with KSETUP.

8. Turn the printer off and then on.

9. After approximately 5 minutes, verify that the printer has logged into the correct server by entering the following commands on the appropriate server:

   For **NetWare 3.X**, enter **USERLIST /A**.

   For **NetWare 4.X**, enter **NLISTUSER /A /B**.

   You should see the print server name logged into the network as it is defined in the KSETUP file.

Printing from Multiple Servers

Do the following steps to print from more than one file server:

1. Use the Change Current File Server menu option in PCONSOLE to change to another server.

File Server	User Name
RAISA NETSERVER1	SUPERVISOR SUPERVISOR

2. Define the printer as a print server (as described previously).

3. Define any queues you want the printer to serve.

    Repeat this process for any additional file servers.

Setting up Notify Lists

The printer supports a wide range of ribbon, paper, and transparency materials. When you send jobs requesting media not currently loaded in the printer, a mismatch occurs; and the printer waits until action is taken. When errors occur and notify lists are in place, messages are sent to all of the users specified in the notify list. Printer error messages are sent once every five minutes until the problem is corrected.

Refer to your Novell NetWare documentation or contact your system administrator if you need help setting up notify lists on the file server.

Novell NetWare - AppleTalk

If Novell's AppleTalk Print Services (ATPS) is not already in use, consult the Novell CD-ROM on-line documentation for setup and use of ATPS. To use ATPS for the Kodak printer, an ATPS.CFG file must be edited appropriately to define an AppleTalk printer name and corresponding zone.

Novell AppleTalk Advantages over Novell IPX

The use of Novell ATPS does not require configuration steps using PCONSOLE, steps to specify a primary server, or steps to specify a frametype. ATPS does not require a user license, and performance differences between the use of IPX and AppleTalk are negligible.

The disadvantage of using Novell AppleTalk over Novell IPX is that you cannot print in Raster mode using ATPS over the Novell server. Only Macintosh systems can print in Raster mode using AppleTalk.

NOTE: Novell AppleTalk only recognizes the printer when it is in PostScript mode. Raster mode printing cannot be accommodated. You must set up an IPX queue to support both PostScript and Raster mode printing.

Novell NetWare - AppleTalk - Printer Parameters

You can set up and modify the Phase Type, AppleTalkZone, and AppleTalkName parameters for network printing over Novell NetWare AppleTalk. Set up the Phase Type from the printer's front display/control panel, and download PostScript command files to set up the AppleTalkZone and AppleTalkName. It should not be necessary to modify these parameters from the factory defaults, Phase Type = Phase II, AppleTalk Zone = *.   The AppleTalk Name is the printer name; such as, Kodak DS 8650 PS.

Refer to "Network Printer Parameters" for information on setting up all printer parameters for the various protocols.

To use Novell ATPS, an atps.cfg file must be edited appropriately to define an AppleTalk printer name and corresponding zone.

NOTE: You cannot print in Raster mode using ATPS.

Do the following procedure to configure Novell ATPS to service the printer and the queue. In this example, the printer is a Kodak printer with a default name of Kodak DS 8650 PS.

1. Make a test print to obtain or verify the printer's name.

2. On the server, back up the sys:\system\atps.cfg file.

NOTE: Make sure you include the beginning and end quotes in the following commands.

Edit the atps.cfg file, and add a line with the Kodak printer AppleTalk Name and its associated AppleTalk Zone to the list of printers in the following format:

<Appletalk Printer Name>:<Appletalk Zone>

For example, enter the following command:

"Kodak DS 8650 PS:No_Trespassing_Zone"

NOTE: Make sure you include the quotation marks in the command.

If no queue is stated, a NetWare queue associated with the AppleTalk Printer Name, NW_Kodak_DS_8650_PS, is created. You can verify this using PCONSOLE.

To create a different queue name, enter the following command:

<Appletalk Name>:<Appletalk Zone> -o <queuename>

For example, enter:

"Kodak Printer:No_Smoking_Zone" -o Color_Printer_q

NOTE: Refer to the "Troubleshooting/AppleTalk" Section for details on defining and assigning AppleTalk Zones.

3. Save the atps.cfg file.

4. Load atps -s -v

    Use the -v [verbose] option to view the atps activity and to verify that the contents are executed properly.

Your server can now use the same print services that Macintosh computers use to access a Kodak printer.

7 Windows 3.x Workstations

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card/printer, the workstation platform(s) that will be used for creating and sending jobs to the printer and any servers that will be used to spool and manage jobs sent to corresponding printer queues.

Section 2: Install the Network Interface Card in the Kodak printer.

Section 3: Install the software for the Network Interface Card.

NOTE: For Windows 3.x a network server queue must be selected so the only relevant software for the Network Interface Card is Novell utilities for setting up a Novell server (IPX)or UNIX utilities for setting up a UNIX server (TCP/IP). No software is necessary for setting up the Network Interface Card with NT server queues.

Section 4: Configure the network printer parameters, if necessary. Some are programmable from the printer's front display/control panel, and others are programmable by downloading PostScript command files.

NOTE: We recommend that you use the default parameters until the printer is functional on your network.

Section 5: Determine printer modes of operation, either PostScript and/or Raster, to be used based on the model of printer purchased. Install the corresponding PostScript and/or Raster mode software. Refer to the appropriate platform-specific sections based on their anticipated use as print servers and/or user workstations for more information.

Printer Setup for Selecting a Network Queue

For 3.x Workstations, any user may configure a printer and select a server print queue to use for printing.

For the first time installation, use the following generic procedures. However, if you encounter any problems or confusion, refer to the README files that came with the installation software for your particular printer. After you install the software, select the printer/port/queue you wish to use.

1. Find the drive or directory where the Kodak PostScript driver

is installed, and execute the SETUP.EXE file.

The Kodak printer should now appear in the Installed Printers: menu.

2. Select "Connect." From the Connect window, select an appropriate LPT port to use for the printer from the Ports menu.

3. Select "Network." From the Network Printer Connections window, click on *Servers* and select an appropriate server from the list. Log in to the server, if necessary. Select the "Printers" icon and then an appropriate print queue from the list.

Select "LPT SETTINGS" and make sure that the Enable Banner feature is not selected if you want to eliminate extraneous banner (USER ID) pages. Finish the installation by clicking on *OK* and closing windows where appropriate.

Refer to "Printing" for more information on how to print from DOS and Windows applications.

NOTE: To print in Raster mode, you may need to capture a network server such as a Novell, NT, or UNIX queue to an LPT port and select the corresponding LPT port from the export module.

Setting up Windows 3.x Workstations to use TCP/IP from PC-NFS

The Network Interface Card was designed as a direct network interface for printers in UNIX environments that support the line printer daemon (lpd). However, it also works with PC/TCP-compatible software, such as PC/TCP FTP, and with VMS™ systems that support (lpd).

PC-NFS enables DOS users sharing printers attached to hosts or to PCs. PC-NFS users can access the printer through their UNIX PC-NFS server and print jobs at the rated speed of the printer.

Do the following steps to set up a shared printer:

1. Install PC-NFS on your PC. See your PC-NFS installation guide for instructions.

2. Set up a PC-NFS server as described in the PC-NFS installation guide. Make sure that the server runs the PC-NFS daemon rpc.pcnfsd.

3. Set up a printer on the PC-NFS server as described in the sections in this guide on UNIX systems.

4. Edit the server's /etc/exports file and add the print spool directory to the list of directories being exported to the PCs running PC-NFS.

   Make sure that the PCs have read and write access to this directory. If the spool directory is not exported, PC-NFS will not mount the printer.

5. Update the list of exported directories using the command:

   exportfs -a

6. Mount this printer using either the nfsconf program or the following command:

NOTE: Enter the command on one line without returns.

   net use <print device>: <host>:<printer name> [/option [/option]...]

NOTE: The print device can be either lpt1, lpt2, or lpt3. The host is the server name, and the printername is the name assigned to the printer.

7. Use the net printers command to see a list of printers: attached to the server.

   net printers <servername>

8. Select raw mode of data transfer while mounting a printer in PC-NFS for printing PostScript files.

Eliminating Extra/Error Pages

Refer to "Printing" for more information on how to print from DOS and Windows applications. This section also discusses elimination of extra/error pages that may occur when printing from TCP/IP.

8 Windows 95 Workstations

Network Interface Card/Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card and the printer, the workstation platform(s) that will be used for creating and sending jobs to the printer, and any servers that will be used to spool and manage jobs sent to corresponding printer queues.

Section 2: Install the hardware for the Network Interface Card in the Kodak printer.

Section 3: Install the software for the Network Interface Card.

NOTE: For Windows 95 a network server queue must be selected so the only relevant software for the Network Interface Card is Novell utilities for setting up a Novell server (IPX)or UNIX utilities for setting up a UNIX server (TCP/IP). No software is necessary for setting up the Network Interface Card with NT server queues.

Section 4: Configure network printer parameters, if necessary. Some are programmable from the printer's front display/control panel, and others are programmable by downloading PostScript command files.

NOTE: We recommend that you use the default parameters initially until the printer is functional on your network.

Section 5: Determine the printer modes of operation (PostScript and/or Raster) to be used based on the model of printer that was purchased. Install corresponding PostScript and/or Raster mode software. Refer to appropriate platform-specific sections based on their anticipated use as print servers and/or user workstations.

Initial Configuration Steps

On a Windows 95 workstation, any user may configure a printer and select a server print queue to use for printing.

Do the following steps to configure your printer. If you encounter any problems or confusion, refer to the README files that came with the installation software for your particular printer.

1. From the Start icon, select "Settings" and then "Printers."

    The Printers window opens.
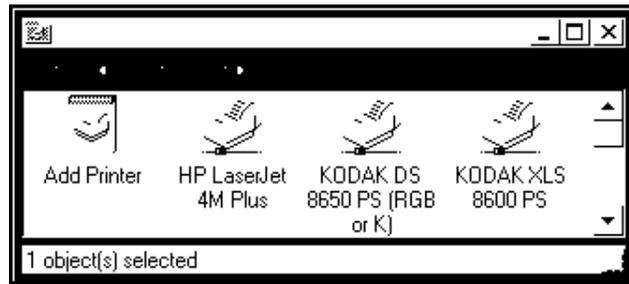
2. Click on *Add Printer*.

    The Add Printer Wizard opens.
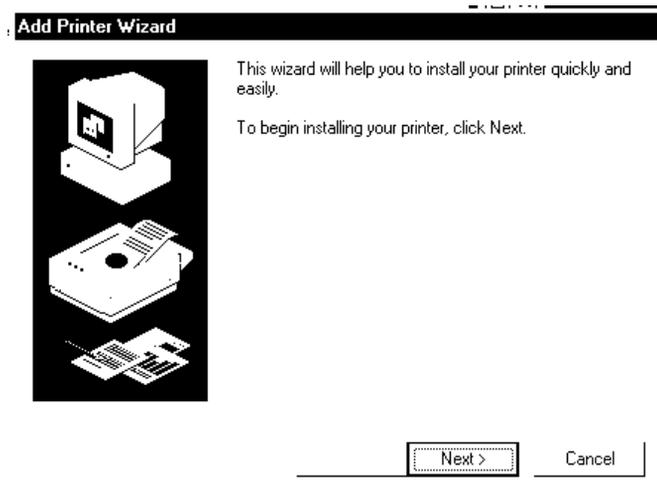
3. Click on *Next*.

The Add Printer Wizard window to select a printer opens.

4. Click on *Network Printer* and then on *Next*.

    The following window which allows you to select a network opens.

5. Browse the network for an appropriate printer queue name configured on a file server, and then click on *Next*.

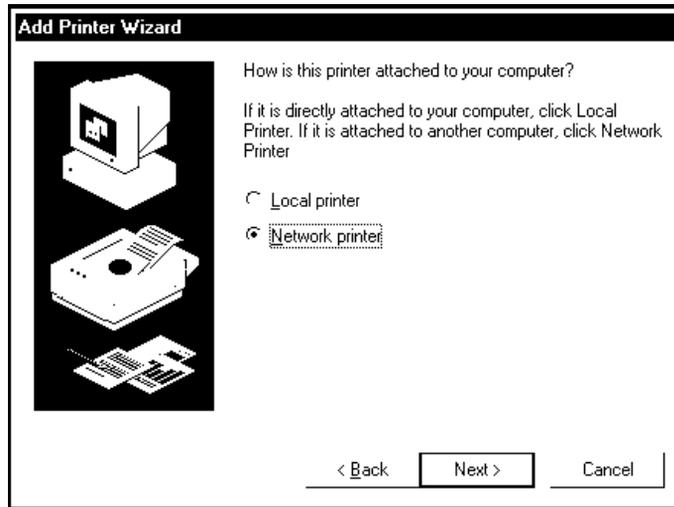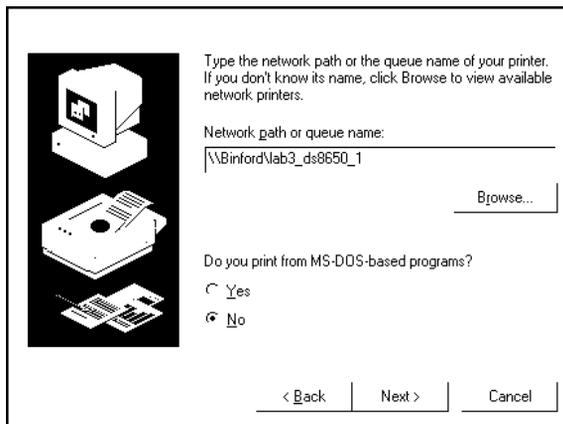The following window which allows you to select your printer model opens.
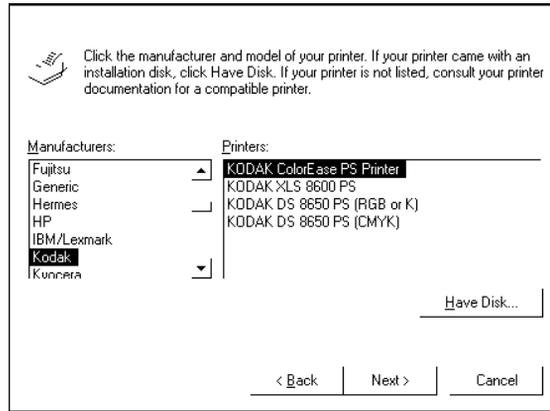
6. To install the Kodak PostScript Driver, select "Have Disk," and then click on *Next*.

NOTE: Printer drivers provided by Microsoft appear in the Add Printer Wizard window as Kodak printer drivers. These drivers have not been tested or certified by Kodak. If you are not sure if a Kodak driver has been installed, install the Kodak driver supplied with the printer.

A dialog box opens which allows you to install the software for the driver or locate the printer driver on your system.
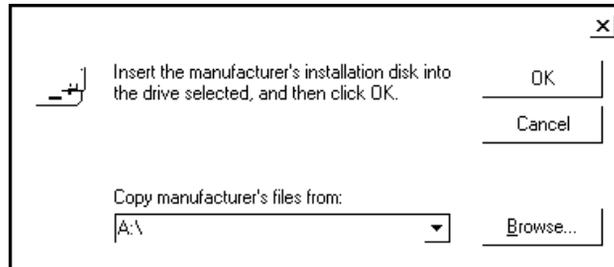
7. If you are installing the printer driver from a diskette or a CD-ROM, install it. Click on *OK*.

If the software is already installed on your system, click on *Browse* to locate the directory where it resides. When the correct directory opens in the "Copy manufacturer's files from," box, click on *OK.*

NOTE: Printer driver software is also available for downloading from the Kodak web site.

A window similar to the one below opens. This example shows the location of installation software that was downloaded from the Kodak web site.
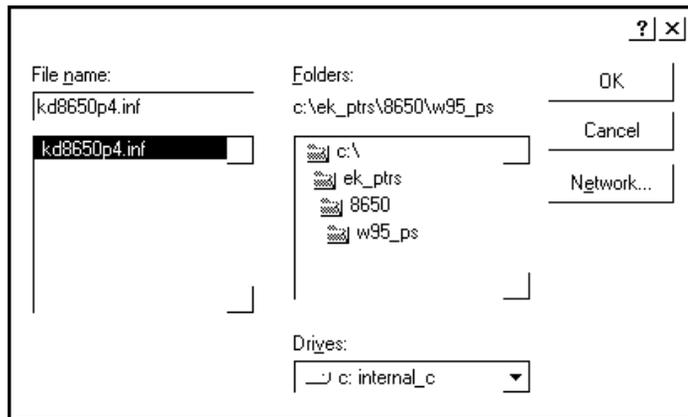
8. Locate the drive or directory where the printer driver installation diskette or CD-ROM is located. Click on *OK.*

A window opens which asks you to select the printer and the ribbon that is installed in the printer.
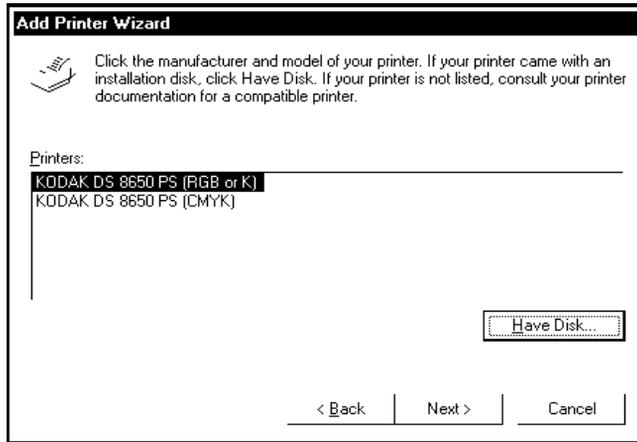
9. Select the correct printer and its corresponding ribbon type. Click on *Next*.

If a printer driver is already installed on your system, a window opens where you can choose to keep the existing driver or install the new driver.
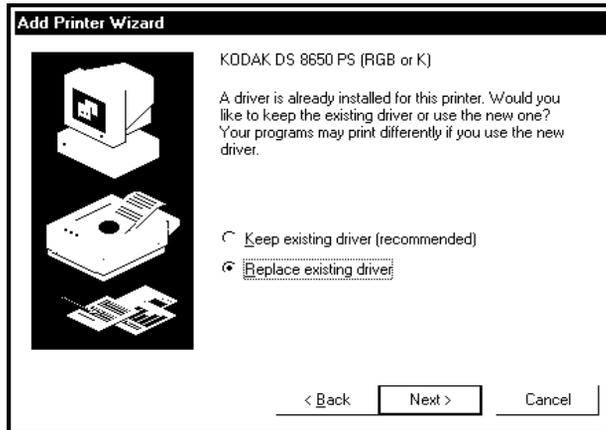
10. If the current driver:

   • operates correctly, click on *Keep existing driver* and then on *Next.*

   • does not operate correctly, click on *Replace existing driver* and then on *Next.*

The following window which allows you to name your printer opens.

Add Printer Wizard

You can type a name for this printer, or you can use the name supplied below. When you have finished, click Next.

Printer name:

KODAK DS 8650 PS (RGB)

Do you want your Windows-based programs to use this printer as the default printer?

⊙ Yes

○ No

< Back   Next >   Cancel
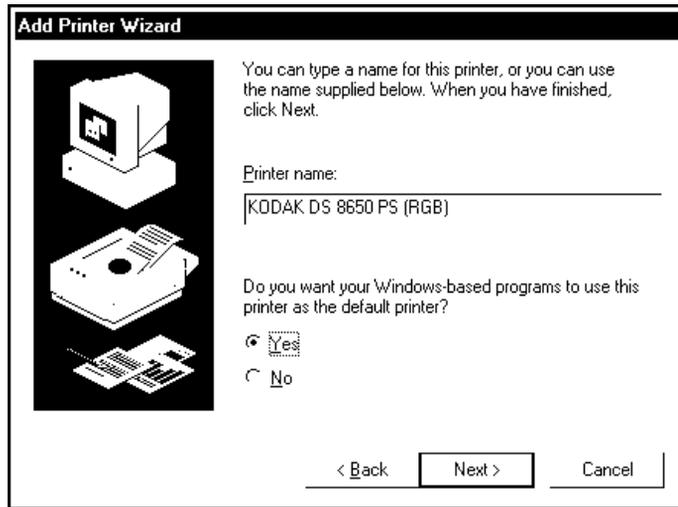
11. Enter a preferred name, or use the default printer name. Click on *Yes* or *No* to use the printer as the default printer. Click on *Next*.

The following window opens and asks you if you want to make a test page.

Add Printer Wizard

After your printer is installed, Windows can print a test page so you can confirm that the printer is set up properly.

Would you like to print a test page?

⊙ Yes (recommended)

○ No

< Back   Finish   Cancel
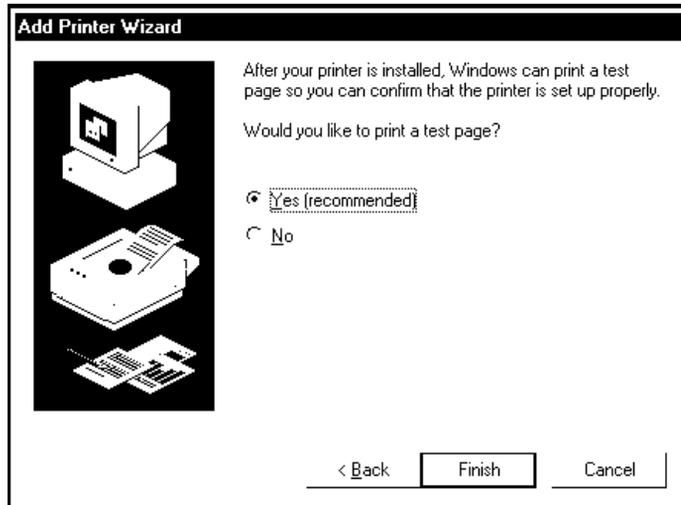
12. Click on *Yes* to print a test page to verify that the setup is correct. Click on *Finish*.

NOTE: If an error occurs when you print a test page, check the Printer Properties menus for the correct printer parameter settings. Refer to the Printer Property windows at the end of this section.

If you are not installing the printer driver, go to "Setting the Printer Properties" on page 8-10.

A copy progress bar opens indicating that the driver is installing
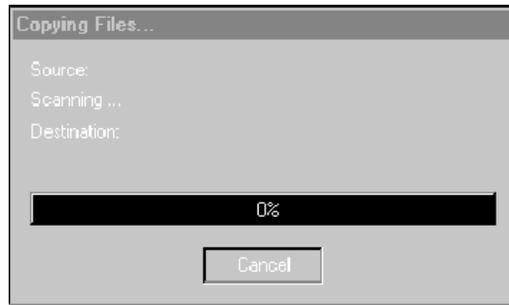
The installation may stop, and the following window opens asking you to insert your Windows 95 CD-ROM.
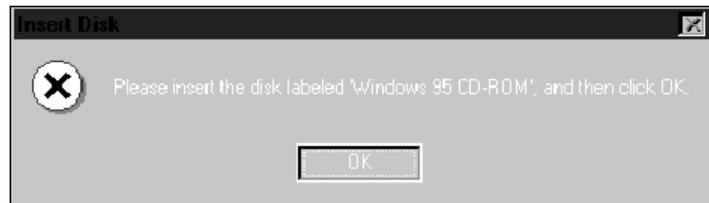
13. Install the CD-ROM if this is the first time you are installing a PostScript printer driver. Click on *OK*.

A window opens asking you to select the drive that contains the CD-ROM.
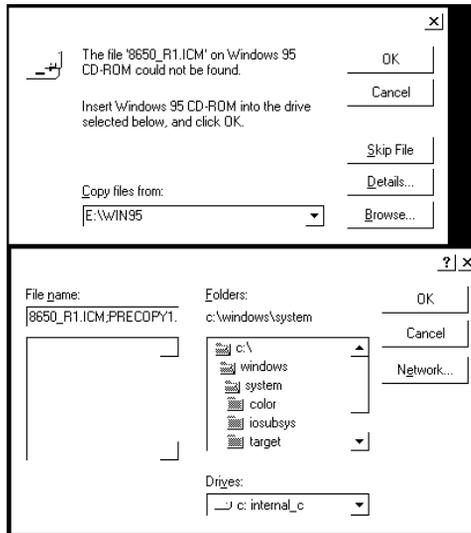
14. Click on *Browse* if you need to locate the directory. Click on *OK*.

NOTE: We recommend that you install all the files. If you have the option to skip a file, do so only if you are sure the file is a generic PostScript system file and is already installed on you system. Check the C:\WINDOWS\SYSTEM directory for previously installed files.

15. Click on *OK* in the Open window to load the files onto your system.

   The icon for the Kodak printer should now appear in the Printers window.

Setting the Printer Properties

1. Select the newly-created Kodak printer in the Printers: window. Select "File>Properties" from the Printers>File.pulldown menu.

The Printer Properties window opens.
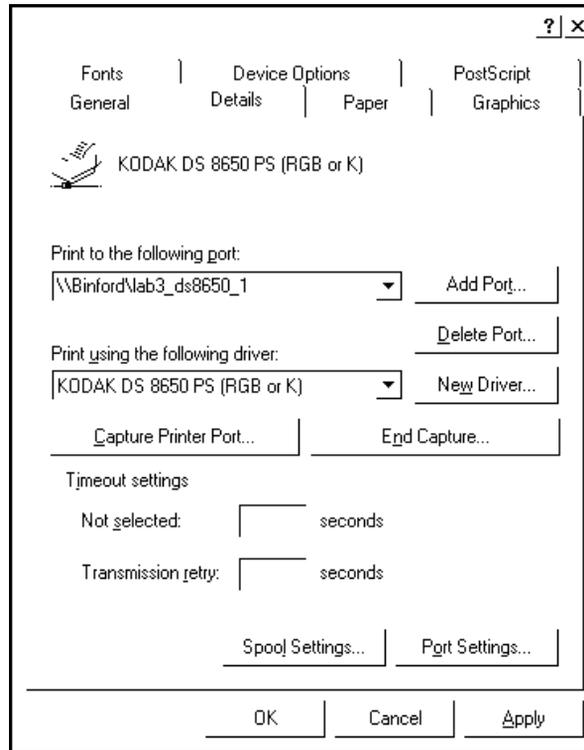
2. From the Properties window, select:

- "PostScript>Advanced" and make sure that all Ctrl Ds before and/or after job are disabled. This prevents you from receiving extra pages and a blank PostScript error page with nothing for an offending command because the Ctrl D is a nonprintable character.

  Refer to "Printing" for further details on eliminating extra/error pages that may occur when printing from TCP/IP.

- "Capture Settings" and make sure that the Enable Banner feature is not selected if you want to eliminate extraneous banner (USER ID) pages.

Check all other tabs and set up all corresponding options to match the media, ribbon, and type/size of materials in the printer as well as the printing features such as Ultracolor you intend to use to avoid printing errors.

NOTE: Refer to "Printing" for further details on how to print from DOS or Windows applications.

TCP/IP from PC-NFS

Windows 95 workstations can also print from TCP/IP PC-NFS software. PC-NFS enables DOS users to share printers attached to hosts or to PCs. PC-NFS users can access the printer through their UNIX PC-NFS server and print jobs at the rated speed of the printer.

To set up a shared printer, follow the same installation procedure outlined for Windows 3.x, TCP/IP from PC-NFS.

9   Windows NT 3.51Workstations and Servers

Network Interface Card/Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card, the printer, the workstation platform(s) that will be used for creating and sending jobs to the printer, and any servers used to spool and manage jobs sent to corresponding printer queues.

Section 2: Install the Network Interface Card in the Kodak printer.

Section3: Install the software for the Network Interface Card.

NOTE: It is not necessary to install Network Interface Card software on Windows NT systems.

Section 4: Configure the network printer if necessary. Some printers are programed from the printer's front display panel, and others are programed by downloading PostScript command files.

NOTE: We recommend that you use the default parameters until the printer is functional on your network.

Section 5: Determine printer modes of operation to be used based on the model of printer that was purchased. Install the corresponding PostScript and/or Raster mode software. For print servers (indirect printing), configure the printer on a pertinent server platform using the desired protocol.

For user workstations, configure the printer to use a server's print queue (indirect printing), or to print (direct printing) directly to the printer using the desired protocol.

Network Service and Protocol Installation

Windows NT supports network printing utilizing TCP/IP, AppleTalk and/or Novel Netware IPX protocols. Using the network control panel, the appropriate services (TCP/IP) and/or protocol (AppleTalk) support must be installed prior to configuring printers.

NT Workstations and Servers:

Service/Protocol	System Support Module	Printer Support
TCP//IP	Microsoft TCP/IP Printing Support	PostScript or Raster
AppleTalk	AppleTalk Protocol	PostScript only
IPX (Novell)	Netware Services/ Support	PostScript or Raster

Network Services/Protocols

To verify or install the proper network service/protocol, select "NETWORK CONTROL PANEL" and then either "SERVICES" or "PROTOCOLS" from the Network menu. Select "SERVICES" for TCP/IP or PROTOCOLS for AppleTalk.

For TCP/IP, select "SERVICES" from the network window menu.

If it is necessary to add/install Microsoft TCP/IP Printing, select "ADD" from the Network Services menu. If you have an NT installation CD-ROM in a drive, select the desired service from the subsequent menu by double-clicking on that service for automatic installation. If you select HAVE DISK, you may have to enter an appropriate search path such as D:\i386\.

For AppleTalk, select "PROTOCOLS" from the network window menu. If it is necessary to add/install AppleTalk Protocols, select "ADD" from the Network Protocols menu. If you have an NT installation CD-ROM in a drive, select the desired service from the subsequent menu by double-clicking on that service for automatic installation. If you select "HAVE DISK," you may have to enter an appropriate search path such as D:\i386\.

Raster Mode Considerations

NOTE: The export module for NT only supports Raster mode printing using TCP/IP or IPX (Novell) queues. NT AppleTalk printing will not recognize the printer in Raster mode because the printer advertises itself as a Kodak_Raster device instead of a LaserWriter device. Therefore, AppleTalk printing will limit the use of the printer to PostScript mode printing only.

A workstation can be configured as a pseudo-server when using TCP/IP to service a printer by also sharing the printer and assigning a queue name. The same workstation can then select itself as a server and the shared queue for either PostScript or Raster mode printing.

Windows NT Servers and Workstations

Some systems such as Windows NT come with Kodak drivers provided by Microsoft. If you use these drivers, you may encounter problems. Be sure to install drivers provided by Kodak. When in doubt, refer to the Kodak web site for availability and the latest versions of drivers. Refer to "Getting Help" for information on how to access the Kodak web site.

We recommend that you install the printer driver and/or the export module on each server and workstation on your network. When you set up the servers for sharing, install only the software relevant to the operating system for the server.

Direct Printing

We recommended that an NT server be configured to service printers with TCP/IP since both PostScript and Raster mode printing is supported by TCP/IP server/queues. An AppleTalk server/queue only supports PostScript mode printing.

We recommend that workstations print indirectly using a server queue.

A printer is configured on an NT server in the same manner as configuring a printer on an NT workstation except that on an NT server, the printer is shared and assigned a queue name.

When a printer is shared on a server, do not select other Windows systems that will use the queue. Drivers should be installed locally on all systems serviced by a server. You may encounter problems when trying to download copies of a driver from the server to a workstation.

Indirect Printing (Printing through a Server)

From the workstation, browse the network and selects a pertinent server and queue.

Even though workstations may be configured to print directly to a printer using TCP/IP or AppleTalk, we recommend that workstations print indirectly by selecting a TCP/IP server queue for optimal resource utilization.

NT Server Queues

On NT servers, you may encounter corruption of data when printing files over 5 Mbytes which have been exhibited by the occurrences of color bands across the printed image. This condition can be corrected by setting up server properties to accept the entire print job before passing the file on to the printer. "Job Prints While Spooling" must be deselected.

Configuring for Workstations and Servers

With Windows NT 3.51 Workstation and Server, an administrator must configure the printer and select a mechanism to use for printing.If necessary, refer to README files that come with installation software for your particular printer.

1. From the Program Manager window, select "Main" and then "Printers."

    The Print Manager window opens.
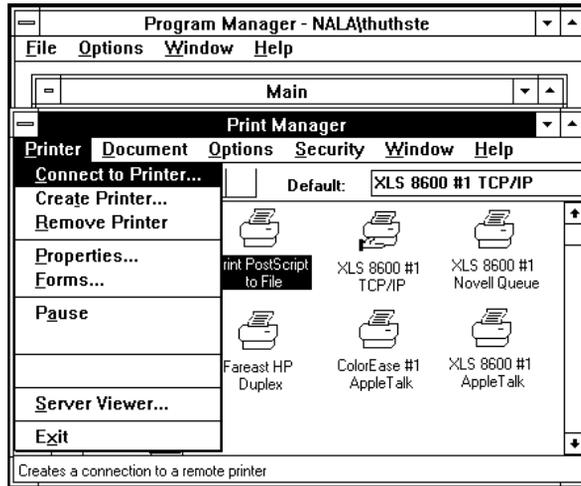
2. Select "Create Printer."

The following windows open:
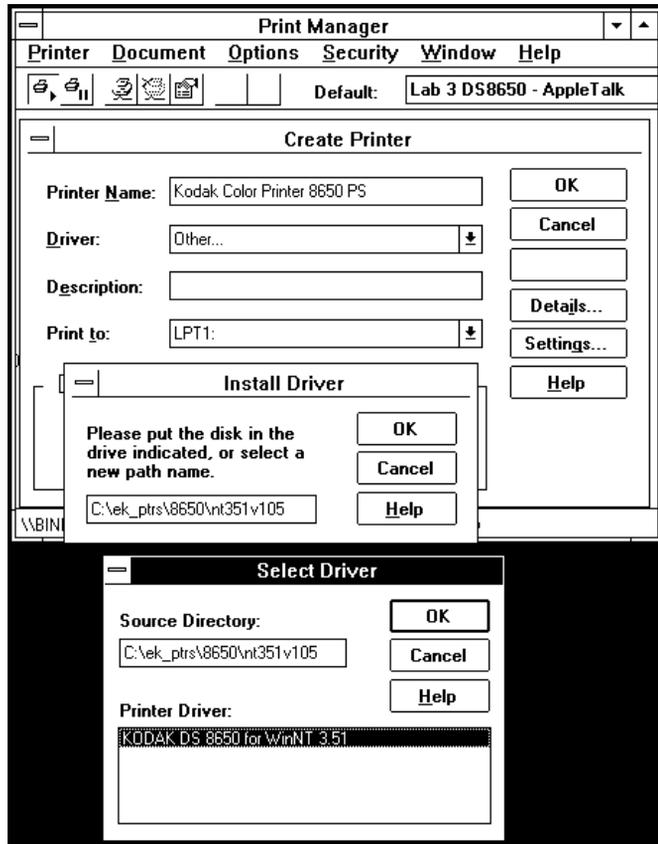
3. In the Create Printer window, enter the following:

   Printer name: Enter a name that you wish to appear on the resulting printer icon in the Print Manager screen.

   Driver: The Kodak driver is a PostScript driver that makes use of NT system PostScript (PSCRIPT.*) components which reside on the NT system CD-ROM. These components may already reside in C:\windows\system if a PostScript printer driver was previously installed.

Select "Other," and install the appropriate Kodak printer driver (PPD) provided by Kodak. If a Windows NT driver is not yet available for the specific Kodak printer, another Kodak or generic PostScript driver could be used but might not provide full access/control of a different Kodak printer's features. You may have problems if you use the Kodak 8600 v2014 driver that Microsoft provides with NT systems.

The example below shows the installation of printer software that was downloaded from the Kodak web site to the directory C:ekptrs\8650\nt351v105.

Description: Enter a description of the printer if desired.

NOTE: If messages such as "Can't find File: PSCRIPT.*" or Unable to Open File PSCRIPT.*" appear, insert the NT CD-ROM. If a PostScript driver was installed previously, either browse to a directory such as C:\windows\system or click on "Ignore".
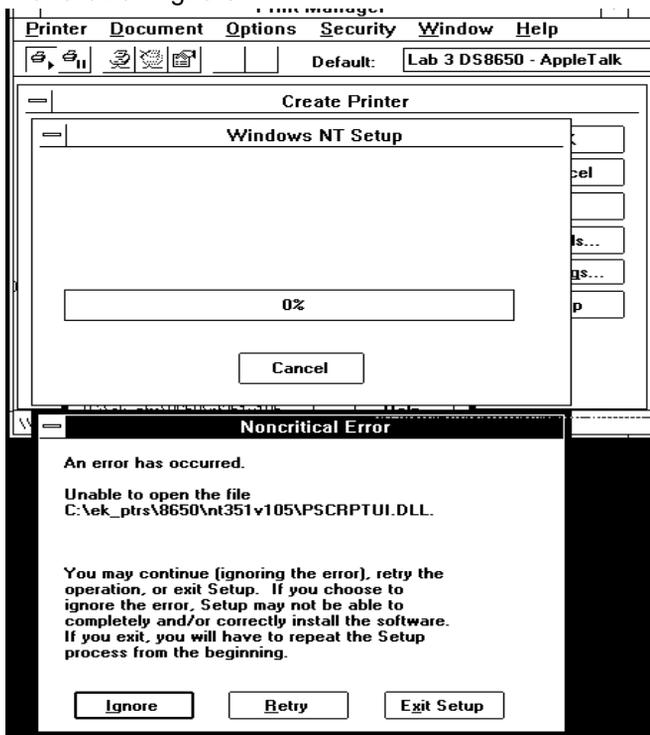
Direct Printing

LPR Port (TCP/IP) Configuration

Do the procedure on Page 10-2 to install the software for the Network Interface Card.

Do the following steps to set up a system to print directly to a printer using TCP/IP:

1. From the Create a Printer window, select "Other" from the Print to drop-down list box.

    The Print Destinations window opens.
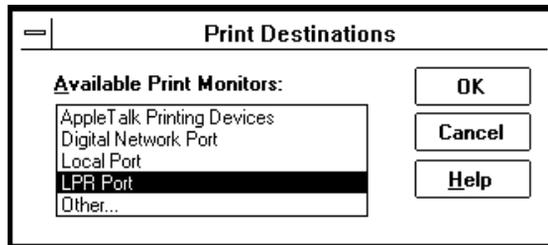
2. Select "LPR Port." If LPR Port is not in the menu, select "Other" again; and install Microsoft TCP/IP Printing Services.

    The Add LPR compatible printer dialog box opens.
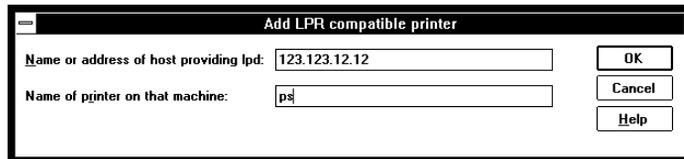
3. In the Add LPR Compatible Printer dialog box, enter the following information:

    • Name or Address of host providing LPD—Enter the IP Address that has been assigned to the Kodak printer.

    NOTE: An IP address entered as 123.123.012.012 from the printer's front control/display panel MUST be entered in this menu as 123.123.12.12 Refer to "Network Printer Parameters" for more information.

- Name of Printer on that Machine (ps).

NOTE: **This entry MUST be 'ps' corresponding to the internal 'PS' (Print Server) queue name on the printer's Network Interface Card.**

4. Click on *OK* in the remaining Create Printer screens.

   The newly-configured printer now appears in the Print Manager window.

AppleTalk Configuration

NOTE: NT AppleTalk supports printing in PostScript mode only. Use TCP/IP queues to support both PostScript and Raster mode printing.

The following steps describe how to set up a system to print directly to a printer using AppleTalk:

1. From the Create a Printer window, select "Other" from the Print to drop-down list box.

2. Select "AppleTalk Printing Devices." Click on *OK*.

NOTE: If AppleTalk Printing Devices Port is not in the menu, select "Other" again and install AppleTalk Protocol.
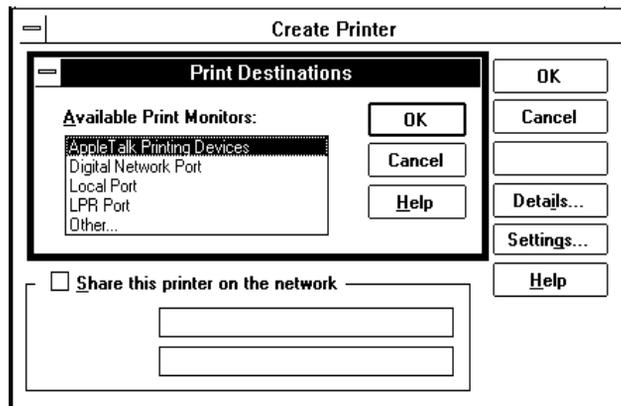
The following window opens
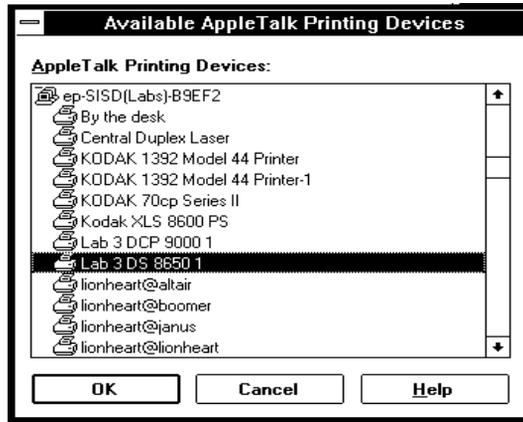
3. Double-click on the pertinent AppleTalk Zone to view the list of available AppleTalk devices and then select the Kodak printer by its AppleTalk Name.

IMPORTANT: If you CAPTURE this printer as an AppleTalk device (as is typically done on Windows workstations for LPT ports), NT Workstation and/or Server will send an NBP packet to the printer renaming the printer type to something other than a generic LaserWriter device. Now users that previously were able to select the printer on the network over AppleTalk will no longer be able to select and use it.

In an exclusive Windows environment, if it is desired that users only print to a queue that has been configured and not print directly to the printer as an AppleTalk Device, it might be appropriate to CAPTURE the printer. Note, however, that in a mixed environment, Macintosh users will no longer see the printer in the Chooser.

4. Click on *OK* in the remaining Create Printer screens. The newly-configured printer will appear in the Print Manager window.

Indirect Printing - Creating a Print Queue

Use the Create Printer dialog box to set up a shared printer on a network.

1. Click on the "Share this Printer on the Network" check box.

2. Enter the printer queue name as you wish it to appear to users.

3. Enter the name of the NT server that the printer is configured for.

NOTE: In the example above, Location = NALA and Share name = DS8650 results in a \\ NALA \ DS8650 server/queue that is available for users to select from the ADD PRINTER mechanism or by using PRINTER>CONNECT TO PRINTER from the PRINT MANAGER menu.

4. Click on *OK* in the remaining Create Printer screens. The printer now appears in the Print Manager window.

Indirect Printing - Selecting a Print Queue

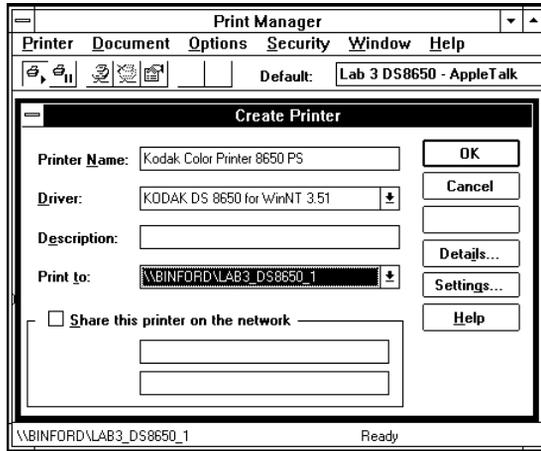The following steps describe how to select a print queue for indirect printing.

NOTE: Use the Create Printer dialog box to select an appropriate print queue.

1. For an existing server print queue, select an appropriate print queue. You may have to select "Other" and Browse the

network to find and select an appropriate queue.

```
┌─────────────────────────────────────────────────┐
│ ═                    Print Manager          ▼  ▲ │
│ Printer  Document  Options  Security  Window  Help│
│ ┌──┬──┐ ┌──┬──┬──┐     ┌────────────────────────┐ │
│ │🖨▶│🖨‖│ │🖨 │🖨 │🖨 │     Default: │Lab 3 DS8650 - AppleTalk││
│ └──┴──┘ └──┴──┴──┘     └────────────────────────┘ │
│  ┌───────────────────────────────────────────┐   │
│  │ ═             Create Printer              │   │
│  │                                  ┌───────┐│   │
│  │ Printer Name: │Kodak Color Printer 8650 PS│  OK   ││   │
│  │                                  └───────┘│   │
│  │ Driver:   │KODAK DS 8650 for WinNT 3.51 ▼│ ┌───────┐│   │
│  │                                  │ Cancel ││   │
│  │ Description: │                    │ └───────┘│   │
│  │                                  ┌───────┐│   │
│  │ Print to: │\\BINFORD\LAB3_DS8650_1  ▼│ │       ││   │
│  │                                  └───────┘│   │
│  │                                  ┌───────┐│   │
│  │ ┌─ □ Share this printer on the network ─┐ │Details...││   │
│  │ │                                │ └───────┘│   │
│  │ │ │                          │ │ ┌───────┐│   │
│  │ │ │                          │ │ │Settings..││   │
│  │ │ │                          │ │ └───────┘│   │
│  │ └────────────────────────────────┘ ┌───────┐│   │
│  │                                  │ Help  ││   │
│  │                                  └───────┘│   │
│  └───────────────────────────────────────────┘   │
│ \\BINFORD\LAB3_DS8650_1              Ready        │
└─────────────────────────────────────────────────┘
```

2. Click on *OK* in the Create Printer dialog box.

    The newly-configured printer appears in the Print Manager window.

10 *Windows NT 4.0 Workstations and Servers*

Network Interface Card /Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card/printer, the workstation platform(s) that will be used for creating and sending jobs to the printer, and any servers that will be used to spool and manage jobs sent to corresponding printer queues.

Section 2: Install the hardware for the Network Interface Card in the Kodak printer.

Chapter 3: Install the software for the Network Interface Card.

> NOTE: It is not necessary to install software to use the Network Interface Card.

Section 4: Configure network printer parameters, if necessary. Some are programmable from the printer's front display/control panel, and others are programmable by downloading PostScript command files.

> NOTE: We recommend that you use the default parameters initially until the printer is functional on your network.

Section 5: Determine the printer modes of operation (PostScript and/or Raster) to be used based on the model of printer. Install the corresponding PostScript and/or Raster mode software. For print servers (indirect printing), configure the printer on a pertinent server platform using the desired protocol.

For user workstations, configure the printer to use a server's print queue (indirect printing) or to print directly to the printer (direct printing) using the desired protocol.

Network Service and Protocol Installation

With Windows NT 3.51 Workstation and Server, an administrator must configure the printer and select a mechanism to use for printing.

Windows NT supports network printing utilizing TCP/IP, AppleTalk and/or Novel Netware IPX protocols. Using the Network Control Panel, the appropriate Services (TCP/IP) and/ or Protocol (AppleTalk) support must be installed prior to configuring printers.

NT Workstations and Servers

Service/Protocol	System Support Module	Printer Support
TCP/IP	Microsoft TCP/IP Printing Support	PostScript or Raster
AppleTalk	AppleTalk Protocol	PostScript only
IPX (Novell)	Netware Services/Support	PostScript or Raster

Network Services/Protocols

To verify or install the proper network service/protocol, select "NETWORK CONTROL PANEL" and then either "SERVICES" or "PROTOCOLS" from the Network menu. Select "SERVICES" for TCP/IP or PROTOCOLS for AppleTalk.

For TCP/IP, select "SERVICES" from the network window menu.

If it is necessary to add/install Microsoft TCP/IP Printing, select "ADD" from the Network Services menu. If you have an NT installation CD-ROM in a drive, select the desired service from the subsequent menu by double-clicking on that service for automatic installation. If you select "HAVE DISK," you may need to enter an appropriate search path such as D:\i386\.

For AppleTalk, select "PROTOCOLS" from the network window menu. If it is necessary to add/install AppleTalk Protocol, select "ADD" from the Network Protocols menu. If you have an NT installation CD-ROM in a drive, select the desired service from the subsequent menu by double-clicking on that service for automatic installation. If you select "HAVE DISK," you may need to enter an appropriate search path such as D:\i386\.

Raster Mode Considerations

A workstation can be configured as a pseudo-server when using TCP/IP to service a printer by also sharing the printer and assigning a queue name. The same workstation can then select itself as a server and the shared queue for either PostScript or Raster mode printing.

> NOTE: The export module for NT only supports Raster mode printing using TCP/IP or IPX (Novell) queues. NT AppleTalk printing does not recognize the printer in Raster mode because the printer advertises it self as a Kodak_Raster device instead of a LaserWriter device. Therefore, NT AppleTalk printing will limit the use of the printer to PostScript mode printing only.

Windows NT Servers and Workstations

Some systems such as Windows NT come with Kodak drivers provided by Microsoft. If you use these drivers, you may encounter problems. Be sure to install drivers provided by Kodak. When in doubt, refer to the Kodak web site for availability and the latest versions of drivers. Refer to "Getting Help" for information on how to access the Kodak web site.

You may encounter problems if you install drivers on remote workstations by downloading them from an NT server.

We recommend that you install the printer driver and/or the export module on each server and workstation on your network. When you set up the servers for sharing, install only the software relevant to the operating system for the server.

Direct Printing

We recommend that an NT server be configured to service printers with TCP/IP since both PostScript and Raster mode printing is supported by TCP/IP Server/ Queues. An AppleTalk server/ queue only supports PostScript mode printing.

A printer is configured on an NT server in the same manner as configuring a printer on an NT workstation, except that on an NT server the printer is shared and assigned a queue name.

When a printer is shared on a server, do not select other Windows systems that will use the queue. Drivers should be installed locally on all systems serviced by a server. You may encounter problems when trying to download copies of a driver from the server to a workstation.

Indirect Printing (Printing through a Server)

From the workstation, browse the network and select a pertinent server and queue.

Even though a workstation may be configured to print directly to a printer using TCP/IP or AppleTalk, we recommend that workstations print indirectly by selecting a TCP/IP server queue for optimal resource utilization.

NT Server Queues

On NT servers, you may encounter corruption of data when printing files over 5 Mbytes. Color bands appear across the printed image. This condition can be corrected by setting up server properties to accept the entire print job before passing the file on to the printer. "Start Printing After Last Page Spooled" must be selected.
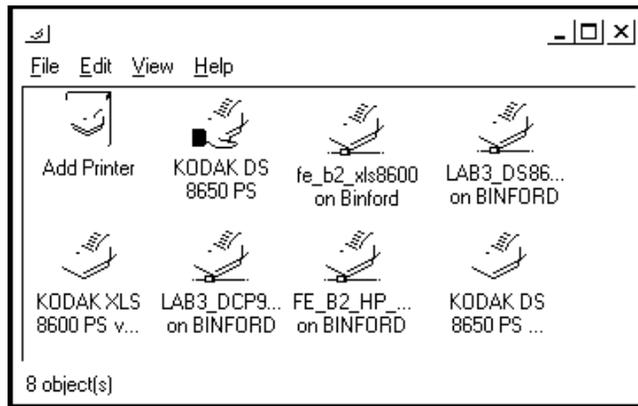
Configuring Workstations and Servers

For Windows NT workstations or servers, an administrator must configure the printer and select a mechanism for printing. If necessary, refer to the README files that come with the installation software for your printer.
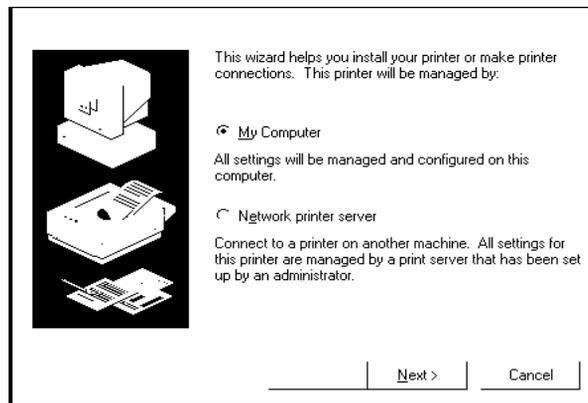
Start/Settings/Printers Menus

1. From the Start icon, select "Settings" and then "Printers."

   The Printers window opens.

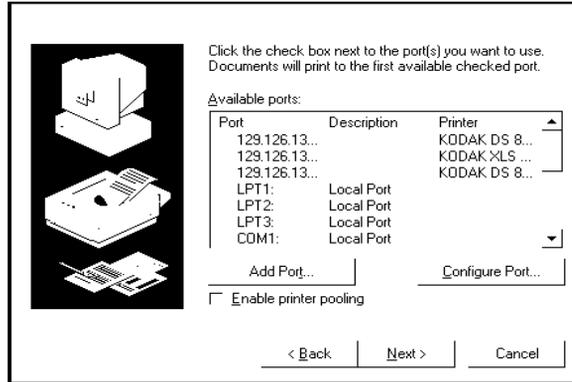2. Click on *"Add Printer."*

   The Add Printer Wizard window opens.

3. Select "My Computer." Click on *Next.*

The Add Printer Wizard window opens.

Configuring Your Printer for an LPR Port (TCP/IP)

NOTE: To configure your server or workstation to print directly to the printer from AppleTalk, **go to Step 9.**

4. From the "Add Printer Wizard" screen:

Click on *Add Port* if you are configuring your server or work-station to print directly to the printer from an LPR port

OR

Click on *LPT1* and then *Next* if you are configuring your work-station to print indirectly to the printer from a predefined server print queue. **Go to "Installing the Kodak Printer Driver" on page 10-11.**

The Available Printer Ports window opens.
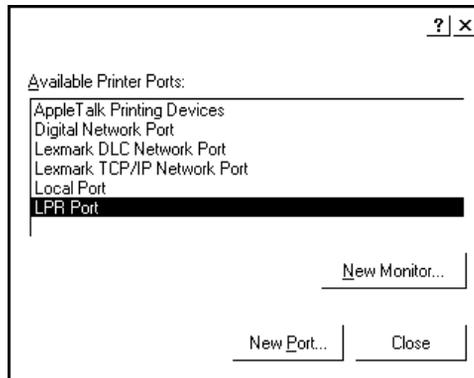
5. Select "LPR Port."

NOTE: If "LPR Port" is not in the menu, install Microsoft TCP/IP Printing Services. If necessary, refer to "Network Service and Protocol Installation."

The Add LPR compatible printer window opens.

Add LPR compatible printer		☒
Name or address of server providing lpd:	123.123.12.12	OK
Name of printer or print queue on that server:	ps	Cancel
		Help

6. Enter the IP Address that has been assigned to the Kodak printer.

   NOTE: An IP address entered as 123.123.012.012 from the printer's front control/display panel MUST be entered in this menu as 123.123.12.12. Refer to "Network Printer Parameters" for more information.

7. Enter the name of the printer.

   NOTE: This entry MUST be 'ps' corresponding to the internal 'ps' (Print Server) queue name on the printer's network interface card. No other entry will work.

8. Click on *OK.*

9. From the Add Printer Wizard (Add Port) window, click on *Next*.

   Go to page 10-11, and do the procedure to install the Kodak printer driver.
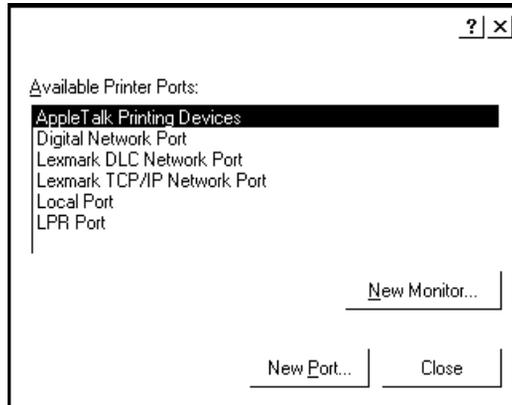
Configuring Your Printer for AppleTalk

NOTE: NT AppleTalk supports printing in PostScript mode only. Use TCP/IP queues to support both PostScript and Raster mode printing.

10. Click on *Add Port* in the Add Printer Wizard window.
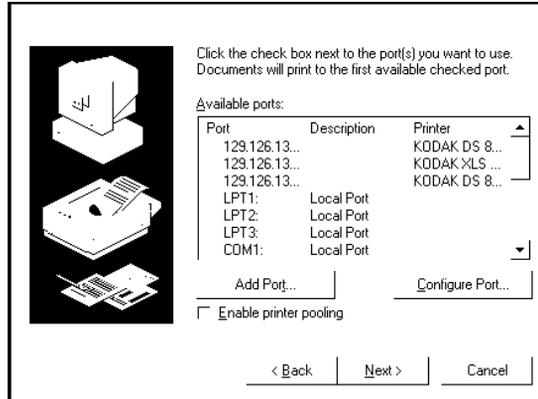

The Printer Ports window opens.

11. Select "AppleTalk Printing Devices".

NOTE: If AppleTalk Printing Devices is not in the menu, install AppleTalk Protocol. If necessary, refer to "Network Service and Protocol installation."

The Available AppleTalk Printing Devices window opens.

12. Double-click on your AppleTalk Zone to view the list of available AppleTalk devices.

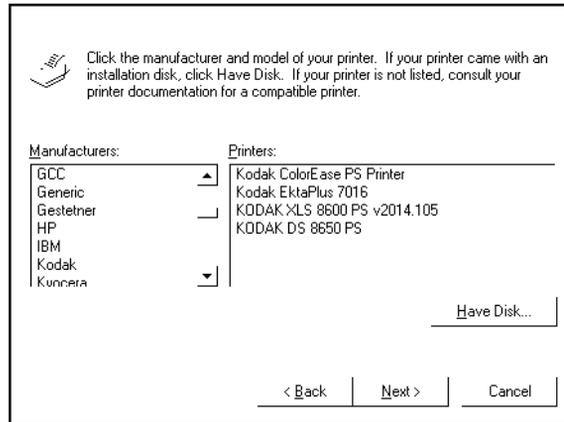13. Select the Kodak printer by its AppleTalk Name. Click on *OK*.
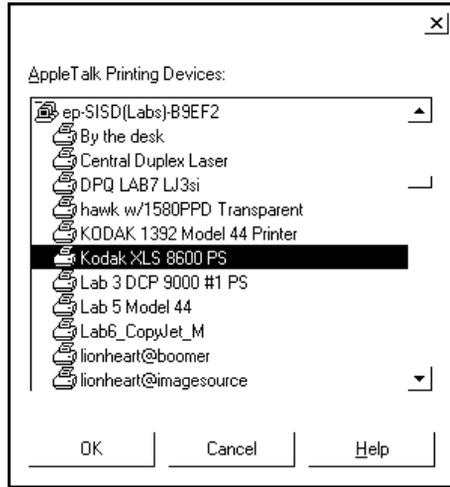
You are returned to the Add Printer Wizard window.

Installing the Kodak Printer Driver

Do the following steps to install the Kodak printer driver.

From the Add Printer Wizard window:

1. Select "Kodak" from the list of Manufacturers. Click on *Have Disk*.

    NOTE: Printer drivers provided by Microsoft appear in the Add Printer Wizard window as Kodak printer drivers. These drivers have not been tested or certified by Kodak. If you are not sure if a Kodak driver is installed, install the Kodak driver supplied with the printer.

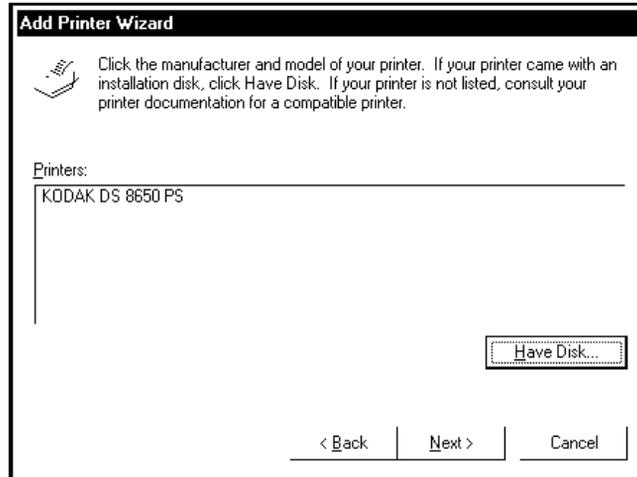2. Install the Kodak printer driver diskette in the disk drive. The following window opens.
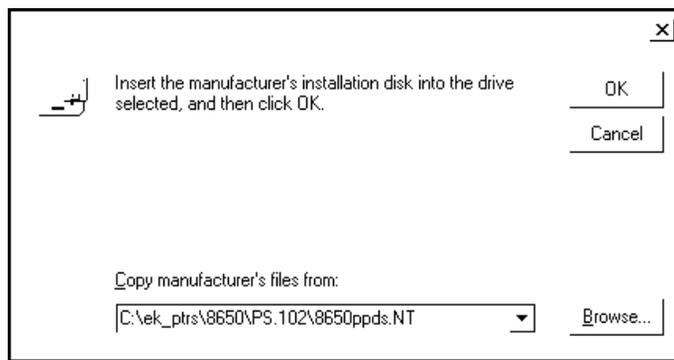
3. Click on *Browse* to locate the printer driver file. Click on *OK*.

The Locate File window opens.

Locate File	? ×
Look in:	↓ 8650ppds.NT ▼ 🔼 📷 ⚏ ▥

🗒 Ntprint
🗒 Printer

File name:	Ntprint	Open
Files of type:		Cancel
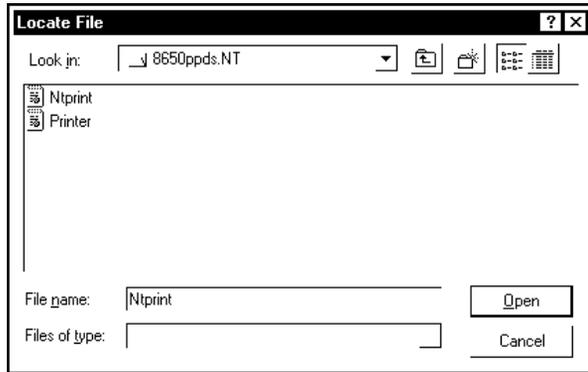
4. Locate an NTPrint file. Click on *Open*.

The Add Printer Wizard window opens with your printer selected.

Add Printer Wizard

Click the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.

Printers:

KODAK DS 8650 PS

[Have Disk...]

< Back   Next >   Cancel
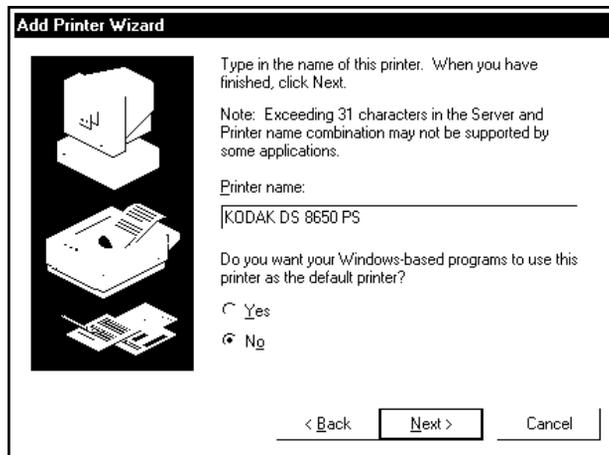
5. Click on *Next*.

If a printer driver is already installed on your system, a window opens asking if you wish to keep or replace the existing driver.
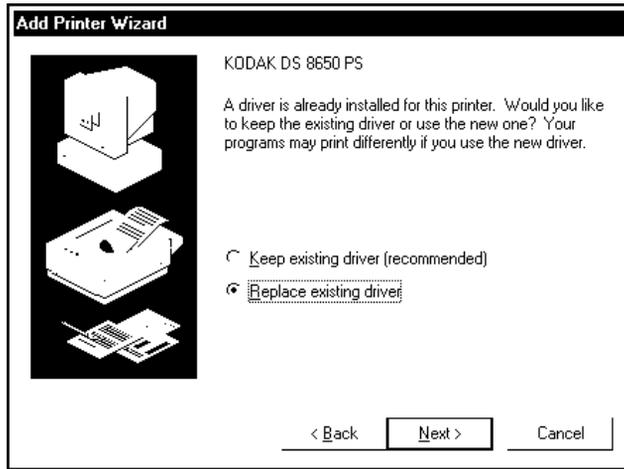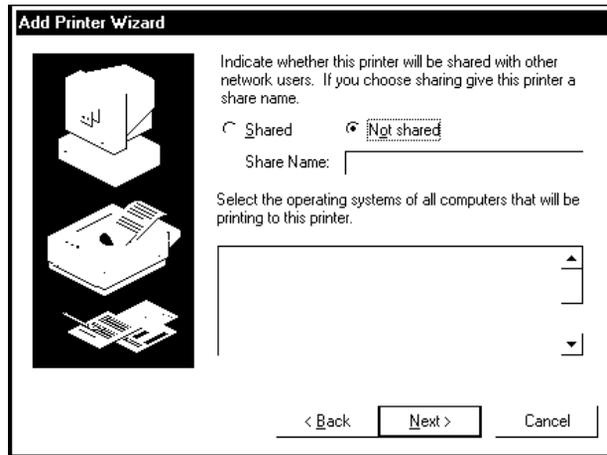

6. If the current driver:

    • operates correctly, click on *Keep existing driver*. Click on *Next*.

    • does not operate correctly, click on *Replace existing driver*. Click on *Next*.

    The Add Printer Wizard window opens.

7. Enter the printer name as you wish it to appear in the Print Manager. Select "Yes" or "No" for default printer. Click on *Next*.

The following window opens.

8. Do one of the following:

    • To set up a printer (direct printing from your workstation), click on *Not Shared* and then on *Next*.

    • To set up a server printer queue (indirect printing from your workstation), click on *Shared*. Enter the name of the printer queue. Click on *Next*.

    NOTE: Do not select any other operating systems for installation of equivalent printer drivers. Drivers for other operating systems must be installed locally on those systems.

The Add Printer Wizard window to print a test page opens.


```
┌─────────────────────────────────────────────────────────┐
│ Add Printer Wizard                                        │
├─────────────────────────────────────────────────────────┤
│                   After your printer is installed, you can│
│                   print a test page so you can confirm    │
│                   that the printer is set up properly.    │
│                                                           │
│                   Would you like to print a test page?    │
│                                                           │
│                   ⊙ Yes (recommended)                     │
│                   ○ No                                     │
│                                                           │
│                                                           │
│                   [ < Back ]  [ Finish ]  [ Cancel ]      │
└─────────────────────────────────────────────────────────┘
```
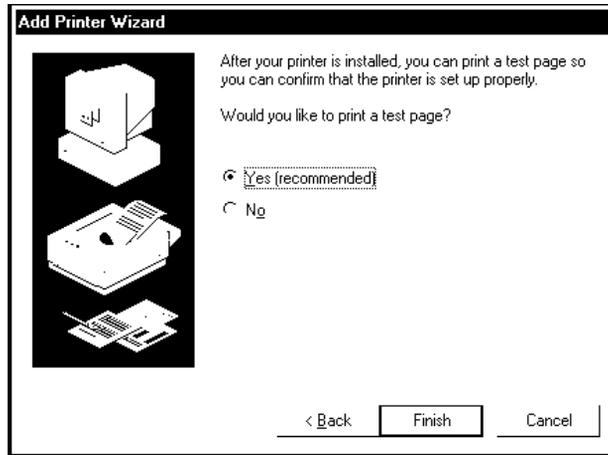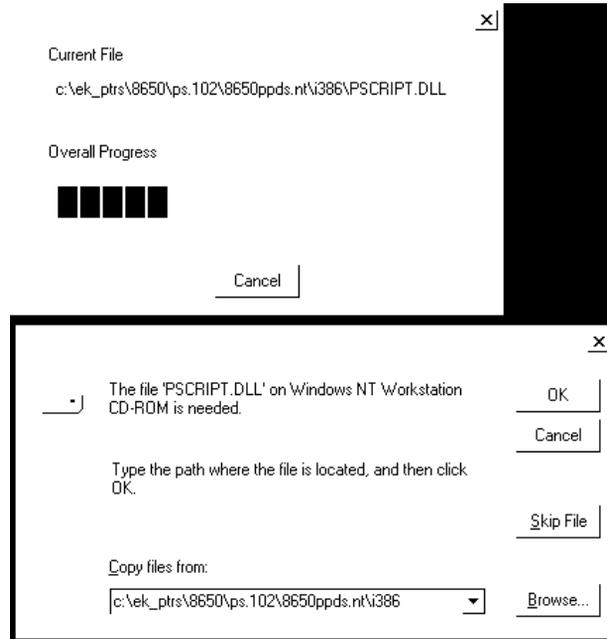
9. Click on *Yes* and then on *Finish*.

   NOTE: If errors are encountered at the printer display panel (load paper, ribbon) when a test page is generated, check the Printer Properties menus for correct/ consistent printer parameter settings.

Kodak Driver - Copying Files/ Files Needed

The Kodak driver is a PostScript driver that uses NT system PostScript (PSCRIPT.*) components which reside on the NT system CD-ROM. These components may already reside in C:\windows\system if any PostScript printer driver has been previously installed.

If messages such as "Can't find File: PSCRIPT.*" or "Unable to Open File PSCRIPT.*", insert the NT CD-ROM. If any PostScript driver has been installed previously, either browse to a directory such as C:\windows\system and select "OK" or select "Skip."

Upon installation of the driver software, the newly-configured printer appears in the Print Manager window.

Current File

c:\ek_ptrs\8650\ps.102\8650ppds.nt\i386\PSCRIPT.DLL

Overall Progress

Cancel

The file 'PSCRIPT.DLL' on Windows NT Workstation CD-ROM is needed.

OK

Cancel

Type the path where the file is located, and then click OK.

Skip File

Copy files from:

c:\ek_ptrs\8650\ps.102\8650ppds.nt\i386

Browse...

Creating a Print Queue for Indirect Printing

To configure a server to provide a print queue for indirect printing from a workstation, select "Shared" in Step 8 of "Installing the Kodak Driver."

OR

If the printer has already been configured as "Not Shared," do the following steps:

1. Select "Printer Properties."

2. Select "Share the printer."

3. Assign a Share Name.

4. Click on *OK*.

Selecting a Print Queue for Indirect Printing

Follow the steps in "Creating a Print Queue for Indirect Printing" to configure a workstation to print from LPT1. This procedure installs the driver locally on a workstation. Do not share the printer. When you finish with the "Add Printer" installation process, do the following:

1. Select the new printer icon.

2. Select "Properties" from the File menu.

3. Select:

    • "Ports" tab

    • "Add Port"

    • "Local Port" from the "Printer Ports screen

4. Click on *New Port*.

5. Enter a port name that corresponds to an existing server.

    For example, Server/ Workstation = NALA and Share name = DS8650 would result in a \\ NALA \ DS8650 server/queue that will be available for users.

6. Click on *OK*.

7. Check the new printer's properties for consistency with the media currently in the printer to avoid errors.

Printer Properties and Document Defaults

To avoid printing errors, set up the appropriate printer characteristics by doing the following:

1. From the Printer's window, select the Kodak printer you configured.

2. Select "Properties" from the file menu.
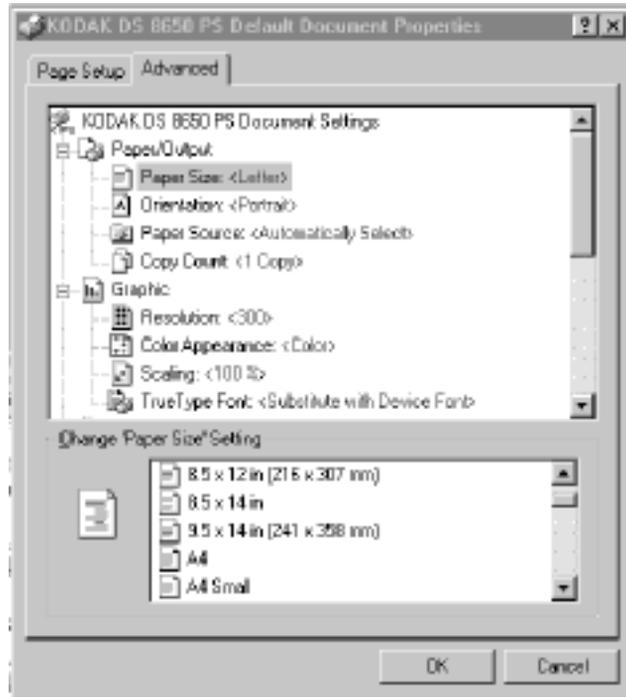
    The following window opens.

3. Select the properties you wish to set up for your printer.

To set up properties for the output from your printer, do the following steps:

1. From the Printer's window, select the Kodak printer you configured.

2. Select "Document Defaults" from the File menu.

    The following window opens.

3. Select the properties you wish to set up for the output from your printer.

11 Macintosh Workstations

Network Interface Card/Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card, printer, workstation platform(s) that will be used for creating and sending jobs to the printer, and any servers that will be used to spool and manage jobs sent to corresponding printer queues.

You should use AppleTalk for Macintosh systems.

Section 2: Install the hardware in the Kodak printer.

Section 3: Install the software.

> Note: There is no software installation necessary for using the Network Interface Card with AppleTalk. However, there may be some utilities provided with the printer for changing the AppleTalk Name and the AppleTalk Zone. Refer to "Network Printer Parameters" for more information.

Section 4: Configure network printer parameters, if necessary. Some parameters are programmable from the printer's front display/control panel and others by downloading PostScript command files.

> Note: We recommend that you use the default parameters until the printer is functional on your network.

Section 5: Determine the printer modes of operation (PostScript and/ or Raster) to be used based on the model of printer purchased. Install the corresponding PostScript and/or Raster mode software. Use the installation programs provided with the PostScript driver and export module diskettes.

Refer to the README files included with specific Kodak printers for installation instructions for the driver and the export module. It may be necessary to move PPD and/or PDF files to appropriate application folders.

AppleTalk Network Printing Setup

Macintosh operating systems use either the network control panel or the AppleTalk control panel to select EtherTalk.

- To use the network control panel, pull down the Apple menu and select "Control Panel>Network>EtherTalk."

- To use the AppleTalk control panel, pull down the Apple menu and select "Control Panels" and then "AppleTalk."Select:

    "Edit"

    "User Mode"

    "Administrator"

    "Change Connect via"

    "Ethernet"

AppleTalk Printer Selection

To select the printer in PostScript mode, open the Chooser from the Apple menu. When using the Chooser, a Kodak printer in PostScript mode should appear by its default or reassigned AppleTalk name when the Kodak printer icon (or any PostScript/ LaserWriter icon) is selected in the left half of the Chooser window.

Apple Menu Icon > Chooser. Select:

    "Active" for AppleTalk

    "AppleTalk Zone"

    Appropriate Printer Icon

    Appropriate Printer

    To select the printer in Raster mode, use "Export" within Adobe Photoshop, and select the printer.

Macintosh - Printing

Refer to "Printing" for details on how to print from Macintosh applications in PostScript and Raster printer modes.

12 UNIX Workstations and Servers

Network Interface Card/Printer Installation Overview

Section 1: Determine the network protocol(s) to be used for communicating to the Network Interface Card and the printer, the workstation platform(s) that will be used for creating and sending jobs to the printer, and any servers that will be used to spool and manage jobs sent to corresponding printer queues.

You must use TCP/IP for UNIX systems.

Section 2: Install the hardware in the Kodak printer.

Section 3: Install the software for the Network Interface Card.

NOTE: Use the UNIX TCP/IP Utilities install.sh script for UNIX.

Section 4: Configure the parameters for the network printer, if necessary. Some parameters are programmable from the printer's front display/control panel and others by downloading PostScript command files.

The only pertinent parameter for UNIX is the IP Address.

Section 5: Determine printer modes of operation (PostScript and/ or Raster) to be used based on the model of the printer purchased.

NOTE: Kodak does not produce drivers and export modules for UNIX platforms. However, PostScript output files can be sent to the printer using the line printer daemon (lpd). For solutions from other vendors, refer to "Getting Help" at the end of this guide.

UNIX BSD Systems

Access to printers in BSD systems is controlled by the lpd normally located in the /usr/lib directory. This is started at boot time through the file rc. The common print programs like lpr and lp take the file to be printed and put it in a spooling queue where lpd finds and prints it.

The reference file for lpr is /etc/printcap. This file contains a description of the printer, the name of the directory where the job is spooled, the accounting file for the printer, the error file for the printer, and the filters used for any further processing of data before it is sent to the printer.

The lpd provides access control through the following process:

• All requests must come from one of the systems listed in either /etc/hosts.equiv or /etc/hosts.lpd.

• If the printcap entry specifies rc capability, only lpr requests for users with accounts on local machines are honored.

• The lock file in each spool directory stores information about the daemon process for lp programs and prevents multiple programs from becoming active. The lock file is an ASCII file containing two lines. The first line is the process ID of the daemon, and the second is the file name of the job being printed.

After the daemon sets the lock, it scans the directory for files beginning with cf. The lines in a cf file specify files to be printed or nonprinting actions. It contains information such as the name of the job, the host name, and the name of the user.

When a file is spooled for printing, its contents are copied into a data file in the spool directory. Data file names begin with df. If you do not want data files to be copied into the spool directory, use the option -s with the lpr command. The spooling software then creates a symbolic link to the files instead of copying them.

Direct Printing/Spooling

Run the installation script on every computer that will access the printer. Define the printer as a local printer on every system. Users will spool directly from their own print queues to the printer.

Indirect Printing/Spooling

Run the installation script only on the computers that will be used as network spooling hosts (servers). Define the printer as a remote printer on every other machine. Users will forward the jobs to the spooling host which, in turn, will access the printer.

Printer Installation/Configuration

Automatic Installation

The installation script on the TCP/IP utilities diskette is for UNIX systems only. The disk is in UNIX tar format. The install script is inappropriate for use on a PC or Macintosh system.

Use the installation script to enter the host name and IP address for the Network Interface Card into the host tables of all spooling hosts. This script automatically places entries into /etc/hosts and /etc/printcap files. Generally this script works for most UNIX systems. Refer to specific UNIX sections for manual installation procedures if you encounter problems.

When you are logged in as root, you can use menu choice 3 of the installation script to delete a printer. This deletes the spool directory, log files, and printcap entry associated with the printer.

Follow the automatic installation procedure outlined using the install script on the TCP/IP Utilities diskette

After you run the installation script, you are ready to print using the Network Interface Card. The host software redirects your UNIX print data to the Network Interface Card over the network. Refer to the sections in this guide on specific print utilities under the UNIX operating system you are using. Run the installation script on every host that spools directly to the Network Interface Card.

1. Log in as root.

2. Find and load the Utilities for the TCP/IP diskette.

3. Use the tar command to see the files:

    tar -tvf /dev/(device)

NOTE: The device name varies depending on the type of computer and its peripheral designations. For example, the BSD floppy device is called fd0.

4. Change to the directory into which you want to load the host software and files

    tar -xvf /dev/(device)

5. List the files you loaded by entering the command

   ls

6. Run the installation script by entering the command

   ./install.sh

7. Respond to the script's prompts.

On BSD UNIX systems the installation script creates an entry in the /etc/printcap file for the printer you specified. The script also creates required spool directories and log files. Installing more than one printer.

The installation script installs one printer at a time. To install more than one printer, execute the script again.

You can create several logical printers with different characteristics which point to the same physical printer in this manner.

For example, to install another printer called 8650 as an alias for DS8650PS in the /etc/hosts file on a BSD UNIX system, you would enter:

   192.185.2.3   DS8650PS   8650

The installation procedure varies for System V UNIX systems.

Manual Installation

/etc/hosts File

Add the host printer name and the IP address to the host database--usually the *etc/hosts* file. Do this for every host that spools directly to the printer.

You must be logged in as root to edit the *etc/hosts* file.

To add a printer named 8650 with an IP address 192.185.2.3, you would add the line below to the *etc/hosts* file:

   192.185.2.3 8650

If you are using NIS ® (Yellow Pages®), edit the YP master hosts database. After editing the database, remember to rebuild it by changing to the YP directory (/var/yp) and typing make.

/etc/printcap File

Edit the */etc/printcap* file if necessary.

The */etc/printcap* file contains entries separated by colons (:). If an entry needs to continue on the next line, enter a backslash (\) at the end of the line. Make sure that the second through the last lines are tabbed, or the file will not be properly read.

A sample remote printer entry for a printer called 8650 accessed through a remote BSD Unix host is shown below. The log file is /usr/adm/8650.errs, and the files are spooled in the directory /usr/spool/8650. The install.sh script on the UNIX Utilities for the TCP/IP diskette automatically adds a section similar to this.

8650:\

    :lf=/usr/adm/8650.errs:\

    :lp=:\

    :rm= 8650:\

    :mx#0:\

    :rp=ps:\

    :sd=/usr/spool/8650:

Printcap File Entries

Some commonly used entries in the printcap file are listed below.

Name	Type	Default	Description
af	string	NULL	full path and name of the accounting file
br	number	none	baud rate
lf	string	/dev/console	full path and name of error log
lp	string	/dev/lp	device name to open for output
mc	num	0	maximum number of copies

Name	Type	Default	Description
mx	num	1000	maximum file size in blocks
of	string	NULL	full path and name of output filter
pl	num	66	page length
pw	num	132	page width
rm	string	NULL	name of machine for remote printer
rp	string	lp	remote <printername> argument
rc	boolean	false	restrict remote users to those with local accounts
rw	boolean	false	open printer device read/write instead of write only
sb	boolean	false	short banner (one line only)
sd	string	/var/spool/lpd	spool directory
sh	boolean	false	suppress burst page headers
tf	string	NULL	troff data filter

Printer Status

To check that the printer is up and responding on the network, use the *ping* command:

ping *<host printer name>* If the printer called 8650 is responding on the network, the response is:

8650 is alive

If there is a problem resolving the printer name, try using ping with the IP address:

ping <IP address>

NOTE: On some systems, the ping command continuously displays messages such as:

64 bytes from 8650 (192.185.2.3) icmp_seq=0 time=3ms

To discontinue the ping command, press *delete* or *Ctrl-C*.

For more information about the printer status, use the lpq command:

lpq -P <printername>

Multiple Queues

The Network Interface Card supports simultaneous printing from up to 12 queues. The card listens for lpd connections on 12 ports. If all 12 are being used at a given time, the 13th lpd will not be able to connect to the card. If this happens, the lpd can be restarted using the command:

lpc restart <queuename>

SGI Systems

On SGI systems, install the following BSD Printing Support modules from the SGI installation CD-ROM:

eoe2.sw.bsdlpr (software)

eoe2.man.bsdlpr(on-line manual)

If you experience problems using the UNIX installation script, it may be necessary to edit the etc/hosts file and printcap files manually.

The lpc command may be used to start/restart/enable printers and queues.

System V Systems

SUN Solaris Systems

If you have problems using the install script, do the following procedure to use lpd support from Solaris-based System V UNIX systems. These steps are similar for other System V systems.

IMPORTANT: *Before you perform any network setup procedures, make sure that all recommended print patches have been installed from the OS patch CD-ROM.*

Using the command line method

Do as follows to use the command-line method to run the installation script.

1. In the /etc/hosts file, add an entry similar to the following to correlate the IP Address of the printer to the printer's name:

    syntax: <IP Address>   <printer name>

    example: 192.185.2.3   DS8650PS

2. Enter the following command to shut down the printer subsystem:

    /usr/lib/lpshut

3. Add the following line to the /etc/lp/Systems file:

    <host printer name>:x:-:bsd:-:n:10:-:-:

4. Enter the following command to add a new printer:

IMPORTANT: *Do not enter any returns in the following command.*

    /usr/lib/lpadmin -p<printer name> -s<host printername> \!ps -I postscript

NOTE:The <Printer name> can be anything you want to call your printer. It can be the same as <host printer name>. However, doing this makes the corresponding printer name associations more confusing.

5. Enter the following command to start the print scheduler:

   /usr/lib/lpsched

6. Enable the printer by entering the following command:

   enable <printername>

7. Enter the following command to make the printer accept connection:

   accept <printername>

Using the admintool

You can also use system administration tools (the Solaris admintool or HP/UX SAM, for example) to install the printer. However, you need to use the lpadmin command to actually add the printer as a new printer.

HP/UX Systems

Installation is similar to the SUN Solaris manual installation with the exception of the following use of lpadmin:

**lpadmin -p<printer name> -mrmodel -orpps -v/dev/null
ocmrcmodel**

   -orm<host printername> -osmrsmodel -ob3

<Printer name> can be anything you want to call your printer. It can be the same as <host printer name>. However, doing this makes corresponding printer name associations more confusing.

13 Printing

Printing Modes - PostScript and Raster

The Kodak printers supported are of 2 types. Models with the PS extension support both PostScript and Raster printing modes. Models with no PS extension support Raster mode printing only.

Printing in PostScript mode is supported by using application software packages. Raster mode is a Kodak proprietary printing language that is more efficient than PostScript in terms of performance and use of special printer features.

Kodak Printer Software

Kodak provides PostScript drivers for PostScript mode printing and export modules for Raster mode printing from Macintosh and Windows platforms. Adobe Photoshop application software for use with the export modules must be purchased from Adobe.

Non-Kodak Printer Software

Applications and drivers are also available from third party support vendors for most platforms. Information on vendors and software solutions can be found on the Kodak world wide web site at:

http://www.kodak.com by following the path:

PRODUCT INFORMATION >TECHNICAL INFORMATION > SYSTEM & SOFTWARE SOLUTIONS CATALOG >SEARCH BY PRODUCT CATEGORY.

Also, if a Kodak driver is not available, a generic PostScript driver or LaserWriter driver could be used in conjunction with the specific Kodak printer PPD file to generate PostScript output to the printer.

Changing between PostScript and Raster Printing Modes

NOTE: If you are setting up a *Kodak Digital Science*™ Desktop Color Proofer 9000, you may wish to refer to the user's guide for the Network Interface card shipped with the proofer for instructions on using the display/control panel

1. Press *Setup/Select* on the display panel when "READY" appears in the panel.
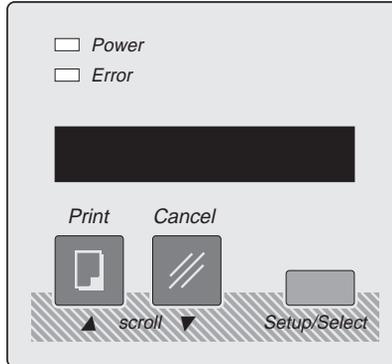
2. Press " ▼ " until "SETUP:MODE" appears.

3. Press *Setup/Select* to access the SETUP:MODE submenu.

4. Press " ▼ " until "MODE:POSTSCRIPT" or "MODE:RASTER" appears.

The currently selected version is indicated by an asterisk (*).

5. Press *Setup/Select* to make your choice.

6. Press " ▼ " until "MODE:EXIT" appears.

7. Press *Setup/Select*.

8. Press " ▼ " until "SETUP:EXIT" appears.

9. Press *Setup/Select*.

If you change the print mode, wait for the printer to reinitialize and return to "READY."

PostScript Mode Printing

Printing from Microsoft Windows

You can print from Microsoft Windows applications using FILE > PRINT.

Be sure to use FILE > PAGE SETUP to setup or verify pertinent printing parameters such as paper size and ribbon type.

Also, check for consistency in parameter definitions from the PRINTER > PROPERTY menus when applicable for eliminating extra/error PostScript pages

When printing from TCP/IP, extraneous job control (end of job) characters that are automatically generated by PostScript applications, <Ctrl D>s, may cause extra pages to be printed along with an "Offending Command" PostScript error page. The printer may also process the job and then return to "READY" without printing.

This Ctrl D does not cause problems when using the parallel, IPX, or network AppleTalk printing. It does, however, cause jobs to be cancelled when they are serviced by a UNIX server.

Windows 3.x Systems

To eliminate the Ctrl Ds from PostScript output files on Windows 3.x systems, a C:\WINDOWS\WIN.INI file must be edited.

Within the C:\WINDOWS\WIN.INI file, search for any occurrences of Kodak printers and/or LPT ports that they may be associated with. A typical entry might look like the following:

[Kodak DS 8650 PS, LPT1]

After this line, add the following line:

CTRLD=0

Save the file, and try printing it again.

Windows 95 and Windows NT 3.51 Systems

To eliminate the Ctrl Ds from PostScript output files on Windows 95 and Windows NT systems, use the Printer >Properties setup menus and select PostScript >Advanced features. Turn off the Ctrl Ds before and/or after job.

Printing from DOS

NPrint

Print to the printer as if it were any other Novell print server. For example, use the Novell CAPTURE command to redirect one of the LPT ports to a queue serviced by the Network Interface Card. If the file server is named raisa and the queue is named lp1, the command to redirect to LPT1 would be:

CAPTURE /S=raisa /Q=lp1

Use NPRINT to print as shown in the following example:

NPRINT myfile S=raisa Q=lp1

You can include the /notify option to send a message to users who send jobs once the jobs successfully print. For example:

NPRINT myfile S=raisa Q=lp1 /notify

Copy

Use COPY to print to an LPT port redirected to a network port.

COPY myfile LPT1

LPR

The example below illustrates how to use the lpr command to send a file to the printer from the DOS command line.

In this example, the server name is server1, and the printer name is 8650.

lpr -S server1 -P 8650 \fullpath\filename

Printing form Macintosh Systems

To send PostScript files to a printer in PostScript mode, use the File>Print function from a PostScript application. A pre-existing PostScript file can be downloaded to the printer using the LaserWriter Font Utility.

Printing from BSD UNIX Systems

Kodak does not develop PostScript drivers or export modules for UNIX platform(s). However, other vendors do provide solutions in support of Kodak printers. These solutions support various UNIX/ Windows/Macintosh platforms and interfaces. For information, refer to "Getting Help" at the end of this guide.

However, if PostScript or Raster output files have been generated by other applications and drivers, they can be sent to a Kodak printer using the line printer daemon.

Access to printers in BSD systems is controlled by the lpd normally located in the /usr/lib directory. This is started at boot time through the file rc. The common print programs like lpr and lp take the file to be printed and put it in a spooling queue where the lpd finds it and prints it.

The reference file for lpr is /etc/printcap. This file contains a description of the printer, the name of the directory where the job is spooled, the accounting file for the printer, the error file for the printer, and the filters to be used for any further processing of data before it is sent to the printer.

An example for printing a file:

lpr -P8650ps filename.ps

Printing from UNIX System V Systems

Kodak does not develop PostScript drivers or export modules for UNIX platform(s). However, other vendors do provide solutions in support of Kodak printers. These solutions support various UNIX/ Windows/Macintosh platforms and interfaces. For information, refer to "Getting Help" at the end of this guide.

However, if PostScript or Kodak Raster output files have been generated by other applications and drivers, they can be sent to a Kodak printer by lp.

Native UNIX print commands are redirected to the Network Interface Card over the network. Consult manual pages for specific print utilities under the UNIX operating system you are using.

Some common System V print commands are listed below.

Command	Function
lp <file>	Print defined file to default printer.
lpstat -t	Display status of all printing jobs you started with lp.
cancel <job-number>	Remove a defined job from the print queue.
lpc	Type status after entering the lpc command to display the status of the printers.

Printing from VMS Systems

Printing with MultiNet™ on a VMS host

The Network Interface Card works with a MultiNet stream queue on a VMS host. Invoke MultiNet's printer configuration utility (PCU) to add a VMS print queue by entering the following command:

multinet configure/printers

The PCU will prompt you for the IP address, the protocol type, and the queue name. Specify lpd as the protocol type, and ps as the queue name.

The change takes effect at the next system boot up. To make it effective immediately, invoke the COM procedure:

@MULTINET:REMOTE-PRINTER-QUEUES

Printing with WIN/TCP on a VMS network or with DEC UCX 2.0

Refer to your user's guide for a detailed description of Installation and printing. Specify ps as the remote queue name and the host name of the Network Interface Card as the remote machine name.

Raster Mode Printing

Windows and Macintosh Platforms

Kodak only supports printing in Raster mode through the use of Kodak printer specific export modules for Adobe Photoshop.

To select the printer in Raster mode, select "Export" from the File menu to open a Select a Kodak Printer screen. Click on *Network* and/or *Update* to view and select printers that are in Raster mode.

After you select a printer, an export module print screen opens; and you will be able to set up printer/printing parameters and export Raster files from Adobe Photoshop.

UNIX Platforms

Kodak does not develop PostScript drivers or export modules for UNIX platform(s). However, other vendors do provide solutions in support of Kodak printers. These solutions support various UNIX/Windows/Macintosh platforms and interfaces. For information, refer to "Getting Help" at the end of this guide.

14 Troubleshooting

If you are having trouble printing, first verify that the standalone printer with no network interface connection operates correctly. Secondly, verify that the printer is configured correctly when connected to your network. If necessary, go to the sections that pertain to the specific platform and protocol used.

Verifying Standalone Printer Functions

- Is the printer plugged in, turned on, and displaying the "READY" prompt?

- Is there an error message displayed on the printer?

  Refer to the user's guide for the printer for information about error messages that appear on the front control/display panel. Error code numbers typically indicate that the printer hardware requires service.

- Does the paper size displayed on the front control/display panel match what is actually in the tray?

  If not, the paper tray may be an adjustable tray that has not been properly set up. Check and/or adjust the paper size selection switch on the side of the tray for the proper paper size setting.

- Is the printer in the appropriate mode (PostScript or Raster)? PostScript mode is necessary for PostScript file printing. The printer should only be in Raster mode when using the export module in conjunction with Adobe Photoshop or when using another vendor's application that specifically states support for Kodak printers in Raster mode.

  If necessary, select the proper mode from the printer's front control/display panel. Refer to "Changing the Printing Mode" in the "Printing" section.

- Make test prints to determine if the printer is functioning in PostScript and/or Raster modes. Do not be alarmed if your particular printer does not support both modes of operation. Make sure that paper and ribbon are loaded. To make a test print, press the print button on the printer when ":READY" appears in the display panel.

Verify Network Connectivity

1. When the printer finishes initialization and the front display/ control panel displays the message "READY," check that the LEDs on the back of the printer operate correctly.

NOTE: Check the yellow LED only if you have 10BaseT cabling.

- The yellow LED should illuminate and be in a stable condition. If the light does not illuminate or is unstable, check the connectivity between the Network Interface Card and the network hub switch. If the connectivity is correct, the Network Interface Card may be defective.

- The green LED should blink intermittently indicating a burst of traffic on the network. If the green light does not blink, the Network Interface Card may be defective.

2. Make sure that the jumpers on the Network Interface Card are set correctly.   Normally for 10Base T cabling, Link should be "OFF" and JP1 and JP2 should be "ON." Refer to "Setting the Jumpers" in the "Network Interface Card" Installation section for more information.

3. Make sure that the network cables are connected correctly and are in good working condition. If necessary, install a new cable.

    If the printer can print from the parallel or Local Talk ports, check for the correct network setup.

Verify Printer/Network Parameters

- Make a PostScript test if you have not already done so.

    Using a PostScript mode test print, verify that pertinent AppleTalk, IPX, and/or TCP/IP parameters that have been set up are correct. These parameters will not appear on a test print made with the printer in Raster mode.

    Printer/network parameters may also be verified from a telnet session. Refer to "Telnet" in this section.

- Power cycle the printer. Under some circumstances the printer may lose network communications with the host and not regain them until a reinitialization occurs. Some parameters

that are downloaded to the printer are effective when you restart the printer.

- You may want to reset the printer to factory defaults from the printer's front control/display panel. Refer to "Printer Parameters" for instructions on resetting the printer.

Verify Application and Printer Parameters

- Is there an error indication on the front control/display panel that the wrong ribbon is in use with a "Load Oversize Ribbon" message or the wrong paper with a "Load Paper" message?

   If pressing the "PRINT" button on the front control/display panel results in a print, this is an indication that the printing problem is due to a mismatch between application "Page Setup" and "Print" menu page/ribbon selection parameters and what is actually in the printer. Check options in both menus carefully because some applications require consistent selections in more than one menu.

- In situations where a Kodak PostScript driver is not available, for example on UNIX platforms, features pertaining to media may not be selectable through the application being used. Some media features are selectable, however, from the printer control/display panel. By selecting the following, these characteristics can be set as defaults:

   SETUP >DEFAULTS >MEDIA,

   TYPE (Paper/Transparency/Draft) and

   COLOR (Standard/Commercial/Publication)

Novell NetWare Installations

This section describes the troubleshooting process for Novell NetWare installations.

- Do the initial steps listed in this troubleshooting section for the printer, connectivity parameters, and applications if you have not already done so.

- The primary or preferred server is the name of the file server that contains the KSETUP configuration file for Novell environments. In most environments it may not be necessary

to define a preferred server (factory default setting). If you have any problems, you should define the preferred server as a troubleshooting precaution.

NOTE: In environments with hundreds of servers, the printer logs in to the preferred server instantly (seconds) instead of potentially searching through hundreds of servers (minutes) to find the KSETUP file. In an environment with only one server, you may find it necessary to define that server as the preferred server.

- Check the test print to verify that the preferred server is correct.

- Make sure that the configuration file is on the correct server and located in the SYS:LOGIN\KODAK subdirectory.

- Check the name of the configuration file. For example, if the Ethernet address of the Network Interface Card is 00:40:C8:77:66:11, the configuration file should be called k776611.

NOTE: Your address will be different than the one used in this example.

- Make sure that your queue and print server names for the Network Interface Card match those specified in the configuration file and that the queue is assigned to that server.

- Check the display panel for error messages. Refer to the appropriate user's guide for information about error messages.

- Check to see if the file server is on line. Use the NetWare SLIST command to list the currently available file servers.

- Make sure the number of logged-in users does not exceed the user license limit.

- From the DOS command line, enter the NetWare command USERLIST (3.x) or NLISTUSER/A/B (4.x) to verify that the printer has logged into the file server. The USERLIST (3.x) or NLISTUSER/A/B (4.x) command displays all logged-in users from the currently attached file server. Verify that your workstation is attached to the printer's defined file server before running USERLIST (3.x) or NLISTUSER/A/B (4.x). The printer should log in as the <print server> name.

- Check to see if the print queue has been disabled. If the queue is enabled but your job is not in it, a workstation problem has prevented the job from entering the print queue. Check the workstation.

- Check the print queue contents using the PCONSOLE command.

- If the printer has not logged in (determined by using the USERLIST (3.x) or NLISTUSER/A/B (4.x) command), check the printers display panel for error messages.

- Verify that names were defined according to the instructions for installation.

- Verify that the correct frametype is chosen under the menu selection PORTS:IPX of the display panel. The file server and printer must use the same frametype.

- Verify that CAPTURE has been run for the appropriate parallel port.

NT Installations

On NT systems, you may encounter corruption of data when printing files over 5 Mbytes. Color bands may appear across the printed image. This condition can be corrected by setting up server properties to accept the entire print job before passing the file on to the printer. For Windows NT 3.51 for workstations and servers "Job Prints While Spooling" must be deselected. For Windows NT 4.0 for workstations and servers "Start Printing After Last Page Spooled" must be selected.

Some systems such as Windows NT come with Kodak drivers provided by Microsoft. If you use these drivers, you may encounter problems. Be sure to install drivers provided by Kodak. When in doubt, refer to the Kodak web site for availability and the latest versions of drivers. Refer to "Getting Help" for information on how to access the Kodak web site.

You may encounter problems if you install drivers on remote workstations by downloading them from an NT server.

We recommend that you install the printer driver and/or the export module on each server and workstation on your network. When you set up the servers for sharing, install only the software relevant to the operating system for the server.

AppleTalk Installations

PostScript mode

This section describes the troubleshooting process for AppleTalk installations of PostScript mode printers (in particular, the 8650 PS printer).

- Do the initial steps listed in this troubleshooting section for the printer, connectivity parameters, and applications if you have not already done so.

- Check the test print to verify that the preferred server is correct.

- Are both the computer and the printer set for the same EtherTalk phase (Phase 1 or Phase 2)?

- Has the AppleTalk/EtherTalk network driver been selected in the Network/AppleTalk control panel?

- If the name of the correct printer driver (for example, the 8650 printer driver) does not appear as a selection in the Chooser, verify that the printer driver was properly loaded on the host. Check for the existence of a file called Kodak DS 8650 PS in the System Folder's Extensions folder.

  If the host driver software is not there, install it according to the instructions in the user's guide for the software.

- Does the printer's name appear as a selection in the Chooser? The factory default name for the 8650 Printer, for example, is "KODAK DS 8650 PS." If not, check the following:

  - Make sure that AppleTalk is enabled (the Active button in the Chooser should be selected).

  - Make sure that the printer has been on for at least 3 minutes.

- If the printer is installed on a network with multiple zones, check the other zones for the printer. The printer will boot up to the default zone that is supplied by the network router.

- Make sure that the printer has been selected in the Chooser.

- If background printing is enabled, open the Print Monitor and check for error conditions at the printer.

Raster Mode

This section describes the troubleshooting process for Macintosh AppleTalk installations for Raster mode printers (in particular, the 8650 PS printer). Raster mode is not supported on non-Macintosh systems.

- Are both the computer and the printer set for the same EtherTalk phase (Phase1 or 2)?

- Has the AppleTalk/EtherTalk network driver been selected in the Network/AppleTalk Control Panel dialog box?

- The appropriate printer must be selected for the export module. You can do this by opening the Export Module dialog box and checking the printer that is displayed in the Printer group box. If the correct printer is not displayed, click on *Select;* and use the dialog box options that appear to select the appropriate printer from the dialog box.

    Refer to the user's guide for the export module for more information.

- Does the printer's name appear as a selection in the select window? (The factory default name for the 8650 printer, for example, is "KODAK DS 8650 PS.") If not, check the following:

    - Make sure that the printer has been on for at least 3 minutes.

TCP/IP Installations

This section describes the troubleshooting process for TCP/IP installations.

- Do the initial steps listed in this troubleshooting section for the printer, connectivity parameters, and applications if you have not already done so.

- Check the test print to verify that the preferred server is correct.

In the examples below, 8650 PS printer is the host name for the Network Interface Card, and the host software is loaded in the directory /usr/local/kodak.

The printer appears to be ready, but you cannot print

Check the /etc/hosts file and see whether the IP address is set correctly.

If the system uses Yellow Pages or NIS, use the following command to view the hosts database:

ypcat hosts

Use the following command to view the IP address for the host 8650 PS printer:

ypmatch DS 8650 hosts

If the following message appears, your system does not use NIS:

can't bind....

If the system uses NIS and you have changed the /etc/hosts or /etc/ethers file, update the database by entering the command:

cd /var/yp; make

This updates the databases for both the YP server and the clients.

The IP address is correct, but you cannot print.

Enter the ping command and the host name:

ping -s *<printername>*

This sends a packet to the Network Interface Card once every second. To abort the ping command, use Ctrl-C or the Delete key. If a message like the following appears, check the cable; and try it with another transceiver.

No answer from *<printername>*

If you are using the 10BaseT port and have nonstandard cabling such as AT&T or HP STARLAN, you may need to disable link integrity. Refer to "Disabling the Link Test Integrity Function" in the "Installing the Hardware" section for instructions.

You can ping the printer but cannot print.

The problem is with the *lpr/lpd* setting.

Verify that the *printcap* entries are correct. Each line should begin with a colon (:) and except for the last line should end with:\. Each line after the first line should be indented (tabbed). A sample entry is shown in "UNIX BSD Systems."

If there are problems in the printcap entries, the files will not print, and you will get the message "warning: no daemon present" when you try to look at the print queue using the lpq -P <printername> command. The file /usr/adm/lpd-errs will contain error messages explaining why the file was not printed. Check for error messages.

You can only print small files.

If large files (usually 1 MB or more) fail to print, check to see if the printcap entry contains a line reading:mx#0. If the line does not exist, you should add it. You should also check to see if there is enough room in the spool directory to accommodate large files.

You cannot print from a DOS or Windows application.

If you cannot print from the application you are using, redirect the output to a file from the application, and print the file from the command line. This will help you to determine if the application is sending the data properly or if a problem exists at the application or driver level.

Telnet

Monitoring Network Interface Card Activity with Telnet

The monitoring of activity by the Network Interface Card is accomplished by a telnet session using TCP/IP network protocol. You must have telnet capability on any Windows/Macintosh/UNIX platform on the network, and an IP address must be assigned to the printer from the front control/display panel.

To enable telnet with the Network Interface Card, both jumpers (JP1/JP2) on the card must be in the "ON" position (jumpered). If 10BaseT is the connection to the network, these jumpers may be left in place to accommodate both telnet capabilities and normal operation. Telnet parameters are IP Address and Port.

The IP Address must be the one assigned to the printer, and the Port must be 2002 (NIC diagnostic Port #).

To invoke a telnet session from a UNIX command line, type:

telnet<IP Address>2002

telnet commands:

s for   'Status'

d for   'Debug'   Toggles Debug Mode On and Off

t for   'Printer/Network Interface Card Parameter List'

Telnet session depicting Novell Primary Server Login Process

NOTE: The 'script <filename>'is not necessary unless you want to save the telnet session results to a file.

(Primary server = BINFORD)

 /nic/telnet_test (1)   script telnet.doc
 UNIX Script started on Tue Oct 22 15:47:23 1996

 /nic/telnet_test (2)   telnet 159.56.12.62 2002
 Trying 159.56.12.62.
 Connected to 159.56.12.62.
 Escape character is'^]'.

 Telnet Console on
 Type "S" to see current status
 Revision 1.2, Datecode 11/16 1994 10:6

S

No active job

status: idle

Getting route for BINFORD

route for BINFORD = 0 60 2f bf 35 8b

Getting route for D294-FPN1

route for D294-FPN1 = 0 60 2f bf 35 8b

. . .

Getting route for HSD_SAA_1

route for HSD_SAA_1 = 0 60 2f bf 35 8b

Found servers:

0: BINFORD

1: D294-FPN2

2: D294-FPN1

. . .

23: HSD_SAA_1

Trying to read file SYS:LOGIN\KODAK\K090681 on server BINFORD

Read Config file:

BINFORD:TPS_LAB3_8650:TPS_LAB3_PS:::

Attaching queue TPS_LAB3_8650 on server BINFORD

Queue TPS_LAB3_8650 attached

telnet> q

Connection closed.

/nic/telnet_test (3)   exit

UNIX script done to telnet.doc on Tue Oct 22 15:57:57 1996

Getting Help

A number of resources are available if you have questions about the printer or the Network Interface Card.

Retailer

The retailer you purchased your printer from may be able to answer your questions. Eastman Kodak Company provides retailers with additional technical information.

Kodak Customer Assistance Center

Contact the Kodak Customer Assistance Center if you:

- have questions about your warranty.

- want to know where to get service.

- have questions about software/printer interaction.

In the U.S., call 1 800 235 6325 from 9:00 a.m. to 8:00 p.m., Eastern Standard Time, on regular business days.

Refer to the user's guide for your printer for telephone numbers outside the United States.

Kodak web Site

This user's guide, software, and release notes may be obtained from the Kodak web site at http://www.kodak.com by following the search paths:

Product Information, Technical Information, Kodak Device Driver Software, Dye Sub Printer Drivers and Calibration Software, Kodak Network Interface Card

Printing Solutions from other vendors

Kodak does not develop PostScript drivers or export modules for UNIX platform(s). However, other vendors do provide solutions in support of Kodak printers. These solutions support various UNIX/ Windows/Macintosh platforms and interfaces.

For more information, refer to the Kodak web site (http:// www.kodak.com) using the path:

Product Information\Technical Information\System & Software Solutions\Search by Product Category.

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