



QMS[®] *magicolor*[®] 330 Print System Options

1800505-001B

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Contents

1 Introduction

Introduction	1-2
About This Manual	1-2
Typographic Conventions	1-3

2 Memory and System Software

Introduction	2-2
Antistatic Protection	2-2
Single In-Line Memory Modules	2-3
Installation Procedure	2-3
Updating System Software	2-7

Minimum Requirements	2-7
Procedure—PC Users—Parallel and Serial, or Ethernet	2-8
System Download Error Pages	2-12

3 Interfaces and Daughterboards

Introduction	3-2
Antistatic Protection	3-2
Network and LocalTalk Interfaces	3-3
What's in an Interface Kit?	3-3
Installation Procedure	3-4
Using a Network Interface	3-6
Using a LocalTalk Interface	3-7
SCSI Interface	3-7
What's in a SCSI Interface Kit?	3-7
Installation Procedure	3-8
Time-of-Day Clock	3-10
What's in the Kit?	3-10
Installation Procedure	3-11

4 Emulations, Fonts, and Other Software

Introduction	4-2
Antistatic Protection	4-2
Emulations	4-3
Downloading an Emulation	4-4
Using an Optional Emulation	4-6
CCITT Emulation	4-6
Disk Fonts	4-6
Downloading Disk Fonts	4-7
PCL 5 Font SIMMs	4-8

Installing a PCL 5 Font SIMM	4-8
Accessing the Fonts	4-10
Kanji Font SIMM	4-11
What's in the Kit?	4-11
Hardware Requirements	4-12
Software Requirements	4-12
Installing a Kanji Font SIMM	4-12
Accessing the Kanji Fonts	4-14
Kanji Font Internal IDE Hard Disk	4-16
What's in the Kit?	4-17
Hardware Requirements	4-17
Software Requirements	4-17
Installing a Kanji Font Internal IDE Hard Disk	4-18
Configuring the Printer for Kanji	4-18
Accessing the Kanji Fonts	4-18
QFORM	4-19

5 Storage Devices

Introduction	5-2
Antistatic Protection	5-2
Identifying Storage Devices	5-3
Internal IDE Hard Disks	5-4
Installing an Internal Hard Disk	5-4
External Storage Devices	5-7
Attaching an External Storage Device	5-7
Turning on an External Storage Device	5-8
Using Jaz and Zip Drives	5-8
Formatting a Storage Device	5-9
Error Messages	5-10
Configuring a Storage Device	5-10
External Storage Devices	5-10
Internal Hard Disks	5-11
Backing Up Data to a Jaz or Zip Drive	5-11
Error Messages	5-12

Restoring Data from a Jaz or Zip Drive	5-13
Error Messages	5-14

6 Hardware Options

Introduction	6-2
Large-Capacity Input Feeder [LCIF]	6-2
What's in the Kit?	6-2
Unpacking the Large-Capacity Input Feeder	6-3
Installing the Large-Capacity Input Feeder	6-6
Security Key	6-10
What's in the Kit?	6-10
Setting Configuration Menu Passwords	6-11
Using Configuration Menu Passwords	6-12
BuzzBox Lite	6-13
What's in the Kit?	6-13
Installing BuzzBox Lite	6-14
Using BuzzBox Lite	6-15
Printer Stand	6-15

7 CrownCopy

Introduction	7-2
Print System Requirements	7-2
What's in the Kit	7-2
Installation	7-3
Flatbed Scanning	7-5
ADF Scanning	7-6
Memory Configuration	7-6
Procedure	7-7
Menu Configuration	7-9
The Copier Menu	7-9
Copy Quality Decisions	7-11
Making Changes to the Copier Menu	7-11
Menu Settings	7-11

Troubleshooting	7-16
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A QMS Customer Support

Sources of Support	A-2
Your QMS Vendor	A-2
Your Application Vendor	A-2
Q-FAX	A-2
CompuServe	A-3
Internet	A-3
QMS Customer Response Center (CRC)	A-4
QMS World-wide Offices	A-5

B Configuration Menu

Introduction	B-2
Menu Chart Conventions	B-2
Administration Menu	B-3
Administration/Communications/Resident NIC/CrownNet	
Menu	B-4
Installation Menu	B-9
Operator Control Menu	B-10

Index



1

Introduction

In This Chapter . . .

- “About This Manual” on page 1-2

Introduction

This manual provides detailed instructions for installing your QMS *magicolor* 330 Print System options. Use this guide in conjunction with your other printer documentation.

About This Manual

This manual contains printer configuration and reference information. It is divided into the following sections:

1	Introduction	Provides an overview of the manual.
2	Memory and System Software	Describes how to install printer memory (SIMMs) and update the system software.
3	Interfaces and Daughterboards	Describes how to install a network (CrownNet Token-Ring, CrownNet Ethernet, and DECnet-TCP/IP) or LocalTalk interface, a SCSI interface, and a time-of-day clock.
4	Emulations, Fonts, and Other Software	Describes how to download fonts and emulations and how to install a Kanji external hard disk and SIMM.
5	Storage Devices	Describes how to install and configure hard disks.
6	Hardware Options	Describes how to install a lower input feeder, a security key, and a BuzzBox Lite warning buzzer.
7	CrownCopy	Describes how to install, set up, and use a CrownCopy scanner.

**A QMS Customer
Support**

Provides world-wide product sales and support telephone numbers and describes how to communicate with QMS through 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

*Mixed-Case
Italic Courier*

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
lowercase italic

PostScript operators and DOS commands
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.

About This Manual

 **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

Memory and System Software

In This Chapter . . .

- “Antistatic Protection” on page 2-2
- “Single In-Line Memory Modules” on page 2-3
- “Updating System Software” on page 2-7

Introduction

This chapter provides details on how to install additional RAM and how to update system software.

Antistatic Protection

- » **Note:** *In compliance with UL guidelines, “The appliance inlet is considered to be the main disconnect device.”*

- ◆ **Caution:** *It's very important to protect the printer controller board and any associated daughterboard or module from electrostatic damage while performing any task involving the controller board.*

*If an antistatic wrist strap is provided in your printer option kit, attach one end of it to your wrist and the other end to any convenient electrical ground (for example, the bare metal chassis of equipment, as on the back of a computer, that is plugged in but **turned off**). Never attach the wrist strap to any piece of equipment with an electrical current present. Turn off all power switches first. Plastic, rubber, wood, painted metal surfaces, and telephones are not acceptable grounding points. The printer isn't an acceptable grounding point because it must be unplugged before you perform this task.*

If you don't have an antistatic wrist strap, discharge your body's static electric charge by touching a grounded surface before you handle any printer boards or components and before removing the controller board. Also avoid walking around after grounding yourself.

Single In-Line Memory Modules

Single in-line memory modules (or SIMMs) are compact circuit boards with surface-mount memory chips.

Your QMS *magicolor* 330 Print System comes with the following printer memory:

- QMS *magicolor* 330 CX Print System—64 MB RAM
- QMS *magicolor* 330 EX Print System—192 MB RAM

However, you can upgrade either of these models to a maximum of 384 MB of RAM through the installation of additional SIMMs.

Additional memory allows you to download more fonts and increase the printer's buffer (area where data sent from the computer is stored while waiting to be printed).

Installation Procedure

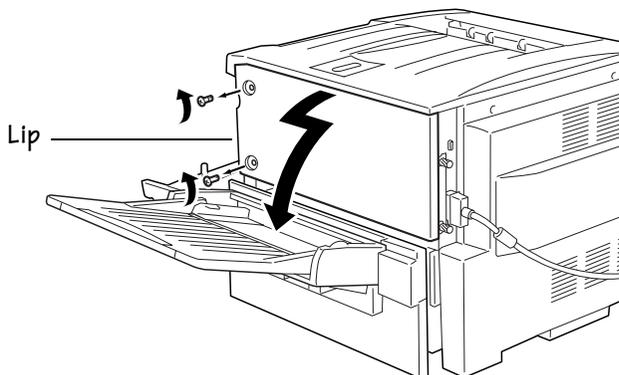
-
- ◆ **Caution:** *It's very important to protect the printer controller board and SIMM from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 2-2.*

Always handle circuit boards by the edges only.

- 1 **In case you need to restore any memory settings after the SIMM installation, print an advanced status page.**
 - » **Note:** *Installing SIMMs automatically restores defaults. If your memory settings are specific to your environment, print an advanced status page before installing SIMMs, so you can recover the current memory settings.*
- 2 **Turn off the printer, and then disconnect the power cord and all interface cables from the printer.**
- 3 **Open the printer's front cover.**

Single In-Line Memory Modules

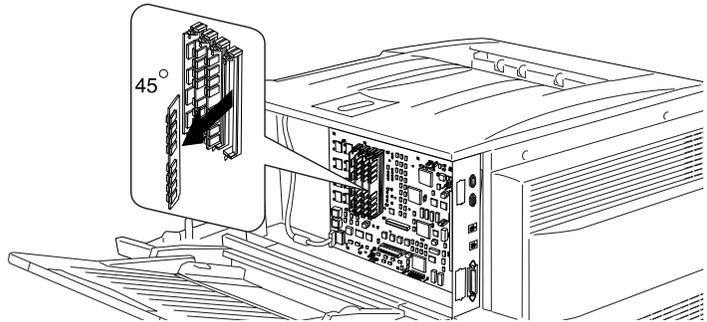
- 4 Slide the fuser unit out slightly.
- 5  Loosen the two screws on the controller board panel and, using the lip on the left side of the panel, pull the panel off of the printer.



- 6  If you need to remove a SIMM before installing one, remove it as follows; otherwise skip to step 7.
 - » **Note:** *If all the SIMM connectors are filled and you want to install more memory, you have to exchange one or more SIMMs for SIMMs with a greater memory capacity.*
 - a Using both thumbs, pull the latches (one on each side of the SIMM connector) outward.
 - b Tilt the SIMM forward to a 45° angle away from the SIMM connector.

Single In-Line Memory Modules

- c Lift the SIMM out.

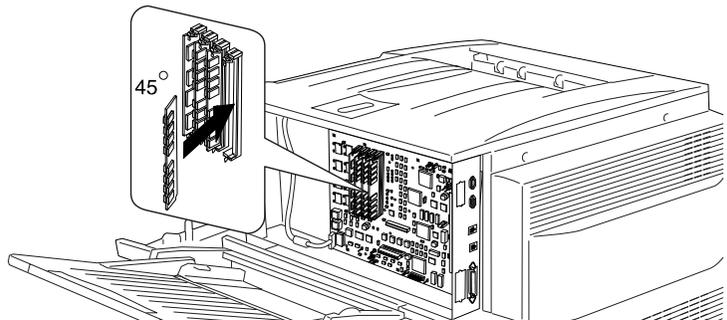


- 7 Remove the new SIMM from its antistatic bag.

- 8 Insert the new SIMM into the SIMM connector. 

- a Hold the SIMM at a 45° angle to the controller board, with the notch on the right side and the bottom edge of the SIMM in the connector.

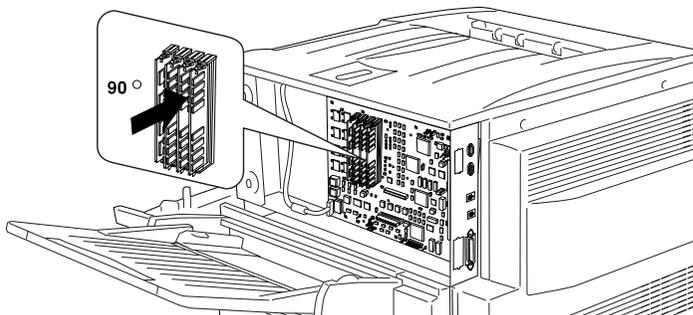
» **Note:** You can insert a SIMM in any SIMM connector as long as DRAM0 and the SIMM connector before the one you're installing are occupied.



Single In-Line Memory Modules

- b Tilt the SIMM back to a 90° angle until you feel it snap into place.

When seated, the SIMM stands straight out, firmly in place. If you cannot snap the SIMM into place, do not force it. Reposition it, making sure that the bottom of the SIMM is seated completely in the connector.



- 9 Repeat steps 7 and 8 for each additional SIMM being installing.

- 10 Reinstall the controller board panel on the printer. 

- 11 Tighten the two screws.

- 12 Push the fuser unit back in.

- 13 Close the printer's front cover.

- 14 Reconnect all interface cables.

- 15 Reconnect the power cord, and turn on the printer.

- 16 Print a startup page.

Check that the startup page states the total size of the RAM installed in your printer.

- 17 If necessary, refer to the advanced status page you printed in step 1 to reconfigure printer memory.

Updating System Software

The system software in your QMS *magicolor* 330 CX Print System is stored in flash ROM, read-only memory that can be erased and rewritten to “in a flash.” The system software in your QMS *magicolor* 330 EX Print System is stored on the hard disk. Updated system software allows you to take advantage of future enhancements to the printer.

- » **Note:** *Updating system software on a hard disk requires that the SIMM in the first slot on the printer controller board have at least 16 MB of memory.*

 - ◆ **Caution:** *Unless the printer is nonfunctional, you should update the system software using CrownAdmin over Ethernet. (Refer to the CrownAdmin online help for instructions). A nonfunctional system requires the parallel connection from a PC, as described in the rest of this section.*
-

Minimum Requirements

Downloading via...	Notes
Parallel	Recommended method for downloading from a non-networked IBM or compatible PC because it's the fastest. No additional cables or changes of port settings required.
Serial	For use when the parallel method is unavailable. Requires either a null modem cable or a standard serial cable with a null modem adaptor attached.

Updating System Software

Macintosh	Requires a connection from the Macintosh's serial port to the serial port of the printer and either a null modem cable or a standard serial cable with a null modem adaptor attached.
Ethernet	Requires a 10BaseT/100BaseTX connection to the printers resident network interface or a connection to the optional network interface.

Procedure—PC Users—Parallel and Serial, or Ethernet

Decompressing the System Software

- 1 Switch to the MS-DOS prompt.
- 2 Create a new directory on your PC.
- 3 Change to this directory.
- 4 Insert the printer system software disk in your PC's 3.5" disk drive.
- 5 Type `x:pkunzip x:system.` where `x` is the name of the disk drive in which you inserted the system software disk.
- 6 Follow the prompts.

They instruct you to insert the system software disks in the following order:

- a Last disk (system software disk 3)
 - b Disk 1 (system software disk 1)
 - c Disk 2 (system software disk 2)
 - d Disk 3 (system software disk 3)
- 7 Turn on the printer, wait for `IDLE` to appear in the message window, and then print an advanced status page.

The advanced status page provides a record of all current configuration settings, so you can verify that they are the same or recover your settings after the system software has been updated.

Downloading the System Software—Parallel

1 Access the Administration/Miscellaneous/New System Image menu.

Menu	Administration/Miscellaneous/New System Image
Choices	Yes—Download new system code No—Don't download new system code
Default	No

2 Select Yes in the New System Image menu.

The printer automatically reboots and waits for the new system software (image) to be sent via your PC's parallel port.

3 Send the new system image to the printer.

■ Type

```
copy /b *.dl lpt#<
```

where # is 1 to 3. (/b refers to binary files.)

4 While the system software is loading, the Online LED blinks off and on, and the message window displays

```
Downloading image  
via parallel port.
```

5 After the new system software has been written to ROM, the printer returns to IDLE.

» **Note:** *The new system image doesn't erase the old image until the printer verifies that the new image is valid.*

6 Restart the printer to activate the new system software.

7 Print another advanced status page, and verify that the configuration settings are the same.

Downloading the System Software—Serial

- 1 Connect the serial cable to the printer.**
- 2 Set the PC's baud rate to 38400 by typing**

```
mode com# 38400 n 8 ↵
```

(where # is the serial communications port 1 to 4).

- 3 Access the Administration/Communication/Serial menu, set the Hardware Flow Control RTS and CTS values to On, press the Online key or Menu key one or more times, and then select Yes to Save Changes.**
- 4 Access the Administration/Miscellaneous/New System Image menu.**

Menu	Administration/Miscellaneous/New System Image
Choices	Yes—Download new system code No—Don't download new system code
Default	No

- 5 Select Yes in the New System Image menu.**

The printer automatically reboots and waits for the new system software (image) to be sent via your PC's serial port (YES remains in the message window until the new image is sent).

- 6 Type**

```
copy /b *.dl com#↵
```

where # is 1 to 4. (/b refers to binary files.)

The Downloading process takes about 15 minutes depending on the size of the file and the speed of your computer. The Ready LED blinks as the new system image is copied to the printer.

- 7 While the system software is loading, the Online LED blinks off and on, and the message window displays**

```
Downloading image  
via serial port.
```

- 8 After the new system software has been written to ROM, the printer returns to **IDLE**.
- » **Note:** *The new system image doesn't erase the old image until the printer verifies that the new image is valid.*
- 9 Restart the printer to activate the new system software.
- 10 Print another advanced status page, and verify that the configuration settings are the same.

Downloading the System Software—Ethernet

- 1 Access the Administration/Miscellaneous/New System Image menu.

Menu	Administration/Miscellaneous/New System Image
Choices	Yes—Download new system code No—Don't download new system code
Default	No

- 2 Select **Yes** in the **New System Image** menu.

The printer automatically reboots and waits for the new system software (image) to be sent via your PC's parallel port.

- 3 Open an ftp session at your PC or workstation by typing one of the following commands:

```
ftp printername␣    (for example, ftp pctdev6␣)
ftp ipaddress␣      (for example, ftp 161.33.130.45␣)
```

- 4 When prompted for a user name and password, press **Enter**.

An ftp> prompt displays.

- 5 At the ftp> prompt, change to binary mode by typing

```
bin␣
```

- 6 At the ftp> prompt, send the emulation file to the printer's hard disk by typing

```
put filename.dl␣
```

Updating System Software

- 7 where *filename* is the name of the system file. **While the system software is loading, the Online LED blinks off and on, and the message window displays**

```
Downloading image
```

- 8 **At the ftp> prompt, end the ftp session by typing**

```
quit↵
```
- 9 **When the Disk light stops flashing and the printer's message window reads Idle for at least 30 seconds, turn the printer off and then on again.**
- 10 **Restart the printer to activate the new system software.**
- 11 **Print another advanced status page, and verify that the configuration settings are the same.**

System Download Error Pages

The following error pages print if downloading the system software was unsuccessful. The possible problems listed may give you an idea as to what went wrong with the download. Each error page lists one of the following two-line messages, the name of the product, and the upgrade system release number.

Error Message	Possible Problem
Unable to replace FLASH image due to insufficient memory!	The system cannot use 64 MB—you need to add more memory.
Unable to reprogram FLASH due to error in image contents!	Error detected in file or it did not understand the file—try to resend.
Unable to reprogram FLASH due to inability to locate imagefile!	Possibly a low memory error—you need to add more memory.
Unable to replace FLASH image due to product incompatibility!	Wrong system code sent—possibly for another QMS printer.



3

Interfaces and Daughterboards

In This Chapter . . .

- “Antistatic Protection” on page 3-2
- “Network and LocalTalk Interfaces” on page 3-3
- “SCSI Interface” on page 3-7
- “Time-of-Day Clock” on page 3-10

Introduction

The following options mount on your printer's controller board:

- Network interfaces (CrownNet Ethernet, CrownNet Token-Ring, and DECnet-TCP/IP)
- LocalTalk interface
- SCSI interface
- Y2K-compliant time-of-day clock

Antistatic Protection

- » **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

- ◆ **Caution:** *It's very important to protect the printer controller board and any associated daughterboard or module from electrostatic damage while performing any task involving the controller board.*

***If an antistatic wrist strap is provided** in your printer option kit, attach one end of it to your wrist and the other end to any convenient electrical ground (for example, the bare metal chassis of equipment, as on the back of a computer, that is plugged in but **turned off**). Never attach the wrist strap to any piece of equipment with an electrical current present. Turn off all power switches first. Plastic, rubber, wood, painted metal surfaces, and telephones are not acceptable grounding points. The printer isn't an acceptable grounding point because it must be unplugged before you perform this task.*

***If you don't have an antistatic wrist strap**, discharge your body's static electric charge by touching a grounded surface before you handle any printer boards or components and before removing the controller board. Also avoid walking around after grounding yourself.*

Network and LocalTalk Interfaces

Your printer supports the following interface cards:

- CrownNet Ethernet 10BaseT (TCP/IP, NetWare, EtherTalk, LAN Manager/LAN Server) for an additional 10BaseT CrownNet Ethernet connection
- CrownNet Fast Ethernet 10BaseT/100BaseTX (TCP/IP, NetWare, EtherTalk, LAN Manager/LAN Server)
- CrownNet Token-Ring (TCP/IP, NetWare, LAN Manager/LAN Server)
- DECnet-TCP/IP
- LocalTalk

You can install one of these interface cards in addition to the three standard interfaces—parallel, serial, and CrownNet Fast Ethernet (TCP/IP, NetWare, EtherTalk, LAN Manager/LAN Server). The printer's Simultaneous Interface Operation (SIO) allows all of these interfaces to be active at the same time. In other words, your printer can simultaneously communicate through all four ports with four hosts, either computers or networks.

What's in an Interface Kit?

An optional interface kit includes the following:

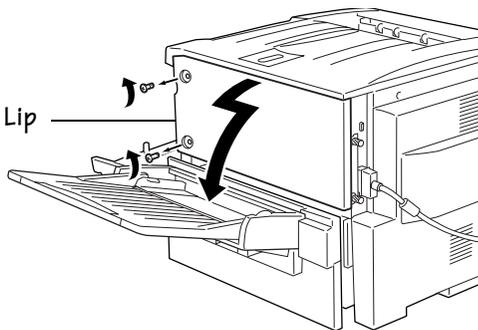
- An interface card
- Interface documentation (in hardcopy and/or on CD-ROM)

The kit may also include additional parts not required for interface installation on this printer.

Installation Procedure

-
- ◆ **Caution:** *It's very important to protect the printer controller board and any associated circuit boards from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 3-2. In addition, always handle circuit boards by the edges only.*
-

- 1 Turn off the printer, and then disconnect the power cord and all interface cables from the printer.
- 2 Open the printer's front cover.
- 3 Slide the fuser unit out slightly.
- 4  Loosen the two screws on the controller board panel and, using the lip on the left side of the panel, pull the panel off of the printer.

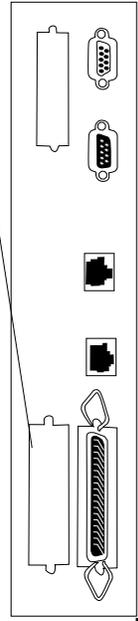


5 Remove the two screws holding the metal plate over the optional interface opening.

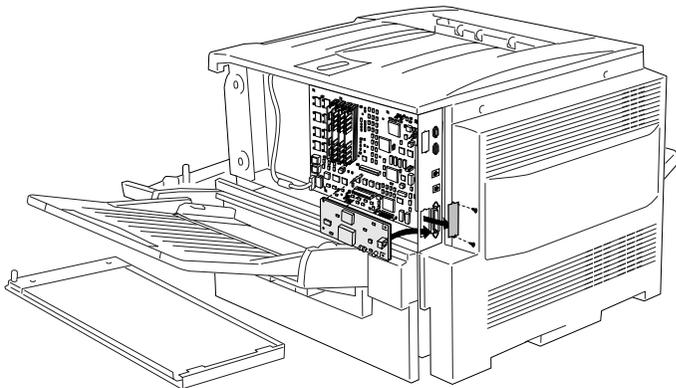
The optional interface opening is labelled "Option." It's located next to the "Parallel" port. Save the two screws. (You'll use them when you install the optional interface card.) You can discard the plate.

6  Attach the interface card to the controller board.

- a Position the interface card so that its I/O connector slides into its opening in the interface panel and that its 80-pin connector aligns with the 80-pin connector on the controller board.
- b Gently press the interface card down until its connector is fully seated and the card is secured by the plastic support post(s).



Caution: *Make sure that the connectors on the interface card and controller board are properly aligned. Damage to the interface card and/or controller board could result if the pins are misaligned.*



Network and LocalTalk Interfaces

- 7 Secure the interface card to the interface panel with the two screws you removed earlier.
 - 8 Reinstall the controller board panel on the printer. 
 - 9 Tighten the two screws.
 - 10 Push the fuser unit back in.
 - 11 Close the printer's front cover.
 - 12 Reconnect all interface cables.
 - 13 Reconnect the power cord, and turn on the printer.
- » **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*
- 14 **Print a startup page.**

Check that the startup page lists the interface just installed under "Options."

Using a Network Interface

Once a network interface is installed, refer to the following for more information:

- For a CrownNet interface, refer to the *QMS CrownNet Setup Guide* for information on connecting to the network, installing the software, and configuring the interface and the network. In addition, chapter 2, "Printer Configuration," of *QMS CrownNet System Administrator's Guide*, provides complete configuration information.
- For a DECnet-TCP/IP interface, refer to the *QMS DECnet-TCP/IP Setup Guide* and the *TCP/IP Protocol Option User's Guide*.
- Your application and network documentation contain information on printing over the network.

Using a LocalTalk Interface

Once a LocalTalk interface is installed, refer to the following for more information:

- For configuration information, refer to chapter 4, “Printer Configuration,” in the *Reference* manual.
- Your application and Macintosh documentation contain information on printing via LocalTalk.

SCSI Interface

The optional SCSI interface allows you to connect up to three optional SCSI hard disks or up to two SCSI hard disks, and/or an Iomega Jaz/Zip drive, and an optional CrownCopy scanner. Hard disks, and/or Iomega Jaz/Zip drive, provide storage for fonts, emulations, and other files, increase the number of pages that can be collated, and provide a secondary storage area for spooled data, while providing virtual memory capabilities.

What's in a SCSI Interface Kit?

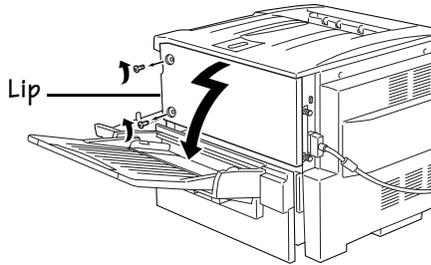
An optional SCSI interface kit includes the following:

- SCSI interface card
- SCSI interface card ribbon cable
- Connector face plate
- Two larger screws
- Two smaller screws

Installation Procedure

-
- ◆ **Caution:** *It's very important to protect the printer controller board and any associated circuit boards from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 3-2. In addition, always handle circuit boards by the edges only.*
-

- 1 Turn off the printer, and then disconnect the power cord and all interface cables from the printer.
- 2 Open the printer's front cover.
- 3 Slide the fuser unit out slightly.
- 4  Loosen two screws (one on each end of the controller board panel) and, using the tab on the lower side of the panel, pull the panel off.

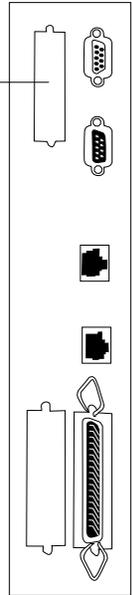
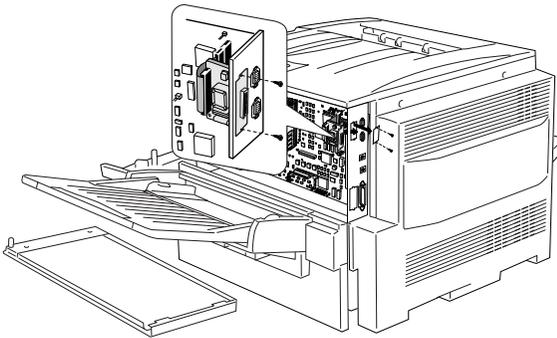


- 5  **Remove the two screws holding the metal plate over the SCSI interface opening.**

The SCSI interface opening is labelled “SCSI.” It’s located next to the “Serial” and “Key” ports.

You can discard the metal plate and screws.

- 6 **Attach the ribbon cable to its connector on the SCSI interface card.**



- 7 **Attach the SCSI interface card to the controller board.**

- Position the SCSI interface card so that its ribbon cable connector aligns with the SCSI connector on the controller board.
- Gently press the ribbon cable connector down until it’s fully seated.



Caution: *Make sure that the connectors on the ribbon cable and the controller board are properly aligned. Damage to the controller board could result if the pins are misaligned.*

- Insert the SCSI interface card connector into its opening in the interface panel.

Time-of-Day Clock

- d Secure the SCSI interface card to the interface panel with the two larger screws in the kit.
 - 8 Reinstall the controller board panel on the printer. 
 - 9 Tighten the two screws.
 - 10 Push the fuser unit back in.
 - 11 Close the printer's front cover.
 - 12 Reconnect all interface cables.
 - 13 Reconnect the power cord and turn on the printer.
- » **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*
- 14 Print a startup page.
Check that the startup page lists the interface just installed under "Options."

Time-of-Day Clock

The Y2K-compliant time-of-day clock provides time and date information on the startup page and in the accounting data.

What's in the Kit?

The optional time-of-day clock kit includes only the following:

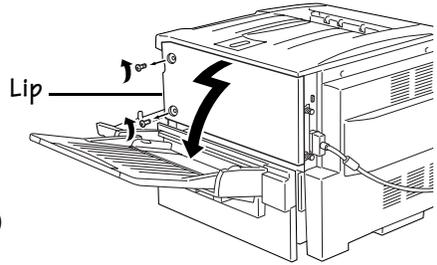
- Time-of-day clock

Installation Procedure

-
- ◆ **Caution:** *It's very important to protect the printer controller board and any associated circuit boards from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 3-2. In addition, always handle circuit boards by the edges only.*
-

Time-of-Day Clock

- 1 Turn off the printer, and then disconnect the power cord and all interface cables from the printer.
- 2 Open the printer's front cover.
- 3 Slide the fuser unit out slightly.
- 4  Loosen two screws (one on each end of the controller board panel) and, using the tab on the lower side of the panel, pull the panel off.
- 5 Attach the time-of-day clock to the controller board. 



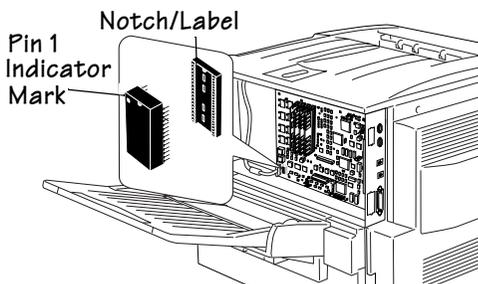
WARNING: Because the time-of-day clock includes an internal battery, there is a danger of explosion if the clock is incorrectly installed or replaced. Replace it only with a similar QMS time-of-day clock. Dispose of any used time-of-day clock in accordance with local laws and regulations.

ACHTUNG! Da der Uhrenbaustein eine interne Batterie enthält, besteht Explosionsgefahr, falls dieser falsch eingesetzt oder ersetzt wird. Er darf nur durch einen Baustein gleichen Typs ersetzt werden. Bitte entsorgen Sie den Baustein gemäß den geltenden Entsorgungsbestimmungen.

AVERTISSEMENT! Dû au fait que l'horloge interne de l'imprimante est munie d'une batterie interne, il y a un risque d'explosion si celle-ci est mal installée ou remplacée. La remplacer seulement avec une horloge similaire à l'horloge interne QMS. Se départir de toute horloge interne défectueuse en respectant les lois et réglementations en vigueur.

Time-of-Day Clock

- a Locate the time-of-day clock socket on the controller board and the pin 1 notch or printed label.



- b Locate the pin 1 indicator mark on the top of the time-of-day clock.

This mark may be a notch or a slight depression on one end of the clock.

- c Align this indicator mark with the pin 1 notch or printed label on the controller board.
- d Gently press on the time-of-day clock until it's firmly seated.



Caution: *Make sure that the pins on the time-of-day clock are properly aligned with those in the receiving socket on the controller board. Damage to the time-of-day clock and/or controller board could result if the pins are misaligned.*

- 6 Reinstall the controller board panel on the printer.



- 7 Tighten the two screws.

- 8 Push the fuser unit back in.

- 9 Close the printer's front cover.

- 10 Reconnect all interface cables.

- 11 Reconnect the power cord and turn on the printer.

» **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

- 12 Print a startup page.

Check that the time-of-day clock is listed under "Options" on the startup page.



4

Emulations, Fonts, and Other Software

In This Chapter . . .

- “Emulations” on page 4-3
- “Disk Fonts” on page 4-6
- “PCL 5 Font SIMMs” on page 4-8
- “Kanji Font SIMM” on page 4-11
- “Kanji Font Internal IDE Hard Disk” on page 4-16
- “QFORM” on page 4-19

Introduction

Your printer has several software options which expand its capabilities:

- QMS emulations
- QMS ProCollection font disk and font SIMM
- QMS ProCollection font SIMM
- QMS Intellifont font SIMM
- QMS Kanji font SIMM and font internal hard disk
- QMS ImageServer
- QMS QFORM

Antistatic Protection

- » **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

-
- ◆ **Caution:** *It's very important to protect the printer controller board and any associated daughterboard or module from electrostatic damage while performing any task involving the controller board.*

If an antistatic wrist strap is provided in your printer option kit, attach one end of it to your wrist and the other end to any convenient electrical ground (for example, the bare metal chassis of equipment, as on the back of a computer, that is plugged in but **turned off**). Never attach the wrist strap to any piece of equipment with an electrical current present. Turn off all power switches first. Plastic, rubber, wood, painted metal surfaces, and telephones are not acceptable grounding points. The printer isn't an acceptable grounding point either because it must be unplugged before you perform this task.

If you don't have an antistatic wrist strap, discharge your body's static electric charge by touching a grounded surface before you handle any printer boards or components and before removing the controller board. Also avoid walking around after grounding yourself.

Emulations

Optional emulations, such as CGM, LN03 Plus, and XES/UDK, are available as PostScript files on floppy disks. This section describes how to download an optional emulation to the printer's hard disk.

- » **Note:** *You must have at least one hard disk, internal or external, attached to the printer in order to use an optional emulation. If more than one hard disk is available, the emulation automatically installs itself on the disk with the most free storage space. QMS recommends that you have at least 4 MB of memory above the base configuration and that you add at least 1 MB memory to each emulation installed. This ensures that the printer can run the emulation without slowing down performance.*

Downloading an Emulation

Via CrownAdmin

We recommend that you use CrownAdmin to download an emulation. Refer to the CrownAdmin online help for instructions.

Via a Serial or Parallel Interface

- 1 Turn on the printer, and wait for **IDLE** to appear in the message window.
- 2 Insert the emulation disk in your PC's 3.5" disk drive, and change to that drive (for example, if you're using the A drive, type **a:↵**).
- 3 Send the emulation to the printer's hard disk.

- If your PC and printer are connected through the parallel port, type

```
copy /b *.ps lpt#↵
```

where # is 1 to 3. (/b refers to binary files.)

- If your PC and printer are connected through the serial port, type

```
copy /b *.ps com#↵
```

where # is 1 to 4. (/b refers to binary files.)

- 4 When downloading is complete, reboot the printer.

The emulation should be listed in the Options section of the printer's startup page, in the Administration/Emulation printer's configuration menu, and on the advanced status page.

Via an Ethernet Interface

- » **Note:** Before you begin this procedure, your printer and PC (or UNIX workstation) must be connected to an Ethernet network running TCP/IP and have valid IP addresses.

- 1 If your PC is running Windows, change to DOS.

- 2 Insert the emulation disk in your PC's 3.5" disk drive, and change to that drive (for example, if you're using the A drive, type `a:↵`).
- 3 If you want to download the emulation from a UNIX workstation, copy the installation file from your PC to a temporary directory on your workstation.
- 4 Turn on the printer, and wait for `IDLE` to appear in the message window.
- 5 Open an `ftp` session at your PC or workstation by typing one of the following commands:

```
ftp printername↵    (for example, ftp pctdev6↵)  
ftp ipaddress↵      (for example, ftp 161.33.130.45↵)
```

- 6 When prompted for a user name and password, press Enter.

An `ftp>` prompt displays.

- 7 At the `ftp>` prompt, change to binary mode by typing

```
bin↵
```

- 8 At the `ftp>` prompt, send the emulation file to the printer's hard disk by typing

```
put filename.ps↵
```

where *filename* is the name of the installation file.

The printer's message window reads `1 Active Job`, and the Disk light flashes to indicate that the emulation is being downloaded to the hard disk. The `ftp>` prompt returns when the emulation has finished loading.

- 9 At the `ftp>` prompt, end the `ftp` session by typing

```
quit↵
```

- 10 When the Disk light stops flashing and the printer's message window reads `Idle` for at least 30 seconds, turn the printer off and then on again.

Disk Fonts

11 When the printer's message window reads `Idle` again, the emulation is ready to use.

The emulation should be listed in the Options section of the printer's startup page, in the Administration/Emulation printer's configuration menu, and on the advanced status page.

- » **Note:** *You may want to erase any installation files left on your PC (and/or workstation), and then remove any temporary directories.*

Using an Optional Emulation

Refer to the documentation that came with your emulation for configuration and usage instructions.

CCITT Emulation

A CCITT emulation (Group 4, monochrome only) is available through the QMS ImageServer option, which image-enables your printer, allowing it to print many images at or near the rated engine speed and eliminating the need for a computerdedicated to rasterizing images. For complete information, refer to the documentation that comes with the ImageServer option.

Disk Fonts

Optional fonts, such as the 65 ProCollection fonts for the HP emulations on your printer and other special PostScript fonts, are available as PostScript files on floppy disks. This section describes how to download optional fonts from a floppy disk to the printer's hard disk.

- » **Note:** *At least one hard disk (internal or external) must be present on your printer before you can download a font (from CrownAdmin). If more than one hard disk is available, the font automatically installs itself on the disk with the most free storage space.*

Downloading Disk Fonts

Via CrownAdmin

We recommend that you use CrownAdmin to download fonts. Refer to the CrownAdmin online help for instructions.

Via a Serial or Parallel Interface

This procedure contains the instructions for downloading the fonts from a floppy disk onto your printer's hard disk.

- 1 Connect the PC to the printer's parallel or serial port.**
- 2 Turn on the printer, and wait for IDLE to appear in the message window.**
- 3 Insert the font disk in your PC's 3.5" disk drive, and change to that drive (for example, if you're using the A drive, type a:↵).**
- 4 Send the fonts to the printer's hard disk.**
 - If your PC and printer are connected through the parallel port, type

```
copy /b *.ps lpt#↵
```

where # is 1 to 3. (/b refers to binary files.)
 - If your PC and printer are connected through the serial port, type

```
copy /b *.ps com#↵
```

where # is 1 to 4. (/b refers to binary files.)
- 5 When the downloading is complete, reboot the printer.**

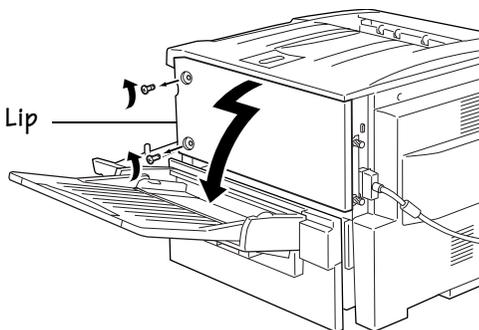
PCL 5 Font SIMMs

The QMS *magicolor* 330 supports 2 PCL 5 font SIMMs: the QMS ProCollection font SIMM and the QMS Intellifont font SIMM. The QMS ProCollection SIMM contains 65 fonts. The QMS Intellifont SIMM contains 17 fonts.

Installing a PCL 5 Font SIMM

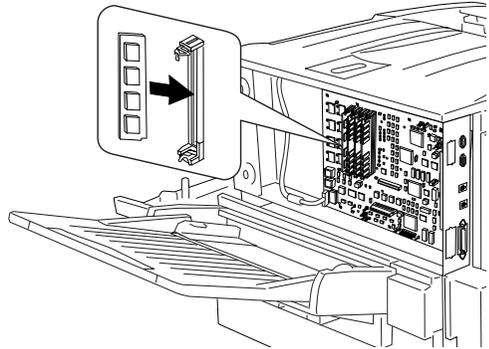
-
- ◆ **Caution:** *It's very important to protect the printer controller board and SIMM from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 4-2. In addition, always handle circuit boards by the edges only.*
-

- 1 Turn off the printer, and then disconnect the power cord and all interface cables from the printer.
- 2 Open the printer's front cover.
- 3 Slide the fuser unit out slightly.
- 4  Loosen the two screws on the controller board panel and, using the lip on the left side of the panel, pull the panel off of the printer.



- 5  **Insert the font SIMM into the font SIMM connector.**

The font SIMM connector is smaller than the RAM SIMM connector. Hold the SIMM at a 45° angle to the controller board, with the notch on the right side and the bottom edge of the SIMM in the connector.



- 6 **Tilt the SIMM up toward you to a 90° angle until you feel it snap into place.**

When seated, the SIMM stands upright, firmly in place.



Caution: *If you can't snap the SIMM into place, don't force it. Reposition it, making sure that the bottom of the SIMM is seated completely in the connector.*

- 7 **Reinstall the controller board panel on the printer.** 

8 **Tighten the two screws.**

9 **Push the fuser unit back in.**

10 **Close the printer's front cover.**

11 **Reconnect all interface cables.**

12 **Reconnect the power cord and turn on the printer.**

» **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

13 **Print a startup page.**

Check that the startup page indicates the font SIMM just installed under "Options." It's identified as cartridge2%.

14 Print an advanced status page.

- a Using the Administration/Special Pages/Status Page Type menu, change the status page type to Advanced.
- a Using the Administration/Special Pages/Print Status menu, print the status page.

The list of HP PCL fonts includes all of the new fonts. Keep this status page for reference when accessing these fonts.

15 Ensure that the Administration/Memory/Disk Cache memory client is set to at least 20 KB.

◆ **Caution:** *You may need to decrease one of the other memory clients before increasing the Disk Cache client. However, you should do this only if you're familiar with adjusting memory settings. Incorrect use of this option could cause your system to operate incorrectly.*

Accessing the Fonts

After you install the font SIMM and configure the printer, you're ready to access the fonts. Most applications handle font selection for you. To access the fonts through your application, you must use an application containing a compatible driver (for example, ProCollection uses an HP driver). The driver lists each font by name or refers to the fonts as a group.

Using Your PCL Application

Use your PCL application to set the font for a single document. See your application documentation for information.

Using the Printer Configuration Menu

Use the printer configuration menu to set the default font for all PCL documents.

- » **Note:** *Before beginning this procedure, you must have a PCL 5 font list from the advanced status page you printed earlier in this section.*

- 1 Access the Administration/PCL5/Default Font menu.**
- 2 Choose the Select by Index option.**
- 3 Access the Administration/PCL5/Default Font Idx menu.**
- 4 Identify the appropriate font selection index.**

The font selection indexes are listed in the PCL 5 font list on the advanced status page.

- 5 Save your changes and put the printer back on line.**

Kanji Font SIMM

The QMS Kanji SIMM Kit contains a Kanji SIMM with Kanji fonts and other files. Once the SIMM is installed, the Kanji fonts are available for use just as if they were resident in the printer. They can be printed in a variety of point sizes, styles, and resolutions.

What's in the Kit?

Your Kanji font SIMM kit contains the following items:

- One antistatic wristband
- One Kanji SIMM with the following 2 Kanji fonts.

This font...	Is licensed by...
Gothic BBB-Medium Ryumin Light-KL	Morisawa and Company, Ltd.

If anything is missing, call your local vendor. See appendix A, "QMS Customer Support," for locations and telephone numbers.

Hardware Requirements

To use a Kanji font SIMM you need

- A Macintosh, IBM PC, or compatible computer

Software Requirements

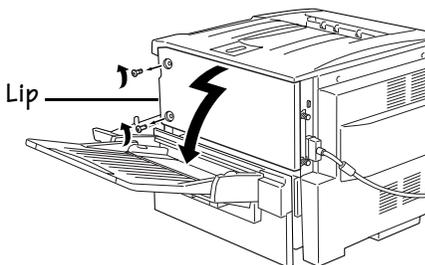
To use a QMS Kanji font SIMM you need

- An application (such as a word processing or desktop publishing package) that supports both the Kanji fonts and PostScript printing.
- If you're using a Macintosh, the following Macintosh system software:
 - Macintosh OS 8.xJ
- If you're using a PC, the following system software:
 - If you're using Windows, version 3.1J or later
 - If you're using DOS, version 5.0J or later

Installing a Kanji Font SIMM

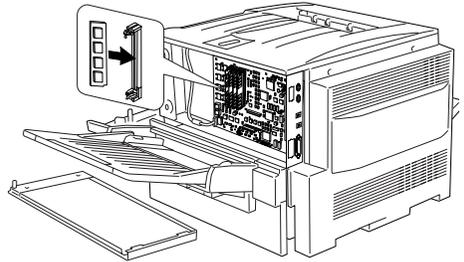
-
- ◆ **Caution:** *It's very important to protect the printer controller board and SIMM from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 4-2. In addition, always handle circuit boards by the edges only.*
-

- 1 Turn off the printer, and then disconnect the power cord and all interface cables from the printer.
- 2 Open the printer's front cover.
- 3 Slide the fuser unit out slightly.
- 4  Loosen two screws (one on each end of the controller board panel) and, using the tab on the lower side of the panel, pull the panel off.



- 5  **Insert the font SIMM into the font SIMM connector.**

The font SIMM connector is smaller than the RAM SIMM connector. Hold the SIMM at a 45° angle to the controller board, with the notch on the right side and the bottom edge of the SIMM in the connector.



- 6 **Tilt the SIMM up toward you to a 90° angle until you feel it snap into place.**

When seated, the SIMM stands upright, firmly in place.

◆ **Caution:** *If you can't snap the SIMM into place, don't force it. Reposition it, making sure that the bottom of the SIMM is seated completely in the connector.*

- 7 **Reinstall the controller board panel on the printer.** 

8 **Push the fuser unit back in.**

9 **Close the printer's front cover.**

10 **Reconnect all interface cables.**

11 **Reconnect the power cord and turn on the printer.**

» **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

Check that the startup page indicates the font SIMM just installed under "Options." It's identified as %cartridge2%.

- 12 **Ensure that the Administration/Memory/Disk Cache memory client is set to at least 20 KB.**

-
- ◆ **Caution:** *You may need to decrease one of the other memory clients before increasing the Disk Cache client. However, you should do this only if you're familiar with adjusting memory settings. (Refer to chapter 4, "Printer Configuration," in the Reference manual.) Incorrect use of this option could cause your system to operate incorrectly.*
-

Accessing the Kanji Fonts

After you install the Kanji font SIMM and configure the printer, you're ready to access the Kanji fonts. Use this information for accessing the Kanji fonts on the Kanji font SIMM and on the Kanji internal IDE hard disk.

Macintosh

If you're using a Macintosh, you need to install the bitmapped screen fonts. The bitmapped screen fonts are a representation of how a printed typeface looks, and they also provide metric information used by the application to determine which outline font to use when formatting text. QMS does not provide the outline fonts since this information is stored on the Kanji SIMM.

Installing the Screen Fonts

Install the bitmapped screen fonts from the floppy disk to your Macintosh as follows.

- 1 Insert the bitmapped screen fonts disk into the Macintosh computer's disk drive.**
- 2 If you're using System 7.x or System 8.x, select the fonts from the floppy disk and drag the fonts to the Fonts folder in the System folder.**
- 3 Restart your Macintosh.**

Adding the Printer Description File

Most Macintosh applications obtain font information from the printer. But applications such as Adobe Separator, QuarkXPress, and

Aldus/Adobe PageMaker, refer to the font list of the PPD file for font information.

1 Replace the PPD files you installed when you purchased your QMS printer.

Follow the instructions in your application documentation or in your printer user's guide "Printer Description Files" section. The PPD file that you need to use is on the QMS PS Executive Series Utilities disk (Japanese version) that comes with the Kanji option kit.

Downloading the JFontPrep File

When downloading Adobe Type Library or Morisawa Type Library Kanji fonts, you need to also download the JFontPrep file.

- » **Note:** *This file is on the QMS PS Executive Series Utilities disk (Japanese version) included in this option kit. You must always download this file before you download any Kanji fonts to your print system.*

1 Open PS Exec.

2 From the File menu, choose Download PS File.

3 Choose JFontPrep, choose Send to download to the printer.

- » **Note:** *The JFontPrep PostScript file is automatically downloaded to RAM. The Japanese PostScript fonts are downloaded to disk.*

4 When the Status window is gone, close PS Exec.

5 Download the font(s).

See the *Adobe Type Library User's Guide* for instructions on downloading fonts.

- ◆ **Caution:** *Do not select Clear Font Cache in the Disk menu even though the Adobe/Morisawa Type Library User's Guide states that you should select this option. It could cause your printer to lock up.*

6 Turn the printer off and then back on again.

Kanji Font
Internal IDE
Hard Disk

Windows

- 1 Install the QMS Windows driver using the instructions given in the README.TXT file on the Windows Drivers disk.

DOS

To run a Japanese application in the DOS environment, you need MS-DOS/V 5.0J. Most major Japanese word processing applications are available for the DOS/V environment.

- » **Note:** *Not all Japanese applications for the DOS/V environment support PostScript printing.*

Kanji Font Internal IDE Hard Disk

The preformatted QMS Kanji font internal IDE hard disk contains Kanji fonts and other files. These fonts can be printed at a variety of point sizes and in different styles and resolutions.

- » **Note:** *This option is available only for the CX model.*

After the Kanji hard disk is installed in your printer, the Kanji fonts are available for use just as if they were resident in the printer.

What's in the Kit?

- Internal hard disk preformatted with the following 6 Kanji fonts:

This font...	Is licensed by...
Gothic BBB-Medium Ryumin Light-KL	Morisawa and Company, Ltd.
Gothic Bold Gothic Heavy Mincho Medium Mincho Heavy	Type Bank

- IDE hard disk with ribbon cable attached
- IDE hard disk bracket
- 3 screws

If anything is missing, call your local vendor.

Hardware Requirements

- A Macintosh, IBM PC, or compatible computer

Software Requirements

- An application (such as a word processing or desktop publishing package) that supports both the Kanji fonts and PostScript printing.
- If you're using a Macintosh, the following Macintosh system software:
 - Macintosh OS 8.xJ
- If you're using a PC, the following system software:
 - If you're using Windows, version 3.1J or later
 - If you're using DOS, version 5.0J or later

Installing a Kanji Font Internal IDE Hard Disk

-
- ◆ **Caution:** *The Kanji fonts are factory installed on a formatted hard disk drive. DO NOT reformat or initialize the QMS Kanji internal hard disk. Reformatting erases all data, fonts, and files on the disk. **Your warranty does not cover this error.***
-

The Kanji font internal IDE hard disk is installed on the controller board in the same way any internal hard disk is installed. See chapter 5, "Storage Devices," for detailed steps on installing an internal hard disk.

- » **Note:** *If you already have an internal hard disk installed, you must remove it before you can install the Kanji disk.*

Configuring the Printer for Kanji

See chapter 5, "Storage Devices," for information on how to configuration your printer's memory when using an internal hard disk.

Accessing the Kanji Fonts

See "Accessing the Kanji Fonts" on page 4-14 for information.

QFORM

The QMS QFORM option allows you to use existing lineprinter and forms printing applications on your QMS *magicolor* 330 Print System. This printer-resident application gives you the ability to store PostScript forms on the printer's hard disk and fill those forms with your application's ASCII print stream. Features include

- Definition of page formatting and fonts
- Duplexing with binding-margin offsets
- Two-sided forms with text fill-in on front and/or back
- "Greenbar" listing formats
- Automatic page numbering
- ANSI carriage-control recognition
- Single- and multipart forms
- Labels and multipart forms
- Logos and watermarks

» **Note:** *QMS QFORM doesn't support color features.*

Refer to the documentation that comes in the QFORM kit for installation and usage instructions.



5

Storage Devices

In This Chapter . . .

- “Antistatic Protection” on page 5-2
- “Identifying Storage Devices” on page 5-3
- “Internal IDE Hard Disks” on page 5-4
- “External Storage Devices” on page 5-7
- “Formatting a Storage Device” on page 5-9
- “Configuring a Storage Device” on page 5-10
- “Backing Up Data to a Jaz or Zip Drive” on page 5-11
- “Restoring Data from a Jaz or Zip Drive” on page 5-13

Introduction

Hard disks, Jaz drives, and Zip drives provide storage for character bitmaps, downloaded outline fonts, and other files. Hard disks also provide virtual memory.

This chapter provides information on installing and using internal and external hard disks as well as Iomega Jaz and Zip drives.

Antistatic Protection

- » **Note:** *In compliance with UL guidelines, “The appliance inlet is considered to be the main disconnect device.”*
- ◆ **Caution:** *It's very important to protect the printer controller board and any associated daughterboard or module from electrostatic damage while performing any task involving the controller board.*

If an antistatic wrist strap is provided in your printer option kit, attach one end of it to your wrist and the other end to any convenient electrical ground (for example, the bare metal chassis of equipment, as on the back of a computer, that is plugged in but **turned off**). Never attach the wrist strap to any piece of equipment with an electrical current present. Turn off all power switches first. Plastic, rubber, wood, painted metal surfaces, and telephones are not acceptable grounding points. The printer isn't an acceptable grounding point because it must be unplugged before you perform this task.

If you don't have an antistatic wrist strap, discharge your body's static electric charge by touching a grounded surface before you handle any printer boards or components and before removing the controller board. Also avoid walking around after grounding yourself.

Identifying Storage Devices

Hard disks, Jaz drives, and Zip drives are identified by their device numbers. If the printer has an internal hard disk, it has a device number of Dsk7. If optional external hard disks and/or drives are attached, their device numbers can be Dsk0–Dsk4 or Dsk6. (Dsk5, which is SCSI ID 5, is reserved for the CrownCopy scanner). Device numbers of external hard disks and drives can be set by the installer.

- » **Note:** *If an internal hard disk is removed or an external hard disk or drive is not turned on, the printer does not reset nonvolatile RAM to the factory defaults.*

- ◆ **Caution:** *If you connect to this printer an external hard disk you previously used with an earlier QMS Crown printer (such as a QMS 2060, 2425, 4060, or magicolor 2), this QMS magicolor 330 Print System software release will automatically reorganize the files on the hard disk when the printer is turned back on again. (The printer release number is listed on both the startup and the status page.) Once this reorganization is done, the files on the hard disk can no longer be accessed if the hard disk is reattached to an earlier QMS Crown printer.*

This reorganization process takes time. If, when you first turn the printer on after attaching a previously used hard disk, it does not come on line immediately, be patient. Interrupting the reorganization process could cause all files on the hard disk to be lost.

Internal IDE Hard Disks

Only one internal IDE hard disk is supported. However, you can add up to three external SCSI hard disks, Jaz drives, and/or Zip drives to the printer.

Installing an Internal Hard Disk

What's in the Kit?

The IDE hard disk kit includes the following:

- IDE hard disk with ribbon cable attached
- IDE hard disk bracket
- 3 screws

Installation Procedure

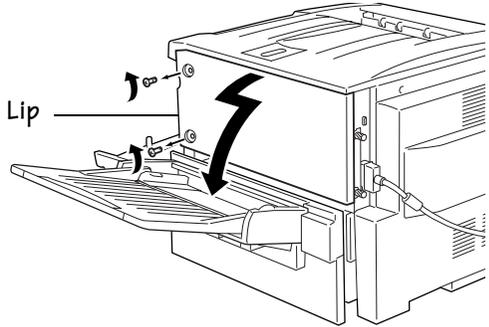
-
- ◆ **Caution:** *It's very important to protect the printer controller board and any associated circuit boards from electrostatic damage. Before performing this procedure, review the antistatic caution in "Antistatic Protection" on page 5-2. In addition, always handle circuit boards by the edges only.*

When installing or removing a hard disk, ensure that the metal support posts (on the hard disk) don't hit any of the electrical leads on the chips mounted on the controller board. The controller board will not function if any of the leads are broken or shorted together.

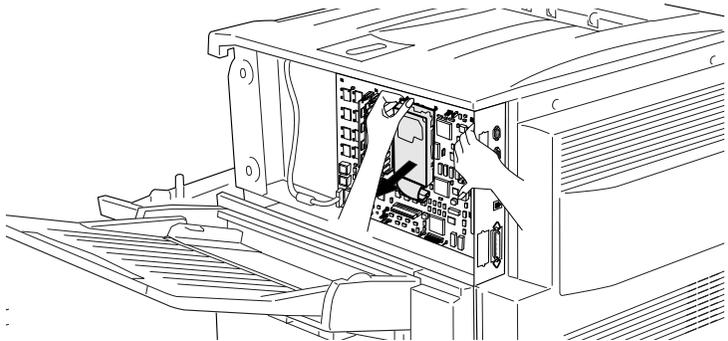
- 1 **Turn off the printer, and then disconnect the power cord and all interface cables from the printer.**

Internal IDE Hard Disks

- 2 Open the printer's front cover.
- 3 Slide the fuser unit out slightly.
- 4  Loosen the two screws on the controller board panel and, using the lip on the left side of the panel, pull the panel off of the printer.
- 5 If you need to remove a hard disk before installing one, remove it as follows; otherwise skip to step 5.



- a Place your right hand on the metal interface plate, the thumb on your left hand on top of the hard disk, and the other fingers on your left hand underneath the corner of the hard disk, and then pull up gently but firmly on the hard disk one pin at a time. The disk is firmly seated, so it may take several tries to remove it.



- b Unplug the ribbon cable connector from its mating connector on the controller board.

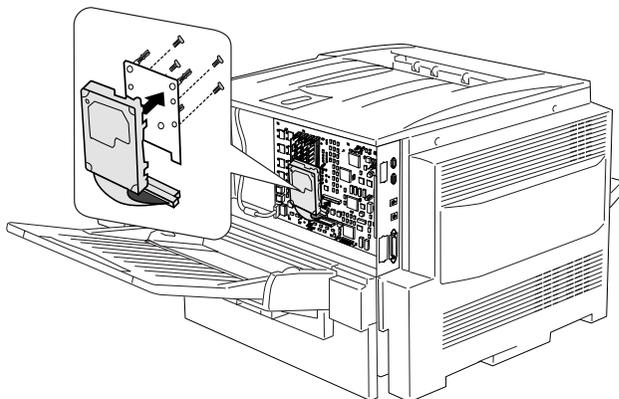


Caution: Don't push or pull with the ribbon cable. Use the cable connector.

Internal IDE Hard Disks

6 Attach the IDE hard disk to the hard disk bracket.

Attach the IDE hard disk to the bracket with the grooved-end of the bracket facing the ribbon cable. The screw holes in the bottom of the hard disk should match up with the holes on the hard disk bracket. Fasten the hard disk to the bracket with the screws provided.



7 Position the hard disk so that the four support posts face the controller board, the colored stripe on the ribbon cable faces away from you, and the connector is down.

8 Insert ribbon cable connector pin 1 (the colored stripe side of the cable) in hard disk connector pin 1.

◆ **Caution:** *Make sure that the ribbon cable connector and the controller board connector pins are properly aligned. Damage to the controller board could result if the pins are misaligned.*

9 Press down gently but firmly on the cable connector until it is fully seated.

◆ **Caution:** *Do not push or pull with the ribbon cable. Use the cable connector.*

- 10 Align the support posts with the holes on the controller board, and then press down to secure the hard disk to the controller board.**

So that you don't stress the board, press one corner at a time to secure the hard disk to the controller board.

- 11 Reinstall the controller board panel on the printer.** 

- 12 Tighten the two screws.**

- 13 Push the fuser unit back in.**

- 14 Close the printer's front cover.**

- 15 Reconnect all interface cables.**

- 16 Reconnect the power cord and turn on the printer.**

- » **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

- 17 Print a startup page.**

Check that the startup page indicates the presence of the hard disk.

External Storage Devices

- » **Note:** *You must have an optional SCSI interface board installed before you can attach an external SCSI hard disk, Jaz drive, or Zip drive. Refer to the installation instructions in chapter 3 "Interfaces and Daughterboards."*

Attaching an External Storage Device

For information on attaching an external SCSI hard disk, an Iomega Jaz drive, or an Iomega Zip drive, see the documentation that comes with the device. You may also contact QMS Technical Support or visit QMS via the Internet at www.qms.com/support.

Turning on an External Storage Device

For the printer to recognize one or more external storage devices, each device must be turned on before you turn on the printer. If the printer recognizes the device(s) and the startup page is enabled, check to ensure that `DISK ONLINE` prints on that page. If the startup page is not enabled, print a status page and check to see if `DISK ONLINE` prints on that page.

If `DISK ONLINE` does not print, see chapter 8, "Troubleshooting Printer Problems," of the *Operation* manual for more information.

Properly installed devices also appear in the "Options" section of the startup page (if it's enabled) and on the status page as `%%diskx%`. (`x` is a 7 for an internal IDE hard disk and 0-4 or 6 for any external SCSI hard disks or drives, depending on the SCSI ID set on the back of the device. SCSI ID 5 is reserved for the CrownCopy scanner.)

Using Jaz and Zip Drives

Keep the following in mind when using Jaz and Zip drives:

- Data can be backed up only to Jaz and Zip drives, not to external SCSI hard disks.
- Jaz and Zip drive information shows up on the startup and status page only if media is present in the drive.
- If a Jaz or Zip drive is attached to the printer but no media is present, you will experience a long delay (30 seconds or more) when you take the printer off line and put it back on line.
- Jaz and Zip drives cannot be used for disk swapping or accounting. They can be used only for font and file storage and for data backup and restoration.

Formatting a Storage Device

Access the Administration/Disk Operations menu, and then press the control panel keys in the order shown in the following table. The printer responds by displaying a status message in the message window (DSK refers to the device, and # is the device number).

- » **Note:** *You may need to press the Next key one or more times to advance through the list of selections or options.*

Press this key...	to...	and the message window reads...
Select	Access the Disk Operations/Format Disk menu	FORMAT DISK
Select	Access the Format Disk/Dsk#: menu.	DSK#:
Next or Previous	Advance through the list of attached devices.	DSK#:
Select	Select the device and display a format confirmation message.	ARE YOU SURE?
Select	Begin the formatting process. While the system reboots, the device is being formatted.	FORMATTING...
	Notify you when the formatting process is complete. The printer then powers up, and a startup page prints (if enabled).	FORMAT COMPLETE

Configuring a Storage Device

Error Messages

The following error messages may appear while you are using the Disk Operations menu:

Message	Meaning	Action
FORMAT FAILED	The device cannot be used.	Press the Menu key to remove the message, and contact your QMS vendor.
WRITE ERROR	The device encountered a write error, or there is no room for the data on the device or in RAM.	Press the Menu key to remove the message, and restart the operation from the beginning.

Configuring a Storage Device

- » **Note:** *While you're making changes in the configuration menu, you may also want to turn on the printer's page recovery option. (Choose On in the Administration/Engine/Page Recovery menu.) Page recovery allows the printer to automatically track and reprint jammed pages so you don't have to resend jobs after clearing a jam.*

External Storage Devices

- 1 Use the Administration/Memory/Disk Cache menu to increase the disk cache size to 256 KB.
- 2 Turn the printer off and then on again.
- 3 Print a status page to check that the Disk Cache size is increased. (Notice that VM remaining memory is also increased.)

Internal Hard Disks

- 1 Use the Administration/Memory/Enable Disk Swap menu to enable disk swapping.**

Disk swapping takes full advantage of the disk by allowing the printer to use the hard disk to supplement RAM when necessary.

- 2 Turn the printer off and then on again to make this change take effect.**

Backing Up Data to a Jaz or Zip Drive

- » **Note:** *You cannot back up data to an internal or external hard disk.*

Attach Jaz or Zip drive to which you'll be backing up data to the printer's SCSI port or SCSI chain. Then access the Administration/Disk Operations menu, and then press the control panel keys in the order shown in the following table. The printer responds by displaying a status message in the message window (DSK refers to the device, and # is the device number).

- » **Note:** *You may need to press the Next key one or more times to advance through the list of selections or options.*

Press this key...	to...	and the message window reads...
Next	Advance to the Disk Operations/ Backup Hard Disk menu	DISK OPERATIONS BACKUP HARD DISK
Select	Access the Backup Hard Disk/Dsk# Full menu.	BACKUP HARD DISK DSK#x FULL
Next or Previous	Advance through the list of attached devices (an accompanying Full or Incremental backup choices).	BACKUP HARD DISK DSK#x INCREMENTAL
Select	Select the displayed option.	

Backing Up Data to a Jaz or Zip Drive

Press this key...	to...	and the message window reads...
Select	<p>Begin the backup process. The printer creates a Backup directory on the Jaz or Zip drive to which you're backing data up and stores the data in that directory.</p> <p><i>If the drive has not already been formatted, the printer automatically formats it.</i></p> <p><i>If the drive already has a Backup directory, the new backed up data overwrites the data in that directory.</i></p>	COPYING DATA
	If the backup requires more than one Jaz or Zip drive, the message display prompts you. Be sure to number the drives since the restore process requires you to use them in the proper sequence.	INSERT MEDIA x (x is the disk number)
	You're prompted when the backup process has finished.	BACKUP COMPLETE
Menu (several times)	Exit from the configuration menu.	CONFIGURATION ADMINISTRATION
Online	Put the printer back on line.	IDLE

Error Messages

The following error messages may appear while you are using the Disk Operations menu:

Message	Meaning	Action
WRITE PROTECT	The drive is write-protected.	Remove the drive's write protection.

Restoring Data from a Jaz or Zip Drive

Attach the Jaz or Zip drive to which you'll be restoring data from the printer's SCSI port or SCSI chain. Then access the Administration/Disk Operations menu, and then press the control panel keys in the order shown in the following table. The printer responds by displaying a status message in the message window (DSK refers to the device, and # is the device number).

- » **Note:** *You may need to press the Next key one or more times to advance through the list of selections or options.*

Press this key...	to...	and the message window reads...
Next	Advance to the Disk Operations/ Restore Disk menu	DISK OPERATIONS RESTORE DISK
Select	Access the Restore Disk/Dsk#: menu.	RESTORE DISK DSK#x
Next or Previous	Advance through the list of attached devices.	RESTORE DISK DSK#x
Select	Begin the restore process.	COPYING DATA
	If the original backup required more than one Jaz or Zip drive, the message display prompts you. Be sure to insert the drives in the proper sequence.	INSERT MEDIA x (x is the disk number)
	You're prompted when the backup process has finished.	RESTORE COMPLETE
Menu (several times)	Exit from the configuration menu.	CONFIGURATION ADMINISTRATION
Online	Put the printer back on line.	IDLE

Restoring Data from a Jaz or Zip Drive

Error Messages

The following error message may appear while you're using the Disk Operations menu:

Message	Meaning	Action
SEQUENTIAL ERROR	The backup drives have been inserted in the wrong sequence.	Remove the drive and insert the correct one.



6

Hardware Options

In This Chapter . . .

- “Large-Capacity Input Feeder [LCIF]” on page 6-2
- “Security Key” on page 6-10
- “BuzzBox Lite” on page 6-13
- “Printer Stand” on page 6-15

Introduction

This chapter provides the installation instructions for the large-capacity input feeder, security key, and BuzzBox Lite warning light/buzzer.

Large-Capacity Input Feeder (LCIF)

The optional large-capacity input feeder increases your printer's media feed capacity by 750 sheets. In addition, the extra media cassettes allow you to change easily between different sizes, colors, and types of media. The large-capacity input feeder is positioned under the printer, so no extra space is necessary.

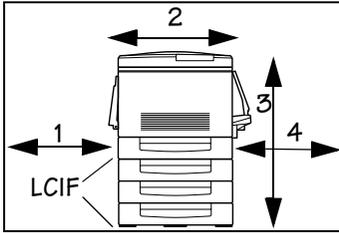
What's in the Kit?

- Large-capacity input feeder unit
 - Three 250-sheet universal media cassettes
- » **Note:** *There may be other pieces shipped with the large-capacity input feeder; however, they are not required for this procedure.*

If anything is missing, call your local vendor. See appendix A, "QMS Customer Support," for locations and telephone numbers.

Unpacking the Large-Capacity Input Feeder

Location Requirements

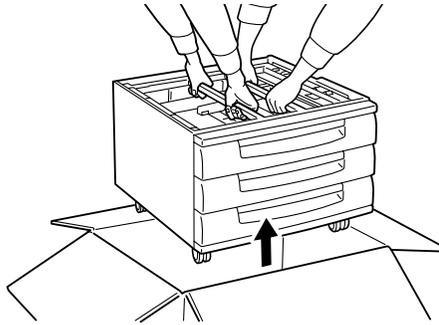


Front View

- 1 20 inches (50.8 cm)
- 2 28.7 inches (72.8 cm)
- 3 36.1 inches (91.7 cm)
- 4 22 inches (55.9 cm)

Procedure

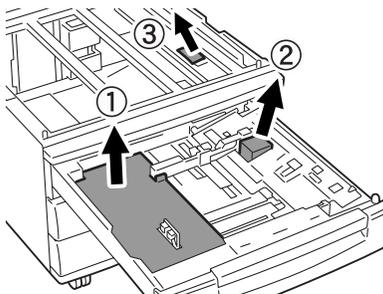
- 1 Remove the feeder from the shipping carton, and place it on a flat surface.



- 2 Remove any tape and packing material from the feeder.

Large-Capacity Input Feeder (LCIF)

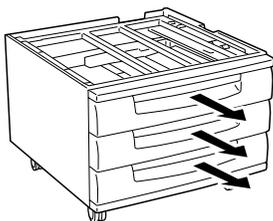
- 3 Remove the spacers from the upper media cassette following to the order indicated in the diagram. 



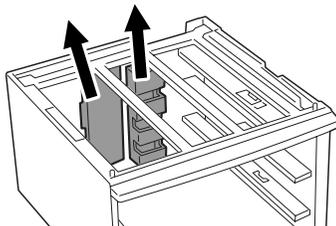
- ① Cardboard
- ② Foam/cardboard (labeled "C")
- ③ Taped-on plastic spacer

» **Note:** Save the packing material in case you ever have to move or ship the feeder to a new location.

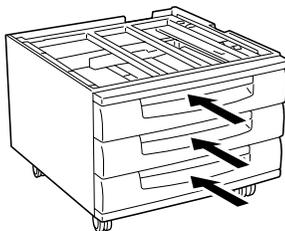
- 4 Pull out and remove all the media cassettes. 



- 5 Remove the two cardboard spacers inside the LCIF. 



- 6 Reinsert all the media cassettes.



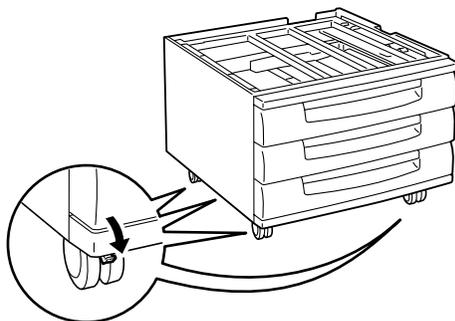
Large-Capacity Input Feeder (LCIF)

- 7 Press down the stoppers on the four casters to lock the LCIF so that it cannot move freely.



WARNING! Always lock the stoppers. If the stoppers are not locked, the printer may move unexpectedly and cause personal injury.

ACHTUNG! Schrauben Sie immer die ArretierfüÙe heraus. Wenn die ArretierfüÙe nicht herausgeschraubt sind, könnte der Drucker wegrollen und Personen verletzen.



Installing the Large-Capacity Input Feeder



WARNING! Your printer weighs approximately 150 lbs (68 kg) without consumables. Be sure to have help when lifting and moving it. If consumables are installed, be sure to keep the printer level when moving it to prevent accidental spills.

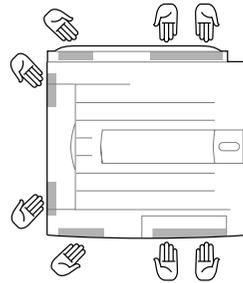
ACHTUNG! Das Gewicht dieses Druckers beträgt ohne Verbrauchsmaterial ca. 68 kg. Bitte versuchen Sie niemals, den Drucker alleine anzuheben oder zu transportieren. Achten Sie bitte darauf, daß der Drucker mit eingebauten Tonerkartuschen nur waagrecht transportiert wird.

- 1 Turn off the printer.

Large-Capacity Input Feeder (LCIF)

- 2 Disconnect the power cord.
- 3 With four people, lift the printer using the recessed carrying grips on the bottom of the front, back, and left side of the printer.

Leave the media cassette inside the printer when performing this installation.

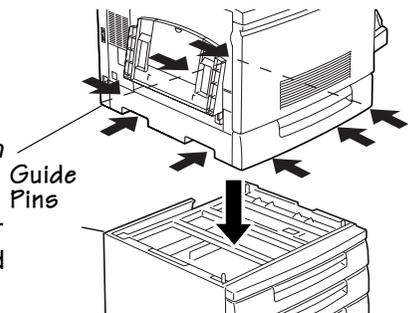


-
- ◆ **Caution:** Do not tilt the printer more than 10° from horizontal. Tilting could cause damage to the machine from spilling of consumables.
-

- 4 Lift up the printer, then  carefully lower it onto the LCIF.

- » **Note:** Make sure the LCIF cables do not get tangled with the printer.

Align the guide pins in all four corners so that the printer and LCIF are flush on the front and both sides. (The back of the printer will protrude.)

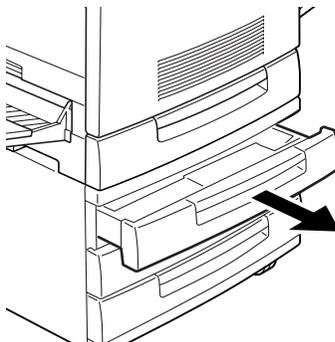


-
- ⚠ **WARNING!** To avoid hand injury, be careful when placing the printer onto the large-capacity input feeder.

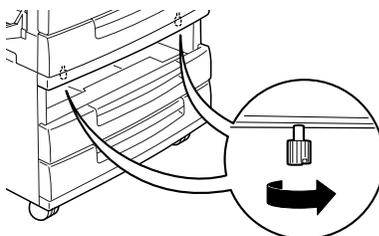
ACHTUNG! Lassen Sie die Papierkassette während der Installation im Drucker, um Handverletzungen zu vermeiden.

**Large-Capacity
Input Feeder
(LCIF)**

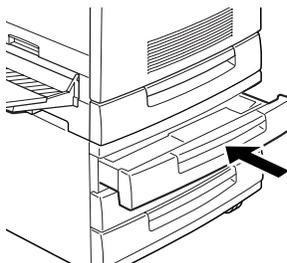
- 5 Remove the upper media cassette from the LCIF.



- 6 Secure the two screws as indicated.

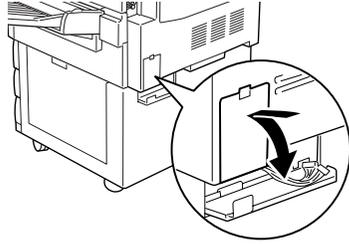


- 7 Push the media cassette all the way back into the LCIF.



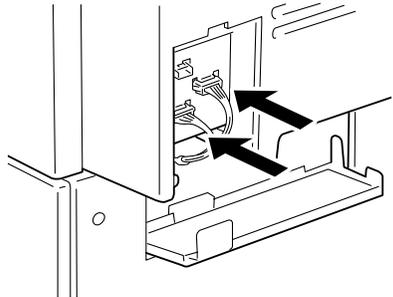
Large-Capacity Input Feeder (LCIF)

- 8 Press in on and remove the plastic cover on the back of the printer.

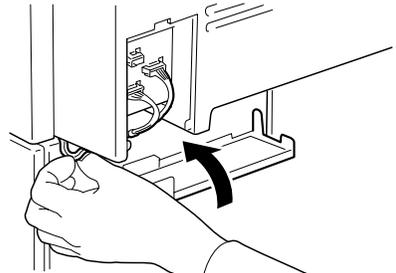


- 9 Firmly plug the connectors of the LCIF cables into the printer.

If the connectors are not firmly connected, an error will result.



- 10 Gather the connector cables to the left side.



Security Key

11 Press the metal cover on the LCIF and hold it until the next step is completed.

12 Start inserting the plastic cover as high up as possible so it catches and secures the metal plate.

13 Push the plastic cover until it clicks into place.

» **Note:** *The plastic cover must be flush with the printer case when done.*

14 Plug the power cord into an AC outlet.

» **Note:** *In compliance with UL guidelines, "The appliance inlet is considered to be the main disconnect device."*

15 Turn on the printer.

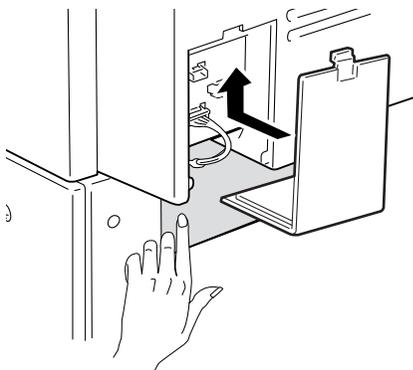
16 Print a startup page.

Check the "Paper Source" section to make sure the LCIF is listed.

The input feeder is now installed.

There are now four media cassettes available for use (three in the LCIF and the media cassette in the printer).

» **Note:** *If you move the printer with the large-capacity input feeder attached, lift the unit by the four bottom corners of the feeder, not by the feeder's cassette slot and not by the printer itself.*



Security Key

A security key is available to password-protect the Operator Control and the Administration menus. When the security key is installed, the Installation menu appears in the printer's configuration menu.

This security key will enable the password menus. These menus allow a system administrator to set a password and lock users out of part or all of the configuration menu system.

What's in the Kit?

- A security key (9-pin connector labeled "Security")

Setting Configuration Menu Passwords

- 1 Insert the security key into the "Key" port on the interface panel.

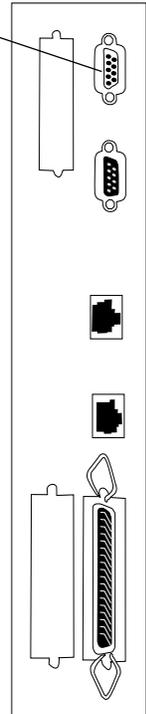
◆ **Caution:** *Even though both the security key and serial interface have a DB-9 interface, the connectors are keyed, and they can't be interchanged. Make sure that you install the security key only in the port marked "Key."*

- 2 Press the Online key to take the printer off line.
- 3 Press the Menu key.
- 4 Access the Installation/Operator Passwr or Administration/Admin Password menu.

You can use the Installation menu to password-protect just the Operator Control menu, just the Administration menu, or both.

- 5 Select the password(s).

Keep in mind that the password(s) you select also protect the Admin mode of Remote Console, available through QMS CrownAdmin.



Menu	Installation/Operator Passwr Installation/Admin Password
Choices	Up to 16 characters (any letter, number, or symbol)

Security Key

Default	Blank (no password)
Notes	Passwords are case sensitive and are entered as an alphanumeric string. If you choose a password that is not 16 characters long, press the Select key until you get to the rightmost character of the password field. Enter the password character string the same as you would enter an alphanumeric string. See chapter 4, "Printer Configuration," in the <i>Reference</i> for complete information on how to enter alphanumeric characters.

6 Enable the password(s).

Menu	Installation/Use Operator Pwd Installation/Use Admin Pwd
Choices	On —Requires the correct password to access to the Administration and/or Operator Control menus. Off —Does not require a password to access the Administration and/or Operator Control menus.
Default	Off
Notes	Enter the passwords in the Installation/Operator Password and Installation/Admin Password menus.

7 Save your changes and exit from the configuration menu.

8 Remove the security key, and store it in a secure location.

After you exit from the menu and remove the security key, the Installation menu is removed from the control panel message window.

9 Press the Online key to put the printer back on line.

Using Configuration Menu Passwords

Once a menu is password protected, you can't enter the menu or make changes in it until you enter a valid password.

- » **Note:** *Password protection does not prevent software commands from changing functions.*

- **If a password is required** to enter the Operator Control or Administration menu, the message window displays

ENTER PASSWORD

when you use the Select key to enter the menu. Enter the password, or press the Menu key to return to the previous menu.

- **If you enter an invalid password**, the message window flashes

INVALID PASSWORD

for three seconds and then returns you to the configuration menu.

- **If you forget the password**, repeat the procedure in “Setting Configuration Menu Passwords” on page 6-11.

BuzzBox Lite

BuzzBox Lite warns you with a buzzer and/or a blinking light any time the printer goes off line. This means you're alerted to print job interruptions, such as empty media cassettes.

What's in the Kit?

The BuzzBox Lite kit contains the following items:

- BuzzBox Lite unit
- RJ-11 cable
- Adhesive-backed clips

If anything is missing, call your QMS vendor. See appendix A, “QMS Customer Support,” for locations and telephone numbers.

Installing BuzzBox Lite

- 1 **Attach one end of the RJ-11 cable connector to the port labeled “BuzzBox.”**
- 2 **Attach the other end of the RJ-11 cable to the BuzzBox Lite unit.**
- 3 **Choose a location to mount the BuzzBox Lite unit.**

Ensure that the unit does not

- interfere with media exiting the printer.
- cover any vents, doors, connectors, or labels.
- cause the BuzzBox ribbon cable to stretch or twist.

- 4 **Use the adhesive-backed clips provided to mount the BuzzBox Lite unit where the printer operator can see and/or hear it.**

We've provided a cable, but you can use up to a 500-foot cable (RJ-11 4-pin or 6-pin).

- 5 **To test the BuzzBox Lite, make sure its switches are on, then press the printer's Online key to take the printer off line.**

- » **Note:** *You can use the BuzzBox switches to enable or disable the buzzer, the light, or both.*

When the printer goes off line, the light flashes and the buzzer sounds until the printer is placed back on line or until the light and buzzer switches are turned off.



Using BuzzBox Lite

- When the BuzzBox lights or buzzes, check the printer message window to find out what has interrupted printing. See chapter 7, “Troubleshooting,” in the *Operation* manual for a list of printer messages and how to respond to them.
- Remember that pressing the Online key to enter the printer configuration menu turns on the BuzzBox.

Printer Stand

A printer stand is available. Follow the assembly instructions included with it.



7

CrownCopy

In This Chapter . . .

- “Installation” on page 7-3
- “Flatbed Scanning” on page 7-5
- “ADF Scanning” on page 7-6
- “Menu Configuration” on page 7-9
- “Troubleshooting” on page 7-16

Introduction

The QMS CrownCopy option consists of an image scanner and software. This feature increases the functionality of your printer, transforming it into a copier as well as a printer. The functionality of CrownCopy is already built into your printer, so using CrownCopy is as simple as making the connections and pushing the Copy button.

Print System Requirements

- At least 64 MB of memory installed on the printer.
- A hard disk (recommended).
- » **Note:** *While you can scan and print multiple copies of single-sheet documents without a hard disk, a hard disk is required to print multiple copies of multiple-sheet documents (with or without collation) from the automatic document feeder (ADF).*

The printer's hard disk is used for temporary storage of the scanned image. There should be enough extra room on the hard disk to store the largest size scanned image. The size of this image depends on the paper size and the printer resolution.

- An optional SCSI interface. (If necessary, refer to the installation instructions in chapter 3 "Interfaces and Daughterboards.")

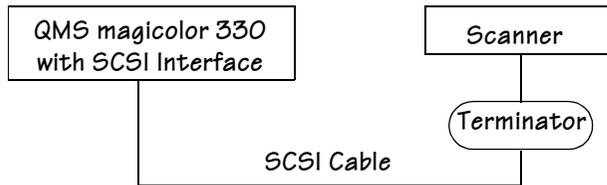
What's in the Kit

- QMS CrownCopy color scanner with ADF capability
- AC power cord (110 V)
- SCSI terminator and interface cable
- Daisy-chain connector
- Copy key
- Warranty and registration card

If anything is missing, call your local vendor. See appendix A, "QMS Customer Support," for locations and telephone numbers.

Installation

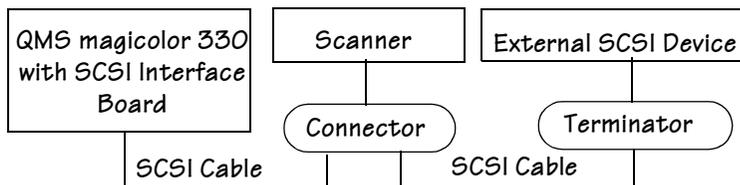
- 1 Refer to the instructions that come with the scanner to unpack it and prepare it for use.
- 2 Ensure that the scanner's SCSI ID is set to 5.
- 3 Locate the SCSI connector on the rear of the scanner.
- 4 If you're connecting only the scanner to the printer, use the following procedure. Otherwise, go to step 5.
 - a Plug the male end of the SCSI terminator into the scanner's SCSI connector.
 - b Attach one end of the SCSI cable to the terminator and the other end of the cable to the printer.



- c Go to step 6.
- 5 If you're connecting the scanner and one or more external SCSI devices to the printer, use the following procedure:
 - a Plug the daisy chain connector into the scanner.
 - b Attach one end of the SCSI cable to the daisy chain connector and the other end of the cable to the SCSI port on the printer.
 - c Attach one end of another SCSI cable to the daisy chain connector.

Installation

- d Attach the terminator to the last external SCSI device (for example, a hard disk drive) on the bus, and plug the other end of the SCSI cable into the terminator.



- 6 Ensure that both the scanner and printer are turned off.
- 7 Turn on the scanner, wait 5 seconds, and then turn on the printer.



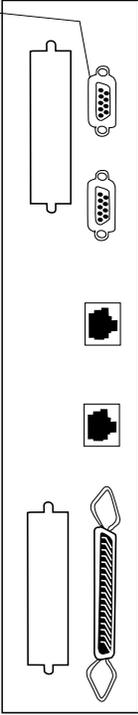
Caution: *The scanner **must** be turned on first so the printer can recognize the scanner's presence.*

8 Insert the copy key into the “Key” port on the printer interface panel.

You can't access the CrownCopy menu unless the copy key is inserted. The printer can be either on or off.

◆ **Caution:** *Even though both the copy key and serial interface have a DB-9 interface, the connectors are keyed, and they can't be interchanged. Make sure that you install the copy key only in the port marked “Key.”*

Your CrownCopy scanner is now ready to use. If necessary, access the Copier Menu on the printer to configure the scanner. For complete information on adjusting copy settings, see “Menu Configuration” on page 7-9.



Flatbed Scanning

◆ **Caution:** *CrownCopy requires a minimum of 64 MB of RAM installed on the printer.*

1 Turn on the scanner, wait 5 seconds, and turn on the printer.

◆ **Caution:** *The scanner **must** be turned on first so the printer can recognize the scanner's presence.*

ADF Scanning

- 2 Insert the copy key in the “Key” port on the printer’s interface panel.

◆ **Caution:** *Even though both the copy key and serial interface have a DB-9 interface, the connectors are keyed, and they can’t be interchanged. Make sure that you install the copy key only in the port marked “Key.”*

- 3 When the scanner is ready, place a document face down on the scanner glass.
- 4 Make sure the printer is on line, and then press the Copy key on the printer’s control panel.

The control panel message window displays

```
COPIER MENU  
COPY
```

- 5 Use the Copier Menu/Copy Mode/Scan Size menu to set the scan size of the document.

See “Menu Settings” on page 7-11 for details.

- 6 Press the Select key to display

```
COPY  
READY TO COPY
```

- 7 Press the Select key again to begin copying.
- 8 When the copying is complete, remove the document.

ADF Scanning

Memory Configuration

To print multiple copies of multiple sheets from the scanner’s automatic document feeder (ADF), we recommend that your printer have a hard disk installed.

- » **Note:** *While you can scan and print multiple copies of single-sheet documents without a hard disk, a hard disk is required to print multiple copies of multiple-sheet documents (with or without collation) from the automatic document feeder (ADF).*

The printer's hard disk is used for temporary storage of the scanned image. There must be enough free space on the hard disk (at least 15 MB) to store the largest-size scanned image. The size of this image depends on the paper size and the printer resolution.

This section identifies the amount of Display List memory required to print multiple copies of multiple sheets (with or without collation) from the ADF.

- 1 **Enable disk swapping (Administration/Memory/Enable Disk Swap menu).**
- 2 **Increase the Display List memory by 60 MB/60,000 KB (Administration/Memory/Manual Config/K Mem Display menu).**

The printer automatically reboots when you press the Online key.

- 3 **Choose collation, if necessary.**
- 4 **Begin the copying/scanning procedure (Copy key).**
- 5 **If the printed output is not correctly collated, use the Administrator/Memory/Manual Config/K Mem Display menu to increase the Display List memory in 10 MB (10,000 KB) increments until the output is correctly printed.**

For complete information on this option, refer to chapters 4 and 5 in the *Reference* manual.

Procedure

- 1 **Turn on the scanner, wait 5 seconds, and turn on the printer.**

◆ **Caution:** *The scanner **must** be turned on first so the printer can recognize the scanner's presence.*

- 2 Insert the copy key in the “Key” port on the printer’s interface panel.

◆ **Caution:** *Even though both the copy key and serial interface have a DB-9 interface, the connectors are keyed, and they can’t be interchanged. Make sure that you install the copy key only in the port marked “Key.”*

- 3 When the scanner is ready, make sure that no documents are on the scanner glass, and then prepare the ADF.
- 4 Move the paper feed guides on the ADF so that they’re approximately 0.25"/5 mm wider than the document.
- 5 Place the document to be copied face down in the input paper chute, putting the ends of the bottom 2 or 3 sheets into the automatic feeder.

Slide the stack forward until it rests against the ADF sensor. The sensor is a small plastic arm inside the ADF. The ADF can be loaded with up to 50 sheets of A4-, legal-, or letter-size paper. You might have problems using thick stock in the ADF.

◆ **Caution:** *Do not feed any of the following through the ADF:*

- Paper with clips or staples
 - Paper with wet ink
 - Paper with folds, tears, notches, or curls
 - Paper with an inconsistent thickness, such as envelopes
 - Very thin paper
 - Paper not square or rectangular in shape
 - Paper smaller than A5 size or larger than A4 width
 - Tracing, coating, carbonless, or photographic paper
 - Items other than paper, such as transparencies, metal sheets, or cloth
 - Important documents that must not be damaged
-

6 Close the paper guides until they touch the sides of the paper stack.

» **Note:** *Skewing may occur if a gap exists between the guides and the document.*

7 Make sure the printer's Online light is lit.

If the Online light is not on, press the Online key to put the printer on line.

8 Press the Copy key.

In the printer's message window you should see

COPIER MENU
COPY

9 Press the Select key, and you should see

COPY
READY TO COPY

10 Press the Select key again and the scanner should begin copying your document.

◆ **Caution:** *Do not press on or open the scanner cover during the copy process.*

11 When the copying is complete, remove the document.

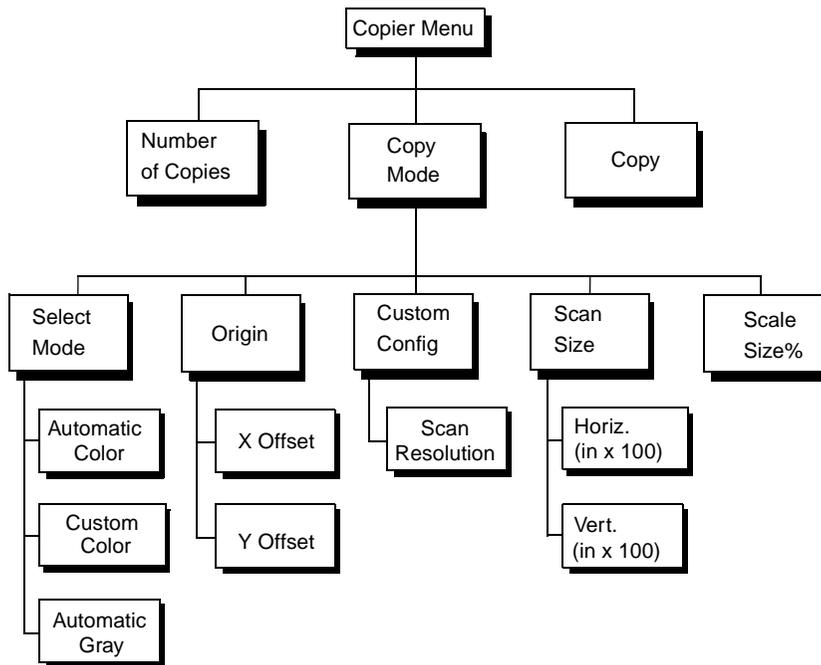
Menu Configuration

The Copier Menu

When the printer is on line, press the Copy key on the printer's control panel once to enter the Copier Menu.

Menu Configuration

- » **Note:** The Copy key must be inserted in the "Key" port on the printer interface panel before you can access the Copier menu.



Copy Quality Decisions

The quality of your copied image depends on several factors. You must consider these factors when judging the output quality of your copied image. The quality of the copy can be adjusted by settings on the CrownCopy menu. The factors involved in copy quality are

- The quality of the original
 - The type of original—text, images, or both
 - The size of the original
 - The speed of your copy output
- » **Note:** *Copies of both color and monochrome originals from the ADF are subject to a gray background. Use the flatbed for cleaner copies.*

Making Changes to the Copier Menu

To access the Copier Menu, press the Copy key once. Then use the Next or Previous key to scroll across the top-level menus (Copy, Number of Copies, and Copy Mode). To enter a lower-level menu or select a menu option, press the Select key. Use the Menu key to back out of the menu and return to `IDLE` after you've made your selections or after you've completed copying.

- » **Note:** *When you press the Copy key, you gain access to the Copier menu. To return the printer to normal operation you can exit from this menu by pressing the Menu key, leaving the copier idle for 60 seconds, pressing the Online key, or going back to do number of copies. Error messages that normally occur (such as jams) will not appear on the display until you exit from the Copier menu. Copier menu changes stay in effect only for the next scan executed.*

Menu Settings

-
- ◆ **Caution:** *Each configuration change you make affects the quality of your printed output significantly. Therefore, we recommend changing **only one setting** at a time, printing a test print, and then determining if further configuration changes are necessary.*
-

Menu Configuration

See chapter 4, "Printer Configuration," of the *Reference* manual for more information on using the configuration menu.

Copy

Menu	Copier Menu/Copy
Purpose	Make a copy.
Choices	Copy When the printer is on line, press the Copy key to access the Copy menu.
Notes	The default scan resolution is 200 dpi. See "Scan Resolution" on page 7-15 for information on increasing scan resolution.

Number of Copies

Menu	Copier Menu/Number of Copies
Purpose	Set the number of copies you want.
Choices	1 to 999 Each digit is set individually. Use the Select key to move the cursor to the digit you want to change, and then use the Next key to increase it or use the Previous key to decrease it. Once the number you want is set, press the Select key to save it.
Default	1
Notes	The number of copies is reset to 1 each time CrownCopy is used or whenever the Copy menu is exited. When you're printing multiple copies, subsequent copies are printed faster than the first copy.

Select Mode

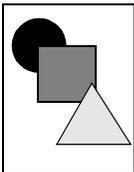
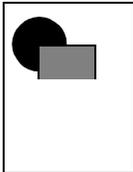
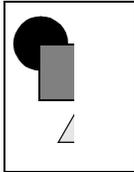
Menu	Copier Menu/Copy Mode/Select Mode
Purpose	Specify what type of copy is being made so the printer can optimize for this type output.
Choices	<p>Automatic Color—Sets color depth to multibit color and scan resolution to 200 dpi.</p> <p>Automatic Gray—Sets color depth to 8-bit gray and scan resolution to 300 dpi.</p> <p>Custom Color—Allows you to adjust color values.</p>
Default	Automatic Color
Note	<p>You <i>must</i> choose Custom Color in order to change the scan resolution in the Copier Menu/Copy Mode/Custom Config/Scan Resolution menu.</p> <p>Use Automatic Gray when copying documents that are either black and white or shades of gray; it provides the best quality output for monochrome images.</p>

Origin

Menu	Copier Menu/Copy Mode/Origin	
Purpose	Specify where the copy is to print on the selected media (in .01" increments).	
Choices	X Offset	0-850
	Y Offset	0-1100
Default	X Offset	0
	Y Offset	0
Notes	This option assigns the top-left corner of the image, so printing with defaults places the image at the top leftmost corner of the page.	

Menu Configuration

Scan Size

Menu	Copier Menu/Copy Mode/Scan Size		
Purpose	Select the width (horizontal size) and length (vertical size) of the image to be scanned to crop (scan only part of) an image or to reduce the copying time for images smaller than letter or A4.		
Choices	Supported Size	Horiz. (in x 100)	Vert. (in x 100)
	Letter	850	1100
	Legal	850	1400
	A5	582	827
	B5	715	1011
	A4	827	1169
Default	Horiz. (in x 100)	850 (8.5")	
	Vert. (in x 100)	1100 (11.0")	
Notes	<p>These values must be selected if you are using the automatic document feeder (ADF) as well as the flatbed for copying.</p> <p>The more you crop out of a scan, the less time it takes to process and print. For example, if you need to copy a photograph, you can get faster copies by placing it at the upper-right corner of the scanner bed and cropping the scan to fit the dimensions of the photograph (the scanner bed has rulers that mark inches.)</p>		
Examples	<p>You can also use the Scan Size menu to crop an image. Cropping is done from right and bottom sides of the page.</p> <p>For example, look at the image shown to the right:</p>		
	<p>If you place this image on the scanner bed and set the Copier Menu/Copy Mode/Scan Size Vert. (in x 100) menu to 400, you'll get this:</p>	<p>If you place this same image on the scanner bed and set the Copier Menu/Copy Mode/Scan Size Horiz. (in x 100) menu to 550, you'll get this:</p>	
			

Scale Size %

Menu	Copier Menu/Copy Mode/Scale Size %
Purpose	Scale the copy.
Choices	50-200
Default	100
Note	<p>To scale a copy, set the scaling percentage and then press the Copy key. Press the Online key <i>only</i> after the copying has finished. If you press Online before pressing Copy, the scaling selection is not saved; your copy prints at the default 100% scaling.</p> <p>Moves to the upper-left of the page. The bottom of the page may be cropped.</p>

Scan Resolution

Menu	Copier Menu/Copy Mode/Custom Config/Scan Resolution
Purpose	Specify the resolution the scanner should use.
Choices	100, 150, 200, or 300 dpi
Default	200 dpi
Note	<p>In order to change the scan resolution, you must choose the Custom Color option in the Copier/Copy Mode/Select Mode menu.</p> <p>Choose a scan resolution that is at least half of the printer resolution being used. The higher the scan resolution, the more detailed the copy output (as long as the printer resolution being used is double the scan resolution). Also, a higher scan resolution increases copying time, because of the increased amount of data that must be scanned and sent to the printer for processing. (Each time the scan resolution is doubled, the amount of information that is scanned and printed is quadrupled.)</p>

Troubleshooting

If this happens...	Do this...
Edges of the copy are cut off.	<ul style="list-style-type: none">■ Make sure you're centering documents at the top of the scanner glass and that the scan size setting is correct. Also keep in mind that the size of the scanned print cannot exceed the printer's maximum imageable area for the size paper in use.
Scanner lamp flicker, is dim, or fails to come on.	<ul style="list-style-type: none">■ The scanner lamp is failing or has failed and needs to be replaced.
Documents don't feed smoothly into the ADF.	<ul style="list-style-type: none">■ Clean the ADF.
Several pages feed into the ADF at the same time.	<ul style="list-style-type: none">■ Clean the ADF.
Multiple copies of a multipage document in the ADF are incomplete.	<ul style="list-style-type: none">■ Increase the Display List memory client (Administration/Memory/Manual Config/K Mem Display menu).
Image quality of copies is not optimal.	<ul style="list-style-type: none">■ Clean the scanner glass: dampen a lint-free cloth with alcohol or a mild detergent and wipe the glass clean.■ If you're using an automatic document feeder (ADF), clean it.■ Copies of both color and monochrome originals from the ADF are subject to a gray background. Use the flatbed for cleaner copies.■ If you're scanning at 150 dpi, some printed materials, such as magazines, cause moiré patterns. To remove these patterns, change the scan resolution to 200 or 300 dpi (choose Copier/Copy Mode/Custom Color, and then Copier/Copy Mode/Custom Config/Scan Resolution/200 or 300).



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.

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 and serial number
 - ☑ 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 of the file you're trying to print (listed on both the status and startup pages)
 - ☑ Your printer firmware version (listed on the status/startup pages)
 - ☑ A status page, if you can print one
- **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
(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) 340-0646
Fax 1 (514) 340-0401
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 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 Internet http://www.qmsaus.com.au/
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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
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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
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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
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QMS Italy	Via della Repubblica 56 43100 Parma Italy (+39) 52-1231 998 Fax (+39) 52-1232 902
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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:

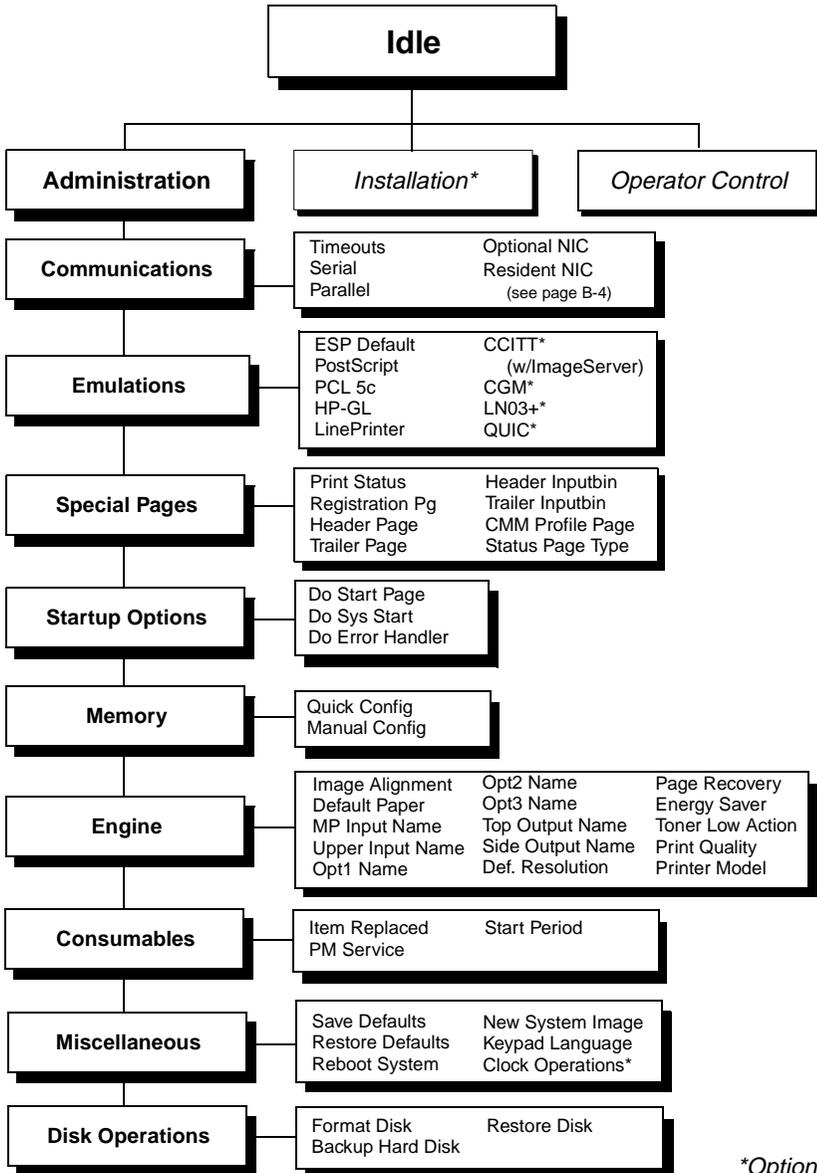
- **Administration menu** on page B-3
 - **Installation menu** on page B-9
 - **Operator Control menu** on page B-9
- » **Note:** *The Copier Menu is displayed in chapter 7, "CrownCopy."*

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.

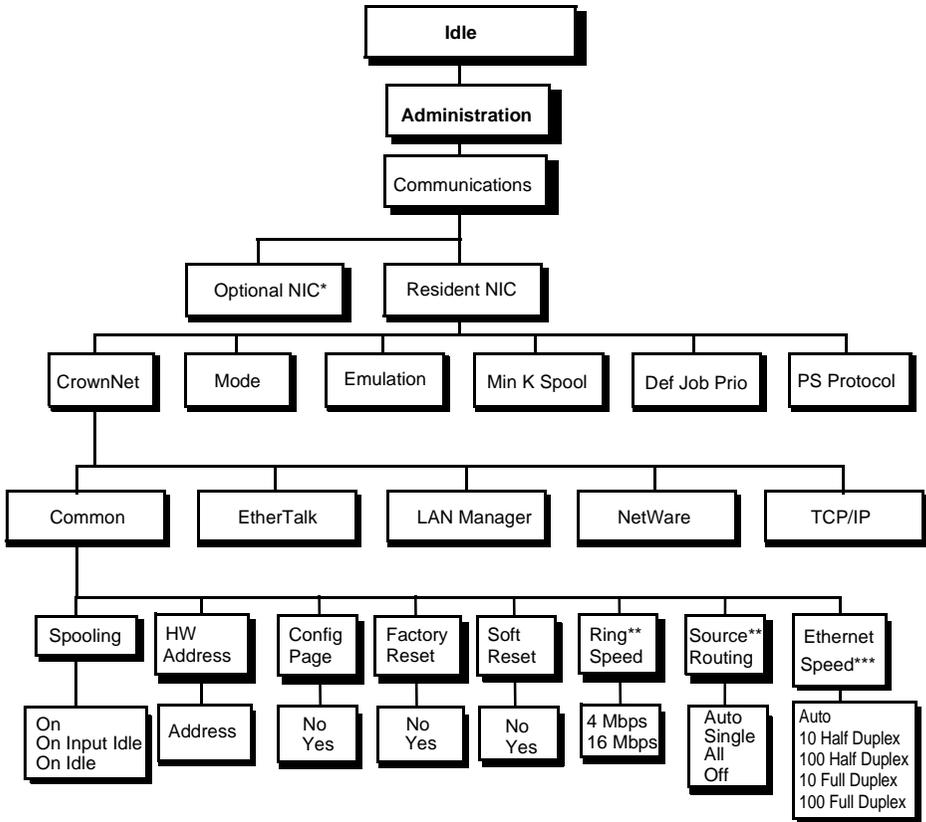
Administration Menu



**Optional*

**Administration/Communications/Resident
NIC/CrownNet Menu**

Common Menu

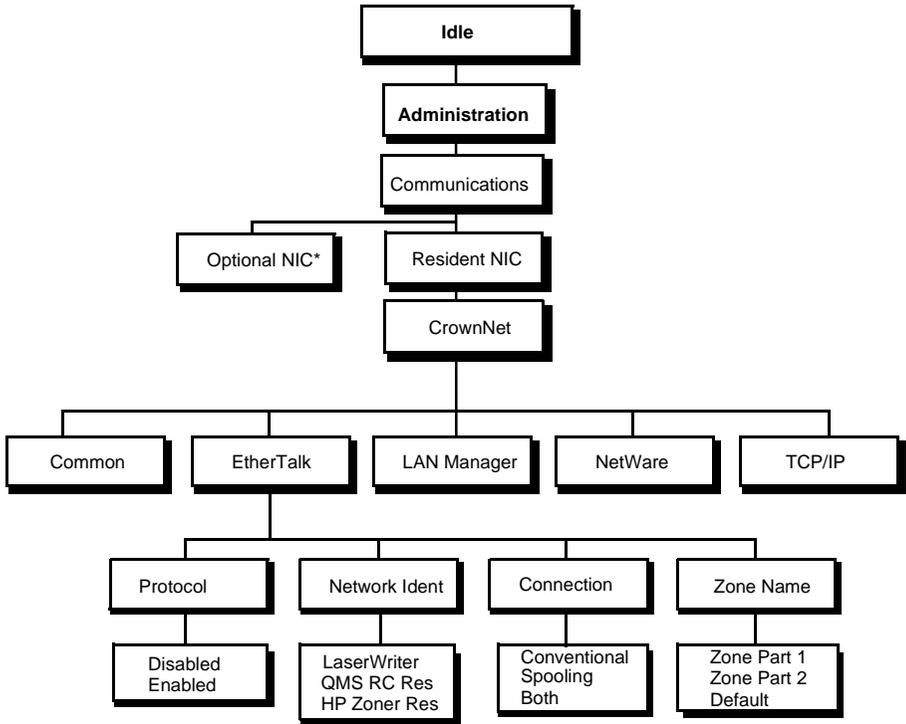


* *Optional*

** *Token-Ring only*

*** *Fast Ethernet Only*

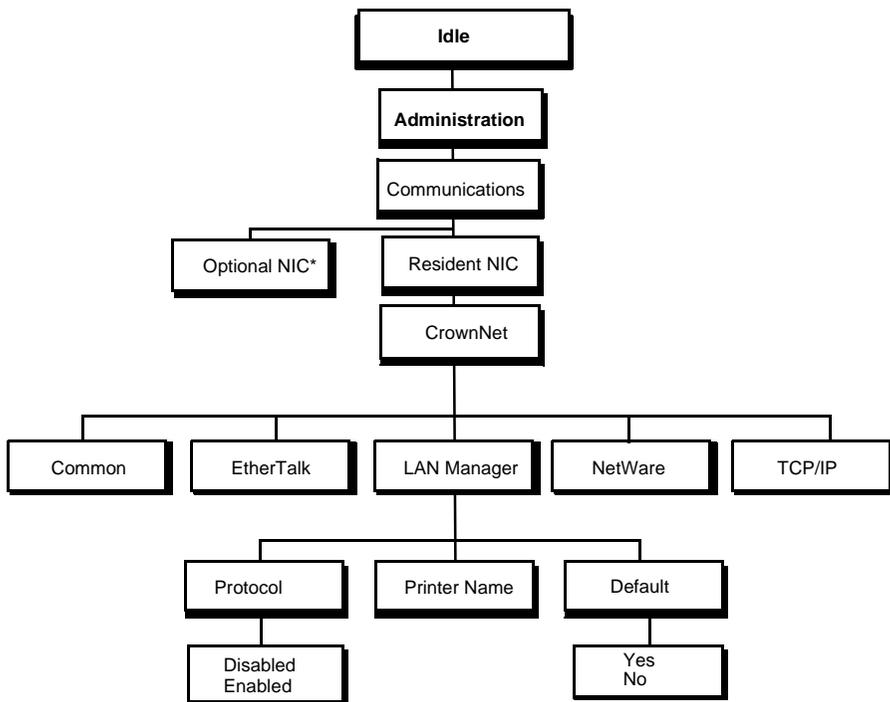
EtherTalk Menu



**Optional*

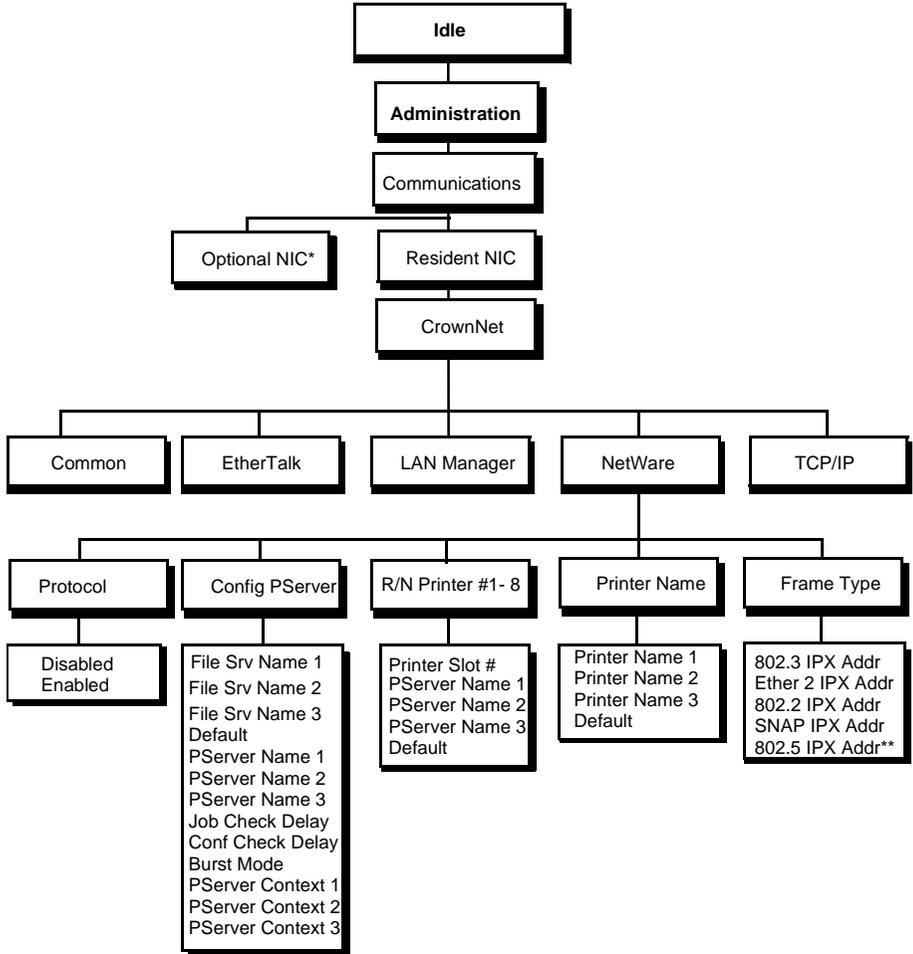
**Administration
Menu**

LAN Manager Menu



**Optional*

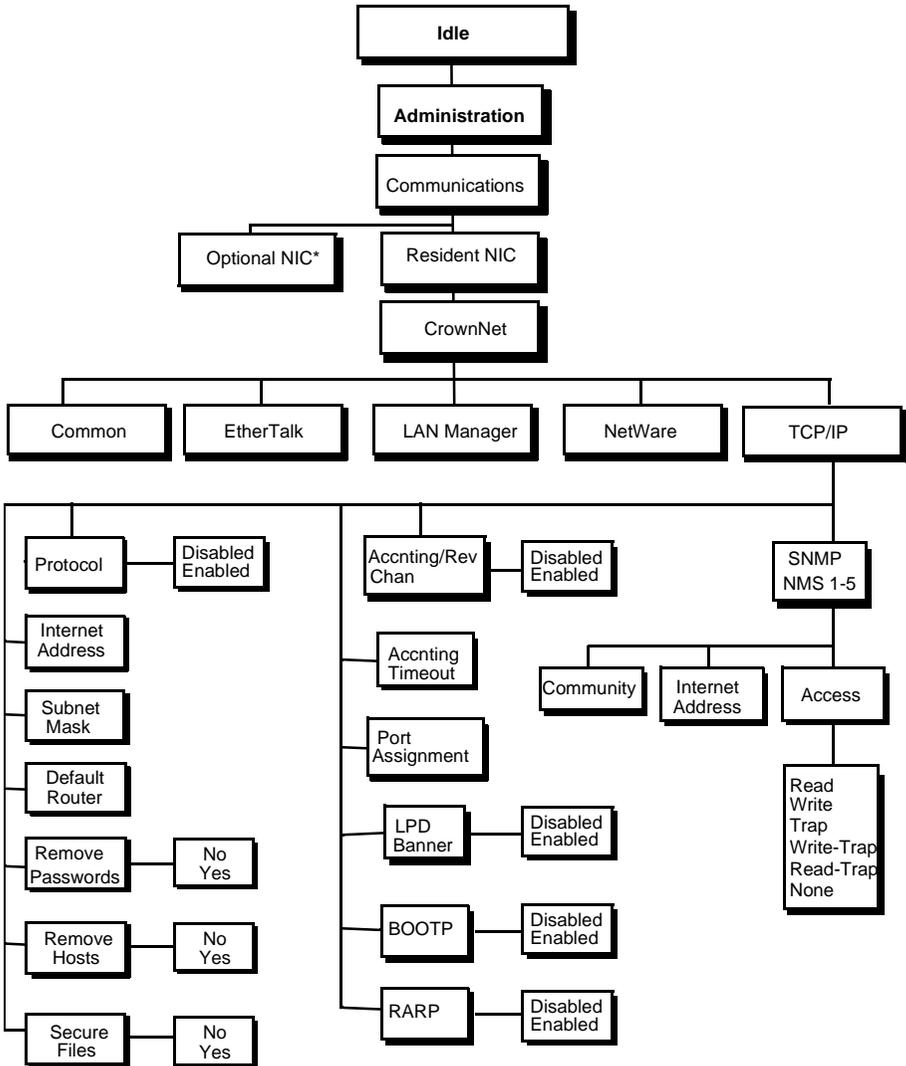
NetWare Menu



**Optional
**Token-Ring only*

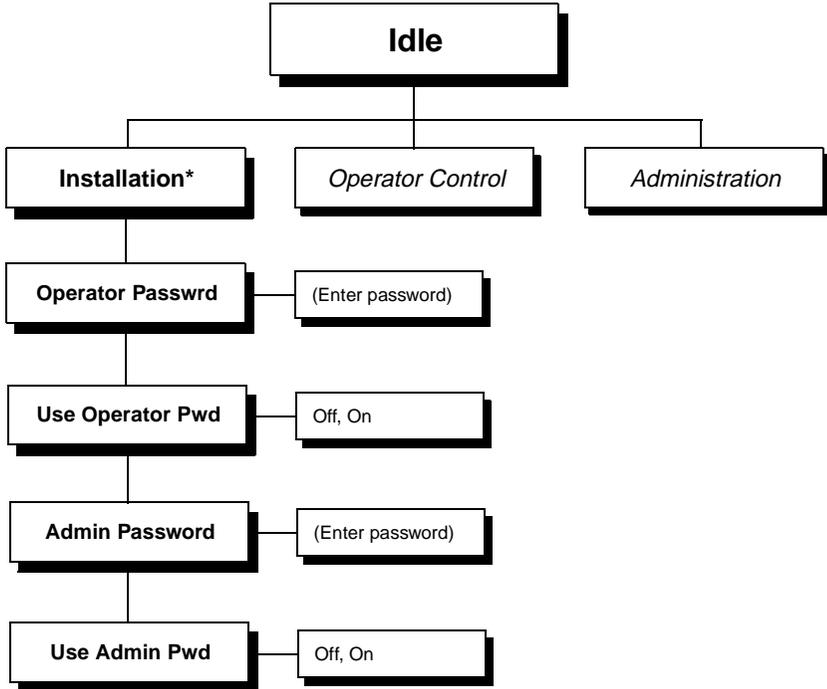
**Administration
Menu**

TCP/IP Menu



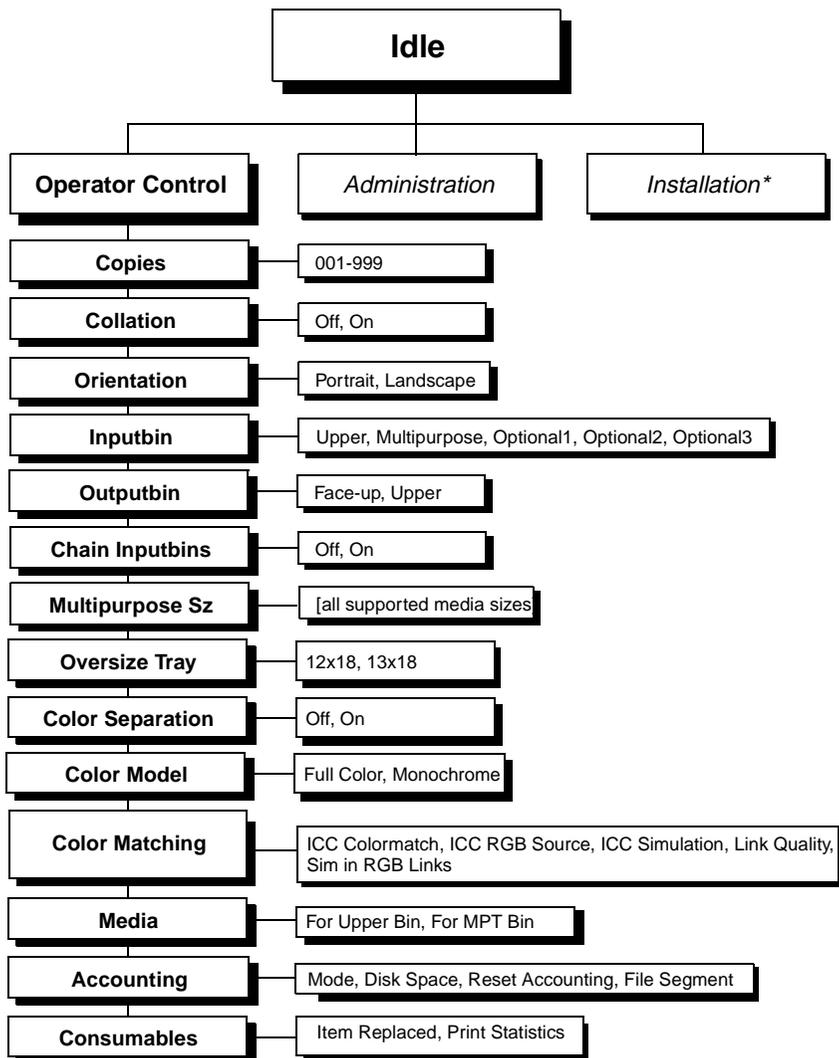
*Optional

Installation Menu



**Optional; available only with security key*

Operator Control Menu



**Optional*

Index

A

Acrobat

- Documentation
- Acrobat files 1-3

ADF

- Copying 7-6

Administration menu B-3

Adobe

- Acrobat 1-3

Antistatic protection 2-2, 3-2, 5-2

AppleTalk

- Connection 3-7
- See also LocalTalk

Automatic Document Feeder

- Cautions 7-8

Automatic document feeder

- Scanning 7-6

B

Backing up

- Jaz drive, to 5-11
- Zip drive, to 5-11

BuzzBox Lite

- Installation 6-14
- Kit 6-13
- Using 6-15

C

CCITT 4-6

Common menu B-4

Configuration

- CrownCopy 7-9

Configuration menu

- Chart B-2

Conventions

- See Manual

Copier Menu menu 7-9

- Copy option 7-12
- Number of Copies option 7-12
- Origin option 7-13
- Scale Size % option 7-15
- Scan Resolution option 7-15
- Scan Size option 7-14
- Select Mode option 7-13

Copy key 7-6, 7-8, 7-9**Copy menu** 7-9**Copy option**

- See CrownCopy

Copying

- ADF 7-6
- CrownCopy configuration 7-9
- Flatbed 7-5
- Scanner 7-5

CrownAdmin

- Emulation, downloading optional 4-4
- Font, disk, downloading 4-7

CrownCopy

- ADF 7-6
- Automatic Document Feeder 7-6
- Configuration 7-9
- Copying 7-5
- Installation 7-2, 7-3
- Memory 7-6
- Menu options 7-12
- Requirements, print system 7-2
- Setup 7-2
- Troubleshooting 7-16

CrownCopy, configuration 7-9**CrownCopy, menu** 7-9**CrownNet**

- LAN Manager menu B-6
- TCP/IP menu B-8
- Updating print system software 2-11
- Updating system software 2-8

CrownNet menu B-4

- EtherTalk menu B-5
- NetWare menu B-7

**Customer Response Center (CRC),
QMS A-4****Customer support, QMS A-2****D****Device numbers, hard disks** 5-3**Disk font**

- Downloading 4-7

Disk fonts 4-6**Documentation**

- Overview of this manual 1-2

Download Error Pages 2-12**Downloading optional emulation** 4-3**E****Emulation**

- CCITT 4-6
- Downloading optional 4-3
- Optional, downloading 4-3
- Using optional 4-6

Error message

- Sequential Error 5-14

Ethernet

- Updating print system software 2-11

EtherTalk menu B-5**External storage device**

- Backing up to 5-11
- Configuring 5-10
- Formatting 5-9
- Restoring from 5-13
- Turning on 5-8

External storage devices 5-7

- Attaching 5-7

F**Feeder**

- Large-capacity input

Flatbed

- Copying 7-5
- Scanning 7-5

Font

- Disk 4-6

- Downloading from disk 4-7
- Intellifonts 4-8
- Kanji font internal IDE hard disk 4-16
- Kanji font SIMM 4-11
- PCL 5 font SIMM 4-8
- ProCollection 4-6, 4-8

H

Hard disk

- Backing up 5-11
- Configuring 5-10
- Device numbers 5-3
- External, attaching 5-7
- External, formatting 5-9
- External, turning on 5-8
- Identifying 5-3
- Internal IDE, installation 5-4
- Restoring 5-13

I

IDE hard disk

- Kanji 4-16

Identification

- Hard disk 5-3
- Storage devices 5-3

ImageServer 4-6

Installation 6-6

- BuzzBox Lite 6-14
- CrownCopy 7-2, 7-3
- Interface kit 3-4
- Internal IDE hard disk 5-4
- Kanji font internal IDE hard disk 4-18
- Kanji font SIMM 4-12
- PCL 5 font SIMMs 4-8
- SCSI interface kit 3-7

Installation menu B-9

Intellifonts 4-8

- Fonts, accessing 4-10

Interface kit 3-3

- Installation procedure 3-4

Interfaces

- LocalTalk 3-3

- Network 3-3

- SCSI 3-7

Internal IDE hard disk 7-2

- Configuring 5-11

- Kit 5-4

Internet A-3

J

Jaz drive 5-7

- Backing up to 5-11
- Restoring from 5-13
- Using 5-8

K

Kanji

- Configuring the printer for 4-18
- Fonts, accessing 4-14, 4-18
- Hardware requirements 4-12, 4-17
- Internal IDE font hard disk 4-16
- Software requirements 4-12, 4-17

Kanji font internal IDE hard disk

- Installation 4-18
- Kit 4-17

Kanji font SIMM 4-11

- Fonts, accessing 4-14
- Installation 4-12

Key

- Copy 7-6, 7-8, 7-9
- Security 6-10

Kit

- BuzzBox Lite 6-13
- CrownCopy 7-2
- Internal IDE hard disk 5-4
- Kanji font 4-11
- Kanji font internal IDE hard disk 4-17
- Large-capacity lower input feeder 6-2
- Security key 6-10
- Time-of-day clock 3-10

L

LAN Manager Menu B-6

LAN Manager menu B-6
Large-capacity input feeder 6-2, 6-6

Location requirements 6-3
Unpacking 6-3

LCIF

See large-capacity input feeder

LocalTalk 3-7

See also AppleTalk

LocalTalk interface 3-3

Using 3-7

Location requirements

Large-capacity input feeder 6-3

M

Manual

Acrobat Files 1-3
Contents 1-2
Overview 1-2
Typographic conventions 1-3

Memory

Collation 7-6
CrownCopy 7-6

Memory modules (SIMMs)

Single in-line 2-3

Menu

See Configuration menu

Moving, printer 6-6

N

NetWare menu B-7

Network interface 3-3

Installation 3-4
Using 3-6

Number of Copies option 7-12

O

Operator Control menu B-10

Optional emulation

Using 4-6

Origin option 7-13

P

Password

Setting 6-11
Using 6-12

PC

Updating print system software 2-8,
2-9

PCL 5

Intellifont SIMM 4-8

PCL 5 fonts

Accessing 4-10

Printer options

Kanji 4-11

Printer stand 6-15

ProCollection 4-6

Fonts, accessing 4-10

Protection

Antistatic 2-2, 3-2, 4-2, 5-2

Q

Q-FAX A-2

QFORM 4-19

QMS

Customer Response Center
(CRC) A-4

World-wide offices A-5

R

Requirements

Location, large-capacity input
feeder 6-3

Resident NIC menu B-4

Restoring data

Jaz drive, from 5-13
Zip drive, from 5-13

S

Scale Size % option 7-15

Scan Resolution option 7-15

Scan Size option 7-14

Scanner

- Copying 7-5
- Troubleshooting 7-16

Scanning

- ADF 7-6
- Flatbed 7-5

SCSI interface 3-7

- Installation 3-8

SCSI interface kit

- Installation procedure 3-7

Security key 6-10

- Password, setting 6-11
- Password, using 6-12

Select mode option 7-13

Sequential Error message 5-14

Service

- United States A-4

Setup

- CrownCopy 7-2

SIMM 2-3

- Installation 2-3
- Kanji fonts 4-11
- PCL 5 font 4-8

Single in-line memory modules

- See SIMM

Stand, printer 6-15

Storage

- Devices, identifying 5-3
- External devices 5-7
- Jaz drive 5-7
- Zip drive 5-7

Support, QMS

- Customer A-2
- Internet A-3
- Technical A-4
- World-wide A-5

System software

- Errors, downloading 2-12
- Updating via Ethernet 2-11
- Updating via PC 2-8, 2-9
- Updating, Ethernet connection 2-8
- Updating, parallel connection 2-8
- Updating, serial connection 2-8

T

TCP/IP menu B-8

Technical support, QMS A-4

Time-of-day clock

- Installation 3-10

Troubleshooting

- CrownCopy 7-16
- Downloading system 2-12
- Hard disk, backup 5-14
- Scanner 7-16

Typographic conventions

- See Manual

Z

Zip drive 5-7

- Backing up to 5-11
- Restoring from 5-13
- Using 5-8



