

# 8808

Heavy Duty  
Ticket Printer  
User's Guide

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Japan

Representative: EPSON EUROPE B.V.

Address : Prof. J.H. Bavincklaan 5  
1183 AT Amstelveen,  
The Netherlands

Declares that the Product:

Product Name : Printer

Type Name : M66SA

Conform to the following Directives and Norms

Directive 89/336/EEC

EN 55022 (1986 /1994 2th)

EN 50082-1 (1992)

IEC 801-2 level 2

IEC 801-3 level 2

IEC 801-4 level 2

Directive 90/384/EEC

EN45501: (1992)

December 1996,



M. Hamamoto  
President of EPSON Europe B.V.

FM66SX0-E02

Type Name : M66SA

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Address : Prof. J.H. Bavincklaan 5  
1183 AT Amstelveen,  
The Netherlands

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Type Name : M117A

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EN 55022 (1986 /1994 2th)

EN 50082-1 (1992)

IEC 801-2 level 2

IEC 801-3 level 2

IEC 801-4 level 2

Directive 90/384/EEC

EN45501: (1992)

December 1996,



M. Hamamoto  
President of EPSON Europe B.V.

## Safety Standards, Warnings, and Compliance

### EMC and Safety Standards

#### Printer

Product Name: METTLER TOLEDO 8808 (TM-U590)

Model Name: M128B

The following standards are applied only to the printers that are so labeled.  
(EMC is tested using the PS-170 power supply.)

Europe: CE Marking  
Safety: EN60950

North America: EMI: FCC/ICES-003 Class A  
Safety: UL 1950/CSA C22.2 No. 950

Oceania: EMC: AS/NZS 3548



**THE CONNECTION OF A NON-SHIELDED PRINTER INTERFACE CABLE TO THIS PRINTER MAY INVALIDATE THE EMC STANDARDS OF THIS DEVICE.**

#### CE Marking

The printer conforms to the following Directives and Norms

Directive 89/336/EEC EN 55022 Class B  
EN 50082-1  
IEC 801-2  
IEC 801-3  
IEC 801-4

Directive 90/384/EEC EN45501



**PERMIT ONLY QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS, AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.**

- Read this manual before installing or servicing this equipment. Save this manual for future reference.
- Follow these instructions carefully.
- Do not allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.
- Always disconnect this equipment from the power source before cleaning or performing maintenance.

Call METTLER TOLEDO for parts, information, and service.

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## FCC Compliance Statement

### US Installations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

### Canadian Installations

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Information about METTLER TOLEDO Technical Training can be obtained by writing, calling, or faxing:

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Columbus, Ohio 43240 USA  
Phone: (614) 438-4511  
Fax: (614) 438-4958  
[www.mt.com](http://www.mt.com)

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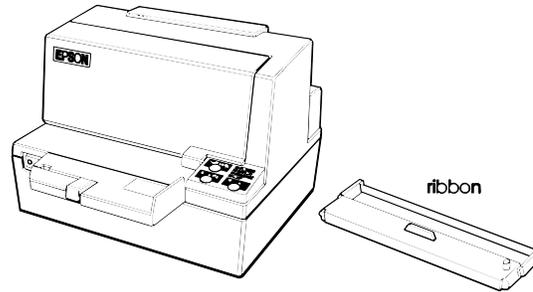
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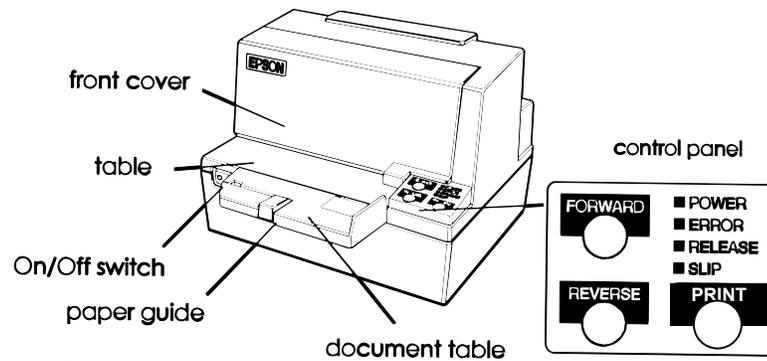
# 1

## Introduction

The 8808 Heavy Duty Ticket Printer has the power to print through multi-copy tickets and forms, making it ideal for use in vehicle or industrial applications. The following illustrations show the items included for the 8808 printer.



\*power supply not shown  
hexagonal lock screws (only for the serial interface)  
switch cover



\* Slide the paper guide to fit the width of your paper.

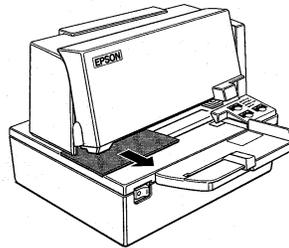
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## Setting Up the Printer

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### Unpacking

1. Open the printer by pulling up on the tab on the front cover. Remove the damper from the printer.
2. Store the dampers with the other packing materials and use them when transporting your printer.



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### Installation

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Install the printer on a horizontal surface. Do not expose it to water or use it in wet environments.

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### Interfacing

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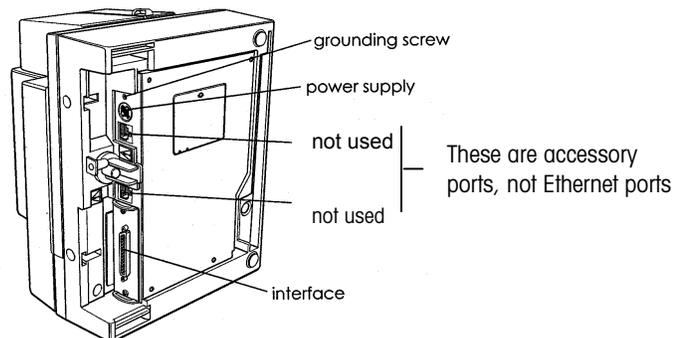
The 8808 printer contains an RS232 serial interface. Default settings for the interface are: 9600 baud, 7 data bits, even parity, and x-on / x-off handshaking. Make sure the host device matches these parameters, or adjust the printer settings using the internal DIP switches.

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### Cable Connection

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Make sure that the printer and the host device are turned off. Then plug the cable into the connector on the printer, as shown here.



**NOTE:** The 8808 printer comes with inch-type hexagonal lock screws installed. If you plan to use an interface cable that requires millimeter-type lock screws, replace the inch-type screws with the enclosed millimeter-type screws using a hex screwdriver (5 mm). The inch-type screws have one or more lines engraved on the barrel of the screws.

## Interface Cable Selection

RS-232 INTERFACE CABLE MATRIX – 8808 TICKET PRINTER				
Device	Device Connector	Required Cable	Cable Length	Printer Connector
COUGAR, LYNX, JAGUAR/JAGXTREME, PANTHER, PANTHER/PANTHER PLUS, SPEEDWEIGH/SPEEDWEIGH PLUS, TRIMWEIGH II	Terminal block	Factory number 0900-0309-000	15 ft	DB25 female TxD: Pin 2 RxD: Pin 3 Ground: Pin 7  Shield: Pin 1: DSR: Pin 6 DTR Pin 20
		Part number 14656000A		
BC, SC, HAWK, WILDCAT	DE9 female TxD: Pin 3 RxD: Pin 2 Ground: Pin 5	Factory number 0900-0255-000	6 ft	
		Part number 13191100A		
SP, SPIDER, VIPER	DE9 female TxD: Pin 2 RxD: Pin 3 Ground: Pin 5	Factory number 0900-0313-000	15 ft	
		Part number 14861700A		
8582, 9360, PUMA	DB25 TxD: Pin 2 RxD: Pin 3 Ground: Pin 7	Factory number 0900-0243-000	6 ft	
		Part number 13230500A		
PR, SR, SG	LocalCAN	Part number 229050	6 ft	
PG, PB, SB	DE9 female TxD: Pin 2 RxD: Pin 3 Ground: Pin 5	Part number 1110-1052	3 ft	
ID Terminals	DIN	Part number 503755	10 ft	
SMx using 21200013 adapter	MiniMettler	Part number 33640	6 ft	

### Grounding the Printer

Although the 8808 printer is grounded through the power supply, you may need to ground your printer. Make sure that the wire is AWG 18 or equivalent.

1. Make sure that the printer is turned off.
2. Connect the ground wire to the printer using the FG screw on the bottom of the printer.

---

## Connecting the Power Supply

The 8808 printer uses an external universal power supply.

 **WARNING**

**USING AN INCORRECT POWER SUPPLY MAY CAUSE FIRE OR ELECTRICAL SHOCK.**

 **CAUTION**

**WHEN CONNECTING OR DISCONNECTING THE POWER SUPPLY FROM THE PRINTER, MAKE SURE THAT THE POWER SUPPLY IS NOT PLUGGED INTO AN ELECTRICAL OUTLET; OTHERWISE YOU MAY DAMAGE THE POWER SUPPLY OR THE PRINTER.**

1. Make sure that the printer and power supply are turned off.
2. Plug the power supply's cable into the printer's connector. Note that the side of the connector faces down.
3. Plug the power supply cord into the outlet.

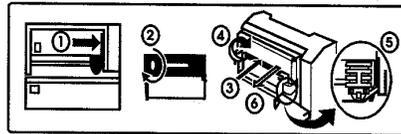
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## Installing the Ribbon Cassette

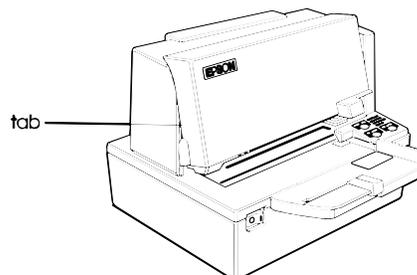
 **CAUTION**

**NEVER TURN THE RIBBON CASSETTE'S FEED KNOB IN THE OPPOSITE DIRECTION OF THE ARROW MARKED ON THE CASSETTE; OTHERWISE THE RIBBON MAY BE DAMAGED. BE SURE THE PRINTER IS NOT RECEIVING DATA WHEN YOU REPLACE A RIBBON CASSETTE; OTHERWISE DATA MAY BE LOST.**

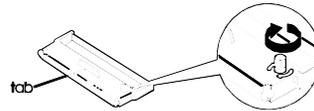
Use the EPSON ERC-31 (P) or ERC-31 (B) ribbon cassette for your printer. Note the label inside the printer that can assist you in replacing the ribbon.



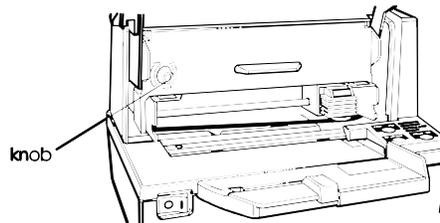
1. Turn on the printer and open the front cover by pulling up on the tab on the left side of the cover.
2. Make sure that the print head is on the right side.



3. If you are replacing a used ribbon, grasp the end of the tab and remove it from the printer.
4. Turn the ribbon knob two or three times in the direction of the arrow to take up any slack in the ribbon.
5. Insert the ribbon cassette in the printer and rotate the cassette's knob two or three times. This is necessary to place the ribbon in the correct position.



6. Make sure that the ribbon is installed below the print head without wrinkles or creases.



7. If the ribbon is not installed correctly, remove the cassette. Repeat steps 5 and 6.
8. Close the printer cover.

---

## Using the Power Switch Cover



### **WARNING**

**IF AN ACCIDENT OCCURS WHEN THE POWER SWITCH COVER IS ATTACHED, UNPLUG THE POWER SUPPLY CORD FROM THE OUTLET IMMEDIATELY. CONTINUED USAGE MAY LEAD TO FIRE, SHOCK, PROPERTY DAMAGE AND/OR BODILY HARM.**

You can use the enclosed power switch cover to make sure the power switch is not accidentally pressed. If you want to use this cover, install it as shown below.



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## Self-Test

The self-test lets you know if your printer is operating properly. It checks the control circuits, printer mechanisms, print quality, ROM version, and DIP switch settings.

---

## Running the Self Test

1. Make sure the printer is turned off and the printer cover is closed properly.
2. While holding down the REVERSE button, turn on the printer to begin the self-test. (The SLIP light blinks.)
3. Feed a sheet of slip paper into the printer. The printer loads the paper automatically, prints the printer settings, and then ejects the paper.
4. Remove the paper from the printer and feed another sheet of slip paper into the printer to print characters from the character table. Continue to feed slip paper into the printer until the self-test prints the following:

\*\*\*completed\*\*\*

The printer is ready to receive data as soon as it completes the self-test.

NOTE: If you want to pause the self-test manually, press the REVERSE button. Press the REVERSE button again to continue the self-test.

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## DIP Switch Settings

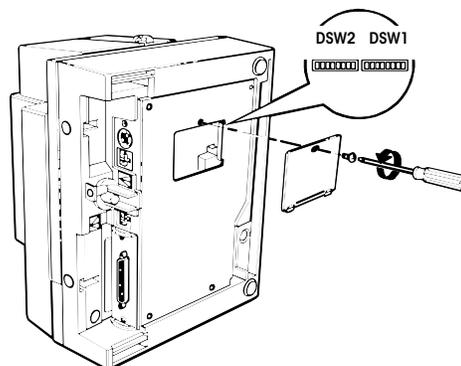
### CAUTION

**TURN OFF THE PRINTER BEFORE REMOVING THE DIP SWITCH COVER TO PREVENT AN ELECTRICAL SHORT, WHICH CAN DAMAGE THE PRINTER.**

NOTE: Changes in DIP switch settings are recognized only when the printer power is turned on. If the DIP switch setting is changed after the printer power is turned on, the change does not take effect until the printer is turned on again or is reset. DIP switches should not be changed while the printer power is on.

If you need to change settings follow the steps below to make your changes:

1. Turn off the printer while removing the DIP switch cover to prevent an electric short, which can damage the printer.
2. Make sure the printer is turned off.
3. Remove the screw from the DIP switch cover. Then take off the DIP switch cover, as shown in the illustration below



4. Set the switches using a pointed tool, such as tweezers or a small screwdriver.
5. Replace the DIP switch cover. Then secure it with the screw.
6. The new settings take effect when you turn on the printer.

Default Settings in **BOLD**

DIP Switch Set 1

SW	Function	ON	OFF
1-1	Emphasized print	Emphasized	<b>Normal</b>
1-2	Received buffer capacity	69 bytes	<b>4K bytes</b>
1-3	Handshaking	<b>XON / XOFF</b>	DTR / DSR
1-4	Word length	<b>7 bits</b>	8 bits
1-5	Parity check	<b>Enabled</b>	Disabled
1-6	Parity selection	<b>Even</b>	Odd
	Baud rate	SW 1-7	SW 1-8
	2400	ON	ON
	4800	OFF	ON
	<b>9600</b>	<b>ON</b>	<b>OFF</b>
	19200	OFF	OFF

DIP Switch Set 2

SW	Function	ON	OFF
2-1	Busy condition	Buffer full	<b>Buffer full / Offline</b>
2-2	Print key function	Send ASCII "S" Cr Lf	<b>Send ASCII "P"</b>
2-3	Forward / Reverse printing	Reverse	<b>Forward</b>
2-4	40 / 66 column printing	66 column	<b>40 column</b>
2-5	Reserved – Internal use – do not change		<b>OFF</b>
2-6			<b>OFF</b>
2-7			<b>OFF</b>
2-8			<b>OFF</b>

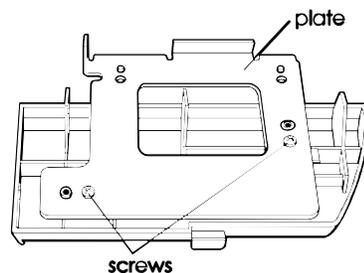
## Removing the Paper Guide

If you will use especially wide paper or the 66 column setting, you may not want to use the paper guide on the document table. To remove it, follow the steps below:

1. Open the printer by pulling up on the tab on the front cover.
2. Slide the large table to the left and remove it as shown in the illustration below.
3. Loosen the screws and remove the document table from the printer.

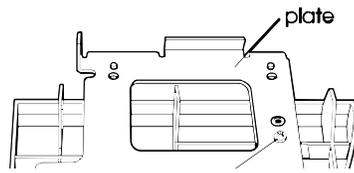
NOTE: Be sure not to drop the screws in the printer.

4. Turn the document table over, remove the screws, and remove the plate.



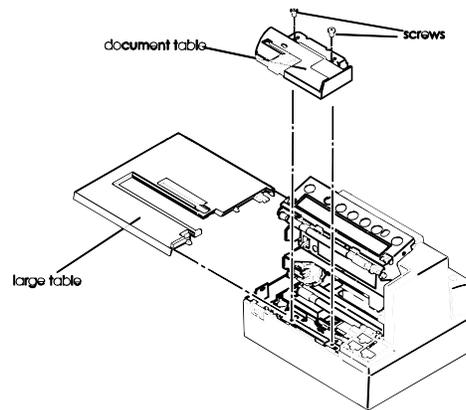
## METTLER TOLEDO 8808 Heavy Duty Ticket Printer User's Guide

5. Slide the paper guide to the left to remove it.



6. Replace the plate and install the document table and the large table.

NOTE: Be sure to keep the paper guide with the manual.

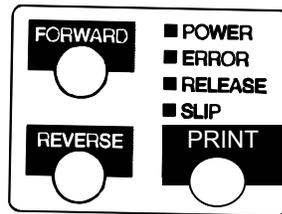


# 2

## Using the Printer

### Operations

You can control the basic paper feeding operations of the printer with the buttons on the control panels. The indicator lights help you monitor the printer's status.



### Keypad

The printer and the buttons on the control panel will not operate when the cover is open.

**FORWARD.** Press the FORWARD button once to advance the slip paper one line. You can also hold down this button to feed slip paper continuously.

**REVERSE.** Press the REVERSE button once to reverse the slip paper one line. You can also hold down this button to reverse the slip paper continuously.

**PRINT:** This key will cause the printer to transmit an ASCII "P" or "S" <CR> <LF> character to the scale of printer, depending on the setting of DIP switch 2-2. Most METTLER TOLEDO products will accept an ASCII "P" character as a remote print request. High Precision products will respond to an ASCII "S" ,<CR> <LF> as a print request.

### LED Displays

**POWER:** (Green) On when the printer has power.

**ERROR:** (Red) Check for paper jam or front cover open.

**RELEASE:** (Green) On when the paper clamp is released and the printer is ready for the operator to insert or remove paper. This LED goes out during printing or feeding.

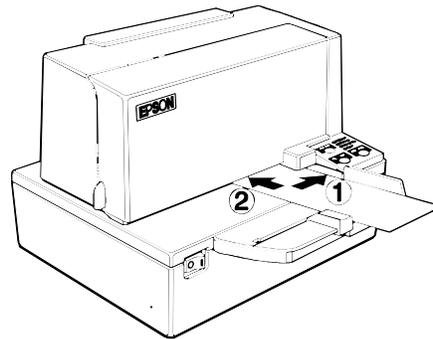
**SLIP:** (Green) On when conditions are normal. Blinks in paper out/error condition.

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## Paper Handling

There are two methods which can be used to print with the 8808:

1. Send the data from the host to the printer. The "SLIP" LED will flash. Insert paper from the front until it stops. The paper will clamp and begin printing ~3/4" from the top of the form. If paper is inserted from the side while the "SLIP" light is flashing, the printer will index the paper to ~3/4" from the top of the form and begin printing.
2. Insert the paper and then send the data from the host. The printer will begin printing immediately at the "PRINT" line which is indicated on the left side of the printer housing (front of cover handle).



## Print Positioning

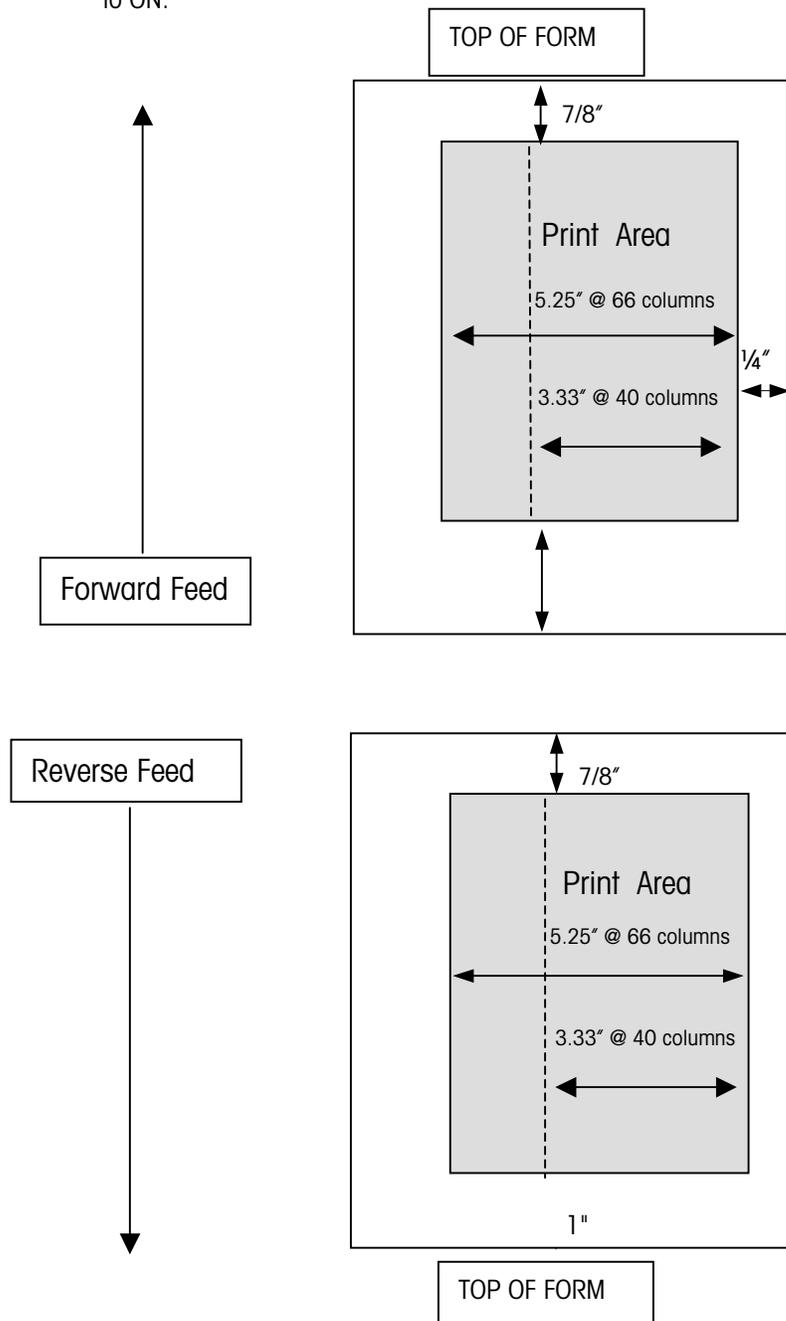
### Vertical positioning:

Printing can be positioned vertically by choosing one of the printing methods listed above.

### Horizontal positioning:

Printing can be positioned horizontally by selecting either 40 (default) or 66 column printing. The 40-column left edge index mark is the left-most line on the paper tray, 3 3/8" from the right side of the paper tray. You may select 66 column printing by changing DIP switch 2-4 to ON; 66 column printing will begin 5 1/2 inches from the right side of the paper tray.

Forms and paper can also be invert-printed (reverse feed), by changing DIP switch 2-3 to ON.



NOTES

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# 3

## Troubleshooting

### Errors and Solutions



**DO NOT TOUCH THE PRINT HEAD BECAUSE IT CAN BE VERY HOT AFTER PRINTING CONTINUOUSLY FOR A LONG TIME. DO NOT MOVE THE PRINT HEAD CARRIAGE.**

Error Message	Possible Solution(s)
The lights on the control panel do not come on.	<p>Make sure that the power supply cables are correctly plugged into the printer, the power unit, and the power outlet.</p> <p>Make sure that power is supplied to the power outlet. If a switcher or timer controls the outlet, use another outlet.</p>
An ERROR light is blinking and the printer does not print.	<p>First, turn off the printer and check for a paper jam. To clear a paper jam, turn the printer off and open the front cover. Remove the jammed paper.</p> <p>If there is no paper jam, turn off the printer and turn it back on after about 10 seconds. If the ERROR light is still flashing, contact a qualified service person.</p>
The ERROR light is off, but nothing is printing.	<p>Try to run the self-test to check that the printer works properly. (Refer to the Self Test instructions in Chapter 1).</p> <p>If the self-test does not work, contact a qualified service person or your authorized METTLER TOLEDO representative.</p> <p>If the self test works properly, check the following:</p> <p>Check the connection at both ends of the interface cable between the printer and the host. Also make sure that this cable meets the specifications for both the printer AND the host.</p> <p>The data transmission settings may be different between the printer and computer. Make sure that the printer's DIP switch settings for data transmission are the same as the host's. You can print the printer's interface settings using the self-test.</p> <p>If the printer still does not print, contact qualified service person or your authorized METTLER TOLEDO representative.</p>
The printer sounds like it is printing but nothing is printed.	The ribbon cassette may not be installed properly. Refer to the instructions in Chapter 1.
The printout is faint.	The ribbon may be worn. Replace the ribbon cassette as described in Chapter 1.

A line of dots is missing in the printout.	The print head may be damaged. Stop printing and contact a qualified service person or your authorized METTLER TOLEDO representative.
Paper is jammed inside the printer.	To clear a paper jam, turn off the printer and open the front cover. Remove the jammed paper.

## Hexadecimal Dump

This feature allows experienced user to see exactly what data is coming to the printer. This can be useful in finding software problems when you turn on the hex dump function; the printer prints all commands and other data in hexadecimal format along with a guide section to help you find specific commands. To use the hex dump feature:

1. Make sure the printer is turned off then open the cover.
2. Hold down the REVERSE button while you turn on the printer.
3. Close the cover.
4. Run any software program that sends data to the printer. The printer prints "Hexadecimal Dump" and then all the codes it receives in a two-column format. The first column contains the hexadecimal codes and the second column gives the ASCII characters that correspond to the codes.
5. A period is printed for each dot that has no ASCII equivalent. During the hex dump all commands except DE EOT and DLE ENQ are disabled.
6. Open the cover to set the printer offline so that it will print the last line.
7. Close the cover and turn off the printer. Or, reset it to turn off the hex dump mode.

### Hexadecimal Dump

```

1B 21 00 1B 26 02 40 40      . ! . . & . @ @
1B 25 01 1B 63 34 00 1B      . % . . c 4 . .
41 42 43 44 45 46 47 48      A B C D E F G H
    
```

# 4

## Reference Information

### Advanced Commands

COMMANDS AND ESCAPE SEQUENCES			
COMMAND	DECIMAL	DESCRIPTION	VALUE OF n
SO	0Eh	Shift out. Starts printing in double wide mode.	
SI	0Fh	Shift in. Switches back from printing in double wide mode to the normal mode	
LF	10	Prints the data in the buffer and feeds one line	
CR	13	Prints the data in the buffer (no line feed)	
ESC SP n	27 32 n	Sets character spacing for the right side of the character to (n x 0.159 mm) (range 0 < n < 255)	Default is 0
ESC a n	27 97 n	Select justification (Must be input at the beginning of a line)	LEFT = 0    CENTER = 1    RIGHT = 2
ESC ! n	27 33 n	Selects special print mode where (range 0 < n < 255) as shown below	
		Double height: ESC ! Cntrl P (decimal 16)	16   Double height
		Double width: ESC ! Space (decimal 32)	32   Double width
		Double height / width: ESC ! 0 (decimal 48)	48   Double height and double width
ESC % n	27 37 n	De-select special print mode – revert to default font	
ESC @	27 64	Initialize printer	Resets printer to power-up settings
ESC - n	27 45 n	Enable underline mode on or off	OFF: when n = 0 ON: when n = 1
ESC { n	27 123 n	Enable inverted print mode	OFF: when n = 0 ON: when n = 1
ESC 3 n	27 51 n	Set line spacing (range 0 < n < 255)	Default is 24 (1/6 inch)
ESC R n	27 82 n	Select international character set	
		USA	0
		France	1
		Germany	2
		UK	3
		Denmark	4
		Sweden	5
		Italy	6
		Spain	7
		Japan	8
		Norway	9
		Korea	13

## Printing Specifications

<b>Printing Methods</b>	Serial impact dot matrix
<b>Head Wire Configuration</b>	9-pin vertical line, 0.353 mm (1/72 in) wire pitch
<b>Head Wire Diameter</b>	0.29 mm (.01 in)
<b>Printing Direction</b>	Bi-directional, minimum distance printing
<b>Number of Characters</b>	95 alphanumeric characters 32 international characters 128 x 10 pages extended graphics (including space page)
<b>Character Structure</b>	Font A: 9 x 9, 3-dot spacing (in half-dot units) Font B: 7 x 9, 2-dot spacing (in half-dot units) Larger spacing can be set by using ESC SP

<b>Character Structure (Horizontal Dots x Vertical Dots)</b>	9 x 9	7 x 9
<b>Character Spacing</b>	3 dots	2 dots
<b>Characters per inch</b>	12.5	16.7
<b>Characters per Second (Carriage Moving Speed)</b>	233	311
<b>Characters per Line</b>	66	88
<b>Character Size (Width x Height)</b>	1.6 x 3.1 mm (.06 x .12 in)	1.3 x 3.1 mm (.05 x .12 in)

## Ribbon Specifications

<b>Type</b>	<b>Cassette Ribbon</b>
<b>Ribbon Cassette Specifications</b>	Part number: ERC-31 (P), ERC-31(B) Color: (P) Purple; (B) Black Ribbon life: (P) 7,000,000 characters (B) 4,500,000 characters (when 1 character = 18 dots)

**Paper Specifications:**

<b>Paper Feed Method</b>	Friction feed	
<b>Paper Feed Pitch</b>	Default 4.23 mm (1/6") 0.176 mm (1/144") can be set by a command	
<b>Paper Feed Speed</b>	Approximately 60 msec/line (4.23 mm (1/6") feeding) Approximately 86.4 mm/second (3.4 inches/second) (continuous feeding)	
<b>Paper Type</b>	Normal paper; carbon copy paper; pressure-sensitive paper	
<b>Total Thickness (paper)</b>	0.09 to 0.36 mm (0.0035 to 0.0141") See "Copy Capability and Paper Thickness" on the next page for more information	
<b>Size (w x l)</b>	70 x 70 mm to 210 x 297 mm (A4) (2.76 x 2.76" to 8.27 x 11.69")	
<b>Ambient Temperature and Copy Capability</b>	Copy capability is greatly influenced by the ambient temperature, so printing must be performed under the conditions described here:	
	<b>Number of Copies</b>	<b>Ambient Temperature (Print Mode)</b>
	Original + 4 copies	Approx. 20 to 45 C (68 to 113 F)
	Original + 1 to 3 copies	5 to 45 C (41 to 113 F)
<b>Copy Capability and Paper Thickness</b>	Normal paper (single-ply): 0.09 to 0.2 mm (.0035 to .0079") Carbon copy paper combination: 5 sheets maximum (original + 4 copies) at 20 to 45 C (68 to 113 F) Backing paper: 0.06 to 0.15 mm (.0023" to .0059") Copy and original: 0.04 to 0.07 mm (.0015 to .0028") Carbon paper: Approximately 0.035 mm (.0014")	
<b>Total Thickness</b>	0.24 mm (less (original to original + 3 copies) 0.30 mm (.0118") or less (original + 4 copies)	

## Notes on Paper

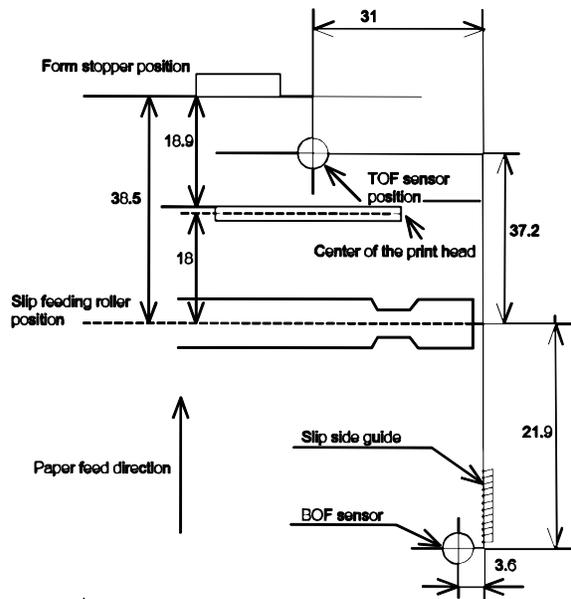
Paper must be flat, without curls or wrinkles – especially at the top edges. Otherwise, the paper may rub against the ribbon and become dirty.

There must be no glue on the bottom edge. Choose slip paper carefully since paper feeding and insertion are affected by gluing conditions (such as glue quality, method and length) and glue location. Be especially careful when the slip paper is wide and has glue on the left edge, since it may not feed in a straight line.

Since the BOF sensor uses a photo sensor, do not use paper that has holes at the sensor position or is translucent. Since the TOF sensor uses a reflective photo sensor, and it detects from the back of slip paper, do not use paper that has holes or dark portions with low reflection (less than 40% reflection) at the sensor position.

Use thinner paper (N30 or equivalent) between the top and bottom sheets of multi-ply paper. If thick paper is used, the copy capability is lowered.

Notes: When inserting paper, be sure to use the side guide and form stopper. If you insert the paper beyond the form stopper, the paper may be ejected.



## Electrical Specifications

Supply voltage	+24 VDC $\pm$ 10% (PS-170)
Current consumption (at 24V)	Operating: Mean: approximately 1.9A (character font A $\alpha$ -N all columns printing) Standby: Mean: approximately 0.3A
Life (when printing alphanumeric characters):	Mechanism: 12,000,000 lines Print head: 200 million characters The printer is defined to have reached the end of its life when it reaches the beginning of the Wear out Period.
MTBF	180,000 hours Failure is defined as Random Failure occurring at the time of the Random Failure Period
MCBF	29,000,000 lines This is an average failure interval based on failures relating to wear out and random failures up to the life of 12 million lines.

## Environmental Conditions

Temperature	Operating: 5 to 45 C (41 to 113 F); Storage: -10 to 50 C (14 to 122 F)
Humidity	Operating: 10 to 90% RH; Storage: 10 to 90% RH (except for paper)

NOTE: When the temperature is 34 C, the humidity must be 90% or less. When the temperature is 40 C, the humidity must be 65% or less. When the temperature is 45 C, the humidity must be 50 or less.

NOTES

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## Replacement Parts

Repair of the 8808 printer is limited to replacement of major assemblies. Listed below are the available parts for the 8808. Contact METTLER TOLEDO or an authorized METTLER TOLEDO distributor for parts and service.

<b>Description</b>	<b>Part Number</b>
Power supply (PS170)	083503020
Printer mechanism complete	083512020
Print head	083514020
Keypad overlay	16269700A
Keypad switch PCB	083513020
Main PCB	083515020
Ribbon cartridge ERC-31B (black)	083516BLK
Ribbon cartridge ERC-31P (purple)	083516PUR



## NOTES

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**METTLER TOLEDO**

1900 Polaris Parkway  
Columbus, Ohio 43240

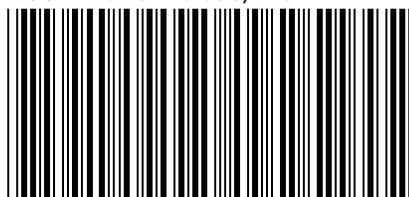
Phone (US and Canada) (800) 786-0038  
(614) 438-4511  
(All Others) (614) 438-4888

Internet: [www.mt.com](http://www.mt.com)

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