

PHASER® 840
COLOR PRINTER

Advanced Features
and Troubleshooting Manual





**Phaser[®] 840 Color Printer
Advanced Features and Troubleshooting Manual**

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Tektronix warrants that the **Phaser 840 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.

Under this product warranty, Customer must notify Tektronix or its authorized representative of the defect before the expiration of the warranty period and if instructed by Tektronix make suitable arrangements for repair. Tektronix or its authorized representative will provide warranty repair during the warranty period at Customer's site, if required, without charge within the United States or outside the United States if the product is located in a customary on site service area. Outside the United States, a description of the customary on-site service area may be obtained from the local Tektronix Subsidiary or Authorized Tektronix Distributor.

The **Maintenance Kit** in this product will be free from defects in materials and workmanship for a period of (a) ninety (90) days from the date of installation, but not more than one (1) year from date of shipment; or (b) six (6) months where longer periods are required by law. Under this warranty, Customer must notify Tektronix or its authorized representative of the defect before the expiration of the warranty period. Tektronix or its representative will ship a replacement kit, at Tektronix expense, to replace the defective kit. Customer shall be responsible for paying any associated taxes or duties. Tektronix may require that the kit be returned to the designated Tektronix depot or the Tektronix authorized representative from which the kit was originally purchased.

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 Phaser 840 printer 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 65,000 pages per month have been reached. All service thereafter shall be billed on a time and material basis.
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* Maintenance Kit in this product is, specifically, maintenance roller and maintenance counter.

User 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 or ground. Use only the specified power cord and connector. Refer to a qualified service technician for changes to the cord or connector.

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

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

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

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

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

Symbols as marked on product:

DANGER high voltage:



Protective ground (earth) terminal:



Hot surface on or in the printer.
Use caution to avoid personal injury:



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.

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

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Color Printer Resources

Tektronix offers the following suite of books, web sites, and software tools to help you get the fullest (and most colorful) use from your printer. The books and software tools are all located on the printer's CD-ROM.



Printed and online books

Setup Guide

- Printed book is shipped with your printer.
- Online book is included on the printer's CD-ROM in PDF (Acrobat) format.
- Topics:
 - Unpacking
 - Setting up
 - Installing printer software

User Guide

- Printed book is shipped with your printer.
- Online book is included on the printer's CD-ROM in PDF (Acrobat) and HTML formats.
- Topics:
 - Loading media
 - Duplex printing
 - Consumables information
 - Troubleshooting print quality
 - Front panel tutorial

PhaserShare Networking Setup Guide

- Printed book is shipped with your printer.
- Online book is included on the printer's CD-ROM in PDF (Acrobat) format.
- Topics:
 - Connecting your printer to a network:
 - Novell NetWare
 - Ethernet
 - TCP/IP
 - Token Ring
 - AppleTalk

Advanced Features and Troubleshooting Manual

- Online book is included on the printer's CD-ROM in PDF (Acrobat) and HTML formats.
- Order a printed copy: order number 070-9103-00.
- Topics:
 - All about media
 - Using color
 - Advanced troubleshooting
 - Connecting hard disk drives and scanners
 - Using a scanner with your printer

PhaserShare Networking Manual

- Online book is included on the printer's CD-ROM in PDF (Acrobat) and HTML formats.
- Order a printed copy: order number 071-0180-01.
- Topics:
 - System administration:
 - Setting printer parameters
 - Printer status
 - Printer management:
 - Usage Profile reports
 - PhaserLink Printer Management software

Tektronix World Wide Web sites

Tektronix home page



What it includes

- Product and supplies information
- Downloading printer drivers
- Finding your local reseller

Where to find it

www.tek.com/Color_Printers/

PhaserLink Printer Management software



What it includes

Printer administration and support tool using World Wide Web technology

- Status of print jobs
- Tracking printer usage
- Configure printer settings
- Routine troubleshooting
- Set security for password-protected features

Where to find it

www.tek.com/Color_Printers/products/phaserlink.html

or

Enter your printer's TCP/IP address in your web browser

TekSMART™ Knowledge Base

What it includes

- Extensive technical troubleshooting library
- Easy search function



Where to find it

www2.tek.com/merlin/tko

Color Connection

What it includes

Link to the world of Tektronix color:

- Color education
- Printing ideas
- Personalized email subscription
- **colorize.com**



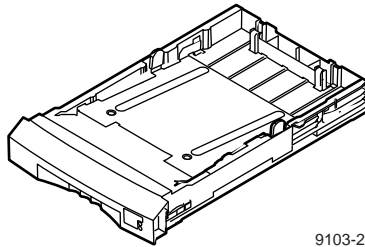
Where to find it

www.colorconnection.tektronix.com

Advanced Print Features

All about media

Standard Paper/Transparency Tray



9103-26

Tray sizes:
436-0330-00 A/Letter
436-0332-00 A4

Paper

200-sheet approximate capacity

- Bond or equivalent, 60 - 120 g/m², 16 - 32 lb.
- Cover stock up to 176 g/m², 65 lb., single-sided printing only
- Coated papers, single-sided printing only
- Short-grained paper, 105 g/m², 28 lb. bond or higher

Ordering Information

Tektronix Premium Paper 90 g/m², 24 lb. bond 500 sheets per package

016-1368-00 A/Letter

016-1369-00 A4

Transparencies

50-sheet capacity

NOTE

Use only Phaser 840 printer transparencies; they have been specially formulated for this printer.

Ordering Information

Phaser 840 Printer Premium Transparencies 50 sheets per package

016-1724-00 A/Letter

016-1725-00 A4

Phaser 840 Printer Standard Transparencies 50 sheets per package

016-1720-00 A/Letter

016-1721-00 A4

Labels

50-sheet capacity

NOTE

Use laser-quality labels.

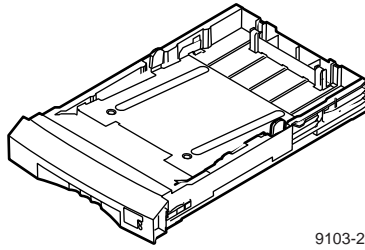
Recommended labels

Avery™ White Laser Labels, for example:

US: 5160, 5960

Metric: L7162

High-Capacity Transparency/Label Tray



9103-26

Tray sizes:
 436-0336-00 A/Letter
 436-0338-00 A4

Transparencies

175-sheet capacity

NOTE

Use only Phaser 840 printer transparencies; they have been specially formulated for this printer.

Ordering Information

Phaser 840 Printer Premium Transparencies 50 sheets per package

016-1724-00 A/Letter

016-1725-00 A4

Phaser 840 Printer Standard Transparencies 50 sheets per package

016-1720-00 A/Letter

016-1721-00 A4

Labels

100-sheet capacity

NOTE

Use laser-quality labels.

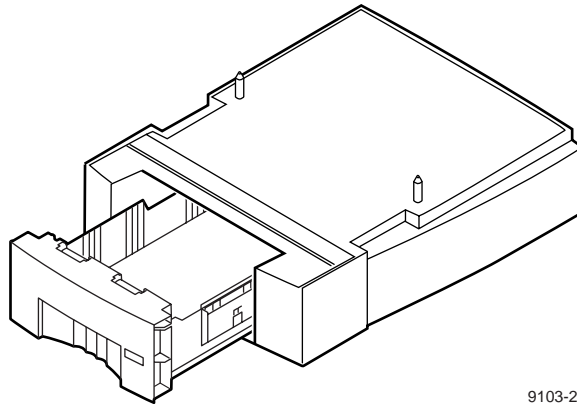
Recommended labels

Avery™ White Laser Labels, for example:

US: 5160, 5960

Metric: L7162

High-Capacity Paper Tray Assembly



Tray sizes:
Z840LTA-00 A/Letter
Z840LTA-01 A4

9103-27

Paper

500-sheet approximate capacity

- Bond or equivalent, 60 - 120 g/m², 16 - 32 lb.

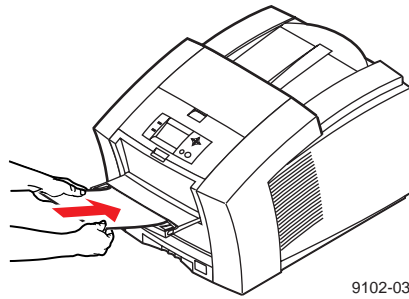
Ordering Information

Tektronix Premium Paper 90 g/m², 24 lb. bond 500 sheets per package

016-1368-00 A/Letter

016-1369-00 A4

Manual Feed Slot



9102-03

Media Sizes

- A/Letter
- A4
- Envelopes (refer to page 13 for supported envelope sizes)

Tray capacity

- 1 sheet

Media Types

Paper

- Bond or equivalent, 60 - 120 g/m², 16 - 32 lb.
- Cover stock up to 216 g/m², 80 lb., single-sided printing only
- Index stock up to 216 g/m², 110 lb., single-sided printing only
- Coated papers, single-sided printing only
- Short-grained paper, 105 g/m², 28 lb. or higher

Ordering Information

Tektronix Premium Paper 90 g/m², 24 lb. bond 500 sheets per package

016-1368-00 A/Letter

016-1369-00 A4

Phaser 840 printer transparencies

NOTE

Use only Phaser 840 printer transparencies; they have been specially formulated for this printer.

Ordering Information

Phaser 840 Printer Premium Transparencies 50 sheets per package

016-1724-00 A/Letter

016-1725-00 A4

Phaser 840 Printer Standard Transparencies 50 sheets per package

016-1720-00 A/Letter

016-1721-00 A4

Labels

NOTE

Always use full-sheet peel-off labels.

- Recommended Avery™ White Laser Labels, for example:

US: 5160, 5960

Metric: L7162

Envelopes

- #10 (US)
- #6 ¾(US)
- C5
- DL
- Choukei 3 Gou
- Choukei 4 Gou

Margins and print area

The image area of a print is a bit smaller than the media size. You may need to adjust the page margins in your application software to match the print area.

NOTE

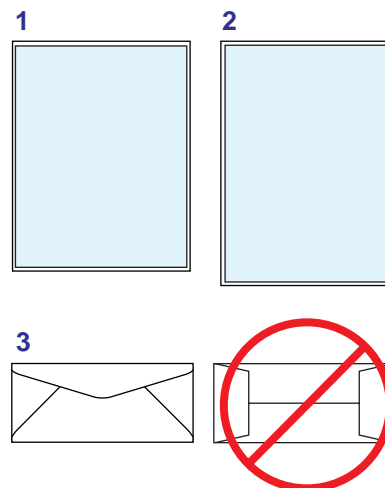
To assure the correct page margins, use the drivers supplied on the printer's CD-ROM.

Supported media sizes selected in drivers and front panel

Media	Page size	Print area	Margins			
			Top	Bottom	Left	Right
1 Letter	8.5 x 11 in.	8.112 x 10.612 in.	.2 in.	.2 in.	.2 in.	.2 in.
2 A4	210 x 297 mm	200 x 283 mm	5 mm	5 mm	5 mm	5 mm
3 Envelopes						
■ US #10	4.13 x 9.5 in.	3.2 x 9.24 in.	.2 in.	.8 in.	.2 in.	.2 in.
■ US #6 ^{3/4}	3.65 x 6.5 in.	3.2 x 6.2 in.	.2 in.	.28 in.	.2 in.	.2 in.
■ C5	162 x 229 mm	80 x 219 mm	5 mm	77 mm	5 mm	5 mm
■ DL	110 x 220 mm	80 x 210 mm	5 mm	25 mm	5 mm	5 mm
■ Choukei 3 Gou	120 x 235 mm	80 x 225 mm	5 mm	35 mm	5 mm	5 mm
■ Choukei 4 Gou	90 x 205 mm	80 x 195 mm	5 mm	5 mm	5 mm	5 mm

NOTE

Never use envelopes with an end flap, or with windows or metal clasps; they will damage the printer. Only use the recommended envelope sizes. Envelopes must always be printed with the **flap face-up**.



9102-04

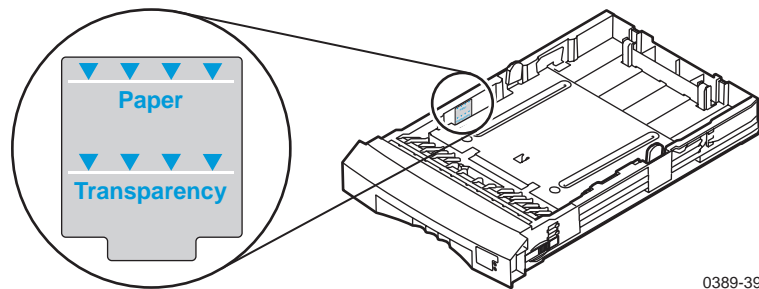
Media hints

- When printing a large number of paper sheets or transparencies, use the media-specific trays for best reliability.
- When you select a media tray by location (Upper, Middle, Lower), the printer feeds from that tray.
- Always keep media in a sealed package to avoid the effects of moisture which can affect feed reliability.
- Always use the Manual Feed Slot for heavy media and envelopes.
- Always fan the media before inserting it in the media tray.

Loading media trays

Loading paper

1. Remove the media tray from the printer.
2. Fan the paper to help separate the sheets.
3. Use the tray's maximum-capacity label to determine how much paper to load.

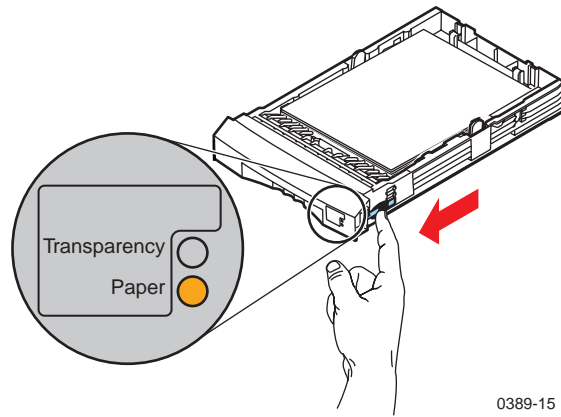


4. Load the paper with the side to be printed *face-up* for single-sided printing.

NOTE

Refer to “Loading pre-printed paper for duplex printing” on page 25 for information about loading paper when duplex printing.

5. Place the media snugly against the front left wall of the tray.
6. Set the indicator switch on the right side of the tray to **Paper**.



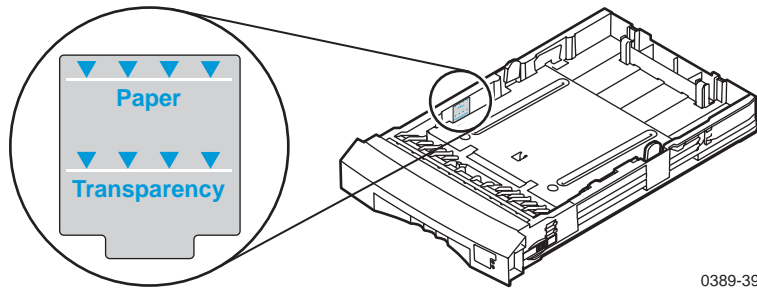
7. Insert the tray into the printer.

Loading Phaser 840 printer transparencies

CAUTION

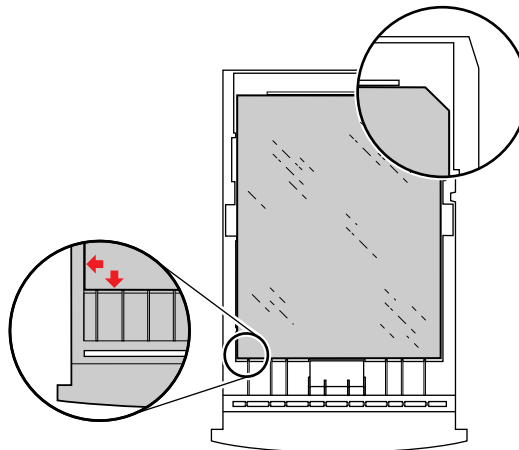
Handle transparencies by the edges and with both hands to avoid fingerprints and creases, which can result in poor print quality.

1. Remove the media tray from the printer.
2. Fan the transparencies.
3. Use the tray's maximum-capacity label to determine how many transparencies to load.



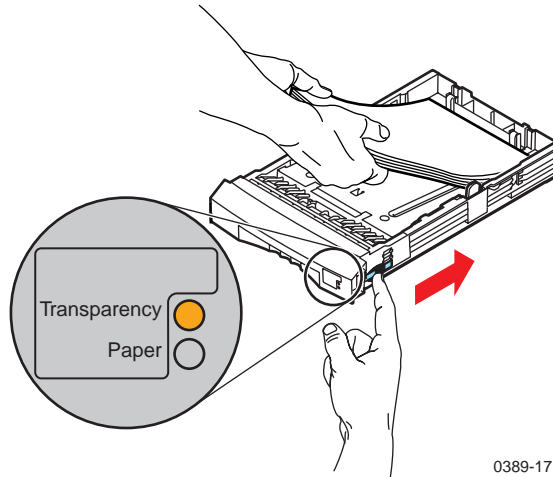
0389-39

4. Place Phaser 840 printer transparencies in the tray so that the notched corner is in the right rear corner of the tray. Make sure that the transparencies fit snugly against the front left wall of the tray.



9103-31

- Set the indicator switch on the right side of the tray to **Transparency**.



- Insert the tray into the printer.

Using the media indicator switch

- For the best printing reliability, always set the indicator switch to **Transparency** when printing on transparencies.
- Always load transparencies in the tray with the notched corner in the right rear corner of the tray.

Loading labels

NOTE

Make sure that duplex printing is **disabled** in the printer driver.

- Remove the media tray from the printer.
- Fan the labels to help separate the sheets.
- Load the labels with the side to be printed *face-up*, and place the label sheets snugly against the front left wall of the tray.
- Set the indicator switch on the right side of the tray.

Tray	Capacity	Indicator Setting
Paper/Transparency tray	50 sheets	Transparency <input type="radio"/> Paper <input checked="" type="radio"/>
High-Capacity Paper/Transparency tray	100 sheets	Transparency <input type="radio"/> Label <input checked="" type="radio"/>

- Insert the tray into the printer.

Using the Manual Feed Slot

The Manual Feed Slot is the only location for loading envelopes, and serves as another location for loading A - or A4 - size media.

- Load a single sheet at a time.
- Use the Manual Feed Slot to print on standard and heavy media.

Standard media

- Paper
- Phaser 840 printer transparencies

Specialty media

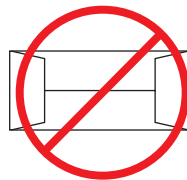
- Cover / Index stock
- Avery™ White Laser Labels

Envelopes

- #10 (US)
- #6 ¾ (US)
- DL
- C5
- Choukei 3 Gou
- Choukei 4 Gou

NOTE

Never use envelopes with an end flap, or with windows or metal clasps; they will damage the printer. Only use the recommended envelope sizes. Envelopes must always be placed with the **flap face-up**.



9102-54

Loading media in the Manual Feed Slot for single-sided printing

NOTE

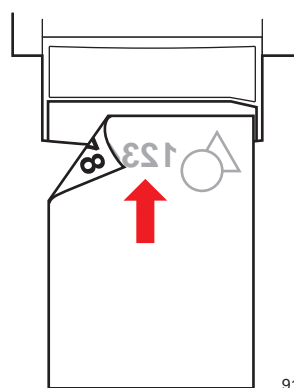
For details on loading pre-printed paper for automatic duplex printing, refer to page 25.

1. In a supported printer driver, select **Manual Feed Paper**.
2. To send the job to the printer, click **Print**.
3. Open the printer's manual feed cover and adjust the guide for your paper size.
4. When the printer's front panel reads *Waiting for paper*, use both hands to insert one sheet of media until it stops.
5. Wait for the front panel's prompt before inserting additional sheets.

Letterhead

1. In a supported printer driver, select **Manual Feed Paper**.
2. To send the job to the printer, click **Print**.
3. Open the printer's manual feed cover and adjust the guide for your paper size.
4. When the printer's front panel reads *Waiting for paper*, insert one sheet of letterhead until it stops:

Insert the letterhead paper with the side to be printed *face-down*, with the top of the page entering the printer *first*.



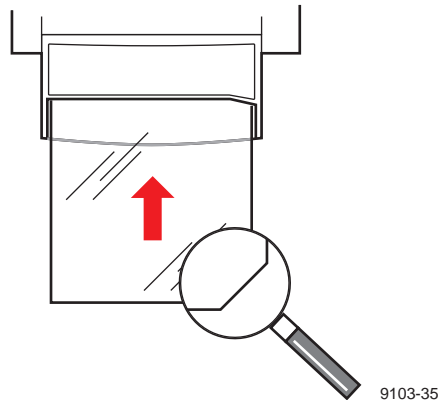
9103-34

5. Wait for the front panel's prompt before inserting additional sheets.

Transparencies

1. In a supported printer driver, select **Manual Feed Transparency**.
2. To send the job to the printer, click **Print**.
3. Open the printer's manual feed cover and adjust the guide for your transparency size.
4. When the printer's front panel reads *Waiting for transparency*, use both hands to insert one transparency until it stops:

Insert the transparency with the notched corner to the *right* and entering the printer *last*.



5. Wait for the front panel's prompt before inserting additional sheets.

Envelopes

This printer should be used for occasional envelope printing only. Do not print envelopes in high volumes.

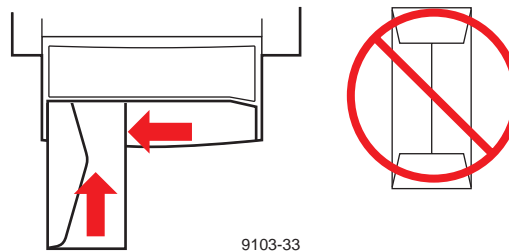
CAUTION

To avoid media jams and damage to the printer components, make sure that you follow the guidelines listed here.

- Keep unused envelopes in their packaging to avoid the effects of moisture, which can affect feed reliability.
- Use the recommended envelope sizes.
- Single-sided printing only.
- No end flaps.
- No windows or metal clasps.
- No exposed gummed surfaces.

1. In your application, create a document matching the measurements of the envelope. Refer to “Margins and print area” on page 13 for dimensions.
2. From your application, make these selections:
 - Set the orientation to **Landscape**.
 - Select the envelope size.
 - Select **Manual Feed Paper** as the paper source.
 - If your application has a tool for creating envelopes, select the feed method that matches the illustration in Step 4.
3. Send the job to the printer.
4. When the printer’s front panel reads *Waiting for manual feed*, insert one envelope, insert one envelope until it stops:

Insert one envelope with the short end of the envelope entering the printer *first*, and with the **flap** side *face-up* and aligned with the *left* side of the manual feed slot.



Envelope printing hints

- **For Macintosh users:** If the envelope address prints upside-down, to correct, select **Page Setup**; select **Landscape** and **Envelope size**. In Page Setup’s **PostScript Options** select **Flip Horizontal** and **Flip Vertical**. From the Print dialog window, select **Manual Paper Feed**.
- Many applications include a tool for creating an envelope document. For example, Microsoft Word includes an **Envelopes and Labels** feature under the **Tools** menu. Make sure that you select **Face Down**; select the feed method icon showing the flap entering to the left, and select **Clockwise Rotation**.

If the envelope addressing prints upside-down in Microsoft WORD, from the **Tools** menu select the **Envelope and Labels** item. After clicking the **Feed** button, select **Face Down**, **Clockwise Rotation**, **Left Flap** (the right icon), and **Use Envelope Feeder**. In the **Envelope Page Setup** dialog, select **Landscape**, **Flip Horizontal** and **Flip Vertical**. From the Print dialog window, select **Manual Feed**.

- Check the Tektronix web site for any application- or platform-specific information for printing envelopes on this printer.

Labels

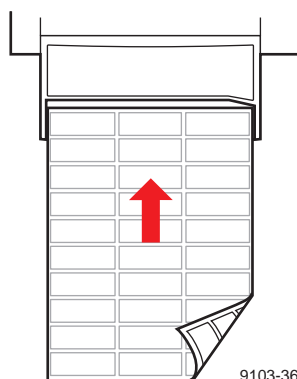
CAUTION

To avoid media jams and damage to the printer components, make sure that you follow these guidelines.

- Tektronix recommends using Avery™ White Laser Labels, for example:
 - A/Letter: 5160, 5960
 - A4: L7162
 - Each label is at least 25 x 67 mm or 1 x 2.625 in. in size. Smaller labels may peel off and damage printer components.
 - If any of the labels on a sheet are missing, do not use that sheet; it may damage the printer.
 - Use full-sheet peel-off labels.
 - Make sure that the duplex printing option is **disabled** in the printer driver.
 - Do not store labels in high-humidity environments. Labels stored under such conditions will jam in the printer.
1. Refer to your application's manual for information on page orientation and page margins.

If your application has a setting for Avery™ labels, use it as a template. Otherwise, set margins and spacing according to the guidelines in the instruction sheets that are included with the labels.
 2. In a supported printer driver, select **Manual Feed Paper**. Make sure that the duplex printing option is disabled.
 3. To send the job to the printer, click **Print**.
 4. Open the printer's manual feed cover and adjust the guide for your paper size.
 5. When the printer's front panel reads *Waiting for paper*, use both hands to insert one sheet of media until it stops:

Insert the label sheet with the side to be printed *face-down*.



6. Wait for the front panel's prompt before inserting additional sheets.

Automatic duplex printing

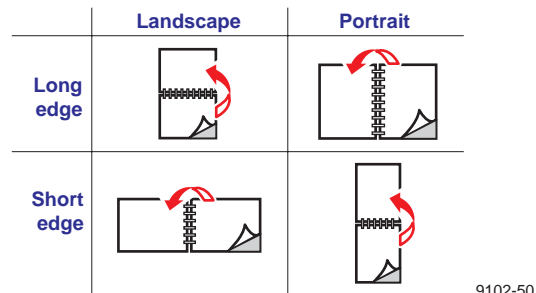
This printer can automatically print double-sided (duplex) copies. When a double-sided print job is sent to the printer, the printer will print the second side (back side) and then print the first side (front side). During this process, the paper will partially exit the printer. To avoid media jams, wait until the paper has completely exited the printer before removing your paper from the output tray.

NOTE

The Plus and Extended printer configurations include automatic duplex printing. The Standard printer configuration does not support automatic duplex printing.

Setting duplex printing in the print driver

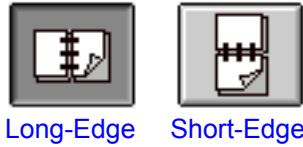
1. Decide on a binding preference (how the page turns) for Step 2:
 - **Long-Edge**
The page turns on the long side, regardless of orientation.
 - **Short-Edge**
The page turns on the short side, regardless of orientation.



2. In the application's **Print** screen, select the Duplex option and a binding preference.

Macintosh: LaserWriter 8.5.1

- a. From the pull-down menu, choose **Layout**.
- b. Check **Print on Both Sides**.
- c. Select the icon for your binding preference:



Macintosh: LaserWriter 8.3.4

- a. Click the **Options** button.
- b. Select **2-Sided Printing**.
- c. Select **Long-Edge Binding** or **Short-Edge Binding**.

PC: Windows 3.1x

- a. Click the **Setup** button.
- b. Click the **Features** tab.
- c. Select **2-sided printing**.
- d. Select **Long-Edge Binding** or **Short-Edge Binding**.

PC: Windows 95 / Windows 98

- a. Click the **Properties** button.
- b. Click the **Paper** tab.
- c. Click **More Options** button and select **Printing on Both Sides**.
- d. Select **Flip on Long-Edge** or **Flip on Short-Edge**.

PC: Windows NT4

- a. Click the **Properties** button.
- b. Click the **Advanced** tab.
- c. Under **Paper/Output**, select **Print on Both Sides**.
- d. Select **Short Side** or **Long Side**.

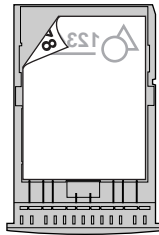
Loading pre-printed paper for duplex printing

Media Tray

NOTE

In the **Print** dialog box, select the tray by location: Upper, Middle, or Lower.

- Letterhead (pre-printed) side is *face-down*.
- Place the top of the page *at the back* of the tray.



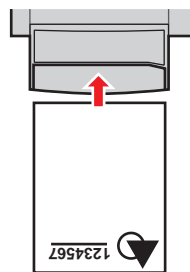
Manual Feed Slot

NOTE

In the **Print** dialog box, select **Manual Feed Paper**.

1. Open the printer's manual feed cover and adjust the guide for your paper size.
2. When the printer's front panel reads *Waiting for paper*, insert one sheet of media until it stops:

For pre-printed papers, such as letterhead, insert the media with the letterhead side *face-up*, with the top of the page entering the printer *last*.



3. Wait for the front panel's prompt before inserting additional sheets.

Using fonts

Resident typefaces (PostScript)

The printer accepts Adobe Type 1 and Type 3 downloadable fonts, TrueType fonts, PCL5, and a variety of user-defined fonts.

To extend font capability, the printer supports an optional internal IDE hard drive and a SCSI-connected external hard disk for storage of additional fonts. Refer to “Connecting Scanners and Hard Drives” on page 101 for more information.

ATM (Adobe Type Manager) software (provided on a separate CD-ROM shipped with your printer) helps your computer to display these fonts on screen as they will appear in your prints.

All printer configurations are shipped with 136 resident fonts. To print a sample of the printer’s fonts, see page 28.

Resident typefaces (PCL5C)

For PCL5C (Printer Command Language) printing (HP LaserJet 5 emulation), the printer supports Courier, Times, and Universe typefaces in medium, bold, italic medium, and italic bold. Before the printer accepts PCL data, the printer port must be set to **AutoSelect**.

Downloading fonts

Printer-resident fonts are always available for printing. Additional downloadable fonts can be sent from your computer and stored in the printer’s memory or on a hard disk. Adding more printer memory expands the number of fonts that can be stored on your printer.

Downloading fonts saves print time when printing large, or several documents, that use those fonts.

The printer accepts these (and other) downloadable fonts:

- Type 1
- Type 3
 - Adobe
 - Agfa
 - Bitstream
 - Microsoft
 - Apple
- TrueType (scalable to any point size; look the same on-screen and printed).

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

Refer to “Connecting Scanners and Hard Drives” on page 101 for more information on connecting hard drives for font storage.

Downloading fonts from a Macintosh

1. From the printer’s CD-ROM, run the Installer application. Select **Custom Install**. Select **Printer Utilities**.
2. From the *PhaserTools* folder on your computer’s hard disk, double-click **Apple Printer Utility**. Select your printer’s zone (AppleTalk Zones) and your printer (Printers).
3. Click **Open Printer**; a dialog box appears.
4. Click the arrow next to **Printer Preferences**.
5. Click the arrow next to **Fonts** for a list of installed fonts and locations.
6. Click **Add**.
7. Select your font folder, then select the font you want to download.
8. Under **Destination**, select the download location: either the printer’s memory or an attached hard disk.
9. Click **Add** for one font or click **Add All** for all fonts in the folder.
10. Click **Send**; the font(s) appear in the list.

NOTE

To remove downloaded fonts, click **Remove**.

Downloading fonts with Windows 95 / Windows 98 (parallel connection only)

To download fonts to a SCSI hard drive, download the DOS-based utility *PCSEND.EXE* (developed by Adobe Systems Inc. for downloading Adobe fonts) from the Tektronix ftp server using the following address:

`ftp://ftp.tek.com/Color_Printers/bbs/pcs/misc_utilities/PCSEND.EXE`

See “Downloading files from the Tektronix ftp server” on page 99 for more information.

NOTE

PCSEND.EXE will support downloading of fonts to a printer directly connected to a parallel port on the computer. The file does not support printers connected via Ethernet.

Printing a list of resident fonts

From a Macintosh

1. From the printer’s CD-ROM, run the **Installer** application. Select **Easy Install**.
2. From the *PhaserTools* folder on your computer’s hard disk, double-click **Apple Printer Utility**. Select your printer’s zone (AppleTalk Zones) and your printer (**Printers**).
3. Click **Open Printer**; a dialog box appears.
4. From the **File** menu, select **Print Font Samples**.

From a PC or workstation

1. From the printer’s CD-ROM, run *setup.exe*. Select **Easy Install**.
2. Open the *PHSRTOOL* directory. Open the *SAMPLERS* subdirectory.
3. Use one of these methods to send to the printer the *FONTS.PS* file:
 - PC users: Use the DOS **COPY** command.
 - Workstation users: Send the file to the printer as you would any PostScript file.
 - Windows NT users: Send the file to the printer by typing the following at the DOS prompt:

```
lpr -S <IPaddress> -P PS FONTS.PS
```

Using Quick Collate

Requirements

- Plus Feature Set
- Hard drive (internal or external)

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 in sequence to the printer until the requested number of copies is printed. With the Quick Collate option, the job is sent only once and then multiple collated sets are produced by the printer, allowing much faster processing time.

The number of pages that can be collated at one time depends on the size of the hard disk attached to the printer.

Through a supported driver — generally through the **Properties** (Windows 95/ Windows 98) or **Printer Specific Options** (Macintosh) menus, select **Quick Collate**.

Quick Collate hints

Increasing the collation capacity. For typical files, the internal IDE hard drive should be sufficient. If you need to increase the number of pages that the printer can collate at once, you can add an external SCSI hard drive.

Quick Collate and Check Print. When you use the printer's Quick Collate option with Check Print, only the first page of the first set is printed before pausing for your review.

NOTE

Make sure that you disable the collate function in your application, because the printer's Quick Collate option is faster than the collate function in software applications.

Previewing with Check Print

Requirements

- Plus Feature Set
- Enable the feature in the printer's front panel

When printing multiple pages through the driver (either multiple copies of a single page or a multiple-page file), select **Check Print** to preview the first page of the job before proceeding with the remainder of the job; this feature is useful when printing a large job.

Access to Check Print from the driver is enabled and disabled in the printer's front panel. You can also set the timeout in the front panel (timeout is the amount of time the printer waits after sending the first page of a file before it continues with the remainder of the job).

The factory default for Check Print is "disabled"; the default timeout is 5 minutes. Follow these instructions to enable Check Print in the front panel, reset the default timeout, and select the option in the printer driver.

Enable Check Print

1. In the front panel, scroll to Menu.; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Check Print. Press **Select** to toggle the setting for Check Print.

Reset the timeout

1. In the front panel, scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Check Print Timeout; press **Select**.
5. Use the up or down arrows to change the timeout (the amount of time the printer pauses before completing the print job).
6. Scroll to Exit and press **Select** to activate your selection.

NOTE

You can also enable Check Print and control the default timeout through PhaserLink Printer Management software. For details on PhaserLink Printer Management software, refer to the *PhaserShare Networking Manual* on the printer's CD-ROM or Tektronix web site.

Use Check Print

1. In a supported driver, select **Check Print**:
 - **LaserWriter 8.3.4 driver:**
In the **Print** dialog box, click **Options**.
 - **LaserWriter 8.5.1 driver:**
In the **Print** dialog box, use the **Printer-Specific Options** pull-down menu.
 - **Windows 95 / Windows 98 PostScript driver:**
In the **Device Options** tab, select **Printer Features**.
 - **Windows NT driver:**
Under the **Properties** tab, select the **Advanced** tab. In the **Document Options** tab, select **Printer** features.
 - **Adobe PS3 driver for Windows 3.1:**
Select the **Features** tab options.

2. Check your first print. At the printer's front panel's **Check Print** message, choose one of these options and press **Select**:

Reprint	Reprints the first page, pauses for the duration of timeout or until you press a button.
Cancel	Cancels the print job.
Continue	Prints the rest of the print job.

Using Image Smoothing

Image Smoothing blends 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 four ways of selecting Image Smoothing (driver selections override all other settings):

- In a supported printer driver; check the **Image Smoothing** box **On**.
- Through the printer's front panel in the `Default Printer Settings` menu.
- Through PhaserLink Printer Management software under **Configure Printer Defaults**.
- Through one of the following PostScript utility files (see "Using Printer Utilities" on page 93):

Macintosh

- *Image Smoothing On*
- *Image Smoothing Off*

PC

- *SMOOTHON.PS*
- *SMOOTHOFF.PS*

Automatic tray switching

When your printer has a High-Capacity Paper Tray Assembly, you can easily run large jobs without having to replace media often.

1. For automatic tray switching to work properly, load the same type and size media in all of the printer's media trays.
2. Install a tray in each of the printer's tray slots.
3. In the printer driver, select **Paper** as the source.

Using Slip Sheets

You can have the printer insert a slip sheet, or divider page, to separate print jobs, multiple copies of a single print job, or individual pages of a print job.

There are two selections to make in your printer driver.

1. In a supported driver, locate the **Slip Sheet** options:

- **LaserWriter 8.3.4 driver:**

In the **Print** dialog box, click **Options**.

- **LaserWriter 8.5.1 driver:**

In the **Print** dialog box, use the **Printer-Specific Options** pull-down menu.

- **Windows 95 / Windows 98 PostScript driver:**

In the **Device Options** tab, select **Printer Features**.

- **Windows NT driver:**

From the **Properties** tab, select the **Advanced** tab. From the **Document Options** tab, select **Printer Features**

- **Adobe PS3 driver for Windows 3.1:**

Select the **Features** tab options.

2. Select one of the following for **Slip Sheet**:

Off	Turns off the slip sheet feature.
End of Job	Inserts a slip sheet between individual print jobs.
End of Set	Inserts a slip sheet between copies, or sets, of a multi-copy print job.
End of Page	Inserts a slip sheet between every page of a print job.

3. Select one of the following for **Slip Sheet Source**:

Upper Tray	Takes paper for the slip sheet from the upper media tray.
Middle Tray	Takes paper for the slip sheet from the middle media tray, if you have two High-Capacity Paper Tray Assemblies installed.
Lower Tray	Takes paper for the slip sheet from the lower media tray, if you have one or two High-Capacity Paper Tray Assemblies installed.

Front Panel Intensity

1. In the printer's front panel, scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Front Panel Intensity; press **Select**.
5. Use the up or down arrows to change the front panel back light intensity (0 is no back light, 10 is the brightest back light).
6. Press **Select** to activate your selection.
7. Scroll to Exit; press **Select** to return to the Ready to Print message.

Intelligent Ready mode

Intelligent Ready mode is an automated system that optimizes printer standby time by monitoring your printer's usage patterns. You can set Intelligent Ready mode with PhaserLink or the printer's front panel. The front panel only allows you to turn Intelligent Ready mode On or Off.

1. In the front panel, scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Advanced Printer Settings; press **Select**.
5. Scroll to Intelligent Ready. Press **Select** to turn this option On or Off.
6. Scroll to Exit; press **Select** to return to the Ready to Print message.

NOTE

You can also enable Intelligent Ready mode and set your own printer warm-up times through PhaserLink Printer Management software. For details on PhaserLink Printer Management software, refer to the *PhaserShare Networking Manual* on the printer's CD-ROM or Tektronix web site.

PhaserPrint Plug-in for Photoshop

The PhaserPrint™ plug-in, included on the printer's CD-ROM, operates within the Photoshop application. With PhaserPrint, you can improve image transfer time and gain easy access to Tektronix printer features and other media features.

PhaserPrint software produces correct output only on supported Tektronix printers.

NOTE

If you use this plug-in with a printer not listed in the PhaserPrint dialog box, the image may be placed incorrectly on the page, or colors may look incorrect, or your file may not print.

Installing the plug-in: Macintosh

NOTE

The PhaserPrint Plug-in is automatically installed with the software installation option Easy Install.

Compatibility requirements

- Photoshop 2.5.1 and higher
- System 7.0 and higher

Installing the plug-in

1. From the printer's CD-ROM, run the **Installer** application. Select **Custom Install**.
2. Select **PhaserPrint plug-in for Photoshop**. Click **Install**; the file is installed in the Photoshop application's *Plug-ins* folder on your computer's hard disk.

Installing the plug-in: Windows

Compatibility requirements

- Photoshop 3.0 and higher
- Windows 95/Windows 98 or Windows NT
- (optional) TCP/IP support requires proper installation of IP networking software and cards

Installing the plug-in

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**.
2. Select **PhaserPrint plug-in for Photoshop**; the file is installed in the Photoshop application's *Plug-ins* directory on your computer's hard disk.

Using the plug-in

1. If you don't already have a default printer selected, do the following:
 - **Macintosh:** Open the **Chooser**. Select a PostScript driver (such as the Apple LaserWriter 8); select your printer. PhaserPrint software works like a printer driver, and prints to the printer you selected in the Chooser.
 - **Windows:** Within the PhaserPrint software, select your printer and port, as described in "Print using (Windows)" on page 38.
2. Open Photoshop. Open an image file.
3. From the **File** menu, select **Export**. Select **PhaserPrint**; the PhaserPrint dialog box appears.
4. In the **Printer Model** field, select your printer.
5. PhaserPrint software supports the following image modes selected from Photoshop's **Mode** menu. If you select a mode not listed here, an error message appears and your image is not printed.
 - Bitmap
 - Grayscale
 - Indexed Color
 - RGB Color
 - CMYK Color
 - Lab Color

Selecting options in the PhaserPrint dialog box

Settings you make in the PhaserPrint plug-in remain in effect until you change them. The exception is Number of Copies, which defaults to 1 each time you start the plug-in.

NOTE

You can get information on any of the plug-in's features or printer-specific options with the online **Help** function.

Number of copies

Enter the number of copies to print, from 1 to 1000.

Print using (Macintosh)

The **Print using** pop-up menu lets you choose between printing an image or saving the image to disk.

- **AppleTalk** Prints the image to the printer currently selected in the Chooser; the currently selected printer name is displayed in the **Printer model** field. If the selected printer is not a PostScript printer, this option is unavailable (grayed-out).
- **PostScript file** Saves an image to disk as a PostScript file. Click **Save**; a dialog box lets you choose a new or existing file for saving the PostScript code.

When selected, the **File format** pop-up menu becomes available. This pop-up menu has two options: **ASCII base-85** and **Binary**.

- **ASCII base-85** Image data is encoded using an ASCII base-85 filter during file output, making the resulting PostScript file portable, and downloadable through interface ports that don't support binary data.
- **Binary** Image data is output in binary format.

Print using (Windows)

The **Print using** pop-up menu lets you choose between printing an image or saving the image to disk. It has two to four options, depending on your system configuration:

- **TCP/IP** Available if a TCP/IP stack is installed and running. From **Printer model**, choose a printer. Add and delete printers in the list, and edit the printer configurations.

NOTE

TCP/IP is the fastest printing method; it prints jobs in much less time than the Parallel Port or Printer Driver methods, and is the recommended method if it is available for the printer you are using.

- **Local Port** Available if you have local ports installed in your PC. From the **Port Name**, choose the desired printer port.
- **Printer Driver** Prints the image through the selected printer driver. From **Driver Name**, choose a printer.
- **PostScript file** Saves an image to disk as a PostScript file. Click **Save**; a dialog box lets you choose a new or existing file for saving the PostScript code.

When selected, the **File format** pop-up menu becomes available. This pop-up menu has two options: **ASCII base-85** and **Binary**.

- **ASCII base-85** Image data is encoded using an ASCII base-85 filter during file output, making the resulting PostScript file portable so that it can be downloaded through interface ports that don't support binary data. Note that the file may be up to 25% larger.
- **Binary** Image data is output in binary format. Recommended for network printing only (not for the parallel port).

Displays the currently selected printer.

Printer model

- Lists all printers supported by PhaserPrint software.
- When you select your printer model, PhaserPrint displays the correct options for your printer.

Media size (selection)

- Paper sizes are printer-specific; refer to the online Help for your printer's options. Before selecting a paper size, select your printer in the **Printer model** field.

Color Correction

- The setting remains in effect until you change it.
- Color Corrections are not available if the **Photoshop Mode** is **Lab**.
- If **RGB** is the selected **Mode in Photoshop**, the **Calibrated RGB** option is also available.

Media

- The setting remains in effect until you change it.

Quality

- The setting remains in effect until you change it.

Rendering Intent

- Available in the following cases:
 - If the **Mode in Photoshop** is **RGB**, and you select **Calibrated RGB** as the **Color Correction in PhaserPrint**.
 - If the **Mode in Photoshop** is **Lab**.
- **Calibrated RGB** and **Lab** modes take longer to print than other modes because the printer must convert CIE colors to RGB or CMYK colors before printing.

Compress Image Data

- Compresses image data so that less data is sent to the printer or stored in a file.
- Useful if your network connection is slow, for example, if you are connected to a busy network or if you are using LocalTalk or a parallel port.

NOTE

For fast networks, printing may be faster without using this option.

- The setting remains in effect until you change it.
- Default is On.

Fast preview

- Quick print of your image with slightly reduced image quality.
- Reflects the printer color correction you selected.
- For the fastest printing, use the **None** color correction option.
- Default is *Off*.

Check Print

- Available only with the printer's Plus Feature Set option.
- `Check Print` must be enabled in the printer's front panel.
- When sending a multiple-copy print job to the printer through the driver, you can select **Check Print** to preview the first page of the job, and determine if the job is printing as expected before proceeding with the remainder of the job. This option is especially useful when printing many copies.
 1. Click the **Check Print** check box.
 2. 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, the printer pauses again for the duration of the selected timeout, or until you press one of the buttons.
 - **Cancel** Cancels the print job.
 - **Continue** Continues printing the entire job.
- At the printer's front panel, set the `Check Print` timeout.
- Default is *Off*.

Image Smoothing

- Blends adjacent colors so that color transitions are less noticeable.
- Use this option when the image being printed was scanned at a lower resolution than the printer's output resolution. For example, printing an image scanned at 72 dpi using the printer's Standard print quality mode (300 dpi).
- Images printed using **Image Smoothing** appear with less sharp detail but with smoother color transitions.
- Default is *Off*.

Stylized representation of the page

- The lower left area of the dialog box displays a stylized representation of the page as it would look when printed using the current selections in the **Scale**, **Scale to fit**, **Printer model**, **Media size** (selection), **Landscape orientation**, **Replicate images**, **Center images**, and **Image separation** options. When you change any of these selections, the representation of the page is redrawn to reflect the new selection.
- If **Show color preview of image** is *On*, an approximate color image is displayed.

Scaling an image

- **Scale to fit**
 - Scales an image to the largest size that fits the image area of the currently selected page size or orientation.
 - Automatically updates the **Scale** field value.
- **Scale**
 - Type the percentage the image should be scaled, from 10 percent to 2000 percent.
 - Use with the **Replicate images** option to produce multiple copies of an image on a single page.
- Alert message *Image clipping will occur*.

This message appears in the PhaserPrint dialog box whenever a scaled image will not fit within the image area of the currently selected page size or orientation option.

Landscape orientation

- Prints the image horizontally (landscape) on the page. Leave this box unchecked to print the image vertically (portrait) on the page.
- Refer to the **Stylized representation** of the page, in the lower left corner of the dialog box, to see how your selection will look when printed.

Center images

- Centers the image in the page's image area.
- If this box is not checked, the lower left corner of the image is aligned with the lower left corner of the printable area of the page.
- If the **Center images** box is checked and the **Replicate images** box is checked, the set of replicated images are centered in the image area of the page.

Replicate images

- Fills the page's image area with as many copies of the image as will fit.
- The size of each replicated image is determined by the setting in the **Scale** text box.
- If the size of each replicated image (shown as black rectangles in the stylized representation of the page) is too small to display, the total image area of the printed page is shown as a single gray rectangle.

Image size

- Reflects the dimensions, in inches or millimeters, of the image.
- If the value in the **Scale** box is out-of-range, the image dimensions are displayed with question marks.

Image separation

- Only available if the **Replicate images** box is checked.
- Type an amount, in inches or millimeters (depending on your measurement standard), to specify the amount of separation between each replicated image.
 - A larger amount reduces the number of images that can be printed at one time.
 - Minimum allowed separation value is 0.
 - Maximum separation value is 100 mm (4 inches).
 - Default separation value is 3.175 mm (0.125/one-eighth inch).
 - Valid characters for this field are 0 to 9 and a period (or decimal point).
 - As you type a value, the stylized representation of the page, and **Number of images** and **Image layout** values are dynamically updated. If the value entered in the Image separation field is out-of-range, the values in these other fields are replaced by question marks, and no images are shown in the stylized representation of the page. If the value is out-of-range, and you click **Print** or **Save**, the following alert is displayed:

The value for Image separation is out of range. It will be replaced with the closest allowed value.

Number of images

- Displays the number of scaled images that will fit in the image area of the currently selected **Media size** (selection) and **Landscape orientation** options.
- **Number of images** reflects the current Image separation value.
- If the **Replicate images** box is not checked, this number is set to **1**.
- If either **Scale** or **Image separation** values are out-of-range, a question mark is displayed.

Image layout

- Shows how the scaled images will fit horizontally and vertically in the image area of the currently selected **Media** and **Landscape orientation** options.
- Image layout reflects the current **Image separation** value.
- If the **Replicate images** box is not checked, this number is set to **1 x 1**.
- If either **Scale** or **Image separation** values are out-of-range, question marks are displayed.

Media size (display)

Reflects the dimensions, in inches or millimeters, of the selected media size.

Show color preview of image

Displays an approximate color image, rather than a black box, in the **Stylized representation of the page** field.

Consumables

User-replaceable consumables

These are the replaceable components for the printer:

- ColorStix ink sticks
- Maintenance Kit (maintenance roller/maintenance counter)

When to replace consumables

When the front panel prompts you to replace a component, make sure that you have replacements on hand. The printer continues to print until the component is depleted.

ColorStix ink sticks

CAUTION

Use only Phaser 840 printer ColorStix® ink; other Phaser ColorStix ink will not fit this printer and will damage it if used. Keep ink in its packaging until you are ready to use it.

Front panel messages

Ink low - Add ink	■ Add ink soon.
Out of ink - Open top cover. Add ink	■ Add ink to continue printing.

Order numbers

016-1604-00	3 Black sticks
016-1605-00	5 Cyan sticks, 2 Black sticks
016-1606-00	5 Magenta sticks, 2 Black sticks
016-1607-00	5 Yellow sticks, 2 Black sticks
016-1582-00	2 Cyan sticks, 1 Black stick
016-1583-00	2 Magenta sticks, 1 Black stick
016-1584-00	2 Yellow sticks, 1 Black stick

Maintenance Kit

NOTE

The Maintenance Kit which ships with a new printer has a life of 10,000 prints. Replacement Maintenance Kits have a life of 30,000 prints.

Front panel messages

Maintenance Kit is Low. Only xx prints until empty.	■ Replace the Maintenance Kit soon.
Maintenance Kit is empty. Open front cover and replace.	■ Replace the Maintenance Kit to continue printing.

Order number

Maintenance Kit Life

016-1727-00	30,000 prints
-------------	---------------

Consumable life information

This printer provides several convenient methods for accessing the information you need on the life of the user-replaceable consumables.

Status of the Maintenance Kit

1. In the front panel, scroll to Menu; press **Select**.
2. Scroll to Consumable Usage; press **Select**.
3. Scroll to Maintenance Kit Remaining Life; press **Select**. The number of Prints Remaining will display.
4. Scroll to Exit; press **Select** to return to the Ready to Print message.

PhaserLink Printer Management software

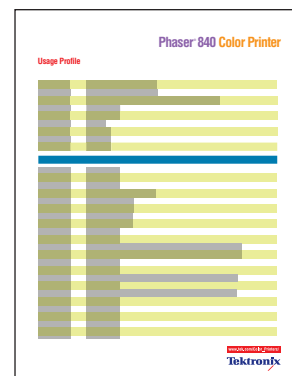
PhaserLink Printer Management software is a printer management tool that uses World Wide Web technology to provide printer information and functionality. PhaserLink requires a TCP/IP connection. To access PhaserLink information, enter your printer's IP address in a web browser. The PhaserLink interface appears on your computer's screen. Refer to page 73 for more information about PhaserLink Printer Management software.



9103-40

Usage Profile Report

The printer can generate a report detailing printer usage. The *Usage Profile Report* includes information on many aspects of printer usage, including ink used, number of pages printed, and media types used. You can print these reports from the printer's front panel or PhaserLink Printer Management software, or you can obtain them automatically via email. Refer to page 74 for more information about the Usage Profile report.



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Troubleshooting

On-line support

Visit Tektronix' color printer web site for the most up-to-date information about your printer. 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.

TekSMART™ Knowledge Base	www2.tek.com/merlin/tko
Tektronix Color Printer web site	www.tektronix.com/Color_Printers/
Documentation	www.tektronix.com/Color_Printers/userdoc/introduction.html
Customer support	www.tektronix.com/Color_Printers/support/colcare.html
Color use tips for novices and experts	colorize.com
PhaserLink Printer Management software	www.tektronix.com/Color_Printers/products/phaserlink.html
Anonymous FTP server	ftp.tektronix.com/Color_Printers/
Email update notices	www.tektronix.com/Color_Printers/support/subscribe.html

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

Australia 1-800-811-177	France 01 69 86 8137	New Zealand +61 2 9888 0100
Austria 0660 5804	Germany 0180 525 3535	Norway (22) 723 801
Belgium 02 720 9602	Hong Kong 2585-6655	Singapore (ASEAN) 1-800-356-5565
Brazil 0800 16 0220	India (South Asia) (91) 80-227-5577	Spain 902 239 272
Canada 1-800-835-6100	Italy 02 45 287 000	Sweden (08) 299 071
China 10-6235-1230	Japan 81 3 3448 4872	Switzerland 155 9493
Denmark (44) 533 444	Korea 2-528-5299	Taiwan (02) 2757-1571
Eastern Europe and the Middle East +44 1908 68187	Luxembourg 400 847	Thailand 2-645-4407
Finland 0203 206 30	Netherlands (040) 267 0440	U.K. (01) 908 681 707
		U.S. 1-800-835-6100

All other locations: Contact local Tektronix dealers or Tektronix offices.
For a list of dealers in your area, visit www.tektronix.com/Color_Printers/contacts.

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 the latest technical hints and tips, solutions to common technical problems, and application notes for software such as CorelDRAW! and QuarkXPress.

Call HAL from anywhere in the world; the fax library is available 24 hours a day, seven days a week. For a catalog listing HAL documents, call one of the following numbers.

Country	Numbers
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)

Diagnostic tools

The printer provides several tools for diagnosing and solving various types of problems; these tools include the following:

Front panel

Status messages

Automatically reflects a condition requiring user intervention.

Help button

Provides detailed information on currently displayed menus and status messages.

Help Topics

Describes common printer tasks.

Consumables Usage Menu

Includes status for the remaining life of the Maintenance Kit.

Configuration Page

Found in the `Printer Configuration` menu; provides useful information for installation and troubleshooting:

- Printer's name and Internet address
- Firmware version
- Feature set (one of three printer configurations: Standard, Plus, Extended)
- Printer serial number
- Network information
- Printer feature status (for example, Check Print enabled)

Usage Profile report

Found in the `Consumables Usage` menu; provides detailed information on consumables used, tray and media selections, printer interventions, as well as an analysis of usage rates. Useful for planning your consumables ordering and tracking the average use of consumables on a per-job basis.

PhaserLink™ Printer Management Software

Use a standard web browser to view printer status, control printer configuration, view consumable information, and link to online documentation via the World Wide Web.

NOTE

To use PhaserLink Printer Management software, the printer must be connected to a network running TCP/IP. Refer to the *PhaserShare Networking Manual* for complete details.

PS Error Handler

Enabled in the front panel's `Advanced Printer Settings` menu. Used to diagnose PostScript problems. When a PostScript error occurs, an error page prints out if the error handler is enabled.

Symptoms and solutions

Front Panel Messages

Symptom	Possible Causes	Solution
Power indicator is blinking	The printer is receiving, processing or printing a job.	Wait for the job to be completed or cancel the job.
	You have entered the menu in the front panel.	Exit the menu.
Power indicator is off	The printer is turned off, is not ready, is disabled, or has detected an error.	Make sure that the printer is plugged in and turned on.
Error indicator is blinking	The printer is stopped because it detected an error or condition requiring user intervention, such as an open door or a media jam.	<ul style="list-style-type: none"> ■ Correct the condition reported by the front panel (for example, close the door or clear the media jam). ■ Press the Help button to access information on the error condition. ■ If the problem is an error that is not user-correctable, contact Customer Support.
The front panel menu returns to Ready to Print without any intervention.	Front-panel timeout: If no activity occurs in 2 minutes, the front panel returns to Ready to Print.	Scroll to Menu and press Select to re-enter the menu.
Front panel reports: Media Jam - Open front cover . . . Media Jam - Open exit cover . . . Media Jam - Remove <xxx> tray . . . Media Jam - Retry manual feed	Media jam.	<ul style="list-style-type: none"> ■ Make sure that paper or transparencies are installed correctly and that the tray's media indicator switch has been set correctly ■ When using the manual feed slot, make sure that the media is fed straight and aligned with the left edge of the manual feed slot. ■ To clear the jam: Refer to "Clearing a media jam" on page 56. ■ To prevent a jam: Clean the rollers. See page 57 for details on cleaning the printer.
	Too much media is loaded in the media tray.	Reduce the amount of media to below the tray's maximum-capacity label.
	Media is wrinkled or curled.	Change the media.
	Media is too thick or too thin.	Use recommended media; refer to page 7.
	Media has jammed at the manual feed slot because it was not loaded properly.	Re-insert the media in the manual feed slot: make sure that it is loaded flush against the left side of the manual feed slot.
Front panel reports: Output tray full	Too much media is stacked in the output tray.	Remove all printed pages from the output tray.
Front panel reports: Envelope Jam - Retry manual feed	An envelope has jammed because it was not loaded properly.	Re-insert the envelope in the manual feed slot: make sure it is loaded flush against the left side of the manual feed slot with the flap side facing up.
Front panel reports: 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, or one of the supported envelope sizes.
Front panel reports: Ink low - Add ink	The ink is almost empty.	Add ink soon.

Front Panel Messages (cont'd.)

Symptom	Possible Causes	Solution
Front panel reports: Out of ink	The ink is empty.	Add ink to continue printing.
Front panel reports: Ink sticks jammed	One or more Ink sticks are stuck in the ink-loading bin.	<ul style="list-style-type: none"> ■ Open and close the top cover. ■ Apply pressure to each row of ink sticks in the loading bin to make sure they are not jammed.
Front panel reports: Maintenance Kit is low . . .	The maintenance kit is almost empty	Order a replacement Maintenance Kit.
Front panel reports: Maintenance Kit Empty . . .	The maintenance kit is depleted.	Replace the Maintenance Kit to continue printing.
Front panel reports: Maintenance Drawer (A) locked	Hot ink is present.	Close the door and wait a few minutes before removing the maintenance drawer (A) from the printer.
Front panel reports: Printer Error ##	An error occurred that may not be user-correctable.	<ul style="list-style-type: none"> ■ Write down the error number. ■ If you have access to the world wide web, look up the error number on the TekSMART web page (see "On-line support" on page 47) for possible corrective action. ■ If the error persists, call Customer Support with the error number. See page 48.

Problems with jams

Symptom	Solution
Frequent media tray jams	<p>Fan the paper or transparencies before installing them in their respective trays; this is especially important for transparencies because they tend to stick together.</p> <p>Clean the printer's rollers. Refer to page 69 for more information.</p>
Frequent media jams	<p>Make sure that you use a high-quality paper: 60 - 120 g/m² (16 - 32 lb. bond) paper in the media trays. Refer to "All about media" on page 7 for more information.</p> <p>Make sure that the printer is placed on a flat, level surface.</p> <p>Use only Phaser 840 printer transparencies; they have been specially formulated for this printer.</p> <p>Do not overfill the media tray, as indicated by the tray's maximum-capacity label.</p> <p>Clean the printer's rollers. Refer to page 64 for more information.</p>

Problems with automatic duplex printing

Symptom	Solution
Output is single-sided	Make sure that you have selected duplex printing in the printer driver.
Frequent jams when duplex printing	<p>Paper must be between 60 - 120 g/m² (16 - 32 lb. bond) in weight.</p> <p>When using the manual feed slot, make sure that the media is always loaded straight.</p> <p>Clean the printer's rollers. Refer to page 64 for more information.</p>
Second side of a duplex print is upside-down	<p>Select the correct method for binding preference in the printer driver.</p> <ul style="list-style-type: none"> ■ Long-edge binding: Page turns on the long side, regardless of image orientation. ■ Short-edge binding: Page turns on the short side, regardless of image orientation. <p>Refer to "Automatic duplex printing" on page 23 for detailed instructions.</p>
Labels are printed on the wrong side	<ul style="list-style-type: none"> ■ Make sure the labels are loaded face down. ■ Make sure that duplex printing is not selected in the printer driver when you are printing labels.

Printed colors are not what you expected

Symptom	Solution
Light-colored or missing stripes on prints	Clean the printhead: in the front panel troubleshooting menu, select Eliminate Light Stripes . Refer to page 58 for more information.
Ink streaks or oil on front, back, or edges of print	<ul style="list-style-type: none"> ■ Clean the printer's internal paper path with the front panel troubleshooting routine. Refer to page 63. ■ Clean the printer's paper-exit rollers. Refer to page 67. ■ Clean the wiper blade in the maintenance drawer (A). Refer to page 62.
Prints have dull, faded colors	<p>If you are using the upper media tray, make sure that the indicator switch has been set for the appropriate media.</p> <p>Use only Phaser 840 printer transparencies; they have been specially formulated for this printer.</p> <p>For printing on transparencies, make sure that you have selected in the driver Transparency (for the media tray) or Manual Feed Transparency (for the manual feed slot).</p> <p>Try a different color correction mode. Refer to page 80 for more information.</p>
Photographic images appear grainy	<ul style="list-style-type: none"> ■ In the printer driver, select the highest print quality mode. ■ Use images that are 150 dpi or higher.
Black-and-white prints instead of color	<p>In the printer driver, check if the TekColor Correction is set to Monochrome; if it is, choose a different color correction.</p> <p>Macintosh users: Make sure that you are using the correct PPD file with the latest Apple LaserWriter printer driver (version 8.3.4 or higher), that supports color PostScript.</p> <p>In the Print dialog box, make sure that Color/Grayscale is selected. Some applications require special files to print in color. Make sure that these files are properly installed. For information, refer to the topics on the printer's CD-ROM or the Tektronix World Wide Web site.</p> <p>PC users: Be sure to use a driver that supports color PostScript.</p> <p>If you are using Windows: In the Options dialog box, make sure that the Color box is checked. For information on the drivers, refer to the printer's CD-ROM or World Wide Web.</p>
Blue colors look too purple	If printed blue colors look too purple, print your document with the Vivid Color color correction. Refer to page 80 for information on color corrections.

Printed colors are not what you expected (cont'd.)

Symptom	Solution
Transparency print quality poor.	<ul style="list-style-type: none"> ■ Use only Phaser 840 printer transparency media. ■ Make sure that you have loaded transparencies correctly in the tray or manual feed slot; refer to page 16 for more information. ■ Make sure that you have selected Standard as the print-quality mode; try setting Vivid Color as the color correction. ■ Make sure that the switch on the side of the High-Capacity Paper/Transparency tray is set to Transparency. ■ Make sure that you have selected in a supported printer driver either Transparency for the media tray or Manual Feed Transparency (for the manual feed slot). Refer to “Loading Phaser 840 printer transparencies” on page 16.
Print is wrinkled or rippled	<ul style="list-style-type: none"> ■ If your media is smooth, use a different type of media. ■ Use single-sided printing instead of double-sided printing.

Print Quality Problems

Symptom	Solution
The printer times out when connected to a parallel port	Windows users: Refer to the Microsoft Online Help for instructions to change the timeout for transmission retry.
The area of paper that the printer prints on is smaller than the media size	<ul style="list-style-type: none"> ■ Refer to “Margins and image areas” for more information. To maximize the image area, you may have to adjust the margins in your application software. ■ In your application check the setting for Image Size.
You have problems printing from a specific application	Get information and tips on printing from specific applications (such as QuarkXPress and PageMaker) from the Tektronix Color Printer web site and from HAL. Refer to page 47 and page 49 respectively.
Fonts print incorrectly in Windows	<ul style="list-style-type: none"> ■ Make sure that you have selected the correct printer feature set (PPD, PostScript Printer Description) with your driver. ■ If you have downloaded fonts to your printer, or stored additional fonts on an internal or external hard drive, you may need to reinstall the fonts.
Text prints in Courier font	The font you have specified is not available. The printer has 136 resident fonts. Other fonts must be downloaded or available on a hard disk. Refer to “Downloading fonts” on page 26.

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; then it prints your original image.

The lower tray is the default tray for media that the printer uses in self-cleaning. If you have one or two High-Capacity Paper Tray Assemblies, you can make the upper or middle tray the default tray through the printer's front panel menu. Refer to "The Cleaning Page" on page 60 for instructions.

Preventing media jams

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

- Make sure that the printer is on a flat, level surface.
- Use the recommended media. Refer to "All about media" on page 7.
- Do not use three-holed paper, perforated paper, or odd-sized paper.
- When using the manual feed slot, always use two hands to load the media straight and evenly.
- 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.
- Fan media before loading it in the trays.
- When using the manual feed slot, wait until a front panel message prompts you before feeding a second sheet of paper or transparency.
- Do not print on sheets of labels that are missing labels.

Clearing a media jam

CAUTION

Some surfaces inside the printer may be hot. To avoid possible injury when clearing a jam, do not touch any hot surfaces.

- When media jams in the printer, the front panel directs you to the location of the jam. Follow the instructions on the front panel.
- Use both hands to gently pull the media through its normal path out the top of the printer (exit cover), if possible. Use the thumbwheel to advance the media. Do not use excessive force pulling the media; it may tear.
- After removing the jammed media, inspect it for tears. Do not leave any scraps of media in the printer.
- If your prints have ink smears after clearing a jam, clean the printer's feed rollers. Refer to page 64.
- If jamming persists, cleaning the printer's internal paper path may solve the problem. Refer to page 63.

WARNING

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

Cleaning the printer

You need to clean the printer when the following occur:

- Media jams are frequent.
- 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.

Using the front panel: Some cleaning procedures are executed through the printer’s front panel, in the `Troubleshooting` menu. Front panel messages guide you through the steps of the procedures.

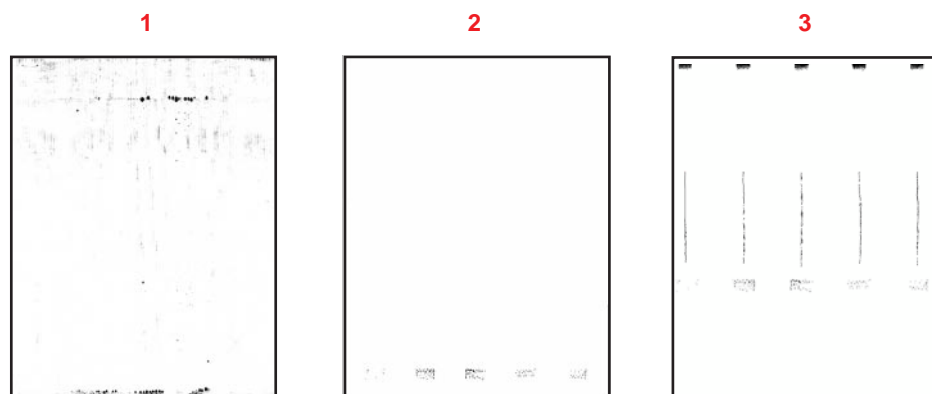
If the printer has frequent media jams

Problem	Cleaning procedure
Media jams or misfeeds at the upper tray.	“Cleaning for media tray jams” on page 69.
Media jams or misfeeds at the middle or lower paper tray.	“Cleaning for lower tray jams: paper-feed rollers” on page 72.
Media jams behind the front cover or at the manual feed slot.	“Cleaning for ink smears and jams: paper-feed rollers” on page 64.
Media jams inside the exit cover.	“Cleaning for ink smears and jams: paper-feed rollers” on page 64.

Ink smears

If your prints have stray ink marks on the front or the back, clean the internal paper path. If smears persist, clean the paper-feed rollers. If smears still appear, clean the paper-exit path.

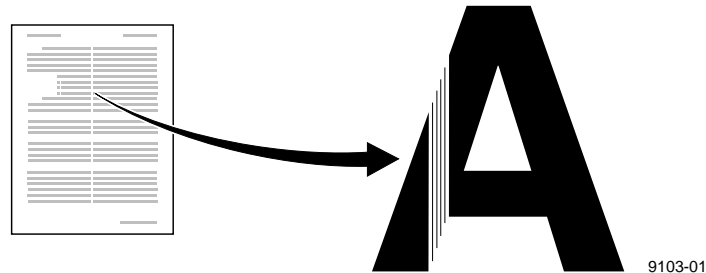
- 1 See “Cleaning for ink smears and jams: internal paper path” on page 63.
- 2 See “Cleaning for ink smears and jams: paper-feed rollers” on page 64.
- 3 See “Cleaning for ink smears: paper-exit path” on page 67.



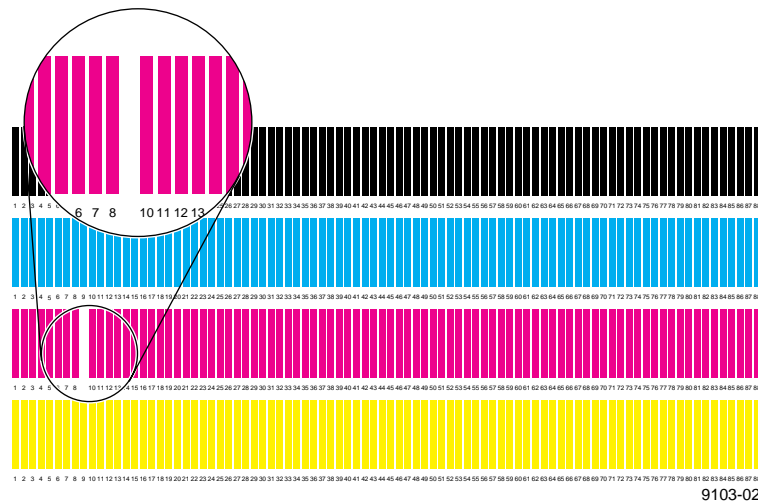
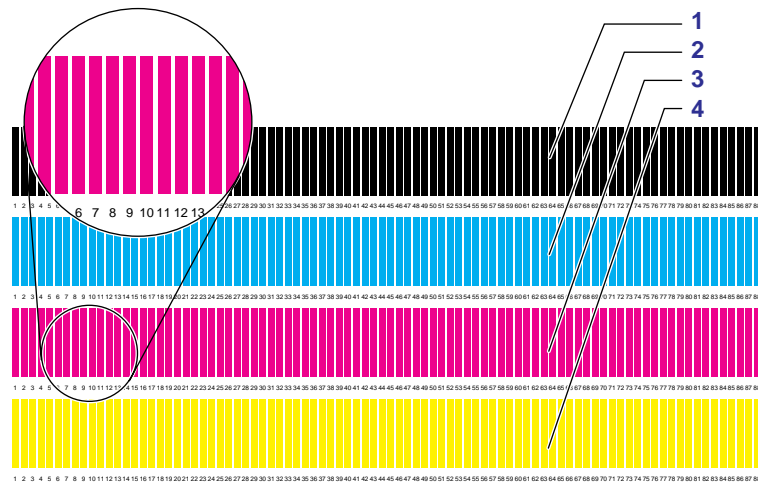
9922-29

Light stripes on prints

If prints have narrow, lengthwise stripes that are faded or the wrong color, or prints have missing colors, run the automatic printhead-cleaning sequence from the printer's front panel.



1. When the Ready to Print message appears, scroll to Menu; press **Select**.
2. Scroll to Troubleshooting; press **Select**.
3. Scroll to Eliminate Light Stripes; press **Select**.
4. 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 60) at the end of the cleaning sequence that you may discard as normal office waste.
5. To confirm that the problem has been corrected, print a Test Page from the Troubleshooting menu. Check for any missing color bars on the Test Page. The following illustration shows a correct Test Page with black (1), cyan (2), magenta (3), and yellow (4). Also shown is an example of a Test Page with a missing color bar in the magenta.



- 6. If one or more of the color bars are still missing or are light, repeat the cleaning sequence.

NOTE

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

- 7. Return the printer to normal operation by scrolling to **Exit** and pressing **Select**. The Ready to Print message appears when the printer is returned to normal operation.
- 8. If your prints still have color stripe problems after the second cleaning sequence, turn the printer off for at least 4 hours to allow the ink to solidify. When the printer is turned back on, it will perform a self-cleaning routine that may resolve the problem.
- 9. If your prints still have color stripe problems, service may be required.

The Cleaning Page

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

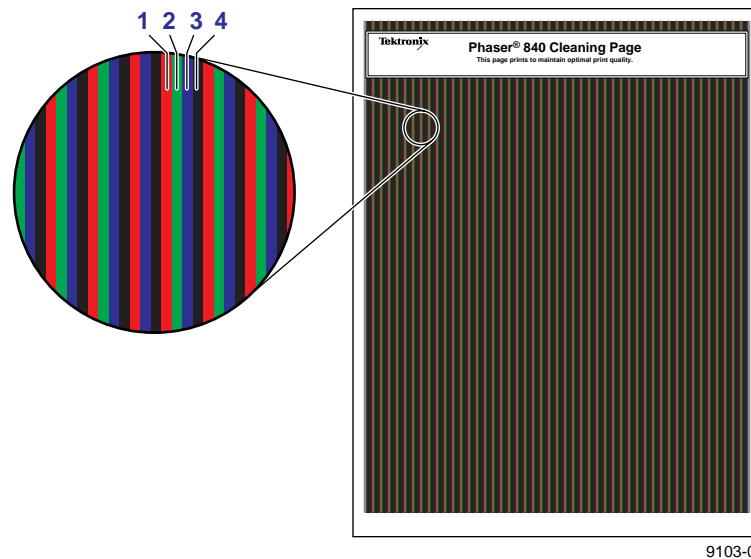
- When you run the cleaning procedure to eliminate light stripes in your prints. Refer to “Light stripes on prints” on page 58 for more information.
- During the printer’s warming-up routine.
- After emerging from Energy Star standby mode.

1 Red

2 Green

3 Blue

4 Black



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 lower tray. When one or two High-Capacity Paper Tray Assemblies are installed, you can ensure that the printer always uses paper from the lower or middle paper tray in its self-cleaning procedures by changing a setting in the printer’s front panel as follows:

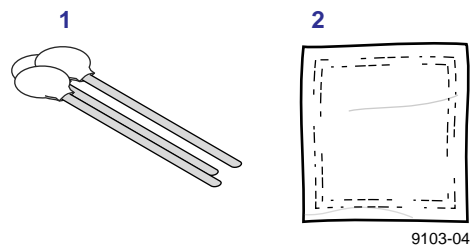
1. When the Ready to Print message is displayed, scroll to Menu and press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Advanced Printer Settings; press **Select**.
5. Scroll to Cleaning Page Source; press **Select** and choose the desired tray.
6. Scroll to Exit; press **Select** to return the printer to the Ready to Print message.

You can also change the default through PhaserLink Printer Management software if you are connected to a network via TCP/IP. Simply enter your printer’s IP address in a standard web browser. Refer to the *PhaserShare Networking Manual* for details.

Cleaning supplies

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

1. Foam-tipped swabs
2. Presoaked alcohol wipes



Using isopropyl alcohol

If you purchase isopropyl alcohol, always use alcohol that is at least 90% pure; alcohol that has additives can damage the printer.

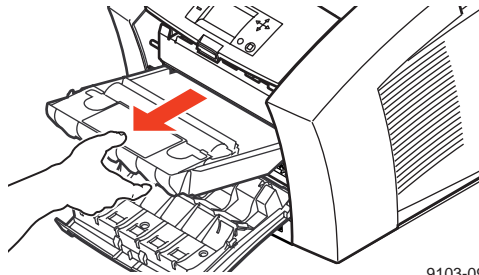
WARNING

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

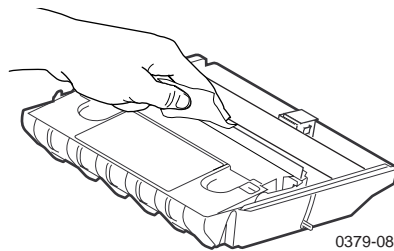
Cleaning for oily streaks

If your prints show oily streaks, you can clean the wiper blade that is located inside the maintenance drawer (A).

1. Open the front cover and remove the maintenance drawer (A).



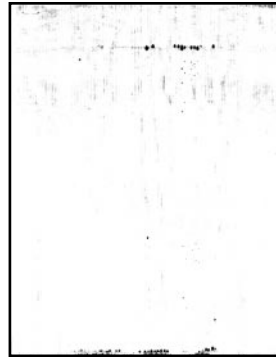
2. Use a lint-free wipe to gently wipe any excess debris from the clear plastic wiper blade.



3. Reinsert the maintenance drawer into the printer.

Cleaning for ink smears and jams: internal paper path

Clean the printer's internal paper path surfaces if your prints have stray ink marks on the front or the back.



9103-06

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.

1. Load high-grade paper into the printer and make sure that the tray's media selector switch is set to **Paper**. If your printer is configured with just the upper media tray, load that tray and set the media selection switch to **Paper**. If you have installed one or two High-Capacity Paper Tray Assemblies, load either the upper tray or the lower tray. The lower tray is the default; if you use the upper or middle paper tray, make sure that the printer's default has been set. Refer to "The Cleaning Page" on page 60 for details.
2. When the printer is on and the Ready to Print message appears in the front panel, scroll to Menu; press **Select**.
3. Scroll to Troubleshooting; press **Select**.
4. Scroll to Remove Ink Smears; press **Select**.
5. After a short delay during the warm-up period, the printer begins an automatic sequence of feeding several clean sheets of paper from the media tray selected as the cleaning page source.

NOTE

For printers with Plus Features: The last few sheets are fed through the duplex paper path.

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.
7. Scroll to Exit; press **Select**. After a warm-up cycle, the printer returns to normal operation.

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 ink smears and jams: paper-feed rollers

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 paper-feed rollers if either of the following conditions exist:

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

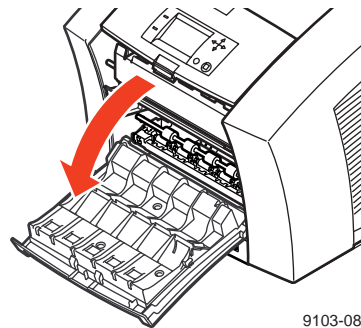


9103-07

CAUTION

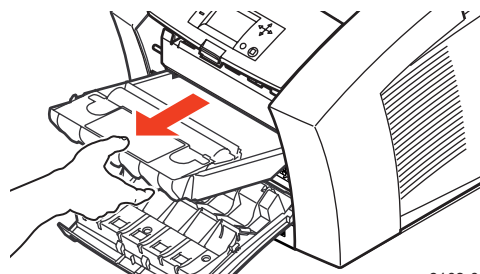
Hot surfaces exist behind the middle paper-feed rollers. To avoid personal injury during cleaning procedures, do not reach in behind these rollers.

1. Open the front cover.



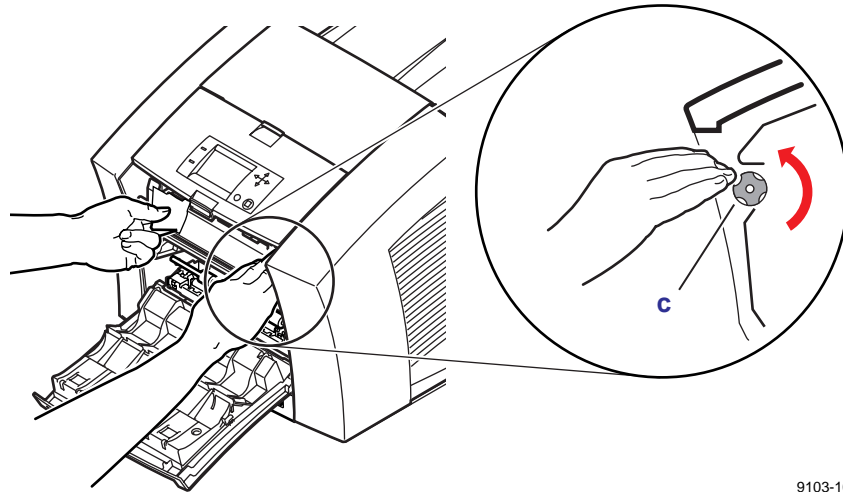
9103-08

2. Remove the maintenance drawer (A) from the printer.



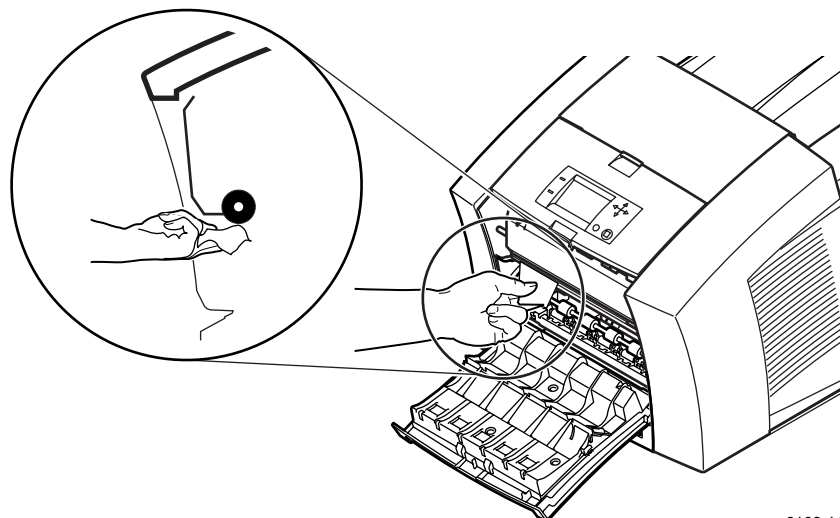
9103-09

3. The upper paper-feed rollers are located above the slot for the maintenance drawer (A). To clean these rollers:
 - a. Use a prepackaged alcohol-soaked wipe.
 - b. Place the cleaning wipe against each upper rubber roller, pressing to create pressure against the roller.
 - c. Use the thumbwheel to turn the upper rollers. The upper rubber rollers should rotate *four or five complete revolutions* for each roller segment to ensure proper cleaning. Scrub each roller thoroughly. If the wipe becomes dirty, discard it and use another.



9103-10

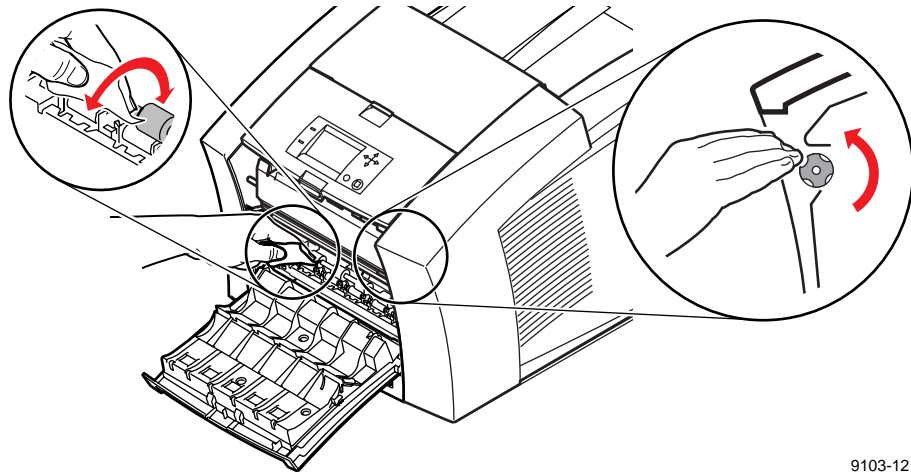
4. To clean the middle rubber feed roller behind metal plate:
 - a. Use a prepackaged alcohol-soaked wipe. Place the cleaning wipe against the underside of each middle roller.
 - b. Manually rotate the middle roller.
 - c. **Scrub each roller thoroughly.** If the wipe becomes dirty, discard it and use another.



9103-11

5. The lower paper-feed rollers are located below the maintenance drawer (A): one set of rollers is black rubber; the other set is white plastic.
To clean the lower rollers:

- a. Use a prepackaged alcohol-soaked wipe. Place and hold the cleaning wipe on top of the white and black rollers.
- b. Use the thumbwheel to turn the rollers. Rotate the rollers *four or five complete revolutions* for each roller segment to ensure proper cleaning.
- c. **Scrub each roller thoroughly until clean.** If the wipe becomes dirty, discard it and use another.



9103-12

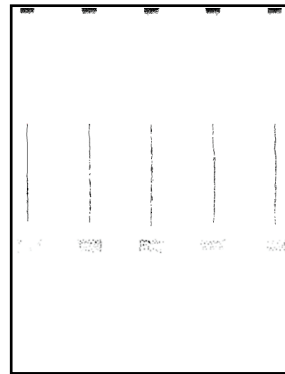
6. Put the maintenance drawer (A) back into the printer.
7. Close the front cover.

Cleaning for ink smears: paper-exit path

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 ink smears and jams: paper-feed rollers” on page 64.

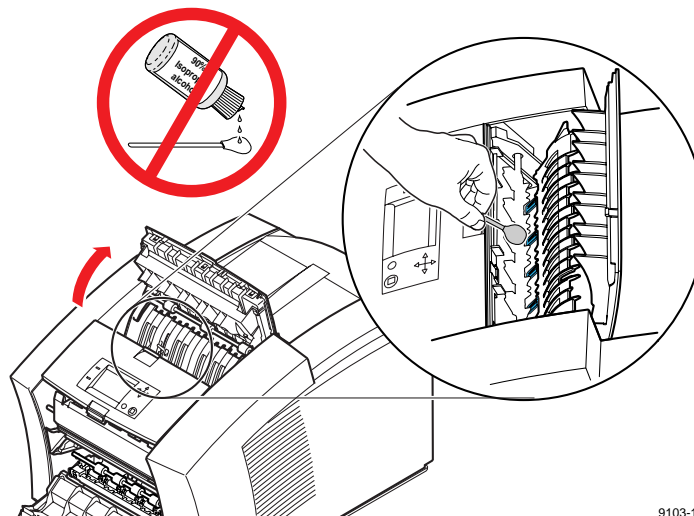
Occasionally, stray ink particles and oil become attached to the exit fingers, rollers, and guides under the exit cover causing ink streaks or marks on the top edge, front, or back of prints. When this occurs, you must clean these parts using both dry swabs and alcohol-soaked wipes.

Sample ink smear: paper-exit path



9103-13

1. Open the exit cover.
2. Clean excess ink particles and oil from the blue exit fingers by gently wiping the top surface of each finger using a *dry* swab.



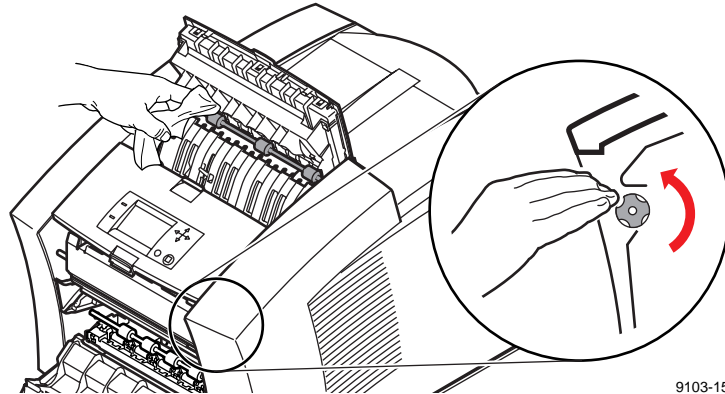
9103-14

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.

3. To clean the rubber exit rollers:

- a. Wrap an alcohol-soaked wipe around the index finger of one hand.
- b. Press your wipe-covered finger against each roller.
- c. Use the thumbwheel to turn the rollers. Rotate the rollers *four or five complete revolutions* for each roller segment to ensure proper cleaning.

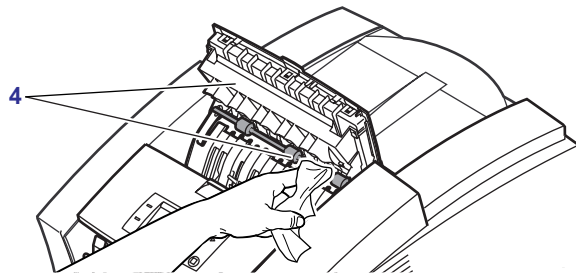


9103-15

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.

- 4.** To clean the two sets of ribbed exit guides under the exit cover, gently wipe the raised ribs using an alcohol-soaked wipe.



9103-17

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.

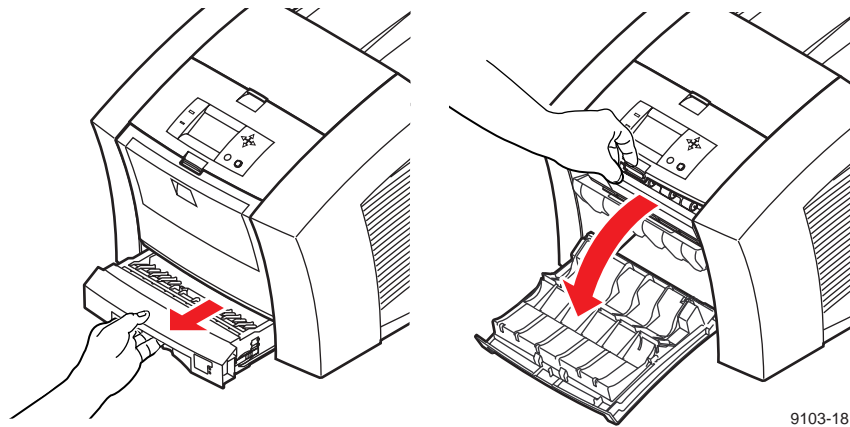
- 5.** Close the exit cover.

Cleaning for media tray jams

If the printer incorrectly feeds paper or transparencies, or feeds more than one sheet at a time from the media tray, you can correct the problem by cleaning the media-pick roller and separator pad.

Cleaning the media-pick roller

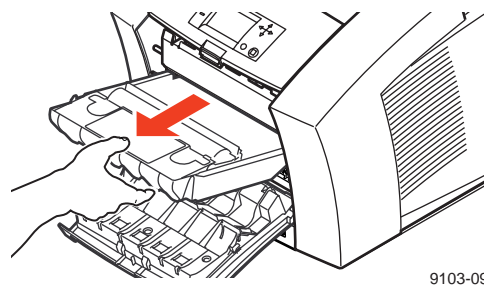
1. Remove the media tray from the printer.
2. Open the front cover.



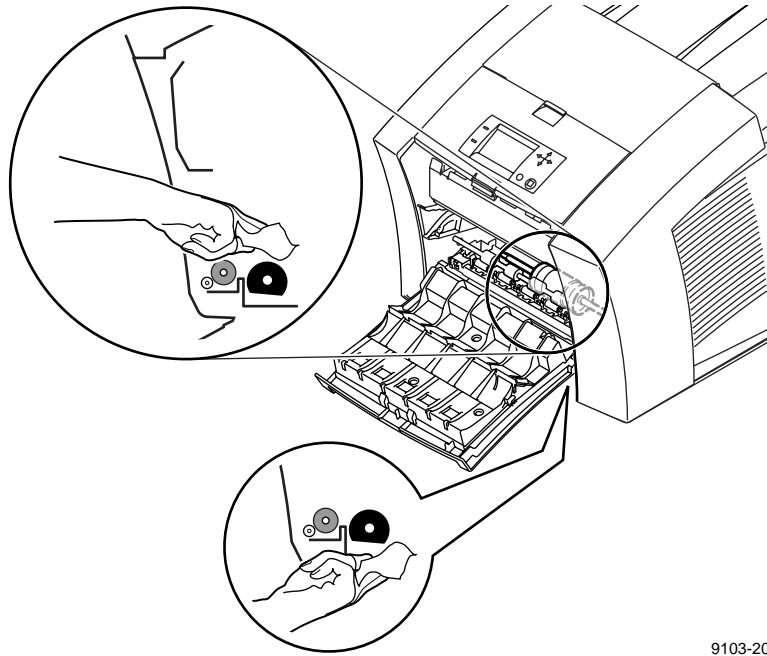
CAUTION

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.

3. Remove the maintenance drawer (A) from the printer.



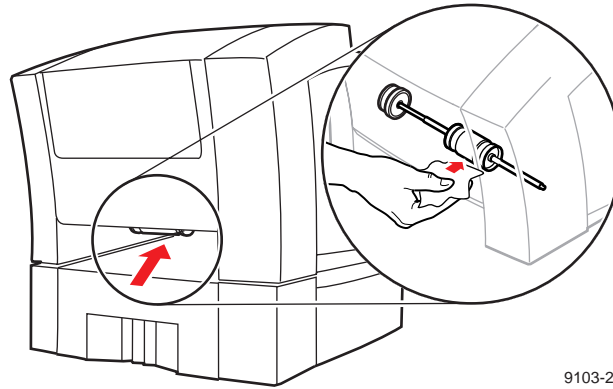
4. To clean the top surface of the media-pick roller:
 - a. Locate the top of the media-pick roller behind the black rubber paper-path rollers.
 - b. Use a prepackaged alcohol-soaked cloth.
 - c. **Scrub the top surface of the media-pick roller thoroughly.** If the wipe becomes dirty, discard it and use another.



9103-20

5. Replace the maintenance drawer (A) in the printer.
6. Close the front cover.

7. To clean the bottom of the media-pick roller:
 - a. Use a prepackaged alcohol-soaked cloth.
 - b. Reach into the media tray slot to access the pick roller. **Scrub the bottom surface of the pick roller thoroughly.**

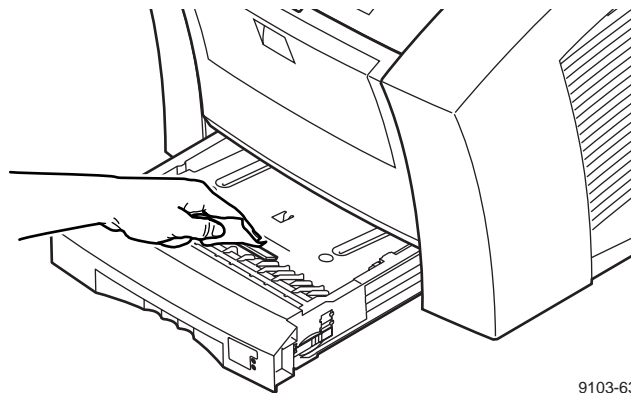


9103-21

8. Replace the upper media tray in the printer.

Cleaning the separator pad

1. Remove the upper media tray from the printer.
2. Gently wipe the separator pad using an alcohol-soaked cloth.



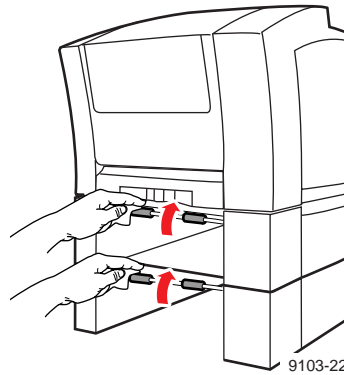
9103-63

3. Inspect the separator pad for damage to the metal edge; it should be free of dents and lie flat against the rubber surface. If any damage is seen, the separator pad should be replaced.
4. Replace the upper media tray in the printer.

Cleaning for lower tray jams: paper-feed rollers

If the printer feeds paper incorrectly or feeds more than one sheet at a time from the High-Capacity Paper Tray Assembly, you can generally correct the problem by cleaning the paper-feed rollers.

1. Remove the paper tray from the High-Capacity Paper Tray Assembly. If your printer has two assemblies, remove the tray from each one. The two paper-feed rollers for each assembly are visible when each tray is removed.
2. Using an alcohol-soaked cloth, **scrub the rollers thoroughly**. Rotate the roller several times to ensure proper cleaning.



3. Replace the paper tray in the High-Capacity Paper Tray Assembly.

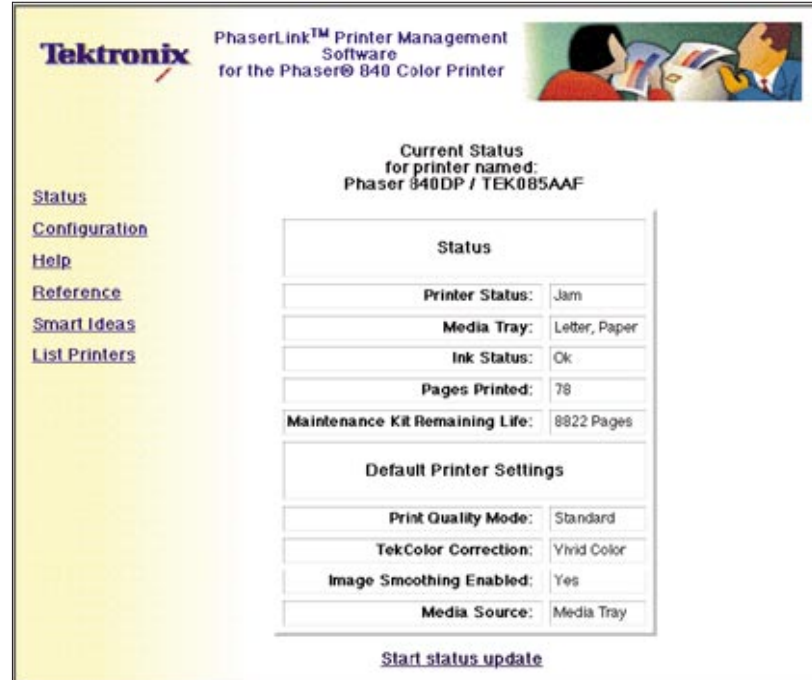
Printer Management

PhaserLink Printer Management software

PhaserLink Printer Management software is a printer management tool that uses World Wide Web technology to provide printer information and functionality:

- Job status
- Job accounting
- Printer usage
- Routine troubleshooting
- Configuration of printer settings

PhaserLink requires a TCP/IP connection. To access PhaserLink information, enter your printer's IP address in a web browser. The PhaserLink interface appears on your computer's screen.



Tektronix PhaserLink™ Printer Management Software for the Phaser® 840 Color Printer

Current Status for printer named: Phaser 840DP / TEK085AAF

Status	
Printer Status:	Jam
Media Tray:	Letter, Paper
Ink Status:	Ok
Pages Printed:	78
Maintenance Kit Remaining Life:	8822 Pages

Default Printer Settings	
Print Quality Mode:	Standard
TekColor Correction:	Vivid Color
Image Smoothing Enabled:	Yes
Media Source:	Media Tray

[Start status update](#)

Navigation links: [Status](#), [Configuration](#), [Help](#), [Reference](#), [Smart Ideas](#), [List Printers](#)

For detailed information on PhaserLink Printer Management software, refer to "PhaserLink Printer Management software: The Printer's Information Link" on the printer's CD-ROM or web site. Or enter this address in your web browser:

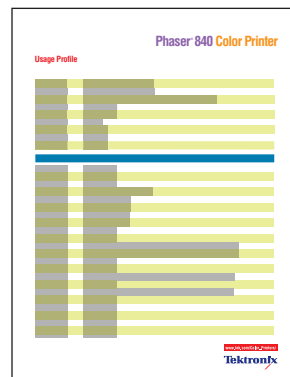
www.tektronix.com/Color_Printers/products/phaserlink.html

Usage Profile

Usage Profile provides a proactive strategy for service, maintenance, and administration of your printer. You can keep track of most printer parameters in more detail than even PhaserLink provides.

Information in the Usage Profile Report includes:

- Remaining life of consumables
- Paper versus transparency usage
- Percent coverage by job or printer history
- Number and location of media jams
- Media tray usage
- Number of pages printed



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Print the Usage Profile report from your printer's front panel:

1. In the front panel, scroll to Menu; press **Select**.
2. Scroll to Consumable Usage; press **Select**.
3. Scroll to Print Usage Profile; press **Select**.

In addition, you can easily arrange electronic mail notification so that your system administrator or supplies ordering agent receives timely information on error conditions or supplies status. This feature allows you to predict consumables ordering for remote locations. These types of error conditions are reported:

- **For the designated operator, system administrator or service provider**
 - Ink low
 - Ink out
 - Maintenance Kit low
 - Maintenance Kit out
 - Empty media tray
- **For the system administrator**
 - Printer configuration
- **For the service provider**
 - Error conditions requiring hardware service repair

For detailed information about the Usage Profile report, refer to **Printer Management** on the printer's CD-ROM or web site.

Enabling and disabling the Startup Page

By default, the printer produces a Startup Page each time the printer is turned on or reset. If desired, you can disable the Startup Page. There are three methods for enabling/disabling the Startup Page:

From PhaserLink Printer Management software

Refer to the *PhaserShare Networking Manual* for information on using your World Wide Web browser to access the printer via a TCP/IP network connection.

From utility files

Download one of the following files from the printer's CD-ROM:

- **Macintosh** Use the Apple Printer Utility (refer to page 93 for instructions).
- **PC** Use utility files *STARTPG.PS* (enables), *NOSTRTPG.PS* (disables); refer to page 96 for downloading instructions.

From the printer's front panel

1. Scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Startup Page; press **Select** to toggle the setting.
5. Scroll to Exit; press **Select**.

Changing the Energy Star timeout

- When the printer is idle for the time set in the Energy Star front panel menu, the printer begins a cool-down cycle that requires a 15 minute warm-up period before being ready to use again.
- The default for the Energy Star timeout is set to 999 hours.
- For optimum printing performance and best ink economy, leave the printer turned on overnight and during weekends, and leave the Energy Start default set.

To change the timeout value:

1. From the front panel, scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Advanced Printer Settings; press **Select**.
5. Scroll to Energy Star Timeout; press **Select**.
6. Use the up or down arrows to set the number of hours the printer must be idle before it enters Energy Star mode.
7. Press **Select** to save the Energy Star setting.
8. Scroll to Exit, press **Select** to return to the Ready to Print message.

Protected mode for the front panel menu

System administrators can control user access to the front panel menus with PhaserLink or the following utility files (refer to page 93 for instructions on downloading utility files):

Macintosh utility files:

- *Menu Short* (limits menu access)
- *Menu Long* (expands menus)

PC utility files:

- *MENUSHRT.PS* (limits menu access)
- *MENULONG.PS* (expands menus)

The “short” utility files limit the menu items displayed on the front panel, preventing users from changing front panel settings that may affect the prints of other users. Users instead select printing features — such as color corrections — through their applications only. In the protected mode, users can access all menus except the Default Printer Settings, Advanced Printer Settings, and Network Settings.

The “long” utility files reset the front panel to display full menus and allow full access to the settings.

If you used the *Menu Short* or *MENUSHRT.PS* file to limit the front panel menus, you can temporarily restore the full menus:

1. When the Ready to Print message appears, scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Hold down the **Left** arrow and press **Select**. The Default Printer Settings and Network Settings selections are added to the menu and are removed again when the Printer Configuration menu is closed.

Job Accounting

The printer stores a log file containing information about jobs printed. The file is a list of job accounting records. Each record contains fields such as user name, job name, pages printed, job times, and ink used. Job accounting is available through the PhaserShare Administrator and PhaserLink Printer Management software.

For more information on Job Accounting, see the *PhaserShare Networking Manual* on the printer’s CD-ROM or web site.

Using Color

Print-quality modes

Mode	Maximum speed *	Description
Fast Color	10 ppm Paper 5 ppm Transparency	<ul style="list-style-type: none"> ■ Fastest full-color output. ■ Useful for many images and previewing work. ■ Rapidly produces good quality transparencies and peer-level documents. ■ Useful for rush jobs and situations where having the most saturated colors is not necessary.
Standard	6 ppm Paper 3 ppm Transparency	<ul style="list-style-type: none"> ■ General-purpose mode for full-color printing. ■ Produces crisp, bright prints suitable for most office use. ■ Recommended for high-quality transparencies. ■ Produces vibrant, saturated prints with smooth color transitions.
Enhanced [†]	3 ppm Paper	<ul style="list-style-type: none"> ■ Balance of high quality and fast speed. ■ Smoothest and brightest large-area fills. ■ Useful for printing paper copies of overhead presentations.
High Resolution/ Photo [†]	2 ppm Paper	<ul style="list-style-type: none"> ■ Requires the Plus Feature set. ■ Highest-quality color prints, 1200 x 600 dpi resolution. ■ Near-photographic detail.

* Approximate number of pages per minute.

[†]Transparencies will be printed in Standard mode.

Color corrections

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

Color correction mode		Description
Front panel selection	Driver selection	
Automatic	Automatic	Default setting. Automatically applies the best color correction mode to each element on the page.
None	None	No correction made to colors. Used with the PANTONE® Color Chart for PANTONE® Color matching.
Vivid Color	Vivid Color	Produces the brightest possible colors and makes blue hues less purple.
sRGB Display	sRGB Display	Closely approximates the colors on a standard display screen.
SWOP Press	SWOP Press	Specification for Web Offset Publications. Used to match U.S. press standards.
Euroscale Press	Euroscale Press	Used to match equivalent Imation Matchprint® proofs.
Commercial Press	Commercial Press	Used to match commercial Imation Matchprint® proofs.
SNAP Press	SNAP Press	Specifications for Non-Heat Advertising Printing. Used to match standards for printing on uncoated and newsprint papers.
DIC	DIC	Used to match Dai Nippon printing inks on coated paper.
Toyo	Toyo	Used to match commercial Toyo printing inks on coated paper.
FujiProof	FujiProof	Used to match the Fuji Color Art System for commercial North American proofs.
Monochrome	—	Leaves gray as is; converts RGB and CMYK to pure gray.
—	Use Printer Setting	Uses the color correction mode specified in the printer's front panel setting rather than any printer driver setting.
Raw RGB*	—	Leaves RGB as is; converts CMYK and gray to RGB.
Raw CMYK*	—	Leaves CMYK as is; converts RGB and gray to CMYK.

* Available only with a downloadable utility file.

NOTE

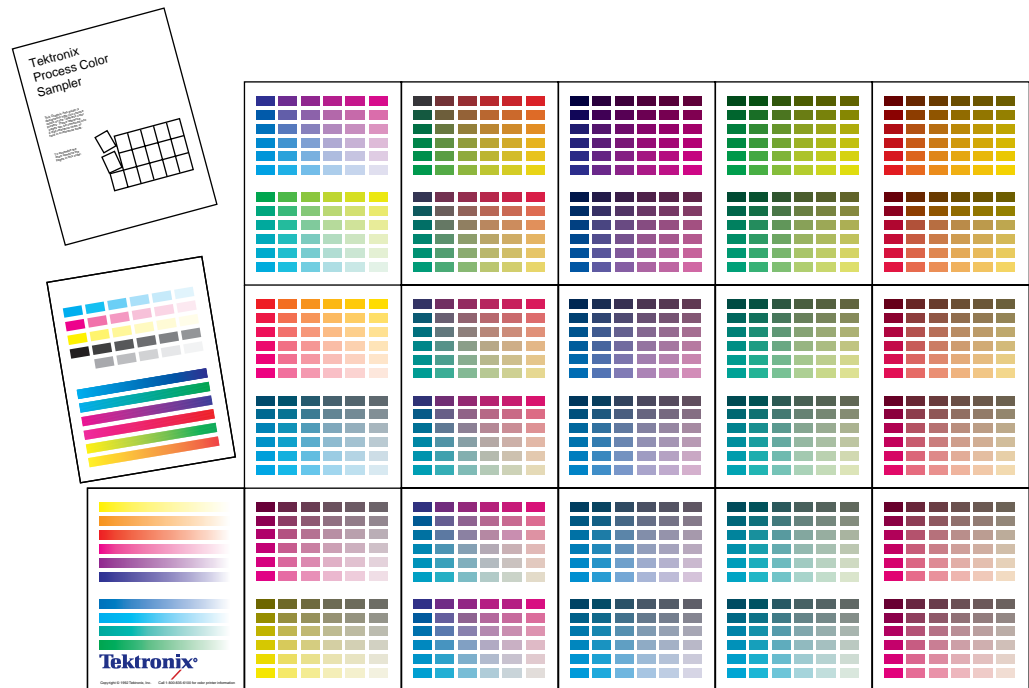
If your printer is on a network and you have changed the front panel settings, tell other users on the network. The front panel printer settings affect all prints made with non-Tektronix drivers.

Printing the Color Sampler Charts

Overview

Color sampler charts are colored rectangles with each color's component values; they help you select colors in an application that can be reproduced on your printer.

Component values are percentages of each color — CMYK (Cyan, Magenta, Yellow, Black), RGB (Red, Green, Blue), or HSB (Hue, Saturation, Brightness) — that combine to make a particular color.



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Color charts

- Which color chart you print and use depends on how your application selects color. For information on color selection, refer to the application's documentation, then print one or more of the color sampler charts.
- Each color sampler chart is several pages long; print them in panels and connect them to form a wall chart or place in a binder for easy reference.

Color sampler chart descriptions

Color sampler chart		Number of pages *	Utility file	Front panel selection
CMYK Sampler	Cyan, magenta, yellow, and black color model	18	X	X
RGB Sampler	Red, green, and blue color model	12	X	X
HSB Sampler	Hue, saturation, and brightness color model	12	X	

* The number of pages will be half if Duplex mode is enabled on the front panel in the Default Printer Settings menu.

NOTE

To print the PANTONE Color sampler chart, refer to "Printing the PANTONE Color Chart" on page 89.

Printing a color sampler chart from the front panel

NOTE

The HSB (Hue, Saturation, Brightness) color sampler chart and the PANTONE Color sampler chart cannot be printed from the front panel.

Use the same color correction and print quality mode to print the chart and to print from your application. Any other color correction selection in the driver causes colors to print differently than expected.

Selecting a color correction file

1. From the printer's front panel, scroll to Menu; press **Select**.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to TekColor Correction. Use the up or down arrows to scroll to the color correction you want.
5. Press **Select** to activate your selection.
6. Scroll to Exit; press **Select** to return to the Ready to Print message.

Printing a color sampler chart

1. From the printer's front panel, scroll to Menu; press **Select**.
2. Scroll to Demo Pages; press **Select**.
3. Scroll to the desired color sampler, then press **Select**.
4. Scroll to Exit; press **Select** to return to the Ready to Print message.

Printing samplers from a Macintosh

NOTE

Use the same color correction and print quality mode to print the chart and to print from your application. Any other color correction selection in the driver causes colors to print differently than expected.

Installing color correction files

1. From the printer's CD-ROM, run the Installer application. Select **Custom Install**.
2. In the dialog box, select **Printer Utilities and Samplers**; click **Install**. Go to the next topic, "Downloading a color correction file".

Selecting a color correction file

Select a color correction file in one of three ways: the front panel, PhaserLink Printer Management software, or download a PostScript utility file. Color correction files include:

- Automatic
- None
- Vivid Color
- sRGB Display
- SWOP Press
- Euroscale Press
- Commercial Press
- SNAP Press
- DIC
- Toyo
- FujiProof
- Raw CMYK
- Raw RGB

Downloading a color correction file

1. From your computer's hard disk, open the *PhaserTools* folder.
2. Double-click **Apple Printer Utility**; a **Printer Selector** dialog box appears:
 - Under **AppleTalk Zones**, select your printer's zone.
 - Under **Printers**, select your printer.
 - Click **Open Printer**.
3. From the **File** menu, select **Send PostScript File**.
4. Open the *Printer Utilities* folder and select a color correction file.
5. Click **Add**.
6. Click **Send**.

Printing a color sampler chart

1. From your computer's hard disk, open the *PhaserTools* folder.
2. Double-click **Apple Printer Utility**; a **Printer Selector** dialog box appears:
 - Under **AppleTalk Zones**, select your printer's zone.
 - Under **Printers**, select your printer.
 - Click **Open Printer**.
3. From the **Utilities** menu, select **Send PostScript File**.
4. Open the *PhaserTools* folder. Open the *Samplers* folder; select a color sampler chart; click **Add**.
5. Click **Send**.

Printing samplers from a PC

NOTE

Use the same color correction and print quality mode to print the chart and to print from your application. Any other color correction selection in the driver causes colors to print differently than expected.

Installing color correction files

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**.
2. In the dialog box, select **Printer Utilities**, select a printer driver, select **Samplers**; click **Install**. Go to the next topic, "Downloading a color correction file".

Downloading a color correction file

1. From the computer's hard disk, open the *PHSRTOOL* directory. Open the *PHSR840* subdirectory; select a color correction file:
 - *AUTOMATC.PS*
 - *NOCORECT.PS*
 - *VIVDCOLR.PS*
 - *SRGBDSPL.PS*
 - *SWOPRESS.PS*
 - *EUROSCAL.PS*
 - *COMRCIAL.PS*
 - *SNAPRESS.PS*
 - *DIC.PS*
 - *TOYO.PS*
 - *FUJIPROF.PS*
 - *RAWCMYK.PS*
 - *RAWRGB.PS*
2. Send to the printer the desired color correction file:
 - PC users: Use the DOS **COPY** command.
 - Workstation users: Send a color correction file to the printer as you would any PostScript file.
 - Windows NT users: Send the color correction file to the printer by typing the following at the DOS prompt:


```
lpr -s <IPaddress> -P PS <filename>
```


Printing a color sampler chart

1. Open the *PHSRTOOL* directory. Open the *SAMPLERS* subdirectory.
2. Send to the printer the desired color sampler chart:
 - PC users: Use the DOS **COPY** command.
 - Workstation users: Send the file to the printer as you would any PostScript file.

NOTE

The name of the color correction mode used to print the color sampler will print on the first page of the sampler.

Printing the desired color from an application

1. Using the color sampler chart that you printed earlier, select the desired colors.
2. From your application, apply the desired colors in your document by entering the specific CMYK or RGB values as indicated on the sampler chart.
3. Print your document; select the same color correction that you used to print the color sampler chart.

PANTONE Color Files

For the latest information on color libraries, visit the Tektronix web site at www.tektronix.com/Color_Printers/ or contact your local Tektronix reseller.

PANTONE Color files for your printer include printer-specific color library files for some specific applications and a file to print PANTONE Color sampler chart.

Methods of printing PANTONE Colors

PANTONE Colors from color selection books

In some applications, you can select colors from PANTONE Color selection books. These colors can be proofed on your Phaser printer before final output on a printing press. For this method, the printer-specific PANTONE files are not required.

1. From an application, select and apply PANTONE Colors; use individual color values from a PANTONE Colors selection book.
2. Print your document; from a supported driver, select the Commercial Press color correction. (Proof colors may not be completely accurate, but PANTONE Colors will be printed correctly on a printing press.)
3. When you are satisfied with the proof, the file can be separated for printing press plates without adjustment to the file.

Printer-specific PANTONE Colors

Your printer can produce process color simulations of PANTONE Spot Colors.

1. Print a copy of the PANTONE Color chart. Refer to “Printing the PANTONE Color Chart” on page 89, or the “README.TXT” file included with the printer-specific PANTONE files.
2. Within an application, define the desired color in your document by using the individual CMYK values which appear on the sampler chart.

NOTE

Tektronix provides custom PANTONE Color library files that can be installed for some applications for the Phaser 840 printer.

3. Print your document. For best results, use the same printer settings for color correction and print quality, and the same type of paper that you used to print the PANTONE Color chart.

For final output on a color printing press

For colors to be printed as a process color (no spot colors), follow these steps:

1. Open the application.
2. Before separating the file for printing press plates, replace the printer’s PANTONE process Colors with standard PANTONE Colors.

Installing the PANTONE Color files

From the Web

1. From the Tektronix web site, www.tektronix.com/Color_Printers/, download the appropriate PANTONE Color file for the Phaser 840 printer.
2. Choose a directory location, and extract the file.
3. For installation instructions, refer to the README.TXT file located in the directory chosen in Step 2.

From a CD-ROM

Macintosh

1. From the printer's CD-ROM, run the Installer application.
2. From the **Custom Install** window, install the following:
 - PANTONE Color Files
 - Printer Utilities

PC

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**.
2. From the **Custom Install** window, install the following:
 - PANTONE Color Files
 - Printer Utilities

Printing the PANTONE Color Chart

Macintosh

Printing individual pages from Acrobat Reader

1. You will need to install Acrobat Reader if you want to print individual pages from the PANTONE Color chart. Insert the CD-ROM in your computer's drive, go to the *Manuals* folder, and install Acrobat Reader onto your computer's hard disk; follow on-screen instructions.
2. After Acrobat Reader is installed, open the *PhaserTools* folder on your computer's hard disk. Open the *Pantone Files* folder. Double-click the desired PDF file.
3. View and print pages from the color sampler chart file. For best results, print on paper. From a supported driver (such as LaserWriter 8), select the appropriate print quality mode and color correction as stated in the included README.TXT file.

NOTE

Print only with the recommended settings; other settings cause PANTONE Colors to print differently than expected.

Printing the entire chart

- Use the Apple Printer Utility to download to the printer the desired PANTONE PostScript file. This PostScript file contains necessary color correction and print quality settings.
- For best results and truest color:
 - Print the chart on paper that is similar to the paper that will be used on the printing press.
 - Disable duplex printing when printing the color chart in order to reduce the effects of color show-through.

PC

Printing individual pages from Acrobat Reader

1. You will need to install Acrobat Reader if you want to print individual pages from the PANTONE Color chart. Insert the CD-ROM in your computer's drive, go to the *Manuals* directory, and install Acrobat Reader onto your computer's hard disk; follow on-screen instructions.
2. After Acrobat Reader is installed, open the *PANTONE* directory on your computer's hard disk. Double-click the desired PDF file.
3. View and print pages from the color sampler chart file.
4. From a supported driver (such as the Tektronix driver for Windows 3.1 or the AdobePS 4 driver for Windows 95), select the appropriate print quality mode and color correction as stated in the included README.TXT file.

NOTE

Print only with the recommended settings; other settings cause PANTONE Colors to print differently than expected.

Printing the entire chart

- Print the PANTONE Color chart by sending the PANTONE PostScript file to the printer; use one of the following methods:
 - PC users: Use the DOS COPY command. You must be connected locally to the printer. Refer to “Downloading files from a PC” on page 96.
 - Workstation users: Send the file to the printer as you would any PostScript file.
 - Windows NT users: Send the appropriate file for the selected print quality mode to the printer by typing the following at the DOS prompt:

```
lpr -S <IPaddress> -P PS <filename>
```
- For best results and truest color:
 - Print the chart on paper that is similar to the paper that will be used on the printing press.
 - Disable duplex printing when printing the color chart in order to reduce the effects of color show-through.

Using Printer Utilities

In addition to using the printer's front panel or the options in a supported driver, the printer's utility files offer another method for changing the way the printer operates. In some cases, a selection can only be made with a utility file.

Utility files control print features such as color correction and enabling or disabling the Startup Page. However, printer features that are selected from a driver override utility file settings and front panel settings.

There are three ways to install utility files:

- From the printer's CD-ROM
- From Tektronix' ftp site
- From Tektronix' World Wide Web site

Using the files on the printer's CD-ROM

Downloading files from a Macintosh

Using the Apple Printer Utility to download files

All PostScript utility files and fonts on the printer's CD-ROM can be downloaded to the printer with the Apple Printer Utility.



NOTE

If your printer is connected through a print server, you can only use the Apple Printer Utility to download PostScript utility files.

1. From the printer's CD-ROM, run the **Installer** application. Select **Custom Install**. Select **Printer Utilities**.
2. From your computer's hard disk, open the *PhaserTools* folder. Open the *Printer Utilities* folder.
3. From the *PhaserTools* folder, double-click **Apple Printer Utility**.
4. In the **Printer Selector** dialog box, make the following selections:
 - Under **AppleTalk Zones**, select your printer's zone.
 - Under **Printers**, select your Phaser printer.
 - Click **Open Printer**.
5. From the **File** menu, select **Send PostScript File**; the **Select the PostScript files to download** dialog box appears.
6. Select the folder location of the PostScript file(s) that you want to download.
7. Select a utility file. Click **Add**.
8. Click **Send**.
9. At the prompt `Save PostScript output as`, you are asked for a file name for saving printer output. Use the default name given in the edit box or type a new name. (Printer output includes status messages generated by the printer reporting such conditions as out of paper.)
10. Click **Save**.
11. If no output is returned by the printer, the Apple Printer Utility displays a dialog box; click **Continue**. If output is returned by the printer, you won't see this dialog box.

Check your computer's hard disk for the message file created by the utility.

Using the Apple Printer Utility to perform other tasks

In addition to downloading PostScript files and fonts, you can use the Apple Printer Utility to perform the following specialized tasks:

Turning on/off the Startup Page

1. From the *PhaserTools* folder, double-click **Apple Printer Utility**.
2. In the **Printer Selector** dialog box, make the following selections:
 - Under **AppleTalk Zones**, select your printer's zone.
 - Under **Printers**, select your Phaser printer.
 - Click **Open Printer**.
3. Click the arrow next to **Printer Preferences**; a list of options appears.
4. Click the arrow next to **Startup Page**.
5. Click one of the following:
 - On: Prints a Startup Page each time the printer is turned on or reset.
 - Off: Stops the Startup Page from automatically printing.
6. Click **Send**.

Changing the printer's AppleTalk name

1. From the *PhaserTools* folder, double-click **Apple Printer Utility**.
2. In the **Printer Selector** dialog box, make the following selections:
 - Under **AppleTalk Zones**, select your printer's zone.
 - Under **Printers**, select your Phaser printer.
 - Click **Open Printer**.
3. Click the arrow next to **Printer Preferences**; a list of options appears.
4. Click the arrow next to **Name**.
5. In the text box, type the new printer name.
6. Click **Send**.

Downloading files from a PC

Windows 3.1

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**. Select **Printer Utilities**.
2. From your computer's hard disk, open the *PHSRTOOL* directory. Open the *PHSR840* subdirectory.
3. Select the utility file you want to send to the printer, for example *RESET.PS*.
4. From the **File** menu, select **Copy**; the **Copy** dialog box appears with the utility file you selected listed in the **From** field.
5. In the **To** field, type the port your printer is connected to. For example, type **LPT1:** for a parallel port connection. Click **OK**.
6. If the **Confirm File Replace** dialog box appears, click **Yes** to continue; the file is downloaded to the printer.

If your printer is connected to an optional Novell NetWare or TCP/IP network, follow the instructions provided with your network software.

Windows 95 / Windows 98

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**. Select **Printer Utilities**.
2. Select the utility file you want to send to the printer, for example *RESET.PS*.
3. In the taskbar on your screen, click **Start**.
4. In the menu that appears, select **Programs**.
5. Select **MS-DOS Prompt**.
 - Change directory to the *PHSRTOOL* directory.
 - If your printer is connected to the parallel (LPT) port, type the following command (where *x* is 1, 2, or 3):
COPY RESET.PS LPTx:
 - If your printer is connected to an optional Novell NetWare or TCP/IP network, follow the instructions provided with your network software.

Windows NT

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**. Select **Printer Utilities**.
2. Select the utility file you want to send to the printer, for example *RESET.PS*.
3. In the taskbar on your screen, click **Start**.
4. In the menu that appears, select **Programs**.
5. Select **MS-DOS Prompt**.
 - Change directory to the *PHSRTOOL* directory.
 - If your printer is connected to a network, type the following command:
lpr -S <IP Address> -P PS RESET.PS
 - If your printer is connected to an optional Novell NetWare or TCP/IP network, follow the instructions provided with your network software.

Downloading files from the Tektronix World Wide Web site

Tektronix has a site on the World Wide Web that you can reach from a web browser, at the following address:

www.tektronix.com/Color_Printers/



At the Tektronix Color Printer home page, explore options such as customer support documents and new product information. New and updated information is always being added, so check the web site frequently.

Use a web browser such as Netscape Navigator, and follow these steps.

1. Start your web browser and enter the following address:

www.tektronix.com/Color_Printers/support/software.html

2. From the pull-down menus, select your printer, computer, and type of file.
3. Select the files you need; they are downloaded to your computer.

Downloading files from the Tektronix ftp server

Utility files included on the printer's CD-ROM let you set up the printer from UNIX and VMS workstations to select between media trays, print quality modes, color correction modes and other features. If you don't have the means to transfer these files from the CD-ROM, you can request files from the Tektronix anonymous ftp server.

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

Log onto the Tektronix ftp server and download utility files:

1. At the system prompt, type the following:

```
ftp ftp.tektronix.com
```

The system responds:

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

2. Type: **anonymous**

Press **Return**.

The system responds:

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

3. Enter your e-mail address. Press **Return**.
4. Change directories to your printer-specific directory:

```
cd Color_Printers/UNIX/Phaser_840/utilities
```

5. Download the utility files; type:

```
mget *
```

The system prompts you for each file in the directory, to which you respond **y** (yes) or **n** (no).

6. Exit the ftp session: type **quit** or **bye**; press **Return**.

Connecting Scanners and Hard Drives

Your printer comes with an IDE (Integrated Drive Electronics) port which can be used to connect an internal hard drive, and an optional SCSI (Small Computer System Interface) port which can be used for connecting external hard disk drives and scanners.

Refer to page 107 for information about connecting an IDE hard drive.

SCSI device overview

NOTE

The Plus and Extended configurations of the printer include support for SCSI devices; The Standard configuration of the printer require the Plus Features Set.

The printer supports up to seven SCSI devices, as long as each has a unique SCSI ID number (any number between 0 – 5) and the final device in the “daisy chain” is appropriately terminated. Devices can be connected in any combination of model and storage capacity.

SCSI peripheral devices

Device	Uses
External SCSI hard disk drives ZDISK	<ul style="list-style-type: none"> ■ Store downloaded fonts, data, and programs. ■ Temporary storage during job collation and PDF Direct Printing. <p>Note: SCSI port is included in both the Plus and Extended configurations of the printer.</p>
Scanners	<ul style="list-style-type: none"> ■ Turn your printer into a convenient color copier. ■ For a list of supported scanners, contact your local Tektronix reseller or visit the Tektronix web site: www.tektronix.com/Color_Printers/

Connecting SCSI devices

Required items

- A SCSI peripheral cable for each SCSI device.
- The printer uses a SCSI-2, 50-pin connector.
- One SCSI cable terminator, unless one of the SCSI devices has an internal terminator.

To order supplies and accessories, contact your local dealer or visit the Tektronix web site at www.tek.com/Color_Printers/supplies.

012-1465-00	SCSI-2 HD to SCSI-1 LD cable	50-pin high-density plug to 50-pin low-density plug; 2.0 meters (6.56 feet)
	Connects the printer's SCSI port to a hard disk drive or a scanner SCSI port.	
012-1299-00	SCSI-1 LD to Macintosh SCSI cable	50-pin low-density plug to Macintosh SCSI 25-pin plug
	Combine with 013-0297-00 to connect the printer's SCSI port to a hard disk drive with Macintosh SCSI 25-pin plug.	
013-0297-00	SCSI-1 LD to SCSI-2 HD adapter	SCSI adapter: converts 50-pin low-density plug to 50-pin high-density plug
	Use with either 012-1465-00 or 012-1299-00 to convert a low-density SCSI connection to a high-density SCSI connection.	

Connection overview

- Determine which SCSI device has which SCSI ID number:
 - The printer is SCSI ID 7.
 - The optional IDE internal hard drive is SCSI ID 6.
 - For SCSI devices, select SCSI ID numbers 0 – 5.
- Turn off the printer.
- Turn off the SCSI device.
- Connect SCSI cables.
- Check termination.
- Connect a SCSI device.
 - **Scanner**
 - **Hard disk drive**
- Turn on a SCSI device.
- Turn on the printer.
- Initialize the hard disk drive

Connecting one SCSI device

CAUTION

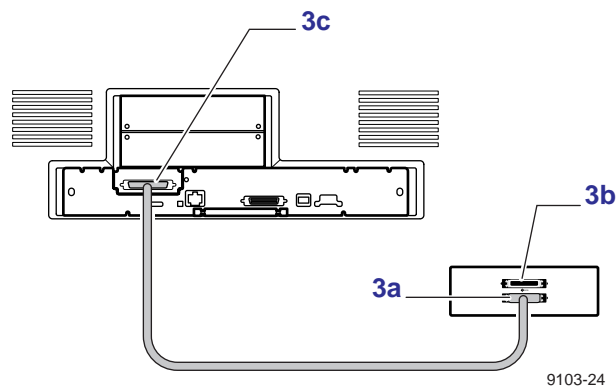
To avoid damaging components, before you connect or disconnect a SCSI cable, turn off the printer, then turn off the SCSI device.

1. Turn off the printer first, then turn off the SCSI device.
2. On the SCSI device, set a unique SCSI ID number (0 – 5; the printer is 7 and the optional IDE internal hard drive is 6).
3. Connect the SCSI device to the printer:
 - a. Connect the SCSI cable to the SCSI device; you will need a high-density SCSI connector to connect to the printer.
 - b. Check termination (not required if the SCSI device has a built-in terminator).
 - The printer has an internal terminator.
 - The printer must always be at one end of the chain with a terminator (or a device with an internal terminator) at the other end.
 - Most SCSI hard disks are shipped with an internal terminator that is active.
 - If the SCSI device does not have an internal terminator, add one.

NOTE

Devices that require power from another device (TERMPWR pin 38) may not terminate properly.

- For termination information on any SCSI device, refer to its documentation.
- c. Connect the SCSI cable to the printer.



4. Turn on the SCSI device first, and then turn on the printer.
5. If you have a SCSI hard disk, see “Initializing a formatted SCSI device” on page 105, and “Enabling and disabling Sys/Start Job execution” on page 106.

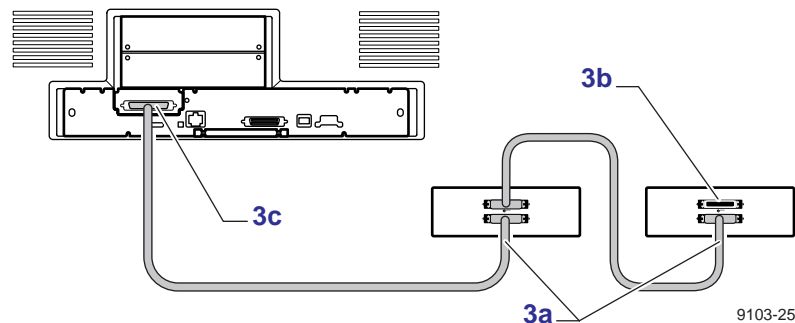
Connecting multiple SCSI devices

CAUTION

To avoid damaging components, before you connect or disconnect a SCSI cable, turn off the printer and all SCSI devices.

Before you turn on the printer, turn on the SCSI devices.

1. Turn off the printer first, then turn off the SCSI devices.
2. For each SCSI device, set a unique SCSI ID number (0 – 5; the printer is 7 and the optional IDE internal hard drive is 6).
3. Connect the SCSI devices to the printer:
 - a. Connect the SCSI cables to the SCSI devices; you will need high-density SCSI connectors.
 - b. Check termination:
 - The printer has an internal terminator.
 - The printer must always be at one end of the chain with a terminator (or a device with an internal terminator) at the other end.
 - Most SCSI hard disks are shipped with an internal terminator that is active. If you are connecting multiple SCSI devices, you will need to de-activate the terminators in all devices except for the last device on the daisy chain.
 - For termination information on any SCSI device, refer to its documentation.
 - c. Connect the SCSI cable to the printer.



4. Turn on the SCSI devices first, and then turn on the printer.
5. If you have a SCSI hard disk, see “Initializing a formatted SCSI device” on page 105, and “Enabling and disabling Sys/Start Job execution” on page 106.

Initializing a formatted SCSI device

Most external hard disks are formatted at the factory and only need to be initialized.

Macintosh users

1. From the printer's CD-ROM, run the **Installer** application. Select **Custom Install**. Select **Printer Utilities**. From your computer's hard disk, open the *PhaserTools* folder. Open *Printer Utilities*.
2. In the **Chooser**, select your printer.
3. From the *PhaserTools* folder, double-click **Apple Printer Utility**. Download to the printer the *Initialize Printer Disks* file.

PC and workstation users

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**. Select **Printer Utilities**. From your computer's hard disk, open the *PHSRTOOL* directory. Open the *PHSR840* subdirectory.
2. Use one of the following methods to send to the printer the *INITDISK.PS* file:
 - PC users: Use the DOS **COPY** command.
 - Windows NT users: Send the *INITDISK.PS* file to the printer by typing the following at the DOS prompt:

```
lpr -S <IPaddress> -P PS INITDISK.PS
```
 - Workstation users: Send the file to the printer as you would any PostScript file.

Enabling and disabling Sys/Start Job execution

You may load a startup (*Sys/Start*) file onto an external hard disk. The *Sys/Start* job file is similar to an *init* file: When you turn on the printer, the file executes — providing that Sys/Start has been enabled either through a front panel setting or with a control file downloaded to the printer.

With multiple disks, only one disk can contain a *Sys/Start* file.

If the *Sys/Start* file contains an error, the printer ignores the remainder of the file and may not start up as expected.

Using the front panel

1. When the Ready to Print message is displayed, use the down arrow button to scroll to Menu; press the **Select** button.
2. Scroll to Printer Configuration; press **Select**.
3. Scroll to Default Printer Settings; press **Select**.
4. Scroll to Advanced Printer Settings; press **Select**.
5. Scroll to Sys/Start Job. Press **Select** to change the setting to **On**.
6. Scroll to Exit; press **Select** to save the new setting. The Ready to Print message appears.

Using a Macintosh utility file

1. From the printer's CD-ROM, run the **Installer** application. Select **Custom Install**. Select **Printer Utilities**. From your computer's hard disk, open the *PhaserTools* folder. Open **Printer Utilities**.
2. In the **Chooser**, select your printer.
3. From the *PhaserTools* folder, double-click **Apple Printer Utility**. Download one of these files to the printer:
 - *Set SysStart Job* Enables automatic execution of the SysStart job.
 - *No SysStart Job* Disables automatic execution of the SysStart job.

Using PC utility file

1. From the printer's CD-ROM, run *setup.exe*. Select **Custom Install**. Select **Printer Utilities**. From your computer's hard disk, open the *PHSRTOOL* directory. Open the *PHSR840* subdirectory.
2. Select one of the following files:
 - *SYSTART.PS* Enables automatic execution of the SysStart job.
 - *NOSYSTRT.PS* Disables automatic execution of the SysStart job.
3. Use one of the following methods to send to the printer the desired file:
 - PC users: Use the DOS **COPY** command.
 - Windows 3.1 users: In the **File Manager**, use the **Copy** command.
 - Workstation users: Send a file to the printer as you would any PostScript file.
 - Windows NT users: Send the file to the printer by typing the following at the DOS prompt:


```
lpr -S <IPaddress> -P PS <filename>
```

Connecting an IDE hard disk drive

Required Items

Internal IDE Hard Disk Drive (order number ZDISK3)

Static Electricity Precautions

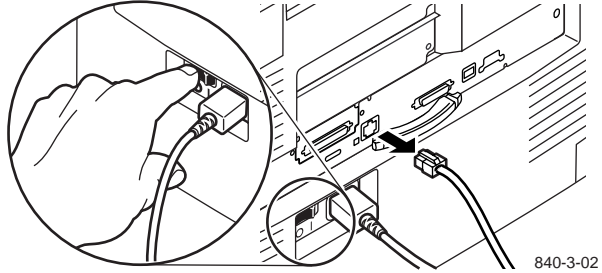
- Leave the printer plugged into its power outlet; this preserves a ground path for static discharges.
- Touch the printer's bare metal frame often to discharge static electricity from your body.
- Handle the circuit board by the edges only.
- Do not lay the board on a metal surface.
- Make the least possible movements to avoid generating static electricity.
- Avoid wearing wool, nylon, or polyester clothing; they generate static electricity.

Tools required

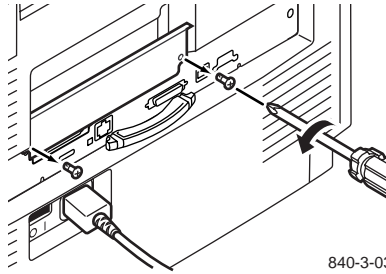
- Phillips® screwdriver

Installing the IDE hard disk drive

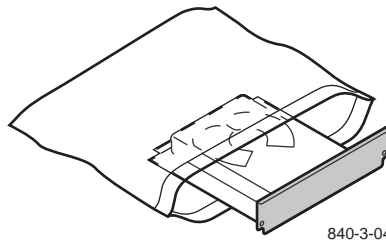
1. Turn off the printer. Disconnect the rear panel cables if they obstruct your work.



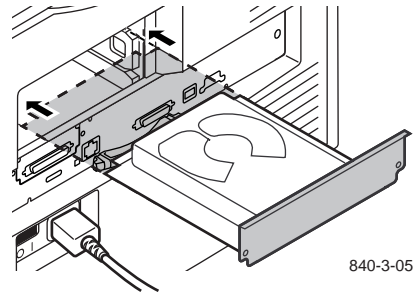
2. If your printer has a network card, remove it and the metal plate above it. Otherwise, remove both metal plates on the back of the printer.



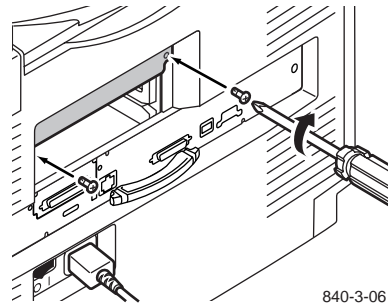
3. Remove the hard disk drive from its packaging.



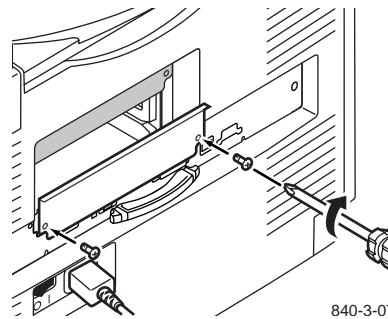
4. Slide the hard disk drive into the upper card slot and firmly push it into place.



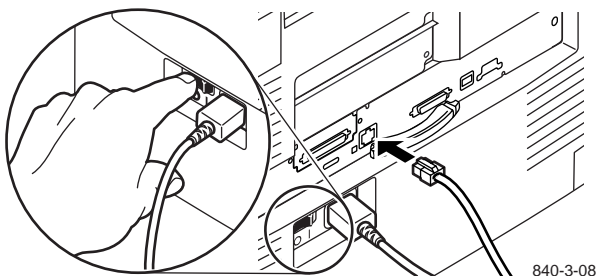
5. Secure the hard disk drive in place with the mounting screws and make sure that the screws are tight.



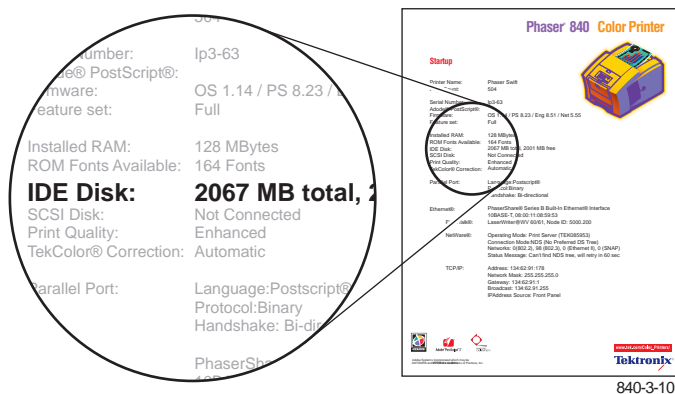
6. Insert the network card, or attach the lower cover plate and secure with the mounting screws.



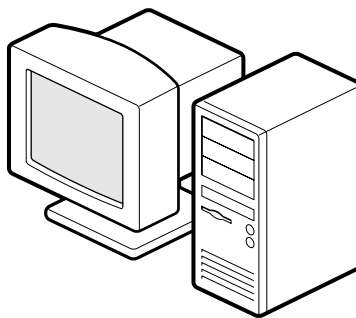
7. Reconnect any cables that were disconnected, and turn on the printer.



8. From the printer's front panel, print a Startup Page and check it to make sure that the hard disk drive is present.



9. At your computer, reconfigure the printer driver. For more information, refer to page 111.



Configuring the printer driver

After the internal IDE hard drive installation is complete, the printer driver needs to be configured before you can use your installed hard drive.

NOTE

If the printer driver is not configured properly, some printer options will not be recognized.

Windows 95, Windows 98, Windows NT4

1. From the **Start** menu, select **Settings**, then select **Printers**.
2. Select your Tektronix printer driver. From the pop-up menu, choose **Properties**.
3. Click the **Device Options** (Windows 95/Windows 98) or **Device Settings** (Windows NT4) tab.
4. Under **Installable Options**, select the options that are installed in your printer (for example, memory configuration, High-Capacity Paper Tray Assembly, or internal hard drive); this information can be found on the Startup page. Setting up the driver allows you to select all printer options when printing.

NOTE

Do not change the value for **Available PostScript Memory Setting**; this value is automatically set.

5. Click **OK**.

Macintosh

1. From the Apple menu, select **Chooser**.
2. Click the icon of the printer driver (LaserWriter 8) on the left side of the window.
3. Click the Zone for your printer, if applicable.
4. From the list of printers, select your printer. If it is not in the list, check the hardware connections and verify that you have selected the correct zone in the **Chooser** on the left side of the window.
5. Click **Setup/Create** to select the correct PPD (PostScript Printer Description) file.
6. After the automatic setup has completed, click **Setup** and click **Configure**.
7. Select the options that are installed in your printer (for example, memory configuration, High-Capacity Paper Tray Assembly, or internal hard drive); this information can be found on the Startup page. Setting up the driver allows you to select all printer options when printing.
8. Click **OK**.
9. Close the **Chooser**.

Using Your Printer with a Scanner

Overview

By attaching a recommended scanner to your printer, you can use the printer as a color copier. Settings for copies are made at the printer's front panel. For example, you can specify the number of copies, reduce or enlarge prints, adjust the color saturation, and select color, gray scale, or black-and-white copying.

For more information, refer to the following topics:

- "Connecting Scanners and Hard Drives" on page 101.
- "Making copies" on page 114.
- "Using the front panel Copier Menu" on page 116.
- "Placing and scaling images" on page 118.

NOTE

For a list of supported scanners, contact your local Tektronix reseller, or visit the Tektronix web site.

Making copies

Copying a single page

Making a copy with your scanner and printer is similar to making a copy with a photocopier:

1. Raise the scanner's document cover.
2. Place the original image face-down on the scanner's glass; position the image in your scanner according to your scanner's instructions.
3. At the printer's front panel, press **Copier**; the printer displays the following message:

```
Copy Count
Begin Copy
Copier Options
```

To enter the number of copies to print, scroll to `Copy Count`; press **Select**. Use the up or down arrows to set the count; press **Select**. To make a print of your original, scroll to `Begin Copy`; press **Select**. Go to the next step if you have other settings to change.

4. Scroll to `Copier Options`; press **Select**.
5. Scroll to the following menus as needed by pressing the arrow buttons.

```
Color Mode
Lighten/Darken
Color Saturation
Zoom
Original Page Size
Tray Selection
Save Defaults
Reset Defaults
```

Refer to "Using the front panel Copier Menu" on page 116 for details on each of these menus.

6. To enter the individual submenus, press **Select**. Scroll to the appropriate selections within those menus. To return to the previous submenu, scroll to `Previous Menu`; press **Select**.

CAUTION

If you return to the top level of the printer menu without saving your settings as default settings, you will lose your copier settings.

7. After making the appropriate selections, scroll to `Begin Copy`; press **Select**.

The image is transferred to the printer. The first copy normally takes 30 to 60 seconds. The subsequent copies are output at the printer's rated speed.

Copying multiple pages with an Auto-Document Feeder

If your scanner is equipped with an Auto-Document Feeder (ADF), you can copy an entire set of originals at one time and produce multiple, collated copies.

1. Make sure that no originals are on the scanner bed.
2. Insert the stack of originals in the ADF (refer to your scanner's documentation).
3. At the printer's front panel, scroll to `Copier`; press **Select**. The printer displays the following message:

```
Copy Count
Begin Copy
Copier Options
```

To enter the number of copies to print, scroll to `Copy Count`; press **Select**. Use the up or down arrows to set the count; press **Select**. To make a print of your original, scroll to `Begin Copy`; press **Select**. Go to the next step if you have other settings to change.

4. Scroll to `Copier Options`; press **Select**.
5. Scroll to the following menus as needed by pressing the arrow buttons.

```
Color Mode
Lighten/Darken
Color Saturation
Zoom
Original Page Size
Tray Selection
Save Defaults
Reset Defaults
```

Refer to "Using the front panel Copier Menu" on page 116 for details on each of these menus.

6. To enter the individual submenus, press **Select**. Scroll to the appropriate selections within those menus. To return to the previous submenu, scroll to `Previous Menu`; press **Select**.

CAUTION

If you return to the top level of the printer menu without saving your settings as default settings, you will lose your copier settings.

7. Scroll to `Begin Copy`; press **Select**.

Pages are loaded and copied one at a time, and output the number of times you requested in Step 3.

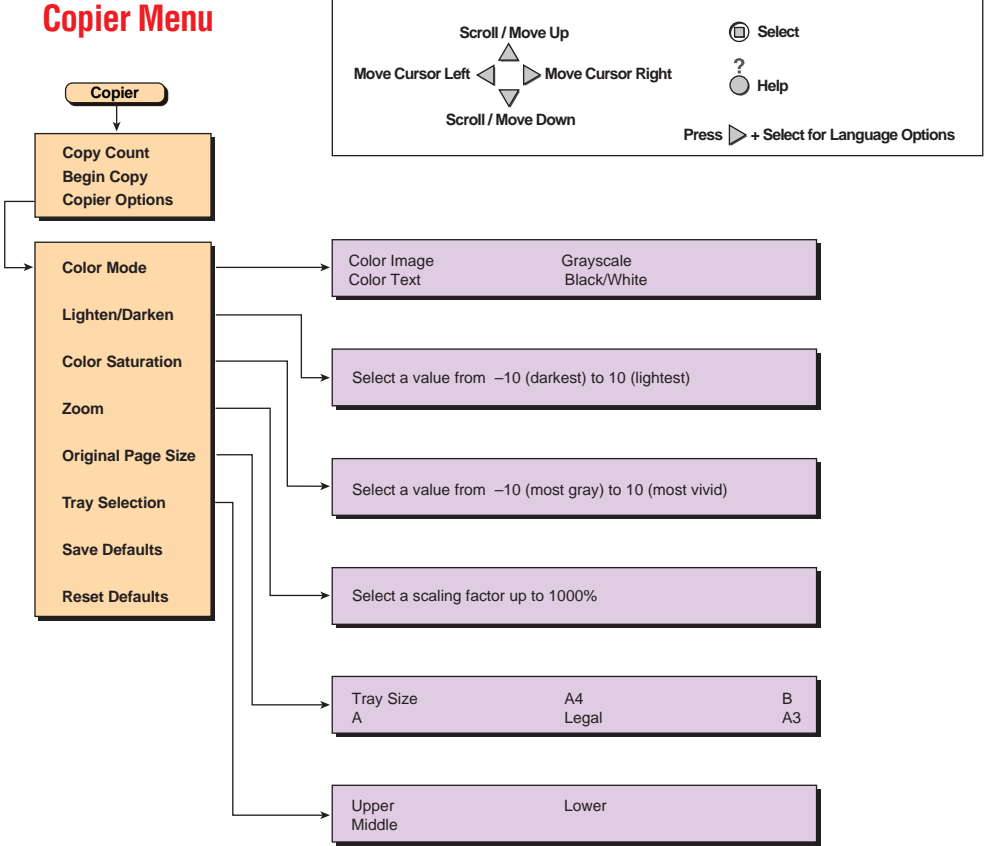
If your printer has Quick Collate capability (requires the Plus Feature Set and a hard drive), the copies are automatically collated when output.

Using the front panel Copier Menu

The printer allows you to control the settings listed in the table below. From the printer's menu, scroll to **Print Menu Map** and press **Select** to print a Copier Menu.

Copier menu setting	Purpose
Copy Count	<p>Selects up to 999 copies. To change the desired number, press the up or down arrows.</p> <p>Press down and hold the up or down arrow to auto-increment the value. Release the button when the desired number of copies is displayed.</p>
Color Mode	<p>Selects the type of color reproduction from the following:</p> <ul style="list-style-type: none"> ■ Color Image: For full-color images. The image is reproduced with as accurate as possible color matching. ■ Color Text: For images with colored text, line art or charts. The image is reproduced in full color, but text colors are accentuated and scanning occurs at a higher resolution to maintain text definition. ■ Grayscale: For copying or creating monochrome images. The image is reproduced in shades of gray. ■ Black/White: The image is reproduced in full white and full black only. Especially suitable for copying line drawings.
Lighten/Darken	Lightens or darkens your prints on a scale of -10 (lightest) to +10 (darkest).
Color Saturation	Brightens or increases the saturation of all colors or reduces the saturation on a scale of -10 (grayest) to +10 (most saturated, brightest). Zero, the default, is neutral.
Zoom	<p>Enlarges or reduces the size of the copy image up to 1000% of the original's image size, depending on your scanner. The default setting is 100%. To change the scale value, press the up or down arrow key.</p> <p>Press down and hold the up or down arrow key to auto-increment the value. Release the button when the desired scale factor is displayed and press Select.</p> <p>For additional information on using the scaling function to enlarge and reduce copies, refer to "Placing and scaling images" on page 118.</p>
Original Page Size	<p>Selects the size of your original image or input.</p> <ul style="list-style-type: none"> ■ The options available (for example, Letter, Legal, Tabloid, A3) will depend on the scan area of your scanner. ■ Tray Size, the default selection, copies an area equal to the size of the media in the selected tray.
Tray Selection	<p>Selects the media tray from which your copy or output will be printed.</p> <ul style="list-style-type: none"> ■ The options available will depend on the number of media trays in your printer.
Save Default	<ul style="list-style-type: none"> ■ Changes the printer's copier menu default settings and saves your own settings for the kinds of copies you typically make.
Reset Defaults	<ul style="list-style-type: none"> ■ Sets the defaults to the printer's original selections.

Copier Menu



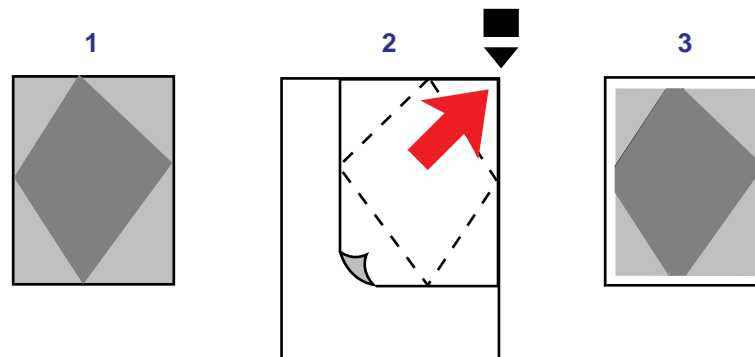
9103-43

Placing and scaling images

Copying at 100% scale

When you copy originals at 100% scale, the copy image is the same size as the original. Note however, that printers are typically unable to print to the extreme edges of the print media; the area in which a printer can print is called its “printable area.” When you make a copy at 100% scale, if any part of the original image extends beyond the printer’s printable area it is cropped. You can see this effect by performing the following experiment:

1. **Original print** Find an original that has information extending to its edges.
2. **Original on the scanner’s glass** Place the original face-down on the glass in your scanner. Lower the document cover. At the printer’s front panel, Scroll to **Begin Copy**; press **Select**. Refer to “Making copies” on page 114 for instructions on using the printer’s front panel to make copies.
3. **Copy print** Note that the image is not printed at the copy’s edges.



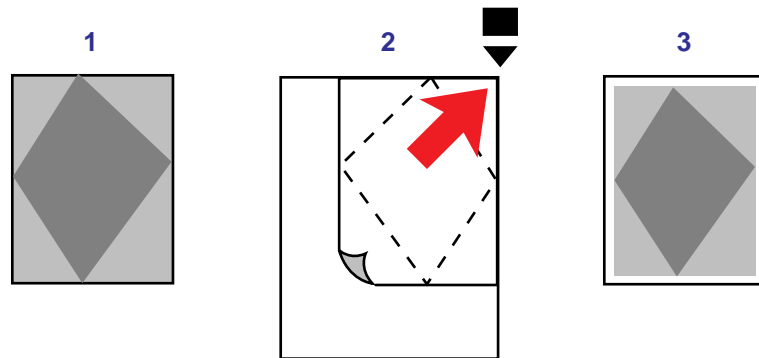
0236-58

The next example, “Copying to fit full-bleed images,” shows how you can work around this problem.

Copying to fit full-bleed images

If your original's image extends to its outer edges — often called a full-bleed image — and you wish to copy the entire image, set **Zoom** to approximately 95%. The full image will be printed, at a slightly reduced scale, within the printer's maximum printable area.

1. **Original print** Find a full-bleed original.
2. **Original on the scanner's glass** Place the original on the scanner glass. Using the front panel controls, set **Zoom** to approximately 95% (you will need to experiment to determine the scaling value that works best with your printer). Lower the document cover. At the printer's front panel, scroll to **Begin Copy**; press **Select**. Refer to "Making copies" on page 114 for instructions on using the printer's front panel to make copies.
3. **Copy print** Note that the entire image now fits, at a slightly reduced scale, entirely within the printer's printable area.



0236-57

Scaling images using Zoom

You can reduce or enlarge an original image using the **Zoom** function.

1. Place the original face-down in your scanner. Lower the document cover.
2. In the front panel **Copier** menu, set the **Zoom** to a value such as **200%**.
3. Under **Select Tray**, select the tray that has the media on which you want to print.
4. Scroll to **Begin Copy**; press **Select**. The image is enlarged on the copy print and it is shifted slightly into the printer's printable area.

Scaling images using Scan Area

If your original is a standard size (Letter, A4, etc.), you can use the **Scan Area** function to automatically scale the image up or down to fit the media in the selected tray.

1. Place the original face-down in your scanner. Lower the document cover.
2. In the front panel **Copier** menu, set the **Scan Area** equal to the size of your original.
3. Under **Select Tray**, select the tray that has the media on which you want to print.
4. Scroll to **Begin Copy**; press **Select**. The image will be scaled to fit the selected media as closely as possible without distorting the image.

Regulatory Information and Specifications

Canadian EMC (Electromagnetic Compatibility) regulatory standards

- This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
- Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Declaration of conformity

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 products

Phaser 840 printer (Z840)

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

For the EC EN60950:1992	Safety of Information Technology Equipment including Electrical Business Equipment
For the EC EN55022:1992	Limits and methods of measurement of radio Interference characteristics of Information Technology Equipment
For the EC EN50082-1:1997	The Generic Immunity Standard Residential, Commercial, and Light Industry.

Environmental Phenomena

Basic Standard

Radio-Frequency Electromagnetic Field immunity	EN 61000-4-3: 1995-02
Electrostatic Discharge	EN 61000-4-2: 1995-01
Fast Burst Transient	EN 61000-4-4: 1995-01
Line Surge	EN 61000-4-5: 1995-02
Radio-Frequency Conducted Immunity	EN 61000-4-6: 1996-03
Voltage Dips and Interruptions	EN 61000-4-11: 1994-06
Flicker	EN 61000-3-3: 1994-12

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

FCC Class B device

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

This equipment has been tested and verified to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interferences in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

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

WARNING

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

Material Safety Data Sheets

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

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

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

Color Printing and Imaging Division
Tektronix, Incorporated

MSDS for Silicone Oil

Section 1 – Product Identification

Trade Names:

Tektronix Silicone Intermediate Transfer Layer Fluid, impregnated into printer's maintenance roller.

Tektronix part number: 401-0777-00 (original maintenance roller)

Tektronix part number: 016-1727-00 (replacement maintenance kit)

Product Use: Tektronix Phaser® 840 color printer

Section 2 – Information On Ingredients

Ingredients

Tektronix Silicone Intermediate Transfer Layer Fluid is a proprietary blend of silicone oils. Specific identities of components, and their percentage composition, are withheld as a trade secret.

Section 3 – Hazards Identification

ROUTES OF EXPOSURE: Skin, eyes

POTENTIAL HEALTH EFFECTS: Health effects from this product are expected to be negligible, when product is used as intended.

Immediate Effects:

Inhalation: Not an expected route of entry

Skin: May cause mild irritation.

Eye: May cause mild irritation.

Ingestion: Not an expected route of exposure.

Chronic Effects: None known or expected.

SIGNS AND SYMPTOMS OF EXPOSURE: Mild skin or eye irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

Section 4 – First Aid Measures

Inhalation: Not a route of exposure for this product.

Eyes: Flush thoroughly with water. Seek medical attention if symptoms occur.

Skin: Wash thoroughly with soap and water. Seek medical attention if symptoms of irritation occur.

Ingestion: Not a route of exposure for this product.

Section 5 – Fire Fighting Measures

Flammable Properties:

Flash Point: No data.

FIRE FIGHTING INSTRUCTIONS: As for any fire, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH approved, and protective gear.

Fire & Explosion Hazards: During a fire, irritating and toxic substances may be generated by thermal decomposition or combustion. No unusual fire hazards expected.

Extinguishing media: All extinguishing agents classified as B and C are effective, including dry powder(s), CO², and halon.

Section 6 – Accidental Release Measures

Spill Or Leak: Fluid is impregnated into maintenance roller. Small amounts (i.e., drops) may result from normal handling. Absorb and place in an appropriate disposal container. Clean spills thoroughly because residue can be slippery.

Section 7 – Handling And Storage

Handling: Wash hands with soap and water after contact. Clean spills per SECTION 6.

Storage: No special requirements.

Section 8 – Exposure Control – Personal Protection

No special protection indicated when used as intended.

Section 9 – Physical And Chemical Properties

Appearance: Clear liquid impregnated into maintenance roller.
Odor: None.
Solubility: No data.
SPECIFIC GRAVITY: Specific gravity of fluid is 0.97 (water=1)

Section 10 – Stability And Reactivity

Stability: Stable.
Incompatibility With Other Materials: Strong oxidizing agents.
Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

No toxicology data on mixture.

Section 12 – Ecological Information

Not available.

Section 13 – Disposal Considerations

Fluid is not listed as RCRA hazardous waste. Dispose of in accordance with federal, state, and local regulations.

Section 14 – Transport Information

DOT: Not regulated.

Section 15 – Regulatory Information

The following information pertains to the ingredients of Tektronix Silicone Intermediate Transfer Layer Fluid:
TSCA (Toxic Substances Control Act): Listed in the TSCA inventory as verified by our suppliers.
California Proposition 65: Not listed
CERCLA: Not listed
SARA (Superfund Amendment and Reauthorization Acts): Not listed in SARA Section 313. Not listed as SARA Extremely Hazardous Substance.
RCRA (Resource Conservation and Recovery Act): Not listed as RCRA hazardous wastes.
The ingredients of this fluid are not listed as carcinogenic by OSHA, IARC or NTP.

Section 16 – Other Information

Original preparation date: August 13, 1998. JMP
Tektronix, Incorporated
P.O. Box 500
Chemical Documentation
Mail Stop 46-825
Beaverton, Oregon 97077
Printer information: 1-800-835-6100
MSDS information: (503) 627-7255

MSDS for Ink Sticks

Section 1 – Product Identification

Trade name and Tektronix part number:

ColorStix [®] Solid Ink — Black	016-1604-00
ColorStix [®] Solid Ink — Cyan	016-1605-00, 016-1582-00
ColorStix [®] Solid Ink — Magenta	016-1606-00, 016-1583-00
ColorStix [®] Solid Ink — Yellow	016-1607-00, 016-1584-00
Four Color Rainbow pack	016-1608-00

Product Use: Tektronix Phaser[®] 840 color printer

Section 2 – Information On Ingredients

Ingredients

A proprietary blend of 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.

Tektronix Phaser[®] 840 printer ColorStix[®] solid ink are considered articles under US OSHA Hazard Communication Standard, 29CFR1910.1200. This Material Safety Data Sheet is provided as a customer service.

Section 3 – Hazards Identification

ROUTES OF EXPOSURE: Skin

POTENTIAL HEALTH EFFECTS:

Immediate Effects: None known or expected. See section 11 for toxicology test information.

Long Term effects: None known or expected

Carcinogenicity: None of the ingredients of this product are listed as carcinogens by IARC, NTP, or OSHA.

SIGNS AND SYMPTOMS OF EXPOSURE: None expected

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None expected

Section 4 – First Aid Measures

EYES: Contact unlikely. If particles get into eye, flush thoroughly with water.

SKIN: Wash skin thoroughly with soap and water.

INHALATION: Not applicable

INGESTION: Not applicable

Section 5 – Fire Fighting Measures

FLASH POINT: Above 200 degrees C (392 degrees F).

EXTINGUISHING MEDIA: All extinguishing agents classified as B and C are effective including dry powder(s), CO₂, and halon.

FIRE FIGHTING INSTRUCTIONS: As in any fire, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH approved, and full protective gear.

FIRE & EXPLOSION HAZARDS: These inks will burn. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion. No unusual fire hazards expected.

Section 6 – Accidental Release Measures

Spill Or Leak: Not applicable.

Section 7 – Handling And Storage

Handling: No special precautions.

Storage: Avoid high temperatures.

Section 8 – Exposure Control – Personal Protection

EXPOSURE GUIDELINES: None established

ENGINEERING CONTROLS/PERSONAL PROTECTION: No special protection indicated when used as intended.

Section 9 – Physical And Chemical Properties

Appearance/Odor: Waxy solid; black, blue, red, or yellow in color. Odorless.
Solubility: Not water soluble.
SPECIFIC GRAVITY: 0.99

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 a primary skin irritant, as determined by standard laboratory tests.
SKIN SENSITIZATION: Not a skin sensitizer, as determined by standard laboratory tests.
CARCINOGENICITY: Components or product not listed by IARC, NTP, or OSHA.

Section 12 – Ecological Information

No known impact.

Section 13 – Disposal Considerations

This product is not a hazardous waste as specified in 40CFR261. TCLP below hazardous waste levels set by EPA. Manage and dispose of waste in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT: 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.
CALIFORNIA PROPOSITION 65: Not listed.
RCRA (Resource Conservation and Recovery Act): Not a hazardous waste as specified in 40CFR261; TCLP below hazardous waste levels set by EPA.
CERCLA: No reportable quantity for this material.
SARA (Superfund Amendment and Reauthorization Acts): Not reportable

Section 16 – Other Information

Original preparation date: December 9, 1998.
Prepared by Corporate Environmental, Health, and Safety/ JMP.
Tektronix, Incorporated
PO Box 500
Chemical Documentation
Mail Stop 46-840
Beaverton, Oregon 97077
Printer Information: 1-800-835-6100
MSDS information: 503-627-7255

MSDS for CleanTex Alcopad

Section 1 – Product Identification

Trade name and Tektronix part number:

Alcopad — 016-1595-00

PRODUCT IDENTIFICATION NUMBERS: 806B, 806C, 806H, 806T, 806Z, 806

CHEMICAL NAME AND SYNONYMS: Isopropyl Alcohol

CHEMICAL FORMULA: $\text{CH}_2\text{CH}(\text{OH})\text{CH}_3$

EMERGENCY TELEPHONE NUMBERS: CHEMTREC (Transportation): 800-424-9300

Product Use: Tektronix Phaser[®] 840 color printer

Section 2 – Information On Ingredients

COMPONENT	CAS#	%	OSHA PEL (ppm)	ACGIL TLV (ppm)
isopropyl alcohol	67-63-0	91.0	400	400
Deionized water	7732-18-5	9.0	NA	NA

Section 3 – Hazards Identification

Product is distributed as a single use, presaturated pad, in which all the liquid is absorbed by the applicator. Isopropyl alcohol is a flammable liquid. Eye contact will cause local irritation and burning sensations with possible injury if not removed promptly. Repeated or prolonged contact with skin may produce irritation and cause dermatitis. Exposure above TLV may cause irritation of respiratory tract and eyes along with headaches, dizziness and CNS effects. May be harmful if swallowed.

Carcinogenicity (OSHA/NTP/IARC/ACGIH): Not Listed

Medical Conditions Aggravated by Exposure: Not Listed

Section 4 – First Aid Measures

EYE CONTACT: Flush with water for 15 minutes, including under eyelids. Get Medical help.

SKIN CONTACT: Flush with water

INHALATION: Remove to fresh air. Keep at rest. Restore and/or support breathing as needed. Get prompt Medical attention.

INGESTION: In the unlikely event of ingestion of a wiper, first aid measures should focus on removal of the object and preventing choking. Once removed, keep affected person at rest. Call physician immediately.

Section 5 – Fire Fighting Measures

FLASH POINT (TCC): 56 degrees F

FLAMMABLE LIMITS (% BY VOLUME): LEL: NA UEL: NA

AUTOIGNITION TEMPERATURE degrees F (degrees C): NA

EXTINGUISHING MEDIA: Isopropyl alcohol fires may be extinguished using carbon dioxide, dry chemical or alcohol foam. Water may be used to cool containers exposed to the fire.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Isopropyl alcohol may release vapors which may ignite at or above flash point.

NFPA RATING: HEALTH(1)

FLAMMABILITY(3)

REACTIVITY(0)

Formulation is classified as an OSHA Class IB Flammable Liquid

NA = Not Available

Section 6 – Accidental Release Measures

Since the isopropyl alcohol solution is completely absorbed by the applicator and the amount of isopropyl alcohol per applicator is small, the chance of a significant spill occurring is small. In the event however, a significant amount of liquid is released, ventilate the area, especially low areas where vapors may collect and remove all sources of ignition. Cleanup personnel need protection against liquid contact and vapor inhalation.

Section 7 – Handling And Storage

Store in a clean, cool, ventilated area away from sources of ignition and oxidizing agents. Handle and store in a manner suitable for an OSHA class IB Flammable Liquid. Electrical services must meet applicable codes. Use non-sparking tools.

Section 8 – Exposure Control – Personal Protection

Provide ventilation to maintain TLV. Use non-sparking tools. Avoid inhalation of vapors, contact with eyes and repeated or prolonged contact with skin. Do not take internally.

Section 9 – Physical And Chemical Properties

BOILING POINT (degrees F (degrees C)):180 (80)
% VOLATILE BY VOLUME @ 25 degrees C:100
VAPOR PRESSURE (mmHg @ 25 degrees C): 33
EVAPORATION RATE (BUTYL ACETATE-1)>1
VAPOR DENSITY (AIR = 1): <1
FORM:liquid
% SOLUBLE IN WATER @ 25 degrees C:100
ODOR:alcohol
SPECIFIC GRAVITY (G/CC@25 degrees C):0.79
APPEARANCE OF LIQUID:clear

Section 10 – Stability And Reactivity

STABILITY:Stable
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBILITIES / CONDITIONS TO AVOID: Caustics, amines, alkanolamines, aldehydes, ammonia, strong oxidizing agents and chlorinated compounds.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide

Section 11 – Toxicological Information

Not Available

Section 12 – Ecological Information

Not Available

Section 13 – Disposal Considerations

Follow Federal, State and Local Regulations.

Section 14 – Transport Information

DOT CLASSIFICATION: Not Regulated
 Proper Shipping Name:
 Hazard Class:
 UN Number:
 Packing Group:
 Hazard Labeling:

IATA / ICAO CLASSIFICATION: Not Regulated
 Proper Shipping Name:
 Hazard Class:
 UN Number:
 Packing Group:
 Hazard Labeling:

IMDG CLASSIFICATION: Not Regulated
 Proper Shipping Name:
 Hazard Class
 IMDG Page #
 Packing Group:
 Flash Point (degrees C):
 Marine Pollutant:

Section 15 – Regulatory Information

SARA TITLE III REPORTING:
 Toxic Chemical (Section 313): Not Listed
 Extremely Hazardous Substance: Not Listed
 Section 302, 304, 311, 312)

Hazard Class:
 Chronic Health Yes
 Acute Health Yes
 Fire Hazard Yes
 Pressure Hazard No
 Reactivity Hazard No

TSCA INVENTORY STATUS: All components listed are on the TSCA inventory

Section 16 – Other Information

The information provided herein is compiled from internal reports and data from professional publication. It is furnished without warranty of any kind, expressed or implied. It is intended solely to assist in evaluating suitability and proper use of the material and in implementing safety precautions and procedures. Employees should use this information as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials. All information used must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Prepared by:

CleanTex Products
 33 Murray Hill Drive
 Nanuet, NY 10954

June 1997

Specifications

Temperature

Operating: 10 degrees C to 32 degrees C (50 degrees F to 90 degrees F)

Non-operating: -30 degrees C to +60 degrees C (-22 degrees F to 144 degrees F)

Humidity

Operating: 10% to 80% relative humidity, non-condensing

Non-operating: 10% to 95% relative humidity, non-condensing

Altitude

Operating: 0 to 2438 m (0 to 8000 ft.) above sea level

Shipping: 0 to 15000 m (0 to 49200 ft.) above sea level

Primary voltage ranges

90 - 140 VAC, 110 VAC nominal

180 - 264 VAC, 220 VAC nominal

Frequency range

47 to 63 Hz

Primary fusing

125, 250 VAC, 10 Amps and 6.3 Amps

(Not user-accessible)

Power Consumption

Meets Energy Star power conservation requirements.

State	Average power
Continuous printing	217 watts per hour
Idle	185 watts per hour
Energy Star	<45 watts

Dimensions of the printer (without a High-Capacity Paper Tray Assembly)

Depth: 600 mm (23.5 in.)

Width: 432 mm (17 in.)

Height: 390 mm (15.3 in.)

Dimensions of the High-Capacity Paper Tray Assembly

Height: 127 mm (5 in.)

Depth: 530 mm (20.875 in.)

Width: 440 mm (17.375 in.)

Weight of the printer

36 kg (79 lb.)

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