

User Manual

Tektronix

**Phaser[®] 360
Color Printer**

Copyright © Tektronix, Inc. Printed in the U.S.A. Unpublished rights reserved under the copyright laws of the United States. Contents of this publication may not be reproduced in any form without permission of Tektronix, Inc.

Tektronix[®], Phaser[®], ColorStix[®], and Made For Each Other[®] are registered trademarks of Tektronix, Inc. TekColor[™], PhaserShare[®], PhaserPrint[™], PhaserTools[™], and PhaserLink[™], and the shapes of ColorStix ink sticks are trademarks of Tektronix, Inc.

IntelliSelect[™] and Adobe Jenson[™] are trademarks, and Adobe[®], PostScript[®], ATM[®], Adobe Garamond[®], Birch[®], Carta[®], Mythos[®], Quake[®], and Tekton[®] are registered trademarks of Adobe Systems Incorporated which may be registered in certain jurisdictions. Adobe Brilliant Screens[™] technology is a trademark of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions.

Apple[®], Macintosh[®], Mac[®] OS, AppleTalk[®], Apple Chancery[®], Chicago[®], Geneva[®], Monaco[®], and New York[®] are registered trademarks, and QuickDraw[™] is a trademark of Apple Computer Incorporated.

Bernhard Modern[™], Clarendon[™], Coronet[™], Helvetica[™], New Century Schoolbook[™], Optima[™], Palatino[™], Stempel Garamond[™], Times[™], and Univers[™] are trademarks of Linotype-Hell AG and/or its subsidiaries.

ITC Avant Guard Gothic[®], ITC Bookman[®], ITC Lubalin Graph[®], ITC Mona Lisa[®], ITC Symbol[®], ITC Zapf Chancery[®], and ITC Zapf Dingbats[®] are registered trademarks of International Typeface Corporation.

Albertus[™], Arial[™], Gill Sans[™], Joanna[™], and Times New Roman[™] are trademarks of Monotype Corporation.

Antique Olive[®] is a registered trademark of M. Olive.

Eurostile[™] is a trademark of Nebiolo.

Hoefler Text was designed by the Hoefler Type Foundry.

Marigold[™] and Oxford[™] are trademarks of AlphaOmega Typography.

Windows[®] is a registered trademark of Microsoft Corporation.

Wingdings[™] in TrueType[®] format is a product of Microsoft Corporation. WingDings is a trademark of Microsoft Corporation and TrueType is a registered trademark of Apple Computer, Inc.

Novell[®] NetWare[®] is a registered trademark of Novell, Inc.

UNIX[®] is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Ltd.

PCL[®] is a registered trademark of Hewlett-Packard Corporation.

PANTONE[®] Colors generated by the Phaser 360 Color Printer are four- and/or three-color process simulations and may not match PANTONE-identified solid color standards. Use current PANTONE Color Reference Manuals for accurate colors.

PANTONE Color simulations are only obtainable on these products when driven by qualified Pantone-licensed software packages. Contact Pantone, Inc., for a current list of qualified licensees. © Pantone, Inc., 1988.

All trademarks noted herein are either the property of Tektronix, Inc., Pantone, Inc., or their respective companies.

The method of printing employed by the Tektronix Phaser[®] 360 Color Printer is covered by U.S. Patent No. 5,372,852. Purchase of a Tektronix Phaser 360 Color Printer provides a purchaser with a license under claims 1, 3, 20, and 22 of the '852 patent, but not a license under other claims of that patent, which cover methods of printing using inks having specific properties. Use of solid-ink sticks — manufactured by any other party and having these specific properties — with a Tektronix Phaser 360 Color Printer is not licensed.

Phaser® 360 Printer Warranty

Tektronix warrants that the Phaser 360 printer will be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. If this product proves defective during the warranty period, Tektronix, at its option, will either repair the defective product on-site or by means of telephone support without charge for parts and labor, or provide a replacement in exchange for the defective product.

In order to obtain service under the product warranty, Customer must notify Tektronix or its authorized representative of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. Tektronix or its authorized representative will provide such service at the Customer's site, if required, without charge during the warranty period, if the product is located in a normal on-site service area. Outside the U.S., a description of the normal on-site service area can be obtained from the Local Tektronix Subsidiary or Authorized Tektronix Distributor.

The maintenance tray in this product will be free from defects in materials and workmanship for a period of ninety (90) days from the date of shipment or six (6) months where longer periods are required by law. If the maintenance tray proves defective during the warranty period, Tektronix, at its option, will either repair the defective product without charge for parts and labor, or provide a replacement in exchange for the defective product. This 90 day warranty applies only to maintenance trays returned to the designated Tektronix depot. For trays returned to other locations, Customer will be assessed an applicable service charge. The preceding limitation shall not apply within the European Economic Area, where trays may be returned for warranty service to the nearest designated service depot regardless of the place of purchase.

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;
- 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 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;
- 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 50,000 pages per month has been reached. All service thereafter shall be billed on a time and material basis.

THE ABOVE WARRANTIES ARE GIVEN BY TEKTRONIX WITH RESPECT TO THIS PRODUCT IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. TEKTRONIX AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TEKTRONIX' RESPONSIBILITY TO REPAIR OR REPLACE DEFECTIVE PRODUCTS IS THE SOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR BREACH OF THIS WARRANTY. TEKTRONIX AND ITS VENDORS WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER TEKTRONIX OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

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.

WARNING Turning the power off using the On/Off switch does not de-energize the printer. You must remove the power cord to disconnect the printer from the mains. Keep the power cord accessible for removal in case of an emergency.

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.

Contents

1 About Your Printer

- Features of your new printer 1-2
- An illustrated guide to your printer 1-4
- Printer parts and components 1-7
 - Consumables 1-7
 - Printer parts 1-8
 - Options and accessories 1-9

2 Getting Set Up

- Setting up the printer: at a glance 2-1
- What you get with your printer 2-2
- Choosing a printer location 2-3
- Removing the packing material 2-3
- Registering the printer 2-3
- Installing the Lower Paper Tray Assembly (optional) 2-4
- Unlocking the transit restraint 2-7
- Installing the maintenance tray 2-8
- Loading the ink sticks 2-10
- Loading the media trays 2-11
 - Loading paper and transparency trays 2-11
 - Loading the optional Lower Paper Tray Assembly 2-15
- Connecting an external hard disk (optional) 2-17
- Connecting the printer 2-18
 - Printer ports 2-18
 - Connecting to a network 2-19
 - Connecting a PC or UNIX workstation to the parallel port 2-20
 - Connecting to a Macintosh 2-21
- Turning on the printer 2-21
 - Front panel display and controls 2-22
- Letting the printer warm up 2-23
- Selecting a language for the front panel 2-24
- Printing a Configuration Page 2-25
- Tips for optimum printing performance 2-26

3 Installing Printer Software

Overview 3-1

PC/Windows software 3-2

 Installing printer software for Windows 95 3-3

 Installing printer software for Windows NT 4.0 3-6

 Installing printer software for Windows NT 3.51 3-11

 Installing printer software for Windows 3.1 3-15

Mac OS software 3-19

 Using the Mac OS installer 3-21

 Setting up the Phaser 360 printer driver 3-22

 Setting up the Apple LaserWriter 8.3.4 driver 3-23

 Setting up the Phaser 360 GX driver 3-25

UNIX workstation software 3-27

 PhaserPrint™ for UNIX software 3-27

 Downloadable printer utility files 3-27

4 Printing Basics

Print features: overview 4-2

 Selecting print features 4-2

Adjusting print speed and resolution 4-4

All about media 4-5

 Acceptable media sizes, types, and weight 4-6

 Margins and image area 4-7

Media trays 4-8

 Media tray settings 4-9

 Changing the default media tray setting 4-10

Printing letterhead 4-11

Printing labels 4-12

Printing transparencies 4-13

 Printing transparencies from the transparency tray 4-13

 Printing transparencies from the standard paper tray 4-14

 Transparency quality tips 4-15

- When to use the manual-feed slot 4-16
- Printing from a PC 4-19
 - Using Windows printer drivers 4-19
 - Using the printer's front panel 4-19
 - Downloading utility files 4-19
 - Using the AdobePS 4 driver with Windows 95 4-22
 - Using the Tektronix driver for Windows 3.1 4-25
 - Using the Adobe PostScript driver for Windows 3.1 4-29
 - Using the Windows NT 3.51 PostScript driver 4-31
 - Using the Windows NT 4.0 PostScript driver 4-31
 - Printing from MS-DOS 4-34
- Printing from a Macintosh 4-35
 - Using Macintosh printer drivers 4-35
 - Using the printer's front panel 4-35
 - Downloading utility files 4-35
 - Using the Phaser 360 printer driver 4-38
 - Using the Apple LaserWriter 8 printer driver 4-39
 - Using the Phaser 360 GX printer driver 4-40
- Printing from a UNIX workstation 4-41
- Printing from specific applications 4-44

5 Printing: Beyond the Basics

- Adjusting the color of your prints 5-2
 - TekColor correction descriptions 5-3
 - Printing and using the color sampler charts 5-6
 - Tips for working with color 5-7
 - Special considerations 5-8
- Using the Quick Collate option 5-9
- Previewing with Check Print 5-10
- Using Image Smoothing 5-11
- Printer languages 5-12

Working with fonts	5-12
Resident typefaces (PostScript and PCL5)	5-12
Downloading fonts	5-13
Using fonts with Windows	5-14
Printing a list of fonts	5-15
Improving print speed	5-16
Selecting page sizes in Windows applications	5-19

6 Using the Front Panel

Front panel overview	6-1
Front panel indicators	6-1
Two-line display	6-2
Front panel buttons	6-3
Enabling and disabling the front panel menu	6-4
Front panel menu map	6-5
Printer Help Pages	6-6
Printing the Help Pages	6-7
Printer standby modes	6-8

7 Caring For Your Printer

Overview	7-1
Moving or shipping your printer	7-2
Adding ink	7-6
Ink handling tips	7-7
Emptying the waste liner	7-8
Replacing the maintenance tray	7-11
Cleaning the printer	7-14
If the printer has frequent media jams	7-14
If prints have light stripes or smears	7-15
The Cleaning Page	7-16
Cleaning supplies	7-18

- Using isopropyl alcohol 7-19
- Cleaning for ink smears and jams: internal paper path 7-20
- Cleaning for jams and ink smears: paper-feed rollers 7-22
- Cleaning for ink smears: paper-exit path 7-28
- Cleaning for upper media tray jams: media-pick roller 7-34
- Cleaning for lower tray jams: paper-pick rollers 7-43

8 Troubleshooting

- Overview 8-1
- Front panel error messages 8-2
- Troubleshooting quick reference 8-5
- Light stripes on prints: cleaning the printhead 8-12
- Media jams and misfeeds 8-15
 - Preventing media jams 8-15
 - Locating jammed media 8-16
 - Clearing a media jam 8-17
- Ink smears 8-20
- If your file doesn't print 8-21
 - General things to check for 8-21
 - If you are using PC/NFS 8-23
 - If you can't print from Windows to an LPT port 8-23
 - Checking the printer's language mode 8-25
- PostScript printing errors 8-26
 - Using a PostScript error handler 8-27
 - Fixing timeout problems in Windows 8-28
- Printed colors are not what you expected 8-31
 - Printing PANTONE Colors 8-32
 - Blue colors look too purple 8-32
- Sharing the printer on a network 8-33
 - Prints do not reflect your settings 8-33
 - If the Apple Printer Utility does not work 8-33

9 Customer Support

- On-line support 9-1
 - Receiving email update notices 9-1
- Customer Support Centers 9-2
- Getting information by fax 9-3

10 Supplies, Accessories, and Expanding Your Printing System

- Tektronix printers and Tektronix supplies:
 - Made For Each Other[®] 10-1
- Customizing your printer 10-1
- Printer supplies 10-2
- PhaserShare network cards 10-3
- Media trays 10-4
- Memory upgrade 10-5
- Tektronix external hard disk 10-5
- Additional software (UNIX and VMS) 10-6
 - PhaserPrint[™] for UNIX software 10-6
 - PhaserSym[™] software 10-6
- Interface cables and adapters 10-7

11 Regulatory Information and Specifications

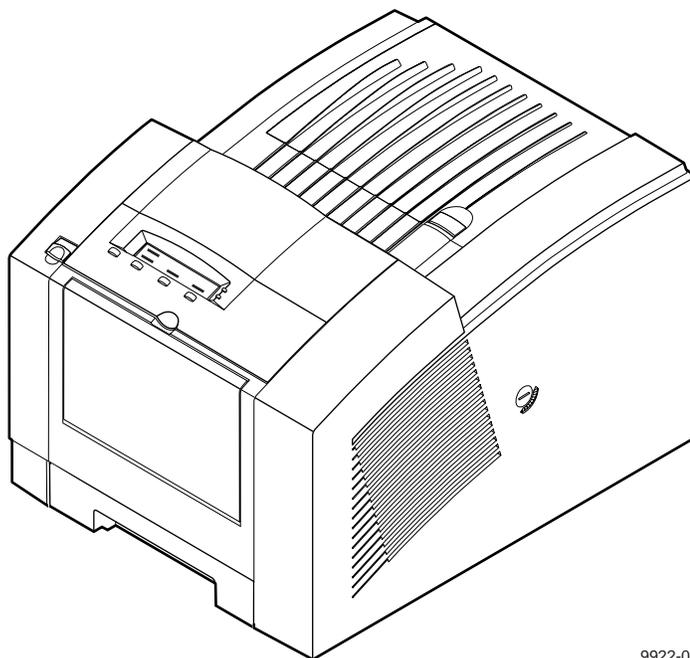
- Declaration of conformity 11-1
- Canadian EMC (Electromagnetic Compatibility) regulatory standards 11-2
- FCC Class B warning (for 115 VAC equipment) 11-3
- Material Safety Data Sheets 11-3
 - MSDS for ColorStix ink sticks 11-4
 - MSDS for silicone oil (drum fluid) 11-6
- Specifications 11-8
- Safety and emissions 11-10

Index

About Your Printer

The Tektronix Phaser® 360 Color Printer is a fast, reliable, economical, and easy-to-use printer that produces brilliant, high-quality color prints on plain paper. It is compatible with the leading network protocols, operating systems, and software applications, so everyone in your workgroup can use it. Optional accessories and upgrades let you customize the printer to suit your current needs and to expand its capabilities in the future.

The Phaser 360 Color Printer



9922-01

Features of your new printer

Image quality and speed

- **Fast Color.** Quick color prints on paper at 6 pages per minute (ppm) and transparencies at 5.5 ppm.
 - **Standard.** 300 x 300 dots per inch (dpi) for normal printing on paper at 4 ppm. Recommended for overhead transparencies — produces vibrant, saturated prints at 2 ppm.
 - **Enhanced.** 800 x 450 dpi for the best text and image quality on paper (2 ppm). Use for transparencies (at 600 x 300 dpi) with very fine detail.
-

Media (letter or A4-size)

- Copier paper
 - Recycled paper
 - Bond
 - Letterhead
 - Labels (full-sheet, peel-off)
 - Card stock, up to 220 g/m² (80 lb.)
 - Tektronix transparencies
-

Workgroup support

- Simultaneously supports PCs, Macintosh computers, and UNIX and OpenVMS workstations, and automatically senses and switches between ports and protocols as necessary.
 - Includes 10BaseT Ethernet connection (supports NetWare, EtherTalk, TCP/IP, Telnet, FTP, and HTTP). Optional network interfaces available.
-

Memory

- 24 Mbytes, upgradeable to 48 Mbytes.
-

Fonts

- 164 resident typefaces
 - Supports Adobe Type 1 and Type 3, TrueType, PCL5, and others
-

Color matching: TekColor™ Dynamic Color Correction

The printer's **Automatic** mode optimizes color quality for text, graphics, and scanned images on each page. Other color corrections let you adjust the color for special needs:

- Enhance the brightness of transparencies (**Vivid Color**).
 - Simulate the colors on the computer screen (**Simulate Display**).
 - Match printing press standards (various selections available).
-

Printer control through your web browser

With the printer's built-in PhaserLink™ software, you can use your web browser for a variety of tasks, including the following:

- Avoid down time by automatically receiving email when ink is low, paper needs loading, or other maintenance is required.
- View the status of print jobs.
- Get data on printer usage.
- Configure the printer.
- Create a local link to your own web site help pages.

Options and accessories

- **Lower Paper Tray Assembly.** Adds 625-sheet paper capacity for convenience and versatility. Use with the upper transparency tray to avoid having to reload media or switch media trays.
- **Transparency tray.** Recommended for transparency printing — 175-sheet capacity. Use with Tektronix transparencies for best transparency printing.
- **PhaserShare® network cards.** 100BaseTx Ethernet, Token Ring, and LocalTalk network interfaces are available.
- **Memory upgrade.** Upgrade to 48 MBytes for even faster image processing and throughput.
- **External hard drive.** For collation and additional font storage. Mounts conveniently on the back of the printer.

On-line support

Visit the Tektronix Color Printer web site at http://www.tek.com/Color_Printers/ for more information about your printer, including the following:

- Updated user documentation
- Downloadable utility files
- Tektronix dealers in your area
- Technical support

Note In addition to this manual, your printer is shipped with the following important resources:

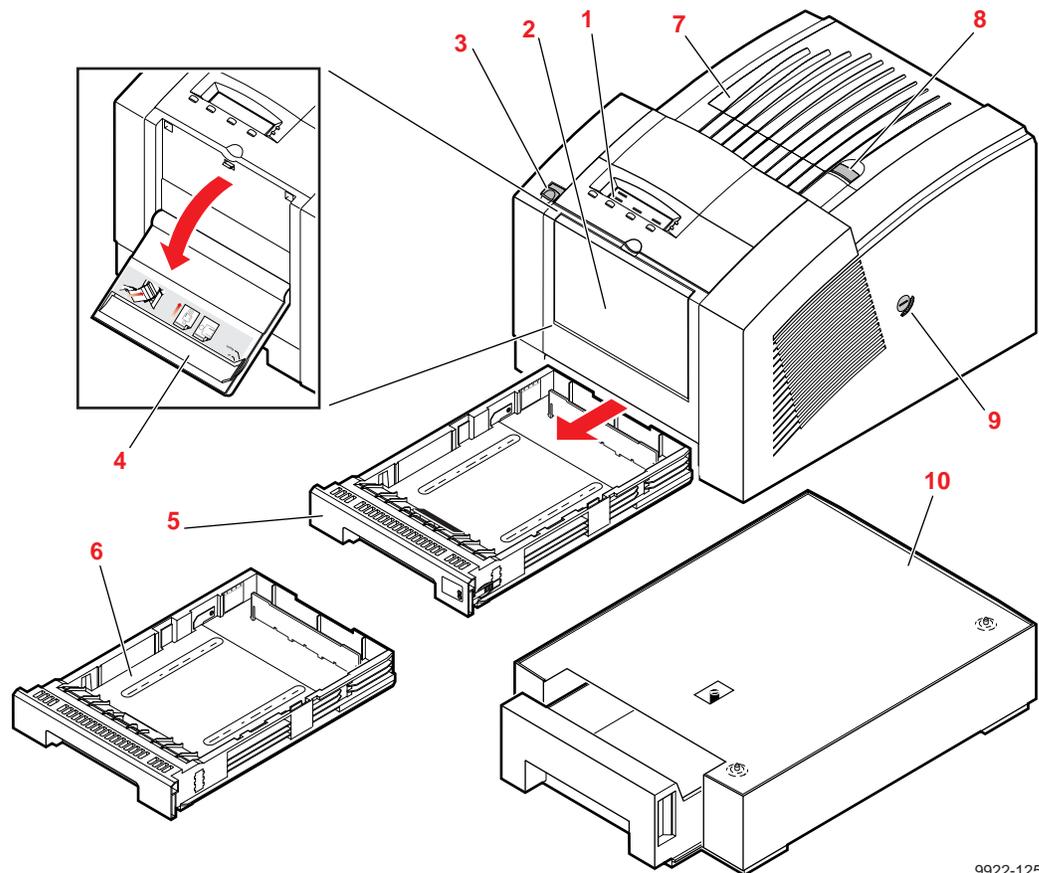
CD-ROM and diskettes Contains driver and utility files for installing and operating your printer and additional user documentation.

Quick Reference Guide Contains at-a-glance instructions for basic printer operations.

PhaserShare Networking System Administrator Manual and diskettes Contains files and instructions for network installation and configuration, and information on using PhaserLink software.

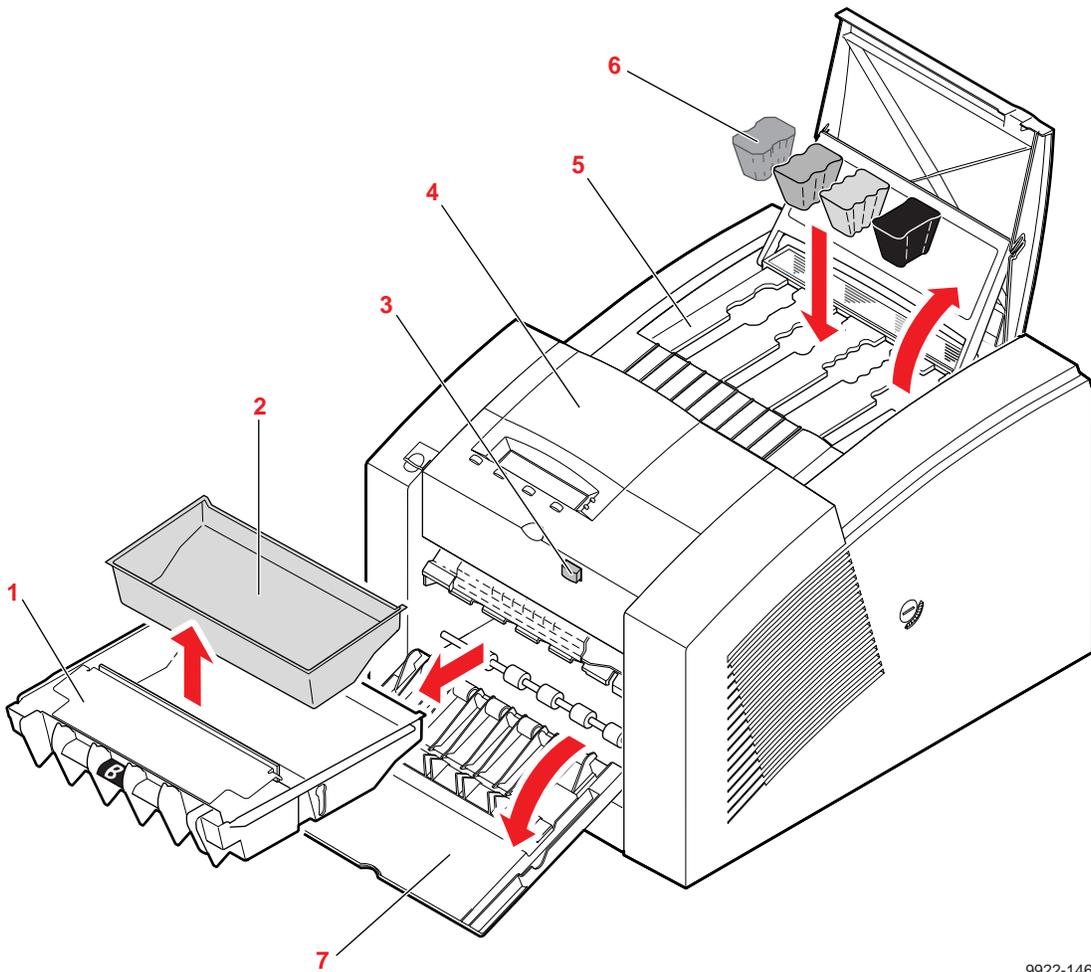
An illustrated guide to your printer

- 1 Front panel menu display and buttons
- 2 Front cover
- 3 Front cover release button
- 4 Manual-feed slot
- 5 Paper tray
- 6 Transparency tray (optional)
- 7 Top cover
- 8 Top cover release button
- 9 Transit restraint (printhead lock)
- 10 Lower Paper Tray Assembly (optional)



9922-125

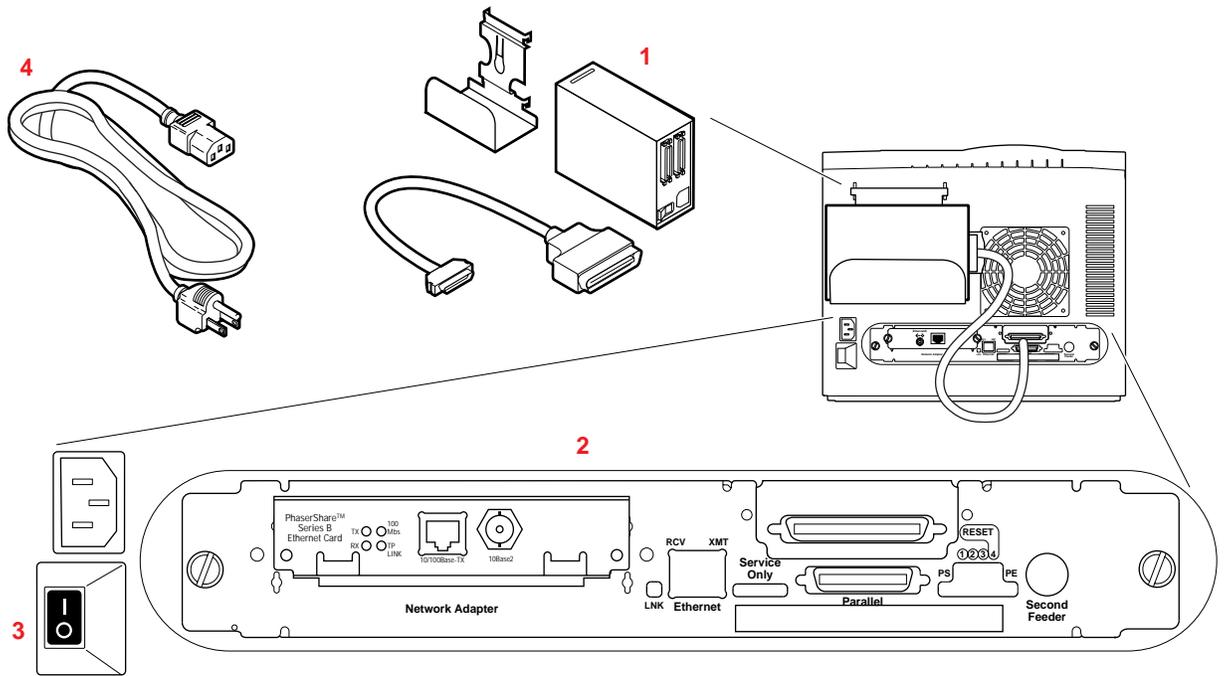
- 1 Maintenance tray
- 2 Waste liner
- 3 Exit cover release button
- 4 Exit cover
- 5 Ink loading bins
- 6 Ink sticks
- 7 Front cover (open)



9922-146

1 About Your Printer

- 1 External hard drive (optional), with bracket and cable
- 2 Back panel with interface ports and PhaserShare network card slot
- 3 On/Off switch
- 4 Power cord



9922-147

Printer parts and components

Consumables

ColorStix solid-ink sticks

Phaser 360 printer ColorStix® solid-ink sticks come in four colors: cyan, magenta, yellow, and black. Each of these ink sticks has a unique shape that matches the shape of the corresponding loading bin on top of the printer. The printer holds up to three ink sticks of each color, and you can replace ink sticks easily — and without having to wait until the printer runs out of ink. ColorStix ink sticks are clean, safe, and environmentally friendly.

Your printer is shipped with a starter ink pack containing one of each color ink stick. Replace ink sticks when prompted by the printer.

Note To ensure that your printer is always available for use, Tektronix recommends that you immediately order and maintain a stock of each color ink stick. See “Printer supplies” on page 10-2 for ordering information.

Maintenance tray and waste liner

The maintenance tray is a replaceable tray that is used during the printer’s printing and cleaning operations. The blue plastic tray inserted in the maintenance tray is the waste liner, which catches ink purged when the printer runs through its cleaning cycle. Replace the maintenance tray when a message at the printer’s front panel indicates the tray is low, after about 12,500 prints. Empty the waste liner when prompted by the printer.

Note To avoid printing delays, always keep an extra maintenance tray available. See “Printer supplies” on page 10-2 for ordering information.

Printer parts

Paper/transparency tray

The standard tray (for either letter- or A4-size media) shipped with the printer accepts up to 200 sheets of common office paper, ranging from 60 to 120 g/m² (16 to 32 lb.), **You can also load full-sheet peel-off labels** or up to 50 sheets of transparencies **or labels** in the standard paper tray.

Manual feed slot

Use this slot to feed single sheets of paper, nonglossy cover stock — up to 220 g/m² (80 lb.) — or transparencies.

Transit restraint

The transit restraint on the right side of the printer secures the printhead in the printer. You must lock the transit restraint before moving or shipping the printer and unlock the transit restraint before operating the printer.

Back panel

The On/Off switch, power plug, and interface ports are on the back of the printer. The Phaser 360 printer has a built-in Ethernet connection, a SCSI port for an external hard drive, a bidirectional parallel port, and an expansion slot to support an optional Tektronix PhaserShare network card.

Options and accessories

High-capacity transparency tray

Save time and effort by ordering a **Tektronix high-capacity** transparency tray for transparency and label printing **only**. Transparency trays (letter- and A4-size) hold up to 175 sheets (about three boxes) of transparencies and 100 sheets of labels. By adding a transparency tray and a Lower Paper Tray Assembly, you can print on paper and transparencies without having to leave your computer to swap trays.

Tektronix transparency media

To ensure reliable, high-quality transparency printing, use only Tektronix standard or premium transparencies. Premium-grade transparencies, indicated by a notched corner, provide superior print quality and enhanced ink adhesion.

Lower Paper Tray Assembly

With a 625-sheet paper capacity, the Lower Paper Tray Assembly is recommended for high-volume printing needs. Dual-tray printing is especially convenient if you commonly print on different types of media. For example, you can keep plain paper in the lower tray, and transparencies, letterhead, or label media in the upper tray. The optional Lower Paper Tray Assembly can be ordered for either letter- or A4-size paper.

Tektronix external hard disk

Add the Tektronix 2.1-Gbyte external hard disk to a Phaser 360 printer to make your printer even more versatile. The following capabilities are added with the installation of the Tektronix external hard drive:

- **Collating large jobs.** The Quick Collate function collates large print jobs quickly, performing this task faster than the collation feature that may exist in your application.

1 About Your Printer

- **Expanded job accounting.** Allows you to keep records on up to 5000 print jobs. You can track usage rates and times, users, paper consumption, duration of print jobs, and other important information.
- **Font storage.** Provides storage for additional downloadable fonts.

Refer to the printer's CD-ROM and the **PhaserShare NetworkingSystem Administrator Manual** for more information.

Getting Set Up

Setting up the printer: at a glance

1. Unpack the printer and its accessories (page 2-3).
2. Send in your registration card (page 2-3).
3. Install the Lower Paper Tray Assembly (optional) (page 2-4).
4. Unlock the transit restraint (page 2-7).
5. Install the maintenance tray (page 2-8).
6. Load the ink sticks (page 2-10).
7. Load the paper tray (page 2-11).
8. Attach an external hard drive (optional) (page 2-17).
9. Connect the printer to your computer or network (page 2-18).
10. Connect the power cord and turn printer on (page 2-21).
11. Let the printer warm up (15 minutes) (page 2-23).
12. Select a language from the front panel display menu (page 2-24).
13. Print a Configuration Page (page 2-25).
14. Install the appropriate printer driver software (page 3-1).

What you get with your printer

The following items are shipped with the printer. The optional Lower Paper Tray Assembly, network cards, and Tektronix external hard disk are shipped separately.

1. Quick-Start Installation guide
2. ColorStix ink starter pack
3. Package of Tektronix premium transparencies
4. Paper tray (letter- or A4-size)
5. Maintenance tray and waste liner
6. Cleaning kit
7. Power cord
8. Parallel cable adapter
9. Registration packet
10. Supplies sheet
11. License agreement
12. **Phaser 360 Color Printer User Manual**
13. **Phaser 360 Color Printer Quick Reference Guide**
14. Phaser 360 Printer CD-ROM, ATM (Adobe Type Manager) CD-ROM, and diskettes (printer drivers and utility software)
15. **PhaserShare Networking Administrator Manual** and diskettes

Choosing a printer location

To ensure proper printer operation:

1. Install the printer on a flat surface. The degree of tilt should be no more than 3 degrees, approximately equivalent to lifting one side of the printer 2 cm (0.75 in.) off a flat surface.
2. Allow at least 5 cm (2 in.) clearance on each side of the printer for proper ventilation and to prevent the printer from overheating.

Caution Some of the printer's internal parts may be damaged or the printer may not operate properly if the printer isn't adequately ventilated. Avoid leaving loose paper or packing materials next to the vent on the right side of the printer; they may adhere to the vent, causing the printer to overheat.

Removing the packing material

Remove the plastic bag and packing materials surrounding the printer.

Note Save all boxes and packing material in case you need to ship the printer later.

Registering the printer

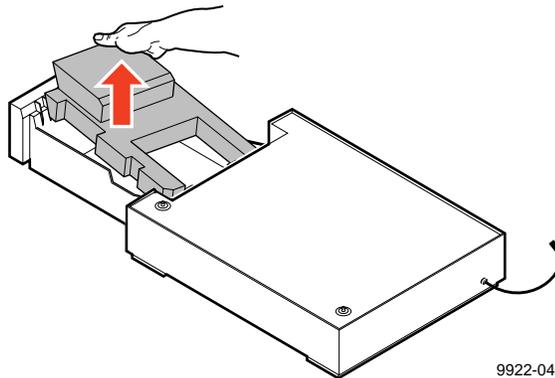
Your product registration card is contained in the **Register Now!** envelope that is shipped with your printer. Fill out the appropriate card (U.S. or international versions) and mail it. By registering your printer with Tektronix, you validate the product warranty and ensure that you will receive information about upgrades, service, and accessories. You can also register on-line at the Tektronix web site:

http://www.tek.com./Color_Printers/

Installing the Lower Paper Tray Assembly (optional)

Caution If you are adding a Lower Paper Tray Assembly to a printer that is already in service, let the printer cool down for at least 30 minutes before you move it to allow sufficient time for the ink to solidify. Then remove the maintenance tray, and turn off and unplug the printer.

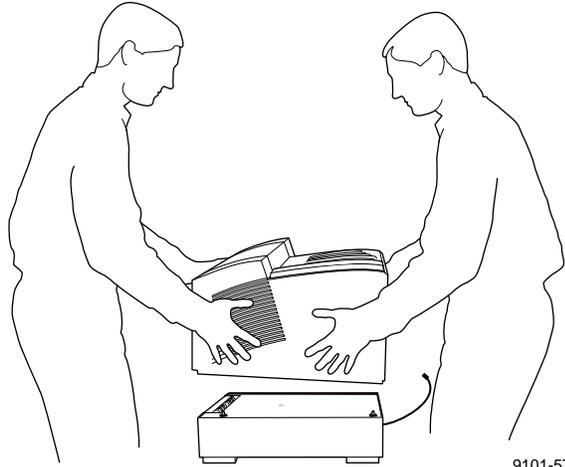
1. Unpack the Lower Paper Tray Assembly.
2. Remove the tray from the Lower Paper Tray Assembly. Remove the shipping block from the tray and replace the tray in the assembly. Refer to page 2-15 for paper-loading instructions.



3. Place the Lower Paper Tray Assembly where you will install the printer.

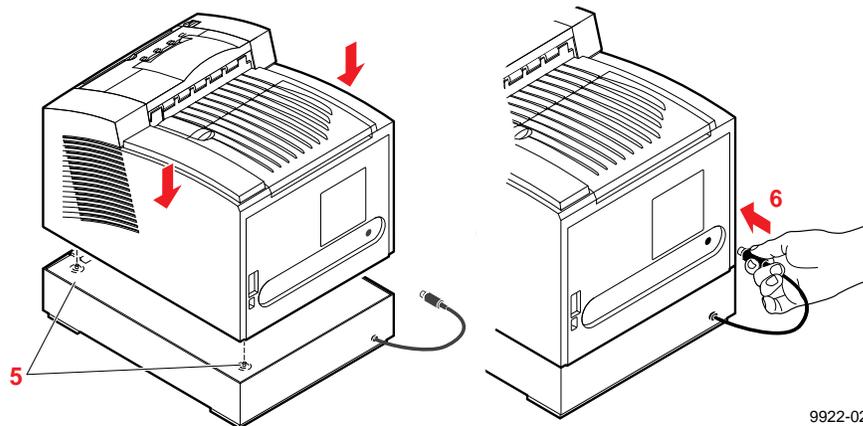
Note To ensure proper printer operation, install the printer and Lower Paper Tray Assembly on a flat surface having no more than 3 degrees of tilt. This is approximately equivalent to lifting one side of the printer 2 cm (0.75 in.) off a flat surface.

4. Place the printer on top of the Lower Paper Tray Assembly.



Warning The printer weighs about 32 kg (70 lb.). Do not attempt to lift the printer without the assistance of another person.

5. Make sure that the left and right alignment pins fit in the holes in the base of the printer.
6. Plug the Lower Paper Tray Assembly cable into the printer.



2 Getting Set Up

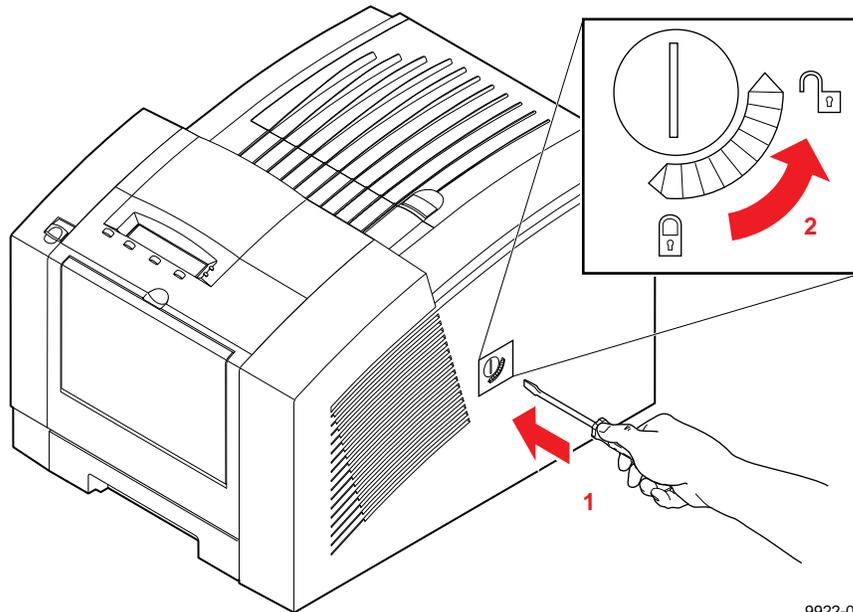
7. If you are installing a Lower Paper Tray Assembly on a printer already in service, reinsert the maintenance tray, plug the printer back in, and turn the printer on.

Warning The printer is not permanently attached to the Lower Paper Tray Assembly. When moving the printer, first disconnect it from the Lower Paper Tray Assembly and then move each unit separately. Moving the printer incorrectly may cause damage or personal injury.

- For ordering information, refer to “Lower Paper Tray Assembly” on page 10-4.

Unlocking the transit restraint

1. Insert a wide flat-blade screwdriver into the slot of the transit restraint lock, located on the right side of the printer.
2. While pushing inward with slight pressure, turn the lock button counterclockwise until it springs out flush with the side of the printer.



9922-03

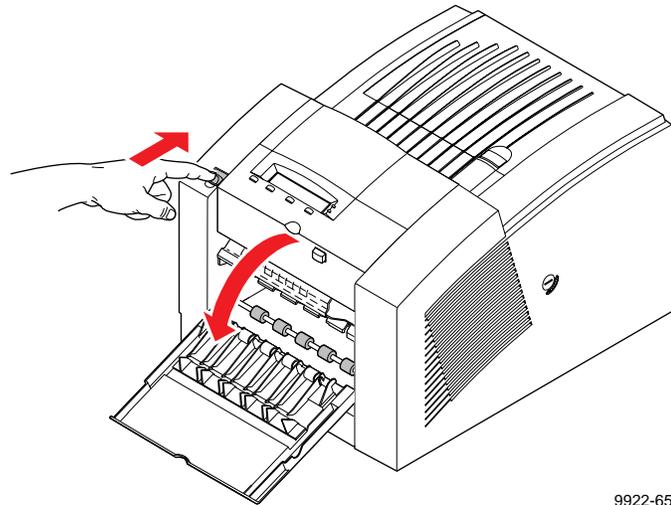
Caution If you move or ship the printer, be sure to lock the transit restraint to protect the printhead from damage. Always turn the printer power off using the On/Off switch before locking or unlocking the transit restraint. Refer to “Moving or shipping your printer” on page 7-2 for more information.

Installing the maintenance tray

The disposable maintenance tray (labeled with a blue “B”) shipped with your printer must be installed before printing is possible. For more details on the maintenance tray, see “Emptying the waste liner” on page 7-8 and “Replacing the maintenance tray” on page 7-11.

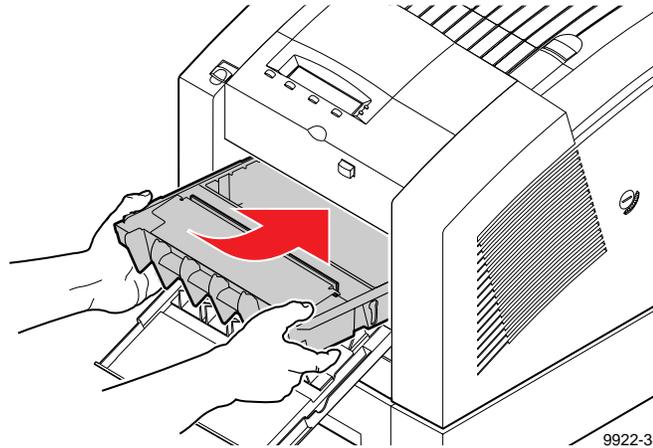
Note To avoid printing delays, always keep an extra maintenance tray available for use in the printer. For ordering information, see “Printer supplies” on page 10-2.

1. Open the maintenance tray shipping box and remove the maintenance tray.
2. Remove the packing materials from the maintenance tray. **Retain the plastic bag for disposal of the used maintenance tray later.**
3. Open the front cover.

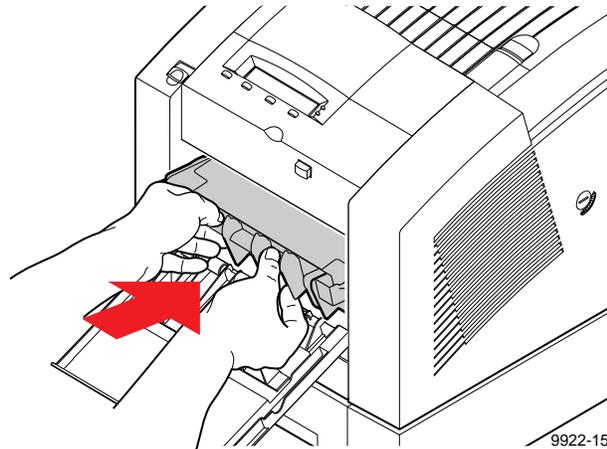


9922-65

4. Install the maintenance tray by sliding it into the printer. Make sure that the tray slides in straight on both sides.



5. Using both thumbs, push the tray in firmly until it latches.



6. Close the front cover.

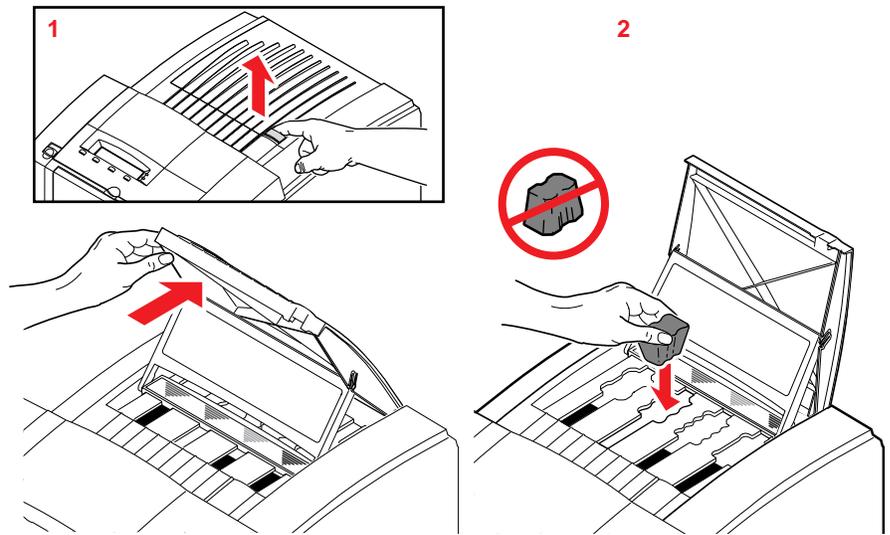
Caution If you move or ship the printer, be sure to remove the maintenance tray to protect the printer from damage. Refer to “Moving or shipping your printer” on page 7-2 for more information.

Loading the ink sticks

Your printer is shipped with a sampler containing one of each of the ColorStix ink sticks (black, cyan, magenta, and yellow). Load the ink sticks before you begin printing. For more details on color ink sticks, see “Adding ink” on page 7-6.

Note To avoid printing delays, maintain a stock of each color ink stick. For ordering information, see “Printer supplies” on page 10-2.

1. Open the top cover. Note the color-coded label and the different shapes of the slots of the ink-loading bin. Each ink stick color has a unique shape.
2. Drop the ink stick of the correct color and shape into each ink-loading bin, with the narrow (tapered) edge down.



9922-21

3. After loading all four ink sticks, close the top cover.

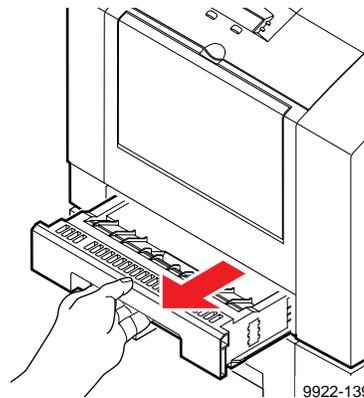
Loading the media trays

Your printer is shipped with a single media tray (letter- or A4-size) that accepts common office paper and letterhead, transparencies, and labels. If you frequently print on different types of media, you may want to obtain a tray for each type of media you use. For transparency printing, the optional transparency tray is recommended.

- For more detail about the types of media you can use with your printer and media tray options, refer to “Acceptable media sizes, types, and weight” on page 4-6.

Loading paper and transparency trays

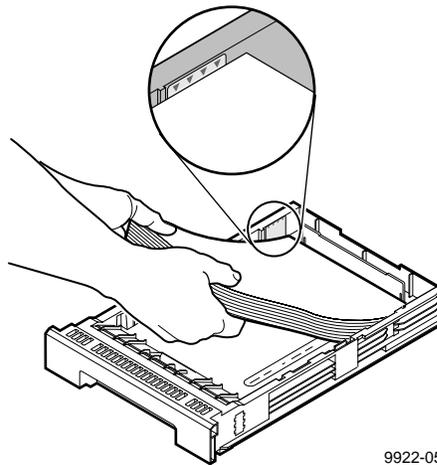
1. Remove the paper tray from the printer. Take out the shipping insert.



2 Getting Set Up

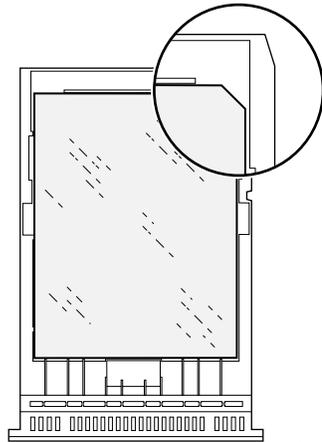
2. To load paper:

- a. First fan the paper to release sheets that are stuck together.
- b. Load up to 200 sheets of common office paper (slightly less than one-half ream). A label on the inside of the paper tray indicates the tray's maximum capacity.
- c. Set the switch on the side of the tray to **Paper**.



9922-05

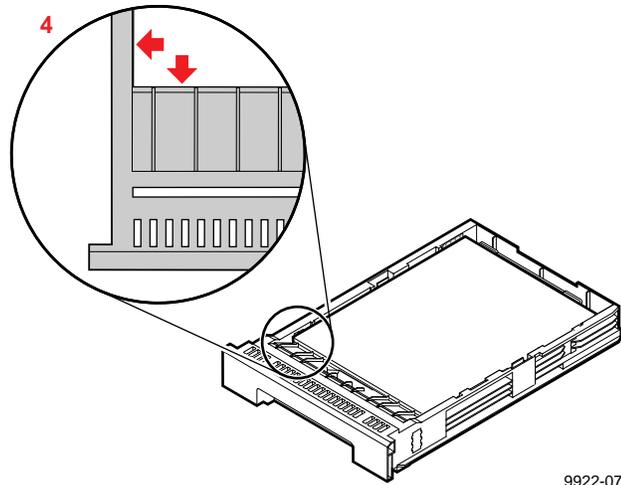
3. To load transparencies:
 - a. Handle transparencies by the edges and with both hands to avoid fingerprints and creases, which can result in poor print quality.
 - b. Load up to 50 transparencies in the standard paper tray (the bottom line on the fill label) and 175 sheets (about three boxes) in the transparency tray (the fill line indicates the maximum capacity).
 - c. Set the switch on the side of the tray to **Transparency**.
 - d. Load Tektronix premium transparencies with the notch in the back, right corner of the tray. Load standard Tektronix transparencies in any orientation.



9922-06

2 Getting Set Up

4. Make sure that the media fits snugly against the inside front wall of the tray.



9922-07

5. Insert the loaded media tray into the printer.

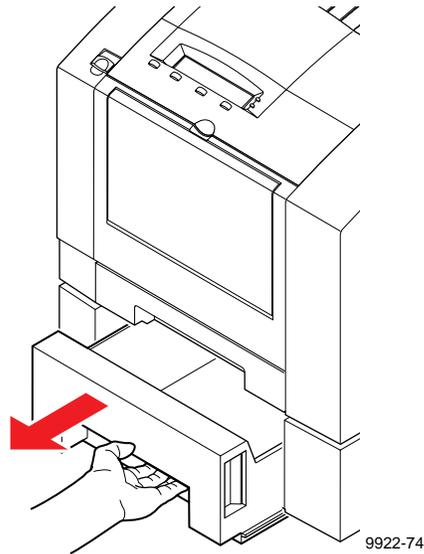
Loading the optional Lower Paper Tray Assembly

The Lower Paper Tray Assembly holds up to 625 sheets (approximately one and one-quarter ream) of 90 g/m² (24 lb.) paper. A label on the inside of the tray provides a fill line to indicate the tray's maximum paper capacity.

- For more information on the Lower Paper Tray Assembly, see “Media trays” on page 4-8 and “Lower Paper Tray Assembly” on page 10-4.

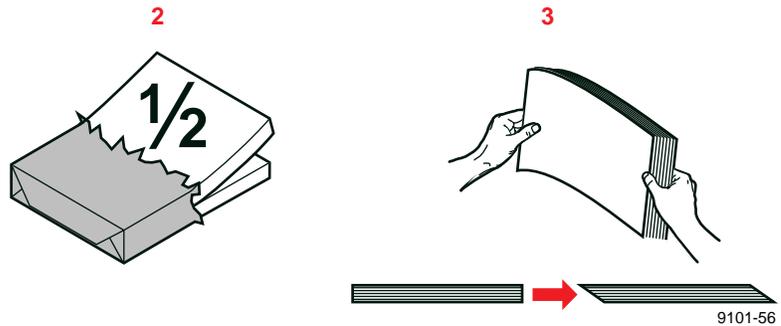
Note The Lower Paper Tray Assembly accepts paper media only; it should not be used with transparencies or label stock.

1. Remove the paper tray from the Lower Paper Tray Assembly.

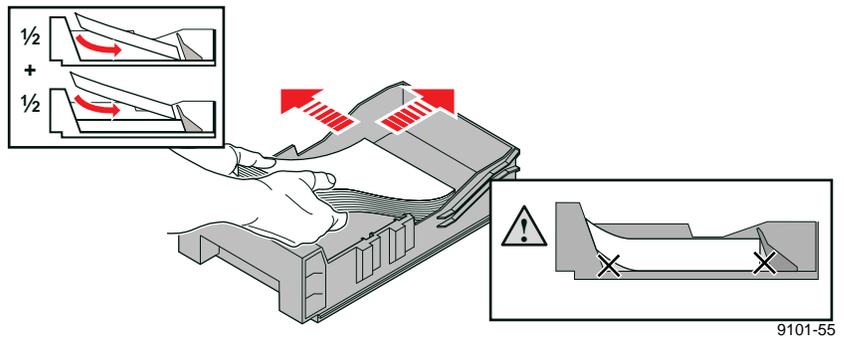


2 Getting Set Up

2. Select one-half of a ream (250 sheets or less) of paper at a time.
3. Prior to loading paper in the Lower Paper Tray Assembly, fan the paper stack to release sheets that are stuck together.



4. Load the first stack of paper in the tray. Make sure that the paper fits snugly against the slanted back wall of the tray.
5. Load the second stack of paper. Make sure that the paper fits flat in the tray. Load the final stack (one-quarter ream) and make sure that the paper is still flat in the tray.



6. Insert the paper tray into the Lower Paper Tray Assembly.

Connecting an external hard disk (optional)

The Phaser 360 printer has a SCSI (Small Computer System Interface, pronounced “suzzy”) port on the rear panel. The SCSI specification is an industry standard for connecting computer peripherals. Use this port only for connecting an external hard disk to the printer. You can connect one or more SCSI external hard disks to the printer for additional font storage and collation. Tektronix offers a 2.1-Gbyte hard disk that mounts conveniently on the rear of the printer.

You can use most commercial SCSI hard disks with up to 2.1 Gbytes of memory with the Phaser 360 printer. For example, SCSI hard disks that work with an Apple LaserWriter will work with a Phaser 360 printer. Contact your computer or printer dealer for information.

- See the printer’s CD-ROM for complete directions on installing an external hard disk and downloading fonts.
- Refer to “Using the Quick Collate option” on page 5-9 for details on collating multipage jobs.
- See “Tektronix external hard disk” on page 10-5 for ordering information. Refer to “Interface cables and adapters” on page 10-7 for information on ordering SCSI cables.

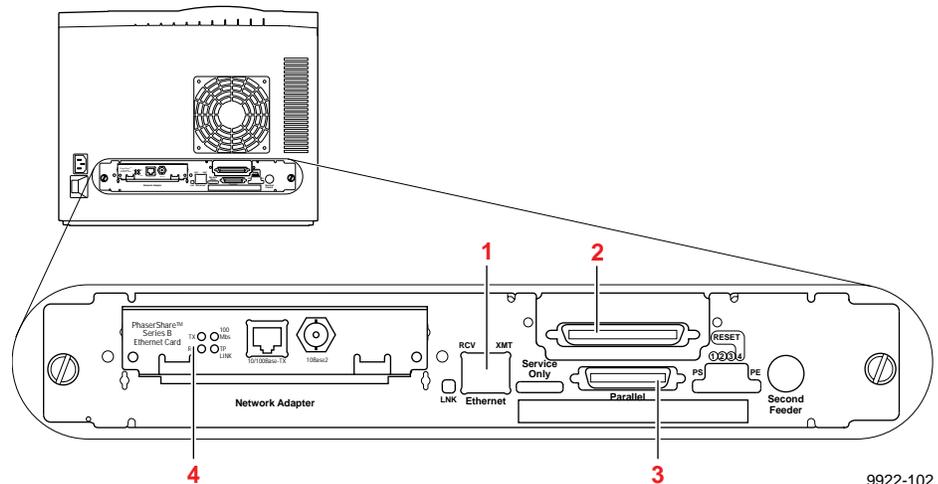
Connecting the printer

The printer can be connected to networks and single workstations. Refer to the **PhaserShare Networking System Administrator Manual** for more information on installing and configuring the printer on a network.

Printer ports

The Phaser 360 printer has the following ports:

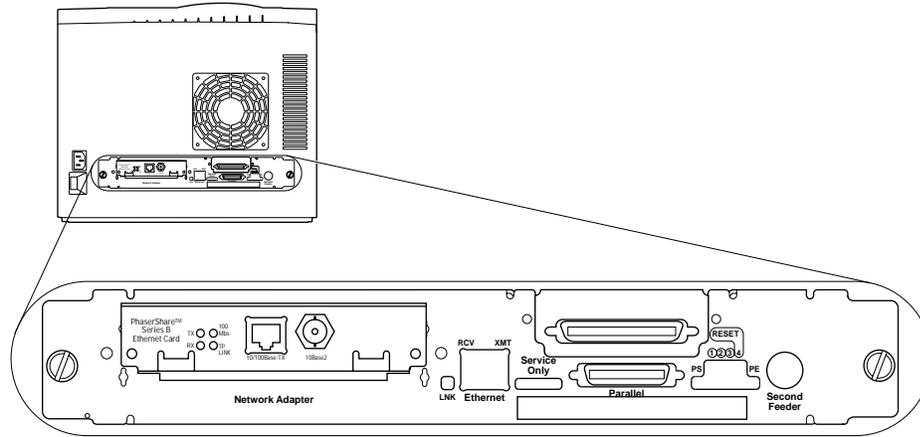
1. 10BaseT Ethernet connection
2. SCSI port for an external hard drive
3. parallel port
4. slot for an optional network card (shown with card installed)



9922-102

Connecting to a network

The Phaser 360 printer has a built-in 10BaseT Ethernet port for network connectivity. An expansion slot is provided for optional Tektronix PhaserShare network cards for 100BaseTx Ethernet (includes connection for 10Base2), Token Ring, or LocalTalk connections.

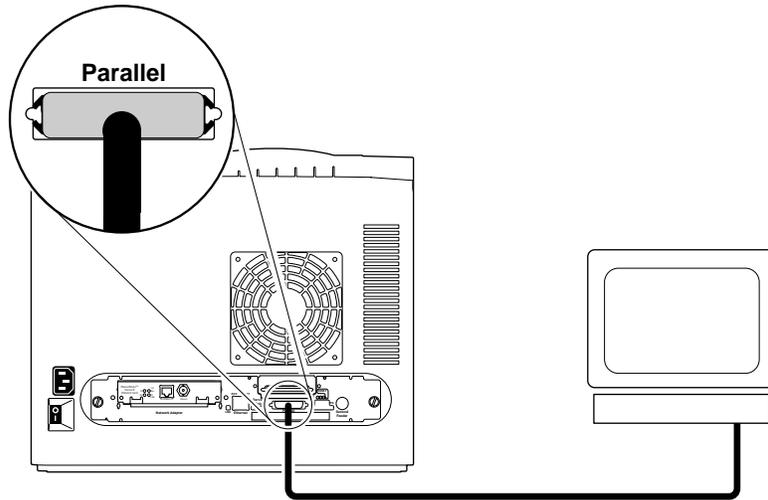


9922-127

- For information on installing and configuring your printer on a network, refer to the **PhaserShare Networking System Administrator Manual** shipped with your printer.
- For ordering information, refer to “PhaserShare network cards” on page 10-3.

Connecting a PC or UNIX workstation to the parallel port

The printer supports a bidirectional parallel port. Connect your computer to the printer's parallel port with a standard parallel cable and the adapter shipped with your printer. Make all connections before you turn on the printer.



9922-08

- If large files do not print, you may need to reset the printer's timeouts. Refer to "Fixing timeout problems in Windows" on page 8-28.
- Refer to the printer's CD-ROM for information on bidirectional status reporting and parallel port pin signals.

Connecting to a Macintosh

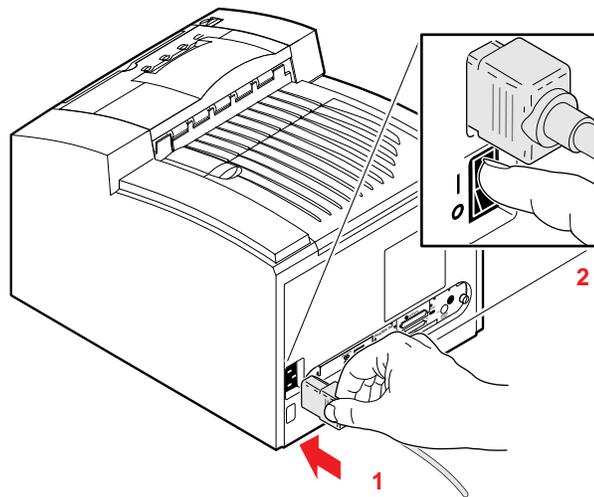
Connect Macintosh computers on a network through the built-in Ethernet interface. An optional LocalTalk network card is available.

- Refer to the **PhaserShare Networking System Administrator Manual** for installation and configuration procedures.
- See “PhaserShare network cards” on page 10-3 for ordering information.

Turning on the printer

1. Plug the power cord into the printer and into a grounded outlet.
2. Turn on the printer.

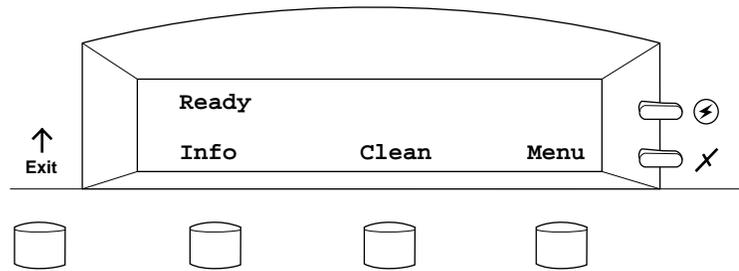
Note To ensure optimum printing performance and best ink economy, *always* leave the printer turned on. The printer automatically switches into a standby mode during periods of infrequent use to reduce power consumption.



9922-10

Front panel display and controls

When the printer is turned on, the front panel display is lighted. Watch the front panel display for instructions as you finish the set-up procedure. Status messages, such as **Warming Up** or **Ready**, appear on the top line of the display. Other messages, such as **Info**, **Clean**, and **Menu** appear on the lower line of the display; these identify a function for the corresponding button located below the message. For example, pressing the button located under the word **Menu** displays the printer's menus.



9922-68

- Refer to "Using the Front Panel" on page 6-1 for a complete description of front panel controls and menus.
- See also "Front panel error messages" on page 8-2.
- System administrators may choose to modify or limit access to front panel menus. See the printer's CD-ROM for instructions on enabling and disabling the front panel menu.

Letting the printer warm up

After you have installed the maintenance tray and the media tray, allow the printer about 15 minutes to warm up and perform self-tests. As the printer warms up, note the following:

- *Front panel display.* When you first turn on the printer, two indicator lights come on, the power light and the error light. During the warm-up cycle, the top power indicator blinks on and off, the error light goes out, and the front panel displays a series of “Warming up” messages. A percentage value is shown to indicate the progress of the warm-up cycle. The cycle is complete when the front panel displays **100%**, then **Ready**.
- *Startup noises.* As the printer initializes, you will hear a series of noises; these are normal and are not an indication of problems with the printer.
- *Cleaning Page.* The printer outputs a color-striped “Cleaning Page” as part of its self-maintenance. Refer to page 7-16 for more information on the Cleaning Page.
- *Startup Page.* The printer outputs a page that lists your printer’s name and serial number, the number of pages printed, installed interface ports, and other information. This Startup Page automatically prints whenever you turn on your printer. To turn off the Startup Page, refer to page 6-6.
- *Ready message.* The front panel displays **Ready** or the printer’s name when the printer is available for printing.

Selecting a language for the front panel

Messages that appear in the front panel window are in English by default. You can skip this step if you want the front panel to display messages in English. To change the language to Spanish, French, German, Italian, or Japanese, follow these steps. (If Chinese or Korean font SIMMs are installed, the front panel will display in English; output will be in the specified language.)

1. When the printer is on and **Ready** or the printer's name appears in the front panel, 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:

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

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

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

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

4. Using the left or right arrow buttons, scroll through the language selections until you reach the appropriate setting.
5. To confirm your language selection, press the **OK** button.
6. Press the **Exit** button until the printer displays the **Ready** message.

Printing a Configuration Page

After the printer is installed, print the Configuration Page. This page lists important information about your printer, including the serial number, printer ID, amount of installed memory, and network protocols enabled. Use this page as a resource for reconfiguring your printer or when contacting Tektronix Customer Support.

To print the Configuration Page:

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. The following message appears:

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

3. Using the left (<---) or Press the right (--->) arrow button. scroll through the selections until you see tThis message appears:

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

4. To print the Configuration Page, press the **Print** button.

Tips for optimum printing performance

- **Always leave the printer on.** Whenever you turn off and restart the printer, it performs a cleaning routine that consumes ink. To ensure optimum printing performance and best ink economy, leave the printer turned on overnight and during weekends. When the printer sits idle, it automatically switches to a standby mode that reduces energy consumption but keeps the printer ready to use. Pressing a front panel button, opening a cover, or sending a print job then “wakes” the printer.
- **Use Tektronix supplies.** Use the Tektronix transparency tray and transparency media (standard or premium) for reliable, high-quality transparency printing. The transparency tray holds up to 175 transparency sheets, saving you from frequent reloadings and interrupted print jobs. And, with the optional Lower Paper Tray Assembly, you can automatically switch between paper and transparency printing from your computer.
- **Do not print on both sides of the media.** Printing on both sides of a sheet of paper or transparency film causes ink to be offset onto the printer’s internal paper path, which will require you to clean the printer.
- **Use the correct type, size, and weight of media.** Use the appropriate media tray and make the appropriate media selection from the printer driver. Load the media correctly, and do not overload the trays. The Tektronix transparency tray and transparencies are recommended for transparency printing. Refer to “Acceptable media sizes, types, and weight” on page 4-6 for more information.

Installing Printer Software

Overview

Packaged with your printer is a CD-ROM and a set of diskettes that contain the software you need to use the printer. Included are installer applications that automatically install the printer's software onto your computer's hard disk. Included are drivers, PostScript printer description files (PPDs), color sampler charts, and utility files. You can select a standard installation (Easy Install) or select individual items (Custom Install).

Note ATM (Adobe Type Manager) software is available on a separate CD-ROM included with your printer.

Refer to the following pages for platform-specific instructions:

- "PC/Windows software" on page 3-2.
- "Mac OS software" on page 3-16.
- "UNIX workstation software" on page 3-23.

PC/Windows software

Refer to the following instructions depending on which version of Windows you are using:

- “Installing printer software for Windows 95” on page 3-3
- “Installing printer software for Windows NT 4.0” on page 3-6
- “Installing printer software for Windows NT 3.51” on page 3-10
- “Installing printer software for Windows 3.1” on page 3-13

Installing printer software for Windows 95

Note This procedure installs the AdobePS 4 printer driver. If you are installing from diskettes, you may need more than one diskette depending on your Windows system. Keep all of the printer's diskettes handy during the installation, and insert each diskette when you are prompted by the installation program.

1. Insert either the printer's CD-ROM or the Phaser 360 Color Printer Installer for Windows Disk 1 into the appropriate drive on your computer.
2. Click the **Start** icon in the taskbar, and select **Run**.
3. Type in the drive for the CD-ROM or diskette, type **SETUP** and click **OK**.
4. In the Installer, click **Next** until the **Select Installation Type** dialog box appears.
5. Select either **Easy Installation** or **Custom Installation**, and click **Next**. When you finish with the **Easy** or **Custom** instructions, continue with Step 6 on page 3-5.

Easy Installation

- a. The following files are copied to your computer's hard disk:
 - **QuarkXPress PDF**
Installs an application-specific printer description file, if the application is found.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
 - b. In the **Choose Destination Directory** dialog box, select the location for installing the PhaserPrint plug-in.
 - c. Click **Next**.
Files are copied to your computer's hard disk.
-

3 Installing Printer Software

Custom Installation

- a. In the **Driver Installation** dialog box, select from the following options, then click **Next** to continue.
 - **Drivers/PPDs**
Installs driver files and printer description files.
 - **QuarkXPress PDF**
Installs an application-specific printer description file.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
- b. If you checked the PhaserPrint plug-in option, now select the location for installing the plug-in in the **Choose Destination Directory** dialog box. Click **Next** to continue.
- c. In the **Custom Install: Select Utilities** dialog box, select from the following options, then click **Next** to continue.
 - **Printer Utilities**
Installs utility files for selecting printer features.
 - **Network Utilities**
Installs utility files for using the printer on a network.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
Use the default **Destination Directory** or click **Browse**.

Files are copied to your computer's hard disk.

- d. If the **LPT.VXD update** dialog box appears, click **Yes** or **No** to continue. Updating this file is recommended.
- e. The **PhaserShare Installation** dialog box appears. PhaserShare software consists of two applications for use on Novell NetWare networks: a printer status application for users and a printer administration application for system administrators. Make selections from the following options, then click **Next** to continue:
 - **Both PhaserShare Status Monitor and Administrator**
 - **PhaserShare Status Monitor**
 - **PhaserShare Administrator**
 - **Do Not Install PhaserShare**
- f. Select PhaserShare installation type, then click **Next** to continue:
 - **Standard Install** (automatically installs the choice you made in the previous dialog box)
 - **Network Install** (copies PhaserShare installation files to a network server)
- g. If you selected the PhaserShare **Network Install** option, click **Browse** to select the drive for installing the installation files. Click **Next** to continue. Click **OK** in the installation successful dialog box.

Files are copied to your computer's hard disk or to a selected network destination.

Note: To use the PhaserShare software installer you copied to a network server, go to the location of the copied files, and run *SETUP.EXE*. Follow the installation prompts to install PhaserShare software on local NetWare-enabled workstations.

6. The **Finish Installation** dialog box contains instructions for completing the printer software setup; click **Next**. The **Add Printer Wizard** program is automatically launched.
7. In the **Add Printer Wizard**, click **Next** in the opening dialog box.
8. Select your printer's connection, either **Local Printer** or **Network Printer**, and click **Next**.
9. In the **Manufacturers/Printers** dialog box, click **Have Disk**.
10. Type in the drive for the CD-ROM or diskette, and click **OK**.
11. Select your **Tektronix Phaser 360** printer, and click **Next**.
12. Select the port your printer is connected to, and click **Next**.
13. Enter a name for the printer, and select the **Phaser 360** as the default printer if desired, and click **Next**.
14. Decide if you want to print a test page, select **Yes** or **No**, and click **Finish**.
15. In the **Installation Completed** dialog box, click **Finish**.
16. You may see a **Restart Windows** dialog box if the system needs to be updated. Decide if you want to restart now or later, and click **OK**.

Note See the “Adobe PostScript Printer Driver User Guide” on the printer's CD-ROM (USERGUIDE.PDF) for detailed information on the AdobePS 4 driver.

Installing printer software for Windows NT 4.0

Note If you are installing from diskettes, you may need more than one diskette depending on your Windows system. Keep all of the printer's diskettes handy during the installation, and insert each diskette when you are prompted by the installation program.

If you will be using a printer on a network, refer to your Windows NT manual for instructions on installing network software, either *Services for Macintosh* (AppleTalk) or *TCP/IP print services* (for TCP/IP; lpr print services).

1. Insert either the printer's CD-ROM or the Phaser 360 Color Printer Installer for Windows Disk 1 into the appropriate drive on your computer.
2. Click the **Start** icon in the taskbar, and select **Run**.
3. Type in the drive for the CD-ROM or diskette, type **SETUP**, and click **OK**.
4. In the Installer, click **Next** until the **Select Installation Type** dialog box appears.
5. Select either **Easy Installation** or **Custom Installation**, and click **Next**. When you finish with the **Easy** or **Custom** instructions, continue with Step 6 on page 3-8.

Easy Installation

- a. The following files are copied to your computer's hard disk:
 - **QuarkXPress PDF**
Installs an application-specific printer description file, if the application is found.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
 - b. In the **Choose Destination Directory** dialog box, select the location for installing the PhaserPrint plug-in.
 - c. Click **Next**.
Files are copied to your computer's hard disk.
-

Custom Installation

- a. In the **Driver Installation** dialog box, select from the following options, then click **Next** to continue.
 - **Drivers/PPDs**
Installs driver files and printer description files.
 - **QuarkXPress PDF**
Installs an application-specific printer description file.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
- b. If you checked the PhaserPrint plug-in option, now select the location for installing the plug-in in the **Choose Destination Directory** dialog box. Click **Next** to continue.
- c. In the **Custom Install: Select Utilities** dialog box, select from the following options, then click **Next** to continue.
 - **Printer Utilities**
Installs utility files for selecting printer features.
 - **Network Utilities**
Installs utility files for using the printer on a network.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
Use the default **Destination Directory** or click **Browse**.

Files are copied to your computer's hard disk.

- d. The **PhaserShare Installation** dialog box appears. PhaserShare software consists of two applications for use on Novell NetWare networks: a printer status application for users and a printer administration application for system administrators. Make selections from the following options, then click **Next** to continue:
 - **Both PhaserShare Status Monitor and Administrator**
 - **PhaserShare Status Monitor**
 - **PhaserShare Administrator**
 - **Do Not Install PhaserShare**
- e. Select PhaserShare installation type, then click **Next** to continue:
 - **Standard Install** (automatically installs the choice you made in the previous dialog box)
 - **Network Install** (copies PhaserShare installation files to a network server)
- f. If you selected the PhaserShare **Network Install** option, click **Browse** to select the drive for installing the installation files. Click **Next** to continue. Click **OK** in the installation successful dialog box.

Files are copied to your computer's hard disk or a selected network destination.

Note: To use the PhaserShare software installer you copied to a network server, go to the location of the copied files, and run *SETUP.EXE*. Follow the installation prompts to install PhaserShare software on local NetWare-enabled workstations.

3 Installing Printer Software

6. The **Finish Installation** dialog box contains instructions for completing the printer software setup; click **Next**. The **Add Printer Wizard** program is automatically launched.
7. In the **Add Printer Wizard**, click **Next** in the opening dialog box.
8. Select printer management, either **My computer** or **Network printer server**, and click **Next**.
9. Select a local printer port, or follow these instructions for a network port:

LPR port (for TCP/IP) setup instructions	AppleTalk port setup instructions
<p>a. Click the Add Port button.</p> <p>b. In the Printer Ports dialog box, under Available Printer Ports, select LPR Port.</p> <p>c. Click the New Port button; the Add LPR compatible printer dialog box appears.</p> <p>d. For Name or address of host providing lpd, type your printer's IP address (or Host name if known to the network).</p> <p>Note: The printer's IP address may be available on the printer's Configuration Page. If not, ask your network administrator.</p> <p>e. For Name of printer or print queue on that server, type in one of the following (use uppercase letters):</p> <ul style="list-style-type: none">■ PS for PostScript■ AUTO for automatic selection <p>f. Click OK.</p> <p>g. In the Printer Ports dialog box, click the Close button to return to the Add Printer Wizard.</p> <p>h. Click Next and continue with Step 10 below.</p>	<p>a. Click the Add Port button.</p> <p>b. In the Printer Ports dialog box, under Available Printer Ports, select AppleTalk Printing Devices.</p> <p>c. Click the New Port button.</p> <p>d. Under AppleTalk Printing Devices, double-click on the appropriate zone (if there are multiple AppleTalk zones).</p> <p>e. Select your Tektronix printer and click OK.</p> <p>f. At the prompt: Do you want to capture this AppleTalk Printing Device?, click No.</p> <p>Note: Clicking Yes hides the printer from regular Macintosh users, forcing them to use NT Server as a spooler, as long as NT Server allows sharing of this printer.</p> <p>g. Click OK.</p> <p>h. In the Printer Ports dialog box, click the Close button to return to the Add Printer Wizard.</p> <p>i. Click Next and continue with Step 10 below.</p>

10. In the **Manufacturers/Printers** dialog box, click **Have Disk**.
11. Type in the drive for the CD-ROM or diskette, and click **OK**.
12. Select your Tektronix Phaser 360 printer, and click **Next**.

13. Enter a name for the printer, and select the Phaser 360 as the default printer if desired, and click **Next**.
14. Decide if you want to share the printer, **Shared** or **Not shared**, and click **Next**.

If you are installing drivers for platforms other than Windows NT 4.0, for example Windows 95, a message appears during the installation procedure asking for the location of printer files. If you see this message, at the prompt, type in the CD-ROM drive followed by `\PPDS95NT-.DVRTEKMSDRV`, and click **OK**. Files are copied to your computer's hard disk.

If you are installing drivers for Windows NT 3.51 for platforms other than i386, click **Browse** to locate the appropriate subdirectory under `\PPDS95NT-.DVRTEKMSDRV\WINNT351` on the printer's CD-ROM.

15. Decide if you want to print a test page, select **Yes** or **No**, and click **Finish**.
16. In the **Installation Completed** dialog box, click **Finish**.
17. You may see a **Restart Windows** dialog box if the system needs to be updated. Decide if you want to restart now or later, and click **OK**.

Installing printer software for Windows NT 3.51

Note If you are installing from diskettes, you may need more than one diskette depending on your Windows system. Keep all of the printer's diskettes handy during the installation, and insert each diskette when you are prompted by the installation program.

If you will be using a printer on a network, refer to your Windows NT manual for instructions on installing network software, either *Services for Macintosh* (AppleTalk) or *TCP/IP print services* (for TCP/IP; lpr print services).

1. Insert either the printer's CD-ROM or the Phaser 360 Color Printer Installer for Windows Disk 1 into the appropriate drive on your computer.
2. Select **Run** from the **File** menu.
3. Type in the drive for the CD-ROM or diskette, type **SETUP** and click **OK**.
4. In the Installer, click **Next** until the **Select Installation Type** dialog box appears.
5. Select either **Easy Installation** or **Custom Installation**, and click **Next**. When you finish with the **Easy** or **Custom** instructions, continue with Step 6 on page 3-12.

Easy Installation

- a. The following files are copied to your computer's hard disk:
 - **QuarkXPress PDF**
Installs an application-specific printer description file, if the application is found.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
 - b. In the **Choose Destination Directory** dialog box, select the location for installing the PhaserPrint plug-in.
 - c. Click **Next**.
Files are copied to your computer's hard disk.
-

Custom Installation

- a. In the **Driver Installation** dialog box, select from the following options, then click **Next** to continue.
 - **Drivers/PPDs**
Installs driver files and printer description files.
 - **QuarkXPress PDF**
Installs an application-specific printer description file.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
- b. If you checked the PhaserPrint plug-in option, now select the location for installing the plug-in in the **Choose Destination Directory** dialog box. Click **Next** to continue.
- c. In the **Custom Install: Select Utilities** dialog box, select from the following options, then click **Next** to continue.
 - **Printer Utilities**
Installs utility files for selecting printer features.
 - **Network Utilities**
Installs utility files for using the printer on a network.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
Use the default **Destination Directory** or click **Browse**.

Files are copied to your computer's hard disk.

- d. The **PhaserShare Installation** dialog box appears. PhaserShare software consists of two applications for use on Novell NetWare networks: a printer status application for users and a printer administration application for system administrators. Make selections from the following options, then click **Next** to continue:
 - **Both PhaserShare Status Monitor and Administrator**
 - **PhaserShare Status Monitor**
 - **PhaserShare Administrator**
 - **Do Not Install PhaserShare**
- e. Select PhaserShare installation type, then click **Next** to continue:
 - **Standard Install** (automatically installs the choice you made in the previous dialog box)
 - **Network Install** (copies PhaserShare installation files to a network server)
- f. If you selected the PhaserShare **Network Install** option, click **Browse** to select the drive for installing the installation files. Click **Next** to continue. Click **OK** in the installation successful dialog box.

Files are copied to your computer's hard disk or a selected network destination.

Note: To use the PhaserShare software installer you copied to a network server, go to the location of the copied files, and run *SETUP.EXE*. Follow the installation prompts to install PhaserShare software on local NetWare-enabled workstations.

3 Installing Printer Software

6. The **Finish Installation** dialog box contains instructions for completing the printer software setup; click **Next**. The **Print Manager** opens automatically.
7. From the **Printer** menu select **Create Printer**.
8. In the **Create Printer** dialog box, under **Driver**, select **Other**.
9. Type in the drive for the printer's CD-ROM or diskette, click **OK**.
10. In the **Select Driver** dialog box, under **Printer Driver**, select your Phaser 360 printer, and click **OK**.
11. In the **Create Printer** dialog box, select a local printer port, or follow the instructions below for a network port:

LPR port (for TCP/IP) setup instructions	AppleTalk port setup instructions
<p>a. In the Print Destinations dialog box, under Available Print Monitors, select LPR Port and click OK; the Add LPR compatible printer dialog box appears.</p> <p>b. For Name or address of server providing lpd, type your printer's IP address (or Host name if known to the network).</p> <p>Note: The printer's IP address may be available on the printer's Configuration Page. If not, ask your network administrator.</p> <p>c. For Name of printer or print queue on that server, type in one of the following (use uppercase letters):</p> <ul style="list-style-type: none">■ PS or PostScript■ AUTO for automatic selection <p>d. Click OK.</p> <p>e. Continue with the instructions in Step 12.</p>	<p>a. In the Print Destinations dialog box, under Available Print Monitors, select AppleTalk Printing Devices.</p> <p>b. Click OK.</p> <p>c. In the Available AppleTalk Printing Devices dialog box, double-click on the appropriate zone (if there are multiple AppleTalk zones).</p> <p>d. Select your Tektronix printer and click OK.</p> <p>e. At the prompt: Do you want to capture this AppleTalk Printing Device?, click No.</p> <p>Note: Clicking Yes hides the printer from regular Macintosh users, forcing them to use NT Server as a spooler, as long as NT Server allows sharing of this printer.</p> <p>f. In the Printer Properties dialog box, click OK.</p> <p>g. Continue with the instructions in Step 12.</p>

12. Select options in the **PostScript Printer Setup** dialog box, and click **OK**. Enabling the **Use Printer Halftoning** option is recommended.
13. In the **Print Manager**, from the **Printer** menu select **Exit**.
14. In the **Installation Completed** dialog box, click **Finish**.

Installing printer software for Windows 3.1

Note If you are installing from diskettes, you may need more than one diskette depending on your Windows system. Keep all of the printer's diskettes handy during the installation, and insert each diskette when you are prompted by the installation program. The Tektronix driver is available on both CD-ROM and diskette; the AdobePS 3 driver is available on CD-ROM only.

1. Insert either the printer's CD-ROM or the Phaser 360 Color Printer Installer for Windows Disk 1 into the appropriate drive on your computer.
2. From the **File** menu, select **Run**.
3. Type in the drive for the CD-ROM or diskette, type **SETUP** and click **OK**.
4. In the Installer, click **Next** until the **Select Installation Type** dialog box appears.
5. Select either **Easy Installation** or **Custom Installation**, and click **Next**. When you finish with the **Easy** or **Custom** instructions, continue with Step 6 on page 3-15.

Easy Installation

- a. The following files are copied to your computer's hard disk:
 - **Tektronix Printer Driver**
 - **QuarkXPress PDF**
Installs an application-specific printer description file, if the application is found.
 - **PhaserPrint Plug-in for Photoshop**
Installs an application-specific plug-in.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
 - b. In the **Choose Destination Directory** dialog box, select the location for installing the PhaserPrint plug-in.
 - c. Click **Next**.
Files are copied to your computer's hard disk.
-

3 Installing Printer Software

Custom Installation

- a. In the **Driver Installation** dialog box, select from the following options, then click **Next** to continue.
 - **Drivers/PPDs**
Installs driver files and printer description files.
 - **QuarkXPress PDF**
Installs an application-specific printer description file.
- b. If you selected **Drivers/PPDs** in the previous window, the **Custom Install: Select Drivers** dialog box appears. Select one of the following drivers and click **Next**:
 - **Adobe Printer Driver for Windows 3.1**
 - **Tektronix Printer Driver for Windows 3.1**

***Note:** The Tektronix Printer Driver for Windows 3.1 must be installed in the Windows directory (default Destination Directory). Do not change the Destination Directory when installing the Tektronix driver unless you are installing the driver on a network and you know the location of the Windows directory on the network drive.*

- c. In the **Custom Install: Select Utilities** dialog box, select from the following options, then click **Next** to continue.
 - **Printer Utilities**
Installs utility files for selecting printer features.
 - **Network Utilities**
Installs utility files for using the printer on a network.
 - **Samplers**
Installs color sampler charts and a fonts sampler.
Use the default **Destination Directory** or click **Browse**.

Files are copied to your computer's hard disk.

- d. The **PhaserShare Installation** dialog box appears. PhaserShare software consists of two applications for use on Novell NetWare networks: a printer status application for users and a printer administration application for system administrators. Make selections from the following options, then click **Next** to continue:
 - **Both PhaserShare Status Monitor and Administrator**
 - **PhaserShare Status Monitor**
 - **PhaserShare Administrator**
 - **Do Not Install PhaserShare**
- e. Select PhaserShare installation type, then click **Next** to continue:
 - **Standard Install** (automatically installs the choice you made in the previous dialog box)
 - **Network Install** (copies PhaserShare installation files to a network server)
- f. If you selected the PhaserShare **Network Install** option, click **Browse** to select the drive for installing the installation files. Click **Next** to continue. Click **OK** in the installation successful dialog box.

Files are copied to your computer's hard disk or a selected network destination.

Note: To use the PhaserShare software installer you copied to a network server, go to the location of the copied files, and run *SETUP.EXE*. Follow the installation prompts to install PhaserShare software on local NetWare-enabled workstations.

6. If you are installing the Tektronix driver, select your **Tektronix Phaser 360** printer and click **Next**.
7. The **Finish Installation** dialog box contains instructions for completing the printer software setup; click **Next**.
8. In the **Installation Completed** dialog box, click **Finish**.
9. Continue with the setup instructions depending on the driver you selected in the installer:

**Tektronix Driver for Windows 3.1:
Setup instructions**

If you selected **Easy Installation**, or if you selected the **Tektronix Driver for Windows 3.1** in the **Custom Installation**, continue with the following instructions:

- a. Open the Windows **Control Panel**.
- b. Open the **Printers** dialog box.
- c. Under **Installed Printers**, select your **Phaser 360 (TekColor)** printer, click **Connect**.
- d. Select the printer's port, and click **OK**.

**AdobePS 3 Driver for Windows 3.1:
Setup instructions**

If you selected the **AdobePS 3 Driver for Windows 3.1** in the **Custom Installation**, continue with the following instructions:

- a. In the Adobe installer, click **Read** or **Skip** in the **README.WRI** dialog box to start the installation.
 - b. Click **Continue** in the **PostScript Printer Driver Setup** dialog box. Files are copied to your computer.
 - c. Click the **Restart Windows** button in the dialog box that appears.
 - d. After Windows restarts, the **Install PostScript Printer from PPD** dialog box opens. Select your **Tektronix Phaser 360** printer in the list and click **Install**.
 - e. Click **OK** in the next dialog box.
 - f. Click **Close** in the **Install PostScript Printer from PPD** dialog box.
 - g. Click **OK** in the information dialog box.
 - h. In the **Control Panel**, double-click **Printers**.
 - i. In the **Printers** dialog box, select the printer you just installed, and click **Connect**.
 - j. In the **Connect** dialog box, select the port the printer is connected to, and click **OK**.
-

Mac OS software

Use the installer application on the printer's CD-ROM or diskettes to install the printer's standard software. Then, continue with driver-specific setup instructions for the driver you are using.

Installer options	Software	Description	Installed folder	
Custom Install (Select any of these items)	Easy Install	LaserWriter 8.3.4 Driver	Driver for use with all (non-GX) Macintosh systems.	<i>System Folder: Extensions</i>
	(Installs these files)	Phaser 360 Driver	Custom driver based on the LaserWriter 7.1.2 printer driver.	<i>System Folder: Extensions</i>
		Phaser 360 GX Driver	Driver for use with QuickDraw GX.	<i>System Folder: Extensions</i>
		Printer Descriptions	PPD for use with drivers and applications.	<i>System Folder: Extensions: Printer Descriptions</i>
		ColorSync Profile	Printer profile for use with ColorSync 2.0.	<i>System Folder: Preferences: ColorSync™ Profiles</i>
		Samplers	Color sampler charts and a fonts sampler.	<i>PhaserTools: Samplers</i>
		QuarkXPress PDF File	File for use with the QuarkXPress application. This file is installed only if you have the QuarkXPress application.	<i>QuarkXPress application folder: PDF folder</i>
		PhaserPrint Photoshop Plug-in	Custom plug-in for printing from Adobe Photoshop. This file is installed only if you have the Photoshop application.	<i>Photoshop application folder</i>
		Printer Utilities	Printer utility files for controlling printer features.	<i>PhaserTools: Printer Utilities</i>
		Network Utilities	Utility files for using the printer on a network.	<i>PhaserTools: Network Utilities</i>
PANTONE® Files	PANTONE® Color library files and sampler chart.	<i>PhaserTools: Pantone Files</i>		

Using the Mac OS installer

1. Insert either the printer's CD-ROM or the Phaser 360 Installer for Mac OS Disk 1 into the appropriate drive on your computer.
2. Double-click the **Phaser 360 Installer** icon. Click **Continue** until the **Easy Install** window appears.
3. Select **Easy Install** or **Custom Install**:

Easy Install	Custom Install
a. Click Install to install the items listed in the Easy Install window.	a. Select Custom Install from the pull-down menu.
b. For details on each item, click Read Me .	b. Select individual items to install.
	c. Click the I buttons for information on each item.
	d. Click Install to install the selected items.

4. Continue with driver setup instructions depending on the driver you are using:
 - If you want to use the LaserWriter 7.1.2-based driver, see "Setting up the Phaser 360 printer driver" on page 3-18.
 - For most applications, see "Setting up the Apple LaserWriter 8.3.4 driver" on page 3-19.
 - If you are using QuickDraw GX, see "Setting up the Phaser 360 GX driver" on page 3-21.

Setting up the Phaser 360 printer driver

The Phaser 360 printer driver is a Tektronix-modified version of Apple's LaserWriter 7.1.2 printer driver. Use the Phaser 360 printer driver if you are using System Software 6.0.7, or 7.0 and later.

1. Install the printer's software as described on page 3-17. Choose **Easy Install** to install all of the necessary software, or select **Phaser 360 Driver** in the **Custom Install** window.
2. Select **Chooser** from the **Apple** menu.
3. Click on the **Phaser 360** printer driver icon on the left side of the **Chooser**. A list appears with the printers you have connected to your Macintosh or printers that are available on a network. (If the printer driver icon does not appear, check the cable connections on your computer and printer.)
4. Click on the **Zone** your printer is in. See your network administrator if you have questions.
5. Click on your Phaser 360 printer in the list of printers on the right side of the **Chooser**.

Close the **Chooser** by clicking its close box.

Setting up the Apple LaserWriter 8.3.4 driver

The LaserWriter 8.3.4 driver uses printer-specific PPDs (PostScript Printer Description files) to learn a printer's page sizes, printing options, and media type options. To use the LaserWriter 8.3.4 driver with a Phaser 360 printer, do the following steps. 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 have to configure a printer only once.

Note During installation, the LaserWriter 8.3.4 driver leaves other versions of the LaserWriter driver (such as 7.x and 6.x) intact, but overwrites an earlier version of the LaserWriter 8 driver, if one exists.

1. Install the printer's software as described on page 3-17. Select **Easy Install** to automatically install all of the necessary software, or select **LaserWriter 8.3.4 Driver and Printer Descriptions** in the **Custom Install** window.
2. From the **Apple** menu, open the **Chooser**.
3. Select the **LaserWriter 8** driver icon.
4. Click on the **Zone** your printer is in. See your network administrator if you have questions.
5. Select your printer from the list, then click the **Setup** button. An auto-setup program searches for the printer's PostScript Printer Description file (PPD).

You may see a dialog box showing the PPD file you installed in Step 1. Click **TKP360P1.PPD** and click **Select**.

Or, if you don't see this file listed, click **Other PPD**. A dialog box opens showing the PPD files you have installed in the **System Folder**, **Extensions** folder, **Printer Descriptions** folder. Click **TKP360P1.PPD** and click **Select**.

3 Installing Printer Software

6. If the auto-setup finishes, a color icon appears next to the printer's name in the **Chooser**.

If not, click **OK** at the prompt. In the dialog box that appears, under **Installable Options** select items such as the optional Lower Paper Tray Assembly, then click **OK**.

7. Click the **Chooser's** close box.

Setting up the Phaser 360 GX driver

If you are using Apple Macintosh QuickDraw GX, use the Phaser 360 GX driver to print to your Phaser 360 printer.

- The Phaser 360 GX driver works with QuickDraw GX and non-QuickDraw GX applications.
- QuickDraw GX does not work with non-QuickDraw GX printer drivers. If you want to print from non-QuickDraw GX applications with a driver such as the LaserWriter 8.3.4, you must first disable QuickDraw GX.
- QuickDraw GX is compatible with System Software 7.5 and later, but **not** with Mac OS 8.0 and later.

Note Refer to the on-line manual on the printer's CD-ROM for details on using the Phaser 360 GX driver.

1. Install the printer's software as described on page 3-17. Select **Easy Install** to automatically install all of the necessary software, or select **Phaser 360 GX Driver** in the **Custom Install** window.
2. From the **Apple** menu, select **Chooser**.
3. Click the **Phaser 360 GX** printer driver icon on the left side of the **Chooser**. A list appears with the printers available on your network. (If the printer driver icon does not appear, **Restart** your Macintosh, and repeat the printer driver installation procedure; also, check the cable connections on your computer and printer.)
4. Click on the **Zone** your printer is in. See your network administrator if you have questions.

3 Installing Printer Software

5. In the **Connect via** field's pop-up menu, select your printer's communication method:
 - The **AppleTalk** option is the standard network connection.
 - The **Servers** option is used to select a shared desktop printer.
6. Click on your Phaser 360 printer in the list of printers on the right side of the **Chooser**.
7. Click the **Create** button to create a desktop printer. An icon of the printer appears on the desktop with the same name as the printer selected in the **Chooser**.
8. Close the **Chooser** by clicking its close box.

UNIX workstation software

PhaserPrint™ for UNIX software

For UNIX environments, Tektronix offers the optional PhaserPrint™ for UNIX software. PhaserPrint for UNIX software includes driver-selectable printer options, and provides fast, raster file and screen copy printing to Tektronix color printers. The printer's CD-ROM contains a demonstration copy of the PhaserPrint for UNIX software, and an on-line instruction guide, in the UNIXDEMO directory. To purchase a licensed copy of this software, see page 10-6 for instructions.

Downloadable printer utility files

Note Refer to the on-line manuals on the printer's CD-ROM for more information on printing from a workstation.

If you do not have a licensed copy of PhaserPrint for UNIX software, you can use the PostScript utility files on the Phaser 360 printer's CD-ROM 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 print controls. UNIX workstation users can access utility files in the following ways:

- Copy the files from the Tektronix Phaser 360 printer's CD-ROM if your system includes a CD-ROM drive. Workstation-specific files are located in the **bin** directory.
- Copy the files from the printer's diskettes. Workstation files are available in both Macintosh and PC format.
- Access the files via the Internet:
 - http://www.tek.com/Color_Printers/support Home page
 - <ftp://ftp.tek.com/cpid/bbs/<platform>/360> Utility files
(where <platform> is pcs, macintosh, or unix)
- Download utility files from the Tektronix Bulletin Board Service (BBS); refer to the printer's CD-ROM for information.

3 Installing Printer Software

Printing Basics

You can print to your printer from PCs, Macintosh computers, and UNIX workstations. Once you have installed the printer's software, a variety of printer features are available from your computer. This chapter discusses the following topics:

- Adjusting print speed and resolution (**Fast, Standard, Enhanced**) (page 4-4)
- The types and sizes of media (page 4-6) and trays (page 4-8) you can use in your printer
- Loading and printing letterhead, labels, and transparencies (page 4-11)
- Using the manual-feed slot (page 4-16)
- Printing from a PC (page 4-19)
- Printing from a Macintosh (page 4-35)
- Printing from a UNIX workstation (page 4-41)

Note Refer to the on-line manuals on the printer's CD-ROM for information on "Printing from DOS."

Print features: overview

Once the appropriate printer driver is installed on your network or computer, you can select the following print features from the menus available in your application software.

- Paper or transparency printing
- Tray selection (if you have the Lower Paper Tray Assembly installed) or manual feeding
- Print-quality (resolution) modes
- Color correction modes (refer to page 5-2)
- Quick Collate for collating multipage documents (requires an external hard drive) (refer to page 5-9)
- Check Print for previewing a sample printout before continuing a print job (refer to page 5-10)
- Image Smoothing for improving low-resolution images

Selecting print features

There are three ways to select print features:

From your applications (recommended) To select print features from Windows applications, refer to the table on page 4-20; to select print features from Macintosh applications, refer to page 4-36. Settings from your software application override the printer's front panel default settings.

Through your web browser Use your web browser to select print features and view the status of the printer. Refer to the **PhaserShare Networking System Administrator Manual** for complete information.

From the printer's front panel Use the front panel for selecting print features only if you were unable to install a driver from the printer's CD-ROM. Refer to "Front panel overview" on page 6-1 for instructions on using the printer's front panel.

Print features quick reference: Printer's front panel

Feature	Feature descriptions	Front panel menu
Print-quality mode <ul style="list-style-type: none"> ■ Fast Color ■ Standard (default) ■ Enhanced (800 x 450 dpi) 	See page 4-4.	Print Quality Menu
TekColor correction <ul style="list-style-type: none"> ■ Automatic (default) ■ None ■ Vivid Color ■ Display ■ SWOP ■ Euroscale ■ Commercial ■ Monochrome 	See page 5-3.	TekColor Correction Menu
Media tray selection (only with optional Lower Paper Tray Assembly) <ul style="list-style-type: none"> ■ AutoSelect ■ Upper ■ Lower 	See page 4-8.	Printer Defaults Menu ↳ Default Tray Menu
Check Print <ul style="list-style-type: none"> ■ Enabled ■ Disabled 	See page 5-10.	Printer Defaults Menu ↳ Check Print ↳ Check Print Timeout
Image Smoothing <ul style="list-style-type: none"> ■ Enabled ■ Disabled 	See page 5-11.	Printer Defaults Menu ↳ Image Smoothing

Note If your printer is networked and you change the front panel settings, make sure that you tell other users on the network. Printer settings affect *all* prints made with nonsupported drivers.

Adjusting print speed and resolution

You can adjust the print quality and speed for different documents and purposes. **Standard**, the default setting, provides the best reproduction for most business printing at 300 x 300 dots per inch (dpi). Select **Fast Color** for the fastest printing, and select **Enhanced** for the highest resolution.

Print-quality mode	Uses	Speed (pages per minute)
Standard (default)	<ul style="list-style-type: none"> ■ Crisp, bright prints; suitable for most office printing ■ Recommended mode for high-quality transparencies: produces vibrant, saturated prints with smooth color transitions 	<ul style="list-style-type: none"> ■ 4 ppm paper ■ 2 ppm transparency
Fast Color	<ul style="list-style-type: none"> ■ Quick presentations; drafts 	<ul style="list-style-type: none"> ■ 6 ppm paper ■ 5.5 ppm transparency
Enhanced	<ul style="list-style-type: none"> ■ Superior text resolution and smoothest color transitions on paper (at 800 x 450 dpi) ■ For transparencies when very fine detail is important (at 600 x 300 dpi) 	<ul style="list-style-type: none"> ■ 2 ppm paper ■ 2 ppm transparency

If you have installed a driver from the printer's CD-ROM, select print-quality modes from your computer: refer to the table on page 4-20 for menus for Windows applications; refer to page 4-36 for Macintosh menus.

You can also select print quality at the printer's front panel. Refer to the table on page 4-3 for the front panel selections.

All about media

The printer prints on letter- and A4-size office paper, transparencies, peel-off labels (such as Avery 5160), and nonglossy cover stock. Tektronix premium and standard grades of transparency media are designed to provide optimal image quality and reliable operation. Tektronix premium transparencies offer enhanced print quality and ink adhesion for overhead transparencies.

Note **Made For Each Other®:** Tektronix inks and transparencies are formulated for use with this printer to ensure the best print quality and long-term reliability. Tektronix does not guarantee printer performance on non-Tektronix transparency media.

For information on ordering Tektronix transparencies and other media supplies, refer to “Printer supplies” on page 10-2.

Caution Never attempt two-sided or two-pass (duplex) printing on any type of media. Ink already present on the media will offset onto the internal paper path, requiring you to perform cleaning procedures.

To avoid damaging your printer, do not use perforated paper, three-holed paper, legal-size paper, or envelopes.

Do not use transparency media intended for ink-jet or thermal-wax printers.

Do not reuse paper that has already been fed through the printer, even if no image has been printed. Oil and ink residue from the media may offset onto printer parts, requiring you to clean the printer.

Keep media and other printer supplies in covered containers. Dust and dirt can be transferred to paper or transparencies, resulting in poor print quality. Paper that has been sitting out of its sealed wrapper can become distorted, causing paper jams. Do not use creased or wrinkled paper.

To avoid having the paper stick together, gently fan the paper before loading it into the paper tray.

Acceptable media sizes, types, and weight

The printer prints on either letter- or A4-size paper, depending on which tray size you ordered. The following table shows the types and weight of letter- or A4-size media you can load in the different trays:

Tray type	Media type
Paper/transparency tray (Letter or A4)	<ul style="list-style-type: none"> ■ Paper 60 – 120 g/m² (16 – 32 lb.) Capacity: 200 sheets ■ Transparencies Capacity: 50 sheets ■ Full-sheet laser printer labels Capacity: 50 sheets
High-capacity transparency tray (Letter or A4)	<ul style="list-style-type: none"> ■ Transparencies Capacity: 175 sheets ■ Labels Capacity: 100 sheets
Lower Paper Tray Assembly (Letter or A4)	<ul style="list-style-type: none"> ■ Paper only 60 – 120 g/m² (16 – 32 lb.) Capacity: 625 sheets 90 g/m² (24 lb.)
Manual feed (Letter or A4)	<ul style="list-style-type: none"> ■ Paper 60 – 120 g/m² (16 – 32 lb.) ■ Nonglossy cover stock 135 – 220 g/m² (50 – 80 lb.) ■ Transparencies ■ Full-sheet laser printer labels

- Print on plain paper, including copier paper and recycled paper, bond, letterhead, and cover stock.
- You can recycle the paper printed on this printer the same way you would recycle paper from any laser printer.

Margins and image area

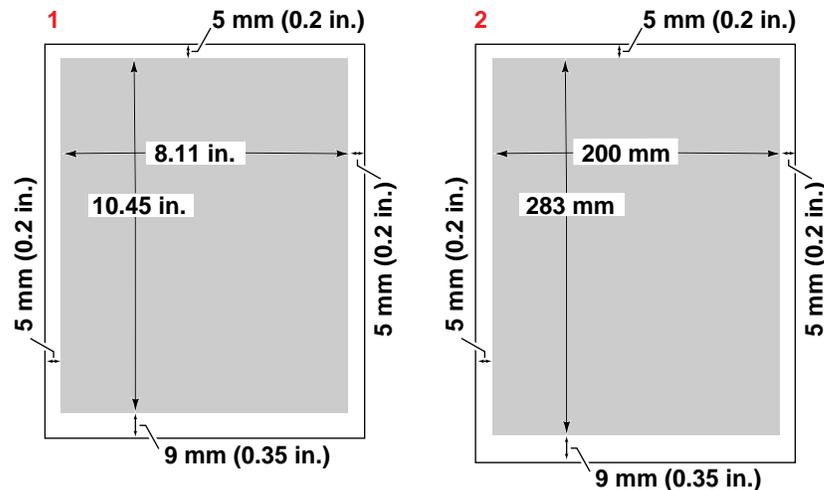
The image area is the part of the media where the image appears. When the printer places an image on the media, the image area is a bit smaller than the actual media size. You may need to adjust the page margins in your application software to match the image area. The printer must be set for the correct size media through the printer driver.

The image area for the Phaser 360 printer is 8.11 x 10.45 in. (letter-size) and 200 x 283 mm (A4-size). The difference between the image area and the media size for the top margin and side margins is 5 mm (0.2 in.). The bottom margin is 9 mm (0.35 in.).

Note For maximum print speed, set left and right margins to 7.4 mm (0.3 in.) or larger.

The following illustration shows the image area and top, side, and bottom margins.

1. Letter-size: 8.5 x 11 in.
2. A4-size: 210 x 297 mm



9922-14

Media trays

Standard paper trays The printer is shipped with a standard letter- or A4-size paper tray that holds 200 sheets (slightly less than one-half ream) of paper. Use the standard paper tray for paper, letterhead, and label stock.

Note The standard paper trays are designed for use with paper. You can use a standard paper tray for printing up to 50 transparency sheets. However, you must use a supported printer driver to specify *Transparency* as the paper source and confirm the selection at the front panel. Refer to page 4-13 for details on printing transparencies.

Transparency trays Optional letter- and A4-size transparency trays have a capacity of 175 sheets (approximately three boxes). Using both paper and transparency trays, you can quickly switch between paper and transparency print jobs by simply swapping media trays in the printer.

Lower Paper Tray Assembly In workgroup or high-volume printing environments, you will want to add the optional 625-sheet Lower Paper Tray Assembly to supplement the standard paper tray. The Lower Paper Tray is convenient when you want to print on paper (lower tray) and another media, such as transparency, letterhead, or label stock (upper tray). With dual-tray capability, you can print on different media directly from the printer driver without the need to leave your computer to switch trays. Refer to “Lower Paper Tray Assembly” on page 10-4 for ordering information.

Note The Lower Paper Tray Assembly accepts paper only; it should not be used with labels or transparencies.

Media tray settings

You can control the source of a print job from your computer. The media tray choices available in your application menus depend on the number and types of trays you have in use, the type of driver you have installed from the printer's CD-ROM, and the printer's default setting.

AutoSelect If this selection appears in your menu, it acts as the default. The printer automatically prints from the upper tray if you are printing in a single-tray configuration. If you have a Lower Paper Tray Assembly, it prints from the lower tray. If you have trays in both slots, the printer automatically switches to the other tray if one of the trays runs out of paper.

Paper This is the initial setting for Windows drivers. If you select **Paper** and the standard media tray is installed, the printer will print on whatever media is loaded in the upper tray. If you have the Lower Paper Tray Assembly installed, selecting **Paper** feeds paper from the lower tray. If you select **Paper** and the transparency tray is installed, the printer will not print and will prompt you to load paper.

Transparency Select **Transparency** whenever you print transparencies. If you use a dedicated transparency tray, you can print from your computer. If you print transparencies from the standard paper tray, you must confirm the print selection at the printer's front panel. Refer to page 4-14 for directions on printing transparencies from the standard paper tray.

Manual Paper Select **Manual Paper** when you wish to hand feed single sheets of paper or card stock (up to 220 g/m² [80 lb.]). Select this option from your computer, then feed the paper into the printer when prompted by the front panel. Refer to "When to use the manual-feed slot" on page 4-16 for more details on using manual feed.

Manual Transparency Select **Manual Transparency** to hand feed single transparency sheets into the printer. Refer to "When to use the manual-feed slot" on page 4-16 for more details on using manual feed.

Upper/Lower Use these settings to change printing trays if you have installed the optional Lower Paper Tray Assembly. See "Changing the default media tray setting" on page 4-10.

Changing the default media tray setting

These instructions apply if you install the optional Lower Paper Tray Assembly.

Default setting

When the Lower Paper Tray Assembly is first installed, the default media tray selection is set to **AutoSelect**. With this setting, the printer automatically prints from the lower paper tray. In addition, note the following: **When the lower paper tray becomes empty, the printer then automatically switches to the upper tray.** If a paper tray is installed in the upper tray slot, then the printer prints on whatever media is loaded in the upper tray. However, if a transparency tray is installed, then the printer prompts you to load paper in the Lower Paper Tray Assembly.

Changing to Upper and Lower settings

When you add the Lower Paper Tray Assembly to your printer, you may want to change the default media tray setting. By resetting the default, you override the printer's automatic switching from the lower paper tray to the upper tray when the Lower Paper Tray Assembly runs out of paper. If you set the default selection to **Lower**, the printer will automatically print from the Lower Paper Tray Assembly until otherwise instructed. When you want to print from the upper tray, for example, to print letterhead or labels, you then change the paper source or media tray setting to **Upper** from your computer. **Always** explicitly select **Transparency** to print transparencies from an upper tray.

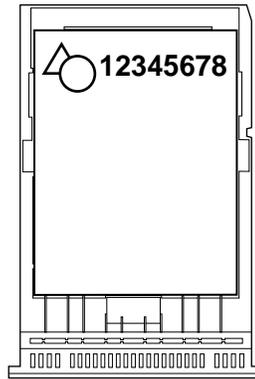
To reset the default media tray:

- From the printer's front panel, first select the **Printer Defaults** menu. Next select **Default Tray** and then make your selection. Refer to page 6-3 for information on using the front panel controls.
- Use a PostScript utility file. Refer to the printer's CD-ROM for more information on downloading utility files.

Note When using a supported printer driver, settings from your software application override the printer's default media tray setting.

Printing letterhead

1. Load letterhead **face up** in the standard paper tray with the bottom edge of the page closest to the paper tray handle.



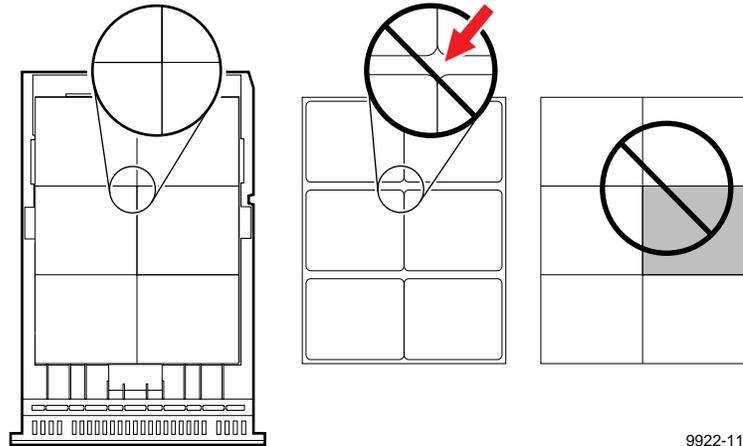
9922-09

2. Print from your software application in the usual way. Refer to “Printing from a PC” on page 4-19 and “Printing from a Macintosh” on page 4-35.

Caution Some letterhead may be printed with ink that will offset onto the printer’s parts, requiring you to perform cleaning procedures. Run several test sheets of letterhead to check for letterhead smearing before attempting a large print job.

Printing labels

1. Use standard full-sheet peel-off labels.
2. Load labels **face up** in the standard paper tray.



9922-11

3. Print from your software application in the usual way. Refer to “Printing from a PC” on page 4-19 and “Printing from a Macintosh” on page 4-35.

Caution To prevent the printer from jamming, do not load partially used sheets of labels, and use only “frameless” labels; when labels are removed, no material is left on the backing.

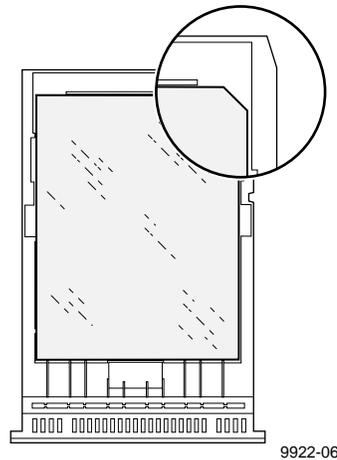
Printing transparencies

Use Tektronix transparency media for optimal image quality and reliable printer operation. Tektronix offers two transparency grades, standard and premium. Tektronix premium transparencies provide enhanced ink adhesion and print quality.

Note Handle transparencies by the edges and with both hands to avoid fingerprints and creases, which can result in poor print quality.

Printing transparencies from the transparency tray

1. Load Tektronix **premium** transparencies with the **notched corner** of the sheet in the back-right corner of the tray. Load Tektronix **standard** transparencies in any orientation. You can load up to 175 sheets (about three boxes) in the transparency tray. A label inside the transparency tray indicates the tray's maximum transparency capacity.



9922-06

2. Print from your computer in the usual way, but select **Transparency** as the Paper Source or Tray Selection. Click **Print**.

~~Printing transparencies from the standard paper tray~~

- ~~1. Print from your computer in the usual way, but select Transparency as the Paper Source or Tray Selection. Click Print.~~
- ~~2. Go to the printer. The front panel flashes the following pair of messages:~~

~~Waiting for Transparency
Continue—Cancel~~

~~Load Tray
Continue—Cancel~~

- ~~3. Pull out the paper tray and load the transparencies. You can load up to 50 transparencies in the standard tray. Refer to page 4-13 for instructions on loading Tektronix premium transparencies. Insert the paper tray.~~
- ~~4. Press Continue.~~
- ~~5. When printing is completed, remove the extra transparencies from the paper tray and replace them with paper.~~

Note ~~Order the optional transparency tray for greater convenience. It has a 175-sheet capacity, and you can print directly from your application.~~

Transparency quality tips

- Use Tektronix transparencies, available in standard and premium grades. Tektronix premium transparencies offer enhanced print quality and ink adhesion.
- Select **Standard** as the print-quality mode for vibrant, saturated prints with smooth color transitions. This is the recommended mode for most transparency printing.
- Select the **Enhanced** print-quality mode for transparencies only when very fine detail is important. Note that selecting this mode for transparency printing produces 600 x 300 dpi, **not** 800 x 450 dpi.
- Use large type on overheads; 18-point or larger type works well.
- Use yellow or other light colors for text on solid-color backgrounds.
- Use Tektronix transparency sleeves to protect your transparencies, make them easier to handle, and make your presentations more professional by covering blank areas exposed on your overhead projector.
- If not using Tektronix transparency sleeves, place slip sheets between printed transparencies or use a protective cover to prevent contact between transparencies.
- Use a printer driver installed from the printer's CD-ROM for printing. If you attempt to print transparencies using a nonsupported driver, the printer will use the printing mode of the tray (paper) and produce unsatisfactory results.

Note Do not load transparencies in the Lower Paper Tray Assembly.

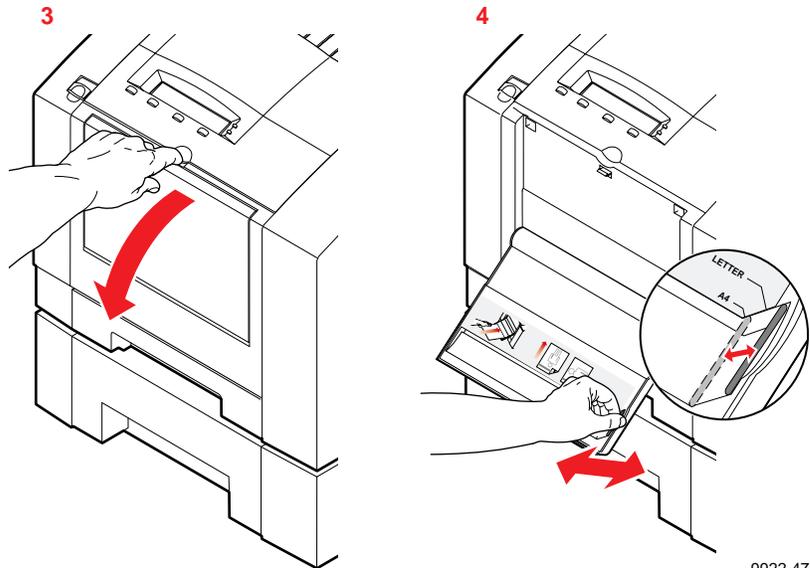
To prevent jams, do not reuse transparencies that have already been fed through the printer, for example, after a jam or if the transparency was ejected without being printed.

Do not use transparency media intended for ink-jet or thermal-wax printers. For best results, use Tektronix transparency media. Refer to "Printer supplies" on page 10-2 and "Media trays" on page 10-4 for ordering information.

When to use the manual-feed slot

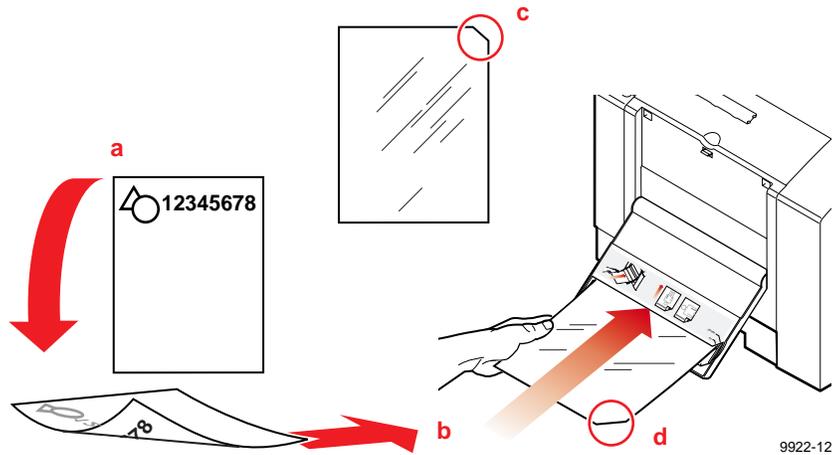
Use the manual-feed slot to feed single sheets for printing, especially when you want to print on heavier paper or cover stock. The manual-feed slot will accept nonglossy cover stock of 135 to 220 g/m² (50 to 80 lb.).

1. Through a supported printer driver, select **Manual Paper** or **Manual Transparency** from your computer. Refer to the tables on page 4-20 and page 4-36 for PC and Macintosh menus, respectively.
2. In the dialog box, click the **Print** button.
3. Go to the printer and open the manual-feed cover using the recessed finger tab.
4. Set the guide on the inside of the manual-feed cover for letter- or A4-size media.



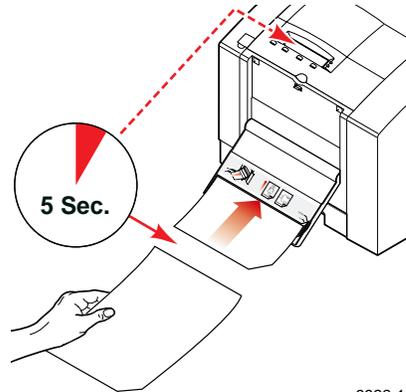
9922-47

5. When prompted by the front panel, insert **one** sheet of paper or transparency media until the sheet stops.
 - **Manually feeding letterhead:** Orient the sheet of letterhead **face down** (a) and feed the **bottom edge** first (b).
 - **Manually feeding transparencies:** Feed Tektronix **premium** transparencies with **the notch** (c) toward you and on the **right side** (d). **Standard** Tektronix transparencies are not notched and can be fed in any orientation.



4 Printing Basics

6. After the first sheet enters the printer, wait for the front panel to prompt you before feeding the next sheet (about 5 seconds).



9922-18

Note A jam error will occur if you feed the second sheet of media into the manual-feed slot before the front panel prompts you.

Printing from a PC

You can print from a PC with or without a Tektronix-provided printer driver. The provided (supported) drivers allow you to select printing features right from your computer. Without a supported driver, you can make some printing selections from the printer's front panel.

Using Windows printer drivers

To select printer-specific features, print from one of the following provided drivers. See page 4-20 for a reference table listing the printing features, and how to find them quickly, in each of these drivers.

Windows 95	AdobePS 4 driver	see page 4-22
Windows 3.1	Tektronix-modified Microsoft driver	see page 4-25
	AdobePS 3 driver	see page 4-29
Windows NT 3.51	Microsoft PostScript driver	see page 4-31
Windows NT 4.0	Microsoft PostScript driver	see page 4-31

Using the printer's front panel

Without a supported driver, you can make some printing selections from the printer's front panel. Refer to page 4-3 for a list of front panel selections and to page 6-1 for instructions on using the front panel.

Downloading utility files

For information on selecting print options with utility files, refer to the on-line documents on the printer's CD-ROM or the Tektronix Color Printer web site.

4 Printing Basics

Print features quick reference: Windows printer drivers

	Windows 3.1	Windows 95	Windows NT 4.0	
Follow these basic driver instructions to select printer features:	<p>AdobePS3Driver</p> <ol style="list-style-type: none"> 1. From Control Panel, double-click Printers. 2. Select Phaser 360 printer. 3. Click Setup. 4. Click the tabs to select printer features. 	<p>Tektronix Driver</p> <ol style="list-style-type: none"> 1. From Control Panel, double-click Printers. 2. Select Phaser 360 printer. 3. Click the buttons to select printer features. 	<p>AdobePS 4 Driver</p> <ol style="list-style-type: none"> 1. Select Start. 2. Select Settings then Printers. 3. Right mouse click Phaser 360 printer. 4. Select Properties. 5. Click the tabs to select features. 	<p>Microsoft Driver</p> <ol style="list-style-type: none"> 1. Select Start. 2. Select Settings then Printers. 3. Right mouse click Phaser 360 printer. 4. Select Properties. 5. Click the tabs to select features.
	Media size (see also page 4-6)	<ol style="list-style-type: none"> a. Click Paper tab. b. Select a Paper Size: <ul style="list-style-type: none"> ■ Letter ■ A4 	<ol style="list-style-type: none"> a. Click Setup. b. Select a Paper Size: <ul style="list-style-type: none"> ■ Letter ■ A4 	<ol style="list-style-type: none"> a. Click Paper tab. b. Select a Paper Size: <ul style="list-style-type: none"> ■ Letter ■ A4
Tray selection (see also page 4-8, page 4-9)	<ol style="list-style-type: none"> a. Click Paper tab. b. Select a Paper Source: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency <p><i>Note: to see all trays in the list, go to the Features tab and select Optional Lower Trays Installed.</i></p> 	<ol style="list-style-type: none"> a. Click Setup. b. Select a Paper Source: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency 	<ol style="list-style-type: none"> a. Click Paper tab. b. Select a Paper Source: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency 	<ol style="list-style-type: none"> a. Click Advanced tab. b. Locate Paper/Output. c. Select a Paper Source: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency <p><i>Note: to see all trays in the list, go to the Device Settings tab, to Installable Options, click Optional Lower Trays, click Installed.</i></p>
Print-quality modes (see also page 4-4)	<ol style="list-style-type: none"> a. Click Features tab. b. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced 	<ol style="list-style-type: none"> a. Click Setup. b. Click Options. c. Click Printer Features. d. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced 	<ol style="list-style-type: none"> a. Click Device Options tab. b. Locate Printer features. c. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced 	<ol style="list-style-type: none"> a. Click Advanced tab. b. Locate Printer features. c. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced

Print features quick reference: Windows printer drivers (cont'd.)

Follow these basic driver instructions to select printer features:

Color corrections (see also page 5-2)

Quick Collate (see also page 5-9)

Check Print (see also page 5-10)

Image Smoothing (see also page 5-11)

	Windows 3.1	Windows 95	Windows NT 4.0	
	<p>AdobePS3Driver</p> <ol style="list-style-type: none"> From Control Panel, double-click Printers. Select Phaser 360 printer. Click Setup. Click the tabs to select printer features. 	<p>Tektronix Driver</p> <ol style="list-style-type: none"> From Control Panel, double-click Printers. Select Phaser 360 printer. Click the buttons to select printer features. 	<p>AdobePS 4 Driver</p> <ol style="list-style-type: none"> Select Start. Select Settings then Printers. Right mouse click Phaser 360 printer. Select Properties. Click the tabs to select features. 	<p>Microsoft Driver</p> <ol style="list-style-type: none"> Select Start. Select Settings then Printers. Right mouse click Phaser 360 printer. Select Properties. Click the tabs to select features.
	<ol style="list-style-type: none"> Click Features tab. Select a Color Correction: <ul style="list-style-type: none"> Automatic None Vivid Color Simulate Display SWOP Press Euroscale Press Commercial Press Monochrome Use Printer Setting 	<ol style="list-style-type: none"> Click Setup. Click Options. Click Printer Features. Select a Color Correction: <ul style="list-style-type: none"> Automatic None Vivid Color Simulate Display SWOP Press Euroscale Press Commercial Press Monochrome Use Printer Setting 	<ol style="list-style-type: none"> Click Device Options tab. Locate Printer features. Select a Color Correction: <ul style="list-style-type: none"> Automatic None Vivid Color Simulate Display SWOP Press Euroscale Press Commercial Press Monochrome Use Printer Setting 	<ol style="list-style-type: none"> Click Advanced tab. Locate Printer features. Select a Color Correction: <ul style="list-style-type: none"> Automatic None Vivid Color Simulate Display SWOP Press Euroscale Press Commercial Press Monochrome Use Printer Setting
	<ol style="list-style-type: none"> Click Features tab. Select Quick Collate checkbox. 	<ol style="list-style-type: none"> Click Setup. Click Options. Click Printer Features. Select Quick Collate checkbox. 	<ol style="list-style-type: none"> Click Device Options tab. Locate Printer features. Select Quick Collate checkbox. 	<ol style="list-style-type: none"> Click Advanced tab. Locate Printer features. Select Quick Collate checkbox.
	<ol style="list-style-type: none"> Click Features tab. Select Check Print checkbox. 	<ol style="list-style-type: none"> Click Setup. Click Options. Click Printer Features. Select Check Print checkbox. 	<ol style="list-style-type: none"> Click Device Options tab. Locate Printer features. Select Check Print checkbox. 	<ol style="list-style-type: none"> Click Advanced tab. Locate Printer features. Select Check Print checkbox.
	<ol style="list-style-type: none"> Click Features tab. Select Image Smoothing checkbox. 	<ol style="list-style-type: none"> Click Setup. Click Options. Click Printer Features. Select Image Smoothing checkbox. 	<ol style="list-style-type: none"> Click Device Options tab. Locate Printer features. Select Image Smoothing checkbox. 	<ol style="list-style-type: none"> Click Advanced tab. Locate Printer features. Select Image Smoothing checkbox.

Using the AdobePS 4 driver with Windows 95

To select printing options, follow these steps:

1. From the taskbar, select **Start**. In the menu that appears, select **Settings**, then **Printers**.
2. In the **Printers** window, click the **Phaser 360** printer icon with the right mouse button, then select **Properties** from the menu.
3. Click the following tabs to see printing options; refer to your Windows 95 documentation for more information on tabs and options.

Details tab

Click the Details tab to access timeout settings and other options.

- Set the **Timeout settings** if your printer is connected to a local port.

Not Selected: Type a value in this text box to change the number of seconds Windows waits before notifying you that a printer is off-line. The default is **15** seconds and is recommended.

Transmission Retry: On large or multiple-page documents, you may see an Alert message that the printer is no longer accepting data before the job is completely sent to the printer. To avoid this Alert message, set this option to a larger value, such as **900 seconds** (15 minutes).

Paper tab

Click the **Paper** tab to see media options, such as **Paper Size** and **Paper Source** (for selecting media trays and media types).

Graphics tab

Click the **Graphics** tab to see graphics options.

- To change the print-quality modes (resolution or dpi settings), use the **Print Quality** selections in the **Device Options** tab. The **Print Quality** selections override the **Resolution** options in the **Graphics** tab.
- If you are using host color correction, you need to make selections in both the **Graphics** and **Device Options** tabs. Refer to the on-line manuals on the printer's CD-ROM for more information on host color correction.

Device Options tab

Click the **Device Options** tab to see printer-specific options.

- In the **Printer features** scroll list, select options such as **Color Corrections**. In the next field, select the **Color Correction** you want, such as **Automatic**.
- In the **Installable Options** scroll list, select options such as the **Optional Lower Tray** or **Optional Hard Drive**.

PostScript tab

Click the **PostScript** tab to see PostScript-related options.

- Under **PostScript timeout values**, make these selections:
 - Leave the **Job Timeout** set to **0**.
 - Set the **Wait Timeout** to a high value, such as **900 seconds** (15 minutes) to make sure you do not lose a multipage job due to a timeout after the **Transmission Retry Alert** message is displayed.
- The PostScript header contains important PostScript information that must accompany each print job; it is not a banner page printed with each job. If an option is not selected, an error message is displayed on your computer screen and your job does not print. Click one of the following in the **PostScript header** field:

Select **Download header with each print job**. This option downloads PostScript header information with each print job. This is the recommended setting.

Click the **Send Header Now** button to save the PostScript header information in the printer, then select the **Assume header is downloaded and retained** option. This option makes print files a little smaller and faster than the first option, but you need to click the **Send Header Now** button every time the printer is turned on.

- Click the **Advanced** button to see more options.
 - For **PostScript language level**, select **3**. Click **OK** when finished.

Note For faster printing, select *Binary communications protocol* under *Data format*.

Using the Tektronix driver for Windows 3.1

To select printing options, follow these steps:

1. From the **Control Panel**, double-click the **Printers** icon.
2. In the **Printers** dialog box, choose your printer from the list of installed printers.
3. Click the **Set As Default Printer** button if you want to select your printer as the default.
4. Click the **Connect** button; the **Connect** dialog box appears.
5. Select the port your printer is connected to.

The printer's Configuration Page contains the information you need to set up the printer's port. Refer to "Printing a Configuration Page" on page 2-25 for instructions on printing the Configuration Page.

Interface	Select	Then do the following
Parallel	LPTx	Go to Step 6.
Network	Network port (LPTx or COMx)	<ol style="list-style-type: none"> 1. Click the Network button to open the Printers-Network Connections dialog box. 2. Fill in each item based on your configuration, then click OK. <p>Refer to your Microsoft Windows documentation for details, or ask your network administrator for help.</p>

Note You can use *CONNECT TO FILE* to save a document as a PostScript file instead of sending it to the printer. For more information, see your Microsoft Windows documentation.

6. Set the **Timeouts**. These options regulate your computer's communications with its printer ports.
 - **Device Not Selected:** Type a value in this text box to change the number of seconds Windows waits before notifying you that a printer is off-line. The default is 15 seconds, and is recommended.
 - **Transmission Retry:** On large or multiple-page documents you may see an Alert message that the printer is no longer accepting data before the job is completely downloaded to the printer. To avoid the Alert message, set this option to a larger value, such as **900 seconds** (15 minutes).
7. Click **OK** to return to the **Printers** dialog box, then click the **Setup** button. A dialog box appears with the name of the printer you selected across the top. Use this dialog box to select paper source, paper size, number of copies, and image orientation.

Note You may want to set the number of copies from your application because the number of copies in the Setup dialog box remains the same until you change it again. Also, if you are printing multiple copies, make sure the Transmission Retry is set for at least 600 seconds (10 minutes).

8. From the **Setup** dialog box, click the **Options** button to see the **Options** dialog box. Refer to your Microsoft Windows documentation for details on the options in this dialog box. Make sure the **Color** check box is **on** to print in color. Select one of the following header options:
 - Make sure the **Send Header with Each Job** check box is **on** to download PostScript header information with each print job. This is the recommended setting.
 - Click the **Send Header** button. In the **Send Header** dialog box, select either **Printer** or **File**, and click the **Send Now** button. This saves the PostScript header information in the printer. This option makes print files a little smaller and faster, but you need to click the **Send Now** button every time the printer is turned on.

9. From the **Options** dialog box, click the **Printer Features** button to see the **Tektronix Printer Features** dialog box. Make color correction and print quality selections in this dialog box. Click **OK** to return to the **Options** dialog box.
10. From the **Options** dialog box, click the **Advanced** button to see the **Advanced Options** dialog box. Make sure the **Use PostScript Level 2 Features** check box is checked **on**.

Note The *Use PostScript Level 2 Features* option affects the print time of bitmapped (raster) images by improving the image transfer time from the computer to the printer, and by improving the image processing time in the printer. This option is only available to applications that use this Tektronix driver with Tektronix PostScript Level 2 printers, such as the Phaser 360 printer. When this box is checked, the *Compress Bitmaps* option is unavailable (grayed-out).

11. Click **OK** until you return to the **Printers** dialog box, then click **Close**.

If you are using PC/NFS

If you have PC/NFS software installed on your computer, you need to make the following selection in the **Network Options** dialog box:

1. From the **Main** window, double-click the **Print Manager** icon.
2. From the **Options** menu in the **Print Manager**, select **Network Settings**.
3. In the **Network Options** dialog box, uncheck the **Print Net Jobs Direct** box.
4. Click **OK**.

Using the Adobe PostScript driver for Windows 3.1

To select printing options, follow these steps:

1. From the **Control Panel**, double-click **Printers**.
2. In the **Printers** dialog box, select the **Tektronix Phaser 360** printer, then click **Connect**.
3. In the **Connect** dialog box, set the **Timeout settings**, then click **OK**:
 - **Device Not Selected:** Type a value in this text box to change the number of seconds Windows waits before notifying you that a printer is off-line. The default is **15** seconds, and is recommended.
 - **Transmission Retry:** On large or multiple-page documents you may see an Alert message that the printer is no longer accepting data before the job is completely sent to the printer. To avoid the Alert message, set this option to a larger value, such as **900 seconds** (15 minutes).
4. In the **Printers** dialog box, click **Setup**. A dialog box appears with the printer's name across the top.
5. Click the following tabs to see printing options; refer to your Windows documentation for more information on tabs and options.

Paper tab

Click the **Paper** tab to see media options, such as **Paper Size** and **Paper Source** (for selecting media trays and media types).

Features tab

Click the **Features** tab to see printer-specific options, such as **Color Corrections**, **Print Quality** modes, and **Optional Lower Tray**.

PostScript tab

Click the **PostScript** tab to see PostScript-related options.

- In the **Performance Options** field, select the **Use Language Level 2 or 3 Features** option.
- Under **PostScript timeout values**, make these selections:
 - Leave the **Job Timeout** set to **0**.
 - Set the **Wait Timeout** to a high value, such as **900 seconds** (15 minutes) to make sure you do not lose a multipage job due to a timeout after the **Transmission Retry Alert** message is displayed.

Job Control tab

Click the **Job Control** tab to see job-related options.

- The PostScript header contains important PostScript information that must accompany each print job; it is not a banner page printed with each job. If an option is not selected, an error message is displayed on your computer screen and your job does not print. Click one of the following in the **PostScript Header** field:
 - Select **Download Each Job**. This option downloads PostScript header information with each print job, and is the recommended setting.
 - Select the **Already Downloaded** option to save the PostScript header information in the printer, then click the **Download** button. This option makes print files a little smaller and faster than the first option, but you need to click the **Download** button every time the printer is turned off or reset.
- For better performance, select the **Binary Mode** option.

Using the Windows NT 3.51 PostScript driver

If you are using Microsoft Windows NT, follow the instructions in “Installing printer software for Windows NT 3.51” on page 3-10 to install a Windows NT PostScript driver with a Phaser 360 printer. You can select printer page sizes in the driver for Windows NT applications, however, TekColor color corrections and other PostScript Level 2 features are not supported by the Windows NT driver. Refer to page 4-3 for instructions on selecting color corrections from the printer’s front panel or from downloadable utility files. Refer to your Microsoft Windows NT documentation for details on features in the Windows NT driver.

Using the Windows NT 4.0 PostScript driver

Setting up installed options

Note If you are not sure which printer options you have installed, the printer’s Startup Page lists some of this information, such as SCSI hard disks. You can print a copy of the Startup Page from the printer’s front panel.

1. From the taskbar, click **Start**, then **Settings** and **Printers**.
2. In the **Printers** dialog box, click the right mouse button on the **Phaser 360** printer, and select **Properties** in the menu.
3. From the **Properties** dialog box, click the **Device Settings** tab.
4. In the **Device Setting** sheet, scroll to the end of the list to **Installable Options**.
5. Under **Installable Options**, highlight **Optional Lower Tray**.
6. In the box that appears at the bottom of the window, click **Installed**.
7. Select other options you have installed, such as **Optional Hard Drive**.
8. Click **OK** to return to the **Control Panel**.

Making default settings

1. From the taskbar, click **Start**, then **Settings** and **Printers**.
2. In the **Printers** dialog box, click the right mouse button on the **Phaser 360 printer**, and select **Properties** in the menu.
3. From the **Properties** dialog box, click the **Device Settings** tab.
4. In the **Device Settings** sheet, locate **Form To Tray Assignment**.
5. Under **Form To Tray Assignment**, highlight the first tray.
6. In the box that appears at the bottom of the window, select the size media you will be using in that tray.
7. Repeat Steps 3 and 4 for each installed tray.
8. Click **OK** to return to the **Control Panel**.

Selecting a printer's Default Document Properties

Note Document properties set from an application always override document defaults set in the printer's *Document Properties* sheets. However, if an application does not set a document property (such as page orientation or paper size), the printer defaults to the document properties set in the printer's *Document Properties* sheets.

1. From the taskbar, click **Start**, then **Settings** and **Printers**.
2. In the **Printers** dialog box, click the right mouse button on the **Phaser 360 printer**, and select **Document Defaults** in the menu.
3. Click the **Advanced** tab. Under **Document Options**, select a printer feature then make your selection in the next field. For example, select **Color Corrections** in the first list, then select an option, such as **Automatic**, in the next list.
4. Click the **Page Setup** tab to see other features, such as **Paper Size** and **Paper Source**.

Selecting printer options within an application: Print

1. From the **File** menu, select **Print**; the **Print** dialog box appears. You can select a different printer and other settings in this dialog box.
2. Click on the **Properties** button; the **Printer Document Properties** sheet appears.
3. Click the **Advanced** tab to change any printer features, including TekColor color corrections. This tab displays the same information as the **Document Defaults Properties Advanced** tab.
4. Click the **Page Setup** tab to see other features. This tab displays the same information as the **Document Defaults Properties Page Setup** tab.

Note Changes to any of these settings overrides the *Default Printer Properties* settings in the *Printers* folder.

Selecting printer options within an application: Page Setup

Note If changing the Printer Driver settings through Page Setup causes problems with the application you are using, then change the Printer Driver settings through *Print* under the *File* menu, described on page 4-33.

1. From the **File** menu, select **Page Setup**; the **Page Setup** dialog box appears.
2. Under **Paper**, select **Size** and **Source** options.

Note Selecting *Automatically Select* as the *Paper Source* uses the default setting made under *Document Defaults* in the *Printers* folder. To change this setting, select a different *Source* in *Page Setup*.

4 Printing Basics

3. Click the **Printer** button; another **Page Setup** dialog box appears. You can select a different printer here.
4. Click the **Properties** button; the **Printer Document Properties** sheet appears.
5. Click the **Advanced** tab to change any printer features, including TekColor. This tab displays the same information as the **Document Defaults Properties Advanced** tab.
6. Click the **Page Setup** tab to see other features. This tab displays the same information as the **Document Defaults Properties Page Setup** tab.

Note Changes to any of these settings overrides the *Default Printer Properties* settings in the *Printers* folder.

Printing from MS-DOS

Refer to the on-line manuals on the printer's CD-ROM for information on printing from MS-DOS.

Printing from a Macintosh

To print from a Macintosh, you need a printer driver. Installing one of the provided (supported) drivers allows you to select printing features right from your computer. Refer to page 4-36 for a reference table of printing features.

Using Macintosh printer drivers

To select printer-specific features, print from one of the following provided drivers. See page 4-36 for a reference table listing the printing features, and how to find them quickly, in each of these drivers.

Phaser 360 driver (based on LaserWriter 7.1.2)	see page 4-38
Phaser 360 GX driver (for use with QuickDraw GX)	see page 4-40
Apple LaserWriter 8 driver (for most applications)	see page 4-39

Using the printer's front panel

Without a supported driver, you can make some printing selections from the printer's front panel. Refer to page 4-3 for a list of front panel selections and to page 6-1 for instructions on using the front panel.

Downloading utility files

For information on selecting print options with utility files, refer to the on-line documents on the printer's CD-ROM or the Tektronix World Wide Web site.

4 Printing Basics

Print features quick reference: Macintosh printer drivers

		Driver name		
		Phaser 360	Apple LaserWriter 8	Phaser 360 GX
Follow these basic driver instructions to select printer features:		<ol style="list-style-type: none"> 1. Make sure the driver software is installed. 2. Make sure your printer is selected and set up in the Chooser. 3. From the File menu, select either Print or Page Setup as listed below. For GX, also use the Printing menu in the Finder. 4. Select printer features as indicated. 		
	Media size (page 4-6)	<ol style="list-style-type: none"> a. Open Page Setup dialog box. b. Select a Paper Size: <ul style="list-style-type: none"> ■ Letter ■ A4 	<ol style="list-style-type: none"> a. Open Page Setup dialog box. b. Select a Paper Size: <ul style="list-style-type: none"> ■ Letter ■ A4 	<ol style="list-style-type: none"> a. Open Page Setup dialog box. b. Select a Paper Size: <ul style="list-style-type: none"> ■ Letter ■ A4
Tray selection (page 4-8, page 4-9)	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click TekColor button. c. Select a Tray Selection: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency 	<ol style="list-style-type: none"> a. Open Print dialog box. b. Select a Paper Source: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency 	<ol style="list-style-type: none"> a. Open the Printer Driver Defaults dialog box. b. Select a Tray Selection: <ul style="list-style-type: none"> ■ Upper ■ Lower ■ Paper ■ Transparency ■ Manual Paper ■ Manual Transparency 	
Print quality modes (page 4-4)	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click TekColor button. c. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced 	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click Options button. c. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced 	<ol style="list-style-type: none"> a. Open Printer Driver Defaults dialog box. b. Select a Print Quality: <ul style="list-style-type: none"> ■ Fast Color ■ Standard ■ Enhanced 	

Print features quick reference: Macintosh printer drivers (cont'd.)

Follow these basic driver instructions to select printer features:

Driver name		
Phaser 360	Apple LaserWriter 8	Phaser 360 GX
<ol style="list-style-type: none"> 1. Make sure the driver software is installed. 2. Make sure your printer is selected and set up in the Chooser. 3. From the File menu, select either Print or Page Setup as listed below. For GX, also use the Printing menu in the Finder. 4. Select printer features as indicated. 		
<ol style="list-style-type: none"> a. Open Print dialog box. b. Click TekColor button. c. Select a Color Correction: <ul style="list-style-type: none"> ■ Automatic ■ None ■ Vivid Color ■ Simulate Display ■ SWOP Press ■ Euroscale Press ■ Commercial Press ■ Monochrome ■ Use Printer Setting 	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click Options button. c. Select a Color Correction: <ul style="list-style-type: none"> ■ Automatic ■ None ■ Vivid Color ■ Simulate Display ■ SWOP Press ■ Euroscale Press ■ Commercial Press ■ Monochrome ■ Use Printer Setting 	<ol style="list-style-type: none"> a. Open the Printer Driver Defaults dialog box. b. Select a Color Correction: <ul style="list-style-type: none"> ■ Automatic ■ None ■ Vivid Color ■ Simulate Display ■ SWOP Press ■ Euroscale Press ■ Commercial Press ■ Monochrome ■ Use Printer Setting
<ol style="list-style-type: none"> a. Open Print dialog box. b. Click TekColor button. c. Select Quick Collate checkbox. 	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click Options button. c. Select Quick Collate checkbox. 	<ol style="list-style-type: none"> a. Open the Printer Driver Defaults dialog box. b. Select Quick Collate checkbox.
<ol style="list-style-type: none"> a. Open Print dialog box. b. Click TekColor button. c. Select Check Print checkbox. 	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click Options button. c. Select Check Print checkbox. 	<ol style="list-style-type: none"> a. Open the Printer Driver Defaults dialog box. b. Select Check Print checkbox.
<ol style="list-style-type: none"> a. Open Print dialog box. b. Click TekColor button. c. Select Image Smoothing checkbox. 	<ol style="list-style-type: none"> a. Open Print dialog box. b. Click Options button. c. Select Image Smoothing checkbox. 	<ol style="list-style-type: none"> a. Open the Printer Driver Defaults dialog box. b. Select Image Smoothing checkbox.

Color correction (page 5-2)

Quick Collate (page 5-9)

Check Print (page 5-10)

Image Smoothing (page 5-11)

Using the Phaser 360 printer driver

Select media size

1. From the **File** menu, open the **Page Setup** dialog box.
2. Use the **Paper** pop-up menu to select the printer's supported paper sizes.

Select printer-specific options

1. From the **File** menu, open the **Print** dialog box.
2. In the **Print** dialog box, click the **TekColor** button to see the **TekColor Options** dialog box.
3. Select printer-specific options:
 - Color Correction
 - Quick Collate
 - Tray Selection
 - Check Print
 - Print Quality
 - Image Smoothing

Using the Apple LaserWriter 8 printer driver

Select media size

1. From the **File** menu, open the **Page Setup** dialog box.
2. To select the printer's supported paper sizes, use the **Paper** pop-up menu.

Select printer-specific options

1. From the **File** menu, open the **Print** dialog box.
2. In the **Paper Source** field, select the media tray by location or type.
3. Click the **Options** button to see the **Print Options** dialog box.
4. Select printer-specific options:
 - Color Correction
 - Quick Collate
 - Tray Selection
 - Check Print
 - Print Quality
 - Image Smoothing

Using the Phaser 360 GX printer driver

Note Refer to the on-line manuals on the printer's CD-ROM for details on using the Phaser 360 GX printer driver.

Printing with a desktop printer

If you are using QuickDraw GX applications, do **one** of the following:

- Select any desktop printer in the **Print** dialog box.
- Drag a document onto a desktop printer icon. The application corresponding to the document opens, prints the document, and then quits.

If you are using non-QuickDraw GX applications, do **one** of the following:

- Print to the **default** desktop printer with the **Print** command from the **File** menu.
- Drag a document onto a desktop printer icon. The application corresponding to the document opens, displays the **Print** dialog box, and waits for you to click **Print**. After printing the document, the application quits.

Selecting printing options

Most of the commands in the **Printing** menu are standard QuickDraw GX driver commands, and are documented by Apple (see the **Macintosh Guide** on-line document for details). The last group of commands in this menu are printer-specific.

Use the **Printer Driver Defaults** command in the **Printing** menu to set default options for the selected desktop printer.

Note The printer defaults dialog box is also available through the *Print* command in the *File* menu for QuickDraw GX applications.

Printing from a UNIX workstation

Overview

You can print from a UNIX workstation through Ethernet, Token Ring, or parallel interfaces. Workstation users can print from any application that generates color PostScript or print screen shots with the PhaserPrint software.

For instructions and examples on creating print queues for your specific platform, visit the Tektronix web site:

`http://www.tek.com/Color_Printers/`

Or, you can contact Tektronix Customer Support at **1-800-835-6100**.

To use the TekColor color corrections and other printer features, use one of the following methods:

- PhaserPrint™ for UNIX software functions like a printer driver for selecting printing options, and provides fast screen copy printing.
- The menus on the printer's front panel let you select printing options; refer to page 6-1 for instructions on using the front panel.
- Downloadable utility files let you select printing options; refer to the on-line manuals on the printer's CD-ROM for instructions.

UNIX workstations

For UNIX environments, Tektronix offers the optional PhaserPrint™ for UNIX software which offers driver-selectable printer options and provides fast, raster file and screen copy printing to Tektronix color printers.

PhaserPrint for UNIX software is available for these workstations:

Workstation	Operating System
Sun	SunOS 4.1.4, Solaris 2.3 and 2.4
SGI	IRIX 5.2, 5.3, 6.2, 6.3, and 6.4
HP 9000 700/800	HP-UX 9.0.5 and 10.2
IBM RS/6000	AIX 3.2 and 4.2
DECstation	ULTRIX 4.0 and 4.4
DEC Alpha AXP	OSF/1 3.0, 3.2, and Digital UNIX 4.0

The printer's CD-ROM contains a demonstration copy of PhaserPrint for UNIX software and an on-line instruction guide in the **unix/unixdemo** directory. If you would like to purchase a licensed version of PhaserPrint software, contact your dealer or local Tektronix office. For ordering information, refer to "Additional software (UNIX and VMS)PhaserPrint™ for UNIX software" on page 10-6.

OpenVMS workstations

To print from OpenVMS workstations, the optional PhaserSym™ utility, a VMS print symbiont, functions as a driver for selecting printing options and as a queue manager. PhaserSym software is compatible with DEC workstations running OpenVMS version 5.0 and later. PhaserSym software communicates over the printer's TCP/IP Ethernet interface and is required for proper communication with the printer. For ordering information, refer to "Additional software (UNIX and VMS)PhaserPrint™ for UNIX software" on page 10-6.

Additional information and tips are available through the following resources:

- Tektronix web site:
http://www.tek.com/Color_Printers/userdoc/introduction.html
- HAL: Request a document catalog from HAL, the Tektronix fax library. Refer to "Getting information by fax" on page 9-3 for instructions.

Printing from specific applications

For printing from most applications, follow the instructions beginning on page 3-1 to install drivers and printer software. Some applications require additional configuration or page description files, which may have been installed with the driver. Additional information and tips are available through the following resources:

- Tektronix web site:
http://www.tek.com/Color_Printers/userdoc/introduction.html
- HAL: Request a document catalog from HAL, the Tektronix fax library. Refer to “Getting information by fax” on page 9-3 for instructions.

Printing: Beyond the Basics

This chapter discusses the following topics:

- “Adjusting the color of your prints” on page 5-2
- “Using the Quick Collate option” on page 5-9
- “Previewing with Check Print” on page 5-10
- “Using Image Smoothing” on page 5-11
- “Printer languages” on page 5-12
- “Working with fonts” on page 5-12
- “Improving print speed” on page 5-16

Adjusting the color of your prints

You may occasionally want to adjust the color of your prints for specific objectives, such as printing on transparencies. The following table lists the TekColor color correction modes and their functions. A more detailed description of each mode follows.

Select a color correction mode from your software application, at the printer's front panel, or with downloadable utility files.

To select print features from Windows applications, refer to the table on page 4-20; to select print features from Macintosh applications, refer to page 4-36. Settings from your software application override the printer's front panel default settings.

Printing objective or problem	Color correction to use
General office printing: Automatic optimizes the color quality for each element on a page — text, photos, and graphics — for the best overall color.	Automatic (default: make no selection)
Brightest, most saturated transparencies. Presentation graphics — bar and pie charts, spread sheets, organization charts.	Vivid Color
Colors simulate computer display screen.*	Simulate Display
Graphic arts applications; colors simulate a printing press standard.	SWOP Press Euroscale Press Commercial Press
Turn off all color corrections. Use PANTONE charts.	None
Print in gray scale.	Monochrome
Use printer's current color default.	Use Printer Setting
Use Adobe's standard color conversions.	<i>Refer to the printer's CD-ROM for downloadable utility files.</i>

* For other ways of matching the screen's colors, use ColorSync color matching on a Macintosh or use host color correction in Windows 95. Refer to the printer's CD-ROM or the Tektronix web site for more information.

TekColor correction descriptions

The following options are available.

Note TekColor color corrections do not affect colors specified in the PostScript Level 2 international color standard CIE XYZ, developed by the Commission Internationale de l'Eclairage (International Commission on Illumination).

Automatic: General all-purpose printing

The **Automatic** (default) option is the best choice for most office printing. This mode optimizes the color quality on each page. The printer automatically applies the appropriate color correction for each element (text, graphics, photographs) for the best reproduction.

Vivid Color: Printing the brightest colors and a truer blue

The **Vivid Color** option makes printed blue appear less purple by reducing the amount of magenta used to print blue colors. Other colors are also adjusted to compensate for the adjusted blue. This selection also increases contrast, making the output appear brighter. Use this selection for presentation graphics, such as overhead transparencies, and for bright-looking colors that don't need to match the screen's colors or printing press colors.

Also use this option if you have specified a color in the CMYK system, **and** the color has a black component, **and** the color appears lighter than you expected when printed. Vivid Color adjusts CMYK colors using a method that adds black to other components. This option prints more saturated (darker) colors and may be useful for printing overhead transparencies.

Simulate Display: Simulating screen colors

The **Simulate Display** option makes printed colors approximate the colors on a standard display screen. This selection should improve the screen-to-printer color accuracy for most applications that don't perform their own color corrections. This selection is best for applications that define colors as RGB (red, green, blue), HLS (hue, lightness, saturation), or HSB (hue, saturation, brightness).

Press options: Matching printing press colors

There are three printing press color correction options. Each press option conforms to a different printing standard. Use a press option if you are previewing work for a four-color job to be printed on a printing press. These options simulate a four-color commercial printing press, **not** solid spot colors, such as PANTONE Colors.

Note If you are selecting PANTONE Colors in your application, use the *None* option; see page 5-5 for details. Also, use the *None* option with other color management systems, such as EfiColor.

Printing press color corrections

Press option	Inks	Base (paper)	Target match (equivalent 3M Matchprint®)
SWOP Press	SWOP	Publication	<p>Specification for Web Offset Publications.</p> <p>These are specifications for color separation films and color proofing that are used to ensure the consistency of printed colors between different publications. This option is typically used in the U.S.</p> <p>Tends to be high-volume, web press printing.</p>
Commercial Press	Commercial	Commercial	<p>This option is typically used in the U.S. and is characterized to match commercial 3M Matchprint proofs.</p> <p>Tends to be high-quality, sheet-fed printing.</p>
Euroscale Press	Euroscale	Publication	<p>This option is typically used in Europe and is characterized to match the equivalent 3M Matchprint.</p>

None: Turning off all color corrections

If you do not want to use any TekColor color corrections, change the color correction setting to **None**. Select **None** when you are doing the following:

- Using applications that do their own color adjusting.
- Using ColorSync on a Macintosh or host color correction in Windows 95.
- Printing PANTONE Colors using applications for which you have installed a Phaser 360 PANTONE Color palette.

Monochrome: Printing in gray scale

The **Monochrome** option prints your color image as a monochrome gray scale (shades of gray between black and white). Use this option to print page masters for photocopying in black-and-white.

Use Printer Setting: Using the printer's current default

The **Use Printer Setting** option is available only in the supported drivers. This option sends no color correction information to the printer. It uses the current default in the printer to process colors for printing. The factory default color correction is **Automatic**. The printer's default can be one of the following:

- Any option selected in the **TekColor Correction** menu on the printer's front panel.
- One of the color correction utility files sent to the printer.

Printing and using the color sampler charts

You can print color sampler charts from your printer to see how colors you have specified from within an application will look when printed. Having a preprinted sample of each color can help you save time in selecting the right one.

The color sampler charts available are CMYK (cyan, magenta, yellow, and black), RGB (red, green, and blue), HSB (hue, saturation, and brightness), and PANTONE Color. Print the color samples from files on the printer's CD-ROM, from the Tektronix web site, or through your web browser. The CMYK and RGB charts can also be printed from the Help Pages menu at the printer's front panel.

Each color sampler chart is several pages long; the pages can be connected to form a wall chart or placed in a binder for easy reference.



9922-132

Tips for working with color

Whether you are producing color reports, memos, graphs, charts, overhead transparencies for presentations, color handouts, or design comps, there are a few things to keep in mind when using color.

- A large area of color looks more saturated (brighter) than a small area of the same color.
- A color looks brighter against a dark background than it does against a white background.
- Colors look different because of the background color or surrounding colors.
- The appearance of a color varies with the type and amount of light, for example, fluorescent lighting versus sunlight.

General guidelines

- Keep a document or design simple and consistent.
- Select colors that look good together and that reinforce your message.
- Check your application for standard palettes to get you started.
- Use a color scheme of five or six shades, and in a series of images, use the colors in a consistent manner throughout the series.
- Use color to highlight the most important information, such as a bar or pie segment in a chart or graph.
- Use color to show relationships between objects, such as a range of values. Objects with a similar meaning or value should be in similar colors.
- Use color as graphic elements in the design of newsletters, logos, and brochures.
- Avoid red and green combinations; these colors are hard for people with red/green color blindness to distinguish.

Special considerations

If your Phaser 360 printer is shared on a network

Another user may use the downloadable color correction utility files, or the printer's front panel, to change the printer's default color correction setting. If this situation occurs and you try to print through a nonsupported driver, your prints may not turn out as expected. Refer to "Sharing the printer on a network" on page 8-34 for more information.

Application color corrections

Some applications perform their own color corrections to improve screen-to-printer color matching. The TekColor color correction options in the supported drivers adjust colors in the printer after the application has performed its color corrections.

- If the application uses CIE (Commission Internationale de l'Eclairage) colors, the TekColor corrections will **not** be applied.
- If you select a TekColor color correction option other than **None**, that selection may override some application features.
- If you try one of the TekColor color correction options and the printed results are not what you expected, then select the **None** option and try reprinting your image.
- Select the **None** TekColor color correction option if you are using ColorSync color matching on a Macintosh or host color correction in Windows 95 (refer to the printer's CD-ROM or the Tektronix web site).

If you are using an unsupported driver

If you are not using one of the printer drivers shipped with the printer or another driver that uses the Phaser 360 PPD (PostScript printer description) files to control printer functions, then use the downloadable utility files from the printer's CD-ROM or the printer's front panel to select color corrections.

Using the Quick Collate option

Quick Collate speeds the collation and printing of large print jobs and multiple sets of documents. The collate function in some software applications repeatedly sends each page to the printer in sequence until the requested number of copies is printed. With the Phaser 360 printer's Quick Collate option, the job is **sent only once** and then multiple collated sets are produced **by the printer**, allowing much faster processing time.

Select **Quick Collate** through a supported driver, generally through the **Properties** (Windows 95) or **Print** (Macintosh) menu. Refer to the charts on page 4-20 and page 4-36, respectively.

Note To use the Quick Collate feature you must attach an external SCSI hard drive. Refer to "Tektronix external hard disk" on page 10-5 for ordering information.

With an added 2.1 GBytes of external disk space, the printer collates up to 500 pages in **Standard** mode and 130 pages in **Enhanced** (800 x 450 dpi) mode. Larger jobs are printed in collated batches. For example, to produce four copies of a 140-page job in **Enhanced** mode, the printer outputs four collated sets of the first 130 pages and then four collated sets of the last 10 pages.

Previewing with Check Print

With the Check Print option, the printer automatically stops after it prints the first page of a document, letting you check the document before printing resumes. This function is especially useful when printing a large job.

Check Print is enabled as a default, with a timeout of 5 minutes: the printer waits 5 minutes after printing the first page of a document before it continues printing. You confirm your choice to continue or cancel the print job at the printer's front panel. To use the Check Print feature:

1. Select **Check Print** in a supported driver:
 - **Windows 95 PostScript driver:**
In the **Device Options** tab options, in the **Printer features** field, select **Check Print**.
 - **AdobePS 3 driver for Windows 3.1:**
In the **Features** tab options, select **Check Print**.
 - **LaserWriter 8.x driver:**
In the **Print** dialog box, click **Options**. In the **Options** dialog box, in the **Check Print** drop-down menu, select **True**.
 - **Phaser 360 driver:**
In the **Print** dialog box, click **TekColor**. In the **TekColor Options** dialog box, select **Check Print**.
 - **Phaser 360 GX driver:**
In the **Print** dialog box, in the **TekColor** printing extension, select **Check Print**. (Or, from the **Printing** menu, in the **Printer Driver Defaults**, select **Check Print**.)
2. Go to the printer. Check your first print. At the **Check Print** message on the printer's front panel, press one of the buttons:
 - **Reprint:** Reprints the first page, then the printer pauses again for the duration of the selected timeout or until you cancel or continue the print job.
 - **Cancel:** Cancels the print job.
 - **Continue:** Continues printing the entire print job.

Setting the Check Print timeout

At the printer's front panel, scroll to the **Printer Defaults** menu, then scroll to **Check Print Timeout** to reset the timeout value. Refer to page 6-1 for information on using the printer's front panel.

Using Image Smoothing

Image Smoothing blends the adjacent colors in low-resolution images for smoother color transitions. For example, use Image Smoothing to improve the appearance of a 72-dpi image downloaded from the World Wide Web. Image Smoothing is not recommended for 300-dpi or higher images.

There are three ways of selecting Image Smoothing:

- Through the printer's front panel.
- In a supported printer driver, check the **Image Smoothing** box on.
- Through one of the following PostScript utility files:

Macintosh file name	PC file name
<i>Image Smoothing On</i>	<i>SMOOTHON.PS</i>
<i>Image Smoothing Off</i>	<i>SMOOTHOFF.PS</i>

Refer to the printer's CD-ROM for instructions on downloading utility files.

Printer languages

The printer supports PostScript Level 1 and Level 2; Postscript 3; monochrome PCL5 (Printer Command Language); and HP-GL (Hewlett-Packard Graphics Language) printer languages.

Refer to the printer's CD-ROM or the Tektronix web site for more information on printing PCL5 or HP-GL.

Working with fonts

Resident typefaces (PostScript and PCL5)

The printer is shipped with 164 PostScript fonts and a CD-ROM containing ATM (Adobe Type Manager) software. ATM software helps your computer display the fonts on screen as they will appear in your prints. Refer to "Printing a list of fonts" on page 5-15 for instructions on printing out a list of the resident fonts.

For PCL5 printing, the printer supports the following typefaces in regular, medium, bold, italic medium, and italic bold: Albertus, Antique, Arial, Clarendon, Coronet, Courier, Garamond, Letter Gothic, Marigold, Times, Times New Roman, Univers, and Wingdings.

Downloading fonts

The fonts resident in the printer are stored in the printer and are always available for printing. The PostScript interpreter in the printer can also accept and store additional fonts known as downloadable fonts. If you want to print PostScript outline fonts that are not built into the printer, you can transfer or download them from your computer to the printer. Downloading fonts saves print time if you plan to print several documents or a large document using those fonts.

When you download a font, it is stored in the printer's memory or on a SCSI hard disk attached to the printer. Refer to the printer's CD-ROM for more information on using an external SCSI disk for font storage. You can download as many outline fonts as the printer's memory or hard disk allow. Adding more printer memory expands the number of fonts that can be downloaded to the printer.

The printer accepts Type 1 and Type 3 downloadable fonts including those from Adobe, Agfa, Bitstream, Microsoft, and Apple; PCL5 fonts; and a variety of user-defined fonts. The printer also accepts TrueType downloadable fonts, which can be scaled to any point size. TrueType fonts look the same on the screen as they do when printed.

You download a font from a PC or Macintosh the same way you download fonts to any PostScript printer. Follow the documentation that was shipped with your fonts.

Using fonts with Windows

Before printing, you need to make sure the fonts specified in your document are installed in the printer or set up correctly in Windows. If you request a font in an application that is not resident in the printer, or is not correctly installed in Windows, the text is printed in the Courier typeface.

To use fonts that are not resident in the printer, do one of the following:

- Use a font downloader supplied with your font package to download the desired font to the printer.
- Windows 3.1 users: Edit your **WIN.INI** file so the Windows driver automatically downloads the fonts you need as part of a print job. Refer to your Microsoft Windows documentation for details on this procedure.

Some font packages automatically update the PostScript port entries in your **WIN.INI** file when you reinstall the fonts. Refer to the font package's documentation for instructions.

For more information on using fonts with Windows, visit the Tektronix color printer web site.

Printing a list of fonts

You can print a list of the printer's resident fonts by downloading a utility file to the printer.

Printing a font list from a Macintosh

1. Install the sampler and utility files from either the Installer for Mac® OS Diskette 1 or the printer's CD-ROM; see page 3-17 for details.
2. In the **Chooser**, select the appropriate printer.
3. On your computer's hard disk, locate the **PhaserTools** folder; locate the Apple Printer Utility and double-click its icon to start the application.
4. From the **Utilities** menu, choose **Download PostScript File**.
5. Select the **Font Sampler** file from the list, then click **Open**. (This file was installed inside the **PhaserTools** folder, in the **Samplers** folder.)
6. If no output is returned by the printer, the Apple Printer Utility displays a dialog box; click **OK** to continue.

Printing a font list from a PC

1. From the printer's CD-ROM or the Printer Software for Windows diskette, locate the **SAMPLERS** directory and the **FONTS.PS** file.
2. Copy the **FONTS.PS** file to your computer's hard disk or use the file directly from the CD-ROM.
3. To send the **FONTS.PS** file to the printer:
 - **PC users:** Use the DOS **Copy** command. (Windows 3.1 users can also use the **Copy** command in the **File Manager**.)
 - **Workstation users:** Send the file to the printer as you would any PostScript file.

Improving print speed

Note There are different ways to improve print speed, such as by printing over Ethernet. For more information, visit the Tektronix web site. Refer to “On-line support” on page 9-1.

To speed the printing of a document with scanned images, here are some suggestions:

All users

- When you use any color correction option (other than **None**), your printer can take longer to process bitmapped images. Select color corrections from the supported drivers, with downloadable utility files, or from the printer’s front panel; see “TekColor correction descriptions” on page 5-3 for more information.
- The **Fast Color** print-quality mode is the fastest mode, followed by the **Standard** print-quality mode and the **Enhanced** mode. Select print-quality modes from the supported drivers, from the printer’s front panel, or through your web browser; see “Adjusting print speed and resolution” on page 4-4 for more information.

Macintosh and Windows users

- If you are using Adobe Photoshop, you can print using the Tektronix PhaserPrint™ software plug-in to improve the image data transfer time from your computer to the printer. See the on-line manual on the printer’s CD-ROM for instructions on installing and using the plug-in.

Windows 3.1 users

Note Use the following procedure only if your computer is connected to the printer through the parallel port. Do not do this procedure if the printer is connected over a network port.

1. From the **Control Panel**, double-click **Printers**.
2. In the **Printers** dialog box, select the **Tektronix Phaser 360** printer, then click **Setup**. A dialog box appears with the printer's name across the top.
3. Click the **PostScript** tab.
4. In the **Performance Options** field, select the **Use PostScript Level 2 Features** option.
5. Click the **Job Control** tab.
6. For better performance, select the **Binary Mode** option.
7. From your application, choose the **Tektronix Phaser 360** as your printer.
8. Try printing the document again.

Windows 95 users

1. In the task bar on your screen, click the **Start** icon; a menu appears.
2. Move the cursor over **Settings**; another menu appears.
3. In the menu, click **Printers**; the **Printers** window appears.
4. In the **Printers** window, select the **Phaser 360** printer icon. From the **File** menu, select **Properties**.
5. Click the **PostScript** tab, then click the **Advanced** button.
6. Select **Use PostScript Level 2 features**.
7. Under **Data format**, select **Binary communications protocol**. **Do not make this selection if the printer is connected over a network port.**
8. Click **Apply** and then **OK** when finished.
9. Try printing the document again.

UNIX workstation users

Workstation users can use the PhaserPrint for UNIX software to significantly increase printer performance when printing bitmapped images; refer to “UNIX workstation software” on page 3-23 for details.

Selecting page sizes in Windows applications

In some Windows applications, you can select printer page sizes from the **File** menu, in a **Print Setup** dialog box. If you use a **Print Setup** dialog box to select the Phaser 360 printer from your application, some page sizes may not be visible in the list.

If the Phaser 360 printer page size you want to use is not visible in the list, do the following:

Windows 3.1

1. From the **Main** window, open the **Control Panel** and double-click the **Printers** icon.
2. In the **Printers** dialog box, select the **Phaser 360** printer in the list of printers.
3. Click the **Setup** button.
4. In the **Setup** dialog box, select the page size you want and click **OK**.
5. Return to your application. If you open the **Print Setup** dialog box again from within your application, the page size selection may be blank. The page size you just selected in the driver is still selected; it is just not visible in the list.
6. Print as usual.

If you open the **Print Setup** dialog box from within an application, and the page size selection is blank, the blank represents the page size last selected from the printer driver through the **Control Panel**. You can leave the page size selection blank and print as usual, or you can select another page size from the list.

Windows 95

1. In the task bar on your screen, click the **Start** icon; a menu appears.
2. Move the cursor over **Settings**; another menu appears.
3. In the menu, click **Printers**; the **Printers** window appears.
4. In the **Printers** window, select the **Phaser 360** printer icon. Select **Properties** from the **File** menu.
5. Click the **Paper** tab.
6. Choose your page size, click **Apply**, and then click **OK**.
7. Return to your application.

Using the Front Panel

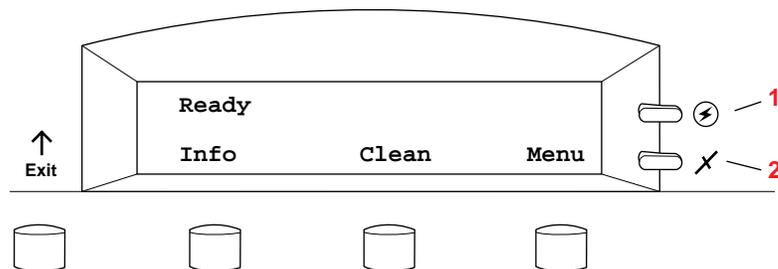
Front panel overview

The printer's front panel includes an LCD display, menu buttons, and power and error indicator lights. The two-line display shows the status of the printer and menus for different printer operations, such as cleaning.

Front panel indicators

The front panel has two indicator lights:

- 1 Power 2 Error



9922-133

Indicator	On	Blinking	Off
1. Power	The printer is on and ready for operation.	The printer is warming up, or it is processing or printing an image. The printer is in interactive mode: you have pressed the Menu button.	The printer is off or not ready, or there is an error.
2. Error	If the indicator is on after the power-up sequence, the printer detects an error that is not user-correctable; the printer requires service.	The printer requires attention: for example, ink is low or the printer is out of paper.	Normal operation.

Two-line display

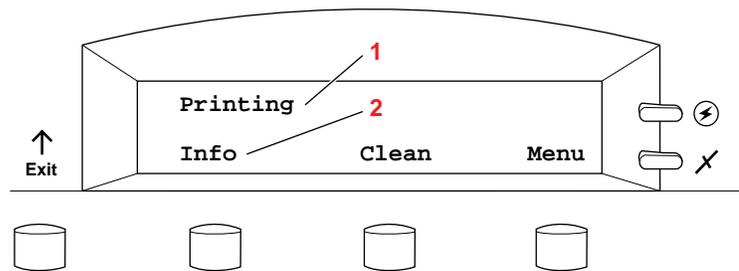
The two lines of the display have the following functions:

Line 1

- Displays status messages such as **Ready**, **Printing**, or the printer's name.
- Displays operation errors and warnings such as **Out Of Ink**.
- Displays the names of menus and parameters you can set.

Line 2

- Displays button labels such as **Info** for displaying printer information, **Clean** for access to cleaning menus, and **Menu** for access to a menu of selections. Other labels include **<----** for **previous**, **---->** for **next**, and **OK** to make selections.

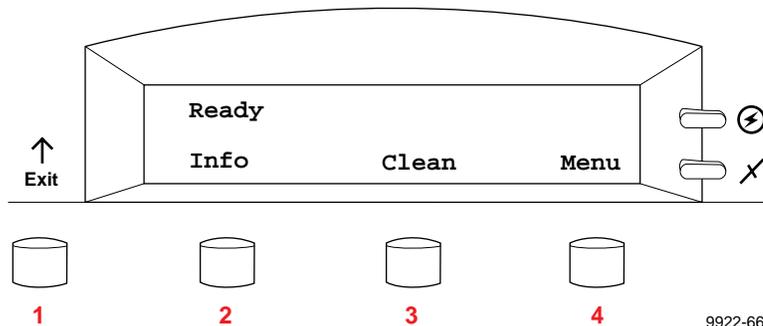


9922-134

Refer to "Front panel error messages" on page 8-2 for a list of the front panel messages. For an overview of the front panel menu selections, refer to "Front panel menu map" on page 6-5.

Front panel buttons

1. The **Exit** button allows you to perform these menu functions:
 - Back up a level of the menu without making a selection.
 - Exit the menu.
2. Button 2, labeled **Info**, lets you cycle through information such as the printer's name and the printer's IP address. Pressing **Info** during a print job displays the job name and source. Pressing **Menu** changes Button 2 to the following:
 - <---- Scroll backward through the available selections.
3. Button 3, labeled **Clean** during normal operation, lets you access the cleaning menus. Pressing **Menu** changes Button 3 to the following as you select submenus:
 - ----> Scroll forward through the available selections.
 - **Cancel** Cancel a print job or selection.
 - **Confirm** Confirm an address change (IP, Broadcast, Gateway).
4. Button 4, labeled **Menu** during normal operation, lets you enter the front panel menu. Pressing **Menu** changes Button 4 to the following as you select submenus:
 - **Menu** Provides access to submenus.
 - **Print** Executes the selected print.
 - **OK** Accepts the selected value.



9922-66

Enabling and disabling the front panel menu

The printer allows a system administrator to lock the front panel menu by downloading a utility file. In this protected mode, you can only print the pages in the Help Pages menu; **you cannot modify any settings in the other menus.**

For more information on enabling and disabling the front panel menu, refer to the printer's CD-ROM or the Tektronix web site.

- When the front panel is enabled, all front panel menu selections are available. When you press the **Menu** button, the front panel displays the following message:

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

- When the front panel is disabled and you press the **Menu** button, the display shows only the pages in the Help Pages menu (without the heading):

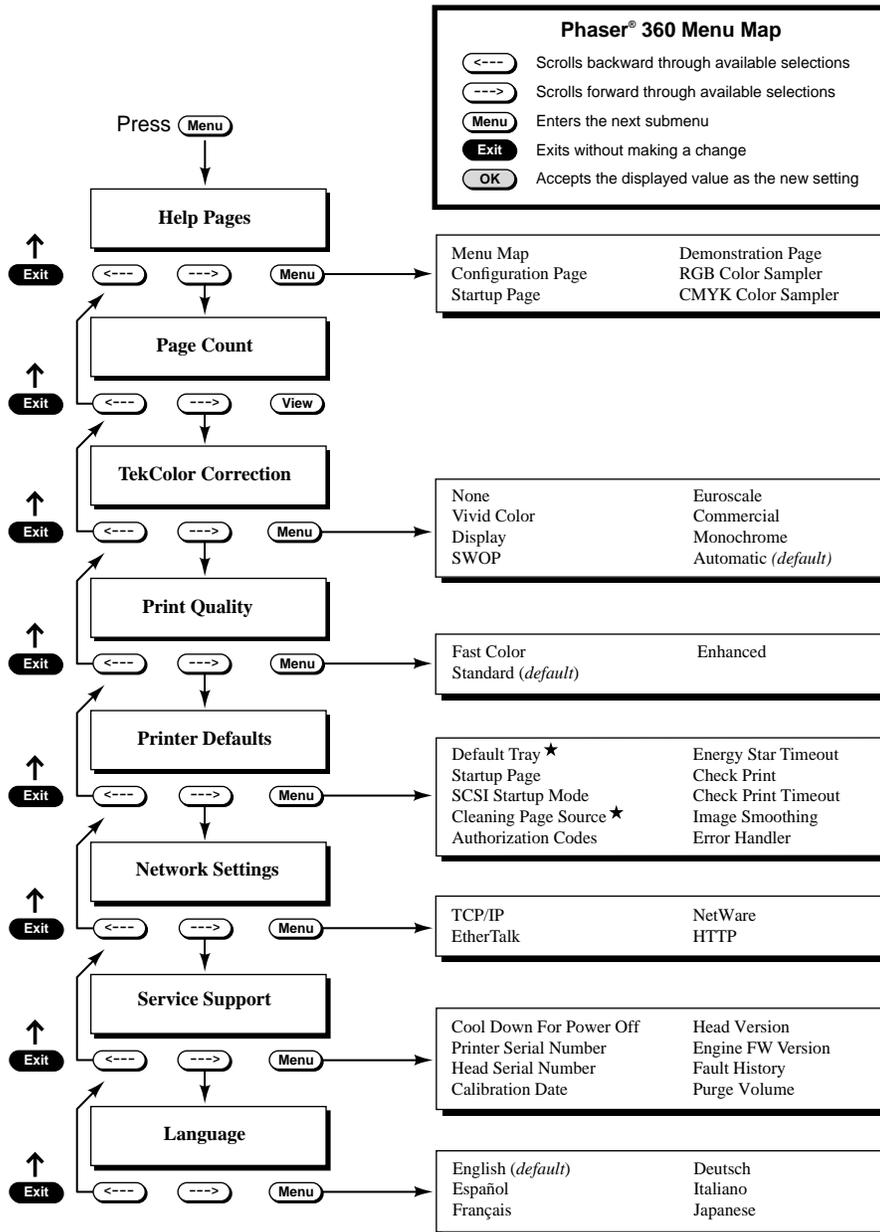
```
Configuration Page  
<---- > Print
```

- To access the entire menu with the front panel disabled, you must use a special key sequence **each time** you want to enter the menu:
 - Press and hold down the **Menu** button and press the **Exit** button. The front panel displays the following message:

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

The full set of menus is now available.

Front panel menu map



9922-145

Printer Help Pages

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

Menu Map

The menu map (see page 6-5) provides a graphical view of the front panel menus. The menu map can be used as a convenient navigation aid for quickly determining the location of menu items. An on-line version of the menu map is also available at the Tektronix web site.

Configuration Page

The Configuration Page lists information on the printer's hardware and software configuration and current settings. This page is especially useful during network installation and troubleshooting. You can print the Configuration Page through the front panel, by sending a PostScript utility file to the printer (refer to the printer's CD-ROM), or through your web browser (refer to the **PhaserShare Networking System Administrator Manual**).

Startup Page

The Startup Page lists the number of pages printed, installed interface ports, software version numbers, installed RAM memory, the number of fonts in memory, and other useful information.

Turning off the Startup Page By default, the Startup Page is printed every time you power up the printer. You can disable the printing of the Startup Page by resetting the default through the printer's front panel menu, by sending a PostScript utility file to the printer, through the Apple Printer Utility on the Macintosh, or through your web browser (refer to the **PhaserShare Networking System Administrator Manual**).

Note If the printer detects a nonfatal failure during power up, it automatically prints a Startup Page containing diagnostic information regardless of the Startup Page setting in the front panel menu.

Demonstration Page

This page is a sample color print you can print through the front panel or through your web browser (refer to the **PhaserShare Networking System Administrator Manual**).

RGB and CMYK Color Samplers

The RGB and CMYK color samplers provide multipage charts containing color samples and their corresponding color values based on the RGB and CMYK color models. Print these charts to help you select colors for use in your documents. Refer to page 5-6 for an example.

Printing the Help Pages

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

```

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

```

2. To access the Help Pages, press the **Menu** button. The following message appears:

```

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

```

3. Press the left arrow (<----) or right arrow (---->) buttons until the Help Page you want appears, for example:

```

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

```

4. To print the page, press the **Print** button.

Printer standby modes

Normal standby

When the printer is idle for more than 4 hours, it goes into a standby mode that keeps the printer ready to use yet reduces energy consumption.

The printer exits standby mode when you send a file to the printer, press any front panel button, install or remove a media tray, or open any cover. For example, adding ink causes the printer to exit standby mode. When the printer exits this standby mode, it is ready to print in about 5 minutes.

Energy Star mode

For printers ordered with the Energy Star option, the Energy Star default is set to 1 hour. After an hour of inactivity, the printer cools down completely, requiring you to wait 10–15 minutes to let the printer warm up before using it again.

Because the printer uses ink during warm-up from a power-off condition and when exiting the Energy Star mode, you can reduce ink consumption by leaving the printer on. Always leaving the printer on, even during long periods when the printer is not used, ensures optimum printing performance and the best ink economy.

Increasing the Energy Star value from 1 hour keeps the printer ready for printing and eliminates the warm-up period. The recommended setting is 999 hours. You can change the Energy Star mode through the front panel or through your web browser (refer to the **PhaserShare Networking System Administrator Manual**).

Caring For Your Printer

Overview

This chapter describes the following topics to help you care for the printer and keep it in peak operating condition:

- **“Moving or shipping your printer” on page 7-2**
Describes the steps you must take to properly move or ship the printer from one location to another.
- **“Adding ink” on page 7-6**
Add ink when the ink level drops to one-half stick. The front panel displays an **Ink Low** message telling you when to add ink.
- **“Emptying the waste liner” on page 7-8**
Empty the excess ink from the waste liner when a front panel message tells you that the waste liner is full or whenever you remove the maintenance tray.
- **“Replacing the maintenance tray” on page 7-11**
Replace the maintenance tray when a front panel message tells you that the maintenance tray is low, approximately every 12,500 prints.
- **“Cleaning the printer” on page 7-14**
Describes how to clean the printer to solve specific print problems: ink smears on prints and problems feeding paper or transparencies from the media trays.

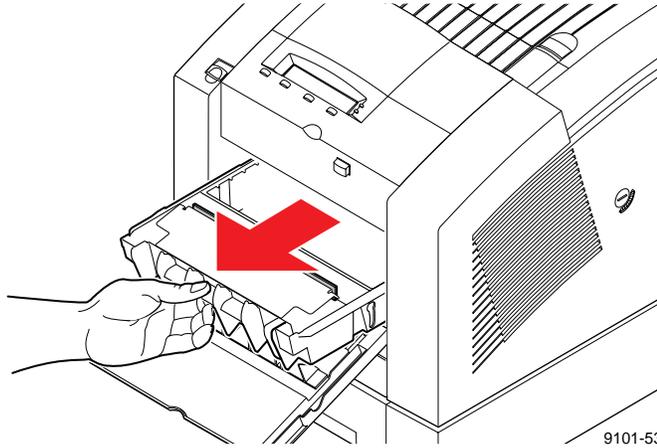
Moving or shipping your printer

Carefully follow the procedures listed below to avoid damaging your printer when you need to move or ship it.

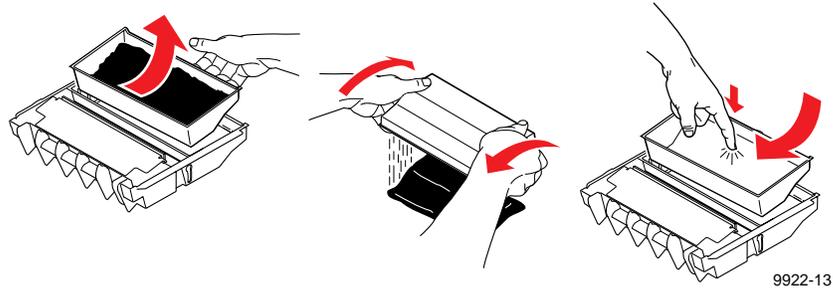
1. **Latch all covers:** Make sure that all doors and covers are firmly latched to ensure that the printhead is parked. **Do not turn off the printer until the doors are closed to avoid damage to the printhead.**
2. **Turn off the printer:** Wait for the printer's front panel to display the **Ready** message or the printer's name, then turn off the printer using the rear-panel On/Off switch.
3. **Unplug the printer:** To prevent damage to the printhead and the power supply, never turn off the printer by unplugging it.
4. **Wait for 30 minutes:** Let the printer cool down for at least 30 minutes before you proceed.

Caution *The printer must be allowed to cool down for at least 30 minutes before you move it so that the ink has time to solidify. Failure to wait 30 minutes will likely result in an ink spill that will damage the printer's internal components.*

5. Remove and store the maintenance tray:
- Open the front cover and remove the maintenance tray from the printer, keeping it level. Close the front cover.



- Remove, empty, and reinsert the waste liner into the maintenance tray.

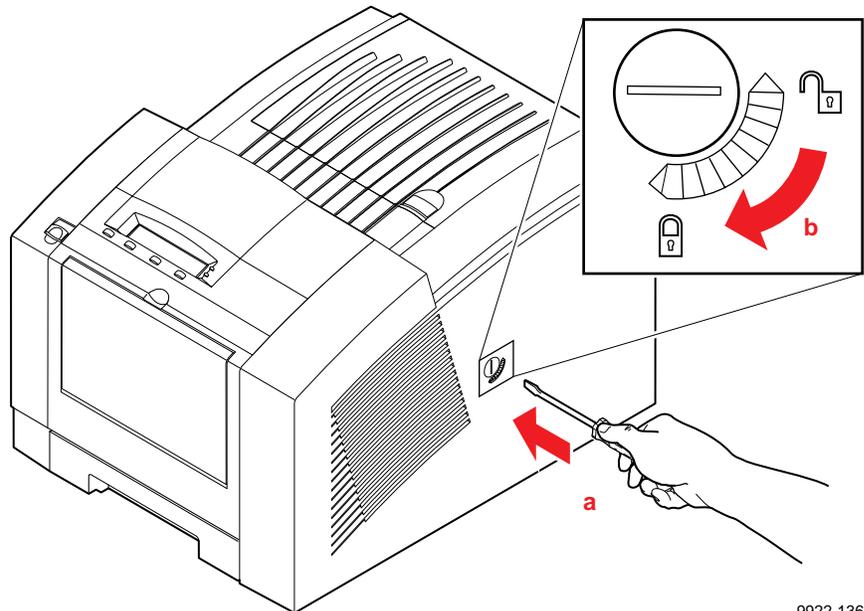


7 Caring For Your Printer

- c. Place the maintenance tray in a plastic bag and seal the bag. The maintenance tray contains drum fluid that leaks if the tray is tipped. Keep the maintenance tray level and in a sealed plastic bag while transporting it.

Caution To avoid potentially causing damages not covered by your printer's warranty, remove the maintenance tray before moving or shipping the printer. Always store a used maintenance tray in a leak-proof package and keep the tray level. Never ship a partially used maintenance tray.

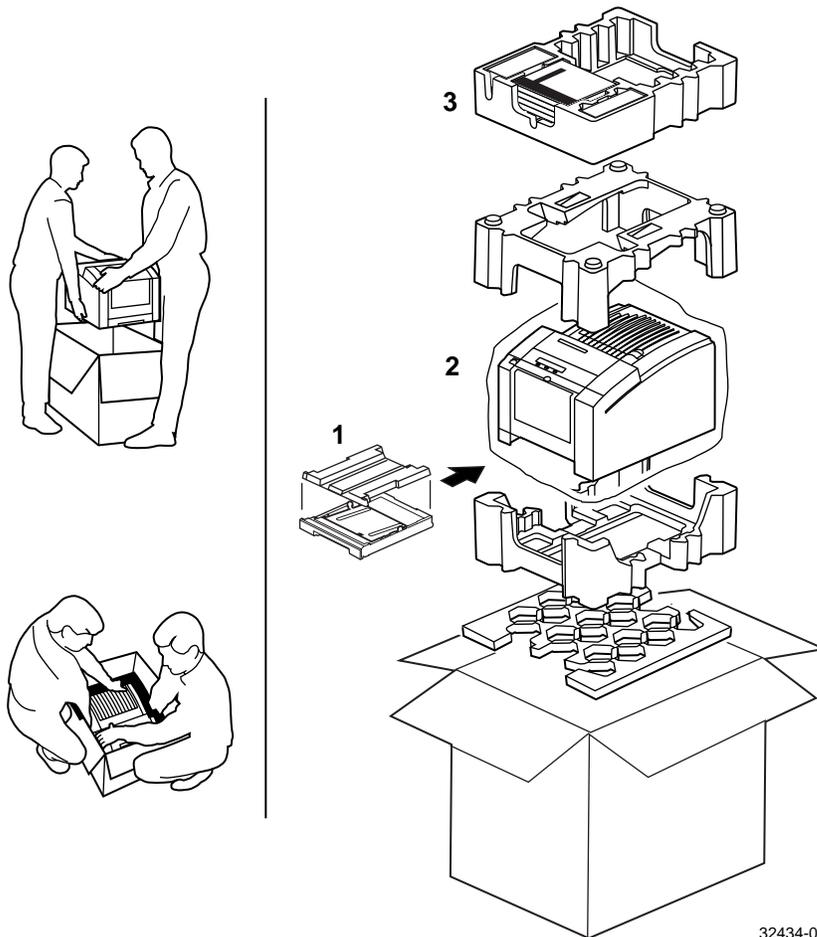
6. Lock the transit restraint:
 - a. Insert a wide flat-blade screwdriver into the transit restraint slot, located on the right side of the printer.
 - b. While pressing inward with medium pressure, turn the transit restraint slot clockwise to lock the printhead. The lock button is recessed from the side of the printer when fully engaged.



9922-136

Caution To avoid damaging the printer's internal components, always turn the printer power off and lock the transit restraint before moving the printer. Failure to do so may result in damage to the printer's internal components, and such damage may not be covered by your printer's warranty.

7. **Repack the printer:** Repack the printer in its original container. If you no longer have the shipping box or if you have any questions about the packing procedure, call your local dealer or in the U.S. call Tektronix at 1-800-835-6100.

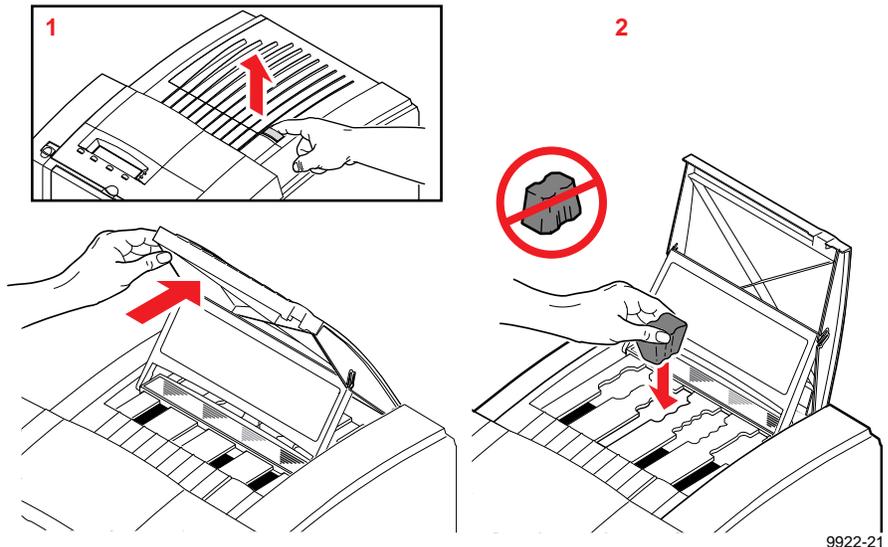


32434-06

Adding ink

You do not have to wait for the printer to run out of ink before adding ink. Prevent printing interruptions by periodically checking the ink supply and adding ink sticks as necessary. The front panel displays **Ink Low** when the level for one or more colors drops to one-half stick. When the printer is completely out of ink, it displays an **Out of Ink** message.

1. Open the top cover. Note the color-coded label and the different shapes of the slots of the ink-loading bin. Each ink stick color has a unique shape.
2. Drop the ink stick(s) of the correct color and shape, with the narrow (tapered) edge down, into the low or empty ink-loading bin. You can load up to three ink sticks in each bin.



3. Close the top cover.

Caution Do not force ink sticks into the ink-loading bin. If an ink stick does not load easily, make sure that the color and shape of the ink stick correspond to the correct loading bin color and shape.

Ink consumption. Ink consumption is primarily dependent on the ink coverage per print. Always keep a supply of ink sticks available to prevent printing interruptions.

- Refer to “Printer supplies” on page 10-2 for information on ordering ColorStix ink sticks.

Ink handling tips

- To ensure optimum print quality and best performance, leave the printer turned on overnight and during weekends. Leaving the printer on reduces the number of cleaning cycles, which consume ink.
- Keep ink sticks clean by storing them in their original containers until you are ready to use them.
- The ColorStix ink sticks will break if dropped; handle them with care.

Caution Use only Phaser 360 printer ColorStix ink sticks. The Phaser 360 printer *cannot* use solid ink intended for other printers, such as the Phaser 380 printer.

Do not load used ink into the printer; reusing waste ink ruins the printhead. Your warranty will not cover repair of damages caused by the reuse of waste ink.

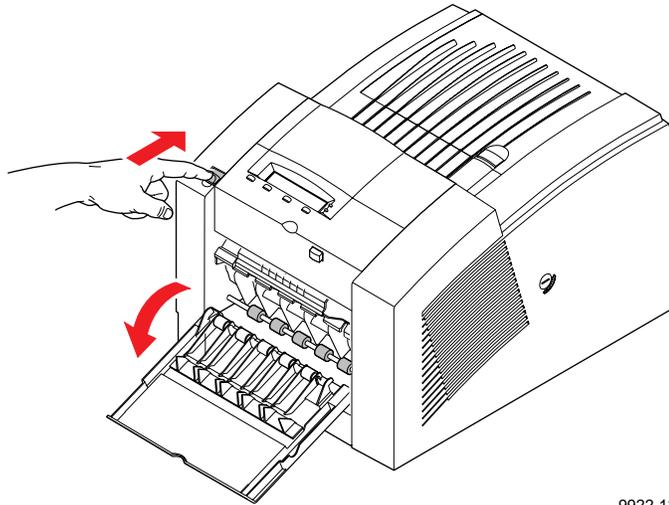
Discard broken ink sticks. Loading broken pieces of ink sticks can cause the ink-loading system to jam.

Emptying the waste liner

The waste liner catches melted ink stick residue resulting from the printer's self-cleaning operations. The blue plastic waste liner fits inside the maintenance tray, which is located behind the front cover. Empty the waste liner whenever you remove the maintenance tray or when the front panel displays the following message:

**Waste Liner (A) Full
Open Front Cover**

1. Open the front cover.



9922-123

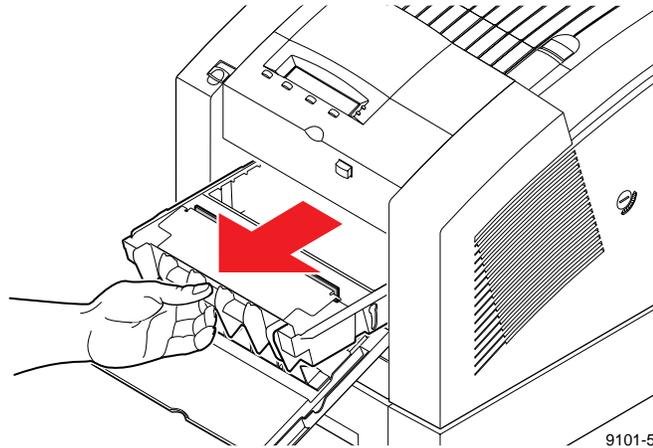
Caution Some surfaces inside the printer may be hot. Be careful not to touch the areas marked with this caution icon:



2. When you open the front cover, the following message appears:

**Waste Liner (A) Full
Remove Tray (B)**

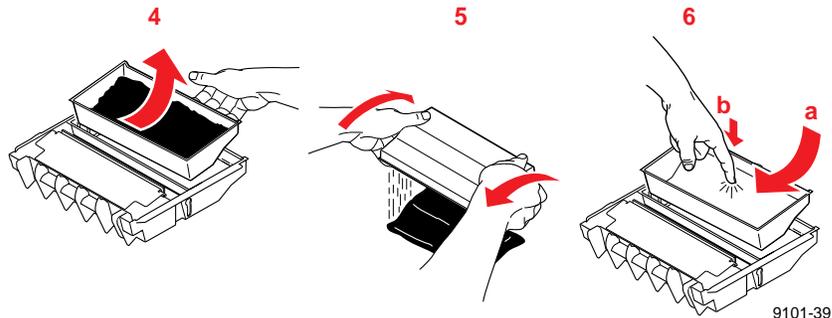
3. Grasp the maintenance tray by the front edge (marked with a blue "B" label) and lift up while sliding it out of the printer.



Note Once the maintenance tray has been partially used, it will leak drum fluid if tipped. Place the maintenance tray on a flat surface after removing it from the printer. Contact with the drum fluid poses no known health risk. Refer to "MSDS for silicone oil (drum fluid)" on page 11-6 for more information.

7 Caring For Your Printer

4. Lift one corner of the waste liner handle to release it from the maintenance tray; remove the waste liner.
5. Empty the contents of the waste liner by twisting it. Make sure that you empty the waste liner completely before replacing it in the maintenance tray. Used ink is nontoxic; it can be treated as normal office waste.
6. Place the waste liner back in the maintenance tray.
 - a. Place the side opposite the handle into the maintenance tray first.
 - b. Press down firmly in the center of the waste liner to snap it into place. Make sure that the waste liner is fully seated in the maintenance tray.



7. Reinsert the maintenance tray into the printer.

Note To prevent media jams at the media tray, be sure to push the maintenance tray into the printer until both sides latch in place.

8. Close the front cover.

Replacing the maintenance tray

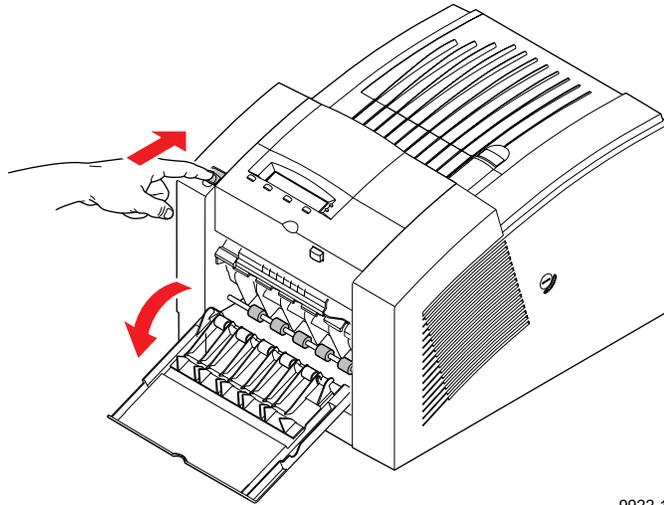
The maintenance tray is a disposable unit located inside the printer and behind the front cover. It cleans the printer's drum, contains the waste liner (a blue plastic insert) for used ink, and functions in other operations of the printer.

A front panel message tells you when the maintenance tray is low. Install a new maintenance tray to continue printing. Each replacement maintenance tray has a print capacity of approximately 12,500 prints. To avoid printing delays, keep an extra maintenance tray available for use in the printer.

- Refer to "Printer supplies" on page 10-2 for information on ordering the maintenance tray.

Note There is a 15-minute warm-up period required after replacing the maintenance tray.

1. Open the front cover.



9922-123

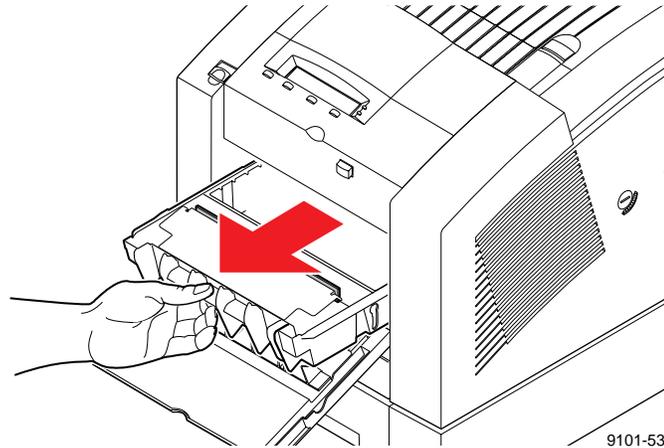
Caution Some surfaces inside the printer may be hot. Be careful not to touch the areas marked with this caution icon:



2. When you open the front cover, the following message appears:

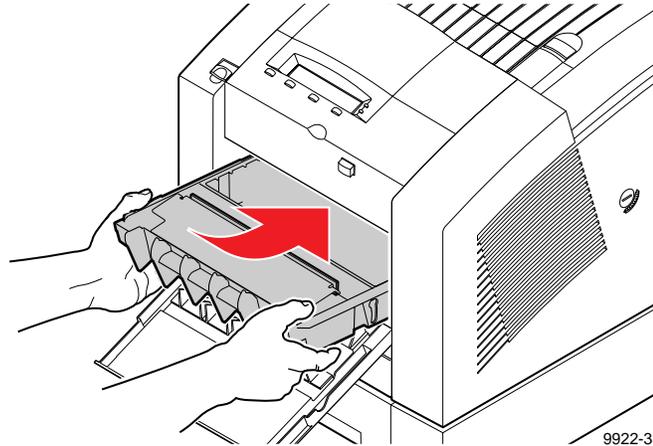
Caution Hot Surfaces
Install New Tray (B)

3. Grasp the maintenance tray by the front edge (marked with a blue “B” label) and lift up while sliding it out of the printer. Place the maintenance tray on a level surface.

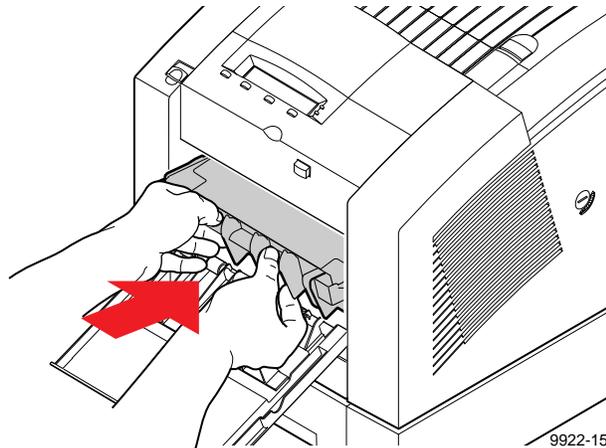


Note Once the maintenance tray has been partially used, it leaks drum fluid if tipped. *Never ship a partially used maintenance tray. Never move or ship a printer with a maintenance tray installed. Contact with the drum fluid poses no known health risk. Refer to “MSDS for silicone oil (drum fluid)” on page 11-6 for more information.*

4. Install the new maintenance tray by sliding it into the printer. Make sure the tray slides in straight on both sides.



5. Using both thumbs, push the tray in firmly until it latches.



6. Close the front cover and wait for the printer to warm up (about 15 minutes).
7. To prevent leaking, seal the used maintenance tray in the plastic bag from the new (replacement) maintenance tray. Treat the used maintenance tray as normal office waste.

Cleaning the printer

You need to clean the printer when the following occur:

- Frequent media jams.
- Prints are striped or smeared.

How often you need to clean the printer will depend on how heavily the printer is used and the environment in which it is used.

To determine an approximate maintenance schedule: Record the date of your first two cleanings, and then divide the elapsed time in half. If your first cleaning was in June, for example, and the second one was in December, then clean the printer about every 2 – 3 months for preventive maintenance.

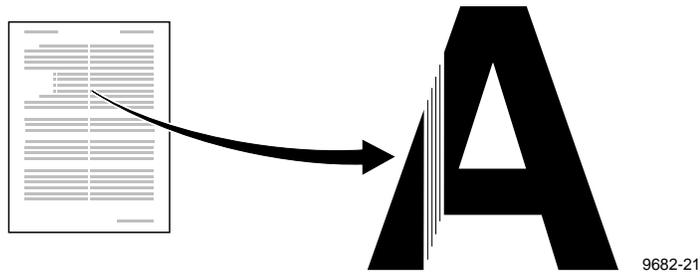
Using the front panel: Some cleaning procedures are executed through the printer's front panel. Front panel messages guide you through the steps of the procedures and on how to print cleaning instructions.

If the printer has frequent media jams

Problem	Cleaning procedure
Media jams or misfeeds at the upper tray.	"Cleaning for upper media tray jams: media-pick roller" on page 7-34.
Media jams or misfeeds at the lower paper tray.	"Cleaning for lower tray jams: paper-pick rollers" on page 7-43.
Media jams behind the front cover or at the manual-feed slot.	"Cleaning for jams and ink smears: paper-feed rollers" on page 7-22.
Media jams or wraps around the large black (transfix) roller inside the exit cover.	"Cleaning for ink smears and jams: internal paper path" on page 7-20.

If prints have light stripes or smears

Problem	Cleaning procedure
Light-colored stripes or missing colors on prints.	"Light stripes on prints: cleaning the printhead" on page 8-12.
Ink smears on the front, back, or edges of a page.	<p>1 "Cleaning for ink smears and jams: internal paper path" on page 7-20.</p> <p>2 "Cleaning for jams and ink smears: paper-feed rollers" on page 7-22.</p> <p>3 "Cleaning for ink smears: paper-exit path" on page 7-28.</p>
Oil (drum fluid) on top edge of print.	3 "Cleaning for ink smears: paper-exit path" on page 7-28.



9922-29

The Cleaning Page

The Cleaning Page, a page with a series of narrow, colored stripes, is output each time the printhead is cleaned. More than one page may be printed. This occurs at the following times:

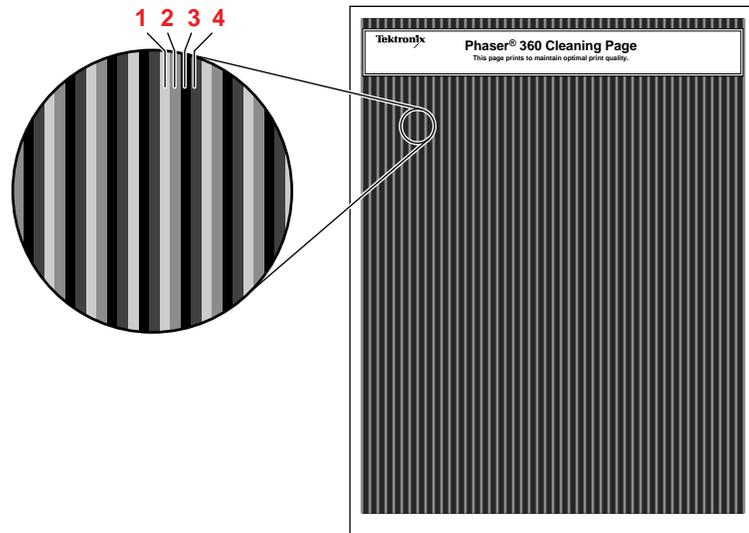
- When you run the cleaning procedure to eliminate light stripes in your prints (see page 8-12)
- During the printer's warming-up routine
- After emerging from Energy Star standby mode

1 Red

2 Green

3 Blue

4 Black



9922-137

Selecting the Cleaning Page source

The default source for the Cleaning Page or other paper that the printer uses in its cleaning procedures is the upper tray. When the Lower Paper Tray Assembly is installed, you can ensure that the printer always uses paper from the lower paper tray in its self-cleaning procedures by changing a setting in the printer's front panel as follows:

1. While the **Ready** message is displayed, press the **Menu** button. The printer displays the following message:

```

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

```

Cleaning Page Source
<---- ----> Menu

```

5. Press the **Menu** button. The following message appears:

```

Cleaning Page Source:Upper*
<---- ----> OK

```

6. Press the right arrow (---->) button once. The following message appears:

```

Cleaning Page Source:Lower
<---- ----> OK

```

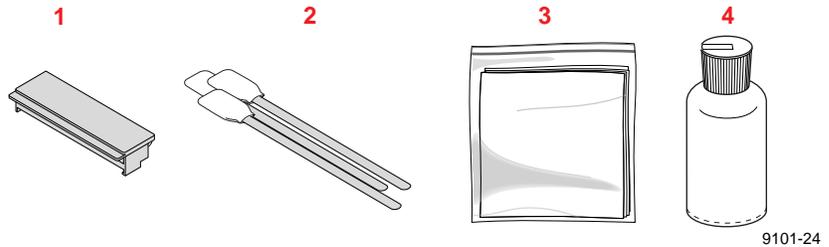
7. Press the **OK** button to confirm the setting.
8. Press the **Exit** button until the printer displays **Ready**.

You can also change the default through a utility file (refer to the printer's CD-ROM).

Cleaning supplies

Your printer is shipped with a cleaning kit that contains the following supplies:

1. Cleaning tray (media-pick roller)
2. Foam swabs
3. Lint-free cloth wipes (dry)
4. Plastic bottle for dispensing isopropyl alcohol



Some cleaning procedures require you to use cloth wipes or swabs saturated with isopropyl alcohol. Because regulations prohibit shipping alcohol or presoaked cleaning materials with the printer, you must supply 90% pure isopropyl alcohol (available at pharmacies).

Presoaked alcohol wipes When you reorder cleaning supplies, you receive individually wrapped cloth wipes presoaked with isopropyl alcohol. You can obtain these presoaked wipes either separately in 10-packs or as part of a separate cleaning kit from Tektronix. For ordering information, refer to “Printer supplies” on page 10-2.

Using isopropyl alcohol

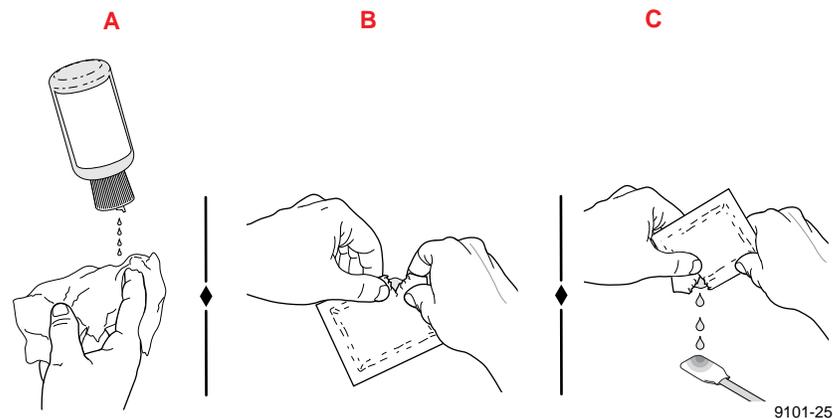
Some of the cleaning procedures require isopropyl alcohol (IPA). Use the purest IPA (99%) available. You can use 90% pure IPA, but if you do, you must wait after cleaning to make sure that the printer parts are completely dry. Ninety-nine percent IPA dries quickly; 90% IPA may take several minutes to dry.

Caution Rubbing alcohol may contain oils that leave undesirable residue on printer parts. Carefully read the label on the container. If the rubbing alcohol contains *only* isopropyl alcohol and deionized water, it is safe to use. To avoid harming the printer's internal components, never use *water only* to clean them.

Whenever the cleaning instructions refer to a lint-free cloth moistened with isopropyl alcohol (A), you can substitute a presoaked alcohol cloth (B). When the cleaning instructions direct you to use an alcohol-soaked swab, you can use the extra alcohol in a presoaked alcohol cloth packet to moisten the swab (C).

Warning Alcohol is flammable; keep alcohol-soaked cloths and swabs away from hot surfaces.

To order presoaked alcohol cloth wipes, refer to "Printer supplies" on page 10-2.

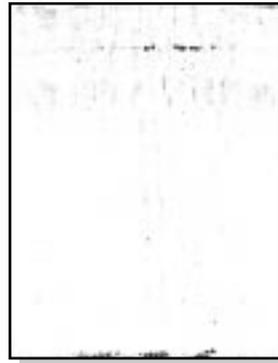


Cleaning for ink smears and jams: internal paper path

Approximate time to complete: 3–6 minutes

Clean the printer's internal paper path surfaces if you note the following:

- Your prints have stray ink marks on the front or the back.



9922-20

- The media is wrapping around the large black roller inside the exit cover.

Caution Always use clean sheets of paper to clean the paper path. Do not reuse cleaning sheets. High-grade, heavier papers, such as 120 g/m² (32 lb.) bond, work best.

Do not attempt duplex (two-sided) printing on any type of media. Ink already present on the media offsets onto the internal paper path, requiring you to perform cleaning procedures.

1. Load at least 10 sheets of clean, high-grade paper into the printer. If your printer is configured with just the upper media tray, load that tray. If you have installed the Lower Paper Tray Assembly, you can load either the upper tray or the lower tray. If you use the lower paper tray, make sure that the printer's default has been reset so that the printer will feed paper that it needs for its cleaning procedures from the lower paper tray only. Refer to "Selecting the Cleaning Page source" on page 7-16 for instructions.

2. When the printer is on and the **Ready** message or the printer's name appears in the front panel, press the **Clean** button. The printer displays the first selection in the menu:

```
Clean:Light Stripes
<---- Clean Test
```

3. Press the left arrow (<---) button until the following front panel message appears:

```
Clean:Ink Smears
<---- Clean Test
```

4. Press the **Clean** button. The printer displays the following message:

```
Warming Up
Cancel
```

5. After a short delay during the warm-up period, the printer begins an automatic sequence of feeding **10** clean sheets of paper from the media tray selected as the cleaning page source. A front panel message indicates the number of sheets remaining to be fed. For example:

```
Cleaning:Using 10 Sheets
```

6. When the cleaning sequence is complete, inspect the last sheet of paper fed through the printer. If it is not clean, repeat the cleaning sequence by pressing the **Clean** button once again.
7. Return the printer to normal operation by pressing the **Exit** button.

If the ink smear problem persists: Refer to the following two procedures for directions on cleaning paper-feed rollers and the paper-exit path.

Cleaning for jams and ink smears: paper-feed rollers

Approximate time to complete: 5 minutes

The paper-feed rollers carry the print media from the media tray and manual-feed slot through the printer. Occasionally, stray ink particles become attached to the paper-feed rollers, creating slick roller surfaces that cause media to feed improperly. Clean the upper and lower paper-feed rollers if either of the following conditions exist:

- Media is consistently jamming behind the front cover or at the manual-feed slot.
- Ink smear problems persist after you have performed the “Cleaning for ink smears: internal paper path” procedure.



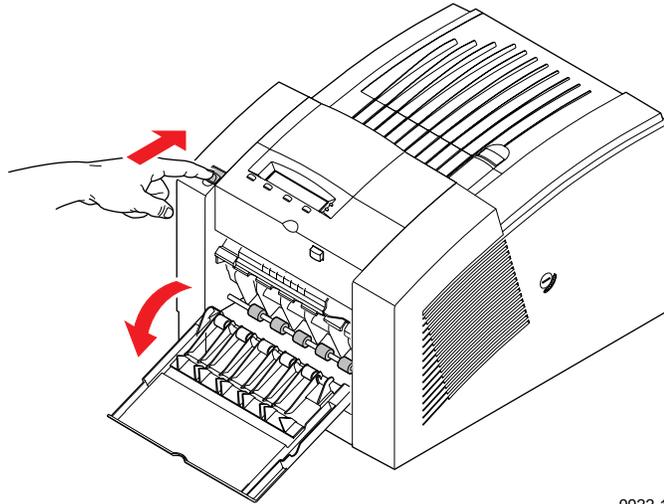
9922-15

Refer to “Using isopropyl alcohol” on page 7-19 for more information on proper cleaning procedures.

Caution Hot surfaces exist behind the upper paper-feed rollers. To avoid personal injury during cleaning procedures, do not reach in behind these rollers.

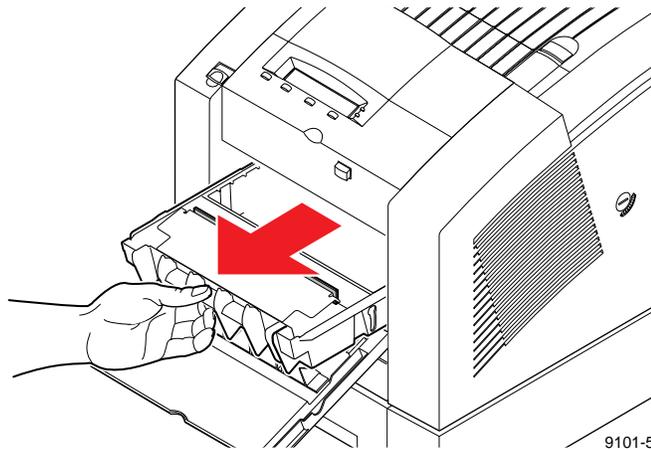


1. Open the front cover.



9922-123

2. Grasp the maintenance tray by the front edge and lift up while sliding it out of the printer. Keep the maintenance tray upright.

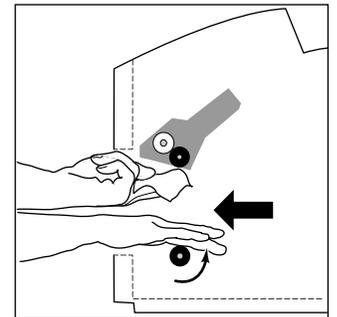
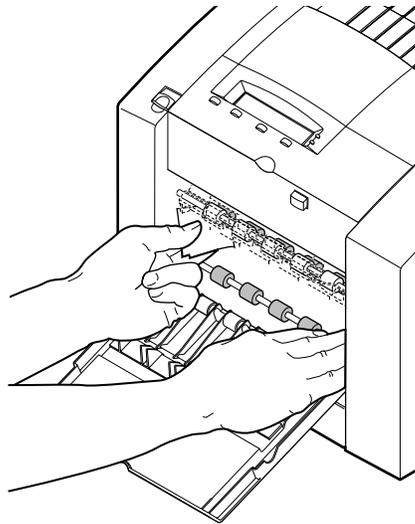


9101-53

Note Once the maintenance tray has been partially used, it leaks drum fluid if tipped. Contact with the drum fluid poses no known health risk; refer to page 11-6 for more information.

7 Caring For Your Printer

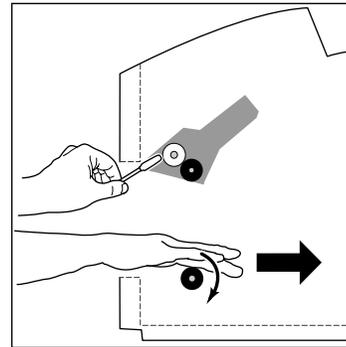
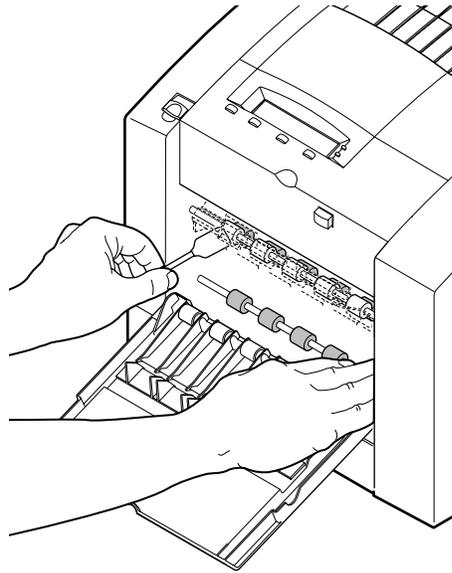
3. Locate the two sets of upper paper-feed rollers above the maintenance tray: One set of rollers is black rubber; the other set is white plastic. Turning the lower rubber rollers also turns the upper rollers.
4. To clean the upper black rubber rollers:
 - a. Use either the prepackaged alcohol-soaked cloth, or fold a lint-free cloth into a 2-inch square and soak with alcohol. Keep the cloth moist with alcohol during the procedure.
 - b. Place the cleaning cloth against the underside of each upper rubber roller, lifting to create pressure against the roller.
 - c. Press the index or middle finger of your other hand flat against a lower roller and turn the roller toward you using the entire length of your finger. The upper rubber roller should rotate **four or five complete revolutions** to ensure proper cleaning.



9922-140

- d. **Scrub each roller thoroughly.** If the cloth becomes dirty, discard it and use another.

5. To clean the upper white plastic rollers:
 - a. Use alcohol-soaked swabs for this procedure.
 - b. Place the swab on top of each upper white roller and press down on the swab to create pressure against the roller.
 - c. Rotate the upper white roller **four or five complete revolutions** by turning the lower black rubber rollers away from you with the index finger of your other hand.

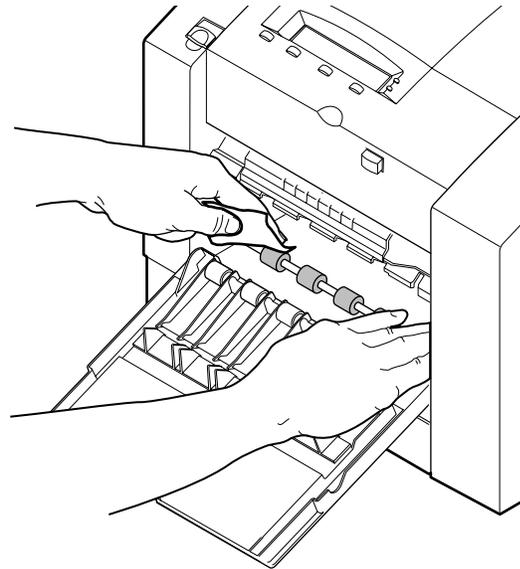


9922-141

- d. Scrub each roller thoroughly until clean. If the swab becomes dirty, discard it and use another.

7 Caring For Your Printer

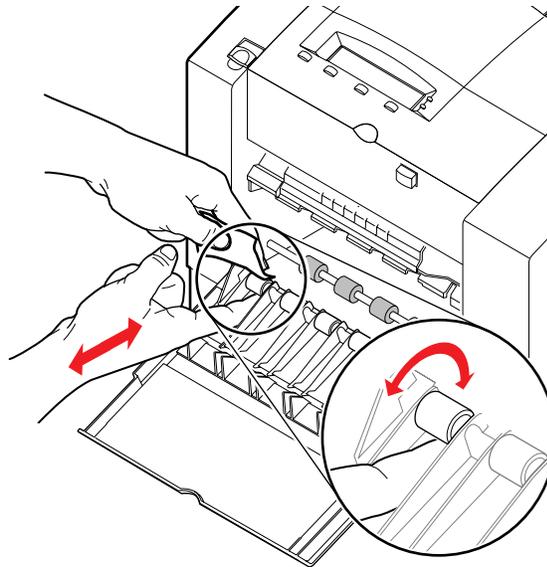
6. Locate the two sets of lower paper-feed rollers: one set of rollers is black rubber; the other set is white plastic. The lower rubber rollers are located below the maintenance tray; the white plastic rollers are located on the inside of the front cover.
7. To clean the lower rubber paper-feed rollers:
 - a. Use either the prepackaged alcohol-soaked cloth or fold a lint-free cloth into a 2-inch square and soak with alcohol.
 - b. Place and hold the cleaning cloth on top of each lower rubber roller, pressing to create pressure against the roller.
 - c. Press the index or middle finger of your other hand flat against a lower roller and turn the roller using the entire length of your finger. The lower rubber roller should rotate **four or five complete revolutions** to ensure proper cleaning.



9922-113

- d. **Scrub each roller thoroughly.** If the cloth becomes dirty, discard it and use another.

8. To clean the lower white plastic rollers:
 - a. Use either the prepackaged alcohol-soaked cloth or fold a lint-free cloth into a 2-inch square and soak with alcohol.
 - b. Place and hold the cleaning cloth on top of each lower white roller while turning the individual roller with your thumb and forefinger.



9922-119

- c. Scrub each roller thoroughly until clean. If the cloth becomes dirty, discard it and use another.
9. Put the maintenance tray back in the printer, pushing on both sides of the maintenance tray to latch it firmly in place.
10. Close the front cover.

If the problem persists: Refer to “Cleaning for ink smears: paper-exit path” on page 7-28.

Cleaning for ink smears: paper-exit path

Approximate time to complete: 10 minutes

If you have already performed the other “Cleaning for ink smears” procedures described earlier in this chapter but problems persist, you should manually clean the paper-exit path. Refer also to “Cleaning for jams and ink smears: paper-feed rollers” on page 7-22.

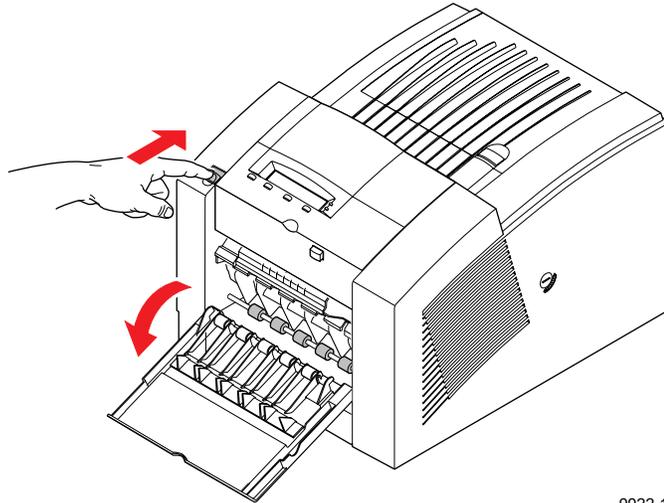
Occasionally, stray ink particles and drum fluid become attached to the exit fingers, rollers, and guides under the exit cover causing ink streaks or marks on the top edge, front, or back of prints. When this occurs, you must clean these parts using both dry and alcohol-soaked swabs. Refer to “Using isopropyl alcohol” on page 7-19 for more information.

Sample ink smear: paper-exit path



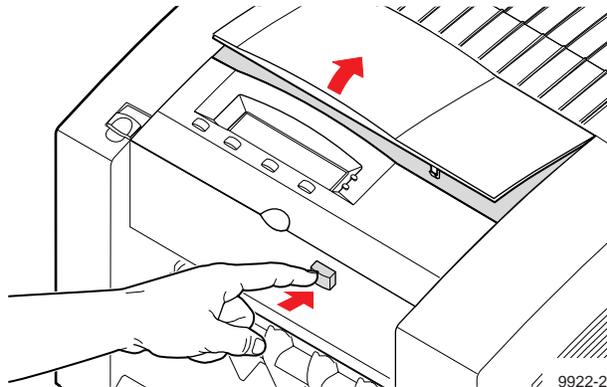
9922-31

1. Open the front cover.



9922-138

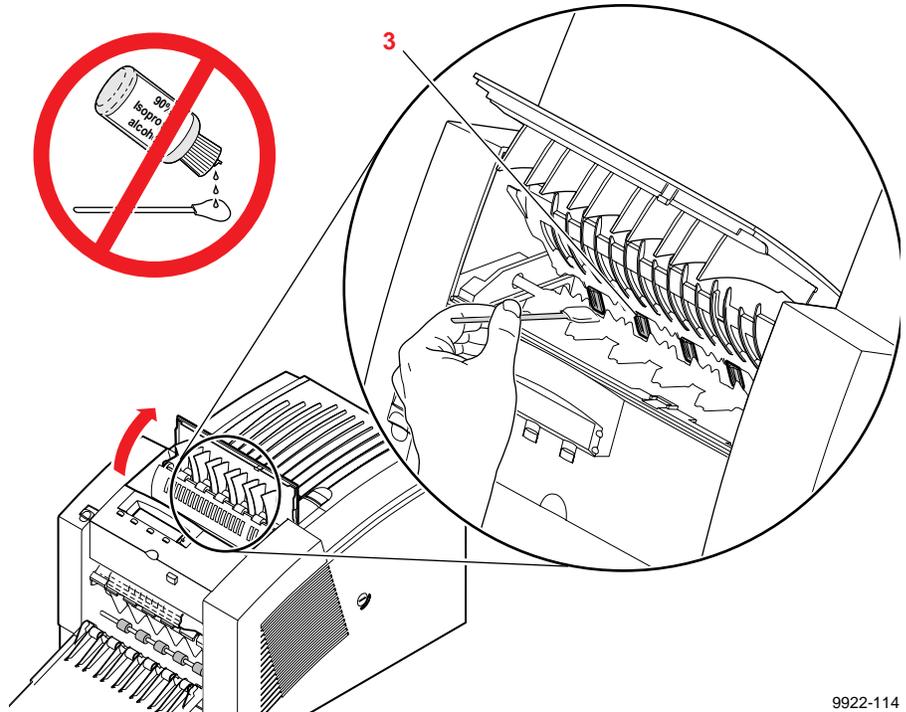
2. Open the exit cover using the blue release button located inside the front cover, at the top of the printer.



9922-24

7 Caring For Your Printer

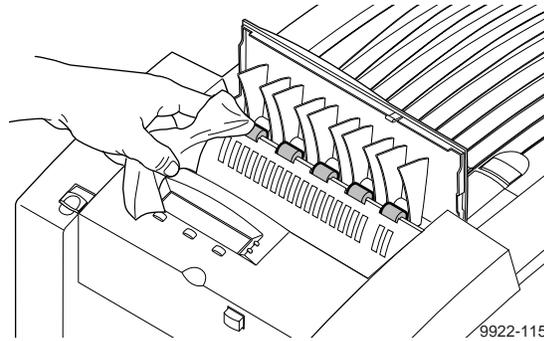
3. Clean excess ink particles and drum fluid from the colored exit fingers by gently wiping the top surface of each finger using a **dry** swab.



9922-114

Caution To avoid damaging the print drum and exit fingers, never scrape excess ink with a tool or fingernail. Use a dry swab provided with the cleaning kit.

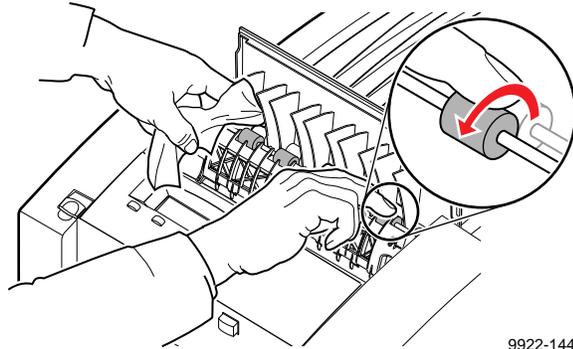
4. To clean the rubber exit rollers:
 - a. Wrap an alcohol-soaked cloth around the index finger of one hand.
 - b. Press your cloth-covered finger against each roller and turn the roller several times to clean each roller individually.



Note You may notice some staining of the exit rollers while performing the cleaning procedure. This is normal and does not indicate additional cleaning is necessary. Simply clean rollers to remove any build-up of ink.

7 Caring For Your Printer

5. To clean the white plastic exit rollers:
 - a. Wrap an alcohol-soaked cloth around the index finger of one hand.
 - b. Place and hold your cloth-covered finger on top of each roller while turning a black rubber exit roller toward you with forefinger of your other hand.

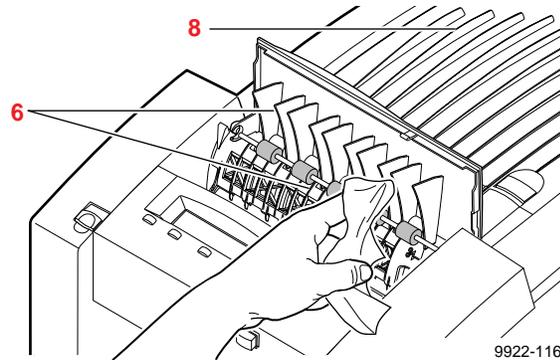


9922-144

6. To clean the two sets of ribbed exit guides on the underside of the exit cover, gently wipe the raised ribs using an alcohol-soaked cloth.

Caution To avoid damaging the print drum and exit guide, never scrape excess ink with a tool or fingernail. Use only the materials provided with the cleaning kit.

7. Close the exit cover and the front cover.
8. If the ribbed guides on top of the printer (the output tray) require cleaning, use an alcohol-soaked wipe.



9922-116

Cleaning for upper media tray jams: media-pick roller

Approximate time to complete: 5 minutes

Clean the media-pick roller if the printer incorrectly feeds paper or transparencies or if it feeds more than one sheet at a time.

You will need the pick-roller cleaning tray included in the cleaning kit and isopropyl alcohol. Refer to “Using isopropyl alcohol” on page 7-19 for more information on proper cleaning procedures.

The printer’s front panel messages will guide you through the necessary steps to perform this automatic cleaning procedure. You can also manually clean the media-pick roller; refer to page 7-39.

Note Media-picking problems can also occur when the maintenance tray is not properly latched. Try removing and relatching the maintenance tray to cure a media-picking problem. Refer to “Replacing the maintenance tray” on page 7-11 for instructions.

Automatically cleaning the media-pick roller

1. When the printer is on and the **Ready** message or the printer’s name appears in the front panel, press the **Clean** button. The printer displays the first selection in the menu:

```
Clean:Light Stripes  
<---- Clean Test
```

2. Press the left arrow (<----) button until the following front panel message appears:

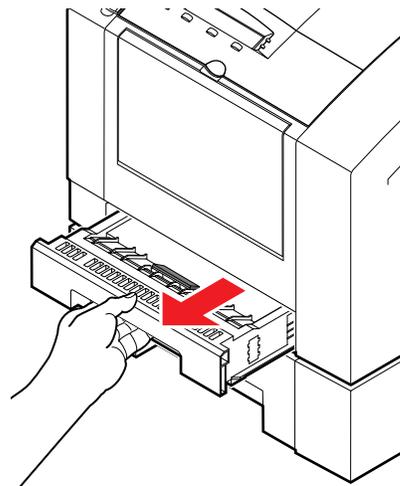
```
Clean:Media Tray Jams  
<---- Clean Test
```

3. Press the **Clean** button once again.

4. When the following front panel message appears, press **Print** if you want a printout of the procedure, otherwise press **Continue**:

Print Instructions?
Continue Print

5. When you press **Continue**, a front panel message prompts you to install the cleaning tray in the media tray.
 - a. Remove the upper media tray from the printer. Remove all print media from the media tray.

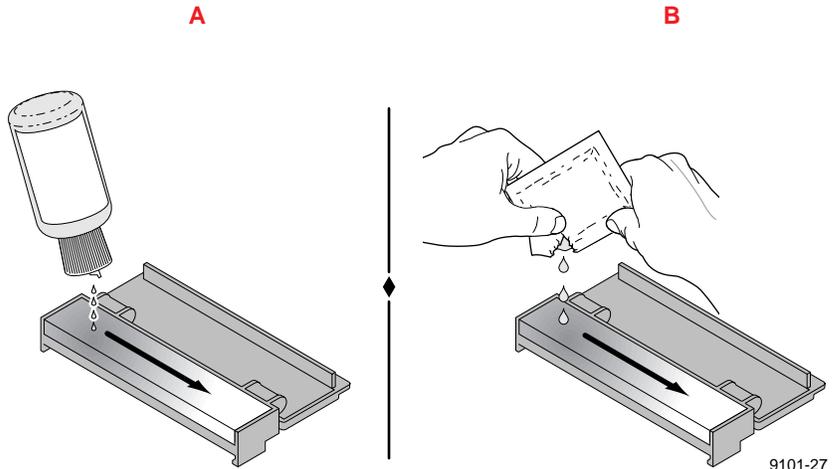


9922-27

- b. Remove the cleaning tray from the cleaning kit and open the tray lid to reveal the cleaning tray sponge.

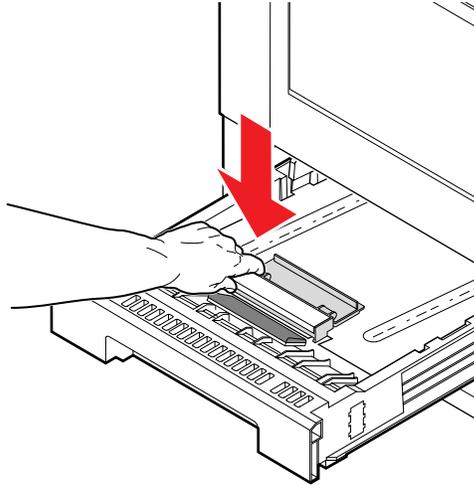
7 Caring For Your Printer

- c. Wet the cleaning tray sponge with isopropyl alcohol (A); a bottle is provided in the cleaning kit for dispensing the alcohol. Alternately, you can squeeze the alcohol from two presoaked alcohol wipe packets to moisten the cleaning tray sponge (B).



Caution Rubbing alcohol may contain oils that leave undesirable residue on printer parts. Carefully read the label on the container. If the rubbing alcohol contains *only* isopropyl alcohol and deionized water, it is safe to use. To avoid harming the printer's internal components, never use *water only* to clean them.

- d. Place the cleaning tray in the media tray so that the tray's sponge pad is nearest the media tray's handle. Press the two tabs underneath the cleaning tray into the two square notches provided in the media tray.



9922-28

- e. Insert the media tray with the cleaning tray into the printer.
6. Press the **Clean** button. The printer cleans the media-pick roller while displaying the following message:

Cleaning

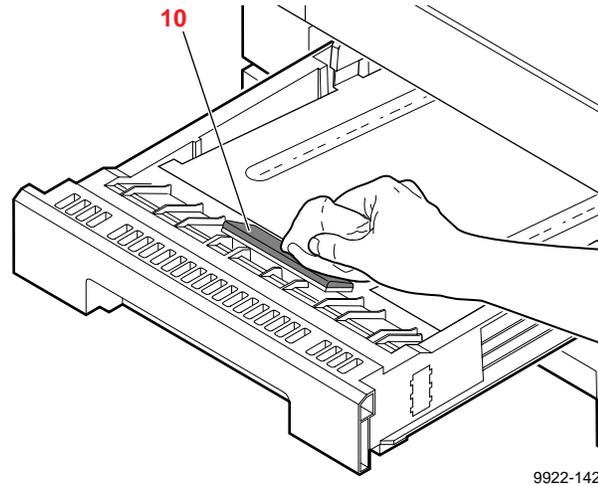
7. When the cleaning operation is complete, the following front panel message appears:

Remove Cleaning Tray

8. Remove the media tray from the printer.
9. Remove the cleaning tray from the media tray.

7 Caring For Your Printer

10. Examine the separator pad located inside the media tray near the paper tray's handle. If it is coated with dust, wipe the separator pad using a clean cloth or a dry brush.



11. Reload media in the media tray. Replace the media tray in the printer.
12. The front panel redisplay the following message:

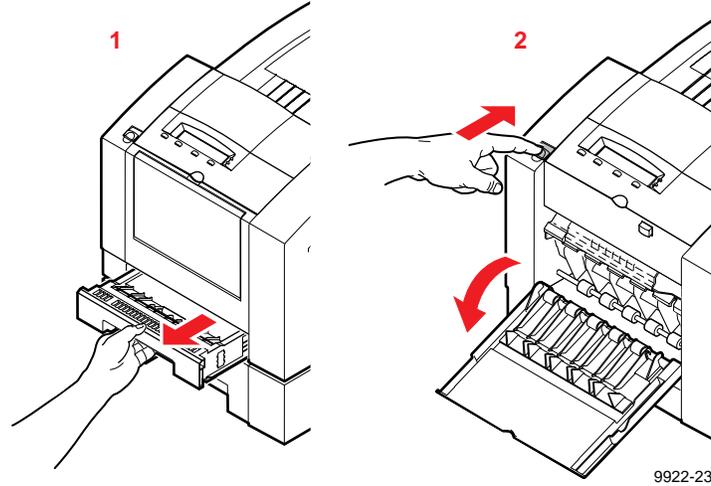
```
Clean:Media Tray Jams  
<---- Clean Test
```

13. Press the **Exit** button to return to normal operation. Store the cleaning tray in its original packaging for later use.

If media-feed problems persist: You may need to clean the media-pick roller by hand with an alcohol-soaked cloth.

Manually cleaning the media-pick roller

1. Remove the upper media tray from the printer.
2. Open the front cover.



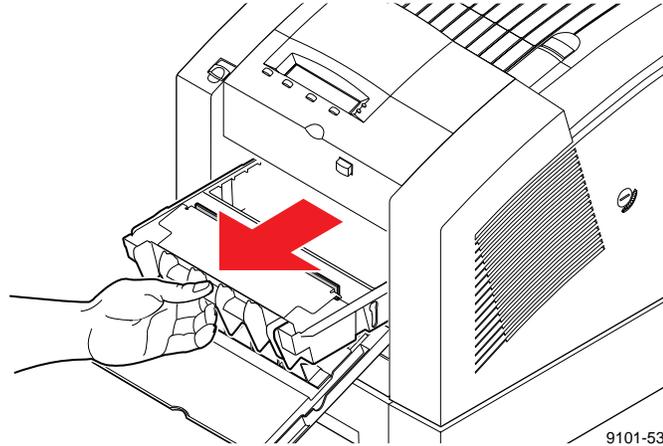
9922-23

Caution Hot surfaces exist behind the upper paper-feed rollers. To avoid personal injury during cleaning procedures, do not reach in behind the paper-feed rollers.



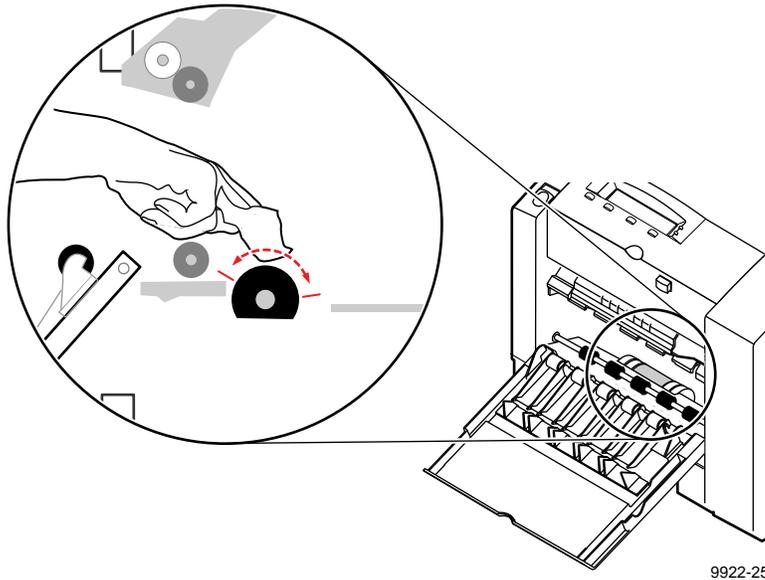
7 Caring For Your Printer

3. Grasp the maintenance tray by the front edge and lift up while sliding it out of the printer. Place the tray on a level surface.



Note Once the maintenance tray has been partially used, it leaks drum fluid if tipped. Contact with the drum fluid poses no known health risk; refer to page 11-6 for more information.

4. To clean the top surface of the media-pick roller:
 - a. Locate the top of the media-pick roller behind the black rubber paper-path rollers.
 - b. Use either the prepackaged alcohol-soaked cloth or a lint-free cloth folded into a 2-inch square and soaked with alcohol.
 - c. **Scrub the top surface of the media-pick roller thoroughly.** If the cloth becomes dirty, discard it and use another.



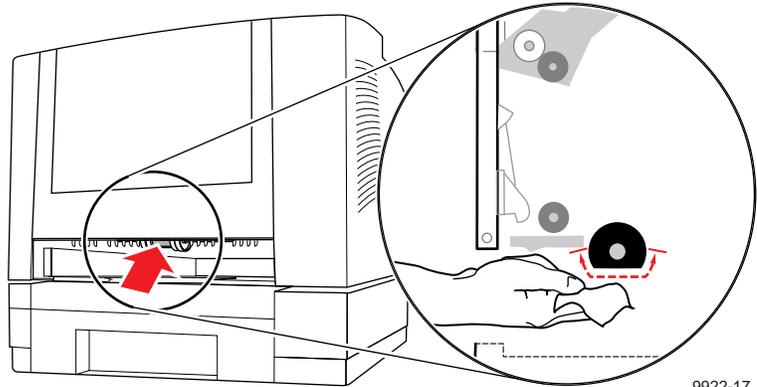
5. Replace the maintenance tray in the printer.

Note To prevent media jams at the media tray, be sure to push the maintenance tray into the printer until both sides latch in place.

6. Close the front cover.

7 Caring For Your Printer

7. To clean the bottom of the media-pick roller:
 - a. Use either the prepackaged alcohol-soaked cloth or a lint-free cloth folded into a 2-inch square and soaked with alcohol.
 - b. Scrub the bottom surface of the pick roller thoroughly.



9922-17

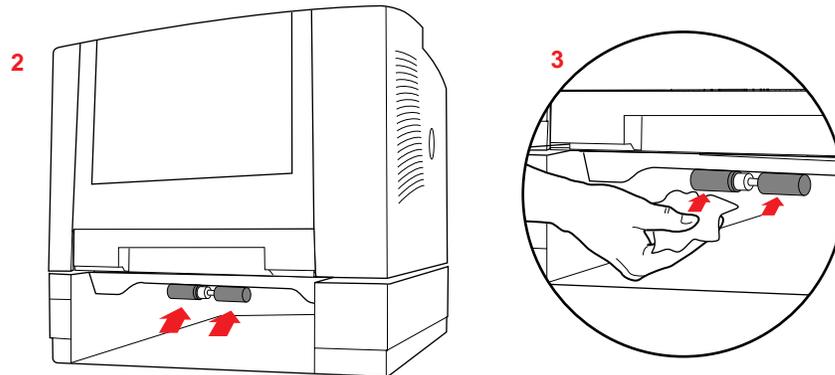
8. Replace the upper media tray in the printer.

Cleaning for lower tray jams: paper-pick rollers

Approximate time to complete: 1 minute

If the printer feeds paper incorrectly or feeds more than one sheet at a time from the Lower Paper Tray Assembly, you can generally correct the problem by cleaning the paper-pick rollers with isopropyl alcohol. Refer to “Using isopropyl alcohol” on page 7-19 for more information.

1. Remove the lower paper tray from the Lower Paper Tray Assembly.
2. Locate the paper-pick rollers.
3. Using an alcohol-soaked cloth, scrub both paper-pick rollers thoroughly.



9922-149

4. Replace the lower paper tray in the Lower Paper Tray Assembly.

7 Caring For Your Printer

Troubleshooting

Overview

Your Tektronix Phaser 360 color printer is designed for reliable operation even in high-volume printing environments. When printer problems do arise, most are easy to resolve without a service call. Proper usage and maintenance will help keep your printer performing at its peak. This chapter includes the following topics:

- “Front panel error messages” on page 8-2
- “Troubleshooting quick reference” on page 8-5
- “Light stripes on prints: cleaning the printhead” on page 8-12
- “Media jams and misfeeds” on page 8-15
- “Ink smears” on page 8-20
- “If your file doesn’t print” on page 8-21
- “Printed colors are not what you expected” on page 8-31

Front panel error messages

The front panel displays messages indicating the condition of the printer. Some messages, such as **Standby** and **Warming Up**, simply provide status information and require no user action. Error messages, such as **Jam:Open Front Cover**, require you to perform some action, such as clear a paper jam. Refer to the table below for responses to front panel error messages.

Numeric error codes: The printer may display a numeric error code when it detects certain types of problems. If you see a numeric error code, first write down the number. Then turn off the printer, wait at least 15 seconds, and then turn the printer on again. If that does not solve the problem, call your local Tektronix office for assistance or contact Tektronix Customer Support in the U.S. and Canada at **1-800-835-6100** or on-line at http://www.tek.com/Color_Printers/.

Front panel messages

Message	Action
Fault. Service Required	Write down the error code in the display. Turn the printer off, wait at least 15 seconds, and then turn the printer on again. In the U.S., call Tektronix service at 1-800-835-6100 . Outside the U.S., contact your local Tektronix office.
Incorrect Media Size	An incorrect paper size is loaded in the tray, or paper narrower than A4-size is in the manual feed slot. Use letter- or A4-size media only.
Ink Low	This message appears when the ink level drops to one-half stick. Open the top cover and add the appropriate color ink stick.
Ink Sticks Jammed	Open the top cover and make sure the bottom ink sticks are resting against the bottom of the ink bin chutes. Clean the ink sticks of particles from broken ink sticks.
Install Tray (B)	Insert a maintenance tray into the printer.
Install New Tray (B)	Open the front cover, remove the maintenance tray, and replace it with a new one.
Jam:Open Exit Cover	Open the exit cover and remove the paper jam. You may need to clean the paper exit path if the problem persists.

Front panel messages (cont'd.)

Message	Action
Jam:Open Front Cover	Open the front cover and remove the paper jam from the manual-feed slot or behind the front cover. You may need to push on both sides of the maintenance tray to relatch it or clean the upper or lower paper-feed rollers.
Jam:Remove Lower Tray	There is a paper jam at the lower paper tray. Remove the tray and the jammed paper.
Jam:Remove Upper Tray	There is a paper jam at the standard media tray. Remove the tray and the jammed paper. You may need to run the Clean:Paper Jams routine if this problem persists.
Jam:Retry Manual Feed	Remove the media from the manual-feed slot and reinsert it.
Lower Media Tray Empty	Add paper to the lower paper tray.
Maintenance Tray (B) Low	The maintenance tray is nearly empty of drum fluid. Open the front cover, remove the maintenance tray, and replace it with a new one.
Manual Feed Paper	The printer requires a sheet of paper for self-cleaning, but the media tray contains transparencies. Feed a sheet of paper into the manual feed slot.
Media Tray Empty	Add paper or transparencies to the media tray.
Out of Ink	One or more ink bins is empty. Load the appropriate ink stick(s).
Replace Lower Media Tray	Insert the lower paper tray.
Replace Media Tray	Insert the standard media tray.
Replace Upper Media Tray	Insert the standard media tray.
Tray (B) Locked	The printer has locked the maintenance tray because hot ink is present. Close the front cover and wait for a few minutes before trying to remove the maintenance tray.
Unlock Transit Restraint	Unlock the transit restraint on the right side of the printer before sending print jobs.

Front panel messages (cont'd.)

Message	Action
Upper Media Tray Empty	Add paper or transparencies to the standard media tray.
Waiting For Manual Feed	Insert paper or transparency in the manual feed slot.
Waiting For Paper	The print job specifies paper, but the printer detects that the transparency tray is installed switch on the side of the tray is set to Transparency . Load paper in the media tray and press OK. For printing paper, install the paper tray and set the switch to Paper . For printing labels in the transparency tray, set the switch to Label .
Waiting For Transparency	The print job specifies transparency, but the printer detects that the paper tray is installed. the tray switch is set to Paper (paper tray) or Label (transparency tray). Load transparency in the media tray and press OK. Pull out the tray, set the switch to Transparency and reinsert the tray.
Waste Liner (A) Full	Open the front cover, remove the maintenance tray, and empty the waste liner.

Troubleshooting quick reference

Refer to the following tables if you encounter problems with the printer. For additional troubleshooting topics, visit the Tektronix web site at http://www.tek.com/Color_Printers/.

Media feeding or jamming problems

Symptom	Solution
Paper jams or mispicks at the standard paper tray or transparency tray.	<ul style="list-style-type: none"> ■ Is the paper too thick or thin for the printer? Use standard office paper 60 to 120 g/m² (16 to 32 lb.) or Tektronix transparency media. Refer to “Acceptable media sizes, types, and weight” on page 4-6 for more details on the type of paper you can use with the printer. ■ Do not load the tray beyond the fill line. Paper tray capacity is 200 sheets paper or 50 sheets transparency. Transparency tray capacity is 175 sheets transparency. ■ Check that the maintenance tray is inserted correctly and latched firmly into place. ■ You may need to clean the media-pick rollers. Refer to “Cleaning for upper media tray jams: media-pick roller” on page 7-34.
Paper-feed problems at the Lower Paper Tray Assembly.	<ul style="list-style-type: none"> ■ Use standard office paper only, 60 to 120 g/m² (16 to 32 lb.). ■ Do not load the tray beyond the fill line. Paper tray capacity is 625 sheets of 90 g/m² (24 lb.) paper.
Paper jamming inside the printer.	<ul style="list-style-type: none"> ■ Remove and relatch the maintenance tray. Refer to “Replacing the maintenance tray” on page 7-11. ■ You may need to clean the paper-feed rollers. Refer to “Cleaning for jams and ink smears: paper-feed rollers” on page 7-22.
Paper jamming at manual feed slot.	<ul style="list-style-type: none"> ■ Wait until the front panel prompts you before inserting media into the manual feed slot. Feed the paper or transparency into the manual feed slot and let the printer take the media out of your hands. ■ Select Manual Paper or Manual Transparency in the printer driver. ■ Select the appropriate size media in the printer driver. ■ Make sure to align the paper against the left edge of the manual feed slot. ■ Is the paper too thick or the wrong size for manual feed? Refer to “Acceptable media sizes, types, and weight” on page 4-6.

Image Quality Problems

Symptom	Solution
Light-colored or blank stripes on prints.	<ul style="list-style-type: none"> ■ Refer to “Light stripes on prints: cleaning the printhead” on page 8-12.
Ink streaks or oil on front, back, or edges of print.	<ul style="list-style-type: none"> ■ Do not print on both sides of the media. Ink may be offset onto the internal paper path. ■ Refer to “Cleaning for ink smears and jams: internal paper path” on page 7-20.
Transparency print quality poor.	<ul style="list-style-type: none"> ■ Use Tektronix premium transparency media. ■ Make sure that you have selected Standard as the print-quality mode; try setting Vivid Color as the color correction. ■ Use the transparency tray for printing transparencies. Make sure that the switch on the side of the paper or transparency tray is set to Transparency and specify Transparency in a supported printer driver. Refer to “Transparency quality tips” on page 4-15.
Print is wrinkled.	<ul style="list-style-type: none"> ■ You may be using paper that is too thick or thin. Refer to “Acceptable media sizes, types, and weight” on page 4-6.
Paper edge is rippled.	<ul style="list-style-type: none"> ■ You may be using paper with the wrong grain. Load long-grained paper.
Printed image is shifted or the wrong color, or the margins are not correct.	<ul style="list-style-type: none"> ■ You may have to make adjustments in the application or print driver. Refer to “Printing and installation problems” on page 8-8. ■ Make sure that the paper is not curled. Also refer to “Cleaning for jams and ink smears: paper-feed rollers” on page 7-22. ■ Microsoft PowerPoint users: <ul style="list-style-type: none"> ■ Macintosh users: In the Chooser, set Background Printing to Off. ■ PC users: Through the Print Manager, turn off background printing.

Image Quality Problems (cont'd.)

Symptom	Solution
Colors do not print as expected.	<ul style="list-style-type: none"> ■ Make sure that the switch on the side of the paper or transparency tray is set for the type of media on which you are going to print. ■ Refer to “Adjusting the color of your prints” on page 5-2 for details on how to select TekColor color corrections. ■ You may have attempted to print on transparencies loaded in a paper tray but did not select Transparency as the tray selection or paper source in the printer driver. Refer to “Printing transparencies” on page 4-13 for more information. ■ Refer to “Printed colors are not what you expected” on page 8-31 for more tips. ■ Refer to “Printing and using the color sampler charts” on page 5-6.
Image prints in black-and-white instead of color.	<ul style="list-style-type: none"> ■ PC users: Be sure to use a driver that supports color PostScript. If you are running Windows, use the Tektronix-supplied driver that was shipped with the printer's software. Refer to “Printing from a PC” on page 4-19 for information on drivers. ■ Microsoft Excel users: In the Print dialog box, check the Print using color option. ■ Macintosh users: Use a supported color PostScript printer driver and the Phaser 360 printer's PPD file. In the Print Options dialog box, select Color/Grayscale. Refer to page 4-35 for more details on how to print from a Macintosh. ■ You may need to install application-related files such as a PDF or PPD file for QuarkXPress. <ul style="list-style-type: none"> ■ PC users: Refer to “PC/Windows software” on page 3-2 for information. ■ Macintosh users: Refer to “Mac OS software” on page 3-16 for information. ■ You may have incorrectly sent the Monochrome color correction utility file to the printer. Send another color correction utility file to the printer, use a front panel selection, or print from a driver.

Printing and installation problems

Symptom	Solution
You have problems printing from a specific application.	<ul style="list-style-type: none"> ■ Get information and tips on printing from specific applications (such as QuarkXPress and PageMaker) from the Tektronix Color Printer web site and from HAL, another Tektronix information resource. Refer to “On-line support” on page 9-1 and “Getting information by fax” on page 9-3.
Fonts print incorrectly in Windows.	<ul style="list-style-type: none"> ■ Make sure you have installed the correct printer with your driver. Refer to “PC/Windows software” on page 3-2 for instructions on installing drivers.
Text prints in <i>Courier</i> font.	<ul style="list-style-type: none"> ■ The font you have specified is not available. The Phaser 360 printer has 164 resident fonts. Other fonts must be downloaded or available on a SCSI hard disk. Refer to “Downloading fonts” on page 5-13.
The image does not finish printing (the printer times out).	<ul style="list-style-type: none"> ■ PC users: If you are using the parallel port, use the MODE command to set the PC’s communication parameters, for example: MODE LPT1:,,P (for parallel port LPT1). ■ Windows users: Double-click on the Control Panel. Double-click the Printers icon. Choose your Tektronix printer. Click the Connect button. Change the Transmission Retry to 850. ■ Parallel port printing: If you get a timeout from the Connect dialog box, change the Ports selection from LPTX to LPTX.DOS. (Some Windows installations may say LPTX.OS2; X is 1, 2, or 3.)
The area of paper that the printer prints on is smaller than the media size.	<ul style="list-style-type: none"> ■ See “Margins and image area” on page 4-7 for more details. To maximize the image area, you may have to adjust the margins in your application software.
Ink Low Or Ink Sticks Jammed message appears when ink bins are full.	<ul style="list-style-type: none"> ■ Apply pressure to each row of ink sticks in the loading bin to make sure they are not jammed.
A Macintosh printed image has shifted or the margins are not correct.	<ul style="list-style-type: none"> ■ You should install a supported printer driver and the Phaser 360 printer PPD onto your Macintosh to select the correct page sizes from the driver. Refer to “Using the Mac OS installer” on page 3-17 for information. ■ Turn off Background Printing through the Chooser. ■ Refer to “Printing from a Macintosh” on page 4-35 for details on how to print from a Macintosh.

Printing and installation problems (cont'd.)

Symptom	Solution
The Ready message or the printer's name is displayed, but the file does not print.	<ul style="list-style-type: none"> ■ Make sure that the Phaser 360 printer is the selected printer. Try printing the same file to another PostScript printer. If the file prints, then the problem could be with the interface cable. Refer to "Interface cables and adapters" on page 10-7 for information on ordering Tektronix interface cables. ■ Turn the printer's power off, wait at least 15 seconds, and then turn the power on again. ■ Refer to "Using a PostScript error handler" on page 8-27 for details on using the Tektronix Error Handler to determine the cause of the problem.
The printer takes too long to warm up (more than 30 minutes).	<ul style="list-style-type: none"> ■ Make sure that the vent on the right side of the printer is not blocked. Allow at least 5 cm (2 in.) clearance on each side of the printer.
A file does not print and a virtual memory (VM) error appears.	<ul style="list-style-type: none"> ■ You may need to expand printer memory. Refer to "Memory upgrade" on page 10-5 for more information.
A file does not print, or it prints unexpected data.	<ul style="list-style-type: none"> ■ Make sure that the printer is set up to receive the appropriate language (PostScript, HP-GL, or PCL5) for that file. Refer to "Checking the printer's language mode" on page 8-25 for more information.
The printout is delayed.	<ul style="list-style-type: none"> ■ See "Printer standby modes" on page 6-8.
The printer outputs two prints after a jam is cleared.	<ul style="list-style-type: none"> ■ The printer is cleaning the print drum and reprinting the image. Refer to "Media jams and misfeeds" on page 8-15.
Files sent during power-up do not print.	<ul style="list-style-type: none"> ■ Before printing a file, wait until the printer's front panel displays Ready or the printer's name.
The printer receives a file on the parallel port but does not print.	<ul style="list-style-type: none"> ■ Do not set the wait timeout to 0. ■ Print files should not have extra characters after the End-of-Job character (Ctrl-D). <p>Refer to the on-line manual on the printer's CD-ROM for information on setting timeouts and the Ctrl-D character.</p>

Printing and installation problems (cont'd.)

Symptom	Solution
The printer receives a file on the parallel port. The front panel displays Processing Data indefinitely. Another file sent to a different port causes your computer or network interface to lock up.	<ul style="list-style-type: none"> ■ Do not set the wait timeout to 0. ■ Print files should not have extra characters after the End-of-Job character (Ctrl-D). <p>Refer to the on-line manual on the printer's CD-ROM for information on setting timeouts and the Ctrl-D character.</p>
The printer receives a file on the parallel port and the job prints successfully. After printing, the printer displays Processing Data , goes into Standby mode, but doesn't come out of Standby mode for the next print job.	<ul style="list-style-type: none"> ■ To recover, press the WakeUp or Cancel button or turn the printer's power off, wait at least 15 seconds, and turn the power on again. (If you reset the printer, you must send the print job again.) To prevent this condition, do not set the wait timeout to 0. ■ Print files should not have extra characters after the End-of-File character (Ctrl-D). <p>Refer to the on-line manual on the printer's CD-ROM for information on setting timeouts and the Ctrl-D character.</p>
The Startup Page prints although you disabled it.	<ul style="list-style-type: none"> ■ If the printer detects a nonfatal error at power-up, the Startup Page prints, even if you have disabled it. A red box on the Startup Page identifies the type of error. The printer's power-up self-test can detect problems that do not necessarily make the printer completely inoperable. Examples of these nonfatal errors include faulty printer ports and some memory failures. The printer may require service.
The maintenance tray is locked inside printer.	<p>The printer locks the maintenance tray until it has cooled down. Try the following:</p> <ul style="list-style-type: none"> ■ Close the front cover, wait for a few minutes, and try removing the tray again. ■ Turn the printer off, wait for about 1 minute, and then turn the printer back on. Wait for about 2 minutes, then try removing the maintenance tray again.
The front panel displays Busy Melting Ink and will not return to Ready .	<ul style="list-style-type: none"> ■ You may need to install a new maintenance tray. Refer to "Replacing the maintenance tray" on page 7-11. ■ Make sure that the ink stick bins are fully loaded. Fill the bins if necessary. Turn the printer off, wait 60 seconds, then turn the printer back on. Wait until the front panel displays Ready (about 15 minutes).

Network problems (Macintosh)

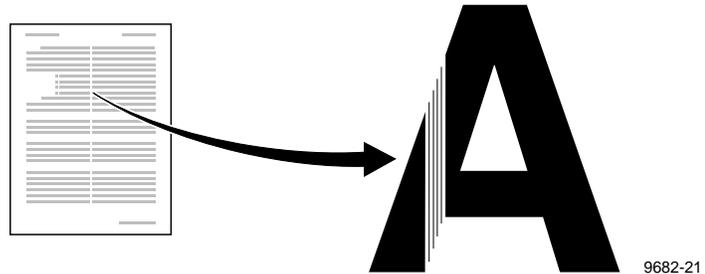
Symptom	Solution
The printer doesn't appear in the Chooser on a Macintosh.	<ul style="list-style-type: none"> <li data-bbox="699 286 1295 340">■ Make sure the printer is connected to your network. If it is not, turn the printer off before reconnecting it. <li data-bbox="699 348 1295 428">■ Check the termination; refer to the documentation for your network adapter or connector for information on termination. <li data-bbox="699 437 1295 543">■ Check the Configuration Page to get the zone name and printer name. Refer to "Printing a Configuration Page" on page 2-25. Make sure that the correct zone and printer name have been selected in the Chooser. <li data-bbox="699 552 1295 604">■ Make sure that the correct network is selected in the Network Control Panel.

Light stripes on prints: cleaning the printhead

Approximate time to complete: 10 minutes

Symptom: Prints have narrow, lengthwise stripes that are faded or the wrong color, or prints have missing colors.

Solution: Run the automatic printhead-cleaning sequence from the printer's front panel.



1. When the **Ready** message or the printer's name appears, press the **Clean** button. The printer displays the first selection in the menu:

```
Clean:Light Stripes  
<---- Clean Test
```

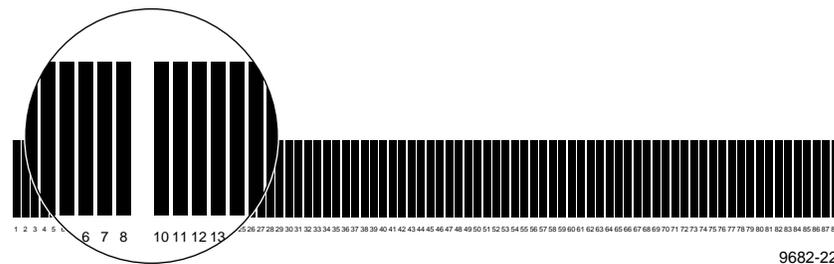
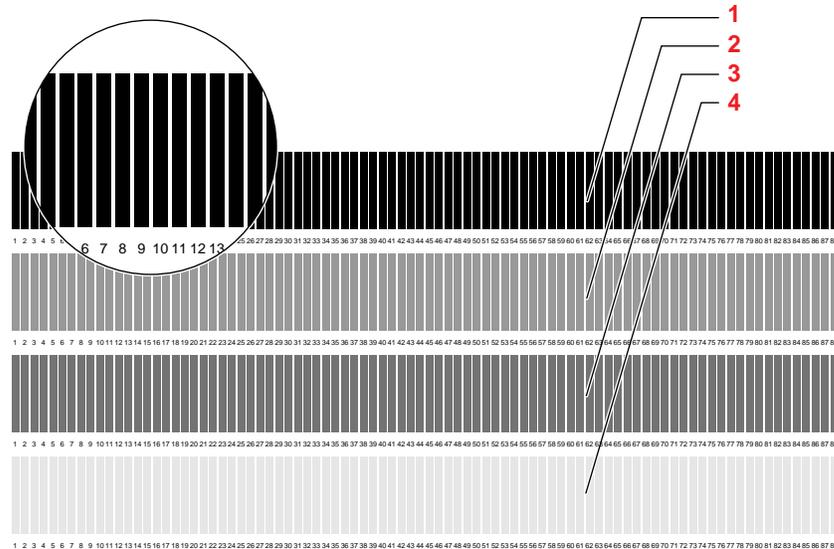
2. Press the **Clean** button again.
3. A series of front panel messages indicate the condition of the printer as it progresses through a sequence of automatic cleaning routines. The printer outputs a Cleaning Page (see page 7-16) at the end of the cleaning sequence that you may discard as normal office waste.
4. When the cleaning sequence is completed, the printer displays the following message:

```
Clean:Light Stripes  
<---- Clean Test
```

5. To confirm that the problem has been corrected, press the **Test** button to print a Test Page. Check for any missing color bars on the Test Page. The following illustration shows a correct Test Page and an example of a Test Page with a missing color bar.

- If your Test Page looks like the first example, go to Step 8 to end this procedure.
- If your Test Page looks like the second example with a missing color bar, go to Step 6 to perform the cleaning procedure again.

1 Black 2 Cyan 3 Magenta 4 Yellow



6. If one or more of the color bars are still missing or are light, repeat the cleaning sequence by pressing the **Clean** button again. When cleaning ends, the printer outputs a Cleaning Page that you may discard as normal office waste.
7. If the second cleaning sequence does not cure the light stripes or missing colors problem, press the **Clean** button to repeat the cleaning sequence.

Note The third cleaning sequence implements a more extensive cleaning of the printer, which may take longer for the printer to execute than the previous two cleanings.

8. If your prints still have color stripe problems after the third cleaning sequence, turn the printer off for **at least 8 hours** to allow the ink to solidify. When the printer is turned back on, it will perform a self-cleaning routine that should resolve the problem.
9. If your prints still have color stripe problems, service may be required.
10. Return the printer to normal operation by pressing the **Exit** button until the **Ready** message appears.

Media jams and misfeeds

After you clear a media jam: The printer automatically outputs a second, usually partial print to remove any image that may remain on the print drum and then prints your original image.

The upper tray is the default tray for media the printer uses in self-cleaning. If you have a Lower Paper Tray Assembly, you can make it the default tray through the printer's front panel menu. Select **Printer Defaults: Cleaning Page Source** and make your tray selection.

Preventing media jams

Use the following guidelines to prevent media jams inside the printer.

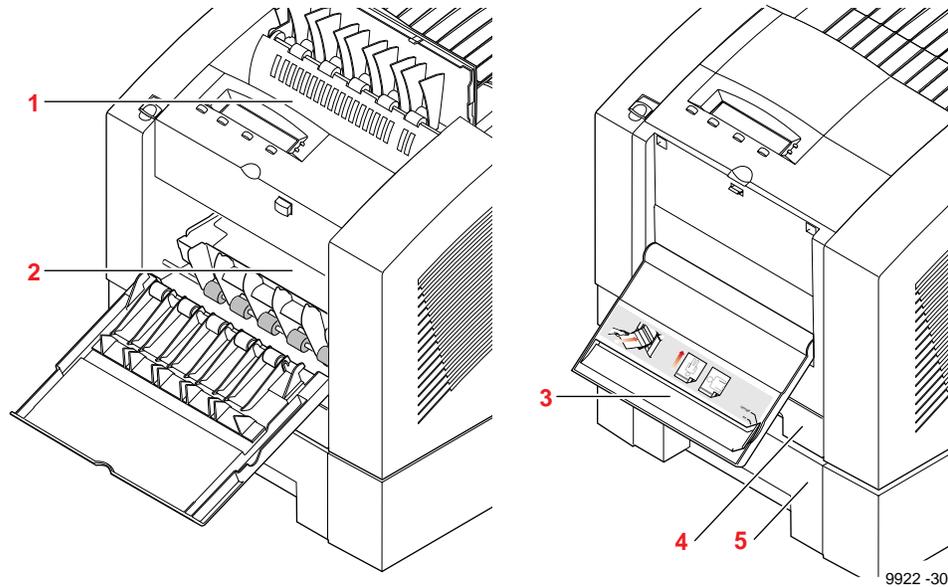
- When inserting a maintenance tray, after sliding it into the printer, use both thumbs on the front edge of the tray to push the tray in to latch it.
- Periodically clean the printer to keep it in peak condition.
- Fan paper before loading it in the upper and lower trays.
- Use standard grade paper, 60 – 120 g/m² (16 – 32 lb.); use the manual-feed slot for heavier stock, up to 220 g/m² (80 lb.). Do not use three-holed paper, perforated paper, legal-size paper, or envelopes.
- Wait until a front panel message prompts you before feeding a second sheet of paper or transparency into the manual-feed slot.
- Keep paper and other supplies clean and free from dust.
- Paper that has been sitting out of its sealed wrapper can become distorted, causing paper jams. Keep paper sealed until you are ready to use it for printing.
- Do not use paper that has been creased or wrinkled.

Caution *Never attempt two-sided or two-pass printing. Ink already present on the media will offset onto the internal paper path, requiring you to perform cleaning procedures. Excessive buildup of ink in the paper path may cause paper jams.*

Locating jammed media

Paper jams can occur in these places:

1. Inside the exit cover, around the large black (transfix) roller
2. Inside the front cover
3. At the manual feed slot
4. At the standard media tray
5. At the Lower Paper Tray Assembly



Caution Some surfaces inside the printer may be hot. Be careful not to touch the areas marked with this caution icon:



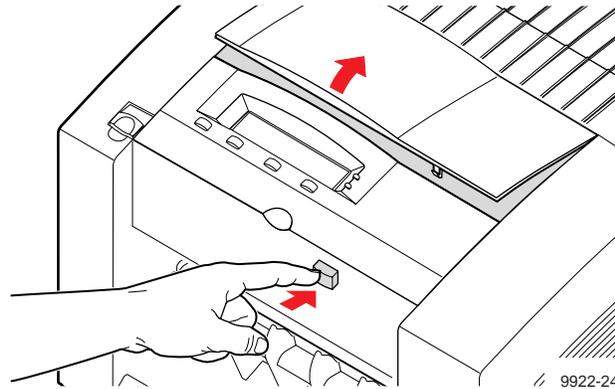
Clearing a media jam

- To avoid ink smearing inside the printer, always try to pull jammed paper or transparencies out through the top of the printer.
- Use both hands to gently pull the media through its normal path out the top of the printer (exit cover), if possible. Do not use excessive force pulling the media; it may tear.
- After removing the jammed media, inspect it for tears. Leave no media scraps in the printer.
- If your prints have ink smears after clearing a jam, refer to “Cleaning for ink smears: paper-exit path” on page 7-28.
- If jamming persists, cleaning the printer may solve the problem. Refer to “Cleaning for ink smears and jams: internal paper path” on page 7-20.

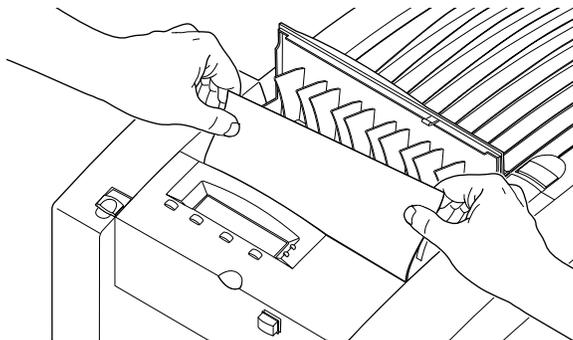
Warning Never use a sharp object to remove jammed paper. You may damage the print drum, requiring repair to your printer.

8 Troubleshooting

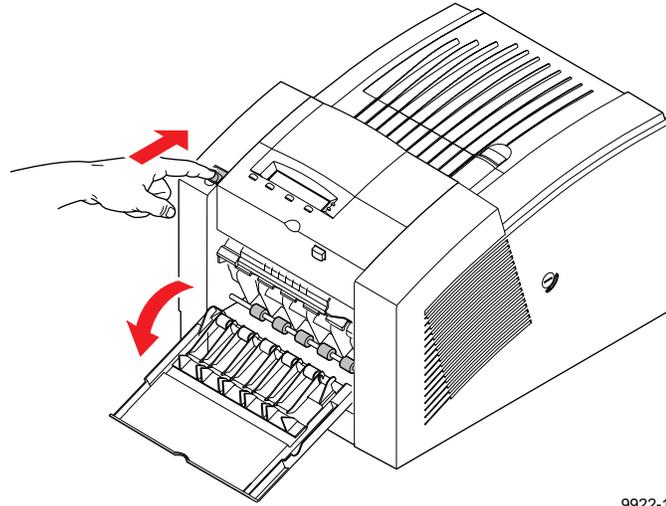
1. Check for jammed media that has partially exited through the top of the printer. Remove any jammed media by pulling the media gently out from the exit cover.
2. If necessary, open the exit cover using the blue release button located inside the front cover, at the top of the printer.



3. Using both hands, pull the jammed media from the top of the printer.

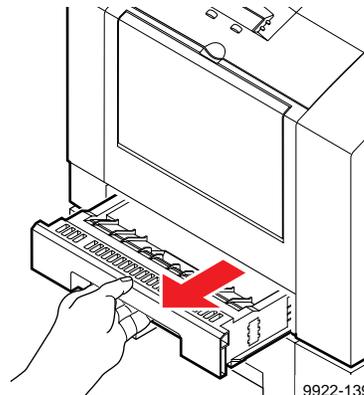


4. If the jam has not cleared, open the front cover and check for jammed media inside the printer.



9922-123

5. If necessary, remove the media tray to locate and clear jammed media.



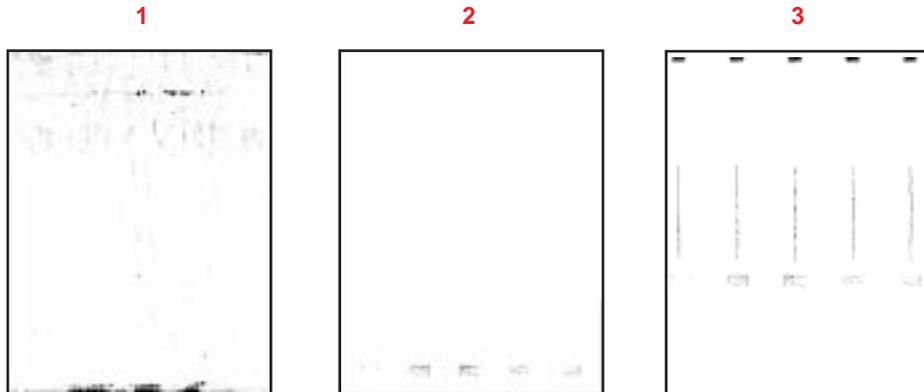
9922-139

Ink smears

Symptom: Prints have stray ink marks on the front or the back.

Solution: Clean the internal paper path. If smears persist, clean the paper-feed rollers. If smears still appear, clean the paper-exit path.

- 1 See “Cleaning for ink smears and jams: internal paper path” on page 7-20.
- 2 See “Cleaning for jams and ink smears: paper-feed rollers” on page 7-22.
- 3 See “Cleaning for ink smears: paper-exit path” on page 7-28.



9922-29

If your file doesn't print

If you've configured a supported driver for your printer but your printer isn't printing, try the following suggestions. If these suggestions fail to solve the problem, copy the Tektronix PostScript error handler utility to your printer to determine what is wrong. Refer to "Using a PostScript error handler" on page 8-27 for information on using the error handler.

General things to check for

Macintosh users

- Open the **Chooser** and select a supported driver, such as the LaserWriter 8.x, and your printer.
 - If the driver isn't installed or properly set up with your printer, refer to "Mac OS software" on page 3-16 for instructions.
 - Make sure that **Background Printing** is turned off.
 - Close the **Chooser** and try printing again.
- If you are having trouble printing from the Finder in System 7.1, for example, if the driver's dialog boxes are not opening, it may be because the Finder doesn't have enough allocated memory. Reinstall a supported driver to automatically allocate enough memory for printing from the Finder.
- For PCI-based PowerMacs, you should be using the latest version of **Open Transport**, available from Apple Computer.

Windows users (general)

- Check to make sure that you have configured the communications ports and the Handshake option correctly by printing the Configuration Page. Refer to “Printing a Configuration Page” on page 2-25.
- Make sure that you are using the correct cables for your computer and printer. See “Interface cables and adapters” on page 10-7 for cable information.

Windows 3.1 users

- Make sure that your printer is connected to the port you selected in the driver’s **Printers/Connect** dialog box.
- Check the **Options** dialog box to make sure that **Printer**, not **Encapsulated PostScript File**, is selected in the driver’s **Print To** box.
- If the error message `Windows Header has not been downloaded to the printer` appears on your computer screen, go to **Setup**, click the **Job Control** tab, and click one of the options for PostScript Header. Refer to “Job Control tab” on page 4-30 for details on the **Job Control** tab.

Windows 95 users

- Make sure that your printer is connected to the port you selected in the driver’s **Details** tab.
- Make sure that the correct port is selected in the driver’s **Details** tab.
- If the error message `Windows Header has not been downloaded to the printer` appears on your computer screen, click the **PostScript** tab and click one of the options for **PostScript Header**. Refer to “PostScript tab” on page 4-24 for details on the **PostScript** tab.

If you are using PC/NFS

If you have PC/NFS software installed on your computer, you need to make the following selection in the **Network Options** dialog box:

1. From the **Main** window, double-click the **Print Manager** icon.
2. From the **Options** menu in the **Print Manager**, select **Network Settings**.
3. In the **Network Options** dialog box, uncheck the **Print Net Jobs Direct** box.
4. Click **OK**.

If you can't print from Windows to an LPT port

Windows 3.1

If your printer is connected through an LPT (parallel) port and your document doesn't print, try the following:

1. In the **Control Panel**, double-click the **Printers** icon.
2. In the **Printers** dialog box, choose your printer from the list of installed printers.
3. Click the **Connect** button; the **Connect** dialog box appears.
4. Change your computer's port connection from **LPTx** to **LPTx.DOS** (where *x* is 1, 2, or 3).
5. Click **OK**.

Note Refer also to "Fixing timeout problems in Windows" on page 8-28 for instructions on fixing timeout problems.

Windows 95

1. In the taskbar on your screen, select **Start**.
2. In the menu that appears, select **Settings**.
3. In the next menu, select **Printers**; the **Printers** window appears.
4. From the **File** menu, click your printer's icon and select **Properties**.
5. Click the **Details** tab.
6. Click **Add Port**.
7. Click **Other**.
8. Make sure that **Local Port** is highlighted, then click **OK**.
9. Type **LPTx.DOS** (where x is 1, 2, or 3).
10. Click **Apply**, then click **OK**.
11. In the **Details** tab, the **Print to the following port** should be **LPT.DOS** (unknown local port).

Checking the printer's language mode

If your file doesn't print, the language on the printer's port you are using may have been changed.

1. Print a copy of the printer's Configuration Page to see the language mode on each port. Refer to "Printing a Configuration Page" on page 2-25.
2. If the printer port you are using has the wrong language set for the type of application you are using, send one of the following utility files to the printer:
 - To print PostScript files, use the **PSCRIPT.PS** file to set up a port to receive PostScript. Refer to the on-line manual on the printer's CD-ROM for details.
 - To print PostScript, HP-GL, or Monochrome PCL5 files interchangeably, use the **AIS.PS** file to set up a port for automatic language selection. Refer to the on-line manual on the printer's CD-ROM for details.

PostScript printing errors

If you get a PostScript error when printing from Aldus PageMaker, Aldus FreeHand, QuarkXPress, or Canvas, you may be using an older or incorrect version of the printer description file.

1. You should always use the most current printer description file. To determine the **date** of the file you are using, do the following:
 - **Mac OS users:**
Select (highlight) a printer description file. From the **File** menu, choose **Get Info**. Make a note of the version date. Or, open the **Systems** folder, then the **Extensions** folder, and then the **Printer Descriptions** folder to find the file name and date.
 - **Windows 3.1 users:**
In the **File Manager**, open the **Windows** folder, then the **Phsrmtch** folder. Make a note of the version date of the file.
 - **Windows 95 users:**
In **Windows Explorer**, select the **Phsrtool** directory. Check a printer description file's creation date. Make a note of the version date.
2. Check Tektronix' on-line services to see if the printer-related files you have are the most recent. Refer to "On-line support" on page 9-1 for information on Tektronix' on-line services and "Receiving email update notices" on page 9-1.

Using a PostScript error handler

The PostScript error handler is useful for diagnosing problems when a job doesn't print. PostScript errors are printed on a page with other status information when an error occurs. This function can be useful to programmers for debugging PostScript code.

You can enable and disable the error handler through the printer's front panel menu (**Printer Defaults** menu), through PhaserLink software (refer to the **PhaserShare Networking System Administrator Manual**), or through a PostScript utility file (refer to the printer's CD-ROM).

Once you've enabled the error handler through the front panel or through PhaserLink software, the error handler remains active until you manually disable it. Cycling the printer's power does not disable the error handler. If you use a PostScript utility file to enable the error handler, you can disable it by cycling the printer's power.

Fixing timeout problems in Windows

If print jobs are timing out and not printing, you may need to increase the timeout values in Windows **and** in the printer. Try one of the following procedures to change the Windows timeout. If the Windows procedure doesn't work for you and you are not on a network, try the DOS procedure. Then, follow the procedure to change the printer's timeout.

Windows timeout: From Windows 3.1

1. From the **Main** menu, open the **Control Panel**.
2. Double-click the **Printers** icon to open the **Printers** dialog box.
3. Click your printer's icon.
4. Click the **Connect** button to open the **Connect** dialog box.
5. Increase the **Transmission Retry** to **950** seconds by typing in the new number.
6. Click **OK**.

Windows timeout: From Windows 95

1. In the taskbar on your computer screen, click the **Start** icon; a menu appears.
2. Move the cursor over **Settings**; another menu appears.
3. In the menu, click **Printers**; the **Printers** window appears.
4. In the **Printers** window, select the **Phaser 360** printer icon. From the **File** menu, select **Properties**.
5. Click the **Details** tab and increase the **Transmission Retry** to **999** seconds (or higher).
6. Click **Apply**, then click **OK**.

Windows timeout: From DOS (and Windows 3.1)

Note To use this procedure, the printer must be connected directly to your computer and not on a network.

1. At the DOS prompt, issue the DOS MODE command by typing the following:

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

2. Start Windows 3.1.
3. From the **Main** menu, open the **Control Panel**.
4. Double-click the **Printers** icon to open the **Printers** dialog box.
5. Click the **Connect** button to open the **Connect** dialog box.
6. Change the port selection from **LPT1** to either **LPT1.DOS** or **LPT1.OS2**, depending on the options you see in the dialog box.
7. Click **OK**.

Printer's timeout

Note This is the basic procedure for changing one of the printer's timeout values. For more information on the printer's timeouts, refer to the on-line manual on the printer's CD-ROM.

You can use the `TIMEOUTS.PS` file to change the PostScript and HP-GL job and wait timeout values. When sent to the printer, your edited version of the `TIMEOUTS.PS` file changes the values in the printer, but **only** while the printer is turned on; if the printer is turned off or reset, the values return to their defaults. To restore your desired timeout settings, you must send your edited `TIMEOUTS.PS` file to the printer again.

Note The `TIMEOUTS.PS` file affects printer operation. If the printer is shared on a network, using this file may affect the prints requested by other users.

1. Follow the instructions beginning on page 3-1 to install drivers and printer software.
2. Locate the `PHSRTOOL` directory, created on your computer's hard disk by the printer's installer. In the `PHSRTOOL` directory, locate the `PHSR360` subdirectory, and then locate the `TIMEOUTS.PS` file.
3. Using a text editor, open the file. The default value is **40** seconds for the wait timeout. Change the value in the `WaitTimeOut` line to **999**.
4. Send the `TIMEOUTS.PS` file to the printer:
 - **PC users:** Use the DOS `COPY` command. (Windows 3.1 users can also use the `Copy` command in the **File Manager**.)
 - **Workstation users:** Send the file to the printer as you would any PostScript file.

Printed colors are not what you expected

For information on selecting TekColor color corrections for accurate color reproduction, see “Adjusting the color of your prints” on page 5-2.

- Select another **Color Correction** option and print your image again.
- If you are not using a supported driver (installed from the printer’s CD-ROM) and are sharing the printer with other users on a network, another user may have changed the printer’s color adjustment setting.
- If you use the driver’s **Use Printer Setting** option and printed colors are not what you expected, check the following:
 - A selection may have been made in the **TekColor Correction** menu on the printer’s front panel. These settings change the printer’s color correction setting.
 - A color correction utility file may have been downloaded to the printer. These files change the printer’s color correction setting.

See also “Sharing the printer on a network” on page 8-34.

Printing PANTONE Colors

If the Phaser 360 printer's printer-specific PANTONE Colors are not printing as expected, make sure that you are printing with the **Enhanced** print-quality setting and with color corrections set to **None**. Refer to "Printing the PANTONE Color Chart" in the on-line manual on the printer's CD-ROM for more information.

There are many variables in process reproduction of colors generated by the Phaser 360 printer, any one of which may affect the quality of the PANTONE Color simulation, including:

- Type of ink used on printing press
- Type of ink film used on printing press
- Effective final resolution
- Dot structure/halftones

Note The Phaser 360 color printer is PANTONE-approved only when used with Tektronix ColorStix inks.

If you have questions about PANTONE Color Matching, you can get information in the following places:

- **Tektronix web site:** You can view selected topics on the Phaser 360 printer's web page. Access the printer's documentation from this web address:

`http://www.tek.com/Color_Printers/userdoc/introduction.html`

- **HAL:** Request a document catalog from HAL, the Tektronix fax library. Refer to "Getting information by fax" on page 9-3 for instructions on using HAL.

Blue colors look too purple

If printed blue colors look too purple, print your document with the **Vivid Color** color correction. Refer to "TekColor correction descriptions" on page 5-3 for more information on the **Vivid Color** color correction.

Sharing the printer on a network

Prints do not reflect your settings

If you share a Phaser 360 printer with other users on a network, the following two conditions may affect your prints:

- Another user has downloaded a color correction utility file.
- Someone has made color correction settings at the printer's front panel.

You can override those settings if you are printing from a supported driver by making sure that your color correction mode is set to any of the selections **except Use Printer Setting**. If you are printing from a nonsupported driver, you will need to either send a color correction utility file to the printer or change the printer's settings at the front panel.

If the colors on your prints are still not what you expected, and your system administrator has disabled some of the printer's front panel menus, ask what settings are in effect and whether a color correction utility file has been downloaded to the printer. You can also print a Configuration Page to see the current color correction selection; see "Printing the Help Pages" on page 6-7 for instructions.

If the Apple Printer Utility does not work

The Apple Printer Utility cannot be used if the printer is connected to a print server. See your system administrator to temporarily remove the printer from the print server to download any of the PostScript utility files.

Customer Support

On-line support

Visit our color printer web site for more information about your printer. For example, view updated user documentation, download utility files, get answers to frequently asked questions, find a list of Tektronix dealers in your area, or contact customer support.

Tektronix Color Printer web site	www.tek.com/Color_Printers/
Documentation	www.tek.com/Color_Printers/userdoc/introduction.html
Technical support	www.tek.com/Color_Printers/support/colcare.html
Anonymous FTP server	ftp.tek.com/Color_Printers/
Email update notices	www.tek.com/Color_Printers/support/subscribe.html

Receiving email update notices

Register your printer on-line and sign up to receive notification by email of new printer drivers, accessories, and upgrades for your Tektronix Phaser color printer. To subscribe to this free service, follow these steps:

1. Point your web browser to the Tektronix web site:
http://www.tek.com/Color_Printers/support/subscribe.html
2. From the pull-down list, enter your email address and select your model of Phaser color printer.
3. Click the **subscribe** button.

Customer Support Centers

For more information or for getting help with troubleshooting or servicing your printer, contact your local Tektronix dealer or sales representative or the following resources worldwide:

Customer Support Centers

U. S. and Canada

1-800-835-6100

(Monday through Friday
6:00 am to 5:00 pm PST)

Australia

1 800 811 177

Austria

0 660 5804

Belgium

0800 1 5059

Brazil

0800 16 0220

Denmark

80 01 81 76

Eastern Europe/Middle East

+44 1908 68187

Finland

0800 1 14494

France

05 90 85 41

Germany

0130 82 10 68

Hong Kong

852 2585 6688

India

91 80 225 2996

Italy

1678 77261

Japan

81 3 3448 4872

Korea

82 2 528 5299

Luxembourg

0800 2853

Norway

800 11782

Singapore

65 356 3900

Spain

900 97 4499

Sweden

020 795 177

Switzerland

155 9493

Taiwan

886 2 765 6362

The Netherlands

06 0221647

UK

0800 558668

All other locations: Contact local Tektronix dealers or Tektronix offices. For a list of dealers in your area, visit our web site: http://www.tek.com/Color_Printers/.

Getting information by fax

Another Tektronix resource for up-to-date information is HAL (Highly Automated Library). If you have a fax machine and a touch-tone telephone, you can quickly receive by fax the latest technical hints and tips, solutions to common technical problems, and application notes for software problems (such as CorelDRAW! and QuarkXPress).

You may call HAL from anywhere in the world, and it is available 24 hours a day, seven days a week. For a catalog listing HAL documents, call one of the numbers below.

Note Not all documents are available in all languages. If a local version of the document you want is available, HAL will send it in your language. Otherwise, it will send an English document.

Country	Numbers
U.S., Canada	1-800-835-6100 (inside U.S. and Canada) (503) 682-7450 (outside U.S. and Canada)
Australia	1-800-650-633 (toll free) 02 9878 0332
Austria	
Belgium	
Denmark	
Finland	00 44 1908 681839
Holland	
Italy	
Norway	
Switzerland	
France	0800 90 81 86
Germany	0130 819 220
Spain	07 44 1908 681839
Sweden	009 44 1908 681839
UK	01908 681839
Other countries	+44 1908 681839 (where + is your country's International Access Code)

Supplies, Accessories, and Expanding Your Printing System

Tektronix printers and Tektronix supplies: Made For Each Other[®]

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 360 printer to guarantee the best print quality, media feed reliability, and trouble-free printer performance.

Customizing your printer

Tektronix offers upgrades and accessories to expand your printer's capabilities. To order, refer to the information provided here or the printer supplies sheet that was shipped with the printer and contact your local dealer or Tektronix office. In the United States, contact your local dealer or call Tektronix at **1-800-835-6100**.

Printer supplies

For a complete list of printer supplies, refer to the supplies information sheet that was shipped with the printer and contact your local dealer or, in the United States, call Tektronix at 1-800-835-6100.

Supplies	Order number	Description
Phaser 340/350/360 ColorStix® ink sticks	016-1307-00	Free black sticks
	016-1308-01	Cyan (3), includes free black sticks
	016-1309-01	Magenta (3), includes free black sticks
	016-1310-01	Yellow (3), includes free black sticks
Tektronix transparencies*	016-1361-00	Letter-size premium* (50 sheets)
	016-1362-00	A4-size premium* (50 sheets)
	016-1359-00	Letter-size standard (50 sheets)
	016-1360-00	A4-size standard (50 sheets)
Transparency sleeves	016-1130-00	Letter-size (50)
	016-1131-00	A4-size (50)
Tektronix paper	016-1368-00	Letter-size, 90 g/m ² (24 lb.) (500 sheets)
	016-1369-00	A4-size, 90 g/m ² (24 lb.) (500 sheets)
Maintenance tray	436-0294-03	Includes waste liner
Waste liner	436-0299-00	(pack of 5)
Cleaning kit	016-1341-00	Includes cleaning tray, alcohol wipes, foam swabs, bottle
Lint-free alcohol-soaked cleaning wipes	006-7824-01	(pack of 10)
Phaser 360 Printer User Manual	070-9922- 04 02	Available also in French (-1011), Italian (-2021), German (-3031), and Spanish (-4041)
PhaserShare Networking System Administrator Manual and diskettes	070-9789-00	Includes documentation and utility files for setting up and configuring the printer on a network
Phaser 360 Printer Drivers and Utilities diskette set	063-2936- 00 01	
Phaser 360 Printer CD-ROM	063-2937- 00 02	Includes user documentation, drivers and utilities, and other files

* Tektronix premium transparencies offer enhanced ink adhesion and superior print quality.

PhaserShare network cards

The Phaser 360 printer is shipped with a built-in 10BaseT Ethernet port and an expansion slot for an additional network interface. Tektronix PhaserShare[®] network cards are easy to install and offer high-performance network connectivity, simultaneously supporting different network protocols.

Description	Order number
Fast Ethernet (100BaseTx/10BaseT/10Base2 card): includes support for Novell NetWare, EtherTalk, TCP/IP, Telnet, FTP, and HTTP	ZNBFE
Token Ring card: includes support for Novell NetWare, TokenTalk, TCP/IP, Telnet, FTP, and HTTP	ZNBTR
LocalTalk/Serial card	ZNBLT

Media trays

Paper and transparency trays

The printer is shipped with a letter- or A4-size paper tray [that also accepts transparencies and labels](#). Use additional trays for different types of media to prevent frequent loading and unloading of a single tray. For ~~printing transparencies~~ [high-volume transparency and label printing](#), the optional transparency tray is recommended.

Lower Paper Tray Assembly

With a 625-sheet capacity, the Lower Paper Tray Assembly is recommended for high-volume printing needs and if you commonly print on several types of media. For example, office paper can be loaded in the lower tray and transparencies, letterhead, or label media in the upper tray. Using the optional Lower Paper Tray Assembly, you can configure the printer for dual-tray printing.

Description	Order number
High-capacity transparency tray (175-sheet capacity transparencies ; 100-sheet capacity labels)	
Letter-size	436-0301- 00 01
A4-size	436-0302- 01 02
Paper/transparency tray (200-sheet capacity paper ; 50-sheet capacity transparencies, labels)	
Letter-size	436-0293- 01 02
A4-size	436-0292- 01 02
Lower Paper Tray Assembly (625-sheet capacity)	
With letter-size paper tray	Z340LTA
With A4-size paper tray	Z340LTA: Option 01
Replacement letter-size tray	436-0288-00
Replacement A4-size tray	436-0289-00

Memory upgrade

The Phaser 360 printer is shipped with 24 Mbytes of memory. It can be upgraded to 48 Mbytes. Additional memory allows for faster processing, faster offloading of print jobs from your computer to the printer, and more storage for downloadable fonts.

Tektronix external hard disk

Description	Order number
External SCSI 2.1-Gbyte hard disk, bracket, and cable	ZDISK

You can connect an external hard disk to the printer for additional font storage, collation, and increased memory for other printer functions. The Tektronix SCSI hard disk mounts conveniently on the back of the printer.

For more information, refer to the following:

- “Connecting an external hard disk (optional)” on page 2-17
- “Using the Quick Collate option” on page 5-9
- “Downloading fonts” on page 5-13

~~Additional software (UNIX and VMS)~~ PhaserPrint™ for UNIX software

Description	Order number
PhaserPrint (for UNIX environments)	4690F20
PhaserSym (for VMS environments)	4690F41

~~PhaserPrint™ for UNIX software~~

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

Your printer's CD-ROM contains a demonstration copy of the PhaserPrint for UNIX software and an on-line instruction guide in the **unix/unixdemo** directory. Refer to "Printing from a UNIX workstation" on page 4-41 for more information.

~~PhaserSym™ software~~

~~For printing in VMS environments, Tektronix offers PhaserSym™ software. PhaserSym software is a VMS print symbiont for DEC OpenVMS VAX and DEC OpenVMS AXP machines. PhaserSym software facilitates communication between VMS hosts and Tektronix Phaser printers. PhaserSym software requires that the Phaser printer include Ethernet support.~~

Interface cables and adapters

The following cables and adapters are available through Tektronix or your dealer. Contact your dealer for other cables and adapters.

Description	Connectors and cable length	Order number
Parallel cable Connects the printer's parallel port to a PC or workstation parallel port.	36-pin high-density plug to 25-pin DSUB plug; 3 meters (9.84 feet)	012-1468-00
Parallel/Centronics adapter Adapts your system's existing low-density, Centronics parallel cable connector to the printer's high-density parallel connector.	parallel adapter: converts 36-pin low-density 1284-B plug to 36-pin high-density 1284-C plug	013-0299-00
SCSI-2 HD to SCSI-1 LD cable Connects the printer's SCSI port to a hard disk drive.	50-pin high-density plug to 50-pin low-density plug; 2.0 meters (6.56 feet)	012-1432-00
SCSI-1 LD to Macintosh SCSI cable Combine with 013-0297-00 to connect the printer's SCSI port to a hard disk drive with Macintosh SCSI 25-pin plug.	50-pin low-density plug to Macintosh SCSI 25-pin plug	012-1299-00
SCSI-1 LD to SCSI-2 HD adapter Use with either 012-1465-00 or 012-1299-00 to convert a low-density SCSI connection to a high-density SCSI connection.	SCSI adapter: converts 50-pin low-density plug to 50-pin high-density plug	013-0297-00

10 Supplies, Accessories, and Expanding Your Printing System

Regulatory Information and Specifications

Declaration of conformity

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 360 printer

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

The provisions of the Low Voltage Directive 73/23/EEC:

EN60950	Safety of Information Technology Equipment including Electrical Business Equipment
---------	--

The provisions of the Electromagnetic Compatibility Directive 89/336/EEC:

EN55022:1992	Limits and Methods of measurement of radio interference characteristics of Information Technology Equipment.
--------------	--

EN61000-3-2:1995	“Part 3: Limits – Section 2: Limits for harmonic current emissions (equipment input current \leq 16A per phase).”
------------------	---

EN61000-3-3:1994	“Part 3: Limits – Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current \leq 16A.”
------------------	---

EN50082-1:1992	“Electromagnetic compatibility Generic immunity standard Part 1: Residential, commercial and light industry.”
----------------	---

11 Regulatory Information and Specifications

Environmental phenomena	Test specification	Basic standard
Radio-Frequency Electromagnetic Field	80 – 1000 MHz 3 V/m (modulated)	EN61000-4-3:1995
Electrostatic Discharge	8 kV (charge Voltage)	IEC801-2:1984
Fast Transients common mode on Signal lines	0.5 kV (peak) 5/50 Tr/Th ns 5 kHz Rep. Frequency	IEC801-4:1988 Capacitive Clamp
AC main ports	1 kV	

This product, if used properly in accordance with the user's instructions, is not dangerous for the consumer or the environment.

Canadian EMC (Electromagnetic Compatibility) regulatory standards

- This digital apparatus does not exceed the Class B 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.

FCC Class B warning (for 115 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 found to comply with the limits for a Class B verified digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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, Inc., is complying with government regulations by providing Material Safety Data Sheets for our products.

Color Printing and Imaging Division
Tektronix, Inc.

MSDS for ColorStix ink sticks

Section 1 – Product identification

Trade name and Tektronix part number:

<i>ColorStix® Solid Ink — Black</i>	016-1307-00
<i>ColorStix® Solid Ink — Cyan</i>	016-1308-01
<i>ColorStix® Solid Ink — Magenta</i>	016-1309-01
<i>ColorStix® Solid Ink — Yellow</i>	016-1310-01

Product use: For use in Tektronix Phaser® 340/350/360 color printers.

Section 2 – Information on ingredients

Ingredients:

Fatty amide waxes; rosin ester; phthalate ester; black, cyan, magenta, or yellow dye

The specific identity of ingredients, and their percentage composition, are withheld as a trade secret.

Section 3 – Hazards identification

Potential Health Effects:

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

Skin: Not an irritant, based on test results.

Inhalation: Not an expected route of exposure.

Ingestion: Not an expected route of exposure. See section 11.

Section 4 – First aid measures

None indicated. This product is a waxy solid and should not cause health hazards when used as intended.

Section 5 – Fire fighting measures

Flammable Properties:

Flash point: Above 200° C.

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

Section 6 – Accidental release measures

Spill or Leak: Not applicable.

Section 7 – Handling and storage

Handling: None.

Storage: Avoid high temperatures.

Section 8 – Exposure control – personal protection

No special protection indicated when used as intended.

TLV/PEL: None established.

Section 9 – Physical and chemical properties

Appearance: Waxy solid. Black, blue, red, or yellow in color.

Odor: None.

Solubility: Not water soluble.

Section 10 – Stability and reactivity

Stability: Stable.

Incompatibility with Other Materials: None.

Hazardous Polymerization: Will not occur.

Section 11 – Toxicological information

Toxicity: Not toxic, as determined by standard laboratory tests for acute oral toxicity.

Skin Irritation: Not an irritant, based on standard tests.

Skin Sensitization: Not a sensitizer, based on standard tests.

Carcinogenicity: Components or product not listed by IARC, NTP, or OSHA.

Section 12 – Ecological information

No known impact.

Section 13 – 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 14 – Transport information

D.O.T.: Not regulated.

NMFC: 101720 Sub. 3 - Ink, Printing, N.O.I., Class 55.

Section 15 – Regulatory information

TSCA: All components of these inks 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 16 – Other information

Original preparation date: March 10, 1994 RC

Corrected MS & WV address 4/20/95 RC

Revised product use 11/5/96 JMP

Corrected Flash Point 4/28/97 JMP

Revised product use 12/5/97 JMP

Tektronix, Incorporated

P.O. Box 500

Chemical Documentation

Mail Stop 46-840

Beaverton, Oregon 97077

Printer information: 1-800-835-6100

MSDS information: (503) 627-7255

MSDS for silicone oil (drum fluid)

Section 1 – Product identification

Trade name and Tektronix part number:

Silicone fluid (found in maintenance tray) 006-7912-00

Product use: For use in Tektronix Phaser® 340/350/360 color printers.

Section 2 – Information on ingredients

Ingredients:

Polydimethylsiloxane

Hazardous Ingredients:

None. This is not a hazardous material as defined by the OSHA Hazard Communication Standard.

Section 3 – Hazards identification

Potential Health Effects:

Eyes: Direct contact may cause temporary discomfort with mild redness and dryness similar to windburn.

Skin: A single prolonged exposure (24 to 48 hours) causes no known adverse effect.

Inhalation: Not an irritant to respiratory passages.

Ingestion: Swallowing large amounts could cause discomfort.

Carcinogenicity: This material is not listed as cancer-causing by IARC, NTP, or OSHA.

Section 4 – First aid measures

Eyes: Flush immediately with water.

Skin: Wipe off and wash with soap and water.

Inhalation: Not a likely route of exposure. No first aid should be needed.

Oral: No first aid should be needed.

Section 5 – Fire fighting measures

Flammable Properties: Flammable limits not determined.

Flash point: 570° F, minimum, open cup.

Fire & explosion hazards: No unusual hazards known.

Section 6 – Accidental release measures

Spill or Leak: Wipe with absorbent material and dispose in accordance with federal, state, and local regulations.

Section 7 – Handling and storage

Handling: No special requirements.

Storage: No special requirements.

Section 8 – 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 9 – Physical and chemical properties

Appearance: Colorless liquid.

Odor: Slight.

Solubility: Not water soluble.

Section 10 – Stability and reactivity

Stability: Stable.

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

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Traces of formaldehyde may form if heated in air above 300° F (149° C). (Normal operating temperature in this printer is 50° to 60° C.)

Section 11 – Toxicological information

Acute oral LD₅₀: Greater than 50 ml/kg (Guinea pig).

Eye Irritation: Very mild irritant, normal after 24 to 48 hours.

Skin: Not a skin irritant.

Mutagenicity: Negative in Ames test, with and without metabolic activation.

Section 12 – Ecological information

No known impact.

Section 13 – Disposal considerations

Observe all federal, state, and local regulations. See section 15.

Section 14 – Transport information

D.O.T.: Not regulated.

Section 15 – 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 16 – Other information

Original preparation date: October 21, 1994 RC

Corrected MS, etc. 4/20/95 RC

Revised product use, etc. 2/7/97 JMP

Revised product use 12/5/97 JMP

Tektronix, Incorporated

P.O. Box 500

Chemical Documentation

Mail Stop 46-840

Beaverton, Oregon 97077

Printer information: 1-800-835-6100

MSDS information: (503) 627-7255

Specifications

Printer tilt

Place the printer on a level surface with no more than 3 degree tilt in any direction, equivalent to raising one corner of the printer approximately 2 cm (0.75 in.).

Caution Tilting the printer more than 3 degrees causes drum fluid to leak from the maintenance tray resulting in damage to your printer not covered by the printer's warranty.

Temperature

Operating: 10° C to 32° C (50° F to 95° F)

Nonoperating: -30° C to +60° C (-22° F to 140° F)

Storage: -30° C to +60° C (-22° F to 140° F)

Humidity

Operating: 10% to 80% Relative Humidity, noncondensing

Nonoperating: 10% to 95% Relative Humidity, noncondensing

Altitude

Operating: 0 to 2,400 meters (0 to 8,000 feet)

Nonoperating: 0 to 15,000 meters (0 to 50,000 feet)

Primary voltage ranges

87 – 128 VAC, 115 VAC nominal

174 – 250 VAC, 220 VAC nominal

Frequency range

48 to 66 Hz

AC input ratings

115 VAC, 10 Amps

220 VAC, 5 Amps

Print quality and speed*

Fast Color mode color print on paper: 6 pages per minute

Fast Color mode color print on transparency: 5.5 pages per minute

Standard mode color print on paper: 4 pages per minute

Standard mode color print on transparency: 2 pages per minute

Enhanced mode 800 x 450 dpi color print on paper: 2 pages per minute

Enhanced mode 600 x 300 dpi color print on transparency: 2 pages per minute

* Left and right margins set to 7.4 mm (0.3 in.) or larger.

Power consumption

Operating power consumption: 140 to 480 Watts

Meets Energy Star power conservation requirements with the Energy Star timeout set to one hour.

Printer Dimensions

Height: 33 cm (13 in.) **Depth:** 50.2 cm (19.75 in.)

Width: 40 cm (15.75 in.) **Weight:** 32 kg (70 lb.)

Printer Clearances

Top: 45.7 cm (18 in.) **Sides:** 10.2 cm (4 in.)

Front: no restrictions **Rear:** 10.2 cm (4 in.)

Bottom: no restrictions

Lower Paper Tray Assembly Dimensions

Height: 13.0 cm (5.13 in.) **Depth:** 50.8 cm (20 in.)

Width: 40 cm (15.75 in.) **Weight:** 7 kg (15.5 lb.)

Safety and emissions

- **Listed:** UL 1950 Information Technology Equipment.
- **Certified:** CSA Standard C22.2 No. 950–95, 3d ed., Safety of Information Technology Equipment, Including Electrical Business Equipment.
- **Certified:** EN60950.
- Class B compliant computing device pursuant to subpart J of Part 15 of FCC rules.
- Conforms to EC EN55022:1992; EN61000-3-2:1995; EN61000-3-3:1994; EN50082-1:1992.

Index

A

- adapters, ordering 10-7
- adding ink 7-6
- adjusting low-resolution images 5-11
- adjusting printed colors 5-2
- Adobe Photoshop plug-in 3-16
- Adobe PostScript driver 4-19
- Adobe Type 1 and Type 3 fonts 5-13
- alcohol
 - presoaked cloth wipes 7-19
 - purity of 7-19
 - using for cleaning 7-19
- Apple LaserWriter 8 driver, using 4-39
- Automatic** color correction 5-3

B

- banding on prints, cleaning 8-12
- blue color, adjusting for 5-3

C

- cables, ordering 10-7
- Cancel** button, location 6-3
- changing the default media tray 4-10
- Check Print
 - previewing print jobs 5-10
 - resetting the timeout 5-11
- CIE colors 5-3
- Clean** button, location 6-3
- cleaning
 - Cleaning Page 7-16
 - for light stripes or missing colors 8-12
 - for Lower Paper Tray Assembly jams 7-43
 - ink smears
 - from internal paper path 7-20
 - from paper-exit path 7-28
 - from paper-feed problems 7-22
 - preventing 8-17

- instructions printout 7-34
- lower pick rollers 7-43
- media-pick roller 7-34
- overview 7-14
- paper pick or separator pad 7-38
- precaution with paper-feed rollers 7-23
- precautions using alcohol 7-19
- printhead 7-30
- printhead 8-12
- printing a test print 8-13
- supplies, illustrated 7-18
- table of problems and solutions 7-15
- using alcohol-soaked swab 7-19
- using isopropyl alcohol 7-19
- using presoaked alcohol cloth wipes 7-19

- cleaning kit contents 7-18
- Cleaning Page
 - changing the media tray source 7-16
 - function of 7-16
 - output of, during warm up 2-23
- cleaning tray
 - illustration 7-36
 - inserting into media tray 7-37
 - when to use 7-34
- CMYK color sampler 6-7
- collating
 - segmenting of large print jobs 5-9
 - with Quick Collate option 5-9
- color
 - adjusting or correcting 5-2
 - how to use 5-7
 - problems with 8-31

- color corrections 5-2
 - Automatic** 5-3
 - Commercial Press** 5-4
 - descriptions of 5-3
 - Euroscale Press** 5-4
 - from an application 5-8
 - Monochrome** 5-5
 - None** 5-5
 - Simulate Display** 5-4
 - SWOP Press** 5-4
 - Use Printer Setting** 5-5
 - Vivid Color (blue)** 5-3
- color sampler charts
 - CMYK 5-6
 - HSB 5-6
 - PANTONE Color 5-6
 - RGB 5-6
- ColorStix ink sticks, **see** ink
- Commercial Press** color correction
 - description of 5-4
- communication ports 2-18, 4-25
- Configuration Page
 - description of 6-6
 - printing 2-25
- connecting the printer 2-18
 - to a Macintosh 2-21
 - to a network 2-19
 - to a PC 2-20
 - to a UNIX workstation 2-20
- controlling access to the front panel menu 6-4
- correcting printed colors 5-2
- customer support
 - customer support centers 9-2
 - getting information by fax 9-3
 - on-line help 9-1

D

- Demonstration Page 6-7
- desktop printers, QuickDraw GX
 - printing from 4-40
- display colors, simulating 5-4
- downloading fonts 5-13
- drivers
 - installing
 - Macintosh 3-17
 - Windows 3-2
 - using
 - Macintosh 4-35
 - Windows 4-19
- drum fluid
 - cleaning 7-28
 - precaution 7-9
- dual-tray printing 4-8
- duplex printing, warning against 2-26

E

- email update notices from Tektronix 9-1
- email, receiving, when the printer needs attention 1-3
- emissions 11-10
- Energy Star
 - power requirements 11-9
 - resetting the default value 6-8
- Enhanced** print-quality mode (800 x 450 dpi) 4-4
- error messages and codes, front panel 8-2
- errors, PostScript 8-26
- Euroscale Press** color correction
 - description of 5-4
- Exit** button 6-3

- external hard disk
 - connecting 2-17
 - description of 1-9
 - for collating 2-17
 - for font storage 2-17
 - ordering 10-5

F

- Fast Color** print-quality mode 4-4
- fax, getting information by 9-3
- features
 - selecting from the front panel 4-3
 - selecting in a Macintosh driver 4-36
 - selecting in a Windows driver 4-20
- font list, printing
 - from a Macintosh 5-15
 - from a PC 5-15
- Font Sampler, Macintosh utility file 5-15
- fonts
 - Adobe Type 1 and Type 3 5-13
 - downloading 5-13
 - PCL5 fonts 5-12
 - PostScript fonts 5-12
 - printer fonts 5-12
 - resident typefaces (PCL5) 5-12
 - resident typefaces (PostScript) 5-12
 - TrueType 5-13
 - using with Windows 5-14
- FONTS.PS, PC utility file 5-15
- front cover, location 1-4
- front panel
 - button functions 6-3
 - Check Print** 5-10
 - display lines 6-2
 - error messages and codes 8-2
 - indicator lights 6-1
 - language change 2-24

- location 1-4
- overview 6-1
- status messages 6-2
- types of messages 2-22
- front panel menu
 - accessing 2-22
 - enabling and disabling 6-4
 - selecting a language for 2-24
- front panel menu map 6-5

G

- getting help 9-2
- gray scale, printing in 5-5

H

- HAL, fax reference library 9-3
- Help Pages
 - access in protected menu mode 6-4
 - description of 6-6
 - printing 6-7

I

- image area 4-7
 - margins 4-7
- image resolution, *see* print quality
- Image Smoothing 5-11
- indicators
 - error 2-23
 - power 2-23
- Info** button 6-3
- ink
 - adding 7-6
 - adding at setup 2-10
 - description of ColorStix ink sticks 1-7
 - handling waste ink 7-8
 - loading precautions 7-7
 - minimizing consumption of 2-26
 - ordering 10-2
 - tips for handling 7-7

- ink smears
 - cleaning internal paper path 7-20
 - cleaning paper-exit path 7-28
 - cleaning paper-feed rollers 7-22
 - preventing 8-17
- installing
 - printer software, Macintosh 3-17
 - printer software, PC/Windows 3-2
 - software 3-1
- installing Lower Paper Tray Assembly 2-4
- inventory, printer 2-2
- isopropyl alcohol, *see* alcohol

L

- labels
 - acceptable tray for 4-6
 - printing 4-12
 - type to use 4-12
- language modes, checking 8-25
- languages
 - default 5-12
 - front panel 2-24
 - printer 5-12
- LaserWriter 8.x driver, using 3-19
- leaving the printer on 2-26
- letterhead
 - loading 4-11
 - running a test sheet 4-11
 - using the manual feed 4-17
- light or missing stripes
 - cleaning for 8-12
 - identifying 8-12
- loading ink, *see* ink
- loading labels 4-12
- loading letterhead 4-11
- loading paper 2-11
- loading transparencies 4-13
- LocalTalk connection 2-19
- locking the transit restraint 7-4

- Lower Paper Tray Assembly
 - attaching to printer 2-4
 - capacity 2-15
 - changing the default media tray 4-10
 - cleaning the paper-pick rollers 7-43
 - fill line 2-15
 - installing 2-4
 - loading 2-15
 - media used with 4-8
 - misfeeds 7-43
 - order number 10-4
 - paper jams 7-43
 - paper weight acceptable 4-6
 - use with upper tray 4-8
- low-resolution images, adjusting for 5-11
- LPT port problems 8-23

M

- Macintosh printer driver
 - selecting printer in Chooser 3-18
- Macintosh utility files, Font Sampler 5-15
- maintenance
 - cleaning the printer 7-14
 - printer's self-cleaning 7-16
- maintenance tray
 - capacity 7-11
 - description of 1-7
 - installing 2-8
 - precautions 7-4
 - relatching to clear media jams 7-34
 - replacing 7-11
- manual feed 4-16
 - location 1-4
 - paper jams 4-18
 - paper weight acceptable 4-6
 - printing letterhead 4-17
 - printing transparencies 4-17
 - when to use 4-16

- margins
 - image area 4-7
 - media 4-7
- media 4-6
 - image area 4-7
 - margins 4-7
 - sizes and weights acceptable 4-6
 - types acceptable 4-6
- media jams
 - cleaning lower paper-pick rollers 7-43
 - cleaning the media-pick roller 7-34
 - clearing 8-17
 - locating 8-16
 - output after clearing 8-15
 - preventing 8-15
- media trays
 - changing the default setting 4-10
 - loading 2-11
 - Lower Paper Tray Assembly 10-4
 - lower tray jams, cleaning for 7-43
 - order numbers 10-4
 - types 4-8
 - upper tray jams, cleaning 7-34
- Menu** button
 - displaying printer menus 2-22
 - label changes 6-3
- menu map, front panel 6-6
- menus, printer front panel 2-22
- Microsoft Windows NT PostScript printer driver, updating 4-31
- misfeeds
 - cleaning for 7-34
 - Lower Paper Tray Assembly 7-43
 - see also media jams
- Monochrome** color correction 5-5
- moving the printer 7-2
 - locking the transit restraint 7-4
 - precautions 7-4
 - removing the maintenance tray 7-3
- MS-DOS, printing from 4-34

N

- network connections, rear panel ports 2-19
- network interfaces, order numbers 10-3
- network, printing from a 8-33
- NFS, see PC/NFS
- noises during warm-up 2-23
- None** color correction 5-5
- NT, Windows NT PostScript printer driver, updating 4-31

O

- oil (printer drum fluid), cleaning 7-28
- on-line customer support 9-1
- order number
 - cables and adapters 10-7
 - cleaning kit 10-2
 - ColorStix ink sticks 10-2
 - external hard disk 10-5
 - maintenance tray 10-2
 - media trays 10-4
 - network interfaces 10-3
 - paper and transparencies 10-2
 - printer supplies 10-2
- overview of software installation 3-3

P

- packing material, removing 2-3
- PANTONE Colors, printing 8-32
- paper 4-6
 - acceptable types 4-6
 - cleaning pick rollers 7-34
 - duplex warning 4-6
 - image area 4-7
 - letterhead, loading 4-11
 - loading 2-11
 - manual feed 4-6
 - margins 4-7
 - recycling 4-6
 - types, size, and weight 4-6

- paper jams, *see* media jams
- paper pick roller cleaning, lower 7-34
- paper pick roller cleaning, upper 7-43
- paper tray
 - acceptable media for 4-8
 - capacity 4-8
 - loading 2-11
 - order numbers 10-4
 - printing transparencies 4-14
 - using for transparencies 4-8
- paper weight 4-6
- parallel cable, ordering 10-7
- parallel port, connecting to 2-20
- PC utility files
 - FONT.SPS 5-15
 - TIMEOUTS.PS 8-30
- PC/NFS
 - Network Option 4-28
 - selecting network settings 8-23
- PC/Windows software 3-2
- PCL5, printing 5-12
- Phaser 380 (LaserWriter 7.1.2-based) printer
 - driver, *see* Macintosh printer driver
- Phaser 560 driver, using 4-38
- Phaser 560 GX driver, using 4-40
- PhaserLink software 1-3
- PhaserPrint for UNIX software
 - bitmapped images 5-18
 - description 4-41
 - order number 10-6
- PhaserPrint, Photoshop plug-in 3-16
- PhaserShare network cards
 - configuring 2-19
 - order numbers 10-3
- ~~PhaserSym software 10-6~~
 - ~~description 4-41~~
 - ~~order number 10-6~~
- pick roller cleaning tray, *see* cleaning tray
- ports, *see* communication ports
- PostScript
 - errors, general 8-26
 - fonts 5-12
 - PostScript Header
 - Windows 3.1 driver 4-30
 - Windows 95 driver 4-24
 - printing files 5-12
 - timeout 8-30
- PostScript Header
 - Windows 3.1 driver 5-17
- power indicator 2-23
- power switch location 2-21
- PowerPoint users, image quality solution 8-6
- previewing print jobs 5-10
- print features
 - overview 4-2
 - selecting 4-2
 - selecting print quality 4-4
- print quality
 - Enhanced** mode 4-4
 - Fast Color** mode 4-4
 - selecting 4-4
 - Standard** mode 4-4
- print resolution, *see* print quality
- print speed
 - Enhanced** mode (800 x 450 dpi) 4-4
 - Fast Color** mode 4-4
 - improving 5-16
 - Standard** mode 4-4
- printdrum, cleaning 7-30
- printer drivers
 - installing
 - Macintosh 3-17
 - Windows 3-2
 - using
 - Macintosh 4-35
 - Windows 4-19
- printer fonts 5-12

- printer languages 5-12
 - default 5-12
- printer management software 1-3
- printer menus 2-22
- printer parts and components 2-2
- printer standby modes, *see* standby modes
- PRINTER.INF, updating Windows NT driver 4-31
- printing
 - a font list 5-15
 - a test page 8-13
 - a truer blue 5-3
 - color sampler charts 5-6
 - from a Macintosh 4-35
 - from a network 8-33
 - from a PC 4-19
 - from applications 4-44
 - Help Pages 6-7
 - in gray scale 5-5
 - labels 4-12
 - letterhead 4-11
 - transparencies 4-13
 - using manual feed 4-16
- printing press color corrections 5-4
- printing problems, Macintosh users 8-21
- problems and solutions
 - image quality 8-6
 - media feeding and jamming 8-5
 - operational hints 2-26
 - printing and installation 8-8

Q

- Quick Collate 5-9
- quick reference 4-36
 - selecting features, Macintosh 4-36
 - selecting features, Windows 4-20
- QuickDraw GX, Tektronix printer driver 3-21

R

- rear panel ports 2-18
- receiving email update notices 9-1
- registering your printer 9-1
- registration, on-line 9-1
- replacing the maintenance tray 7-11
- resident typefaces
 - PCL5 5-12
 - PostScript 5-12
 - printing a list of 5-15
- RGB color sampler 6-7

S

- safety and emissions 11-10
- selecting
 - a front panel language 2-24
 - pages sizes in Windows applications 5-19
 - print features 4-2
 - print-quality modes 4-4
- setting page margins 4-7
- setting the Check Print timeout 5-11
- shipping the printer, *see* moving the printer
- Simulate Display** color correction 5-4
- software, installing 3-1
- specifications 11-8
- Standard** print-quality mode 4-4
- standby modes
 - Energy Star 6-8
 - leaving the printer on 2-26
 - normal 6-8
- Startup Page 6-6
 - disabling 6-6
 - during warm up 2-23
 - nonfatal error at power-up 8-10
 - printing 6-6
- stripes in prints, cleaning 8-12
- supplies, ordering 10-2
- SWOP Press** color correction
 - description of 5-4

T

- technical support, **see** customer support
- Tektronix Bulletin Board Service (BBS) 3-23
- Tektronix Color Printer web site 9-1
- test page, printing 8-13
- timeouts
 - Windows 3.1 8-28
 - Windows 3.1 driver 4-29
 - Windows printer driver 4-26
- TIMEOUTS.PS, PC utility file 8-30
- tips
 - for handling ink 7-7
 - for optimum printing 2-26
 - for printing transparencies 4-15
 - for working with color 5-7
- top cover, location 1-4
- transit restraint
 - location 1-4
 - locking before moving printer 7-4
 - unlocking for set up 2-7
- Transmission Retry
 - Windows 4-29
 - Windows 3.1/Tek driver 4-26
 - Windows 95/Adobe & Microsoft driver 4-22
- transparencies
 - acceptable types 4-13
 - loading 2-11
 - manual feed printing 4-17
 - order number 10-2
 - precautions 4-15
 - printing from the paper tray 4-14
 - printing from the transparency tray 4-13
 - printing instructions 4-13
 - size 4-6
 - tips 4-15
 - tray types 10-4
 - using Tektronix 4-5
- transparency tray
 - capacity 4-8

- loading 2-11
- order number 10-4
- printing from 4-13
- troubleshooting
 - front panel error messages 8-2
 - operational hints 2-26
 - problems and solutions, tables 8-5
- TrueType fonts 5-13
- turning on the printer 2-21
- two-sided printing, precaution against 8-15

U

- UNIX workstations 4-42
 - installing printer software 3-23
 - software for 10-6
- Use Printer Setting color correction 5-5
- used ink, disposal of 7-8
- using color 5-7
- using color corrections 5-2
- using your web browser for printer management 1-3
- utility files 3-23

V

- Vivid Color color correction 5-3
- ~~VMS software, ordering 10-6~~
- ~~VMS workstations, software for 4-43~~

W

- warming up the printer 2-23
 - time necessary for 2-23
- waste liner
 - description of 1-7
 - emptying 7-8
- web site, Tektronix 9-1
- weight, paper 4-6
- Windows 3.1 driver
 - Features tab 4-29
 - improving print speed 5-17
 - Job Control tab 4-30
 - Paper tab 4-29
 - PostScript header 4-30, 5-17
 - PostScript tab 4-30
 - problems with setting page sizes 5-19
 - timeout PostScript driver 4-29
 - timeouts 8-28
 - using 4-29
- Windows 95 driver
 - Details tab 4-22
 - Device Options tab 4-23
 - Graphics tab 4-23
 - Paper tab 4-22
 - PostScript Header 4-24
 - PostScript tab 4-24
 - timeout 8-28
 - using Adobe and Microsoft drivers 4-22
 - using PostScript driver 4-29
- Windows printer driver
 - configuring 4-25
 - timeouts 4-26
- workstation software
 - PhaserPrint for UNIX, ordering 10-6
 - ~~PhaserSym for VMS, ordering 10-6~~
- World Wide Web, Tektronix Color Printer
 - web site 9-1

