

NEC

S U P E R S C R I P T TM

4650 SERIES



User's Guide for Models
4650, 4650N & 4650NX

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CHAPTER 1

FEATURES

OVERVIEW

The NEC SuperScript™ 4650 Series color laser printer is the best value today for fast color and monochrome printing. It delivers high resolution color output for outstanding business presentations. It also offers web-based printing technology through its innovative PrintAgent, first introduced with NEC's SuperScript 4400. PrintAgent allows you to send print jobs anywhere, whether across the building or across the country! The following section reviews enhancements and options that will make this printer the busiest machine in your office.

SuperScript 4650 Series Highlights

- Prints 4 plus color pages or 16 monochrome pages per minute.
- With PostScript 3 or PCL5e printing languages, you can print almost anything. The printer automatically selects the appropriate printer language for incoming jobs. (PCL5e is not available for the 4650 model).

note: For color printing, you must have the PostScript 3 printer driver loaded on your system. The PCL5e printer driver is for monochrome printing only.

- 600 x 600 dpi printing is standard
- 1200x1200 dpi printing is standard (with 96MB RAM)
- 200 MHz processor speeds up the rendering of complex graphic documents
- 128 MB of RAM standard, extendable to 256MB for 4650NX model
- 96 MB of RAM standard, extendable to 256MB for 4650N model
- 32 MB of RAM standard, extendable to 256MB for 4650 model

SuperScript 4650N and 4650NX Enhancements

With the SuperScript 4650N and 4650NX, you can take advantage of the latest printing technology.

- SCSI port supports optional scanner and Zip drive features.
- 2.1 GB internal hard disk for storing fonts, scanned images, and spooled files for 4650N and 4650NX models
- Advanced PostScript spooling features enabled by the built in hard disk. Features include collation, send one—print multiple copies, and on-demand printing from an externally connected Zip® drive.
- The printer's home page provides access to web-based printing software, online help, and other features.
- Using NEC's PrintAgent™ software, configuration and monitoring can be done from your workstation.
- Supports traditional network printing over NetWare®, TCP/IP, EtherTalk and above, Windows NT 4.0, Windows 2000, Windows 98, Windows 95, Windows 3.1x, and NetBEUI/NetBIOS

Printer Options

You can add these SuperScript features to increase your printer's versatility.

- 250-sheet standard size Paper Tray 2 (standard with 4650NX model)
- 250-sheet Legal Tray
- SuperScript network interface card or NIC (standard with 4650N or 4650NX models)
- Extra memory

Assumptions

The instructions in this guide assume that you are familiar with your computer and/or network operating systems, and that your system is configured and operating properly.

System Requirements

Your SuperScript 4650 Series printer and software can operate using the following minimum system configurations.

Windows Operating System

- Microsoft® Windows® 95/98, Windows NT® 4.0/2000, or Windows 3.1x
- 486 or higher CPU
- CD-ROM drive
- 6.5 MB of free hard disk space
- 16 MB RAM for Windows 95/98
32 MB RAM for Windows NT/2000
8 MB RAM for Windows 3.1x
- Parallel Port
- Ethernet connection if you want to print over a network

Macintosh Operating System

- Mac OS 7.1 or higher
- 68040 or higher CPU
- CD-ROM drive
- 5 MB of free hard disk space
- 8 MB or more of RAM
- Addition of an optional SuperScript NIC with the 4650 model for Ethernet connect ability

Web-Based Printing Requirements

To use the web-based Pull Printing and NEC PrintAgent features, you need to have Microsoft's Internet Explorer 4.01 SP1 or above web browser. Other requirements are described in the *SuperScript Color Laser Network Guide*.

Supported Printing Environments

The SuperScript 4650 Series printer comes with software for using the printer on several operating systems and networks.

- Microsoft Windows 95/98, Windows 2000, Windows NT 4.0, and Windows 3.1x
- NetWare® versions 3.x, 4.x and 5.x
- Mac™ OS 7.1 and higher using EtherTalk®
- Peer-to-peer printing for Windows 95/98 (IPX-P2P only),

Windows 2000, and Windows NT 4.0.

- UNIX®

For network setup, your workstation and network operating system should be configured and operating correctly, and your SuperScript 4650 Series printer drivers should already be properly installed.

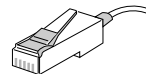
Hardware Requirements

You need to provide the following to set up your printer:

- For standard connection, a IEEE 1284 compliant parallel cable.



- For network connection, Category 5 twisted pair cable with RJ-45 connectors for 10/100Base-TX Ethernet, shown below.



note: The network interface card (NIC) automatically detects whether you have a 10 Mbps or 100 Mbps Ethernet connection. For better performance, NEC recommends that you use shielded cable and connectors when connecting to 100 Mbps Ethernet.

Energy Saving



The SuperScript 4650 Series printer meets the requirements of the Environmental Protection Agency's ENERGY STAR® Computers program for printers. The purpose of this program is to promote the manufacturing and marketing of energy-efficient office automation equipment, thereby potentially reducing combustion-related pollution. (The ENERGY STAR emblem does not represent EPA endorsement of any product or service.)

As an ENERGY STAR Partner, NEC has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

ENERGY STAR is a U.S. registered mark.

SUPERSCRIPT 4650 SERIES CD

The *SuperScript 4650 Series CD* that comes with your printer provides three options for installing printer drivers and printing utilities in Windows.

- Easy/Local Setup
- Network Client/Custom Setup
- Network Server/Administrator Setup

Choose the one that best suits your needs.

Printing Software for Windows

Easy/Local Setup

Use this option to quickly install the basic printing tools for your operating system. This is appropriate if you are connected to a SuperScript 4650 Series printer from the parallel port. Using this option, you can install

- PostScript 3 and PCL5e printer drivers (Use PCL5e on a UNIX system)
- Adobe Acrobat Reader 4.0
- A user's guide you can view online, or print out

note: For color printing, you must use the PostScript 3 printer driver.

Also, the advanced setting, Image Color Matching (ICM), is not available with this setup.

Network Client/Custom Setup

If you are a network client with access to a SuperScript 4650N or 4650NX printer (or 4650 with a NIC), you can use this setup to access web-based printing tools and network utilities. Using this option, you can install

- PostScript 3 printer driver with Image Color Matching
- PostScript 3 printer driver without Image Color Matching
- PCL5e printer driver (not included with 4650 model)
- NEC PrintAgent for Remote Printing
- Utilities for peer-to-peer printing*
- Internet Explorer 5.0
- Adobe Acrobat Reader 4.0
- User's guides you can view online, or print out

Network Server/Administrator Setup

This setup should only be used by system administrators who are familiar with the procedures for installing server software and network configuration. Use it to install and use network utilities, and set up servers for NEC PrintAgent Pull Printing.

For more information on network setup see the *SuperScript Color Laser Network Guide*.

In addition to all the items available in the Network Client/Custom Setup, the following tools are provided:

- PrintAgent Pull Printing Server software
- PrintAgent Secondary File Server software
- MAP utility for Windows 95/98, Windows 2000, and Windows NT 4.0

Printing Software for Mac OS

The *SuperScript 4650 Series CD* that comes with your printer provides the following software for Mac OS users.

- The AdobePS printer driver
- The SuperScript 4650 series printer description file
- ICC files for Color Sync

Instructions for installing Mac OS software are on page 59. More detailed instructions are provided in the *SuperScript Color Laser Network Guide*.

*IPX-P2P is not available for Windows NT workstations

4650N(X) PRINTER WEB PAGES

Every SuperScript 4650N and 4650NX network printer has a built-in web server and **Printer Home page** you can use for a variety of tasks, including

- Pull Printing from your desktop
- Installing the NEC PrintAgent Remote Printing driver
- Monitoring SuperScript 4650 PrintAgent printers
- Performing network administration tasks
- Configuring URLs for 4650 printers and servers
- Downloading Pull Printing Server software
- Downloading Secondary File Server software
- Getting information and Help

You will need to obtain your printer's IP address from your network administrator and then assign the IP address to the printer (see page 23).

Once you assign an IP Address to the printer, you can browse to it using Microsoft's Internet Explorer 4.01 or higher. The URL uses the printer's IP Address.

It is **http://<Printer IP Address>** for example:

`http://131.241.045.27`

Two other useful printer web pages are

- **The URL Configuration Page**, which you can use to install and configure Pull Printing Servers. The URL is `http://<Printer IP Address>/configure.html`. See the *SuperScript Color Laser Network Guide* for more information.
- **The Network Administration Page**, which you can use to configure the printer network settings. To access this, go to the URL configuration page and click the **Network Administration** link. See the *SuperScript Color Laser Network Guide* for more information.

The Printer Home Page

You can view the Printer Home page from Windows, Mac OS, or UNIX.

The URL is the IP address you assign to the printer, for example, `http://131.241.45.27`.

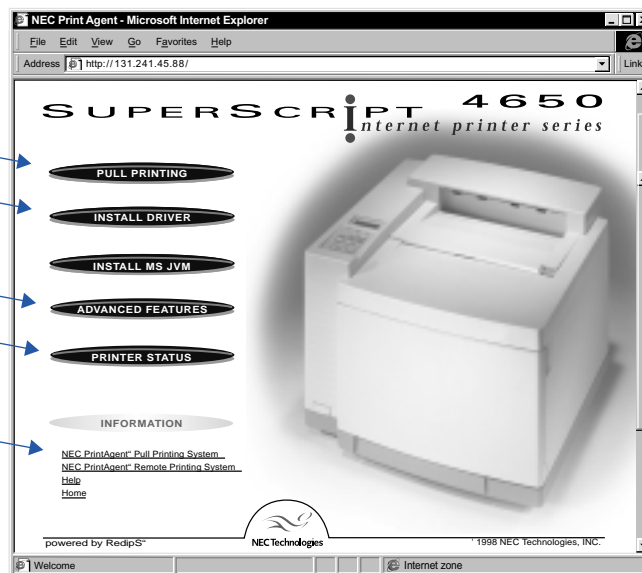
Click here to display the Pull Printing page to print over the web without a driver

Click here to install the NEC PrintAgent driver for remote printing over the web

Click here to access advanced features

Click here to display the NEC PrintAgent window to monitor the web printer

Use these links to learn more about Pull Printing and Remote Printing using the NEC PrintAgent



PAPER HANDLING AND SPECIAL MEDIA

You can use the printer to print on a wide variety of media and sizes. SuperScript 4650 Series paper handling features let you manage print jobs and office tasks efficiently.

Supported Media

Use any light or medium weight copier paper to print out draft copies of your documents. Then, for the best results on final documents, you should consider using NEC's Premium papers.

Premium Color Laser Paper - 24 lb. Bond: A bright paper with a super smooth finish for brilliant color reproduction. Use this for correspondence, proposals, charts, graphs, and illustrations.

Premium Color Laser Paper - 60 lb. Cover: A heavier stock that is ideal for report covers, mailers, greeting cards and invitations.

Ultra Glossy Color Laser Paper - 100 lb. Text: Has a double-sided glossy finish that is preferred for professional printing and photographic art. Use this for data sheets, brochures, and client presentations.

Premium Transparency: Use this for brilliant projected images.

Your Starter Kit includes a sampler of NEC Premium papers. See page 110 for information about ordering NEC premium papers and other printer supplies. If you do not have the NEC Premium papers, try to match them as closely as possible for the best printing results. Appendix B, "Media Specifications," has more information about choosing media.

When printing special media, be sure to load the paper tray only to the mark indicated for that media. When printing on thick or glossy stock, set the Media Type to **Thick Stock** on the printer Operator Panel, and reset it to Paper when you are done (see page 73 for instructions).

Supported Paper Sizes

You can print on a variety of paper sizes including

Paper Size	Inches	Millimeters
Letter	8.5 x 11	216 x 279
Legal	8.5 x 14	216 x 356
A4	8.3 x 11.7	210 x 297
Executive	7.25 x 10.5	184 x 267
UK Quarto*	8 x 10	203 x 254
Folio*	8.5 x 13	216 x 330
Commercial #10 Env.	4.13 x 9.5	105 x 241

*Not available in PCL printer drivers.

note: To print Legal size paper, you must install the optional Legal Paper Tray into Paper Tray 1 or Paper Tray 2.

Paper Source Selections

In your printer driver, you can specify which paper tray the printer should use for your print job: **Tray 1**, **Tray 2** (option), or **AutoSelect**. When you specify **AutoSelect**, the printer automatically selects the right tray based on the media type in the trays. The printer can detect paper sizes based on how the trays are adjusted. Therefore, it is important to adjust the paper trays properly.

Orientation

Orientation describes the position of images on a page with respect to the long and short edges of the paper. You can print three ways.



Portrait means the page has a vertical orientation (the default).



Landscape means the page has a horizontal orientation.



Rotated Landscape means the page has a horizontal orientation and is flipped.

Number of Copies

You can set the number of copies to be printed up to 999 (99 for PCL).

SUPERSCRIPT 4650 SERIES SETTINGS

Printer Settings

SuperScript 4650 Series printer settings give you many ways to customize your print job. There is often more than one place to change the same printer setting. These include:

- The SuperScript PostScript 3 printer drivers
- PCL5e printer drivers (for 4650N or 4650NX)
- The Operator Panel on your printer

Using the Printer's Operator Panel

You can use the printer's Operator Panel to cancel a print job or change settings that are not available in your printer driver. You can view messages on the Operator Panel to help diagnose printing problems. In addition, the printer operator panel allows you to print out font lists and test pages and view the total page count. You can also set the printer's TCP/IP address or reconfigure network settings. Chapter 4, "Printer Drivers," shows the PostScript printer drivers and explains how to use them.

Using Printer Drivers

Your printer software includes the PostScript 3 printer drivers for Windows 95/98, Windows NT 4.0/2000, Windows 3.1x, and Mac OS. The 4650N(X) also includes the PCL 5e printer driver for Windows 95/98, Windows NT 4.0/2000, and Windows 3.1x. They offer a wide range of features for setting up your print job and printer settings.

Most of these features and settings are described in this chapter. A particular feature may be implemented slightly differently, depending on which driver you are using.

note: If you are unsure about a setting in your printer driver, be sure to use the driver's Online Help feature. Chapter 4, "Printer Drivers," provides complete information about using your printer driver software.

When to Use the PostScript 3 or PCL5e Printer Driver

Use the **PostScript 3** driver for color documents and documents that contain many complex graphic images or extensive page layout formatting. The PostScript driver has

more options and delivers better graphic processing.

With the 4650N or 4650NX model printer you can use the **PCL5e** driver for monochrome documents that contain mostly text and limited formatting. The PCL5e driver processes this type of document quickly.

note: For color printing, you must use the PostScript 3 printer driver for your system. The PCL5e printer driver is for monochrome printing only.

POSTSCRIPT 3 FEATURES

These are general descriptions of settings available in the PostScript 3 printer drivers. The interface of the printer driver depends on the operating system you use. **Not all settings are available for all drivers, or they may appear on different tabs in the printer driver.** All printer drivers have Online Help available at the click of a button, with more information about specific settings. Chapter 4, "Printer Drivers," shows the PostScript printer drivers and explains how to use them.

Color Processing

Color Control

Use these settings to define color in your print job.

Color Photo: Produces smooth color images, for the best reproduction of photographic images.

Color Business Graphics: Produces bright, solid colors, suitable for presentation graphics, charts, and posters.

Color Transparency: Use this for the best results when printing color presentations on overhead transparency film.

Grayscale: Converts all colors in the document to black and shades of gray for monochrome printing.

Unadjusted: Does not apply any of the special color control features.

Image Color Matching

This feature is available for advanced users (except for Windows 3.1x and Windows NT). During the PostScript 3 for Windows 95/98 driver installation (from the *SuperScript 4650 Series CD* using the **Network Client/Custom Install** feature), you have the option of installing a driver using Microsoft

Image Color Matching (ICM) technology or a driver using NEC's color matching method. The driver using NEC's color matching method is the default and recommended driver.

The ICM based driver calibrates the colors with those actually seen on the print client's monitor. The NEC based driver calibrates the colors with those described by the NEC Color Table located inside the printer.

Advanced Features

Advanced features allow you to have more control over your print jobs. They can be accessed from the NEC features tab of the PostScript driver or from the Advanced features button on your printer's home page. For more details about these unique features see Chapter 6 of this user's guide.

note: These advanced features are not available with the SuperScript 4650 printer.

Collation

Use the collation feature to print multiple, sorted copies of your print job.

Job Hold

Through job hold you can store a document on the printer's hard drive and release it through the Operator Panel later. This feature is most useful when you want to ensure confidentiality in a networked environment.

Job Preview and Job Reprint

With these features, the printer's hard disk stores your document indefinitely. Job preview lets you preview the first copy of a document before printing out more copies. Job reprint holds your job for release at a later time.

Banner Page

Banner pages are used to identify and separate print jobs. They contain information about your print job and are especially useful in a network environment.

Color Scanning

An optional color scanner can be attached to the printer's SCSI interface and provide convenient color copies. Scanned images can be saved in JPEG format and accessed across the company network or Internet.

Zip Drive Attachment

You can print certain files (.ps, .prn, .eps, .jpg) directly from a SCSI attached Iomega Zip® drive—without the use of a PC. You can search for files on the Zip drive by using the Operator Panel or through the Advanced Features button on the printer's home page.

Watermarks

A watermark is text that appears on pages in your print job, such as DRAFT or CONFIDENTIAL. Use these settings to apply watermarks to your print job, create new watermarks, or modify existing watermarks. A preview area shows how the watermark will appear. You can also specify whether the watermark appears in the foreground or background, and on which pages it appears. This feature is not available for Windows NT.

Paper Handling

Layout

Use this feature to print multiple page images on the printed page, including 1, 2, 4, 6, 9, and 16. This gives you the ability to print pamphlets, storyboards, or thumbnail layouts. You can also print a border around the page image (except for 1 page only).

Unprintable Area

Use this setting to specify the area on the edge of the paper that cannot be printed on. This setting overrides margins set in the application.

Graphics

Resolution

Print resolution is measured by the number of dots per inch (dpi) in an image. The higher the number is, the finer the resolution. Resolution can be set to **600 dpi** (the default) or **1200 dpi**.

note: 1200 dpi is only available when 96MB or more of RAM are installed in the printer.

Sharp Edge Technology

Specifies whether or not NEC's Sharp Edge Technology (SET) should be used. SET is only available with 600 dpi. It refines

the print quality of characters and line art by smoothing the fine gradations along the edge of the printed image. It is best to turn this feature OFF for color photo images.

Halftoning

If graphic images in your document do not print correctly, use these settings to adjust screen frequency and angle. For example, use this when screened images show a moiré pattern.

Negative Image

If you select this, black and white values are reversed and colors print as their complements.

Mirror Image

If you select this, pages are “mirrored” on the horizontal axis.

Scaling

You can enlarge or reduce the page image. A value of 100% (the default) means no enlargement or reduction. A value of 50% reduces the page image to half its normal size. A value of 200% doubles the size of the page image.

PostScript Options

There are several settings you can use to customize the way the driver processes print jobs

PostScript Output Format

These settings control the way the driver creates the PostScript language descriptions for page images.

Optimize for Speed: Check this for faster printing. This option may cause a problem for some print jobs if the printer does not have enough memory.

Optimize for Portability-ADSC: Check this to ensure that the document can be printed on any PostScript printer. Documents may take longer to print when this option is selected. This option is useful if the printer has limited memory, because it creates smaller documents.

Encapsulated PostScript (EPS): Use this to print your document as a single-page image that will be incorporated into another file. You must also select **Output to File**.

Archive Format: Use this to create a PostScript data stream that gets stored in a file to be used later.

PostScript Header

You can control whether the driver sends a PostScript header with each document. By default a header precedes each sent PostScript job. (You will not see this header, it is part of the PostScript code.) If you are printing to your own local printer and you will only be sending PostScript jobs you can choose to send the header just once. The header is retained and will be used with each job, thus slightly reducing print time.

Error Handling

You can send an error handler with each print job. Then, if an error occurs, the printer prints a page with a message describing the nature of the error. You or a technician can use this information to diagnose the problem.

PostScript Timeout Values

These settings define timeout periods allowed when the driver communicates with the printer. Enter a value from 0 to 999 seconds (32,767 seconds for NT). When zero is entered, the printer will wait indefinitely. If your printer is shared, do not specify a value of zero.

Job Timeout: This is the maximum number of seconds the printer can take to print a single job. If the print job takes more time to print than the timeout value, the printer may stop printing and prepare to receive a new document.

Wait Timeout: This is the maximum number of seconds the printer will wait for data from the computer. While receiving a print job, the printer driver may pause to build a PostScript language description of each page. For complicated pages, which take longer to build, you may need to set a higher wait time.

Advanced Options

Advanced options allow you to optimize printer performance, but generally should not be changed unless you have specific reasons to do so. Use the driver Online Help feature for more information on these settings.

Device Options

You can use settings on the Device Options tab to match the attached printer configuration so that the printer driver can generate optimized PostScript code.

Available printer memory

Set this to match the amount of memory you have installed in the printer.

Available font cache

The driver automatically adjusts the font cache size based on installed memory. Increase this amount for better performance of Type 32 bitmap fonts.

Installable options

Use this area to change the settings to match the printer's hardware setup when you add options to the printer, including Tray 2, or more RAM memory.

PCL5E FEATURES

These are general descriptions of settings available in the PCL5e printer drivers (models 4650N and 4650NX). The interface of the printer driver depends on the operating system you use. Not all settings are available for all drivers, or they may appear on different tabs in the printer driver. All printer drivers have Online Help available at the click of a button, with more information about specific settings. Chapter 4, "Printer Drivers," shows the PCL5e printer drivers and explains how to use them.

Resolution

Print resolution is measured by the number of dots per inch (dpi) in an image. The higher the number is, the finer the resolution. Resolution can be set to **600** (the default), **300**, **150**, and **75 dpi**. Lower resolutions require less memory and processing time.

Dithering

Select a dithering pattern for converting images from one format to another, for example, for printing color documents in black and white. Dithering, along with the intensity and resolution settings, affect the overall appearance of graphics in printed documents.

Halftone Color Adjustment

In the Windows NT driver this is an advanced feature for controlling how color appears in a document and is converted to monochrome when printed.

Intensity

Adjust this setting to control the darkness of graphics in the printed document.

Reserved printer memory

Specify how much memory to reserve for special printer functions, such as macros, Operator Panel settings, etc. The reserved memory is not used for printing.

Printer memory tracking

Before printing a document, the printer driver calculates how much memory is required to print. If the document requires more memory than is available in the printer, the document is rejected. Use this setting to define how this calculation is made. A conservative calculation ensures that printer memory is never over-committed. A more aggressive calculation allows the printer to attempt printing a complex document, but memory may be over-exceeded and the print job may not be completed.

Printer Memory

This feature appears on the driver, but does not apply to the SuperScript 4650 Series printer and does not need to be adjusted.

Cartridges

This feature appears on the driver, but does not apply to the SuperScript 4650 Series printer and does not need to be adjusted.

WORKING WITH FONTS IN WINDOWS

Under most conditions your documents will print out well without any adjustment to font settings in your printer drivers. The Windows printer drivers have settings for specifying how TrueType fonts in your document are matched to PostScript fonts in the printer. You may want to adjust these if your documents take a long time to print or the quality of the font is not satisfactory. Font settings vary slightly on the Windows 95/98, Windows NT 4.0, Windows 2000, and Windows 3.1x printer drivers.

PostScript 3 Font Settings

Send TrueType fonts to printer according to the font Substitution Table: Instead of downloading all TrueType fonts to the printer, this selection substitutes PostScript fonts resident in the printer for the TrueType fonts used in the document according to a table you define.

Using the Substitution Table: The substitution utility allows you to view or edit which fonts in the printer should be substituted for the TrueType fonts in your document. Using resident printer fonts speeds printing.

Always use built-in printer fonts instead of TrueType fonts: Select this and the printer substitutes its closest matching resident fonts. This speeds printing, but the document may not print out exactly as it appears on the screen

Always use TrueType fonts: Downloads bitmap TrueType fonts to the printer to print the document. This ensures the printed document will look the same as it does on the screen, but it may take longer to print.

The **Update Soft Fonts** feature updates the driver to recognize new fonts. Use this if you have added new fonts to your system after you installed the driver.

PCL5e Font Settings

Download TrueType fonts as outline fonts: TrueType fonts used in your document are processed by the driver and downloaded to the printer as outline fonts. This provides the quickest printing time, but lowest quality for text output.

Download TrueType fonts as bitmap fonts: TrueType fonts used in your document are processed by the driver and downloaded to the printer as bitmapped fonts. Formatting is very accurate at small point sizes. Printing is faster, but not portable if printing to a file.

Print TrueType Text as graphics: TrueType fonts used in your document are processed by the driver and downloaded to the printer as graphics. This produces the best text quality, but can slow printing. This is best for documents with several graphics and little or no repeating text.

Install Printer Fonts: Use this to download soft fonts to the printer.

CHAPTER 2

GETTING STARTED

OVERVIEW

This chapter tells you how to safely set up your printer and begin printing right away. Included are instructions for:

- Selecting a location and unpacking
- Checking printer contents and identifying printer parts
- Installing the Belt Cartridge, Fuser Oil Bottle and Fuser Cleaning Roller, and Toner Modules
- Loading the Paper Tray
- Printing a Startup Page
- Connecting the printer to your computer or network
- Printing with the 4650 Series laser printer
- Quick Web printing
- Printing envelopes, transparencies, and labels

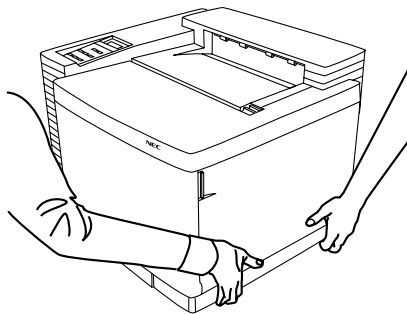
SAFETY INSTRUCTIONS

To protect yourself and your equipment from possible damage, always follow these precautions:

- Protect the printer from dampness or spills.

Safety Precautions

The printer and packaging weighs approximately 100 lbs. Moving and unpacking the printer requires two adults.

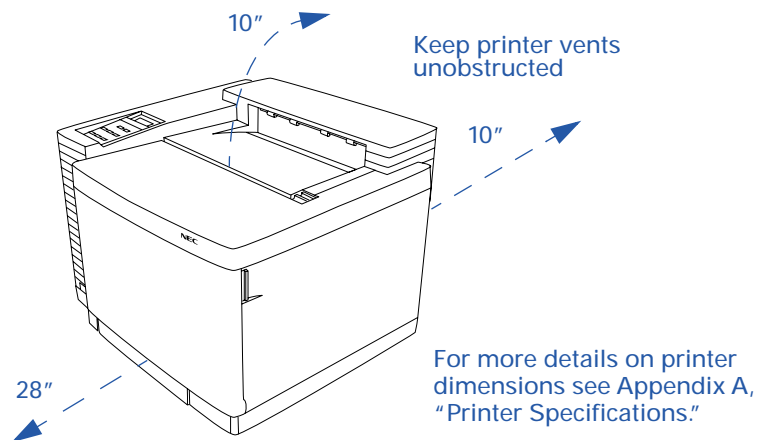


- Save the printer box and all packing materials that came with your printer in case you need to ship it later.
- Lifting or moving the printer requires two adults!
- Read the installation instructions carefully before you plug in your printer, and heed all warnings.
- Keep this user's guide for reference.
- Keep the printer level at all times, especially when the Fuser Oil Bottle is installed. Do not tilt more than 1.5°!
- The fuser area, under the Top and Back Covers is very hot. Let the printer cool at least 15 minutes before touching these areas.

WARNING! This printer is intended to be electrically grounded. It comes with a three-wire grounding plug. This plug will only fit a grounded AC outlet or power strip. This is a safety feature. Do not defeat the purpose of the grounding plug by removing the third pin.

SELECTING A LOCATION

Select a level, stable place with adequate space for air circulation and opening covers and trays. The area should be well ventilated and away from direct sunlight or sources of heat, cold, and humidity. **Do not set the printer close to the edge of your desk or table!**

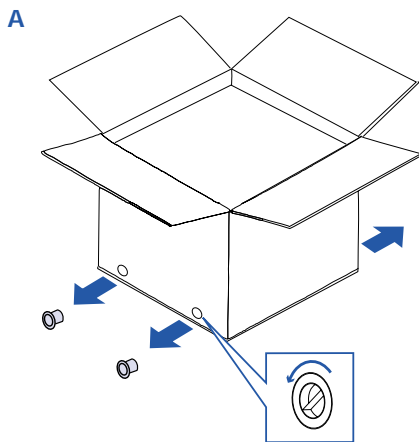


UNPACKING

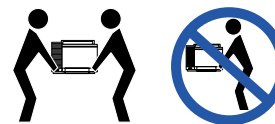
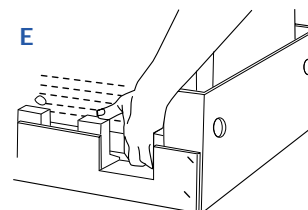
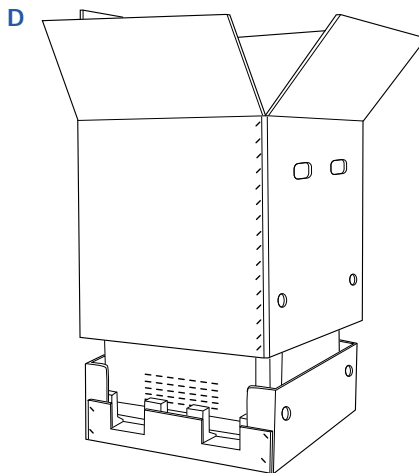
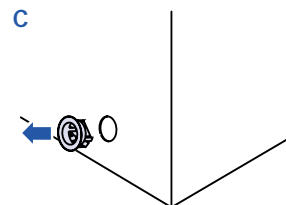
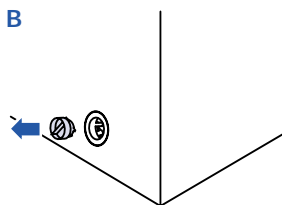
Follow these steps to safely unpack the printer:

1. Open the top cover of the shipping box.
2. Remove the optional 2nd Tray box (if you have the 4650NX model) and remove the QuickStart poster.
3. Open the inner printer box and remove the Accessory kit and Starter kit.
4. Turn the large plastic box screws at the bottom of the box to the left (A) and pull them out (B).
5. Using your thumb and finger, remove the plastic screw sleeves from the box (C).
6. Lift off the outer box (D).

Unpacking the Inner Printer Box



note: Save the box, box screws, and packing material. If you ship the printer in the future, be sure to follow the special packing instructions in Appendix D to safeguard internal components.



Caution! The printer and packaging weigh approximately 100lbs. To set up the printer and move it requires two adults.

7. Open the plastic bag that contains the printer and slide it down.
8. With one person on each side of the printer, grasp the printer at the hand grips where they are exposed by notches in the foam padding (E).
9. Lift the printer and place it on a sturdy, level surface. **If you are setting up a 4650NX printer unpack the optional 250-sheet Tray and attach it first before installing anything inside the printer! See Page 28 in Chapter 3 or the 4650 Series QuickStart.**

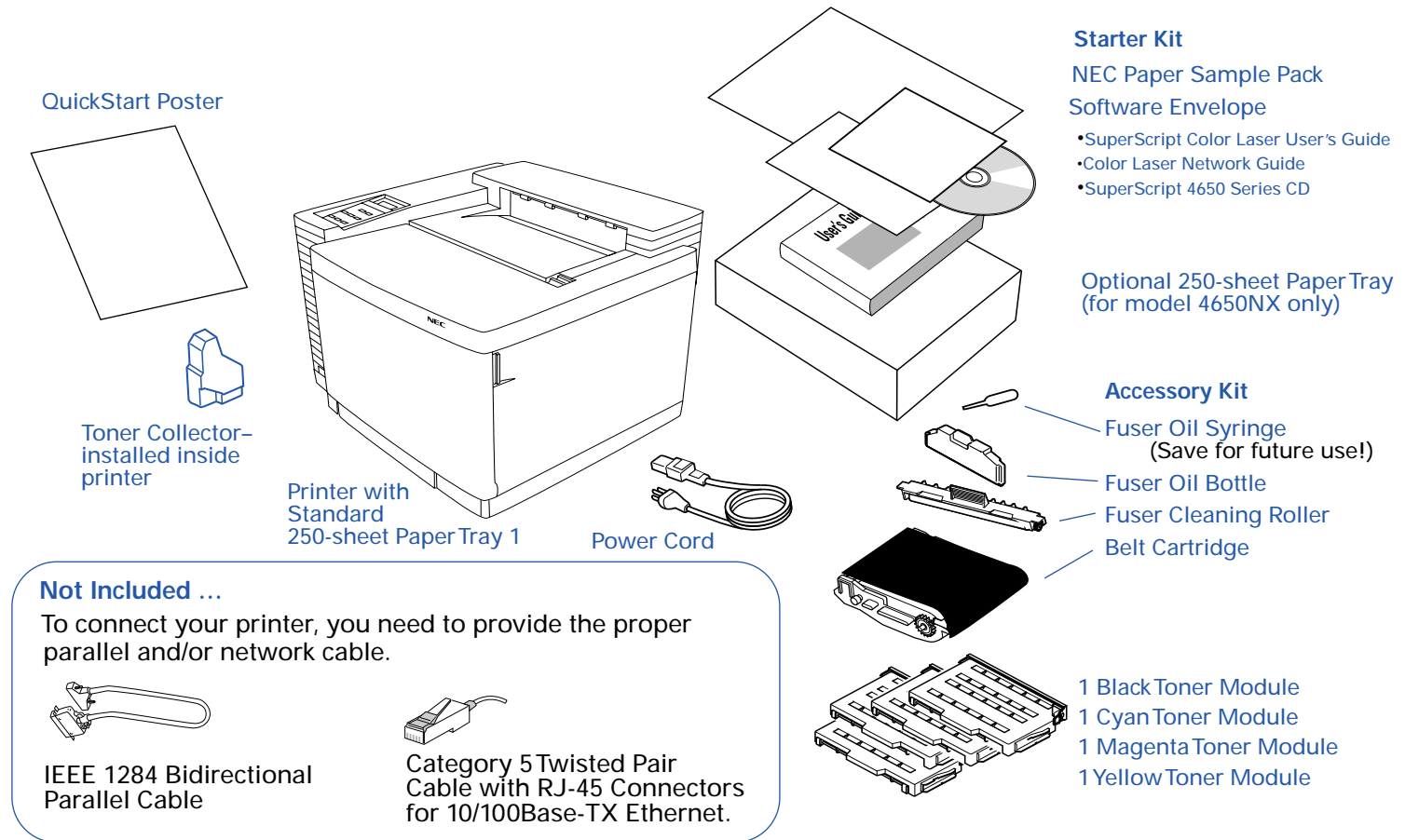
CHECKING PRINTER CONTENTS

Take a moment to verify that the following items were included in your printer box:

- QuickStart Poster
- Optional 250-sheet Paper Tray 2 **if you have model 4650NX**
- SuperScript 4650 printer with 250-sheet Paper Tray 1
- Starter Kit (see contents below)

- Accessory Kit (see contents below)
- SuperScript 4650 Series software in a license envelope
- Power Cord
- Toner Collector (installed next to the Toner Modules inside Front Cover of printer)

note: The black and color modules in the Accessory Kit print approximately 5,000 and 3,000 pages respectively. Replacement modules print approximately 10,000 and 6,000 letter size pages respectively, at 5% coverage.



IDENTIFYING PRINTER PARTS

Use the illustrations on the facing page to identify standard parts for the SuperScript 4650 Series printer.

Front View

- Operator Panel—for displaying messages and configuring the printer
- Power Button—for turning on and off the printer
- Top Cover—provides access to the Fuser Unit and inside of the printer (also serves as the Output Tray)
- Output Tray —holds up to 250 printed sheets
- Top Cover Release button—unlocks and opens the Top Cover
- Front Cover—provides access to Toner Modules and Toner Collector
- Front Cover Latch—unlocks and opens the Front Cover
- Paper Tray 1—standard input tray, holds 250 sheets of paper

Front Internal View

- Toner Module Racks—holds Toner Modules
- Toner Collector—collects used toner
- Paper Transfer Rollers—moves the paper from the inside of the printer to the Output Tray

Back View

- Serial Number—necessary for warranty registration
- Back Cover—provides access to clear paper jams
- Back Cover Latch—lift to open back of printer
- Filter Cover—contains the Ozone Filter
- Bidirectional parallel interface—for attaching bidirectional parallel cable from your computer
- Ethernet interface—for attaching the Ethernet 10/100 Base-TX connectors from your network
- SCSI Interface (Port)—for attaching a selected scanner and/or Zip drive
- Interface Panel—contains the interface for the controller board, hard drive and network interface card

- Power Cord Connector—for attaching the power cord
- Back Vent—allows ventilation

Back Internal View

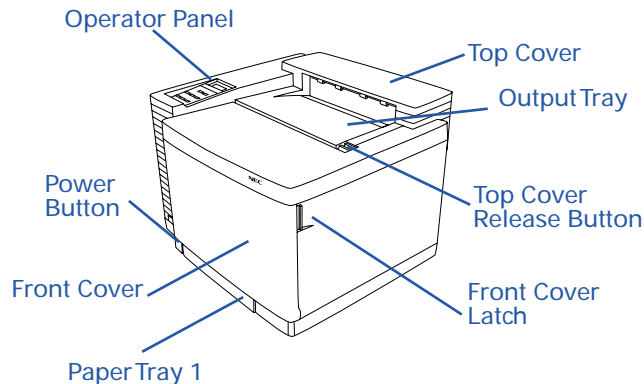
- Transfer Drum—transfers image to paper
- Registration Rollers—keeps the paper straight
- Transfer Roller—works with the Transfer Drum to transfer the image to the paper
- Paper Discharger—removes the static electricity from the paper
- Transfer Unit—consists of the above four parts

Top Internal View

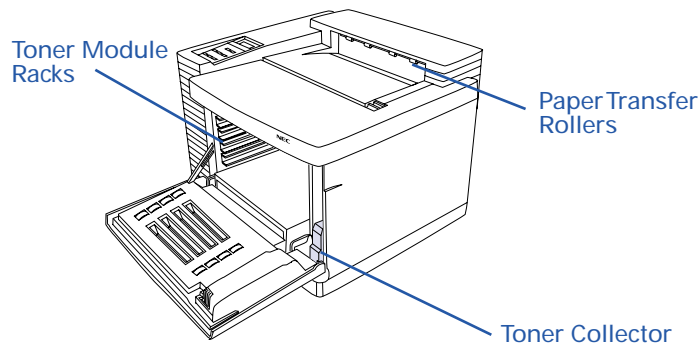
- Fuser Unit—uses heat and pressure to adhere the toner image to the paper. Contains two Fuser Rollers.
- Fuser Oil Bottle—holds the oil that helps adhere the toner image to the paper
- Fuser Cleaning Roller—helps keep the Fuser Rollers clean
- Belt Cartridge—also known as the Photoconductor Belt Module or OPC Unit.

Important Printer Parts

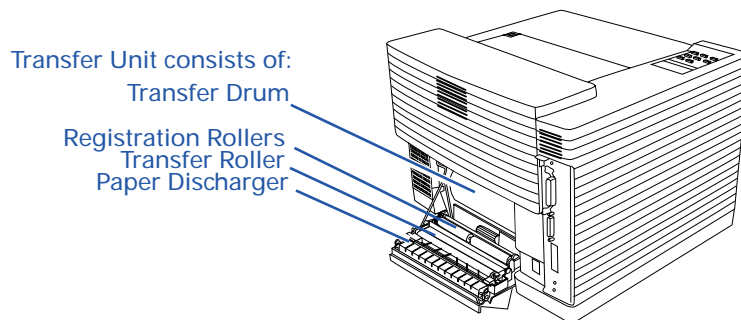
FRONT VIEW



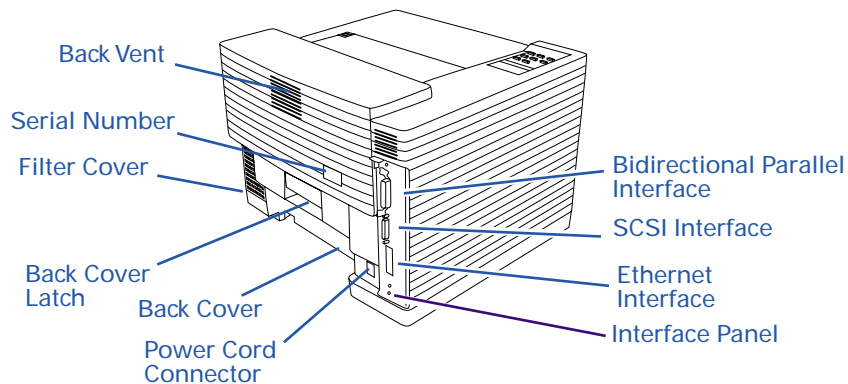
FRONT INTERNAL VIEW



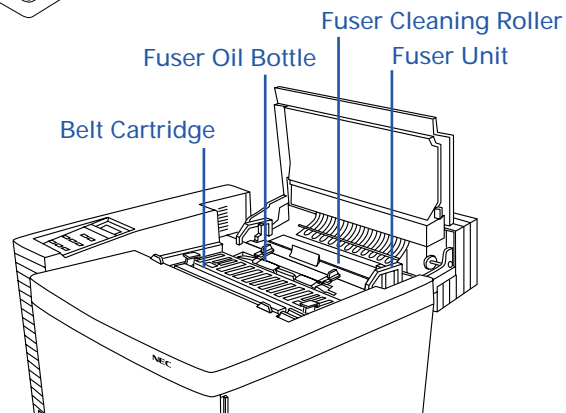
BACK INTERNAL VIEW



BACK VIEW



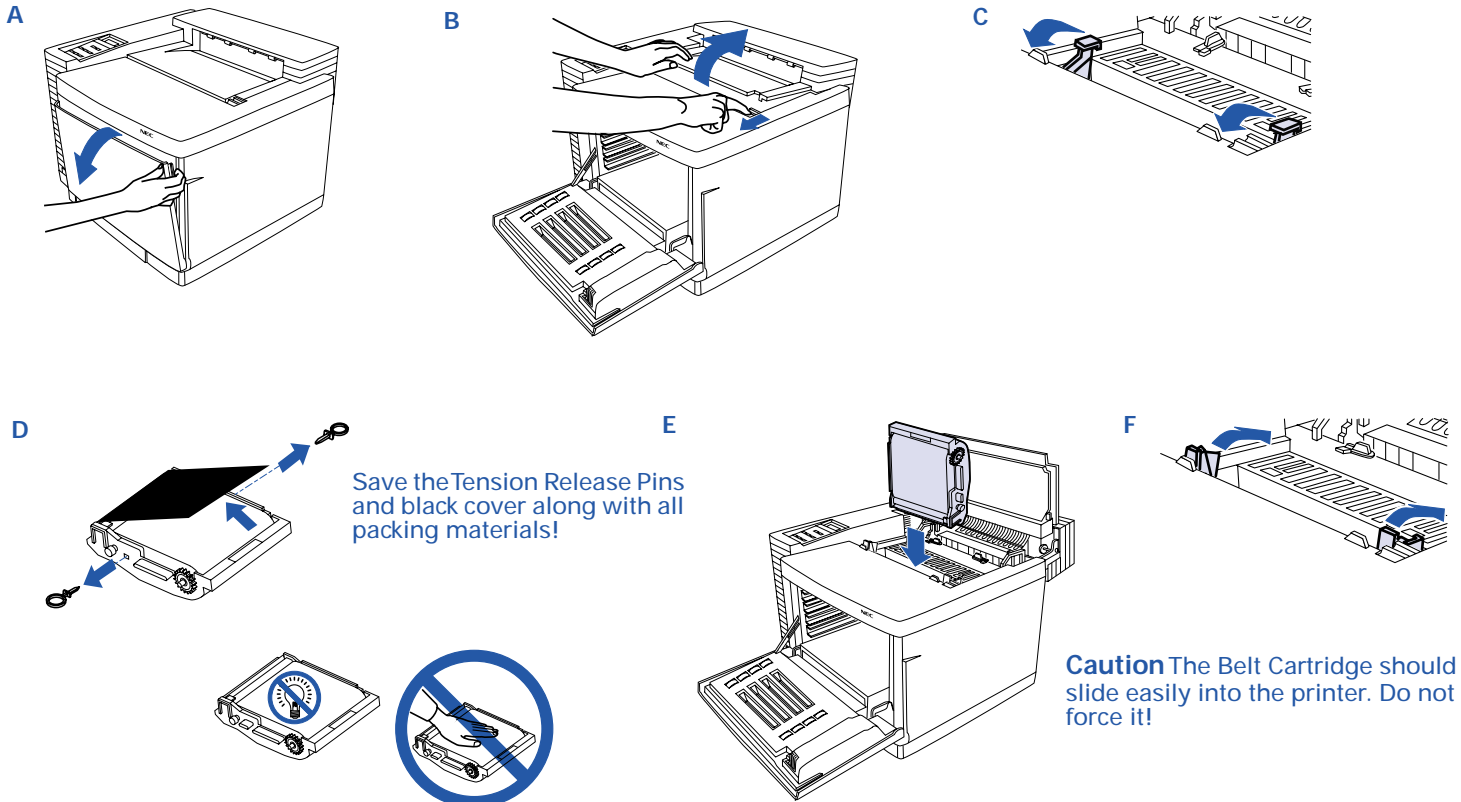
TOP INTERNAL VIEW



INSTALLING THE BELT CARTRIDGE

1. Make sure all packing materials and tape are removed from the printer. **If you are setting up a 4650NX printer, attach the optional 250-sheet Tray first before installing the Belt Cartridge!** See “Adding the Paper Tray 2 Unit” in Chapter 3.
2. Open the Front Cover of the printer with the Front Cover Release Latch (A).
3. Open the Top Cover of the printer by sliding the Top Cover Release button toward you (B).
4. Flip up the Belt Cartridge Locking Levers inside the top of the printer (C).
5. Remove the Tension Release Pins from both sides of the Belt Cartridge (D). Do not discard these pins.
6. Remove, but do not discard, the black protective sheet from around the Belt Cartridge.
7. Slide the Belt Cartridge into the guides, as shown (E). The flat side of the cartridge should face the front of the printer.
8. Snap the Belt Cartridge Locking Levers into place (F).
9. Close the Top Cover and then the Front Cover of the printer.

note: The Belt Cartridge is sometimes called the Photoconductor Belt Module or OPC Unit.



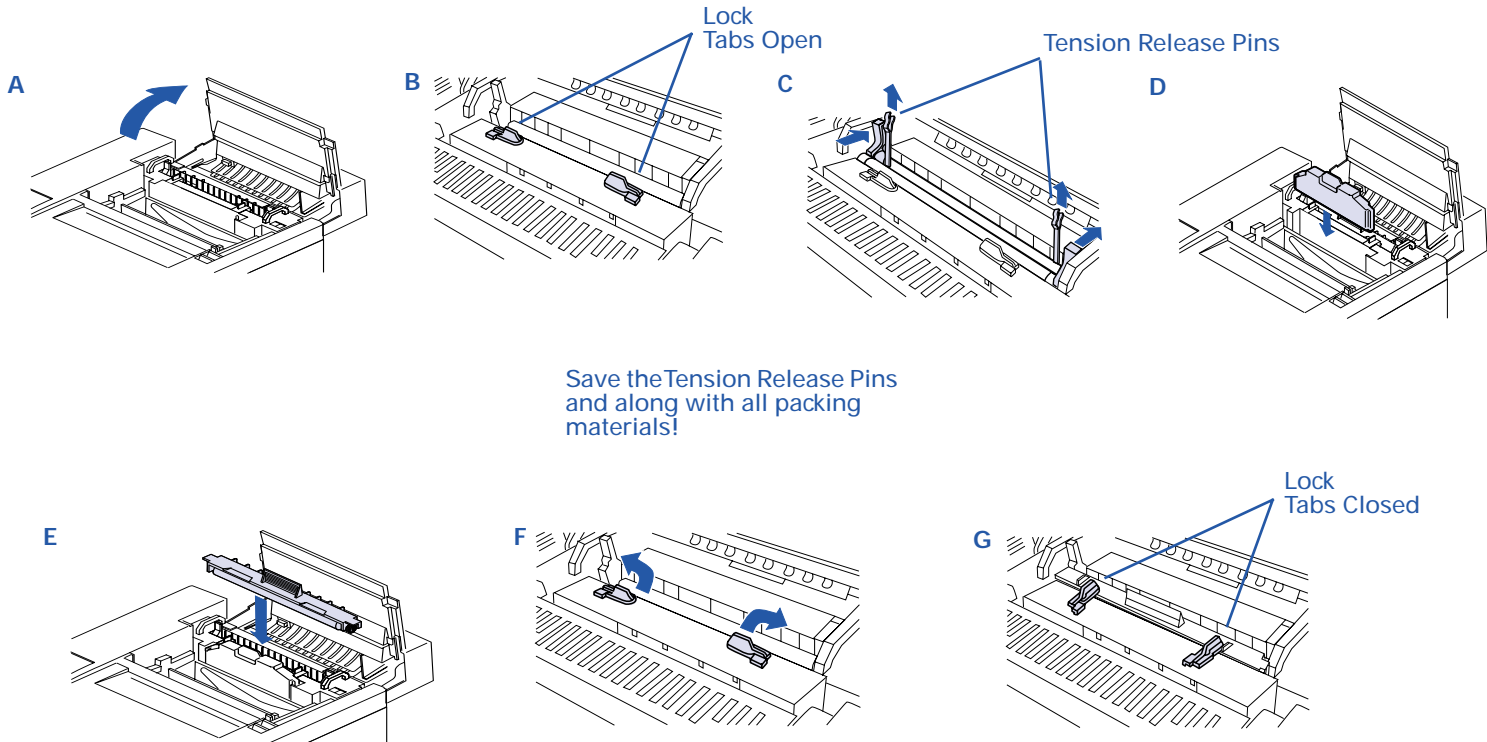
INSTALLING THE FUSER COMPONENTS

Follow the steps below to install the Fuser Oil bottle and the Fuser Cleaning Roller:

1. Open the Top Cover of the printer (A).
2. Make sure the Lock Tabs are in the open position (B).
3. Remove the orange Tension Release Pins from the ends of the Fuser Rollers. Open the Pressure Release Tabs and pull the pins up and out (C).

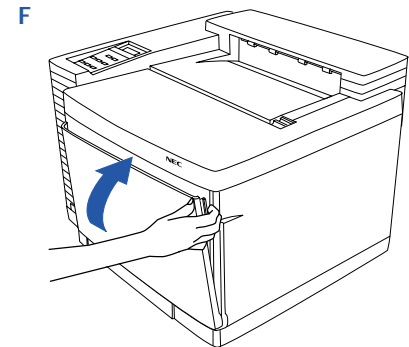
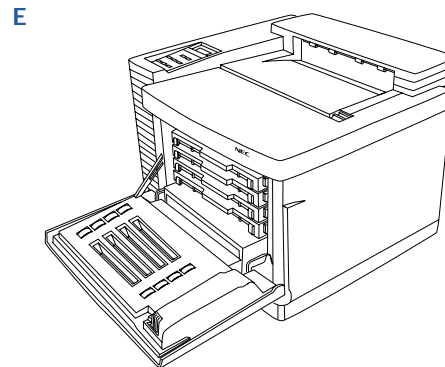
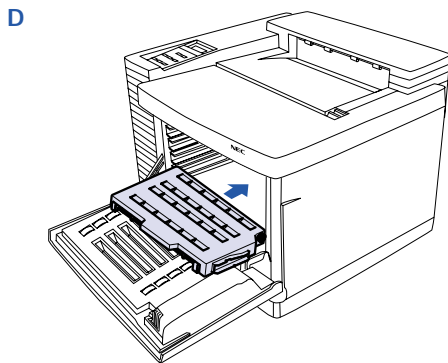
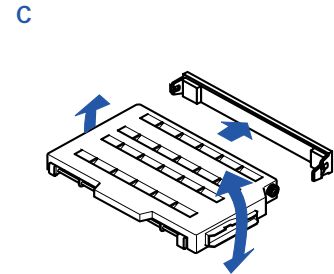
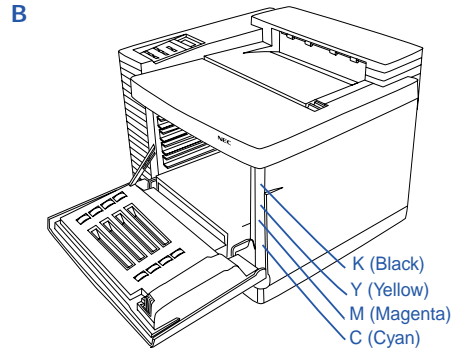
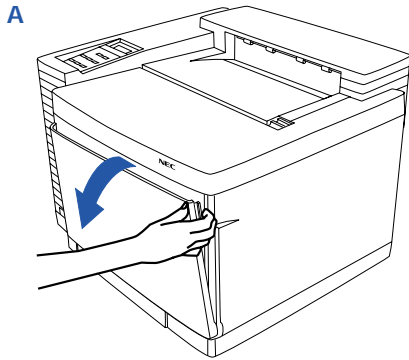
note: You may have to pull hard to remove these.

4. Remove the Fuser Oil Bottle from its plastic bag and set into place with the shunt valve down and the labeled side facing the front of the printer (D). The tab on the bottle should face right when viewed from the printer's front. Place in front of the Lock Tabs.
5. Remove the Fuser Cleaning Roller from its plastic bag and set into place with the exposed part of the roller facing the front of the printer (E). The extra tab should be on the left. Place in back of the Lock Tabs over the Fuser Rollers.
6. Turn the Lock Tabs to the closed position holding the Fuser Oil Bottle and Fuser Cleaning Roller in place (F).
7. Close the Top Cover of the printer.



INSTALLING THE TONER MODULES

1. Open the Front Cover of the printer (A).
2. Note the color labels inside indicating where to slide the different color Toner Modules (B) (C=Cyan, M=Magenta, Y=Yellow, and K=Black).
3. Begin with Cyan. Remove the Toner Module from its plastic bag and rock it gently three or four times (C).
4. Remove the protective tape from the module.
5. Remove (and save) the orange protective cover.
6. Hold the module level and slide into place along the racks in the printer (D).
7. Repeat steps 3 through 6 for the remaining color Toner Modules (E).
8. Close the Front Cover, making sure it clicks into place (F).



LOADING THE PAPER TRAY

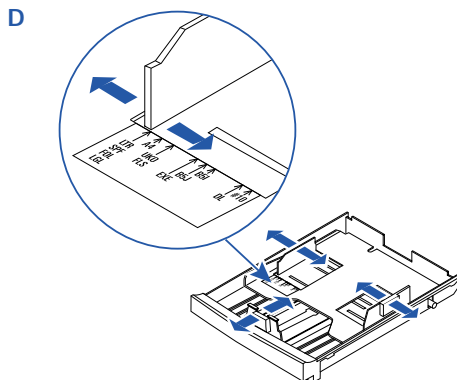
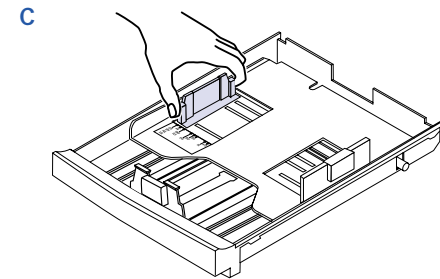
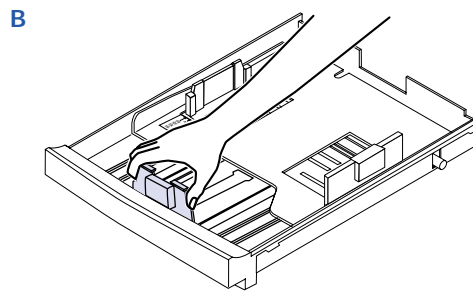
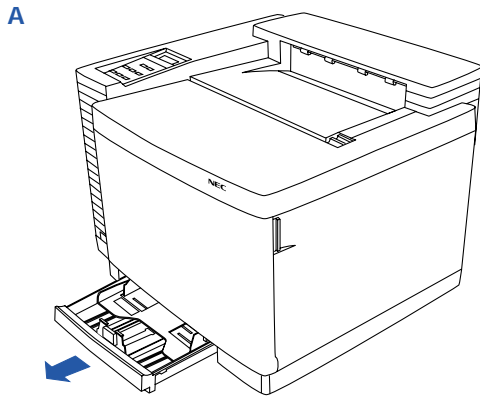
Paper Tray 1 can hold up to 250 sheets of medium weight paper—U.S. letter size, executive, UK quarto, or A4. It also holds envelopes, transparencies, and sheets of labels. See Appendix B, “Media Specifications,” for a complete list of media that can be used. The exact number of sheets Paper Tray 1 can hold depends on the weight of the paper.

1. Remove Paper Tray 1(A).
2. Squeeze both sides of the length tab and slide it into place. The outside of the tab should match the desired size marked on the inside of the tray (B).
3. Squeeze the left side guide and slide it to match your

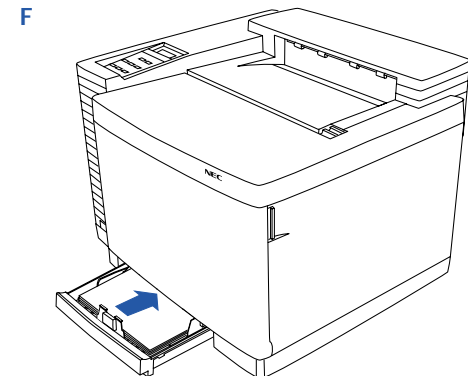
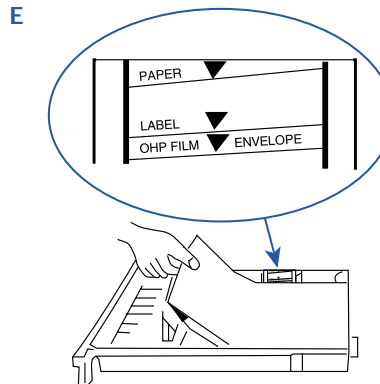
paper's width (C). The inside of the tab should match the desired size on the tray (D).

4. Insert the paper into Paper Tray 1 (E).
5. Reinsert Paper Tray 1 into the printer (F).

note: If the paper type has been changed from plain to thick stock, or from thick stock to plain, use the Media button on the Operator Panel to switch between these paper types. The printer does not have to be reconfigured for overhead transparencies; it will automatically recognize when this type of media is loaded.



Do not overfill Paper Tray!

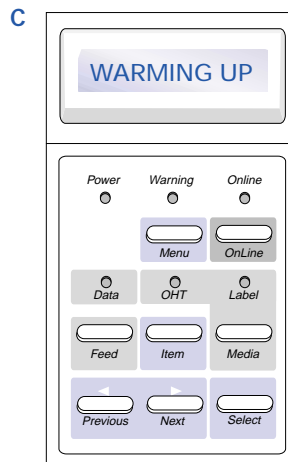
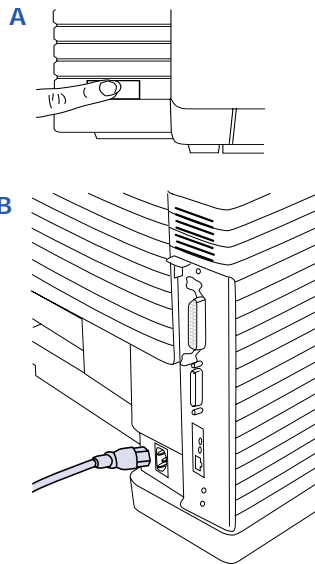


PRINTING A STARTUP PAGE

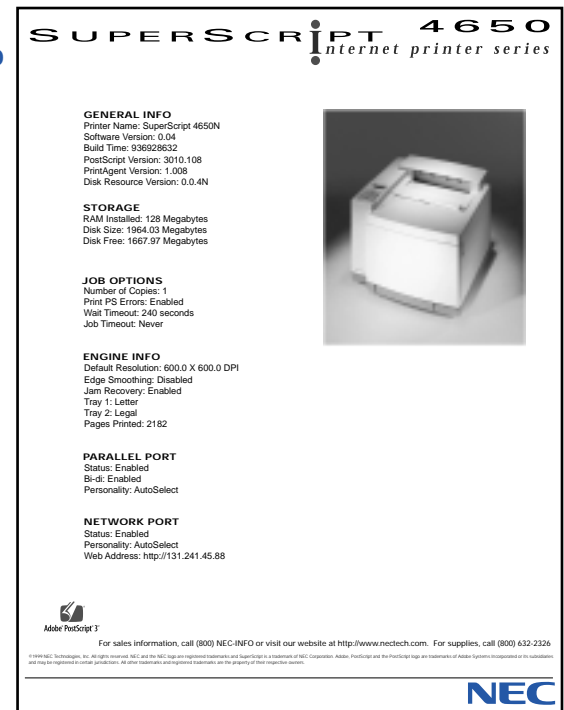
Follow these steps to connect your printer to AC Power and print a Startup Page:

1. Make sure the power switch is turned off **(A)** (button is out).
2. Connect the Power Cord to the rear of the printer **(B)**.
3. Plug the other end of the Power Cord into a properly grounded outlet.

WARNING! This printer is intended to be electrically grounded. It comes with a three-wire grounding plug. This plug will only fit a grounded AC outlet or power strip. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug by removing the third pin!



4. Turn on the printer power.
5. Indicator lights cycle and the following messages appear on the Operator Panel display in sequence **(C)**:
SelfTest
SuperScript 4650 booting...
INITIALIZING
WARMING UP
PRINTING
6. The printer issues the Startup Page **(D)** and the following message appears on the Operator Panel display:
READY



CONNECTING THE PRINTER

This section tells you how to connect your SuperScript 4650 Series printer to your computer or network.

note: You can be connected to and receive data at the parallel port and Ethernet port at the same time.

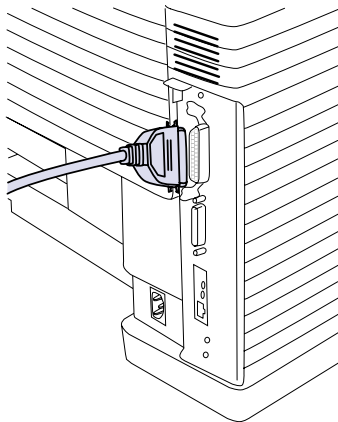
Connecting the 4650 Series Printer Locally



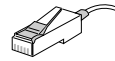
You can connect to an IBM®-compatible computer using the bidirectional parallel interface. We recommend an IEEE 1284 bidirectional parallel cable that is no more than 6 feet in length. If you use a cable that is longer than 6 feet, it should be certified as bidirectional. Use the wire clips to fasten the cable to the printer.

Follow these basic steps:

1. Make sure your computer and printer are turned OFF.
2. Plug the parallel cable into the parallel port on your computer and printer.
3. Turn on your printer, wait until it displays the **READY** message, then turn on your computer.



Connecting the 4650N(X) to a Network

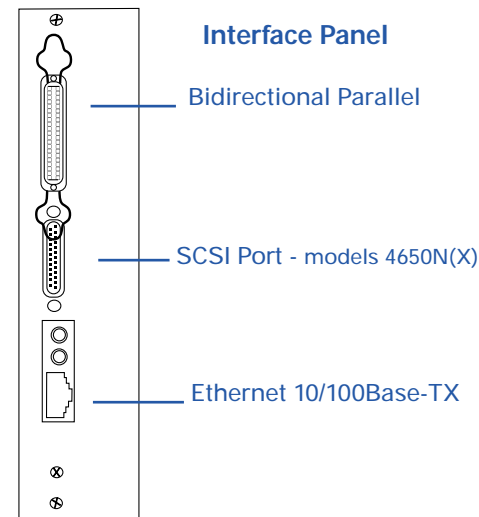


With the SuperScript 4650N(X), you can connect to an Ethernet network. You can also connect to a network if you have updated your printer with the optional SuperScript NIC. Use a Category 5 twisted pair cable with RJ-45 connectors for 10/100Base-TX Ethernet.

Follow these basic steps to connect the printer and verify that the NIC is installed and operating properly.

1. Make sure your computer and printer are turned OFF.
2. Connect the network's twisted pair cable with RJ-45 connectors to the new network port on your printer. Reattach the power cord to the printer, plug in the printer.
3. Turn on the printer. It may take up to 90 seconds to warm up, and then it prints a Startup page and then a Network Settings page with NIC status information. For more details see the "*SuperScript Color Laser Network Guide.*"

note: Keep the Network Settings page. You or your network administrator will need this information when configuring the NIC for your network.



PRINTING WITH THE 4650 SERIES PRINTER

After you have successfully printed a Startup Page and connected your printer, you can install a printer driver from the *SuperScript 4650 Series CD* and begin printing.

There are three available setups for SuperScript 4650 Series printer software: Easy/Local, Network Client/Custom, and Network Server/Administrator. These were described earlier on page 3 of this user's guide.

note: Instructions for setup and printing from a Mac OS are on page 48. See also the "*SuperScript Color Laser Network Guide*."

To get started, you can use the **Easy/Local** setup. This setup quickly installs the basic printing tools for your operating system.

Local Setup for Windows 95/98/NT 4.0/2000

Follow these steps.

1. Insert the *SuperScript 4650 Series CD* into the CD-ROM drive.
2. The Installer will launch automatically. You will be asked to choose your printer model: SuperScript 4650, 4650N, 4650NX.
3. When prompted, select the **Easy/Local** installation option and click **Next**.
4. Continue responding to the selections displayed in the dialog boxes until installation is complete.

PostScript Driver Setup for Windows 3.1x

Follow these steps to install and use the PostScript printer driver in Windows 3.1x.

1. Boot your system and start Windows.
2. Insert the *SuperScript 4650 Series CD* into the appropriate drive (in this example we use drive E:).
3. In the Windows Program Manager, select **Run** from the File menu. Windows displays the Run dialog box.
4. Type E:\WIN31\PS\SS4650(NX)\SETUP.EXE in the Command Line field.
5. Click the **OK** button. This launches the Installer.
6. Respond to the selections displayed in the installation dialog boxes.
7. When installation is complete the installer will prompt you to restart Windows. Click the Restart Windows button.
8. After Windows restarts the **Install PostScript Printer From PPD** dialog box will appear.
9. Select **NEC SuperScript 4650(NX) PS**. Click on **Install**.
10. When installation is complete click on **Close**.

Printing from Your Application

You can do this using the print command of the application used to create your document.

1. Open a document you wish to print.
2. Select **Print** from the File menu. The Print dialog box appears.
3. Select the options you want in the Print dialog box, including the number of copies and page range.
4. When the options are selected, click **OK** to print the document.

Instructions for setup and printing from a Mac OS computer are on page 59.

QUICK WEB PRINTING WITH THE 4650N(X)

The fastest way to begin printing over the network is to use NEC's PrintAgent software and a web browser. This section tells how to set up NEC PrintAgent Remote Printing.

To use Remote Printing, you must have the following on your computer:

- Microsoft Internet Explorer 4.01 SP1 or above
- The Windows 95/98 or Windows NT/2000 operating system

Setting the Printer's IP Address

There are several ways to do this. The steps below show how to use the Operator Panel to set your printer's IP Address.

1. Press the **Online** button of the Operator Panel. **OFFLINE** appears on the display.
2. Press the **Menu** button to enter menu mode. **MENU - PRINT FORM** appears on the display.
3. Press the **Next** button until **COMMUNICATIONS** appears on the display, and press the **Select** button.
4. Press the **Next** button until **NETWORK** appears on the display, and press the **Select** button.
5. Press the **Next** button until **TCP/IP** appears on the display, and press the **Select** button.
6. Press the **Next** button until **NET ADDRESS** appears on the display, and press the **Select** button.
7. Use the Operator Panel buttons to set values for each of the 12 digits in this manner.

First press **Next** to set the cursor to the first digit.

For the first digit, press **Select** to increment to the correct value. Then press **Next** to move to the next digit and press **Select** to increment to its correct value. Continue until all twelve digits are set. When the final digit is set, press **Next** to confirm the Net Address you set and then press **Select**.

8. Press **Menu** to exit menu mode and press **Online** to bring the printer online.
9. To validate any changes to network settings, you must turn the printer off, and then on again.

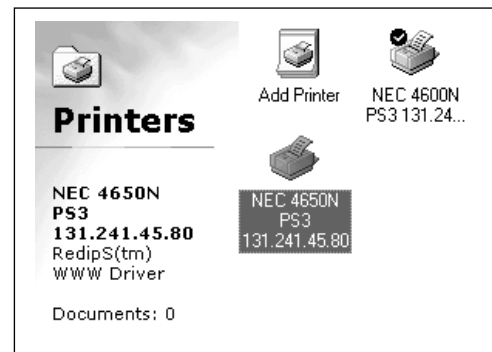
Easy Remote Printing Setup

Once the IP address is assigned to the printer, you can go to the printer's home page to download and install the NEC PrintAgent software and driver.

note: For more information on PrintAgent Remote Printing, see the "SuperScript Color Laser Network Guide."

1. Launch your web browser.
2. Enter the Printer's IP Address as the URL to reach the Printer Home Page for example
http://131.241.045.27
3. Click on the **Install Drivers** button to download PrintAgent software.
4. In the File Download dialog box that appears, check **Run this program from its current location.** and then click **OK** to begin downloading and installing.
5. During installation, you will be prompted to enter the URL (IP Address) of your printer so it can be added to your system as the default printer. When installation is finished, you can see the special NEC PrintAgent driver by selecting **Settings** and then **Printers** from the Windows Start menu.

The Printers Window

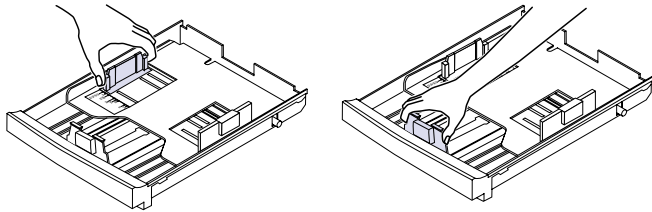


6. Restart Windows for the new driver to take effect.

note: You can also install Remote Printing software from the *SuperScript 4650 Series CD*.

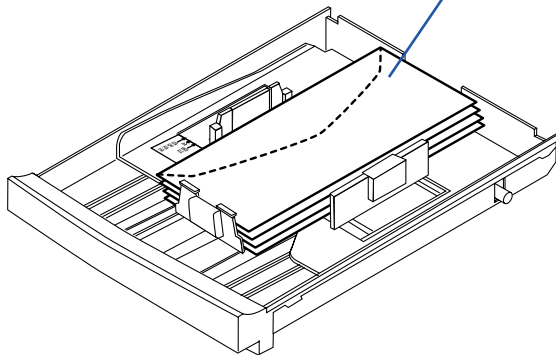
PRINTING ENVELOPES

1. Format your envelopes in your computer application.
2. Remove Paper Tray 1 and adjust the paper guides to the envelope size you want to load.



3. Load no more than 15 Com10 envelopes into Paper Tray 1. Make sure the envelope stack is flat and even.
4. The following illustration shows how to load a stack of envelopes in Paper Tray 1.

Stack the envelopes with flaps down and facing left

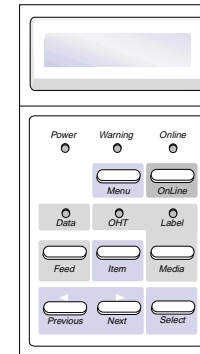


WARNING! Do not use envelopes that have fasteners, snaps, or windows. Also, do not use envelopes that seal with peel-off strips or pressure-sensitive adhesives. Printing on such envelopes can damage the printer.

5. Put Paper Tray 1 or the Legal Paper Tray back in the printer.

note: You can load envelopes in Paper Tray 1 or the optional LegalTray as long as the tray is inserted in the Paper Tray 1 Feeder.

6. Press the **Media** button once. The message **MEDIATYPE THICK STOCK** appears.



7. To return to printing regular weight paper again press the **Media** button. The message **MEDIATYPE PAPER** appears.

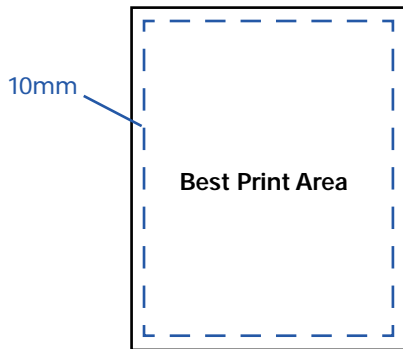
note: If envelopes are wrinkling, try envelopes made from a different kind of paper. Generally, textured envelopes do not print well in laser printers.

PRINTING ON THICK PAPER

Printing on thick stock or heavy paper is basically the same as printing on envelopes. Follow the **Printing Envelopes** directions above. Adjust the paper guides inside the tray to match your paper size.

PRINTING TRANSPARENCIES

- Create the information you need printed on the transparencies within your application. Try printing on a plain sheet of paper first for proper placement.
- Print transparencies from Paper Tray 1 only.
- Load up to 50 sheets in Paper Tray 1.
- Keep the paper path clean. Transparencies are especially sensitive to dirt. If shadows appear on either the top or bottom of the sheets, refer to Chapter 8, “Maintaining Your Printer,” for instructions on how to clean the printer.
- If the manufacturer put a removable strip at the edge of the transparencies, load the transparencies with the strip toward the front of the printer (even if they recommend that the striped edge faces the back of the printer).
- The printer will automatically detect transparencies in Paper Tray 1.
- The best quality printing will be inside a 10 mm border around the edge of the transparency



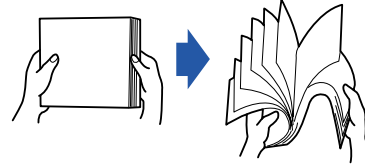
note: The terms OHT (found on Operator Panel) and OHP (found inside Paper Tray 1) both refer to transparencies.

- The OHT light on the Operator Panel will light up when the printer detects transparencies in Paper Tray 1.

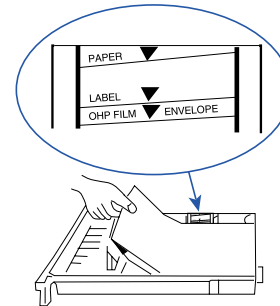
PRINTING LABELS

Print labels as you would thick paper. Printing labels, envelopes, thick paper, or transparencies takes slightly longer than plain paper.

Be careful to fan and align the label sheets in Paper Tray 1. When adding more label sheets, remove the ones already in the tray. Stack and fan together before putting them back.



1. Remove Paper Tray 1 and load no more than 80 label sheets.



2. Reinsert Paper Tray 1 into the feeder.

note: You can load label sheets in Paper Tray 1 or the optional Legal Tray as long as the tray is inserted in the Paper Tray 1 feeder.
3. Press the **Media** button once. The message **MEDIA TYPE THICK STOCK** appears.
4. To return to printing regular weight paper, press the **Media** button. The message **MEDIA TYPE PAPER** appears.

note: Load label sheets face up in the tray.

CHAPTER 3

PRINTER OPTIONS

OVERVIEW

The SuperScript 4650 Series printers have several easily installed options. For models 4650 and 4650N, a second 250-sheet tray can be added for an extended 500 sheet input. Additional DIMMs can increase random-access memory (RAM). The addition of a SuperScript NIC can gain you networking capability and you can add versatility with a Legal Paper Tray.

The illustration below shows how the 4650 printer looks equipped with the SuperScript Paper Tray 2 Unit. The Paper

Tray 2 Unit is standard with the 4650NX model printer.

This chapter provides instructions for installing and using the printer options. For directions on how to install a NIC, see the “SuperScript Color Laser Network Guide.”

- Adding the Paper Tray 2 Unit—Order # 4405
- Installing the Legal Paper Tray—Order # 4404
- Adding additional memory using industry standard DIMMs
- 4650 Network Interface Card (NIC)—Order # 4010

WARNING! When installing any of the options described in this chapter, be sure the printer is turned OFF.



To order options
call 1-800-632-2326 or
point your browser to
www.nectech.com and
click on Shop Now
BuyNow.

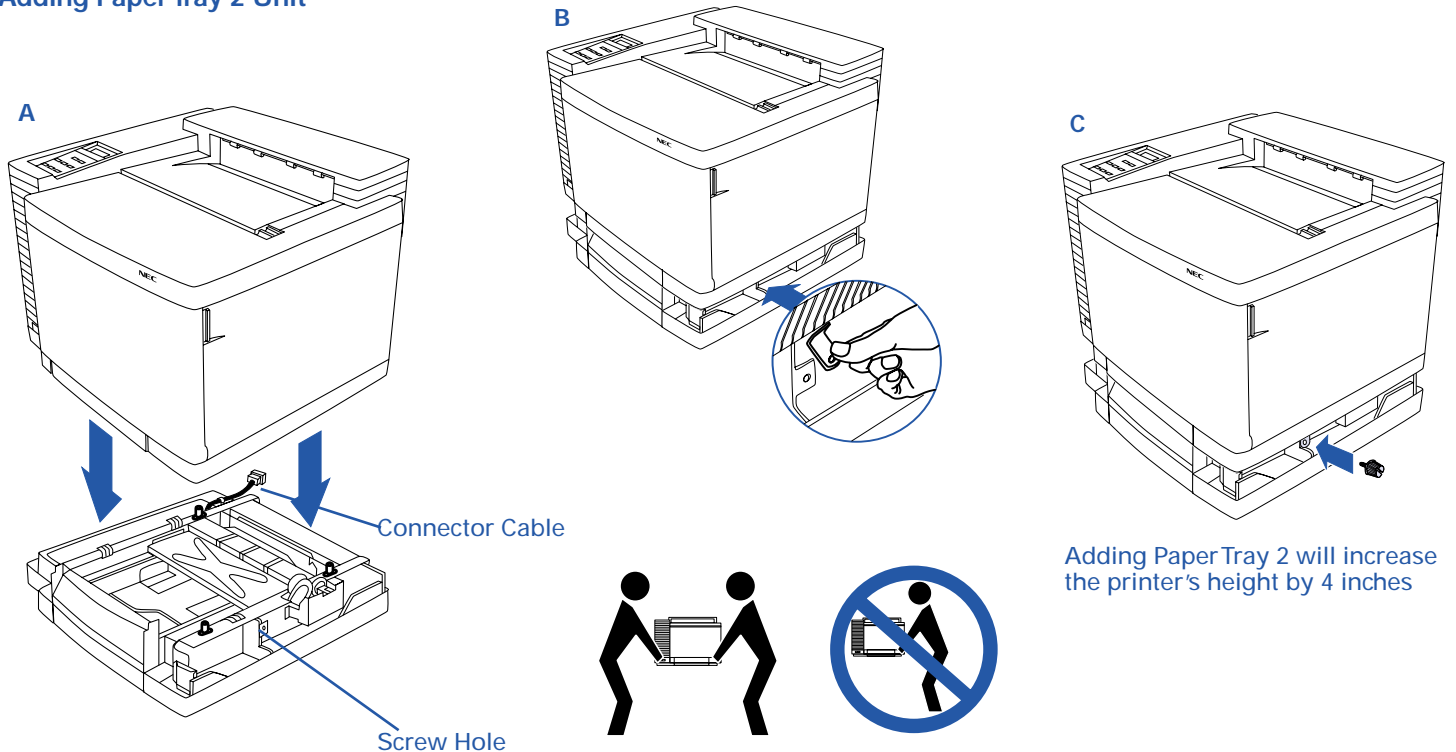


ADDING THE PAPER TRAY 2 UNIT

Order #4005

1. Make sure the printer is turned off and disconnected.
2. Make sure there is plenty of room around and above the printer to work. Remove the optional Paper Tray 2 unit from its packaging. Find the packet of brackets and thumb screws and set aside.
3. Remove the .75" x 2" Connector Cable Door from the unit. Extend the Connector Cable away from the unit.
4. Set the Paper Tray 2 unit next to the printer. Carefully align the Paper Tray 2 unit to the printer. Keeping the printer level, have two people lift the printer up and onto the Paper Tray 2 Unit as shown (A).
5. Locate the metal tab with screw hole on each side of the Paper Tray 2 unit (A).
6. Take a metal bracket from the packet and hold it at a slight angle away from you. Slide the bracket up into the hole underneath the printer (B).
7. Make sure the hole in each metal bracket is lined up with the corresponding screw hole on the Paper Tray 2 unit. Insert and tighten the thumb screws (C).

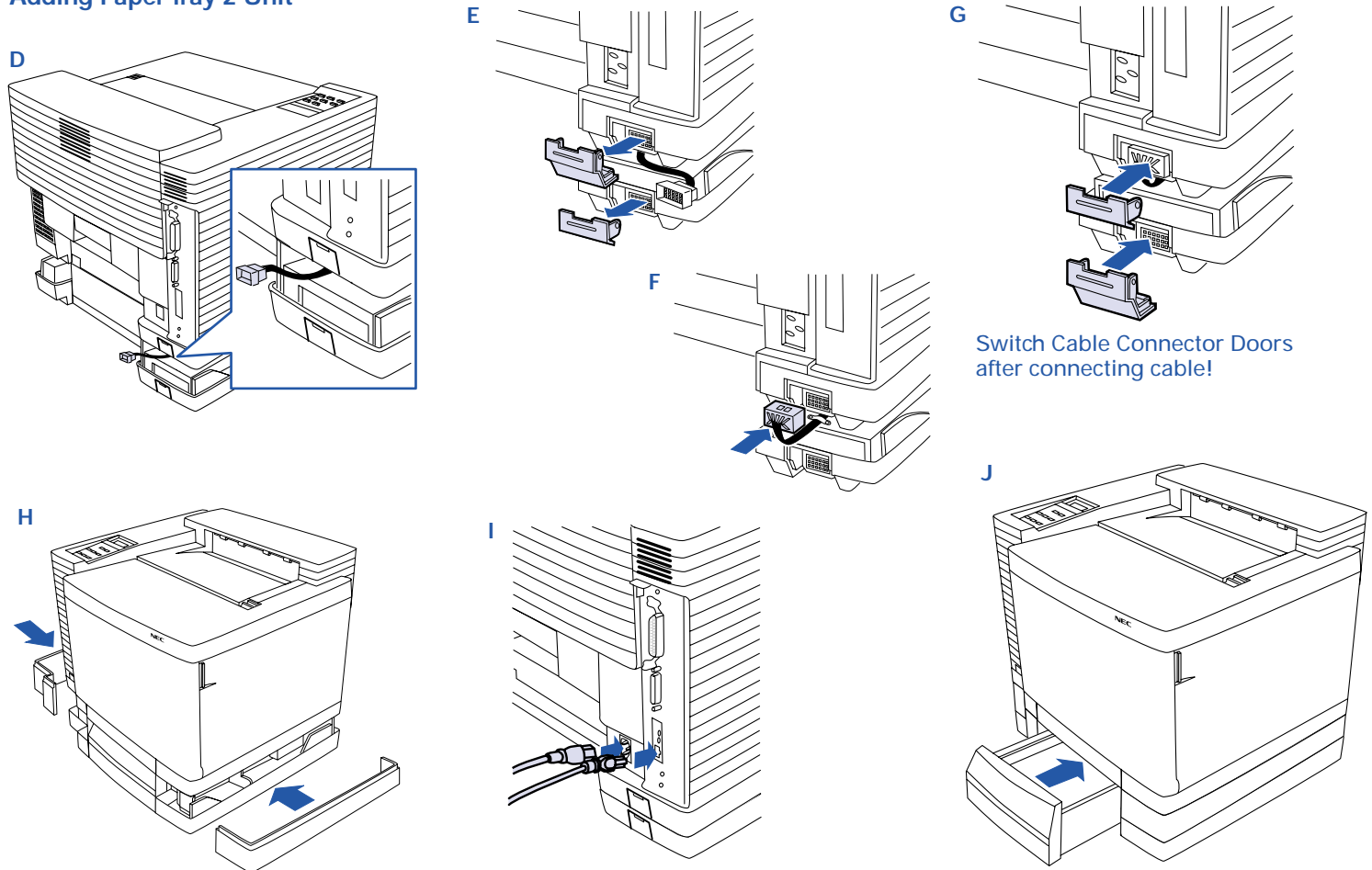
Adding Paper Tray 2 Unit



8. Facing the back of the printer, locate the Connector Cable at the rear of the Paper Tray 2 unit (D).
9. Remove the Cable Connector Doors at the rear of the printer and the 2nd tray (E).
10. Plug the cable in to the printer socket (F).
11. Place the Cable Connector Door that you removed from the printer over the opening on the Paper Tray 2 unit. Place the Cable Connector Door that you removed from Paper Tray 2 over the cable plug opening on the back of

- the printer (G).
12. Snap on the left and right Paper Tray 2 unit covers (H).
13. Reconnect the power and interface cables to your printer (I).
14. Load paper into your new Paper Tray 2 (J). To check operations, turn your printer on and send a print job to the printer using paper from both trays.
15. Update your printer driver. See Chapter 4 about changing device settings in your driver.

Adding Paper Tray 2 Unit



INSTALLING THE LEGAL PAPER TRAY

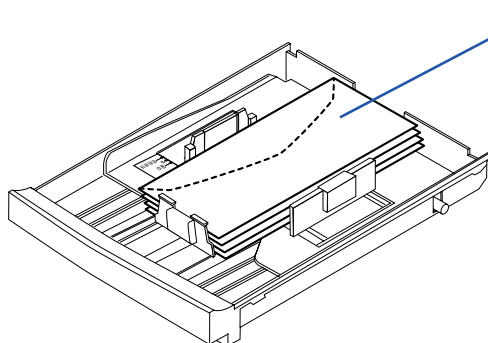
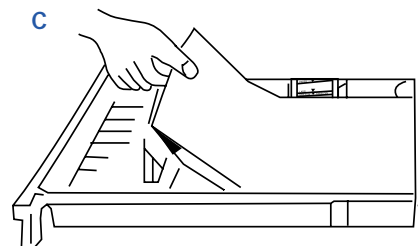
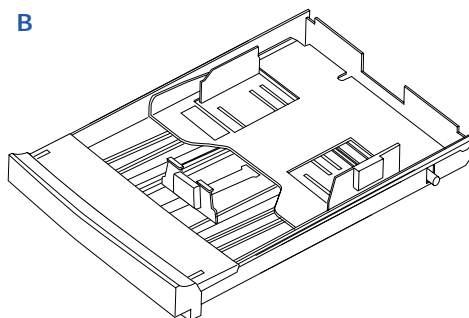
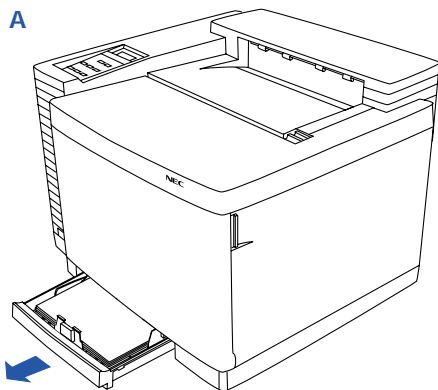
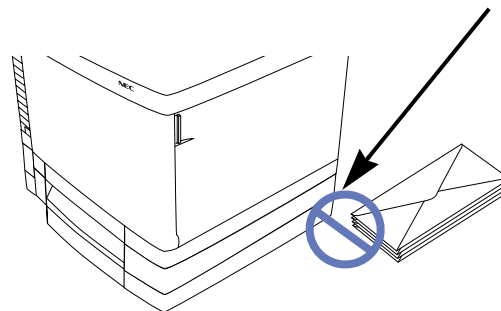
Order #4004

The optional Legal Paper Tray can hold 250 sheets of legal paper or 15 envelopes.

Installation of the optional Legal Paper Tray is simple.

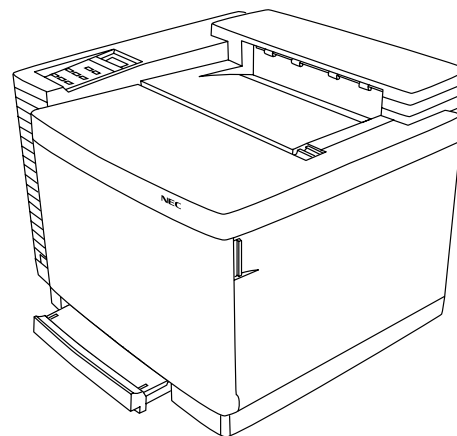
1. Remove the standard paper tray from the main feeder or the optional Paper Tray 2 unit (A).
2. Remove the packing from the Legal Paper Tray and make any needed adjustments inside the tray (B).
3. Fill the tray (C).
4. Install the tray in the feeder unit.

note: You can load envelopes in the Legal Paper Tray as long as the tray is inserted in the Paper Tray 1 feeder. **Do not print envelopes from the Paper Tray 2 feeder.**



Envelope flaps down

Legal Paper Tray installed
in the Paper Tray 1 feeder



ADDING MEMORY (DIMM)

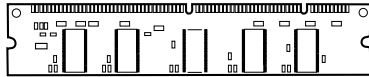
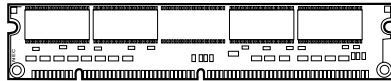
The SuperScript 4650 color laser printers have two Dual Inline Memory Module (DIMM) slots. The 4650 model comes with 32MB RAM, the 4650N comes with 96MB RAM, and the 4650NX comes with 128MB RAM. However, you can upgrade your printer to a maximum of 256MB of RAM through the installation of additional DIMMs.

Installing additional memory will help ensure that your printer has enough memory to print the most complex graphic print jobs without sacrificing resolution. But configuring the printer with more than 128 Mbytes of RAM will not noticeably increase printer performance.

note: It takes a minimum of 96MB RAM to support 1200 X 1200 dpi resolution.

Use high quality DIMMs with the following properties:

- 168 pin DIMM
- PC100 SDRAM
- 64 bit wide configuration (i.e. 8M x 64)
- 3.3v
- 32MB or larger
- DIMMs with parity or ECC are not supported
- Only DIMMs using 64Mbit SDRAMs, or larger, are supported



The easy way to tell if you have the 64 Mbit SDRAM chips or larger is that we only allow 4 or 8 chips on each side of the SDRAM. A 32MB DIMM can only have four chips on a single side; 64MB, 128MB and 256MB DIMMs can have 4 or 8 chips on each side. The most common SDRAM DIMMs will be found in these configurations.

If you want to upgrade your memory from 32MB to 96MB, install a 64MB SDRAM in the empty SDRAM slot.

If you want to upgrade your memory from 128MB to 256MB,

install another 128MB DIMM in the other memory slot. Your printer now has 256MB of RAM.

The instructions on the next page explain how to install memory in your printer yourself. You can also contact an NEC-authorized dealer and have more memory installed for a service fee. Call 800-632-4650.

When you turn on your printer it will automatically recognize the added memory. The new memory should show up on the Start up page shown below. Make sure the printer driver knows about your added memory. See Chapter 4 about changing device settings in your driver.

Startup Page

SUPERSCRIPT 4650
internet printer series

GENERAL INFO
Printer Name: SuperScript 4650N
Software Version: 0.04
Build Time: 936928632
PostScript Version: 3010.108
PrintAgent Version: 1.008
Disk Resource Version: 0.0.4N

STORAGE
RAM Installed: 128 Megabytes
Disk Size: 1964.03 Megabytes
Disk Free: 1667.97 Megabytes

JOB OPTIONS
Number of Copies: 1
Print PS Errors: Enabled
Wait Timeout: 240 seconds
Job Timeout: Never


ENGINE INFO
Default Resolution: 600.0 X 600.0 DPI
Edge Smoothing: Disabled
Jam Recovery: Enabled
Tray 1: Letter
Tray 2: Legal
Pages Printed: 2182

PARALLEL PORT
Status: Enabled
Bi-di: Enabled
Personality: AutoSelect

NETWORK PORT
Status: Enabled
Personality: AutoSelect
Web Address: http://131.241.45.88

For sales information, call (800) NEC-INFO or visit our website at <http://www.nectech.com>. For supplies, call (800) 632-2326

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NEC

Installing DIMM

1. Turn the printer off and disconnect the power cords and all I/O cables.
2. Using a small phillips-head screw driver remove the two screws from the expansion slot on the rear of the printer (A), and pull out the Controller Board part way (B).

note: You may also perform this procedure with the Controller Board removed. In this case, lay the board down flat.

3. To remove any un-needed DIMMs flip open the ejector levers as shown. The DIMM will be released from the memory socket (C).
4. To add DIMMs:
Hold the DIMM so that the metal connector edge faces

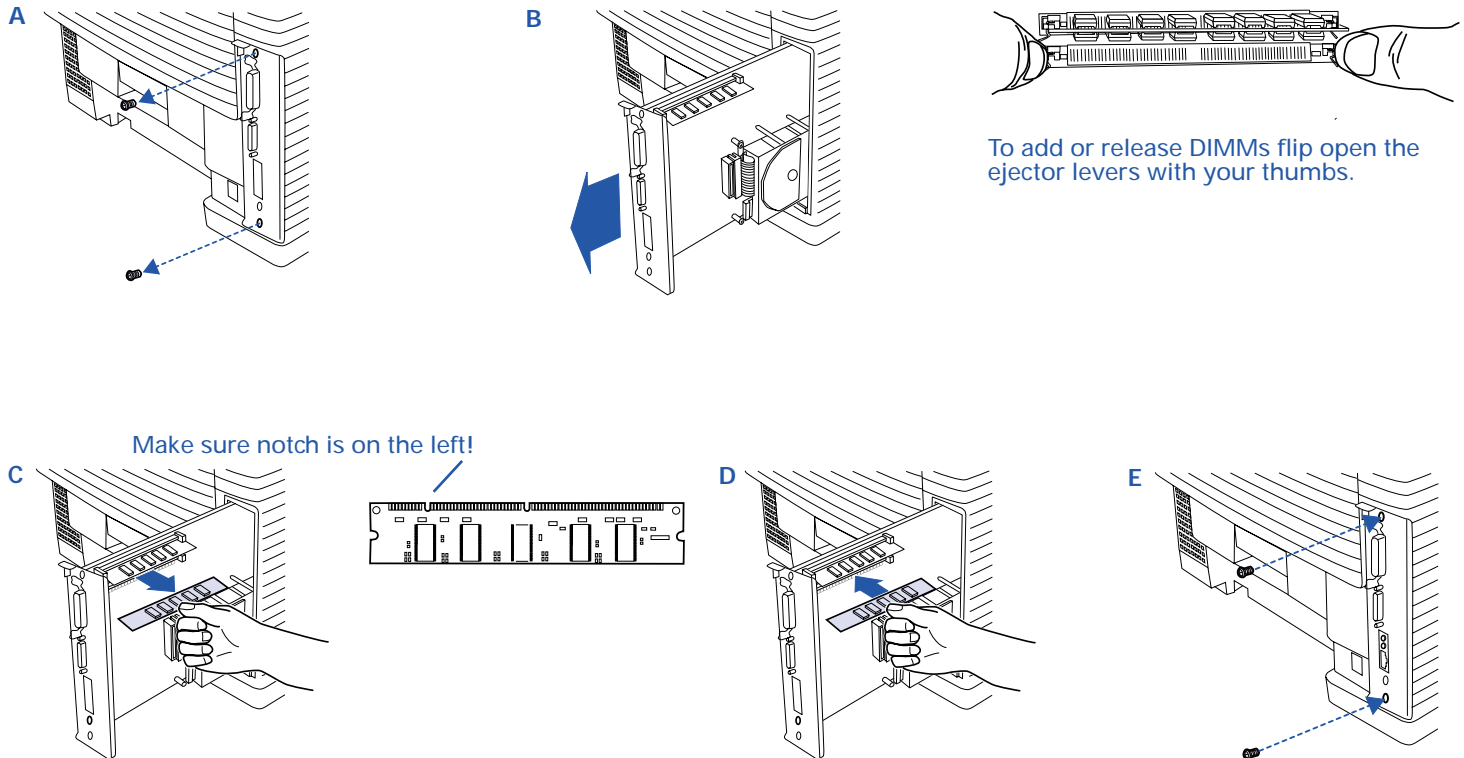
toward the memory socket and the notched side of the DIMM is on the left.

Being careful not to touch the connection points along the edge of the DIMM, insert the DIMM straight into the memory socket (D).

Press the DIMM in until it clicks into place.

Make sure the DIMM is seated securely and the ejector levers are locked.

5. Slide the controller board back into the printer and reinstall the screws (E).
6. Connect the interface cable and power cord and turn on the printer. The Startup page should print indicating the correct amount of RAM (see previous page).



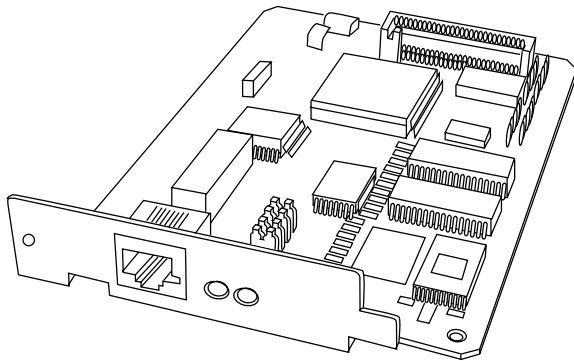
THE SUPERSCRIPT NIC

Order #4010

If you have an NEC SuperScript™ 4650N or 4650NX printer it is already equipped with a Network Interface Card (NIC). If you have the SuperScript 4650, you can upgrade it by installing a NIC. A NIC, or network interface card, is a printed circuit board containing hardware for connecting a printer or computer to a network.

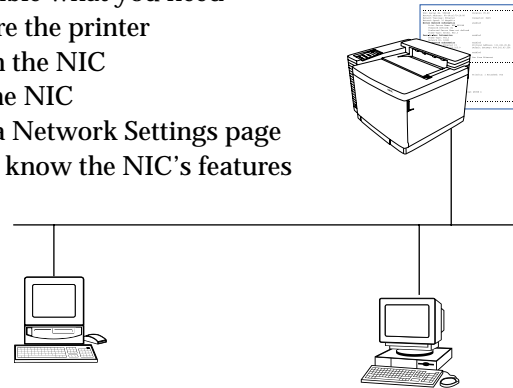
The SuperScript Network Interface Upgrade Kit contains a NIC that allows you to connect your SuperScript color laser printer to a network. Once installed the NIC enables your printer to process print jobs from any computer on the network. It also enables your printer to print over the Internet using PrintAgent technology (see next page for more information).

SuperScript Network Interface Card



Installation Steps

1. Assemble what you need
2. Prepare the printer
3. Attach the NIC
4. Test the NIC
5. Print a Network Settings page
6. Get to know the NIC's features



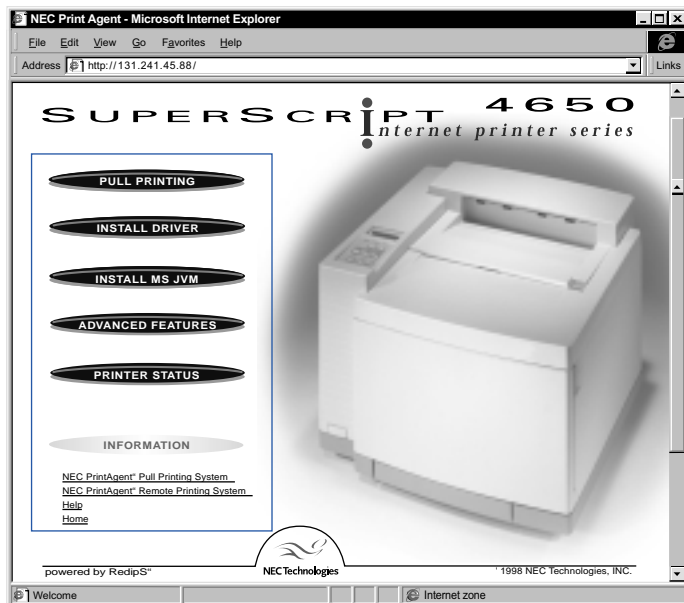
note: For complete setup instructions see the "SuperScript Color Laser Network Guide."

PrintAgent and the SuperScript 4650(NX)

There are differences between the SuperScript 4650 and the 4650N(X). Not all feature buttons are available for the 4650 model.

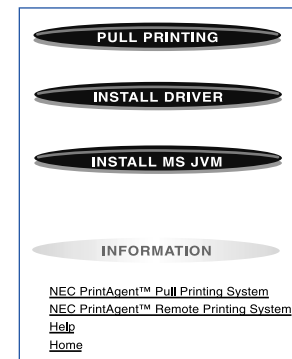
Once the NIC is installed in the 4650 printer you can use the printer's home page to print over the Internet. PrintAgent Pull Printing and Remote Printing features are explained in the "SuperScript Color Laser Network Guide." Please note that advanced features like Zip drive and scanner support are not included on the SuperScript 4650 printer because it lacks a hard disk and SCSI port.

Feature Buttons on the 4650N(X) Home Page



Feature Buttons on the 4650 Home Page

The 4650 Printer's Home page has **only** these feature buttons.



note: SuperScript 4650 users can get printer status from the Pull Printing page.

CHAPTER 4

PRINTER DRIVERS

OVERVIEW

A printer driver is software that translates your computer data into a format that the printer can read and print out. You can access the printer driver software to change printer and document settings and manage fonts. First, you need to install the right printer driver for your system.

The *SuperScript 4650 Series CD* provides the following printer drivers.

- PostScript 3 for Windows 95/98
- PCL5e for Windows 95/98
- PostScript 3 for Windows 2000
- PCL5e for Windows 2000
- PostScript 3 for Windows NT 4.0
- PCL5e for Windows NT 4.0
- PostScript 3 for Window 3.1x
- PCL5e for Window 3.1x—with 4650N(X)
- PostScript 3 for Mac OS (on EtherTalk networks)

In this chapter, you learn how to install, access, and use these printer drivers to control printer settings. For definitions of the different settings available on printer drivers, see Chapter 1, “Features.” You can also use the online Help feature on any printer driver.

The *SuperScript 4650 Series CD* also provides software for configuring and using the printer on NetWare and TCP/IP networks. For Macintosh users, EtherTalk software is already built into the operating system. Network setup is described in the “*SuperScript Color Laser Network Guide*. “

When to Use the PostScript 3 or PCL5e Printer Driver

Use the **PostScript 3** driver for color documents and documents that contain many complex graphic images or extensive page layout formatting. The PostScript driver has more options and delivers better graphic processing.

If you have the 4650N or 4650NX model printer you can use the **PCL5e** driver for monochrome documents that contain mostly text and limited formatting. The PCL5e driver handles this type of document well and delivers faster printing than the PostScript3 driver.

note: For color printing, you must use the PostScript 3 printer driver for your system. The PCL5e printer driver is for monochrome printing only.

Installation Options

There are three types of setup available for the SuperScript 4650 Series software: Easy/Local for local connection of any models or, Network Client/Custom and Network Server/Administrator for network setup of the 4650N or 4650NX models*. This chapter provides instructions for using the Easy/Local setup. The following procedure installs the basic printing tools for your operating system. This is appropriate if you are connected to a SuperScript 4650 Series printer from the parallel port.

*Network setup can also work if the 4650 model has the SuperScript NIC (network interface card) option installed.

WINDOWS 95/98

About Color Control Options

During the PostScript 3 for Windows 95/98 driver installation, you have the option of installing a driver using Microsoft Image Color Matching (ICM) technology or a driver using NEC's color matching method. The driver using NEC's color matching method is the default and recommended driver.

The ICM based driver calibrates the colors with those actually seen on the print client's monitor. The NEC based driver calibrates the colors with those described by the NEC Color Table located inside the printer.

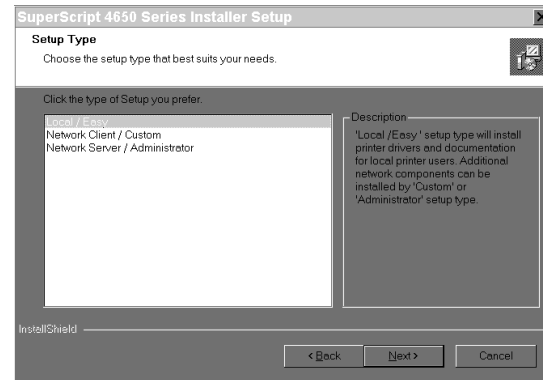
The choice can be made when the Select Components dialog box appears during installation. Simply highlight the **Printer Drivers Win95** item, then click **Change** to open the Select Subcomponents dialog box. The ICM based driver can be selected there. However, when the ICM based driver is installed, you can still choose between ICM based or NEC's color matching printing methods from the Color Control options located in the Graphics tab of the driver.

Installing Printer Software

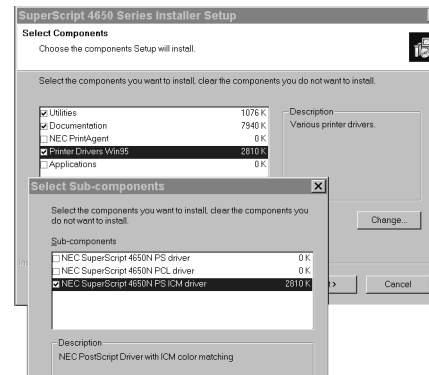
Follow these steps to use the SuperScript Installer in Windows 95/98.

1. Insert the *SuperScript 4650 Series CD* into the CD-ROM drive.
2. The Installer will launch automatically.
3. Follow the instructions displayed on the computer monitor.
4. At the Setup Type window, select the installation type.

For example **Easy/Local**.



5. For a more customized install choose **Network Client/Custom**. With this type of installation you can pick and choose specific driver components. For example, if **Printer Drivers Win 95** is highlighted and checked, you may click the **Change** button if you want to install the ICM based driver described above.



6. When installation is complete, restart Windows.

note: Pure binary data is not supported by PostScript when a computer is locally connected (directly connected using a parallel cable) to the printer. To assure communications between the computer and the printer, go to the PostScript tab of the driver, click **Advanced** to open the PostScript Options dialog box, then make sure the **Pure Binary Data** radio button is clear.

Printing a Document

You can do this using the print command of the application used to create your document.

1. Open a document you wish to print.
2. Select **Print** from the File menu. The Print dialog box appears.
3. Select the options you want in the Print dialog box, including the number of copies and page range.
4. When the options are selected, click **OK** to print the document.

Accessing a Printer Driver

You can access the printer driver from your application, or the Windows Printer folder.

From your application

Different applications have different methods for accessing the Printer Setup. Below is one common example. If it does not work with your application, consult your software manual.

1. Select **Print** from the File menu of your application.
2. In the Print dialog box that appears, click the **Name** pull-down menu and select a printer from the list.
3. Then click the **Properties** button in the Print dialog box to display the printer driver.

From the Printers folder

1. Press the **Start** button and select **Settings** in the Start pop-up menu. In the menu that appears, click **Printers**.
2. In the Printers folder, select the printer driver you wish to view.
3. From the File menu, select **Properties**.

Changing Settings in the Printer Driver

In the Properties folder, you simply point and click to change printer settings.

1. Select a category of settings that you want to change by clicking its name tab.
2. Click to select new settings in the property sheet.
3. Click **OK** to save the changes you made in all property sheets and close the printer driver.
Click **Apply** to save the changes you made in a property sheet. The printer driver remains open.
Click **Cancel** to close the printer driver. Your changes will not be implemented.

Setting Another Printer Driver as Default

You can change printer drivers using the Printers folder.

1. Press the **Start** button and point to **Settings** in the Start pop-up menu. In the menu that appears, click **Printers**.
2. In the Printers folder, double-click a new printer driver.
3. In the folder that appears, select **Set As Default** from the Printer menu.

Shared Printing Windows 9x/Windows NT 4.0

Windows 95/98 print clients can share the printer with networked computers running Windows NT 4.0 and having a parallel connection to the printer. This requires that the PostScript printer driver be installed on the Windows NT computer and that the driver be configured for sharing. Print clients then can use the network to install the PostScript printer driver from the Windows NT computer.

Description

As seen from a Windows 95 and Windows 98 computer, the shared Windows NT 4.0 PostScript printer driver is similar to the Windows 95 and Windows 98 PostScript drivers. They both have the same options and features.

Sharing the Windows NT 4.0 PostScript Printer Driver

Configuring the PostScript printer driver for sharing can be done during the installation of the driver from the *SuperScript 4650 Series CD* to the Windows NT 4.0 computer, or after the driver has been installed on the Windows NT 4.0 computer.

To configure sharing during driver installation:

1. Insert the *SuperScript 4650 Series CD* into the Windows NT 4.0 computer to automatically launch the installer.
2. Follow the instructions presented by the installer to install the PostScript printer driver until the **Get Shared Information** dialog box appears.
3. From the **Get Shared Information** dialog box, select the **Shared** radio button, then type in a name for the printer into the **Share Name** text box.
4. Select the operating systems of the computers that will be printing to this printer.
5. Click **Next** to finish installing the driver.

To configure sharing after the driver is installed:

1. From the Windows NT 4.0 computer, click **Start**, select **Settings**, then click on **Printers** to open the Printers folder.
2. Double-click on the selected printer icon.
3. From the menu select **Printer** to see the available options and select **Sharing....** to open the printer driver

Properties.

4. Select the **Shared** radio button and type in a name for the printer.
5. Select the operating system(s) of the computers printing to this printer and click **OK**. You will be prompted to insert the CD.
6. Insert the *SuperScript 4650 Series CD* (press and hold the shift key on your keyboard to disable Autorun) and click **OK**.
7. Press the **Browse...** button and open the folder that represents your printer's model number, for example SS4650N.
8. Double-click the **PSNT** folder.
9. Double-click the **win95** folder and select **NC46N_95.inf** file.
10. Click **OK**.

Installing the Shared Driver into Windows 95/98 Clients

After the Windows 2000 PostScript printer driver has been configured for sharing, a Windows 95 and Windows 98 client can use a network to install the driver from the Windows NT 4.0 computer.

To install the shared driver:

1. From the Windows 95 or Windows 98 client, use the network to navigate to the Windows NT 4.0 computer.
2. Click on the shared printer driver to open the shortcut menu.
3. Select **Install**.
4. Follow the instructions presented by the installer to install the driver.

Shared Printing Windows 9x/Windows 2000

Windows 95/98 print clients can share the printer with networked computers running Windows 2000 and having a parallel connection to the printer. This requires that the PostScript printer driver be installed on the Windows 2000 computer and that the driver be configured for sharing. Print clients then can use the network to install the PostScript printer driver from the Windows 2000 computer.

Description

As seen from a Windows 95 and Windows 98 computer, the shared Windows 2000 PostScript printer driver is similar to the Windows 95 and Windows 98 PostScript drivers. They both have the same options and features.

Sharing the Windows 2000 PostScript Printer Driver

Configuring the PostScript printer driver for sharing can be done during the installation of the driver from the *SuperScript 4650 Series CD* to the Windows 2000 computer, or after the driver has been installed on the Windows 2000 computer.

To configure sharing during driver installation:

1. Insert the *SuperScript 4650 Series CD* into the Windows 2000 computer to automatically launch the installer.
2. Follow the instructions presented by the installer to install the PostScript printer driver until the **Get Shared Information** dialog box appears.
3. From the **Get Shared Information** dialog box, select the **Shared** radio button, then type in a name for the printer into the **Share Name** text box.
4. Select the operating systems of the computers that will be printing to this printer.
5. Click **Next** to finish installing the driver.

To configure sharing after the driver is installed:

1. From the Windows 2000 computer, click **Start**, select **Settings**, then click on **Printers** to open the Printers folder.
2. Double-click on the selected printer icon.

3. From the menu select **Printer** to see the available options and select **Sharing....** to open the printer driver Properties.
4. Select the **Sharing as:** radio button and type in a name for the printer.
5. Press the **Additional Drivers...** button for a list of more drivers.
6. Select the operating system(s) of the computers printing to this printer and click **OK**. You will be prompted to insert the CD.
7. Insert the *SuperScript 4650 Series CD* (press and hold the **shift** key on your keyboard to disable Autorun) and click **OK**.
8. Press the **Browse...** button and open the folder that represents your printer's model number, for example **SS4650N**.
9. Double-click the **PSNT** folder.
10. Double-click the **win95** folder and select **NC46N_95.inf** file.
11. Click **OK**.

Installing the Shared Driver into Windows 95/98 Clients

After the Windows 2000 PostScript printer driver has been configured for sharing, a Windows 95 and Windows 98 client can use a network to install the driver from the Windows 2000 computer.

To install the shared driver:

1. From the Windows 95 or Window 98 client, use the network to navigate to the Windows 2000 computer.
2. Click on the shared printer driver to open the shortcut menu.
3. Select **Install**.
4. Follow the instructions presented by the installer to install the driver.

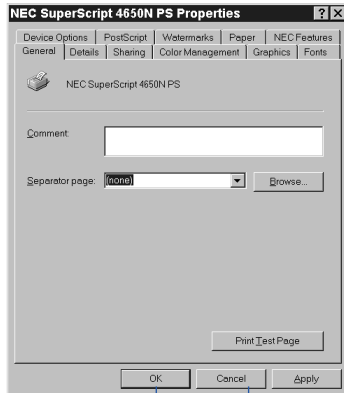
Using the Windows 95/98 Printer Drivers

Windows 95/98 Printer Driver - System Tabs

The **General**, **Details**, and **Sharing** tabs provide access to Windows features for setting up your printer. A brief description is provided here. For more information about settings on these tabs, see the Windows manual.

General Tab

This tab provides general information about the printer. Use the Comment area to add comments about the printer. You can specify a separator page to be sent between jobs, and print a test page to troubleshoot problems.

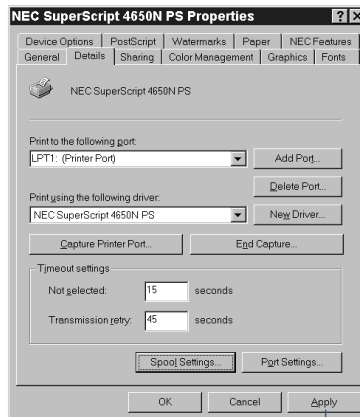


Click **OK** to save changes and close the window.

Click **Cancel** to discard changes and close the window.

Details Tab

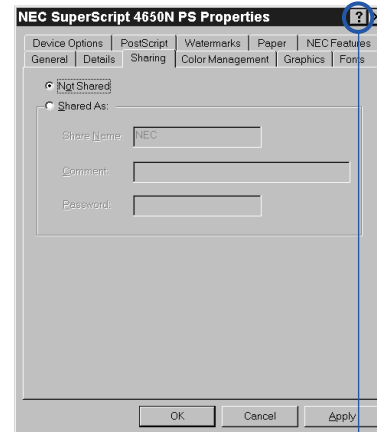
Use this tab to customize the local and network port connections to the printer and specify print spooling settings.



Click **Apply** to save changes and leave the window open.

Sharing Tab

Use this tab to customize the local and network port connections.

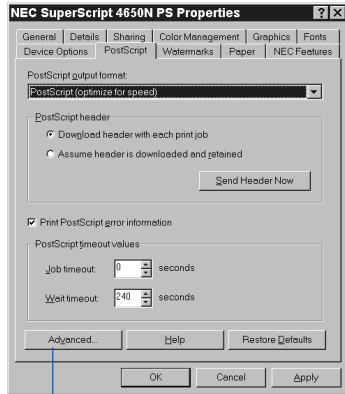


Click the ? Help icon and click a setting on the driver to view more information about it.

Windows 95/98 Printer Driver - PostScript 3 Tabs (I)

PostScript Tab

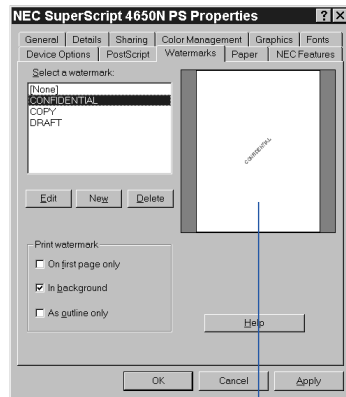
Use these settings to configure options for the PostScript printing language.



Click here to customize advanced PostScript features such as data format.

Watermarks Tab

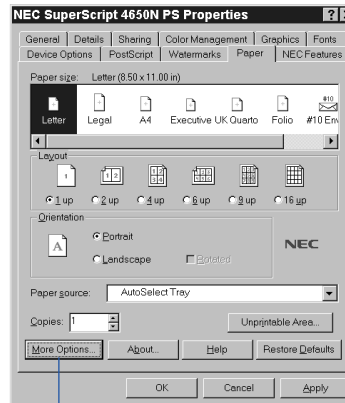
A watermark is text that appears on pages in your print job, such as DRAFT or CONFIDENTIAL. Use these settings to customize watermarks for your print job.



This preview area shows the effect of your selections.

Paper Tab

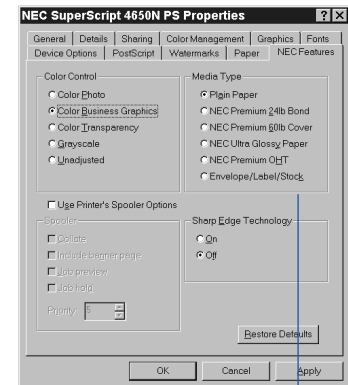
Use the Paper tab to customize paper handling for the print job.



Click here to print page borders on your job.

NEC Features Tab

This tab allows you to control the special features of the SuperScript 4650 Series printer. Spooling Options not shown for the 4650 model.



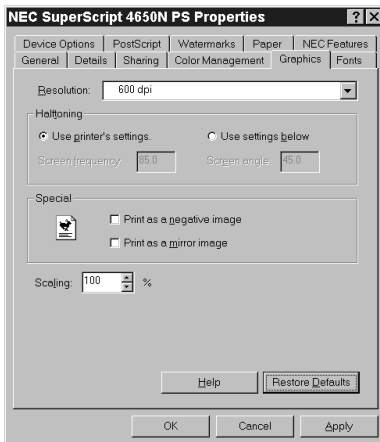
To order NEC Premium papers call 800-632-2326

To learn more about the printer's spooling features, such as collation, see Chapter 6, "Advanced Features."

Windows 95/98 Printer Driver - PostScript 3 Tabs (II)

Graphics Tab

Use the Graphics tab settings to define print quality.



Click the **Help** button to view the complete Help file.

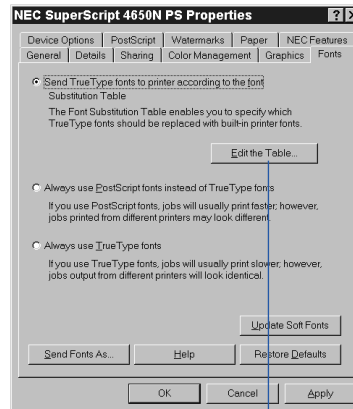
Click the ? Help icon and click a setting on the driver to view more information about it.

Click any tab to view more printer settings.

Click the **Restore Defaults** button to replace current settings on the tab with factory defaults.

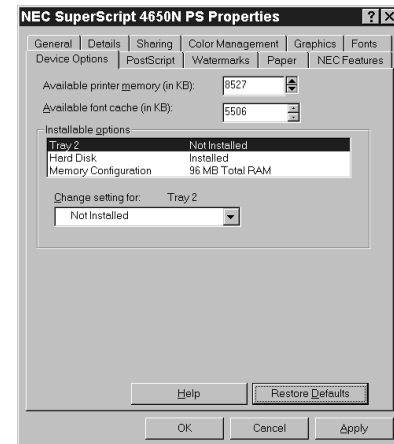
Fonts Tab

Use the Fonts tab to specify how TrueType fonts in your document will be processed by the printer.



Device Options Tab

Use settings on the Device Options tab to match the attached printer options and configuration so that the printer driver can generate optimized PostScript code. Tab appearance will vary from model to model.

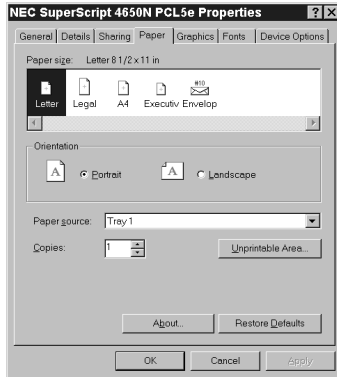


Click here to display the Font Substitution Table.

Windows 95/98 Printer Driver - PCL5eTabs (4650N and 4650NX models)

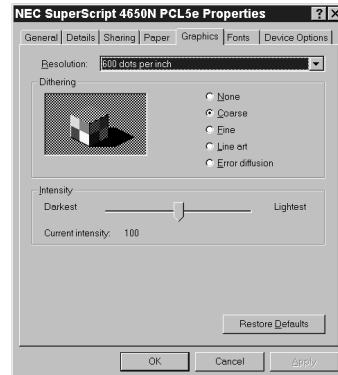
Paper Tab

Use the Paper tab to customize paper handling for the print job.



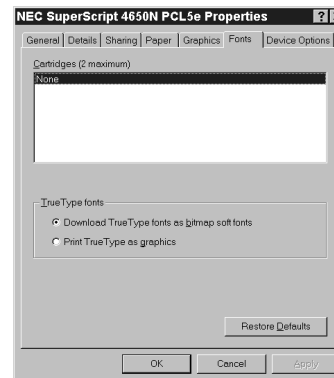
Graphics Tab

Use the Graphics tab settings to define print quality.



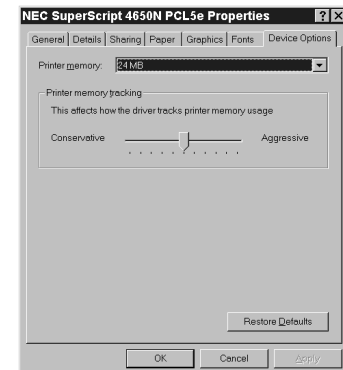
Fonts Tab

Use the Fonts tab to specify how TrueType fonts in your document will be processed by the printer.



Device Options Tab

Use settings on the Device Options to match the attached printer options and configuration so that the printer driver can generate optimized PostScript code.



Click the ? Help icon and click a setting on the driver to view more information about it.

Click any tab to view more printer settings.

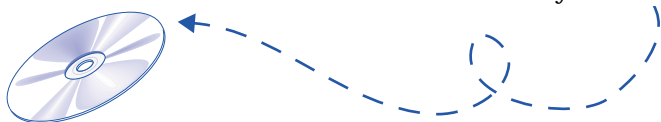
Click the **Restore Defaults** button to replace current settings on the tab with factory defaults.

WINDOWS 2000 DRIVER

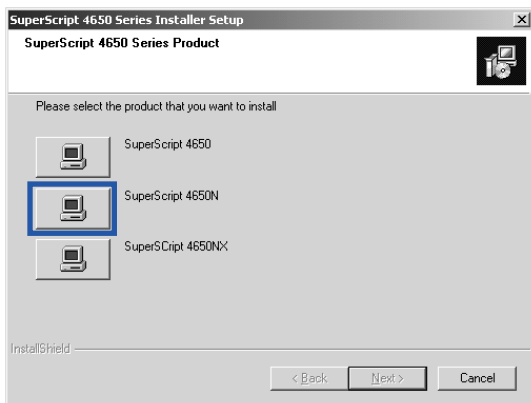
Installing the Driver Software

Follow these steps to use the SuperScript Installer in Windows 2000.

1. Insert the *SuperScript 4650 Series CD* into the CD-ROM drive. The Installer will launch automatically.

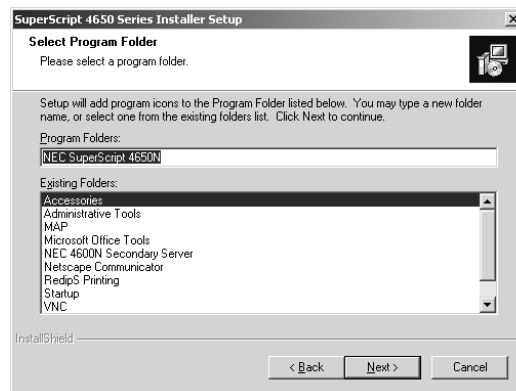


2. Click **Next** in the **Install** dialog box.
3. Select the printer model number, for example **SuperScript 4650N**.

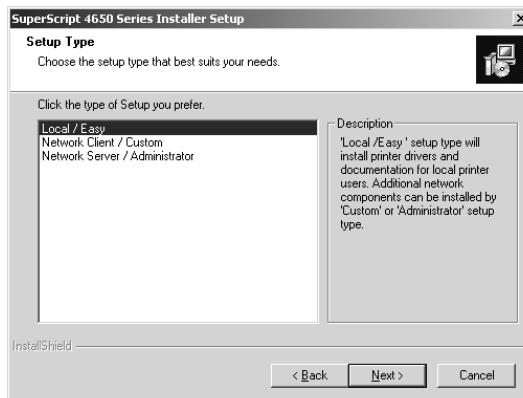


4. Read the information screen text to determine which installation option is best for you. Click **Next**.

5. In the dialog box that follows select a program folder. You will probably want to choose the default NEC SuperScript folder. Click **Next**.



6. Choose a destination location in the next dialog box and click **Next**.
7. When prompted, select an installation option, for example **Easy/Local**, and click **Next**.



8. Continue responding to the selections displayed in the installation dialog boxes.
9. When installation is complete Windows may prompt you to restart your computer.

Printing a Document

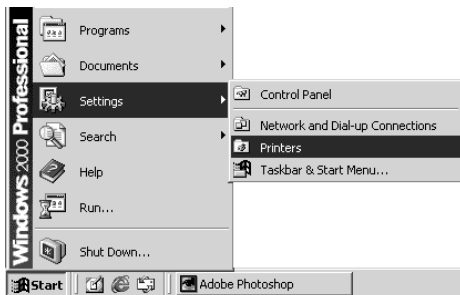
You can do this using the print command of the application used to create your document.

1. Open a document you wish to print.
2. Select **Print** from the File menu. The Print dialog box appears.
3. Select the options you want in the Print dialog box, including the number of copies and page range.
4. When the options are selected, click **Print** to print the document.

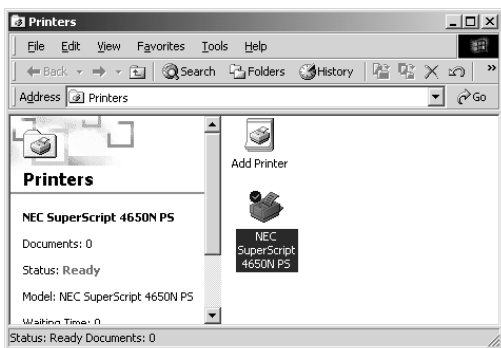
Accessing Printing Preferences

You can access the Printing Preferences page from the Windows Start menu.

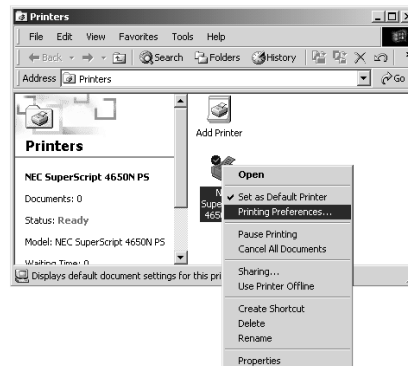
1. Press the **Start** button and select **Settings** then **Printers**.



2. In the Printers folder, select the printer driver you wish to view.



3. From the printer menu, select **Printing Preferences**. The Preferences tabs are described on page xx.



Accessing Printer Properties

You can access the Printer Properties page from the Windows Start menu.

1. Press the **Start** button and select **Settings** then **Printers**.
2. In the Printers folder, select the printer driver you wish to view.
3. From the Printer menu, select **Properties**.



note: More information about using Windows 2000 printer properties and preferences pages is provided later in this chapter.

Changing Settings in the Printer Driver

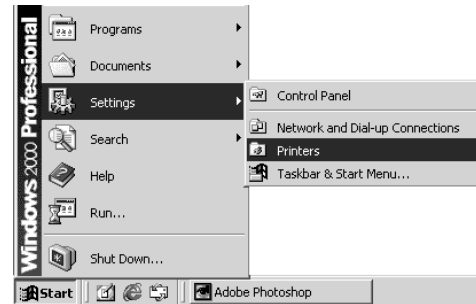
In the Document Properties pages, you simply point and click to change printer settings.

1. Select the **Page Setup** or **Advanced** tab to find the setting you want to change.
2. Click to select new settings. In the Advanced tab, when you click a setting in the scrolling menu, more specific options are shown in the lower portion of the window.
3. Click **OK** to save the changes you made in all property sheets and close the printer driver. Click **Cancel** to close the printer driver. Your changes will not be implemented.

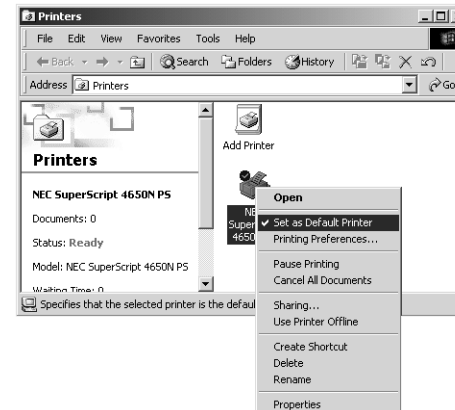
Setting Another Printer Driver as Default

You can change printer drivers using the Printers folder.

1. Press the **Start** button and select **Settings** then **Printers**.



2. In the Printers folder, select the printer and driver you wish to choose as a default.
3. From the Printers menu, select **Set as Default Printer**.



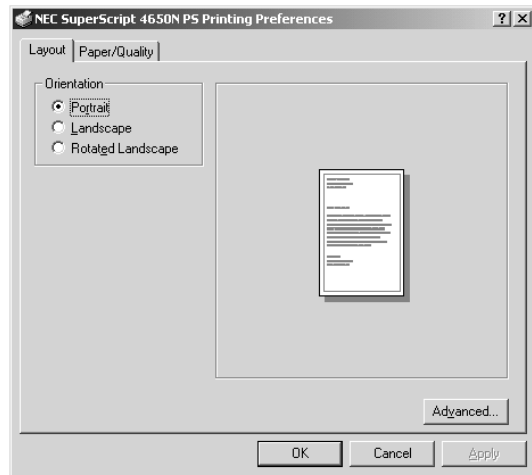
Using Windows 2000 PS Printer Driver

Windows 2000 Printer Preferences- PostScript 3

You can change advanced document settings by using the Document Preferences pages. To access these, select Print or Print Setup from your application's File menu or Printer Preferences from the Printers menu.

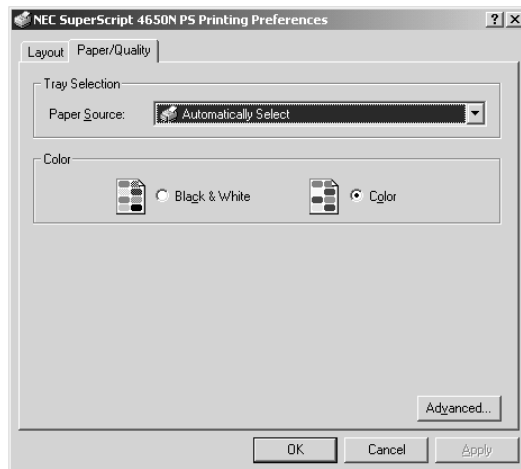
Layout Tab

Use this tab for general page setup options.



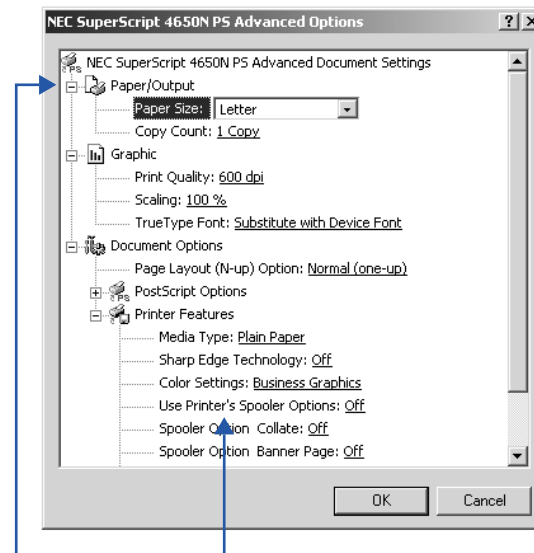
Paper/Quality Tab

Use this tab for tray selection and color options.



Advanced Button

Use this button to access all Windows 2000 printer driver settings and advanced options.



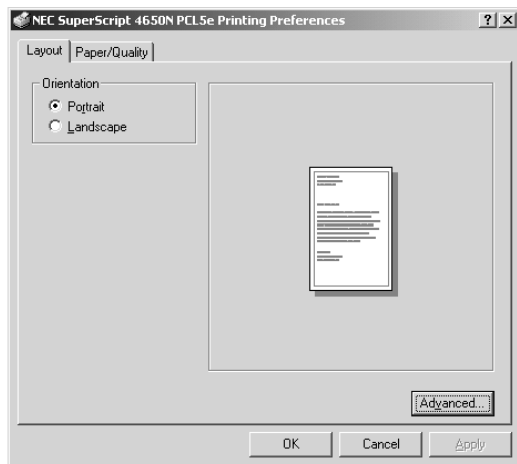
Click any setting in the scrolling menu and the lower portion of the tab displays more options for that setting.

Windows 2000 Printing Preferences- PCL5e

You can change advanced document settings by using the Printing Preferences pages. To access these, select Print or Print Setup from your application's File menu or Printing Preferences from the Printers menu.

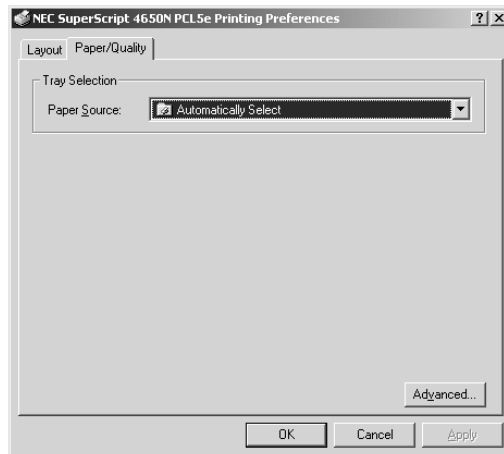
Layout Tab

Use this tab for general page layout options.



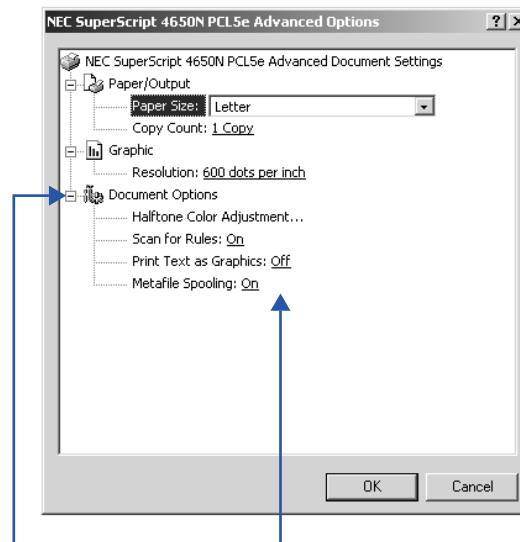
Paper/Quality Tab

Use this tab for tray selection.



Advanced Button

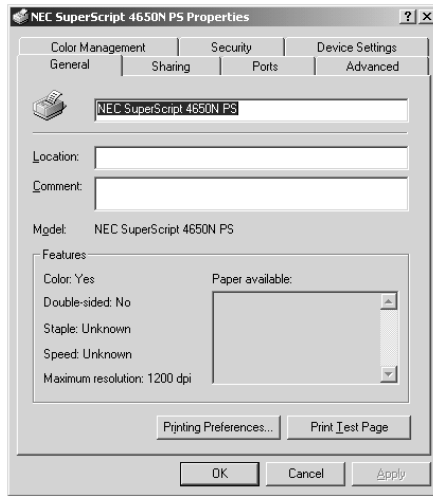
Use this button to access all Windows 2000 document settings.



Click any setting in the scrolling menu and the lower portion of the tab displays more options for that setting.

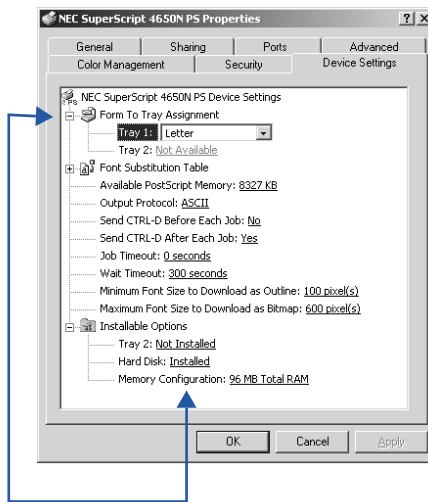
Windows 2000 Printer Properties

The **General**, **Sharing**, **Ports**, **Color Management**, and **Security** tabs provide access to Windows features for setting up your printer. For information about settings on these tabs, see your Windows 2000 manual.



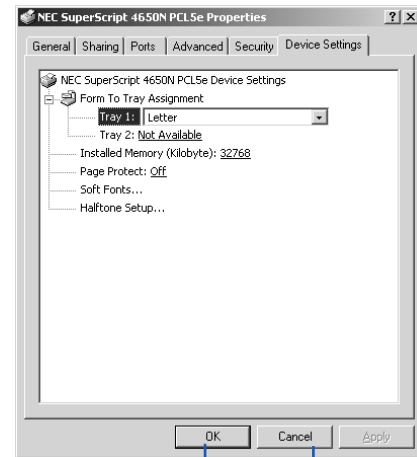
The **Device Settings** tab lets you change printer properties specific to the SuperScript 4650 Series printer. Notice that the Device Settings tabs are different for the PostScript 3 and PCL5e printer drivers. Each are shown below.

PostScript 3 Device Settings



Click any setting in the scrolling menu and the lower portion of the tab displays more options for that setting.

PCL5e Device Settings



Click **OK** to save changes and close the driver window.

Click **Cancel** to discard changes and close the driver window.

Installing Options

After you install an option such as Paper Tray 2, Go to the Device Settings tab. Open installable options and select **Installed** for Tray 2.

WINDOWS NT 4.0

Installing Printer Driver Software

Follow these steps to use the SuperScript Installer in Windows NT 4.0.

1. Insert the *SuperScript 4650 Series CD* into the CD-ROM drive.
2. The Installer will launch automatically.
3. Select the folder that represents your printer model number for example: **SuperScript 4650N**.
4. When prompted, select an installation option, for example **Easy/Local**, and click **Next**.
5. Continue responding to the selections displayed in the installation dialog boxes.
6. When installation is complete Windows will prompt you to restart.

Printing a Document

You can do this using the print command of the application used to create your document.

1. Open a document you wish to print.
2. Select **Print** from the File menu. The Print dialog box appears.
3. Select the options you want in the Print dialog box, including the number of copies and page range.
4. When the options are selected, click **Print** to print the document.

Accessing Printer Properties

You can access the Printer Properties page from the Windows Start menu.

1. Press the **Start** button and point to **Settings** in the Start pop-up menu. In the menu that appears, click **Printers**.
2. In the Printers folder, select the printer driver you wish to view.
3. From the File menu, select **Properties**.

Accessing Document Properties

You can access the Document Properties page from an application, such as Word or Excel.

1. Select **Print** or **Print Setup** from the File menu of your application.
2. In the Print dialog box that appears, click the **Name** pull-down menu and select a printer from the list.
3. Then click the **Properties** button in the Print dialog box to display the printer driver settings.

Changing Settings in the Printer Driver

In the Document Properties page, you simply point and click to change printer settings.

1. Select the **Page Setup** or **Advanced** tab to find the setting you want to change.
2. Click to select new settings. In the Advanced tab, when you click a setting in the scrolling menu, more specific options are shown in the lower portion of the window.
3. Click **OK** to save the changes you made in all property sheets and close the printer driver.
Click **Cancel** to close the printer driver. Your changes will not be implemented.

Setting Another Printer Driver as Default

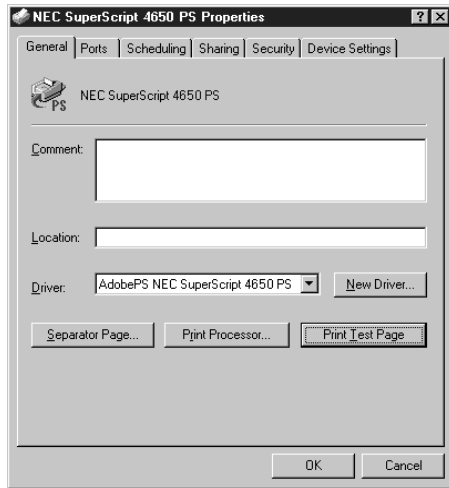
You can change printer drivers using the Printers folder.

1. Press the **Start** button and point to **Settings** in the Start pop-up menu. In the menu that appears, click **Printers**.
2. In the Printers folder, double-click a new printer driver.
3. In the folder that appears, select **Set As Default** from the Printer menu.

Using Windows NT 4.0 Printer Driver

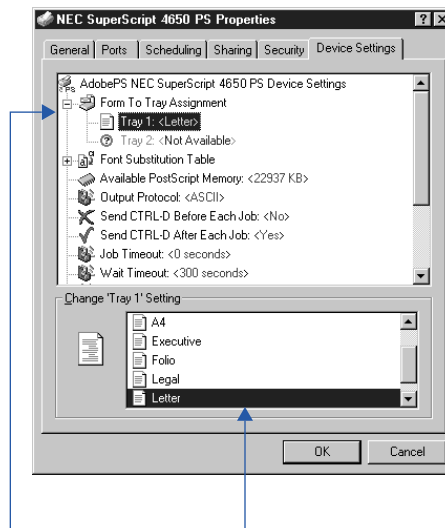
Windows NT 4.0 Printer Properties

The **General**, **Ports**, **Scheduling**, **Sharing**, and **Security** tabs provide access to Windows features for setting up your printer. For information about settings on these tabs, see the Windows manual.



The **Device Settings** tab lets you change printer properties specific to the SuperScript 4650 Series printer. (More settings are available when you select Print or Print Setup from your application's File menu or Document Default from Printer Properties menu.) The Device Settings tabs are different for the PostScript 3 and PCL5e printer drivers, and are shown below.

PostScript 3 Device Settings

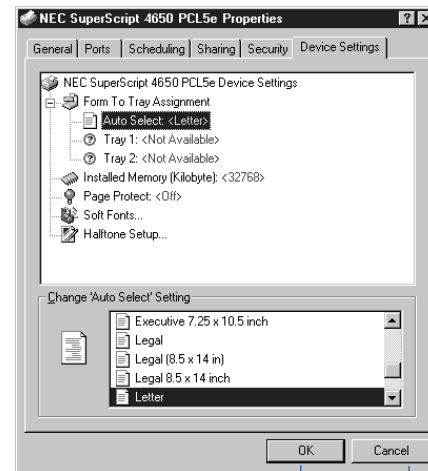


Click any setting in the scrolling menu and the lower portion of the tab displays more options for that setting.

Installing Options

After you install an option such as Paper Tray 2, Go to the Device Settings tab. Open installable options and select **Installed** for Tray 2.

PCL5e Device Settings



Click **OK** to save changes and close the driver window.

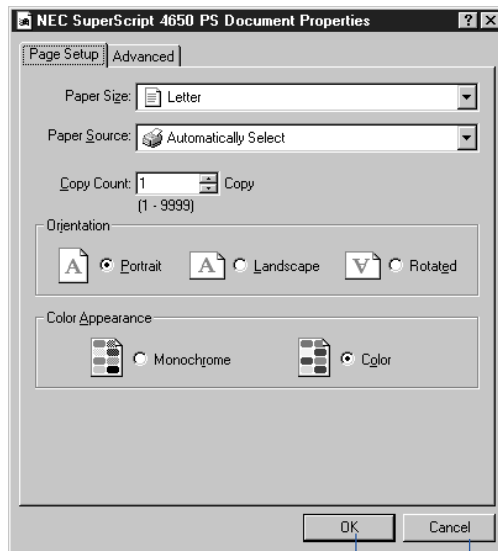
Click **Cancel** to discard changes and close the driver window.

Windows NT 4.0 Document Properties - PostScript 3

You can change document settings using the Document Properties pages. To access these, select Print or Print Setup from your application's File menu or Document Defaults from the Printer Properties menu.

Page Setup Tab

Use this tab for general page setup options.

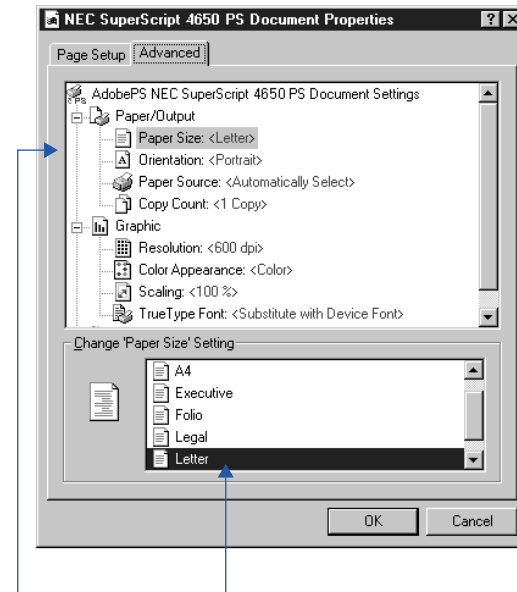


Click **OK** to save changes and close the driver window.

Click **Cancel** to discard changes and close the driver window.

Advanced Tab

Use this tab to access all Windows NT 4.0 printer driver settings. PostScript settings are described in Chapter 1.



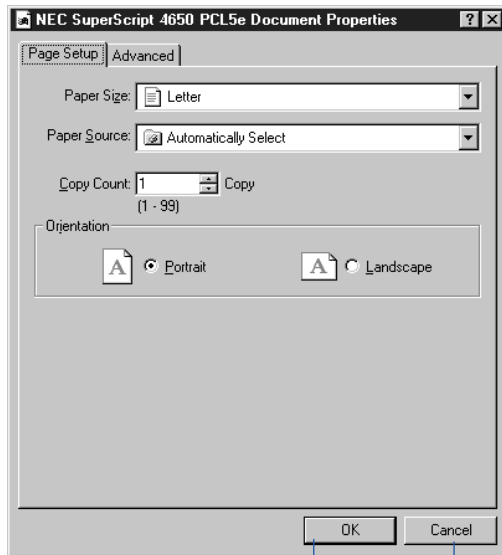
Click any setting in the scrolling menu and the lower portion of the tab displays more options for that setting.

Windows NT 4.0 Document Properties - PCL5e

You can change document settings using the Document Properties pages. To access these, select Print or Print Setup from your application's File menu or Document Defaults from Printer Properties menu.

Page Setup Tab

Use this tab for general page setup options.

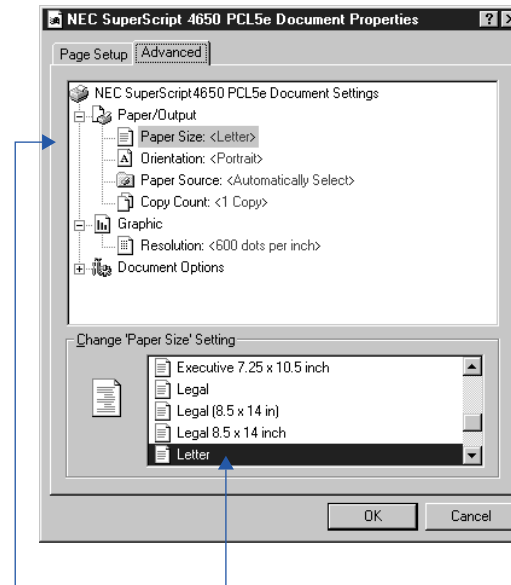


Click **OK** to save changes and close the driver.

Click **Cancel** to discard changes and close the driver.

Advanced Tab

Use this tab to access all Windows NT 4.0 printer driver settings. PCL5e settings are described in Chapter 1.



Click any setting in the scrolling menu and the lower portion of the tab displays more options for that setting.

WINDOWS 3.1X

Installing the Printer Driver Software

Installation for Windows 3.1x (PostScript)

1. Boot your system and start Windows.
2. Insert the *SuperScript 4650 Series CD* into the appropriate drive (in this example we use drive E:).
3. In the Windows Program Manager, select **Run** from the File menu. Windows displays the Run dialog box.
4. In the Run dialog box, click on the Browse button and navigate to E:\WIN31\SS4650(NX)\PS\SETUP.EXE
5. Click the **OK** button. This launches the Installer.
6. Respond to the selections displayed in the installation dialog boxes.
7. When installation is complete the installer will prompt you to restart Windows.
8. After Windows restarts, the Install PostScript Driver From PPD dialog box appears.
9. Select **NEC SuperScript 4650 PS**. Click on **Install**.
10. When installation is complete, click on **Close**.
11. See "Setting Another Printer as Default" below and follow the instructions.

Installation for Windows 3.1x (PCL Driver)

1. For models 4650N(X) only. Boot your system and start Windows.
2. Insert the *SuperScript 4650 Series CD* into the appropriate drive (in this example we use drive D:).
3. In the Main group, double-click on the Print Manager icon. Click Options then Printer Setup.
4. Click on the Browse button and navigate to D:\WIN31\SS4650N(X)\PCL\

Printing a Document

You can do this using the print command of the Windows application used to create your document.

1. Open a document you wish to print.
2. Select **Print** from the File menu. The Print dialog box appears.

3. Select the options you want in the Print dialog box, including the number of copies and page range.
4. When the options are selected, click **OK** to print the document.

Accessing the Printer Driver

You can access the printer driver from your application and the Windows Control Panel.

From Your Application

Different applications have different methods for accessing a printer driver. Below is one common example. If it does not work with your application, consult your software manual.

1. Select **Print** from the File menu of your application.
2. In the Print dialog box that appears, click the **Setup** button.
3. In the Print Setup dialog box that appears, select the appropriate SuperScript printer driver in the Printers list and then click the **Setup** button.

From the Windows Control Panel

1. In the Windows Control Panel double-click the **Printers** icon.
2. In the Printers dialog box that appears, select the driver you wish to view from the Installed Printers list. Then click the **Setup** button.

Changing Settings in the Printer Driver

In the printer driver, you simply point and click to change printer settings.

1. In the **PostScript 3** driver, select a category of settings that you want to change by clicking its name tab. In the **PCL5e** driver, press the **Options** button to display more settings.
2. Click on any setting to select it.
3. Click **OK** to save the changes you made in all property sheets and close the printer driver.

Click **Apply** (PostScript driver only) to save the changes you made in a property sheet. The printer driver remains open.

Click **Cancel** to close the printer driver without changes.

Setting Another Printer Driver as Default

You can change printer drivers using the Windows Control Panel.

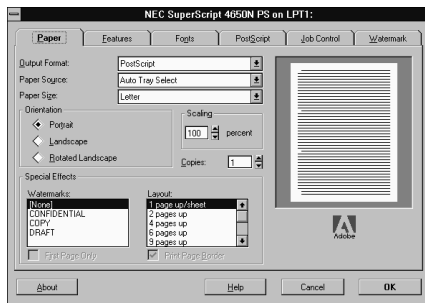
1. In the Windows Control Panel double-click the **Printers** icon.

2. In the Printers dialog box that appears, select the driver you wish to use in the Installed Printers list.
3. Click the **Set As Default Printer** button.
4. Click on the **Close** button to close the Printers dialog box.

The Windows 3.1x PostScript 3 Printer Driver Properties

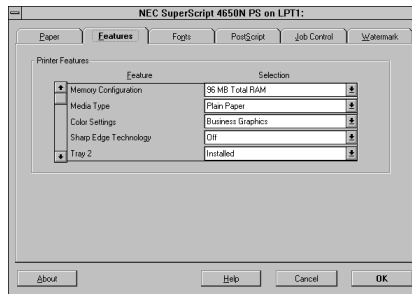
Paper Tab

Use the Paper tab to customize paper handling for the print job.



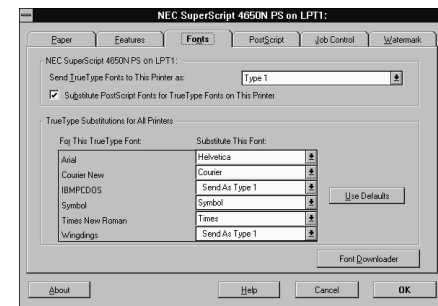
Features Tab

This tab allows you to control the special printer features.



Fonts Tab

You can use the Fonts tab to specify how TrueType fonts in your document will be processed by the printer.

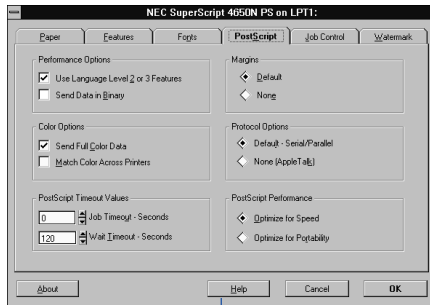


Using Windows 3.1x Printer Driver

The Windows 3.1x PostScript 3 Printer Driver Properties

PostScript Tab

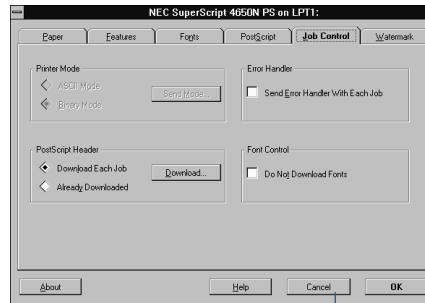
Use these settings to configure options for the PostScript printing language.



Click the **Help** button to view the complete Help file.

Job Control

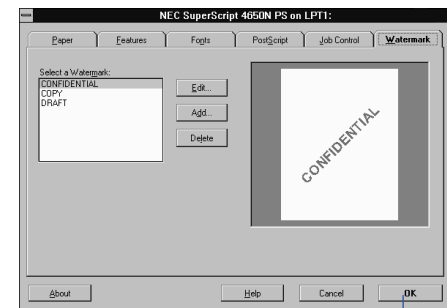
Use these settings to configure more options for PostScript printing.



Click **Cancel** to discard changes and close the driver.

Watermarks Tab

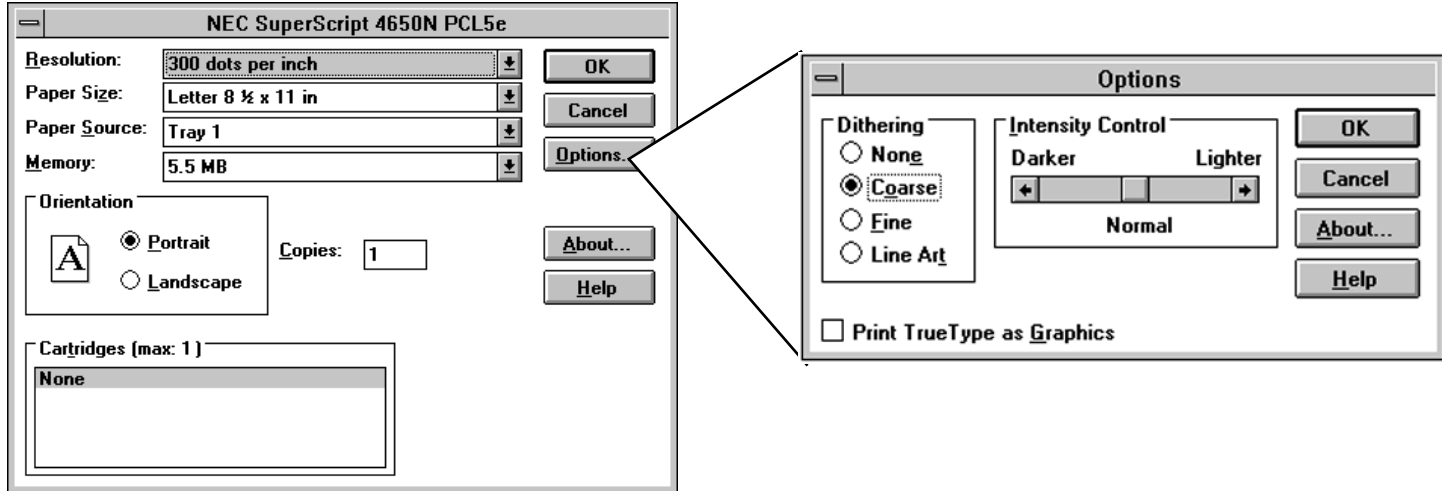
A watermark is text that appears on pages in your print job, such as DRAFT or CONFIDENTIAL. Use these settings to customize watermarks for your print job.



Click **OK** to save changes and close the driver.

Windows 3.1x - PCL5e Printer Driver Properties

The PCL5e printer driver window has general document settings. Press the Options button to display more settings for adjusting graphic output. The PCL5e driver is available for models 4650N and 4650NX.



Click the **Help** button to view the complete Help file.
 Click **Cancel** to discard changes and close the driver.
 Click **OK** to save changes and close the driver.
 Click **About** to view version and copyright information.

MACINTOSH REQUIREMENTS

This section describes the hardware and software requirements for Macintosh computers to connect with SuperScript color laser printers.

Software Requirements

For Macintosh computers to connect to the printer, they must meet the following requirements.

- EtherTalk software must be installed in your computer and active.
- The operating system must be Mac OS 7.1 or higher.
- The standard LaserWriter 8 printer driver must be installed. Check the Chooser in the Apple menu to assure that it is installed. If it isn't, use the Mac OS help system for information about installing it.
- The standard Apple Script program must be installed and active before configuring your network configuration.
- The NEC SuperScript PPD must be installed.

Hardware Requirements

Hardware requirements are categorized into requirements for the Macintosh and requirements for the printer.

Macintosh Hardware Requirements

- The computer must already be connected to the network and able to communicate with the network via Ethernet.
note: PowerMacs have built-in Ethernet capabilities. Older Macs need to have an Ethernet expansion card installed.
- An appropriate 10/100Base-TX cable must be connected to the Ethernet port.

Printer Hardware Requirements

- To receive print jobs from a Macintosh computer, the printer must be an "N" model or have a SuperScript NIC installed.
- The printer must already be connected to an Ethernet network.

SETTING UP THE PRINTER

Installing the PPD

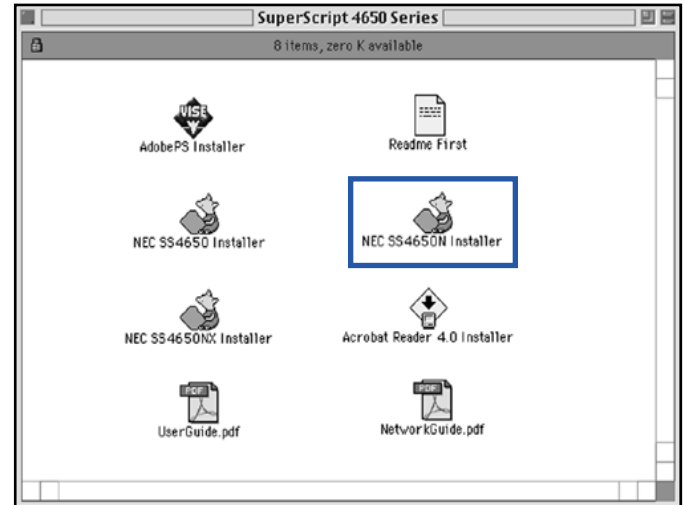
Follow these steps for installing the SuperScript C4650 Series printer driver extension and PPD file:

1. Close all open applications.
2. Make sure the **Adobe PS** icon shows up in the Chooser. If not you can install it from the CD.

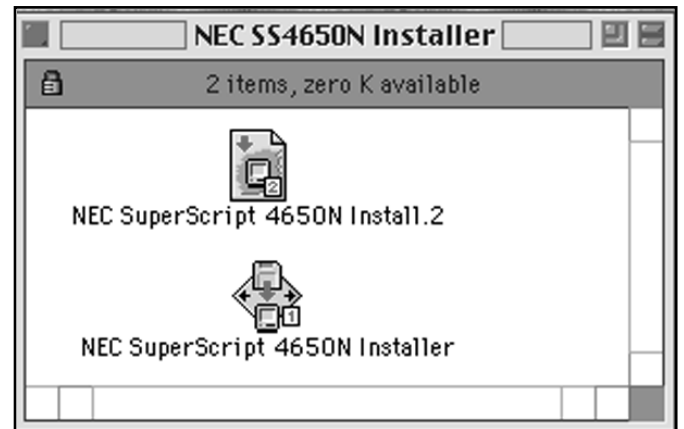


3. Insert the SuperScript 4650 Series CD into your Macintosh.
4. Double-click on the *SuperScript 4650 Series* CD desktop icon.
5. The **SuperScript 4650** window appears. If you need to install the AdobePS driver, double-click on the AdobePS Installer icon and follow the directions on the screen.

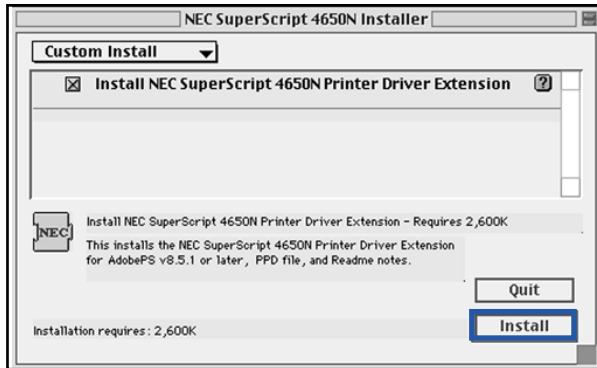
6. To install the driver (PPD) double-click on the folder with the model name of your printer on it. For example, **SuperScript 4650N Installer**.



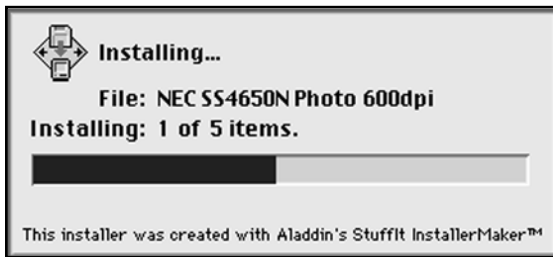
7. From the installer window, double-click the **Installer** icon to begin installing the PPD. If there is an installer 2 it will automatically launch with the first installer.



- From the next installer window select **Install NEC SuperScript...**It makes no difference if you choose Custom Install or Easy Install.



- Click the **Install** button.
- The SuperScript printer driver will load.

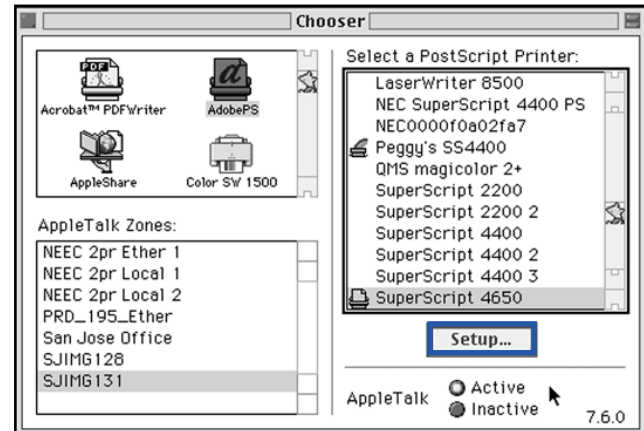


- The installer will let you know when installation is complete. To install other programs, such as Adobe Acrobat 4.0, you must go back to the first window.

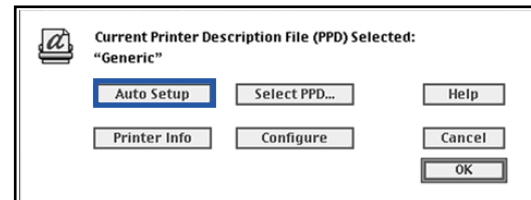
Configuring the Printer

- Select **Chooser** from the Apple menu and make sure the AppleTalk **Active** button is selected.
- In the Chooser, select the **AdobePS** printer icon.
- Select the AppleTalk zone your printer is on.

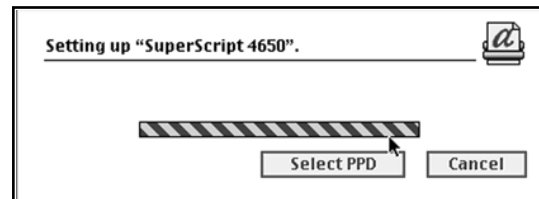
- Select the printer's name, for example **SuperScript 4650**, in the printer list.



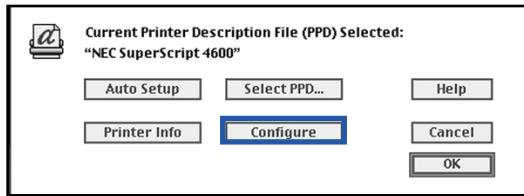
- Click the **Setup** button in the Chooser.
- In the Setup dialog box, click **Auto Setup**. The driver will attempt to determine the correct PPD (PostScript Printer Description) file to associate with the printer.



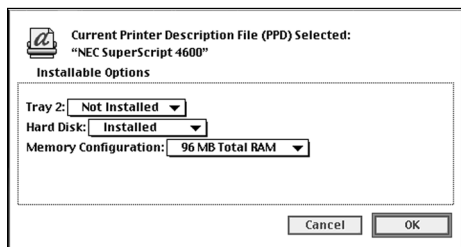
- In the Printer Descriptions dialog box, select **SuperScript 4650** (or what ever model printer you are configuring) and click **Select**. The following status box appears:



- When the Setup dialog box reappears, click the **Configure** button.



- In the Configure dialog box, use the pull-down menus to specify options currently installed in your printer.



Renaming Your Printer

Rename your printer if you have more than one SuperScript color laser printer on your network. To do this you need a copy of Apple Printer Utility. Obtain this online from Apple Computer at this URL:

<http://asu.info.apple.com>

Search for "Apple Printer Utility," or you can request the Apple LaserWriter 8.5.1 driver installer disk set from Apple by calling 800-SOS-APPL.

Then perform a custom install of the Apple Printer Utility:

- Launch the Apple Printer Utility.
- Select the zone in which your SuperScript printer resides.
- Select the printer you wish to rename and click **Open Printer**.
- Select the **Name** section of the window by clicking the arrow.
- Type your desired name into the field labeled **AppleTalk Name**.
- Click the **Send** button.

Page Setup

To view and change Page Setup settings

- Select **Page Setup** from the File menu.
- A dialog box appears that allows you to select the settings you want. Change the center "Panel" of settings by selecting **Page Attributes** or **PostScript Options** from the set-down menu.
- Select options and click **OK** to return to the document.

Printing

To print a document from your Macintosh computer:

- Select **Print** from the File menu.
- A Print dialog box appears that allows you to select the settings you want. Change the center "Panel" of settings by selecting categories from the **Settings** pull-down menu.
- Select one of the following options from the **Destination** pull-down menu.

Printer: Your document is printed out on your printer (the default).

File: The document can be saved as a PostScript Job.

- When all settings are specified, click the **Print** button to print the document.

Mac OS -Print Dialog Box

8.5.1

Printer: SuperScript 4650N 2 @ San... Destination: Printer

General

Copies: 1

Pages: All
 From: To:

Paper Source: All pages from: Auto Select
 First page from: Tray 1
 Remaining from: Tray 1

Adobe

Save Settings Cancel Print

Click where it says General to view the categories in the Settings menu

Background Printing

Print in: Foreground (no spool file)
 Background

Print Time: Urgent
 Normal
 Print at: 3:07 PM 9/10/98
 Put Document on Hold

Cover Page

Print Cover Page: None
 Before Document
 After Document

Cover Page Paper Source: Same as document

Color Matching

Print Color: Color/Grayscale

Printer Profile: Printer's Default

Layout

Pages per sheet: 1

Layout Direction: 1 2 2 1

Border: none

Error Handling

If there is a PostScript™ error:

- No special reporting
- Summarize on screen
- Print detailed report

Save as File

Format: PostScript Job

PostScript Level: Level 1, 2 and 3 Compatible
 Level 2 Only
 Level 3 Only

Data Format: ASCII
 Binary

Font inclusion: None

8.5.1

Printer: SuperScript 4650N 2 Destination: Printer

NEC Features

Media Type: Plain Paper
 NEC Premium 24lb Bond
 NEC Premium 60lb Cover
 NEC Ultra Glossy Paper
 NEC Premium OHT
 Envelope/Label/Stock

Printer's Spooler: On
 Off

Copies: 1

Priority: 5

Resolution: 600 dpi
 1200 dpi

Sharp Edge Technology: On
 Off

Collate
 Banner Page
 Job Preview
 Job Hold

Restore Defaults

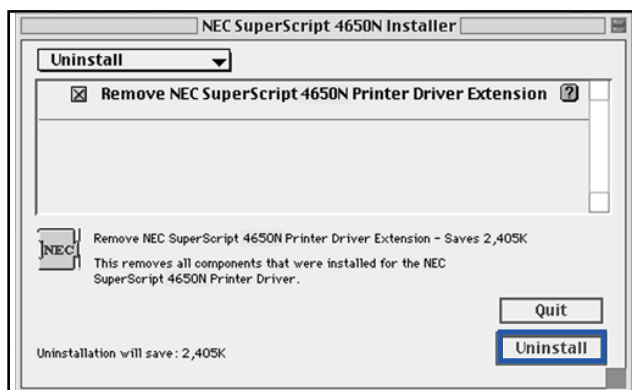
Save Settings Cancel Print

For more details about the spooler features see Ch. 6

UNINSTALLING THE DRIVER

To uninstall the SuperScript Color Laser printer driver follow these steps:

1. Insert the CD that came with your printer and double-click on its icon.
2. In the **SuperScript Color Laser Mac** window, double-click on the **AdobePS Installer** icon.
3. Double-click on the **Uninstall** icon.
4. Choose **Uninstall** from the drop-down menu.
5. Select the **Remove NEC SuperScript...box**.
6. Click on the Uninstall button.



7. Removal progress will be shown on your screen and a dialog box will appear letting you know that the printer driver has been removed from your system.

CHAPTER 5

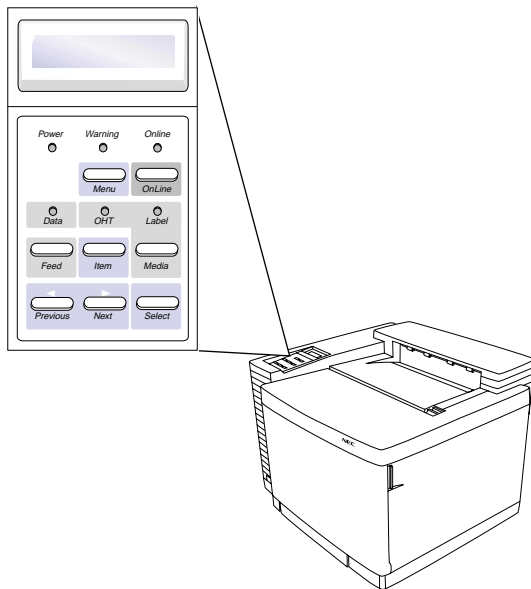
OPERATOR PANEL

OVERVIEW

The printer's Operator Panel allows you to read printer messages and change printer settings directly at the printer. The Operator Panel on the SuperScript 4650 Series printer consists of eight buttons and six indicator lights.

This chapter describes

- Operator Panel features, including indicator lights, the message display, and buttons
- Using the Operator Panel menu tree
- Important tasks you can perform using the Operator Panel and menu tree settings.



OPERATOR PANEL FEATURES

Indicator Lights

The indicator lights on the Operator Panel help communicate the status of the printer.

Light	Mode	Status
Power (Green)	On	Printer power is on or in POWER SAVE mode.
	Off	Printer power is off.
Warning (Red)	On	Call for service (see page xx).
	Off	Normal state, no action is required.
	Blinking	The printer has a problem. See the message display. If there is no message, call for service (see page xx).
Online (Green)	On	Printer is online and ready to print.
	Off	Printer is offline or in menu mode.
	Blinking	Printer is warming up.
Data (Orange)	On	Print buffer contains data.
	Off	Print job has ended or print buffer has been cleared by pressing the Feed button.
	Blinking	Data is being sent to the printer.
OHT (Green)	On	Media type is set to Over Head Transparency (OHT).
	Off	Media type is not set to OHT.
Label (Green)	On	Media type is set to Thick.
	Off	Media type is not set to Thick.

The Message Display

The Operator Panel status display is an LCD panel that shows status messages, alert messages, media types, and menu selections. When the printer is performing a job, the display indicates a printer status message, such as **PROCESSING**, **PRINTING**, etc. The standard display is **READY**, meaning the printer is ready for use. The table below lists

Status messages with their explanation. **Alert** messages are explained on page 98. **Service** messages require that you call an authorized service representative. See page 109 for information about service and technical support.

Status Message	Explanation
INITIALIZING	Indicates that the printer is performing startup tests.
RESETTING	Indicates that the printer settings are being restored to their factory defaults.
WARMING UP	Printer is not yet ready to operate. It is performing an initial power up check or the fuser unit is warming up to operating temperature.
READY	Printer is online and ready to print under Auto Emulation Switching mode.
PRINTING	Printer is printing a page.
PROCESSING	Printer is processing a job.
WAITING	Printer is waiting for additional input to complete the print job.
POWER SAVE MODE	Printer is in Power Saving mode. When the printer receives data or you press any button, the display restores ordinary printer messages.
MEDIATYPE <type>	Shows the current paper type <PAPER ORTHICK STOCK> when user presses Media button.
SELECTED	Appears when a setting is selected.
TEST PRINT	Printer is printing a test page.
FIRST JOB	Startup page is printing (if enabled).
RESETTING JOB	Printer is resetting a job.
OFFLINE	Printer is offline.
PRESS SELECT TO CANCEL JOB	This appears if you press the Online button while the printer is processing a job or waiting for additional input to complete the print job. Then press the Select button to cancel the job or press the Online button again to continue.

Operator Panel menu tree and procedures for changing printer settings are discussed beginning on page 68.

Operator Panel Buttons

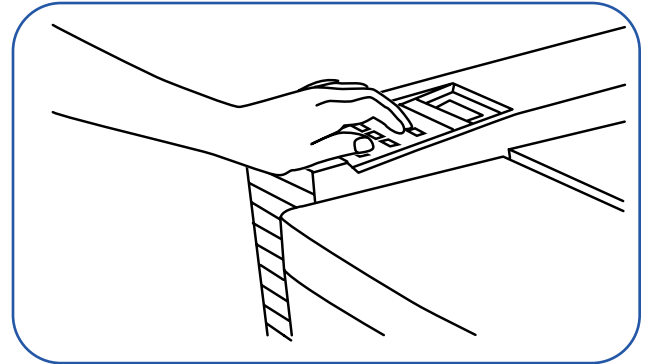
Operator Panel buttons have different functions depending on whether the printer is online, offline, or in menu mode. The table below summarizes Operator Panel buttons. The

Button	Mode	Function
Online	Offline	Press to bring printer online.
	Online	Press to take printer offline.
	Menu	Button is not active.
Feed	Offline	In PCL emulation or Automatic Emulation Switching (AES) mode, pressing this button with the DATA indicator light on allows data stored in the print buffer to be printed out. This button is not active in PostScript emulation mode.
	Online	Button is not active.
	Menu	Button is not active.
Menu	Offline	Press to enter the menu mode. The menu category, CONTROL appears on the status display.
	Online	Button is not active.
	Menu	Press to exit menu mode.
Media	Offline	Press once to change media to Thick stock (use for envelopes and labels too) Green LED light turns on. Press again to return to plain paper. When the printer detects overhead transparencies in the paper tray, the button is not active, and the green OHT indicator light goes on. When the transparencies are removed from the paper tray, the setting returns to the previous value.
	Online	Same as offline.
	Menu	Button is not active.
Item	Offline	Button is not active.
	Online	Button is not active.
	Menu	Press to go up one menu level.
Previous	Offline	Button is not active.
	Online	Scanner's copy feature is activated (see Chapter 6, "Advanced Features.")
	Menu	Press to display previous item in a menu.
Next	Offline	Button is not active.
	Online	Scanner's scan to JPG feature is activated (see Chapter 6, "Advanced Features.")
	Menu	Press to display next item in a menu.
Select	Offline	Button is not active.
	Online	Press to print a demo page.
	Menu	Enables changes made to settings in the menu tree.

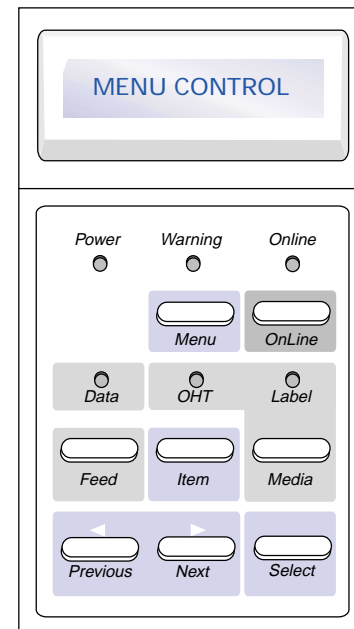
USING THE MENU TREE

You can use the Operator Panel to set communications channels, print forms or pages, view usage reports, use advanced features, or change printer settings. (However, in most cases, you will use your printer drivers to change printer settings.) Follow these three basic steps to enter menu mode and navigate through the menu tree

1. Turn on the printer, if necessary.
2. Press **Online** to take the printer offline. The display changes from **READY** to **OFFLINE**.
3. Press **Menu**. The display changes to **MENU-PRINT FORM**.
4. You navigate through the menu tree by pressing the menu selection buttons on the Operator Panel.
 - Press **Next** to go to the next item in a menu.
 - Press **Previous** to go to the previous item in a menu.
 - Press **Select** to go to the next menu level or to choose the displayed setting if you are at the lowest menu level.
 - Press **Item** to move back to the previous menu level.
 - Press **Menu** to exit menu mode. If you changed any network settings, you must restart the printer to validate the new settings.



For an example of how to use the menu tree, see the next page.



An Example of Using the Menu Tree

The Operator Panel menu for the 4650N and 4650NX tree has eight top-level menu categories. Each category contains items you can select, and some of these items contain even more options. These form a menu tree, but as you navigate through the menu tree, only the currently selected item is shown on the status display. **The 4650 model does not have a menu category for Advanced Features or PCL.**

Checking Total Page Count

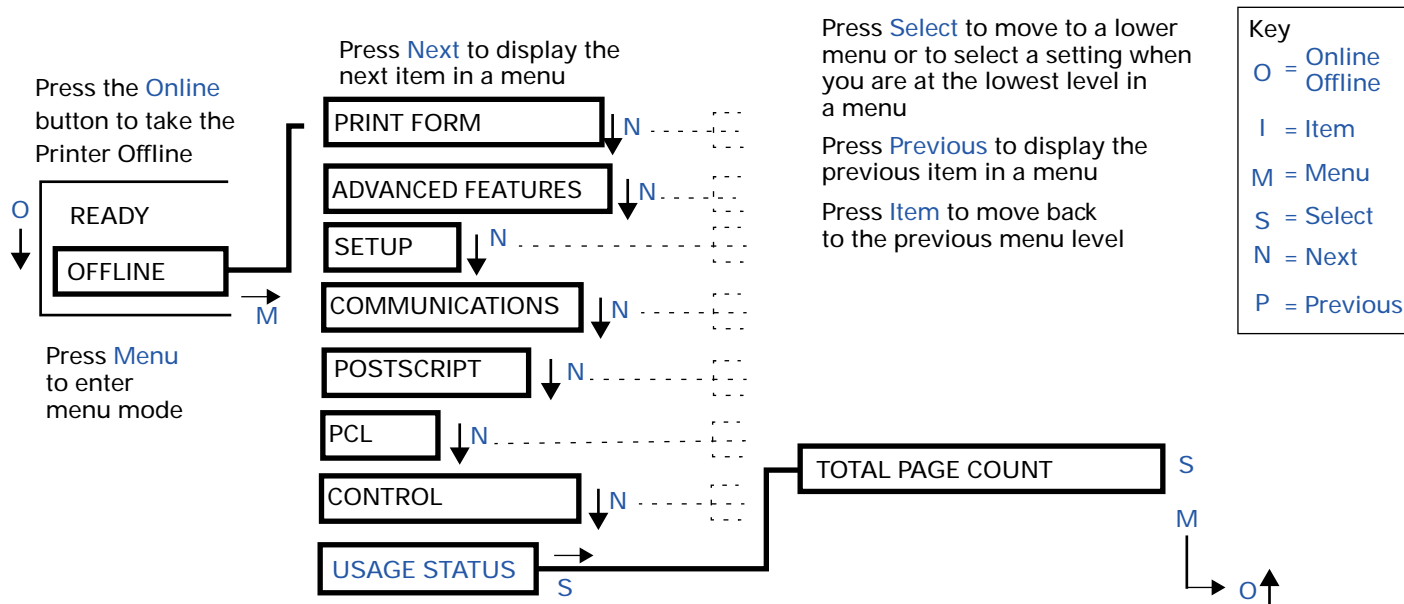
The example illustrated below shows the steps you take to view the total page count. Follow these steps:

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu**. **MENU - PRINT FORM** appears on the display.
3. Press **Next**. **MENU - ADVANCED FEATURES** appears on the display.

display.

4. Press **Next**. **MENU - SETUP** appears on the display.
5. Press **Next**. **MENU - COMMUNICATIONS** appears on the display.
6. Press **Next**. **MENU - POSTSCRIPT** appears on the display.
7. Press **Next**. **MENU - PCL** appears on the display.
8. Press **Next**. **MENU - CONTROL** appears on the display.
9. Press **Next**. **MENU - USAGE STATUS** appears.
10. Press **Select**. Press **Next** until **TOTAL PAGE COUNT** appears on the display.
11. Press **Select** and the number of pages printed appears on the display
12. Press **Menu** and **Online**. **READY** appears on the display.

Using the Operator Panel Menu Tree



Operator Panel Menus

The Operator Panel for the 4650N(X) model printers has eight main menus, described below. The 4650 model printer does not include the PCL or the Advanced Features menu. Default selections for each setting are marked with an asterisk (*).

Control Menu

Use this menu to cancel the current print job or reset the printer when the printer is in an error state. Selecting **RESET PRINTER** restarts the printer and causes it to reinitialize and perform a self-test. **RESET NIC** allows you to reset the network interface parameters without rebooting.

CONTROL

JOB HOLD PRINT*
RESET PRINTER — CONFIRM
RESET NIC — PARAMETERS

Setup Menu

Use this menu to configure the default settings for jobs that are not sent using printer driver software, or restore the factory default settings. The **JOB DEFAULTS** submenu allows you to set the appearance of print jobs. The **MISCELLANEOUS** menu allows you to set printer operation settings. Select **RESTORE DEFAULTS** to return printer settings to their factory defaults (except communications parameters).

SETUP

JOB DEFAULTS

RESOLUTION** — 600 x 600* / 1200 x 1200
EDGE SMOOTHING — ENABLE / DISABLE*
COPIES — 1* to 999

MISCELLANEOUS

POWER SAVE — NEVER, 30 MIN., 1 HOUR*,
1.5 HOURS, 2 HOURS, 3 HOURS
JAM RECOVERY — NO / YES*
MEMORY — 32MB, 64MB,
96MB, 128MB,
160MB, 192MB, 256MB

RESTORE DEFAULTS

*Default selection for the setting.

PostScript Menu

Use this menu to configure the printer's settings for the PostScript interpreter.

POSTSCRIPT

STARTUP PAGE — YES* / NO
 PRINT PS ERRORS — YES* / NO
 WAITTIMEOUT — NEVER, 20, 40, 60, 80, ... 240*, ... 300
 JOBTIMEOUT — NEVER*, 20, 40, 60, 80, ... 280, 300

PCL Menu

Use this menu to configure the 4650N or 4650NX printer's settings for the PostScript interpreter.

PCL

TIMEOUT — 0, 5, 6, 7, ..., 60*... 300
 SET FONT
 SOURCE — INTERNAL / DOWNLOAD
 NUMBER — 0*, 1, 2, 3, ... 50
 PITCH † — 0, 0.44, 10*, ... 999.99
 HEIGHT † — 2.00, 4.25, ... 12.00*, ... 999.75
 SYMBOL SET — Roman-8*, etc.

*Default selection for the setting.

** 1200 x 1200 resolution will be available when 96MB or more memory is installed.

† Either PITCH or HEIGHT will be displayed depending on the default font selected by the ID number.

Communications Menu

This menu has settings that enable the printer to receive print jobs from the Parallel port or NIC, and to configure emulations and networking protocols. See page 74 for instructions on configuring TCP/IP parameters such as the network IP address. For more network information see the *SuperScript Color Laser Network Guide*.

COMMUNICATIONS

PARALLEL PORT

ENABLE — YES* / NO
 BIDI — ON* / OFF

PERSONALITY

PS STANDARD
 PS BINARY
 PSTBCP
 PCL (if available)
 AIS RAW*
 AIS BINARY
 AISTBCP

NETWORK

ETHERTALK — ENABLE* / DISABLE
 NOVELL IPX — ENABLE* / DISABLE
 TCP/IP
 : ENABLE* / DISABLE
 : NET ADDRESS
 : SUBNET MASK
 : GATEWAY

PERSONALITY — AIS* / POSTSCRIPT / PCL

Usage Status Menu

Use the Usage Status menu to view the total number of pages printed. Whenever a Fuser Unit, or Belt Module is installed you must reset its status on the Operator Panel.

USAGE STATUS

TOTAL PAGE COUNT
ROLLER REPLACE?
BELT REPLACE?
FUSER REPLACE?

Print Form Menu

Use the Print Form menu to select and print documents stored in the printer.

PRINT FORM

DEMO PAGE or DEMO PAGE 1, 2
PS START PAGE
MENU TREE PAGE
PS FONT PAGE
SUPPLY ORDER

Advanced Features Menu

If you have the 4650N or 4650NX model you can use the Advanced Features menu to access advanced features that include scanner, Zip disk, and spooler functions. For a description of these, see Chapter 6 of this user's guide.

ADVANCED FEATURES

ZIP DISK MENU

SELECT FILE

COPIES

1*—999

EJECT DISK

SCANNER/COPY

START COPY

COPIES

1*—999

SCAN TO JPG

LIGHT/DARK ADJUST

RESOLUTION—75 DPI, 150 DPI*, 300 DPI

COLOR MODE

COLOR*

BLACK & WHITE

GRAYSCALE

SCALE—20–400%, 100%*

SPOOLER

RESTORE Q @ BOOT — ENABLE* / DISABLE

note: When the “Restore Q @ Boot” feature is enabled, print jobs left in the print buffer at shut down will automatically start printing when the printer is turned back on.

*Default selection for the setting.

OPERATOR PANEL TASKS

This section describes important tasks you perform using the Operator Panel buttons and menu selections.

Taking the Printer Offline and Online

Press the **Online** button to switch between the online and offline states.

note: The printer must be offline before you can change any printer settings. It must be online (indicator light on) to print.

While the printer is offline, it continues to receive data until its input buffer is full. If you press the **Online** button while the printer is printing, it finishes the current page, and then waits for you to bring it online again.

Setting Media Type

When you load a new paper type into the tray, you should set the Media type. If you do not specify the correct media type, print quality may be poor, because the printer will move the paper at the wrong speed. To change the Media type, on the Operator Panel press the **Media** button to display **PAPER** or **THICK STOCK**. When the correct type is displayed, the LCD message will display **READY**.

Stopping a Job

If you wish to stop a print job before it is complete

1. Press the **Online** button to take the printer offline.
2. **PRESS SELECT TO CANCEL JOB** appears on the message display.
3. Press the **Select** button to cancel the job.
4. Press **Online**. **READY** appears on the display.

Clearing the Print Buffer

The print buffer is an electronic memory in the printer where data is kept before processing. When the Data light is blinking, this indicates there is still data in the printer buffer. To print out any data that is in the print buffer, press the **Online** button to take the printer offline; then press the **Feed** button to eject the page. (Not available in PostScript emulation.)

Resetting the Printer

You can reset the printer to its previous settings. Follow these steps.

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu** until **MENU - CONTROL** appears on the display. Press **Select**.
3. Press **Next** until **RESET PRINTER** appears on the display.
4. Press **Select**, and when the panel displays **CONFIRM**, press **Select** again.
5. Press **Online**. The printer performs a self test and initialization occurs. A Startup page will print.

Resetting the NIC

You can reset the NIC to its factory default settings. Follow these steps.

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu** until **MENU - CONTROL** appears on the display. Press **Select**.
3. Press **Next** until **RESET NIC** appears on the display.
4. Press **Select**, and when the panel displays **PARAMETERS**, press **Select** again.
5. Press **Menu**, then **Online**.

Restoring Factory Defaults

To restore factory default settings to the printer

1. Turn off the printer.
2. While pressing the **Online** and **Media** buttons, turn on the printer. When the display changes to **INITIALIZE NVRAM**, release the button. Or follow these steps.
 1. Press **Online**. **OFFLINE** appears on the display.
 2. Press **Menu** until **MENU - CONTROL** appears on the display.
 3. Press **Next** until **SETUP** appears on the display, and press the **Select** button.
 4. Press **Next** until **RESTORE DEFAULTS** appears on the display, and press the **Select** button.
 5. When the panel displays **CONFIRM**, press **Select** again. All settings except those under the Communications Menu will be restored to their default.

6. Press **Menu**, then **Online**.

Printing Information Pages

You can print a number of different pages preformatted with useful information about your printer. Follow these steps.

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu**. **MENU - PRINT FORM** appears on the display.
3. Press **Select**.
4. Press **Next** until you see the page you want to print. Your choices are, **DEMO PAGE 1**, **DEMO PAGE 2**, **PS START PAGE**, **PS FONT PAGE**, **MENUTREE PAGE**, and **SUPPLY ORDER**.
5. Press **Select**. The chosen page will print.
6. Press **Menu**, then **Online**.

Resetting Usage Reports

You should reset the Usage Status any time you replace the Belt Cartridge, Fuser Cleaning Roller, or Fuser Unit. Follow these steps. The example below shows how to reset the Usage Report when you replace the Fuser Unit.

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu** until **MENU - USAGE STATUS** appears on the display.
3. Press **Select**.
4. Press **Next** until **REPLACE FUSER** appears on the display.
5. Press **Select**, and when the panel displays **CONFIRM**, press **Select** again.
6. Press **Menu**, then **Online**.

TCP/IP Setup

You can use the Operator Panel to enable and set up the TCP/IP networking parameters for the printer. This is particularly useful for setting the printer's IP address so you can use it as the printer's URL in web-based printing. Follow these steps.

1. Press the **Online** button of the Operator Panel. **OFFLINE** appears on the display.
2. Press the **Menu** button to enter menu mode. **MENU - PRINT FORM** appears on the display.
3. Press the **Next** button until **MENU - COMMUNICATIONS** appears on the display, and press the **Select** button.
4. Press the **Next** button until **NETWORK** appears on the display, and press the **Select** button.
5. Press the **Next** button until **TCP/IP** appears on the display, and press the **Select** button.
6. Press the **Next** button until **NET ADDRESS** appears on the display, and press the **Select** button.
7. Use the Operator Panel buttons to set values for each of the 12 digits in this manner:
First press **Next** to set the cursor to the first digit.
For the first digit, press **Select** to increment to the correct value. Then press **Next** to move to the next digit and press **Select** to increment to its correct value. Continue until all twelve digits are set. When the final digit is set, press **Next** to confirm the Net Address you set and then press **Select**.
8. Press **Menu** to exit menu mode and press **Online** to bring the printer online.

SUBNET MASK, and **GATEWAY** are set in the same way. If you select **ENABLE**, the TCP/IP protocol is enabled.

To validate any changes to network settings, you must turn the printer off, and then on again.

For more information about networking the 4650 Series printer, see the *SuperScript Color Laser Network Guide*.

CHAPTER 6

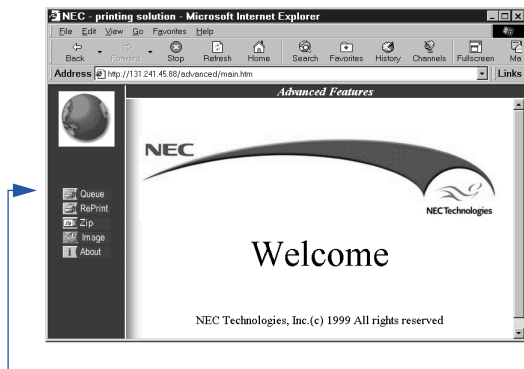
ADVANCED FEATURES

OVERVIEW

This chapter provides information on the new advanced features of the SuperScript 4650N and 4650NX. If your printer has an IP address and you are connected to the Internet, you can access most of these features from the printer's home page. Most features can also be accessed through the Operator Panel. Advanced features include:

- Special spooling options like collation and job preview
- On Demand printing from a Zip drive
- Scanner/copy options

The Advanced Features Web Page



Web Page Icons

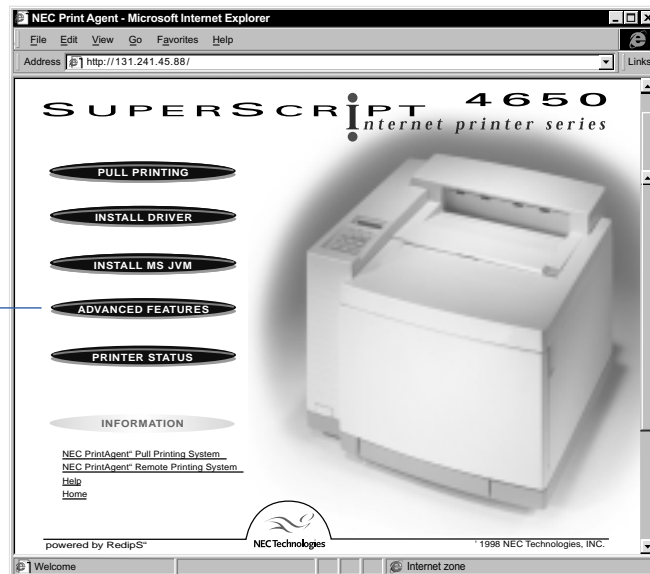
- Click on the Queue icon for print status
- Click on the RePrint icon to print multiple copies of a previewed document
- Click on the Zip icon to access files from the Zip drive
- Click on the Image icon to preview the last scanned image

FROM THE PRINTER'S HOME PAGE

You can access the printer's advanced features from the SuperScript 4650N(X) home page. When you click on the Advanced Features button, a welcome page appears with several navigational links on the left sidebar. For status on a print job, click on the Queue icon. To print multiple copies of a document after previewing a single copy, click on the RePrint icon. To access a list of printable files from the ZIP drive, click on the Zip icon. To see the last scanned image in the printer's hard drive, click on the Image icon.

note: If you have the SuperScript 4650 model printer, you will not be able to take advantage of these advanced features.

The Printer's Home Page



SPOOLING OPTIONS

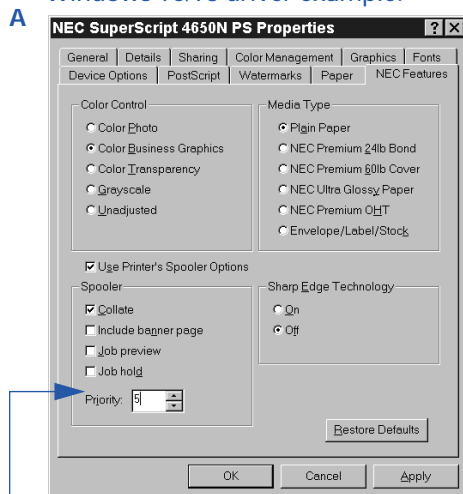
On printer networks, multiple users can send documents to the same printer. These documents are sent to a spooler in the printer where they wait in a queue (line). Special spooler features found in the SuperScript 4650N(X) greatly improve print performance and usability. Advanced spooling features, along with the built in 2.1 GB hard disk of the printer, speed up print time especially for long, multiple-copy documents.

Most spooling options can be set up through the SuperScript 4650 PostScript driver under the **NEC Features** tab (A). Make sure the “Use Printer’s Spooler Options” box is checked. Spooler options can also be set up or viewed through the Printer’s Home page under Advanced Features (B).

In Windows NT, spooling options can be found on the Document Properties Advanced tab under Document Options and then Printer Features (see page 52).

Accessing Advanced Spooling Options

Windows 95/98 driver example:



Assign a priority number here. Highest Job Priority is number 1.

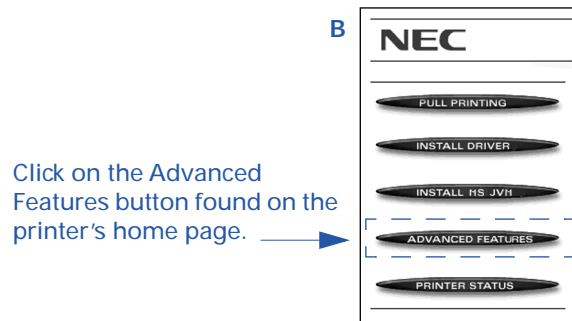
In Windows 2000, spooling options can be found from the PostScript driver Advanced Options button (see page 47).

Print Queue Status

This feature is shown on the Print Queue Status page (C) after being chosen from the Advanced Features web page. It shows you the next spooling print job, current print status, and a list of recently printed jobs. **You cannot change print job parameters on this web page.**

Job Priority

The Job Priority feature allows you to prioritize a document and send it to the “front of the line.” Each sent document is assigned a default priority number of five (5). Set up Job Priority on the NEC Features tab of the printer driver. If you want a job to print ahead of the others, choose a number between 1 and 4 in the scrolling Priority box on the NEC Features tab.



Advanced Features

SuperScript 4650N Print Queue Status

Print status: Processing

Currently active jobs:

Job Number	Size	Job Name	Owner	Status	Priority	Print Banner Page?	Delete After Printing?	Hold Job?	Collate?	Copies of job
149	3 MB	SILVER.CPT	Administrator	Processing	5	Yes	No	No	No	1

Recently printed jobs:

Job Number	Size	Job Name	Owner	Status	Priority	Print Banner Page?	Delete After Printing?	Hold Job?	Collate?	Copies of job
148	1 MB	RED1BOAT.CPT	Administrator	Finished	5	Yes	No	No	No	1
147	15 KB	Info.txt - Notepad	Administrator	Finished	5	No	Yes	No	No	1
146	207 KB	CD7L_LET.CDR	Administrator	Finished	5	Yes	No	No	No	1
145	15 KB	Info.txt - Notepad	Administrator	Finished	5	No	Yes	No	No	1
144	222 KB	CD7L_LET.CDR	Administrator	Finished	5	Yes	No	No	No	1

Banner Pages

Banner pages are used to identify and separate print jobs. These are especially useful with a shared printer. Items found on the Banner page include job number, job name, owner, job

creator, job size, number of copies, job hold, and job reprint information. You can choose to print a Banner page from the PostScript driver's NEC Features tab or from the Job RePrint web page, shown below.

SuperScript 4650 Series Banner Page

SPOOLER JOB INFO

Job ID number: 34
 Job Owner: Tom Jeynes
 Job Name: Testfile.doc
 Job Creator: Microsoft Word

SPOOLER JOB INFO

Copies of job: 1
 Collate: Yes
 Hold job at printer: No
 Delete job after printing: No

Web address for print queue status:
<http://10.10.10.21/spoolq.html>

Job RePrint Web Page

Advanced Features

SuperScript 4650N Job RePrint

Total disk space: 1489 MB
Free disk space: 1343 MB

Queue
 RePrint
 Zip
 Image
 About

Go	Delete	Job Number	Job Name	Author	Size	Print Banner Page?	Delete After Printing?	Hold Job?	Collate?	Copies of job
		4	Msvpad.rtf	Administrator	122 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		12	GRF3_LET.PDF	Administrator	105 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		13	WRD2_LET.PDF	Administrator	283 KB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		14	C:\Jir\NT\TstFiles\Core\MSCD7\LET.CDR	Administrator	231 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		16	C:\Jir\NT\TstFiles\Core\MSCD7\LET.CDR	Administrator	215 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		18	C:\Jir\NT\TstFiles\Core\RED1\BOAT.CPT	Administrator	1 MB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		19	C:\Jir\NT\TstFiles\Core\SILVER.CPT	Administrator	3 MB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		20	ATQ8_LET.WPD	Administrator	119 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

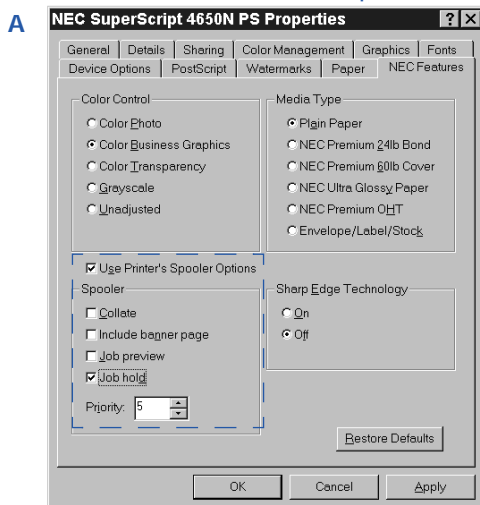
Job Hold

The Job Hold feature gives you the ability to send a document to the printer and hold it there until you “release” it at the Operator Panel. The printer will continue to print other jobs in the queue until you go to the Operator Panel and physically select **JOB HOLD PRINT** from the Control Menu. Set up the Job Hold feature from the NEC Features tab in the printer’s PostScript driver. You can also use the Job RePrint web page.

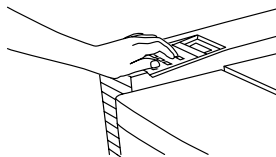
How to Use the Job Hold Feature

1. Select Job Hold on the spooler area of the NEC Features tab (A).
2. Send your print job through the printer network.
3. Go to the printer’s Operator Panel and press **Online**. **OFFLINE** appears on the display.
4. Press **Menu** until **MENU - CONTROL** appears on the display. Press **Select**.
5. Press **Next** until **JOB HOLD PRINT** appears on the display (B).
6. Scroll through the list, if necessary, using the **Next/Previous** buttons until you find your job. Press **Select**.
7. Your job will print.
8. Press **Menu**, then **Online**. **ONLINE** appears on the display.

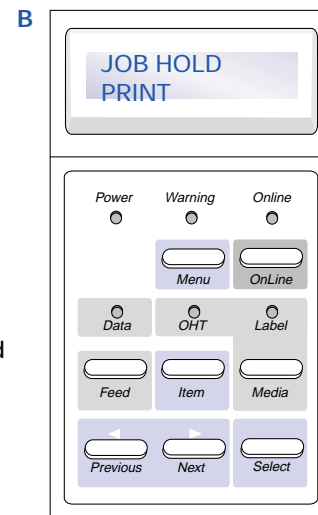
Windows 95/98 driver example:



Release the held print job at the Operator Panel



note: In Windows NT, the Job Hold (Confidential) feature can be found on the Document Properties Advanced tab under Document Options and then Printer Features (see page 52). In Windows 2000, the Job Hold feature can be found from the Advanced Options button (see page 47).



Job RePrint Web Page

Advanced Features

SuperScript 4650N Job RePrint

Total disk space: 1489 MB
Free disk space: 1343 MB

Go	Delete	Job Number	Job Name	Author	Size	Print Banner Page?	Delete After Printing?	Hold Job?	Collate?	Copies of job
		4	Mswpad.rtf	Administrator	122 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		12	GRF3_LET.PDF	Administrator	105 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		13	WRD3_LET.PDF	Administrator	283 KB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		14	C:\Jir\NTTstFiles\Core\MSCD7L_LET.CDR	Administrator	231 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
		16	C:\Jir\NTTstFiles\Core\MSCD7L_LET.CDR	Administrator	215 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

Job Preview

The Job Preview feature allows you to preview a first copy of a long document before printing out multiple copies. This gives you the opportunity to proofread the document first, then print the required number of copies later. Job Preview saves time because the document is stored on the printer's hard disk and does not have to be sent to the printer again (assuming the preview document is OK).

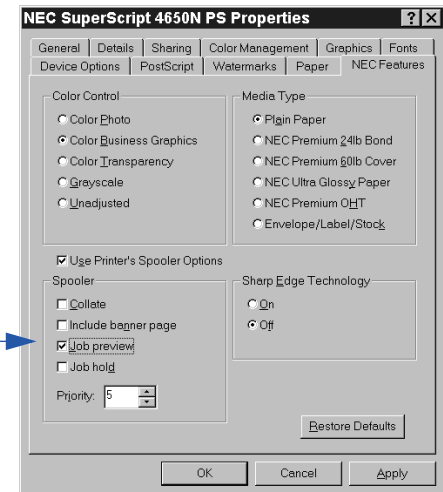
Collation

The Collation feature allows multiple copy jobs to be printed in "sorted order." In other words, if Collate is selected and you want to print two copies of the same document, the pages will be printed in 1-2-3-1-2-3 order. This sorts each document for you so it does not have to be sorted by hand. You only have to go to the printer once and not to the copy machine at all. By default this option is not selected. If Collate is not selected the pages will be printed in 1-1-2-2-3-3 order.

How to Use the Job Preview Feature

1. Select Job Preview on the NEC Features tab.
2. Send one copy of your print job to the printer.
3. The preview copy of your document will print.
4. Proofread the preview copy.
5. If it is OK, bring up your printer's web page.
6. Click on Advanced Features. The Advanced Features page appears.
7. Click on the RePrint icon on the sidebar of the Advanced Features web page.
8. Specify how many copies on the Job RePrint web page.
9. Click on the Print button under Go.
10. Your job will now print.

Windows 95/98 driver example:



The composite image illustrates the steps for using the Job Preview feature. It shows the printer's web interface with a sidebar on the left containing icons for Queue, RePrint, Zip, Image, and About. The main area displays the 'Advanced Features' page for a 'SuperScript 4650N Job RePrint'. Below the title, it shows disk space information: 'Total disk space: 1489 MB' and 'Free disk space: 1343 MB'. A table lists print jobs with columns for Go, Delete, Job Number, Job Name, Author, Size, Print Banner Page?, Delete After Printing?, Hold Job?, Collate?, and Copies of job. The 'Job RePrint' page also includes a 'Go' button and a 'Print' button. On the right, a 'Features' menu is shown with 'ADVANCED FEATURES' highlighted. Blue arrows connect the numbered steps from the 'How to Use the Job Preview Feature' list to these specific elements in the interface.

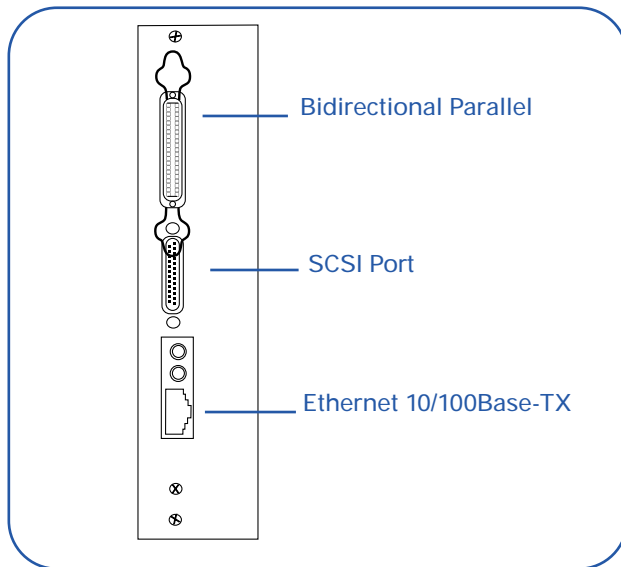
Go	Delete	Job Number	Job Name	Author	Size	Print Banner Page?	Delete After Printing?	Hold Job?	Collate?	Copies of job
Print	Delete	4	Mswpad.rtf	Administrator	122 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
Print	Delete	12	GRF3_LET.PDF	Administrator	105 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
Print	Delete	13	WRD3_LET.PDF	Administrator	283 KB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
Print	Delete	14	C:\JiriNTTstFiles\Core\MSCD71_LET.CDR	Administrator	231 KB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

EXTERNAL ZIP DRIVE FEATURE

An SCSI Iomega Zip® 100MB or Zip® 250MB drive can be connected to the SCSI port of the SuperScript 4650N(X). The drive must be connected and the Zip cartridge must contain files when the printer is turned on. You can then set up your print job either through the Web or the printer's Operator Panel. You can print files with the .prn, .ps, .jpg, or .eps extensions.

note: A parallel port Zip drive will not work with this printer.

SuperScript 4650 Interface Panel

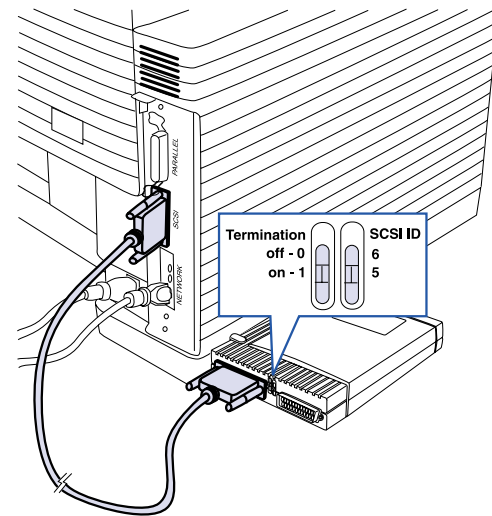


Connecting the Zip Drive

Perform these steps to connect the Zip drive to your printer.

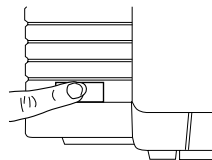
1. With the printer OFF, connect the Zip drive to the SCSI port on the back Interface Panel of the printer (A).
2. Set the Zip drive terminator to ON.
3. Set the SCSI ID switch to 5.
4. Plug the Zip drive into the power supply, then turn on the printer (B).
5. If you are also connecting a scanner to the printer, see page 83.

A



Caution! Do not plug in the Zip drive when the printer is turned ON.

B



To Print From the Web

1. Insert the Zip disk of files you want to print (**A**).
2. Click on the Advanced Features button from the Printer's Home page (**B**).
3. Select Zip from the left sidebar of the Advanced Features home page.
4. You will see a list of files from your ZIP drive (**C**).
5. Clicking on a directory will open it and list the files. Clicking on the ".." directory will bring you up to the parent directory.
6. Click on the file you want printed.

note: You cannot specify the number of copies from the Web.

To Print From the Operator Panel

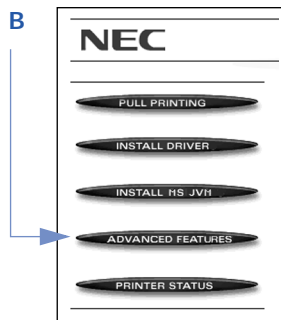
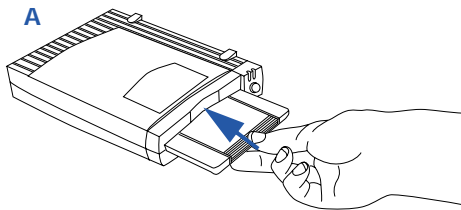
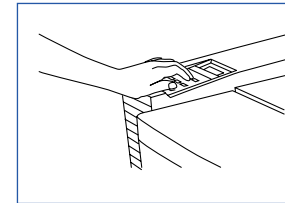
You can also access Zip disk settings from the printer's Operator Panel. Follow these steps.

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu**. **MENU - PRINT FORM** appears on the display.
3. Press **Next** until **MENU - ADVANCED FEATURES** appears on the display. Press **Select**.

4. Press **Next** until **ZIP - DISK MENU** appears on the display. Press **Select**.
5. Press **Next** until **SELECT FILE** appears. Press **Select**, then press **Next** again until the file you want appears on the display. Press **Select**.

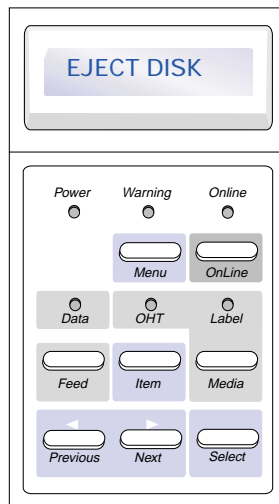
note: Directory names have a right arrow (➔) next to them. To enter these sub-directories, press the Select button and navigate with the Next button.

6. **COPIES** appears on the display. Press **Select**.
7. Press **Next** until the number of prints you want (1—999) appears on the display, then press **Select**.
8. Press **Menu**, then press **Online**. **ONLINE** appears on the display.

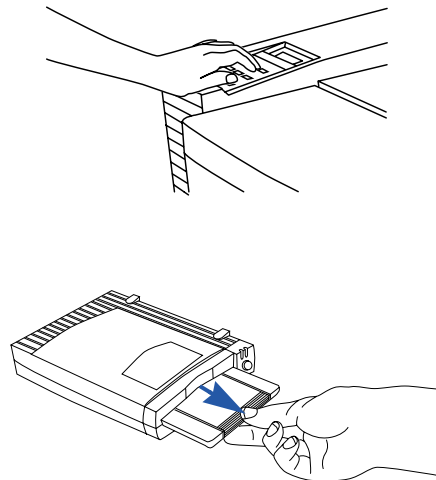


To Eject Zip Disk

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu**. **MENU - PRINT FORM** appears on the display.
3. Press **Next** until **MENU - ADVANCED FEATURES** appears on the display. Press **Select**.
4. Press **Next** until **ZIP DISK MENU** appears. Press **Select**.
5. Press **Next** until **EJECT DISK** appears on the display. Press **Select**.
6. Press **Menu**, then press **Online**. **ONLINE** appears on the display.



Eject Zip disk at the Operator Panel



SCANNER COPY FEATURE

The printer works with the HP ScanJet® 6300C and Astra® 1200S, 1220S, or 2400S scanner.

Setting Up the Scanner

Before you can print, you must set up the printer to work with the scanner. If you have an HP 6300 you will need to have the proper SCSI cable*.

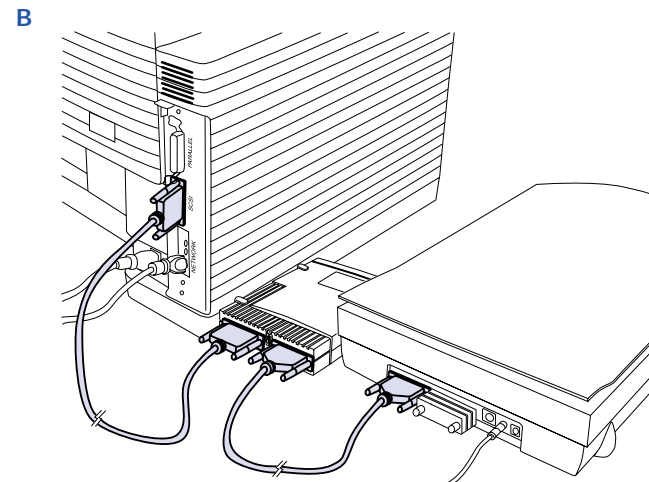
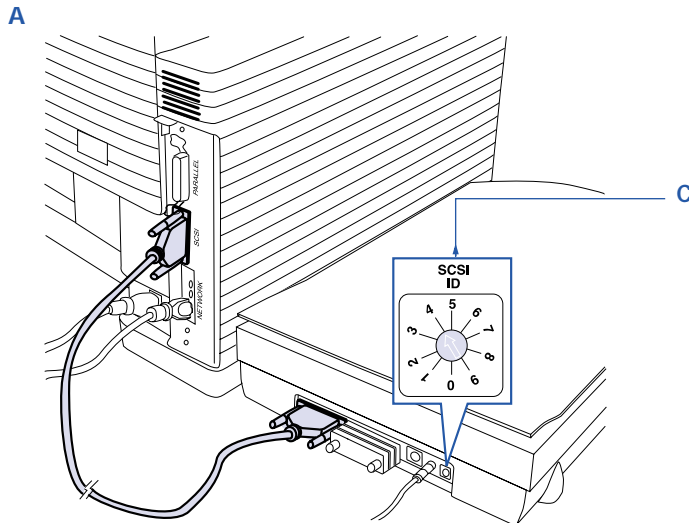
1. Make sure the scanner is not plugged into the power and the printer is turned OFF.
2. Plug the SCSI cable from the scanner to the SCSI port on the Interface Panel of the printer (A).

note: The SCSI scanner cable can also be plugged into the Zip drive SCSI port if a Zip drive is already connected to the printer. Set the Zip drive terminator to OFF when attaching the scanner (B).

3. Attach the SCSI terminator provided with the scanner to the SCSI port of the scanner. Refer to the scanner's documentation on how to attach the terminator.
4. If you have an Astra scanner, locate the SCSI ID switch on the back of the scanner. If you have an HP scanner go to Step 6. The SCSI ID switch will set automatically.
5. With a small screw driver gently turn the SCSI ID switch to 4, the usual factory default is 5 (C).
6. Turn the scanner, Zip drive if present, and then printer ON.

Caution! Do not plug in the scanner while the printer is turned ON.

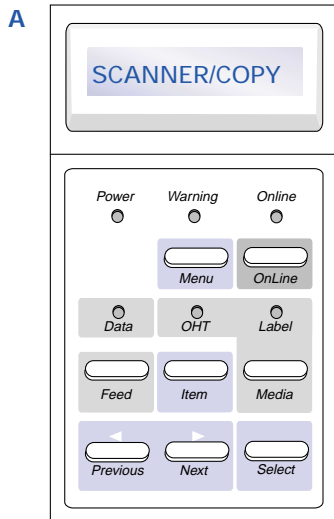
*SCSI-2 cable with a HD 50-pin male connector and a DB 25-pin male connector.



Accessing the Scanner

Access scanner settings at the printer's Operator Panel (A). Follow these steps.

1. Press **Online**. **OFFLINE** appears on the display.
2. Press **Menu** and **MENU - PRINT FORM** appears.
3. Press **Next** until **MENU - SPECIAL FEATURES** appears on the display. Press **Select**.
4. Press **Next** until **SCANNER/COPY** appears on the display. Press **Select**.
5. Press **Next** until **START COPY** appears. Press **Select**.
6. **COPIES** appears on the display. Press **Select**.
7. Press **Next** until the number of prints you want (1—999) appears on the display, then press **Select**.
8. Repeat steps 4—7 to make selections of **SCALE**, **COLOR MODE**, **LIGHT/DARK ADJUST**, **SCANTO JPG**, and **RESOLUTION**. By default the settings are color mode and 150 dpi.
9. Press **Menu**, then press **Online**. **ONLINE** appears on the display.



Scanner Support Features

Scale: Specifies the image size after scanning with respect to the original image.

Color Mode: You can scan images in black and white, grayscale, or color. The default setting is color.

Light/Dark Adjust: Adjust the darkness or brightness of the image to be scanned. This control is applied before or during the scanning and is not for modifying the scanned output JPEG file.

Scan to JPG: Scans a page and saves it to the printer's hard drive as a jpg file. It can then be saved to another drive for editing or printing.

Resolution: You can scan images in 75, 150, or 300 dpi. The default setting is 150 dpi.

Previewing a Scanned Image

To see a preview of the printer's last scanned image, click the Image icon on the 4650N Advanced Features web page (B).



CHAPTER 7

MAINTAINING YOUR PRINTER

OVERVIEW

This printer is designed for easy use and maintenance. Be sure to review the maintenance and service schedules on page 86, which show when parts should be cleaned or replaced. Your Operator Panel will also remind you when replacement of parts or consumables is due.

This chapter explains basic maintenance and cleaning procedures you must follow to maintain the high print quality and efficient operation of your NEC SuperScript 4650 Series printer. Included are instructions for the following maintenance tasks:

- Replacing the Toner Modules
- Replacing the Fuser Oil Bottle, Fuser Cleaning Roller, and Fuser Unit
- Cleaning and Replacing the Belt Cartridge
- Cleaning inside the Back Cover
- Cleaning the Laser Lens
- Replacing the Ozone Filter
- Replacing the Toner Collector (Waste Toner Bottle)
- Cleaning the Paper Exit Roller
- Cleaning the outside of the printer

note: See page 110, for information about ordering printer supplies.

The life expectancy of each replaceable part is based on printing under specific operating conditions, such as media type, number of colors used, humidity, page size, and page coverage (usually 5% coverage as in an average business letter).

PRECAUTIONS

Please take the following precautions when performing maintenance tasks:

- Do not work inside Top or Back Covers of printer until it has cooled at least 15 minutes.
- Do not use ammonia-based cleaners. They may react with the toner in the module.
- Do not use alcohol-based cleaners on the printer exterior. They may damage the plastic case.
- Do not expose the Belt Cartridge or Transfer Drum to direct sunlight or bright room light.
- Do not spill any liquid inside the printer or in the Power Cord connector.
- Turn off and unplug the printer while working inside the covers.
- Follow all directions carefully. Save this user's guide for future reference.
- Do not attempt to service the printer yourself since opening some internal parts may expose you to high voltage or other hazards. Refer all servicing not explained in this user's guide to qualified technicians. Call NEC Technical Support at 800-632-4650 for help.

Maintenance Schedule

Follow this schedule to keep your printer in good operating condition.

Ongoing—As Needed

- Clean the outside of the printer with a soft cloth and mild solvent when dusty or soiled.
- When print output becomes too light or **TONER EMPTY** message appears on the Operator Panel display, take out the **Toner Module** and gently rock it from side to side to redistribute the toner. Replace Toner Modules after about every 6,000 pages for color toner and every 10,000 pages for black toner.
- Clean the **Registration Rollers** using the procedure on page 92.
- Clean the **Transfer Roller** (see page 92).
- Clean the **Paper Exit Roller** using the procedure on page 96.
- Clean the **Belt Cartridge** (OPC Belt) when the charge wire gets stained or printouts show vertical streaks. Use the procedure on page 90.
- Clean the **Laser Lens** using the procedure on page 94 if printouts show vertical streaks.

Every 12,000 Pages

- Replace the **Fuser Oil Bottle** when shipping the printer, after 12,000 pages, or when indicated on the Operator Panel display.
- Replace the **Toner Collector** (Waste Toner Bottle) after 12,000 pages.
- Replace the **Fuser Cleaning Roller** after 12,000 pages (see page 89).

Every 12 Months or By Page Count

- Clean inside the Back Cover of the printer, after 20,000 prints or every 12 months, using the instructions on page 92.
- Wipe down the **Paper Guides** in the paper trays with a soft cloth and mild solvent (after 20,000 prints or sooner if needed).
- Replace the **Belt Cartridge** after 50,000 color planes* or every 12 months, using the procedure on page 91.
- Replace the **Ozone Filter** using the procedure on page 95.
- Replace the **Fusing Unit** after 60,000 pages using the procedure on page 93.

Service Visit Schedule

Certain printer parts must be maintained or replaced by an authorized NEC field service engineer. When this is necessary call NEC Technical Support at 800-632-4650. They will put you in touch with an engineer in your area who can service your printer.

Every 120,000 pages: Paper Discharger, Drum Cleaner, Paper Pick-up Roller, and Transfer Roller must be replaced by a field service engineer.

Every 300,000 planes: Transfer Drum must be replaced by a field service engineer.

*Every laid-down color on a page is considered a plane. There are four planes to a full color page using cyan, magenta, yellow, and black.

REPLACING THE TONER MODULES

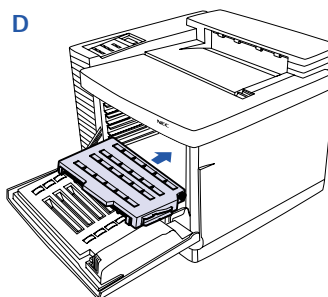
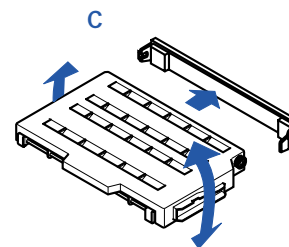
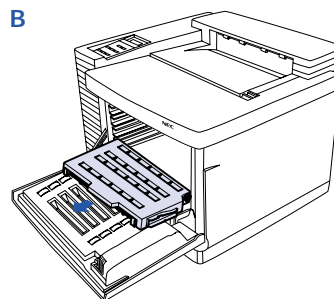
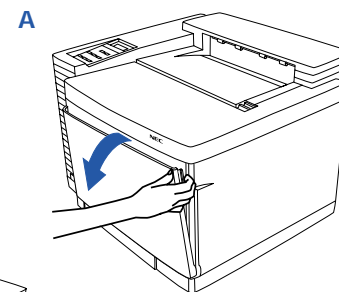
Replace each Toner Module when you start seeing print quality problems such as light images or white streaks across the page. The Operator Panel will display the TONER EMPTY message when the toner level is getting low.

To order an NEC SuperScript 4650 Series Toner Module contact your NEC printer dealer or see below. The black replacement modules print approximately 10,000 pages. The yellow, magenta, and cyan replacement modules print approximately 6,000 pages each.

Follow these directions to replace the Toner Modules;

1. Open the Front Cover (A).
2. Pull out the Toner Module that needs replacing (B).
3. Hold the new Toner Module horizontally and rock it left to right three or four times. Then remove the protective orange cover and tape (C).
4. Insert the Toner Module into its corresponding slot and close the printer (D).

note: The starter Toner Modules that shipped with your printer contain less toner than replacement modules.



To order new Toner Modules  800-632-2326

Toner Module	Order #
Black Toner Module	20-200
Yellow Toner Module	20-201
Magenta Toner Module	20-202
Cyan Toner Module	20-203

REPLACING THE FUSER OIL BOTTLE

Order Number 20-212

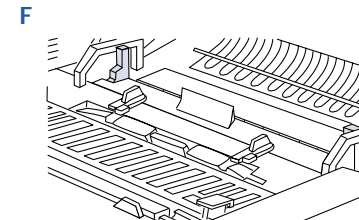
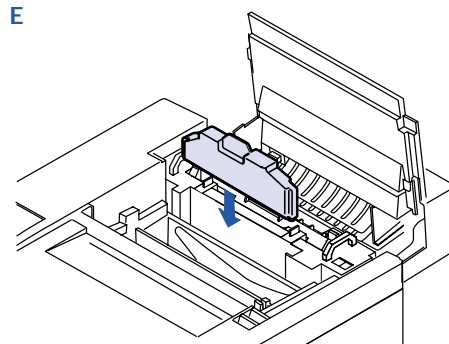
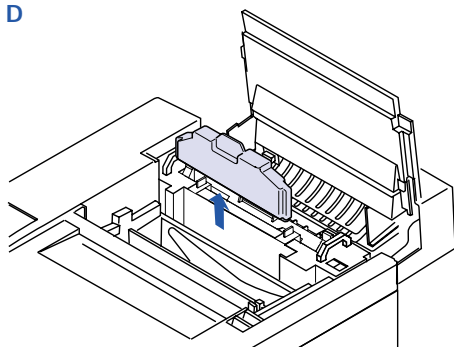
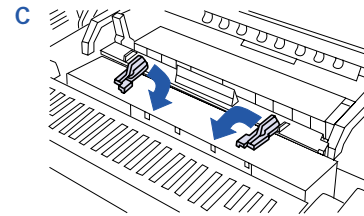
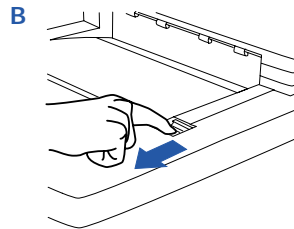
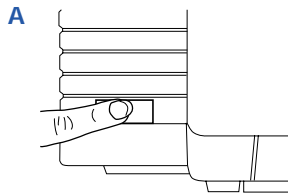
1. Turn the printer off and allow it to cool (A).

WARNING! The Fuser Unit area may be very hot.

2. Open the Top Cover (B).
3. Open the Lock Tabs (C).
4. Remove the used Fuser Oil Bottle and discard it (D).

note: Hold a piece of paper under the used Fuser Oil Bottle while removing it to avoid drips in the printer.

5. Insert the new Fuser Oil Bottle, cap side down. Make sure the tab of the bottle is on the right (E). The label will face the front of the printer.
6. Close the Lock Tabs and the Top Cover (F).
7. The Operator Panel will inform you when the Fuser Oil is getting low again.

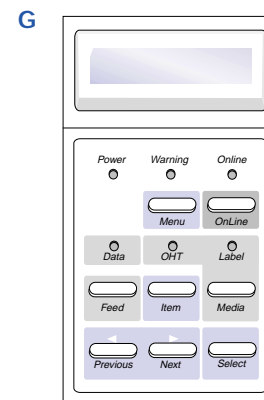
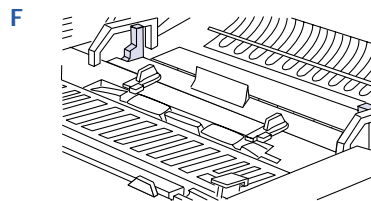
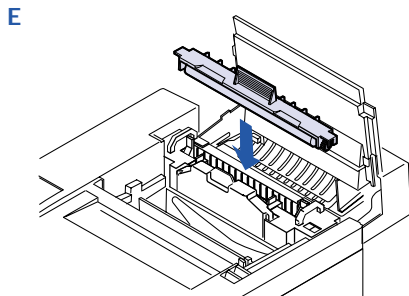
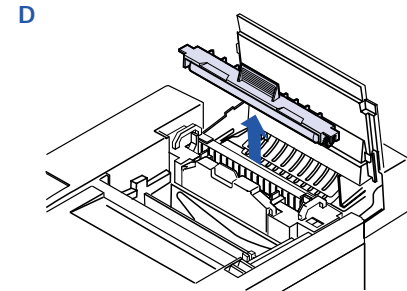
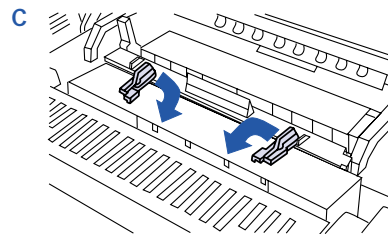
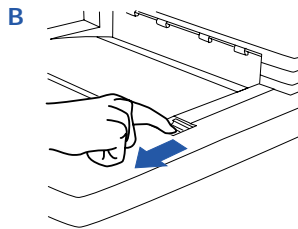
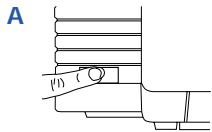


REPLACING THE FUSER CLEANING ROLLER

Order Number 20-211

1. Turn off the printer and allow it to cool (A).
2. Open the Top Cover (B).
3. Open the Lock Tabs (C).
4. Remove the used Fuser Cleaning Roller (D).
5. Install the replacement Fuser Cleaning Roller (E).
6. Close the Lock Tabs and the Top Cover of the printer (F).

7. Reset the Operator Panel to make sure the consumables usage information is current (G). Follow these steps.
 - a. Press **Online**. OFFLINE appears on the display.
 - b. Press **Menu**. PRINT FORM appears on the display.
 - c. Press **Next** until USAGE STATUS appears on the display, and then press **Select**.
 - d. Press **Next** until ROLLER REPLACE? appears on the display, and then press **Select**.
 - e. When the panel displays CONFIRM, press **Select** again.
 - f. Press **Menu**, then **Online**.

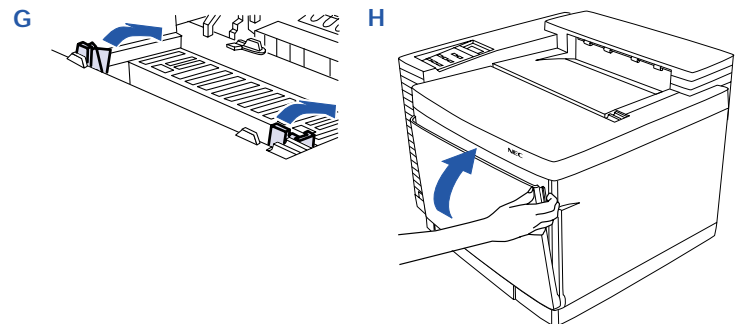
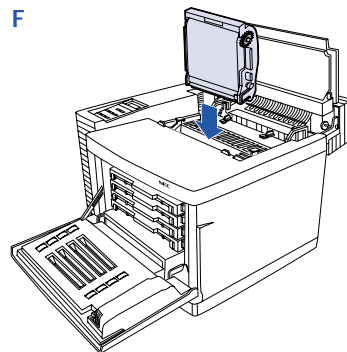
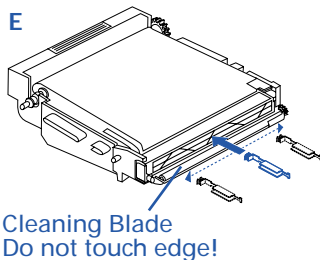
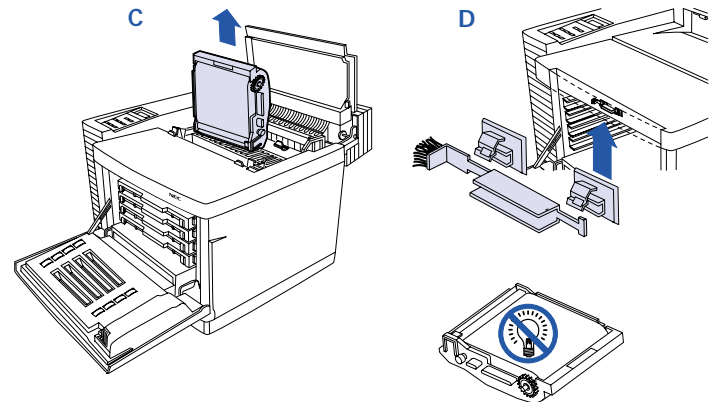
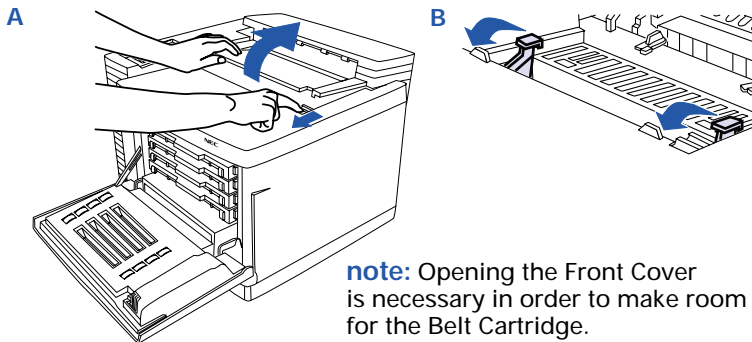


CLEANING THE BELT CARTRIDGE

The Belt Cartridge is sensitive to bright light and touch. Always wrap it in a soft dark cloth until you are ready to clean or install it. Use a clean soft cloth to clean the parts.

1. Turn off the printer and unplug it.
2. Open the Front and Top Covers of the printer (A).
3. Release the Lock Levers (B) and carefully remove the Belt Cartridge (C).
4. Clean any toner or paper dust from the Belt Cartridge.
5. Remove the small Cleaning Brush from inside the front of the printer (D).

6. Turn the Belt Cartridge so that the handle is facing away from you.
7. Use the brush to gently clean the wire inside the end of the Belt Cartridge. Do not press hard on the wire (E).
8. Using a dry cloth, clean any toner buildup from around the Cleaning Blade.
9. Reinstall the Belt Cartridge (F) and secure the Lock Levers (G).
10. Return the Cleaning Brush to its holder and close the Top and Front Covers (H).



REPLACING THE BELT CARTRIDGE

Order Number 20-205

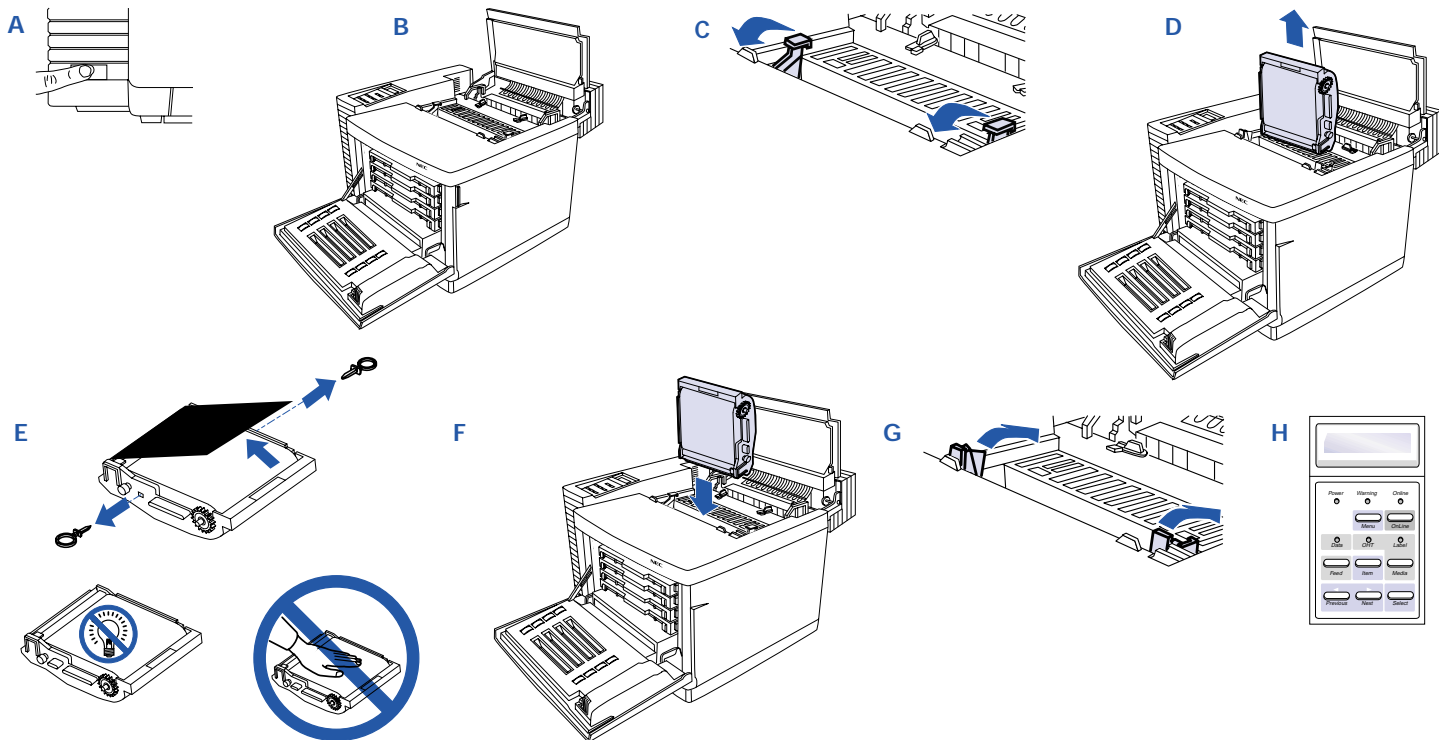
1. Turn off the printer (A).
2. Open the Front and Top Covers (B).
3. Flip up the Lock Levers to release the Belt Cartridge (C).
4. Pull the old Belt Cartridge straight up and discard it (D).
5. Remove the black wrapper from the new Belt Cartridge and pull out the two tension release pins as shown (E).

WARNING! Do not touch the green material on the Belt Cartridge. It is easily scratched.

6. With the flat side of the Belt Cartridge facing the front, insert it straight into the guide slots in the lock levers. The white gear on the cartridge goes to the right.

Do not use force (F).

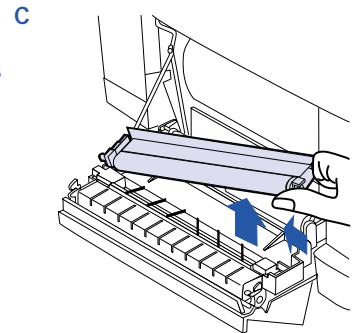
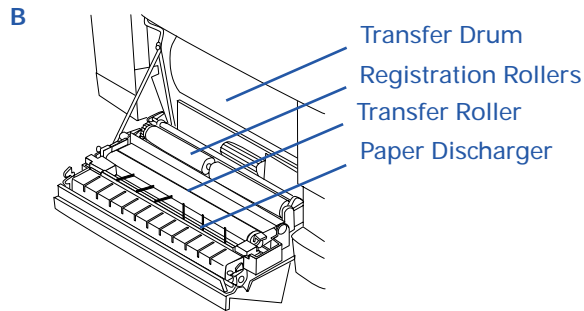
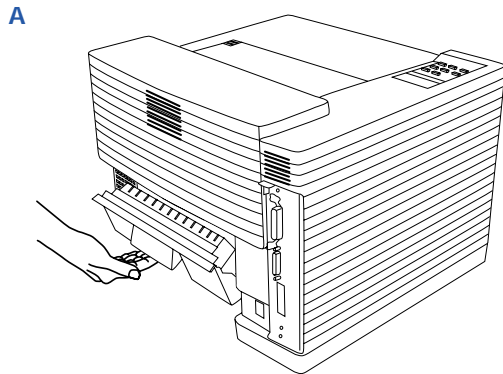
7. Flip down the Lock Levers (G).
8. Close the Front and Top Covers.
9. Reset the Operator Panel to make sure the consumables usage information is current (H). Follow these steps:
 - a. Press **Online**. **OFFLINE** appears on the display.
 - b. Press **Menu**. **PRINT FORM** appears on the display.
 - c. Press **Next** until **USAGE STATUS** appears on the display, and then press **Select**.
 - d. Press **Next** until **BELT REPLACE?** appears on the display, and then press **Select**.
 - e. When the panel displays **CONFIRM**, press **Select**.
 - f. Press **Menu**. Press **Online**.



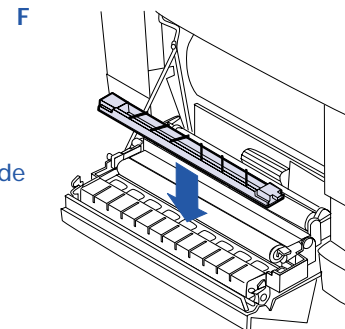
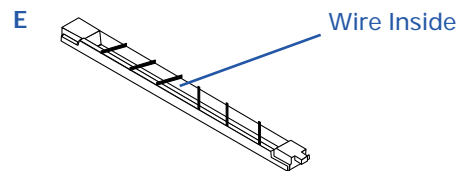
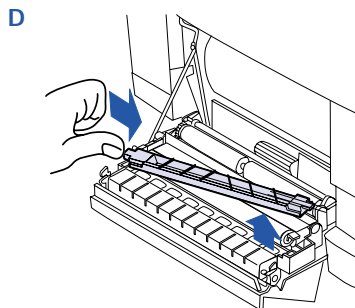
INSIDE THE BACK COVER

Allow several minute for the printer to cool down and use only dry, lint-free cotton cloths or swabs for this procedure. The Transfer Unit consists of the Transfer Drum, Registration Rollers, Transfer Roller, and Paper Discharger.

1. Turn off and unplug the printer.
2. Open the Back Cover (A) and avoid the Transfer Drum while cleaning the other parts of the Transfer Unit (B).
3. Using a dry cotton cloth, clean any paper dust or toner buildup from the Registration Rollers. Rotate the rollers with the white gear while cleaning.
4. Clean the Transfer Roller unit by lifting the Lock Lever on the right end until the unit is released. Lift the unit out (C).
5. Wipe and rotate the Transfer Roller with a soft cloth.
6. Reinstall the Transfer Roller in the Transfer Unit.
7. Remove the Paper Discharger by pushing the left side to the right, as shown, and lifting it out (D).
8. Clean off any dust or toner with the cotton cloth.
9. Using a dry cotton swab, clean any extra buildup from the interior of the Paper Discharger holder.
10. Carefully clean the Paper Discharger wire (E) with a cotton swab.
11. Reinstall the Paper Discharger in the Transfer Unit. Push it into the left part of the holder, then down until it locks in place (F).
12. Clean the rest of the Transfer Unit.
13. Close the Back Cover.



Be careful not to touch the Transfer Drum!



REPLACING THE FUSER UNIT

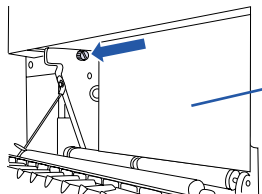
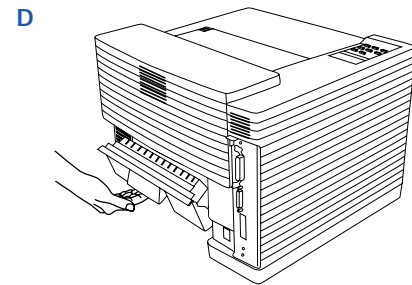
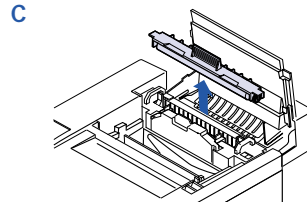
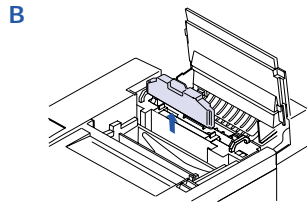
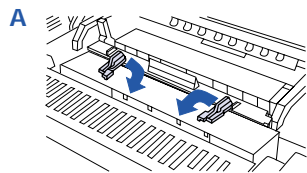
Order Number 20-219

1. Turn the printer off and allow it to cool.

WARNING! The Fuser Unit area may be very hot.

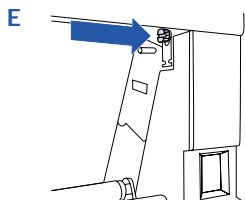
2. Open the Top Cover.
3. Open the Lock Tabs (A).
4. Remove the Fuser Oil Bottle and put in a plastic bag temporarily or discard if replacing with a new one (B).
5. Remove the Fuser Cleaning Roller (C).
6. Open the Back Cover (D).
7. Place a clean piece of paper against the Transfer Drum to protect it.

8. Loosen (but do not remove) the finger screws and brackets that hold the Fuser Unit in place (E).
9. Lift out and discard the used Fuser Unit (F).
10. Remove the new Fuser Unit from its packaging and pull out the orange Tension Release Pins on each side.
11. Carefully lower the new Fuser Unit into the slot (G).
12. Tighten the thumb screws inside the back of the printer.
13. Gently lift up on the Fuser Unit's handles to make sure that it is secured.
14. Close the Back Cover
15. Reinstall the Fuser Oil Bottle (H) and Fuser Cleaning Roller (I).
16. Close the Locking Tabs (J) and the Top Cover.
17. Reset the Operator Panel to make sure the usage information is current. See page 74.

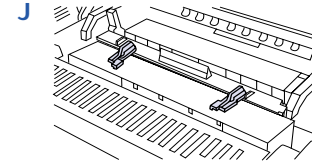
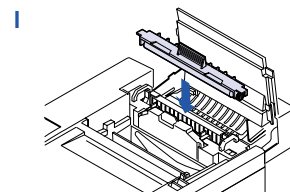
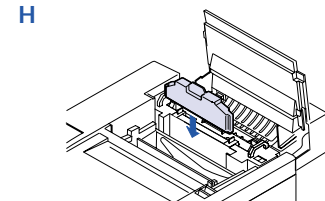
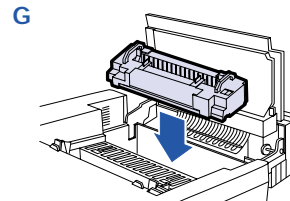
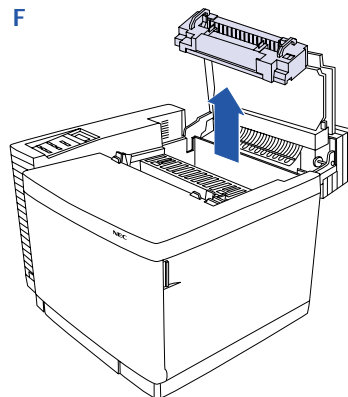


Paper to protect Transfer Drum

Loosen left Thumb Screw



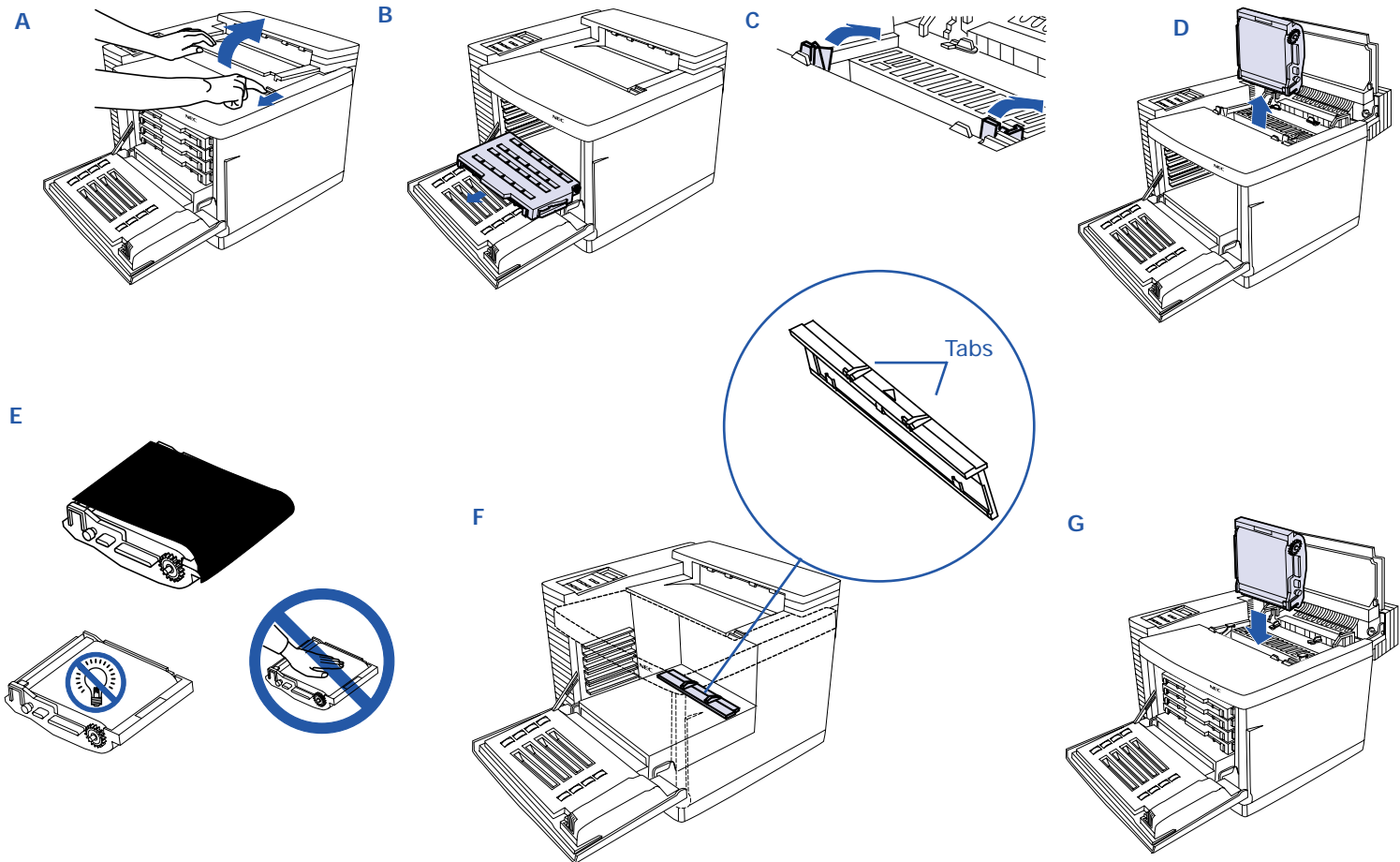
Loosen right Thumb Screw



CLEANING THE LASER LENS

Cleaning the Laser Lens is only necessary when you find vertical white or light-color streaking in the colors.

1. Open the Front Cover and Top Cover (A).
2. Remove the four Toner Modules (B). Keep them level!
3. Flip up the Belt Cartridge Lock Levers (C).
4. Remove the Belt Cartridge (D) and loosely wrap it in a soft dark cloth or paper (E).
5. Use both hands to remove the Laser Lens. Pinch the Laser Lens tabs located on the bottom of the Toner Module area and lift it out (F).
6. Using a dry cotton cloth, wipe the lens.
7. Reinstall the Laser Lens by sliding it in at a 45° angle.
8. Reinstall the Belt Cartridge and the Toner Modules (G).
9. Close the Front and Top Covers.

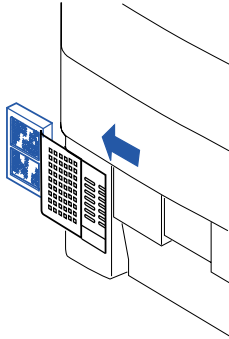


REPLACING THE OZONE FILTER

Order Number 126164

The Ozone Filter needs to be replaced about every 12 months.

1. Slide open the Filter Cover located in back of the printer.



2. Take the used Ozone Filter from inside the Filter Cover and discard it.
3. Fit the new Ozone Filter inside the Filter Cover and slide it shut.

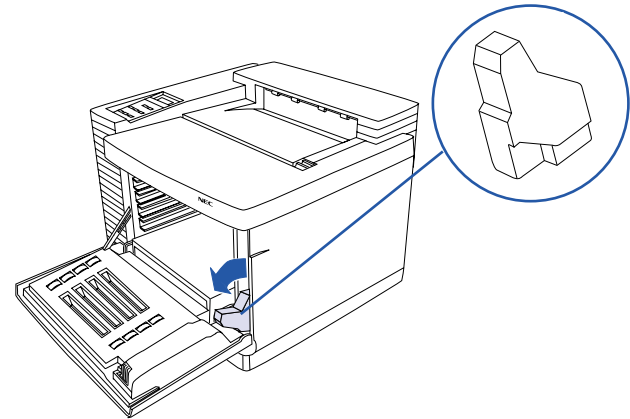
note: The Ozone Filter will produce an odor if not replaced regularly.

REPLACING THE TONER COLLECTOR

Order Number 20-213

The Toner Collector is a replaceable plastic bottle that collects used toner. Follow these directions to change it:

1. Open the Front Cover of the printer.
2. Remove the used Toner Collector.



3. Note the label attached to the used Toner Collector. Remove this label and use it to seal shut the opening.
4. Discard the used Toner Collector.
5. Install the new Toner Collector.

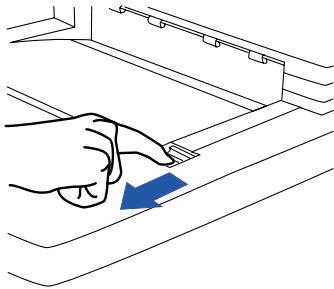
CLEANING THE OUTSIDE OF THE PRINTER

Use a clean cotton cloth and mild cleaner to clean the outside of the printer.

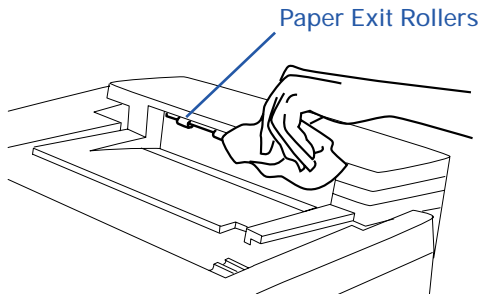
note: Do not use strong solvents or abrasive cleansers on plastic parts of the printer.

To clean the Paper Exit Rollers follow the instructions below:

1. Turn off and unplug the printer
2. Open the Top Cover slightly.



3. Using a dry cotton cloth, clean the Paper Exit Rollers. Manually rotate each roller.
4. Close the Top Cover.



CHAPTER 8

TROUBLESHOOTING

OVERVIEW

This chapter tells you how to resolve common printer problems. Topics include:

- Print quality maintenance
- Simple troubleshooting
- Operator Panel alert messages
- Clearing paper jams
- Print quality problems

note: Refer to the *SuperScript Color Laser Network Guide* for problems relating to printer networking.

Print Quality Maintenance

Here are some suggestions for maintaining the highest print quality from your printer.

- Replace the Toner Modules immediately when the display indicates that replacement is necessary.
- Use high-quality paper or transparencies to obtain sharp, crisp characters and maximum contrast.
- Follow the cleaning procedures described in Chapter 7, "Maintaining Your Printer."

Simple Troubleshooting

Here are some simple resolutions to occasional printer problems.

Power light is off...

Check that the power cord is plugged into a live power outlet and the printer power switch is turned on.

Power light is on but printer does not print...

- Verify that the Online indicator light is on (if it is not, press the **Online** button).
- Verify that all interface cable connections are tightly secured.

Paper does not output to the output tray...

Check for paper jam or misfeed.

Paper does not stack correctly...

Check that the paper is between 16 and 90 lbs. base weight.

Printer Messages

Printer messages provide useful information for progress checks and troubleshooting. These messages are displayed on the printer Operator Panel.

Status Messages

Status messages appear on the printer operator panel and report normal operating conditions. No action is necessary. The table on page 66, summarizes status messages.

Alert Messages

Alert messages appear on the printer Operator Panel when a condition occurs that causes normal printing to be suspended. Often, operations can be recovered without losing data by removing the source of the problem. Other conditions require the printer to be turned off and then on again to reset it, in which case, any data is lost. If Jam Recovery is set to On, the printer will automatically reprint lost pages of a PostScript print job after a jam is cleared, as long as you do not turn off the printer. Jam Recovery can only be set in the Operator Panel menu tree (see page 70).

The table on page 98, summarizes alert messages and the action you can take to correct them.

Service Messages

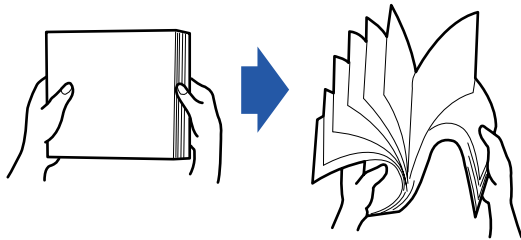
If a major problem occurs, the Operator Panel will display the **SERVICE CALL** message followed by a code, such as **F5**. You must call an authorized service representative to resolve this problem. Report the code when you call to assist in diagnosing the problem. See page 109 for more information about getting service.

ALERT Message	Explanation
Booting...	First message to appear when the printer is powered up.
OUT OF PAPER	One of the paper trays is empty
TRAY 2 UNSUPPORTED SIZE	Paper Tray 2 contains paper size that is not supported by the engine.
PAPER MISMATCH LOAD	Paper Tray 1 or 2 does not have the correct paper size as specified for the print job. Load the paper size shown on the display <Letter, Legal, A4, B5JIS, B5ISO, EXEC, FOLIO, FSCAP, SPFOLI, QUARTO, COM-10, or DL>.
<Paper Size> TRAY	
<K, Y, M, or C> TONER EMPTY	Specified Toner Module is empty. Replace it with a new one.
<K, Y, M, or C> TONER NOT FOUND	Specified Toner Module is not installed or installed incorrectly. Reinstall it.
PAPER JAM DRUM	Paper jam in Transfer Drum area.
PAPER JAM INNER/DRUM	Paper jam in back transfer area.
PAPER JAM EXIT/DRUM	Paper jam in Output Tray.
MISFEED	Paper misfeed from Paper Tray 1 or Paper Tray 2.
CHECK WASTE TONER	Waste Toner (Toner Collector) is full or is not installed.
REPLACE FUSER OIL	Fuser Oil Bottle needs replacing.
REPLACE FUSER ROLLER	Fuser Cleaning Roller needs to be replaced.
MISPRINT HW FAULT	Printing error caused by no PRREQ-N within a page. Resend the print job.
BELT CARTRIDGE NOT FOUND	Belt Cartridge (OPC) is not installed.
FUSER UNIT NOT FOUND	Fuser Unit is not installed.
FUSER ROLLER NOT FOUND	Fuser Cleaning Roller is not installed.
FRONT COVER OPEN	Front Cover is open.
BACK COVER OPEN	Back Cover (containing Transfer Unit) is open.
TOP COVER OPEN	Top Cover is open.
LOW FUSER OIL	Fuser oil is low. Fuser Unit has about 30 pages of operation remaining.
NEAR END FUSER ROLLER	Fuser Cleaning Roller has about 1000 pages of operation remaining.
REPLACE BELT	Belt Cartridge worn out.
REPLACE FUSER UNIT	Fuser Unit reaches end-of-life.
K-TONER LOW	Black Toner Module has less than 300 pages of operation remaining.
<Y, M, or C> TONER LOW	Specified Toner Module has less than 500 pages of operation remaining.
120K SERVICE	Paper Discharger, Drum Cleaner, Transfer Roller, Transfer Drum, and Paper Pick-up Roller (in back of Paper Trays) all need to be replaced by technician.
CASSETTE OUT <TRAY 1 or 2>	Paper Tray 1 or 2 is not installed in feeder.
MEDIA MISMATCH LOAD <MEDIA> TRAY	Tray does not have the correct media as specified for the print job. Load the media shown on the display <Paper, Label, or OHT (Transparency/OHP)>.

PREVENTING PAPER JAMS

This section explains how to prevent and remove paper jams. There are several things you can do to prevent paper jams.

- Make sure the paper is not folded, wrinkled, or curled.
- Do not overfill the paper trays. Paper Tray 1 and 2 have a fill-limit mark on the inside left side.
- Use paper, envelopes, labels, and transparencies that match the printer specifications (see Appendix A).
- If you have problems with double feeding, remove the media from the tray and fan the sheets. They may be sticking together.



- Store all media in a dry location.
- Make sure you have loaded the paper printing-side up. Many manufacturers place an arrow on the end of the wrapper to indicate the printing side.

Understanding the Paper Path

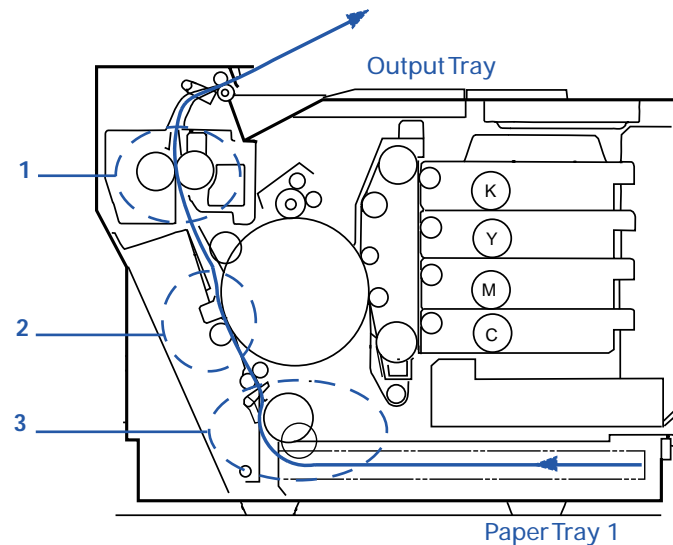
The following illustration shows the printer's paper path. Understanding this path will help you locate paper jams. The paper is picked up from Paper Tray 1 (or 2) and passed under the Transfer Drum. It then passes through the Fuser Unit and is delivered to the Output Tray on the top of the printer.

Paper jams occur in the following three areas.

1. The top Fuser Roller/output area. Operator Panel will report **PAPER JAM EXIT/DRUM**.
2. The back Transfer Unit area. Operator Panel will report **PAPER JAM/INNER** or **PAPER JAM/DRUM**.
3. The Paper Tray feed area. Error message on the Operator Panel will report **MISFEED**.

note: Frequent jams in any area indicate that area should be checked, repaired, or cleaned.

Paper Path of the SuperScript 4650 Series



REMOVING PAPER JAMS

- To avoid damage to rollers, always remove jammed paper gently.
- Try to remove jammed paper without tearing it. Any pieces of media left in the printer, whether large or small, can obstruct the paper path and cause further jams.

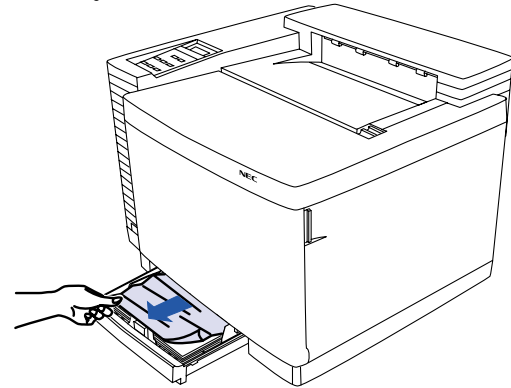
If, after clearing the paper jam, the jam message on the Operator Panel persists, open and close the Top Cover. This should clear the jam message.

If Jam Recovery is enabled (see page 70), once the jammed paper is removed and the printer is online, the printer should resume printing the job from the page where the jam occurred.

Misfeed Jams

Misfeed jams happen in Paper Tray 1 or 2. A misfeed jam may be as simple as a sheet of media not being picked up, or it may be that the paper was picked up but not fed properly. Access to this area is through the tray slot.

1. Remove the paper tray.
2. Pull out the jammed media.

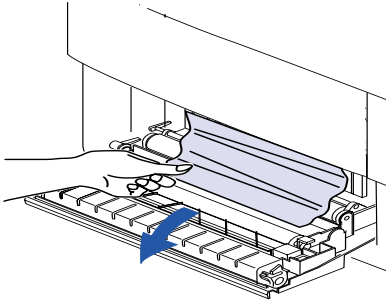


3. Make sure the paper is lying flat in the tray and that the stack does not exceed the media limit mark inside the tray.
4. Slide the tray back into the printer.

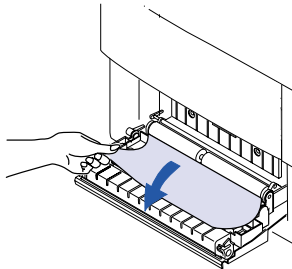
Inner Jams

Inner jams happen in the transfer Drum/Transfer Unit area. This type of jam means that the media did not make it to the paper exit area.

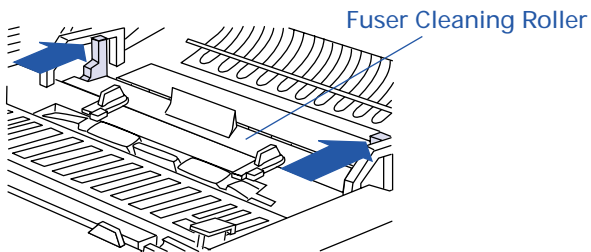
1. Open the Back Cover.



2. If most of the page is showing, gently pull it toward you.

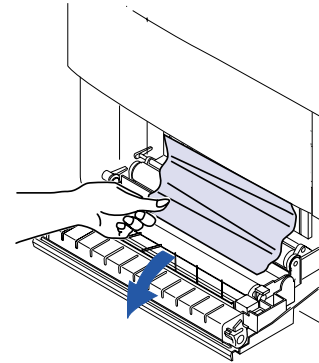


3. If the paper did not come out easily, open the Top Cover and open the Pressure Release Tabs.

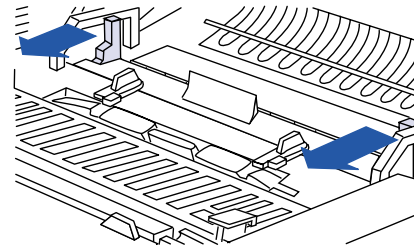


4. Remove the jammed paper by pulling it from the **bottom of the fuser**, through the printer's Back Cover, not from the top of the Fuser area. This prevents any unfused toner from dirtying the Fuser Rollers (located under the Fuser Cleaning Roller).

WARNING! Be careful not to touch the Transfer Drum while removing jammed paper.



5. Close (set) the Pressure Release Tabs.

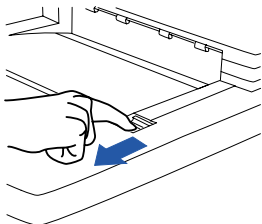


6. Close the Top and Back Covers of the printer.

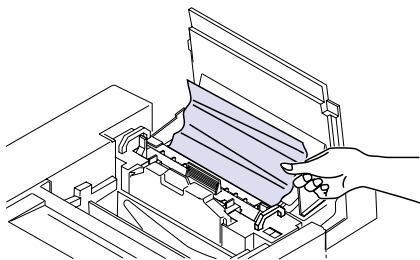
Outer Jams

Outer jams occur in the fuser area. Jams of this type usually means that paper is stuck in the Fuser Roller/Output Area. Follow these steps to clear these kinds of jams.

1. Turn off the printer and open the Top Cover.



2. If there is a large amount of paper showing, gently pull it out.

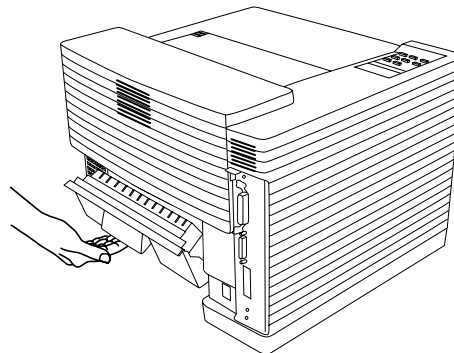


3. If the paper does not come out easily or if only a small amount is showing, open the Top Cover and follow steps 3—5 in the previous section.
4. Close the Top and Back Covers.

Drum Jams

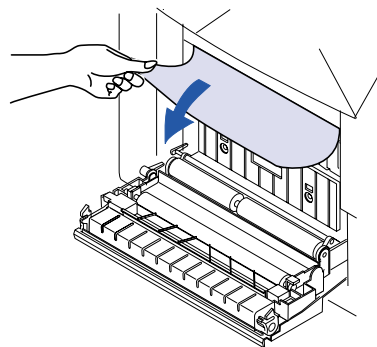
Drum jams occur when the paper gets wound around the Transfer Drum.

1. Turn off the printer and let it cool. Open the Back Cover.



2. Carefully remove the paper from the Transfer Drum.

note: Do not touch the Transfer Drum!



3. Close the Back Cover.

PRINT QUALITY

This section discusses potential print quality problems, what causes them, and how to resolve them.

Background is Smeared

Toner can spread where it does not belong when there is too little toner or when the Belt Cartridge is worn out.

Solutions

- Check the Toner Module of the color that is smearing. Replace it if it is too low.
- Replace the Belt Cartridge if it is worn or has reached the end of its expected life (about 12 months).

Image Edges are Missing or Peeling

If edges of images are not sharply defined, are peeling, or are missing, there may not be enough toner or the Belt Cartridge may be warped.

Solutions

- Check the Toner Module of the color that is effected. Redistribute the toner or replace the Toner Module if it is too low.
- Replace the Belt Cartridge if it is warped or has reached the end of its expected life (about 12 months).

Horizontal Jitter

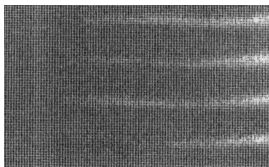
Toner distribution appears uneven horizontally across the page.

Solution

- Call a service representative to check the printer.

Horizontal Ribbing

Light print appears in a ribbed pattern at the left or right side of the page. This may be caused by a tilt in the surface supporting the printer, or by too little toner.



Solutions

- Check the table the printer is on. It should not be tilted more than 1.5%.
- Check the Toner Modules. Replace any that are too low.

Image Shows Banding, Shadows, or Shifting

This occurs when the image wrinkles, shifts, or color mis-registers.

Solution

- Call a service representative to check the printer.

White Line

If a vertical line appears in a specific color area, there may be paper, dust, or some particle stuck to that color's Developer Roller or Toner Module Blade.

Solutions

- Check the Toner Module of the color that is misprinting.
- Call a service representative.

Vertical Streaks

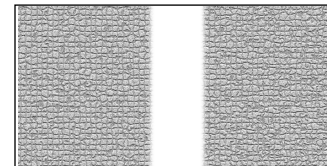
A vertical band runs the entire length of the paper.

Solution

- Clean the Charge Wire at the end of the Belt Cartridge.
- Call a service representative to check the printer.

Vertical White Band

A white band appears vertically in the print image.

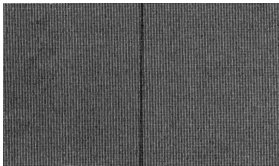


Solution

- Make sure the Toner Modules have toner.
- Clean the Laser Lens. See page 94 for procedure.
- If problem persists call a service representative.

Black Line

A fine black line appearing in the printed image may indicate that the Belt Cartridge surface is damaged or that there is debris stuck in the Belt Cartridge area.



Solutions

- Clean or replace the Belt Cartridge if it is damaged or has reached the end of its expected life.
- If problem persists call a service representative.

Vertical Line

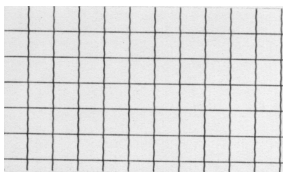
A vertical line of any color appearing in the printed image may indicate that there is debris on or near the transfer drum.

Solutions

- Clean inside the back of the printer especially the Paper Discharger (see page 92).

Image Staggered Vertically

A printed image that staggers or repeats vertically may indicate that the printer was bumped or vibrating during printing. It may also indicate that the optical unit has failed.

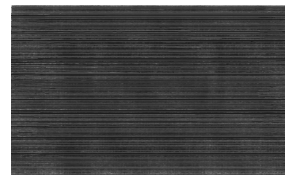


Solutions

- Ensure that the printer was not bumped during printing and that the surface it is placed on is not shaky or wobbly.
- Call a service representative to check the printer, if you cannot identify a cause.

Horizontal Banding

Horizontal banding in the image may indicate a transfer failure.



Solutions

- Check Toner Modules.
- Replace the Belt Cartridge if it is getting to the end of its life.
- If problem persists call a service representative.

Horizontal White Band

A white band appears horizontally in the print image.

Solution

- Call a service representative to check the printer.

Toner Spots

Toner spots or stains on the paper may be caused by toner dropping inside the printer.

Solutions

- Clean the Belt Cartridge (see page 90).
- Call a service representative to check the printer.

Mixed Color Image

If a mixed color image appears on the page it may indicate a problem with a Toner Module.

Solutions

- Confirm that all Toner Modules are inserted correctly.
- Make sure that the Front Cover is completely closed.
- Replace or redistribute Toner Modules if low.

Color Misregistration

When two colors do not register properly, it may indicate problems with the Belt Cartridge.

Solutions

- Confirm that the Belt Cartridge is properly seated.
- Replace the Belt Cartridge if it is worn or damaged.
- Call a service representative to check the printer to replace the Cleaning Brush if necessary.

Toner Streak

When toner is streaked or brushed across the page, it may indicate problems with the Toner Module.

Solutions

- Remove Toner Modules and rock them to the left and right to redistribute toner.
- Confirm that Toner Modules are installed properly.
- Replace low or damaged Toner Modules.

Mottled Image

There is variation or mottling in the density of the image.

Solution

- Call a service representative to check the printer.

Shadowing

A residual image of a preceding page appears on subsequent pages.

Solution

- Call a service representative to check the printer.

Insufficient Gloss

When the printed image appears dull, it may indicate a problem with the Fuser Cleaning Roller or Fuser Unit.

Solutions

- Replace the Fuser Cleaning Roller (see page 89).
- Replace the Fuser Unit if getting to end of life (see page 93).

Back of Paper is Stained

There are toner stains on the back side of the paper.

Solution

- Paper containing unfused ink may have been pulled up through the Fuser Rollers, probably after a paper jam. (Most paper jams are best removed from the back of the printer.) Run several sheets of plain paper through the printer to clean these rollers.
- If problem persists call a service representative to check the printer.

Missing Print

A blank page is printed or a specific color is missing.

Solution

- Make sure all Toner Modules are installed correctly.
- Call a service representative to check the printer.

Partial Printing

When an image is partially printed, it may indicate improper fusing.

Solutions

- Use only recommended paper.
- Make sure that the correct Media Type is selected on the Operator Panel.
- Replace the Fuser Unit if it is at the end of its life.

TROUBLESHOOTING FOR MACOS

- Is the Macintosh computer connected to the network through Ethernet, and has the correct network port been selected? For more information on Macintosh setup see the *SuperScript Color Laser Network Guide*.
- Did you select the correct printer driver, zone, and printer name in the Chooser?
- If you renamed the printer in the Apple Utility, you must turn the printer off then on, and then reselect the printer under its new name in the Chooser.
- If you placed the printer in a new zone, be sure you reselected the zone and the printer name in the Chooser.

In the following example the printer's name changed. The default name for the printer is *SuperScript 4650N #*, where # is the sequential number of 4650N printers installed. If a user changes the name of SuperScript 4650 2 to Mary's Printer, the last printer in line will be reassigned the name *Superscript 4650 2*, and the print path must be changed using the Chooser for the system to work again 🍏

WINDOWS OS PARALLEL PRINTING PROBLEMS

This section describes solutions to problems that might appear when a computer is locally connected (with a parallel cable) to the printer. Only Windows and UNIX computers can be locally connected.

Nothing Printed

The printer does not indicate that a print job was received and nothing was printed.

Solution

Assure the bidirectional parallel cable is attached securely.

Nonsense is Printed

Content appears cryptic and does not make any sense.

Solution

- Assure that an IEEE 1284 compliant bidirectional cable is used.
- Assure that the computer provides an IEEE 1284 compliant parallel port.

Error Messages with Little or Nothing Printed

This may be a data communications problem between a Windows 95 or higher computer and the printer.

Solutions for Windows 95 or Higher Computers

One of, or a combination of, the following solutions may resolve the problem.

- With the printer driver open, click the Details tab to move it to the front. Click **Spool Settings** to open the Spool Settings dialog box. Clear the **Disable bidirectional support for this printer** radio button.
- From the Spool Settings dialog box, select **Print directly to the printer** radio button.
- Put the printer into unidirectional mode.
 1. From the printer Operator Panel, press the **OFFLINE** button.
 2. Press **MENU**.
 3. Press **NEXT** until **COMMUNICATIONS** appears.

4. Press **SELECT** and **COMMUNICATIONS PARALLEL PORT** will appear.
5. Press **SELECT**.
6. Press **NEXT** until **BIDI** appears.
7. Press **SELECT** and **ON** will appear.
8. Press **NEXT** until **OFF** appears.
9. Press **SELECT**.
10. Press **MENU**.
11. Press **ONLINE** to finish.

To return the printer to directional mode, repeat the steps, but select **ON** in Step 8.

Solutions for UNIX Computers

Put the printer into unidirectional mode.

1. From the printer Operator Panel, press the **OFFLINE** button.
2. Press **MENU**.
3. Press **NEXT** until **COMMUNICATIONS** appears.
4. Press **SELECT** and **COMMUNICATIONS PARALLEL PORT** will appear.
5. Press **SELECT**.
6. Press **NEXT** until **BIDI** appears.
7. Press **SELECT** and **ON** will appear.
8. Press **NEXT** until **OFF** appears.
9. Press **SELECT**.
10. Press **MENU**.
11. Press **ONLINE** to finish.

To return the printer to directional mode, repeat the steps, but select **ON** in Step 8.

CHAPTER 9

TECHNICAL SUPPORT

OVERVIEW

This chapter provides information about different resources for information and technical support, including

- How to reach NEC Technical Support for assistance
- How to order supplies and printer options
- How to obtain NEC service contracts
- SuperScript 4650 Series Printer Limited Warranty

ASSISTANCE NEARBY

Often, the best source for assistance is closer than you think. Before calling NEC, check out the options below.

Help From Within Your Company

If your organization is large and has purchased many NEC printers, the best source of assistance may be within your own company. Your company may have designated central support personnel that you can go to when you have any problems or when you need supplies such as paper or toner cartridges. These central support personnel can then contact the appropriate dealer or NEC support staff.

Help From Your Dealer

The dealer from whom you purchased your printer is backed by complete support resources and programs within NEC. Your dealer can provide you with details on all available support options.

NEC TECHNICAL SUPPORT

NEC Technical Support is available to answer your questions, Monday through Friday, 8:30 a.m. to 8:00 p.m., Eastern Standard Time.

Please have the following printer information ready when you contact NEC:

- Model number
- Serial number

- Page count (shown on the Printer Settings page)
- Date and place of purchase
- NEC Maintenance agreement number (if printer is already under agreement)

NEC Technical Support can help you with the initial installation of this product. Please contact your operating system or network software vendor if you require assistance in optimizing or customizing your system.

How to Contact NEC

There are a number of ways to contact NEC or receive information about technical issues, products, and services.

Contacting NEC Technical Support or Customer Service by Telephone

In North America, call 1-800-632-4650 to speak to a representative about technical support, extended warranties, repairs, or customer service.

Reaching NEC on the World Wide Web

NEC's web site provides up-to-date product information and includes links to NEC's FTP site and e-mail address. Using your Web browser, open this URL: <http://www.nectech.com>

This URL is available 24 hours-a-day.

- Search the Knowledge Base for compatibility charts, specifications, white papers, technical drawings, and various other helpful documents.
- Explore the FAQ pages for common problems and solutions.
- Visit the Message Board to post your technical questions or to search a vast library of previous technical support solutions.
- Browse Service Programs to learn about ways to extend or enhance your existing warranty.
- Use the Dealer Locator to find a NEC Technologies' sales or service center near you.

Sending Internet Electronic Mail

You can e-mail your questions to NEC. NEC will respond within three business days. Send e-mail messages to: tech-support@nectech.com

Sending a Facsimile Transmission

You can fax questions or comments to NEC at 1-978-742-7049

Be sure to indicate the number where NEC can telephone or fax a response.

Using FastFacts—NEC's Information Retrieval System

NEC's technical support staff have created technical notes and tips for using NEC products. You can order these documents by touchtone menu and have these automatically sent to your fax machine.

To use NEC FastFacts in the US or Canada, call 1-630-467-4363

Follow instructions for ordering documents and include your return fax number.

Reaching the NEC Bulletin Board System

You can use the NEC Bulletin Board System (BBS) to send messages and transfer files. The BBS number is 1-978-742-8706

Writing NEC

You can mail your questions and comments to NEC Technical Support at the following address:

Printer Technical Support, Dept. #3390
NEC Technologies, Inc.
305 Foster Street
Littleton, MA 01460-2004

ORDERING SUPPLIES

To order printing supplies, contact your SuperScript 4650 Series dealer. You can also call 1-800-632-2326 to locate the NEC supplies dealer nearest you or purchase supplies directly from NEC.

The tables below list available parts and part numbers. The print media listed have been tested to produce high quality color output on the SuperScript 4650 Series.

Printer Options

Part	Order #
250-Sheet Paper Tray 2	4005
250-Sheet Legal Tray	4004
Network Interface Upgrade Kit	4010

Printer Supplies

Part	Order #
Black Toner Module	20-200
Yellow Toner Module	20-201
Magenta Toner Module	20-202
Cyan Toner Module	20-203
Belt Cartridge (Photoconductor Belt Module)	20-205
12K Kit — Contains items that all need to be replaced at the 12,000-page interval, including 1 Fuser Cleaning Roller, 1 bottle of Fuser Oil, and 1 Toner Collector. These items can also be purchased separately using these order #s:	20-210
Fuser Cleaning Roller	20-211
Fuser Oil Bottle	20-212
Toner Collector	20-213
Fuser Unit	20-219
Ozone Filter	126164

Print Media

Part	Order #
Premium Color Laser Paper - 24 lb. Bond	70-510
Premium Color Laser Paper - 60 lb. Cover	70-511
Ultra Glossy Color Laser Paper - 100 lb. Text	70-515
Premium Transparency Film	70-520
NEC Premium Paper Sampler	79-001

NEC WARRANTY AND SERVICE

Your SuperScript 4650 Series printer comes with a one-year onsite warranty. The complete warranty is provided below. Packing and shipping instructions are provided in Appendix D. All repair requests must be prequalified by calling NEC Customer Service at 1-800-632-4650.

NEC Service Contracts

After the initial one-year warranty period, fee-based technical support and service is available. NEC Customer Service and its dealers offer a complete range of services, including onsite repairs and maintenance. Several maintenance agreement programs are available to meet your needs and budget, including:

- Onsite agreements on a yearly or multi-year basis which ensure priority response from NEC Customer Service and Support
- Per-incident repair services for scheduled maintenance.

To discuss an extended warranty or a service contract, contact NEC Customer Service at 1-800-632-4650.

note: This product requires specific computer hardware and software configurations to operate as specified by NEC. It is the owner's responsibility to supply these supporting items, and where necessary, to reconfigure and/or furnish additional hardware and/or software as required or specified by NEC to assure normal product operation. NEC incurs no obligation to furnish or install said items. NEC reserves the right to modify or update SuperScript software as it deems necessary and to determine distribution policies for such changes to existing owners.

SUPERSCRIPT 4650 SERIES LIMITED WARRANTY

NEC TECHNOLOGIES, INC. (hereinafter NECTECH) warrants this Product to be free from defects in material and workmanship and agrees to repair or replace any part of the enclosed unit which proves defective under these terms and conditions.

Warranty Period

Labor is warranted for one (1) year from the date of the first consumer purchase. Parts are warranted for one (1) year from the date of the first consumer purchase. The Toner Modules are warranted until they run out of toner or until their usable life expires, whichever occurs first. The Belt Cartridge is warranted until its usable life expires (about 12 months).

Warranty Coverage

This warranty may be enforced only by the first consumer purchaser and it is not transferable.

Except as specified below, this warranty covers all defects in material or workmanship in this Product. The following are not covered by this warranty:

1. Any Product which is not distributed in the U.S.A. or Canada by NECTECH or which is not purchased in the U.S.A. or Canada by the first consumer purchaser.
2. Any Product on which the serial number has been defaced, modified, or removed.
3. Damage, deterioration, or malfunction resulting from:
 - a. Accident, misuse, abuse, neglect, fire, water, lightning, or other acts of nature, improper storage, unauthorized product modification, or failure to follow instructions supplied with the Product.
 - b. Alteration, repair, or attempted repair by anyone not authorized by NECTECH.
 - c. Any shipment of the Product (claims must be presented to the carrier).
 - d. Removal or installation of the Product.
 - e. Any other cause which does not relate to a Product defect.

4. Cartons, carrying cases, batteries, external cabinets, magnetic tapes, or any accessories used in connection with the Product.
5. This warranty covers only NECTECH-supplied components. Service required as a result of third party components is not covered under this warranty.

Warranty Support

NECTECH will pay labor and material expenses for covered items, but we will not pay for the following:

1. Removal or installation charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls.
3. Payment of shipping and related charges incurred in returning the Product for warranty repair.

Obtaining Warranty Service

All service calls must be qualified by a NECTECH technical support specialist. A service request can be made by calling 1-800-632-4650. If necessary NECTECH can dispatch a technician to your site within 24 hours (excluding holidays and weekends).

NECTECH may send a replacement printer which will be, at NECTECH's option, new or like new, and will meet all of the specifications of the replaced printer. The replacement printer will be shipped for delivery within 3 business days at NECTECH's expense within the United States or Canada, upon receipt of your defective printer, or upon receipt of a major credit card number to guarantee receipt of the defective printer. The warranty period on any replacement printer shall be either 1) the remaining balance of the original one (1) year term, or 2) ninety (90) days, whichever is longer. With the exception of the duration, the terms and conditions of this warranty shall apply to any replacement printer. No service will be provided outside of the United States or Canada.

NECTECH requires that you provide the original bill of sale or receipt as proof of purchase in order to obtain warranty service. Please retain such proof of purchase with your records.

You can contact Customer Service and Technical Support by dialing 800-632-4650.

Limitation of Damages

The following describes NECTECH's policy on limitation of damages and implied warranties:

NECTECH's sole liability for any defective product is limited to the repair or replacement of the product at our option. NECTECH shall not be liable for:

1. Damage to other property caused by any defects in this product, damages based upon inconvenience, loss of use of the product, loss of time or data, commercial loss; or
2. Any other damages, whether incidental, consequential, or otherwise.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including but not limited to, the implied warranties of merchantability or fitness for a particular purpose. Some states do not allow the exclusion of implied warranties or the limitation or exclusion of liability for incidental or consequential damages. Therefore, the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For information, telephone 1-800-632-4650

Note: All Products returned to NECTECH for service MUST have prior approval; this may be obtained by calling the above number. Any unit shipped to NECTECH without authorization may be returned freight collect.

This Product is warranted in accordance with the terms of this limited warranty. Consumers are cautioned that Product performance is affected by system configuration, software, the application, customer data, and operator control of the system, among other factors. While NECTECHNOLOGIES, INC. Products are considered to be compatible with many systems, the specific functional implementation by the customers of the Product may vary. Therefore, the suitability of a Product for a specific purpose or application must be determined by the customer and is not warranted by NECTECH.

APPENDIX A

PRINTER SPECIFICATIONS

OPERATING SPECIFICATIONS

Print speed

Letter: 4-8 pages per minute color, 16 ppm monochrome

Print method

- Electrophotographic
- Disposable color toner modules (C, Y, M, and K)

Recommended Duty Cycle

Monochrome: 20,000 prints per month

Color: Up to 5,000 full color prints per month

Processor

Based on 64-bit IDT 64475, 200 MHz RISC processor

Random Access Memory (SDRAM DIMMs)

- 128 MB standard for 4650NX
- 96 MB standard for 4650N
- 32 MB standard for 4650
- 256 MB Maximum for all models

Internal IDE Hard Disk

For storing fonts, forms, spool files, and html pages
Not included with, or upgradable for, the 4650 model

SCSI Interface

To work with a Umax Astra® 1200S, 1220S, 2400 or HP 6300C scanner.

To work with a SCSI Iomega Zip® 100MB or Zip® 250MB drive.

Printer Language Emulations

- PostScript Level 3
- PCL 5e except for 4650 model

Automatic Jam Recovery

Automatically reprints jammed pages

Color Support

- Apple® ColorSync 2.12
- Windows 95 ICM
- All ICC-compliant color management systems

Interface Ports

- IEEE 1284-compliant parallel
- Ethernet 10/100Base-TX (except 4650 without a NIC)

Power Requirements

- 120V Model-120 VAC, ± 10%, 60 Hz, 8.3A

Power Consumption

- 1000 W maximum, 575W average during operation
- 25 W maximum, Sleep mode

Noise Level

Operating: less than 55 dBA

Standby: less than 48 dBA

Temperature

Operating: 50°F to 90.5°F (10°C to 32.5°C)

Non-operating: 41°F to 95°F (5°C to 35°C)

Humidity

Operating: 20-80% RH (non-condensing)

Non-operating: 10-80% RH (non-condensing)

Dimensions (without options)

Width: 19.7" (500 mm)

Depth: 19.3" (490 mm)

Height: 15.3" (388 mm)

Weight

64 lb (29 kg) without consumables, 90 lb (41 kg) shipped

Administrative Compliance

- UL 1950 2nd Edition

- CSA C22.2 950M89
- FCC Class B for the 4650, FCC Class A for the 4650N(X)
- Energy Star Compliant

Clearance Space

- Left Side:** 4 inches
- Right Side:** 20 inches
- Front:** 28 inches
- Back:** 8 inches

Printable Area

- Paper:** 5 mm from top, left, and right edge
- Transparencies:** 10 mm from all edges

Paper Handling

Supported Paper Sizes

SuperScript 4650 Series printer drivers support the following paper sizes.

Paper Size	Inches	Millimeters
Letter	8.5 x 11	216 x 279
Legal	8.5 x 14	216 x 356
A4	8.3 x 11.7	210 x 297
Executive	7.25 x 10.5	184 x 267
UK Quarto*	8 x 10	203 x 254
Folio*	8.5 x 13	216 x 330
Com10 Envelope	4.13 x 9.5	105 x 241

*Not supported in the PCL5e printer driver.

note: To print Legal size paper, you must install the optional Legal Tray in PaperTray 1 or PaperTray 2.

Supported Media

- Plain paper
- Standard transparencies
- Glossy papers
- Laser-quality labels
- Heavy (thick) paper stock

- Envelopes

Recommended Media

Use NEC Premium papers (listed below) to ensure the best quality printed output. If you do not have the NEC Premium papers, try to match them as closely as possible for the best printing results.

Premium Color Laser Paper 24 lb. Bond: A bright paper with a super smooth finish for brilliant color reproduction. Use this for correspondence, proposals, charts, graphs, and illustrations.

(NEC Order No. 70-510)

Premium Color Laser Paper 60 lb. Cover: A heavier stock that is ideal for report covers, mailers, greeting cards, and invitations.

(NEC Order No. 70-511)

Ultra Glossy Color Laser Paper: Has a double-sided glossy finish that is preferred for professional printing and photographic art. Use this for data sheets, brochures, and client presentations.

(NEC Order No. 70-515)

Premium Transparency Film: Use this for brilliant projected images.

(NEC Order No. 70-520)

NEC Premium Paper Sampler: A sampler is available that contains a selection of all the NEC Premium Papers.

(NEC Order No. 79-001)

Recommended Paper Weights

Plain Paper: 16 to 24 lb. bond (60 to 90 g/m² bond)

Thick Stock: Up to 60 lb. cover/90 lb. index (160 g/m²)

Paper Sources

Standard Paper Tray 1: 250-sheet capacity

Optional Paper Tray 2: 250-sheet capacity

Paper Output

Main Output Tray—250-sheet capacity

APPENDIX B

MEDIA SPECIFICATIONS

This appendix has general guidelines for purchasing and storing paper and other media for your NEC SuperScript 4650 Series printer. Your printer supports a wide variety of print media, including

- Plain paper
- Transparencies
- Glossy papers
- Laser-quality labels
- Heavy paper stock
- Envelopes

Recommended Media

Use NEC Premium papers (listed below) to ensure the best quality printed output. If you do not have the NEC Premium papers, try to match them as closely as possible for the best printing results.

Premium Color Laser Paper 24 lb. Bond: A bright paper with a super smooth finish for brilliant color reproduction. Use this for correspondence, proposals, charts, graphs, and illustrations.

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(NEC Order No. 70-515)

Premium Transparency Film: Use this for brilliant projected images.

(NEC Order No. 70-520)

NEC Premium Paper Sampler: A sampler is available that contains a selection of all the NEC Premium Papers. (NEC Order No. 79-001)

Recommended Paper Weights

Plain Paper: 16 to 24 lb. bond (60 to 90 g/m² bond)

Thick Stock: Up to 60 lb. cover / 90 lb. index (160 g/m²)

Paper Handling Considerations

Transparency Film: When you are printing on transparency film, only load the transparencies to the mark indicated on the paper tray.

Envelopes: The printer accepts Commercial 10 envelope size. The leading edge of an envelope that feeds into the printer must be straight. The fold must be firmly creased and be no thicker than two paper thicknesses. As a rule, the larger the envelope is, the more difficult it is to feed properly. You should load envelopes with the flap edge to the left. The address side must face up and the flap side must face down.

Adhesive Labels: Only use adhesive labels that are recommended for use in laser printers.

Heavy Print Stock: Excessive use of heavy stocks may cause premature wear in addition to causing excessive wear of print mechanisms.

Preprinted Forms: During the print operation, heat applied to preprinted forms can remove ink from the form and leave residue (called offset) inside the printer. In addition to offset residue problems, ink residues may generate harmful gases and emissions. Note the following considerations. Tell the commercial printer who will be printing your forms that you will be using them in a laser printer. Forms should be printed with heat-resistant inks that do not vaporize or generate harmful emissions at temperatures greater than 392°F (200°C) for 0.1 second. Do not use paper printed with low-temperature inks, flammable inks, or inks that are affected by the resin components found in toner.

Care must be taken to avoid changing the moisture content of paper being preprinted or using materials that change the electrical or handling properties of the paper.

Forms should be sealed in moisture-proof wrapping after pre-printing to prevent moisture changes during storage.

Choosing Paper and Media

Choosing quality paper is your best bet for avoiding many of the output problems common to heat-intensive printing. It is the most effective measure you can take to achieve consistently good results from your printer. Using the NEC Premium papers described above will ensure good results. Generally, paper manufactured for photocopying has good print quality and paper handling characteristics. Smoother surface paper generates sharper output resolution and detail. Try samples of any paper to determine if the printer performance and print quality are acceptable to you. Textured envelopes do not print well in laser printers. Envelopes constructed with diagonal seams work better than envelopes with a straight seam.

When purchasing paper

- Check that the media meets all specifications noted in this chapter.
- Order a small quantity to test with your printer and your work environment. Some paper vendors offer print quality guarantees to ensure that the output meets a predetermined standard when used with laser printers. If you do not like the paper, you may be able to return it for another type — but test that one, too.
- Tell the supplies buyer, the prospective seller, and commercial letterhead printer that you will be using this media in a laser printer.

note: NEC offers a media sampler of premium papers. One is included in the Starter kit that comes with your printer. See page 110 for information about ordering another.

Storing Printer Supplies

Avoid storing printer supplies, such as Toner Modules and paper in direct sunlight, near an open flame, or in humid or dusty places. Only use Toner Modules that have been designed exclusively for use with this printer.

Paper and Print Media You Should NOT Use in This Printer

Paper jams or poor print quality may result from using print media that is not recommended for use in this printer or from print media that is damaged. Do not use media with the following characteristics.

- Paper that does not meet the size and weight specifications of this printer
- Paper that is wrinkled, curled, torn, or bent
- Paper that is wet
- Paper that is extremely rough or heavily textured
- Paper that is sticky or has an adhesive surface
- Paper that is pasted
- Thermal paper
- Carbon paper
- Paper that is unable to withstand a temperature of 392°F.
- Paper that is stapled or clipped
- Paper that is labeled “NOT recommended for use in laser printers”
- Label stock with the backing sheets exposed between the individual labels
- Multiple copy perforated checks
- Envelopes with thick or uneven edges
- Envelopes with transparent windows
- Envelopes with clasps attached to them
- Embossed envelopes
- Envelopes that contain more than 25% cotton fiber

APPENDIX C

SAFETY INFORMATION

This chapter provides safety information and product specifications for the SuperScript 4650 Series printer. As you operate your printer, please be aware of the following safety considerations.

Ozone Emission

The corona assemblies found in laser printers and copiers generate ozone gas (O₃) as a by-product of the electrophotographic process. Ozone is only generated while the printer is printing (while the coronas are energized).

UL Standards for Ozone

The only existing standard for ozone emissions has been established by Underwriters Laboratory (UL). All SuperScript family printers meet this standard when shipped from the factory to our customers.

Employer Responsibilities

Because ozone can be an irritant, various regulatory agencies have established limits to the amount of ozone to which employees may be exposed. The employer is responsible for providing a safe work environment that meets the agencies' standards.

Recommendations for Minimizing Ozone Exposure

Almost all ozone concerns arise from abnormal site or operating conditions. The following conditions may generate an ozone complaint:

- Installation of multiple laser printers in a confined area
- Extremely low relative humidity
- Poor room ventilation
- The exhaust port of the printer is directed towards the face of personnel
- The existing ozone filter is in poor condition
- Long, continuous printing combined with any of the above

Inspect your work environment for the operating conditions listed above if you believe ozone emissions are a problem in your area. Some people may be ultra-sensitive to ozone odor. If these situations are encountered, it is advisable to position the printer away from the sensitive user.

Laser Safety

This printer is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. This means that the printer does not produce hazardous laser radiation.

Since radiation emitted inside the printer is completely confined within protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.

CDRH Regulations

The Center of Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured after August 1, 1976. Compliance is mandatory for products marketed in the United States. The printer's rear panel indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

Caution! Use of controls, adjustments, or performance of procedures other than those specified in this user's guide may result in hazardous radiation exposure.

FCC Statement

(For United States Use Only)

Federal Communications Commission Radio Frequency Interference Statement.

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from the one to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

Use a shielded and properly grounded I/O cable to ensure compliance of this unit to the specified limits of the rules.

Since the SuperScript models 4650N and 4650NX come with a network interface card (NIC) installed, they meet the requirements of FCC Class A when connected to an Ethernet cable.

(For Canadian Use Only)

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A présentes dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Declaration of Conformity

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party: NEC Technologies, Inc. Address: 1250 N. Arlington Heights Road, Itasca, Illinois 60143 Telephone Number: 630-467-5000
--

Type of product: Laser Printer

Equipment Classification: Class A Peripheral
Model: SuperScript 4650N and SuperScript 4650NX

Equipment Classification: Class B Peripheral
Model: SuperScript 4650



We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC rules.

APPENDIX D

MOVING YOUR PRINTER

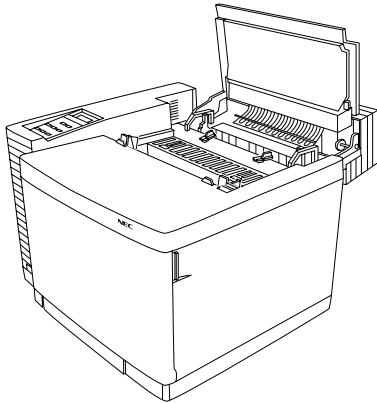
This appendix gives you directions on how to safely move or ship your printer. Please follow these instructions carefully. Failure to do so may result in damage to the printer.

MOVING THE PRINTER LOCALLY

To move the printer locally means that it can either be carried by two people or moved on a cart to its new location. Follow these steps:

1. Turn the printer off and allow it to cool for 15 minutes.
2. Remove any cables, plugs, and paper trays.
3. Remove the optional Paper Tray 2 Unit if attached. (Reverse the directions given on page 28.)

A



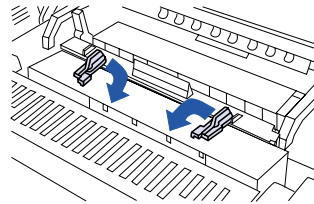
WARNING! The printer must be kept level at all times unless ALL oil is removed.

4. Open the Top Cover (A).
5. Open the Lock Tabs inside (B).
6. Carefully remove the Fuser Oil Bottle (C).

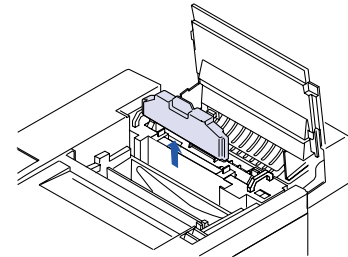
note: Hold a sheet of paper under the Fuser Oil Bottle so no oil drips back into the printer.

7. Place the Fuser Oil Bottle in an oil-proof container, such as a plastic bag, until you are ready to reinstall it.
8. Use the Oil Syringe provided with your printer (or an eye dropper) to remove any excess oil from the fuser area. Deposit in plastic dish and discard (D).
9. Clean out any extra oil residue with several paper towels (E). If you are also shipping the printer, fill the space normally occupied by the Oil Bottle with paper towels to absorb any residual oil during shipment.

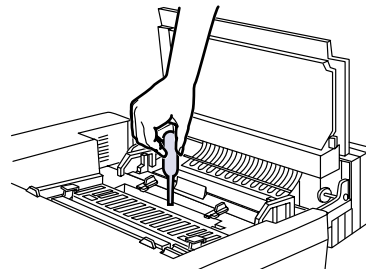
B



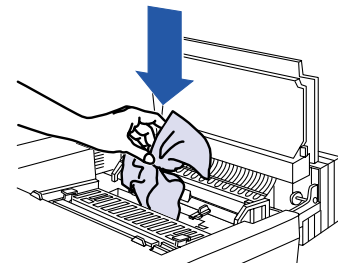
C



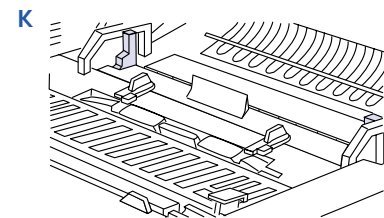
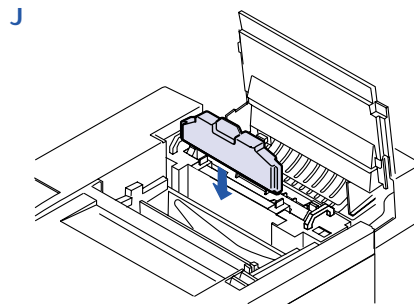
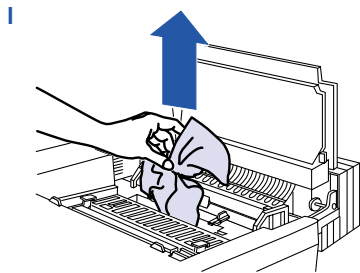
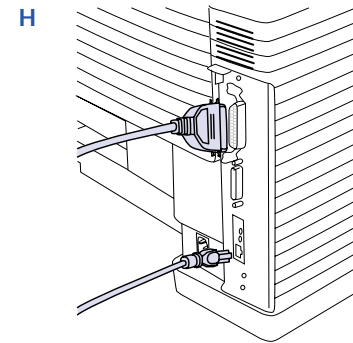
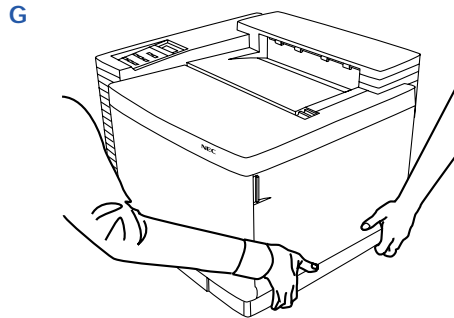
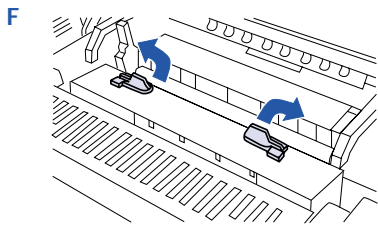
D



E



10. Close the Locking Tabs and Top Cover (**F**).
11. Two adults should lift the printer onto a sturdy, level cart (**G**).
12. Move the printer to its new location.
13. Connect the interface cables (**H**).
14. Open the Top Cover and remove any paper towels from the fuser area (**I**).
15. Reinstall the Fuser Oil Bottle (**J**). Close the Lock Tabs (**K**) and Top Cover.
16. Plug the printer in and turn the power on. Check to make sure no error messages are showing on the Operator Panel.



It takes two adults to move this printer!



SHIPPING THE PRINTER

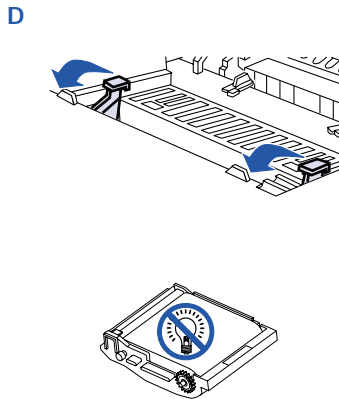
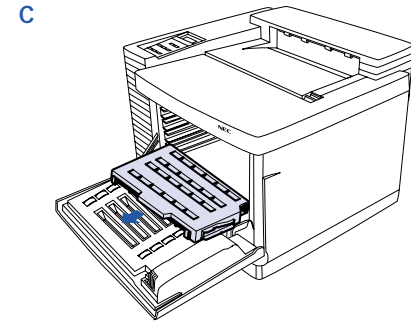
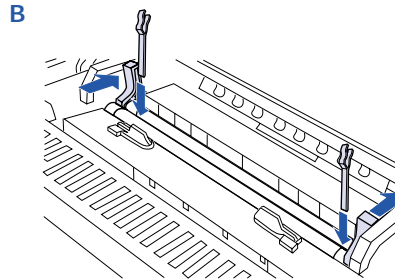
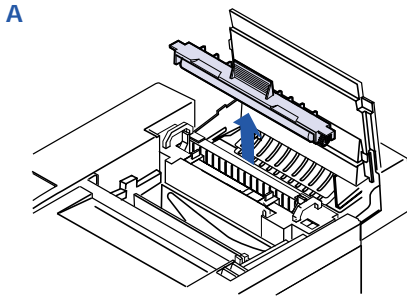
To ship your printer long distance, follow steps 1 —9 under “Moving Your Printer Locally” on page 119. Then proceed with the following instructions.

note: If you are returning the printer for service, you do not need to return the Power Cord, Toner Modules, Belt Cartridge, Fuser Oil Bottle, or Fuser Cleaning Roller.

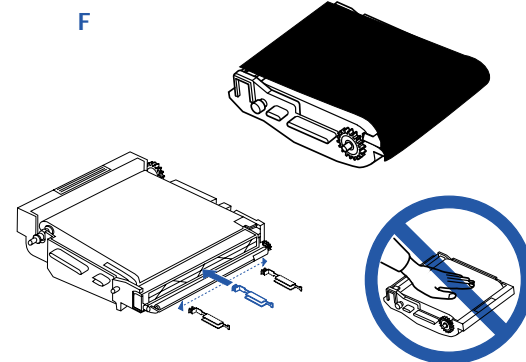
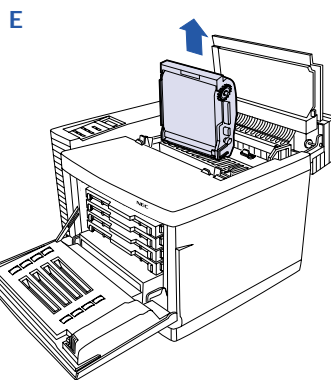
1. Remove the Fuser Cleaning Roller (A). Make sure the Fuser Oil Bottle is out.
2. Open the Tension Release Tabs and insert the orange Tension Release Pins removed when you originally

unpacked your printer. Insert the Tension Release Pins at each end of the fuser as shown (B).

3. Open the Front Cover and remove the Toner Modules (C). **Do not remove the Belt Cartridge first!**
4. Repack the Toner Modules in their original packaging.
5. Flip up the Belt Cartridge Locking Levers (D).
6. Remove the Belt Cartridge (E) and clean according to directions found on page 90.
7. Wrap the Belt Cartridge in its original black wrapper (F).



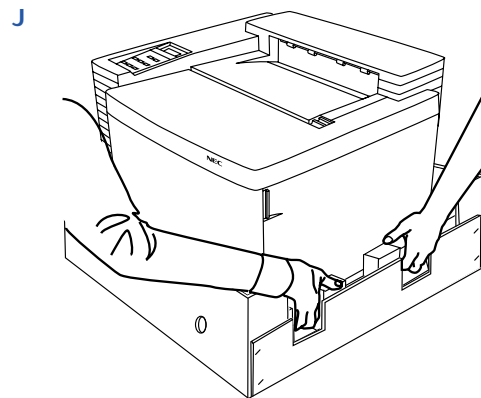
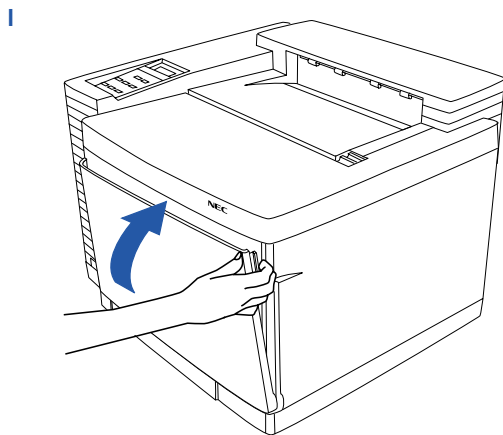
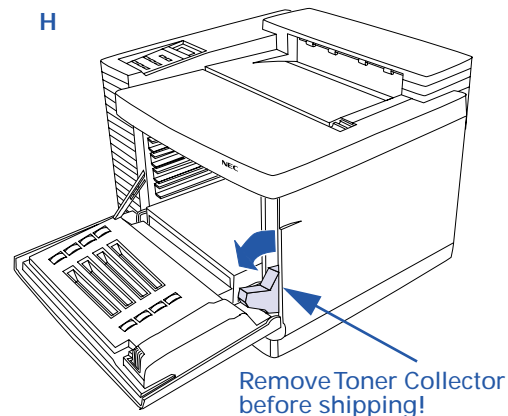
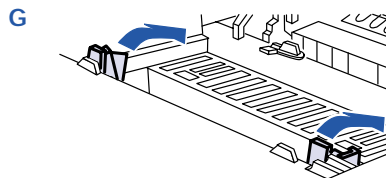
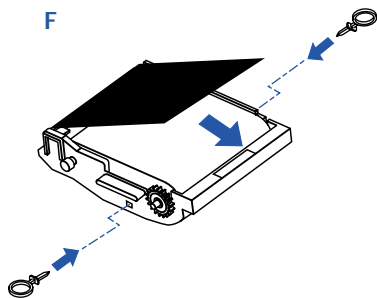
Avoid exposing the Belt Cartridge to light!



Avoid touching the Belt Cartridge!

8. Replace the Tension Release Pin on each side. Insert the pin until you feel some resistance, then move it forward slightly and slide it in the rest of the way (F). (The Tension Release Pins protect the Belt Cartridge and its cleaning blade during its move.)
9. Snap down the Belt Cartridge Locking Levers (G).
10. Remove and discard the used Toner Collector (H). Leave the Toner Collector chamber empty. **Do not ship your printer with a used Toner Collector.**
11. Close the Front and Top Covers (I).

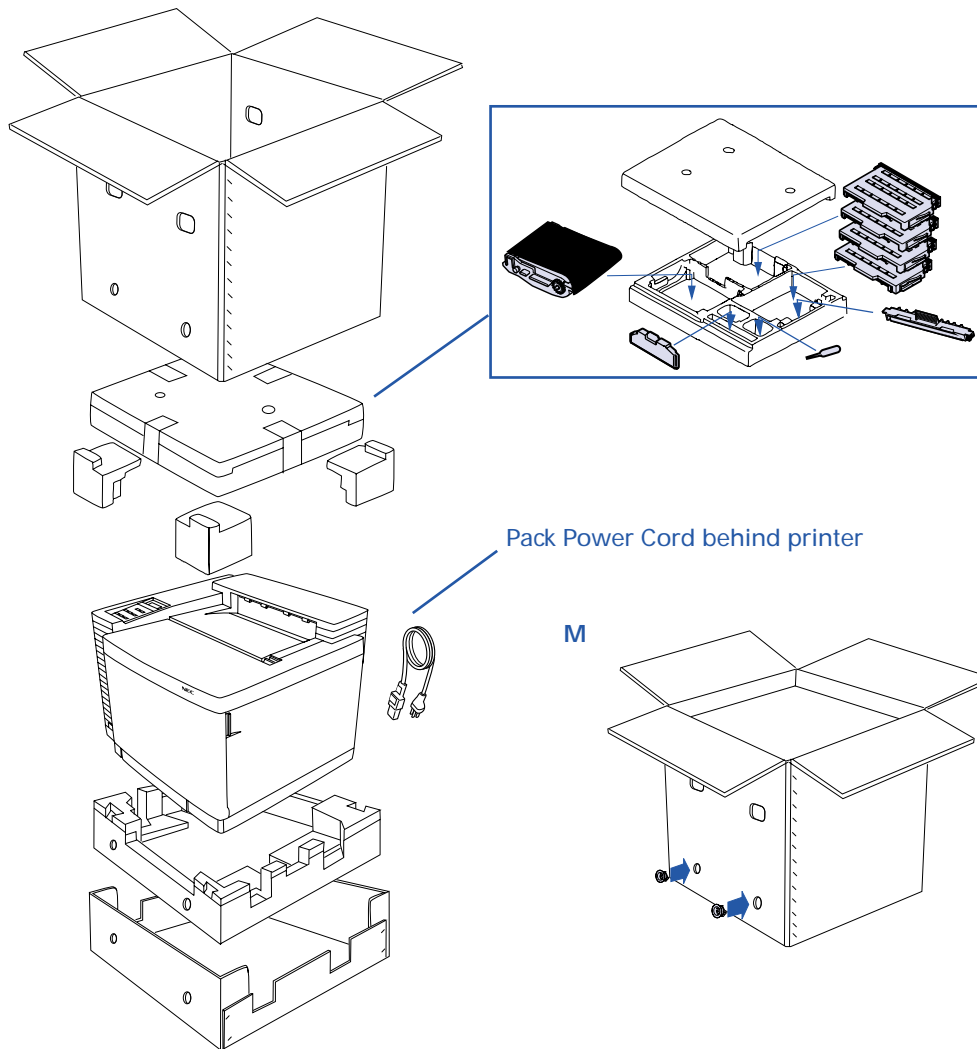
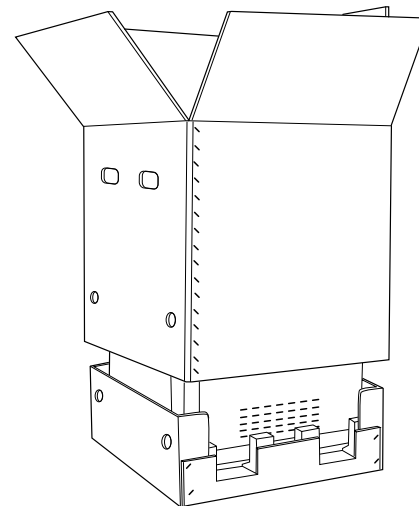
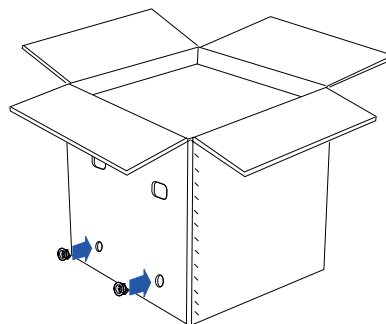
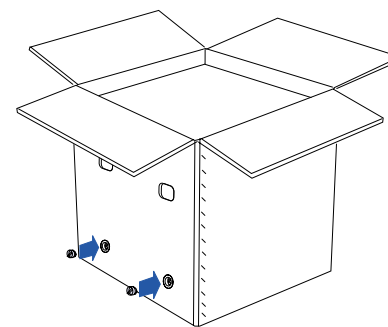
12. Pack any accessories in the styrofoam box. See next page.
13. With another person's help, put the printer into a plastic bag.
14. Place the printer into the base tray of the shipping carton (J).



It takes two adults to move this printer!

15. Pack the printer for shipment as shown (**K**).
16. Do not forget the Power Cord and User's Guide (unless you are shipping the printer for **service**). Slide the box cover all the way down (**L**).
17. Attach the shipping box to its base tray. Insert the screw holders first (**M**), then the box screws themselves (**N**).

18. Tape the top of the box shut
19. Put shipping straps vertically around the box.
20. When the printer gets to its destination, unpack the printer and clean the Belt Cartridge again according to directions found on page 90.

K**L****M****N**

- Numerics
 - 10 Mbps 2
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 - 10/100Base-TX 2
 - 100 Mbps Ethernet 2
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 - 4600N printer 21
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 - installing 16
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- C
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