



MICROLINE 390/391 Turbo /n

24 Pin Printer

User's Guide



59339301

Document Title and Part Number

Microline 390/391 Turbo/n User's Guide

P/N 59339301 rev. 1.1

Disclaimer

Every effort has been made to ensure that the information in this document is complete, accurate, and up-to-date. Oki Data assumes no responsibility for the results of errors beyond its control. Oki Data also cannot guarantee that changes in software and equipment made by other manufacturers and referred to in this guide will not affect the applicability of the information in it. Mention of software products manufactured by other companies does not necessarily constitute endorsement by Oki Data.

Copyright Information

Copyright 2007 by Oki Data. All rights reserved.

Revised edition, 2007

Written and produced by the Oki Data Training and Publications Department.

Contact Information

Please address any comments on this publication to:

Mailing Address

Oki Data Americas, Inc.
Training & Publications Dept.
2000 Bishops Gate Blvd.
Mt. Laurel, NJ 08054-4620

e-Mail Address

pubs@okidata.com

Web Site

Please visit Oki Data's multilingual web site at:

<http://www.okiprintingsolutions.com>

Trademark Information

OKI and MICROLINE are registered trademarks of Oki Electric Industry Company, Ltd.

Epson is a registered trademark of Epson America, Inc.

IBM is a registered trademark of International Business Machines Corp.

Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

Contents

Helpful Hints	8	Introduction	13
Saving Money	9	Printer Features	14
Saving Money: Forms Tear-Off	9	Parts Identification	15
Saving Time	10	Printer Serial Number	15
Saving Time: Internet Support	10	Parts Identification: Rear Feed (Continuous Forms)	16
Saving Time: Paper Park	10	Parts Identification: Top Feed (Single-Sheet)	17
Saving Time: Moving Through the Menu	10	Front Panel Lights	18
Operation Tips	11	Front Panel Keys	19
Operation Tip: Top of Form	11		
Operation Tip: Turning the Platen Knob	12		
Operation Tip: Control Access to the Printer	12		

Installation	20	Paper Loading	30
Installation Hints	20	Testing the Printer	34
Installation Overview	21	Font Sample Test	35
Installation Location	21	Rolling ASCII Test	36
Customizing the Installation	22	Local Printer Installation	37
Unpacking the Machine	24	Installing Printer Software	37
Shipping Restraints	25	Windows 95,98,Me,NT4.0	37
Ribbon Cartridge	26	Windows 2000	38
Ribbon Cartridge Handling	28	Network Printer Installation	39
Ribbon Cartridge Emergency First Aid	28	Connecting the Network Cable	39
Accessories	29	Connecting to the Parallel Port	41
Power Connections	29	Emulations	41
		Printer Drivers	41
		Product Registration	42
		my.okidata.com	42
		Registering Your Printer	42

Using Your Printer	43	Printhead Gap	58
Top of Form (TOF)	43	Expanded Printhead Gap	59
Top of Form (TOF) and Forms Tear-Off	44	Print Quality	63
Forms Tear-Off Status (ON or OFF)	44	Typeface	64
Setting Top of Form, Forms Tear-Off ON (Step A)	45	Character Pitch	65
Setting Top of Form, Forms Tear-Off OFF (Step B)	47	Printer Reset	66
Temporary Top of Form Change	49	Emulations	67
Reset Top of Form to Factory Default	50	Available Emulations	67
Printer ON	50	Changing Emulations	67
Printer OFF	50	Printer Drivers	68
Forms Tear-Off	51	Selecting Printer Drivers	68
Changing the Forms Tear-Off Setting	52	Obtaining Drivers	69
Automatic Forms Tear-Off	53	Installing Printer Drivers	69
TEAR Key and Automatic Forms Tear-Off	53	Menu Mode	70
Manual Forms Tear-Off	54	Moving Through the Menu	71
TEAR Key	55	Moving Forward	71
Forms Tear-Off set OFF	55	Moving Backward	71
Forms Tear-Off set ON	55	Resetting Menu to Factory Defaults	72
Paper Park	56	Printing the Menu Settings	72
Changing Paper Paths	57	Changing the Menu Settings	73
Continuous-forms to single-sheet feed	57	Menu Settings Table	74
Single-sheet feed to continuous forms	57	Explanations of Menu Items	79

Maintenance	82
Replacing the Ribbon Cartridge	82
Printer Cleaning	83
Paper Jams	84
Rear Feed Paper Jams	84
Single-sheet Paper Jams	89
Troubleshooting	90
General Information	90
Internet Support	90
List of Problems	91

Specifications	96
Service and Support	102
General Information	102
Documentation	103
Purchase Location	103
Internet Support	104
www.okidata.com	104
my.okidata.com	104
Telephone Support	105
Oki Data Service Centers	106
Service and Support: United States and Canada	107
Service and Support: Latin America	108
Accessories	109
Purchasing Accessories	109
Accessories: Part Numbers	110
Consumables: Part Numbers	110
Options: Part Numbers	110
Replacement Parts: Part Numbers	111
Documentation: Part Numbers	112

Printer Control Codes	113
Epson LQ Commands	114
IBM Proprinter X24e / XL24e and IBM X24e AGM /XL 24e AGM Commands	117
Index	126



Helpful Hints

Your printer has many features and capabilities that will help you:

- save money.
- save time.
- operate the machine.

This section summarizes the features and capabilities directly connected to saving money and time.

Details for these features and capabilities are provided in other sections of this document.

You may want to use some of our Helpful Hints when working with your machine.

Saving Money

Saving Money: Forms Tear-Off

The Forms Tear-Off feature allows a printed page (rear feed, continuous form) to be torn off without wasting paper or adjusting the printer.

Forms Tear-Off automatically moves the paper from the initial printing position (print start position) to the tear-off position, after a time interval (which you select through the menu).

The top of the page (perforation) is even with the tear bar. The tear bar is located under the clear top of the access cover.

Paper remains in the tear-off position until the printer receives more data. Then, the paper moves back down for printing (retracts to the initial print position).

When printing stops, the paper will advance to the tear-off position.

This feature is normally turned off.

Forms Tear-Off and the Top of Form settings interact.

For more information, refer to “Using Your Printer, Forms Tear-Off” and “Using Your Printer, Top of Form.”

Saving Time

Saving Time: Internet Support

Oki Data provides support via the Internet.

Oki Data's main web site, www.okidata.com, is the gateway to Oki Data's products and services.

my.okidata.com is a powerful area of Oki Data's web site designed to help you personalize the information and service you get from Oki Data.

You can find information at your convenience, at any time.

For more information, refer to "Service and Support, Internet Support."

Saving Time: Paper Park

Your printer's paper park feature allows you to print a single sheet (cut-sheet) page without removing continuous feed paper from the printer.

For more information, refer to "Using Your Printer, Paper Park."

Saving Time: Moving Through the Menu

When the printer is in Menu Mode, you can move forward or backwards through the menu.

To move forward, press GROUP, ITEM, or Set, whichever is appropriate.

To move backward, press and hold SHIFT, then GROUP, ITEM, or Set, whichever is appropriate.

For more information, refer to "Using Your Printer, Menu Mode."

Operation Tips

Operation Tip: Top of Form

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *Always determine the status of the Forms Tear-Off menu setting **BEFORE** setting the Top of Form. Refer to “Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF).”*

Top of Form sets the print start position for the printer. It is adjustable in increments of 1/144 of an inch. The amount of adjustment is limited to avoid paper jams.

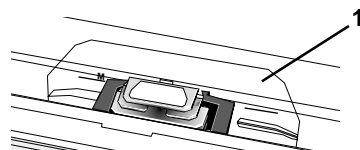
The Top of Form may be left at the factory default (1 inch), changed for a single print job, or set to a new (permanent) default.

The first line prints at the red line of the plastic paper shield (1) on the printhead.

The Top of Form and Forms Tear-Off settings of your printer interact.

How you set the Top of Form depends on the status of the Forms Tear-Off menu setting.

For more information, refer to “Using Your Printer, Top of Form (TOF).”



Operation Tip: Turning the Platen Knob

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*

Operation Tip: Control Access to the Printer

You can control access to the printer by changing the setting for the Operator Panel Function (in the Menu).

When the Operator Panel Function is set to Full Operation (the factory default), all keys on the front panel operate.

When the Operator Panel Function is set to Limited Operation, the PRINT QUALITY and CHARACTER PITCH keys don't work. This prevents these settings from being changed from the control panel when several people are using the printer.

For more information, refer to "Using Your Printer, Menu Mode, Menu Settings Table, Setup, Operator Panel Function."

Introduction

Thank you for purchasing this printer.

This rugged 24-pin printer can meet the needs of harsh and demanding environments. The expanded printhead gap, zero-tear capability, and multiple paper feed paths allow the printer to handle a wide variety of media, including 6-part forms. Your printer will provide years of dependable and efficient service.

In addition to the many standard features, options can expand the machine's capabilities.

For information on the options, see "Accessories."

Oki Data on the Internet

The Oki Data Web Sites provide the most current information available on your product.

An on-line version of this document is available for viewing and downloading via Oki Data's Web Sites.

You may reach Oki Data via the Internet at:

- www.okidata.com
- my.okidata.com

For more information on the Oki Data Web Sites, refer to "Service and Support, Internet Support."

Printer Features

- Super reliable, durable operation: 10,000 hours Mean Time Between Failures (MTBF)!
- Expandable head gap for handling forms up to 0.031" (0.79 mm) thick through the bottom feed path using the optional push and/or pull tractor.
- Advanced paper handling, with built-in rear push tractor and zero-tear forms capability.
- Blazing print speeds:
 - Utility Mode
260 to 390 cps
depends on selected characters per inch
 - Letter Quality Mode
87 to 174 cps
depends on selected characters per inch
- 100% backward compatible with Microline 390/391 printers.

Parts Identification

The parts identified here are parts of the unit that you will use during normal operation.

For accessories (consumables, options, replacement parts, and documentation), refer to “Accessories.”

Printer Serial Number

The serial number of your machine is on a label on the back of your machine.

The label says “S/N.”

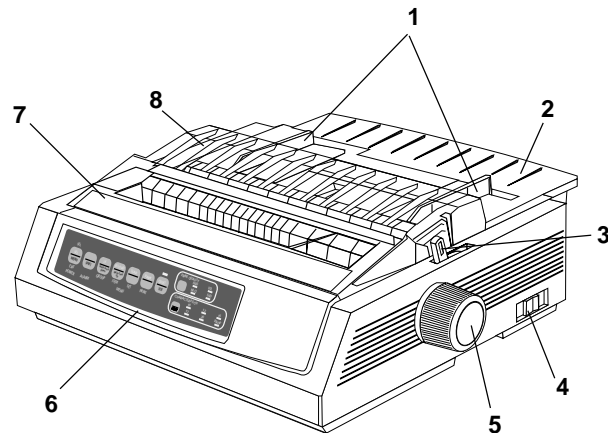
An example serial number is: 401A0154693.

- ! ***You will need your printer serial number if your machine requires servicing.***

A written receipt for the product, showing the date of purchase, dealer’s name, and both the model and serial numbers of the product must accompany any request or claim for work to be performed under Limited Warranty.

Parts Identification: Rear Feed (Continuous Forms)

- 1 Paper Guides
- 2 Paper Separator
- 3 Paper Lever
- 4 On-Off Switch
- 5 Platen Knob
- 6 Control Panel
- 7 Acoustic Cover
- 8 Access Cover

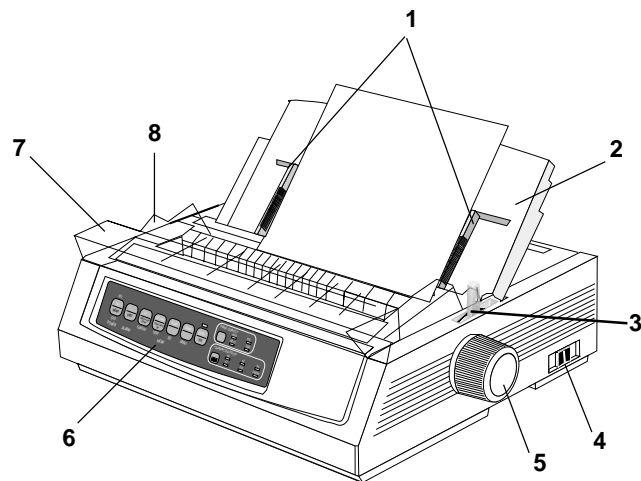


- ! *Move the paper lever to the position marked “REAR.”*
- *For rear feed, the paper lever is towards the front of the printer.*

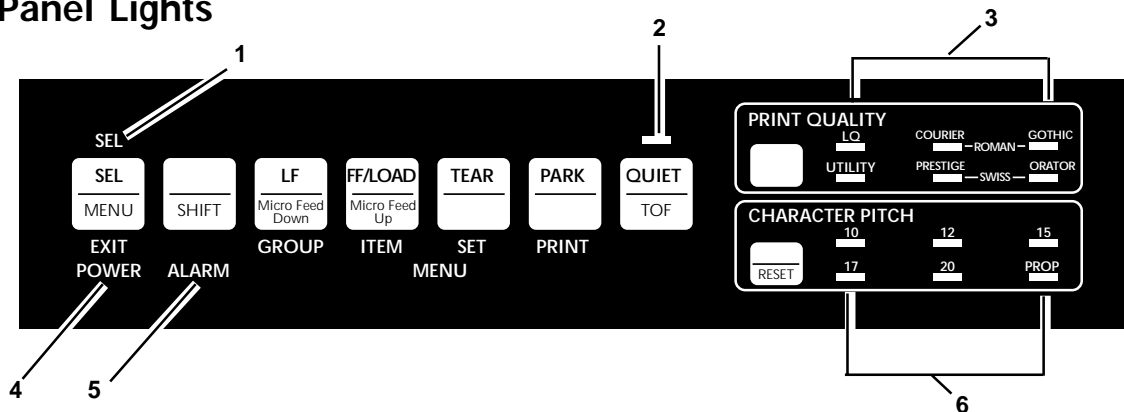
Parts Identification: Top Feed (Single-Sheet)

- 1 Paper Guides
- 2 Paper Separator
- 3 Paper Lever
- 4 On-Off Switch
- 5 Platen Knob
- 6 Control Panel
- 7 Acoustic Cover (open)
- 8 Access Cover

- ! *Move the paper lever to the position marked “TOP.”*
- *The paper lever is towards the back of the printer.*

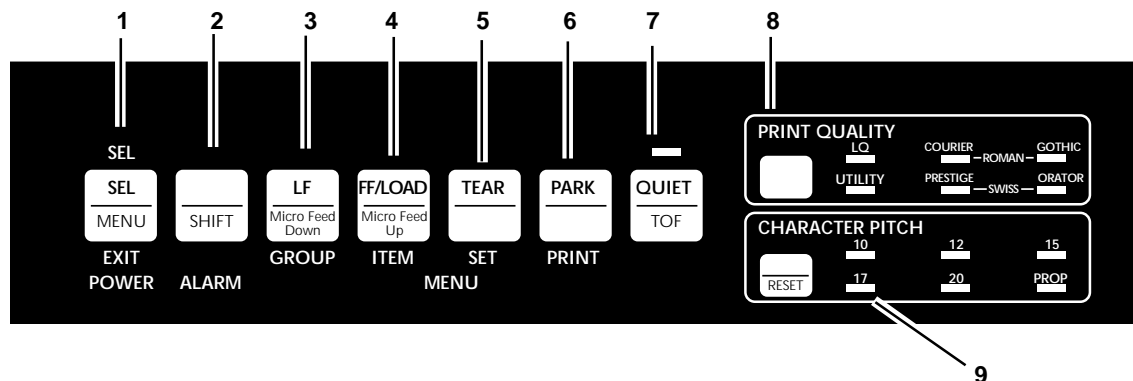


Front Panel Lights



- 1 **SEL:** Glows = printer selected, ready to receive data
Flashes = printer in Print Suppress Mode
Not lit = printer deselected (cannot receive data)
- 2 **QUIET:** Glows = printer is in Quiet mode.
- 3 **Print Quality:** Indicates selected print quality and typeface.
- 4 **POWER:** Glows = printer is turned on.
- 5 **ALARM:** Glows = error condition exists:
 - out of paper (no other lights blinking)
 - paper jam if 15 cpi light is also blinking
 - paper lever is set to wrong position if 10 cpi light is also blinking.
 - Blinks = error condition. Turn printer off, then on; if light still flashes, contact service dealer.
- 6 **10 / 12 / 15 / 17 / 20 / PROP:**
Indicate selected character pitch.

Front Panel Keys



- 1 SEL:** Selects/deselects printer (printer on-line / off-line). When held on power up, or with SHIFT key, engages Menu Mode.
- 2 SHIFT:** Press and hold while pressing another key to engage the alternate function for that key (e.g., “Micro Feed Down” for LF key).
- 3 LF:** Moves paper up one line: press and hold for repetitive line feeds. When held on power up, activates Font Test.
- 4 FF/LOAD:** Loads/ejects single sheet of paper; loads continuous-form paper or feeds it to next page.
- 5 TEAR:** Moves continuous-form paper up for tear-off or back down for printing.
- 6 PARK:** Retracts continuous-form paper from the path.
- 7 QUIET:** Turns Quiet Mode on and off. When held on power up, activates Rolling ASCII Test.
- 8 PRINT QUALITY:** Selects print quality and typeface.
- 9 CHARACTER PITCH:** Selects the character pitch. Used with SHIFT key to reset the printer and clear the buffer.

Installation

Installation Hints

- Read the setup and operating instructions in this document carefully. Be sure to save this document for future reference.
- Read and follow all warning and instruction labels on the printer itself.
- Place your printer on a firm, solid surface. If you put it on something unsteady, it might fall and be damaged. If you place it on a soft surface (such as a rug, sofa, or bed) the vents may be blocked, causing it to overheat.
- The printer must be installed near a power outlet which will remain easily accessible.
- Be certain that your power source matches the rating listed on the back of the printer. If you are not sure, check with your dealer or with your local power company.
- Your printer has a grounded, 3-prong plug as a safety feature. It will only fit into a grounded outlet. If you cannot plug it in, chances are that you have an older, non-grounded outlet. Contact an electrician to have it replaced with a grounded outlet. Do not use an adapter to defeat the grounding.
- Avoid damaging the power cord. Do not put anything on it or place it where it will be walked on. If the cord becomes damaged or frayed, replace it immediately.

- If you're using an extension cord or power strip with the printer, make sure that the total of the amperes required by all the equipment on the extension is less than the extension's rating. Generally, the total ratings of all equipment plugged into any one power line should not exceed 15 amperes. Don't exceed this unless you know that the power line your equipment is plugged into has a rating above 15 amperes.
- Protect your printer from overheating. Make sure the openings on the printer are not blocked. Do not put the printer on or near a heat source, such as a radiator or heat register. If you put the printer in any kind of enclosure, make sure it is well ventilated.

Installation Overview

To install your new printer, follow the instructions in this section. You must complete these steps for your printer to operate properly.

If you have purchased an accessory (option) for your printer, refer to the documentation you received with that accessory for installation instructions.

Installation Location

- Place your printer on a firm, solid surface.
- Allow enough space on each side of the machine to easily access the platen knob and the various paper feed paths.
- Make sure a power outlet is available nearby.

Customizing the Installation

Your printer has many settings (defaults) that do not need to be adjusted as part of a standard installation.

However, you may need to adjust settings to fit your standards.

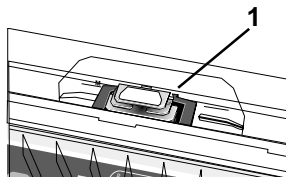
Some settings you may need to adjust as part of your installation are:

- Top of Form (TOF)
- Paper Path
- Printhead Gap

To adjust these settings, refer to the appropriate section in “Using Your Printer.”

Top of Form (TOF)

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *The factory default setting for the Top of Form (where the printing should begin) is one inch down from the top of the page.*
- ! *Your software may print the first line of print above or below where TOF is set. You may need to adjust the TOF to meet your software's needs. Use the procedures in "Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF)."*
- ! *The first line prints at the red line of the plastic paper shield (1) on the printhead.*



The Top of Form and Forms Tear-Off settings of your printer interact.

How you set the Top of Form depends on the status of the Forms Tear-Off menu setting.

If Forms Tear-Off is activated (set to ON), set the Top of Form using "Using Your Printer, Setting Top of Form, Forms Tear-Off ON (Step A)."

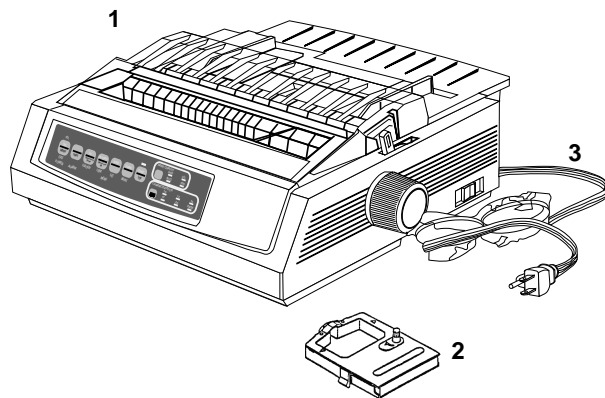
If Forms Tear-Off is NOT activated (set to OFF), set the Top of Form using the "Using Your Printer, Setting Top of Form, Forms Tear-Off OFF (Step B)."

Unpacking the Machine

Before you begin, be sure that all the items listed below are included in your package.

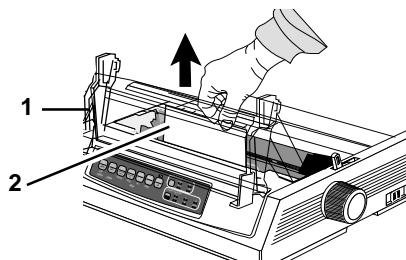
- ! *If any items are missing, contact your dealer immediately. Keep your packing materials and carton in case you ever need to ship or transport the unit.*

- 1 Printer
- 2 Ribbon Cartridge
- 3 Power Cord

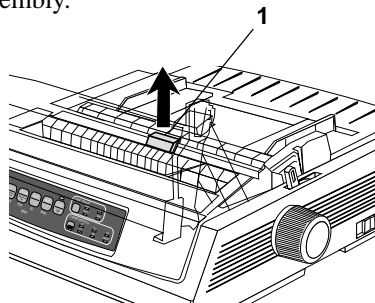


Shipping Restraints

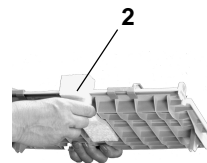
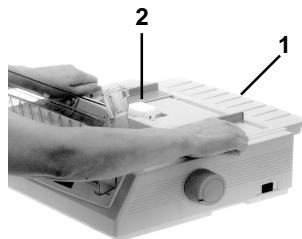
- 1 Open the access cover (1). Remove the printhead shipping restraint (2) and tape.



- 2 Remove the shipping restraint (1) behind the pull-up roller assembly.



- 3 Grasp the tabs and lift off the paper separator (1). Remove the shipping restraint (2).



- 4 Install the paper separator.



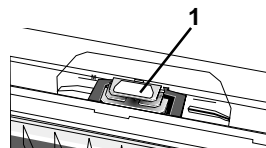
! *Keep your packing materials and carton in case you ever need to ship or transport the unit.*

Ribbon Cartridge

- ! **Important:** Make sure you have the correct replacement ribbon for the ML390/391 Turbo Printers (P/N52104001).

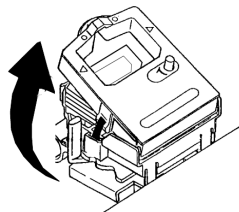
The wrong ribbon WILL NOT print when installed on the ML390/391 Turbo Printers.

- 1 Make sure the printer is turned OFF.
- 2 Center the printhead (1).



- 3 If you are replacing the ribbon: swing the front of the cartridge up off the printhead, then lift the cartridge out and discard it.

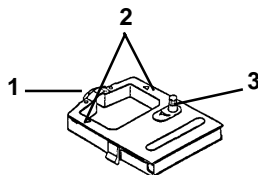
! **Caution! The printhead may be HOT!**



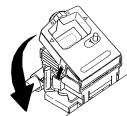
- 4 Unpack the ribbon cartridge.

! **Important! DO NOT remove the ribbon shield from the ribbon!**

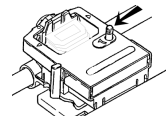
- 1 Ribbon Shield
- 2 Grip Points
- 3 Take-up Knob



- 5 Install the new ribbon cartridge.



- 6 Turn the take-up knob in the direction of the arrow to take up any ribbon slack.



Ribbon Cartridge Handling

- Leave unused ribbon cartridges in their packages until needed.
- When replacing a ribbon cartridge, re-use the packaging to dispose of the old ribbon cartridge.
- Be careful when removing the ribbon cartridge. Do not let it touch your clothing or porous materials. The ribbon ink may cause permanent stains.
- Ribbon ink on skin or clothing can usually be removed with soap and water.

Ribbon Cartridge Emergency First Aid

Contact occurs with eyes.

Flush eyes with large quantities of water for 15 minutes, keeping eyelids open with fingers. Seek medical attention.

Contact occurs with skin

Wash thoroughly with soap and water.

For more information

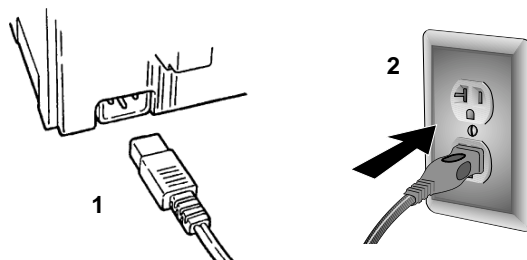
Refer to the Material Safety Data Sheet in “Warranty, Regulatory, and Safety Information.”

Accessories

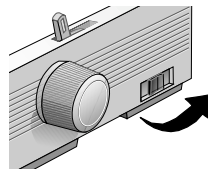
If you have purchased an accessory (option) for your printer, refer to the documentation you received with that accessory for installation instructions.

Power Connections

- 1 ***Make sure both the printer and the computer are OFF.***
- 2 Plug the power cord into the back of the printer (1), then into a grounded outlet (2).



- 3 Turn on the printer.



Paper Loading

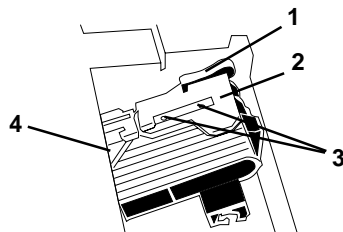
Rear Feed, Continuous Forms

Use the rear-feed path for printing on single-thickness, continuous-form paper.

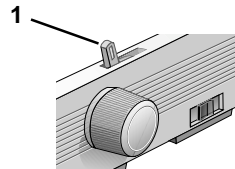
Use the single-sheet path (top feed) for graphics or charts.

! *If you have paper in the paper path, be sure to remove it before installing rear-feed paper.*

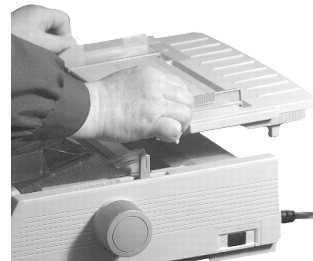
- 1 Lock Lever
- 2 Upper Tractor Cover
- 3 Pins
- 4 Lower Tractor Cover



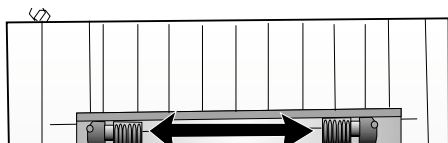
- 1 Move the paper lever (1) to the position marked “REAR.”



- 2 Grasp the tabs and lift off the paper separator.



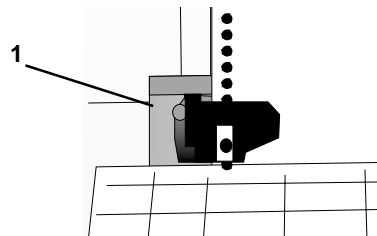
- 3 Pull up on the lock levers and open the tractor covers. Then, move the right tractor to fit the width of the paper.



- 4 Place the first two holes in the paper over the tractor pins on either side. Close the tractor covers.



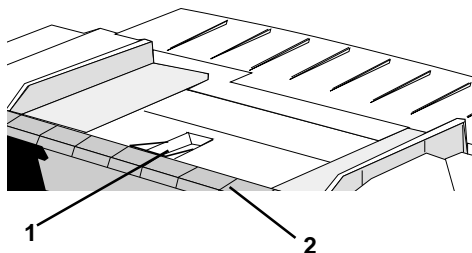
- 5 Move the left tractor to align the edge of the paper with the appropriate reference mark (1). Then, push back the lock lever.



- 6 Adjust the position of the right tractor to center the holes in the paper on the pins. Then, push back the right lock lever. Do not stretch the paper.



- 7 Install the paper separator. Place the wire guide (1) on the pull-up roller assembly (2).



- 8 Press FF/LOAD. The paper feeds into the printer.

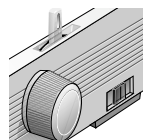
- ! *The factory default setting for the Top of Form (where the printing should begin) is one inch down from the top of the page. To change the setting, see “Using Your Printer, Top of Form (TOF).”*

Top Feed (Single Sheets)

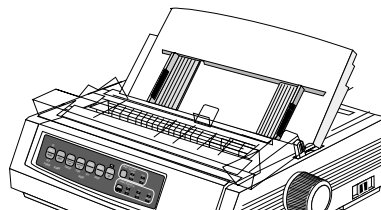
Use the single-sheet path for letterhead stationery, memos, and individual envelopes.

- ! *If you have continuous-form paper in the path, press*
- *PARK to remove it before loading single sheets.*

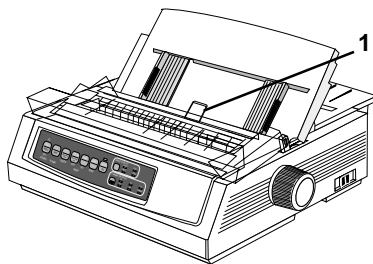
- 1 Make sure the printer is on and deselected (SEL light off).
- 2 Place the paper lever in the position marked “TOP.”



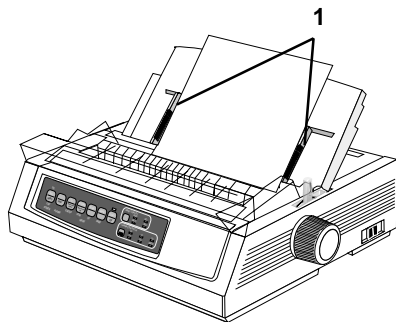
- 3 Open the carriage cover. Raise the paper separator to the single-sheet position.



- 4 Make sure the wire feed guide (1) is secured in the sheet guide.



- 5 Adjust the paper feed guides (1) for the width of the paper. Place a sheet of paper in the separator. The paper will feed into the printer.



- ❗ **Important!**
- *If the paper does not feed in, remove it. Check the paper lever position. Make sure the ALARM light is on: if it is flashing, hold the SHIFT key and press the CHARACTER PITCH (RESET) key. Reload the sheet of paper.*
 - ❗ *The factory default setting for the Top of Form (where the printing should begin) is one inch down from the top of the page. To change the setting, see “Using Your Printer, Top of Form (TOF).”*

Testing the Printer

Running the printer self tests is a good way to check the installation of your printer.

The two self tests are:

- Font Sample Test
- Rolling ASCII Test

! *Wide Carriage Model*

• *Microline 391 Turbo/n*

If you are using 8.5 inch paper to run the test, make sure the paper width selection in the printer menu is set to 8.5 inches. Otherwise, printing on the platen may damage the printer. Refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.”

Font Sample Test

- ! **The Font Sample Test automatically stops after all the available fonts print.**

- ! **Wide Carriage Model**
- **Microline 391 Turbo/n**

If you are using 8.5 inch paper to run the test, make sure the paper width selection in the printer menu is set to 8.5 inches. Otherwise, printing on the platen may damage the printer. Refer to “Using Yo

The Font Sample Test prints a sample of the fonts standard to the printer.

The top of the printout has the Printer Model, Emulation, Country Code, Interface, and Firmware Revision Level for your printer.

To run the test:

- Turn the printer off, then press and hold the LF key while turning the printer back on.



To exit the test:

- Press SEL.



Rolling ASCII Test

! *Wide Carriage Model*

• *Microline 391 Turbo/n*

If you are using 8.5 inch paper to run the test, make sure the paper width selection in the printer menu is set to 8.5 inches. Otherwise, printing on the platen may damage the printer. Refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.”

! *The Rolling ASCII Test DOES NOT automatically stop.*

• *You must manually stop it.*

The Rolling ASCII Print Test produces a continuous printout of all 96 ASCII characters in a rolling pattern. The type style set in the printer menu will be utilized.

Use the Rolling ASCII Test to check the following.

- Print Quality
 - Across the entire length of a line
 - Down the entire page
- Line Spacing
- Character Formation

The top of the printout has the Printer Model, Emulation, Country Code, and Firmware Revision Level.

To run the test:

- Turn the printer off, then press and hold the QUIET key while turning the printer back on.



To exit the test:

- Press SEL.



Local Printer Installation

- ! *You **MUST** install your printer as a Local Printer before you perform any network installation.*

*During this part of your printer installation, you **DO NOT** connect a cable between your printer and your computer.*

You are making an installation to a logical port, which is done through software, not physical connections.

- ! *If you want to use the parallel port, you **MUST** remove the Network Card from the printer. See the OkiLAN 6120e User's Guide for details.*

Installing Printer Software

Windows 95, 98, Me, NT4.0

- 1 With the OKI ML 390/391 Turbo/n CD in your CD-ROM drive, click **Start→Run**.
- 2 Browse to your CD-ROM drive, then double-click **install.exe**.
- 3 Select the ML 390/1Tn printer model.
- 4 On the OKI Menu Installer main menu, click **Printer Software**.
- 5 Make sure the ML390/1Tn Driver is selected.
- 6 Select **Local Printer**. Click **Next**.
- 7 Select **LPT1**. Click **Next**.
- 8 Click **Finish**.

Installing Printer Software

Windows 2000

- 1 With the OKI ML 390/391 Turbo/n CD in your CD-ROM drive, click **Start→Run**.
- 2 Browse to your CD-ROM drive, then double-click **install.exe**. Click **OK**.
- 3 Select the 390/1Tn printer. Click **Continue**.
- 4 On the OKI Menu Installer main menu, click **Printer Software**. This launches the Add Printer Wizard.
- 5 Select **Local**. Clear **Automatically detect and install my Plug and Play printer**. Click **Next**.
- 6 Click **Next** to accept LPT1 as the port selection.
- 7 Click **Have disk**.
- 8 Click **Browse**.
- 9 Locate CD-ROM in the pull-down menu.
- 10 Open the **Drivers\390391\Win2k** folder.
- 11 Select **OEMPRINT.INF**. Click **Open**.
- 12 Click **OK**.
- 13 **OKI ML390/1 Turbo** displays in the Printers window.
Click **Next**—*do not select **Have disk***.
- 14 Rename the printer if you wish. Click **Next**.
- 15 Select **Do not share this printer**. Click **Next**.
- 16 Do not print a test page. Click **Next**.
- 17 Click **Finish**.
- 18 If the Digital Signature Not Found window appears, click **Yes**.
- 19 Click **Next**.

Network Printer Installation

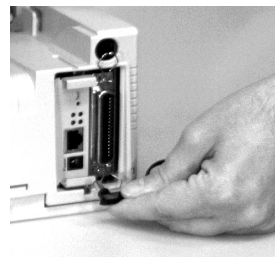
- ! *You **MUST** install your printer as a Local Printer before you perform any network installation.*
- ! *If you want to use the parallel port, you **MUST** remove the Network Card from the printer. See the OkiLAN 6120e User's Guide for details.*

For detailed information on installing network software and setting up your printer on a network, refer to the on-line OkiLAN 6120e User's Guide.

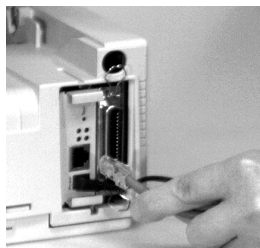
From the OKI Menu Installer, click **Network and Admin Software**→**Network Documentation**.

Connecting the Network Cable

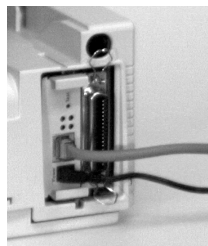
- 1 Plug the power adapter wire into the power jack on the OkiLAN 6120e. Then plug the power adapter into a 120 VAC wall outlet.
- ! *Some countries may require a different adapter for local voltages, such as 240 VAC.*



- 2 Attach the 10/100 Base-T UTP cable to the receptacle on the back of the OkiLAN 6120e. Attach the other end of the cable to the Network.



- 3 Plug the printer power cord into the power outlet.

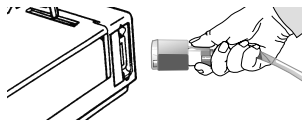


Connecting to the Parallel Port

! *If you want to use the parallel port, you **MUST** remove the Network Card from the printer. See the OkiLAN 6120e User's Guide for details.*

! *FCC regulations require the use of a shielded cable no longer than 6 ft. (1.8 m).
An IEE 1284-compatible parallel cable is needed for bi-directional communications.*

- 1 Plug the interface cable into the parallel port (1) and secure it with the wire loops.



- 2 Attach the other end of the cable to your computer.

Emulations

The factory default emulation for your printer is Epson® LQ. If you need to change the emulation, refer to “Using Your Printer, Emulations.”

Printer Drivers

Before you can use your printer, you must select the correct printer driver in your software. If you select the wrong driver, you will see strange characters, incorrect fonts, etc.

! *See your software documentation for information on how to select a printer driver.*

For more information on printer drivers, refer to “Using Your Printer, Printer Drivers.”

Product Registration

my.okidata.com

Your Personal Solutions Center

Register your printer and create your own personalized support center with *my.okidata.com*.

my.okidata.com is a powerful area of our web site designed to help you get the most from your OKI printer. It represents our commitment to providing you with solutions, finding out the latest updates about your OKI products, and getting the details on OKI programs and services that can help your bottom line.

You can also

- Choose to receive product updates via e-mail.
- Have private access to our solutions section.
- Check out the What's New section to see what's changed since your last visit.
- Get your own Solutions Specialist that you can contact directly via e-mail when you need assistance.

my.okidata.com offers you support, solutions and more, all personalized for you and your specific OKI printer. Start using *my.okidata.com* today!

Registering Your Printer

You can register your printer by:

- visiting our website at **<http://www.okidata.com>**. Click on **Product Registration**.
- filling out the hardcopy registration form and mailing it in
or
faxing it in.

Service and Support

If you need further assistance or have questions, please refer to "Service and Support."

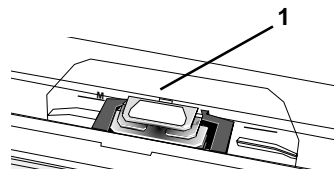
Using Your Printer

Top of Form (TOF)

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *The factory default setting for the Top of Form (where the printing should begin) is one inch down from the top of the page.*
- ! *Your software may print the first line of print above or below where TOF is set. You may need to adjust the TOF to meet your software's needs. Use the procedures in "Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF)."*

Top of Form sets the print start position for the printer. It is adjustable in increments of 1/144 of an inch. The amount of adjustment is limited to avoid paper jams.

The first line prints at the red line of the plastic paper shield (1) on the printhead.



Top of Form (TOF) and Forms Tear-Off

! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*

! *Your software may print the first line of print above or below where TOF is set. You may need to adjust the TOF to meet your software's needs. Use the procedures in "Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF)."*

The Top of Form and Forms Tear-Off settings of your printer interact.

How you set the Top of Form depends on the status of the Forms Tear-Off menu setting.

If Forms Tear-Off is activated (set to ON), set the Top of Form using Step A.

Refer to "Using Your Printer, Setting Top of Form, Forms Tear-Off ON (Step A)."

If Forms Tear-Off is NOT activated (set to OFF), set the Top of Form using Step B.

Refer to "Using Your Printer, Setting Top of Form, Forms Tear-Off OFF (Step B)."

Forms Tear-Off Status (ON or OFF)

Before you set the Top of Form, you need to know the status of the Forms Tear-Off menu setting (whether it is ON or OFF).

There are two ways to determine the status of the Forms Tear-Off menu setting:

- print the Menu.
- use the TEAR key.

To print the Menu, refer to "Using Your Printer, Menu Mode, Print the Menu Settings."

To use the TEAR key:

- 1 Load paper.
- 2 Press TEAR.
- 3 If the paper moves up, then Forms Tear-off is OFF.
If the paper moves down, then Forms Tear-off is ON.

Setting Top of Form, Forms Tear-Off ON (Step A)

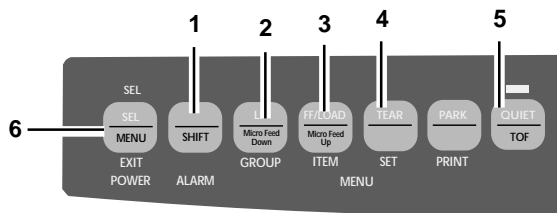
- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *Always determine the status of the Forms Tear-Off menu setting BEFORE setting the Top of Form. Refer to “Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF).”*

- 1 Turn the printer ON.
- 2 Park the paper.
- 3 With paper out of the unit, (red alarm light should be on) press SHIFT (1) and QUIET/TOF (5) to reset the current Top of Form.
- 4 Press FF/LOAD (3) to load the paper.
- 5 Press SEL/MENU (6) to take the printer off line.
The SEL light goes out.
- 6 Wait until the paper moves up to the tear position, then press and hold TEAR (4).
The paper moves to the current Top of Form.
Keep pressing and holding TEAR.
- 7 Press and hold SHIFT and release TEAR.

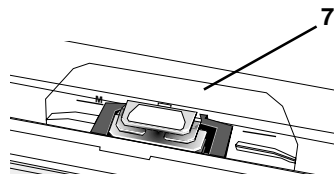
- 8 As you continue to hold SHIFT, press the LF / Micro Feed Down (2), or FF/LOAD / Micro Feed Up (3), depending on which direction you want to move the paper to align Top of Form.

Press LF / Micro Feed Down to decrease the space (move Top of Form higher). The paper moves down.

Press FF/LOAD / Micro Feed Up to increase the space (move Top of Form lower). The paper moves up.



- ! The first line prints at the red line of the plastic paper shield (7) on the printhead.



- 9 Keep holding SHIFT and press QUIET/TOF a few times to set the Top of Form.
- 10 When the Top of Form is at the correct position, release all keys.
- 11 Press SEL/MENU to place the printer on-line.

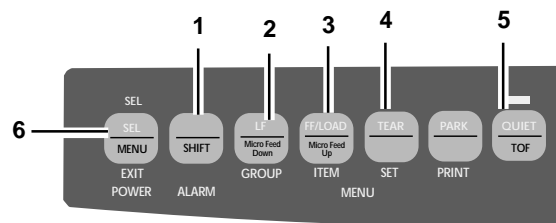
Setting Top of Form, Forms Tear-Off OFF (Step B)

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *Always determine the status of the Forms Tear-Off menu setting BEFORE setting the Top of Form. Refer to “Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF).”*

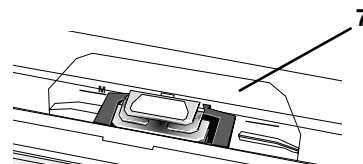
- 1 Turn the printer ON.
- 2 Press SEL/MENU (6) to take the printer off line. The SEL light goes out.
- 3 Press and hold SHIFT (1).
Then, press LF / Micro Feed Down (2) or FF/LOAD / Micro Feed Up (3), depending on which direction you want to move the paper to align the tear-off position.

Press LF / Micro Feed Down to decrease the space (move Top of Form higher). The paper moves down.

Press FF/LOAD / Micro Feed Up to increase the space (move Top of Form lower). The paper moves up.



- ! **The first line prints at the red line of the plastic paper shield (7) on the printhead.**
-



- 4 Keep holding SHIFT and press QUIET/TOF a few times to set the Top of Form.
- 5 When Top of Form is at the correct position, release all keys.
- 6 Press SEL/MENU to place the printer on line.

- ! **If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!**
- ! **For information on resetting the Top of Form to the factory default, refer to “Using Your Printer, Top of Form, Reset Top of Form to Factory Default.”**
-

Temporary Top of Form Change

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *The factory default setting for the Top of Form (where the printing should begin) is one inch down from the top of the page.*

To change the Top of Form (move it lower) *for one page only*:

- 1 Press SEL to deselect the printer.
- 2 Press LF to change the position of the Top of Form.

Reset Top of Form to Factory Default

- ! *If you turn the platen knob when the printer is turned on, you will cause the Top of Form to mis-align. Always turn the printer off before turning the platen knob!*
- ! *The factory default setting for the Top of Form (where the printing should begin) is one inch down from the top of the page.*

There are two ways to reset the Top of Form to the factory default:

- with the printer ON.
- with the printer OFF.

Printer ON

- 1 With the printer ON, and paper parked (out of the printer) Press QUIET / TOF.

Printer OFF

- 1 With the printer OFF, and no paper installed, Press and hold PARK + QUIET/TOF while turning on the printer.

Forms Tear-Off

- ! *The status of the Forms Tear-Off menu setting affects how you set the Top of Form.*

To determine the status of the Forms Tear-Off menu setting, refer to “Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF).”

For information on setting the Top of Form, refer to “Using Your Printer, Top of Form, Setting Top of Form, Forms Tear-Off (ON or OFF).”

The Forms Tear-Off feature allows a printed page (continuous forms, rear or bottom feed, with no pull tractor option installed) to be torn off without wasting paper or adjusting the printer.

Forms Tear Off automatically moves the paper from the initial printing position to the tear-off position, after a time interval (which you select through the menu).

The top of the page (perforation) is even with the tear bar. The tear bar is located under the clear top of the access cover.

Paper remains in the tear-off position until the printer receives more data. Then, the paper moves back down for printing (retracts to the initial print position).

When printing stops, the paper advances to the tear-off position.

The default setting for Forms Tear-Off is OFF.

There are two types of Forms Tear-Off:

- Automatic Forms Tear-Off
- Manual Forms Tear-Off

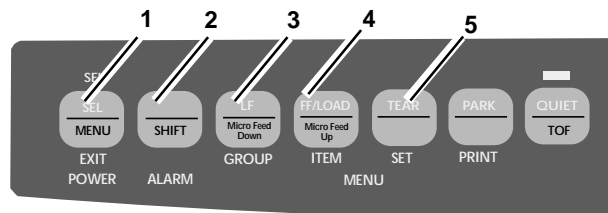
- ! *If the software package you are using “pauses” while sending data to the printer, Forms Tear-Off may be activated (if it is enabled through the Menu). The pause must be for two or more seconds. No data is lost. Uneven print registration will occur due to the paper movement. If the problem occurs, use the menu to turn off this feature.*

- ! *DO NOT use Forms Tear-Off with labels or multi-part forms!*

- ! *Forms Tear-Off CANNOT be used when the optional pull tractor is engaged.*

Changing the Forms Tear-Off Setting

The default setting for Forms Tear-Off is OFF.



To change the Forms Tear-Off setting:

- 1 Press SHIFT (2) + SEL (1).
- 2 Press GROUP (3) until one of the following lines appears, depending on which paper feed you are using
REAR FEED Form Tear-Off OFF
BOTTOM FEED Form Tear-Off OFF
- 3 Press ITEM (4) until Form Tear-Off appears in the second column.
- 4 Press SET (5) until the time interval you wish to select appears in the third column.
- 5 Press SHIFT (2) + SEL (1) to exit Menu Mode and save the setting.

! The status of the Forms Tear-Off menu setting affects how you set the Top of Form.

! If the software package you are using “pauses” while sending data to the printer, Forms Tear-Off may be activated (if it is enabled through the Menu). The pause must be for two seconds or more. No data is lost. Uneven print registration will occur due to the paper movement. If the problem occurs, use the menu to turn off Forms Tear-Off.

! DO NOT use Forms Tear-Off with labels or multi-part forms!

! Forms Tear-Off CANNOT be used when the optional pull tractor is engaged.

Automatic Forms Tear-Off

Forms Tear-Off must be set to ON in the menu for Automatic Forms Tear-Off to occur.

Automatic Forms Tear-Off automatically moves the paper from the initial printing position (print start position) to the tear-off position, after a time interval which you select through the menu.

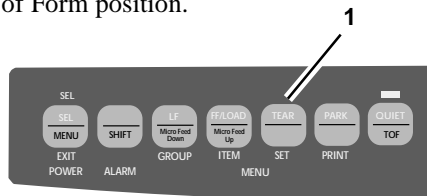
The top of the page (perforation) is even with the tear bar. The tear bar is located under the clear top of the access cover.

Paper remains in the tear-off position until the printer receives more data. Then, the paper moves back down for printing (retracts to the initial print position).

When printing stops, the paper advances to the tear-off position.

TEAR Key and Automatic Forms Tear-Off

If you press TEAR (1) when Forms Tear-Off is turned on (activated in the printer menu), the printer retracts the paper to the Top of Form position.



- ! **The status of the Forms Tear-Off menu setting affects how you set the Top of Form.**

To determine the status of the Forms Tear-Off menu setting, refer to “Using Your Printer, Top of Form, Forms Tear-Off Status (ON or OFF).”

For information on setting the Top of Form, refer to “Using Your Printer, Top of Form, Setting Top of Form, Forms Tear-Off (ON or OFF).”

- ! **If the software package you are using “pauses” while sending data to the printer, Forms Tear Off may be activated (if it is enabled through the Menu). The pause must be for two or more seconds. No data is lost. Uneven print registration will occur due to the paper movement. If the problem occurs, use the menu to turn off this feature.**

- ! **DO NOT use Forms Tear Off with labels or multi-part forms!**

- ! **Forms Tear-Off CANNOT be used when the optional pull tractor is engaged.**

Manual Forms Tear-Off

Manual Forms Tear-Off allows you to advance a single page to the tear-off position.

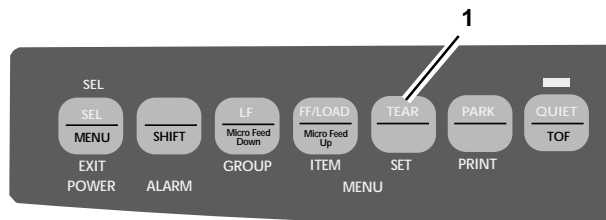
Manual Forms Tear-Off works when Forms Tear-Off is turned off (deactivated in the printer menu).

When Forms Tear-Off is turned on (activated in the printer menu), and you attempt Manual Forms Tear-Off, the printer retracts the paper to the Top of Form position.

! ***DO NOT use Forms Tear-Off with labels or multi-part forms!***

! ***Forms Tear-Off CANNOT be used when the optional pull tractor is engaged.***

- 1 Press TEAR (1) to advance continuous-form paper up to the tear position.



TEAR Key

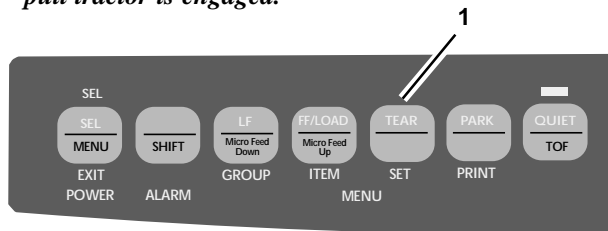
Forms Tear-Off set OFF

If you press TEAR (1) when Forms Tear-Off is turned off (deactivated in the printer menu), the printer advances continuous-form paper up to the tear position.

Manual Forms Tear-Off allows you to advance a single page to the tear-off position.

Manual Forms Tear-Off works when Forms Tear-Off is turned off (deactivated in the printer menu).

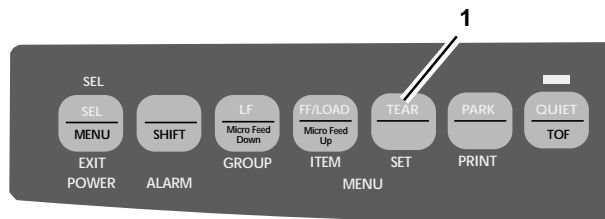
- ! **Forms Tear-Off CANNOT be used when the optional pull tractor is engaged.**



Forms Tear-Off set ON

If you press TEAR (1) when Forms Tear-Off is turned on (activated in the printer menu), the printer retracts the paper to the Top of Form position.

- ! **Forms Tear-Off CANNOT be used when the optional pull tractor is engaged.**

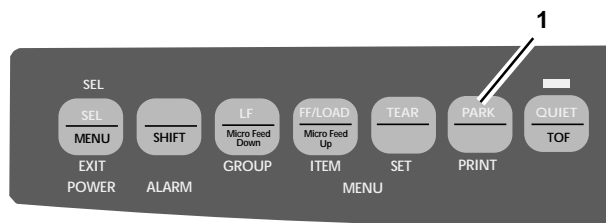


Paper Park

! *Never park labels!*

Paper park allows you to print a single sheet (cut-sheet) page without removing continuous feed paper from the printer.

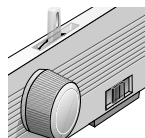
Press PARK (1) to retract rear-feed paper from the paper path.



Changing Paper Paths

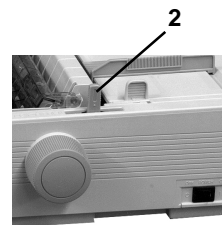
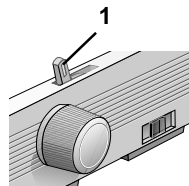
Continuous-forms to single-sheet feed

- 1 Tear off any printed pages.
- 2 Press PARK.
- 3 Raise the paper separator to the single-sheet feed position.
- 4 Place the wire feed guide in the paper separator.
- 5 Move the paper lever to the position marked “TOP.”
The paper lever is towards the back of the printer.
- 6 Place a sheet of paper in the paper separator.



Single-sheet feed to continuous forms

- 1 Press FF/LOAD to remove the single-sheet paper.
- 2 Lower the paper separator into the continuous-forms position. Swing the wire feed guide over onto the pull-up roller.
- 3 Move the paper lever to the appropriate position.
For rear feed (1), the paper lever is towards the front of the printer.
For bottom feed, (2), the paper lever is in the center position.
- 4 If necessary, load continuous-form paper.
- 5 Press FF/LOAD.

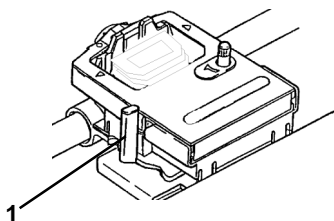


Printhead Gap

The printhead gap is the distance between the printhead and the platen.

- ! ***Make sure the printer is turned off before you open the access cover.***

To adjust the gap, open the access cover and move the blue lever (1) to the recommended setting from the table.



Media	Setting
12-20 lb paper	1
20-24 lb bond paper	2
Labels	3 or 4
Envelopes	4 or 5
2-part form (with carbon)	1 or 2
3-part form (with carbon)	2 or 3
4-part form (with carbon)	3 or 4
5-part form (with carbon)	4 or 5
6-part form (with carbon)	5

- ! ***For dedicated, bottom-feed printing of extra-thick continuous forms (requires optional push and/or pull tractor), the printhead gap range can be expanded to take forms up to 0.031" (0.79 mm) thick. For more information, refer to "Using Your Printer, Printhead Gap, Expanded Printhead Gap."***

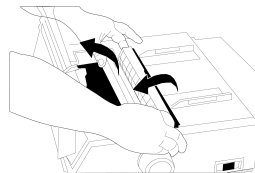
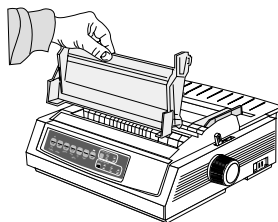
Expanded Printhead Gap

Your printer can be used for dedicated bottom-feed printing on extra-thick multi-part forms. Extra-thick multi-part forms range from 0.017-inch (0.43 mm) to a maximum of 0.03 inch (0.79 mm). To print on extra-thick multi-part forms, you engage the expanded printhead gap feature. This expands the head gap settings for extra-thick forms and heavy card stock. It also increases the impact strength of the pins in the printhead.

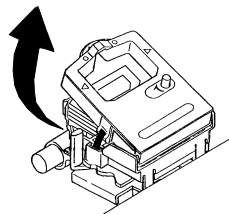
- ! **CAUTION!** *Once the expanded printhead gap is engaged, you cannot print on single sheets without changing the gap back. If you try to print on single sheets without adjusting the printhead gap, you can damage the printhead and void your warranty. To disengage the expanded printhead gap, reverse the following steps.*

To engage the expanded printhead gap:

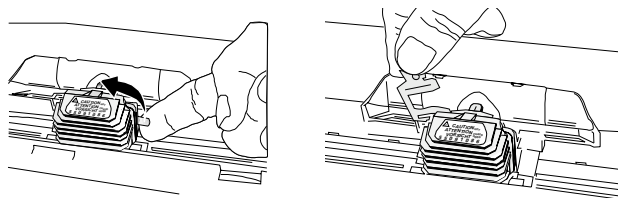
- 1 Turn the printer off.
- 2 Remove the access cover and the pull-up roller assembly.



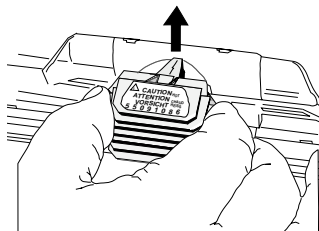
- 3 Move the printhead to the center of the platen.
- 4 Remove the ribbon cartridge.



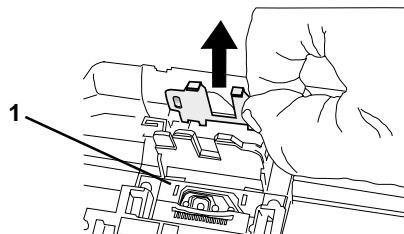
- 5 Swing up the printhead clamp, then remove it by pushing forward (toward the platen) and to the left.



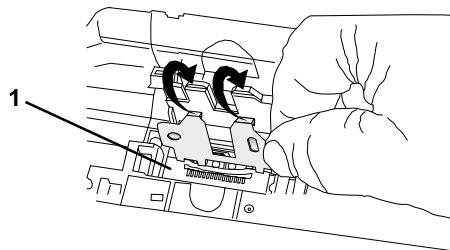
- 6 Remove the printhead.



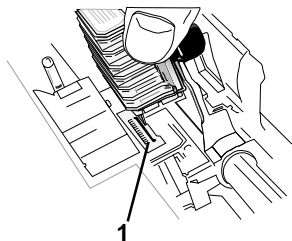
- 7 Lift the printhead plate off the carriage assembly (1).



- 8 Turn the printhead plate around and reinsert it on the other side of the carriage assembly (1).

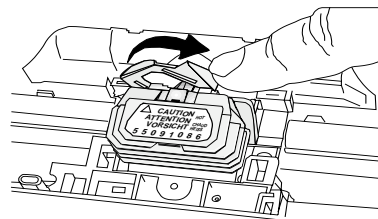


- 9 Replace the printhead, making sure that the circuit board at the bottom of the printhead firmly engages the slot (1) in the carriage.



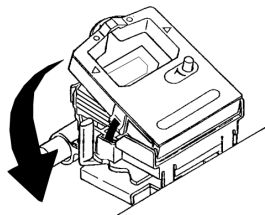
- ! **CAUTION!** Be sure the printhead is fully inserted before proceeding.

- 10 Reinstall the printhead clamp and swing it back over to lock the printhead in place.

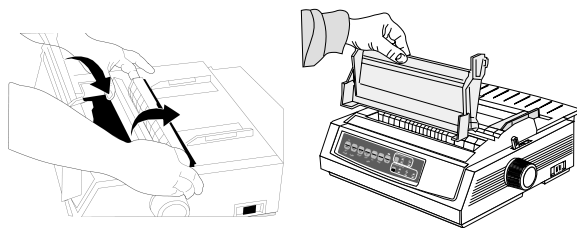


- ! **Important!** The clamp must be between the black projection on the printhead and the metal plate on the carriage, on both sides.

11 Reinstall the ribbon cartridge.



12 Replace the pull-up roller assembly and the access cover, then turn the printer on.

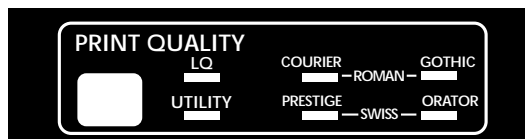


13 Change the printer's secondary menu (make sure paper is loaded!) to engage the expanded printhead gap:

- a) Press SEL + TEAR while turning the printer back on.
- b) Press LF to advance through the menu to the Technical group (last option in menu).
- c) Press FF/LOAD to advance through the items to Expanded Gap.
- d) Press TEAR to change the setting for Expanded Gap to Valid.
- e) Press SHIFT + MENU to exit the menu and save your setting.

Print Quality

- ! **Important!**
- *Front panel settings for print quality and character pitch are overridden by software commands. The lights will always reflect the printer's state.*



Press PRINT QUALITY to select:

LQ: Letter Quality

- Highest quality, slowest speed
- Seven typefaces
- Recommended for correspondence

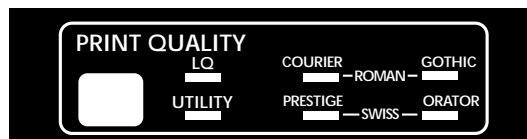
Utility

- Medium quality, medium speed
- Gothic font only
- Recommended for internal documents and high-volume data.

- ! *To engage high speed 390 cps printing, select Utility for the Print Quality and 15 cpi for the Character Pitch.*
-

Typeface

- ! **Important!**
- **Front panel settings for print quality and character pitch are overridden by software commands. The lights will always reflect the printer's state.**



When Letter Quality is engaged, the front panel lights indicate which typeface is selected.

Courier: LQ and COURIER lights are on

Gothic: LQ and GOTHIC lights are on

Orator: LQ and ORATOR lights are on

Prestige: LQ and PRESTIGE lights are on

Roman: LQ, COURIER, and GOTHIC lights are on

Swiss: LQ, ORATOR, and PRESTIGE lights are on

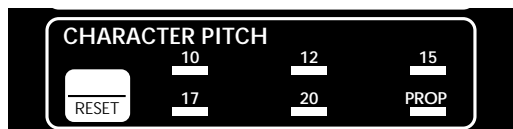
Swiss Bold: LQ light is on

Character Pitch

! Important!

- *Front panel settings for print quality and character pitch are overridden by software commands. The lights will always reflect the printer's state.*

Press CHARACTER PITCH/RESET to select the width of characters in characters per inch, or Proportional.



10 cpi

- Recommended for standard text

12 cpi

- Recommended for standard text
- Yields more text per page

15 cpi

- Recommended for spreadsheets and large volumes of data
- Yields more text per page
- In HSD mode, yields fastest printing

17.1 cpi, 20 cpi

- Recommended for spreadsheets
- Smallest print

PROP (LQ only)

- Recommended for a more polished appearance
- Proportional spacing

Printer Reset

When you reset the printer, you reinitialize it.

You will need to reset the printer to clear some error conditions

To reset the printer:

- 1 Press and release the SEL key to take the printer off-line.
The SEL light will be out.
- 2 Then, press and hold the SHIFT key and press the RESET (CHARACTER PITCH) key.
- 3 The printer is reset.



Important!

- ***A printer reset is NOT the same as a reset to factory defaults.***

A printer reset reinitializes the printer, but does NOT affect any menu settings.

A reset to factory defaults returns ALL menu settings to the factory defaults.

Emulations

Available Emulations

Your printer has three emulations:

- Epson® LQ — *factory setting*
- IBM® Proprinter
- IBM® AGM

Changing Emulations

- 1 Make sure paper is loaded.
- 2 Press SHIFT + SEL. The printer enters the Menu Mode.
- 3 Press LF. The following line prints:

`P r i n t e r C o n t r o l E m u l a t i o n M o d e E P S O N L Q`
- 4 Press TEAR consecutively until the emulation you wish to select prints in the right-hand column.
- 5 Press SHIFT + SEL to save your setting and exit the Menu Mode.

Printer Drivers

Selecting Printer Drivers

Before you can use your printer, you must select the correct printer driver in your software. If you select the wrong driver, you will see strange characters, incorrect fonts, etc.

- ! **See your software documentation for information on**
- **how to select a printer driver.**

The drivers below are listed by **decreasing** compatibility with your printer. *Use one as close to the top of the list as possible.*

Epson LQ

Oki Data ML390/1T Epson

Epson LQ 870/1170

Epson LQ 80/1000

Epson LQ 2500

Epson LQ 1500

Epson FX

IBM Proprinter

Oki Data ML390/1T IBM

IBM Proprinter X24e/XL24e

IBM Proprinter X24/XL24

IBM Proprinter

IBM Graphics Printer

IBM X24e AGM/XL24e AGM

Use this emulation only when you've selected an IBM proprinter X24e/XL24e driver

and

you need to use Epson Letter Quality (LQ) high density graphics.

Obtaining Drivers

Drivers are available for a variety of operating systems.

You can obtain the drivers by downloading them from the web site at

<http://www.okidata.com>

Installing Printer Drivers

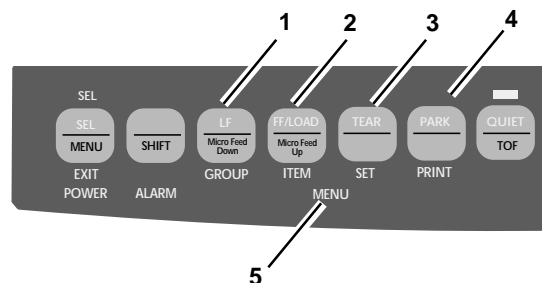
Installation procedures vary according to the driver you select. Follow the instructions provided with the selected driver.

Menu Mode

- ! ***ALWAYS print the current Menu Mode settings before you reset or change the Menu settings.***
- ***Printing the settings is the only way to have a record of the settings.***

To print the Menu Mode Settings, refer to “Using Your Printer, Menu Mode, Printing the Menu Settings.”

In Menu Mode, you use the front panel keys to change the defaults for the printer parameters. The changes you make in the Menu Mode are automatically saved when you exit the Menu Mode and are retained, even when you turn the printer off.



- 1 **GROUP:** Prints the next Group in the Menu. With the SHIFT key, prints the previous Group.
- 2 **ITEM:** Prints next Item in the Group. With the SHIFT key, prints previous Item in the Group.
- 3 **SET:** Prints next Setting for an Item. With the SHIFT key, prints previous Setting for an Item.
- 4 **PRINT:** Prints a copy of all the Menu settings. With the SHIFT key, prints the current settings for the Group selected.
- 5 **MENU light:** Glows when the printer is in the Menu Mode.

Entering and Exiting Menu Mode

To enter or exit the Menu Mode, hold SHIFT while pressing SEL.

Moving Through the Menu

When the printer is in Menu Mode, you can move forward or backwards through the menu.

Moving Forward

To move forward, press GROUP, ITEM, or SET, whichever is appropriate.

For more information, refer to “Using Your Printer, Menu Mode.”

Moving Backward

To move backward, press and hold SHIFT, then GROUP, ITEM, or SET, whichever is appropriate.

For more information, refer to “Using Your Printer, Menu Mode.”

Resetting Menu to Factory Defaults

- ! ***ALWAYS print the current Menu Mode settings before you reset or change the Menu settings.***
 - ***Printing the settings is the only way to have a record of the settings.***
 - To print the Menu Mode Settings, refer to “Using Your Printer, Menu Mode, Printing the Menu Settings.”***

To reset the Menu to the standard settings (factory defaults):

- 1 Turn the printer off.
- 2 Press SEL + LF while turning the printer on.

Printing the Menu Settings

- ! ***ALWAYS print the current Menu Mode settings before you reset or change the Menu settings.***
 - ***Printing the settings is the only way to have a record of the settings.***
 - 1 Make sure paper is loaded in the printer.
 - 2 Enter the Menu Mode (SHIFT + SEL).
 - 3 Press PRINT (PARK key).
- ! ***To print out a listing of the settings for all menu items, regardless of the emulation selected or the accessories installed, enter the Menu Mode, then press SHIFT + PRINT QUALITY.***

Changing the Menu Settings

- ! ***ALWAYS print the current Menu Mode settings before you reset or change the Menu settings.***
- ***Printing the settings is the only way to have a record of the settings.***

To print the Menu Mode Settings, refer to “Using Your Printer, Menu Mode, Printing the Menu Settings.”

- 1 Press SHIFT + SEL to enter the Menu Mode.
- 2 Use the GROUP, ITEM and SET keys to make your changes:
Press GROUP until the Group you wish to change appears in the first column.
Press ITEM until the Item you wish to change appears in the second column.
Press SET until the setting you want appears in the third column.
- 3 Press SHIFT + SEL to exit the Menu Mode and save your settings.

- ! ***Important!***
- ***If you turn off the printer without first exiting the Menu Mode, the changes you have made will be lost.***

Menu Settings Table

For a complete explanation of each menu item, refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.”

The table below shows the items which may appear in the menu. Settings which are engaged at the factory (defaults) are set in ***bold italic***. Some groups or entries will only appear when a specific emulation is engaged, as noted.

Group	Item	Settings (Defaults are set in <i>bold italic</i>)
Printer Control	Emulation Mode	<i>EPSON LQ</i> , IBM PPR, IBM AGM
Font	Print Mode	<i>LQ Courier</i> , LQ Roman, LQ Swiss, LQ Swiss Bold, LQ Orator, LQ Gothic, LQ Prestige, Utility
	Pitch	<i>10 cpi</i> , 12 cpi, 15 cpi, 17.1 cpi, 20 cpi
	Proportional Spacing	<i>No</i> , Yes
	Style	<i>Normal</i> , Italics
	Size	<i>Single</i> , Double
Symbol Sets	Character Set	<i>Set I</i> , Set II
	Language Set	<i>American</i> , French, German, British, Danish I, Swedish, Italian, Spanish I, Japanese, Norwegian, Danish II, Spanish II, Latin American, French Canadian, Dutch, Publisher
	Zero Character	<i>Slashed</i> , Unslashed
	Code Page	<i>USA</i> , Canada French, Multilingual, Portugal, Norway, BRASC II, Abicomp

Menu Settings Table (Continued)

For a complete explanation of each menu item, refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.”

The table below shows the items which may appear in the menu. Settings which are engaged at the factory (defaults) are set in ***bold italic***. Some groups or entries will only appear when a specific emulation is engaged, as noted.

Group	Item	Settings (Defaults are set in <i>bold italic</i>)
Rear Feed	Line Spacing	<i>6 LPI</i> , 8 LPI
	Form Tear-Off	<i>Off</i> , 500 ms, 1 sec, 2 sec
	Skip Over Perforation	<i>No</i> , Yes
	Page Width (wide model only)	<i>13.6"</i> , 8"
	Page Length	<i>11"</i> , 11-2/3", 12", 14", 17", 3", 3.5", 4", 5.5", 6", 7", 8", 8.5"
Bottom Feed	Line Spacing	<i>6 LPI</i> , 8 LPI
	Form Tear-Off	<i>Off</i> , 500 ms, 1 sec, 2 sec
	Skip Over Perforation	<i>No</i> , Yes
	Page Width (wide model only)	<i>13.6"</i> , 8"
	Page Length	<i>11"</i> , 11-2/3", 12", 14", 17", 3", 3.5", 4", 5.5", 6", 7", 8", 8.5"

Menu Settings Table (Continued)

For a complete explanation of each menu item, refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.”

The table below shows the items which may appear in the menu. Settings which are engaged at the factory (defaults) are set in ***bold italic***. Some groups or entries will only appear when a specific emulation is engaged, as noted.

Group	Item	Settings (Defaults are set in <i>bold italic</i>)
Top Feed	Line Spacing Bottom Margin Page Width (wide model only) Page Length Wait Time Page Length Control	<i>6 LPI</i> , 8 LPI <i>Valid</i> , Invalid <i>13.6"</i> , 8" <i>11"</i> , 11-2/3", 12", 14", 17", 3", 3.5", 4", 5.5", 6", 7", 8", 8.5" 500 ms, <i>1 sec</i> , 2 sec <i>By MENU Setting</i> , By Actual Page Length
Set-Up	Graphics Receive Buffer Size Paper Out Override Print Registration	<i>Bi-directional</i> , Uni-directional <i>8 K</i> , 1 Line, 23K <i>No</i> , Yes <i>0</i> , set in 0.05 mm increments: press SEL to shift registration to the left; press SHIFT + SEL to shift registration to the right.

Menu Settings Table (Continued)

For a complete explanation of each menu item, refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.”

The table below shows the items which may appear in the menu. Settings which are engaged at the factory (defaults) are set in ***bold italic***. Some groups or entries will only appear when a specific emulation is engaged, as noted.

Group	Item	Settings (Defaults are set in <i>bold italic</i>)
Set-Up (continued)	Operator Panel Function	<i>Full Operation</i> , Limited Operation
	Reset Inhibit	<i>No</i> , Yes
	Print Suppress Effective	<i>Yes</i> , No
	Auto LF	<i>No</i> , Yes
	Auto CR+	<i>No</i> , Yes
	SI Select Pitch (10 cpi) *	<i>17.1 cpi</i> , 15 cpi
	SI Select Pitch (12 cpi) *	<i>20 cpi</i> , 12 cpi
	Time Out Print	<i>Valid</i> , Invalid
	Auto Select	<i>No</i> , Yes
	Graphics Speed	<i>Low</i> , High
	Centering Position	<i>DEFAULT</i> , MODE 1, MODE 2

* Appears only when the IBM emulation is selected.

Menu Settings Table (Continued)

For a complete explanation of each menu item, refer to “Using Your Printer, Menu Mode, Explanations of Menu Items.” The table below shows the items which may appear in the menu. Settings which are engaged at the factory (defaults) are set in *bold italic*. Some groups or entries will only appear when a specific emulation is engaged, as noted.

Group	Item	Settings (Defaults are set in <i>bold italic</i>)
Parallel I/F	I-Prime Pin 18 Auto Feed XT**	<i>Buffer Print</i> , Invalid, Buffer Clear +5V, Open <i>Invalid</i> , Valid

* * Appears only when the Epson emulation is selected.

Explanations of Menu Items

Refer to “Using Your Printer, Menu Mode, Menu Settings Table” for an overview of the menu structure.

Auto CR (IBM). If you want the printer to automatically add a carriage return when a Line Feed is received at the end of a line, change the setting to Yes.

Auto LF. If your printout is consistently double spaced, select No; if it overprints, select Yes.

Auto Feed XT (Epson). If your system uses pin 14 of the parallel interface to control automatic line feed, change the setting to Valid.

Auto Select. If you always use the same Top of Form position, change the setting to Yes.

Bottom Margin. Change to Invalid if you want the printer to ignore the bottom margin setting.

! **Caution!!** *This can cause loss of data and damage the printhead by allowing printing without paper.*

Centering Position. Used to limit printhead travel when printing narrow columns.

Select Mode 1 for the narrow carriage printer.

Select Mode 1 or Mode 2 for the wide carriage printer.

Character Set. Choose IBM Set I or IBM Set II

Code Page. Choose the Code Page character set you wish to use: USA (IBM 437), Canada French (IBM 863), Multilingual (IBM 850), Portugal (IBM 860), Norway (IBM 865), BRASC II, or Abicomp.

Emulation Mode. Choose the printer emulation.

Form Tear-Off. Choose 500 ms, 1 sec, or 2 sec to turn the Form Tear-Off feature on and to set the time interval for the printer to wait before advancing the paper.

Graphics. Change to bi-directional graphics for faster printing. Optimize the registration using the Print Registration setting in the Menu.

Graphics Speed. Change to High for faster printing when optimum print quality is not an issue.

Explanations of Menu Items (Continued)

Refer to “Using Your Printer, Menu Mode, Menu Settings Table” for an overview of the menu structure.

I-Prime. Determines what the printer will do when it receives the I-Prime signal from the software.

Buffer Print prints out the buffer contents before resetting.

Buffer Clear dumps the buffer contents immediately.

Invalid causes the printer to ignore the I-Prime command.

Language Set. Replaces certain standard symbols with special characters used in foreign languages.

Line Spacing. Change to 8 lines per inch (lpi) to get more lines on a page.

Operator Panel Function. Change to Limited Operation to deactivate the PRINT QUALITY and CHARACTER PITCH buttons. This prevents these from being changed from the control panel when several people are using the printer.

Page Length. Selects the length of the paper you are using.

Page Length Control. Change the setting to “by Actual Page Length” if you wish to print on single-sheets longer than 17 inches. When “by Actual Page Length” is selected, the menu setting for Top Feed Page Length is ignored.

Page Width (Wide Carriage only). Change to 8" to print on letter-size paper.

Paper Out Override. Senses when less than 1" (25 mm) of paper remains and stops printing. Change to Yes to override the sensor.

! **Caution!! This can cause loss of data and damage the printhead by allowing printing without paper.**

Pin 18. Sets the signal on pin 18 to +5 volts or to open.

Pitch. Choose the character width, in character per inch (cpi).

Print Mode. Choose the quality and typeface of printing.

Print Registration. Change the setting as required to obtain the best registration for bi-directional printing.

Explanations of Menu Items (Continued)

Refer to “Using Your Printer, Menu Mode, Menu Settings Table” for an overview of the menu structure.

Print Suppress Effective. If your system uses the DC1 and DC3 codes for something other than the print suppress mode, change the setting to No.

Proportional Spacing. Change the setting to Yes to engage proportional spacing of characters.

Receive Buffer Size. Selects the amount of memory devoted to holding received data. Choosing 1 Line will tie up your computer while printing, but if you abort the print job, the printer will stop much sooner.

Reset Inhibit. Select Yes to prevent your software from resetting your printer's settings.

SI Select Pitch, 10 cpi (IBM). Sets the pitch to be engaged when the printer control panel is set for 10 cpi and the SI command is received.

SI Select Pitch, 12 cpi (IBM). Sets the pitch to be engaged when the printer control panel is set for 12 cpi and the SI command is received.

Size. Change to Double for double width and height printing.

Skip Over Perforation. Change to Yes if you want the printer to go to the next page when it comes within 1" (25 mm) of the bottom of the page. Keep it set to No if your software has its own page formatting controls.

Style. Change to italics if you want the printed characters to be slanted.

Time Out Print. If your software spends a long time processing between portions of data it feeds to the printer, change the setting to Invalid to keep your printer from dumping the received data while it is waiting for more.

Wait Time. Sets the amount of time the printer will wait for more data before moving to the form tear-off position.

Zero Character. If you do not want the printer to use a slash to distinguish the number zero from the capital letter O, change the setting to Unslashed.

Maintenance

Replacing the Ribbon Cartridge

If you need instructions for replacing the ribbon cartridge, you can refer to the

- packaging of the new cartridge
- web site
- “Installation, Ribbon Cartridge.”

For the best results, use genuine OKI ribbons.

For information on obtaining consumables, refer to “Accessories.”

For information on the web site, refer to “Service and Support, Internet Support.”

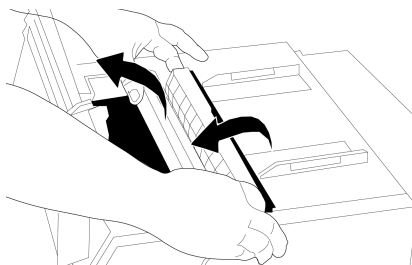
- ! *Make sure that the printer model number for the ribbon is the same as the model number for your printer. If the model numbers don't match, the ribbon WILL NOT work in the printer.*

Printer Cleaning

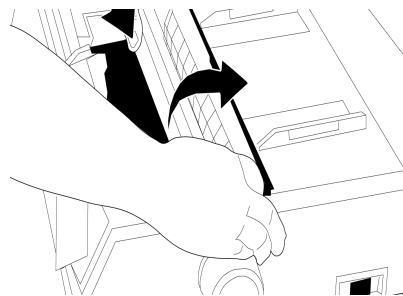
You should clean the printer every six months (or after about 300 hours of operation).

! *Never use solvents or strong detergents on the cabinet: they could cause damage.*

- 1 Turn off the printer. Then, use the platen knob to back the paper out of the printer.
- 2 Open the access cover. Remove the pull-up roller assembly.



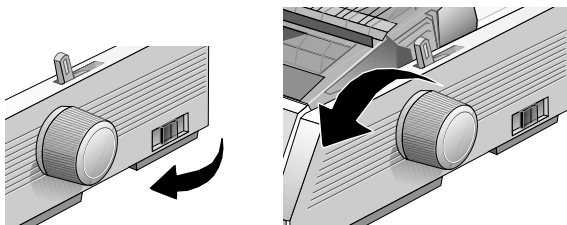
- 3 Use a clean, dry cloth to dust around the carriage shaft and platen. Remove any loose bits of paper.
- 4 Install the pull-up roller assembly. Close the access cover.



Paper Jams

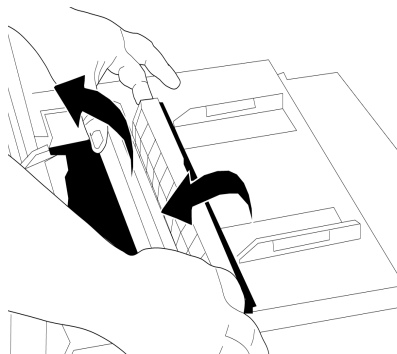
Rear-Feed Paper Jams

- 1 Turn off the printer. Then, use the platen knob to back the paper out of the printer.

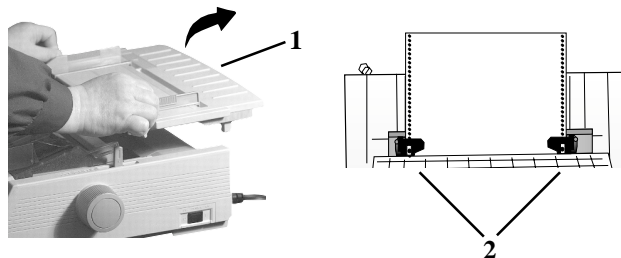


- ! ***Make sure the printer is turned off before you open the access cover.***

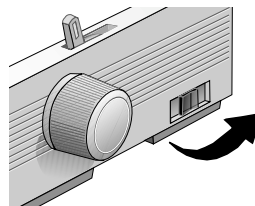
- 2 Open the access cover. Remove the pull-up roller assembly.



- 3 Remove any torn pieces of paper.
- 4 Grasp the tabs and lift off the paper separator (1). Load paper. Make sure you lock the tractor covers (2).



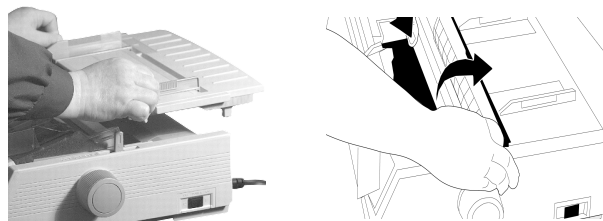
- 6 Turn on the printer.



- 7 Press FF/LOAD.



- 5 Install the paper separator. Install the pull-up roller assembly. Close the access cover.



Rear-Feed, Repeating Paper Jams

If the paper keeps jamming, you may have:

- defective paper.
- misaligned paper.
- bits of paper stuck in the paper path.

Defective Paper

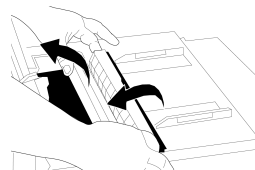
Replace the paper with a fresh stack.

Misaligned Paper

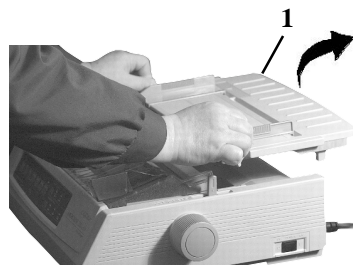
- 1 Turn off the printer. Then, use the platen knob to back the paper out of the printer.
- 2 Tear off a couple of sheets of paper, leaving a new, clean, square-cut edge.
- 3 Reload the paper and turn the printer back on.

Bits of Paper Stuck in the Paper Path

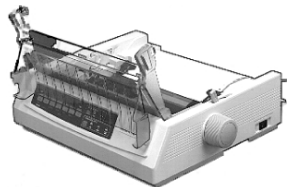
- 1 Turn off the printer. Then, use the platen knob to back the paper out of the printer.
- 2 Open the access cover. Remove the pull up roller assembly. Remove any torn pieces of paper.



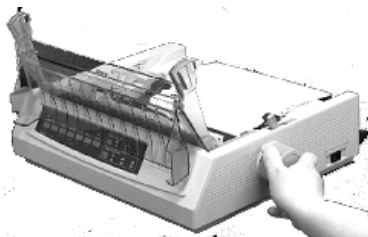
- 3 Grasp the tabs and lift off the paper separator (1).



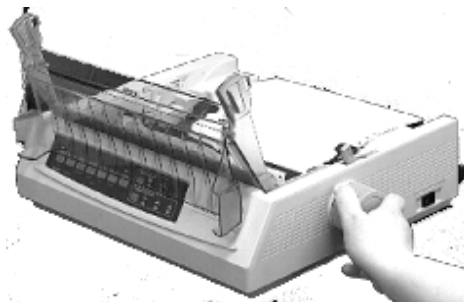
- 4 Fold some continuous-form paper over three times to make a page four sheets thick. Then, load it on the tractors and close the covers.



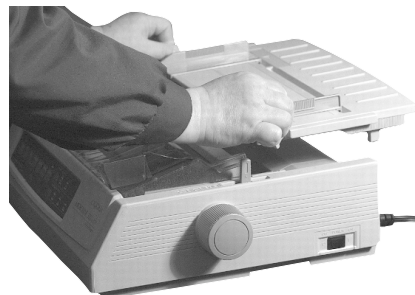
- 5 Use the platen knob to draw the quadruple-thick page around the platen. This clears any jammed bits of paper.



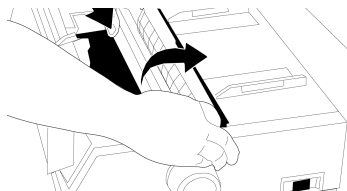
- 6 Remove any paper pieces. Then, use the platen knob to back the paper out.



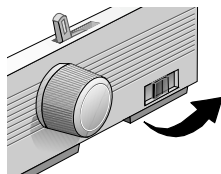
- 7 Load regular paper (making sure the tractor covers are closed). Install the paper separator.



- 8** Install the pull-up roller assembly. Close the access cover. **10** Press FF/LOAD.

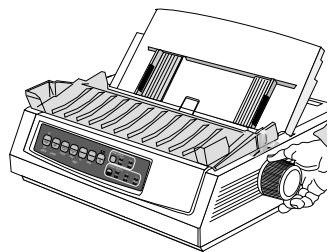


- 9** Turn on the printer.

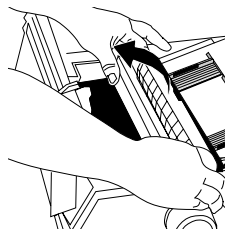


Single-Sheet Paper Jams

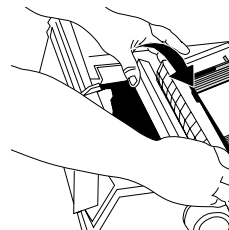
- 1 Turn off the printer.
- 2 Then, use the platen knob to back the paper out.



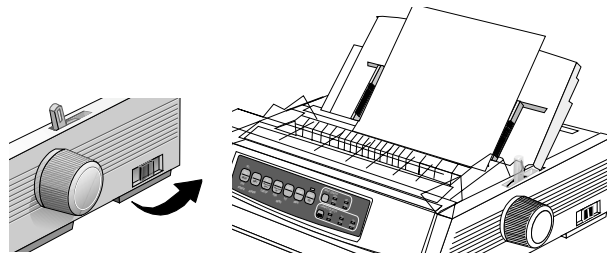
- 3 Open the access cover. Remove the pull-up roller assembly.



- 4 Remove any torn pieces from around the carriage.
- 5 Install the pull-up roller assembly. Close the access cover.



- 6 Turn on the printer. Load paper.



Troubleshooting

General Information

Here are some general things to check before proceeding with detailed troubleshooting.

- Is the printer plugged in and turned on?
- Are the connections (power and interface) secure?
- Is the product being operated under the proper ambient conditions?
- Does the paper being used meet the specifications for this product?
- Is the paper properly installed?
- Has the ribbon been replaced as recommended?
- Is the ribbon properly installed?
- Is an OKI ribbon being used?
- Is the printhead gap correctly set?
- Are the correct printer drivers being used for the printer?

- ! *Settings in your software application will override any settings in your printer driver.*
- *Your printer driver settings will override any settings from the printer menu or printer front panel.*

Internet Support

Okidata provides support via the Internet.

Okidata's main web site, www.okidata.com, is the gateway to Okidata's products and services.

my.okidata.com is a powerful area of Okidata's web site designed to help you personalize the information and service you get from Okidata.

For more information, refer to "Service and Support, Internet Support."

List of Problems

Problem 1:

My word processor files do not print the way I have the menu and front panel set.

Problem 2:

Nothing happens when I turn on the printer.

Problem 3:

The printer does not print when the computer sends data.

Problem 4:

I'm getting strange symbols, incorrect fonts, etc., when I try to print a document.

Problem 5:

Ink smears on the paper when I print on narrow forms.

Problem 6:

I've installed a new ribbon and the printing is smeared and streaked.

Problem 7:

The ALARM light is flashing.

Problem 8:

The ALARM light is on and the Character Pitch 10 light is flashing.

Problem 9:

The ALARM light is on and the Character Pitch 15 light is flashing.

Problem 10:

The printer needs paper, but the ALARM light is not on and I cannot load the paper.

Problem 11:

The Print Quality and Character Pitch keys on the front panel don't work.

Problem 12:

Continuous-form paper sticks to the paper separator.

Problem 1:

My word processor files do not print the way I have the menu and front panel set.

Solution:

Always remember that:

- 1 Settings in your software application will override any settings in your printer driver.
- 2 Your printer driver settings will override any settings from the printer menu or printer front panel.

Solution:

Before sending a file to the printer, many word processors send either an “initialization string” or an I-Prime signal to the printer.

The initialization string contains codes that override the panel and menu settings. To change your printer to ignore the reset code, enter the Menu Mode, go to the Set-Up group and change the setting for Reset Inhibit to Yes. Refer to “Using Your Printer, Menu Mode.”

The I-Prime signal will automatically override any front panel settings you have made. To eliminate this problem, enter the Menu Mode, go to the Parallel Interface group and change the setting for I Prime to Invalid. Refer to “Using Your Printer, Menu Mode.”

Problem 2:

Nothing happens when I turn on the printer.

Solution:

Check the power cord connection to the outlet. If you are using a power strip, make sure it is turned on, and that a fuse hasn't blown or that a circuit breaker hasn't tripped.

Problem 3:

The printer does not print when the computer sends data.

Solutions:

- 1 Is the SEL light on? If not, press the SEL key.
- 2 Check that the interface cable is securely connected to both the printer and the computer.
- 3 If you have the optional serial interface board installed, check to be sure that it is firmly seated in the printer.

Problem 4:

I'm getting strange symbols, incorrect fonts, etc., when I try to print a document.

Solutions:

- 1 Check to be sure that the printer driver you have selected in your software matches the printer emulation.
Press SHIFT and SEL keys, then press GROUP key.
This will print a line showing the emulation you have selected.
- 2 If you have embedded any printer commands in your software, check to be sure that you entered them correctly.

Problem 5:

Ink smears on the paper when I print on narrow forms.

Solution:

This may be caused by excessive printhead travel from the centering position. Enter the Menu and set the Centering Position to MODE 1. Refer to “Using Your Printer, Menu Mode.”

For the wide-carriage printer, if MODE 1 doesn't work, try setting the Centering Position to MODE 2.

Problem 6:

I've installed a new ribbon and the printing is smeared and streaked.

Solution:

The ribbon shield is either loose or missing. Remove the ribbon cartridge and check the ribbon shield.

If it is loose, secure it.

If it is missing, find it and install it.

Problem 7:

The ALARM light is flashing.

Solution:

Try turning the printer off and then back on again. If the light still blinks, call for service.

Problem 8:

The ALARM light is on and the Character Pitch 10 light is flashing.

Solution:

This indicates that the paper lever is set at the wrong position for the paper you are trying to use. Move it to the proper setting.

Problem 9:

The ALARM light is on and the Character Pitch 15 light is flashing.

Solution:

This indicates a paper jam. Press the SEL key and correct the paper jam situation. Refer to “Maintenance, Paper Jams.”

Problem 10:

The printer needs paper, but the ALARM light is not on and I cannot load the paper.

Solution:

Press and release the SEL key.

Then, press and hold the SHIFT key and press the RESET (CHARACTER PITCH) key.

The printer is reset.

Problem 11:

The Print Quality and Character Pitch keys on the front panel don't work.

Solution:

The Operator Panel Function in the printer menu can be used to disable these buttons (Limited Function). If the printer is part of a customized system or if it is used by a number of people, the system manager may have used this option to make sure the printer is always set properly.

Check with your system manager before changing any menu settings.

Refer to “Using Your Printer, Menu Mode.”

Problem 12:

Continuous-form paper sticks to the paper separator.

Solution:

In cold dry weather, static charges can build up and make the paper cling to the paper separator. Try moving the paper guides together so that the paper rests on the guides rather than on the separator.

Specifications

! *Specifications subject to change without notice.*

Print Method

Impact dot matrix

Printhead

24 pins, 0.20 mm (0.0079") diameter, thermal protection

Print Speed

<i>Mode</i>	<i>Pitch— Characters per Inch</i>	<i>Speed— Characters per Second</i>
Utility	10 cpi	260 cps
	12 cpi	312 cps
	15 cpi	390 cps
	17.1 cpi	223 cps
	20 cpi	260 cps
Letter Quality	10 cpi	87 cps
	12 cpi	104 cps
	15 cpi	131 cps
	17.1 cpi	149 cps
	20 cpi	174 cps

Characters per Line (cpl)

<i>Setting</i>	<i>ML390 Turbo/n</i>	<i>ML391 Turbo/n</i>
10 cpi	80 cpl	136 cpl
12 cpi	96 cpl	163 cpl
15 cpi	120 cpl	204 cpl
17.1 cpi	137 cpl	233 cpl
20 cpi	160 cpl	272 cpl

Emulations (co-resident)

Co-resident

Epson LQ

IBM PPR

IBM AGM

Interface

Standard: Centronics parallel, IEEE-1284 compliant

Optional: RS-232C serial

Graphics Resolution

360 x 360 dpi maximum (24-dot, hex density)

Receive Buffer Size

23 K

Resident Fonts

Print Quality

Letter Quality

Utility

Available Fonts

Courier, Gothic, Orator, Prestige,
Roman, Swiss, Swiss Bold

Gothic

Resident Scalable Fonts*

Courier, Roman, and Swiss, in sizes from 8 to 64 points

*Selectable through software only.

Resident Typefaces

<i>Mode/Font</i>	<i>Size</i>
LQ Courier	10 & 12 cpi, Proportional 10 & 12 cpi, Superscript/Subscript Proportional Superscript/Subscript
LQ Letter Gothic	10 & 12 cpi, Proportional 10 & 12 cpi, Superscript/Subscript Proportional Superscript/Subscript
LQ Prestige	10 cpi, 12 cpi, Proportional
LQ Orator	10 cpi, 12 cpi, Proportional
LQ Roman	10 cpi, 12 cpi, Proportional
LQ Swiss	10 cpi, 12 cpi, Proportional
LQ Swiss Bold	10 cpi, 12 cpi, Proportional
Utility Gothic	10 cpi, 12 cpi, Proportional 10 & 12 cpi, Superscript/Subscript
HSD Gothic	15 cpi

Bar Codes

Code 39, UPC A, UPC E, EAN 8, EAN 13,
Interleaved 2 of 5, Code 128, Postnet

Reliability

Mean Time Between Failures (MTBF)

10,000 hours at 25% duty cycle and 35% page density

Mean Time to Repair (MTTR)

15 minutes

Printhead Life

200 million characters average in 10 cpi draft mode at 25%
duty and 35% page density

Ribbon Life

4 million characters, on average, 10 cpi utility

Paper Specifications

Microline 390 Turbo/n

Paper Type: Cut Sheet
Feed: Top
Weight: 14-24 lb. (52.5-90 g/m²)
Width Range: 7.2" to 8.5" (182.8 to 215.9 mm)

Paper Type: Single-part, continuous forms
Feed: Rear, Bottom
Weight: 12-24 lb. (45-90 g/m²)
Width Range: 3" to 10" (76.2 to 254 mm)

Paper Type: Carbonless continuous forms
Feed: Rear, Bottom
Weight: 9-11 lb. (33.75-41.25 g/m²)
Width Range: 3-10" (76.2 to 254 mm)

Paper Type: Interleaf continuous forms
Feed: Rear, Bottom
Weight: 10-12 lb.
Width Range: 3-10" (76.2 to 254 mm)

Paper Type: Labels
Feed: Bottom
Weight: Not applicable
Width Range: 3-10" (76.2 to 254 mm)

Paper Type: Envelopes, single feed
Feed: Top
Weight: 24 lb. max. (90 g/m²)
Width Range: 6.5" to 9.5" (165.1 to 241.3 mm)

Paper Type: Envelopes, continuous feed, non-overlap
Feed: Bottom
Weight: 24 lb. max. (90 g/m²)
Width Range: 6.5" to 9.5" (165.1 to 241.3 mm)

Paper Type: Card stock
Feed: Bottom
Weight: 120 lb. max. (450 g/m²)
Width Range: Not applicable

Paper Type: Transparencies
Feed: Top
Weight: Not applicable
Width Range: Not applicable

Standard Transparencies are
8.5" x 11" (215.9 - 279.4 mm)

Paper Specifications

Microline 391 Turbo/n

Paper Type:	Cut Sheet
Feed:	Top
Weight:	14-24 lb. (52.5-90 g/m ²)
Width Range:	7.2" to 14.3" (182.8 to 363.2 mm)
Paper Type:	Single-part, continuous forms
Feed:	Rear, Bottom
Weight:	12-24 lb. (45-90 g/m ²)
Width Range:	3" to 16" (76.2 to 406.4 mm)
Paper Type:	Carbonless continuous forms
Feed:	Rear, Bottom
Weight:	9-11 lb. (33.75-41.25 g/m ²)
Width Range:	3" to 16" (76.2 to 406.4 mm)
Paper Type:	Interleaf continuous forms
Feed:	Rear, Bottom
Weight:	10-12 lb.
Width Range:	3" to 16" (76.2 to 406.4 mm)
Paper Type:	Labels
Feed:	Bottom
Weight:	Not applicable
Width Range:	3" to 16" (76.2 to 406.4 mm)

Paper Type:	Envelopes, single feed
Feed:	Top
Weight:	24 lb. max. (90 g/m ²)
Width Range:	6.5" to 9.5" (165.1 to 241.3 mm)
Paper Type:	Envelopes, continuous feed, non-overlap
Feed:	Bottom
Weight:	24 lb. max. (90 g/m ²)
Width Range:	6.5" to 9.5" (165.1 to 241.3 mm)
Paper Type:	Card stock
Feed:	Bottom
Weight:	120 lb. max. (450 g/m ²)
Width Range:	Not applicable
Paper Type:	Transparencies
Feed:	Top
Weight:	Not applicable
Width Range:	Not applicable
	Standard Transparencies are 8.5" x 11" (215.9 - 279.4 mm)

Paper Thickness

Rear Feed

0.014" (0.36 mm) maximum

Bottom Feed*

0.0165" (0.44 mm) maximum
expandable to 0.031" (0.79 mm) maximum

* Requires optional push or pull tractor.

Printer Dimensions

Width x Depth x Height

ML390 Turbo/n

17.25 x 16.1 x 5.75 inches
436 x 409 x 145 mm

ML391 Turbo/n

23.1 x 16.1 x 5.75 inches
587 x 409 x 145 mm

Printer Weight

ML390 Turbo/n: 16.5 lbs. (6.5 kg)

ML391 Turbo/n: 19.8 lbs. (8.9 kg)

Environmental Requirements

Temperature

Operating 41 to 104°F (5 to 40°C)

Storage 14 to 122°F (-10 to 50°C)

Humidity

Operating 20 to 80% RH

Storage 5 to 95% RH

Electrical Requirements

120 volts ac

(+5.5%, -15%), 50 or 60 Hz ($\pm 2\%$)

110 W Maximum, 40 W idle

230 or 240 volts ac also available

(+ 10%, - 14 %), 50 or 60 Hz ($\pm 2\%$)



Specifications subject to change without notice.

Service and Support

General Information

Oki Data offers service and support to you through a variety of methods.

Please choose the service and support method that is best for you.

Oki Data's service and support methods are:

- the documentation provided with your machine
- the store location where you purchased your machine
- Internet Support
- Telephone Support

Details of each support method are provided in this section

Oki Data's service and support methods are different in these two areas:

- United States and Canada
- Latin America

Details for each area are provided in this section.

Service Centers are trained by Oki Data and are authorized to service OKI products. For more information about Service Centers, refer to "Service and Support, Service Centers."

Documentation

The documentation provided with your machine provides an excellent reference for the day-to-day operation of your machine.

The documentation included with your machine is:

- User's Guide, on line, provided on the CD
- Microline Reference Manual, on line, provided on the CD
- Warranty, Material Safety Data Sheet

If you cannot locate your documentation, go to www.okidata.com or my.okidata.com. Follow the prompts for your product, and you will find the on-line versions of all of these documents.

Purchase Location

The store location where you purchased your machine provides an excellent, local means of support for you and your machine.

Your purchase location will also provide any warranty service required by your machine

- ! ***You will need your printer serial number if your machine requires servicing.***

A written receipt for the product, showing the date of purchase, dealer's name, and both the model and serial numbers of the product must accompany any request or claim for work to be performed under Limited Warranty.

Internet Support

www.okidata.com

Your Gateway to OKI Products and Services

www.okidata.com is Oki Data's web site. It provides general information about all of the OKI products and services available to you.

You can use our web site to

- get Web-based support for all OKI products: 24 hours a day, 7 days a week—no waiting!
- download the printer drivers you need.
- read about other customers and how they use OKI products to improve their productivity and enhance their documentation.
- use the Dealer Locator to find a dealer location close to you.
- find out about Oki Data's special promotional offers and breaking news.
- and more . . .

my.okidata.com

Your Personal Solutions Center

my.okidata.com is a powerful area of Oki Data's web site designed to help you personalize the information and service you get from Oki Data.

When you register for my.okidata.com, you

- personalize the web-based support for the OKI products you own: 24 hours a day, 7 days a week—no waiting!
- automatically register your product.
- access on-line versions of your product documentation (manuals) and support information.
- control your contact, profile, and preference information.
- receive automatic notification of new printer drivers, key updates, and support information.
- track your e-mail support history.
- and more . . .

Telephone Support

Oki Data Customer Information System Information System Automated Attendant

1-800-654-3282 (1-800-OKI-DATA)

Toll Free in the U.S. and Canada

For quick answers to commonly-asked questions, the Oki Data Information System Automated Attendant is available 24 hours a day, 7 days a week. The system can provide immediate assistance with:

- Basic operating procedures
- Sales and service referrals
- Parts and consumable referrals
- Product information

Customer Support Professionals

1-800-654-3282 (1-800-OKI-DATA)

Toll Free in the U.S. and Canada

Customer Support Professionals are available 24 hours a day, 7 days a week. Please be sure that you are calling from a telephone close to your machine so you can describe your problem accurately.

Our Customer Support Professionals are trained on all current OKI products. They can answer your questions regarding:

- Locations of sales and service dealers
- Installation of your machine
- Usage/normal maintenance of your machine
- Error message interpretation/solutions
- Parts and supplies identification
- Consumer relations

Oki Data Service Centers

Oki Data Authorized Service Providers

Oki Data has over 2,000 local Authorized Service Providers in North and South America.

For the most comprehensive, up-to-date listing of Oki Data authorized Service Centers:

- Consult our web site at **www.okidata.com**
- In the U.S. and Canada, call 1-800-654-3282 (1-800-OKI-DATA)
- In Latin America, contact the Latin America Service Coordinator at Oki Data's Corporate Headquarters at 856-222-7496 (Spanish only)

Oki Data Contact Locations

United States

Oki Data Americas, Inc.
2020 Bishops Gate Blvd.
Mt. Laurel, NJ 08054
Phone: 1-800-654-3282
Fax: 1-856-222-5247

Canada

Oki Data Americas, Inc.
2735 Matheson Blvd. East, Unit 1
Mississauga, Ontario
Canada L4W 4M8
Phone: 1-800-654-3282
Fax: 1-905-238-4427

Mexico

Oki Data de Mexico, S.A. de C.V.
Mariano Escobedo No. 748-8 Piso
Col. Anzures, e.p. 11590
Mexico, DF
Phone: (525) 263-8780
Fax: (525) 263-8785

Brazil

Oki Data do Brasil, Ltda.
Rua Alexandre Dumas, 2220 - 8 andar
Chácara Sto Antonio
São Paulo, Brazil 04717-004
Phone: 55-11-3444-3500
Fax: 55-11-3444-3501

Service and Support: United States and Canada

Oki Data is firmly committed to the satisfaction of our customers. If you have problem that your customer documentation cannot solve, contact the listed sources for service or support.

Sales and Service Dealers: United States and Canada

Consult the store location where you purchased your machine, or contact Oki Data for the location of the nearest Authorized Oki Data Service Dealer.

- Prices and minimum charges may vary.
- Proof of purchase is required for warranty work. Be sure to retain your purchase documents.

Service and Support: Latin America

Oki Data is committed to offer the best customer support possible to our customers. In the instance of having a difficult problem with your OKI product, please contact any of the OKI- CAS (Centro Autorizado de Servicio) shown on our Web site, **www.okidata.com**.

Sales and Service Centers: Latin America

If you need to service your OKI product, please contact the store where you bought your fax machine or contact any of the OKI-CAS listed on our Web site for information.

- Prices and charges may vary.
- A copy of the proof of purchase is required for the warranty process.

Contacting Oki Data: Latin America

Information regarding our products and authorized service centers is available in our Web site:

<http://www.okidata.com>

Customer Support Professionals: Latin America

Our CAS's are trained and certified to provide the best service and support possible to our customers. Make sure that you are close to your machine when you call one of our OKI authorized service centers (OKI-CAS) so that you can describe your problem more accurately.

Our customer support professionals are trained on all current OKI products. They can answer your questions regarding:

- Location of nearest CAS (Service Center).
- Installation of your machine.
- Usage/normal maintenance of your machine.
- Error message interpretation/solutions
- Parts and supplies identification.
- Consumer relations.

Accessories

Purchasing Accessories

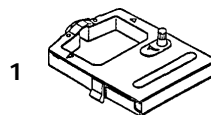
Before you purchase, know your machine model number (see the front of the unit) and have the correct part number and description of the item. Item descriptions and part numbers are provided in this section.

- Consult the dealer where you purchased your machine.
- Locate an Authorized Oki Data Reseller by visiting one of these web sites
 - <http://my.okidata.com>
Allows you to register your product and personalize your own support needs
 - <http://www.okidata.com>
Provides general information
- In the United States, purchase directly from Oki Data
 - Via the Internet
 - <http://my.okidata.com>
 - <http://www.okidata.com>
 - Via telephone
Order toll-free by phone at 1-800-654-3282 (1-800-OKI-DATA) using VISA, MasterCard, or American Express.
- In Canada, call 888-309-4570.

Accessories: Part Numbers

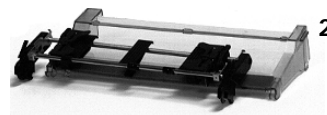
Consumables: Part Numbers

Consumable	Part Number
Ribbon Cartridge (1) -----	52104001



Options: Part Numbers

Option	Part Number
<i>Model ML390T/n</i>	
Pull Tractor, Top-Mount (2) -----	70030501
Push Tractor, Bottom-Mount (3) -----	70030701
Roll Paper Stand (4) -----	70023301

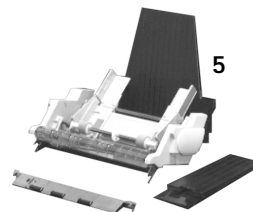
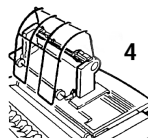


<i>Model ML391T/n</i>	
Pull Tractor, Top-Mount (2) -----	70030601
Push Tractor, Bottom-Mount (3) -----	70030801

Both Models

Cut Sheet Feeder (5) -----	70030101
(Cut Sheet Feeder sold only with printer; not available separately)	
Serial Interface (Not Shown) -----	70012801

3



Replacement Parts: Part Numbers

Replacement Part ----- Order No.

Model ML390T/n

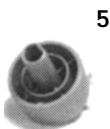
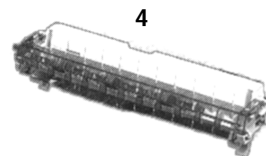
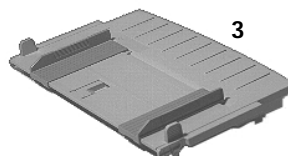
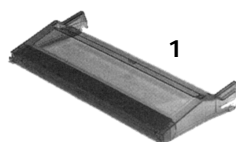
Access Cover (1) -----	53076701
Acoustic Cover (2) -----	53076901
Paper Separator (3) -----	51009409
Pull-Up Roller Assembly (4) -----	50411001

Model ML391T/n

Access Cover (1) -----	53076801
Acoustic Cover (2) -----	53077001
Paper Separator (3) -----	51009510
Pull-Up Roller Assembly (4) -----	50411101

Both Models

Platen Knob (5) -----	51902220
Power Cord (6) -----	56631801
Printhead (7) -----	50114701



Documentation: Part Numbers

Document	Part Number
User's Guide -----	refer to my.okidata.com
Reference Manual -----	refer to my.okidata.com
Warranty, Material	
Safety Data Sheet -----	refer to my.okidata.com

- ! *If you cannot locate your hardcopy documentation or the CD provided with your machine, go to www.okidata.com or my.okidata.com. Follow the prompts for your product, and you will find the on-line versions of all of these documents.*
-

Printer Control Codes

This section lists the most commonly used printer control codes.

The Microline Reference Manual provides complete lists of all the commands, along with information on their use.

You may view this document by:

- accessing the document on the CD provided with your machine
- using the Oki Data web sites
<http://www.okidata.com>
or
my.okidata.com

! *The Microline Reference Manual is ONLY available in American English.*

Epson LQ Commands

Epson Command	ASCII	Decimal
Backspace	BS	8
Cancel	CAN	24
Carriage Return, Execute	CR	13
Character Pitch		
Select 10 cpi	ESC P	27 80
Select 12 cpi	ESC M	27 77
Select 15 cpi	ESC g	27 103
Begin 10 cpi	ESC SI, or SI	27 15, or 15
Cancel Condensed Print	DC2	18
Character Style		
Normal	ESC q 0	27 113 48
Outline	ESC q 1	27 113 49
Shadow	ESC q 2	27 113 50
Outline with Shadow	ESC q 3	27 113 51
Delete	DEL	127
Double Height On	ESC w 1	27 119 49
	or ESC US 0	or 27 31 48
Double Height Off	ESC w 0	27 119 48
	or ESC US 1	or 27 31 49

Epson Command	ASCII	Decimal
Double Width On	ESC W 1	27 87 49
Double Width Off	ESC W 0	27 87 48
Double Width for One Line	SO or ESC SO	14 or 27 14
Emphasized Print On	ESC E	27 69
Emphasized Print Off	ESC F	27 70
Enhanced Print On	ESC G	27 71
Enhanced Print Off	ESC H	27 72
Italic Printing On	ESC 4	27 52
Italic Printing Off	ESC 5	27 53
Form Feed	FF	12
Form Length		
n Inches (n = 1 to 22)	ESC C NUL n	27 67 0 n
n Lines (n = 1 to 127)	ESC C n	27 67 n
Horizontal Tab	HT	9
Initialize Printer	ESC @	27 64

Epson LQ Commands (Continued)

Epson Command	ASCII	Decimal
Justification		
Left	ESC a 0	27 97 48
Center	ESC a 1	27 97 49
Right	ESC a 2	27 97 50
Full	ESC a 3	27 97 51
Line Feed, Execute w/ Carriage Return n/180" (n=0 to 255) n/360" (n=0 to 255) Reverse, n/180" (n = 0 to 255)	LF ESC J n ESC] n ESC j n	10 27 74 n 27 93 n 27 106 n
Line Spacing, Set n/360" (n = 0 to 255) n/180" (n = 0 to 255) n/60" (n = 0 to 127) 1/6" 1/8"	ESC + n or ESC [n ESC 3 n ESC A n ESC 2 ESC 0	27 43 n or 27 91 n 27 51 n 27 65 n 27 50 27 48

Epson Command	ASCII	Decimal
Margins		
Set Left Margin (n = 0 to 255)	ESC l n	27 108 n
Set Right Margin (n = 0 to 255)	ESC Q n	27 81 n
Paper Out Sensor		
Disabled (Off)	ESC 8	27 56
Enabled (On)	ESC 9	27 57
Print Quality/Font		
Select LQ	ESC x 1	27 120 49
Select Utility	ESC x 0	27 120 48
Select Roman (LQ only)	ESC k 0	27 107 48
Select Swiss (LQ only)	ESC k 1	27 107 49
Select Courier (LQ only)	ESC k 2	27 107 50
Select Prestige (LQ only)	ESC k 3	27 107 51
Select Orator (LQ only)	ESC k 7	27 107 55

Epson LQ Commands (Continued)

Epson Command	ASCII	Decimal
Print Speed		
Half-Speed On	ESC s 1	27 115 49
Half-Speed Off	ESC s 0	27 115 48
Print Suppress Mode On	DC3	19
Print Suppress Mode Off	DC1	17
Proportional Spacing On	ESC p 1	27 112 49
Proportional Spacing Off	ESC p 0	27 112 48
Skip Over Perforation ON (n = 1 to 127)	ESC N n	27 78 n
Skip Over Perforation OFF	ESC O	27 79
Software I-Prime	ESC } NUL	27 125 0
Subscript On	ESC S 1	27 83 49
Superscript On	ESC S 0	27 83 48
Subscript/Superscript Off	ESC T	27 84

Epson Command	ASCII	Decimal
Underline On	ESC - 1	27 45 49
Underline Off	ESC - 0	27 45 48
Uni-Directional Printing		
One Line Only	ESC <	27 60
On	ESC U 1	27 85 49
Off	ESC U 0	27 85 48
Upper Range Control Codes		
Permit Printing	ESC 6	27 54
Cancel Printing	ESC 7	27 55
Vertical Tab, Execute	VT	11

IBM Proprinter X24e / XL24e and IBM X24e AGM / XL 24e AGM Commands

IBM Command	ASCII	Decimal
Backspace	BS	8
Cancel	CAN	24
Carriage Return	CR	13
Character Pitch, Select		
10 cpi	DC2	18
12 cpi	ESC :	27 58
15 cpi	ESC g	27 103
Condensed Print	ESC SI, or SI	27 15, or 15
Character Style		
Normal	ESC q 0	27 113 48
Outline	ESC q 1	27 113 49
Shadow	ESC q 2	27 113 50
Outline with Shadow	ESC q 3	27 113 51
Double Width		
On	ESC W 1	27 87 49
Off	ESC W 0	27 87 48
for One Line	SO	14

IBM Command	ASCII	Decimal
Emphasized Printing On	ESC E	27 69
Emphasized Printing Off	ESC F	27 70
Enhanced Printing On	ESC G	27 71
Enhanced Printing Off	ESC H	27 72
Form Feed	FF	12
Form Length		
n inches		
n = 1 to 255	ESC C NUL n	27 67 0 n
n lines		
n = 1 to 255	ESC C n	27 67 n
Horizontal Tab, Execute	HT	9

IBM Proprinter X24e / XL24e and IBM X24e AGM / XL 24e AGM Commands (Continued)

IBM Command	ASCII	Decimal
IBM Character Set		
Select Set I	ESC 7	27 55
Select Set II	ESC 6	27 54
Print One Character from IBM Set III (n = 0 to 255)	ESC ^ n	27 94 n
Italic Printing On	ESC % G	27 37 71
Italic Printing Off	ESC % H	27 37 72
Line Feed, Execute w/ Carriage Return n/180" AGM only (n = 1 to 255)	LF	10
n/216" PPR only (n = 0 to 255)	ESC J n	27 74 n
n/360" (n = 0 to 255)	ESC J n	27 74 n
Reverse	ESC % 4 n	27 37 52 n
Auto Line Feed On	ESC]	27 93
Auto Line Feed Off	ESC 5 1	27 53 49
	ESC 5 0	27 53 48

IBM Command	ASCII	Decimal
Line Spacing		
Set Spacing to 1/8"	ESC 0	27 48
Set Spacing to 7/72"	ESC 1	27 49
Set to n/60": AGM only (n = 1 to 255)	ESC A n	27 65 n
Set to n/72": PPR only (n = 1 to 255)	ESC A n	27 65 n
Activate Spacing Set by ESC A n	ESC 2	27 50
Set to n/180": AGM only (n = 1 to 255)	ESC 3 n	27 51 n
Set to n/216": PPR only (n = 1 to 255)	ESC 3 n	27 51 n
Set to n/360" (n = 1 to 255)	ESC % 8 n	27 37 56 n

IBM Proprinter X24e / XL24e and IBM X24e AGM / XL 24e AGM Commands (Continued)

IBM Command	ASCII	Decimal
Overscore On	ESC _ 1	27 95 49
Overscore Off	ESC _ 0	27 95 48
Paper Out Sensor Off	ESC 8	27 56
Paper Out Sensor On	ESC 9	27 57
Print Quality / Font		
Select LQ Roman	ESC k 0	27 107 48
Select LQ Swiss	ESC k 1	27 107 49
Select LQ Courier	ESC k 2	27 107 50
Select LQ Prestige	ESC k 3	27 107 51
Select LQ Orator	ESC k 7	27 107 55
Print Suppress Mode On	ML390T ESC Q \$ ML391T ESC Q #	27 81 36 27 81 35
Print Suppress Mode Off	DC1	17
Proportional Spacing On	ESC P 1	27 80 49
Proportional Spacing Off	ESC P 0	27 80 48

IBM Command	ASCII	Decimal
Skip Over Perforation On (n = 1 to 255)	ESC N n	27 78 n
Skip Over Perforation Off	ESC 0	27 79
Software I-Prime	ESC } NUL	27 125 0
Stop Printing	ESC j	27 106
Subscript On	ESC S 1	27 83 49
Superscript On	ESC S 0	27 83 48
Subscript/Superscript Off	ESC T	27 84
Top of Form, Set at Current Position	ESC 4	27 52
Underline Printing On	ESC - 1	27 45 49
Underline Printing Off	ESC - 0	27 45 48
Uni-Directional Print On	ESC U 1	27 85 49
Uni-Directional Print Off	ESC U 0	27 85 48
Vertical Tab, Execute	VT	11

Index

Symbols

0 character (slashed, unslashed) 74, 81
10 cpi (Front Panel Light) 18, 65
12 cpi (Front Panel Light) 18, 65
120 volt printer 101
15 cpi (Front Panel Light) 18, 65
17 cpi (Front Panel Light) 18, 65
20 cpi (Front Panel Light) 18, 65
230 or 240 volt printer 101

A

ABICOMP 74, 79
Access
 Controlling access to the printer 12
Access Cover, Part Number 111
Accessories 109, 110
 Part Numbers 110
 Purchasing 109

Acoustic Cover, Part Number 111
Alarm
 ALARM flashing 18, 33, 94
 ALARM lit 18
 ALARM lit, CPI 10 flashing 94
 ALARM lit, CPI 15 flashing 95
Alignment problems 12
ASCII Test 36
Auto Carriage return 79
Auto CR+ 77
Auto LF (Line Feed) 77, 79
Auto Select 77

B

Backward
 Movement through Menu 10
Bar Codes 98
Bi-directional
 Communications 41
 Printing 76, 80

Bottom Feed 99, 100, 101
 Form Tear-Off 75
 Line Spacing 75
 Pull Tractor (Option) 110
 Skip Over Perforation 75

BRASC II 74, 79

Brazil 106

British (Language) 74

Buffer

 Clearing 19, 80
 Print 80
 Receive Buffer Size 76, 81, 97

C

Cable

 Length (Parallel) 41
 Network Cable 40
 Parallel 41
 Shielded, Parallel 41

Canada

- Service 105, 107
- Service Center (Oki Data) 106
- Canadian French 74, 79
- Carbon Forms 58
- Carbonless continuous forms 99, 100
- Cardstock 99, 100
 - Expanded printhead gap 59
- Centering 77, 79
 - Printhead Position 94
- Centronics parallel interface 97
- Character Pitch 80
 - Front Panel key 19
 - Indicator Lights 18
 - Key doesn't work 95
 - Selecting 65
- Character Set 74, 79
- Character Width 80
- Characters
 - Italics 81
 - Proportional Spacing 81
 - Special for languages 80
- Characters Per Second (CPS) 14
- Cleaning the printer 83
- Code 128 98
- Code 39 98

- Code Page Character Set 79
- Codes, Printer Control 113
- Commands
 - Epson LQ 114, 115, 116
 - IBM Proprinter
 - X24e / XL24e 117
 - X24e AGM / XL24e AGM 117
- Compatibility 14
- Connecting the Network Cable
 - Network, connecting the cable
 - cable, network 39
- Consumables
 - Part Numbers 110, 112
 - Ribbon Cartridge 110
 - Ribbon Life 98
- Contact Information for Oki Data 2
- Contents list, unpacking the printer 24
- Continuous Feed
 - Carbonless Forms 99, 100
 - Changing to single-sheet feed 57
 - Extra-thick forms 58
 - Interleaf continuous forms 99, 100
 - Paper 95
 - Paper Park 19

- Pins (graphic) 30
- Rear Feed 16
- Reference Mark 31
 - Single-part forms 30, 99, 100
- Control Codes 113
- Correspondence, Print Quality 63
- Costs, Cutting 9
- Courier
 - Font / Typeface 64, 97
 - Front Panel Light 18
- Covers, Part Numbers 111
- cpi 10 flashing, ALARM lit 94
- cpi 15 flashing, ALARM lit 95
- Cut Sheet Feeder 110
- Cut Sheet Paper 99, 100
- Cutting Costs. *See* Money, Saving

D

- Danish (Language) 74
- Data
 - Printing large amounts 65
- DC1 code 81
- DC3 code 81
- Depth of printer 101

- Detergent, cleaning the housing 83
- Documents, Print Quality 63
- Drivers
 - Oki Data Web Site 69
 - Operating Systems 69
- Dutch (Language) 74

E

- E-mail address for Oki Data 2
- EAN 13 98
- EAN 8 98
- Efficiency. *See* Time, Saving
- Electrical Requirements 101
- Electromagnetic Conformance 125
- Emulation 67, 74
 - Changing 67
 - Choices 41, 67, 97
 - Matching the printer driver 93
 - Mode 74, 79
- Envelopes 32
 - Continuous Feed 99, 100
 - Printhead Gap Setting 58
 - Single Feed 99, 100

- Environmental Requirements 101
- Epson LQ
 - Commands 114, 115, 116
 - Emulation Mode 67, 74
- Error Conditions
 - ALARM blinks 18
 - ALARM glows 18
- European Union Council of the
 - European Communities 125
- Expanded Printhead Gap 59

F

- Factory Defaults
 - Menu Mode 72
- FCC (Federal Communications
 - Commission) 123
- FF/LOAD (Front Panel Key) 19
- Font 74
 - Embedded Printer Commands 93
 - Font Sample Test 19, 35
 - Front Panel Lights 18
 - PRINT QUALITY key 19

- Resident 97
- Scalable 97
- Selecting 80
- Size 65, 74, 97
- Style 74
- Wrong fonts print 41, 68, 93
- Forms
 - Continuous
 - Carbonless 99, 100
 - Interleaf 99, 100
 - Single-part 99, 100
 - Multipart and Printhead Gap 58
 - Narrow width 94
 - Thick 59
 - Thickness ranges 14
 - Zero-Tear 14
- Forms Tear-Off 79
 - Automatic 53
 - Bottom Feed 75
 - Changing 52
 - Manual 54

OFF
 TEAR key 55
 Top of Form 47
ON
 TEAR key 55
 Top of Form 45
Rear Feed 75
Saving money with 9
Status (ON or OFF) 44
TEAR key 19, 53
Top of Form 44
Wait Time 81
French (Language) 74
French Canadian (Language) 74
Front Panel
 Keys 12, 19, 77
 Alternate Functions 19
 Won't work 12, 77, 80
 Lights 18
 Menu Mode 70

G

German (Language) 74
Gothic

Font 64, 97
 Utility Print Quality 63
Front Panel Light 18
Graphics
 Printing 79
 Bi-directional 76
 Uneven print registration
 51, 52, 53
 Uni-directional 76
 Resolution 97
GROUP, Menu Mode 70

H

Height
 Double height printing 81
 of Printer 101
Help. *See* Service and Support
Humidity
 Operating 101
 Storage 101

I

I-Prime 78, 80, 92

IBM

Character Set 79
Commands
 Proprietary X24e / XL24e 117
 Proprietary X24e AGM / XL24e
 AGM 117
Emulation 74
 AGM 67, 74
 Proprietary (PPR) 67, 74
IBM 437 79
IBM 850 79
IBM 860 79
IBM 863 79
IBM 865 79
IC. *See* Industry Canada
IEEE-284 97
Impact Dot Matrix 96
Industry Canada 124
Initialization string 92
Initialize the printer 66
Installation
 Local printer 37
 Network Printer 39
 Printer Software 37, 38

Installation Customization 22
Interface 97
 Parallel 41
 Serial Interface (Option) 110
Interleaf Continuous Forms 99, 100
Interleaved 2 of 5 98
Internet 13
 Oki Data Web Site
 2, 104, 106, 108
 Saving time with 10
Invalid (I-Prime command) 80
Italian (Language) 74
Italic 74, 81
Item, Menu Mode 70
 Explanations of Items 79, 80, 81
 Settings 70

J

Japanese (Language) 74

K

Keys, Front Panel 19

L

Labels 99, 100
 Paper Park 56
 Printhead Gap Setting 58
Language 74, 80
Latin America
 Language 74
 Locating a service center 106
 Service 108
Length, Page
 Bottom Feed 75
 Control, Top Feed 76
 Rear Feed 75
 Top Feed 76
Letter Quality (LQ) 63, 97
 Front Panel Light 18
 Print Speeds 14
Letterhead 32
LF (Line Feed) Front Panel key 19
Lights
 Front Panel 18
 Print Quality 64
Limited Operation 12, 80, 95
Line Spacing 80

Bottom Feed 75
Rear Feed 75
Top Feed 76
Local printer installation 37
Lock Lever (graphic) 30

M

Mailing address for Oki Data 2
Maintenance
 Cleaning the printer housing 83
 Replacing the ribbon cartridge 82
Margin, Bottom 76, 79
Mean Time Between Failures (MTBF)
 14, 98
Mean Time to Repair (MTTR) 98
Memory, Receive Buffer size
 76, 81, 97
Memos 32
MENU light 70

- Menu Mode 70
 - Changing Settings 73
 - Entering 71
 - Exiting 71
 - Front Panel keys 70
 - Group 70
 - Item 70
 - Explanations 79, 80, 81
 - Losing setting changes 73
 - MENU light 70
 - Moving through 10, 71
 - Printing the Menu Settings 72
 - Reset to factory defaults 72
 - Saving time 10
 - SEL and SHIFT keys 19
 - SEL on power up 19
 - Set (Item Setting) 70
 - Settings Table 74, 75, 76, 77, 78
- Mexico 106
- Microline Reference Manual 113
- Money, Saving 9
- Moving through the menu 10
- MSDS. *See* Material Safety Data Sheet
- Multilingual 74, 79
- my.okidata.com 42, 104

N

- Network
 - Printer Installation 39
 - Cable 39
 - software 39
- Norwegian 79
 - Code Page 74
 - Language 74

O

- Off-line, SEL key 19
- Oki Data
 - e-mail address 2
 - Latin America Information 106
 - Mailing address 2
 - Service Centers 106
 - Telephone 105, 106, 109
 - Web Site 2
- On-line, SEL key 19
- Operating Systems 69
- Operator Panel Function 95
- Options 109
 - Descriptions 110

- Part Numbers 110
- Purchasing 109
- Orator
 - Font / Typeface 64, 97
 - Front Panel Light 18
- Out of Paper 18

P

- Packing for Shipment 25
- Page Length 80
 - Bottom Feed 75
 - Rear Feed 75
 - Top Feed 76
- Page Width 80
 - Bottom Feed 75
 - Rear Feed 75
 - Setting in the Printer Menu 76, 80
 - Top Feed 76
- Paper
 - 1" (25 mm) remains 80
 - Continuous Feed
 - Alignment 31
 - Rear Feed 30
 - Cut Sheet 110

- Feeding 14
- Loading 30
- Paper Out Override 76, 80
- Roll Paper 110
- Single Sheet 30, 32
- Specifications
 - ML390 Turbo 99
 - ML391 Turbo 100
- Static 95
- Thickness 101
- Types, and Printhead Gap 58
- Weight 99, 100
- Widths 99, 100
 - Setting in the Printer Menu 76, 80
- Paper Feed
 - Continuous to single-sheet feed 57
 - Cut Sheet Feeder (Option) 110
 - FF/LOAD key 19
 - LF key 19
 - PARK key 19
- QUIET key 19
- Roll Paper Stand (Option) 110
- Single-sheet to continuous-feed 57
- Switching feed paths 57
- TEAR key 19
- Paper Jams 95
 - ALARM glows, 15 cpi blinks 18
 - Continuous feed 95
 - Rear Feed 84
 - Rear Feed, repetitive 86
 - Single Sheet 89
- Paper Lever 94
 - ALARM glows, 10 cpi blinks 18
 - REAR feed position (graphic) 30
- Paper Out 95
- Paper Park 56
 - Labels 56
 - Saving time with 10
- Paper Path, Switching 57
- Paper Separator 95
- Parallel Interface 41, 78
 - I-PRIME Signal 92
- PARK Front Panel Key 19, 32
- Parts, Replacement 109
- Part Numbers 110
- Purchasing 109
- Perforation, Skip over 75, 81
- Pin 14 79
- Pin 18 78, 80
- Pitch, Character 74, 80
- Platen Knob
 - Operation Tip 12
 - Part Number 111
- Port
 - Logical Port 37
 - Parallel 37, 41
- Portugal 74, 79
- Postnet 98
- Power
 - Connecting the printer to 29
 - Front Panel Light lit 18
 - Grounded Outlets 20, 120
 - Nothing happens when printer is turned on 93
 - Power Rating 20, 120
- Prestige

- Font / Typeface 64, 97
- Front Panel Light 18
- PRINT, Menu Mode 70
- Print Method 96
- Print Mode 74, 80
- Print Quality
 - ASCII Test 36
 - CHARACTER PITCH key 19
 - Font Sample Test 35
 - Front Panel key 19
 - Highest (LQ) 63
 - Indicator Lights 18
 - key doesn't work 95
 - Medium (Utility) 63
 - PRINT QUALITY key 19
 - Print Speed 79
 - Proportional Spacing 81
 - Selecting 63, 80
 - Software commands 63
- Print Registration 76, 80
 - Forms Tear-Off 51, 52, 53
 - Shift left 76
 - Shift right 76
- Print Size 97
 - Smallest 65
 - Standard 65
- Print Speed 14, 96
 - Fastest 65
 - Medium (Utility) 63
 - Slowest (LQ) 63
- Print Start Position
 - Reset to factory default position 50
 - Temporary adjustment 49
 - Top of Form 43, 49, 50
- Print Suppress 77, 81
- Printer
 - Dimensions 101
 - Humidity Specifications 101
 - Initialization 66
 - Model Number 109
 - Parameters 10
 - Parts and Accessories 109, 110
 - Printer vs. software settings 92
 - Reset 19, 66
 - Serial Number 15
 - Size 101
 - Temperature Specifications 101
 - Weight 101
- Printer Control Codes 113
- Printer Drivers
 - matching the emulation 93
 - Obtaining 69
 - Operating systems 69
 - Selecting 41, 68
- Printer Parameters 70
- Printhead 96
 - Centering position 79, 94
 - Heat 121
 - Life 98
 - New printhead 94
 - Part Number 111
- Printhead Gap 14
 - Definition 58
 - Expanded 59
 - Extra-thick continuous forms 58
 - Setting 58
 - Settings, and Media types 58
- Printing

- Double width and height 81
- Embedded Commands 93
- High Speed 63
- Italics 81
- Problems
 - Files don't print correctly 92
 - Incorrect fonts print 41, 68, 93
 - Printer doesn't print 93
 - Smeared print 94
 - Strange characters print 41, 68
 - Strange symbols print 93
 - Streaked printing 94
- Stopping 76, 81, 97
- Product Registration 42
- Productivity. *See* Money, Saving; Time, Saving
- Proof of Purchase 107
- PROP
 - characters per inch (dpi) 65
 - Front Panel Light 18
- Proportional Spacing 65, 74, 81
- Proprietary Commands
 - X24e / XL24e 117
 - X24e AGM / XL24e AGM 117
- Publisher (Language Set) 74

- Pull Tractor 14, 58, 101, 110
- Pull-Up Roller Assembly 111
- Push Tractor 14, 58, 101, 110

Q

QUIET

- Front Panel Key 19
- Front Panel Light 18

R

- Radio Interference Statement 123, 124
- Rear Feed 99, 100, 101
 - Continuous Forms 16, 30
 - Form Tear-Off 75
 - Jams, Repetitive 86
 - Line Spacing 75
 - Paper Jam 84
 - Skip Over Perforation 75
- Receive Buffer size 76, 81, 97
- Registration, Print 76, 80
- Registration, Product (Warranty) 42
- Regulatory Information

- Canada 124
- Europe 125
- United States 123
- Reliability 14, 98
- Replacement Parts 109, 110, 111
- Reset 77
 - Reset Code 92
 - Reset Inhibit 81, 92
 - the printer 66, 95
- Resolution (Graphics) 97
- Reverse
 - Movement through Menu 10
- Ribbon Cartridge 110
 - Installing / Replacing 26, 82
 - Life 98
 - New Ribbon Cartridge 94
 - Part Number 112
- Ribbon Shield 27, 94
- Roll Paper Stand 110
- Rolling ASCII Test 19
- Roman
 - Font / Typeface 64, 97

Front Panel Light 18
RS-232C Serial Interface 97

S

Safety, General Information 120
Saving Money. *See* Money, Saving
Saving Time. *See* Time, Saving
Security. control printer access 12
SEL

Front Panel Key 19
Front Panel Light
Flashes 18
Lit 18
Not Lit 18, 93

Self Tests 34

Serial Interface Option 93, 110

Serial Number 15

Service

ALARM flashing 94
Locating a service center 108
Latin America 108
United States 105, 107
Machine Reliability 98
Mean Time Between Failures
(MTBF) 14, 98
Mean Time To Repair (MTTR) 98

Service and Support 102
Documentation 103
General Information 102
Internet Support 104
Purchase Location 103
Registering your product 42
Telephone Support 105

Service Centers

Authorized Service Centers 106
Oki Data 106

Set, Menu Mode 70

SHIFT Front Panel Key 19

Shipping

Restraints 25
Saving the packing materials 25

SI 77, 81

Single Sheet

Change from continuous forms 57
Change to continuous forms 57
Cut Sheet Feeder (Option) 110
Jams 89
Loading 32
Top Feed 17, 30

Size

Double width and height 81
of printer 101

Skip Over Perforation 75

Software

Embedded commands 93
Installation 37, 38
Matching drivers to emulations 93
Scalable Fonts 97
Software vs. printer settings 92

Solvents, cleaning 83

Spanish (Language) 74

Specifications 96

Speed

High Speed Printing 63
Print Speed, graphics 79

Spreadsheets, Character Pitch 65

Standard Character Set 74

Static charges and paper 95

Stationery 32

Support 102

Documentation 103
General Information 102
Internet Support 13, 104
Purchase Location 103

Telephone Support 105
Swedish (Language) 74
Swiss
 Font / Typeface 64, 97
 Front Panel Light 18
Swiss Bold
 Font / Typeface 64, 97
Symbol Sets 74, 80

T

Take-up Knob (Ribbon Cartridge) 27
TEAR
 Front Panel key 19, 55
 Forms Tear-Off 53
 Forms Tear-Off OFF 55
 Forms Tear-Off ON 55
TEAR feature 51
 does not work
 51, 52, 53, 54, 55
Telephone
 Oki Data Support 105, 106, 109
 Latin America 106

Temperature Specifications 101
Tests
 ASCII Test 36
 Font Sample Test 35
Thickness, Paper 101
Time Out 77, 81
Time, Saving 10
Top Feed 99, 100
 Bottom Margin 76
 Line Spacing 76
 Pull Tractor 110
 Single Sheet 17, 30
Top of Form 79
 Decreasing the space 46, 48
 Forms Tear-Off 44
 Forms Tear-Off OFF 47
 Forms Tear-Off ON 45
 Increasing the space 46, 48
 Operation Tip 11
 Paper Shield 11, 43
Reset to factory default 50
 Printer OFF 50
 Printer ON 50

Setting 43
Standard Setting
 32, 33, 43, 49, 50
Temporary adjustment 49
Tractor Covers 30
Transparencies 99, 100
Troubleshooting
 Aborting print jobs 76, 81, 97
 ALARM flashing 18, 94
 ALARM lit 18
 ALARM lit, 10 cpi flashing 18, 94
 ALARM lit, 15 cpi flashing 18, 95
 ALARM lit, no other lights 18
 Alignment problems 12
 Can't load paper 95
 Character Pitch Indicator Lights 18
 Data loss 79, 80, 81

- Embedded Printer Commands 93
- Emulation 93
- Extra paper movement 51, 52, 53
- Files don't print correctly 92
- Front Panel keys 19
 - won't work 12, 77, 95
- Front Panel Lights 18
 - Print Quality 64
- General Information 90
- Internet Support 90
- List of Problems 91
- Locating a service center 108
- Menu Setting changes are lost 73
- Narrow forms 94
- New ribbon 94
- Oki Data Support (Telephone)
 - 105, 106, 109
 - Latin America 106
- Oki Data Support (Web Site)
 - 104, 106, 108
- Paper jams, continuous feed 95
- Paper Out 95
- Perforation skip over 81

- POWER lit 18
- PRINT QUALITY and CHARACTER
 - PITCH keys don't work 12, 80, 95
- Print Quality front panel lights 18, 64
- Print Registration 76
- Printer doesn't print 93
- Printer Drivers, current version 69
- Printhead Damage 79, 80
- Printhead moves too much 94
- QUIET lit 18
- SEL
 - flashing 18
 - lit 18
 - not lit 18
- Self Tests 34
- Smeared printing 94
- Software settings vs. printer settings 63, 64, 81
- Static charges 95
- Strange characters print 41, 68

- Streaked printing 94
- Turn on the printer, nothing happens 93
- Uneven print registration in graphics 51, 52, 53
- Weather conditions 95
- Wrong fonts print 41, 68, 93
- Wrong printer driver 41, 68
- Typefaces 74. *See* Font
 - Resident 98
 - Selecting 64, 80
 - Software commands 64

U

- Uni-directional printing, graphics 76
- United States
 - Service 105, 107
 - Service Center (Oki Data) 106
- Unpacking your printer
 - List of contents 24

- UPC A 98
- UPC E 98
- USA 74, 79
- Utility
 - Front Panel Light 18, 97
 - Print Speeds 14
 - Utility Mode Print Quality 63

V

- Volume
 - High-volume print quality 63

W

- Wait Time 76, 81
- Warranty
 - Proof of Purchase 107
 - Registering your printer 42
- Web Site, Oki Data 2
- Weight
 - Paper 99, 100
 - Printer 101

Width

- Character 80
- Double width printing 81
- Page (Bottom Feed) 75
- Page (Rear Feed) 75
- Page (Top Feed) 76
- Paper 99, 100
 - Setting in the Printer Menu 76, 80
- Printer 101
- www.okidata.com 104, 106, 108

Y

- Year 2000 (Y2K) 122

Z

- Zero character (slashed, unslashed) 74, 81