

User Manual

Tektronix

**Phaser® 550
Color Printer**

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Phaser® 550 Warranty

Tektronix warrants that the Phaser 550 will be free from defects in materials and workmanship for a period of one (1) year from the date of shipment and that Customer Replaceable Components (CRCs)* in the Phaser 550 will be free from defects in materials and workmanship for a period of ninety (90) days from the date of shipment or six months where longer periods are required by law. If the product or its CRCs prove defective during their respective warranty periods, Tektronix, at its option, will either repair the defective product or CRC without charge for parts and labor, or provide a replacement in exchange for the defective product or CRC.

This warranty applies only to products and CRCs returned to the designated Tektronix depot or the Tektronix authorized representative from which the product or CRC was originally purchased. For products or CRCs returned to other locations, Customer will be assessed the applicable service charge. The above limitation shall not apply within the European Economic Area, where products or CRCs may be returned for warranty service to the nearest designated service depot regardless of the place of purchase.

In order to obtain service under this warranty, Customer must provide the applicable office of Tektronix or its authorized representative with notice of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. Customer shall be responsible for packaging and shipping the defective product or CRC to the service center designated by Tektronix or its representative, with shipping charges prepaid. Tektronix or its representative shall pay for the return of the product or CRC to Customer. Customer shall be responsible for paying any associated taxes or duties.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. Tektronix shall not be obligated to furnish service under this warranty:

- a) to repair damage resulting from attempts by personnel other than Tektronix representatives to install, repair or service the product or CRC;
- b) to repair damage resulting from improper use or connection to incompatible equipment;
- c) to repair any damage or malfunction caused by the use of non-Tektronix supplies or consumables;
- d) to repair a product or CRC that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product or CRC;
- e) to repair damage or malfunction resulting from failure to perform user maintenance and cleaning at the frequency and as prescribed in the user manual; or
- f) to repair this product after the limit of its duty cycle of 20,000 pages per month has been reached; all service thereafter shall be billed on a time and material basis.

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* Customer Replaceable Components in the Phaser 550 are fuser, imaging unit, transfer kit (transfer roller and waste bin) and toner cartridges.

Users safety summary

Terms in manual: CAUTION Conditions that can result in damage to the product.
WARNING Conditions that can result in personal injury or loss of life.

Power source: Do not apply more than 250 volts RMS between the supply conductors or between either supply conductor and ground. Use only the specified power cord and connector. Refer to a qualified service technician for changes to the cord or connector.

Operation of product: Avoid electric shock by contacting a qualified service technician to replace fuses inside the product. Do not operate without the covers and panels properly installed. Do not operate in an atmosphere of explosive gases.

Safety instructions: Read all installation instructions carefully before you plug the product into a power source.

Terms on product: CAUTION A personal injury hazard exists that may not be apparent. For example, a panel may cover the hazardous area. Also applies to a hazard to property including the product itself.
DANGER A personal injury hazard exists in the area where you see the sign.

Care of product: Disconnect the power plug by pulling the plug, not the cord. Disconnect the power plug if the power cord or plug is frayed or otherwise damaged, if you spill anything into the case, if product is exposed to any excess moisture, if product is dropped or damaged, if you suspect that the product needs servicing or repair, and whenever you clean the product.

Ground the product: Plug the three-wire power cord (with grounding prong) into grounded AC outlets only. If necessary, contact a licensed electrician to install a properly grounded outlet.

Symbols as marked on product:

DANGER high voltage:



Protective ground (earth) terminal:



Use caution. Refer to the manual(s) for information:



WARNING: If the product loses the ground connection, usage of knobs and controls (and other conductive parts) can cause an electrical shock. Electrical product may be hazardous if misused.


This product is certified under IEC 825 as a Class 1 Laser Product:

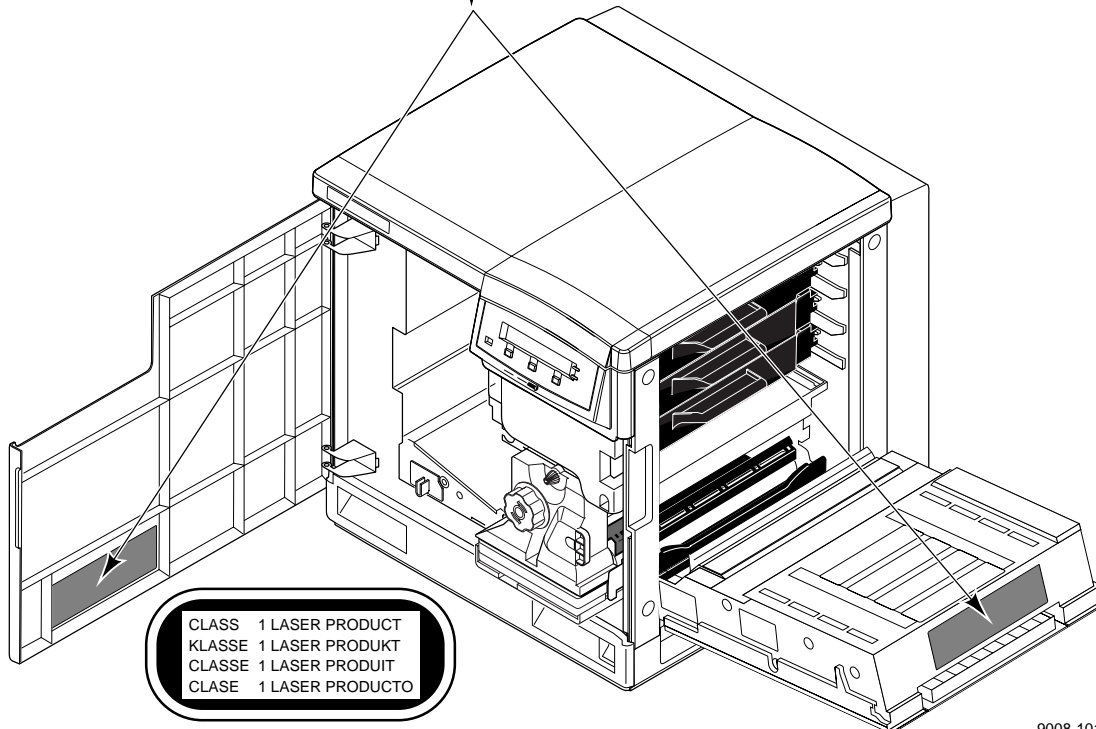


WARNING: For your protection, do not defeat any interlocks.

CAUTION: This product utilizes a laser. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Do not open covers and do not repair yourself. Refer servicing to qualified personnel.

When you operate this equipment, the socket outlet should be near the equipment and be easily accessible.

<p>DANGER: Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.</p>	<p>CAUTION: Invisible laser radiation when open and interlocks defeated. AVOID DIRECT EXPOSURE TO BEAM.</p>	<p>VORSICHT: Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. NICH DEM STRAHL AUSSETZEN.</p>	<p>ATTENTION: Rayonnement laser invisible dangereux en cas d'ouverture et lorsque la sécurité est neutralisée. EXPOSITION DANGEREUSE AU FAISCEAU.</p>	 Class 3B	
<p>PELIGRO: Cuando se abre y se invalida el bloqueo, se producen radiaciones invisibles de láser. EVITESE LA EXPOSICIÓN DIRECTA A TALES RAYOS.</p>	<p>VARNING: Osynlig laserstrålning när denna del är öppnad och spärrar är urkopplade. STRÅLEN ÄR FARLIG.</p>	<p>VARO! Näkymätön avattaessa ja suojalukitus ohitettaessa olet alttiina lasersäteilylle. ÄLÄ KATSO SÄTEESEN.</p>	<p>VARNING: Osynlig laserstrålning när denna del är öppnad och spärrar är urkopplade. BETRAKTA EJ STRÅLEN.</p>	<p>ADVARSEL: Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. UNNGÅ UD ÆTTELSE FOR STRÅLING.</p>	<p>ADVARSEL: Usynlig laserstrålning når deksel åpnes og sikkerhedsbrytes. UNNGÅ EKSPONERING FOR STRÅLEN.</p>
<p>PJQT4521ZA</p>					



FOR USERS IN NORWAY

VARNING! OM APPARATEN ANVANDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

Tekniska specifikationer för lasern

Uteffekt:	5 mW max.
Våglängd:	780 nm
Effektgrad för stråining:	Kontinuerlig

KLASS 1 LASER APPARAT

Apparaten skall anslutas till jordat uttag när den ansluts till ett Nätverk.

FOR USERS IN JAPAN

This equipment is in the 2nd Class category (information equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council For Interference by Information Technology Equipment aimed at preventing radio interference in such residential area.

When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

Contents

1 Introduction

Ordering supplies 1-4

2 Getting Set Up

At a glance 2-1

Setting up the printer 2-2

 What you get with your printer 2-2

 Printer box 2-2

 Standard accessories box 2-2

 Optional accessories 2-4

 Registering your printer 2-5

 Removing the packing material 2-5

 Installing the optional Lower Tray Assembly 2-6

 Installing the toner cartridges 2-8

 Installing the fuser 2-10

 Installing the imaging unit 2-12

 Installing the output tray 2-16

 Adding paper or transparencies 2-17

Connecting the printer 2-20

 Printer ports 2-20

 Parallel connection 2-22

 PhaserShare™ network and serial connections 2-23

 SCSI connections 2-23

 Turning on the printer 2-24

 What happens at power-up 2-25

 When the printer is ready for operation 2-25

Selecting a language for the front panel 2-26

Making a demonstration print 2-27

Installing the printer's software 2-28

 PC software 2-28

 PC: Software for Microsoft Windows 95 2-29

 PC: Software for Microsoft Windows 3.1 2-32

 PC: Updating the driver software for Windows NT 2-35

 PC: DOS and setting up ports 2-39

- Macintosh software 2-40
 - Using the installer to load software 2-42
 - LaserWriter 8.x setup 2-43
 - Phaser 550 GX driver 2-46
- Workstation users 2-47
- What next? 2-48

3 Printing

- Which platform? 3-1
 - Printing from Windows 95 3-2
 - Printing from Windows 3.1 and Windows NT 3-3
 - Printing from a PC: DOS 3-4
 - Printing from a UNIX or VMS workstation 3-5
 - Printing from a Macintosh 3-7
 - Printing from specific applications 3-8
- Selecting print features 3-9
 - Print-quality modes 3-10
 - Selecting print-quality modes from the front panel 3-11
 - Color correction 3-12
 - Selecting TekColor corrections from the front panel 3-13
 - Controlling color density 3-14
 - Using color sampler charts 3-18
 - Quick Collate 3-19
 - Check Print 3-19
- All about media 3-20
 - Margins and print area 3-21
- Media trays 3-22
 - Selecting a media tray by location or media type 3-23
 - Upper, Middle and Lower selections 3-23
 - Paper or Transparency 3-24
 - AutoSelect 3-24
 - Manual Feed 3-24
 - Image orientation 3-25

- Using manual feed 3-26
 - Insert the paper 3-27
 - Insert the transparency 3-28
- Making transparencies 3-29
- Fonts 3-30
 - Resident typefaces (PostScript) 3-30
 - Resident typefaces (PCL5) 3-32
 - Downloading fonts 3-32
 - Installing Macintosh screen fonts 3-32
- Printer languages: PostScript, HP-GL, PCL5 3-33
- Printing hints 3-34
 - Application hints 3-34
 - Tektronix supplies and software 3-34
 - Getting the best results 3-35
 - Getting the largest printed picture 3-35
 - Relative port speed 3-35
 - Fastest print time 3-36

4 Caring for Your Printer

- Overview 4-1
 - User-replaceable components 4-2
 - When to replace components 4-3
- Replacing a toner cartridge 4-4
 - Replace the used toner cartridge 4-4
- Replacing the imaging unit 4-7
 - Remove the used imaging unit 4-8
 - Unpack the new imaging unit 4-10
 - Clean the sensors 4-11
 - Replace the filter 4-11
 - Insert the new imaging unit 4-12
 - Reset the copy count 4-14
 - What to do with the used imaging unit 4-14
 - If the new imaging unit did not fix the symptom 4-15

- Replacing the fuser 4-16
 - Remove the used fuser 4-16
 - Insert the new fuser 4-18
 - Reset the copy count 4-19
- Replacing the transfer kit 4-20
 - Remove the used transfer roller 4-20
 - Insert the new transfer roller 4-22
 - Replace the waste bin 4-23
 - Reset the copy count 4-24
- Manually resetting component copy counts 4-25
- Occasional cleaning 4-26
 - Cleaning the paper-pick and paper-feed rollers 4-26
 - Cleaning other rollers 4-30

5 Supplies and Accessories

- Tektronix supplies: the mark of quality 5-1
- Ordering information 5-1
- Supplies and accessories 5-2

6 Troubleshooting

- If you need help 6-1
 - Customer Support Hotline 6-1
 - Printer service 6-1
 - The Tektronix Bulletin Board Service 6-2
 - Online services 6-2
 - Using the automated fax systems 6-4
- Symptoms and solutions 6-7
 - Diagnostic tools 6-7
 - Maintaining print quality 6-8

- If you can't make a print 6-20
 - Printer not operating 6-20
 - Printer doesn't appear in the Chooser (Macintosh) 6-22
 - Power indicator blinks and stops, but the file does not print 6-22
 - Printer will not power up to Ready 6-22
 - Print job does not finish (the printer times out) 6-23
 - Error indicator is blinking 6-23
- Media problems 6-24
 - Frequent paper-picking errors 6-24
 - Media is picked but does not advance 6-24
 - Frequent media jams 6-24
- Problems with image size and position 6-25
 - Off-set images 6-25
 - Cut-off images 6-25
 - Image shifts or margins are incorrect (Macintosh) 6-25
- Print quality problems 6-26
 - Prints have dull, faded colors 6-26
 - Photographic images appear grainy 6-27
 - Streaks or spots 6-27
 - Black-and-white prints instead of color 6-28
- Startup page prints even though it is disabled 6-29
- Clearing a media jam 6-30

7 Front and Rear Panels

- Front panel 7-1
 - Front panel indicators 7-1
 - Front panel buttons 7-2
 - Two-line display 7-3
 - Protected mode for the front panel menu 7-4
 - Front panel menu map 7-5
- Rear panel 7-6

A Technical Notes

- Printing Help Pages A-1
 - Printing the test print and service print A-2
 - Printing the demonstration page A-3
 - Printing the startup page A-4
 - Enabling and disabling the startup page A-5
 - Printing the configuration page A-6
 - Printing the front panel menu map A-7
- Using the Quick Collate option A-8
 - Increasing the collation capacity A-11
 - Quick Collate and the Check Print option A-11
- Energy Star mode A-12
 - Changing the Energy Star timeout A-12
- Parallel port A-13
- Specifications A-16

B Expanding Your Printing System

- Upgrade kits B-1
- Advantages of adding memory B-2
- Phaser Copystation accessory B-3
- Lower Tray Assembly B-3
- PhaserPrint B-4
- PhaserSym B-4
- Adding a hard disk for font storage B-5
 - Compatible hard disks B-5
 - Requirements for adding a hard disk B-5
 - Connecting one disk B-7
 - Connecting multiple disks B-8

C Moving Your Printer

Repacking your printer C-1

D Regulatory Information

Canadian EMC (Electromagnetic Compatibility) regulatory standards D-1

Declaration of conformity (for 220-230 VAC equipment) D-2

FCC Class B device (for 100-120 VAC equipment) D-3

Material Safety Data Sheets D-4

MSDS for toner D-5

MSDS for silicone oil D-8

Index

Introduction

The Phaser® 550 Color Printer provides fast, high-quality color printing on plain paper, plus the ease of operation and high performance you expect from a laser printer. Some of its features include:

- **High quality**

Crisp 600 dots-per-inch (dpi) printing with high-definition screening produces bright colors and clean text suited for nearly any application. Optionally available, full 1200 dpi imaging provides near-photographic print quality.

- **High speed**

Fast Color Mode

Nearly 5 pages per minute (ppm) full color printing at 600 dpi (prints using CMY toners).

Standard Mode

Nearly 4 ppm full color, 14 ppm monochrome, at 600 dpi.

**Enhanced Mode*

Nearly 4 ppm full color, 14 ppm monochrome, at 600 x 1200 dpi.

**Premium Mode*

Nearly 2 ppm full color, 7 ppm monochrome, at 1200 dpi.

Transparency Mode

1.5 ppm color and 7 ppm monochrome, at 600 dpi.

Presentation Mode

Nearly 4 ppm full color, 14 ppm monochrome, at 600 x 1200 dpi.

* Optional configuration required.

- **Workgroup efficient**
High-capacity, easy-to-replace components minimize user intervention. Fast throughput and automatic tray switching make the Phaser 550 an excellent central resource for large or small workgroups.
- **Color calibration**
A front panel control allows you to adjust individual toner densities.
- **Job collation feature**
Generates multiple copies of a multiple-page job in collated order.
- **Plain paper**
Prints on common office papers (16-32 lb. or 60-120 g/m²).
- **Media sizes**
Supports Letter-, A4-, and Legal-size printing.
- **Check Print capability**
Allows you to preview a large print job before running the entire job.
- **Lower Tray Assembly**
The optional Lower Tray Assembly provides two additional media trays, especially useful for automatic media selection for running large printer jobs.

- **Phaser Copystation**
The Phaser Copystation accessory enables your printer to be used as a color copier.
 - **TekColor™ Dynamic Correction**
Tektronix' exclusive color-control technology makes it easy to print the colors you want.
 - **Easy to connect**
Bi-directional parallel port with plug-and-play support; PhaserShare™ cards provide optional network interfaces for Ethernet or Token Ring (EtherTalk, TokenTalk, Novell NetWare, and TCP/IP), as well as LocalTalk and serial.
 - **PhaserLink™ printer control and information access**
PhaserLink software provides a breakthrough in printer control and information access. Rather than use vendor-proprietary, printer-specific, and platform-specific management utilities, PhaserLink provides this function using HTTP (HyperText Transfer Protocol, the basis for World Wide Web browsers). This allows you to use a standard web browser to view printer status, control printer configuration, and link to online documentation via the World Wide Web.
- Note** To use PhaserLink, the printer must be connected to a network running TCP/IP. Refer to *PhaserShare Status Software User Manual* for complete details.
- **Font capacity**
The Phaser 550 Color Printer has 17 resident PostScript fonts in the standard configuration, upgradable to 39 fonts with the extended features option. Additionally, it accepts Adobe Type 1, Type 3, and TrueType downloadable fonts as well as a variety of user-defined fonts. For additional font storage, the printer provides a SCSI (Small Computer System Interface) port that allows you to attach an external hard disk.

Ordering supplies

To order supplies such as paper, transparencies, color toner cartridges, a fuser, or an imaging unit, refer to Chapter 5 of this manual or the supplies information sheet that is shipped with the printer; and contact your local reseller or, in the United States, call Tektronix at **1-800-835-6100**.

Getting Set Up

At a glance

Installation of your Phaser 550 Color Printer involves these tasks:

- 1. Setting up the printer**
Putting all the pieces together: unpacking the printer and accessories, installing the optional Lower Tray Assembly or the optional Phaser Copystation, loading the media tray(s), and installing the fuser, imaging unit, and toner cartridges.
- 2. Connecting power and interface cables**
- 3. Selecting a language for the front panel**
- 4. Installing printer software on your computer**
Using the Printer Software diskettes or CD-ROM to install software (for example, PPDs and utility files) on a Macintosh, or a PC running Windows 95, Windows 3.1, or Windows NT.

Note To add a hard disk to your printer, see “Adding a hard disk for font storage” on page B-5.

Setting up the printer

What you get with your printer

The printer and its accessories are shipped in two boxes. If you ordered an optional Lower Tray Assembly or Phaser Copystation, each is shipped separately.

Printer box

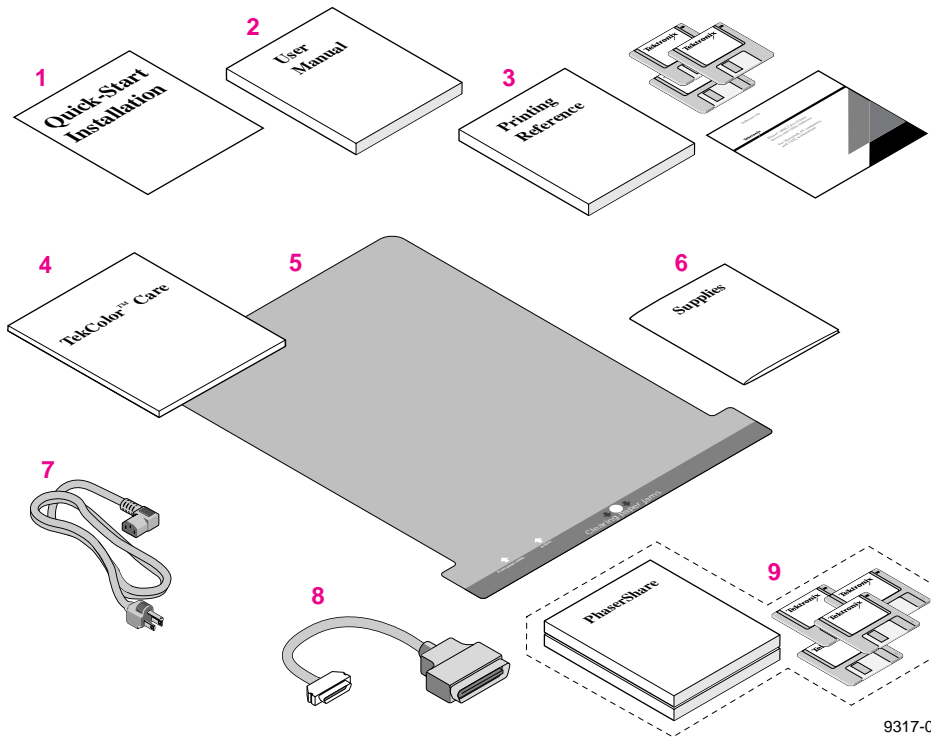
The following items are shipped in the printer box:

1. **Quick-Start Installation Instructions**
2. **Phaser 550 Color Printer User Manual**
3. **Phaser 550 Drivers and Utilities Printing Reference manual**, CD-ROM, and diskettes
4. TekColor Care information (including the registration card)
5. **Phaser 550 Quick Reference Card**
6. Supplies information sheet
7. Power cord
8. Parallel cable adapter
9. Optional PhaserShare manuals and diskettes

Standard accessories box

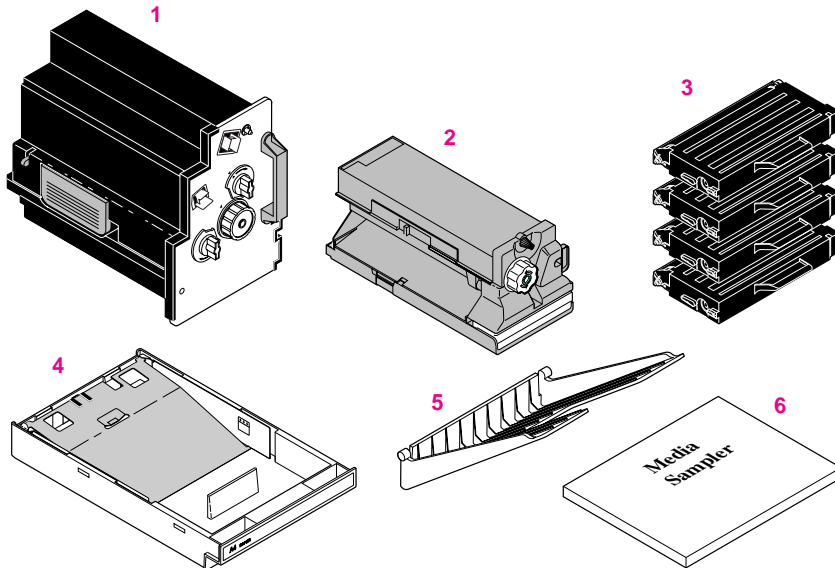
1. Imaging unit
2. Fuser
3. Four starter toner cartridges (black, cyan, magenta, and yellow)
4. Paper tray
5. Output tray
6. Media sampler kit

Printer box



9317-01

Standard accessories box

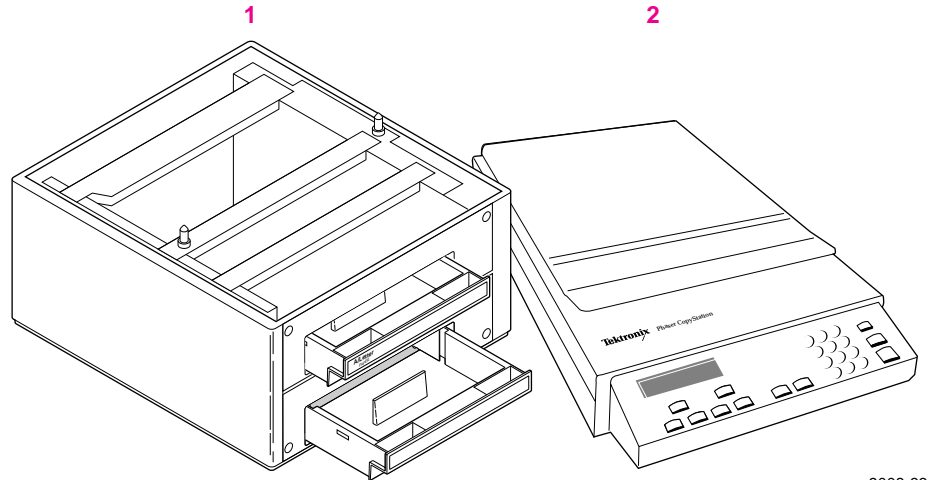


9317-02

2 Getting Set Up

Optional accessories

1. Lower Tray Assembly, paper tray and transparency tray
2. Phaser Copystation



9008-63

Registering your printer

1. Find the customer registration card that is appropriate for you (U.S. or international versions).
2. Fill out the card and mail it.

By registering your printer with Tektronix, you are validating the product warranty and ensuring that you will be sent information about upgrades, service, and accessories as it becomes available.

Removing the packing material

1. Remove the plastic bag from the printer.
2. Remove any adhesive tape that holds the printer's doors shut.

Note Save *all* packing material in case moving or subsequent shipment is necessary.

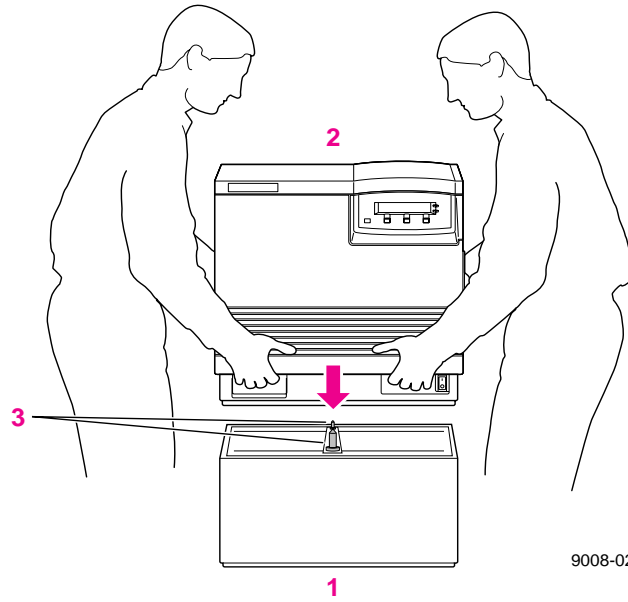
Installing the optional Lower Tray Assembly

An optional Lower Tray Assembly is available with the Phaser 550 (allowing you to print from three trays). Follow these steps to install it.

Warning The printer weighs about 39 kg. (86 lbs.) and the Lower Tray Assembly weighs about 14 kg (31 lbs.). Observe standard precautions for lifting heavy objects.

The printer is not permanently attached to the Lower Tray Assembly. When you move the printer, move the pieces separately; moving the printer incorrectly may damage it and may cause personal injury.

1. Place the Lower Tray Assembly on a solid table or cart you have selected for your printer.
2. Place the printer on top of the Lower Tray Assembly. Always keep the printer upright.
3. Make sure that the left and right alignment pins fit in the holes in the base of the printer.

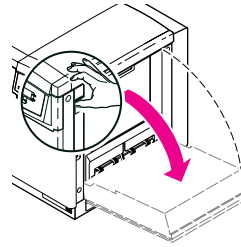


9008-02

Installing the toner cartridges

Note The toner cartridges that are shipped with the printer are starter cartridges. They are installed exactly the same as other cartridges; the only difference is that the starter cartridges have less toner.

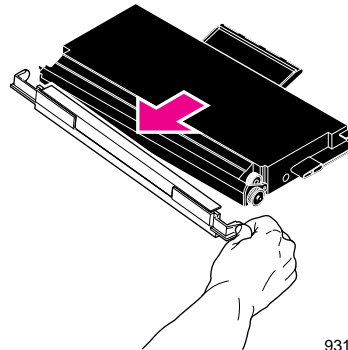
1. Open the printer's right side door to install the toner cartridges.



9008-91

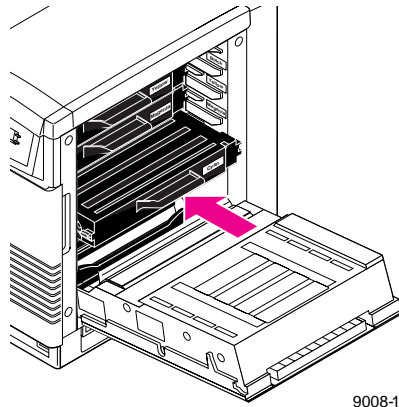
Note Instructions for loading each toner cartridge are the same except for the slot into which you insert each cartridge. From top to bottom, the order of the colors is *Black, Yellow, Magenta, Cyan*.

2. Remove the toner cartridge from its packaging.
Save all packing material in case you need to return the cartridge for repair or replacement.
3. Remove the shipping cover from the cartridge.



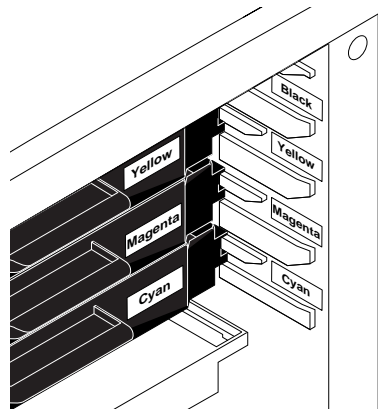
9317-03

4. Insert the toner cartridge in the slot labeled for its color.



9008-10

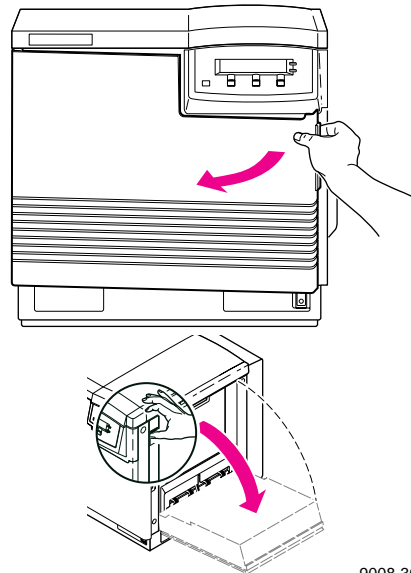
5. Repeat Steps 2 – 4 for each toner cartridge.
From top to bottom, the order of the color toner cartridges is Black, Yellow, Magenta, Cyan.



9008-11

Installing the fuser

1. Open the front door and the right side door to install the fuser.



9008-30

2. Remove the fuser from its packaging.

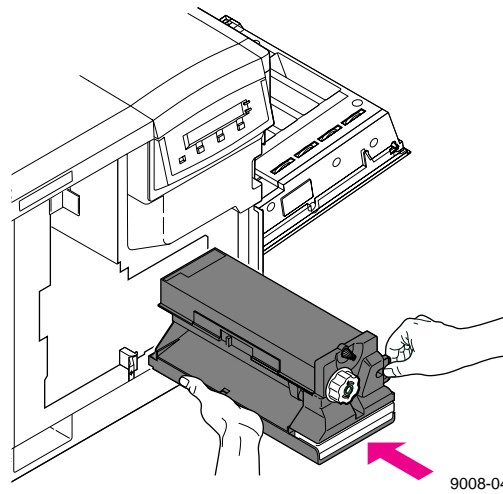
Note After factory testing, a small amount of residual oil may be absorbed by the fuser's protective wrapping paper; this does not affect operation.

Save all packing material in case you need to return the fuser for repair or replacement.

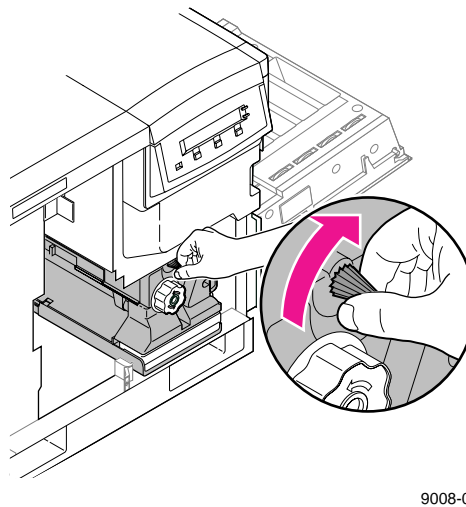
Caution The fuser weighs approximately 4.1 kg (9 lbs.); take care when handling it.

Always keep the fuser in an upright position.

3. Slide the fuser into the printer.



4. Lock the fuser by turning the **small blue screw clockwise** several turns.

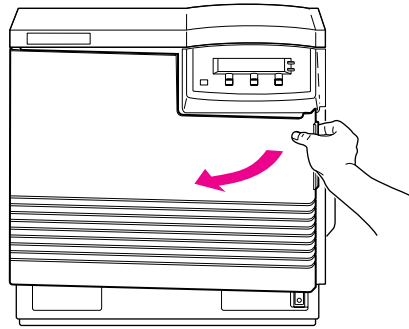


5. Close the right side door.

Installing the imaging unit

1. Open the printer's front door to install the imaging unit.

Caution Make sure that the right side door is closed to minimize light exposure; the imaging unit is extremely light-sensitive.



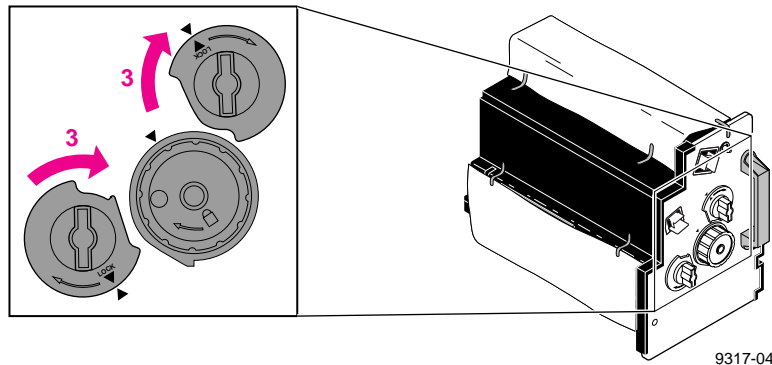
Caution The imaging unit weighs approximately 5.9 kg (13 lbs.); always use the handles when lifting it.

2. Remove the imaging unit from its box and plastic bag, but leave the protective plastic sheet on until immediately before you insert the unit into the printer.

Caution The imaging unit is extremely light-sensitive; make sure that it is not exposed to light for more than 45 seconds or it may damage the unit. Never expose it to direct sunlight.

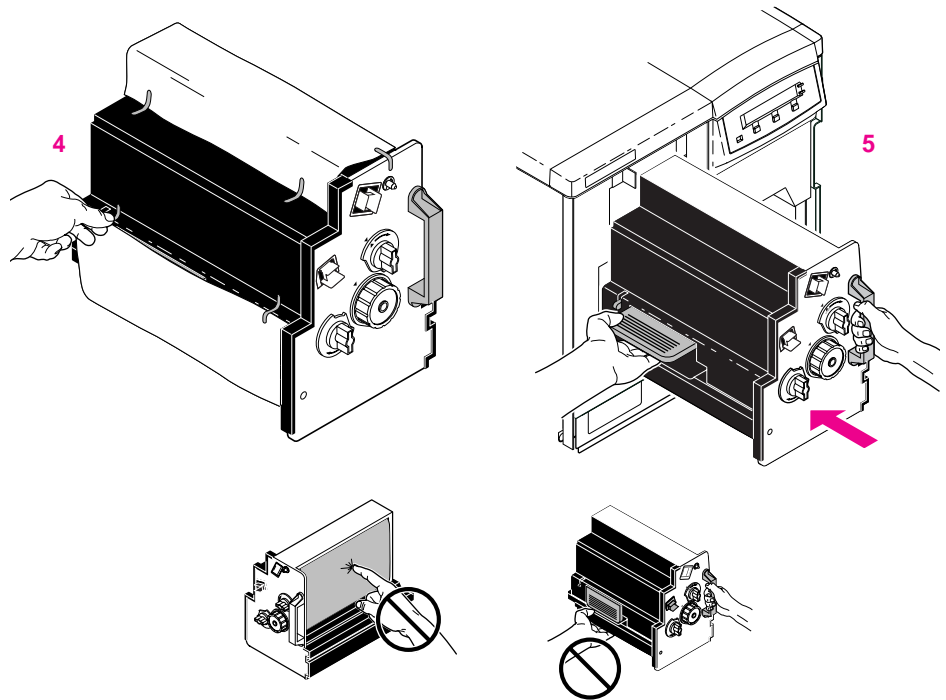
Save all packing material in case you need to store the imaging unit or if you need to return it for repair or replacement.

3. On the imaging unit, turn the two outer blue knobs clockwise to align the triangles. (This tightens the internal belt to ready the unit for printing.)



2 Getting Set Up

4. Remove the adhesive tape from the protective plastic sheet; then remove the sheet from the imaging unit, taking care not to touch the green belt (right side) or the underside.
5. Insert the imaging unit into the printer, holding it by the blue handles. Release the left handle and slide the unit in until it stops.



9317-05

Caution Be sure the outer two blue knobs are aligned *vertically*. If the belt is not tight, it may catch on the printer cabinet during installation.

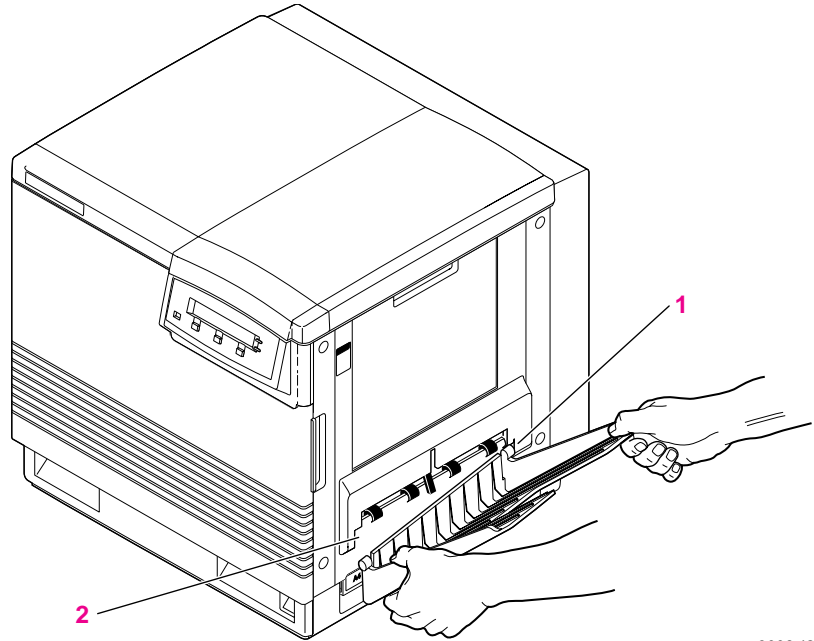
Be careful not to touch the green belt (the right side) or the underside of the imaging unit; fingerprints may affect the print quality. Keep the imaging unit's light exposure to a minimum (under 45 seconds), or you may damage the unit. Never expose it to direct sunlight.

6. Turn the center blue knob **clockwise** to insert the imaging unit completely and to lock it. The lock icon should align with the triangle.
7. Close the printer's front door.

2 Getting Set Up

Installing the output tray

1. Insert one side of the plastic output tray into the opening on the printer.
2. Press the opposite side to insert it into its opening on the printer.



9008-12

Adding paper or transparencies

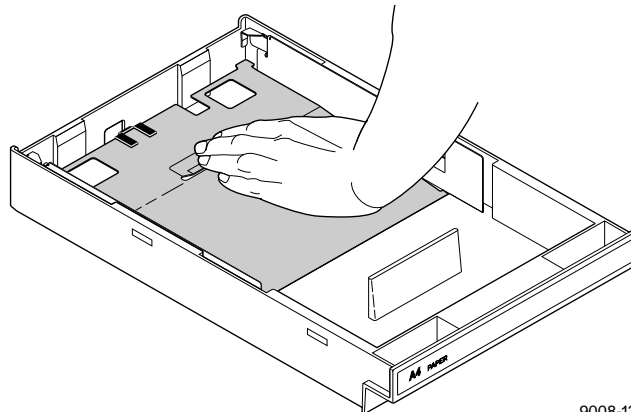
Unpack the media tray(s). Be sure to remove all adhesive tape and protective foam. The printer uses five different trays:

Tray	Size
A/Letter Paper <i>standard</i>	8.5 x 11 in.
A/Letter Transparency <i>optional</i>	8.5 x 11 in.
A4 Paper <i>optional</i>	210 x 297 mm
A4 Transparency <i>optional</i>	210 x 297 mm
Legal paper <i>optional</i>	8.5 x 14 in.

Note Make sure that you load the correct media. Each tray is designed and labeled for *only* paper or transparency. If you load the wrong media type in a tray, you will get an error message when you attempt to print.

If you have the Lower Tray Assembly installed and you wish to use the automatic tray-switching feature (for example, for a large print job), make sure that all trays in the printer at any one time are the *same* media type and size.

1. To load paper or transparencies, push down on the media tray's metal plate until it clicks, locking it in place.

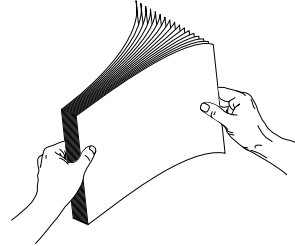


9008-13

2 Getting Set Up

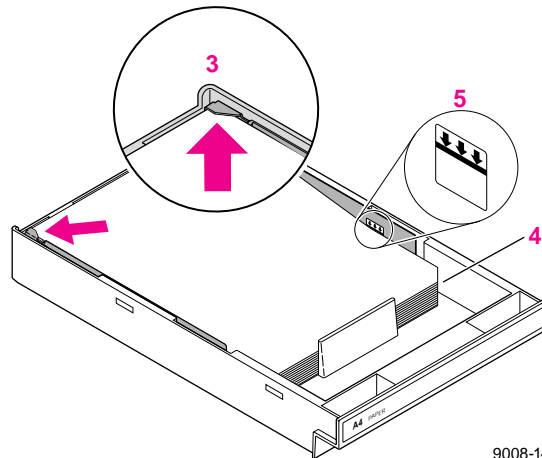
Caution To keep your printer in good working order, always use clean, unused media.

2. Fan the paper or transparencies, but be careful not to leave fingerprints, which can result in a smudged print.



9014-36

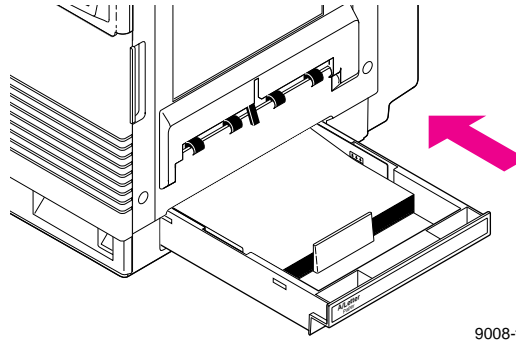
3. Place paper or transparencies in the tray under the hooks.
4. If loading transparencies, load them so that the notched corner is placed closest to the media level label (5).
5. You can load approximately 250 sheets of paper or 100 sheets of transparency film. Use the label on the inside of the tray as a reference for the proper amount of media.



9008-14

6. If you have a single media tray

Slide the paper tray completely into the slot.

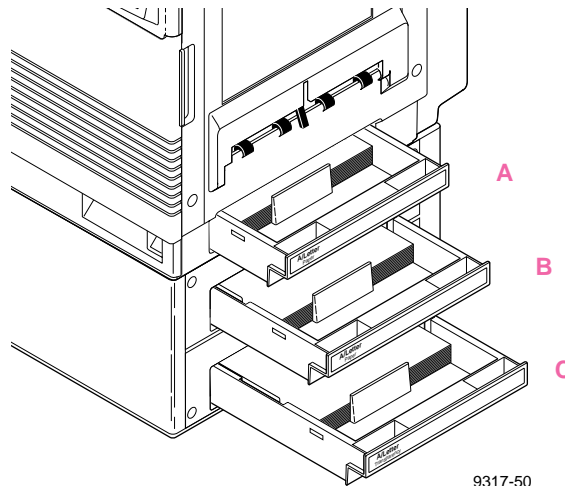


9008-15

If you have a Lower Tray Assembly

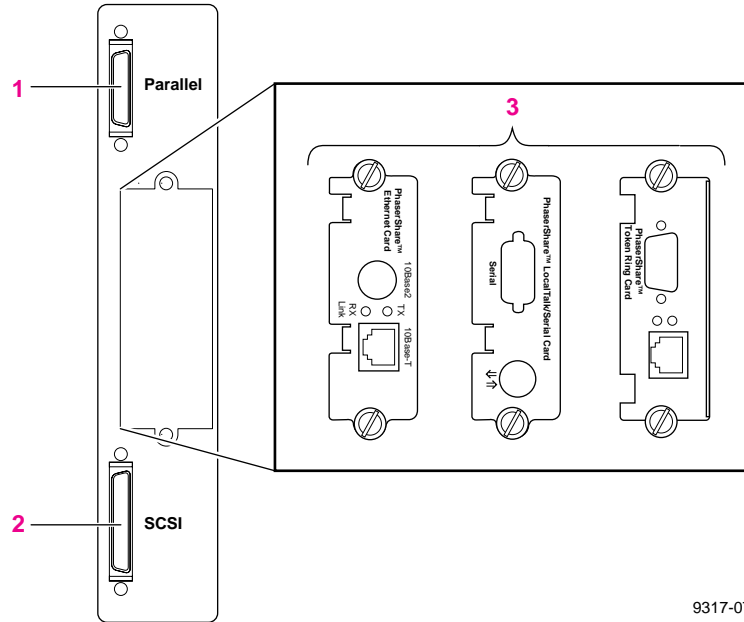
Install a media tray into each of the three slots.

Note A paper tray can be installed in any of the three tray slots (A, B, and C); however, the transparency tray should only be inserted in the upper (A) and middle (B) tray slots.



9317-50

The **PhaserShare Network Cards and Software System Administrator User Manual** contains all the information necessary for configuring and using the optional connections.



9317-07

Note See “Supplies and accessories” on page 5-2 about ordering cables for connecting the printer.

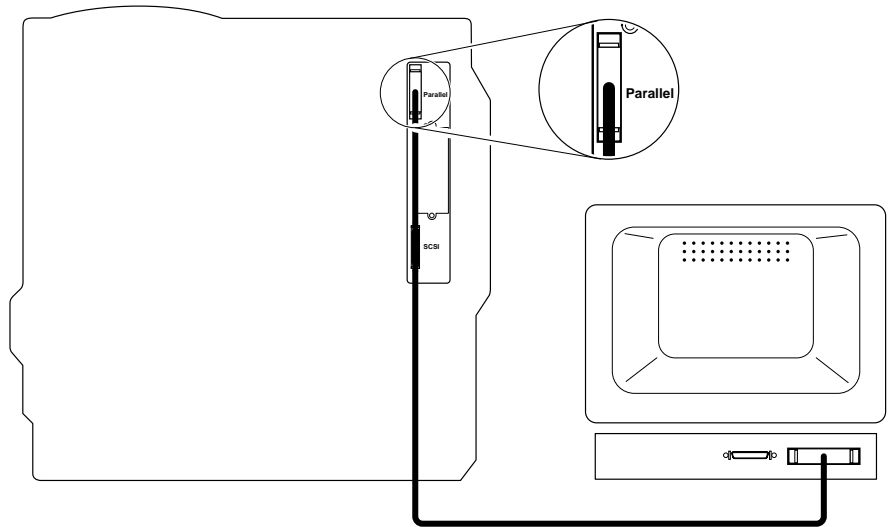
Parallel connection

The printer supports a standard (uni-directional) parallel port. The parallel port can also be set for bi-directional communications. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for instructions on changing parallel communications. For information on cables and adapters, refer to page 5-4 in this manual.

Note Make all printer port connections *before* you turn on the printer.

1. Connect a parallel interface cable to your computer and to the printer's parallel port.

Note The printer's parallel port uses a high density connector, Type IEEE 1284-C. To use a standard Centronics-style parallel cable, use the parallel cable adapter that was included with the printer.



9317-08

2. If you have no other connections to make, turn immediately to "Turning on the printer" on page 2-24.

PhaserShare™ network and serial connections

To obtain serial or network connections, one of the optional PhaserShare™ cards must be installed in the printer. A PhaserShare card can be purchased initially with the printer or later as a separate upgrade kit. If purchased initially, you will find the network manuals, **PhaserShare Network Cards and Software System Administrator User Manual** and **PhaserShare Status Software User Manual**, included in the box with your printer.

PhaserShare network interfaces offer high performance and flexible workgroup connectivity. All data input ports and network protocols are simultaneously active. Print jobs are processed on a first-come, first-served basis.

To order the optional hardware, contact your local Tektronix reseller or call Tektronix toll-free in the United States at 1-800-835-6100.

For detailed information on configuring and using the printer on networks, refer to the **PhaserShare Network Cards and Software System Administrator User Manual**.

SCSI connections

The SCSI port is used for connecting these optional peripheral devices:

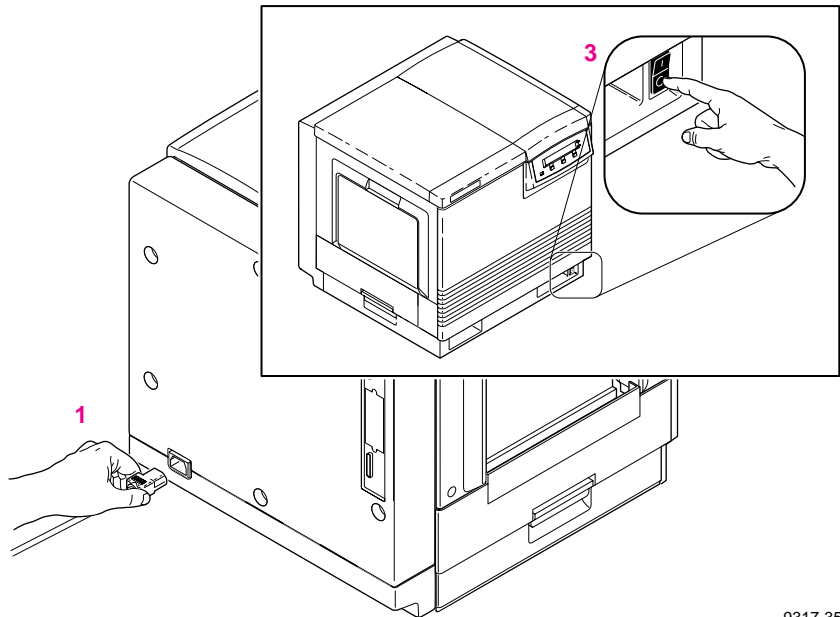
- **External font disk (optional)**
Refer to “Adding a hard disk for font storage” on page B-5 for information on installing a hard disk.
- **Phaser Copystation accessory (optional)**
Refer to Chapter 2 of the **Phaser Copystation User Manual** to set up the Phaser Copystation.

Turning on the printer

After you have connected all the interface cables, you are ready to connect the power cord and turn on the printer.



Caution To protect your printer from a power surge, make sure that the power switch on the printer is in the *off* position before plugging in the cord.

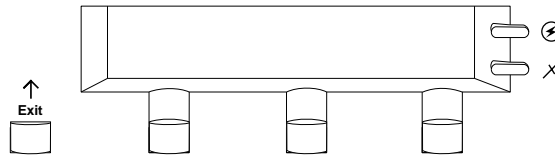
1. Plug the power cord into the printer and into a grounded outlet.
2. Turn on the power to any peripherals you have connected (i.e., a font disk or Phaser Copystation).
3. Wait 1 minute, then turn on the printer.



9317-35

What happens at power-up

- Both status indicators (power  and error ) on the printer's front panel light briefly. Messages appear in the display panel (LCD). The printer goes through a series of self-tests. The printer takes a about 2 minutes to warm up and complete the self-tests (depending on the amount of memory installed).



9008-43

- After the self-tests run successfully, the printer prints a startup page and, if the printer's copy count is between five and eight pages, a registration page. The startup page prints whenever you turn on or reset the printer.

If you want to turn off the startup page, you can use the front panel menu or a software utility file provided on the drivers and utilities diskettes (or CD-ROM) included with your printer. Refer to "Enabling and disabling the startup page" on page A-5 and the **Phaser 550 Drivers and Utilities Printing Reference** for details on using the utility file.

When the printer is ready for operation

When the power-up sequence is complete, the green indicator is on steady (not blinking), the red indicator is off, and the front panel message reads Ready.

Selecting a language for the front panel

Messages that appear in the front panel window are in English. To change the language to French, German, Spanish, Italian, or Japanese, follow these steps.

1. When the printer is on and the Ready message appears, press the **Menu** button. You see this message:

```
Help Pages
<---    ---> Menu
```

Pressing the left arrow button (<---) scrolls backward through the selections; pressing the right arrow button (--->) scrolls forward through the selections; and **Menu** enters the currently displayed menu.

2. Using the left (<---) or right (--->) arrow buttons, scroll through the selections until you see this message:

```
Language
<---    ---> Menu
```

3. Press the **Menu** button to enter the language selection menu. You see this message:

```
Language: English*
<---    ---> OK
```

where the asterisk (*) indicates the currently selected language.

4. Press the right arrow button until the display shows the language you want from these selections:

```
Language: English
Language: Español
Language: Français
Language: Deutch
Language: Italiano
Language: (Japanese)
```

5. Press OK to select the language. Press the **Exit** button until Ready is displayed.

Making a demonstration print

You can print a demonstration page to check that your printer is set up and operating correctly.

1. When the printer is on and the Ready message appears, press the **Menu** button. You see this message:

```
Help Pages
<---      --->  Menu
```

2. Press the **Menu** button. You see this message:

```
Test Print
<---      --->  Print
```

3. Using the left (<---) or right (--->) arrow buttons, scroll through the selections until you see this message:

```
Demonstration Page
<---      --->  Print
```

4. Press the **Print** button to print the demonstration page.

Installing the printer's software

Packaged with your printer are the Phaser 550 compact disk (CD-ROM) for platforms with a CD-ROM drive or, if your computer does not have a CD-ROM drive, the diskettes for PC and Macintosh computers. The CD-ROM and diskettes contain software and utility files that work with a printer driver to let you select media type, media trays, print-quality modes, color correction modes and other features.

For complete details on the contents of the CD-ROM and diskettes and how to use them, refer to the **Phaser 550 Drivers and Utilities Printing Reference**, which is shipped with the printer.

The following topics discuss installing software on a PC, Macintosh, and workstation.

PC software

The Phaser 550 diskettes and CD-ROM include an installer application that automatically installs the following printer software on your computer's hard disk:

- **TKPH5501.PDF**
PostScript printer description file for use with QuarkXPress.
- **TK550171.PPD**
PostScript printer description file for use with the standard configuration of the printer and a PPD-driven printer driver such as the Adobe PS3.
- **TK550391.PPD**
PostScript printer description file for use with the printer's extended features option and a PPD-driven printer driver such as the Adobe PS3.
- **TKPH5501.ICM**
Printer profile for use with host color correcting.
- **SAMPLERS**
Directory containing color sampler charts and a fonts sampler.
- **PHSR550**
Directory containing printer utility files.

PC: Software for Microsoft Windows 95

For best performance and added features when printing from Windows 95, use the Windows 95 printer driver (not the Windows 3.1 printer driver, which may cause printing problems in Windows 95). Follow these steps:

1. Remove the Windows 3.1 driver (if applicable) from your PC. For instructions, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Caution If you installed a Tektronix Windows 3.1 printer driver in Windows 3.1, then upgraded to Windows 95, that driver will appear in Windows 95 and may cause printing problems in the new operating system.

2. Start Windows 95.
3. Insert either the Printer Software for Windows diskette or the Phaser 550 CD-ROM into the appropriate drive.
4. Click the **Start** icon in the task bar on your screen. In the menu that appears, click **Settings**.
5. In the menu that appears, click **Printers**; the **Printers** window appears.
6. In the **Printers** window, double-click **Add Printer**; the **Add Printer Wizard** appears. Click **Next**.
7. Select your printer's connection:
 - Select **Local Printer** if your printer is connected directly to your computer, then click **Next**.
 - Select **Network Printer** if you are accessing your printer through a network. Click **Browse** to search the network and select a printer queue. Then click **Next**.

8. In the window listing **Manufacturers/Printers**, click **Have Disk**.
9. In the **Install From Disk** dialog box, type in the drive for either the Phaser 550 CD-ROM or the Printer Software for Windows diskette, and click **OK**.
10. A list of Tektronix printers appears. Select your printer in the list, then click **Next**.
 - Select **Tektronix Phaser 550** if you have the standard configuration of the printer.
 - Select **Tektronix Phaser 550 with 1200 dpi** if you have the printer's extended features option.

Note If you are not sure whether your printer has the standard configuration or the extended features option, print the startup page from the **Help Pages** menu in the front panel. This page includes an entry for *Extended Features: Yes if installed, No if it is not*.

11. Select the port your printer is connected to, then click **Next**.
12. It is recommended that you use the default printer name shown under **Printer name**. Click **Yes** if you want this printer to be the default printer. Then click **Next**.

13. At the prompt, Would you like to print a test page? click **Yes** to verify the printer's connection, or click **No**. Then click **Finish**.

A status bar appears while files are copied to your computer.

14. If prompted, select the path for the PostScript driver file **ICONLIB.DLL**; this should be in your **WINDOWS/SYSTEM** directory.

If the file isn't installed on your hard disk, insert the Microsoft CD-ROM for Windows 95, select the **WIN95** directory, and click **OK**. Or, insert the requested floppy diskette for Windows 95, select the drive, and click **OK**. The software you need is installed.

15. If your printer is set up correctly, and you clicked **Yes** in Step 13, a test page prints showing the Windows 95 logo and information about your printer.

Your Phaser 550 printer should be added to the **Printers** window.

PC: Software for Microsoft Windows 3.1

The following procedure automatically installs the Adobe PS3 printer driver and PostScript printer description files (PPDs) required by some applications. The Adobe PS3 driver works faster and more efficiently with the Adobe PostScript interpreter inside your Phaser 550 than other drivers, especially if you are using TrueType fonts.

Note If you are using the Tektronix floppy diskettes for installation, you will need both the Printer Software for Windows diskette and the Adobe PS3 Printer Driver for Windows 3.1 diskette for this procedure.

1. Make sure that Windows 3.1 is running on your PC.
2. The driver installation overwrites an older version of the Adobe PostScript printer driver. If you already have an Adobe driver installed, you may want to remove your installed Tektronix printers before continuing, and reinstall them later with the newer driver. Follow these steps to remove printers with an older driver:
 - a. From the **Control Panel**, double-click **Printers**.
 - b. In the **Printers** dialog box, select a printer that was set up with an older version of the Adobe driver, and click **Remove**.
 - c. Repeat Steps **a** and **b** for all printers installed with the Adobe driver.
 - d. After you have installed the new driver, you can reinstall your existing printers (PPDs) through the **Adobe PostScript Printers** dialog box in the **Control Panel**.
3. Quit all applications, including the **Control Panel**.
4. Insert either the Adobe PS3 Printer Driver for Windows 3.1 diskette or the Phaser 550 CD-ROM into the appropriate drive on your computer.

5. In the **Program Manager**, select **Run** from the **File** menu.
 6. At the **Command Line**, type one of the following, replacing **A:** with the correct drive, then click **OK**.
 - **CD-ROM:** **A:\win31drv setup**
 - **Diskette:** **A:setup**
 7. At the **README.WRI** dialog box, click one of the buttons. The **README** file contains information on installing the driver and application notes. Clicking **Read** opens the **README** file. Clicking **Skip** (or quitting the **README** file) moves you to the next dialog box listed in the next step.
 8. In the **PostScript Printer Driver Setup** dialog box, click **Exit** if you need to quit any open applications, or click **Continue** to start the driver installation.
 9. You will see a status dialog box during the installation procedure. At the end of the installation, click the **Restart Windows** button.
 10. After Windows restarts, the **Install PostScript Printer from PPD** dialog box opens.
 11. Select your printer in the **Printer Descriptions Available** list and click **Install**:
 - Select **Tektronix Phaser 550** if you have the standard configuration of the printer.
 - Select **Tektronix Phaser 550 with 1200 dpi** if you have the printer's extended features option.
- Note** If you are not sure whether your printer has the standard configuration or the extended features option, print the startup page from the **Help Pages** menu in the front panel. This page includes an entry for *Extended Features: Yes if installed, No if it is not.*
12. At the installation successful message, click **OK**.

2 Getting Set Up

13. Click Close in the **Install PostScript Printer from PPD** dialog box.
14. At the message, click **OK**; the **Control Panel** opens.
15. From the **Control Panel**, double-click **Printers**.
16. In the **Printers** dialog box, select the **Tektronix Phaser 550** printer you just installed, then click **Connect**.
17. In the **Connect** dialog box, select the port the printer is connected to, then click **OK**.

Note Refer to the README file on the Adobe PS3 Driver for Windows 3.1 diskette from Tektronix, or to the Adobe PostScript Printer Driver User Guide, for more detailed information on installing and using the Adobe PS3 driver.

PC: Updating the driver software for Windows NT

If you are using Microsoft Windows NT, follow these instructions to update the printer driver that enables you to print to a Phaser 550. This update procedure provides printer page size information for Windows NT applications. However, TekColor color corrections and other PostScript Level 2 features are not supported by the Windows NT driver. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for instructions on other ways of selecting color corrections. Refer to your Microsoft Windows NT documentation for details on features in the Windows NT driver.

Note This procedure requires that a PostScript printer driver be installed on your system. If it is not, you will need your original Windows NT setup diskettes (or CD-ROM).

1. Start your system with Windows NT.
2. If your computer has an Intel-compatible processor, such as the Intel I386, go on to Step 3.

If your computer is a MIPS or Alpha, you need to edit the **PRINTER.INF** file on the Phaser 550 CD-ROM or Printer Software for Windows diskette.

- a. The Phaser 550 CD-ROM and Printer Software for Windows diskette are read-only (write-protected). To edit the **PRINTER.INF** file, copy the following files from the top level of either CD-ROM or diskette to a new, formatted floppy diskette.

Place all files at the top (root) level of the new diskette.

TEK1

PRINTER.INF

TK550171.PPD (for the standard configuration)

TK550391.PPD (for the printer's extended features option)

Note If you are not sure whether your printer has the standard configuration or the extended features option, print the startup page from the Help Pages menu in the front panel. This page includes an entry for *Extended Features*: Yes if installed, No if it is not.

- b. Open the copy of the **PRINTER.INF** file on the new diskette in a text editor such as **Notepad**.
 - c. Locate the following section in the **PRINTER.INF** file:
`[ProductType]
STF_PLATFORM = I386`
 - d. Replace the **I386** with either **MIPS** (for a MIPS platform) or **Alpha_AXP** (for an Alpha platform).
 - e. Save the **PRINTER.INF** file, and go on to the next step.
3. From the **Main** window, double-click on the **Print Manager** icon.
 4. If you already have a PostScript printer driver installed, go on to Step 5.

Note If you do not have a PostScript printer driver installed, install one now. The driver files are required to complete the Tektronix printer installation.

- a. From the **Printer** menu, select **Create Printer**; the **Create Printer** dialog box appears.
- b. Under **Driver**, scroll through the list and select a PostScript printer, such as the Apple LaserWriter NT, and click **OK**.
- c. Follow the online instructions to install the driver files from your Windows NT CD-ROM or diskettes.

5. Install the Tektronix Phaser 550 printer driver. From the **Printer** menu, select **Create Printer**; the **Create Printer** dialog box appears.
6. Under **Driver**, scroll to the end of the list and select **Other**; the **Install Driver** dialog box appears.
7. When prompted, do one of the following.
 - **If you are using the Phaser 550 CD-ROM:**
Type in the CD-ROM drive location. Click **OK**; the **Select Driver** dialog box appears.
 - **If you are using the Tektronix Printer Software for Windows diskette:**
Type in the disk drive location of the diskette. Click **OK**; the **Select Driver** dialog box appears.
 - **If you are using an edited copy of the *PRINTER.INF* file from Step 2:**
Type in the disk drive location of the diskette. Click **OK**; the **Select Driver** dialog box appears.
8. Under **Printer Driver**, choose your Phaser 550 printer from the list, then click **OK**.
 - Select **Tektronix Phaser 550** if you have the standard configuration of the printer.
 - Select **Tektronix Phaser 550 with 1200 dpi** if you have the printer's extended features option.

Note If you are not sure whether your printer has the standard configuration or the extended features option, print the startup page from the **Help Pages** menu in the front panel. This page includes an entry for *Extended Features*: *Yes* if installed, *No* if it is not.

2 Getting Set Up

9. In the **Windows NT Setup** dialog box, type in the same path you used in Step 7 (for example, B:). Click **Continue**; the **Noncritical Error** dialog box appears.
10. When you are prompted for the location of the **PSCRIPTUI.DLL** file and the **PSCRIPT.DLL** file, click **Ignore**. (These files were installed in Step 4 or were already installed.)
11. When the **Create Printer** dialog box appears, fill in the other fields as desired, then click **OK**; the **PostScript Printer Setup** dialog box appears.
12. Select options in the **PostScript Printer Setup** dialog box. Enabling the **Use Printer Halftoning** option is recommended. Then click **OK**; the **Windows NT Setup** dialog box appears.
13. If you installed a PostScript printer in Step 4, follow this procedure to delete it. (Now that the Tektronix printer is installed, this printer is no longer needed.)
 - a. Select the printer you want to remove.
 - b. From the **Printer** menu, select **Remove Printer**.
 - c. At the prompt, click **OK** to remove the selected printer.

PC: DOS and setting up ports

Check the list of supported printers in your DOS application for support of a Phaser 550 printer. If the list does not include this printer, check to see if other Tektronix Phaser series printers are listed and choose one of those. Otherwise, use a generic color PostScript driver. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for more information.

Note Generic PostScript printer drivers do not have information about this particular printer, for example, its page sizes or its image area size. Using a standard Letter or A4 paper size selection should produce acceptable results.

Setting up the parallel port

If you are using the printer's parallel port, disable timeouts on your computer's parallel port to ensure that large files will print, even if data transmission is slow.

Use the DOS **MODE** command to disable timeouts on your computer's parallel port.

1. Type the following command at the DOS prompt (if LPT1 is not available, use LPT2):

```
MODE LPT1:,,P > NUL
```

See your DOS documentation for details on the **MODE** command.

2. You can add the **MODE** command to your **AUTOEXEC.BAT** file, so that it takes effect every time you turn on your computer. Refer to your PC user documentation.

Setting up optional interface ports

For instructions on setting up any of the optional interface ports, refer to the **PhaserShare Network Cards and Software System Administrator User Manual**.

Macintosh software

Note You must have an optional PhaserShare card installed in the printer before using the driver.

The Phaser 550 diskettes and CD-ROM include an installer application that automatically installs the following printer software on your Macintosh hard disk. You can select a standard installation or select individual items.

- **Standard printer software** installs Phaser 550 Utilities, Samplers, PPD files for drivers and applications, ColorSync Profiles, and the Phaser 550 GX printer driver.
- **Standard plus QuarkXPress printer software** installs the PDF file for QuarkXPress, Phaser 550 Utilities, Samplers, PPD files for drivers and applications, ColorSync Profiles, and the Phaser 550 GX printer driver.
- **ColorSync Profiles (Phaser 550 Profile** printer profile for use with ColorSync 2.0).
- **Phaser 550 Utilities** installs the following in a **Phaser 550 Utilities** folder inside a **PhaserTools** folder created by the Installer application:
 - Printer utility files, such as color corrections, tray selections, and print quality modes.
 - **PhaserPrint**, a plug-in for use with Adobe Photoshop.
 - **LaserWriter Utility** downloading and utility application.

- **Samplers** installs color sampler charts and a fonts sampler in a **Samplers** folder inside a **PhaserTools** folder created by the Installer application.
- **PPD files for drivers and applications** installs the following:
 - **TK550171.PPD**
PostScript printer description file for use with the standard version of the printer.
 - **TK550391.PPD**
PostScript printer description file for use with the printer's extended features option.
- **PDF file for QuarkXPress (Phaser 550.PDF)** PostScript printer description file for use with QuarkXPress).
- **Phaser 550 GX printer driver** (printer driver for use with QuickDraw GX and System Software 7.5).

The **Phaser 550 Drivers and Utilities Printing Reference** provides detailed software installation procedures and complete information on using the software with your printer.

Using the installer to load software

To install the printer's software, follow this procedure:

1. Disable virus detection software before starting the **Installer** application:
 - **Restart** the Macintosh while holding down the **Shift** key to start the computer with extensions off or refer to the virus software's documentation for instructions.
2. Insert either the Printer Software for the Macintosh diskette or Phaser 550 CD-ROM into the appropriate drive.
3. Double-click the **Phaser 550 Installer** icon. Click **Continue** until the installer dialog box appears.
4. Select one of the standard options or select individual options; shift-click to select more than one item. Then click **Install**.
5. If you select the **Standard** button, the **Install Phaser 550 software** dialog box appears. Click **Install** to load the **Standard printer software**.

LaserWriter 8.x setup

The LaserWriter 8.x driver uses printer-specific PPDs (PostScript Printer Description files) for information on a printer's page sizes, printing options, and media type options. To use the LaserWriter 8.x driver with a Phaser 550 printer, do the following steps depending on the version of the driver you are using. If the printer is busy, it may take some time to complete this configuration procedure; you may want to do this procedure when the printer is idle. You only have to configure a printer once.

Note During installation, the LaserWriter 8.x driver leaves other versions of the LaserWriter driver intact.

Setting up the LaserWriter 8.3 driver

1. Make sure that the LaserWriter 8.3 driver is installed on your Macintosh.

If the LaserWriter 8.3 driver is not installed:

The LaserWriter 8.3 driver software is available from Apple Computer; see your local Apple dealer for details. Refer to the LaserWriter driver's documentation, **LaserWriter 8.x Update Guide**, for instructions on installing the driver.

2. Follow the instructions in "Installing the printer's software" on page 2-28 to install the PPD printer description files. Select one of the standard options to automatically install all of the printer's software, or select the **PPD files for drivers and applications** option.
3. Open the **Chooser**.
4. Select the **LaserWriter 8** driver icon.
5. Select your printer from the list.
6. Still in the **Chooser**, click the **Setup** button to see a list of options.

2 Getting Set Up

7. The dialog box that appears shows the location of the PPD files you installed in the previous procedure. Highlight one of the following PPD files and click **Select**:
 - Use the **TK550171.PPD** file with the standard version of the printer.
 - Use the **TK550391.PPD** file with the extended features configuration of the printer.

Note If you are not sure whether your printer has the standard configuration or the extended features option, print the startup page from the Help Pages menu in the front panel. This page includes an entry for *Extended Features*: *Yes* if installed, *No* if it is not.

8. In the dialog box that appears, select the appropriate items under **Installable Options** then click **OK**.
9. Click the **Chooser's** close box.

Setting up an earlier version of the LaserWriter 8.x driver

1. Make sure that the LaserWriter 8.x driver is installed on your Macintosh.

If the LaserWriter 8.x driver is not installed:

The LaserWriter 8.x driver software is available from Apple Computer; see your local Apple dealer for details. Refer to the LaserWriter driver's documentation, **LaserWriter 8.x Update Guide**, for instructions on installing the driver.

2. Follow the instructions in "Installing the printer's software" on page 2-28 to install the **PPD** printer description files. Select one of the standard options to automatically install all of the printer's software, or select the **PPD files for drivers and applications** option.
3. Open the **Chooser**.
4. Select the **LaserWriter 8** driver icon.
5. Select your printer from the list.
6. Still in the **Chooser**, click the **Setup** button to see a list of options.
7. In the dialog box that appears, click the **More Choices** button to see the full range of options.

Note Do not use the *Auto Setup* button; errors can occur with the **PPD files**. Continue with this procedure to properly set up the driver.

8. Click the **Printer Info** button, then click the **Update info** button in the next dialog box.
9. Record the information on **PostScript Version** and **Total Memory Installed**; you will need this information later. Click **OK**.
10. Click the **Select PPD** button; the **Printer Descriptions** folder in the **Extensions folder**, inside the **System Folder**, is displayed.

11. Highlight one of the following PPD files you installed in Step 2, and click **Select**:
 - Use the **TK550171.PPD** file with the standard version of the printer.
 - Use the **TK550391.PPD** file with the extended features configuration of the printer.

Note If you are not sure whether your printer has the standard configuration or the extended features option, print the startup page from the Help Pages menu in the front panel. This page includes an entry for *Extended Features*: Yes if installed, No if it is not.

12. Make sure the information under **Printer Model** matches the printer you have and the **PostScript Version** information you got in Step 9.

13. Click **Select**.

Note If the information under *Printer Model* is not an exact match, use the closest printer name, and call Tektronix Customer Support in the U.S. and Canada at 1-800-835-6100 for the latest PPD file. Outside the U.S. and Canada, contact your local Tektronix reseller. You can also download the latest PPD files from the Tektronix Bulletin Board Service (BBS); see page 6-2 for instructions.

14. Click **Configure**. In the field for **Memory Configuration** under **Installable Options**, select the amount of memory your printer has installed. Check other options either **Installed** or **Not Installed**, as appropriate.
15. Click **OK** in two dialog boxes and close the **Chooser**.

Phaser 550 GX driver

If you are using Apple Macintosh QuickDraw GX and System Software 7.5, use the Phaser 550 GX driver to print to the Phaser 550 printer. For details on installing and using the GX driver, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Workstation users

The printer-control PostScript files that are on the Tektronix CD-ROM and the Printer Software for Windows diskette (PC format) can be used with UNIX and VMS workstations. These files let you set up your spooling system to select between media trays, print-quality modes, color correction modes and other features. UNIX workstation users can access utility files in the following ways:

- Install the files from the Tektronix Phaser 550 CD-ROM if your system includes a CD-ROM drive.
- Mount the PC diskette on the workstation.
- Access the Tektronix anonymous ftp site on the Internet at **ftp.tek.com**.
- Download utility files from the Tektronix Bulletin Board Service (BBS); refer to page 6-2 for information.
- Access the Tektronix World Wide Web server on the Internet:
 - http://www.tek.com/Color_Printers/ Home page
 - <ftp://ftp.tek.com/bbs/<platform>/550> Utility files

Most workstations with 3.5-inch disk drives provide a device driver that allows you to mount a PC floppy diskette. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for information on mounting PC diskettes.

Refer to Chapter 6 in this manual for information on accessing Tektronix' online services.

What next?

- When you have set up all the hardware and connections, turned on the power, and installed the software on your computer, you are ready to print. Chapter 3, “Printing,” contains useful information on basic printing features such as color correction, fonts, print-quality modes, color calibration and basic printing hints. For detailed information on printing options, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.
- To install a hard disk for font storage, turn to “Adding a hard disk for font storage” on page B-5.
- To disable the startup page, refer to “Enabling and disabling the startup page” on page A-5.

Printing

Which platform?

You can print to your printer from any of these platforms, providing the printer has the appropriate interface port. Refer to “Printer ports” on page 2-20 for more information.

- PC — in Windows, Windows 95, Windows NT, and in DOS
- UNIX and VMS Workstations
- Macintosh

To print from a Macintosh, from Windows, Windows 95, or Windows NT, you should first have installed the printer software, as described in Chapter 2. This chapter describes the basic print features available; for complete information on using the features, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Printing from Windows 95

Note Printing from a PC through an interface port other than the parallel port requires that an optional PhaserShare card be installed in the printer.

1. Make sure that you have installed the printer software for Windows 95, as described in Chapter 2. If you have not, do so now.
2. In the **Printers** window, select the **Phaser 550** printer icon.
3. Select **Properties** from the **File** menu.
4. Click on any of the tabs along the top of the **Properties** window to view and make selections that control the print features (for example, the **Paper** tab controls **Paper size** and **Paper source** selections).

For information on print features, see “Selecting print features” on page 3-9. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for detailed information.

Printing from Windows 3.1 and Windows NT

Note Printing from a PC through an interface port other than the parallel port requires that an optional PhaserShare card be installed in the printer.

1. Make sure that you have installed the printer software for Windows 3.1 or Windows NT, as described in Chapter 2. If you have not, do so now.
1. From the **Control Panel**, double-click **Printers**.
2. In the **Printers** window, select the **Phaser 550** printer, then click **Setup**. A dialog box appears with the printer's name across the top.
3. Click on any of the tabs along the top of the dialog box to view and make selections that control the print features (for example, the **Features** tab controls resolution, color correction modes, and installable options).

For information on print features, see "Selecting print features" on page 3-9. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for detailed information.

Printing from a PC: DOS

1. In your application software, set up the printing options for a color printer driver and a communications port. For more information on making these selections, refer to your application software's user manual.
2. Make sure that the PC communication ports have been set up correctly. Refer to "PC: DOS and setting up ports" on page 2-39 for instructions.
3. Select the printer driver for the Phaser 550, or a Tektronix Phaser printer, or a generic color PostScript driver.

Note Generic PostScript printer drivers do not have information about your Phaser 550, for example, its page sizes and image area size. Using a standard Letter or A4 paper size selection should produce acceptable results.

- a. Select the appropriate port (an LPT port for parallel; a COM port for serial; one of the LPT or COM ports for network connections).
 - b. Set the page margins in your application software as needed. For details on the printer's paper and margin sizes, refer to "Margins and print area" on page 3-21.
4. Send a file to the printer from your software application. Refer to the application software's user manual for details.

For details on driver options, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Printing from a UNIX or VMS workstation

You can print from a workstation through Ethernet, Token Ring, parallel, or serial interfaces. Workstation users can print from any application that generates color PostScript.

For UNIX and VMS environments, Tektronix offers PhaserPrint™, which provides fast raster file and screen copy printing to Tektronix color printers. PhaserPrint also provides a graphical user interface for push-button control of Tektronix printer features.

PhaserPrint software is available for these supported workstations and tested operating systems:

Workstations	Operating systems
Sun SPARCstation	Sun OS 4.1.3, Solaris 2.3, Solaris 2.4
SGI:	IRIX 4.0.1, 5.2, and 5.3
HP 9000 700/800:	HP-UX 9.0.5
IBM RS/6000:	AIX 3.2
DECstation:	Ultrix 4.0 and 4.4
DEC Alpha AXP:	OSF/1 3.0 and 3.2

Note Tektronix offers a similar solution for DEC OpenVMS VAX and DEC OpenVMS AXP.

PhaserPrint works with the workstation's native spooling system to print PostScript files and raster files in these formats: Sun Raster Format (SRF), **xwd**, and SGI RGB.

If you ordered your printer with an Ethernet or Token Ring interface, a demonstration copy of PhaserPrint is provided on a compact disk (CD-ROM). If you did not receive a demonstration copy but would like one, or if you would like to purchase PhaserPrint, contact your dealer, local Tektronix office, or in the United States and Canada, call **1-800-835-6100**.

3 Printing

For VMS environments, Tektronix also offers PhaserSym, a VMS print symbiont. Refer to Appendix B for ordering information.

For information on printing from workstations and setting up spooling systems, you can contact HAL, the Tektronix automated fax system by calling direct (503) 682-7450 or, in the United States or Canada, by calling toll-free 1-800-835-6100. Refer to "Using the automated fax systems" on page 6-4 for details on using the HAL system.

The printer-control PostScript files that are on the CD-ROM and printer diskettes (PC format) can be used for UNIX workstations. These files let you set up your spooling system to select between media trays, print-quality modes, color correction modes and other features. Most workstations with 3.5-inch disk drives provide a device driver that allows you to mount a PC floppy diskette.

If you don't have the means of transferring utility files to control printer features from the PC diskette or CD-ROM, you can download utilities and files from the Tektronix ftp server, the Tektronix Bulletin Board Service (BBS), or the Tektronix World Wide Web server. Refer to Chapter 6, "Troubleshooting," for information on Tektronix' online service.

Printing from a Macintosh

The CD-ROM and Printer Software diskettes include Printer Description Files (PPDs) that work with the Macintosh drivers to select print features.

Note Printing from a Macintosh requires that an optional PhaserShare card be installed in the printer.

1. From the **File** menu, open the **Page Setup** dialog box. Use the **Paper** pop-up menu to select the printer's supported paper sizes.
2. From the **File** menu, open the **Print** dialog box. Select media options and paper trays in the **Paper Source** field. Refer to "All about media" on page 3-20 and "Media trays" on page 3-22 for details.
3. In the **Print** dialog box, click the **Options** button to see the **Print Options** dialog box. There are printer-specific **TekColor** features listed at bottom of the dialog box. Refer to "Print-quality modes" on page 3-10 for details on **Print Quality** and for details on **Color Correction**.
4. The LaserWriter 8.3 driver offers ColorSync options; refer to the **Phaser 550 Drivers and Utilities Printing Reference** for instructions.

For detailed information on print features, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Note If you are using the *Phaser 550 GX driver* to print a file, refer to the *Phaser 550 Drivers and Utilities Printing Reference* for complete information on installing and printing from the driver.

Printing from specific applications

Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for some application-specific information.

You can also get tips on printing from specific applications (such as QuarkXPress and PageMaker) by contacting HAL or EuroHAL, the Tektronix automated information systems. HAL and EuroHAL fax you information immediately on applications and other topics. To receive a HAL FAX catalog, call toll-free in the United States **1-800-835-6100**, or dial direct **(503) 682-7450**. For a EuroHAL catalog, and for complete information on both HAL and EuroHAL, see "Using the automated fax systems" on page 6-4.

In addition, you can get application information on the Tektronix World Wide Web server and other online services. Refer to "Online services" on page 6-2.

Selecting print features

This printer provides five print-quality modes as well as TekColor color corrections that you can select to customize your prints. Other print features include tray selection, media size and media type. There are several ways to select print features:

- **Through the printer driver**

Print selections that are made using a supported printer driver override the settings on the printer's front panel. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for details on selecting print features in the driver.

- **From the printer's front panel**

Settings you make on the front panel are only used when printing from a non-supported driver. Refer to the instructions included in this chapter.

Note For network setup protection, the front panel access to setup parameters may be limited. Refer to "Protected mode for the front panel menu" on page 7-4 for details.

- **Sending a PostScript utility file to the printer**

Printer settings downloaded to the printer's front panel are **only** used when printing from a non-supported driver. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for information on sending utility files to the printer.

- **Using PhaserLink software**

If your network is running TCP/IP and you have a World Wide Web browser (such as Netscape or Mosaic), you can use this browser to view printer status and select printer features. Refer to the **PhaserShare Status Software User Manual** for complete information.

Print-quality modes

Fast Color Produces the fastest full-color output at 600 x 600 dpi, nearly 5 pages per minute (ppm). When printing raster image data or color graphics, this mode provides excellent output using CMY toners. Not recommended for documents containing large amounts of black text.

Standard The default setting, at 600 x 600 dpi. This is the best general-purpose mode for full color printing. Prints at nearly 4 ppm color and 14 ppm monochrome, depending on the size and complexity of the image. You can get faster throughput with more memory installed.

*** Enhanced** This mode produces high quality color prints at 1200 x 600 dpi. It provides more detail and clarity in scanned images and prints at nearly 4 ppm color and 14 ppm monochrome. This print-quality mode requires that a minimum of 16 Mbytes of additional RAM be installed (for a total of 24 Mbytes). You can get faster throughput with more memory installed.

*** Premium** This mode produces the highest quality color prints at 1200 x 1200 dpi. It provides near photographic detail and prints about 2 ppm. This print-quality mode requires that a minimum of 16 Mbytes of additional RAM be installed (for a total of 24 Mbytes). You can get faster throughput with more memory installed.

Presentation This mode, selectable from the front panel, prints at 600 x 600 dpi and produces the smoothest and brightest large-area fills. **Presentation** mode is always used when you select transparency film, regardless of the driver print-quality setting. When you select **Presentation** mode in the front panel, it replaces **Standard** mode as the default and will be used when **Standard** mode is selected from the driver. This mode can be useful for printing paper copies of overhead presentations.

* If you select **Premium** or **Enhanced** mode but do not have the extended features option and sufficient memory installed, prints are made in **Standard** mode.

Selecting print-quality modes from the front panel

Use the following steps to change the print-quality mode through the printer's front panel menu.

1. When the printer is on and the Ready message appears, press the **Menu** button. The printer displays the first selection in the menu:

```
Help Pages
<---   ---> Menu
```

2. Using the left arrow (<---) or right (--->) arrow buttons, scroll through the selections until the following message appears:

```
Print Quality
<---   ---> Menu
```

3. Press the **Menu** button to access print-quality selections. The printer displays the following message:

```
Print Quality:Standard*
<---   ---> OK
```

4. Using the right or left arrow buttons, scroll between the print-quality selections until you reach the appropriate setting. An asterisk next to the selection indicates the currently active setting.
5. Press the **OK** button to confirm your selection.
6. Return to the top level of the menu by pressing the **Exit** button until the printer displays the Ready message.

Color correction

The printer provides TekColor Dynamic Correction, which consists of the following color correction modes:

Color correction mode	Description
None	Factory default. No correction made to colors.
Vivid Color	Adjusts the color blue to appear less purple. Produces the brightest possible colors for transparencies.
Display	Adjusts the color to closely approximate the colors on a standard display screen.
SWOP Press	Specification for Web Offset Publications. Typically used to match U.S. press standards.
Euroscale Press	Characterized to match the equivalent 3M Matchprint [®] . Typically used to match European press standards.
Commercial Press	Used to match commercial 3M Matchprint [®] proofs.
Monochrome	Prints a color image as a monochrome gray scale. Outputs color page masters in black-and-white for photocopying.
Use Printer Settings	Uses the color correction mode specified in the printer front panel setting rather than any printer driver setting. This may include a custom download color correction.

You can view sample output of four of the color correction modes at the bottom of the Startup page. Refer to “Printing the startup page” on page A-4 for instructions on printing the Startup page.

Note If your printer is on a network and you have changed the front panel settings, make sure that you tell other users on the network. The printer settings affect *all* prints made with non-Tektronix drivers.

Selecting TekColor corrections from the front panel

Use the following steps to change the color correction mode through the printer's front panel menu.

1. When the printer is on and the Ready message appears, press the **Menu** button. The printer displays the first selection in the menu:

```
Help Pages
<---   ---> Menu
```

2. Using the left (<---) or right (--->) arrow buttons, scroll through the selections until the following message appears:

```
TekColor Correction
<---   ---> Menu
```

3. Press the **Menu** button to access color correction selections. The printer displays the following message:

```
TekColor Correction:None*
<---   ---> OK
```

4. Using the right or left arrow buttons, scroll through the color correction selections. An asterisk next to the selection indicates the currently active setting.
5. Press the **OK** button to confirm your selection.
6. Return to the top level of the menu by pressing the **Exit** button until the printer displays the Ready message.

For a complete list of the front panel settings, see Chapter 7. For more detailed information on color correction, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Controlling color density

The printer's front panel provides an interface to adjust the density of the toner applied to the media. This feature compensates for the changes in density that can occur as toner cartridges or the imaging unit age. Follow these steps to adjust the color density:

1. Press the **Menu** button on the front panel. The display reads:

```
Help Pages  
<---    --->  Menu
```

2. Press the right arrow button so that the display reads:

```
Calibrate Colors  
<---    --->  Menu
```

3. Press the **Menu** button to enter the Calibrate Colors menu.

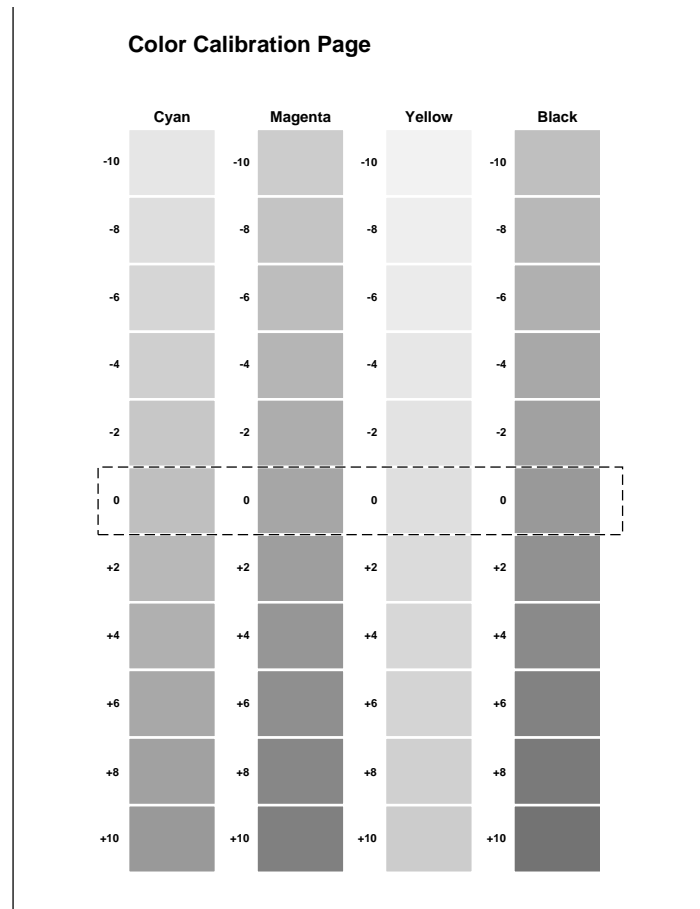
4. Press the right or left arrow button so that the display reads:

```
Adjust each color  
<---    --->  Menu
```

5. Press the **Menu** button. The display reads:

```
Calibration Page  
<---    --->  Print
```

6. Press the **Print** button to print the Color Calibration Page. The current density setting for each color is indicated by the dashed line enclosure and the numeric value (-10 to +10) next to each color. The page also shows the ranges that you can select in the front panel. In the example on the next page, the density setting for each color is the default, 0.

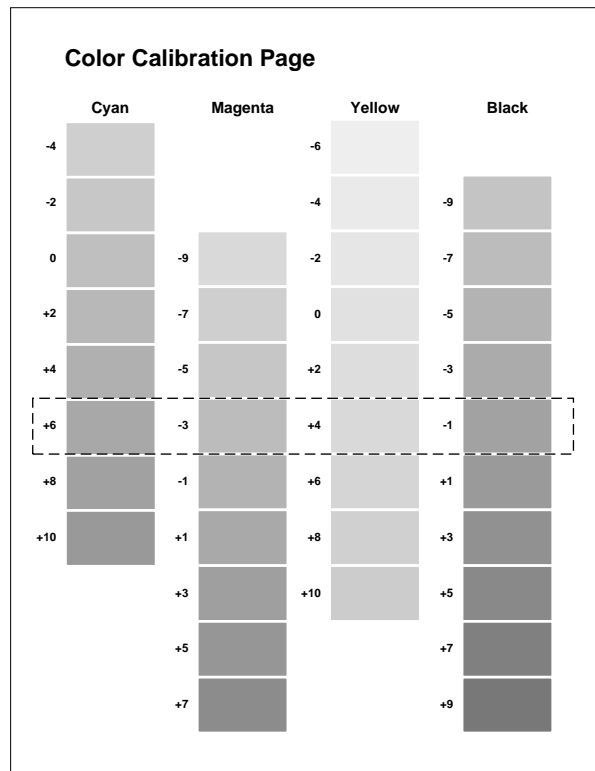


9317-51

7. Compare the printer's current density settings on the Color Calibration Page with the color density samples on the **Phaser 550 Quick Reference Card**:
 - a. Place the Color Calibration Page on at least 2 sheets of clean white paper in a well-lighted area.
 - b. Align the hole in the cyan color density sample on the **Phaser 550 Quick Reference Card** over the cyan column on the Color Calibration Page.
 - c. Decide which block on the Color Calibration Page most closely matches the density of the cyan sample on the **Quick Reference Card**. Make a note of the value (-10 to +10) associated with that block.
 - d. Repeat Steps a through c for each color.
 - e. Reprint the Color Calibration Page to check the adjusted density.

3 Printing

8. Adjust the density using the Calibrate Colors menu in the front panel. Refer to the table on page 3-17 for information on these settings.
9. After changing the density setting for any or all of the colors, reprint the Color Calibration Page, which shows the following:
 - The dashed line enclosure reflects the changes you made to the settings. In this example, the density for each color is set to a different value.



9317-53

10. When you finish adjusting the colors, press the **Exit** button until the front panel displays Ready.

The following table shows the selections available in the Calibrate Colors menu, along with a brief explanation of each function.

Calibrate Colors menu selections

Menu item*	What it does	How it works
Adjust light/dark <----> <----> Menu	Lightens or darkens all toner colors.	<ul style="list-style-type: none"> ■ Press the Menu button.
Lighter/Darker:+0 * <----> <----> OK	<p>Lightens or darkens all toner colors.</p> <p>The current Light/Dark setting reflects the <i>average value</i> of the four separate density settings. Each increment adjusts all four density values up or down the same amount. The available adjustment range is limited so that no single color exceeds the ± 10 value limit.</p>	<ul style="list-style-type: none"> ■ To lighten colors, press the left arrow button (the number decrements in 1-point steps); then press the OK button. ■ To darken colors, press the right arrow button (the number increments in 1-point steps); then press the OK button.
Adjust each color <----> <----> Menu	Controls the color density for each color independently.	<ul style="list-style-type: none"> ■ Press the Menu button.
Color Calibration Page <----> <----> Print	Prints a sample of the current density setting and a range of settings for each color.	<ul style="list-style-type: none"> ■ Press the Print button.
Adjust <color>: <----> <----> Menu	Enters the menu to calibrate a single color.	<ul style="list-style-type: none"> ■ Press the Menu button.
Adjust <color>:+0 * <----> <----> OK	Calibrates the indicated color.	<ul style="list-style-type: none"> ■ To lighten this color toner, press the left arrow button (the number decrements in 1-point steps); then press the OK button. ■ To darken this color toner, press the right arrow button (the number increments in 1-point steps); then press the OK button.
Reset adjustments <----> <----> Menu	Resets the color calibration to the default settings.	<ul style="list-style-type: none"> ■ Press the Menu button; then press the Confirm button.

* An asterisk (*) on the front panel selection indicates the current setting.

Using color sampler charts

The Phaser 550 CD-ROM and diskettes contain color sampler charts for the following color methods:

CMYK

Cyan, magenta, yellow, and black

RGB

Red, green, and blue

HSB

Hue, saturation, and brightness

PANTONE® Colors

The charts consist of colored rectangles and coordinate values. Print the appropriate chart for your application, and use the coordinate values (numbers printed beneath each color) to select colors within an application. For example, your printer can produce PANTONE-approved process color simulations. Use the PANTONE Color sampler chart to select the process color values within software applications that support PANTONE Colors.

If you use an application that specifies print colors using CMYK values, use the CMYK charts. If you use an application that specifies print colors using RGB values, use the RGB charts. For details on printing the charts, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

If you did not receive the color sampler charts, you can download them from the Tektronix ftp server, the Tektronix Bulletin Board Service (BBS), or the Tektronix World Wide Web server. Refer to “Online services” on page 6-2 for information on Tektronix’ online services.

Quick Collate

This feature, available with the extended features option, allows a user to generate multiple copies of a multiple-page job so that the output is produced in collated order. To set this print feature, you select it in the driver by clicking on the check box. Refer to “Using the Quick Collate option” on page A-8 for detailed information on how this option handles collating multiple copies and on the memory requirements for the best performance. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for detailed information on selecting and using the **Quick Collate** option.

Check Print

This feature is available with the extended features option. When sending a file to the printer through the driver, you can select **Check Print** to preview the first page of the job and determine if the print is to your liking before proceeding with the remainder of the job. This is especially useful when printing a large job.

The ability to access **Check Print** from the driver is enabled and disabled in the printer’s front panel. You can also set the timeout in the front panel (the timeout is the amount of time the printer will wait after sending the first page of a file, before it continues with the remainder of the job).

By default, access to **Check Print** is enabled, with a default timeout of 5 minutes.

For complete instructions on making this driver selection, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

All about media

- Make sure that the media trays are free of dust. Dust and dirt in a media tray can be transferred to the paper or transparency, resulting in poor print quality.
- Handle paper and transparencies with both hands at the edges to avoid creases and fingerprints, which can result in poor print quality.
- Store paper and transparencies in the original, dust-free package.
- To avoid having transparencies or paper stick together, fan them before loading into the appropriate media tray.
- For best results, use a smooth paper and Tektronix transparencies.
- Use a high grade laser paper, such as Tektronix 24 lb. Bond, for the finest resolution and brightest, most consistent colors: 75-105 g/m² (20-28 lb.) paper in the media trays and 60-120 g/m² (16-32 lb.) paper with manual feed.
- Feeding media through the printer twice or printing on both sides of the media can reduce the life of the printer's paper path components and consumables and may require frequent cleaning of the paper path components.
- This printer is not designed to accommodate envelopes. Do not attempt to print on envelopes; poor print quality or damage to the printer may result.
- If you need to print labels, use only full 8.5 x 11-inch label sheets rather than die-cut label sheets. Die-cut labels may peel off from their backing and stick inside the imaging unit.
- If you have a Lower Tray Assembly: A paper tray can be installed in any of the three tray slots; however, the transparency tray should only be inserted in the upper and middle tray slots.

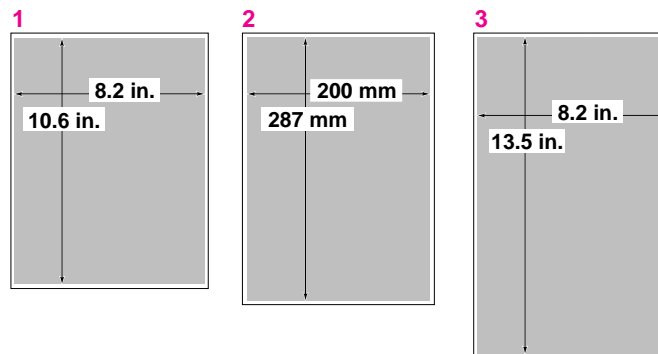
Margins and print area

When the printer places an image on media, the image (print area) is a bit smaller than the media size. You may need to adjust the page margins in your application software to match the print area.

Note To assure the correct page margins, use the drivers with the Tektronix software (PPDs).

The following table and illustration show the page sizes, the largest print areas, and the margins for the media sizes supported on this printer.

Media	Page size	Print area	Margins		
			Top	Bottom	Sides
1. A/Letter (U.S.)	8.5 x 11 in.	8.2 x 10.6 in.	.22 in.	.18 in.	.15 in.
2. A4 (Metric)	210 x 297 mm	200 x 287 mm	5 mm	5 mm	5 mm
3. Legal (U.S.)	8.5 x 14 in.	8.2 x 13.5 in.	.22 in.	.18 in.	.14 in.



9317-09

Media trays

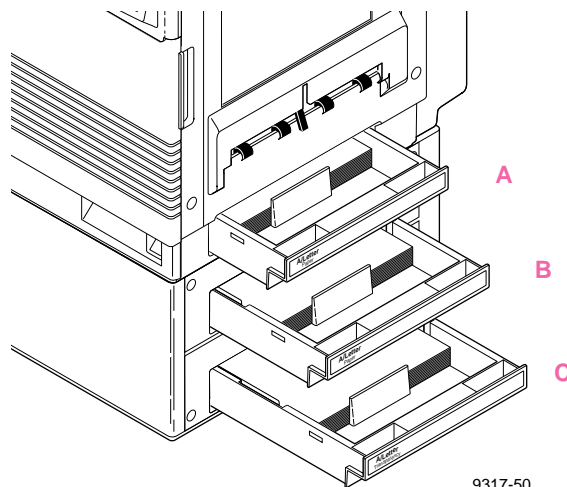
The printer is shipped with a paper tray, either A/Letter Paper (U.S.) or A4 Paper (Metric), depending on the order option. Optional trays (either A/Letter Transparency, A4 Transparency, or Legal Paper) are also available.

Media Trays	Media size
A/Letter Paper	8.5 x 11 in.
A/Letter Transparency	8.5 x 11 in.
A4 Paper (Metric)	210 x 297 mm
A4 Transparency (Metric)	210 x 297 mm
Legal Paper	8.5 x 14 in.

Caution Load only paper in the paper tray and transparencies in the transparency tray; otherwise, the printer reports a media jam.

If you have the Lower Tray Assembly installed and you wish to print transparencies, insert the transparency tray(s) into the upper (A) or middle (B) tray slot.

If you have the Lower Tray Assembly installed and you wish to use the automatic tray-switching feature (for example, when running a large job), make sure that all trays in the printer at any one time are the same media type and size.



9317-50

Selecting a media tray by location or media type

When your printer has a Lower Tray Assembly, the printer accommodates three media trays at once. You can select a tray from the driver, the front panel, or use a PostScript utility file.

Regardless of which method you use, you can select media by choosing the location (tray or manual feed) or the type of media; only one can be selected at a time.

Upper*	Forces the upper tray to be selected.
Middle*	Forces the middle tray to be selected.
Lower*	Forces the lower tray to be selected.
Paper	Forces a paper tray to be selected (if one is installed).
Transparency	Forces a transparency tray to be selected (if one is installed).
Media Tray	Selects media from the media tray (if the printer has only one tray).
Manual Feed paper	Selects paper from the manual feed slot.
Manual Feed transparency	Selects transparency from the manual feed slot.
Auto Select	Picks media from the default tray or any tray with media.

* This selection only appears in the front panel if you have the optional Lower Tray Assembly installed.

Upper, Middle and Lower selections

All of the selections are available in the printer driver and front panel. In addition, you can also select the **Upper**, **Middle**, or **Lower** tray by using a PostScript utility file (provided on the printer's CD-ROM and utility diskettes). If you make a selection by one of these methods, the printer picks media from the appropriate tray until that tray is empty. When that tray is empty, printing stops until the selected tray is filled.

Paper or Transparency

If you specify a particular media type, the printer picks media from any tray loaded with that type. If the type requested is not available, the printer waits until it is available, and displays a message requesting that the appropriate type of media be loaded.

AutoSelect

You can also choose **AutoSelect** from the front panel or with a utility file. With **AutoSelect**, the printer picks media from the default tray (if it is filled and loaded) or any tray in the printer that has media loaded. When that tray is empty, the printer automatically picks from another tray if it is the same type and size of media tray.

Manual Feed

The printer driver and the front panel also allow you to choose the manual feed tray. In the front panel, the selections are **Manual Feed: Paper** and **Manual Feed: Transparency**. In the Macintosh driver, you select manual feed and media type separately. If no media is loaded in the manual feed tray when manual feed is selected, the printer waits 60 seconds before it flushes the job (the default timeout is 60 seconds).

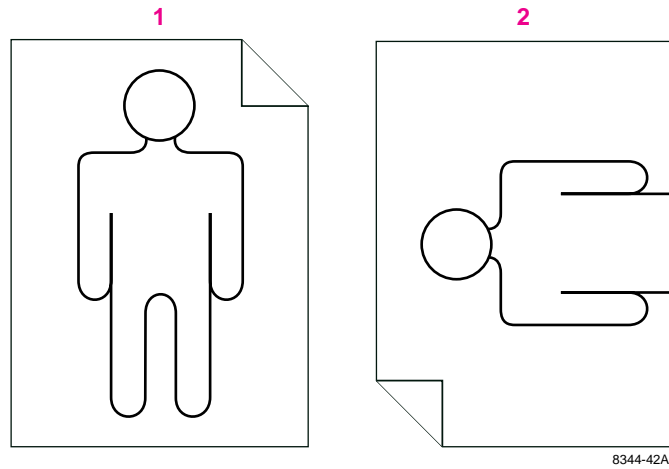
For more information on the front panel, see “Front panel” on page 7-1. For detailed information on the printer drivers, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Note You can change the printer’s tray-switching behavior by sending the appropriate utility file to the printer; however, media tray selections made in a driver take priority over selections made in either the front panel or by sending utility files to the printer. For more information, see the *Phaser 550 Drivers and Utilities Printing Reference*.

Image orientation

Orientation refers to how the image appears on a print. You specify the image orientation through your software application or printer driver.

1. Portrait
2. Landscape



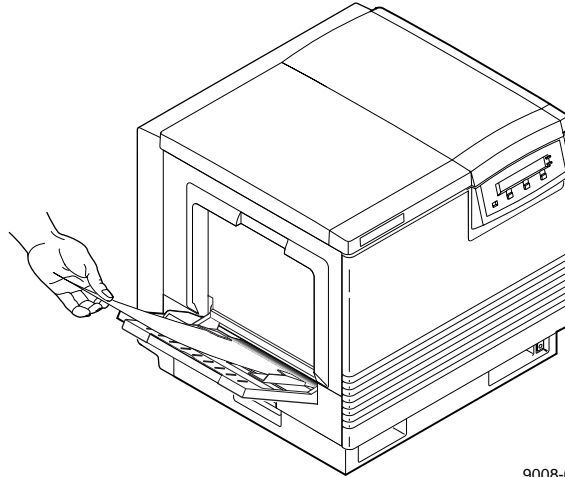
Using manual feed

Use manual feed for printing on a media other than what is installed in the media tray. When the printer senses media in the manual feed tray, it picks that media. You can also select manual feed in the front panel; when you do, the front panel reads `Manual Feed: Paper` or `Manual Feed: Transparency`. The message remains in the front panel until you feed media at the manual feed slot or make another selection. (This front panel setting is overridden by a driver selection.) If no media is loaded in the manual feed tray when manual feed is selected, the printer waits 60 seconds before it cancels the job (the default timeout is 60 seconds).

Caution Re-using media that has been fed through the printer once, for example, after jams or if the media is ejected without being printed, can reduce the life of the consumables and paper path components.

Insert the paper

1. Adjust the guides to the width of the paper.
2. Insert a piece of paper until it stops.
3. Wait 5 seconds after the first sheet enters the printer before inserting a second sheet.

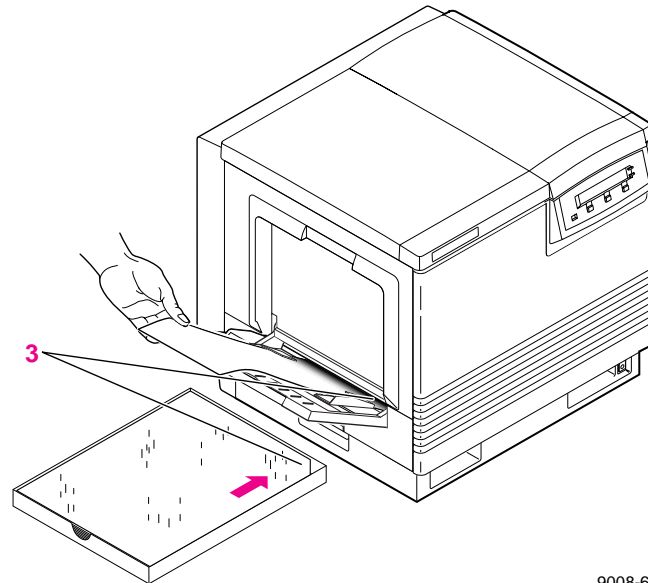


9008-61

3 Printing

Insert the transparency

1. Adjust the guides to the width of a transparency.
2. Tektronix transparency film is stored in its box with the printable side facing **up** and the notched end at the upper right side of the box.
3. Place the transparency in the manual feed tray with the printable side **up**: the end that is notched enters the printer first with the notched corner closest to the **front** of the printer. Insert the transparency until it stops.
4. Wait 5 seconds after the first sheet enters the printer before inserting a second sheet.

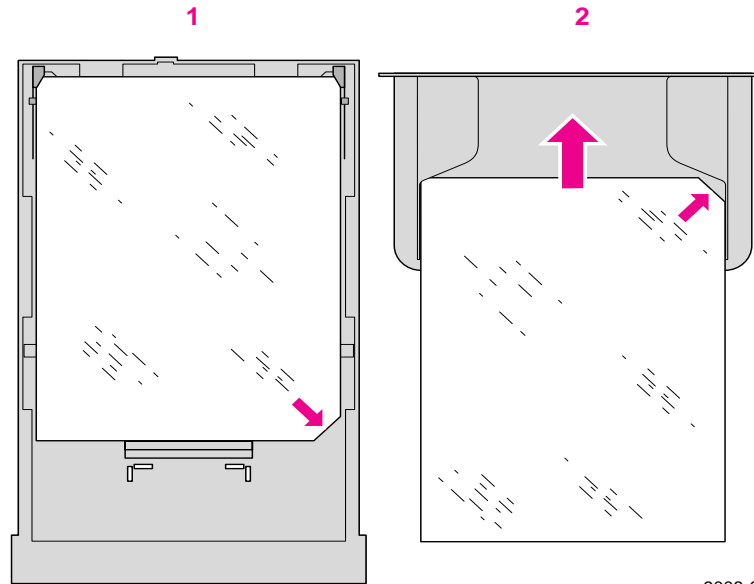


9008-69

Making transparencies

Follow these guidelines when you make transparencies:

- Use only Tektronix transparencies.
- When using the transparency tray (1), load transparencies with the printable side **down** (the notched end is placed closest to the load level label inside the transparency tray).
- When using manual feed (2), insert the side with the notched end into the printer first, with the notched corner closest to the front of the printer.



9008-68

Note Re-using transparencies that have been fed through the printer once (for example, after jams or if the transparency is ejected without being printed) can reduce the life of the consumables and paper path components.

Fonts

Resident typefaces (PostScript)

The printer accepts Adobe Type 1 and Type 3 downloadable fonts, TrueType fonts, PCL5 (optionally enabled), and a variety of user-defined fonts. To extend font capability, the printer supports a SCSI-connected external hard disk for storage of additional fonts. Refer to “Adding a hard disk for font storage” on page B-5 for more information.

The Phaser 550 standard configuration is shipped with a set of 17 resident fonts.

Additional fonts can be added to the Phaser 550. The extended feature option includes these 39 fonts. Refer to Appendix B for upgrade information.

Courier

Courier Bold

Courier Oblique

Courier Bold Oblique

ITC Avant Garde Gothic Book

ITC Avant Garde Gothic Book Oblique

ITC Avant Garde Gothic Demi

ITC Avant Garde Gothic Demi Oblique

ITC Bookman Light

ITC Bookman Light Italic

ITC Bookman Demi

ITC Bookman Demi Italic

Helvetica

Helvetica Bold

Helvetica Oblique

Helvetica Bold Oblique

Helvetica Condensed

Helvetica Condensed Bold

Helvetica Condensed Oblique

Helvetica Condensed Bold Oblique

Helvetica Narrow

Helvetica Narrow Bold

Helvetica Narrow Oblique

Helvetica Narrow Bold Oblique

New Century Schoolbook

New Century Schoolbook Bold

New Century Schoolbook Italic

New Century Schoolbook Bold Italic

Palatino

Palatino Italic

Palatino Bold

Palatino Bold Italic

Times Roman

Times Bold

Times Italic

Times Bold Italic

ITC Zapf Chancery Medium Italic

☆*⋄⋆⊗⊠⊡⊢⊣⊤⊥⊦⊧⊨⊩⊪⊫⊬⊭⊮⊯⊰⊱⊲⊳⊴⊵⊶⊷⊸⊹⊺⊻⊼⊽⊾⊿ (ITC Zapf Dingbats)

Σψμβoλ (Symbol)

9317-10

Resident typefaces (PCL5)

For PCL5 (Printer Command Language) printing (HP Laserjet III emulation), the printer supports Courier, Times, and Universe typefaces in medium, bold, italic medium, and italic bold. (PCL5 support is optional and must be separately enabled. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for details.)

Downloading fonts

The printer accepts PostScript Type 1, Type 3, and TrueType downloadable fonts.

If you have an external hard disk connected to the Phaser 550, you can store the downloadable fonts on it. You can use utilities on the Phaser 550 printer utilities diskettes or CD-ROM to download fonts to the printer. For details, see the **Phaser 550 Drivers and Utilities Printing Reference**.

Installing Macintosh screen fonts

The Macintosh Driver and Printer Utilities diskette and CD-ROM include screen fonts for these typeface families: Times, Helvetica, Courier, Symbol, Helvetica Condensed, Helvetica Narrow, Palatino, ITC Avant Garde Gothic, ITC Bookman, ITC Zapf Chancery, ITC Zapf Dingbats, and New Century Schoolbook.

If they are not already installed, you must install these screen fonts to see the printer's resident typefaces on the Macintosh screen. For information on how to install fonts, see the **Phaser 550 Drivers and Utilities Printing Reference** or your Macintosh documentation.

Printer languages: PostScript, HP-GL, PCL5

The printer supports PostScript Level 1 and Level 2 and HP-GL (Hewlett-Packard Graphics Language) printer languages. Additionally, the printer supports monochrome PCL5 (Printer Command Language) as a separately enabled option. Refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

The default language for the parallel port is PostScript. For information on default language for other interface ports, refer to the **PhaserShare Network Cards and Software System Administrator User Manual**.

If you want to print HP-GL or PCL5 files on a port set to PostScript, you must set up that printer port for that type of data or enable Adobe IntelliSelect™ automatic language selection. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for instructions.

If automatic language selection is enabled, you can send PostScript, HP-GL, and PCL5 files to the printer and the printer automatically detects the type of file and prints it. You can change the default language so that the next time you turn on the printer, it is set to receive PostScript, HP-GL, or PCL5 data on a specific port.

The printer has default values for the HP-GL parameters, such as pen color and pen width. However, you can change these values. Refer to the **Phaser 550 Drivers and Utilities Printing Reference** for instructions.

Printing hints

Application hints

For information about using specific software applications with your printer, contact Tektronix' HAL or EuroHAL information systems. In the U.S., call **1-800-835-6100** or **(503) 682-7450**; for EuroHAL telephone numbers, refer to "If you need help" on page 6-1. For a complete listing of available topics, request a catalog. For instructions on using the HAL and EuroHAL systems, refer to "Using the automated fax systems" on page 6-4.

Tektronix supplies and software

Always use Tektronix supplies to ensure the highest quality prints and printer performance. Tektronix Printer Description Files (PPDs) and utility files work with the drivers to provide the best access to printer features. See Chapter 5 for order information.

Getting the best results

There are many variables in process reproduction of colors generated by the Phaser 550, any one of which may affect the quality of the PANTONE Color simulation, including:

- Color toner
- Quality of paper and transparency film
- Effective final resolution
- Dot structure/halftones

For optimal results, always use the recommended Tektronix supplies. Refer to Chapter 5 for order information.

Getting the largest printed picture

To get the largest printed picture, keep in mind the following:

- The area of media that the Phaser 550 prints on is smaller than the size of the paper or transparency (refer to “Margins and print area” on page 3-21 for more details). You may have to adjust the margins in your application software.

Relative port speed

Ethernet and Token Ring are the fastest ports, followed by the parallel port, the LocalTalk port, then the serial port.

Fastest print time

The total print time depends on the following:

- Image complexity
- Image size
- Type of port used and network traffic
- Printer's memory configuration (a 72-Mbyte configuration is fastest)
- Resolution selected (600 x 600 dpi is approximately twice as fast as 1200 x 1200 dpi)
- Type of media (paper or transparencies)

Of these elements, only the time contributed by the printer's paper-marking speed (the time it takes the printer to put the colored toner on the paper once it has received the processed image) is predictable; the others can vary greatly depending on your system configuration and the type of image you are printing. However, the Phaser 550 PostScript interpreter combines very fast image processing and communication with sophisticated memory management to keep the total print time to a minimum.

The printer's optimum image processing throughput via a dedicated Ethernet connection is about 200 Kbytes per second (12 Mbytes per minute). Actual throughput will generally be somewhat slower than this, depending on network traffic, image complexity, color correction, and memory configuration.

For details on the printer's paper-marking speed, see "Specifications" on page A-12.

Caring for Your Printer

Overview

To ensure the best print quality and the most reliable printer operation, follow these simple guidelines:

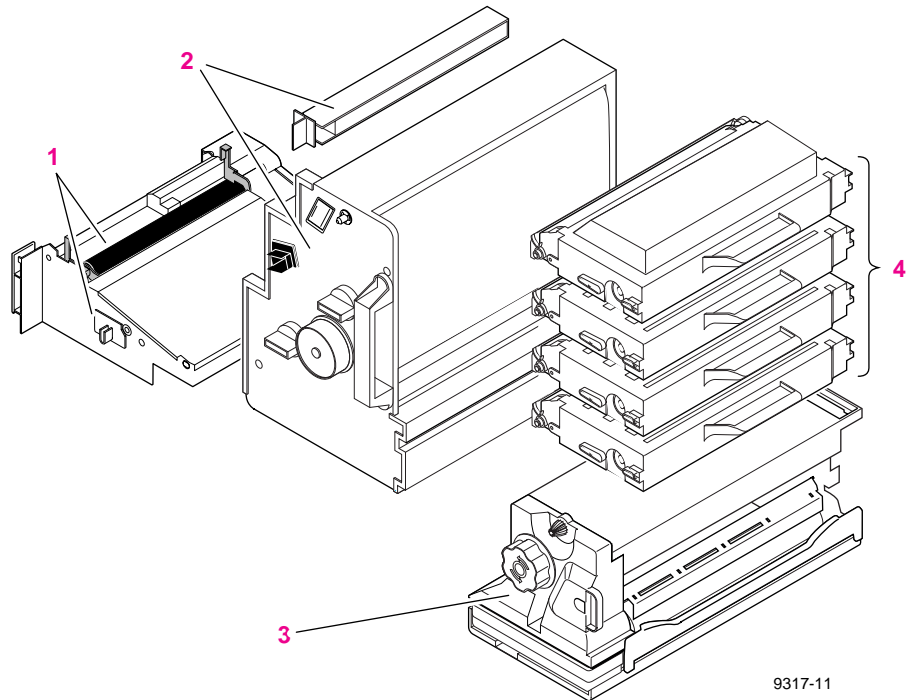
- Always use high-quality laser paper and **only** Tektronix transparencies.
- To maintain print quality, use the troubleshooting information on the **Phaser 550 Quick Reference Card** and in Chapter 6; also use the Test Print and Service Print 1 in the front panel's Help Pages menu to diagnose symptoms.
- Do not touch the underside or the right side of the imaging unit; fingerprints may appear on your output.
- Keep the imaging unit's light exposure to a minimum — less than 45 seconds — or you may damage the unit:
 - When installing a new imaging unit, keep the protective plastic sheet on until immediately before you insert it into the printer.
 - If, when installing the imaging unit, you also need to install other components, install the imaging unit **last** to minimize its light exposure.
 - When changing a toner cartridge or clearing a media jam, make sure that you close the right side door quickly to avoid any light exposure to the imaging unit.
 - Do not leave the front door open for extended periods of time (for example, several hours).
- Double-sided printing will require more frequent cleaning of the rollers and will reduce the average life of the consumables.

User-replaceable components

This printer is designed modularly so that it is easy to maintain: several of the components are replaceable. What this means to you is that cleaning is only necessary if you experience paper-path problems (see “Cleaning the paper-pick and paper-feed rollers” on page 4-26).

These are the replaceable components for the Phaser 550:

1. Transfer kit (transfer roller and waste bin)
2. Imaging unit (includes the filter)
3. Fuser
4. Toner cartridges



9317-11

When to replace components

The following table lists the replaceable components and what symptoms to look for when they need to be replaced.

Printer component	Average life*	Symptom
Toner cartridges		
<i>Change the color toner soon.</i>	8,000 pages (CMY)**	<ul style="list-style-type: none"> ■ Front panel message: <color>: low ■ Uneven, streaky or mottled color
	10,000 pages (Black)**	<ul style="list-style-type: none"> ■ Faded or missing color in a single color. ■ One or more straight and even, vertical, light or dark streaks in one color.
<i>Change the color toner now.</i>		<ul style="list-style-type: none"> ■ Front panel message: Stopped: replace <color>
Imaging unit		
<i>Replace the imaging unit.</i>	60,000 images	<ul style="list-style-type: none"> ■ Refer to the “% Used” gauge on the Test Print ■ Dark, vertical streaks on the print.
	or 15,000 full color pages	<ul style="list-style-type: none"> ■ Dark color spots and streaks in all colors. ■ A wide, light, horizontal band in one place on the page. ■ All colors are faded; fine line detail disappears. ■ Front panel message: Imaging Unit: replace
Fuser		
<i>Change the fuser soon.</i>	30,000 pages	<ul style="list-style-type: none"> ■ Refer to the “% Used” gauge on the Test Print ■ Front panel message: Fuser: replace
<i>Change the fuser now.</i>	40,000 pages	<ul style="list-style-type: none"> ■ Front panel message: Stopped: replace Fuser!
Transfer kit		
	40,000 pages	<ul style="list-style-type: none"> ■ Refer to the “% Used” gauge on the Test Print ■ Front panel message: Transfer Kit: replace

* These figures are based on an average of 5% coverage of the printable area for any one color. The frequency of replacement will vary, depending on the complexity of the prints you are making.

** The starter cartridges that are shipped with the printer have an average life of approximately 3,000 pages, based on an average of 5% coverage.

For a more detailed list of print quality symptoms and solutions, refer to the table “Troubleshooting and print quality quick reference” on page 6-10 and “Print quality problems” on page 6-26.

Replacing a toner cartridge

Replace a toner cartridge soon after the front panel reads `<color>: low` (after the message appears, the cartridge may still yield about 100 pages, depending on the complexity of your prints). When the toner cartridge is empty, the printer stops and the front panel reads `Stopped: replace <color>`.

Note The toner cartridges shipped with the printer are *starter* cartridges (i.e., the toner level is about a third of the replacement cartridges). Refer to “Supplies and accessories” on page 5-2 for information on ordering replacement cartridges.

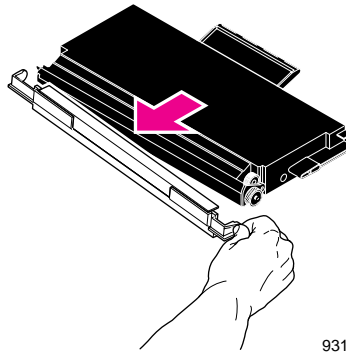
Replace the used toner cartridge

Caution Do not leave the right side door open for more than 45 seconds *when a toner cartridge has been removed*; the imaging unit is exposed to light and will be damaged.

Use this procedure to replace any of the four color toner cartridges. **Leave the power on** when you replace any of the components.

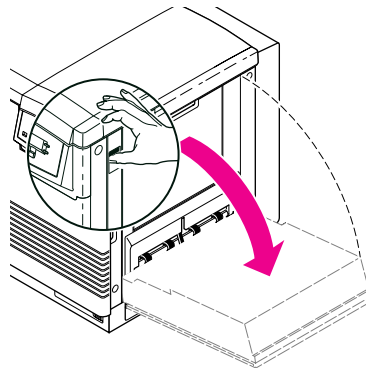
1. Remove the new toner cartridge from its packaging.

2. Remove the shipping cover from the new toner cartridge.



9317-03

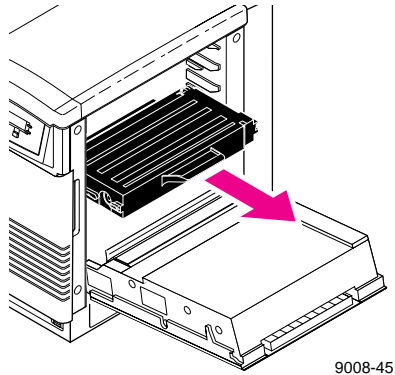
3. Open the right side door.



9317-12

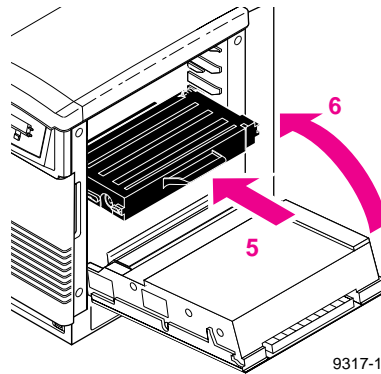
4 Caring for Your Printer

4. Slide out the used toner cartridge and dispose of it as normal office waste.



9008-45

5. Insert the new toner cartridge into the printer.
6. Close the right side door.



9317-13

Note The cartridge and printer labels are color-coded for easy installation.

Replacing the imaging unit

Replace the imaging unit when the front panel reads `Imaging Unit: replace`. Refer to “Troubleshooting and print quality quick reference” on page 6-10 for more information on diagnosing print quality symptoms.

The kit consists of these items:

- Imaging unit
- Filter
- Blower/brush cleaning tool

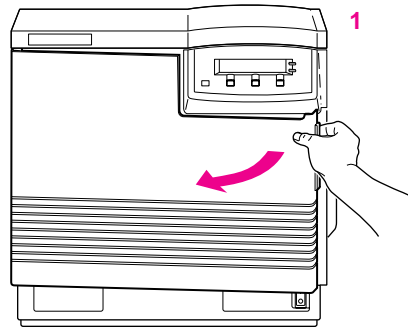
Caution When replacing the imaging unit, make sure that you do not expose either the new or used unit to light for more than 45 seconds. Place the used unit in a dark closet or empty box to protect it from the light. (When diagnosing a print quality symptom, you may replace the imaging unit and find it was not the solution, and then need to put the original unit back into the printer.)

4 Caring for Your Printer

Remove the used imaging unit

Leave the power *on* when you replace any of the components.

1. Open the front door.

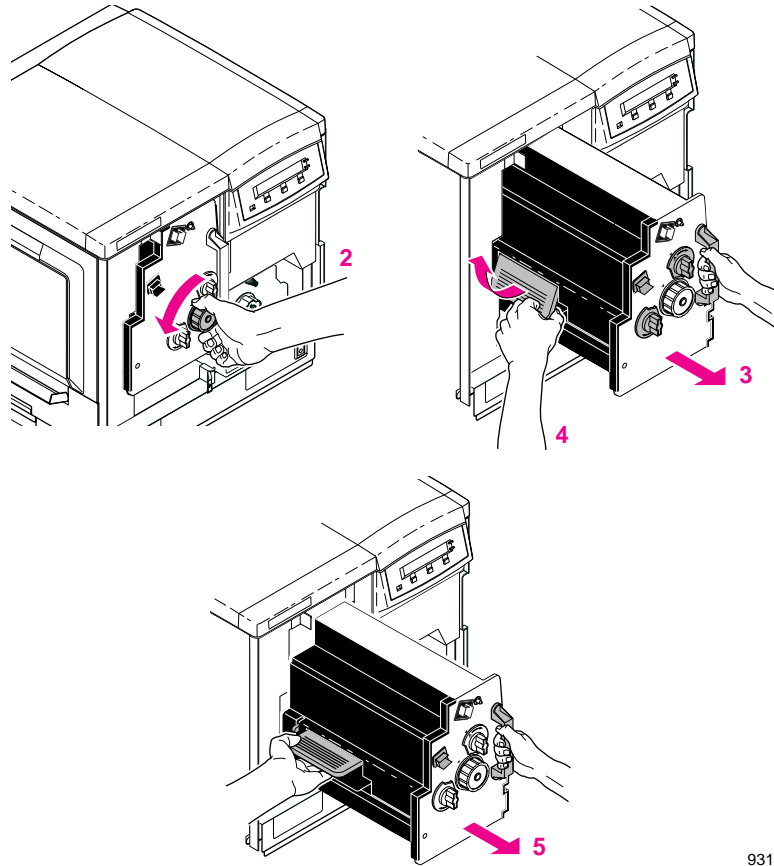


9317-14

2. To unlock the imaging unit, turn the large blue knob counterclockwise.
3. Holding the blue front handle, pull out the imaging unit until it stops.
4. Lift up the blue handle to the left of the imaging unit to release the catch.

Caution The imaging unit weighs about 5.9 kg (13 lbs.); take care to handle the imaging unit as shown to avoid damage to the unit and personal injury.

5. Slide the imaging unit out all the way; cover it completely to prevent damage from exposure to light, and set it aside.



9317-15

Unpack the new imaging unit

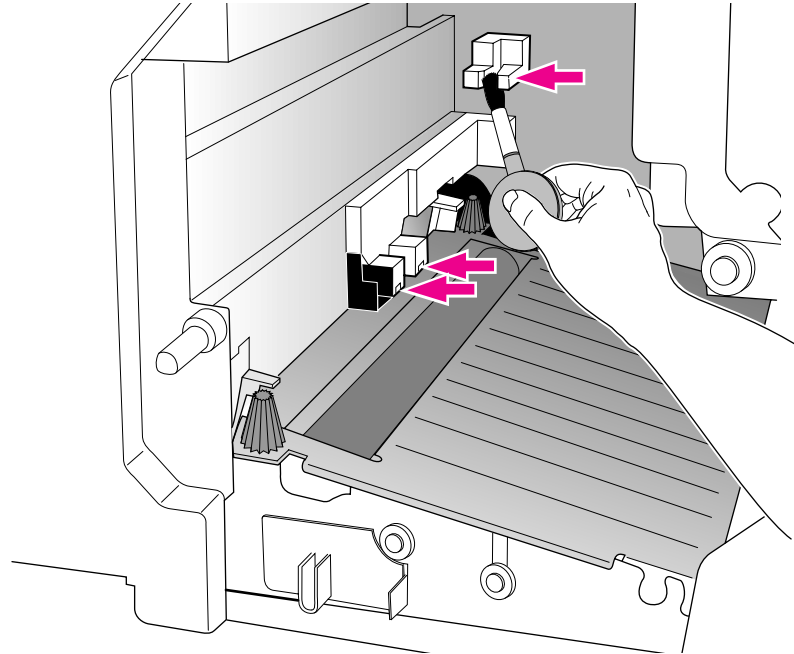
1. Remove the contents from the packaging, but leave the protective plastic sheet on the imaging unit until you insert it into the printer.
2. Save all packing material in case moving or subsequent shipment is necessary.

Caution To ensure print quality, do not touch the underside or the right side of the imaging unit; you may see fingerprints on your output.

Never allow exposure to direct sunlight, which can cause permanent damage in only a few seconds. Do not leave the imaging unit exposed to any light for more than 45 seconds. If you do, the unit may be damaged and need to be replaced. When installing it, leave the protective cover on until immediately before you insert it into the printer; then, promptly close the front door.

Clean the sensors

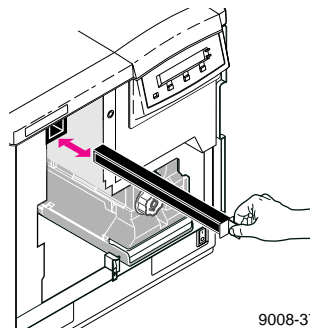
1. Using the blower/brush cleaning tool that was included in the imaging unit packaging, clean the three sensors inside the printer.



9317-49

Replace the filter

1. Pull out the used filter and dispose of it as normal office waste.
2. Insert the new filter.

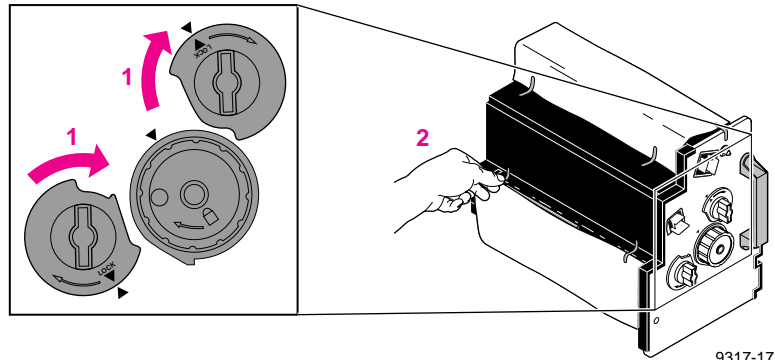


9008-37

4 Caring for Your Printer

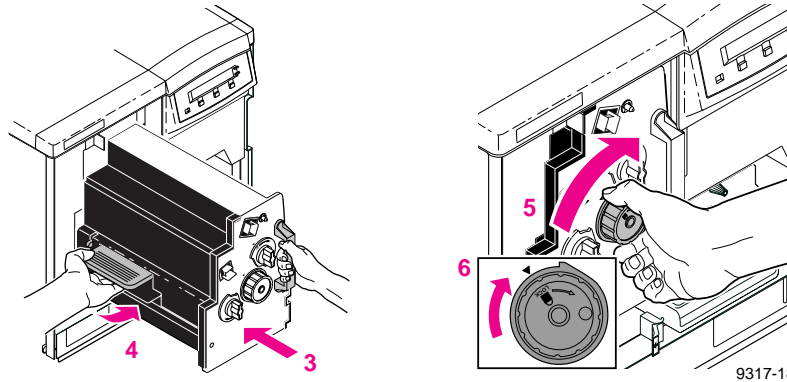
Insert the new imaging unit

1. Turn the two small blue knobs **clockwise** to align the triangles.
2. Remove the tape from the protective plastic sheet; then remove the sheet from the imaging unit.



9317-17

3. Insert the new imaging unit into the printer, holding it by the blue handles.
4. Release the left handle and slide the unit in until it stops.
5. Turn the large blue knob **clockwise** to insert the imaging unit completely and to lock it.
6. When properly installed, the lock icon aligns with the triangle.
7. Close the front door.



Reset the copy count

When you close the front door after replacing the imaging unit, the front panel displays the following question:

```
New imaging unit?  
No           Yes
```

Press the **Yes** button, then the **Confirm** button to automatically reset the copy count.

Note If you changed the imaging unit before the front panel reported a need to replace it, you will have to reset the copy count manually:

- Press the **Menu** button to enter the menu.
- Navigate to the **Imaging Unit** count in the **System Counts** menu; press **Reset** and **Confirm** for the imaging unit.

Refer to “Manually resetting component copy counts” on page 4-25 for detailed instructions.

What to do with the used imaging unit

Once you determine that the new imaging unit takes care of whatever print-quality symptom you observed, dispose of the used imaging unit as normal office waste.

If the new imaging unit did not fix the symptom

If the new imaging unit that you installed did **not** take care of the print-quality symptom, do the following:

1. Remove the new unit from the printer and carefully repack it so that it is protected for future use (it is especially important to protect it from exposure to light):
 - a. Replace the protective plastic sheet with the adhesive tape to protect the imaging unit. Take care not to touch the belt while handling the imaging unit.
 - b. Turn the two blue knobs **counterclockwise** to relieve the belt tension before storing the unit.
 - c. Repack the imaging unit into its box, using all of the packing material.
2. Re-install the original imaging unit.

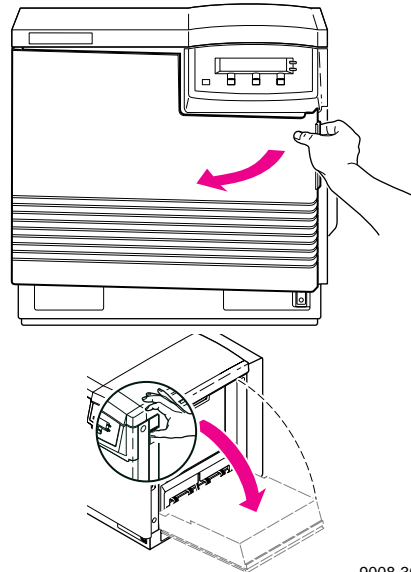
Replacing the fuser

Replace the fuser soon after the front panel reads `Fuser: replace` or immediately when the front panel reads: `Stopped: replace fuser!`. Refer to “Troubleshooting and print quality quick reference” on page 6-10 for more information on diagnosing print quality symptoms.

Remove the used fuser

Leave the power *on* when you replace any of the components.

1. Open the front door and the right side door.



9008-30

2. Wait 10 minutes to allow the fuser to cool.

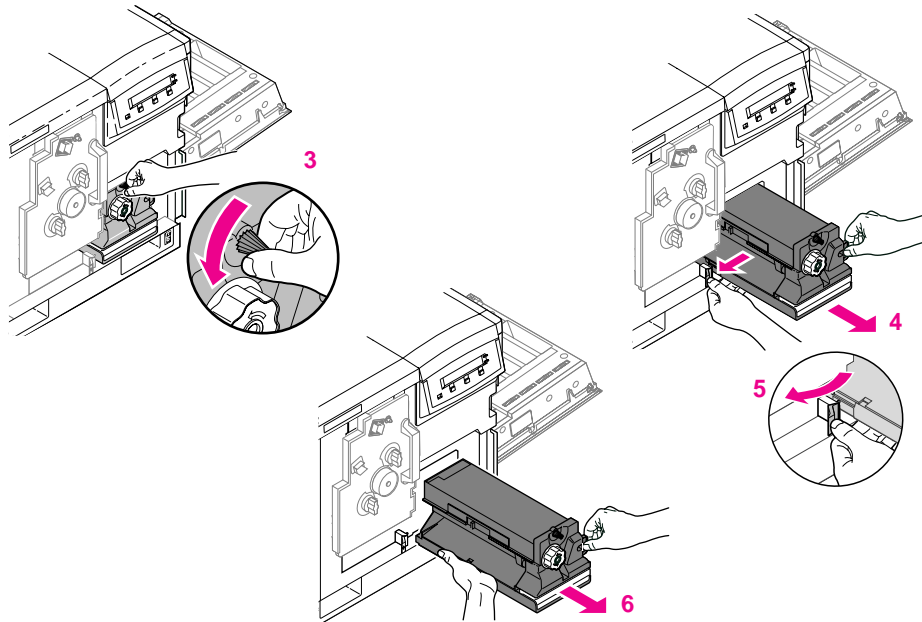
3. To unlock the fuser, turn the **small** blue screw that is above the large knob **counterclockwise** (about four turns) until it is loose.
4. Holding the blue tab on the right, pull the fuser until the safety catch stops it.
5. Press the blue lever to release the safety catch.

Caution The fuser may be hot. Be careful not to touch the areas marked with this caution icon:



The fuser weighs about 4.1 kg (9 lbs.); take care to handle the fuser as shown in the illustrations.

6. Slide the fuser out all the way, and dispose of it as normal office waste.



9317-19

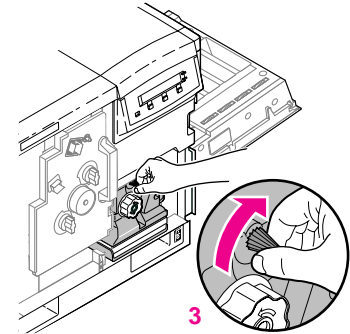
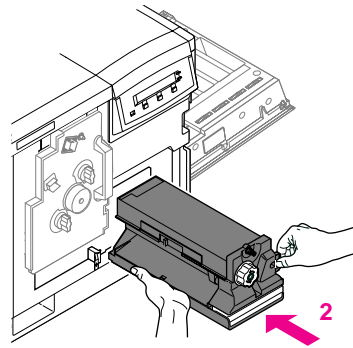
4 Caring for Your Printer

Insert the new fuser

1. Remove the new fuser from its packaging.

Note Save all packing material in case moving or subsequent shipment is necessary.

2. Using both hands, slide the new fuser into the printer. Push firmly to seat the fuser in place.
3. To lock the fuser, turn the **small blue screw clockwise** about four turns until it is tightened.



9317-20

4. Close the right side door and the front door.

Reset the copy count

When you close the front door after replacing the fuser, the front panel displays the following question:

```
New fuser?  
No          Yes
```

Press the **Yes** button, then the **Confirm** button to automatically reset the copy count.

Note If you changed the fuser before the front panel reported a need to replace it, you will have to reset the copy count manually:

- Press the **Menu** button to enter the menu.
- Navigate to the **Fuser Count** menu; press **Reset** and **Confirm** for the fuser.

Refer to “Manually resetting component copy counts” on page 4-25 for detailed instructions.

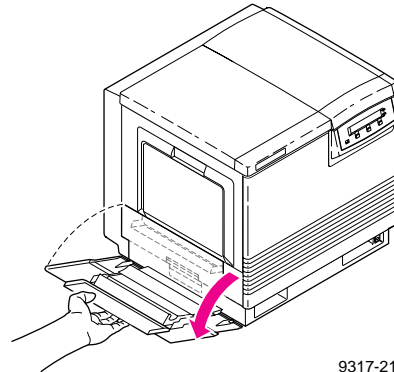
Replacing the transfer kit

Replace the transfer kit (consisting of the transfer roller and the waste bin) when the front panel reads `Transfer Kit: replace`. Refer to “Troubleshooting and print quality quick reference” on page 6-10 for more information on diagnosing print quality symptoms.

Remove the used transfer roller

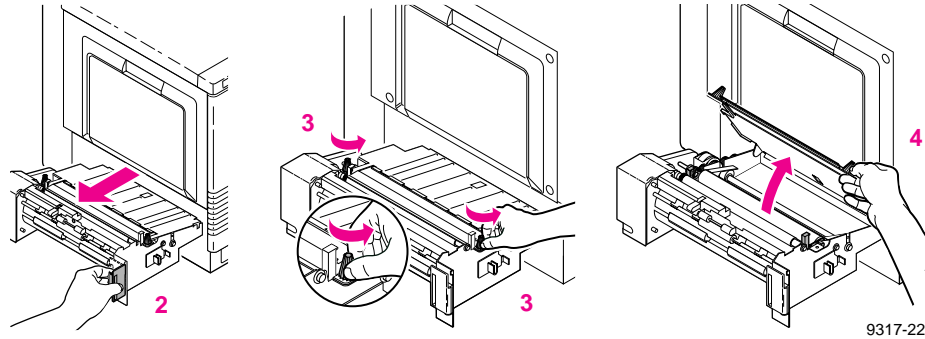
Leave the power *on* when you replace any of the components.

1. Open the left side door. (If you have an optional Lower Tray Assembly, open the upper of the two left side doors).

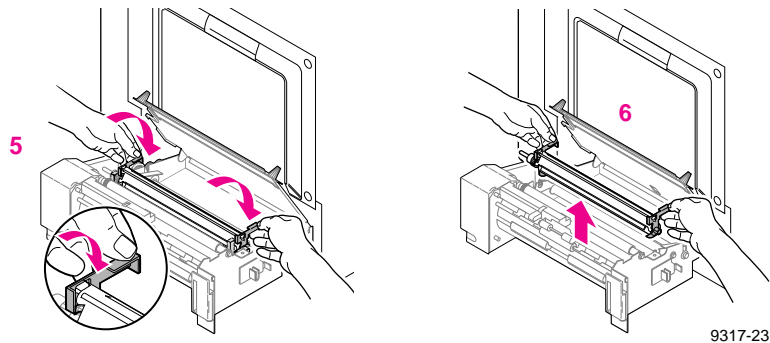


9317-21

2. Use the blue handle to pull out the paper feeder.
3. Turn the blue screws **counterclockwise** about four turns to unlock the cover.
4. Lift the cover until it catches and stays open.



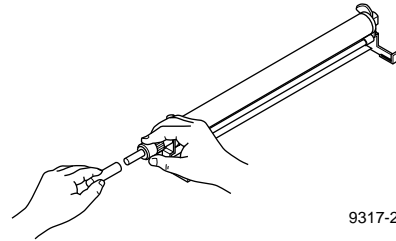
5. Hold the transfer roller by its blue handles; rotate the handles toward the printer.
6. Lift out the used transfer roller and dispose of it as normal office waste.



Insert the new transfer roller

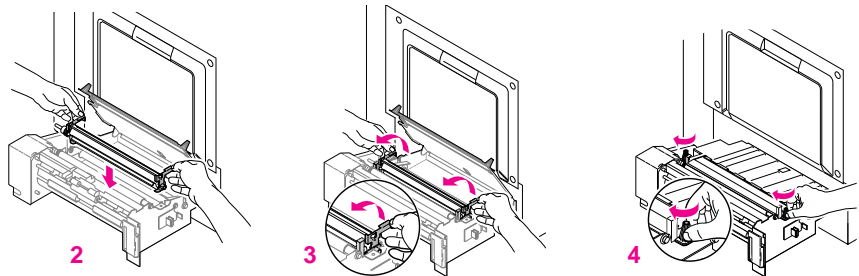
1. Remove the plastic cover from the new roller.

Caution Take care when removing the plastic cover because the tip of the transfer roller is coated with a lubricant that can be difficult to remove from hands or clothing.



9317-24

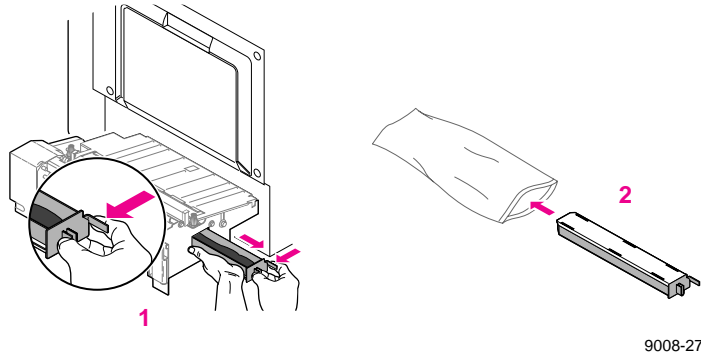
2. Holding the new transfer roller by its blue handles, place the roller into the paper feeder.
3. Rotate the handles away from the printer to seat the roller securely.
4. Close the cover and tighten the two blue screws (clockwise).



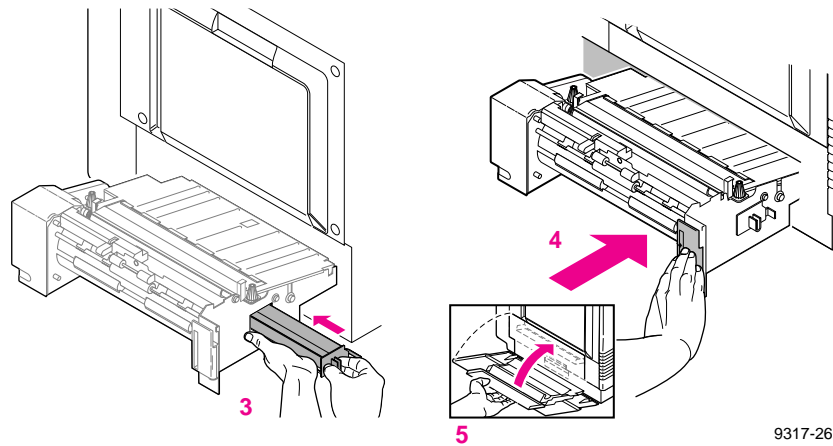
9317-25

Replace the waste bin

1. With the paper feeder still out, pinch the waste bin's handle; press the safety catch to release it and remove the waste bin.
2. Place the used waste bin in the plastic bag provided in the kit; close the plastic bag securely and dispose of it as normal office waste.



3. Insert the new waste bin.
4. Slide the paper feeder back into the printer.
5. Close the left side door.



Reset the copy count

When you close the door after replacing the transfer kit, the front panel displays the following question:

```
New transfer kit?  
No           Yes
```

Press the **Yes** button, then the **Confirm** button to automatically reset the copy count.

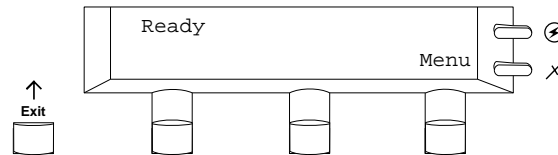
Note If you changed the transfer kit before the front panel reported a need to replace it, you will have to reset the copy count manually:

- Press the **Menu** button to enter the menu.
- Navigate to the **Transfer Kit count** menu; press **Reset** and **Confirm** for the transfer kit.

Refer to “Manually resetting component copy counts” on page 4-25 for detailed instructions.

Manually resetting component copy counts

If you replace any of the customer components at a time other than when the front panel displays a warning, you will have to manually reset the copy count for that component. To do so, complete these steps.



9008-20

1. Press the **Menu** button to enter the front panel menu. You will see this message in the display:

```
Help Pages
<---    --->    Menu
```

2. Press the right arrow button (--->) until the display reads

```
System Counts
<---    --->    Menu
```

3. Press the **Menu** button to enter the System Counts menu.
4. Press the right arrow button (--->) until the front panel displays the component you want. For example:

```
Imaging unit
<---    --->    Menu
```

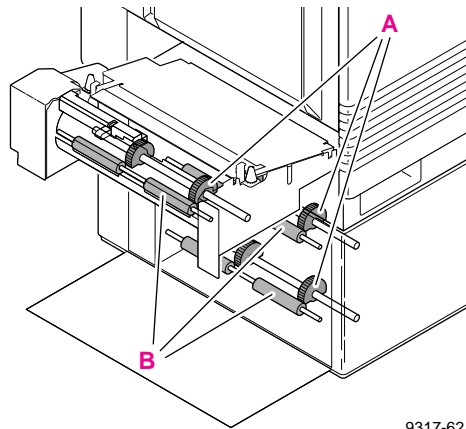
5. Press the **Menu** button; press the **Reset** button; then press the **Confirm** button.
6. Press the **Exit** button until the display reads Ready.

Occasional cleaning

Regularly scheduled cleaning is not necessary for the Phaser 550. However, if your printer experiences frequent media jams, you can clean the rollers.

Cleaning the paper-pick and paper-feed rollers

If your printer experiences media feed or pick errors, clean the paper-pick rollers (A) and the paper-feed rollers (B).

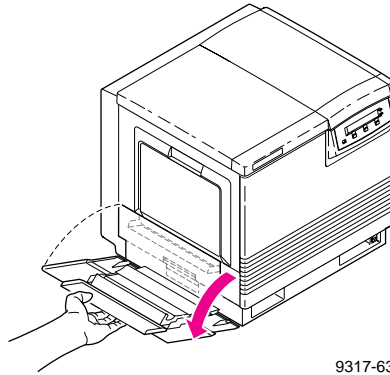


9317-62

Use a lint-free cloth that has been dampened with isopropyl alcohol (at least 90% pure, obtainable from your local pharmacy). You can also use pre-soaked alcohol wipes (order number 006-7824-01).

Follow these steps to clean the rollers:

1. Slide the media tray(s) out (you do not have to remove them) to allow access to the paper-pick and paper-feed rollers.
2. Open the left side door to access the rollers.

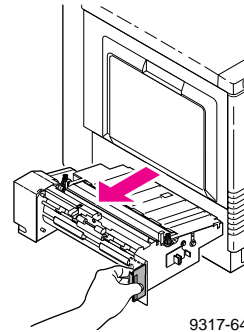


9317-63

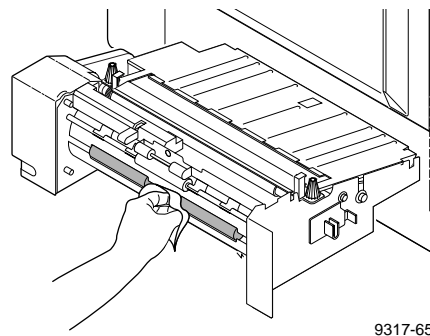
Note If you have a Lower Tray Assembly, you may also need to clean the rollers for the middle and lower media trays, which are accessed by the *lower* left side door.

4 Caring for Your Printer

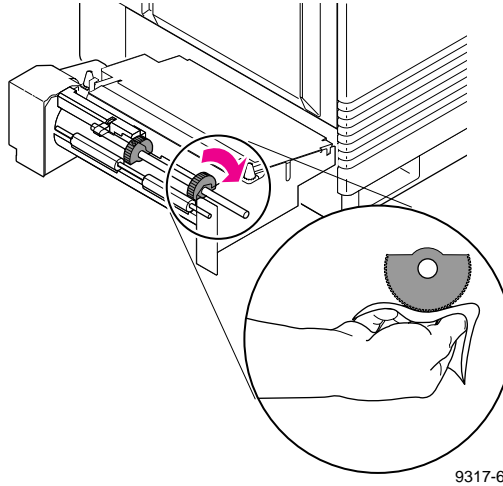
3. If you are cleaning the rollers for the upper media tray (if you do not have a Lower Tray Assembly, this is the **only** set of rollers), use the blue handle to pull out the paper feeder, allowing the best access to the rollers.



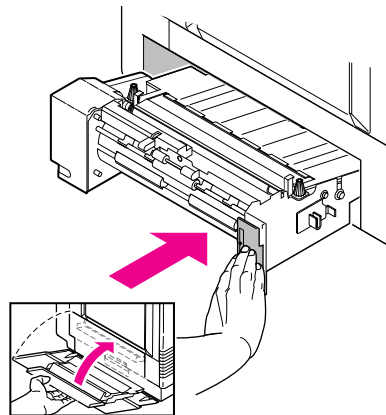
4. Use a lint-free cloth moistened with 90% isopropyl alcohol to wipe the paper-feed rollers. Rotate each roller to clean its entire surface.



5. Gently rotate the paper-pick rollers 180° (the paper-pick rollers are D-shaped) and wipe them with a lint-free cloth that has been moistened with isopropyl alcohol.



6. Close the paper feeder and the left side door.



7. Replace the media tray(s).

Cleaning other rollers

You can clean any of the rollers in the printer. Always use a lint-free cloth.

Caution If you clean the transfer roller, use a dry, lint-free cloth; do not use isopropyl alcohol, because it can reduce the life of this roller.

Supplies and Accessories

Tektronix supplies: the mark of quality

Tektronix supplies are developed and tested as a total **system**: printer, user-replaceable components, and media. These system components work together to produce consistent, high-quality color images.

Always order Tektronix supplies for your Phaser 550 printer to guarantee the best print quality, media feed reliability, and trouble-free printer performance.

Ordering information

For specific product information, refer to the next page or the supplies information sheet that is shipped with the printer. To order supplies, contact your local Tektronix reseller or, in the U.S.A., call Tektronix at **1-800-835-6100**.

Supplies and accessories

Phaser 550 Supplies and Accessories

	Order number	Description	
Supplies			
Toner cartridges	016-1417-00	Black	
	016-1418-00	Cyan	
	016-1419-00	Magenta	
	016-1420-00	Yellow	
Fuser	016-1323-01	110 volt	
	016-1354-01	220 volt	
Imaging kit	016-1457-00		
Transfer kit	016-1318-00		
Main charge grid	018-9070-00		
Paper	016-1368-00	A/Letter (U.S.)	500 sheets
	016-1369-00	A4 (Metric Letter)	500 sheets
Transparencies	016-1414-00	A/Letter (U.S.)	50 sheets
	016-1415-00	A4 (Metric Letter)	50 sheets

Phaser 550 Supplies and Accessories (cont'd.)

Order number	Description
Accessories	
436-0282-00	A/Letter paper tray
436-0283-00	A4 paper tray
436-0284-00	A/Letter transparency tray
436-0285-00	A4 transparency tray
436-0314-00	Legal paper tray
436-0297-01	Output tray
4676FTA	Lower Tray Assembly (includes one A/Letter paper tray and one A/Letter transparency tray; order Option 01 for metric trays)
4540	Phaser Copystation printer accessory
070-9317-00	<i>Phaser 550 Color Printer User Manual</i>
063-2437-00	<i>Phaser 550 Quick Reference Card</i>
063-2486-00	Phaser 550 Printer Software diskettes
063-2242-00	Phaser 550 CD-ROM
070-9117-00	<i>Phaser 550 Drivers and Utilities Printing Reference</i>
070-9538-00	<i>PhaserShare Network Cards and Software System Administrator User Manual</i>
070-9539-00	<i>PhaserShare Status Software User Manual</i>
006-7824-01	Pre-soaked alcohol cleaning wipes (packet of 10)

5 Supplies and Accessories

Phaser 550 Supplies and Accessories (cont'd.)

	Order number	Description	
Cables and adapters	012-1468-00	Parallel/Centronics	36-pin high-density plug to 25-pin DSUB plug; 3 meters (9.84 feet)
			Connects the Phaser 550 to a PC or workstation parallel port.
	013-0299-00	Parallel/Centronics adapter	Parallel adapter: converts 36-pin low-density 1284-B plug to 36-pin high-density 1284-C plug.
			Adapts your system's existing low-density Centronics parallel cable connector to the printer's high-density Centronics parallel connector.
	012-1465-00	SCSI-2 HD to SCSI-1 LD	50-pin high-density plug to 50-pin low-density plug; 2.0 meters (6.56 feet)
			Connects the Phaser 550's SCSI port to a hard disk drive or the Phaser Copystation SCSI port.
	012-1299-00	SCSI-1 LD to Macintosh SCSI	50-pin low-density plug to Macintosh SCSI 25-pin plug
			Combine with 013-0297-00 to connect the printer's SCSI port to a hard disk drive with Macintosh SCSI 25-pin plug.
013-0297-00	SCSI-1 LD to SCSI-2 HD	SCSI adapter: converts 50-pin low-density plug to 50-pin high-density plug	
		Use with either 012-1465-00 or 012-1299-00 to convert a low-density SCSI connection to a high-density SCSI connection.	
012-1379-00	Serial (RS-232) Null modem	9-socket receptacle to 9-socket receptacle; 1.8 meters (6 feet)	
		Connects the Phaser 550 serial port to a PC or workstation serial port.	
012-1380-00	Serial (RS-232) Null modem	9-socket receptacle to 25-socket receptacle; 1.8 meters (6 feet)	
		Connects the Phaser 550 serial port to a PC or workstation serial port.	

Troubleshooting

If you need help

If you need assistance, contact your local Tektronix dealer or sales representative, Tektronix Customer Support Hotline, the Tektronix Bulletin Board Service (BBS), Tektronix World Wide Web pages, or Tektronix' interactive fax system (HAL).

Customer Support Hotline

If your problem is still not resolved after first trying the suggestions in this Troubleshooting chapter, call the Tektronix Customer Support Hotline in the United States and Canada at **1-800-835-6100** (from 6:00 am to 5:00 pm PST).

For technical support outside the United States and Canada, contact your local Tektronix dealer or local Tektronix office.

Printer service

If your printer needs service, call **1-800-835-6100** in the United States, weekdays from 6:00 am to 5:00 pm PST. Outside the U.S., contact your Tektronix dealer or local Tektronix office.

The Tektronix Bulletin Board Service

The Tektronix Bulletin Board Service (BBS) is available for direct downloading of the latest versions of printer drivers, utilities, and files. If you have a Macintosh or PC, communication software, and modem, you can call the system and use the menus to locate and download the files you want.

To access the BBS 24 hours a day, 7 days a week, call **(503) 685-4504**.

For a detailed instruction guide on system requirements, terminal settings, protocol, modem, how to connect to our BBS, and how to download files, request a document catalog from HAL, the Tektronix automated fax system. Refer to "Using the automated fax systems" on page 6-4 for instructions on using HAL.

Online services

Tektronix color printer information is also available through online services:

- Technical support: **support@ColorPrinters.tek.com**
- World Wide Web: **http://www.tek.com/Color_Printers/**
- Tektronix anonymous ftp server:
 ftp.tek.com/Color_Printers
- America Online: **keyword Tektronix**
- eWorld: **shortcut Tektronix**
- CompuServe: **go Tektronix**

Using the Tektronix World Wide Web server to download files

You can access the Tektronix World Wide Web server (WWW) to download files such as utilities or drivers. Use a web browser such as Netscape or Mosaic and follow these steps:

1. Start your web browser and enter the following address:
 ftp://ftp.tek.com/Color_Printers/bbs
2. Click on the appropriate platform (**macintosh, pcs, or unix**).
3. Click on **550** for Phaser 550-specific files.
4. Select the file(s) you need; the system prompts you to select a location for downloading the file(s).

Downloading files from the Tektronix ftp server

UNIX and VMS workstation utility files included with the printer on a PC diskette let you set up the printer to select between media trays, print quality modes, color correction modes and other features. If you don't have the means of transferring these files from the PC diskette, you can request files from the Tektronix anonymous ftp server.

If you can exchange electronic mail with other Internet sites, you can access the Tektronix ftp server. From this server you can retrieve driver and utility files and color printer information.

To log onto the Tektronix ftp server and download utility files, follow these instructions:

1. Type the following at the system prompt:

```
ftp ftp.tek.com
```

The system responds:

```
Name (ftp.tek.com:<login name>) :
```

2. Type **anonymous** and press the Return key.

The system responds:

```
Guest login ok, send your complete e-mail  
address as password.
```

3. Enter your e-mail address and press the Return key.

4. Change directories to your printer-specific directory:

```
cd Color_Printers/UNIX/<Tektronix printer>/utilities
```

5. To download the utility files, type the following command:

```
mget *
```

The system prompts you for each file in the directory, to which you respond **y** or **n**.

6. To exit the ftp session, type **quit** or **bye**; then press the Return key.

Using the automated fax systems

As an alternative to the Customer Support Hotline, and to provide up-to-date information quickly, Tektronix has set up HAL (Highly Automated Library) and EuroHAL, two interactive, automated fax systems. These automated fax systems provide Macintosh, PC, and workstation users with the latest technical hints and tips (like color adjustments), solutions to common technical problems, and application notes for software problems (such as CorelDRAW! and QuarkXPress).

You may call HAL or EuroHAL from anywhere in the world. The fax systems are available 24 hours a day, seven days a week.

Use HAL to order a catalog or individual documents in the U.S.A. and Canada

If you have a fax machine and a touch-tone voice telephone, you can order a HAL catalog, listing all of the information offered by HAL, by calling **(503) 682-7450** (direct) or, in the U.S. and Canada, call **1-800-835-6100**.

1. Before you call, write down the area code and telephone number for your fax machine. HAL will ask you to key this number through the keypad on your voice telephone. If you are calling from outside the United States or Canada, you'll need to know the international access code to reach your country from the United States. Without a complete fax number, HAL cannot call your fax machine.
2. Call only from a touch-tone voice telephone.
3. Follow through the voice-prompted menu.
4. Order individual documents by entering the desired document's number as listed in the HAL catalog. Enter the number by using the telephone's keypad.
5. You can order up to three documents per call.
6. The HAL catalog or documents you request are faxed to you in a matter of minutes.

Use EuroHAL to order a catalog or individual documents in Europe

EuroHAL includes many documents, some in English and some in other European languages. If a local version of the document you want is available, EuroHAL will send it in your language. Otherwise, it will send English documents.

If you have a tone-dial telephone and a fax machine, then you can use EuroHAL. If your telephone has star (*) and hash mark (#) keys then it can probably use tones; ask your local telephone supplier if you are not sure.

If your telephone does not have these keys or has a dial, you will need to buy a tone dialer from your local telephone or electronics shop. This small box is held to the phone and will send the standard tones that you need to talk to EuroHAL.

1. To use EuroHAL, dial one of the numbers listed in the following table.

Country	Numbers
Austria	
Belgium	
Denmark	00 44 1908 681 839
Finland	
Italy	
Switzerland	
France	05 90 81 86
Germany	0130 819 220
Holland	09 44 1908 681 839
Norway	0 95 44 1908 681 839
Spain	07 44 1908 681 839
Sweden	0 09 44 1908 681 839
UK	01908 681 839
Other countries	+44 1908 681 839 (where + is your country's International Access Code)

6 Troubleshooting

2. EuroHAL answers and asks which language you want to use.
For English Press 1
For French Press 2
For German Press 3
3. The first time you use EuroHAL, you should order a catalog. This lists all the documents that are available and is constantly updated.
4. EuroHAL asks you for your fax machine number. If you are calling from outside the UK, add your country code first, as shown in the following table.

Country	Country code	Your area code and fax number	Press # when finished
Austria	00 43	area code fax number	#
Belgium	00 32	area code fax number	#
Denmark	00 45	area code fax number	#
Finland	00 358	area code fax number	#
France	00 33	area code fax number	#
Germany	00 49	area code fax number	#
Holland	00 31	area code fax number	#
Italy	00 39	area code fax number	#
Norway	00 47	area code fax number	#
Spain	00 34	area code fax number	#
Sweden	00 46	area code fax number	#
Switzerland	00 41	area code fax number	#
UK		just enter your fax number	#
Other countries	00 xx	area code number	#

Symptoms and solutions

Diagnostic tools

The Phaser 550 provides several tools for diagnosing and solving various types of problems, from print quality to media jams. These tools include the following:

- **“Troubleshooting and print quality quick reference” table**
Describes several printing problems by symptom (including an example), then lists the possible causes and solutions. Especially useful for determining when the consumables need to be replaced. See page 6-10.
- **Test Print and Service Print 1**
Found in the Help Pages menu (accessed from the front panel); these help you diagnose print quality problems; for example, if a user-replaceable component, such as a toner cartridge, needs to be replaced. Included on the test print is the % Used graph, showing the approximate usage for the imaging unit, transfer kit and fuser.
- **Phaser 550 Quick Reference Card**
Provides easy access to troubleshooting information on media jams and maintaining print quality (including color examples of print quality symptoms). Also provides samples of standard color density that you can compare to the printer’s current settings that appear on the Color Calibration Page.
- **Color Calibration Page**
Found in the Calibrate Colors menu (accessed from the front panel). This page shows the printer’s current density settings and the ranges for adjustment. Use this page to compare the printer’s current settings to the color density samples on the **Quick Reference Card**. Refer to “Controlling color density” on page 3-14 for details.
- **Configuration Page**
Found in the Help Pages menu (accessed from the front panel). This page provides useful information for installation and troubleshooting. Refer to Appendix A for information on printing the Configuration Page.

Maintaining print quality

If you notice a problem with the quality of your prints, the probable solution is replacing one of the consumable components (toner cartridges, imaging unit, fuser or transfer kit).

- Make sure that you are using the recommended paper. Refer to “Media problems” on page 6-24.
- Check if the printer’s front panel message indicates replacing one or more consumables and replace it if necessary.
- To help you diagnose the problem (in the absence of a front panel message), print the test print or service print 1 from the front panel menu:

1. Press the **Menu** button. The display reads:

```
Help Pages  
<---    --->  Menu
```

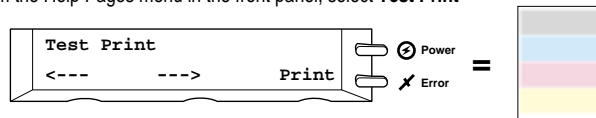
2. Press the **Menu** button. The display reads:

```
Test Print  
<---    --->  Print
```

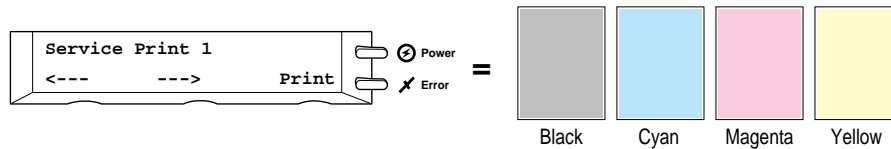
3. Do one of the following:
 - a. Press the **Print** button to print the test print.
 - b. Press the right or left arrow button until the display reads Service Print 1; then press the **Print** button.

4. Use the test print and service print 1 to diagnose and correct any problems you might be having with print quality. If you need to call the Customer Support Hotline, always print the test print first, because it contains useful diagnostic information.
5. Refer to the table “Troubleshooting and print quality quick reference” on page 6-10 for examples of symptoms, probable causes, and solutions. The **Phaser 550 Quick Reference Card** contains color examples of some of the most common print artifacts to help diagnose and correct print quality problems.

From the Help Pages menu in the front panel, select **Test Print**



From the Help Pages menu in the front panel, select **Service Print 1**



9317-67

6 Troubleshooting

Troubleshooting and print quality quick reference

Symptom	Possible Causes	Solution
Power indicator is blinking	The printer is receiving, processing or printing a job.	Wait for the job to be completed or cancel the job.
	You have entered the menu in the front panel.	Exit the menu.
Power indicator is off	The printer is not ready, is disabled, or has detected an error.	Read the front panel message to determine the printer's status.
Error indicator is on	Attention is required, but not immediately. For example, when the front panel reads <code><color>:low</code> .	Correct the condition reported by the front panel.
Error indicator is blinking	The printer is stopped because it detected a user-correctable error such as an open door or a media jam.	Correct the condition reported by the front panel (e.g., close the door or clear the media jam).
	Error occurred that is not user-correctable.	Turn the printer off and back on again. If the indicator is still on after the power-up sequence, the printer requires service. See page 6-1.
The front panel menu exits and returns to <code>Ready</code> without anyone pressing the button.	Front panel timeout: if no activity occurs in 5 minutes, the front panel returns to <code>Ready</code> .	Press Menu to enter the front panel menu.
Front panel reports: Jam at <code><Location></code> : See inside front door	Media jam.	<ul style="list-style-type: none"> ■ To find the jam: refer to the paper path illustration on the inside front door label or refer to "Clearing a media jam" on page 6-30. ■ To clear the jam: refer to the instructions on the Quick Reference Card or in this chapter. ■ Make sure that paper or transparencies are installed correctly and in the media-specific tray. See page 2-17.
	Too much media is loaded in the media tray.	Reduce the amount of media to below the media level indicator on the media tray label.
	Wrong media is installed in the tray.	Load paper in the paper tray or transparencies in the transparency tray.
	Media is wrinkled or curled.	Change the media.
	Media is too thick or too thin.	Use recommended laser paper and Tektronix transparencies. Refer to "Media problems" on page 6-24 for more information.

Troubleshooting and print quality quick reference (cont'd.)

Symptom	Possible Causes	Solution
Front panel reports: Wrong media in tray	Paper is installed in the transparency tray or transparencies are installed in the paper tray.	<ul style="list-style-type: none"> ■ Load only paper in the paper tray and transparencies in the transparency tray. ■ Make sure that you are using the correct size media tray for the media loaded (A, A4, or Legal).
Front panel reports: Waiting for <media>	The media installed is not what the printer is expecting.	<ul style="list-style-type: none"> ■ Insert the appropriate media tray. ■ Change the default media tray to match the desired media type; restart the printer. ■ Cancel the job and check for the appropriate driver selection. ■ If the message persists, call the Customer Support Hotline.
Front panel reports: Stopped: replace <color>	Indicated color toner cartridge is empty.	Replace the indicated color toner cartridge now.
Test print shows a single color (A) that is not uniform (has a mottled appearance)	The toner cartridge is nearly empty.	Replace the color toner cartridge.

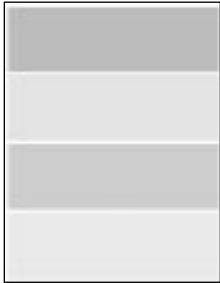
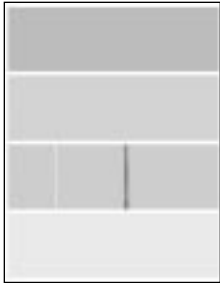

or

Test print shows a single color (B) with many vertical streaks (both light and dark) of slightly different density and non-uniform color.

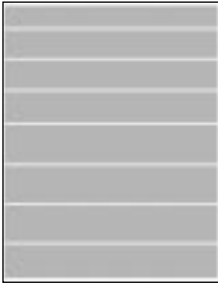



6 Troubleshooting

Troubleshooting and print quality quick reference (cont'd.)

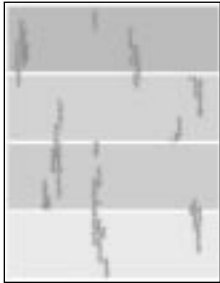
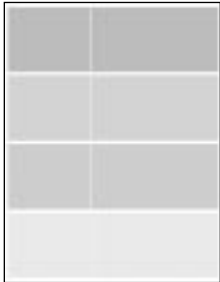
Symptom	Possible Causes	Solution
<p>Test print appears faded in a single color.</p> 	<p>The color density is set incorrectly in the front panel.</p> <p><i>or</i></p> <p>The toner cartridge is wearing out.</p>	<p>Check the density setting by printing the Color Calibration Page in the Calibrate Colors menu in the front panel. Compare the settings to the color samples on the <i>Quick Reference Card</i> and, if necessary, adjust the density in the front panel. Refer to "Controlling color density" on page 3-14.</p> <p>Replace the color toner cartridge soon (depending on the complexity of your prints, you can continue to print up to 100 more pages).</p>
<p>A single color has a sharp, dark or light vertical streak.</p> 	<p>Toner cartridge is wearing out; a mechanism inside the cartridge is not properly applying toner.</p>	<p>Replace the color toner cartridge.</p>
<p>Service print 1 shows small, repeating light or dark spots in a single color.</p> 	<p>The color toner cartridge is damaged.</p>	<p>Replace the color toner cartridge.</p>

Troubleshooting and print quality quick reference (cont'd.)




Symptom	Possible Causes	Solution
<p>A single color shows a light, repeating horizontal line.</p> 	<p>The roller in the toner cartridge has a slight impression after long storage.</p>	<p>Run 20-30 prints. The impression will disappear with continued time and use.</p>
<p>A single color on the test print is cut off with a jagged edge either on the left or right side of the print.</p> 	<p>The cartridges are installed in the printer in this order from top to bottom: black, yellow, magenta, cyan.</p> <p>The toner cartridge that is positioned in the printer <i>above</i> the cartridge that displays this symptom has a defect; it prevents the lower cartridge from fully opening during printing.</p>	<p>Replace the toner cartridge that is positioned in the printer above the cartridge showing the symptom.</p>
	<ul style="list-style-type: none"> ■ If the symptom appears in yellow: ■ If the symptom appears in magenta: ■ If the symptom appears in cyan: 	<ul style="list-style-type: none"> ■ Replace the black toner cartridge. ■ Replace the yellow toner cartridge. ■ Replace the magenta toner cartridge.

6 Troubleshooting

Troubleshooting and print quality quick reference (cont'd.)

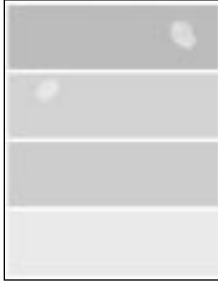
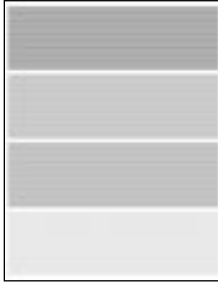
Symptom	Possible Causes	Solution
Front panel reports: Imaging unit:replace	The imaging unit is wearing out.	Replace the imaging unit soon.
Test print shows dark, uneven vertical streaks or “smudges” on the whole page; most prominent in the middle of the page; most visible in the yellow band on the test print.	The imaging unit is wearing out.	Replace the imaging unit.
		
Prints are missing fine-line detail.	The imaging unit is worn out.	Replace the imaging unit.
Dark color spots and dark or light streaks appear in all colors.	The imaging unit is worn out.	Replace the imaging unit.
Test print shows a straight, thin and even, light vertical line in all colors.	The photosensitive belt inside the imaging unit is scratched.	Replace the imaging unit.
		

Troubleshooting and print quality quick reference (cont'd.)

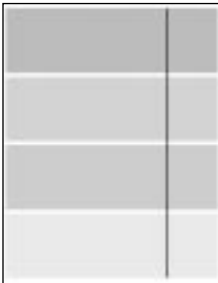
Symptom	Possible Causes	Solution
<p>On the test print, each color “bleeds” into the color band below it (the most visible is magenta in the yellow band).</p> 	<p>The cleaning blade inside the imaging unit is not cleaning an internal belt.</p>	<p>Replace the imaging unit.</p>
<p>A single white spot appears in approximately the same vertical place on the page.</p> 	<p>The imaging unit is damaged.</p>	<p>Replace the imaging unit.</p>
<p>A single, wide, light horizontal band appears in one place on the page (near the top) or all colors are faded.</p> 	<p>The imaging unit was exposed too long to light.</p>	<p>Wait overnight and print the test print. If print quality hasn’t changed, replace the imaging unit.</p>

6 Troubleshooting

Troubleshooting and print quality quick reference (cont'd.)

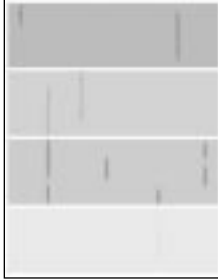

Symptom	Possible Causes	Solution
Large light spot(s) appear randomly in the test print, approximately on the same horizontal and vertical place or they move vertically from one print to another.	Fingerprint(s): someone has touched the underside of the imaging unit.	Print several pages until the artifacts fade.
		
Dark and light repeating horizontal lines at 1.5 mm intervals.	Gears in the imaging unit are not meshing smoothly.	Replace the imaging unit.
		

Troubleshooting and print quality quick reference (cont'd.)


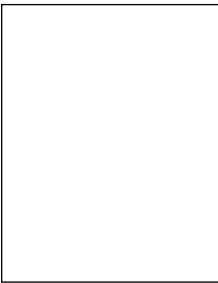
Symptom	Possible Causes	Solution
<p>One or more vertical, dark and even fine lines appear on the print through all colors.</p>	<p>The imaging unit is scratched.</p> <p><i>or</i></p> <p>The fuser is damaged.</p>	<p>Replace the imaging unit; make sure that the old imaging unit is not exposed to light for more than 45 seconds.</p> <p>If a new imaging unit does not correct the problem:</p> <ul style="list-style-type: none"> ■ Put the old imaging unit back into the printer. ■ Repack the new imaging unit. ■ Replace the fuser.
		
<p>Front panel reports: Fuser:replace</p>	<p>The fuser is wearing out.</p>	<p>Replace the fuser soon.</p>
<p>Front panel reports: Stopped: replace fuser!</p>	<p>The fuser is worn out.</p>	<p>Replace the fuser now.</p>
<p>The surface of the printed image appears to have vertical scratches (visible by holding the print at an angle and observing the “shine” of the image).</p> <p>At first, the scratches appear only on the printed image; eventually, dark vertical scratches appear on the unprinted portion of the page.</p>	<p>The fuser is wearing out.</p>	<p>Replace the fuser (depending on your quality needs, you can continue to print until the dark vertical lines appear).</p>
<p>A piece of the printed image is missing and reappears out of place, approximately 129 mm (5 in.) down on the page.</p>	<p>The fuser is worn out.</p>	<p>Replace the fuser.</p>

6 Troubleshooting

Troubleshooting and print quality quick reference (cont'd.)

Symptom	Possible Causes	Solution
<p>Dark and wavy vertical streaks appear in all colors (most easily visible in yellow).</p> 	<p>The main charge grid is dirty.</p>	<p>Replace the main charge grid.</p>
<p>The entire page prints in black, including the borders.</p> 	<p>The cause is one of the following:</p> <ul style="list-style-type: none"> ■ Bad electrical contact for the main charge grid. ■ The main charge grid is broken. ■ Power supply high voltage. 	<p>The solution is one of the following:</p> <ul style="list-style-type: none"> ■ Re-insert the imaging unit to correct the contact for the main charge grid. ■ Replace the main charge grid with a new one. ■ Call Service. See page 6-1.
<p>Front panel reports: Transfer kit:replace</p>	<p>The transfer kit is worn out.</p>	<p>Replace the transfer kit.</p>
<p>Toner spots appear on the back of the media.</p>	<p>The transfer kit is worn out.</p>	<p>Replace the transfer kit.</p>

Troubleshooting and print quality quick reference (cont'd.)

Symptom	Possible Causes	Solution
<p>The page prints in black in the image area only (the borders are clear).</p> 	<p>Either the image processor board or engine control board is not functioning properly.</p>	<p>Turn the printer off and back on again. If the problem persists, call Service. See page 6-1.</p>
<p>The page is completely blank.</p> 	<p>The problem could be with one of the following:</p> <ul style="list-style-type: none"> ■ Engine control board. ■ Developer voltage. ■ Laser scanning unit mirror. 	<p>Turn the printer off and back on again. If the problem persists, call Service. See page 6-1.</p>
<p>Front panel reports: Printer Error ##</p>	<p>An error occurred that is not user-correctable.</p>	<p>Turn the printer off and back on again. If the error persists, call the Customer Support Hotline.</p>
<p>Thin horizontal stripes or a "weave" pattern appears in a complex image.</p>	<p>The printer has insufficient memory for an image of this complexity.</p>	<p>Increase the amount of memory. Refer to page B-1.</p> <p style="text-align: center;"><i>or</i></p> <p>Print the image at a lower resolution.</p>

If you can't make a print

Printer not operating

- Make sure that you plugged in the printer and turned it on.
- Make sure that you connected the interface cable(s) properly.
- Make a test print from the front panel to verify that the controller board is functional.
- Verify that your print engine is functional by pressing the test print button (the blue pushbutton in the center of the back of the printer), and holding it down for 3 seconds.
- Verify that your computer can communicate with the printer.

Note When you have checked all possible causes and your printer is still not operating, you can call for service at 1-800-835-6100 in the U.S. and Canada, or call your nearest Tektronix reseller.

To verify that your computer can communicate with the printer, use one of these methods:

- **If you have a Macintosh**

Make sure that you have the correct PPD file installed and selected and that you have selected the printer in the **Chooser**. If the printer's name does not appear in the **Chooser**, your LocalTalk or EtherTalk connection may be faulty. (See also "Printer doesn't appear in the Chooser (Macintosh)" on page 6-22.)

You can use the **Print Window** command to send a file to the printer without using an application. If the communication link between your computer and the printer is working, the printer produces a directory listing of the active window on the desktop.

- **If you have a PC**

Type this DOS command:

```
echo %! > port
```

```
echo showpage [Ctrl-D] > port
```

Where [CTRL-D] indicates pressing the D key while holding down the CTRL key. Substitute the name of the printer port (for example COM1:, COM2:, LPT1:, LPT2:) for the variable **port** in this command. For example, if you are testing a parallel connection on LPT1, type:

```
echo %! > lpt1:
```

```
echo showpage [Ctrl-D] > lpt1:
```

If the communication link between your computer and the printer is working, the printer ejects a blank page. If this occurs, but you cannot print from your application or through Windows, make sure that the appropriate driver is installed and that you have selected the printer correctly.

Printer doesn't appear in the Chooser (Macintosh)

- Make sure that the printer is turned on and the cables are correctly attached.
- Check the termination (refer to the documentation for your network adapter or connector for information on termination).
- Make sure that you have the correct zone selected in the **Chooser** before looking for the printer's name in the list of printers.
- If you have changed the printer's name, make sure that you have given it a unique name (not the same as any other printer in the zone or on the network).
- Make sure that the correct network is selected in the **Network Control Panel**.

Power indicator blinks and stops, but the file does not print

This is probably the result of a PostScript error. Download the PostScript error handler file from the Phaser 550 utility diskettes. For more information on using the PostScript error handler, see the **Phaser 550 Drivers and Utilities Printing Reference**.

Printer will not power up to Ready

This may be the result of an unterminated network connection. The printer sees network activity, but is unable to successfully connect.

Print job does not finish (the printer times out)

If you are using the serial or parallel port from a PC, make sure that you used the **MODE** command to set the PC's communication parameters. For example:

```
MODE LPT1:,,P > NUL
```

```
MODE COM1:9600,N,8,1,P
```

The **P** parameter in these commands sets the port timeout to **Infinite Retry** and must be part of the command.

If you are using Windows 3.1, make sure that the **Transmission Retry** value for the printer's assigned port is set to **850**. For more information, see "PC: Software for Microsoft Windows 3.1" on page 2-32.

Error indicator is blinking

The **Error** indicator blinks with any hard error, such as the following circumstances:

- Media jam
- Any of the printer doors are open
- Any of the user-replaceable components are missing

Look at the front panel for an indication of the type of error, then correct the problem. If the front panel message is **Printer Error##**, turn the printer off and on again. If the **Error** indicator remains on after power-up, your printer requires service. See "If you need help" on page 6-1 for telephone information.

Media problems

Frequent paper-picking errors

- Fan the paper or transparencies before installing them in their respective trays; this is especially important for transparencies because they tend to stick together.
- Make sure that you have loaded the correct media in the tray. You must load paper in the paper tray and transparencies in the transparency tray.
- Make sure that the media is installed under the hooks at the front of the media tray.
- If printing on transparencies and your printer has a Lower Tray Assembly, make sure that the transparency tray is installed in either the upper or middle tray slots.
- Clean the paper-feed rollers and paper-pick rollers. See page 4-26 for instructions.

Media is picked but does not advance

- Check the front panel; if it reads `wrong media in tray`, check that the paper is loaded in the paper tray or transparencies are loaded in the transparency tray.

Frequent media jams

- Make sure that you use a high-quality laser paper: 75-105 g/m² (20-28 lb.) paper in the media trays and 60-120 g/m² (16-32 lb.) paper with manual feed. Refer to “All about media” on page 3-20 for more information.
- Use only Tektronix transparencies that are listed on the supplies information sheet. Tektronix does not guarantee the results of non-Tektronix transparencies in Tektronix printers.
- Make sure that the media is installed under the hooks at the front of the media tray.
- Do not overfill the media tray, as indicated by the red line on the right side of the tray.
- Clean the paper-feed rollers and paper-pick rollers. See page 4-26 for instructions.

Problems with image size and position

Off-set images

Check your application for correct image sizing.

Cut-off images

- Check your application for image sizing.
- Make sure that you are using a Phaser 550 PPD file and have selected the correct page size. If you select the incorrect page size, the image may be cut off.
- Make sure that the correct size media is in the media tray.

Image shifts or margins are incorrect (Macintosh)

- Make sure that you have installed the Phaser 550 GX printer driver or the correct PPD file onto your Macintosh so that you can select the correct page sizes from the driver. For details on the LaserWriter driver, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.
- For details on how to print from a Macintosh, refer to “Printing from a Macintosh” on page 3-7.
- If printing on transparencies and you have a Lower Tray Assembly installed, make sure that the transparency tray is installed in the upper or middle slots (the bottom tray slot takes only paper trays).

Print quality problems

Prints have dull, faded colors

- Print the Color Calibration Page from the Calibrate Colors menu in the front panel. Check the density settings for each color and compare them to the color density samples on the **Phaser 550 Quick Reference Card**. Refer to “Controlling color density” on page 3-14 for instructions on comparing and setting color density.
- Print the test print from the Help Pages in the front panel.
 - If all colors are faded, the imaging unit may need to be replaced. Refer to the % Used graph for the imaging unit at the bottom of the test print.
 - If one color is faded (and you have checked and/or adjusted the density setting for that color), replace the toner cartridge.
- Make sure that the imaging unit stays covered until immediately before installing it in the printer. Exposure to light can damage the imaging unit and will produce light streaks or faded prints.
- Make sure that the toner cartridges are installed correctly.
- Make sure that you use a high-quality laser paper:
75-105 g/m² (20-28 lb.) paper in the media trays and
60-120 g/m² (16-32 lb.) paper with manual feed. Refer to “All about media” on page 3-20 for more information.
- Use only Tektronix transparencies that are listed in Chapter 5 and on the supplies information sheet. Tektronix does not guarantee the results of non-Tektronix transparencies in Tektronix printers.

Photographic images appear grainy

- Check the Print Quality menu in the front panel. If the selected mode is **Presentation**, change it to **Standard**.

The **Presentation** print-quality selection in the front panel substitutes **Presentation** mode rendering when **Standard** mode is selected in the driver.

Streaks or spots

Most spots are caused by fingerprints or dust introduced into the printer while installing the imaging unit or loading media.

- Make sure that the surface where you unpack the imaging unit, paper, and transparencies is free of dust. Keep supplies in a covered area or a closed box.
- Make sure that the imaging unit stays covered until immediately before installing it in the printer. Exposure to light for more than 45 seconds can damage the imaging unit.
- Do not touch the right side or underside of the imaging unit; fingerprints affect print quality.
- Make sure that the paper or transparency film is clean.
- Make sure that you handle the media on the outside edges to avoid fingerprints.
- To get rid of fingerprint spots, print a few prints (you can print any of the Help Pages in the front panel menu).

Black-and-white prints instead of color

■ If you have a Macintosh

Make sure that you are using the Phaser 550 GX driver or the correct PPD file with the latest Apple LaserWriter printer driver (version 6.0.7 or higher), which supports color PostScript.

Make sure that **Color/Grayscale** is selected in the **Print** dialog box. Some applications require special files to print in color. Make sure that these files are properly installed. For information, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Make sure that you have not selected **Monochrome** in the **TekColor Options** dialog box.

■ If you have a PC

Be sure to use a driver that supports color PostScript. If you are using Windows 3.1, use the Phaser 550 driver.

If you are using Windows, make sure that the **Color** box in the **Options** dialog box is checked. For information on the drivers, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.

Make sure that you have not selected **Monochrome** in the **Tektronix Printer Features** dialog box.

- If you are not using a driver, make sure that you have not sent the monochrome mode selection code; make sure that the front panel is not set for **Monochrome**.

Startup page prints even though it is disabled

The printer’s power-up self-test can detect problems that do not necessarily make the printer completely inoperable. Examples of these **non-fatal** errors include faulty printer ports and some memory failures.

If the printer detects a non-fatal error at power-up, the startup page prints, even if you have disabled it. In this case, the page contains one or more of the error messages listed in the following table. Depending on your needs, you may not need to call for service immediately.

Error messages on the startup page

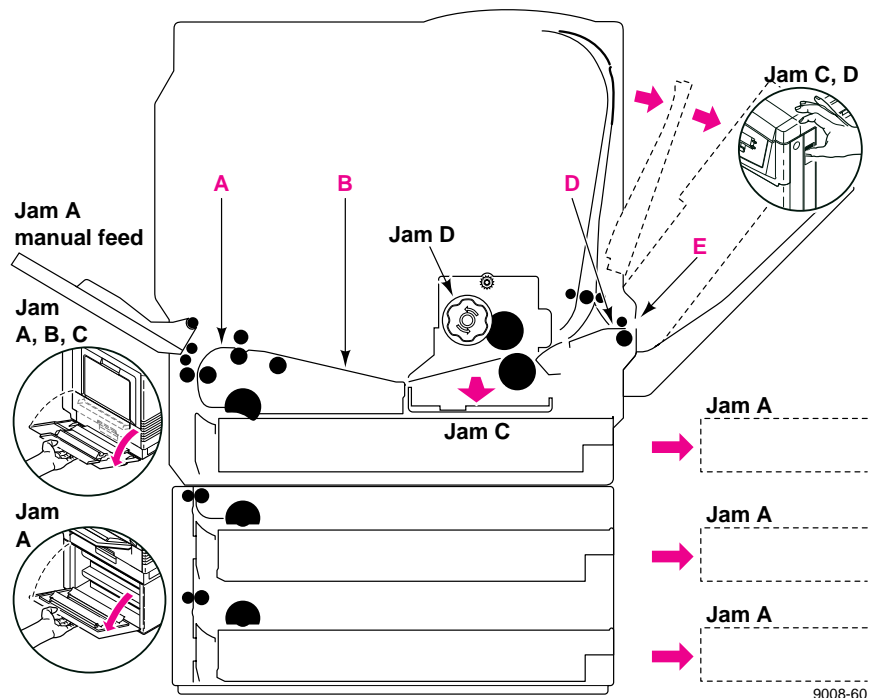
Message	Description
Parallel Port failed I/O Card failed. SCSI Port failed	The named port is not working. The other ports can still be used.
DRAM SIMM <i>x</i> failed	One of the memory SIMMs is not working. In this message, <i>x</i> indicates the number of the SIMM that failed. Since the printer’s base memory is still working, the printer can still be used, but higher resolution print modes may not be available and throughput may suffer. If the failed SIMM leaves less than 24 Mbytes of RAM, no access to the extended features, (if the printer was configured for extended features).
Extended Features SIMM failed	The Extended Features Simm is not working. No access to Check Print, Job Collation, 1200 dpi print modes, and 22 extra fonts. The base fonts are still available, the printer can be used, but requests for the optional fonts will be replaced with <i>Courier</i> . Requests for other extended features will be ignored.

Clearing a media jam

Note If you get frequent media jams, make sure that you are using high-quality laser paper and Tektronix transparencies. Order from the supplies information sheet that is shipped with your printer.

If a media jam occurs, the front panel reports Jam at <Location>. The <Locations> are the various sensors throughout the paper path, listed as **A** through **E**. If you have an optional Lower Tray Assembly installed, Jam A can occur at any of the three media trays, whichever tray you selected for the current print job.

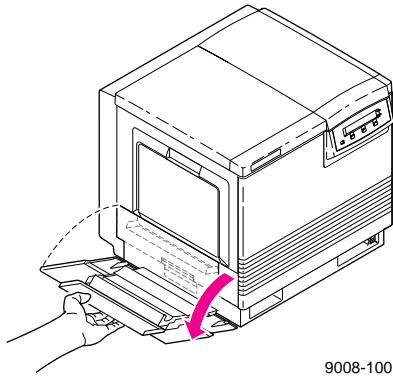
The following illustration shows the locations of the sensors that report a media jam (**A** through **E**).



9008-60

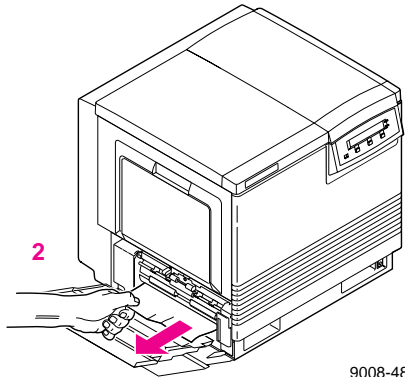
Jam at A

1. Open the left side door corresponding to the selected media tray.



9008-100

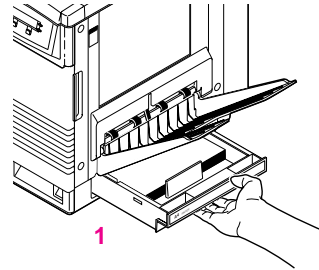
2. Remove the jammed media.



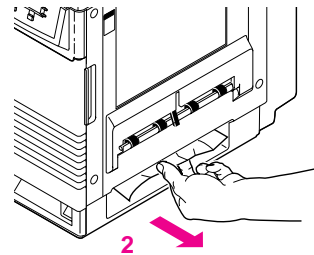
9008-48

1. Remove the selected media tray.
2. Remove the jammed media from inside the printer.

OR



1



9008-49

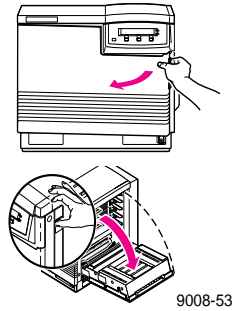
Note If you have an optional Lower Tray Assembly, Jam A can occur at any of the three media trays, whichever tray you selected for the current print job.

6 Troubleshooting

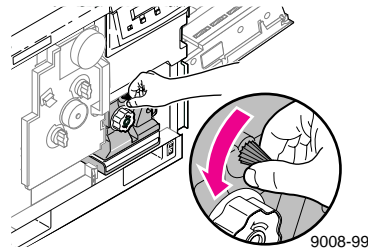
Jam at C

Caution The fuser is hot. To avoid personal injury, wait 10 minutes for the fuser to cool before touching it.

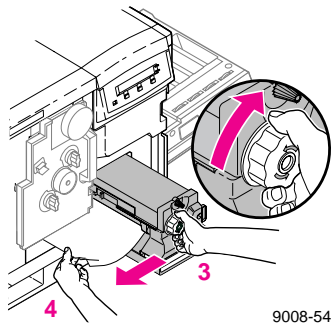
1. Open the front door *and* the right side door to access the fuser.



2. Turn the **small blue knob counterclockwise** to unlock the fuser; pull the fuser out until it stops.



3. Turn the fuser's large blue knob **clockwise** to release the jammed media.
4. Remove the jammed media from the fuser.

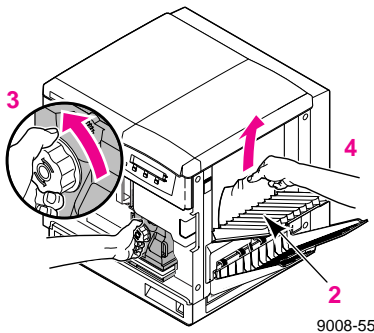


Jam at D

Caution The fuser is hot. To avoid personal injury, wait 10 minutes for the fuser to cool before touching it.

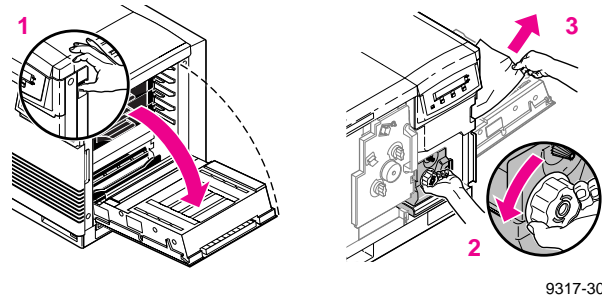
Warning First check the exit opening for media that has jammed and folded like an accordion. It is especially difficult to see if the media is transparency film.

1. Open the front door to access the fuser.
2. Pull open the access door (above the plastic output tray); the media is visible.
3. On the fuser, turn the large blue knob **counterclockwise**.
4. Remove the media from inside the access door.



1. Open the front door **and** the right side door to access the fuser.
2. Turn the fuser's large blue knob **counterclockwise** to release the jammed media.
3. Remove the jammed media from the right side of the printer.

OR



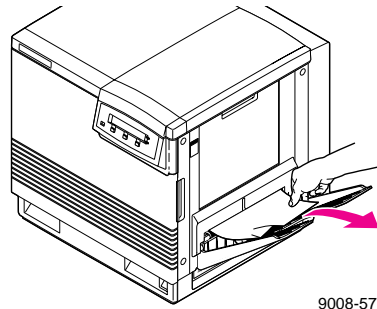
Caution If the fuser knob will not turn, *do not force it* or you may damage the fuser. Instead, follow these steps:

- Unlock the fuser by turning the small blue knob *counterclockwise*.
- Pull the fuser out. The media will probably tear.
- Turn the fuser's large blue knob *clockwise* to release the jammed media.
- Remove the jammed media from the fuser and the printer.

6 Troubleshooting

Jam at E

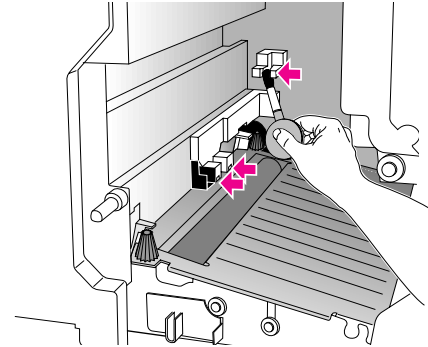
Remove the jammed media from the output tray.



9008-57

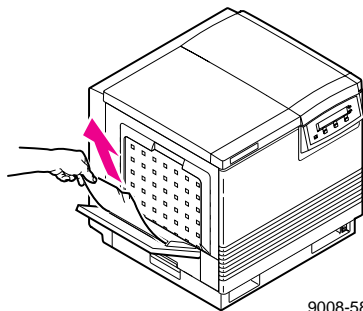
OR

Pull open the access door (above the plastic output tray) and remove the media.



Jam at Manual Feed

Remove the jammed media from the manual feed tray.



9008-58

Front and Rear Panels

Front panel

The front panel provides a display of two lines of 24-characters each for messages, button labels, and user-adjustable parameter settings.

Front panel indicators

The front panel also includes two indicator lights:

1. **Power** (green LED)
2. **Error** (red LED)

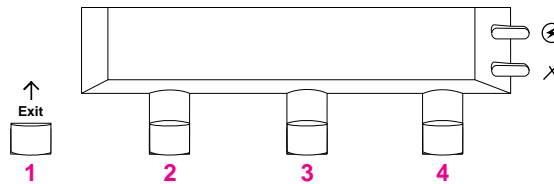
Indicator	On	Blinking	Off
1. Power	The printer is on and ready for operation.	The printer is processing or printing an image. The printer is in interactive mode: you have pressed the Menu button.	The printer is not ready, or there is an error.
2. Error	If the indicator is on after the power-up sequence, some user interaction is required (for example, toner is low). Check the front panel message.	The printer requires immediate user interaction (for example, clear a media jam or close an open door). Refer to Chapter 6.	Normal operation: there are no print engine or controller board errors.

Front panel buttons

1. The **Exit** button allows you to perform the following menu functions:
 - Back up a level of the menu without making a selection.
 - Exit the menu.
2. Button 2 is inactive during normal printer operation. However, you can perform this menu function when you enter the front panel menu:
 - **<---** Scroll backward through the available selections.
3. During normal printer operation, button 3 has the following effect:
 - **Cancel** Cancels a print job or selection.

When you enter the front panel menu, button 3 has the following effect:

- **--->** Scrolls forward through the available selections.
 - **Confirm** Implements a selection.
4. Button 4 is labeled **Menu** during normal operation and allows you to enter the menu. After entering the front panel menu, Button 4 changes meaning as you select sub-menus:
 - **Menu** Accesses to sub-menus.
 - **Print** Executes a print command.
 - **OK** Accepts the selected value.
 - **Reset** Resets the count for a user-replaceable component.



9008-29

Two-line display

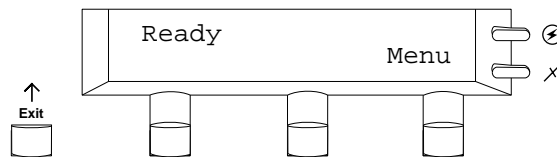
The two lines of the display have the following functions:

Line 1

- Displays status messages such as Ready and Printing.
- Displays operation errors and warnings such as <color>:low.
- Displays the names of menus and parameters you can set.

Line 2

- Displays button labels such as <--- for **previous** and ---> for **next** (for moving through selections in a given menu), **Menu** for access to a menu of selections, and **Print** and **OK** to make selections.



9008-43

For a roadmap to the front panel menu selections, turn to “Front panel menu map” on page 7-5.


Protected mode for the front panel menu

System administrators may choose to limit user access to front panel menus by downloading a utility file to the printer. The “lock” utility file prevents most menu items from being displayed on the front panel. The capability of limiting menu access is often useful when a system administrator needs to retain control of the printer’s settings. In the protected mode, users still have access to print the Test Print, Configuration, Startup, and Demonstration pages.

In the protected mode, you can still access the full menu structure through a combination of front panel button pushes. An “unlock” utility file can also be downloaded to the printer to unlock the front panel menu for user viewing.

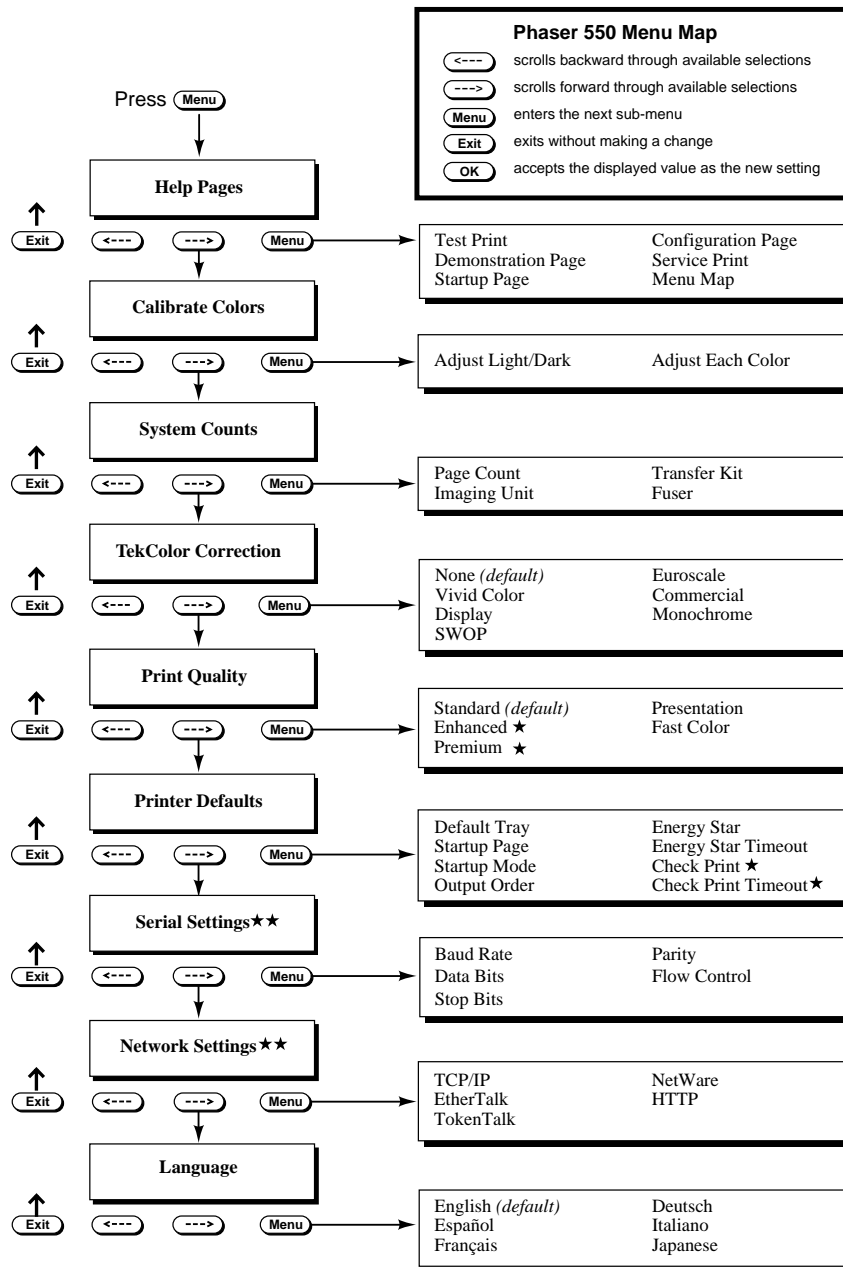
To learn more about locking and unlocking the front panel menus, refer to the **Phaser 550 Drivers and Utilities Printing Reference** or call the Tektronix Customer Support Hotline at **1-800-835-6100** (from 6:00 am to 5:00 pm PST).

Use the following key sequence to access the entire menu when the front panel is “locked:”

- Press and hold down the **Menu** button and press the  button.

The Help Pages menu in the front panel menu includes a front panel menu map. Refer to “Front panel menu map” on page 7-5. For instructions on printing the menu map, refer to “Printing the front panel menu map” on page A-7.

Front panel menu map



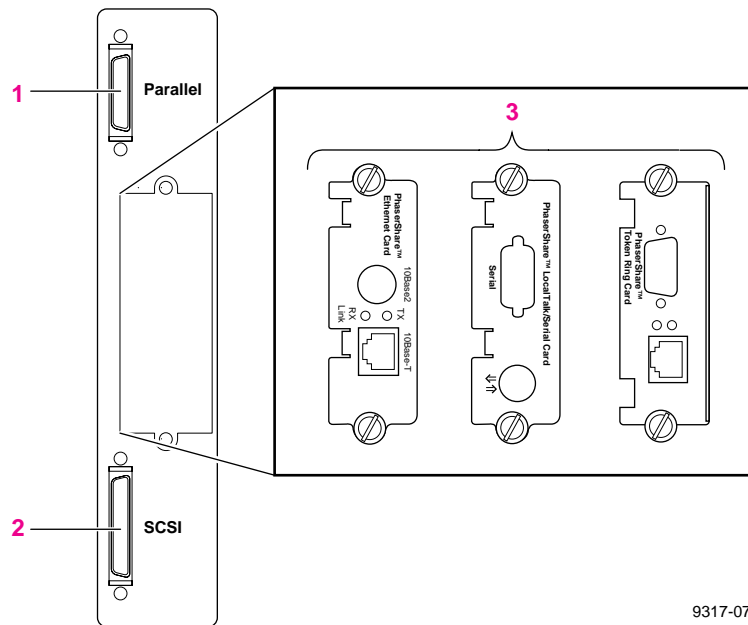
★Optional configuration.

★★Appears when optional PhaserShare™ card is installed.

9317-36

Rear panel

1. Parallel connector
2. SCSI connector
(to add a Phaser Copystation or a hard disk for font storage)
3. Optional PhaserShare card with serial and network connectors



9317-07

A

Technical Notes

Printing Help Pages

The printer has several Help Pages that you can print to learn more about the printer.

Test Print:	Provides a test pattern to diagnose and correct print quality problems.
Demonstration Page:	Provides a colorful way of learning more about the printer while demonstrating its printing quality.
Startup Page:	Lists the number of pages printed, installed interface ports, software version numbers, installed RAM memory, the number of fonts, and other useful information.
Configuration Page:	Lists general information on printer settings and how the printer is configured.
Service Print 1:	Provides diagnostic pages for users and service technicians to correct print quality problems.
Service Print 2:	Provides diagnostic pages for service technicians.
Menu Map:	Provides a graphical view of the front panel menus.

The Help Pages are discussed in the following topics.

Printing the test print and service print

The test print and service print 1 provide easy-to-use tools to diagnose and resolve print quality symptoms. The **Phaser 550 Quick Reference Card** and Chapter 6 of this manual provide examples of symptoms as well as the information necessary to correct the problem. When you call the Customer Support Hotline, always print the test print first; it contains useful diagnostic information.

1. While the **Ready** message is displayed, press the **Menu** button. The printer displays the first item in the menu:

```
Help Pages
<----- > Menu
```

2. Press the **Menu** button to enter the Help Pages menu. Press the right (<---) or right arrow (--->) button until one of the following messages appears:

```
Test Print                or  Service Print 1
<----- > Print          <----- > Print
```

3. Press the **Print** button to print the test print or service print 1.

Printing the demonstration page

You can print a demonstration page anytime you want to examine the printing quality of the printer. The demonstration page prints in the currently selected print mode.

1. When the printer is on and the Ready message appears, press the **Menu** button. The printer displays the first item in the menu:

```
Help Pages
<----      ---->      Menu
```

2. Press the **Menu** button to access the Help Pages. The following message appears:

```
Test Print
<----      ---->      Print
```

3. Press the left arrow (<---) or right arrow (--->) buttons until the following message appears:

```
Demonstration Page
<----      ---->      Print
```

4. Press the **Print** button to print the demonstration page.

Printing the startup page

By default, printing of the startup page is enabled on power up. However, you can print the startup page anytime when you need to learn the number of pages that have been printed, the amount of installed memory, the number of fonts in memory, and installed interface ports.

Note If the printer detects a non-fatal failure, it automatically prints a startup page containing diagnostic information regardless of the startup page setting.

1. While the Ready message is displayed, press the **Menu** button. The printer displays the first item in the menu:

```
Help Pages
<----- <-----> Menu
```

2. Press the **Menu** button to access the Help Pages. The following message appears:

```
Test Print
<----- <-----> Print
```

3. Press the left arrow (<---) or right arrow (--->) buttons until the following message appears:

```
Startup Page
<----- <-----> Print
```

4. Press the **Print** button to print a startup page.

Enabling and disabling the startup page

You can enable and disable printing of the startup page in three ways:

- On a PC, send a PostScript language utility file to the printer. For more information, refer to the **Phaser 550 Drivers and Utilities Printing Reference**.
- On a Macintosh, use the **LaserWriter utility**.
- Through the printer's front panel, according to the following instructions:

1. While the Ready message is displayed, press the **Menu** button. The printer displays the first item in the setup menu:

```
Help Pages
<---- <----> Menu
```

2. Using the left arrow (<---) or right arrow (--->) buttons, scroll through the selections until the following message appears:

```
Printer Defaults
<---- <----> Menu
```

3. Press the **Menu** button to access the printer defaults settings.
4. Using the left arrow (<---) or right arrow (--->) buttons, scroll through the selections until the following message appears:

```
Startup Page
<---- <----> Menu
```

5. Press the **Menu** button to access the startup page settings.
6. Press the right arrow (--->) button once for the following message:

```
Startup Page:disabled
<---- <----> OK
```

7. Press the **OK** button to disable printing of the startup page.
8. To return to the top level of the menu, press the **Exit** button until the printer displays the Ready message.

Printing the configuration page

The configuration page contains a variety of information especially useful for network installation and troubleshooting.

There are two ways to print the configuration page:

- **Use the printer's front panel menu.**

1. While the Ready message is displayed, press the **Menu** button. The printer displays the first item in the menu:

```
Help Pages
<----- > Menu
```

2. Press the **Menu** button to access the Help Pages. The following message appears:

```
Test Print
<----- > Print
```

3. Press the left arrow (<---) or right arrow (--->) buttons until the following message appears:

```
Configuration Page
<----- > Print
```

4. Press the **Print** button to print a configuration page.

- **Send the PostScript language file to the printer.**

See the **PhaserShare Network Cards and Software System Administrator User Manual** or the **Phaser 550 Drivers and Utilities Printing Reference** for more information on the configuration page.

5. until the printer displays the Ready message.

Printing the front panel menu map

The front panel menu map provides a convenient navigation aid for quickly determining the location of menu items. The menu map can be printed from the front panel; it is also available in Chapter 7.

1. While the **Ready** message is displayed, press the **Menu** button. The printer displays the first item in the menu:

```
Help Pages
<----->      Menu
```

2. Press the **Menu** button to enter the Help Pages menu. The following message appears:

```
Test Print
<----->      Print
```

3. Press the left arrow (<---) or right arrow (--->) buttons until the following message appears:

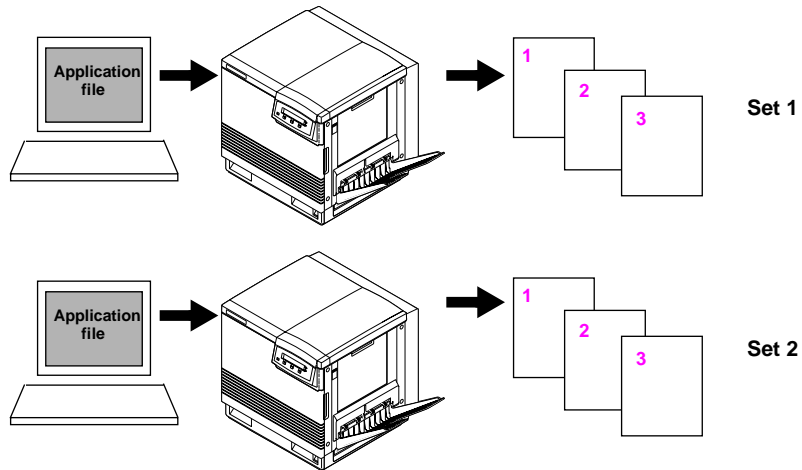
```
Menu Map
<----->      Print
```

4. Press the **Print** button to print the menu map page.

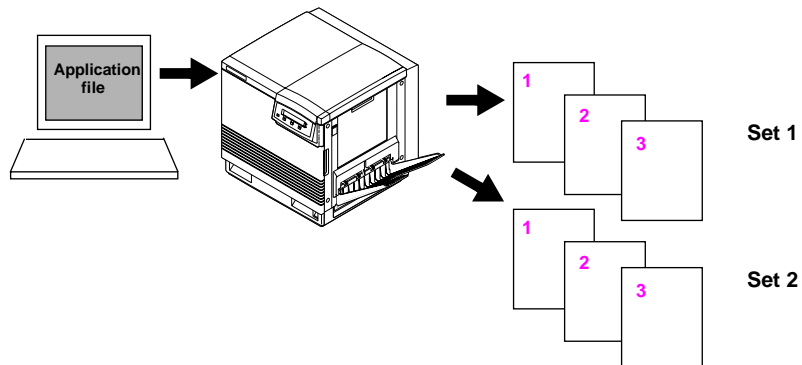
Using the Quick Collate option

The **Quick Collate** option in the supported drivers performs document collation **in the printer**. This is faster than the **Collate** option that exists in some applications because applications send each page to the printer in sequence, as many times as necessary to provide the requested number of copies. With the Phaser 550 **Quick Collate** option, the job is **sent only once**, and then multiple collated sets are produced **by the printer**.

Application collation



Phaser 550 Quick Collate

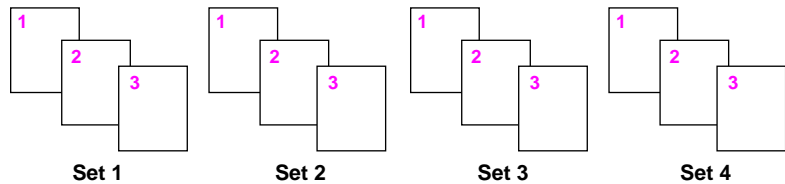


The number of pages that can be collated at one time depends on these factors:

- Printer's memory configuration.
- Size of the hard disk attached to the printer.
- Complexity of the pages to be collated.

According to these factors, the printer collates in sequential sets as many pages as will fit in the available memory. For example, you have a 6-page job and you request 4 copies. Because the fourth page is complex and consumes all available memory, only the first three pages fit in the printer's (or hard disk's) available memory. The fifth and sixth pages are relatively small. In this case, the printer divides this job into three segments and prints in this manner:

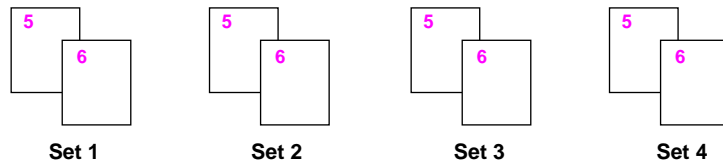
① 4 sets of pages 1, 2, and 3



② 4 copies of page 4



③ 4 sets of pages 5 and 6



Increasing the collation capacity

To increase the number of pages that the printer can collate at one time, consider one or more of the following changes:

- Increase the printer's memory.
 - 4685F16 16-Mbyte SIMM (Option 16)
 - Z480F32 32-Mbyte SIMM (Option 32)
- Attach a hard disk to the printer's SCSI port.
- Increase the size of an existing hard disk.

Quick Collate and the Check Print option

When you use the Phaser 550 **Quick Collate** option in combination with the **Check Print** option, only the first page of the first set is printed before pausing for review.

When using the **Quick Collate** option, make sure that you either select **Output Face Down** or uncheck the **Output Face Up** box, depending on the driver you are using.

Note The *Quick Collate* feature is only available with the printer's **extended features option (Z550FX or Option FX)** and at least **24-Mbytes of memory**.

Energy Star mode

When the printer is idle for the time set in the Energy Star front panel menu (1 hour default), it cools down completely. When the printer exits the Energy Star cool-down mode, it is ready to print in about 2 minutes.

Refer to the menu map in Chapter 7 to locate the Energy Star Timeout setting in the front panel submenu. The following topic provides directions for changing the value of the Energy Star timeout.

Changing the Energy Star timeout

The default value for the Energy Star timeout is 1 hour. You can change the default timeout value when you want the printer to more quickly reach the Energy Star energy-saving standby mode.

1. When the printer is on and the Ready message appears, press the **Menu** button. The printer displays the first selection in the menu:

```
Help Pages
<----  ----> Menu
```

2. Using the left (<---) or right (--->) arrow buttons, scroll through the selections until the following message appears:

```
Printer Defaults
<----  ----> Menu
```

3. Press the **Menu** button to access printer default selections. The printer displays the following message:

```
Default Tray
<----  ----> Menu
```

4. Using the left or right arrow buttons, scroll through the selections until the following message appears:

```
Energy Star Timeout
<----  ----> Menu
```

5. Press the **Menu** button to access Energy Star selections. The printer displays the following message:

```
Timeout: 1 hrs
<----  ---->  OK
```

6. Using the left or right arrow buttons, scroll through the selections until the desired setting is reached.
7. Press the **OK** button to confirm your Energy Star timeout selection.
8. Return to the top level of the menu by pressing the **Exit** button until the printer displays the Ready message.

Parallel port

The printer has an asynchronous parallel port that lets you interface with PCs. The parallel port supports uni-directional and bi-directional communications (refer to the **Phaser 550 Drivers and Utilities Printing Reference** for instructions on setting the port to bi-directional communications). For bi-directional communications, the parallel port supports two modes: Compatibility Mode and Nibble Mode.

The interpretation of interface signals depends on the current mode. Compatibility Mode provides host-to-printer communication in a manner compatible with a uni-directional interface. Nibble Mode provides printer-to-host communication and may be combined with Compatibility Mode to provide bi-directional communication.

Note For more information, refer to the IEEE P1284 document for parallel interfaces.

When you use the parallel port, be sure to type this command at the PC (if LPT1 is not available, use LPT2) to disable timeouts:

```
MODE LPT1:,,P
```

The table shows the parallel port's connected pins. Other pins are not connected.

Parallel port signal descriptions

Pin	Signal mode names: Compatibility/Nibble	Return pin	Signal source	Description
1	Busy/PtrBusy	19	Printer	C mode: Positive true = not ready for data N mode: Data bits 3 then 7, then busy status
2	Select/Xflag	20	Printer	C mode: Positive true = online N mode: Data bits 1 then 5
3	nAck/PtrClk	21	Printer	C mode: Negative true = data transfer acknowledge N mode: Data qualifier
4	nFault/nDataAvail	22	Printer	C mode: Negative true = printer fault exists that prevents printing N mode: Negative low = data ready then data bits 0 then 4
5	PError/AckDataReq	23	Printer	C mode: Positive true = printer error exists, such as media tray empty N mode: Data bits 2 then 6
6	Data 1	24	Host	C mode: Positive true data input N mode: Not used
7	Data 2	25	Host	C mode: Positive true data input N mode: Not used
8	Data 3	26	Host	C mode: Positive true data input N mode: Not used
9	Data 4	27	Host	C mode: Positive true data input N mode: Not used
10	Data 5	28	Host	C mode: Positive true data input N mode: Not used
11	Data 6	29	Host	C mode: Positive true data input N mode: Not used

Parallel port signal descriptions (cont'd.)

Pin	Signal mode names: Compatibility/Nibble	Return pin	Signal source	Description
12	Data 7	30	Host	C mode: Positive true data input N mode: Not used
13	Data 8	31	Host	C mode: Positive true data input N mode: Not used
14	nInit/nHostRTS	32	Host	C mode: Negative true = reset interface N mode: Not used
15	nStrobe/HostClk	33	Host	C mode: Negative true = transfer data into printer input latch on rising edge N mode: Negative true = transfer Extensibility Request value into printer input latch on rising edge
16	nSelectIn/1284 Active	34	Host	C mode: Negative true = select printer N mode: Used in conjunction with HostBusy for 1284 hardware handshaking
17	nAutoFd/HostBusy	35	Host	C mode: Not used N mode: Used in conjunction with 1284 Active for 1284 hardware handshaking
18	Host Logic High		Host	Positive true = host signals valid Negative true = host signals invalid
36	Peripheral Logic High		Printer	Positive true = printer on Negative true = printer off

Specifications

Temperature

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

Best Print Quality: 15° C to 25° C (59° F to 77° F)

Non-operating: 0° C to 40° C (32° F to 104° F)

Storage: (without paper, transparencies, or consumables): -20° C to +60° C
(-4° F to +140° F)

Humidity

Operating: 10% to 80% Relative Humidity, non-condensing

Best Print Quality: 30% to 70% Relative Humidity, non-condensing

Non-operating: 10% to 90% Relative Humidity, non-condensing

Altitude

Operating: 0 to 2,500 m (8,000 ft.).

Non-operating: 0 to 4000 m (13,125 ft.)

Primary voltage ranges

91 - 128 VAC, 110 VAC nominal

174 - 250 VAC, 220 VAC nominal

Frequency range

47 to 63 Hz

Primary fusing

110 VAC, 10 Amps

220 VAC, 8 Amps

(Not user-accessible)

Power Consumption

Meets Energy Star power conservation requirements.

State	Average power
Continuous printing	208 W
Idle	130 W
Energy Star	29 W or under

Dimensions of standard unit (without Lower Tray Assembly)

Height: 454 mm (18 in.)

Depth: 492 mm (19.5 in.)

Width: 489 mm (19* in.)

*712 mm (27.4 in.) with the output tray

Dimensions with Lower Tray Assembly

Height: 666 mm (26.2 in.)

Depth: 492 mm (19.5 in.)

Width: 489 mm (19* in.)

*712 mm (27.4 in.) with the output tray

Weight of standard unit with all consumables (without Lower Tray Assembly)

53.3 kg (117 lbs.)

Weight of Lower Tray Assembly

14 kg (31 lbs.)

Printing speed

The speeds and rates listed in the following table represent the time it takes the printer to produce a print (**1st print**) and the rate at which the printer produces multiple prints (**Continuous throughput rate**). In both cases these are physical mechanism times, independent of image processing time. Actual time to first print depends on image complexity and size, resolution, and memory configuration.

Print mode	Color		Monochrome	
	1st print	Continuous throughput rate (ppm)*	1st print	Continuous throughput rate (ppm)*
Fast Color	55 sec.	4.7	55 sec.	4.7
Standard / Enhanced / Presentation	60 sec.	3.5	45 sec.	14
Premium	1 min. 20 sec.	1.8	50 sec.	7
Transparency	1 min. 30 sec.	1.5	60 sec.	7

* Pages per minute.

Safety and emissions standards

FCC Part 15, Subpart J “Class B” verified

Vfg 243 Class B

CISPR 22 Class B, verified

UL 1950, listed.

CSA 220, certified.

EN60950/IEC 950, TUV licensed

EN55022

B

Expanding Your Printing System

Upgrade kits

Order number	Description
4685F16	16-Mbyte SIMM for adding memory (Option 16); see “Advantages of adding memory” on page B-2.
Z480F32	32-Mbyte SIMM for adding memory (Option 32); see “Advantages of adding memory” on page B-2.
Z550FX	Extended Features SIMM (Option FX) adds 22 fonts, Check Print, print collation, job pipelining, plus support for Enhanced and Premium print modes.
4676FTA	Lower Tray Assembly with one paper tray and one transparency tray. For metric trays, order 4676FTA Option 01.
4540	Phaser Copystation accessory adds color copying capability to your Tektronix Phaser printer.
4676FP1	Ethernet networking card upgrade kit; includes EtherTalk and Novell NetWare protocols (Option P1).
4676FP3	LocalTalk networking card upgrade kit; includes LocalTalk protocol and RS-232 (serial) interface (Option P3).
4676FP4	Token Ring Networking Card upgrade kit (Option P4).

Advantages of adding memory

The following table summarizes the memory configurations for the Phaser 550 printer:

Memory configurations for the Phaser 550 printer

Memory	Total memory	Performance / Benefit
Standard	8 Mbytes	Base configuration supports Fast Color , Standard , and Presentation print modes.
Add one 16-Mbyte SIMM	24 Mbytes	Increases frame buffer size, I/O buffers, and virtual memory. Improves throughput. Full frame buffer for Standard mode. Minimum requirement for Enhanced or Premium mode printing; full-size print area on Legal-size media; Letter-size copies on the Phaser Copystation.
Add one 32-Mbyte SIMM	40 Mbytes	Increases frame buffer size, I/O buffers and virtual memory (two full frame buffers for Standard mode, one full frame buffer for Enhanced mode). Minimum requirement for Legal-size copies on the Phaser Copystation.
Add one 16-Mbyte SIMM and one 32-Mbyte SIMM	56 Mbytes	Increases the size of caches, buffers, and virtual memory to reduce the amount of time required to transfer large images and to process multiple jobs.
Add two 32-Mbyte SIMMs	72 Mbytes (max.)	1200 x 1200 dpi without compression guarantees the fastest throughput and best image quality.

The total amount of memory installed in the printer is reported on the startup page and on the configuration page.

In general, more memory improves throughput, reduces the level of compression, provides more storage for downloadable fonts, and allows printing of the most complex images. Additional memory can also reduce offload time by increasing the size of input buffers for the I/O ports.

Phaser Copystation accessory

The Phaser Copystation accessory adds easy-to-use, walk-up color copying capability to the Phaser 550 Color Printer.

The Copystation's front-panel controls let you specify the number of copies and select among color, gray scale and black-and-white copying modes. You can choose to make copies reduced to 25% or enlarged to 200% of the original's size, and you can adjust copies for color balance and lightness.

In order to use the Phaser Copystation with the Phaser 550, your printer requires the following memory upgrades:

- 16-Mbyte SIMM (total 24-Mbytes) **Letter-size copies**
- 32-Mbyte SIMM (total 40-Mbytes) **Legal-size copies**

Note To order a Phaser Copystation, use Tektronix order number 4540.

For instructions on connecting a Phaser Copystation to your printer or printer network, and for operating instructions, refer to the **Phaser Copystation User Manual**.

Lower Tray Assembly

The Lower Tray Assembly adds two more media trays to your printer, each tray with a 250-sheet capacity. This transforms the printer into a high-volume printing solution for networked environments. Triple-tray printing capability is especially useful if you commonly print on both paper and transparency or Letter- and Legal-sized media. For ordering information, refer to "Supplies and accessories" on page 5-2.

PhaserPrint

For printing in UNIX and VMS environments, Tektronix offers PhaserPrint. PhaserPrint provides fast raster screen copy printing to Tektronix color printers. PhaserPrint also provides a graphical user interface for push-button control of Tektronix printer features. PhaserPrint works with the workstation's native spooling system to print PostScript files and raster files in these formats: Sun Raster Format (SRF), `xwd`, and SGI RGB.

Note To order PhaserPrint, use Tektronix order number 4690F20.

PhaserSym

For printing in VMS environments, Tektronix offers PhaserSym. PhaserSym is a VMS print symbiont for DEC OpenVMS, VAX, and DEC OpenVMS AXP computers.

Note To order PhaserSym, use Tektronix order number 4690F41.

Adding a hard disk for font storage

With the Phaser 550, you can connect one or more Small Computer System Interface (SCSI) external hard disks to the printer and use them for additional font storage. Once you download a font to the external disk, the font remains there until you remove it.

Compatible hard disks

The Phaser 550 can use most SCSI hard disks that support the full SCSI command set. Also, most SCSI hard disks that work with an Apple LaserWriter will work with the Phaser 550. Contact your computer or printer dealer for information.

Requirements for adding a hard disk

To connect an external disk, you need these items:

- A SCSI peripheral cable for each disk. The printer uses a SCSI-2, 50-pin connector.
- One SCSI cable terminator, unless your disk has an internal terminator.

The printer can support up to seven external disks connected at one time. When connecting a hard disk to the printer, follow these guidelines:

- The printer must always be at one end of the chain with a terminator or terminated device (such as the Phaser Copystation) at the other end of the chain.
- You must turn on the disk(s) **before** you turn on the printer. Wait at least one minute after turning on the disk(s) before turning on the printer.
- With multiple disks, each disk must have a unique SCSI ID number. Do not turn on the printer or disk **until each disk has a unique number**.
- With multiple disks, only one disk can contain a Sys/Start file.

B Expanding Your Printing System

Initialization Unless the disk is already formatted for operation with a PostScript printer, you have to initialize (format) the disk after connecting it to the printer. The Phaser 550 diskettes and CD-ROM contain utilities to help you initialize the disk and download fonts to it. For instructions on how to use the utilities, refer to the manual **Phaser 550 Drivers and Utilities Printing Reference**.

SCSI ID number The printer's SCSI number is 7. Valid ID numbers for the external disk are 0 through 6.

Note If you have a Phaser Copystation connected to the printer, it must be located at one end of the chain, with the printer at the other end and the external disk(s) in the middle. The Copystation uses two SCSI ID addresses, 05 and 06 and is internally terminated; therefore, the external disk(s) can use ID numbers 0 through 4, be non-terminated, and located between the Copystation and printer.

Termination The Phaser 550 has an internal terminator.

Note If the Sys/Start file contains an error, the printer ignores the remainder of the file and may not start up as you expect it to.

Startup file You may load a startup file called **Sys/Start** onto your external disk. You can use the **Sys/Start** file to customize printer operation (for example, select a specific color correction or load fonts into the printer's memory).

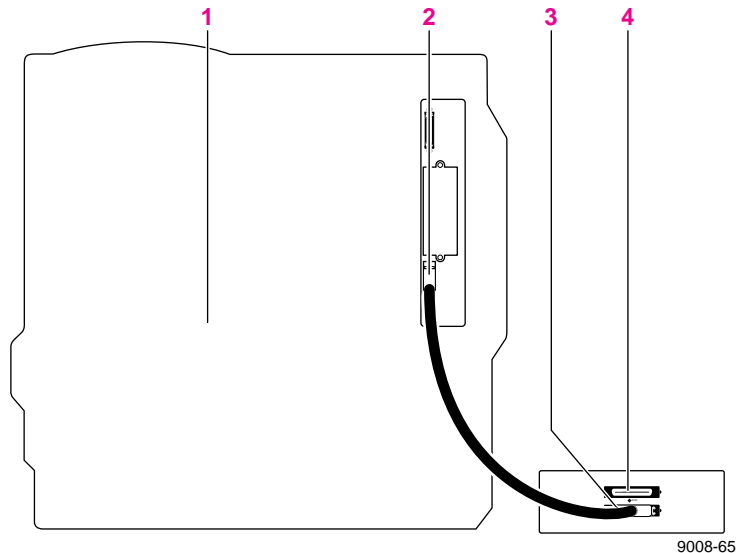
Connecting one disk

Make sure that the computer, printer, and external disk are turned **off** before you connect or disconnect a SCSI cable.

1. Phaser 550 printer with a built-in SCSI terminator
2. SCSI port
3. External disk SCSI port
4. Terminator (not required if the disk has a built-in terminator or if you have a Phaser Copystation connected at the other end of the chain).

Each disk must have a unique SCSI ID number. Do not turn on the printer or disk until each disk has a unique number.

Note You must turn on the disk(s) *before* you turn on the printer. Wait at least one minute after turning on the disk(s) before turning on the printer.



B Expanding Your Printing System

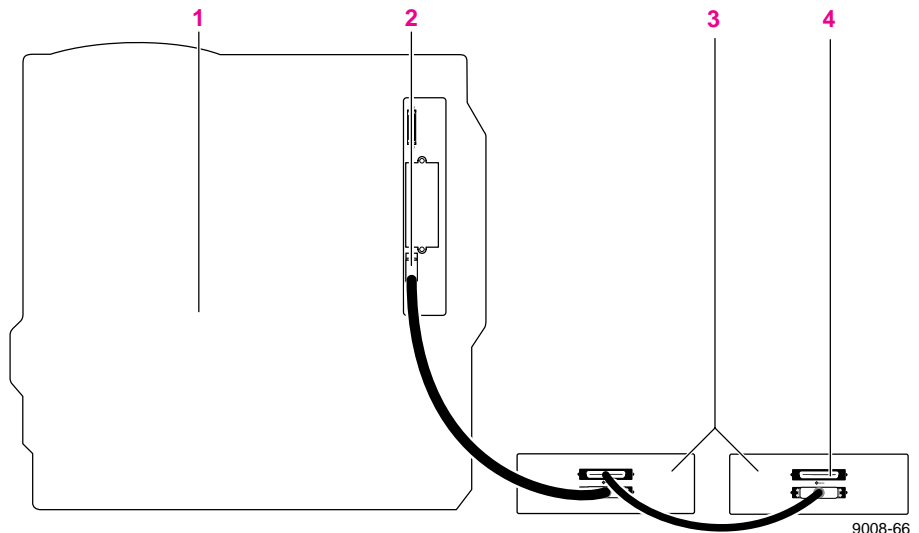
Connecting multiple disks

Make sure that the computer, printer, and external disks are turned **off** before you connect or disconnect a SCSI cable.

1. Phaser 550 printer with a built-in SCSI terminator
2. SCSI port
3. External disks
4. Terminator (not required if the **end** disk has a built-in terminator or if you have a Phaser Copystation connected at the other end of the chain). The middle disk must **not** have an internal terminator).

Each disk must have a unique SCSI ID number. Do not turn on the printer or disk until each disk has a unique number.

Note You must turn on the disk(s) *before* you turn on the printer. Wait at least one minute after turning on the disk(s) before turning on the printer.

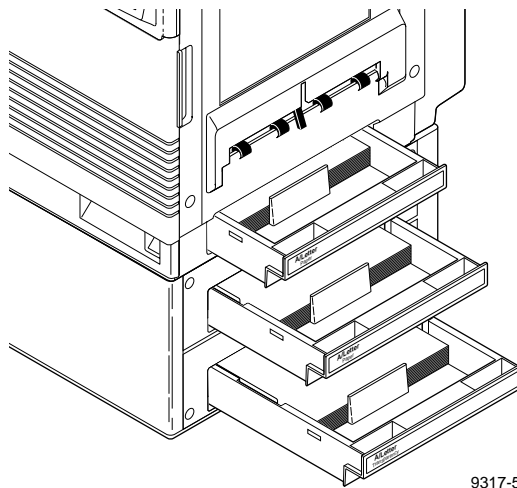


C

Moving Your Printer

Repacking your printer

1. Turn off the printer; remove the power cord.
2. Remove the media tray(s). Repack them for shipping or storage in their original shipping boxes.



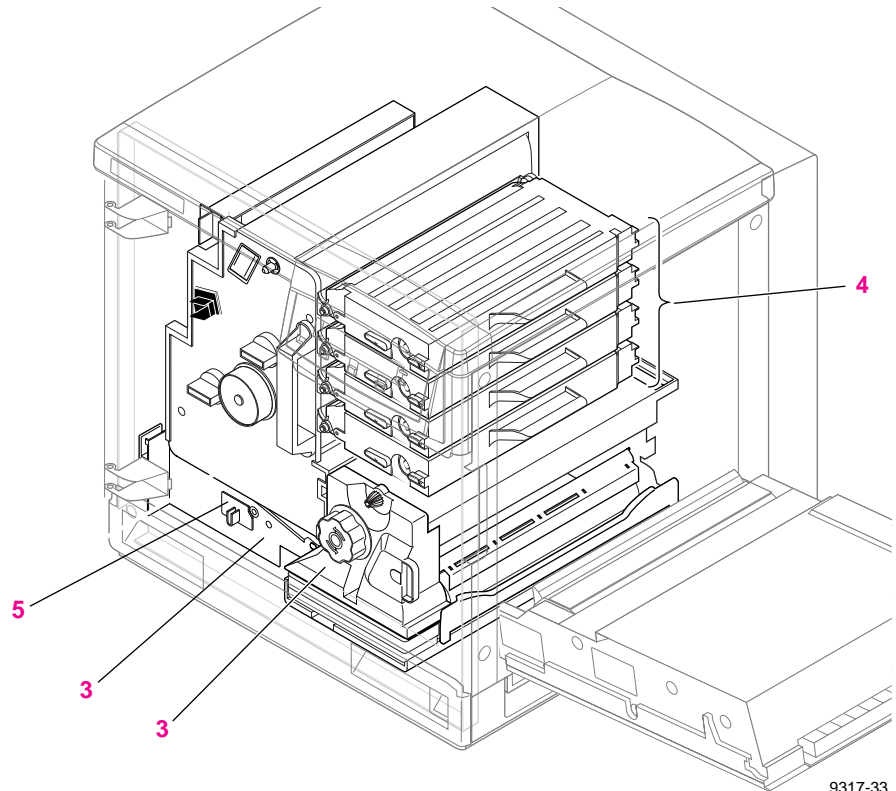
9317-50

C Moving Your Printer

3. With the front and right side doors open, remove the fuser and imaging unit; immediately repack them for shipping or storage in their original shipping boxes.

Caution The imaging unit is extremely light sensitive; keep its light exposure to a minimum (less than 45 seconds). Also, keep it upright to avoid spilling any waste toner.

4. Remove the four toner cartridges; replace the protective cover for each cartridge; repack them for shipping or storage in their original shipping boxes.
5. Carefully remove the waste bin; empty the waste toner into a plastic bag that you seal and dispose of as normal office waste; replace the waste bin in the printer.



9317-33

6. Wipe off any loose toner in and around the printer.

Note If a toner vacuum is available, it is the best tool for cleaning spilled toner. Do not use a standard office vacuum; the toner will not be retained by typical vacuum dust collectors.

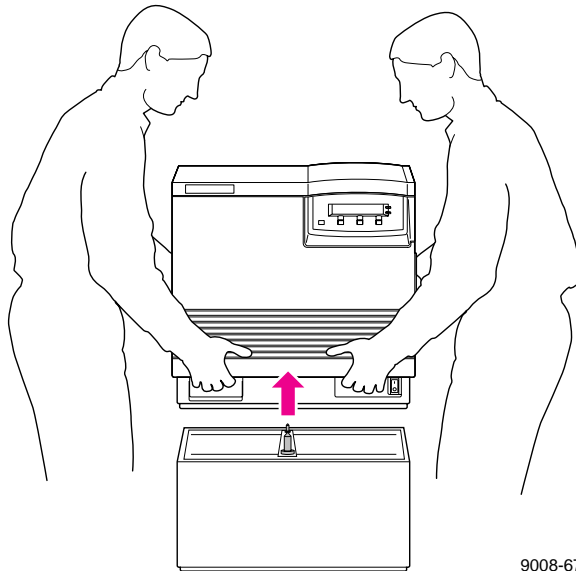
7. Close all doors and secure them with adhesive tape. If you don't have a Lower Tray Assembly, read ahead to Step 9.

8. **If you have a Lower Tray Assembly:**

- a. Lift the printer up and away from the Lower Tray Assembly.

Warning The printer weighs about 39 kg (86 lbs.) and the Lower Tray Assembly weighs 14 kg (31 lbs.). Observe standard precautions for lifting heavy objects.

- b. Repack the Lower Tray Assembly in its original shipping box.



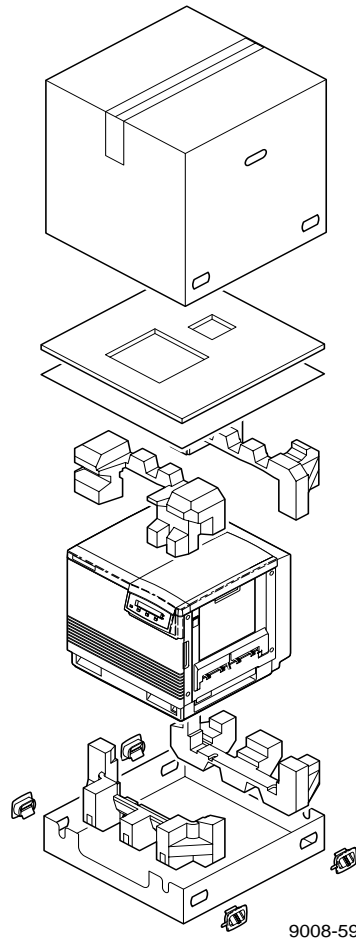
9008-67

9. Repack any other accessories in the original Tektronix shipping box.

C Moving Your Printer

10. Repack the printer in the original Tektronix shipping box. Make sure that you keep the printer level when moving.

Note To keep your warranty valid, you must first remove the fuser, toner cartridges, and imaging unit, then ship the printer in its Tektronix shipping box with the appropriate packing materials. Call Tektronix at 1-800-835-6100 or call your nearest Tektronix dealer if you need a replacement box. Also, if you are returning the printer for service, call Tektronix or your nearest Tektronix dealer for a return authorization number.



D

Regulatory Information

Canadian EMC (Electromagnetic Compatibility) regulatory standards

- This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus 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 la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Declaration of conformity (for 220-230 VAC equipment)

Tektronix, Inc.
Color Printing and Imaging Division
P.O. Box 1000
Wilsonville, Oregon 97070-1000 U.S.A.

declares, under our sole responsibility, that the product

Phaser 550 (Z550)

to which this declaration relates, is in conformity with the following standard(s) or other normative document(s):

For the Safety of Information Technology Equipment including
EC EN60950 Electrical Business Equipment

For the Limits and methods of measurement of radio Interference
EC EN55022 characteristics of Information Technology Equipment

For the The Generic Immunity Standard
EC EN50082-1 Residential, Commercial, and Light Industry.

following the provision of the

Low Voltage Directive 73/23/EEC, the Electromagnetic Compatibility Directive 89/336/EEC, Machinery Directive 89/392/EEC.

FCC Class B device (for 100-120 VAC equipment)

The equipment described in this manual generates and uses radio frequency energy. If it is not installed and used properly in strict accordance with Tektronix' instructions, it may cause interference with radio and television reception.

This equipment has been tested and verified 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 interferences 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 of more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning Changes or modifications not expressly approved by Tektronix can affect emission compliance and could void the user's authority to operate this product. To ensure emission compliance, use shielded interface cables.

Material Safety Data Sheets

Proper management of environmental resources protects the well-being of our employees, customers, shareholders, and the communities we are a part of worldwide.

Tektronix establishes and maintains sound environmental management practices to accomplish this goal and to assure compliance with the laws, regulations, and orders of the responsible governmental authorities wherever Tektronix and its subsidiaries operate.

Tektronix, Incorporated is complying with government regulations by providing Material Safety Data Sheets for this product.

Color Printing and Imaging Division
Tektronix, Incorporated

MSDS for toner

Section I – Product identification

Trade name and Tektronix part number:

Black Toner Cartridge	016-1417-00
Cyan Toner Cartridge	016-1418-00
Magenta Toner Cartridge	016-1419-00
Yellow Toner Cartridge	016-1420-00

Black Toner Starter Cartridge	118-9081-00
Cyan Toner Starter Cartridge	118-9082-00
Magenta Toner Starter Cartridge	118-9083-00
Yellow Toner Starter Cartridge	118-9084-00

Product use: Used in the Phaser 550 color printers.

Section II – Information on ingredients

Ingredients

Toners are a proprietary blend of pigments and resins

Section III – Hazards identification

Potential Health Effects:

Eyes: Contact unlikely. If any particles get into the eye, flush thoroughly with water.

Skin: Not expected to be an irritant.

Inhalation: Minimum irritation expected, as with any non-toxic dust.

Ingestion: Not considered a route of exposure. See Section XI.

Section IV – First aid measures

None indicated. These toners are encapsulated pigments and should not cause health hazards when used as intended.

D Regulatory Information

Section V – Fire fighting measures

Flammable Properties:

Flash point: Not determined.

Fire & explosion hazards: These toners will burn. No unusual hazards are expected.

Section VI – Accidental release measures

Spill Or Leak: Not applicable.

Section VII – Handling and storage

Handling: None.

Storage: Avoid high temperatures.

Section VIII – Exposure control – personal protection

Exposure Guidelines: No special protection indicated when used as intended. TLV/PEL: None established.

Section IX – Physical and chemical properties

Appearance: Black, blue, red, or yellow powders.

Odor: None.

Solubility: Not water soluble.

Section X – Stability and reactivity

Stability: Stable.

Incompatibility With Other Materials: None.

Hazardous Polymerization: Will not occur.

Section XI – Toxicological information

Toxicity: Non-toxic orally.

Carcinogenicity: Not listed by IARC, NTP, or OSHA.

Section XII – Ecological information

No known impact.

Section XIII – Disposal considerations

These products are not a hazardous waste as specified in 40CFR 261. Dispose in accordance with all Federal, State, and Local regulations.

Section XIV – Transport information

D.O.T.: Not regulated.

Section XV – Regulatory information

TSCA: All components of these toners are listed in the Toxic Substances Control Act inventory as verified by our suppliers.

SARA: Not reportable.

RCRA: TCLP below hazardous waste levels set by EPA.

CERCLA: No reportable quantity for this material.

California Prop. 65: Not listed.

Section XVI – Other information

Original preparation date: October 24, 1995 R.C.

Tektronix, Incorporated
P.O. Box 500
Chemical Documentation
Mail stop 48-825
Beaverton, Oregon 97077
Printer information: 1-800-835-6100
MSDS information: (503) 627-7255

Section VI – Accidental release measures

Spill Or Leak: Wipe with absorbent material and dispose in accordance with Federal, State, and Local regulations.

Section VII – Handling and storage

Handling: No special requirements.

Storage: No special requirements.

Section VIII – Exposure control – personal protection

Exposure Guidelines: None established.

Engineering Controls: None needed when used as intended in Tektronix printers.

Eye Protection: None needed.

Skin Protection: None should be needed.

Respiratory Protection: None needed.

Section IX – Physical and chemical properties

Appearance: Colorless liquid.

Odor: Slight.

Solubility: Not water soluble.

Specific Gravity: 0.97.

Section X – Stability and reactivity

Stability: Stable. Traces of formaldehyde may form if heated in air above 300° F (149° C). Levels generated in the printer are not considered hazardous.

Incompatibility With Other Materials: Oxidizing compounds can cause a reaction.

Hazardous Polymerization: Will not occur.

Section XI – Toxicological information

Eye Irritation: May cause slight irritation.

Skin: May cause slight irritation, but no significant effect.

D Regulatory Information

Section XII – Ecological information

No known impact.

Section XIII – Disposal considerations

Observe all Federal, State, and Local regulations. See section XV.

Section XIV – Transport information

D.O.T.: Not regulated.

Section XV – Regulatory information

EPCRA section 313 Reportable Ingredients: None.

California Prop. 65: Not listed.

Canadian WHMIS: Not considered a hazardous chemical.

TSCA: This product is listed in the Toxic Substances Control Act inventory as verified by our suppliers.

OSHA: Not considered a hazardous material as defined by 29CFR1910.1200 Hazard Communication.

Section XVI – Other information

Original preparation date: October 24, 1995 R.C.

Tektronix, Incorporated
P.O. Box 500
Chemical Documentation
Mail stop 46-825
Beaverton, Oregon 97077
Printer information: 1-800-835-6100
MSDS information: (503) 627-7255

Index

A

- A/Letter media trays 2-17, 3-22, 5-3
- A4 media trays 2-17, 3-22, 5-3
- accessories
 - Phaser Copystation B-3
 - PhaserPrint B-4
 - PhaserSym B-4
- accessories, ordering 5-3
 - cables and adapters 5-4
 - Lower Tray Assembly 5-3, B-1
 - media trays 5-3
 - output tray 5-3
 - Phaser Copystation 5-3
- adding memory B-2
- adjusting color density 3-14
- applications, printing 3-8
- automated information system (HAL)
 - 3-6, 3-8, 6-4
- automatic language selection 3-33
- AutoSelect** 3-24

B

- Bulletin Board Service (BBS) 6-1

C

- Calibrate Colors menu 3-14
 - selections 3-17
- calibrating colors 3-14
- Cancel** button 7-2
- CD-ROM 2-2
 - drive 3-6
 - utilities 3-7
- changing languages 3-33
- changing the Energy Star timeout A-12
- Check Print** 7-5
 - resetting the timeout 3-19
- Chooser**
 - printer doesn't appear 6-22
 - selecting a driver 6-20

- cleaning 4-26
 - paper-pick and paper-feed rollers 4-26
 - sensors 4-11
 - transfer roller 4-30
- CMYK color sampler chart 3-18
- collating multiple copies 3-19, A-8
- color calibration page 3-14, 6-7, 6-12
 - printing 3-14
- color correction 3-12, 3-18
 - CMYK color sampler chart 3-18
 - HSB color sampler chart 3-18
 - PANTONE Color sampler chart 3-18
 - RGB color sampler chart 3-18
 - selecting from front panel 3-13
- color density
 - controlling 3-14
 - samples 3-15
- Commercial Press** 3-12
- components
 - installing 2-8, 2-10, 2-12
 - ordering 5-2
 - replacing 4-2
- configuration page 6-7
 - printing A-6
- Confirm** button 7-2
- connecting power 2-24
- connections
 - network 2-20, 2-23
 - parallel cable adapter 2-22
 - power 2-24
 - rear panel 7-6
 - SCSI 2-23
 - serial 2-23
- consumables, see **components**
- controlling color density 6-12
- copy count
 - resetting 4-14, 4-19, 4-24
 - resetting manually 4-25, A-12
- Customer Support Hotline 6-1

D

- declaration of conformity D-2
- demonstration page 2-27, A-3
- diagnosing print quality 6-7
- disable timeouts 2-39
- disk, see **hard disk**
- diskettes
 - drivers 2-1
 - PostScript utility files 3-23
 - utilities 2-1, 3-7
- drivers
 - installation 2-28
 - installation (Macintosh) 2-40
 - installation (Windows) 2-29, 2-32, 2-35
 - installing PPDs 2-28
 - using (Windows) 2-35
 - Windows 2-32
 - Windows 95 2-29
 - Windows NT 2-35
 - Windows NT 2-35

E

- enabling and disabling the startup page A-5
- Energy Star 7-5
 - mode A-12
 - timeout A-12
- Enhanced** print mode 3-10
- error indicator 2-25, 6-10, 6-23
- error messages on the startup page 6-29
- Ethernet 2-20, 2-23
 - problems 6-22
- EuroHAL, automated fax system 6-5
- Euroscale Press** 3-12
- extended features option
 - Enhanced** print mode 3-10
 - fonts 3-31
 - PCL5 3-32
 - Premium** print mode 3-10
 - print-quality modes 3-10

F

- Fast Color** print mode 3-10
- fastest printing available 3-36
- filter, replacing 4-11
- font disk, see **hard disk**
- fonts 1-3, 3-31
 - downloading 3-32
 - extended features option 3-31
 - Macintosh screen fonts 3-32
 - resident typefaces 1-3, 3-32
 - standard configuration 3-30
 - TrueType 1-3
- front panel 4-4, 4-16, 4-20, 6-30, 7-1
 - buttons 7-2
 - Calibrate Colors menu 3-17
 - changing color correction 3-13
 - Check Print** 3-19, 7-5
 - color calibration page 3-14
 - configuration page A-6
 - controlling color density 3-14
 - demonstration page 2-27, A-3
 - diagnosing problems 6-10, 6-11
 - display 7-3
 - Help Pages 6-8, A-1
 - indicators 7-1
 - locked 7-4
 - menu map 7-5, A-2, A-7
 - messages 6-10, 6-11, 6-14, 6-17
 - print-quality modes 3-11
 - protected mode 7-4
 - selecting 3-11
 - selecting a language 2-26
 - standby mode 6-14, 6-17
 - startup page A-4
 - test print 6-7, A-1, A-2
 - timeout 6-10
- ftp server 3-6, 6-2

fuser

- front panel message 4-16
- installing 2-10
- ordering 5-2
- replacing 4-16
- troubleshooting 6-17
- waste disposal 4-17

G

- getting help 6-1
- getting the best results 3-35

H

- HAL — Highly Automated Library 3-6, 3-8, 6-1, 6-4
- handling media 3-20
- hard disk B-5
 - connecting multiple B-8
 - connecting single B-7
 - font storage B-5
 - guidelines B-5
 - initialization B-6
 - installing B-5 to B-8
 - Sys/Start file B-6
 - turning on the power 2-24, B-7
- Help Pages
 - configuration page A-6
 - demonstration page A-3
 - menu map 7-5
 - printing A-1
 - service prints A-1
 - startup page 2-25, A-4
 - test print 6-7, A-2
- hotline, technical support 6-1
- HP-GL, using 3-33
- HSB color sampler chart 3-18

I

- image area 3-21
 - size and position 6-25
- image shifts 6-25
- imaging unit
 - disposing of 4-14
 - installing 2-12
 - ordering 5-2
 - protective cover 2-14
 - replacing 4-7
 - troubleshooting 6-14
 - unpacking 4-10
 - weight 2-12
- indicators
 - at power-up 2-25
 - error 2-25, 6-10, 6-23, 7-1
 - power 2-25, 6-10, 6-22, 7-1
- information access
 - PhaserLink 1-3
- installation 2-28
 - drivers and PPDs 2-28, 2-43
 - fuser 2-10
 - imaging unit 2-12
 - inventory 2-2
 - Lower Tray Assembly 2-6
 - Phaser 550 GX driver 2-46
 - Phaser Copystation 2-23
 - printer software for Macintosh 2-40
 - printer software for Windows 3.1 2-32
 - printer software for Windows NT 2-35
 - tasks 2-1
 - toner cartridges 2-8
 - unpacking 2-2
- installer
 - loading printer software 2-42
- installing printer software
 - Macintosh 2-40
 - PC 2-28, 2-32
 - PC, Windows 95 2-29
- installing the fuser 2-10

- installing toner cartridges 2-8
- IntelliSelect™ (automatic language selection) 3-33
- interactive fax system (HAL) 6-1
- interfaces
 - Ethernet 2-20
 - network 2-23
 - parallel 2-22
 - serial 2-23
 - Token Ring 2-20
- inventory 2-2
- isopropyl alcohol, for cleaning 4-27

J

- job collating 3-19, A-8

L

- landscape orientation 3-25
- language
 - front panel selection 2-26
- laser paper 1-2, 2-17, 3-20, 6-24
- LaserWriter 8.x
 - setting up on a Macintosh 2-43
 - using 2-43
- left arrow button 7-2
- Legal-size media 3-21
 - tray 2-17, 3-22, 5-3
- Letter-size media trays 5-3
- loading media 2-17, 2-18, 3-20
 - manual feed 3-26
- loading transparencies 3-29
- LocalTalk 2-20
 - problems 6-22
- Lower Tray Assembly 3-23, C-3
 - inserting media trays 2-19
 - installing 2-6
 - ordering 5-1, B-1
 - repacking C-3
 - using three media trays 3-23
- LPT port, setting up 2-39

M

- Macintosh
 - installing printer software 2-40
 - printing from 3-7
- main charge grid, ordering 5-2
- maintaining print quality 4-1, 6-7
- manual feed 3-26
 - inserting paper 3-27
 - inserting transparencies 3-28
 - selecting 3-24
 - transparencies 3-29
- manuals, ordering 5-3
- margins 3-21
 - and print area 3-21
 - incorrect 6-25
- Material Safety Data Sheets (MSDS) D-4
- media 1-2
 - about 3-20
 - handling 3-20
 - jams 6-31, 6-32, 6-33
 - loading paper 2-18
 - loading transparencies 2-18
 - print area 3-21
 - selecting 3-24
 - selecting trays 3-23
 - sizes 3-21, 3-22
 - trays 2-17, 3-22, 5-3
- media jams 6-24, 6-30
 - clearing 6-10
 - Jam at A 6-31
 - Jam at C 6-32
 - Jam at D 6-33
 - Jam at E 6-34
 - Jam at Manual Feed 6-34
 - troubleshooting 6-10
- media trays
 - Lower Tray Assembly 3-23
 - ordering 5-3
 - using three trays 3-23

- memory, adding B-2
- Menu** button 7-2
- menu map 7-5
 - printing A-2, A-7
- Microsoft Windows 2-29, 2-32
- Microsoft Windows NT 2-35
- Microsoft Windows NT 2-35
- MODE command 2-39
- Monochrome** color correction 3-12
- moving the printer C-1
- MSDS
 - silicone oil D-8
 - toner D-5
- multiple copies, collating 3-19, A-8

N

- network
 - connectors 7-6
 - PhaserShare connections 2-23
 - ports 2-20
- networking B-3
 - PhaserShare 2-20
- Novell NetWare 2-20

O

- OK** button 7-2
- online services 2-47, 6-2
- options
 - networking B-3
- ordering supplies 1-4, 5-2
- ordering upgrade kits B-1
- orientation
 - landscape 3-25
 - paper 3-25
 - portrait 3-25

P

- packing material
 - removing 2-5
 - repacking C-4
- PANTONE Colors 3-18
 - simulation 3-35
- paper 1-2
 - handling 3-20
 - image area 3-21
 - jams 6-31, 6-34
 - loading 2-18
 - ordering 5-1, 5-2
 - picking errors 6-24
 - selecting 3-24
- paper sizes
 - A/Letter 3-21, 3-22
 - A4 3-21, 3-22
 - Legal 3-21
- parallel port 2-20, A-13
 - cable adapter 2-22, 5-4
 - connector 2-22, 7-6
- parallel port, see **LPT port**
- PC
 - installing printer
 - software 2-28, 2-29, 2-32
 - printing from DOS 3-4
 - printing from Windows 3-3
 - printing from Windows 95 3-2
 - setting up ports in DOS 2-39
 - updating driver software for Windows NT 2-35
- PCL5 3-32, 3-33
 - extended features option 3-32
- Phaser 550 GX driver 3-7
- Phaser 550 Quick Reference Card** 3-15, 5-3, 6-7
- Phaser 550 utilities
 - downloading fonts 3-32
- Phaser Copystation 2-20, B-3
- PhaserLink 1-3, 3-9

- PhaserPrint 3-5, B-4
- PhaserShare 3-2, 3-3, 3-7
 - cards 2-20, 7-6, B-3
 - connections 2-23
 - manuals 5-3
 - networking 2-20
- PhaserSym 3-6, B-4
- portrait orientation 3-25
- ports 2-20
 - parallel A-13
 - selecting 3-4
 - setting up 2-39
- ports, computer 2-39
- ports, printer
 - Ethernet 2-23
 - parallel 2-22, A-13
 - speed 3-35
- PostScript 3-33
 - fonts 3-31
 - utility files 3-23
- power indicator 2-25, 6-10, 6-22
- power, connecting 2-24
- power-up 2-25
- Premium** print mode 3-10
- Presentation** print mode 3-10
- print area 3-21
- Print** button 7-2
- print features, selecting 3-9
- print quality 4-1
 - maintaining 6-7
 - problems 6-26
 - symptoms 4-3
- print quality quick reference table 6-10
- printer
 - components 4-3
 - features 3-9
 - languages 3-33
 - service 6-1
 - weight 2-6, A-17, C-3
- printer control
 - PhaserLink 1-3
 - selecting features 3-9
- printer drivers
 - using (Windows) 2-35
- printer languages 3-33
- printer software
 - for Windows 3.1 2-32
 - for Windows 95 2-29
 - for Windows NT 2-35
 - installer 2-42
 - installing on a Macintosh 2-40
 - installing on a PC (Windows 95) 2-29
 - installing on a PC (Windows NT) 2-35
 - installing on a PC (Windows) 2-32
- PRINTER.INF, updating Windows NT driver 2-35
- printing
 - configuration page A-6
 - from a Macintosh 3-7
 - from a PC (DOS) 3-4
 - from a PC (Windows 3.1 and NT) 3-3
 - from a PC (Windows 95) 3-2
 - from a workstation 3-5
 - from specific applications 3-8
 - front panel menu map A-2, A-7
 - Help Pages A-1
 - hints 3-34
 - menu map A-7
 - on a network 3-12
 - platform 3-1
 - spooling system 3-6
 - startup page A-4
 - test print A-2
 - time 3-36
 - timeout 6-23
- print-quality modes 3-10, 3-11
 - extended features option 3-10
 - standard configuration 3-10
- problems and solutions 6-7
- protected mode, front panel 7-4

Q

- Quick Collate** option 3-19, A-8
 - increasing capacity A-11
 - using with the **Check Print** option A-11
- quick reference card, ordering 5-3
- quick reference table, troubleshooting 6-10

R

- rear panel 7-6
- registering your printer 2-5
- registration page 2-25
- regulatory information D-1
- repacking C-1
 - Lower Tray Assembly C-3
 - shipping box C-4
- replaceable components
 - average life 4-3
 - ordering 5-2
 - replacing 4-4, 4-7, 4-16, 4-20
- replacing
 - filter 4-11
 - fuser 4-16
 - imaging unit 4-7
 - toner cartridges 4-4
 - transfer kit 4-20
 - user-replaceable components 4-3
 - waste bin 4-23
- Reset** button 7-2
- resetting the copy count 4-19, 4-24
 - automatically 4-14
 - manually 4-25, A-12
- resident fonts 3-31
- RGB color sampler chart 3-18
- right arrow button 7-2
- rollers, cleaning 4-26

S

- SCSI 1-3, 2-20
 - connections 2-23
 - connector 7-6
 - disk, see **hard disk**
 - ID number B-6
 - initialization B-6
 - termination B-6
- SCSI disk initialization B-6
- selecting
 - manual feed 3-24
 - media 3-24
 - media trays 3-23
 - print features 3-9
 - print-quality modes 3-10, 3-11
- self-tests 2-25
- sensors, cleaning 4-11
- serial connections 2-23
- serial port, printer 2-20
- service 6-1
- service print 6-9
- setting up PC ports for DOS 2-39
- setting up the printer 2-2
- silicone oil MSDS D-8
- Simulate Display** 3-12
- software, installing PPDs 2-28
- solutions, problem solving 6-7
- specifications A-16
- spots on prints 6-27
- standard configuration
 - fonts 3-30
 - print-quality modes 3-10
- Standard** print mode 3-10
- standby 6-14, 6-17

- startup page 2-25, 6-29
 - enabling and disabling A-5
 - error messages 6-29
 - printing A-4
 - prints when disabled 6-29
 - reports error message 6-29
- streaks or spots on prints 6-27
- supplies and accessories 1-4, 3-34, 5-1
- SWOP Press** 3-12
- symptoms and solutions 6-7
 - adjusting color density 3-14
 - color calibration page 3-14
 - Phaser 550 Quick Reference Card** 6-7
 - test print 6-7
- Sys/Start file** B-6

T

- TCP/IP 2-20
- technical support 6-1
- TekColor Dynamic Correction 3-12
- Tektronix Bulletin Board Service (BBS) 2-47, 3-6, 3-18, 6-1
- Tektronix ftp server 6-3
- Tektronix online services 2-47
- test print 6-8, A-1, A-2
 - button 6-20
 - front panel 6-7
- timeouts 6-23
 - disable 2-39
- Token Ring interface 2-20
- TokenTalk interface 2-20
- toner cartridges
 - installing 2-8
 - ordering 5-2
 - replacing 4-4
 - shipping cover 2-8
 - waste disposal 4-6
- toner MSDS D-5

- transfer kit
 - front panel message 4-20
 - replacing 4-20
- transfer roller
 - cleaning 4-30
 - waste disposal 4-21
- transparencies
 - handling 3-20
 - jams 6-31, 6-32, 6-33, 6-34
 - loading 2-18, 3-29
 - ordering 5-1, 5-2
 - picking errors 6-24
 - selecting 3-24
- tray selection 3-23
- troubleshooting
 - black and white prints instead of color 6-28
 - bleeding colors 6-15
 - can't make a print 6-20
 - clearing media jams 6-30
 - configuration page A-6
 - cut off images 6-25
 - dark, vertical line 6-17
 - fine-line detail missing 6-14
 - fingerprints 6-16
 - frequent paper-picking errors 6-24
 - image shifts (Macintosh) 6-25
 - image size and position 6-25
 - light spots 6-16
 - light vertical line 6-14
 - margins incorrect (Macintosh) 6-25
 - media jams 6-24
 - media problems 6-24
 - off-set images 6-25
 - paper-picking errors 6-24
 - power light blinks, but file doesn't print 6-22
 - print job does not finish 6-23
 - print quality problems 6-26
 - printer doesn't appear in the **Chooser** 6-22

- Printer Error ## 6-19
- print-quality 6-26
- prints show streaks or spots 6-27
- repeating light spot 6-12
- startup page prints when disabled 6-29
- streaks or spots 6-27
- test print A-2
- verify communications 6-20
- TrueType fonts 1-3, 3-32
- turning on the printer 2-24

U

- UNIX workstations 3-5
 - downloading files 6-3
 - installing printer software 2-47
- unpacking 2-2
- upgrade kits B-1
 - adding memory B-2
 - Ethernet B-1
 - LocalTalk support B-1
 - ordering B-1
 - serial support B-1
- Use Printer Settings** 3-12
- user-replaceable components 4-2
 - installing 2-8, 2-10, 2-12
 - ordering 5-2
 - replacing 4-2
- using a Windows printer driver 3-3
- using EuroHAL 6-5
- using the automated fax systems 6-4
- utilities 3-7
 - CD-ROM 2-1
 - diskettes 2-1
- utility files 2-47
 - downloading 6-2

V

- Vivid Color** 3-12

W

- waste bin
 - disposal 4-23
 - emptying C-2
 - replacing 4-23
- waste disposal
 - fuser 4-17
 - toner cartridges 4-6
 - transfer roller 4-21
 - waste bin 4-23
- Windows 2-29, 2-32, 2-35
- Windows 3.1
 - installing printer software 2-32
- Windows 95
 - installing printer software 2-29
- Windows NT
 - installing printer software 2-35
 - printer driver 2-35
 - updating software 2-35
- workstations
 - PhaserPrint 3-5
 - PhaserSym 3-6
 - UNIX 3-5
 - VMS 3-6
- World Wide Web server 3-6, 6-2

