



MICROLINE[®] 393 AND 393C

Setup Guide

Note to Customer

OKIDATA continually improves and updates its products to bring you the best possible performance. Because of this, some photographs may vary slightly in appearance from the product you receive. We've made every effort, however, to ensure that the information on printer functions in this document is complete, accurate and up-to-date.

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Table of Contents

Intro	duction	1
D Part	1: Setup	2
Pr	reliminaries	2
Pe	ersonality and Font Cartridges	2
M	laking the Connections	2
In	serting Ribbon	3
A	djusting the Head Gap	4
Pa	aper Handling Configurations	6
In	stalling the Paper Support	8
In	stalling the Paper Separator	9
In	stalling the Optional Tractor	10
In	stalling the Optional Cut Sheet Feeder	13
	2. Operation	16
L Part	z: Operation	10
Lo	pading Rear Feed Paper	16
Lo	pading Single Sheet Paper	16
Lo	pading Bottom Feed Paper	18
Lo	bading the CSF	21
-	Printing Envelopes with the CSF	22
Se	etting lop of Form	23
KU	unning a Self Test	20
0	Resic Control Panel	/ Z 7 כ
	Print Feature Controls	27 29
	Macros	20 28
	Macros	20
	Menu Select Operation	30
C	leaning	
Pr	roblem Solving	31
	andix: Menu Selections	

Introduction

This Setup Guide will help you get your new MICROLINE 393 or 393C printer set up and running quickly. Here's how it's organized:

Part 1, **Setup**, shows you how to get the printer ready, connect it to your computer, and install the standard and optional paper handling accessories.

Part 2, **Operation**, describes how to load different types of paper, how to run a self test to check out your printer, how to use the control panel, and gives you some hints on what to do if you're having problems.

If you want more details about working with software or advanced topics like graphics, read the **Reference Guide**, also included. Use it to find out more about particular commands or to explore your MICROLINE's advanced capabilities.

In addition to the manuals and the **Customer Service Guide**, make sure you have the following items:*



- 1. MICROLINE printer
- Epson[®] LQ IBM Proprinter XL[®] compatible personality cartridge
- 3. Platen knobs (2)
- 4. Power cord
- 5. Ribbon cartridge (black for ML393, color for ML393C)
- 6. Paper separator
- 7. Paper support

* Paper and interface cable sold separately.

NOTE: If you're missing any of these items, contact your dealer right away.

Follow the steps on the next few pages to get your printer ready to run with your computer. The only tool you'll need is a Phillips screwdriver.

Part 1: Setup_

Remove shipping restraint. (Save with packing material for reshipping.)

Preliminaries



Front cover open.

Insert platen knobs on both sides of printer.



Flat side of shaft matches flat side of knob.

Personality and Font Cartridges

Personality cartridge goes here.

here.

Insert cartridges with label facing up; make sure they're firmly seated.

IMPORTANT: Make sure the printer is OFF before inserting or removing personality or font cartridges.

Making the Connections

Power switch: Make sure it's OFF until the printer is ready.

Connect power cord and interface cable.

NOTE: Plug into a three-hole grounded socket only.

completed.

Power cord: Plúg into printer-don't plug it into an electrical outlet until setup is

Parallel interface

Interface cable (not supplied)

Tighten screws to fasten cable.

Fasten clips to cable.

Interface connectors: Loosen the metal plate with a Phillips screwdriver and slide to uncover the proper connector for your computer, then tighten the plate.

NOTE FOR SERIAL USERS: Use the Menu Select mode to match the printer interface to your computer. See your printer Reference Guide for more information.

Inserting Ribbon

Unpack the ribbon cartridge.

Note: Your printer can use genuine OKIDATA film ribbons when they are available for crisper, darker printing. When you put a film ribbon in your printer, be sure to change the "Ribbon" menu item to "Film Ribbon" —this adjusts the printing impact so that the ribbon won't be damaged. See the Reference Guide for details on the menu.

Film ribbon is very abrasive, and it increases wear on the printhead and ribbon path. Therefore we recommend that you use film ribbon only for final copies. If you do switch ribbons, make sure the printer's menu is always set for the type of ribbon you're using.

Lay ribbon in printer so that the pins on the cartridge fit into the notches in the side plates of the printer. Push down so that the cartridge clicks into place. (See diagram on cartridge.)



Center the printhead.





Finally, turn knob clockwise to take up ribbon slack.

Adjusting the Head Gap

The blue head gap lever adjusts the printer for different types of paper. The following are recommended settings for commonly used papers. You may want to try varying the settings to get the easiest feeding and best print quality for the paper you're using.

Paper	Setting
12-15 lb.	1
20-24 lb. bond	2
Labels	3-4
Two-part forms	3-4
Three-part forms	4-5
Four-part forms	7
Envelopes	5-9

Head gap lever



Paper Handling Configurations

The ML393/393C's paper handling systems are both trouble-free and flexible. Using either the standard configuration or one of the available options, you can set up your printer to handle most common forms of paper. The following pages outline your choices and point you to the proper installation instructions.

With standard equipment:

Rear feed of continuous form paper:

- Install the paper support (page 8) and the paper separator (page 9).
- Turn to page 16 for paper loading instructions.



Top feed of individual single sheets:

- Install the paper support (page 8) and the paper separator (page 9).
- Turn to page 18 for paper loading instructions.

NOTE: For added convenience, you can feed single sheets without removing rear-fed continuous form paper.



With options:







Bottom feed of continuous-form paper:

- Do NOT install the paper support and paper separator.
- Install the Tractor Feed Option kit (page 10).
- Turn to page 20 for paper loading instructions.

Automatic feed of single-sheet paper:

- Do NOT install the paper support and paper separator.
- Install the CSF 3001 Cut Sheet Feeder (page 13).
- Turn to page 21 for paper loading and operating instructions.

Alternate automatic feed of letterhead and plain stationery:

- Do NOT install the paper support and paper separator.
- Install the CSF 3002 Dual-bin Cut Sheet Feeder (page 13).
- Turn to page 21 for paper loading and operating instructions.

Installing the Paper Support

(If you have the optional CSF 3001 or 3002 Cut Sheet Feeder, go directly to page 13.)

Paper support



Holes pop into tabs on back cover.



Brace holds support upright for single sheets.



Installing the Paper Separator

Opens to prevent paper from curling back into printer.



Back of printer

Front of printer ->>>

Installing the Optional Tractor

To feed paper from the bottom of the printer, you need:

- The optional pull tractor kit
- A slotted printer stand

Acoustic cover Paper guide Pull tractor

Remove the paper separator by tilting it forward and lifting it out.



Paper separator

Move paper lever forward.



Lower the tractor onto the printer.

1. Fit tabs on tractor into notches on printer.



To remove, press the lock buttons and tilt back.

2. Pull forward on top of tractor until clamps click onto platen.

Lock button



Fit front tabs of acoustic cover into slots, then tilt into place.



Fit paper guide into place on the back of the acoustic cover.

Paper guide lies flat.



Acoustic cover fits over acoustic shield on front cover.



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MICROLINE 393 Product Update

Epson/IBM Emulation

The Personality Module with your Microline 393 printer now includes IBM Proprinter XL and IBM Proprinter XL Alternate Graphics Mode emulations in addition to Epson LQ emulation. You can choose the emulation you want through your printer's Menu Select mode; see your Reference Guide for complete details on how to use this feature and how to select the emulation that's best for you.

Please note that the Appendix to your Setup Guide does not reflect this upgrade to the menu.

Film Ribbon Capability

Your Microline 393 printer can use film ribbon when it becomes available. This new ribbon produces crisper, darker characters to make your best documents look even better.

When you put a film ribbon into your printer, you need to change the "Ribbon" item on the printer's menu to "Film ribbon." (If you don't have a color printer, this item will only have two settings, "Black ribbon" and "Film ribbon.") This adjusts the amount of impact to match the two of ribbon is use. The film ribbon will be demand if you do not set the more item.

the type of flobon in use. The film flobon will be damaged if you do not set the menu item to "Film ribbon."

Important Note:

Although film ribbon enhances your Microline 393's superb print quality, the ribbon material is very abrasive, and it increases wear on the ribbon path and printhead. If you print a great deal with film ribbon, some maintenance will have to be performed more frequently: you'll need to have the printhead replaced after printing approximately 100 million characters (utility mode), and the ribbon shield after approximately 20 million characters. On color printers, the ribbon guide assembly will need replacement after approximately 20 million characters.

For this reason we recommend that you use film ribbon only for final copies; use a normal fabric ribbon for the rest of your printing. If you do switch ribbons, make sure that the printer's menu is always set for the kind of ribbon you have in the printer.

Installing Optional Cut Sheet Feeder

The CSF 3001 single-bin and CSF 3002 dual-bin cut sheet feeders are ideal for high-volume printing using single sheet paper. Paper can be fed automatically, controlled either from the front panel or through your computer. The dual bin allows you to alternate between letterhead and plain stationery.

Since the two cut sheet feeders are installed in the same way, we'll illustrate the procedure with the CSF 3001, noting any differences as they appear.



Remove the back cover: tilt back slightly and lift off.

Open front cover.



Remove back cover.

Hold CSF over printer.



Bail lever forward.

Fit the CSF hooks over the platen shaft and lower gently onto the printer.

Make sure the printer is OFF, then plug cable into socket on printer. The arrow on the plug faces up.





Move paper lever back to single sheet setting.

Part 2: Operation

Loading Rear Feed Paper

Pull lever forward.

For rear feed, use the built-in tractor.

Be sure to use only full sheets of paper in these procedures.



Rear cover open.

Center paper guides on width of the paper.



Insert paper through here.

Pull paper through.



Open tractor covers, set paper on pins.

Pull lever forward to unlock tractor, slide to adjust to the width of the paper, push lever back to lock in place.

Close the covers. If the printer is ON, press FORM FEED to advance paper to the front of the printer.

To set Top of Form, see page 23.

Short Tear (Rear feed paper only)

This ingenious feature lets you remove a printed page from the printer without wasting paper. Activate it by changing the SHORT TEAR OFF menu selection to ON. (See page 30 and the Appendix.) After you load paper and press FORM FEED to feed it, paper advances past the top of form position to the tear bar. It stays in this position until the printer receives data; then paper moves down to the top of form position for printing. A few seconds after printing stops, the paper moves back to the tear bar so you can tear it off without feeding an extra sheet of paper.

To set Top of Form, see page 23.



NOTES: Some programs, such as high resolution graphics packages, pause occasionally while sending data to the printer. If the pause lasts more than two seconds, the paper will advance to the tear bar until more data is received. No data will be lost, but this can cause uneven print registration in graphics. If this is a problem, use the menu to deactivate short tear.

Don't use short tear when printing on labels or multi-part forms. Labels should only be fed from the bottom of the printer.

Loading Single Sheet Paper (No paper handling options installed)

Switching between continuous forms and single sheet paper is particularly easy with the ML393. Its automatic parking feature lets you back continuous forms out of the paper path at the touch of a button, and the touch of another button automatically positions a single sheet.

Start by tearing off any extra sheets of continuous form paper. With the printer selected (SELECT light on), press the TOP OF FORM button. The paper will retract from the front of the printer.

4. Last, press FORM FEED to 3. Move paper lever back. insert paper.

Next ...

See page 23 for instructions on setting Top of Form.

To replace continuous form paper:

- 1. Remove any single sheet paper still in the printer by pressing the FORM FEED button. If you use the platen knob, this procedure won't work properly—you'll have to turn the printer OFF, then ON again before you continue with the following steps.
- 2. Move paper lever forward.
- **3.** Press FORM FEED. The paper that was retracted will move back into position.

NOTE: You can use #10 envelopes (standard business size) in your printer. Be sure to adjust the head gap lever (see page 5). For best results, avoid printing on areas where the flap overlaps the envelope. Printing where the envelope varies in thickness may be uneven.

Loading Bottom Feed Paper



Push paper up through the slot in the bottom of the printer and pull up to the tractor.

Open tractor covers, set paper on pins, close covers.

Pull lever forward to unlock, adjust to width of paper, push back to lock.

Push bail lever back.

See page 23 for instructions on setting Top of Form.

REMEMBER: The front cover must be closed for the printer to operate.



Wind paper through.

Close front cover first, then acoustic cover.

Loading the CSF

Each bin of the optional CSF 3001 and CSF 3002 holds up to 130 sheets of 20 lb. paper, or between 100 and 120 sheets of 24 lb. paper, depending on thickness and texture.

Reset lever: up to load, down to

feed.

Envelope lever: Back for envelopes, forward for paper.

Paper lever: Back for single sheets.

paper is in position.

Fan the paper and square it.

1. Push reset lever up.



NOTE: Be sure to set the head gap lever for the type of paper you're using (see page 5). Put letterhead stationery in with the letterhead facing down and toward the printer. Push the LINE FEED or FORM FEED button to insert paper.

See page 23 for instructions on setting Top of Form.

To eject paper, press FORM FEED.

To control the cut sheet feeder through your computer, see the "Cut Sheet Feeder Control" section of your Reference Guide.

Select bins on the CSF 3002 as shown.



NOTE: This button has no function on the CSF 3001.

Light ON: Bin 1 selected.

Light OFF: Bin 2 selected.

Printing Envelopes with the CSF

You can use #10 envelopes (standard business size) in your CSF 3001 and in the front bin only of the CSF 3002. Be sure to adjust the head gap lever (see page 5) and push the envelope lever back. Load envelopes with the flaps facing down and toward the front of the printer.

For best results, avoid printing on areas where the flap overlaps the envelope. Printing where the envelope varies in thickness may be uneven.

Setting Top of Form

This establishes the position of the first print line on each page (shown by the red line on the ribbon shield). If you're using a word processor that sets its own top margin, set the Top of Form for the topmost line on the page. Otherwise we recommend positioning the top of the page under the bail; the first line of printing will then be about one inch below the top of the page.



Red line shows baseline for printing.

Normal Operation (Short Tear inactive)

Make sure the SELECT light is out. Press the SELECT button if it isn't.

Use the platen knobs or the LINE FEED button to adjust the paper, then press the TOP OF FORM button.

Short Tear Active

Activate the short tear feature through the menu. (Set SHORT TEAR OFF to ON; see page 28 and the Appendix.)

Make sure the SELECT light is out. Press the SELECT button if it isn't. The top of the paper will be even with the tear bar.



Press and hold down the TOP OF FORM button; the paper will move down to the initial printing position ("top of form"). The top of form is preset to about one inch below the top of the page.



Red line shows baseline of initial printing position.

To adjust the top of form, keep holding the TOP OF FORM button and press...



When you have the printing position where you want it, release the buttons. After a few seconds the paper will move back to the tear bar.



The printing position will be permanently stored—even when the printer is turned off—until you readjust it. If the paper accidentally gets out of adjustment, make sure the SELECT light is on and press TOP OF FORM; the paper will back out from the platen. Then press FORM FEED—the paper will return to the tear bar with the printing position restored. NOTES: Some programs, such as high resolution graphics packages, pause occasionally while sending data to the printer. If the pause lasts more than two seconds, the paper will advance to the tear bar until more data is received. No data will be lost, but this can cause uneven print registration in graphics. If this is a problem, use the menu to deactivate short tear.

Don't use short tear when printing on labels or multi-part forms. Labels should only be fed from the bottom of the printer.

Running a Self Test

After you've installed the ribbon, personality cartridge and paper, you're ready to run either of two self tests.

NOTES: The printer will not run with the front cover open. The bail must be closed (bail lever back) when the printer is turned ON. If it's open, the ALARM light will blink. Push the lever back, and turn the printer OFF, then ON again.



Have this information at hand if you call for service.

Using the Control Panel



The control panel puts many of your printer's functions within reach of your fingertips. It even lets you customize your printer for special applications without programming. Experiment with these controls and you'll see how much your MICROLINE can do and how easy it is to work. The next few pages explain the basics of using the control panel. You'll find all the details in your Reference Guide.

Basic Controls



NOTE: When the printer is selected, pressing TOP OF FORM will activate the automatic park feature (page 18). These buttons have special functions when you hold them down while turning the printer on:

LINE FEED: Activates narrow self test (page 24).

QUIET: Activates wide self test (page 24).

FORM FEED: Puts printer in the Menu Select mode (see Reference Guide).

SELECT: Puts printer in the Hex Dump mode (see page 29).

Print Feature Controls



You can select basic printing features from the front panel without programming or modifying your software. With the printer deselected (SELECT light out), simply press the button of the feature you want to control until your selection is lit. For complete details on these features, see your Reference Guide.

Macros

If you use some combinations of features frequently, you can store the settings in macros. Then, instead of cycling through the choices, you only have to push a few buttons to change the settings. You can set up to four macros, and they're stored in a special area of memory, so they stay in the printer even when it's turned off. Macro 1 is the default, so that will automatically be set when you turn on the printer.

For more details on setting and using macros, see your Reference Guide.



Menu Select Mode

This is another feature that allows you to change printing styles without programming. It is also used to set the printer's serial interface configuration to match your computer. As you step through the menu, each item and selection is printed out. The printer stores changes to the menu in a special area of its memory, so that they are preserved even when the printer is off and they become the default settings (automatically set when you turn the printer on).

You'll find a list of the menu selections in the Appendix; complete information on using the Menu Select mode is in the Reference Guide.

Activating Menu Select Mode



Cleaning

Every six months (or after 300 hours of operation), take a clean, dry, soft cloth and dust the area around the carriage shaft and platen. Be sure to remove any loose particles of paper. Do not use solvents or strong detergents on the cabinet. Be sure to turn the printer OFF before cleaning.

Problem Solving

Why does nothing happen at all when I turn on the printer?

The printer may not be plugged in. Check the power cord connection to the printer and the outlet.

Why is the ALARM light on?

Check to see if:

- paper is out.
- the paper lever is not set for the type of paper you're using (single sheet or continuous form).
- the front cover is open.

After correcting the alarm condition, you may have to turn the printer off and on again to make the ALARM light go out.

Why is the ALARM light flashing?

Turn the printer off and check to see if:

- The bail is open. Make sure the bail lever is toward the back of the printer.
- The paper or ribbon is jammed.
- Something is blocking the path of the printhead.

If none of these problems exist, call for service.

Why doesn't the printer print when data is sent from the computer?

You may have the printer deselected. (The SELECT light is out.) Press the SELECT button. If the SELECT light still won't turn on even though the POWER light is on, turn the printer OFF and try reinserting the personality cartridge.

NOTE: For details on service, see the Customer Service Guide, included with your printer.

Why are dots missing in my printouts?

The head gap may not be set correctly. Try moving the head gap lever to a lower setting. (See page 5.) If that doesn't help, the printhead may be damaged; call for service.

How can I check the data that my computer is sending to the printer?

Use the hexadecimal dump mode. To activate it, hold the SELECT button down while you turn on the printer. All data sent to the printer, including text and printer commands, will print in both hexadecimal and ASCII format; In the ASCII format, all non printable codes are represented by two-letter condensations of the standard ASCII abbreviations. (See Appendix B of your Reference Guide.) For example, this line of BASIC code:

LPRINT CHR\$(27);CHR\$(15);"This is an example of the way data prints in hexadecimal dump mode"

Would print like this:

1B	ØF	54	68	69	73	20	69	-	73	20	61	6E	20	65	78	61	¹ c ¹ This is an exa
6D	70	6C	65	20	6F	66	20	-	74	68	65	20	77	61	79	20	mple of the way
64	61	74	61	20	70	72	69	-	6E	74	73	20	69	6E	20	68	data prints in h
65	78	20	64	75	6D	70	20	-	6D	6 F	64	65	ØD	ØA			ex dump modeckin

To return to normal printing, turn the printer off, then on again.

Appendix: Menu Selections

The menu items will vary depending on the emulation and interface you have selected, and whether you have a monochrome or a color printer. See your Reference Guide for detailed information on items and selections. Factory settings are in red.

Menu Item	Selections
Lines per inch	6, 8
Emphasized	Yes, No
Enhanced	Yes, No
Character Width	Single, Double, Triple
Character Height	Single, Double, Triple
Italics Slashad Zara	Yes, No
Slashed Zero	Yes, No
Language	USA, French Canada, France, Germany, UK
	Denmark I, Denmark II, Sweden, Italy, Spain I
Graphics Printing	Spain II, Latin America, Japan, Norway
Page Length	
Ribbon (monochrome printer)	5, 5.5, 4, 5.5, 0, 7, 8, 8.5, 11, 11/3, 12, 14
Ribbon (color printer)	Black Ribbon, Plack Vollow, Maganta, Guan
Ribboli (color printer)	Violet Orange Green Film Bibbon
Select # of DLL Character Set	
(Epson only)	0, 1, 2
DLL Character Set (IBM only)	No (for future use)
DC1/DC3 Active	Yes, No
Skip over Perforation	Yes, No
Auto LF	Yes, No
Auto CR (IBM only)	Yes, No
Paper Out Override	Yes, No
Print Registration	+5, +4, +3, +2, +1, 0, -1, -2, -3, -4, -5,
Parity*	Odd, Even, None
Serial Data 7/8 Bits*	7, 8
Protocol*	Ready/Busy, X-ON/X-OFF
Diagnostic Test*	Yes, No
Busy Line	SSD-, SSD+, DTR, RTS
	19.2, 9.6, 4.8, 2.4, 1.2, 0.6, 0.3
Dor valla	valid, invalid

*Appears only when the serial interface is selected.

DTR Signal* Busy Time* Form Tear Off Transparency/Paper Character Set (Epson only) Character Set (IBM only) Emulation Ready on Select, Ready on Power Up 0.2, 1 On, Off Paper, Transparency Epson, IBM Set I, IBM Set II IBM Set I, IBM Set II Epson LQ, IBM Proprinter, IBM Alternate Graphics Mode 13.6 inches, 8 inches

Line Length (IBM only)

*Appears only when the serial interface is selected.

Federal Communications Commission Radio Frequency Interference Statement

WARNING: This equipment complies with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules. These specifications are designed to minimize radio frequency interference in a residential installation; however, there is no guarantee that radio or television interference will not occur in any particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on when the radio or television is on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the radio or television receiving antenna.
- Relocate the printer with respect to the receiver.
- Move the printer away from the receiver.
- Plug the printer into a different outlet so that the printer and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communication Commission helpful:

"How to Identify and Resolve Radio/TV Interference Problems"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402 by ordering stock number 004-000-00345-4.





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