
QMS[®] magicolor[®] 2

Print System

Operation



1800482-001B

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1

Introduction

In This Chapter . . .

- “Introduction” on page 1-2
- “About This Manual” on page 1-2

Introduction

This manual provides information on installing consumables such as media and toner cartridges. You'll also find information on advanced printing features, printer care, print quality, and troubleshooting. Use this guide in conjunction with your other QMS *magicolor 2* documentation.

About This Manual

1	Introduction	Provides an overview of this guide.
2	Consumables	Describes the media that's best suited for your printer; how to load paper, labels, transparencies, envelopes; and how to replace the toner cartridges, OPC belt cartridge, fuser oil bottle, cleaning roller, and waste toner pack.
3	Advanced Printing Features	Explains how to collate output, print a status page, cancel a print job, and end a print job.
4	Color Printing	Describes how to print documents in color.
5	Printer Care	Describes how to handle and clean the printer.
6	CrownView Printer Web Page	Contains information on how to access and use the printer's web page.
7	Media Jams	Explains how to locate and clear media jams.

8	Troubleshooting Printer Problems	Lists printer status messages, outlines printer and print quality problems and solutions, and describes how to place a service call.
9	Repacking the Printer	Explains how to repack the printer in case you need to relocate or ship your printer after it's been installed.
A	QMS Customer Support	Provides product sales and support telephone numbers, and describes how to communicate with QMS through CompuServe, the Internet, and Q-FAX.
B	Configuration Menu	Provides a view of the printer's configuration menu.

Typographic Conventions

The following typographic conventions are used in this manual:

Mixed-Case Courier	Text you type, and messages and information displayed on the screen
<i>Mixed-Case Italic Courier</i>	Variable text you type; replace the italicized word(s) with information specific to your printer or computer
UPPERCASE COURIER	Information displayed in the printer message window
lowercase bold	PostScript operators and DOS commands
<i>lowercase italic</i>	Variable information in text.
UPPERCASE	File and utility names
↵	Press the Enter key (PC) or Return key (Macintosh)
^	Press and hold down the Ctrl key (PC)
	In Adobe Acrobat PDF versions of the manual, click to play a QuickTime video clip of the procedure described in the text.

- » **Note:** *Notes contain tips, extra information, or important information that deserves emphasis or reiteration.*

- ▲ **Caution:** *Cautions present information that you need to know to avoid equipment damage, process failure, or extreme annoyance.*

- 💧 **WARNING!** *Warnings indicate the possibility of personal injury if a specific procedure is not performed exactly as described in the manual.*

ACHTUNG! *Bitte halten Sie sich exakt an die im Handbuch beschriebene Vorgehensweise, da sonst Verletzungsgefahr bestehen könnte.*



2

Consumables

In This Chapter . . .

- “Introduction” on page 2-2
 - “Loading the Media Cassette” on page 2-2
 - “Using Media Other than Paper” on page 2-4
 - “Using Toner Cartridges” on page 2-9
 - “Replacing a Toner Cartridge” on page 2-11
-

Introduction

This chapter covers basic printer operation, such as loading paper, transparencies, labels, and envelopes; and replacing toner cartridges.

Loading the Media Cassette

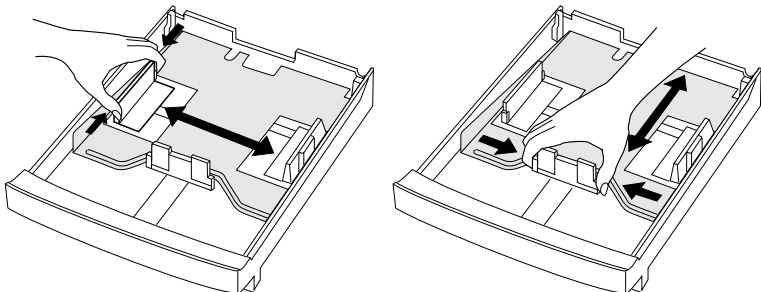
Prepare the Paper

- 1 Take a stack of about 250 sheets ($\frac{1}{2}$ ream).
- » **Note:** *Don't unwrap the paper above the printer as this might cause paper particles to fall into the printer.*
- 2 Holding the stack with one hand, fan the paper with the other.
This gets air through the sheets and prevents static buildup.
- 3 Take off the top and bottom sheets.
Residual glue buildup on these sheets may cause media jams.

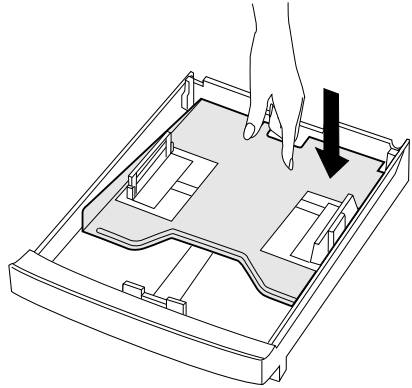
Load the Cassette

- 1 Remove the media cassette from the printer.
- 2 Adjust the media guides to fit the size paper you're loading.

Squeeze the retainers at the ends of the left width guide and/or the length guide, move the guide to the appropriate location (media sizes are listed on the cassette), and release the retainers.

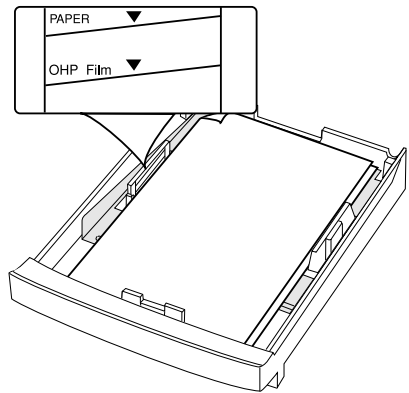


- 3 Push the media pressure plate down to lock it in position.**



- 4 Load the paper.**

- A fill limit mark is provided on the inside left side of the cassette. The media cassette holds 250 sheets of 20 lb (75g/m²) paper. (Paper is packed in reams of 500 sheets.) Do not overfill the cassette.
- The printing side of the paper should face up. An arrow on the paper package label indicates the face-up side of the paper.



- 5 Slide the media cassette back into the printer.**

Using Media Other than Paper

▲ **Caution:** *Although the QMS magicolor 2 was designed for occasional printing on a wide range of media types, it is not intended to print exclusively on a single media type except plain paper. Continuous printing on media other than plain paper (such as transparencies, labels, or thick stock) may adversely affect print quality or reduce engine life.*

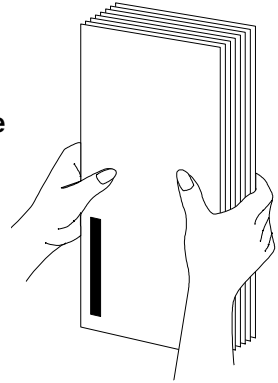
Using Envelopes

Formatting	Your printer receives the instructions to print on envelopes from your application.	
	■ When formatting data for envelopes, leave at least a 0.16" (4.06 mm) margin from the edges of the envelope. ■ Print on the front side only. Some parts of the envelope consist of three layers of paper—the front, back, and flap. Anything printed in these layered regions may be lost or faded. ■ See your application documentation for specific information on printing envelopes.	
Input	Source	Upper slot; universal cassette
	Capacity	Up to 15, depending on the thickness of the envelopes
Type	Refer to the specifications in chapter 2, "Print Media," in the <i>Reference</i>	
Notes	■ Use envelopes with a smooth exterior surface. Envelopes with a rough surface may jam in the media cassette. ■ You can print only on the address side of the envelope. ■ You can print envelopes from either cassette, but only in the upper position, not from the optional lower input feeder.	

Loading and Printing Envelopes



- 1** Place the envelopes on a flat surface, and flatten them by pressing down the corners.
- 2** Flex the envelope stack (including the edges) to remove any stiffness.
- 3** Correct any dog-eared corners, and then tap the envelopes on a flat surface to align them



- 4** Remove the media cassette from the printer (and remove any media in the cassette).

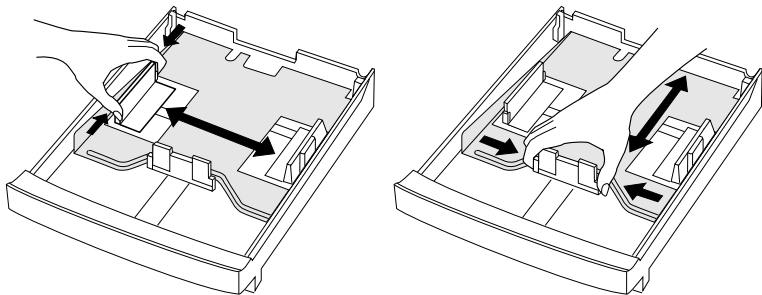
The media cassette must be located in the upper position, not in the optional lower input feeder.

Using Media Other than Paper

5 Adjust the media guides to the length and width of the envelopes.

Squeeze the retainers at the ends of the left width guide and/or the length guide, move the guide to the appropriate location (media sizes are listed on the cassette), and release the retainers.

- » **Note:** *Make sure the guides are snug enough to keep the envelopes straight, but not so tight that they buckle the envelopes.*



6 Place the envelope stack into the cassette with the printing-side up.

- » **Note:** *Check your application documentation to determine if the flap should be placed on the left or on the right. You can also print a single envelope to check the orientation before printing multiple copies.*

7 Insert the cassette into the printer.

The media cassette must be located in the upper position, not in the optional lower input feeder.

8 Open the flap of each envelope immediately (before it cools) after the envelope is delivered to the output tray.

- » **Note:** *Because the envelopes pass through heated rollers, the gummed area on the flaps may seal. Using envelopes with emulsion-based glue avoids this problem.*

Using Labels

Formatting	Format label data within your application. Try printing your data on a plain sheet of paper first to check placement.	
Input	Source	Upper cassette
	Capacity	Up to 50, depending on the thickness of the labels
Type	Refer to the specifications in chapter 2, "Print Media," in the <i>Reference</i>	
Notes	■ Avoid using labels with exposed adhesive; it may stick to the toner cartridge or the fixing roller, causing labels to peel off and media jams to occur. ■ Check your application documentation for other information on printing labels.	

Loading and Printing Labels

- 1 Load labels the same way you load paper.
 - » **Note:** *If your label stock has a top-of-page, place the top-of-page toward the rear of the printer.*
- 2 In the Operator Control/Media/For Upper Bin menu, select Thick Stock.

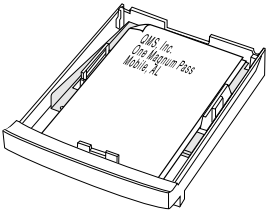
Using Letterhead and Memo Media

Formatting	Format letterhead or memo data within your application. Try printing your data on a plain sheet of paper first to check placement.	
Input	Source	Upper cassette
	Capacity	Up to 250 sheets, depending on the thickness of the media
Type	Refer to the specifications in chapter 2, "Print Media," in the <i>Reference</i>	
Notes	■ Check your application documentation for other information about printing on letterhead and memo media.	

Loading and Printing Letterhead and Memo Media



- Load letterhead and memo media the same way you would load paper.
- » **Note:** Load the media printing-side up with the **top** of the media (the letterhead or memo information) toward the back of the cassette.



Using Transparencies

Formatting	Format the information to be printed on the transparencies within your application. Try printing your data on a plain sheet of paper first to check placement.	
Input	Source	Upper cassette
	Capacity	Up to 50 sheets, depending on the thickness of the transparencies » Note: If you have problems feeding 50 sheets, try loading only 5–10 sheets at a time. Loading a large number of transparencies at a time may cause static buildup, thus causing feeding problems.
Type	Refer to the specifications in chapter 2, “Print Media,” in the <i>Reference</i>	
Notes	■ Keep the media path clean. Transparencies are especially sensitive to a dirty media path. If there are shadows on either the top or the bottom of the sheets, refer to chapter 5, “Printer Care,” for instructions on how to clean the printer. ■ Check your application documentation for other information about printing on transparencies.	

Loading and Printing Transparencies



- Load transparencies the same way you would load paper.

Using Toner Cartridges

Toner Cartridge Life

A toner cartridge contains enough toner to print the following number of letter/A4-size pages:

Color	Rated life @ normal 5% page coverage
Black	10,000 pages
Yellow	6,000 pages
Magenta	6,000 pages
Cyan	6,000 pages

When toner runs low in a cartridge, **x TONER LOW** displays in the message window. It's your option whether to continue printing; usually, parts of the page print lighter.

When toner is low, it's sometimes helpful to take the cartridge out of the printer and redistribute the toner by gently rocking the cartridge side to side. Then reinstall the cartridge. If the **TONER LOW** message remains in the message window after you redistribute the toner, replace the cartridge.

The printer stops 330 pages after detecting that toner in a cartridge is low. **TONER OUT** displays in the message window.

Refilled Toner Cartridges

Refilled toner cartridges may produce variations in toner quality and reliability and may reduce the print quality of your documents. In addition, toner leaks affect your warranty.

Toner Cartridge Storage

- Keep toner cartridges in their packaging until you're ready to install them.
- Store toner cartridges in a cool, dry location away from sunlight (due to heat). The maximum storage temperature is 95° F (35° C) and the maximum storage humidity is 80% without condensation.
- Keep toner cartridges level during storage. Do not stand or store cartridge on their ends or turn upside down; the toner inside the cartridges may become caked or unequally distributed.
- Keep toner cartridges away from salty air environments and corrosive gases such as aerosols.
- Keep toner cartridges away from disk drives and floppy disks. The magnets in the cartridge can damage stored data.

Replacing a Toner Cartridge

Your printer uses four toner cartridges: black, yellow, magenta, and cyan.

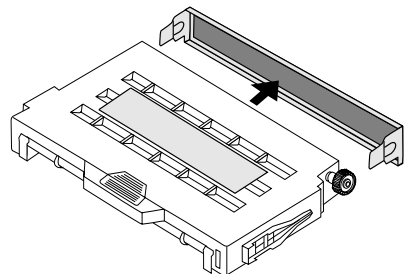
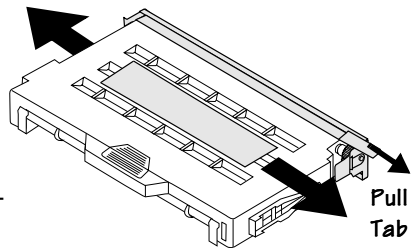
- 1 Open the printer's front cover.
- 2 Remove and discard the empty toner cartridge.

▲ **Caution:** Put the old toner cartridge in a trash receptacle. Do not dispose of it by burning

- 3 Remove the toner cartridge from its shipping carton.
- 4 Distribute the toner in the cartridge.

Holding the cartridge with both hands, gently rock it from side-to-side five or six times.

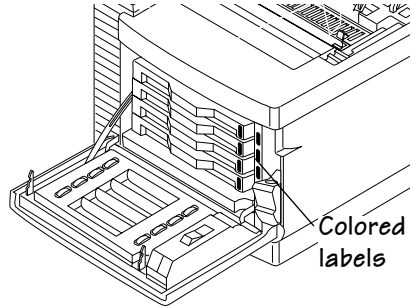
- 5 Pull the tab.
- 6 Remove the orange protective cover from the cartridge.



Replacing a Toner Cartridge

7 Install the toner cartridge.

Align the toner cartridge with the cartridge guides, and gently push the cartridge into the printer until it's firmly seated.



Caution: *Each toner cartridge has a colored label that corresponds to a colored label to the right of the cartridge slots. Always install the toner cartridge in the slot with a label of the same color.*

If a toner cartridge doesn't slide in easily, don't force it. In addition, don't push it in until you hear a click. If you hear a click, you've locked it into place against the OPC belt cartridge and your prints may be smudged. Pull the toner cartridge out so that it's firmly seated but not locked into place. While the cartridges may appear not to be fully inserted, closing the front cover will guide them to their final position.

8 Close the printer's front cover.

9 In the Operator Control/Consumables/Item Replaced/x Toner menu choose Yes to reset the consumables usage monitoring system.

» **Note:** *When you replace a toner cartridge after an x TONER EMPTY message displays in the message window, the engine automatically recovers. However, you must manually reset the consumables usage monitoring system to ensure accurate consumables monitoring.*

To access consumables usage information, use the Operator Control/Consumables/Print Statistics menu or the CrownView printer web page.



3

Advanced Printing Features

In This Chapter . . .

- “Introduction” on page 3-2
 - “High-Resolution Printing” on page 3-2
 - “Cassette Chaining” on page 3-5
 - “Collating Output” on page 3-6
 - “2-Sided Printing” on page 3-8
 - “Printing on Standard and Custom Media Sizes” on page 3-9
 - “Working with Status Pages” on page 3-10
 - “Cancelling/Ending Print Jobs” on page 3-11
-

Introduction

This chapter describes changing print resolution, chaining paper cassettes, collating output, printing a status page, cancelling a print job, and ending a print job.

High-Resolution Printing

QMS Multi-Res technology provides a print resolution for almost every application or budget. The QMS *magicolor 2* supports each of the following resolutions at up to rated engine speed:

300x300 dpi	Built into all <i>magicolor 2</i> Print Systems, this resolution has the fastest processing time for producing draft-quality output. 300x300 dpi resolution is also required by some printer emulations.
600x600 dpi	The standard resolution in the base <i>magicolor 2</i> CX is also the standard resolution for business documents. 600x600 dpi resolution provides excellent print quality for most business applications, such as letters, proposals, and presentations. With 600 dpi in both horizontal and vertical directions, it also provides the best quality line drawings for engineering applications.
1200x600 dpi	For improved halftone quality in graphics and images, 1200x600 dpi resolution is available for all media sizes on the base <i>magicolor 2</i> EX. The <i>magicolor 2</i> CX is also capable of producing 1200x600 dpi resolution through the installation of additional memory.
2400x600 dpi	For graphic arts and desktop publishing applications, where the best quality graphics and photorealistic images are required, the <i>magicolor 2</i> EX Print System comes standard with 2400x600 dpi resolution for many media sizes. The <i>magicolor 2</i> CX Print System is also capable of producing 2400x600 dpi resolution through the installation of additional memory.

How Much Memory Do You Need?

- » **Note:** If a certain resolution is chosen and the minimum amount of memory is not installed in the printer, the file is printed using the next lower resolution that can handle the job. For example, if you attempt to print a 4-color image at 2400x600 dpi resolution on legal media, but the printer has only 24 MB of RAM instead of the required 88 MB minimum, the file prints at 600x600 dpi.

Minimum System Memory Requirements

Media Size	300x300/600x600		1200x600		2400x600	
	Mono	4-Color	Mono	4-Color	Mono	4-Color
Letter/A4	24 MB	24 MB	24 MB	40 MB*	24 MB	72 MB*
Legal	24 MB	24 MB	24 MB	48 MB*	24 MB	88 MB**

- » **Note:** These values are for a printer without a hard disk. For a printer with a hard disk installed and disk swapping enabled, add an additional 4 MB of RAM for each media size.

* Additional memory required on a *magicolor 2 CX*

** Additional memory required on a *magicolor 2 CX* and *magicolor 2 EX*

You may also need additional memory (SIMMs) for the following:

- To print complex graphics or complex PostScript documents
- For increased collation performance
- For increased spooling performance

Setting the Default Resolution

Menu	Administration/Engine/Def Resolution
Choices	300 dpi—300x300 dpi resolution 600 dpi—600x600 dpi resolution 1200 dpi—1200x600 dpi resolution 2400 dpi—2400x600 dpi resolution
Default	600 dpi, 1200 dpi, or 2400 dpi—your printer's default is the highest resolution available for the amount of RAM installed in the printer (see “Minimum System Memory Requirements” on page 3-3 for more information)
Notes	Whenever possible, set the print resolution through your application. If the print resolution can't be set through the application, you can set it through the configuration menu, the printer driver, or QMS Document Option Commands (DOCs). If you want the printer to use a lower default resolution when you restore defaults, set this option to your choice (and make any other necessary configuration settings), and then use the Administration/Miscellaneous/Save Defaults menu to save your custom defaults. See “Working with Custom Configurations” in chapter 4, “Printer Configuration,” of the <i>Reference</i> for more information. In addition, after you lower the default resolution, you should reconfigure the printer memory (Administration/Memory/Quick Config menu) to distribute it better for that particular resolution. For example, if you set the default resolution to 600 dpi when your printer has enough memory to print at 2400 dpi, the frame buffer remains configured for 2400 dpi, which means that printer memory that could be better used somewhere else is being wasted.

Cassette Chaining

If you have an optional lower input feeder, you may choose to have the printer automatically draw media from the other cassette (input-bin) when the current cassette empties. This is called cassette chaining, and it provides a total media input capacity of 500 sheets.

Enabling/Disabling Cassette Chaining

There are four ways to enable/disable cassette chaining:

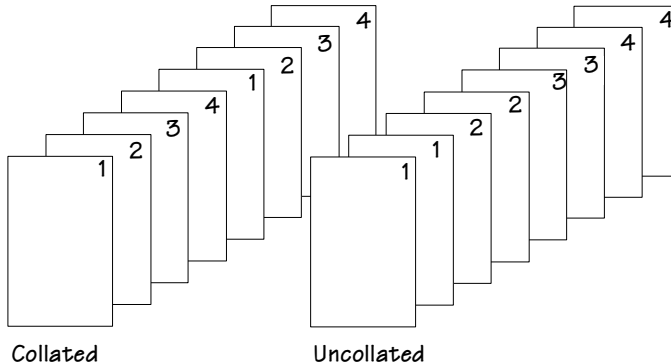
- Use your application. (Check the documentation to see if your application includes a specific procedure for using a dual-cassette printer.)
- Select an alternate cassette for chaining in the QMS Level 2 Windows printer driver.
- On a network, use CrownAdmin 3 to select the media cassettes and/or the media source.
- Configure the printer through the configuration menu.

Using the Configuration Menu

Menu	Operator Control/Chain Inputbins
Choices	On—Switches to the next cassette with the same size and type of media when the default cassette is empty. Off—Doesn't switch cassettes; uses only the default cassette. On Any—Switches to the next cassette, regardless of the size and type of media installed, when the default input bin is empty.
Default	On
Notes	Use the Operator Control/Inputbin menu to set the default inputbin.

Collating Output

You can print multiple copies of documents either as complete sets in numeric order (collated) or as separate sheets. The following figure shows collated and uncollated stacking for two copies of a four-page file.



The main advantage of collation is convenience and the time savings derived from not having to separate and sort individual copies of a document. Each copy of the document exists as a whole unless chunk collation has occurred.

Enabling/Disabling Collation

There are three ways to enable/disable collation:

- Use your application. (Check the documentation to see if your application includes a specific procedure for collating pages.)
- Select collation in the QMS Level 2 Windows printer driver.
- On a network, use CrownAdmin 3 to select collation.
- Configure the printer through the configuration menu.

Using the Configuration Menu

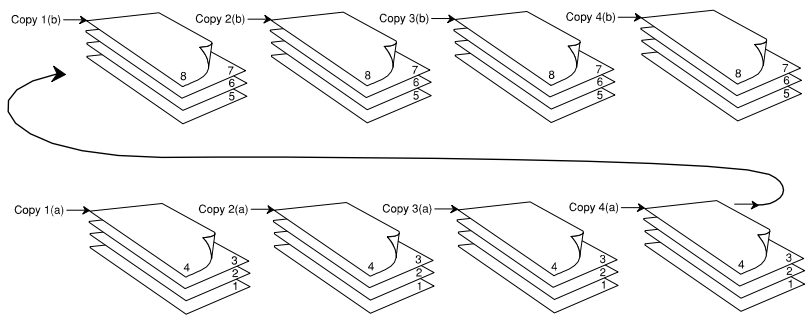
Menu	Operator Control/Collation
Choices	On, Off
Default	Off

Working with Chunk Collation

For a multiple copy document with collation On, there must be enough display list memory to hold the display list blocks for all pages in the collation range. (For more information on Display List blocks, see “Display List” in chapter 5, “Additional Technical Information,” in the *Reference* manual.) If there’s not enough memory, then a collation boundary is forced after the last compiled page of the collation range.

Chunk Collation

This mechanism of introducing a forced boundary—or breaking a document down into several smaller, more manageable sets—is known as chunk collation. For example, in the following illustration, copies “a” and “b” of each set must be manually combined to create one collated document. The order of printing is copy 1(a), copy 2(a), copy 3(a), copy 4(a), copy 1(b), copy 2(b), copy 3(b), and copy 4(b).



» **Note:** If chunk collation occurs, you may want to enable header and trailer pages to help you determine the beginning and end of each collated sequence.

Improving Collation Performance

To avoid chunk collation, your printer must have sufficient memory to store an entire document before printing begins. Of course, this always depends on the size of your print job versus the amount of available memory in your printer. The QMS *magicolor* 2 with 24 MB or more of memory can fully collate most print jobs.

To improve collation performance, which allows you to collate longer and more complex print jobs on your printer, you can do one of the following:

- Add more printer memory, which automatically increases the display list client's memory settings.
- Take any memory not being used by other clients, and add it to the Administration/Memory/K Mem Display memory setting.



Caution: *Use this option only if you're familiar with adjusting memory clients' values. (Refer to chapter 4, "Printer Configuration," in the Reference manual for information.) Incorrect use of this option could cause your system to operate incorrectly.*

- If your printer has an optional hard disk, set the Administration/Memory/Enable Disk Swap menu to On. This distributes any extra memory to all clients.
 - Collate through your application.
- » **Note:** *Collating through your application is more time consuming than collating through the printer. The application sends the complete job the requested number of times rather than sending it once and holding data in printer memory.*

2-Sided Printing

While the QMS *magicolor* 2 doesn't have a duplexing option, you can duplex print manually: Print on one side of the paper, reinsert the printed sheet(s) into the media cassette (blank side up and the top of the page toward the back of the printer), and then print the second side.

- » **Note:** *Media jams may occur if the printed sheet(s) reinserted in the media cassette are not entirely flat.*

Printing on Standard and Custom Media Sizes

The QMS *magicolor* 2 prints on a wide variety of media sizes. However, the way you identify the size to the printer varies:

- **Standard “sensed” media sizes**—The printer automatically senses six media sizes—A4, B5 JIS, Com 10*, Executive, Foolscap, Legal, and Letter. To print on these media sizes, you need to do no more than load the media in the cassette.
- **Standard “non-sensed” media sizes**—The printer can print on five media sizes—A5*, B5 ISO, DL Envelope*, Folio, SP Folio, Statement*, UK Quarto—that it can't automatically sense. To print on these media sizes, you must load the media in the cassette and then choose the appropriate size from either the Operator Control/Custom Bin/Upper or Operator Control/Custom Bin/Optional menu.
- **Non-standard “non-sensed” media sizes**—The printer can also print on non-standard media sizes up to 8.5"x13.8" (215.9x350.5 mm). To print on these media sizes, you must load the media in the cassette, choose Universal from the Operator Control/Custom Bin/Upper or Operator Control/Custom Bin/Optional menu.

*This media size can be printed only from a cassette installed in the upper/standard position.

Optional menu, and then identify the media size in your application.

- » **Note:** *If you preview your file in your application, the dimensions of the Universal media size rather than your custom size will be shown in the preview window, and your document will be imaged in the lower-left corner of this media size. You must manually move the margins in from the left and right as well as up from the bottom to define the correct imageable area for your custom media size.*

Working with Status Pages

Identifying a Status Page Type

Menu	Administration/Special Pages/Status Page Type
Choices	Standard, Advanced
Default	Standard

Standard

This one-page document provides

- Printer identification (the printer's name, firmware information, and number of sheets/faces printed during the life of the printer)
- » **Note:** *The number of sheets/faces statistics differ from the number of sheets printed statistics in CrownView and the consumables statistics page (Operator Control/Consumables/Print Statistics), which refer to the number of sheets/faces printed to date during the current consumables tracking period (Administration/Consumables/Start Period menu).*
- Printer settings (printer set-up options for paper handling)
- Current memory configuration (printer memory settings)
- Timeouts (printer timeout settings)

- Communication settings and input buffer sizes (host-printer communication settings, including spooling memory sizes)
- Tickmarks in the lower-left corner for image alignment

Advanced

This multi-page document provides

- All the information from the standard status page
- The configuration menu settings
- A full list of fonts and downloaded emulations

Printing a Status Page

Menu	Administration/Special Pages/Print Status
Choices	No, Yes
Default	Yes

Cancelling/Ending Print Jobs

The Cancel key has three functions:

- It cancels the oldest print job in the system.
- It cancels all jobs with a printing, interpreting, terminating, or spooled status.
- It allows you to send an end-of-job indicator to a currently compiling print job waiting on incoming data.

You don't have to press the Online key before using the Cancel key.

Cancelling a Print Job

Press this key...	to...	The message window reads...
Cancel	Access the Job Cancel menu.	JOB CANCEL CANCEL JOB
Cancel or Select	Cancel the oldest job in the queue.	CANCEL JOB IS SELECTED

Cancelling all Print Jobs

Press this key...	to...	The message window reads...
Cancel	Access the Job Cancel menu.	JOB CANCEL CANCEL JOB
Next (twice)	Advances to the Cancel All Jobs mode.	JOB CANCEL CANCEL ALL JOBS
Cancel or Select	Cancel all jobs with a printing, interpreting, spooled, or terminating status. The CANCEL ALL JOBS message displays until all print jobs are completely removed.	CANCEL ALL JOBS IS SELECTED

Ending a Print Job

Use this procedure when the message window displays

WAITING ON INPUT
END JOB?

- » **Note:** *This procedure does not end print jobs that are still receiving data. Its only purpose is to provide an end-of-job indicator for a print job that does not have one. You can identify an end-of-job indicator in the Administration/Communications/Parallel and Administration/Communications/Serial menu. (Refer to chapter 5, "Additional Technical Information," in the Reference Manual for a complete discussion of End Job Mode.*

Press this key...	to...	The message window reads...
Cancel	Access the Job Cancel menu.	JOB CANCEL CANCEL JOB
Next (twice)	Advance to the End Job mode.	JOB CANCEL END JOB
Cancel or Select	Select End Job.	END JOB IS SELECTED



4

Color Printing

In This Chapter . . .

- “Introduction” on page 4-2
- “QCOLOR Color Control” on page 4-2
- “Other Methods of Color Control” on page 4-4
- “Color Density” on page 4-9

Introduction

Your QMS *magicolor* 2 Print System features advanced color laser technology that produces inexpensive and durable color prints at 300x300, 600x600, 1200x600, and 2400x600 dpi on plain paper, envelopes, labels, and transparencies.

QCOLOR Color Control

To help you optimize color output, QMS developed QCOLOR, which provides automatic or custom color control. QCOLOR dynamically configures the QMS *magicolor* 2 for the best output quality based on the contents of the document and the media on which it will be printed. QCOLOR matching capabilities include CIE-based color matching, PANTONE®* Color simulation, and ICM 2.0 and ColorSync 2.1 support by means of ICC 3.2-compliant printer profiles. QCOLOR automatic color control is accessed through the QMS Level 2 Windows 95 printer driver.

Accessing QCOLOR for Windows 95

- 1 If you haven't already, install the QMS Level 2 Windows driver.
- 2 Open or create the file you want to print.
- 3 From the File menu, choose Print Setup.

Some applications may call this option something else, such as Page Setup.

- 4 In the Print Setup dialog box, make sure the QMS *magicolor* 2 is selected, then choose the Options or Properties button.

The QMS Level 2 Windows driver dialog box appears.

* Pantone, Inc.'s check-standard trademark for color reproduction and color reproduction materials.

5 On the Job tab (Windows 95 driver) or Paper tab (Windows 3.1/Windows 95 driver), select a Quick Color Setup setting:

- **Automatic Color Control** (if you're printing a combination of document types)

Automatic Color Control is the best option for most jobs, because it's designed to provide the best color output for a large variety of documents. However, if the Automatic setting doesn't provide satisfactory color output for a particular page element or document type, then select a more specific QCOLOR setting (for example, Photographic for scanned photographic images).

- **Graphics** (if you're printing color graphics)
- **Grayscale** (if you're printing images with gray shades)
- **Photographic** (if you're printing photographic images)
- **Text and Spot Color** (if you're printing text or spot colors)
- **Third Party Color Management** (if you want to allow your application to control color settings)
- **Color All Black** (if you want to print monochrome)
- **Customize** (if you want to customize the color settings by using the options on the Color tab)

» **Note:** *Because QCOLOR automatically adjusts the settings on the Color tab (Windows 95 driver) or Color Setup tab (Windows 3.1/Windows 95 driver), you don't have to adjust them manually. However, if you want to customize them, you can get information about them and other options in the driver by choosing the Help button. Also, some applications (like PageMaker and Ventura Publisher) specify color outside the Windows driver, in which case the color settings in the QMS Level 2 Windows driver are ignored.*

6 Choose the media type you're using.

Use either the Windows 95 printer driver's Paper tab or the printer's Operator Control/Media/For Upper Bin or Operator Control/Media/For Optional Bin menu.

Other Methods of Color Control

7 Choose any other printing options you want.

Choose the Help button in the printer driver for detailed descriptions of the options.

8 Choose OK until you return to the application.

9 From the File menu, choose Print.

10 In the Print dialog box, select any other options you want and then choose OK.

Other Methods of Color Control

Color Matching

A major concern in the color publishing industry today is color consistency across devices with different color models. For example, when you scan a color photograph, the scanner sends the image data to the computer in an RGB (Red-Blue-Green) format. The computer then converts the data into another RGB format to display it on the monitor. When the image data is sent to the printer, it is converted into CMYK (Cyan-Magenta-Yellow-black) format by the printer driver or application. Because of these conversions, a color output device (like your printer) may produce colors dramatically different from those seen on the computer screen, or in the original image.

To keep colors more consistent, you can use color matching, which uses software to describe colors for different devices in a common language to make sure that color is produced in the same shade on all devices.

Color Matching with a Color Management System

Color management systems (CMSs) work by translating color information from different devices into a common language. A CMS first gets information about the way these devices create color and the

range of colors they can produce. (This information is contained in device *profiles*.) Then, using this information, the CMS maps each device's color descriptions to the CIE model, which is an international, device-independent standard for color.

For example, to make a printer's color output look the same as the colors on your computer monitor, a CMS translates the monitor's RGB colors into device-independent CIE color, and then translates from the CIE color into the printer's CMYK colors. A CMS can warn you (or automatically adjust color) when the colors you specify are outside the output device's range, and they can show you on screen how the printed output will look.

The advantages of using a CMS are that you get consistent color across all devices, and an on-screen preview of output. However, CMSs are not portable across platforms, they can be expensive, and they do consume processing time and power at the host.

A few well-known color management systems include Kodak Color-Flow, Agfa ColorTune, Pantone POCE, Apple ColorSync, Microsoft ICM, Color Solutions ColorBlind, and Linotype-Hell LinoColor. The following are shipped with your printer:

- An Apple ColorSync/ICC (International Color Consortium) device profile
- A Windows ICM device profile

Instructions for installation and use are included on the *QMS Software Utilities* CD-ROM or on the supplemental color disk provided with the printer.

Color Matching with PostScript Level 2

Your printer's PostScript Level 2 allows it to accept device-independent CIE color specification directly (in addition to CMYK or RGB color specifications). This means that if you have an application that supports PostScript Level 2 printing (such as Adobe PhotoShop) or if you use the QMS-developed driver for Windows or Macintosh, your printer will perform color matching automatically. These drivers work with the printer-resident color rendering dictionaries to match colors. See control panel for more information on CRDs.

Other Methods of Color Control

The advantages of Level 2 color matching are that it is portable, it is application- and printer-resident (there's nothing else to buy), and it is performed at the printer level (so it doesn't tie up your host). However, no on-screen preview of output is provided, and you are not warned if a color is out of printer's gamut (color range).

Color Matching with PANTONE®*

Your printer has been approved by Pantone, Inc. to simulate PANTONE Colors. Pantone specifies hundreds of spot colors, each identified by a unique number. Each of these spot colors can be simulated on the printer with the appropriate combination of process (CMYK) colors.

Within a Pantone-licensed application (such as Aldus FreeHand or Adobe Illustrator), you can choose a PANTONE Color number and the corresponding CMYK simulation is printed. Pantone tables for supporting applications are shipped on the *QMS Software Utilities* CD-ROM or on a supplemental color disk with the printer, including the following:

- Adobe Illustrator (Macintosh and Windows)
- CorelDRAW (Windows only)
- Macromedia FreeHand (Macintosh and Windows)
- QuarkXPress (Macintosh only)

Instructions for installation and use of these files are included on the Pantone disk shipped with your printer.

The formulas in the PANTONE Color look-up charts result in Pantone-approved color only under the following conditions:

- A Pantone-licensed application (such as Adobe Illustrator, QuarkXPress, and Macromedia FreeHand) is used to create the color.
- The colors are printed with QMS-supplied toner.

*Pantone, Inc.'s check-standard trademark for color reproduction and color reproduction materials.

- The colors are printed on Hammermill Laser Print white paper.

The formulas listed in the Pantone charts are only for the *magicolor 2* CX printer. Also, the PANTONE®* Colors generated by this printer are four-color process simulations and may not exactly match Pantone-identified solid color standards. Use current PANTONE Color Reference Manuals (available from Pantone, Inc.) for accurate color.

The advantages of using PANTONE Color matching are that it is easy to use, it is widely supported, and that it is good for spot color. However, it is not as accurate as other methods of color matching, it can't be used for photographs, and it is only supported by applications.

About Printer Halftones and CRDs

The printer's default CRD (Color Rendering Dictionary) can be changed through the QMS-developed Macintosh and Windows drivers or, if your application requires you to use a non-QMS driver, you can change the CRD at the printer's control panel (Administration/Emulations/PostScript/Color Rendering menu). See chapter 4, "Printer Configuration," of the *Reference* manual for information on using the control panel.

Halftones

The enhanced halftone uses amplitude-modulation (AM) screening.

Some applications may be set up to ignore the printer's color settings. See chapter 3, "Connecting to a PC," and chapter 5, "Connecting to a Macintosh," in the *Getting Started* manual.

Color Rendering Dictionaries (CRDs)

Since the printer has a different range of colors than other color devices (such as your monitor), a color rendering dictionary is necessary to tell the printer how to print colors that are out of its range. The printer has three default CRD settings:

*Pantone, Inc.'s check-standard trademark for color reproduction and color reproduction materials.

Other Methods of Color Control

Colorimetric—The Colorimetric CRD is designed for very basic color matching and one-to-one conversion from CIE color to CMYK color. With Colorimetric chosen as the printer default CRD, all colors are reproduced exactly unless a specified color is “out of gamut” (out of the printer’s range). For out of gamut colors, the Colorimetric CRD substitutes the closest “in-gamut” color. The result is that exact color matches between the two devices are maintained wherever possible, but the printed image may have a smaller range of colors than the original image (since several image colors may be mapped to a single printer color). We recommend that you use this CRD for printing spot colors.

Business—The Business CRD matches the images on a monitor as closely as possible (WYSIWYG). Use the Business CRD for computer-generated graphics.

Photographic—QMS developed the Photographic CRD to optimize the quality of photographic images and other images with many subtle color shifts. Like the Colorimetric CRD, the Photographic CRD substitutes out-of-gamut colors with in-gamut colors, but it also adjusts (compresses) all other colors (whether in-gamut or out-of-gamut) as necessary to maintain the proportional relationship between the colors.

Color Density

Adjusting the Color Density

Use the following procedure to check and adjust the color density.

-
- ▲ **Caution:** *For best results when checking the printer's color density, print the calibration page described in step 3 on **good** quality paper, such as Hammermill LaserPrint Radiant White or Weyerhaeuser First Choice premium paper. Otherwise, the color of the paper could affect the results.*
-

1 Set the density of each color to 0.

- a Access the printer's Administration/Engine/Density/Cyan menu.
- b Set the cyan color density to 0.

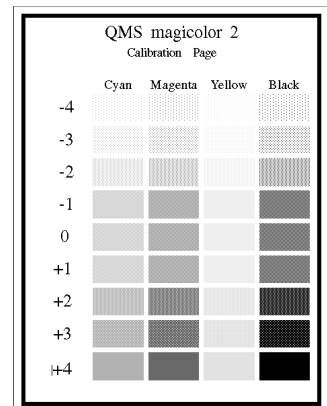
Press the Previous key to decrease the density setting or the Next key to increase the setting.

- c Repeat steps a and b for the magenta, yellow, and black color densities.
- d Save your changes.

2 Access the printer's Administration/Special Pages/Calibration Page menu.

3 Press Select to print a calibration page.

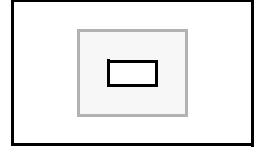
This page provides a density range for each of the printer's colors—cyan, magenta, yellow, and black.



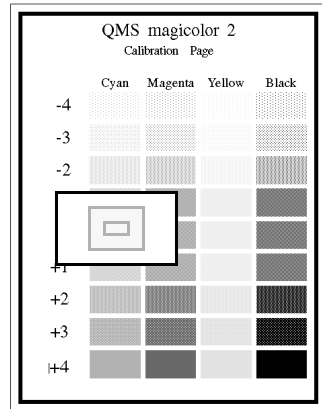
Color Density

- 4 Compare the calibration page to the four calibration cards that were provided with your printer.

Each card features a single color—cyan, magenta, yellow, or black.



- Place the calibration page on a sheet of clean white paper in a well-lighted area.
- Align the cutout in the cyan color calibration card over the cyan column on the calibration page.



- Decide which block on the calibration page most closely matches the cyan color calibration card.

» **Note:** *It may be easier to decide which colors match if you view the output at a distance (3–4 feet) and squint.*

- Make a note of the value (-4 to +4) associated with that block, or simply mark the pane through the cutout in the card.

You will need this value in step 6.

- Repeat steps b–d with the magenta, yellow, and black calibration cards.

- 5 Access the printer's Administration/Engine/Density/Cyan menu.

- 6 Adjust the cyan color density according to the number you recorded in step 4.**

Press the Previous key to decrease the density setting or the Next key to increase the setting.
- 7 Repeat steps 5 and 6 for the magenta, yellow, and black color densities.**
- 8 Save your changes.**
- 9 Print a new calibration page (Administration/Special Pages/Calibration Page menu).**
- 10 Compare the new calibration page to the four calibration cards again.**
- 11 Make any additional adjustments necessary.**

If none are necessary, you're done and ready to print.



5

Printer Care

In This Chapter . . .

- “Introduction” on page 5-2
 - “Handling the Printer” on page 5-2
 - “Cleaning the Printer” on page 5-3
 - “Maintenance Schedule” on page 5-12
 - “Replacing the Fuser Oil Bottle and Cleaning Roller” on page 5-14
 - “Replacing the OPC Belt Cartridge” on page 5-17
 - “Replacing the Ozone Filter” on page 5-20
 - “Replacing the Waste Toner Pack” on page 5-21
-

Introduction

This chapter describes how to handle and clean the printer.

Blurred or splotchy prints and paper jams can result from dusty printer parts. Regular cleaning takes only a few minutes and helps ensure print quality. Printer parts that require cleaning are the paper pick-up rollers and the outside surface of the printer.

Handling the Printer

Handle the printer with care to preserve its life. Abuse may cause damage. Keep the following guidelines in mind:

- Do not place anything on the top of the printer.
- Avoid spraying cleaning solution directly on the printer's surface; the spray could penetrate through the air vents of the printer and damage the internal circuits.
- Be careful when cleaning the inside or removing paper jams, as the fuser assembly and other internal parts become very hot. Open the printer cover, and let the interior of the printer cool before handling the inside of the printer.
- Always close the printer covers gently. Never expose the printer to vibrations.
- Do not cover the printer immediately after using it. Turn it off and wait until it cools down.
- Do not leave the printer open for any length of time, especially in well-lit places; light may damage the OPC belt cartridge.
- Do not open the printer during printing and do not tap paper stacks on the printer.
- Do not tilt, lubricate, or disassemble the printer.

- Do not touch the electrical contacts, gears, or laser beam devices. Doing so may damage the printer and cause the print quality to deteriorate.
- Keep media in the output tray at minimum level. If the media stacks too high, your printer may experience media jams and excessive media curl.
- Lift the printer from the bottom only, using the carrying grips under each side corner. Make sure two people are available to lift the printer when moving it.
- Keep the following in mind when storing the printer for an extended period:
 - Unplug the printer.
 - Remove the toner and OPC belt cartridges from inside the printer. After removing the cartridges, return them to their original packaging. If the original packaging is not available, protect the toner cartridges from spilling toner, and protect the OPC belt cartridge from damage and light.
 - See appendix B, “Technical Specifications,” in the *Reference* manual for storage specifications.

Cleaning the Printer

Paper dust may accumulate inside the printer. This could affect the printer's performance. To prevent any potential problems associated with this, you should clean your printer on a regular basis. You need to clean both the inside and outside of the printer.

 **WARNING!** *Turn off the printer, unplug the power cord, and disconnect all interface cables before cleaning.*

ACHTUNG! *Ziehen Sie den Netzstecker aus der Steckdose bevor Sie den Drucker reinigen.*

Guidelines for Cleaning Inside the Printer

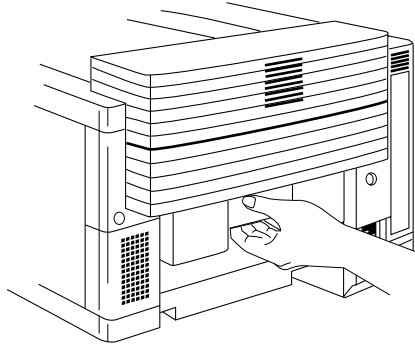
- Either clean the printer before use, or allow a few minutes after unplugging it to allow the fusing unit to cool down.
- Turn off the printer, unplug the power cord, and disconnect all interface cables before cleaning inside the printer.
- Read all caution and warning labels carefully, making sure to follow any instructions contained in them. These labels are located on the inside of the printer's covers and the interior of the printer body.
- Use only dry, lint-free cotton cloths or swabs.
- Make sure any parts removed during cleaning are replaced before you plug in the power cord, reconnect the interface cables, and turn on the printer.

Cleaning the Transfer Unit

These items in the transfer unit require cleaning:

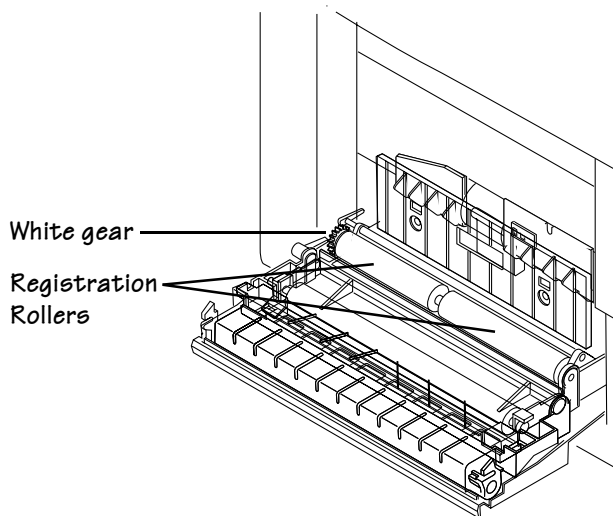
- Registration rollers
 - Transfer roller
 - Paper discharge
- » **Note:** *A dry cotton cloth and dry cotton swab are required for this procedure.*
- 1 Turn off and unplug the printer.**

- 2 Open the printer's rear cover.



- 3 Using a dry cotton cloth, clean any paper dust and toner buildup from the registration rollers.

You can manually rotate the rollers while cleaning them by turning the white gear on the left end of the roller shaft.

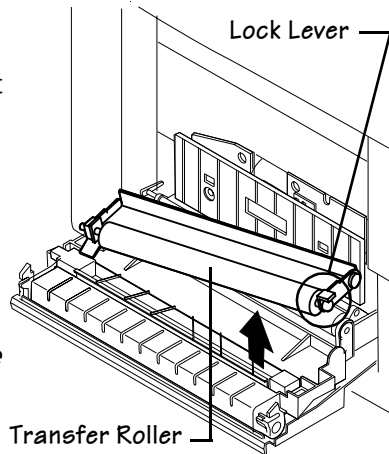


Cleaning the Printer

4 Clean the transfer roller.

- a Remove the transfer roller unit by lifting the lock lever at the right end of the transfer roller unit until the unit is freed, and then lifting the unit out.

» **Note:** *Because you cannot see when the unit is released, it's best to lift the unit and the lock lever at the same time.*



- b Using a dry cotton cloth, clean any paper dust and toner buildup from the transfer roller.

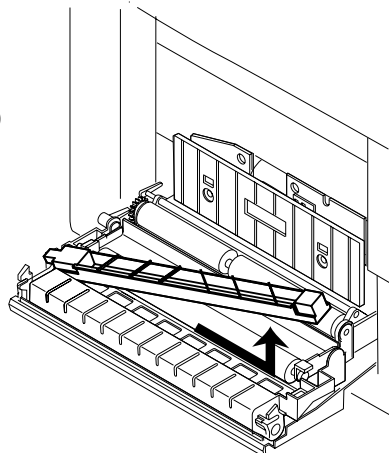
» **Note:** *Manually rotate the roller while cleaning it.*

- c Reinstall the transfer roller in the transfer unit.

5 Clean the paper discharger.

- a Remove the paper discharger by pushing it to the right and then lifting it up and out of the transfer unit. (It comes out after the tabs on the charger have cleared their retainers.)

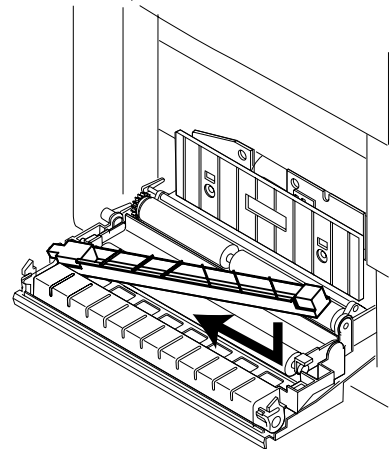
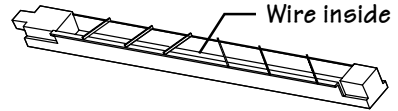
- b Using a dry cotton cloth, clean any paper dust and toner buildup from the outside of the paper discharger.



- c Using a dry cotton swab, clean any paper dust and toner buildup from the interior of the paper discharger.

Cleaning the Printer

- d Using a dry cotton swab, clean the paper discharger wire.
 - e Reinstall the paper discharger in the transfer unit, and then push it down and to the left to lock it in place.
- 6 Clean any paper dust and toner buildup found on the transfer unit itself.**
- 7 Close the printer's rear cover.**



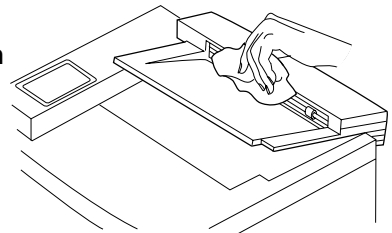
Cleaning the Paper Exit Rollers

» **Note:** A dry cotton cloth is required for this procedure.

- 1 Turn off and unplug the printer.**
- 2 Open the printer's top cover.**
- 3 Using a dry cotton cloth, clean the paper exit rollers.**

While manually rotating each paper exit roller, clean each roller.

- 4 Close the printer's top cover.**



Cleaning the OPC Belt Cartridge

- ▲ **Caution:** *The OPC belt is extremely sensitive to touch. Always handle the cartridge so you don't touch the surface of the belt. Any body oil left on the surface of the belt will prevent toner from adhering to the belt which results in poor image quality. Also, keep the cartridge away from anything that may scratch the surface of the belt. Any scratches will show in the image produced.*

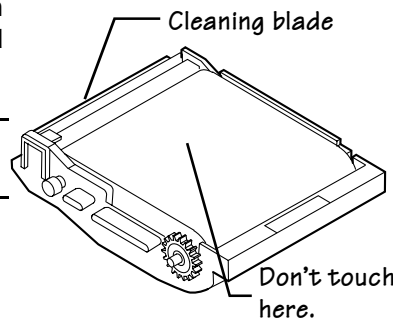
The OPC belt is also extremely sensitive to bright light and direct sunlight. Always leave it in its protective bag until you are ready to install it. Any exposure to light should be limited to two minutes. If you suspect the belt is damaged due to exposure to light, put the belt in a dark place to recover. Depending on the amount of exposure, recovery may take up to two hours. Recovery time is dependent on the amount of exposure sustained. Recovery is not guaranteed.

- » **Note:** *A dry cotton cloth is required for this procedure.*

- 1 Turn off and unplug the printer.
- 2 Open the printer's front and top covers, release the OPC belt cartridge lock levers, and remove the OPC belt cartridge.
- 3 Using a dry cotton cloth, clean any toner buildup from around the cleaning blade.

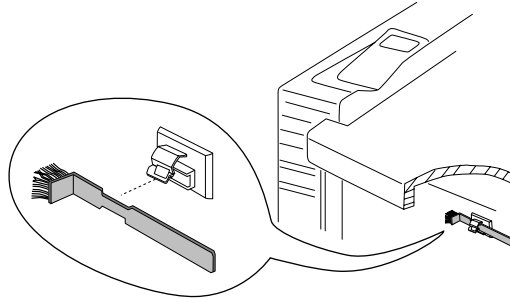
- ▲ **Caution:** *Don't touch the edge of the cleaning blade.*

- 4 Clean any paper dust and toner buildup found on the OPC belt cartridge itself.



- ▲ **Caution:** *Handle the cartridge carefully. The belt is very sensitive to hand oils and scratches, both of which reduce print quality.*

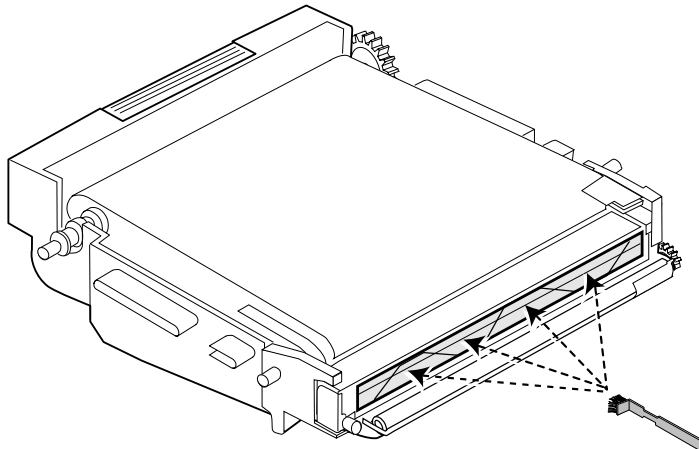
- 5 Remove the corona-wire cleaning brush from inside the front of the printer.



- 6 Turn the OPC belt cartridge so that the handle is facing away from you.
- 7 Use the brush to clean the corona wire inside end of the OPC belt cartridge.



Caution: The corona wire is very delicate. Do not press hard on the wire.



- 8 Reinstall the OPC belt cartridge, and secure its lock levers.
- 9 Return the corona-wire cleaning brush to its holder, and then close the printer's front and top covers.

Cleaning the Laser Lens

It's necessary to clean the laser lens only when you find vertical white or light-color streaking in all primary colors on your printouts.

- » **Note:** *A dry cotton cloth or dry cotton swab is required for this procedure.*

- 1 Open the printer's front cover.**
- 2 Remove the four toner cartridges.**
- 3 Remove the laser lens.**

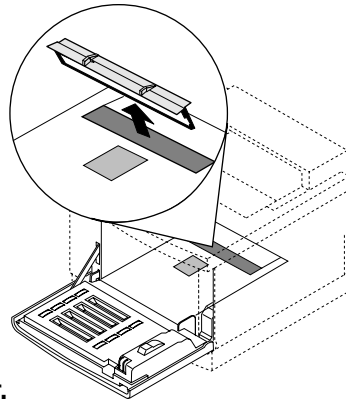
Use the two tabs on top of the lens.

- 4 Using a dry cotton cloth, wipe the lens.**

- 5 Reinstall the laser lens.**

It slides in at a 45° angle.

- 6 Reinstall the four toner cartridges.**
- 7 Close the printer's front cover.**



Cleaning the Exterior of The Printer

⚠ **WARNING!** *Turn off the printer, unplug the power cord, and disconnect all interface cables before cleaning. Do not spill water or detergent into the printer; otherwise the printer will be damaged and an electric shock may occur.*

ACHTUNG! *Ziehen Sie den Netzstecker aus der Steckdose bevor Sie den Drucker reinigen. Verschütten Sie kein Wasser oder andere Flüssigkeiten auf dem Drucker, da das Gerät sonst beschädigt wird oder die Gefahr eines elektrischen Schlages besteht.*

To protect your printer and maintain its appearance, clean the exterior regularly. Use the following guidelines:

- Use only a dry or slightly damp, lint-free, soft cloth moistened only with water or mild detergent.
- Never use cleaning solutions that contain solvents, such as alcohol and benzene. Solvents may damage the printer's finish.
- Always test any cleaning solution on a small area of your printer to check the solution's performance.
- Never use sharp or rough implements, such as wire or plastic cleaning pads.
- Never spray a cleaning solution directly on the printer as the cleaning solution will penetrate to the interior of the printer and cause damage.

Maintenance Schedule

The stated life expectancy of each consumable is based on printing under specific operating conditions, such as media type, number of color planes, page size, and page coverage (usually 5% coverage of letter/A4-size media). The actual life expectancy will vary depending on these and other printing variables, including continuous or intermittent printing, ambient temperature, and humidity.

This item needs replacing...	After...	By...
20,000-page preventive maintenance	20,000 pages**	QMS National Service
120,000-page preventive maintenance	120,000 pages**	QMS National Service
AC paper discharger	120,000 pages**	QMS National Service
Cleaning roller	CHECK CLEANING ROLLER displays in the message window (after 12,000 pages** at 5% coverage of each color)	User See “Replacing the Fuser Oil Bottle and Cleaning Roller” on page 5-14.
Drum cleaner	120,000 planes*	QMS National Service
Fuser oil bottle	FUSER OIL LOW or FUSER OIL EMPTY displays in the message window (fuser oil bottle life is media dependent: coarser paper requires more oil)	User See “Replacing the Fuser Oil Bottle and Cleaning Roller” on page 5-14.
Fuser unit	60,000 pages** maximum (at an equal mix of black and 4-color pages, all with 5% coverage of each color)	QMS National Service

Maintenance Schedule

This item needs replacing...	After...	By...
OPC belt cartridge	REPLACE BELT displays in the message window (maximum life—50,000 planes*, usually occurs with continuous use; minimum life—20,000 planes*, usually occurs with intermittent use although other factors also affect cartridge life)	User See “Replacing the OPC Belt Cartridge” on page 5-17.
Ozone filter	12 months	User See “Replacing the Ozone Filter” on page 5-20.
Transfer roller	120,000 pages**	QMS National Service
Waste toner pack	WASTE TONER FULL displays in the message window (after 12,000 pages** at 5% coverage of each color)	User See “Replacing the Waste Toner Pack” on page 5-21.

* A **plane** is a single pass of the OPC belt (one toner color). For example, a one-color print job makes one pass (one plane), and a two-color print job makes two passes (two planes).

** A single-sided **page** (also called a face) usually consists of four passes of the OPC belt, since most color print jobs use all four toner colors.

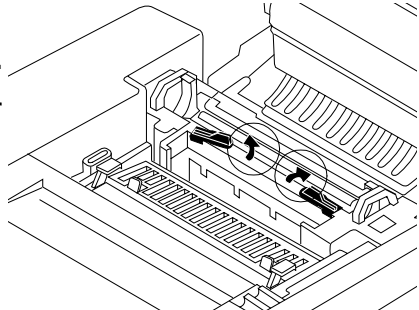
Replacing the Fuser Oil Bottle and Cleaning Roller

-
- ▲ **Caution:** *The fuser unit is an integral part of the imaging process and is also expensive to replace. Fuser life will be shortened (or the fuser permanently damaged) if the oil bottle and cleaning roller are not changed when needed and installed properly. This type of damage is not covered under warranty or service contract.*
-

- ⚠ **WARNING!** *The fuser unit can become extremely hot and cause severe burns. Make sure the unit is cool before handling it.*

ACHTUNG! *Die Fixiereinheit kann sehr heiß werden, so daß Verbrennungsgefahr besteht. Bitte lassen Sie die Fixiereinheit einige Zeit abkühlen, bevor Sie diese berühren.*

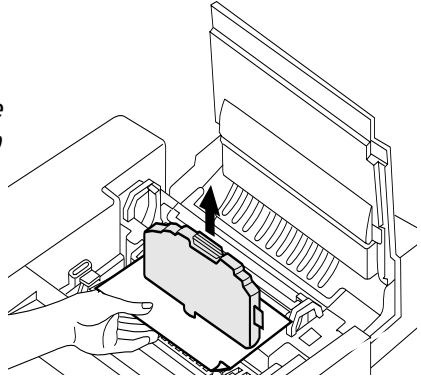
- 1 Turn off the printer.
- 2 Open the printer's top cover.
- 3 Open the two cleaning roller lock levers.



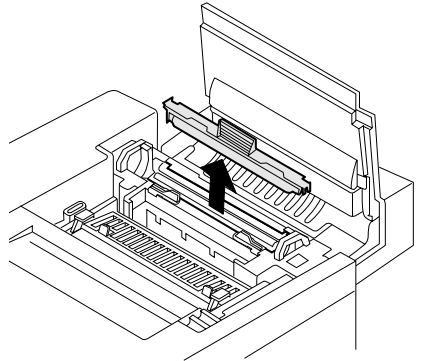
Replacing the Fuser Oil Bottle and Cleaning Roller

- 4 Remove the old oil bottle.

▲ **Caution:** *Hold a sheet of paper under the oil bottle while removing it, so oil doesn't drip into the printer.*

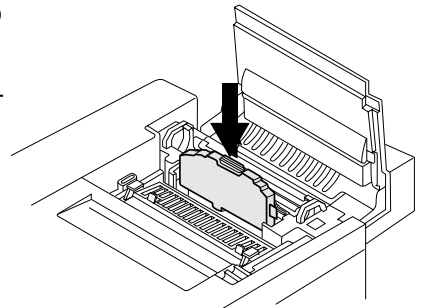


- 5 Remove the old cleaning roller.



- 6 Lower the new oil bottle into its slot.

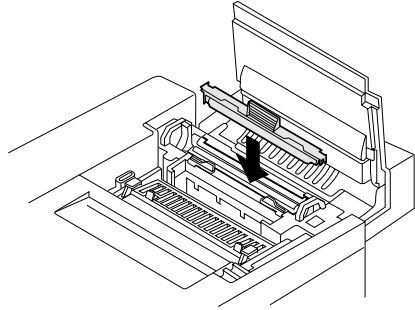
The tab on the side of the bottle must be on the right.



Replacing the Fuser Oil Bottle and Cleaning Roller

7 Install the cleaning roller in its slot.

The tab on the top of the cleaning roller must be on the left.



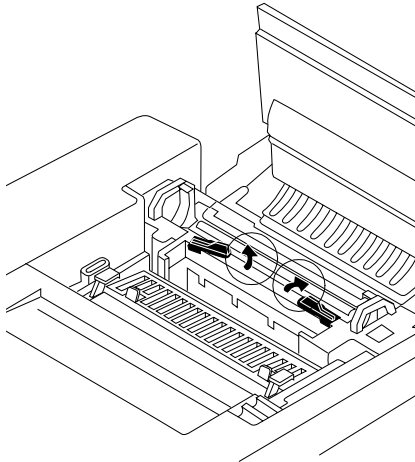
8 Close the two lock levers.

9 Close the printer's top cover.

10 Turn on the printer.

11 Reset the consumables usage monitoring system.

- a In the Operator Control/ Consumables/Item Replaced/Fuser Oil menu choose Yes.
- b In the Operator Control/ Consumables/Item Replaced/Cleaning Roller menu choose Yes.



» **Note:** When you replace the fuser oil bottle and cleaning roller after a FUSER OIL EMPTY or CHECK CLEANING ROLLER message displays in the message window, the engine automatically recovers. However, you must manually reset the consumables usage monitoring system to ensure accurate consumables monitoring.

To access consumables usage information, use the Operator Control/Consumables/Print Statistics menu or the CrownView printer web page.

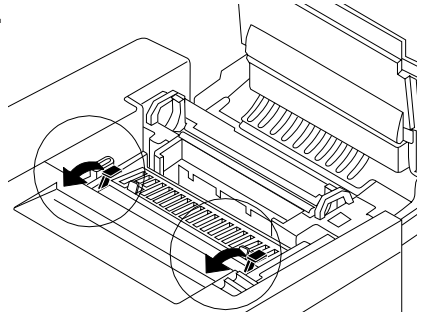
Replacing the OPC Belt Cartridge

-
- ▲ **Caution:** *The OPC belt is extremely sensitive to bright light and direct sunlight. Always leave it in its protective bag until you're ready to install it. Also, handle the cartridge carefully. The belt is also extremely sensitive to hand oils and scratches, both of which reduce print quality.*
-

- 1 Turn off the printer.
- 2 Open the printer's front cover.

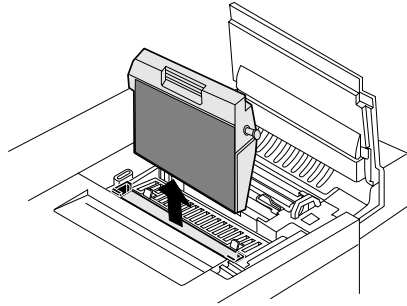
-
- ▲ **Caution:** *This is necessary as it pulls the toner cartridges forward slightly to make room for the OPC belt cartridge. You could damage the OPC belt if you don't do this.*
-

- 3 Open the printer's top cover.
- 4 Rotate up the two lock levers (one on each side of the OPC belt cartridge) to release the cartridge.

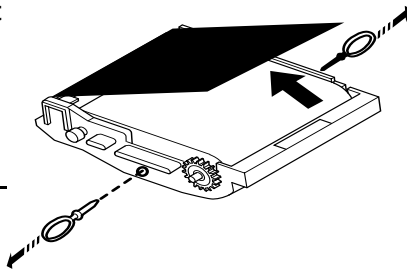


Replacing the OPC Belt Cartridge

- 5 Pull the cartridge straight up and out of the printer, and then discard it.



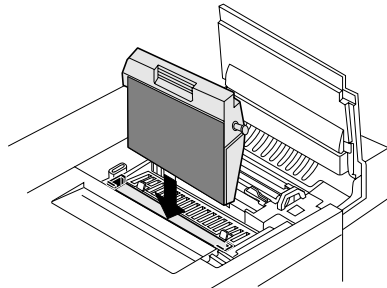
- 6 Remove the protective sheet from the cartridge, and then pull out the two tension-release pins (one on each side of the cartridge).



▲ **Caution:** *Don't touch the green material on the cartridge. It scratches easily.*

- 7 Holding the cartridge above the printer, align the guide pins on the cartridge with the guide slots in the lock levers.

The white gear on the cartridge goes to the right.

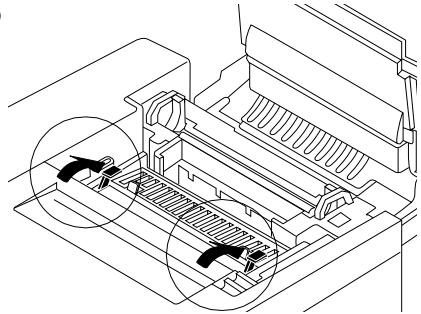


- 8 Gently guide the cartridge into the printer.

▲ **Caution:** *The cartridge should slide easily into the printer. Don't force it.*

Replacing the OPC Belt Cartridge

- 9 Rotate the two lock levers to secure the OPC belt cartridge in the printer.
- 10 Close the printer's front and top covers.
- 11 Turn on the printer.



- 12 In the Operator Control/Consumables/Item Replaced/OPC Cartridge menu choose Yes to reset the consumables monitoring system.

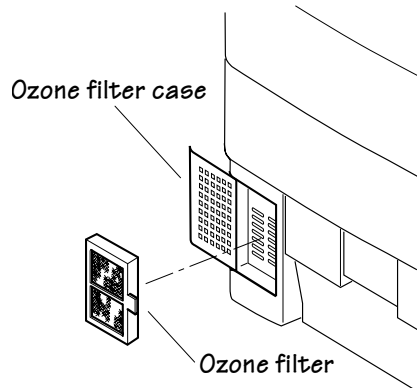
» **Note:** *When you replace the OPC belt cartridge after a REPLACE BELT message displays in the message window, the engine automatically recovers. However, you must manually reset the consumables usage monitoring system to ensure accurate consumables monitoring.*

To access consumables usage information, use the Operator Control/Consumables/Print Statistics menu or the CrownView printer web page.

Replacing the Ozone Filter

The ozone filter reduces exhausted ozone gas.

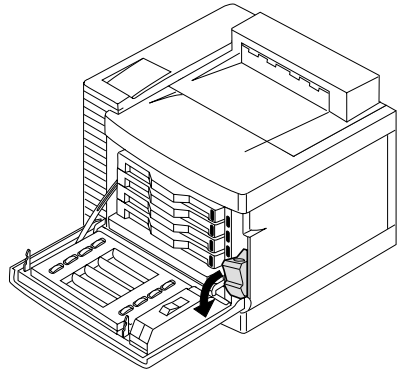
- 1 Remove the ozone filter case on the left rear of the printer.
- 2 Remove the ozone filter from the case.
- 3 Install a new ozone filter in the case.
- 4 Reinstall the ozone filter case.



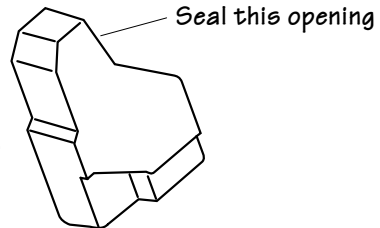
Replacing the Waste Toner Pack

The waste toner pack collects the waste toner from the printing process so you can conveniently throw it away.

- 1** Open the printer's front cover.
- 2** Remove the waste toner pack.



- 3** Use the label on the side of the old waste toner pack to seal the opening, and then dispose of the pack in accordance with safety laws and regulations in your area.



- 4** Insert the new waste toner pack.
- 5** Close the printer's front cover.

Replacing the Waste Toner Pack

- 6 In the Operator Control/Consumables/Item Replaced/Waste Toner Pack menu choose Yes to reset the consumables monitoring system.
- » **Note:** *When you replace the waste toner pack after a CHECK WASTE TONER message displays in the message window, the engine automatically recovers. However, you must manually reset the consumables usage monitoring system to ensure accurate consumables monitoring.*

To access consumables usage information, use the Operator Control/Consumables/Print Statistics menu or the CrownView printer web page.



6

CrownView Printer Web Page

In This Chapter . . .

- “Introduction” on page 6-2
- “Setting up the Printer Web Page” on page 6-3
- “Printer Home Page” on page 6-8
- “Web Page Help System” on page 6-29

Introduction

QMS CrownView is a printer-based application using the World Wide Web portion of the Internet as a framework for the QMS *magicolor 2* Print System. This feature allows you to monitor printer consumables as well as access information that is normally available only by printing a status page.

Inside your new QMS printer resides an HTTP (Hyper-Text Transfer Protocol) based web page that can be accessed from the most common web-browser software, Netscape Navigator and Microsoft Explorer. This web page gives you access to the most frequently accessed printer configurations and gives you instant access to printer status. Anyone on your company intranet can access the QMS printer through their web-browser software.

- » **Note:** *The sample windows and dialog boxes shown in this chapter are as they appear in Netscape Navigator and Internet Explorer, and coincide with the step-by-step instructions provided.*

This chapter provides you with details on

- Setting up and using the web page
- The different types of pages in the printer
- Accessing the QMS web site and performance support

Setting up the Printer Web Page

Setting up the printer web page to run on your intranet involves two basic steps:

- Assigning a name to your printer
- Setting up the “no proxy” preferences in your browser software

Assigning a Printer Name

The printer web page can be accessed only through the assigned name of the printer or the IP address. It is more convenient for you to use a name than the address. The default name for the printer is usually the model number of the printer, for example, QMS *magicolor 2* Print System. Change the default name to one that is more easily remembered and typed.

You can change the printer name through the Administration/Communications/Networkx/CrownNet/NetWare/Printer Name menu or the Administration/Communications/Networkx/CrownNet/LanManager/Printer Name menu. (See the *QMS CrownNet Setup Guide* for more information.)

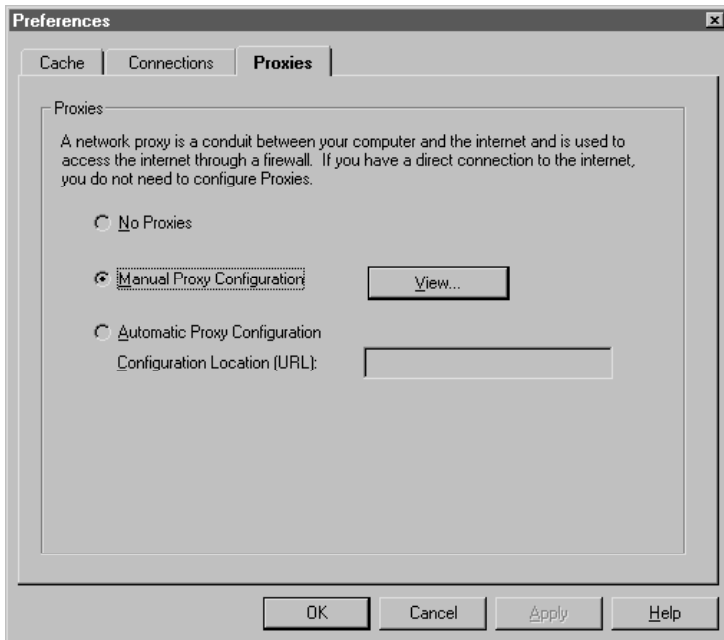
Setting Up Your Browser Software

Since your printer will reside on your intranet and will not be accessible beyond the firewall of your network, you must set up the proper “preferences” in your browser software. Your printer name or IP address must be added to the “no proxy” list in the preferences dialog box of the browser.

- » **Note:** *You need to do this procedure only once.*

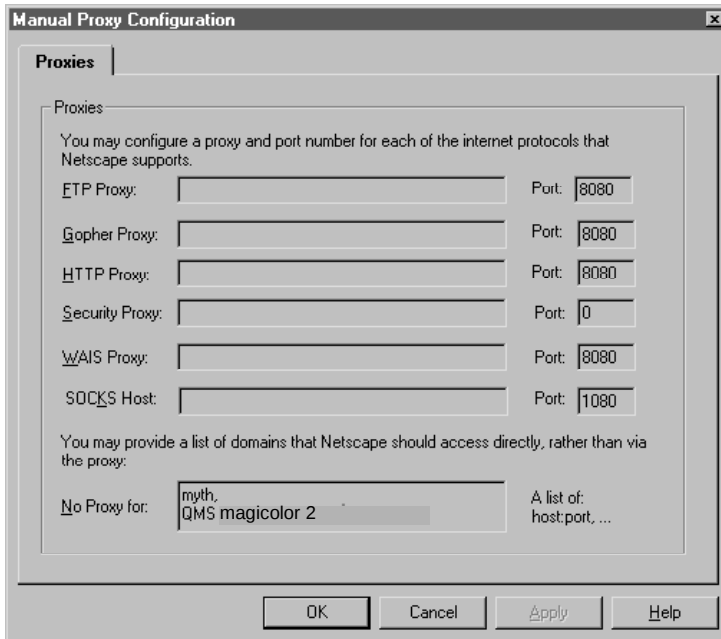
For Netscape

- 1 Start your web-browser.**
- 2 Access the Options menu and choose Network Preferences.**
- 3 Select the Proxies tab in the dialog box.**



- 4 Select the Manual Proxy Configuration radio button and press the View... button.**

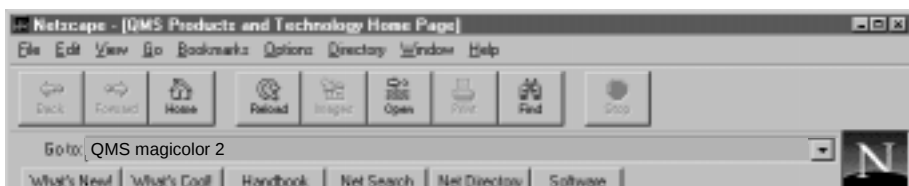
- 5 In the No Proxy For: text box, type a comma after the last entry and then type the printer name or the IP address of your QMS *magicolor 2*.



- » **Note:** The printer name is entered in the network protocol menu that you are using. The default name is the model number of the printer. See "Assigning a Printer Name" on 6-3 for more information on naming your printer.

- 6 Choose OK.

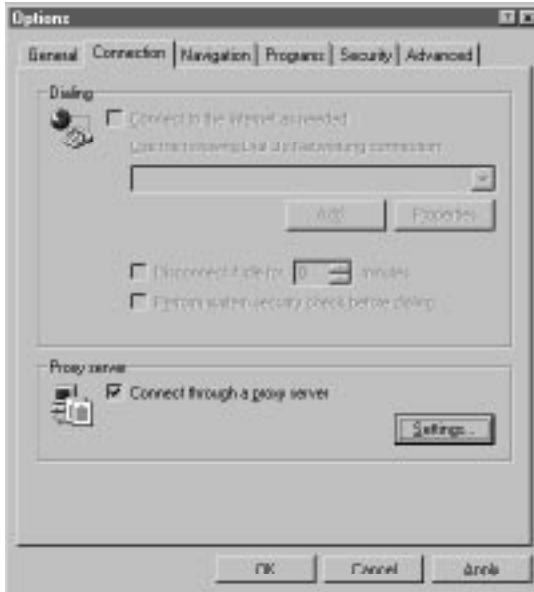
- 7 Enter the printer name or IP address in the Go to: URL address box to access the printer home page.



Setting up the Printer Web Page

For Internet Explorer

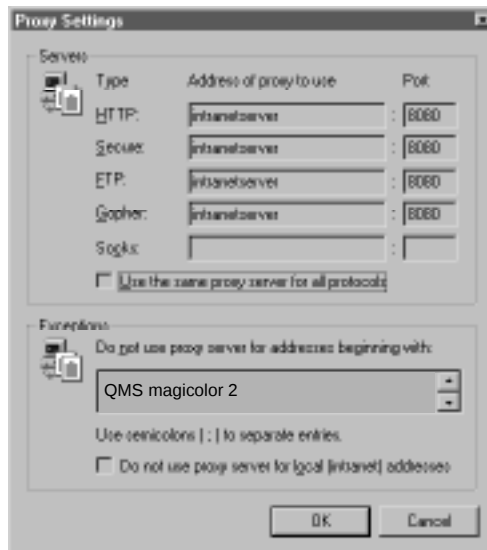
- 1 Start your web browser.
- 2 Access the View menu and choose Options.
- 3 Select the Connection tab on the dialog box.



- 4 Click the Settings button to display the Proxy Settings dialog box.

Setting up the Printer Web Page

- 5 In the Exceptions text box, type a comma after the last entry and then type the printer name or the IP address.
- » **Note:** The printer name is entered in the network protocol menu that you're using. The default name is the model number of the printer. See the QMS CrownNet System Administrator's Manual for information on changing the printer name.

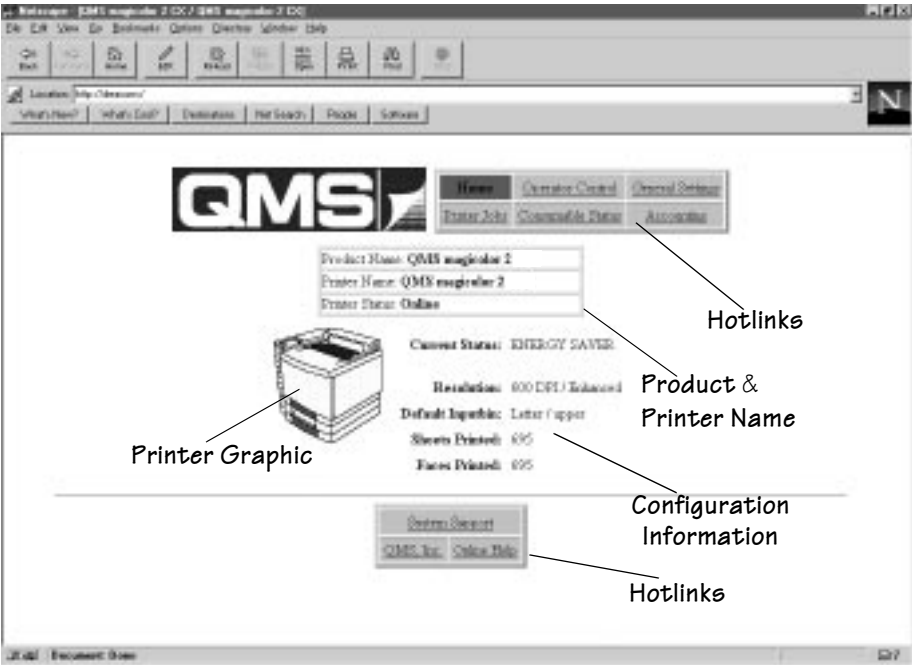


- 6 Click OK.
- 7 Now you should be able to enter the printer name in the URL address box to access the printer home page.



Printer Home Page

The Home Page is the starting point for all access to the printer web pages. On this page you will find hotlinks to all of the supporting web pages for your printer.



The printer home page provides the following information.

Product Name	Identifies the particular printer that you are browsing. This printer is pictured in the graphic with all installed paper handling options.
	Configuration Menu: No equivalent

Printer Name	Shows the name you have assigned to your printer. The default printer name is the same as the product name.
	Configuration Menu: Administration/Communications/Networkx/CrownNet/NetWare/Printer Name menu or the Administration/Communications/Networkx/CrownNet/LanManager/Printer Name menu
Current Status	Echoes the status message in the printer control panel message window.
	Configuration Menu: No equivalent
Resolution	Identifies the resolution and halftone.
	Configuration Menu: Administration/Engine/Def Resolution
Default Inputbin	Identifies the input cassette or tray, the media size, and the percent filled with media.
	Configuration Menu: Operator Control/Inputbin
Sheets Printed	Lists the number of sheets of media printed to date during the current consumables tracking period (Administration/Consumables/Start Period menu).
	» Note: <i>This number differs from the number of sheets printed statistics on the printer's start-up and status pages, which refer to the total number of sheets of media printed during the life of the printer.</i>
Faces Printed	Configuration Menu: No equivalent
	Lists the number of page faces printed to date.
	» Note: <i>This number differs from the number of faces printed statistics on the printer's start-up and status pages, which refer to the total number of page faces printed during the life of the printer.</i>
	Configuration Menu: No equivalent

Hotlinks	Take you to other pages of status, configurations, or help information. Each of these hotlinks is fully explained in this chapter.
	Configuration Menu: No equivalent

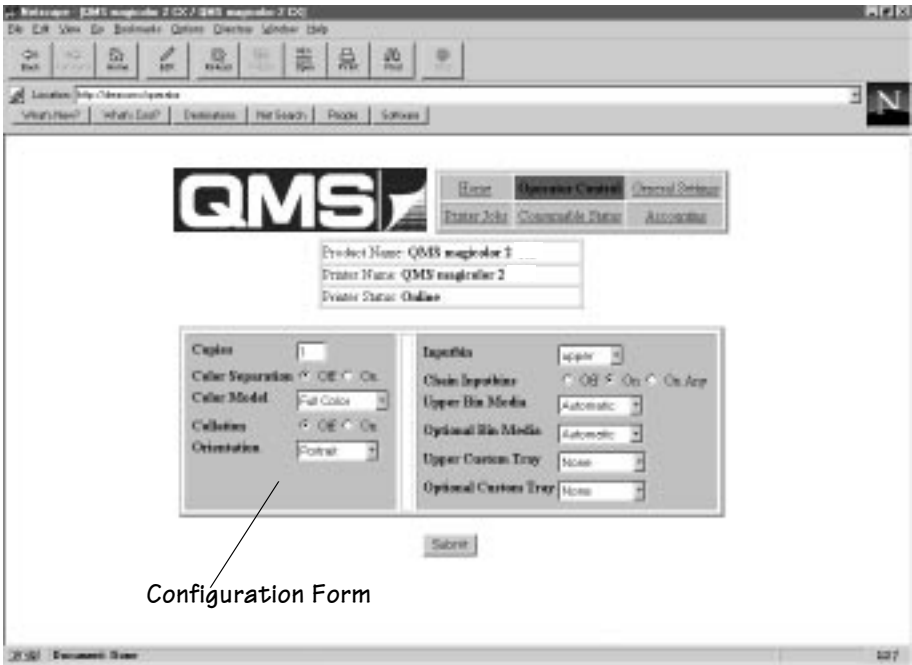
Home

The Home hotlink simply returns you to the printer home page when it is selected.

Operator Control

The Operator Control hotlink on the home page jumps to the Operator Control page. This page contains a form which allows you to configure settings in your printer.

After you make your choices, choose the Submit button to make them take effect.



The Operator Control page contains the following options. For complete information on any options see chapter 4, “Printer Configuration,” of the *Reference* manual.

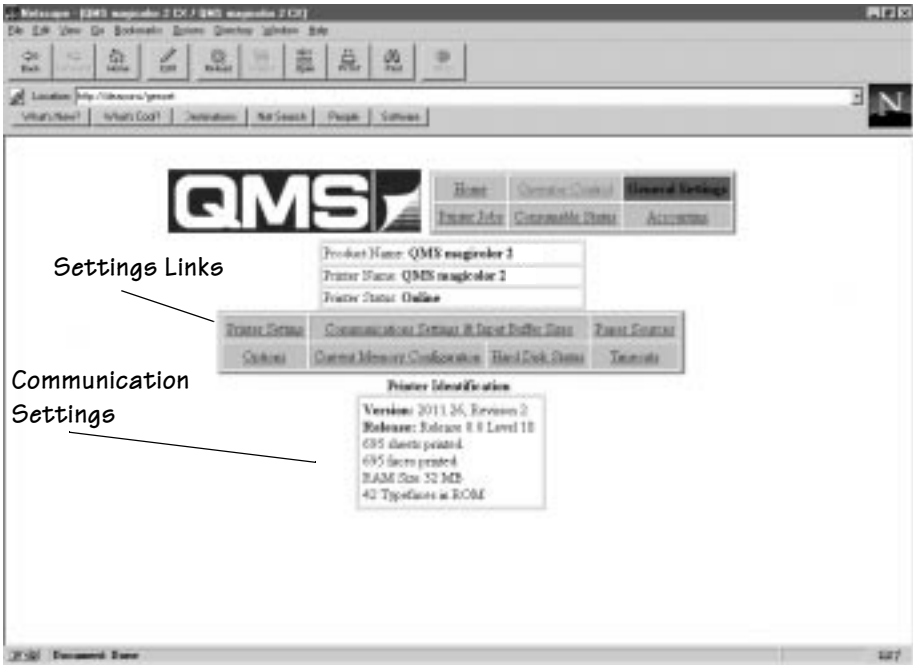
Copies	Allows you to enter the number of copies to print.
	Configuration Menu: Operator Control/Copies

Color Separation	Allows you to print color separations.
	Configuration Menu: Operator Control/Color Separation
Color Model	Allows you to select between full-color or monochrome mode.
	Configuration Menu: Operator Control/Color Model
Collation	Allows you to turn collation Off or On.
	Configuration Menu: Operator Control/Collation
Orientation	Allows you to select Portrait or Landscape orientation.
	Configuration Menu: Operator Control/Orientation
Inputbin	Allows you to choose Upper or Optional as the input source.
	Configuration Menu: Operator Control/Inputbin
Chain Inputbins	Allows you to set input bin chaining to Off, On, or On Any.
	Configuration Menu: Operator Control/Chain Inputbins
Upper Bin Media	Allows you to specify the type of media in the upper (standard) cassette so the printer can optimize output for that media type.
	Configuration Menu: Operator Control/Media/For Upper Bin
Optional Bin Media	Allows you to specify the type of media in the optional lower input feeder so the printer can optimize output for that media type.
	Configuration Menu: Operator Control/Media/For Optional Bin

Upper Custom Tray	Specifies the media size in the upper (standard) cassette if it's something other than A4, Legal, or Letter (the typical sizes the cassettes expect)
	Configuration Menu: Operator Control/Custom Bin/Upper
Optional Custom Tray	Specifies the media size in the optional lower input feeder if it's something other than A4, Legal, or Letter (the typical sizes the cassettes expect)
	Configuration Menu: Operator Control/Custom Bin/Optional

General Settings

The General Settings hotlink takes you to the General Settings page.



This page provides hotlinks to several groups of printer configuration settings. Each is described in more detail in the following pages:

- “Printer Setting” on page 6-14
- “Communication Settings & Input Buffer Sizes” on page 6-16
- “Paper Sources” on page 6-16
- “Options” on page 6-17
- “Current Memory Configuration” on page 6-17
- “Hard Disk Status” on page 6-19
- “Timeouts” on page 6-19

You can view this information to see the status of the printer, but you can change it only by accessing the printer’s configuration menu through the printer control panel, a remote or local console, or CrownAdmin 3.

Printer Setting

This table provides you with data relative to the settings of the printer.

Compatibility Level	Identifies the PostScript emulation level.
	Configuration Menu: No equivalent
Do Start-up Page	Identifies whether the printer start-up page is turned on or off.
	Configuration Menu: Administration/Startup Options/Do Start Page
Do Error Handler	Identifies whether the PostScript Error Handler is on or off. Error Handler is a diagnostic tool that identifies PostScript errors encountered during a print job.
	Configuration Menu: Administration/Startup Options/Do Error Handler

Do Sys/Start	Identifies whether the printer controller checks the hard disk for a PostScript file named SYS\START and then executes the file. This file does not print.
	Configuration Menu: Administration/Startup Options/Do Sys Start
Is Password 0?	Identifies whether the Administration menu password is set. 0=Off
	Configuration Menu: Installation/Use Admin Pwd
Default Chaining	Identifies whether tray chaining is enabled or disabled. Tray chaining allows the printer to draw media from another input source with either the same or any size and type of media (dependent on the choice selected) automatically when the first input source empties.
	Configuration Menu: Operator Control/Chain Inputbins
Default Paper Tray	Tells you which input source is the default.
	Configuration Menu: Operator Control/Inputbin
Number of Paper Trays	Tells you the number of input sources available on your printer.
	Configuration Menu: No equivalent.
Left Margin	Identifies the amount (in .01" increments) the image is adjusted horizontally on the page.
	Configuration Menu: Administration/Engine/Image Alignment/Horiz Offset
Top Margin	Identifies the amount (in .01" increments) the image is adjusted vertically on the page.
	Configuration Menu: Administration/Engine/Image Alignment/Vertical Offset
Resolution	Identifies the printer resolution.
	Configuration Menu: Administration/Engine/Def. Resolution

Communication Settings & Input Buffer Sizes

This hotlink displays a screen that shows the communications settings of the printer.

Serial IF	Identifies the settings for the serial interface.
	Configuration Menu: Administration/Communications/Serial
Parallel IF	Identifies the settings for the parallel interface.
	Configuration Menu: Administration/Communications/Parallel
IF 1	Identifies the settings for the optional Network1 interface.
	Configuration Menu: Administration/Communications/Network1
IF 2	Identifies the settings for the Network2 (CrownNet Ethernet) interface.
	Configuration Menu: Administration/Communications/Network2
Shared Spooling Space	Identifies the total amount of spooling space shared by the interfaces
	Configuration Menu: No equivalent.

Paper Sources

This hotlink provides media source information.

Upper	Identifies the size and type of media currently installed in the upper tray.
	Configuration Menus: Operator Control/Custom Bin/Upper, Operator Control/Media/For Upper Bin
Optional	Identifies the size and type of media currently installed in the optional lower input feeder.
	Configuration Menu: Operator Control/Custom Bin/Optional, Operator Control/Media/For Optional Bin

Options

Disk(s)	Identifies how many hard disks are attached to the printer and what their addresses are.
	Configuration Menu: No equivalent
Emulations	Identifies the installed emulations.
	Configuration Menu: No equivalent

Current Memory Configuration

Memory configuration affects the number of jobs that can be accepted by the printer, the number of options available simultaneously, the number of downloadable fonts and emulations that can be stored, and overall printer performance.

Host Input Spool	Shows the size (in KB) of the Host Input field, also known as K Mem for Spool. This memory client stores incoming data from all the interfaces until the emulation can process the print job.
	Configuration Menu: Administration/Memory/Manual Config/K Mem for Spool
Display List	Shows the size (in KB) of the Display List, also known as K Mem Display. This client stores compressed representations, or blocks, of the pages to be printed.
	Configuration Menu: Administration/Memory/Manual/Config/K/Mem Display
PostScript Font Cache	Shows the size (in KB) of the Font Cache, also known as K Mem for PS Fonts. This memory client stores bitmapped representations of previously scaled PostScript fonts.
	Configuration Menu: Administration/Memory/Manual Config/K Mem for PS Fonts

PostScript Heap	Shows the size (in KB) of the Heap, also known as K Mem for PSHeap, PostScript VM, and Virtual Memory. This client holds downloaded fonts, PostScript operators, and forms.
	Configuration Menu: Administration/Memory/Manual Config/K Menu for PSHeap
Framebuffer	Shows the size (in KB) of the Frame Buffer. This client holds rasterized or bitmapped images of page faces which are ready to be sent to the print engine.
	Configuration Menu: Administration/Memory/Manual Config/K Mem Framebuff
Emulation	Shows the size (in KB) of the Emulation client, also known as K Mem Emulation. This client is used to store any optional emulations, such as LN03 Plus.
	Configuration Menu: Administration/Memory/Manual Config/K Mem Emulation
Emulation Temporary	Shows the size (in KB) of the Emulation Temporary client. This client is used by non-PostScript emulations for storing downloaded (soft) fonts, forms, or macros.
	Configuration Menu: Administration/Memory/Manual Config/K Mem Emulation Temp
Disk Cache	Shows the size (in KB) of the Disk Cache. This memory client stores frequently used data in system memory instead of continually storing and retrieving it from a hard disk.
	Configuration Menu: Administration/Memory/Manual Config/K Mem /Disk Cache

System Use	Shows the size (in KB) of the System Use. Also known as System Memory, this non-configurable client is the amount of RAM used to run the printer's operating system. It's never increased or decreased. The system memory subtracted from the total amount of RAM identifies the amount of RAM available for all the other memory clients.
	Configuration Menu: No equivalent
Printer Memory	Shows the size (in KB) of the total amount of RAM that your printer has.
	Configuration Menu: Administration/Memory/Manual Config/MB Printer Mem

Hard Disk Status

This hotlink provides the status of the hard disk.

Disk(s)	Provides the name, size, and free space on all attached hard disks.
	Configuration Menu: No equivalent
Total	Identifies the total space and free space on all attached hard disks.
	Configuration Menu: No equivalent

Timeouts

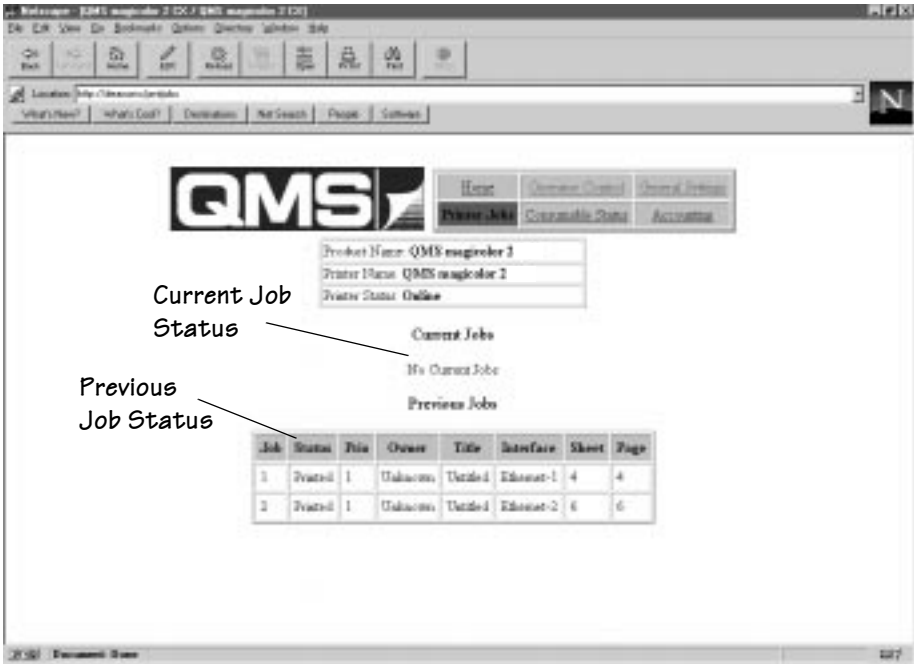
This hotlink provides the status on established timeouts.

Wait	Shows the maximum number of seconds the PostScript emulation waits for incoming data.
	Configuration Menu: Administration/Communications/Timeouts/PS Wait Timeout
Job	This shows the maximum number of seconds the printer processes a print job before it ends the job.
	Configuration Menu: Administration/Communications/Timeouts/Job Timeout

Emulation	Shows the maximum number of seconds emulations other than PostScript wait for incoming data.
	Configuration Menu: Administration/Communications/Timeouts/Emulation Timeout
ESP	Shows the maximum number of seconds the printer uses to match an emulation before printing the job in the default emulation.
	Configuration Menu: Administration/Communications/Timeouts/ESP Timeout

Printer Jobs

The Printer Jobs hotlink on the home page jumps to the Printer Jobs page. This page contains information about the current jobs the printer is processing and information on the previous five jobs printed.



Job	Indicates the job number of the current print jobs and up to five previous print jobs.
	Configuration Menu: No equivalent.
Status	Indicates the status of each job. (Interpreting, Spooling, Spooled, Printing, Printed)
	Configuration Menu: No equivalent
Prio[rity]	Shows the priority of each job.
	Configuration Menu: No equivalent
Owner	Shows the name of the owner of each current job.
	Configuration Menu: No equivalent
Title	Shows the title of each job.
	Configuration Menu: No equivalent
Interface	Identifies the interface over which the job was sent to the printer.
	Configuration Menu: No equivalent
Sheet	Shows the number of physical sheets of media printed for each job.
	Configuration Menu: No equivalent.
Page	Indicates the number of pages printed for each job.
	Configuration Menu: No equivalent

Consumable Status

The Consumable Status hotlink on the home page jumps to the Consumable Status page. This page contains information about the level of usage of all of the printers' consumables.

- » **Note:** *The scales are an estimate, reported as a percentage, and do not indicate the exact amount of consumables used. In addition, the life expectancy of each consumable is based on printing under specific operating conditions, such as media type, number of color planes, page size, and page coverage (usually 5% coverage of letter/ A4-size media). The actual life expectancy will vary depending on these and other printing variables, including continuous or intermittent printing, ambient temperature, and humidity.*



Consumable Name	Identifies the consumable (for example, Black Toner or 20K PM Service).
	Configuration Menus: Operator Control/Consumables and Administration/Consumables
Consumable Max Number	Shows the maximum capacity of the consumable (for example, 10000 planes or 120000 sheets).
	Configuration Menus: Operator Control/Consumables and Administration/Consumables
Consumable Usage Gauges	Shows the remaining amount of the consumable (in percentages, not planes, faces, or sheets).
	Configuration Menus: Operator Control/Consumables and Administration/Consumables

Accounting

The Accounting hotlink on the home page jumps to the Accounting page, which contains information about accounting configuration settings.



Mode	Shows whether accounting is enabled or disabled.
	Configuration Menu: Operator Control/ Accounting/Mode
Disk Space	Shows how much disk space is allocated to job accounting files.
	Configuration Menu: Operator Control/ Accounting/Disk Space

File Segment	Shows whether accounting information is stored in the printer in a single file or in multiple files.
	Configuration Menu: Operator Control/ Accounting/File Segment

System Support Page

The System Support hotlink on the home page jumps to the System Support page. This page can be used to set up internal support for the printer as well as to link to the QMS web site.



Page refresh rate	The rate at which information in the form is reset to the current printer settings.
If you need assistance, contact	A text box for entering the name of a local expert
	Configuration Menu: No equivalent
Contact Number	A text box for entering a local or QMS contact number
	Configuration Menu: No equivalent
Printer Help URL	A text box for entering a local or QMS printer help URL (web address)
	Configuration Menu: No equivalent
QMS Corporate URL	The QMS corporate URL (web address)
	Configuration Menu: No equivalent
To order supplies and accessories	A text box for entering a local or QMS contact number
	Configuration Menu: No equivalent

Once you've made the necessary changes, choose Submit.

- » **Note:** *If the page refresh rate is set to too small a time interval, you may lose your changes before you choose the Submit button.*

QMS, Inc. Page

The QMS, Inc. hotlink on the home page jumps to the QMS web site configured on the System Support page (QMS Corporate URL). From the QMS web site you can access information about other QMS printers, contact information, a FAQ database, printer manuals, and online performance support.



Online Help Page

The Online Help hotlink on the home page jumps to any help information that has been configured on the System Support page (Printer Help URL). You can configure this to jump to your own help web site set up on your local intranet or to the QMS online performance support information for your QMS print system.

Web Page Help System

Your printer web page is supported with help and support tools located at the QMS web site. If you typed in the QMS online performance support address on the System Support page (Printer Help URL), when you click on the Online Help button on the printer home page you'll be linked to an HTML page located at the QMS web site. From here you can link to a topic which applies to your specific problem. You can also access a list of current FAQs (Frequently Asked Questions) about your print system.



7

Media Jams

In This Chapter . . .

- “Introduction” on page 7-2
 - “Automatic Jam Recovery” on page 7-2
 - “Preventing Media Jams” on page 7-2
 - “Understanding the Media Path” on page 7-3
 - “Understanding Media Jam Status Messages” on page 7-4
 - “Removing Media Jams” on page 7-5
-

Introduction

This chapter explains automatic jam recovery, discusses how to prevent media jams, and then provides detailed information on how to find and remove media jams.

Automatic Jam Recovery

The QMS *magicolor* 2 Print System provides automatic jam recovery (when enabled through the Administration/Engine/Page Recovery menu). After you remove any jammed media, printing automatically resumes from the page the printer stopped at when the jam occurred.

- » **Note:** *For automatic jam recovery to work, it is necessary to leave the printer turned on when you remove the jammed media. After the jam is cleared, open and close the top door before printing. Printing will not resume until you do this.*

Preventing Media Jams

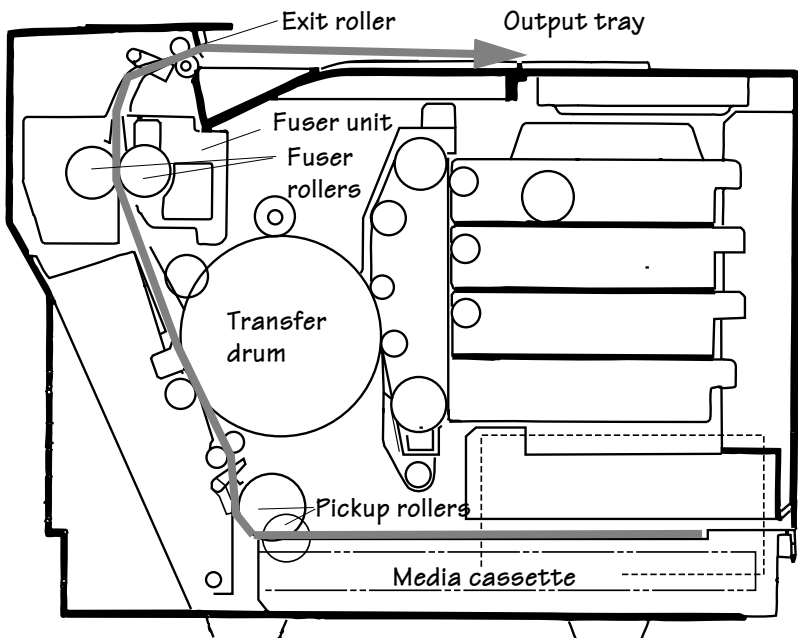
There are several things you can do to reduce the occurrence of media jams.

- Use paper, envelopes, labels, and transparencies that match the printer specifications.
- Make sure the media is not folded, wrinkled, or excessively curled.
- Do not overfill the media cassette. The cassette has a fill-limit mark on the inside left side.
- If you have problems with double feeding, remove the media from the cassette and fan the sheets. They may be sticking together.
- » **Note:** *Do not fan transparencies since this causes static.*
- Store media in a dry location away from moisture and humidity.

- Make sure you've loaded the media printing-side up. Many manufacturers place an arrow on the end of the wrapper to indicate the printing side. If you can't determine which side of the media to print on, remove the media from the cassette, rotate the stack a half-turn, turn the stack over, and then place it back in the cassette.

Understanding the Media Path

Understanding the printer's media path will help you locate media jams. The media cassette is located at the bottom front of the printer. The media is picked from the cassette, passed under the transfer drum, passed through the fuser, and delivered via the paper exit unit to the media exit tray, which is the top of the printer. Access to the media path, in case of a media jam is through the printer's rear cover.



Understanding Media Jam Status Messages

When a jam occurs, the message window on the control panel displays one of four messages: MISFEED JAM, INNER JAM, OUTER JAM, or DRUM JAM. Frequent jams in any area indicate that area should be checked, repaired, or cleaned. Repeated jams may also happen if you're using the wrong weight print media.

- **Misfeed jams** occur in the standard cassette or optional lower input feeder. A misfeed jam may be as simple as a sheet of media not being picked, or it may be that the media was picked but not fed properly. Access to this area is through the cassette slot.
- **Inner jams** occur in the transfer drum/transfer unit area. This type of jam means that the media did not make it to the paper exit area. Access to this area is through the printer's rear cover.
- **Outer jams** occur in the fuser/media exit area. Jams of this type usually means that media is stuck in the fuser/exit roller area. Access to this area is through the printer's top cover.
- **Drum jams** occur if the media winds around the transfer drum. Access to this area is through the printer's rear cover.

Removing Media Jams

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

If, after clearing the media jam, the jam message in the control panel window persists, open and close the printer's top cover. This should clear the jam message.

If the automatic jam recovery is enabled (Administration/Engine/Page Recovery menu), once the jammed media is removed and the printer is operational, the printer should resume printing the job from the page where the jam occurred.

Misfeed Jams

- 1 Remove the media cassette(s).
- 2 Pull out the jammed media.
- 3 Ensure that the media is lying flat in the cassette(s) and that it doesn't exceed the media limit mark.
- 4 Slide the cassette(s) back into the printer.

Removing Media Jams

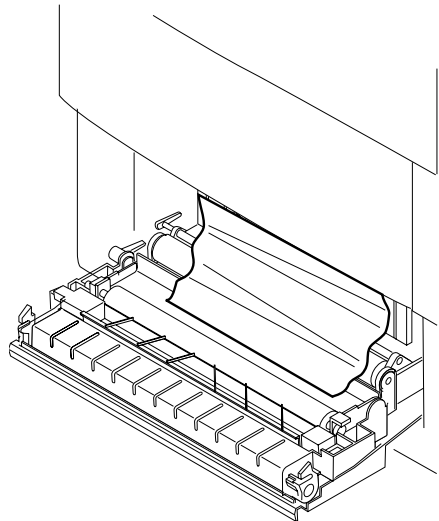
Inner Jams, Outer and Drum Jams

 **WARNING!** *The fuser unit is hot! Do not remove a jam in this area until the fuser unit cools.*

ACHTUNG! *Die Fixiereinheit wird sehr heiß! Bitte achten Sie darauf, daß sie diese einige Zeit abkühlen lassen, bevor Sie einen Papierstau beseitigen.*

▲ Caution: *Media that hasn't fully passed through the fuser contains unfused toner that can dirty your hands, clothes, or any thing else it gets on. If you accidentally get toner on your hands, wash them in cool water. If you accidentally get toner on your clothes, lightly dust them off as much as possible. If some toner remains on your clothes, use cool, not hot water, to rinse the toner off, provided your clothing is washable.*

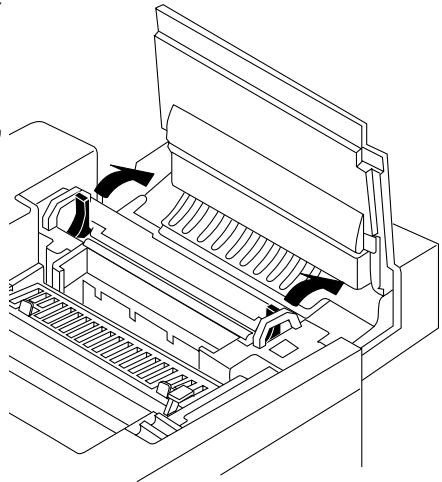
- 1 **Open the back cover of the printer.**
- 2 **Remove the jammed media by pulling it toward you.**



Removing Media Jams

- 3 If the jammed media came out easily, skip to step 7.

If it didn't come out easily, open the top cover, and then open the fuser roller pressure release levers (one at each end of the fuser).

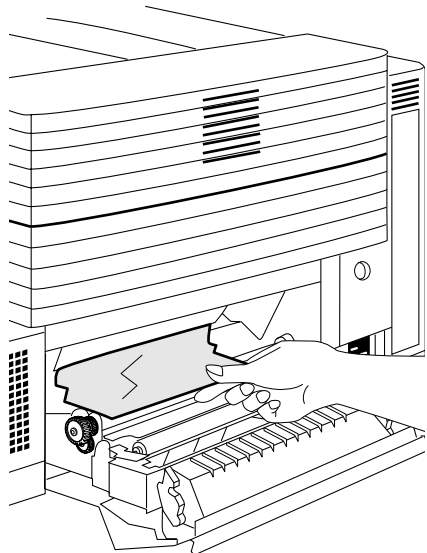


- 4 Remove the jammed media by pulling it from the bottom of the fuser (through the printer's rear cover), not from the top of the fuser.

This prevents any unfused toner from dirtying the fuser rollers.



Caution: Be careful not to touch the transfer drum while removing jammed media.



- 5 Close the fuser roller pressure release levers.
- 6 Close the top cover of the printer.
- 7 Close the back cover of the printer.



8

Troubleshooting Printer Problems

In This Chapter . . .

- “Introduction” on page 8-3
 - “Status and Service Messages” on page 8-3
 - “HP-GL Error Codes and PCL Error Codes” on page 8-13
 - “Testing PC-Printer Communication” on page 8-14
 - “Testing Macintosh-Printer Communication” on page 8-18
 - “Printer Problem Checklist” on page 8-19
 - “OPC Belt Cartridge Problems” on page 8-21
 - “Control Panel Problems” on page 8-22
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-

- “CrownNet Problems” on page 8-24
- “Output Problems” on page 8-25
- “Kanji Option Kit Problems” on page 8-27
- “Print Quality Problems” on page 8-29
- “Color Density Problems” on page 8-30
- “Image Defects” on page 8-32
- “Placing a Service Call” on page 8-38

Introduction

This chapter provides information to aid you in resolving printer problems you may encounter, or at least guide you to the proper sources for help. You'll find in this chapter tables of common status messages, a problem checklist, and actions you should take when a specific problem occurs. There are step-by-step instructions for removing media jams from key locations along the media path, as well as descriptions of common print quality problems with corresponding solutions. You'll also find the information you'll need to have before placing a service call if one becomes necessary.

Status and Service Messages

Status and service messages are displayed in the control panel message window. They provide information about your printer and help you locate many problems. When the condition associated with a displayed message has changed, the message is cleared from the window.

Status Messages

» **Note:** *Status messages are not displayed while the printer is off line.*

This status message...	means...	Do this...
ACC ALREADY DISABLED	The accounting option selected is now in effect.	No action needed.
ACC ALREADY ENABLED	The accounting option selected is now in effect.	No action needed.
ACC DISABLED	The accounting option selected is now in effect.	No action needed.
ACC ENABLED	The accounting option selected is now in effect.	No action needed.

Status and Service Messages

This status message...	means...	Do this...
ACC FILES GOT REMOVED	The accounting option is disabled and the accounting files are empty. After a reset, the files are removed. This prevents you from wasting disk space with empty accounting files.	No action needed.
ACC JOB FILE FULL ACC PAPER FILE FULL	The job or paper file is full.	If you want accounting enabled, copy the job accounting and paper accounting files to floppy disk(s), or transfer them to your host computer using ftp (if available). Then reset the accounting files so that new jobs can be accepted. If you don't want to use accounting, you can disable it.
ACC FILE 95% FULL ACC FILE 90% FULL ACC FILE 85% FULL ACC FILE 80% FULL	The Job Accounting File is 80, 85, 90, or 95% full.	See ACC JOB FILE FULL message for action needed.
ACC FILES NOT EMPTY, CANNOT SHRINK, KEEPING OLD SIZE	The Job Accounting file can be reduced in size only after a reset when the file is empty.	No action needed.
x ACTIVE JOBS	The printer is on line. (x identifies the number of jobs in process.)	No action needed.

This status message...	means...	Do this...
ADJUST <i>INPUTBIN</i> BIN	The specified cassette is not inserted correctly.	Adjust the cassette.
<i>INPUTBIN</i> BIN JAM	Media has jammed while being pulled from the specified cassette.	Clear the jam from the specified cassette.
BACK PANEL OPEN	The rear cover over the transfer unit is not closed.	Close the rear cover.
BELT CARTRIDGE MIS-INSTALLED	The OPC belt cartridge is either missing or incorrectly installed.	Ensure that an OPC belt cartridge is correctly installed.
CANCEL JOB	The Cancel key has been pressed, and one or more of the print jobs in the print queue are being canceled.	Press Select and the oldest job in the print queue will be canceled.
CANCEL ALL JOBS	The Cancel key has been pressed, and one or more of the print jobs in the print queue are being canceled.	Press Select for all jobs with a printing, interpreting, spooled, or terminating status to be completely removed from the system.
CHECK CLEANING ROLLER	The cleaning roller needs to be replaced.	Install a new cleaning roller.
CHECK WASTE TONER	Either the waste toner pack is full and needs to be replaced, or it is incorrectly installed.	Ensure that the waste toner pack is not full and is correctly installed.
CLOSE ENGINE DOOR(S)	One or more of the front or side covers is open and must be closed.	Close the front or side covers.

Status and Service Messages

This status message...	means...	Do this...
COPIER OPTION NOT INSTALLED	The Copy key was pressed while the printer was on-line, but the CrownCopy option is not installed.	If you want to copy, install a Crown-Copy scanner. Otherwise, no action is needed.
CREATED FILE	The accounting file has been created.	No action needed.
CREATING XXXXXXXXXXXX FILE, PLEASE WAIT	The specified accounting file is created when accounting is enabled and the files are not in existence or these files are created following a Reset Accounting. (XXXXXXXXXXXX represents the Job Accounting or Paper Accounting file.	Wait. No other action needed.
END JOB	The Cancel key has been pressed.	Press Select to provide an end-of-job indicator for a print job that does not have one
EXTENDED ACCOUNTING FILE SIZE	The size of the non-empty accounting file has been increased successfully.	No action needed.
FUSER MISINSTALLED	The fuser is not fully seated.	Ensure the fuser is fully seated.
FUSER OIL EMPTY	The oil bottle for the fuser is empty. The printer will not print any more copies until a new oil bottle is installed.	Install a new fuser oil bottle.

This status message...	means...	Do this...
FUSER OIL LOW	The oil bottle for the fuser unit is running low.	If you have a new fuser oil bottle on hand, you may want to install it now. If you don't, order one now. A limited number of copies (about 100) will still print. However, when the oil runs out, the printer stops and the FUSER OIL EMPTY message appears.
IDLE	The printer is on line, but no jobs are in process.	No action needed.
INITIALIZING	The printer is warming up and getting ready to go on line.	Wait. No other action needed.
INNER JAM	Media has jammed leaving the OPC belt cartridge area.	Locate and remove the jam.
INPUT IDLE PRINTING	The printer is on line and printing jobs already in the queue. No new jobs are arriving at the communication interfaces.	No action needed.
OUTPUTBIN OUTPUTBIN JAM	Media has jammed between the print engine and the specified tray.	Locate and remove the jam.

Status and Service Messages

This status message...	means...	Do this...
PRINTING STATUS	A status page is printing	Wait until after the status page prints, and the message clears.
PUT <i>SIZE</i> PAPER IN <i>INPUTBIN</i> BIN	The Operator Control/Chain Inputbins is set to Off and the displayed cassette is empty. Refill it with the specified size media. <i>SIZE</i> is the media size detected by the engine, and <i>INPUTBIN</i> is the empty cassette.	Refill the cassette with the specified size media.
PUT <i>SIZE</i> PAPER IN ANY BIN	Operator Control/Chain Inputbins is set to On and a chained cassette is empty.	Refill the cassette with the specified size media.
REPLACE BELT	The OPC belt cartridge need replacing.	Install a new belt cartridge.
RESETTING ACCOUNTING	The reset accounting operation is in process.	No action needed.
SCAN ERROR	There may be insufficient memory to scan the document from the scanner's automatic document feeder (ADF). There may be a media jam in the ADF.	Add a hard disk, enable disk swapping, and/or increase Display List memory. (Refer to the ADF scanning section in chapter 7, "Crown-Copy," of the <i>Options</i> manual.) Remove the media jam.

This status message...	means...	Do this...
SCANNER NOT CONNECTED	The Copy key has been pressed, but the scanner cannot be accessed.	Turn off the printer and scanner, turn on the scanner, wait 5 seconds, and then turn on the printer. If this doesn't work, make sure the printer and scanner are correctly connected.
SCANNING . . .	The CrownCopy scanner is scanning a document.	No action needed.
TEST PRINT	A test print page is printing.	No action needed.
TONER ABSENT	The toner cartridge is not installed.	Install a toner cartridge.
x TONER EMPTY	The x (color) toner cartridge is empty.	Replace the toner cartridge.
x TONER LOW	The x (color) toner is low. There is enough toner left to print 330 pages before the printer stops.	Redistribute the toner in the cartridge, or replace the cartridge.
x TONER OUT	The x (color) toner is out. The printer stops.	Replace the toner cartridge.
TOP COVER OPEN	The top cover of the printer is not fully closed.	Ensure the top cover is fully closed.
TR UNIT MISINSTALLED	The transfer unit is not installed incorrectly.	Check the transfer unit installation.
TRANSPORT JAM	Media has jammed while passing through the engine.	Locate and remove the jam.

Status and Service Messages

This status message...	means...	Do this...
WAITING FOR IDLE	An active job is in process. Access to the menu is not allowed until the job is finished.	Wait until the print job is finished and the printer goes idle.
WAITING ON INPUT END JOB?	The compiler is waiting on incoming data for the first job in the queue. The job may not have an end-of-job indicator and therefore cannot end. The message clears if more input arrives from the port or if you press the Cancel key. No other jobs can be printed until this job has ended.	Wait until the job is finished and the printer goes idle to access the configuration menu.
WARMING UP	The printer is warming up.	Wait. No other action needed.

Service Messages

This service message...	Means...
CALL FOR SERVICE C3 NVRAM ERROR	An error has been detected with the item indicated in the service message. Correction of these errors is performed by qualified QMS service personnel only. Contact your QMS vendor. » Note: <i>A service message sometimes occurs as a result of an unusual combination of events, not because of an actual problem. When the printer stops and a service message displays in the message window, turn the printer off and then back on. This often clears the service message indicator, and printer operation resumes. Always try this before making a service call.</i> Service calls should be placed to the vendor from whom you purchased the printer. If you cannot get service from your vendor, see appendix A, "QMS Customer Support," for more information.
CALL FOR SERVICE C4 ENG CTRLR HW	
CALL FOR SERVICE C7 TIMING CLOCK	
CALL FOR SERVICE D1 Y CLUTCH	
CALL FOR SERVICE D2 M CLUTCH	
CALL FOR SERVICE D3 C CLUTCH	
CALL FOR SERVICE D4 K CLUTCH	
CALL FOR SERVICE D5 YK SOLND	
CALL FOR SERVICE D6 MC SOLND	
CALL FOR SERVICE E1 DEVLPR MOTOR	
CALL FOR SERVICE E2 MAIN MOTOR	
CALL FOR SERVICE E3 DRUM ERROR	
CALL FOR SERVICE E4 TONER SENSOR	
CALL FOR SERVICE E5 ROLLER SOLND	
CALL FOR SERVICE E6 CLEAN SOLND	
CALL FOR SERVICE E7 CLEAN CLUTCH	
CALL FOR SERVICE E8 FUSER CLUTCH	
CALL FOR SERVICE E9 BELT MARKER	
CALL FOR SERVICE EL ERASE LED	
CALL FOR SERVICE F0 COOLING FAN	
CALL FOR SERVICE F2 OZONE FAN	

**Status and
Service Messages**

This service message...	Means...
CALL FOR SERVICE F4 FUSER FAN	See the information on the previous page.
CALL FOR SERVICE F5 CHRG HV UNIT	
CALL FOR SERVICE H0 FUSER THERM	
CALL FOR SERVICE H2 FUSER TEMP 2	
CALL FOR SERVICE H3 FUSER TEMP 3	
CALL FOR SERVICE H4 FUSER TEMP 4	
CALL FOR SERVICE L1 BEAM DETECTR	
CALL FOR SERVICE L2 SCANNER MOTR	
CALL FOR SERVICE LL LASER POWER	

HP-GL Error Codes and PCL Error Codes

The following tables list error codes that could appear on the printer message window when running the HP-GL or PCL emulation.

HP-GL	
Error Code	Description
0	Not enough memory for job.
1	Too many transformations.
2	Math error.
3	Job aborted.
4	Instruction not recognized.
5	Wrong number of parameters.
6	Out of range parameter, or illegal character.
7	Not used.
8	Unknown character set.
9	Position overflow.
10	Buffer overflow.
11	Not used.

PCL	
Error Code	Description
0	Not enough memory for job.
1	State lost.
2	Math error.
3	Job aborted.
4	Out of memory for macros.
5	Disk full. Cannot store fonts.
6 - 13	Internal error 1 - 8.

Testing PC-Printer Communication

To test communication between your printer and your PC, first create a short file that ejects a page from the printer. Then send the file to the printer.

Creating the Test File

To create the test file, type the following commands at the DOS prompt:

```
copy con printest.ps↵
showpage↵
^D^Z↵
```

(All commands above except the DOS **copy** command are case sensitive and must be typed exactly as shown.) Showpage is a PostScript command that prints a blank page. The ↵ symbol means to press the Enter key. To produce the ^D and ^Z, press and hold down the Ctrl key while you type the appropriate letters (d and z). These characters signify the end of the file and must always be included.

Sending the Test File

Parallel Communication

- 1 To send the PRINTTEST.PS file (you just created) to the printer, type

```
copy /b printest.ps lpt#↵
```

where # is the port number (1 to 3).

- » **Note:** *If the computer has more than one parallel port, they're probably labeled. If not, check the computer documentation for the LPT port names.*

2 If the printer and PC are communicating, a blank page ejects from the printer.

If a blank page doesn't eject and you typed the file correctly, you may want to check your AUTOEXEC.BAT file to see if LPT1 (the parallel port) is being directed to COM1 (the serial port):

- a If the AUTOEXEC.BAT file contains the line

```
MODE LPT1:=COM1:
```

delete it.

- b Then type

```
MODE LPT1:,,P↵
```

The "P" represents infinite retry and it tells the PC to send print jobs until the printer accepts them.

- c Restart the PC and retry the communication test.

Refer to your DOS documentation for more information.

Serial Communication

1 To send the PRINTTEST.PS file you just created to the printer, type

```
copy /b printtest.ps com#↵
```

where # is the port number (1 to 4).

- » **Note:** *If the PC has more than one serial port, they're probably labeled. If not, check the PC's documentation for the COM port names.*

2 If the printer and PC are communicating, a blank page ejects from the printer.

If a blank page doesn't eject and you typed the file correctly, you may want to check your AUTOEXEC.BAT file in DOS to make sure that the printer's serial port settings match those of the PC.

- a Look for a command line like this in your AUTOEXEC.BAT file:

```
MODE COM1:9600,N,8,1,P↵
```

In this example, the serial port settings are 9600 for baud rate, N (no) parity, 8 data bits, and 1 stop bit. The "P" stands for infinite retry.

» **Note:** If the **mode** statement isn't in your AUTOEXEC.BAT file, you may temporarily set these parameters at the DOS prompt to continue this test by typing the **mode** statement as shown above. To make this setting permanent, you'll need to add this statement to your AUTOEXEC.BAT file.

- b Restart the PC, and then check the start-up page, which prints when you turn on the printer (unless you disabled it). This tells you the current serial port settings for the printer.
- c If the serial settings (baud rate, parity, data bits, and stop bits) shown on the start-up page match those in your AUTOEXEC.BAT file, you need make no further changes. Go to the section "Special PC Concerns" later in this chapter.

If the printer's serial port settings are different from your PC's settings, use the printer control panel, as described in the following section, "Changing Serial Port Settings," to make them match.

Changing Serial Settings

Since your printer is configured at the factory for the most typical printing environments, the serial settings in your AUTOEXEC.BAT file and on the start-up page should be the same. However, if they differ, you must configure the printer to use the serial settings specified in the AUTOEXEC.BAT file. Use the information in the following table.

Press this key...	to...	The message window reads...
Online/ Offline	Turn off the Ready indicator and enable printer configuration.	IDLE
Menu	Access the configuration menu.	CONFIGURATION OPERATOR CONTROL
Next	Advance to the Administration menu.	CONFIGURATION ADMINISTRATION
Select	Access the Administration menu.	ADMINISTRATION COMMUNICATIONS
Select	Access the Communications menu.	COMMUNICATIONS TIMEOUTS
Next	Advance to the Serial menu.	COMMUNICATIONS SERIAL
Select	Access the Serial menu.	SERIAL MODE
Next (one or more times)	Advance to the Baud Rate menu.	SERIAL BAUD RATE
Select	Access the Baud Rate menu.	BAUD RATE *9600
Next (one or more times)	Advance to the correct baud rate.	BAUD RATE #
Select	Select the displayed baud rate.	# IS SELECTED
		SERIAL BAUD RATE

» **Note:** *If you need to change other settings, press the Next key to access the appropriate menu option, and then return to the point where you press the Select key to access the Administration menu and select the new settings.*

Testing Macintosh-Printer Communication

Press this key...	to...	The message window reads...
Online/ Offline	Access the Save Changes option.	SAVE CHANGES? *NO
Next	Advance to the Yes option.	SAVE CHANGES? YES
Select	Save changes.	IDLE
Online/ Offline	Put the printer back on line (the Ready indicator lights).	IDLE

Verifying the Serial Setting Changes

- 1 Turn the printer off and on again to produce a start-up page.
- 2 Compare the serial port settings listed on the start-up page to those in your AUTOEXEC.BAT file.
- 3 Try the communication test again.

If a blank page ejects from the printer, the printer and the PC are communicating. If a blank page doesn't eject and you typed the file correctly, refer to your DOS documentation for more information.

Testing Macintosh-Printer Communication

Testing Macintosh Communication

You can check communication between the printer selected in the Chooser and the Macintosh by sending a file to the printer from an application (see your application documentation for more information) or by printing a directory, as described here:

- 1 Display a disk or folder window.

2 Set up page information.

- a From the File menu choose Page Setup.
- b Select paper size, orientation, and other necessary options.
- c Choose OK.

3 Print a directory or a window.

- a From the File menu choose Print Directory or Print Window. A dialog box appears.
- b Select the printing options you want, and then choose OK.

Printer Problem Checklist

This section contains a list of possible printer problems and solutions. If you've just installed your printer, be sure you've followed the steps in chapter 2, "Setting Up Your Printer," in the *Getting Started* manual.

If there is no status message in the control panel message window, use the following steps to identify the source of your problem and to learn of possible solutions:

1 Does the printer power light come on?

YES - Go to number 2.

NO - Check the following:

- Is power supplied to the AC outlet.
- Is the power cord plugged securely into both the power outlet and the printer? Check the power cord connection.
- Is the printer power switch in the On position (pushed in)?
- Is the power outlet working?
- Does the line voltage from the power outlet match the printer's power requirements? See appendix B, "Technical Specifications," in the *Reference* manual.

Printer Problem Checklist

2 Can you print a status page?

YES - Go to question 3.

NO - Check the following:

- Is the printer off line before you try to enter the Administration/Special Pages/Print Status menu? It should be.
- Does the cassette have paper? If it is out of paper, the PAPER OUT message displays and the Error indicator lights.
- Are all the printer covers closed securely?
- Is there a media jam? If a paper jam message displays and the Error indicator lights, go to one of the following sections in this chapter on clearing a media jam.

3 Is the printer receiving data from the computer?

If the Data indicator blinks after a file is sent, the printer is receiving the data. If not, check the following:

- Is the printer on line? The online indicator should be on and the message window should display IDLE.
- Has the emulation been changed from ESP to an emulation that doesn't match the file you are sending. See chapter 4, "Printer Configuration," in the *Reference* manual.
- Print a status page from the control panel. If you are using the serial interface, is the baud rate (speed of data transmission) of the printer, the computer, and your software application the same? See chapter 4, "Printer Configuration," in the *Reference* manual.
- If you still cannot identify the problem, contact your QMS vendor.

4 Is the printer printing codes or not printing at all when in ESP mode?

- Reconfigure the port to the specific printer emulation of the file you are trying to print. See chapter 4, “Printer Configuration,” in the *Reference* manual for instructions.
- If a PostScript file prints PostScript statements while the printer is in ESP mode, increase the ESP timeout. See chapter 4, “Printer Configuration,” in the *Reference* manual for instructions.
- If you continue to have problems with the ESP mode selecting the appropriate printer emulation, contact your QMS vendor.

OPC Belt Cartridge Problems

The OPC belt is extremely sensitive to bright light and direct sunlight. Always leave it in its protective bag until you are ready to install it. Any exposure to light should be limited to two minutes. If you suspect the belt is damaged due to exposure to light, put the belt in a dark place to recover. Depending on the amount of exposure, recovery may take up to two hours. Recovery time is dependent on the amount of exposure sustained, and recovery is not guaranteed.

Control Panel Problems

Data Indicator Stays Lit

If the printer has warmed up and the Data indicator stays on, two problems may exist. If you are downloading additional typefaces, too many can overload the printer's memory, causing the printer to reset and lose information previously downloaded to RAM. Make sure you have enough printer memory.

On a LocalTalk network, Macintosh computers sometimes interfere with each other. If this happens often, reinstall the LaserWriter and Laser Prep files, which reset the printer. If neither of these is the problem, place a service call to your QMS vendor.

No Advanced Status Page

If your printer prints a standard status page even though you've configured the printer in the Administration/Special Pages/Status Page Type menu to print an advanced status page, your printer probably doesn't have enough free memory available. To print an advanced status page you may need to reduce the amount of memory assigned to one or more of the memory clients or add more memory (see the "Memory" section in chapter 5, "Additional Technical Information," in the *Reference* manual for information about memory clients).

No Start-up Page

If the Ready indicator is on, but no start-up page prints, check the following:

1 Has the start-up page been disabled?

Use the control panel to make sure the start-up page is enabled.

2 Did you wait long enough? From a cold start, the printer takes approximately 3 minutes to warm up.

Be sure you wait long enough for a start-up page before suspecting a problem.

- 3 Check that the paper cassettes are loaded with paper, in place and secure.**
- 4 Check for a media jam.**
- 5 Make sure a toner cartridge is installed.**

If you still have not solved the problem, you need to call your QMS vendor for help. See "Placing a Service Call" on page 8-38 for information on how to contact your QMS vendor.

Paper Jam Message Stays On

If a PAPER JAM message stays on, open the printer and clear the jam. If the message is still there, try opening and closing the top of the printer again. See chapter 7, "Media Jams," for complete information clearing media jams.

Printer Resets

Occasionally, Macintosh applications interfere with each other. Applications send a printer prep file to the printer at the beginning of each document. Other prep files cannot be sent without resetting the printer. Monitor your activities to see if there is a correlation between your use of a certain application and the printer resetting. If so, contact the application developer.

Downloading too many typefaces can overload the printer memory and cause the printer to reset to default. Additional memory (RAM), which can be used for font storage, is available and easily installed. Contact your QMS vendor for information on RAM upgrades.

If the printer resets in other circumstances, you should call your QMS vendor for service.

PostScript Errors

If your printer is having trouble printing when using PostScript emulation, you should turn on the Error Handler in the control panel menu.

Windows Driver Problems

Error Handler is a diagnostic tool that identifies PostScript errors encountered during a print job.

Menu	Administration/Startup Options/Do Error Handler
Choices	Yes—Load the Error Handler. No—Don't load the Error Handler.
Default	No
Notes	Refer to the <i>PostScript Language Reference Manual</i> (Adobe Systems Incorporated, Reading, PA: Addison-Wesley, 1990, ISBN 0-201-18127-4) for information on PostScript errors. You must reboot the printer after turning on the error handler.

Windows Driver Problems

Printer Description Files

If you experience problems either when installing or using printer description files on a PC, see “Notes on Installing Printer Description Files” in chapter 3, “Connecting to a PC,” in the *Getting Started* manual.

CrownNet Problems

If you have trouble installing and setting up your QMS CrownNet interface, check the following:

- If the printer requires a network interface card, is it correctly installed in the printer?
- Is the printer connected to the network?
- Is the printer plugged in, turned on, and correctly configured?

- Do the printer start-up and status pages list the interface? Is the configuration information correct?
- Is the interface enabled?
- Is the appropriate protocol (or protocols) enabled?

Are all printer and protocol addresses configured correctly?

Output Problems

1200x600, 2400x600 dpi Printing Unavailable

- The amount of RAM installed in your printer governs which resolutions can be used with each media size. If you have a QMS *magicolor* 2 Print System with
 - 24 MB RAM, you can print at 600x600 dpi resolution on all media sizes.
 - 48 MB RAM, you can print at 1200x600 dpi resolution on all media sizes.
 - 88 MB RAM, you can print at 2400x600 dpi resolution on all media sizes.

Check the start-up page to make sure the printer has enough RAM installed. See chapter 2, “Memory and System Software,” in the *Options* manual for information on installing additional RAM.

- If you have enough RAM installed, and you have configured the printer from the control panel to print at 600x600, 1200x600, or 2400x600 dpi resolution (Administration/Engine/Def Resolution menu) but the printer continues printing at a lower resolution, you may need additional memory allocated to the frame buffer.

To allocate the correct amount of memory, use the Memory/Quick Config menu to choose the correct resolution and paper size for your printing. See chapter 4, “Printer Configuration,” in the *Reference* manual for more information.

Blank Pages

If a blank start-up page ejects or blank pages come out during a printing job, try the following:

- 1 Check the toner cartridges.**

The image does not print if the cartridges are empty.

- 2 If the toner cartridges are not empty and blank pages are ejecting, take each cartridge out, rock it from side to side, and reinstall it in the printer.**

- 3 If these solutions do not work, contact your QMS vendor to purchase another toner cartridge.**

Not All Pages Print

If the printer stops printing in the middle of your file, try the following:

- 1 Check your cable.**

You could have the wrong kind of cable, or your printer may not be configured for the correct cable and port.

- 2 Make sure no one pressed the Cancel key while your job was printing.**

- 3 Check the message window to see if the cassette you are using is out of media.**

Kanji Option Kit Problems

Use the information in this section to locate and solve problems that may arise when installing and using the Kanji SIMM kit.

Can't Download Kanji Fonts

- Are you attempting to download Kanji TrueType fonts using the PS Executive Series Utilities?

This utility cannot be used to download Kanji TrueType fonts. See your Kanji TrueType font software documentation for information on how to download these fonts.

- Did the printer run out of memory while downloading Kanji fonts?

If you experience memory problems when downloading Kanji fonts, then you can do one of the following to increase printer memory:

- Add 4 MB more printer memory.
- Decrease the number of fonts that you are downloading. When downloading a large number of fonts, packet them in smaller groups for downloading. (For example, instead of downloading 4 fonts at one time, download 2).
- Are you getting the following message:

The Resolution of this PostScript Device Exceeds the Maximum Resolution Specified in the Licensing Agreement.

It is possible to get this message when attempting to download Adobe Type Library or Morisawa Type Library Kanji fonts without first downloading the JFontPrep file.

If you get this message, you must download this file.

Can't Access Kanji Fonts

- Does the start-up page indicate that the Kanji internal IDE hard disk is on line?

When this disk is on line, Japanese fonts print in the lower half of the start-up page. If not, check that the disk is installed correctly and that the disk is not damaged.

- Does your application support Japanese fonts?

You should be able to select these fonts if the application supports them.

- Did you inadvertently initialize or reformat the Kanji internal IDE hard disk?

If so, contact your QMS vendor. See appendix A, "QMS Customer Support," for product sales and service information.

- Did you correctly configure the printer?

See the *Options* manual for complete printer configuration information.

Can't Access the Kanji File Through Your Application

- If you are using Windows, ensure that the Japanese version of the Windows driver is installed?

Double-click the Windows control panel icon, double-click Printers, choose your Windows driver, click Setup, and then click About. Check that you are using the QMS Windows 3.1J driver.

- If you are using a Macintosh, ensure that the system is KanjiTalk, and the appropriate Kanji screen fonts are installed.

The two Morisawa screen fonts are included on your Macintosh system disk. The four Typebank screen fonts are included on the Macintosh bitmapped screen fonts disk that comes with the Kanji Option Kit.

Print Quality Problems

Print quality problems are those related to the appearance of the pages you print. Print quality problems include white lines on the page, uneven blacks, and other print distortions.

First, refer to the appendix B, “Technical Specifications,” in the *Reference* manual for recommended media types. If you are using recommended media and continue to have problems with the quality of your printed pages, try this quick-check procedure:

1 Check that you are using the correct type media.

See appendix B, “Technical Specifications,” in the *Reference* for media specifications.

2 Check that there is enough toner in the printer whether or not the x TONER LOW message is on.

Remove the toner cartridge and gently rock it from side to side to redistribute the toner. Then reinsert the cartridge and try printing again. The toner can settle, and this procedure redistributes the toner.

3 If, after rocking the toner cartridge, the print quality does not improve and/or the x TONER LOW message remains on, replace the toner cartridge.

4 Place a service call to your QMS vendor.

Color Density Problems

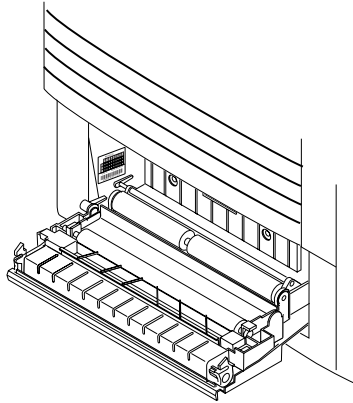
Color density problems are related to the appearance of the pages you print. To check the printer's color density, print a calibration page (Administration/Special Pages/Calibration Page) and compare it to the calibration cards that were provided with your printer. Complete instructions are included in the "Color Density" section of chapter 4, "Color Printing."

- » **Note:** *The Administration/Special Pages/Calibration Page menu is available **only** on engines with the latest 1-3 engine ROM. It is not available on older engines.*

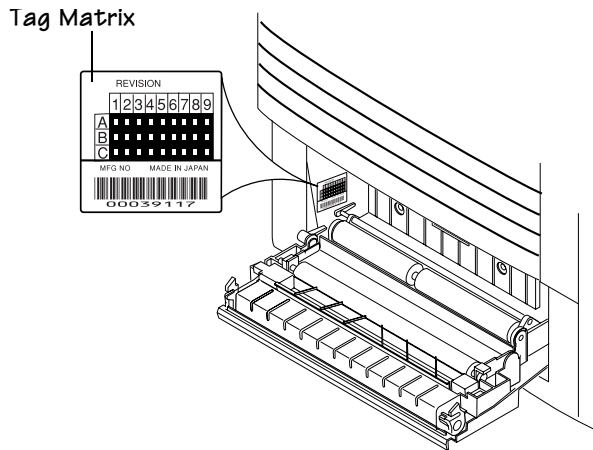
Engine ROM

To determine if your printer has the latest 1-3 engine ROM, check the tag matrix located inside the printer.

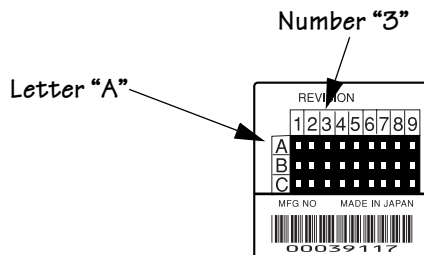
- 1 Open the rear cover of the printer.**



- 2 Locate the tag matrix that is affixed inside on the left side frame.



- If your printer has the 1-3 engine ROM (and the color density feature), the letter “A” and the number “3” are blocked in.



- If these characters aren’t blocked in, then your printer doesn’t have the 1-3 engine ROM. To find out how to acquire it, contact your QMS vendor, see appendix A, “QMS Customer Support,” for product sales and service information.

Image Defects

The following list includes several image defects with possible solutions. Try the solutions in the sequence given. If the solutions listed don't solve the problem, place a service call to your QMS vendor. See the next section in this chapter, "Placing a Service Call."

General

Print quality problems are those related to the appearance of the pages you print. Print quality problems include white lines on the page, uneven colors, and other print distortions.

If you have problems with the quality of your printed pages, try the following:

- If the TONER OUT message is on and the printer continues to print, try distributing the toner to improve print quality. If the print quality does not improve, replace the toner cartridge.
- Remove the toner cartridge and rock it several times from side to side. The toner can settle, and this procedure redistributes the toner. Reinsert the cartridge and try printing again.
- Place a service call to your QMS vendor.

Specific

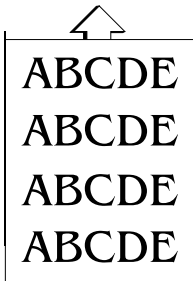
Listed below are several print quality problems with possible solutions. Try the solutions in the sequence given. If the solutions listed do not solve the problem, place a service call to your QMS vendor.

Solid Color Image



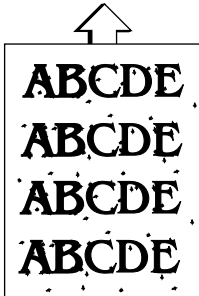
- 1 A toner cartridge may be defective. Remove it and install a new toner cartridge.
- 2 Your printer may need a service check. Contact your QMS vendor.

Printout Too Dark



- 1 Install a new toner cartridge.

Toner Smudges



Toner smudges only on the front of the page:

- 1 Check to make sure the toner cartridges are not pushed in too far.

Don't push a toner cartridge in until you hear a click. If you hear a click, you've locked the cartridge into place against the OPC belt cartridge, and your prints may be smudged. Pull the toner cartridge out so that it's firmly seated but not locked into place.

- 2 Distribute the toner.

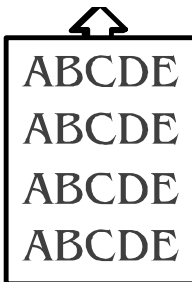
- 3 Check to make sure the toner cartridge is not defective.

- 4 If steps 1, 2, and 3 do not solve the problem, install a new toner cartridge.

Toner smudges on the front and back of the page:

- 1 The image transfer roller may be dirty. Open the printer once and close it again to clean the roller.

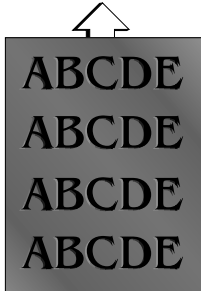
Printout Too Light



- 1 Remove the toner cartridges and rock them as you would when installing a new cartridge. This redistributes toner inside the cartridges. Then, reinstall the cartridges.

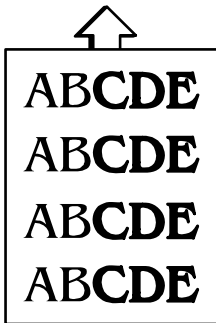
- 2 The toner cartridges may be defective. Install new toner cartridges.

Blurred Background



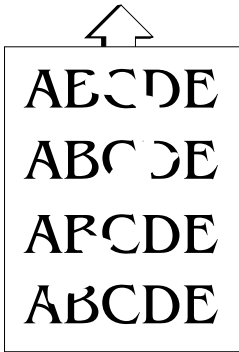
- 1 The toner cartridge may be defective. Install a new toner cartridge, if needed.

Uneven Print Density



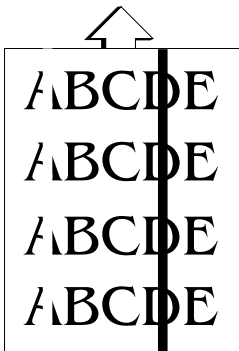
- 1 Remove the toner cartridge and rock it as you do before installing a new cartridge. This redistributes toner inside the cartridge. Reinstall the cartridge.
- 2 If step 1 does not solve the problem, install a new toner cartridge.

Irregular Print



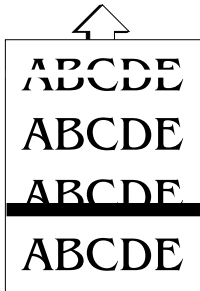
- 1 The paper being used may have absorbed moisture (perhaps due to high humidity or having water spilled on the paper supply). Toner does not adhere well to paper at the positions where it has become wet. Replace the paper in the tray or cassette with dry paper, and retest for irregular print.

Vertical Streaking



- 1 The laser lens may be dirty. Clean the lens as described in chapter 5, "Printer Care," of this manual.
- 2 The corona wire inside the OPC belt cartridge might be dirty. Clean the corona wire as described in chapter 5, "Printer Care," of this manual.
- 3 The toner cartridge may be defective. Install a new toner cartridge, if needed.

Colored Bands



- 1 One or more toner cartridges may be defective.
Install new toner cartridges.

Placing a Service Call

If you have a problem you cannot resolve, contact your QMS vendor. Your QMS vendor is best equipped to immediately handle any problem you may encounter.

If you have technical questions your vendor is unable to answer, contact the QMS Customer Response Center (see appendix A, "QMS Customer Support.") If you've determined your printer needs to be examined by a QMS service technician, contact QMS National Service for work inside the US, or one of the QMS international offices for work outside of the US. (National and international contacts are listed in appendix A, "QMS Customer Support.") Before calling, be sure you have the answers to these questions handy to help our technicians serve you more quickly:

- 1 What is your printer model and serial number?**
- 2 What kind of host computer do you have?**
- 3 What operating system do you have and what version?**
- 4 What interface are you using? If serial, what protocol?**
- 5 What application are you using?**
- 6 What is the emulation of the file you're trying to print? In what emulation mode is the port?**
- 7 What is the firmware revision number for your printer? (It is listed on both the status and start-up pages.)**
- 8 If you can print, have a status page available.**

Your service representative needs to know these things prior to helping you.



9

Repacking the Printer

In This Chapter . . .

- “Introduction” on page 9-2
 - “Remove Cables and Cassette(s)” on page 9-3
 - “Remove the Toner Cartridges” on page 9-3
 - “Remove the OPC Belt Cartridge” on page 9-3
 - “Prepare the Fuser Unit” on page 9-5
 - “Change the Waste Toner Pack” on page 9-9
 - “Remove the Lower Input Feeder” on page 9-11
 - “Repack the Printer” on page 9-13
-

Introduction

If you need to relocate or ship your printer after it's been installed, you must follow the procedures in this chapter to prevent damage to the printer and to keep your warranty valid.

-
- ▲ **Caution:** *QMS cannot be held responsible for damage to your printer during shipment that results from the improper packaging of your printer. You **must** use the instructions given in this section before repacking the printer in its original shipping carton with the original packing materials.*

*If you need replacement packaging, in the US call QMS National Service at 1 (334) 633-4300 x 2530 and request catalog number 2600439-200. If you need to return the printer for service, in the US call QMS Customer Service at 1 (334) 633-1072 for an RMA (Return Merchandise Authorization) number **before** shipping the printer. In other countries, refer to appendix A, "QMS Customer Support."*

What's Involved?

Repacking your printer for shipment involves the following steps. Each is described in more detail in the following sections.

- 1 Remove the cables and paper cassette.
- 2 Remove the toner cartridges.
- 3 Remove the OPC belt cartridge.
- 4 Prepare the fuser unit for shipment:
- 5 Change the waste toner pack.
- 6 Remove the lower input feeder (if attached).
- 7 Pack the printer for shipment.

Remove Cables and Cassette(s)

- » **Note:** *If you're returning the printer for service, you don't need to return the power cable, interface cables, or media cassette(s).*
- 1 Turn off the printer.**
- 2 Remove the power cable and all interface cables.**
- 3 Remove the media cassette(s) from the printer.**

Remove the Toner Cartridges

- 1 Open the printer's front and top covers.**
Leave them open during the entire repacking procedure.
- 2 Remove the four toner cartridges, attach the protective shields over their magnetic rollers, and repackage them in their original packaging.**

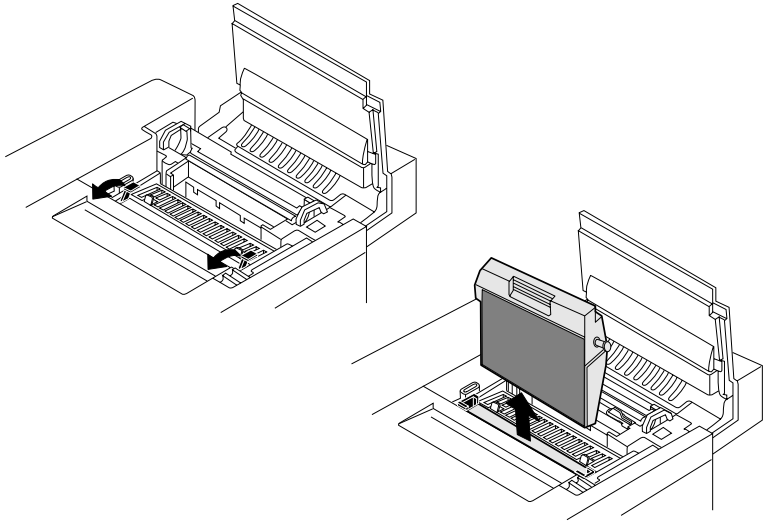
Remove the OPC Belt Cartridge

-
- ▲ **Caution:** *The OPC belt is extremely sensitive to bright light and direct sunlight. Limit exposure to 2 minutes. While the printer is being moved, store the cartridge in its original shipping bag. If you don't have this bag, carefully wrap it in a piece of dark, heavy cloth, and place it where it will not get scratched or damaged. If exposure exceeds 2 minutes, put the cartridge in a dark place to recover before using it again. Depending on exposure, recovery may take up to 2 hours.*

Also, handle the OPC belt cartridge carefully. The belt's extremely sensitive to body oils, moisture, solvents, corrosives, dust, and scratches, all of which will reduce print quality.

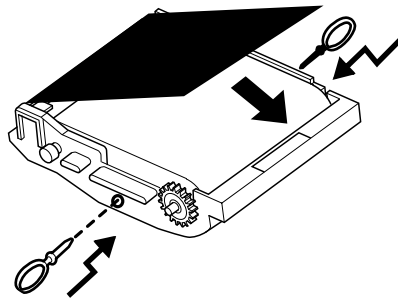
Remove the OPC Belt Cartridge

- 1 With the printer's front and top covers open, rotate up the lock levers at each end of the OPC belt cartridge slot, and lift the cartridge out of the printer.



- 2 Replace the protective sheet around the OPC belt cartridge and the tension release pin on each side.

Insert the pin until you feel some resistance, move it forward (toward the silver corona unit), and then slide it in the rest of the way. The tension-release pins protect the belt and its cleaning blade by relieving tension during movement.



3 Repack the OPC belt cartridge in its original shipping bag.

If you don't have this bag, carefully wrap the cartridge in a piece of dark, heavy cloth. Store the cartridge where it will not get scratched or damaged.

4 Rotate down the lock levers at each end of the OPC belt cartridge slot.

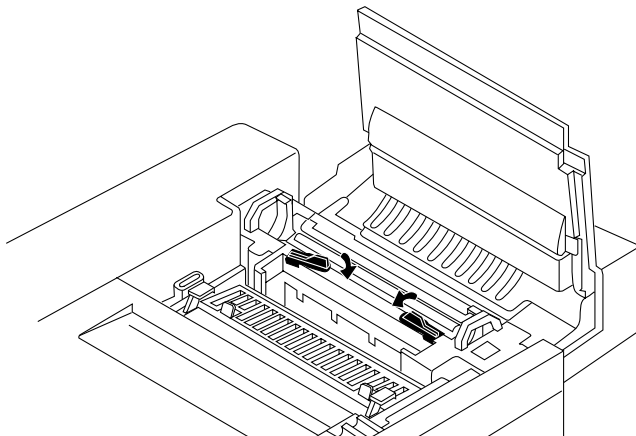
Prepare the Fuser Unit

 **WARNING!** *The fuser unit can become extremely hot and cause severe burns. Make sure the unit is cool before handling it.*

ACHTUNG! *Die Fixiereinheit kann sehr heiß werden, so daß Verbrennungsgefahr besteht. Bitte lassen Sie die Fixiereinheit einige Zeit abkühlen, bevor Sie diese berühren.*

1 Open the printer's top cover.

2 At the top of the fuser, rotate the two lock levers to release the oil bottle.

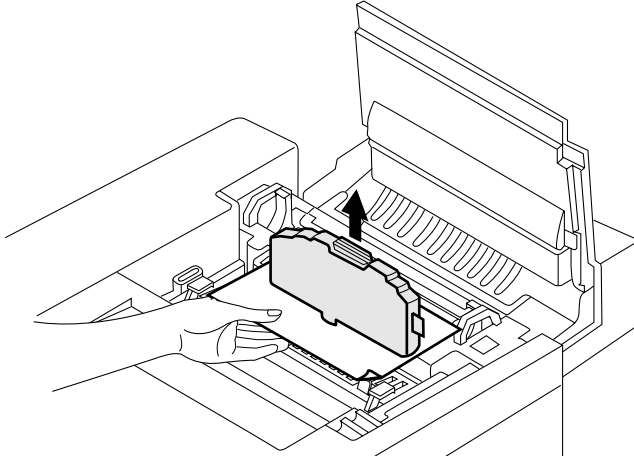


Prepare the Fuser Unit

3 Remove the oil bottle.



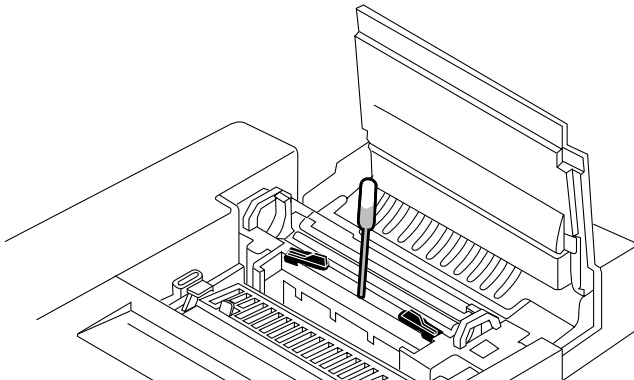
Caution: *Hold a sheet of paper under the oil bottle as you remove it, so no oil drips into the printer.*



4 Place the oil bottle in an oil-proof container, such as a plastic bag, until you're ready to reinstall it.

5 Use an eye-dropper to remove any excess oil from the fuser.

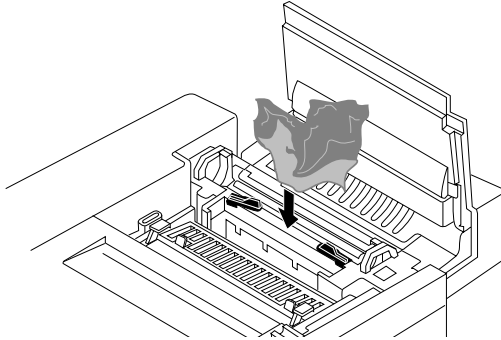
Dispose of the oil following local safety laws and regulations.



Prepare the Fuser Unit

- 6 Stuff several clean, wadded paper towels into the space normally occupied by the oil bottle to absorb any residual oil during shipment.

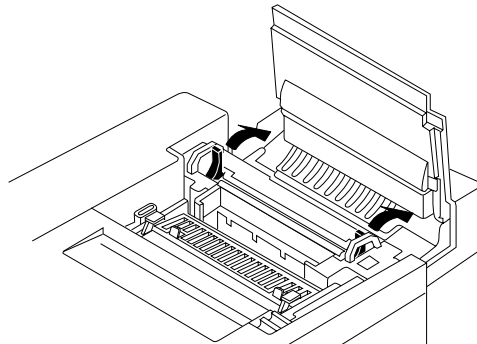
» **Note:** Don't force the paper towels in, but make sure there are enough to fill the space.



- 7 Close the lock levers to secure the cleaning roller.
- 8 Install the fuser-roller shipping restraints.

These restraints protect the fuser rollers from damage during a move by removing the pressure between the two rollers. They must be removed again before printing.

- a Open the pressure-release levers (one at each end of the fuser) to separate the two rollers in the fuser.

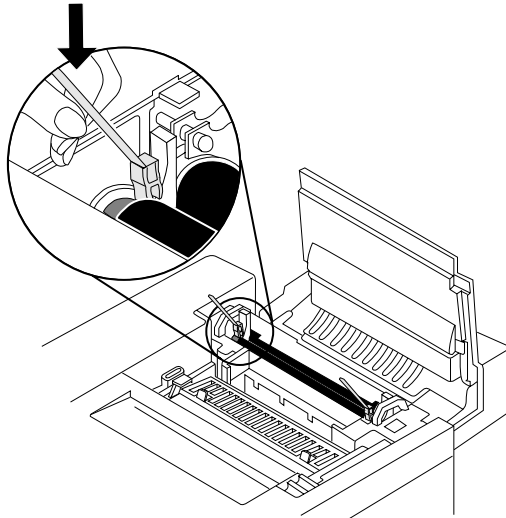


Prepare the Fuser Unit

- b Insert the fuser roller shipping restraints between the fuser rollers (one at each end of the fuser).



Caution: *Be sure to insert the shipping restraints at the **ends** of the rollers, not in the middle. Inserting them in the middle will damage the rollers.*



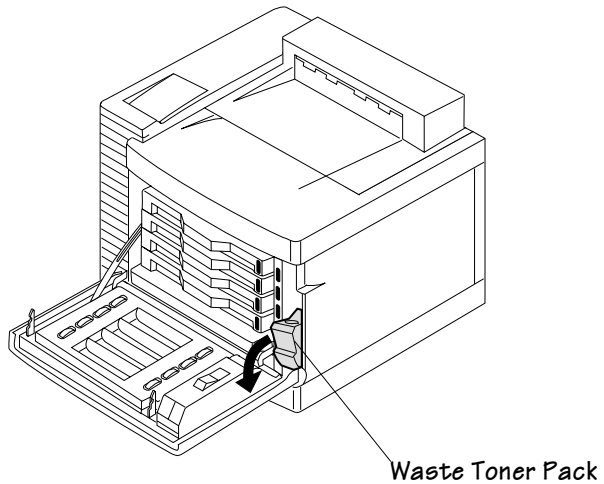
Change the Waste Toner Pack

- c Close the pressure-release levers (one at each end of the fuser).

When correctly positioned, the fuser roller shipping restraints fit snugly between the rollers.

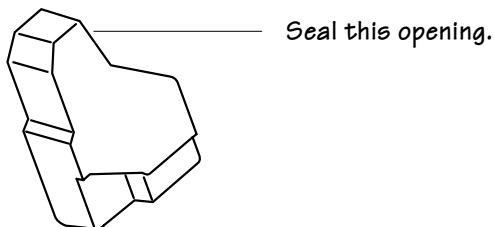
Change the Waste Toner Pack

- 1 With the printer's front cover open, remove the waste toner pack from the printer.



Change the Waste Toner Pack

- 2 Use the label on the side of the old waste toner pack to seal the opening, and then dispose of the pack in accordance with safety laws and regulations in your area.**



- 3 Install a new waste toner pack.**

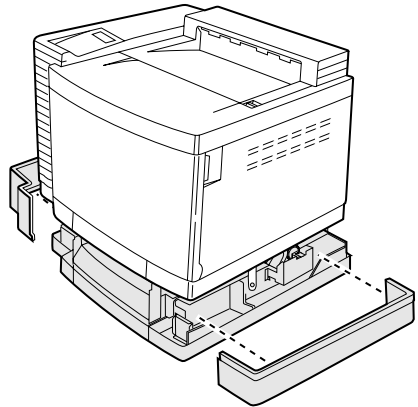
This ensures that no waste toner is shaken into the printer during shipment.

- 4 Close the printer's top and front covers.**

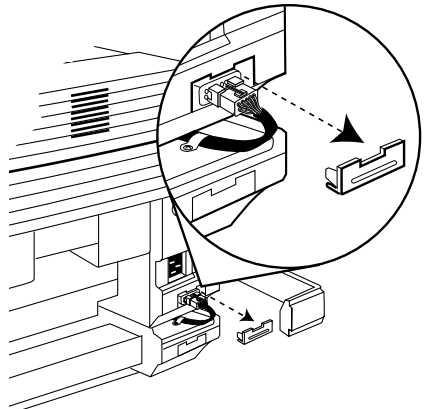
Remove the Lower Input Feeder

» **Note:** *If you don't have a lower input feeder installed, skip to the next section.*

- 1 Remove the plastic side covers from the sides of the input feeder.

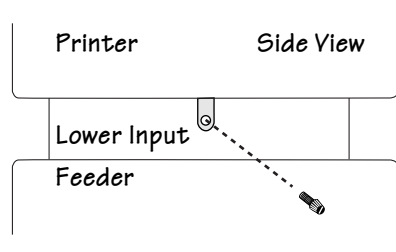


- 2 Locate the cable at the left rear of the optional feeder that connects it to the printer, and then unplug it.



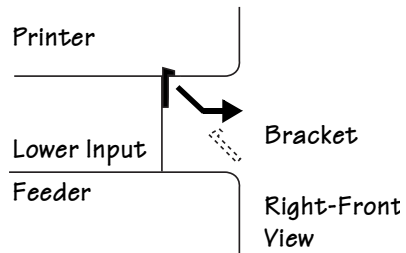
Remove the Lower Input Feeder

- 3 Unscrew the thumbscrews that attach the two brackets (one on each side of the printer) to the lower input feeder.



- 4 Remove the two metal brackets from underneath the sides of the printer.

Angle the bracket out, and then, slide it out of the hole underneath the printer.

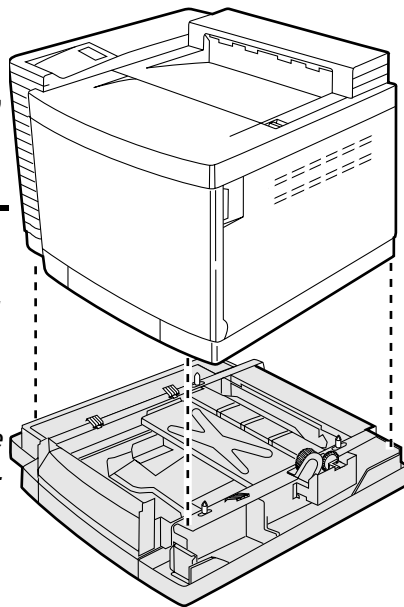


- 5 With the help of another person, pick up the printer by its four corners, lift it from the lower input feeder, and place the printer on a table.



WARNING! Your printer weighs approximately 64 lbs (29 kg) without consumables. Be sure to have help when lifting and moving it.

ACHTUNG! Das Gewicht dieses Druckers beträgt ohne Verbrauchsmaterial ca. 29 kg. Bitte versuchen Sie niemals, den Drucker alleine anzuheben oder zu transportieren.

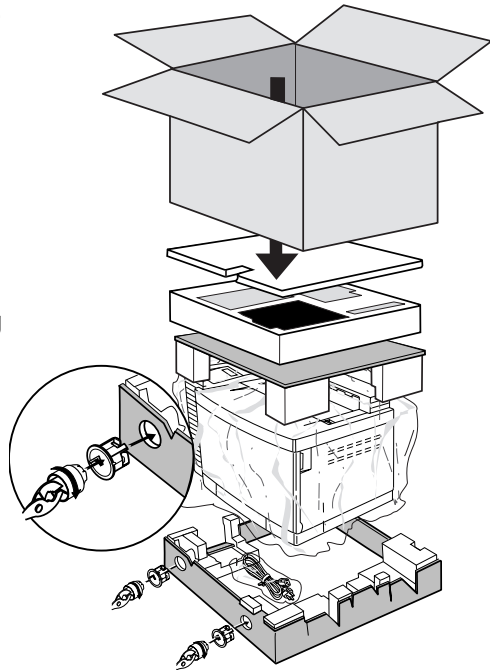


Repack the Printer

- 6 Repack the input feeder in its original shipping carton for storage or shipment.
- » **Note:** *If you're returning the printer for service, you don't need to return the input feeder.*

Repack the Printer

- 1 Ensure that the fuser and fuser cleaner roller are in the printer.
 - 1 With another person's help, put the printer into the plastic bag, and place the printer into the base tray of the shipping carton.
 - 2 Pack the printer for shipment as shown in the illustration.
 - 3 If you're also shipping the power cord and any manuals with the printer, place them in the package.
- » **Note:** *Don't ship these items if you're returning the printer for service.*
- 4 Attach the shipping carton to its base tray with the four joints provided.
 - 5 Ensure that the top of the carton is securely taped.
 - 6 Put the slipping straps around the carton.



A

QMS Customer Support

In This Appendix . . .

- “Sources of Support” on page A-2
- “QMS World-wide Offices” on page A-5

Sources of Support

Several sources of help and information are available, depending on the type of help you need:

Your QMS Vendor

Your local vendor (the one from whom you bought the printer) may be best equipped to help you. Your vendor has specially trained service technicians available to answer questions, and the equipment to analyze your printer problems.

Your Application Vendor

Often, "printing" problems have more to do with the application being used than with the printer. In this case, the application manufacturer is the best source of help.

Q-FAX

Q-FAX, a QMS information retrieval service, provides application notes, technical support notes on common printing problems, and information about printer specifications, options, accessories, consumables, and prices.

In the United States and Canada, call (800) 633-7213 to reach Q-FAX. In all other countries, call (334) 633-3850. Have your fax number handy when you call (or place the call from your fax machine's handset).

You can choose to have either a directory (a list of currently available documents) or a specific document sent to you. The first time you call, request the directory (press 2 on your phone or fax keypad when prompted). Then call back to request specific documents. You can order up to three documents per call.

CompuServe

Through CompuServe, you ask general (non-technical) questions, share information with other users, and access printing information and programs. When you use CompuServe, type `go qmsprint` to go directly to the forum where QMS is located. The QMS library section contains application notes, printer drivers, utilities, technical information, and announcement files.

Internet

The QMS server provides access to technical reports, new product announcements, a trade show schedule, and other general information about QMS.

If you have access to the World Wide Web, you can view the QMS home page at <http://www.qms.com/>. The QMS ftp resource is <ftp.qms.com>.

QMS Customer Response Center (CRC)

You can contact the QMS Customer Response Center (CRC) in three different ways:

- **Telephone**—You can call the CRC at (334) 633-4500 (US) Monday–Friday, 7:00 am–6:00 pm, Central Time.
- » **Note:** *If you call for assistance, have the following information ready so our technicians can help you more quickly:*
 - ☑ Your phone number, fax number, and shipping address
 - ☑ A description of the problem
 - ☑ The printer model
 - ☑ The type of host computer you're using
 - ☑ The type and version of operating system you're using
 - ☑ The interface you're using, and, if serial, the protocol (for example, XON/XOFF)
 - ☑ The application and version you're using
 - ☑ The emulation you're using
 - ☑ Your printer firmware version (listed on the status/start-up pages)
- **Fax**—You can fax questions to the CRC at (334) 633-3716 (US). Provide the same information as listed above, and indicate whether you would like a faxed or a phoned reply.
- **Internet**—If you have access to the World Wide Web, you can access the CRC through the QMS home page at <http://www.qms.com/>

QMS World-wide Offices

QMS United States and Latin America

General Contact

1 (334) 633-4300

Fax 1 (334) 633-4866

Email info@qms.com

Internet <http://www.qms.com>

Information on QMS products, supplies, and accessories, and on the authorized QMS remarketer or service provider nearest you

1 (800) 523-2696

Customer Response Center (CRC)

Technical Assistance

1 (334) 633-4500

7:00 am–6:00 pm Central Time

Fax 1 (334) 633-3716

Internet <http://www.qms.com>

Latin America Fax

1 (334) 639-3347

National Service

Service Information, Installation, and Maintenance Pricing

1 (800) 762-8894

On-Site Service and Depot Repair Information

1 (800) 858-1597

7:00 am–7:00 pm Central Time

Spare Parts Ordering and Information

1 (334) 633-4300 x2530

8:00 am–5:00 pm Central Time

QMS Canada

General Contact

1 (514) 333-5940

Fax 1 (514) 333-5949

Supplies and Accessories

1 (800) 268-0343 x223

National Service

On-Site Service and Depot Repair Information

1 (800) 268-4969

8:30 am–7:00 pm Eastern Time

Spare Parts Ordering and Information

1 (905) 206-9234 x238

8:30 am–5:00 pm Eastern Time

QMS in Japan

General Contact

(+81)-3 3779-9600

Fax (+81)-3 3779-9650

Internet <http://www.qmsj.co.jp>

QMS in Latin America

General Contact

Cra 43 DD#8-42

Oficina 201

Medellin, Colombia

(+57) (4) 312 13 70

Fax (+57) (4) 268 92 97

QMS EMEA

QMS Australia

Anitech

Sydney Business & Tech. Centre

52/2 Railway Parade

2141 Lidcombe NSW

Australia

(+61) 2-9901 3235

Fax (+61) 2-9901 3273

QMS Benelux

**Belgium, Netherlands, and all
unlisted countries**

Planetenbaan 60 'Corner Plaza'

3606 AK Maarssen

The Netherlands

(+31) 346-551333

Fax (+31) 346-550170

Internet <http://www.qms.nl>

QMS France

Vélizy Plus

1 Bis, Rue du Petit Clamart

78142 Vélizy Cedex

France

(+33) 1-410 79 393

Fax (+33) 1-408 30 110

QMS GmbH

**Germany and
Austria**

Gustav Heinemann Ring 212

D-81739 Munich

Germany

(+49) 89 63 02 67 0

Fax (+49) 89 63 02 67 67

QMS Italy	Via della Repubblica 56 43100 Parma Italy (+39) 52–1231 998 Fax (+39) 52–1232 902
QMS Nordic Sweden, Finland, Norway, and Denmark	Arenavägen 41, 6th floor 121 77 Johanneshov Sweden (+46) 8–600 01 30 Fax (+46) 8–600 01 33
QMS South Africa	Saskay House Unit 24 Sunninghill Business Park Peltier Road, Sunninghill, Johannesburg Republic of South Africa (+27) 11–807 6957 Fax (+27) 11–807 6960
QMS UK United Kingdom and Ireland	Old Bridge House, The Hythe Staines, Middlesex TW18 3JF United Kingdom (+44) 1784–442255 Fax (+44) 1784–461641



B

Configuration Menu

In This Chapter . . .

- “Introduction” on page B-2
- “Menu Chart Conventions” on page B-2
- “Administration Menu” on page B-3
- “Installation Menu” on page B-9
- “Operator Control Menu” on page B-10

Introduction

Use this chapter as a quick reference for understanding and navigating the printer's configuration menu. The following menu charts are provided:

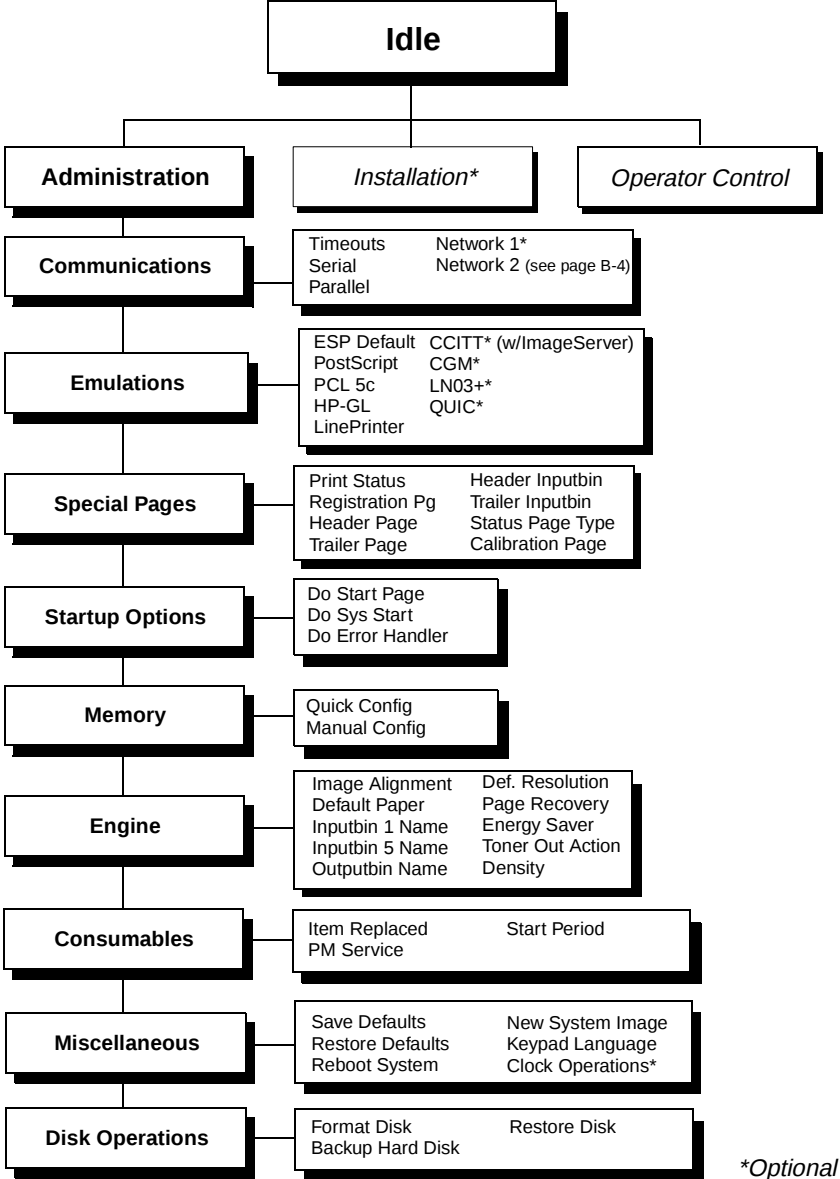
- **Administration menu** on page B-3
 - **Installation menu** on page B-9
 - **Operator Control menu** on page B-9
- » **Note:** *The Copier Menu is displayed in chapter 7, "CrownCopy," of the Options manual.*

Menu Chart Conventions

The following conventions are used in the menu charts:

- Some menu choices are marked as optional or with a *w/item*, indicating that the selection appears in the menu only when the option is installed.
- These charts show only the top-level menus. See chapter 4, "Printer Configuration," in the *Reference* manual for detailed information on menu options.

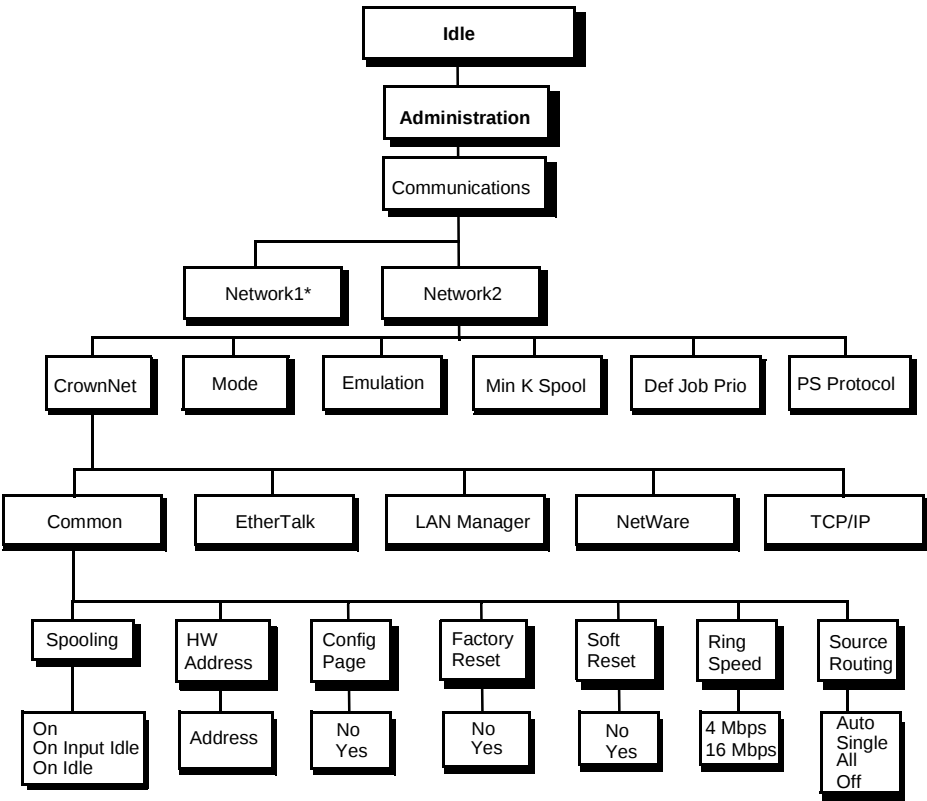
Administration Menu



**Optional*

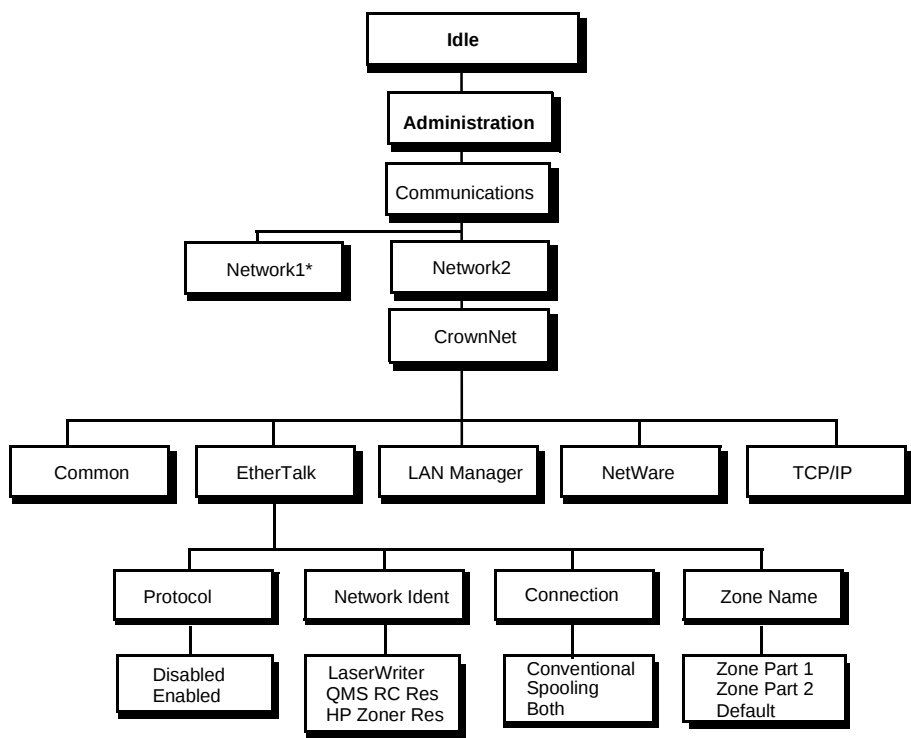
**Administraction/Communications/Network2/
CrownNet Menu**

Common Menu



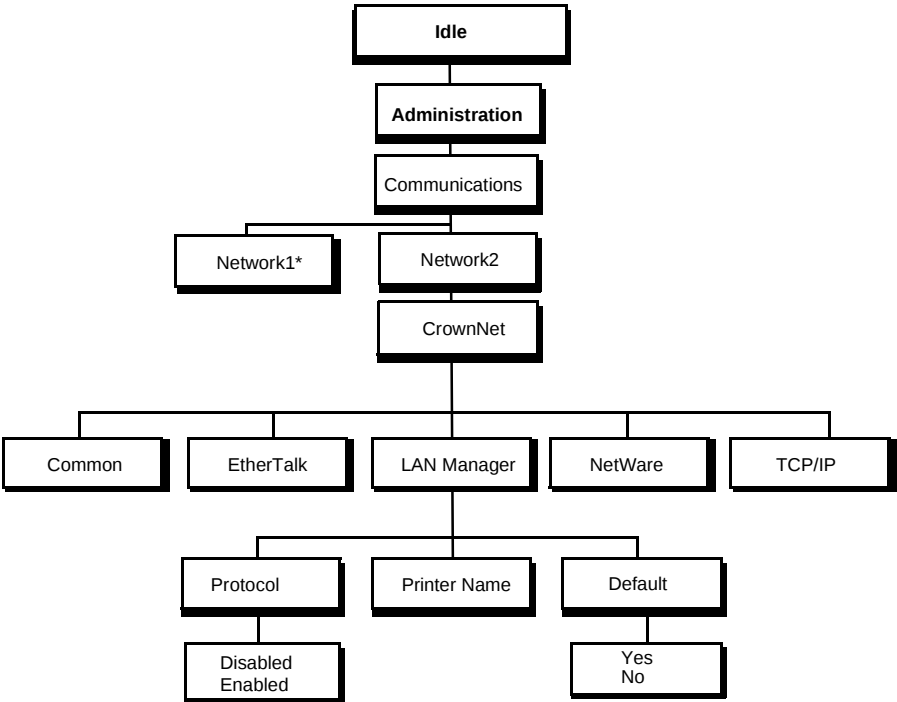
**Optional*

EtherTalk Menu



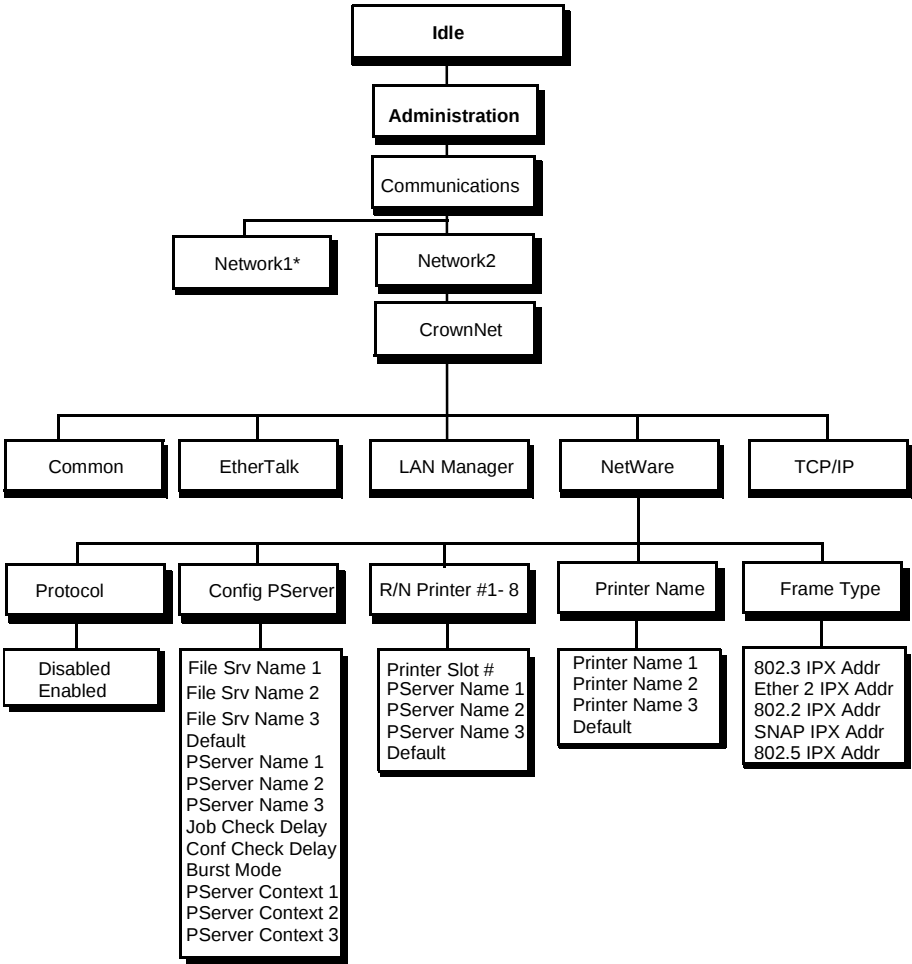
**Optional*

LAN Manager Menu



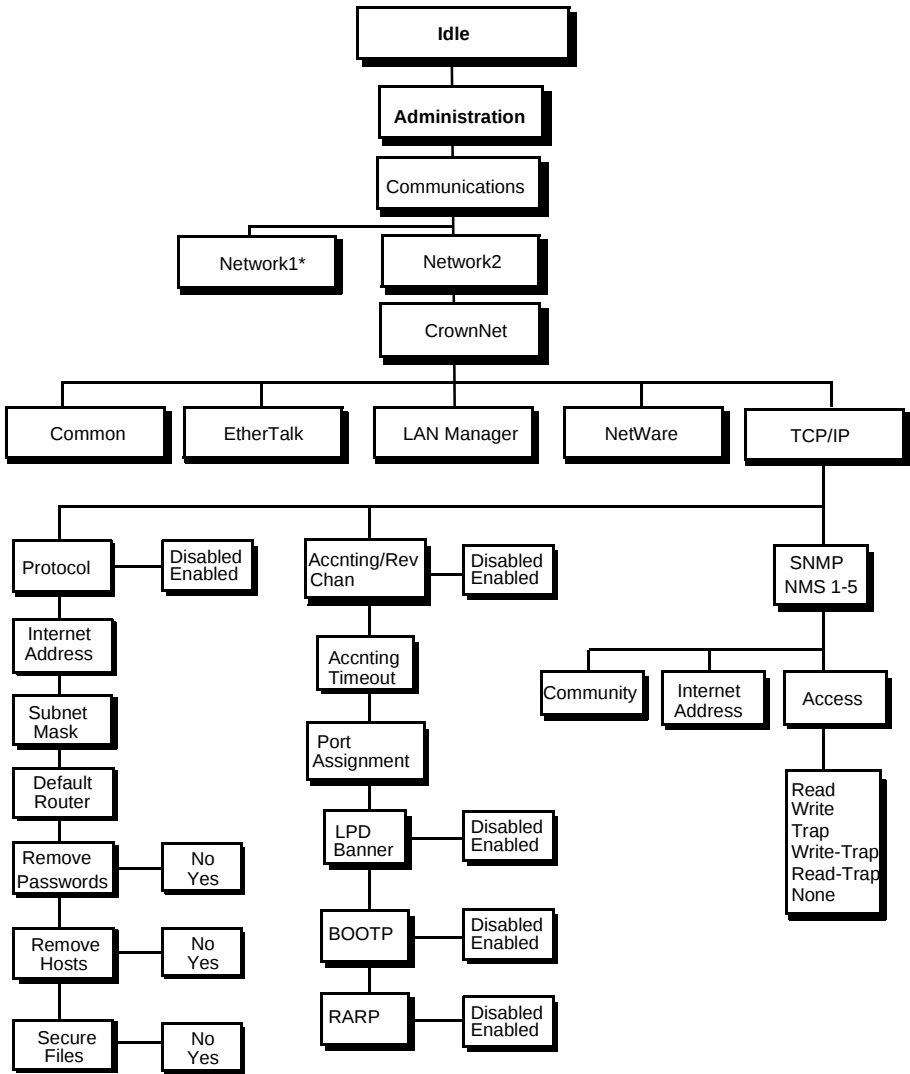
**Optional*

NetWare Menu



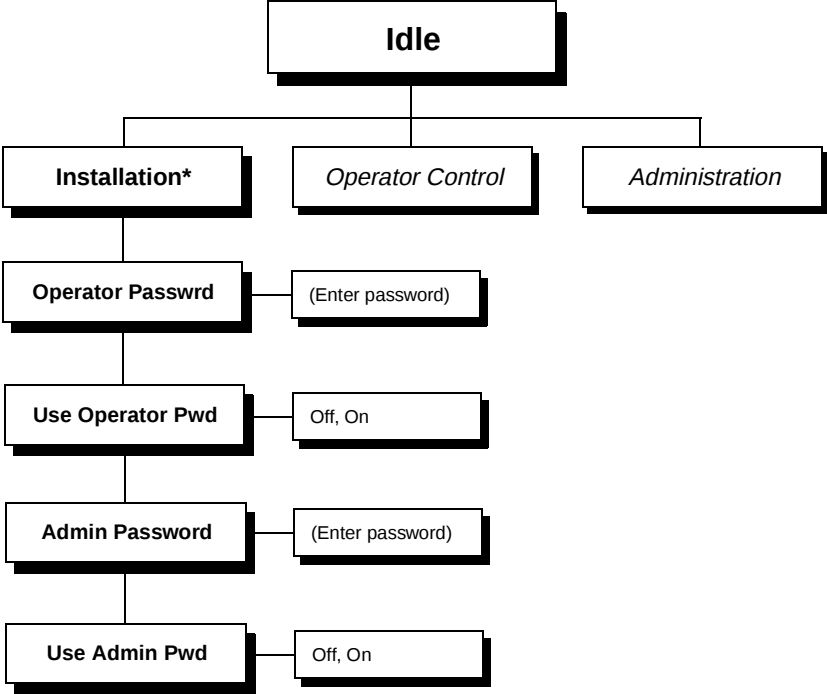
**Optional*

TCP/IP Menu



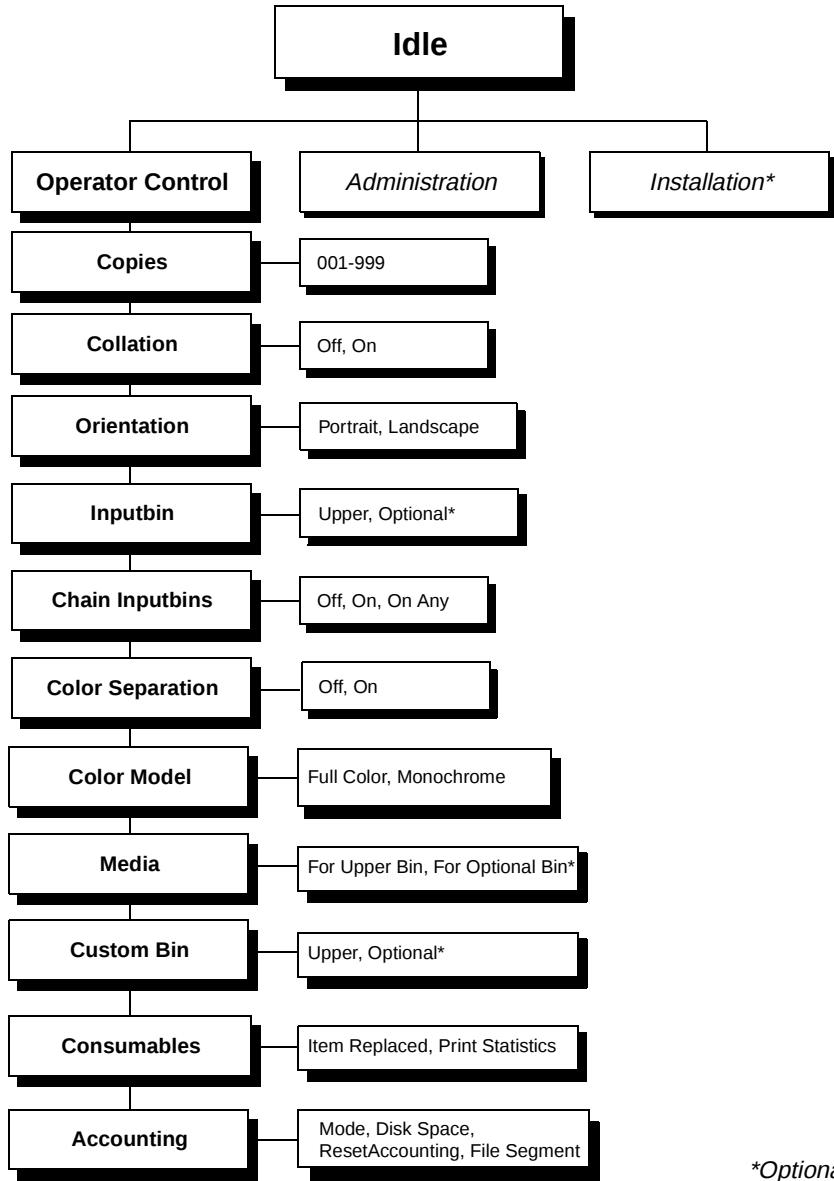
**Optional*

Installation Menu



**Optional*

Operator Control Menu



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