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# **QMS<sup>®</sup> 1660 Print System Getting Started**

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**1800356-001B**

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# Dear Customer,

Mark Twain once said that only two things in life are certain: death and taxes. Well, if he were living today, we're sure he'd add manuals to this list. Just about everything you buy is accompanied by a manual—and your new QMS printer is no exception.

Now, we know that even though we've devoted our lives to writing manuals, very few people actually enjoy reading them. So we've written this user's guide with you in mind. However, there are as many of you out there as there are printers, and you all need something different. Because of this, we've tried to design your user's guide to help you reach your destination as quickly and easily as possible:

- **Table of Contents**—Use this section as a road map to discover what there is to see in the user's guide.
- **About the Documentation**—This section functions as a Welcome Center. It gives you an idea about what's in this city (your guide to getting started) as well as in other nearby cities (other printer documentation).
- **About This Manual**—As long as you're at the Welcome Center, you probably want a list of local attractions. This section lets you know which chapters you really shouldn't miss and which you need to visit only if you have the time and interest, or a special purpose. It's pretty much the same information as in the table of contents, but in a descriptive format.
- **Headers, Footers, and Tab Dividers**—Use these as road signs to help you locate the section of the manual you want to visit.
- **Index**—While some people like to wander through a city, stopping wherever they find something interesting, others like to call ahead to make a reservation for a specific hotel or restaurant. Our Blue Pages help you find information quickly without unnecessary detours. Easy on, easy off. We think you'll find the blue color especially useful since you'll have more than one manual in the binder.

We hope you enjoy your new QMS printer (and traveling through its manuals, too!)

*Your QMS Technical Writer*

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# 1

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## Introduction

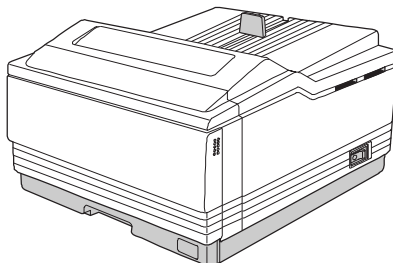
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### **In This Chapter...**

- About the printer
- About the documentation
- About this manual
- Printer features and user benefits

## **About the Printer**

The QMS 1660 Print System offers the unique QMS Crown multitasking operating system, superior performance, extensive connectivity, upgrade options, and flexible emulation support.



It prints 16 letter/A4-size pages per minute; uses media up to 11.70"x19.50"/297.18x495.30 mm in size; and offers 300x300, 600x600, and 1200x600 dpi (dots-per-inch) resolution.

## **About the Documentation**




The documentation provides a window into the many capabilities of your printer. The more familiar you are with the documentation, the easier it'll be for you to achieve the results you want from your printer.

Several pieces of standard documentation accompany your printer. If you've ordered any printer options, you'll have even more documentation. But don't worry—you don't have to read them all tonight to be able to use your printer. In fact, some of them you may never have to refer to at all, depending on the type of documents you print and the environment in which you print them.

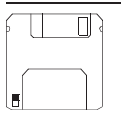
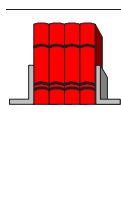
This section will give you an idea of how we've organized information and which documents you'll probably refer to the most.

## **Standard Product Documentation**

The following documentation is shipped with your printer:

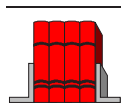
|   |   |  |
|---|---|--|
|  | <b><i>QMS 1660 Print<br/>System Getting<br/>Started</i></b> | <p>You're looking at this manual right now. It contains detailed, illustrated instructions to guide you as you unpack and set up your printer and connect it to an Apple Macintosh or an IBM or compatible PC. In addition, it introduces you to the printer's control panel. The "About This Manual" section later in this chapter details the contents of this manual.</p>   |
|  | <b><i>QMS 1660 Print<br/>System Operation</i></b>           | <p>This manual guides you through the day-to-day operation of your printer. It includes information on replacing print media and toner, using advanced printing features, handling and cleaning your printer, improving print quality, and troubleshooting printer problems.</p>   |
|  | <b><i>QMS 1660 Print<br/>System Reference</i></b>           | <p>This manual provides information you may need only once in a while, such as information on typefaces and fonts, control panel configuration menu, memory, end job mode, the PS protocol option, HP-GL color encoding, and installing and using printer options.</p> <p>This manual also provides technical specifications, a list of printer-supported QMS Document Option Commands (DOC), and a glossary of frequently used terms.</p> |

## About the Documentation

|   |  |  |
|---|--|--|
|  | <b>QMS Crown Network Notes</b>   | Refer to this manual for tips on using your QMS 1660 Print System if you're connecting to a network through the serial or parallel port.   |
|   | » <b>Note:</b> <i>This manual is provided on disk in encapsulated PostScript (EPS) form. Refer to the README file for information on printing a hard copy of the manual.</i> | It discusses 3Com 3+Open, Banyan VINES, LAN Manager-based LANs, Novell NetWare, TCP/IP, UNIX, and VMS/DECnet. In most cases, only advanced network users and system administrators need this information.  |
|  | <b>Printer Option Documentation</b>  | If you purchased a printer option (for example, a network interface or a Kanji option kit), you received separate documentation for it. See chapter 6, "Printer Options," of the <i>QMS 1660 Print System Reference</i> for additional option information. |

## Optional Documentation

The following manual, available from your QMS vendor, may also be useful:

|  |   |  |
|--|---|--|
|  | <b>QMS Crown Document Option Commands</b> | Document Option Commands (DOCs) are software codes you insert in documents to enable printer features that cannot be accessed by your application or page description language. This manual lists and explains all of the DOC commands. The DOCs supported by your printer are listed in appendix D, "Document Option Commands," of the <i>QMS 1660 Print System Reference</i> . |
|  |   | In most cases, only advanced users and system administrators need this information.  |

## **Related Documentation**

Don't forget that your application, host operating system, and network documentation all contain useful printing information.

# **About This Manual**

This manual provides detailed information on how to set up your QMS 1660 Print System and how to use the control panel. It is divided into the following sections:

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|                                    |   |
|------------------------------------|---|
| <b>1 Introduction</b>              | Provides an overview of the documentation, this manual, and the printer's features.   |
| <b>2 Setting Up Your Printer</b>   | Guides you in selecting a location for your printer and explains how to unpack and set up your printer.   |
| <b>3 Connecting to a Macintosh</b> | Explains how to connect the printer to an Apple Macintosh.  |
| <b>4 Connecting to a PC</b>        | Explains how to connect the printer to an IBM or compatible PC via the parallel and serial ports.   |
| <b>5 Using the Control Panel</b>   | Introduces the parts of the printer control panel.  |
| <b>A QMS Customer Support</b>      | Provides world-wide product sales and support telephone numbers and describes how to communicate with QMS through the QMS Bulletin Board, CompuServe, the Internet and Q-FAX. |

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**B Configuration Menu** Displays the printer configuration menu in tree form.

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### **Typographic Conventions**

The following typographic conventions are used in this manual:

|                                 |  |
|---------------------------------|--|
| Mixed-Case<br>Courier           | Text you type, and messages and information displayed on the screen  |
| Mixed-Case<br>Italic<br>Courier | Variable text you type; replace the italicized word(s) with information specific to your printer or computer |
| UPPERCASE<br>COURIER            | Information displayed in the printer message window  |
| <b>lowercase bold</b>           | PostScript operators and DOS commands  |
| <i>lowercase italic</i>         | Variable information in text   |
| UPPERCASE                       | File and utility names   |
| ↵                               | Press the Enter key (PC) or Return key (Macintosh)   |
| ^                               | Press and hold down the Ctrl key (PC)  |

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

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

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⚠ **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.*

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# Printer Features

This brief overview will acquaint you with your printer's major features and how they can benefit you. Specific chapters throughout this manual, the operation manual, and the reference manual contain more information on each feature. Consult the index or the table of contents in each manual for guidance in locating this information.

## Media Flexibility

The printer supports print media in 14 different sizes—11"x17"/279.40x431.80, full ledger (full-bleed 11"x17" on 11.70"x17.40"/297.18x441.96 mm media), 11.7"x19.5"/297.18x495.30 mm, A3, A4, A5, A6 (postcard), B4, B5, B6, executive, legal, letter, and universal—and in both portrait and landscape orientations. The multipurpose tray also supports custom print media in sizes ranging from 3.9" to 11.7" (101 mm to 297 mm) wide and from 5.8" to 19.5" (147 mm to 495 mm) long.

**User Benefit**—You have the option of printing on a variety of standard and non-standard media sizes, including full ledger (11.70x17.40/297.18x441.96 mm) and 11.70"x19.5"/297.18x495.30 mm, which provide full-bleed 11"x17"/279.40 x 431.80 mm images in both portrait and landscape orientations and with enough additional imageable area to accommodate crop marks outside the 11"x17" area.

## Multiple Resolutions

The printer supports three print resolutions: 300x300, 600x600, and 1200x600 dpi (dots per inch).

- » **Note:** *Printing at 600x600 and 1200x600 dpi resolution on certain media sizes requires additional memory. See the "High-Resolution Printing" section in chapter 3, "Advanced Printing Features," of the Operation manual for details.*

**User Benefit**—Three different resolutions allow you to customize the quality of your output according to its use: 300x300 dpi for most hard-copy needs, 600x600 dpi for good camera-ready output, and

## **Printer Features**

1200x600 dpi for better camera-ready output and enhanced gray scales (depending on your application).

### **Toner Savings**

The Conserve Toner option allows you to increase the life of the printer's toner cartridge. Using the printer's control panel or Remote Console, you can turn Conserve Toner on or off for all print jobs. However, with PS Executive Series Utilities, you can set Conserve Toner on a per-job basis.

**User Benefit**—A choice of printing modes allows you to lower printing costs by reducing the amount of toner on the printed page when you're printing draft copies of documents.

### **Three Standard Interfaces**

LocalTalk, Centronics/IEEE 1284 parallel, and serial interfaces are standard on your printer. An optional CrownNet (Ethernet or Token-Ring) interface allows you to connect to EtherTalk (Ethernet only), LAN Manager/LAN Server, NetWare, and TCP/IP networks.

**User Benefit**—You can connect a computer directly to the printer's LocalTalk, parallel, and serial ports or use the optional CrownNet interface to connect to a wide variety of microcomputers, workstations, minicomputers, and mainframe computers on several different networks using either Ethernet or Token-Ring cabling).

### **Four Resident Emulations**

Your printer supports printing in HP PCL 5, HP-GL, Lineprinter, and PostScript emulations.

**User Benefit**—Most applications can print directly to the printer.

#### **HP PCL 5 Emulation**

The printer simultaneously emulates a Hewlett-Packard LaserJet III Si and an HP PaintJet XL300 Color Printer (the output is gray-scaled on your QMS 1660). PCL 5 files print at both 300x300 dpi (bitmap and

scalable fonts) and 600x600 dpi (scalable fonts only), but HP-GL/2 files print at 300x300 dpi only.

- » **Note:** *Using 600x600 dpi resolution with certain media sizes may require additional memory. See the “High-Resolution Printing” section in chapter 3, “Advanced Printing Features,” of the Reference for details.*

### **HP-GL Emulation**

The printer provides HP-GL plotter emulation (7470A, 7475A, 7550A, and ColorPro) at 300x300 dpi, 600x600 dpi, and 1200x600 dpi.

- » **Note:** *Using 600x600 dpi and 1200x600 dpi resolution with certain media sizes may require additional memory. See the “High-Resolution Printing” section in chapter 3, “Advanced Printing Features,” of the Reference for details.*

### **Lineprinter Emulation**

The Lineprinter emulation prints simple, unformatted text files at 300x300 and 600x600 dpi. Each text line ends with a carriage return.

- » **Note:** *Using 600x600 dpi resolution with certain media sizes may require additional memory. See the “High-Resolution Printing” section in chapter 3, “Advanced Printing Features,” of the Reference for details.*

### **PostScript Level 2 Emulation and Level 1 Compatibility**

The QMS 1660 Print System’s Level 2 emulation allows you to take full advantage of your printer’s high print resolution (up to 1200x600 dpi). The Level 2 emulation is compatible with Adobe’s PostScript Level 2 language while providing additional capabilities. QMS Level 2 supports extensive graphics capabilities to control the appearance of text, geometric shapes and images, and improves memory and resource management. Full support for PostScript Level 1 files is also included.

## Printer Features

- » **Note:** *Printing at 600x600 and 1200x600 dpi resolution on certain media sizes requires additional memory. See the “High-Resolution Printing” section in chapter 3, “Advanced Printing Features,” of the Operation manual for details.*

## Resident Fonts and Symbol Sets

Your printer comes with 12 PostScript typeface families containing 39 licensed fonts, and it provides TrueType font support (in PostScript emulation only). All resident PostScript typeface families have multi-lingual character sets. The printer also has 7 resident bitmap HP PCL fonts in 25 symbol sets each, 12 resident scalable HP PCL fonts in 35 symbol sets each, 1 resident scalable HP PCL font in 5 symbol sets, and 40 resident HP-GL symbol sets.

**User Benefit**—With so many resident fonts and symbol sets, there is less need for time-consuming downloading.

## QMS Crown Technology

The QMS Crown multitasking operating system provides fast processing speeds, networking capability, and higher printer performance while maintaining outstanding print quality.

## Compile-Ahead Technology and True Multitasking

Compile-ahead technology keeps all of the QMS 1660's printing resources busy to improve throughput. While the engine is printing a page, compile-ahead technology uses available printer memory to prepare the subsequent pages of the document (or the next job). With pages ready in memory, the engine continues printing as soon as it deposits printed pages in the output tray. In other words, compiling, rasterizing, and printing all work independently but simultaneously.

**User Benefit**—Because print job processing time is significantly reduced, the host is free sooner and you spend less time waiting for your documents to print.

## **Simultaneous Interface Operation (SIO)**

Although many other printers have multiple interface ports and automatically designate a “hot port,” only one port actively receives data at a time. Your QMS 1660 Print System is unique because SIO allows all of its interface ports—LocalTalk, Centronics IEEE 488/1284 parallel, serial, and up to two optional network interfaces—to be active at the same time.

**User Benefit**—You can have more than one computer printing to the printer. Each interface has an input buffer (which may be expanded with additional memory) that receives data while another interface is being used to print.

## **Emulation Sensing Processor (ESP) Technology**

Most printers can recognize only their native command language. However, using a form of artificial intelligence, ESP technology analyzes incoming file data from any of the printer’s interfaces, selects the appropriate emulation from those installed on the printer, and processes the print job.

**User Benefit**—When your printer is in ESP mode, you can easily print PostScript, HP PCL 5, HP-GL, and Lineprinter documents without changing printer switch settings or sending software commands to accommodate different printer languages.

## **Context Switching**

After its initial use, the state of an emulation and downloaded data (such as fonts, macros, and overlays) is preserved for as long as the printer power is on.

**User Benefit**—Repetitive downloading of emulations, fonts, macros, and overlays is unnecessary.

## **Compressed Data Formats**

Crown printers convert data received from the input buffers into intermediate, compressed blocks until the data is needed for printing. These compressed blocks of data are designed to be processed

## Printer Features

rapidly by the printer, and many more can be stored in memory at one time than can traditional bitmapped images.

**User Benefit**—This allows and increases the speed of such printer features as collation and automatic jam recovery.

### **Automatic Jam Recovery**

Crown technology also provides automatic jam recovery. With most printers, when a media jam occurs, you must remove the jammed media and then reprint the job. If jam recovery is enabled on a Crown printer, once you remove the jammed media, the printer reprints the jammed page and then continues with the print job. This is possible because compressed data formats allow more pages to be stored in memory. The printer remembers the last page printed, pulls the necessary information from memory, and automatically reprints any lost pages.

**User Benefit**—You save time and print media because it's unnecessary to resend a print job after clearing a media jam.

## **Energy Star Compliance**

The QMS 1660 Print System is compliant with US Environmental Protection Agency (EPA) Energy Star regulations. After a specified period of inactivity, the printer changes to a low-power state (the engine remains on, but the fuser turns off). When a print job is received, the printer returns to normal power within 90 seconds.



**User Benefit**—The EPA Energy Star Computers program promotes the use of energy-efficient personal computers, monitors, and printers and the reduction of air pollution caused by power generation.

## **Software Loadable System**

Your printer has a software loadable system, which allows you to replace or upgrade its system software from a Macintosh or a PC, or over an Ethernet or Token-Ring network. Future enhancements to the system software can be easily installed as they become available from QMS.

## **Remote Console**

An optional CrownNet network interface card (NIC) and its accompanying software allow your printer to establish a remote console connection via EtherTalk, LAN Manager/LAN Server, Novell NetWare, and TCP/IP. Printer status that requires user intervention is displayed on the remote console. For example, a status message may indicate that paper is low, the output bin is full, or a media jam has occurred. The *QMS CrownNet Interface System Administrator's Manual* explains how to begin a remote console session, and the *QMS Crown Remote Console User's Guide* explains how to use a remote console to control and configure the printer. A copy of each manual is shipped with the CrownNet NIC.

**User Benefit**—The ability to control your printer from a remote console as well as from the printer's own control panel means you don't have to leave your workstation every time the printer needs attention. Moreover, you'll know right away if the printer is tied up with a media jam or other simple problem requiring user intervention.

## **PCMCIA Card Slots**

The two PCMCIA (Personal Computer Memory Card International Association) card slots on the right side of the printer under the output tray support PCMCIA Release 1.0 Type I and Type II cards. The right slot also supports Release 2.0 Type I and Type II cards.

**User Benefit**—Both slots support font and security cards (see the following section, "Printer Options," for details).

## **Printer Options**

The following options are available for your QMS 1660 Print System. Contact your QMS vendor for purchase information.

### **Upgradable RAM (Random Access Memory)**

The QMS 1660 Print System comes in two configurations:

- 12 MB of RAM
- 24 MB of RAM

However, you can upgrade this RAM to 64 MB through the installation of SIMMs (single in-line memory modules). Additional RAM allows you to print at higher resolutions on certain media sizes, download and cache fonts, and attach and use multiple hard disks. Additional RAM also increases the printer's buffer (the area where data sent from the host computer is stored), allowing you to send large data-intensive files to the printer without tying up the host for long periods.

- » **Note:** *SIMM specifications are included in Q-FAX document 6502, "QMS-tested SIMMs and Hard Disks." This document contains a description of each approved SIMM, its manufacturers and part numbers, and the QMS products on which it's used. See appendix A, "QMS Customer Support," of this manual to find out how to access Q-FAX documents.*

**User Benefit**—Your printer's memory can be upgraded as your needs grow.

- » **Note:** *Printing at 600x600 and 1200x600 dpi resolution on certain media sizes requires additional memory. See the "High-Resolution Printing" section in chapter 3, "Advanced Printing Features," of the Operation manual for details.*

### **250-Sheet and 500-Sheet Paper Cassettes**

This option increases the printer's paper feed capacity. While your printer comes standard with two 250-sheet paper cassettes (letter/A4 and 11" x 17"/A3), you can install only one paper cassette at a time in the printer. However, an optional paper feeder allows you to install dual paper cassettes, increasing paper feed capacity to 600 sheets

(including the multipurpose tray). Attaching an optional cassette supporter to the paper feeder allows you to install a 500-sheet paper cassette, increasing paper feed capacity to 850 sheets (including the multipurpose tray).

**User Benefit**—You can customize the printer's media input sources to your printing needs.

## **Fonts**

Optional fonts are available in three different formats:

- The HP ProCollection fonts and special PostScript fonts are either contained on font cards or must be downloaded to an optional printer hard disk. Font cards can be inserted in either of the two card slots.
- An Intellifont SIMM increases the number of fonts available to the HP PCL 5 emulation from 20 to the 37 PCL 5 fonts available on an HP LaserJet 4Si.
- A pre-formatted IDE hard disk provides the Kanji fonts Ryumin Light-KL and Gothic BBB Medium (both licensed to QMS by Morisawa and Company, Ltd.) as well as the fonts Mincho Medium, Mincho Heavy, Gothic Bold, and Gothic Heavy (licensed to QMS by TypeBank). These fonts can be printed at a variety of point sizes and in different styles and resolutions.

Contact your QMS vendor for a complete list of available fonts.

**User Benefit**—Optional fonts increase the printer's functionality and allow you to create more distinctive documents.

## **Emulations**

Optional emulations, such as LN03 and QUIC II, are contained on floppy disks and must be downloaded to an optional printer hard disk.

Contact your QMS vendor for a complete list of available emulations.

**User Benefit**—Extra emulations allow you to print documents created in printer languages other than those resident on the printer.

## **Security Card**

An optional security card allows you to password-protect the printer's configuration menu. The card can be inserted in either PCMCIA (Personal Computer Memory Card International Association) card slot.

**User Benefit**—A security card restricts access to the configuration menu to those users with valid passwords, thus ensuring that default settings are not changed inappropriately.

## **CrownNet Network Interfaces**

Using a CrownNet network interface card (NIC), the QMS 1660 Print System can be attached to an Ethernet and/or a Token-Ring network running multiple protocols. Contact your QMS vendor for a list of available protocols.

**User Benefit**—CrownNet network interfaces provide flexibility and fast data transfer in complex network environments.

## **Hard Disk Expandability**

An optional internal IDE-SCSI disk drive board supports an internal 2.5" IDE hard disk and up to three external SCSI hard disks.

- » **Note:** *Q-FAX document 6502, "QMS-tested SIMMs and Hard Disks," contains a description of each approved hard disk, its manufacturers and part numbers, and the QMS products on which it's used. See appendix A, "QMS Customer Support," of this manual to find out how to access Q-FAX documents.*

**User Benefit**—Hard disks provide true virtual memory as well as storage for character bitmaps, downloaded outline fonts, and other files.

## **Paper Output Ramp**

The paper output ramp extends the QMS 1660's output tray to accommodate 11.7" x 19.5"/297.18 x 495.30 mm media.

**User Benefit**—Extra-large-size media lies flat in the output tray.

# **What's Next?**

Chapter 2, "Setting Up Your Printer," explains how to find a good location for the printer, unpack the printer, install a toner cartridge, and load and install a 250-sheet paper cassette.





# 2

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## Setting Up Your Printer

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### In This Chapter...

- Finding a good location for the printer
- Unpacking the printer
- Installing a toner cartridge
- Loading and installing a 250-sheet paper cassette

# Introduction

This chapter explains how to set up your QMS 1660 Print System for the first time.

It includes information on finding a good location for the printer, unpacking it and checking the shipment contents, installing a toner cartridge and paper cassette, and printing a start-up page.

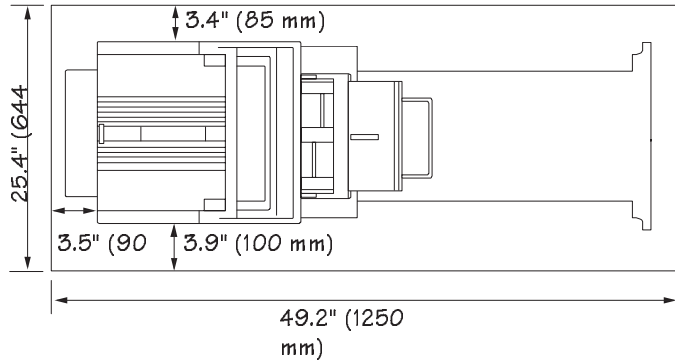
## Finding a Good Location

Your QMS 1660 Print System operates in almost any computing environment. However, when selecting your printer's location, use the following guidelines.

### Location Requirements

- Away from cooling sources, heating sources, extreme temperature changes, direct sunlight, excessive dust, and corrosive chemicals or vapors.
- Away from any strong electromagnetic field (such as that created by an air conditioner) and excessive vibration.
- Temperature range of 50° F (10° C) to 90° F (32.5°C).
- Relative humidity range of 20% to 80%.
- Level (with less than 2° slope) and capable of supporting the printer weight, which is about 50 lbs (23 kg) for the printer only.
- An appropriate distance from the host computer, based on your operating environment—6 feet (1.8 meters) or less for parallel connection or 25 feet (7.5 meters) or less for a serial connection.
- Well ventilated. Leave space on each side of the printer for adequate ventilation.
- Enough space to hold the four printer legs and to allow you to open the front cover, access the multipurpose tray, and slide out

the paper cassette. In other words, with the 11" x 17"/A3 paper cassette installed, you need an area at least 25.4"/664 mm x 49.2"/1250 mm.



## Power Requirements

Your printer requires a properly grounded AC outlet with a power range of  $\pm 10\%$  of the rated voltage (100, 110/120, or 220/240 V). Noise-generating equipment should not be connected to the same electrical outlet as the printer. The recommended frequency is 50 Hz  $\pm 2$  Hz for 100 and 220/240 V systems and 60 Hz  $\pm 2$  Hz for 110/120 V systems.

- 
- ▲ **Caution:** *The supplied power cord is equipped with a 3-wire grounding plug for safety purposes. Use the proper grounding-type power outlet.*
- 

## Energy Star Compliance

The printer is compliant with US Environmental Protection Agency (EPA) Energy Star regulations. After a specified period of inactivity, the printer changes to a low-power state (the engine remains on, but the fuser turns off). When a print job is received, the printer returns to normal power within 90 seconds.

# Checking Shipment Contents

In addition to this manual, your shipment consists of the following items. As you unpack the printer in the next section, make sure that all of these items are included in your shipment before setting up your printer. If any items are missing or damaged, contact your shipping company or your QMS vendor. See appendix A, "QMS Customer Support," for world-wide product sales and support information.

- QMS 1660 Print System
  - 250-sheet ledger or A3 paper cassette
  - 250-sheet letter or A4 paper cassette
  - Paper cassette rear cover
  - Power cord
  - Warranty and registration card
  - Toner cartridge
  - Documentation
    - *QMS 1660 Print System Operation*
    - *QMS 1660 Print System Reference*
    - *QMS Crown Network Notes* (on disk)
  - Documentation binder
  - PS Executive Series Utilities software (on disk)
- » **Note:** *Interface cables aren't included in the shipment. If you need cables, contact your QMS vendor or a local computer store. Chapters 3, "Connecting to a Macintosh," and 4, "Connecting to a PC," of this manual specify the type of cable you need.*

# Registering the Printer

QMS is committed to developing print systems that offer you flexible, efficient solutions, so we're interested in knowing how you plan to use your printer. Register it now, and we'll send you a special gift.

To register by mail, fill out and send in your warranty card. To register by telephone, in the US call QMS toll-free at (800) 637-8049. In other countries, refer to appendix A, "QMS Customer Support," for the appropriate telephone number.

# Unpacking the Printer

The packing materials that protect your printer during shipment—cardboard, polystyrene, tape, and shipping spacers—must be removed before you can use the printer.

Use the following procedure to unpack the printer. To ensure that your printer was not damaged during shipment, follow the entire procedure, including printing the start-up page.

- » **Note:** *You may want to save the packing materials in case you ever have to move or ship the printer to a new location.*

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- ▲ **Caution:** *You may damage the printer if you turn it on before all of the packing materials are removed.*

---

- ☛ **WARNING!** *The printer weighs about 50 lbs (23 kg). Don't lift it by yourself.*

**ACHTUNG!** *Der Drucker wiegt ca 23 kg; bitte versuchen Sie niemals, das Gerät alleine anzuheben oder zu tragen.*

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- 1 Remove everything except the printer from the shipping carton.**

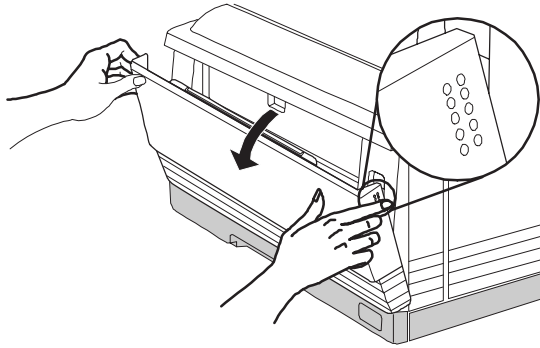
## Unpacking the Printer

### 2 Lift the printer out of the shipping carton.

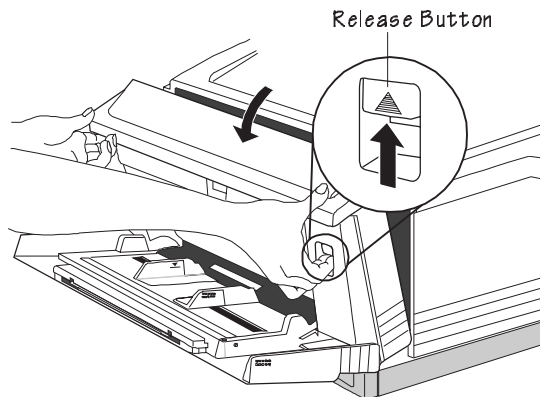
The printer is heavy, so two people should lift it. Hold the printer by the carrying grips located on the printer bottom.

### 3 Remove the protective plastic covering and tape from the printer body.

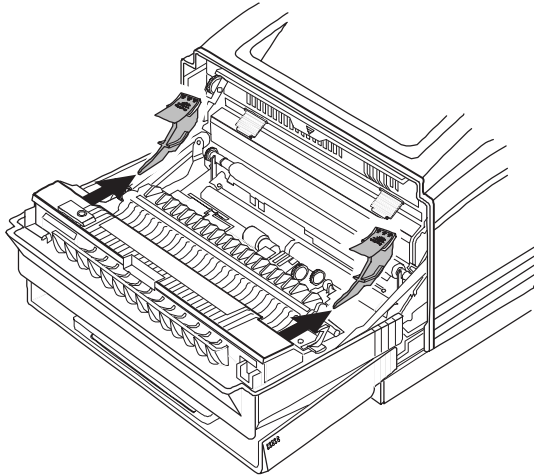
### 4 Using both hands, open the multipurpose tray.



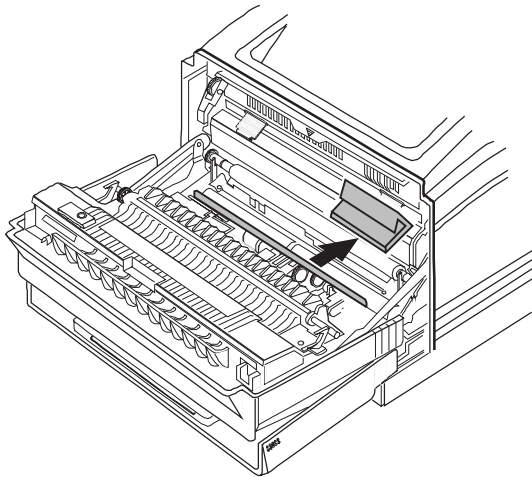
### 5 Open the printer's front cover.



- 6 Remove the two orange shipping spacers from inside the printer.**



- 7 Remove the piece of cardboard that holds the paper lift plate in place.**



# Installing Consumables

You must install the toner cartridge, load and install a paper cassette, connect the power cord, and print the start-up page before you can install any options.

## Installing the Toner Cartridge

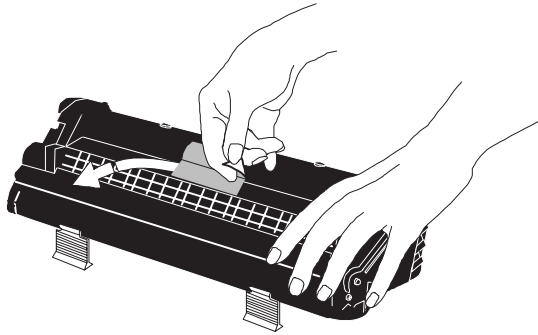
Characters and images are created in your laser printer through a process that applies toner (made of carbon particles) to the page in the printer's fusing unit. When an image is formed, heat and pressure from the printer are applied to transfer the image to the page. The toner cartridge contains the toner and the photosensitive drum needed to operate the laser printer. You may purchase additional toner cartridges from your QMS vendor.

- » **Note:** *The toner cartridge is sensitive to bright light. Do not remove the cartridge from its protective bag until you are ready to install it. Keep the toner cartridge away from your computer. The magnets in the cartridge can damage data, particularly on your floppy disks.*

- 1 Lift the toner cartridge out of its shipping carton, open the aluminum protective bag, and remove the cartridge.**

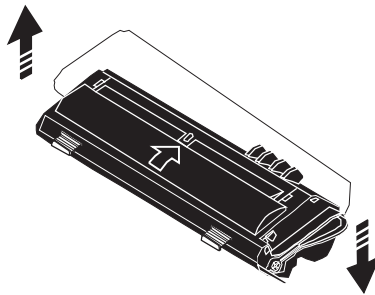
**2 Remove the black protective sheet, and discard it.**

Place the cartridge on a stable, flat surface to get a good grip on the protective sheet tab.



**3 Distribute the toner in the cartridge.**

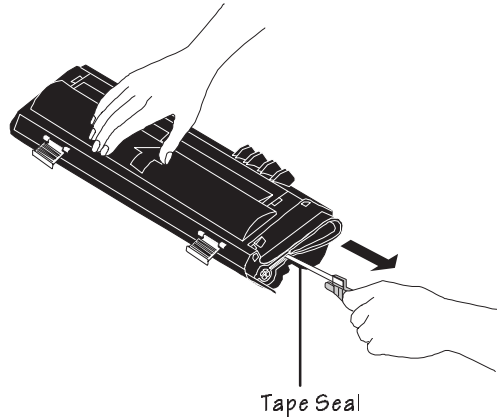
Hold the cartridge with both hands, and gently rock it from side-to-side five or six times to distribute the toner.



## Installing Consumables

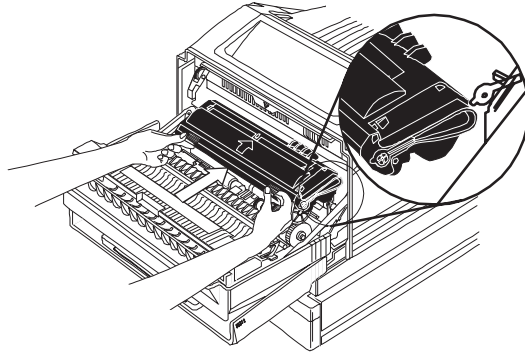
### 4 Remove the tape seal.

Holding the cartridge in place with one hand, use your other hand to grasp the orange tab on the right side of the tape seal. Pull the orange tab (26.4"/670 mm) straight out, and then discard both the orange tab and the tape seal.



**5 Slide the toner cartridge into the printer.**

Grasp the green tabs on the toner cartridge and place the cartridge on the rails inside the printer. Then lift the green tabs slightly, and slide the cartridge straight back into the printer until it is firmly seated.



**6 Close the front cover, and then close the multipurpose tray.**

- » **Note:** *When a toner cartridge is installed, keep the printer's front cover closed unless you need access to the inside of the printer. When the front cover is open, the protective shutters of the cartridge's photosensitive drum open, and the drum surface is exposed to light. This may deteriorate the drum and reduce print quality.*

## **Loading the 250-Sheet Paper Cassette**

The QMS 1660 Print System comes standard with two 250-sheet paper cassettes (letter/A4 and ledger/A3). Load paper in either 250-sheet cassette as follows.

- » **Note:** *Paper must be loaded only in the appropriate cassette (for example, letter and A4 paper must be loaded only in the letter/A4 cassette). When the cassette is inserted into the printer, it sends a paper size signal to the printer software.*

## Installing Consumables

- 1 **Remove the packing materials from inside the two paper cassettes.**

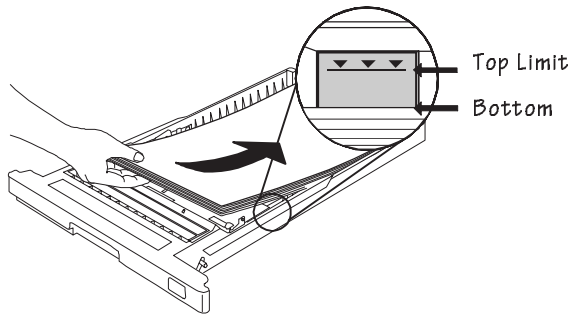
One paper cassette is already installed in the printer.

- 2 **Align a stack of paper on a flat surface.**

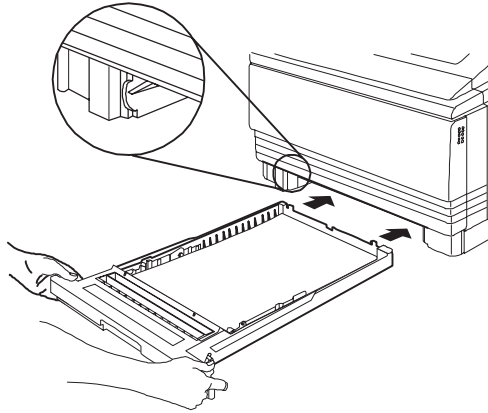
The cassette holds about 250 sheets of 20 pound (75 g/m<sup>2</sup>) paper.

- 3 **Insert the paper into the appropriate cassette.**

Make sure the paper lies flat, does not exceed the top limit mark, and rests under the retaining clips.

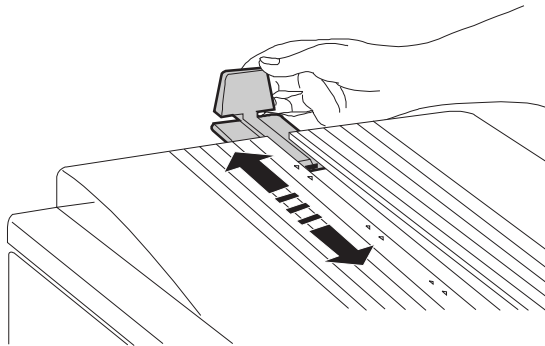


- 4 Slide the cassette into the cassette slot until it's firmly seated.**



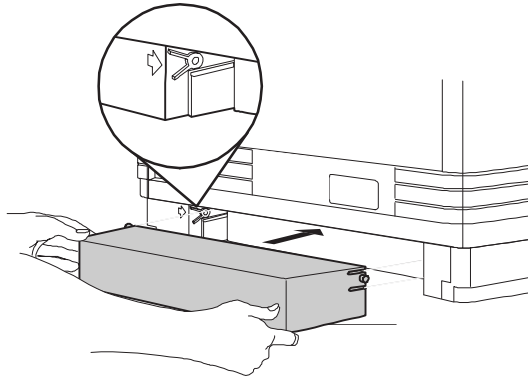
- 5 Adjust the media stop to fit the paper size.**

The printer delivers your output, print-side down, to the output tray at the top of the printer. The media stop keeps the sheets positioned in the output tray.



## Installing Consumables

- 6 If you're using either a ledger /A3 or an optional legal/B4 media cassette, place the cassette rear cover on the end of the cassette at the rear of the printer.

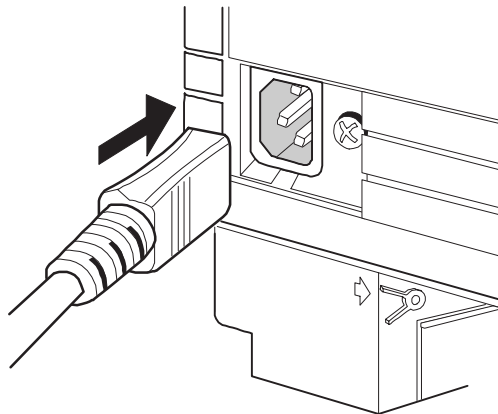


# Connecting the Power Cord

The power cord connector is located at the rear of the printer. The power switch is located at the lower right of the printer.

- 
- ▲ **Caution:** *Make sure that the printer power switch is turned off (the O is pressed down).*
- 

- 1 Plug the power cord into the connector on the rear of the printer.**



- 2 Connect the opposite end of the power cord to a grounded AC outlet.**
- 3 Turn on the printer (press down the | side of the switch).**  
After a brief warm-up (2 minutes maximum) the printer produces a start-up page.

# Printing a Start-up Page

When you turn on the printer, a start-up page prints. This page gives you an overview of your QMS 1660 Print System.


The following information prints on the start-up page:

- Printer product name
- Cumulative number of printed sheets
- Amount of resident RAM (in bytes)
- Number of PostScript typefaces in ROM
- Default resolution
- Software version, revision, and release numbers
- Firmware level number
- Address and status (on or off line) of attached hard disk(s), if any
- Emulation and protocol information for all standard and optional interfaces

If the start-up page prints with all the start-up page information, and the print quality is good, go to chapter 3, "Connecting to a Macintosh," or chapter 4, "Connecting to a PC."

Otherwise, see chapter 6, "Troubleshooting," of the *Operation* manual for more information on printing a start-up page.

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 **WARNING!** *Turn the printer off and unplug the power cord before checking for correct printer installation.*

**ACHTUNG!** *Schalten Sie bitte den Drucker aus und ziehen Sie auch den Netzstecker heraus, bevor Sie die korrekte Installation des Druckers überprüfen.*

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## **Enabling/Disabling the Start-up Page**

A start-up page automatically prints when you turn on your print system. You can save time, paper, and toner by disabling the start-up page. However, you may need the information included on the start-up page after you have disabled the page (for example, to provide to QMS Customer Technical Assurance).

You can disable (and enable) the start-up page in two different ways:

- 1 Use the PS Executive Series Utilities. See the PS Executive Series Utilities on-line documentation for complete information.
- 2 Use the printer control panel (Administration/Startup Options/Do Start Page menu). See “Enabling/Disabling the Start-up Page” in chapter 4, “Printer Configuration,” of the *Reference* for complete information.

# **Installing Options**

If you purchased any printer options, such as extra memory (SIMMs) or a hard disk, you can install them now. If installation instructions are included with the option, follow them. If not, installation instructions are included in chapter 6, “Printer Options,” of the *Reference*.

## **What’s Next?**

Now that you’ve set up your printer, go to chapter 3, “Connecting to a Macintosh,” or chapter 4, “Connecting to a PC,” of this manual to connect your printer to a host computer.

If you want to connect your printer to a network via an optional CrownNet network interface, use the installation instructions in chapter 6, “Printer Options,” of the *Reference* and the connection instructions that came with the interface.





# 3

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## Connecting to a Macintosh

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### In This Chapter . . .

- Printer-host interface
- AppleTalk port connection
- Macintosh printing software

# Introduction

This chapter explains how to connect your printer to a Macintosh (or another computer on a network that uses LocalTalk-type connectors and boxes) and how to install the necessary Macintosh printing software.

The AppleTalk port is used to print if

- Your host is any member of the Apple Macintosh family. If you're connecting the printer to an AppleTalk network with more than one Macintosh, see your PhoneNET and Macintosh documentation for more information.
  - Your host is an IBM PC or compatible microcomputer, workstation, minicomputer, or mainframe computer that connects through a print network (such as TOPS or AppleShare) using LocalTalk-type connectors and boxes. If you're connecting the printer to one of these computers, you may need additional hardware or software (see your computer or network documentation).
- » **Note:** *If you're connecting your printer to a network, see your network documentation for connection information.*

# Before Making the Connection

If you have a brand-new Macintosh, before connecting the printer you should follow the manufacturer's instructions for setting up the Macintosh and installing (if it's not already installed) any operating system software.

## What You Need

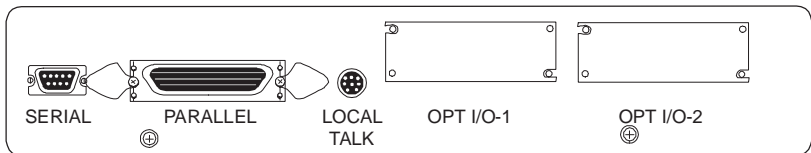
Interface cables are not included with your printer. If you're replacing a printer, you may already have the necessary cables. If not, contact your QMS vendor or a local computer store.

To connect your printer to a single Macintosh, you need the following:

- Two PhoneNET-type transformer boxes (one for the printer port and one for the Macintosh port), each with a DIN-8 connector
- An RJ11 (telephone) cable
- Two terminating resistors to close the open sockets left in the transformer boxes after the connection is made

# Making the Connection

- ▲ **Caution:** *Turn off both the printer and the Macintosh before making the connection.*

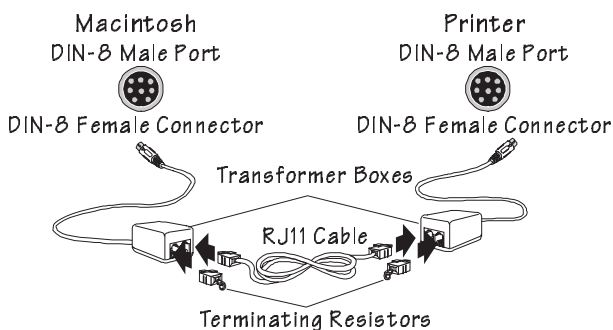


- 1 Plug the connector from one transformer box into the printer's AppleTalk port.**

## Making the Connection

- 2 Plug the connector from the other transformer box into the Macintosh printer port.
- 3 Connect the two transformer boxes with the telephone cable.
- 4 Put terminating resistors in all open sockets in the connector boxes.

This ensures proper communication and helps speed up transmission.



- 5 Turn on both the printer and the Macintosh.

A start-up page should print. If it doesn't, see the "Printer Problem Checklist" in chapter 6, "Troubleshooting," of the *Operation* guide.

- 6 Test communication between the printer and the Macintosh.

You can do this by sending a file from one of your applications, or you can refer to "Testing Communication" in chapter 6, "Troubleshooting," of the *Operation* guide.

# Macintosh Printing Software

If your Macintosh was previously connected to a PostScript printer, you can probably start printing now with the printing software already in place. Refer to your application documentation for instructions on sending a document to the printer.

**However**, if you want to use all of your printer's special features (like collation, 600x600 and 1200x600 dpi printing, and gamma correction), **or** if you've never printed to a PostScript printer before, you need to take a few minutes to make sure you have the following printing software installed:

- PS Executive Series Utilities
- The 1660 PPD file
- Application-specific printer files

## Installing PS Executive Series Printer Utilities

The PS Executive Series Utilities (or PS Exec), included on the Macintosh-format disks we shipped with your printer, is a utilities program for controlling the printer from the Macintosh. For example, through PS Exec you can turn off the start-up page, rename the printer, install printer-resident screen fonts, download fonts, print font samples, and manage hard disks. Many of the procedures described in this manual involve using PS Exec.

- 1 With the Macintosh on, insert the Macintosh Format PS Executive Series Utilities disk in the disk drive.**
- 2 Double-click the PSExec3.xx Installer icon.**
- 3 In the PSExec 3.xx dialog box that appears, verify the Install Location.**

To change the Install Location you can either use the drop-down list box to display and select the appropriate disk, or you can choose the Switch Disk button to scroll through the available disks.

**4 Also in the PSExec 3.xx dialog box, choose Easy Install or Custom Install.**

- **Easy Install** automatically installs all of the utilities, including the PS Exec application; the LaserWriter 8.x driver; the PDF, PDX, and PPD files; and the screen fonts.
- **Custom Install** allows you to choose the options you want to install.

The amount of available space on your Macintosh hard disk and the amount of space necessary for all of the selected options are indicated near the bottom of the window.

- » **Note:** *If you're using Custom Install, you can click the small icon (it looks like an I inside a square) to the right of each install option for more information about that option.*

**5 Click the Install button to begin the installation.**

The installation takes approximately one minute. The Installer places the LaserWriter 8.x driver in the Extensions folder inside the System Folder and all of the other options inside a newly created PSExec 3.xf folder in the hard disk window. Also inside this folder is the Installer log file, which you can view to verify the installation.

- » **Note:** *All Macintosh users on a network must use the same version of the LaserWriter and Laser Prep files to run correctly. For example, if the network has a mixture of LaserWriter 6.x, 7.x, and/or 8.x, the printer will experience frequent reinitialization problems. To check the version number, select the LaserWriter icon and then hold down the Command key and press the I key. The driver version number appears in the Info window on the second-to-last line. LaserWriter 7.x and 8.x do not require a Laser Prep file to work correctly with your printer. The Laser Prep information is located within the LaserWriter driver itself.*

**6 When the installation is finished, you are prompted to choose Continue to install additional options from the Custom installation option or to choose Quit to exit the Installer program.**

- » **Note:** *The Easy Install procedure automatically installs the Version 4.x PPDs but not the Version 3.0 PPDs. If you want to install them, you can do so now as a Custom installation. Return to step 4.*
- 7 Back at the hard disk window, open the new PSExec 3.x f folder and then, inside that, the PS Execf folder.**
- 8 Open PSInstall to personalize your copy of PS Exec.**
- 9 Check the README file(s) for updates, and see the PS Exec on-line help for information on using the utility.**

### **Installing the QMS 1660 4.1 PPD**

The QMS 1660 Print System 4.1 PPD (a printer description file) allows you to take advantage of printer features like multiple-resolution printing and collation that are not available through LaserWriter 8.x alone.

- » **Note:** *If you have problems printing with LaserWriter 8.x, reinstall the LaserWriter 7.x driver that came with your Macintosh (if available), or call the QMS Customer Response Center (CRC). See appendix A, "QMS Customer Support," for a list of telephone numbers.*
- 1 If you haven't already, follow the instructions given above in "Installing PS Executive Series Printer Utilities."**
- 2 If necessary, create a Printer Descriptions folder:**
  - System 7 users**—Create a folder called Printer Descriptions inside the Extensions folder inside the System Folder.
  - System 6 users**—Create a folder called Printer Descriptions inside the System Folder.
- 3 Open the 4.1 PPDs folder inside the PSExec 3.xx f folder.**
- 4 Select the QMS 1660 Print System PDF, and drag it to the Printer Descriptions folder.**
- 5 From the Apple menu, choose Chooser.**
- 6 In the Chooser window, select the LaserWriter 8.x icon and select QMS 1660.**

**7 Choose the Setup button.**

The LaserWriter driver queries the printer and automatically chooses the appropriate PPD.

**8 Exit from the Chooser.**

Now, when you open the application, you can access QMS printing options by choosing Options in your application's Print dialog box. Choose Help in the Options dialog box for information on these options.

## **Installing Application-Specific Printer Files**

If you plan to print from Aldus PageMaker, Aldus FreeHand, Aldus PrePrint, Adobe Separator, or QuarkXPress, you'll also want to install the latest printer description file (PPD, PDX, or PDF) for your particular software. You can probably print without this file, but you may not be able to access all of your printer's features, and you may get an error message telling you to change the printer name.

- » **Note:** *The application (PageMaker, FreeHand, PrePrint, Separator, or QuarkXPress) should be installed before you install the printer description file(s).*

**1 If you haven't already, follow the instructions given above in "Installing PS Executive Series Printer Utilities."**

**2 Install the appropriate printer description file(s) for your application from 4.1 PPDs, PDFs, or PDXs folder in the PSExec 3.xf folder:**

- **If you use Adobe Separator**, install the PPD file. Your Separator documentation explains where to put it.
- **If you use Adobe PageMaker 5.x**, install the version 4.1 PPD in the Printer Descriptions folder.
- **If you use Aldus PageMaker 4.x**, install the version 3.0 PPD and PDX files in the PPDs folder in the Aldus folder in the System Folder.
- **If you use Aldus FreeHand 4.x**, install the version 4.1 PPD in the Printer Descriptions folder.

- **If you use Aldus FreeHand 3.x**, install the version 3.0 PPD and PDX files in the PPDs folder in the Aldus folder in the System Folder.
- » **Note:** *Version 3 PPDs are not installed automatically through the PS Exec Easy Install procedure. You must use the Custom Install procedure. Refer to the PS Exec installation instructions at the very beginning of this section.*
- **If you use Aldus PrePrint**, install the version 3.0 PPD and PDX files in the PPDs folder in the Aldus folder in the System Folder.
- » **Note:** *Version 3 PPDs are not installed automatically through the PS Exec Easy Install procedure. You must use the Custom Install procedure. Refer to the PS Exec installation instructions at the very beginning of this section.*
- **If you use QuarkXPress**, install the QMS 1660 and 1660E PDFs in the PDF folder in the QuarkXPress folder. While QuarkXPress 3.3 allows you to access either a PDF or a PPD, to have access to all of your printer's features, you should use the PDF. To select the PDF, go to the Page Setup dialog box in QuarkXPress, and hold down the Shift key while clicking the Printer Type list box. (The italicized selections are PPDs, and the non-italicized selections are PDFs.)
- » **Note:** *The 1660E PDF allows you to choose between basic and enhanced (advanced) halftoning (or screening) in QuarkXPress. If this PDF is not present, you won't be able to used enhanced halftoning even though the printer supports it. See "A Special Note for QuarkXPress Users" in chapter 5, "Additional Technical Reference," in the Reference, for more information on halftones.*

# Printing from the Macintosh

You're now ready to print from your Macintosh. From this point, you'll probably perform most printing tasks from your application. For specific information, check the printing section in your application documentation.

For information on print media types and sizes, see chapter 2, "Print Media," in the *Reference* guide.

## **A Note for Users of "Aldus" Applications**

If you use an Aldus application (or one that used to be owned by Aldus, such as Adobe PageMaker or MacroMedia FreeHand), when you want to print, hold down the Option key while selecting Print from the File menu. This brings up the LaserWriter windows, which contains the QMS printing options. Normally, Aldus applications bypass LaserWriter and use an Aldus printer driver, which prevents you from accessing QMS printing options.

## **A Note for Users of Adobe PhotoShop**

If you use Adobe PhotoShop, go to PhotoShop's Page Setup dialog box, and select Use Printer's Default Screen under the Screens option. This allows your choices in the QMS driver to take effect.

## **What's Next?**

Now that you've connected your printer to a Macintosh, skip to chapter 5, "Control Panel," to learn about the printer's control panel keys, indicators, and message window.



# 4

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## Connecting to a PC

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### In This Chapter . . .

- Connecting via the parallel port
- Connecting via the serial port
- Using PS Executive Series Utilities
- Using the QMS-developed Windows driver

# Introduction

This chapter explains how to connect your printer to a PC via the parallel and serial ports and how to install the necessary PC printing software.

- » **Note:** *If you're connecting your printer to a network, see your network documentation for connection information.*

## Before Making the Connection

If you have a brand-new PC, before connecting the printer you should follow the manufacturer's instructions for setting up the PC and installing (if it's not already installed) any operating system software, such as DOS and Windows.

### What You Need

Interface cables are not included with your printer. If you're replacing a printer, you may already have the necessary cables. If not, contact your QMS vendor or a local computer store.

To connect your printer to a single PC, you need **one** of the following:

- A parallel cable with a 36-pin male and a 25-pin male connector.
- or
- A serial cable with either a 9- or 25-pin connector (depending on your PC's serial port) and a 9- or 25-pin null modem assembly to connect to the serial cable. Depending on the type of null modem assembly you have, you may also need a 9-to-25-pin adapter. See your cable vendor for more specific cable assembly information. (Appendix B, "Technical Specifications," of the *Reference* contains cable pinout specifications.)

## **Choosing a Cable**

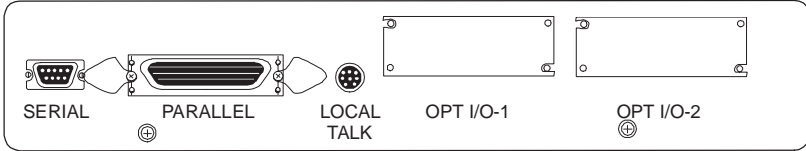
**Parallel cable**—If a parallel port is available on your PC, we recommend using a parallel cable. Your printer supports both Centronics parallel and IEEE 1284 bidirectional parallel communication. The type of parallel cable you use depends on the type of parallel communication your PC supports (check your PC's documentation if you're unsure).

- If your PC supports IEEE 1284 bidirectional parallel communication, you need an IEEE 1284 bidirectional parallel cable (IEEE 1284 is indicated on the cable). This cable must be 6.5 feet/2 meters or less in length.
- If your PC supports only Centronics parallel (IEEE 488) communication, you may use either an IEEE 488 parallel cable (unmarked on cable) or an IEEE 1284 bidirectional parallel cable (IEEE 1284 is indicated on the cable). However, we recommend an IEEE 1284 cable. The IEEE 1284 cable must be 6.5 feet/2 meters or less in length while the IEEE 488 cable may be longer.

**Serial cable**—If the printer is more than about 6.5 feet/2 meters from the PC, we recommend using a serial cable for better communication. For best results, the serial cable should be less than 25 feet/7.6 meters long.

# Making the Connection

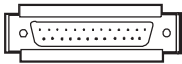
- 
- ▲ **Caution:** Turn off both the printer and the PC before making the connection.
- 



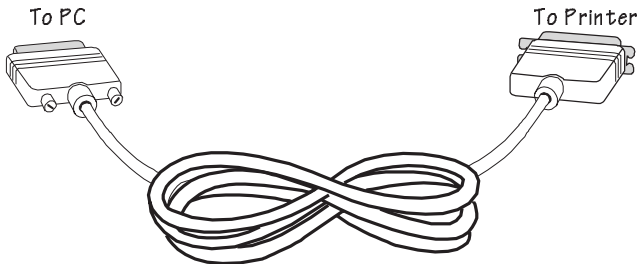
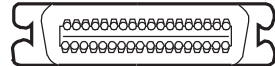
**1 Attach the cable to the printer and the PC.**

■ **Parallel Cable**

PC  
25-pin Female Port

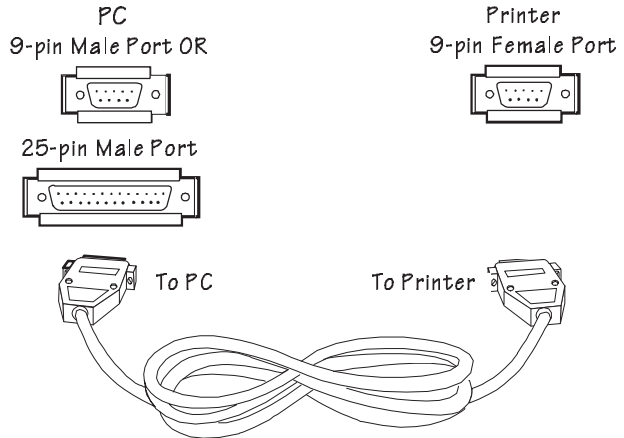


Printer  
36-pin Female Port



- a Connect the 36-pin end of the cable to the printer's parallel port (it's labeled "PARALLEL").
- b Close the clips.
- c Connect the 25-pin end of the cable to the PC's parallel port.
- d Tighten the screws.

■ **Serial Cable**



- a Connect the serial cable, null modem assembly, and, if necessary, an adapter.
  - b Connect one end of the serial cable-null modem assembly to the printer's serial port (labeled "SERIAL") and the other end to the PC's serial port.
  - c Tighten the screws.
- 2 Turn on both the printer and the PC.**
- A start-up page should print. If it doesn't, see the "Printer Problem Checklist" in chapter 6, "Troubleshooting," of the *Operation* guide.
- 3 Test communication between the printer and the PC.**
- You can do this by sending a file from one of your applications, or you can refer to "Testing Communication" in chapter 6, "Troubleshooting," of the *Operation* guide.

# PC Printing Software

If you're replacing a PostScript printer, you can probably start printing now with the printing software already in place. Refer to your application documentation for instructions on sending documents to the printer.

**However**, if you want to use all of your printer's special features (like collation, 600x600 dpi and 1200x600 dpi printing, and gamma correction), **or** if you've never printed to a PostScript printer before, we recommend you take a few minutes to make sure you have the following printing software installed:

- PS Executive Series Utilities
- A PostScript printer driver
- Printer description files (if you use QuarkXPress 3.3, Aldus PageMaker, or Adobe PhotoShop)

## Installing PS Executive Series Printer Utilities

The PS Executive Series Utilities (or PS Exec), included on the DOS-format disks we shipped with your printer, is a utilities program for controlling the printer from your PC. For example, through PS Exec you can turn off the start-up page, rename the printer, download fonts, print font samples, and manage hard disks. Many of the procedures described in this manual involve using PS Exec. The README file on the PS Exec disk explains how to install the program, and the on-line help explains how to use it.

## Installing a PostScript Printer Driver

**If you're using Windows**, we recommend that you install the QMS-developed Windows driver. See "Installing the QMS Windows Driver," below.

**If you're using a non-Windows application**, read the printing section of the application documentation for information on choosing a PostScript driver. If the application does not provide a PostScript driver, contact the application manufacturer to see if one has become

available since you bought the program. Also, PostScript drivers for some applications are available through the QMS Corporate Bulletin Board System and through CompuServe; see appendix A, "QMS Customer Support," for information.

Also, check to see if application notes (tips for printing from specific applications) are available for your application from Q-FAX, the QMS bulletin board, or CompuServe. Appendix A, "QMS Customer Support," explains how to use these QMS information services.

### **Installing the QMS Windows Driver**

The QMS-developed Windows driver supports all the printer's features. Use the following procedure to install the driver:

- 1 With Windows running on your PC, insert the QMS "Windows Driver" disk (shipped with your printer) in the PC's 3.5" disk drive.**
- 2 Open the Windows Control Panel, and double-click the Printer's icon.**

The Control Panel icon is usually located in the Program Manager's Main window.

- 3 In the Printers dialog box, choose the Add button.**
- 4 From the List of Printers that appears, choose Install Unlisted or Updated Printer, and then choose the Install button.**
- 5 In the text box that appears, type the name of the disk drive (for example, a: \) the Windows Driver disk is in, and then choose OK.**
- 6 In the Add Unlisted or Updated Printer dialog box, select the appropriate printer:**
  - If you're using the QMS Level 2 Windows printer driver, select your printer (for example, QMS 1660 Level 2) from the list of printers, and choose OK.

- Otherwise, select QMS PostScript Printer, and choose OK.
- » **Note:** *If you see the message Insert Microsoft Windows 3.1 Disk #5 or a disk with the updated SSERIFF.FON file in..., choose Cancel.*
- 7 When QMS 1660 Level 2 appears in the list of printers, choose the Connect button to configure the printer port.**
  - 8 In the Connect dialog box, select the appropriate computer port in the Ports list, and then choose OK.**
  - 9 Choose the Setup button to configure the printer's default settings:**
    - If you're using the QMS Level 2 Windows printer driver, on the setup tabs select the appropriate default settings.
    - Otherwise, in the PostScript Printer on xxx dialog box, select your printer (for example, QMS 1660) in the Printer drop-down list box, and select the appropriate default settings.
  - 10 Choose OK to return to the Printers dialog box.**
  - 11 Choose Set As Default Printer to make the QMS printer the default printer.**
  - 12 Repeat steps 3-10 to install the QMS driver for other ports, or choose Close to exit from the Printers dialog box.**

Now you can set printer options from your application by choosing Print Setup from the application's File menu and then choosing the Options button. Choose the Help button in any of the driver dialog boxes for information on driver options.

## **Printer Description Files**

Printer description files for Windows applications are included on the QMS Windows Drivers disk shipped with your printer.

- **If you use Adobe PhotoShop**, for best output quality use the QMS-developed Windows driver. Then, so that choices in the QMS driver take effect, go to PhotoShop's Page Setup dialog box, and select Use Printer's Default Screen under the Screens option.

- **If you use Adobe PageMaker 5.x**, use the version 4 PPD on the QMS Windows Drivers disk. If you experience problems using the QMS driver with this application, refer to chapter 6, “Troubleshooting,” in the *Operation* guide for more information.
- **If you use QuarkXPress 3.3**, after you install the QMS driver install the QMS 1660 PDF according to the instructions in your QuarkXPress documentation.

## Printing from the PC

You're now ready to print from your PC. From this point, you'll probably perform most printing tasks from your application. For specific information, check the printing section in your application documentation.

For information on print media types and sizes, see chapter 2, “Print Media,” in the *Reference* guide.

## What's Next?

Now that you've connected your printer to a PC, continue with chapter 5, “Control Panel,” to learn about the printer's control panel keys, indicators, and message window.





# 5

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## Control Panel

---

### In This Chapter...

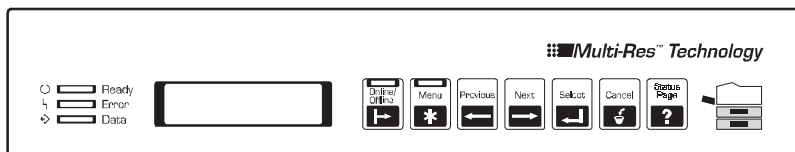
- Control panel indicators
- Control panel message window
- Control panel keys

# Introduction

The control panel, located on the front of the printer, allows you to direct the printer's operation. In addition, it displays the current status of the printer, including any condition that needs your attention.




The control panel consists of the following parts:

- Eight indicators provide printer status information and identify the current media source.
- A message window displays status and configuration information.
- Seven keys allow you to control the printer.



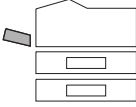
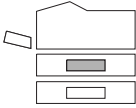
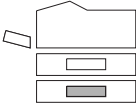


## Control Panel Indicators

Five indicators on the control panel display printer status information, and three other indicators (located on the print engine diagram) identify the current media source:

|   |   |
|---|---|
| ○  Ready | Flashes when the printer is warming up. It remains on when the printer is ready to receive a print job and while it is processing or printing a job (unless an error is encountered). |
| ⌋  Error | Lights when the printer requires operator intervention. This indicator is usually accompanied by a status message in the message window.  |
| ↔  Data  | Lights when the printer is receiving data from one or more of the simultaneous interfaces.  |

## Control Panel Indicators

|   |  |
|---|--|
|  | Lights when the printer is on line and ready to accept and process new print jobs. Press it once to take the printer off line (the indicator is not lighted) and make the printer ready for configuration. |
|  | Lights when you access the configuration menu and remains on until you press the Online/Offline key to put the printer back on line.   |
|  | Lights when the multipurpose tray is the current input bin.  |
|  | Lights when the lower cassette is the current input bin.   |
|  | Lights when the optional cassette is the current input bin.  |

# Message Window

The control panel message window provides status and configuration information. Status messages are listed in chapter 6, “Troubleshooting,” of the *Operation* guide. Printer configuration is explained in chapter 4, “Printer Configuration,” of the *Reference*.

## Setting the Message Window Language

Status messages and configuration menus can be displayed in the message window in English, French, German, or Spanish. If you need to change the message window language, use the Keypad Language option in the Administration/Miscellaneous menu.



If you’re not familiar with using the configuration menu, refer to chapter 4, “Printer Configuration,” of the *Reference* for complete information.

|                |   |
|----------------|---|
| <b>Menu</b>    | Administration/Miscellaneous/Keypad Language  |
| <b>Choices</b> | English, French, German, Spanish  |
| <b>Default</b> | English   |
| <b>Notes</b>   | The printer must be restarted for changes to this menu to take effect. You can either let the printer restart automatically after you save the change and exit from the configuration menu, or you can wait for the change to take effect the next time you manually turn on the printer. |


# Control Panel Keys

## Online/Offline, Cancel, and Status Page Keys

The Online/Offline, Cancel, and Status Page keys access frequently used printer options.

|   |  |
|---|--|
|    | <p>Press the Online/Offline key once to take the printer off line (the indicator goes out). You must take the printer off line before using all other keys except the Cancel and Status Page keys.</p> <p>When the printer goes off line, the communication ports are closed, so no new data is accepted. The printer continues printing until it has finished all jobs in process. Although jobs continue to compile and print using the data already received, a job may be interrupted, causing it to wait for more incoming data before printing resumes.</p> <p>When the printer is off line, press the Online/Offline key once to place it back on line and ready to accept new print jobs (the indicator goes back on). If a remote console has the printer off line, pressing the Online/Offline key will not take effect until the console puts the printer back on line.</p> |
|  | <p>Press the Cancel key to cancel all print jobs currently printing, interpreting, or spooling, or to send an end-of-job indicator to print jobs waiting for incoming data. The printer then resumes printing other print jobs in the queue. If you press the Cancel key by mistake, or if you decide not to cancel a print job after pressing this key, press the Menu key to “cancel” the Cancel key’s function.</p> <p>See chapter 3, “Advanced Printing Features,” of the <i>Operation</i> guide for complete information.) It is not necessary to take the printer off line first.</p>  |




## Control Panel Keys

|   |  |
|---|--|
|  | <p>Press the Status Page key to print a page listing the current printer settings. It is not necessary to take the printer off line first.</p> <p>See the “Special Pages” section of chapter 4, “Printer Configuration,” in the <i>User’s Guide: Reference</i> for more information.</p> |
|---|--|

## Menu, Next, Previous, and Select Keys

The Menu, Next, Previous, and Select keys are used in printer configuration (explained in detail in chapter 4, “Printer Configuration,” of the *Reference*). Before using any of these keys, you must press the Online/Offline key to take the printer off line.

- » **Note:** *The printer must be idle and off line before using these keys to make configuration changes. If the printer is not idle, print jobs may be lost.*

|   |   |
|---|---|
|    | <p>Press the Menu key to access the configuration menu after the printer goes off line. When you’re changing printer configuration, press this key to cancel a change (before pressing the Select key), to return to a previous menu, or to return to a previous character when entering character information.</p> |
|  | <p>Press the Next key to advance through the list of selections or options for the current menu. When changing character information, use this key to advance to the next choice for the current input character.</p>   |
|  | <p>Press the Previous key to return to the previous selection or option for the current menu. When changing character information, use this key to return to the previous choice for the current input character.</p>   |



Press the Select key to access a menu or to choose a displayed menu option.

## **What's Next?**

Now, you're ready to print. For more information on the day-to-day operation of your printer, refer to the *Operation* manual. For more technical information, refer to the *Reference* manual.





# A

---

## **QMS Customer Support**

---

### **In This Appendix . . .**

- Sources of customer support
- QMS world-wide offices

# 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 on a particular topic) 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.

## **The QMS Corporate Bulletin Board System**

The QMS Corporate Bulletin Board System (BBS) contains technical support notes, application notes, drivers, patches, and utilities, and you may leave technical questions not requiring an immediate response on electronic mail for the Sysop (System Operator).

The bulletin board [(334) 633-3632] operates at 1200, 2400, 9600, and 14400 baud, 8 data bits, no parity, 1 stop bit, with XMODEM, YMODEM, and ZMODEM capabilities. Contact the QMS Customer Response Center (CRC) for more information about the bulletin board.

## **CompuServe**

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

## **Internet**

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

You can access the QMS server via any one of the many web viewers available to Internet users. If you don't have access to a web viewer, we recommend the NCSA Mosaic web viewer (Mosaic is at <ftp.ncsa.uiuc.edu>). The QMS home page is at <http://www.qms.com/>. The QMS FTP resource is <ftp.qms.com>.

## **QMS Customer Response Center (CRC)**

The QMS Customer Response Center (CRC) is available M-F, 7:00 am-6:00 pm, Central Standard Time, at (334) 633-4500 (US). You can also fax questions to the CRC at (334) 633-3716 (US). Please indicate whether you would like a faxed or a phoned reply.

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 are using
- The type and version of operating system you are using
- The interface you are using, and, if serial, the protocol
- The application and version you are using
- The emulation you are using
- Your printer firmware version (listed on the status and start-up pages)

## **QMS National Service**

The following numbers are valid in the US. To contact QMS in other countries, see the list of world-wide offices in the following section.

|                                   |  |
|-----------------------------------|--|
| <b>(800) 762-8894</b>             | Call for service information and maintenance pricing for repair of all QMS printers and printers of various other manufacturers. |
| <b>(800) 858-1597</b>             | On-Site Service and Depot Repair Information<br>7:00-7:00 pm, Central Standard Time  |
| <b>(334) 633-4300<br/>(x2530)</b> | Spare Parts Ordering and Information   |

# QMS World-wide Offices

|   |   |
|---|---|
| <b>United States/<br/>Latin America</b> | <p>QMS, Inc.<br/>One Magnum Pass<br/>Mobile, AL 36618<br/>(334) 633-4300</p> <p>Product Information: (800) 523-2696<br/>OEM Information: (800) 631-2692<br/>Consumables: (800) 777-7782<br/>Fax: (334) 633-4866<br/>E-mail: info@qms.com<br/>Latin America Fax: (334) 639-3347</p>                          |
| <b>Asia-Pacific</b>                     | <p>QMS Asia-Pacific<br/>Melbourne 61 (3) 899 5777<br/>Sydney 61 (2) 901 3235<br/>Tokyo (81) (3) 3437 4030</p>   |
| <b>Canada</b>                           | <p>QMS Canada, Inc.<br/>9630 Rte. Trans-Canadienne<br/>Saint-Laurent, Québec H4S 1V9<br/>Telephones: (514) 333-5940, (800) 361-3392<br/>Fax: (514) 333-5949<br/>National Service: (800) 268-4969<br/>National Service Fax: (905) 673-7676</p> <p>Offices in Ottawa, Québec City, Toronto, and Vancouver</p> |
| <b>Europe, Middle<br/>East, Africa</b>  | <p>Düsseldorf (49) 211/596 1333<br/>London (44) 1 784 442255<br/>Maarssen (31) 3465 51 333<br/>Paris (33) (1) 4107 9393<br/>Stockholm (46) (8) 725 5680</p>   |





# B

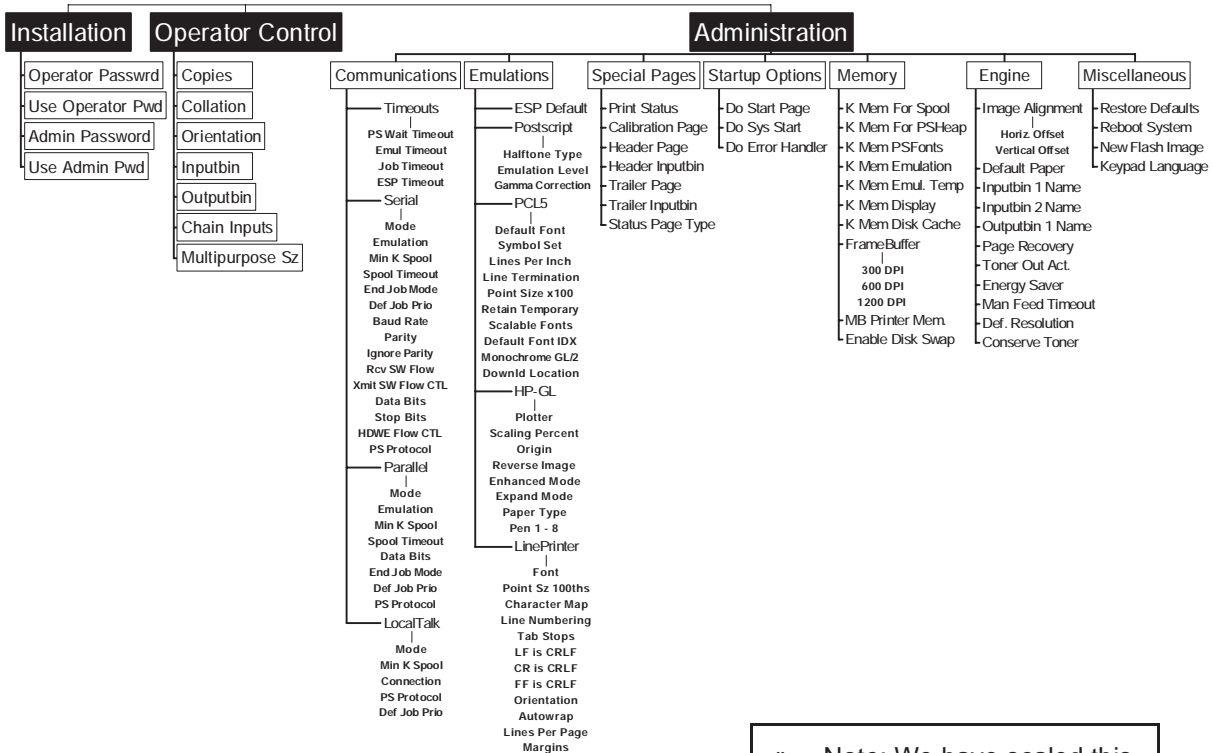
---

## Configuration Menu

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### In This Chapter . . .

- Configuration menu diagram



» Note: We have scaled this diagram to fit it on the page. We recommend that you enlarge it on a photocopy machine for ease of use.



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