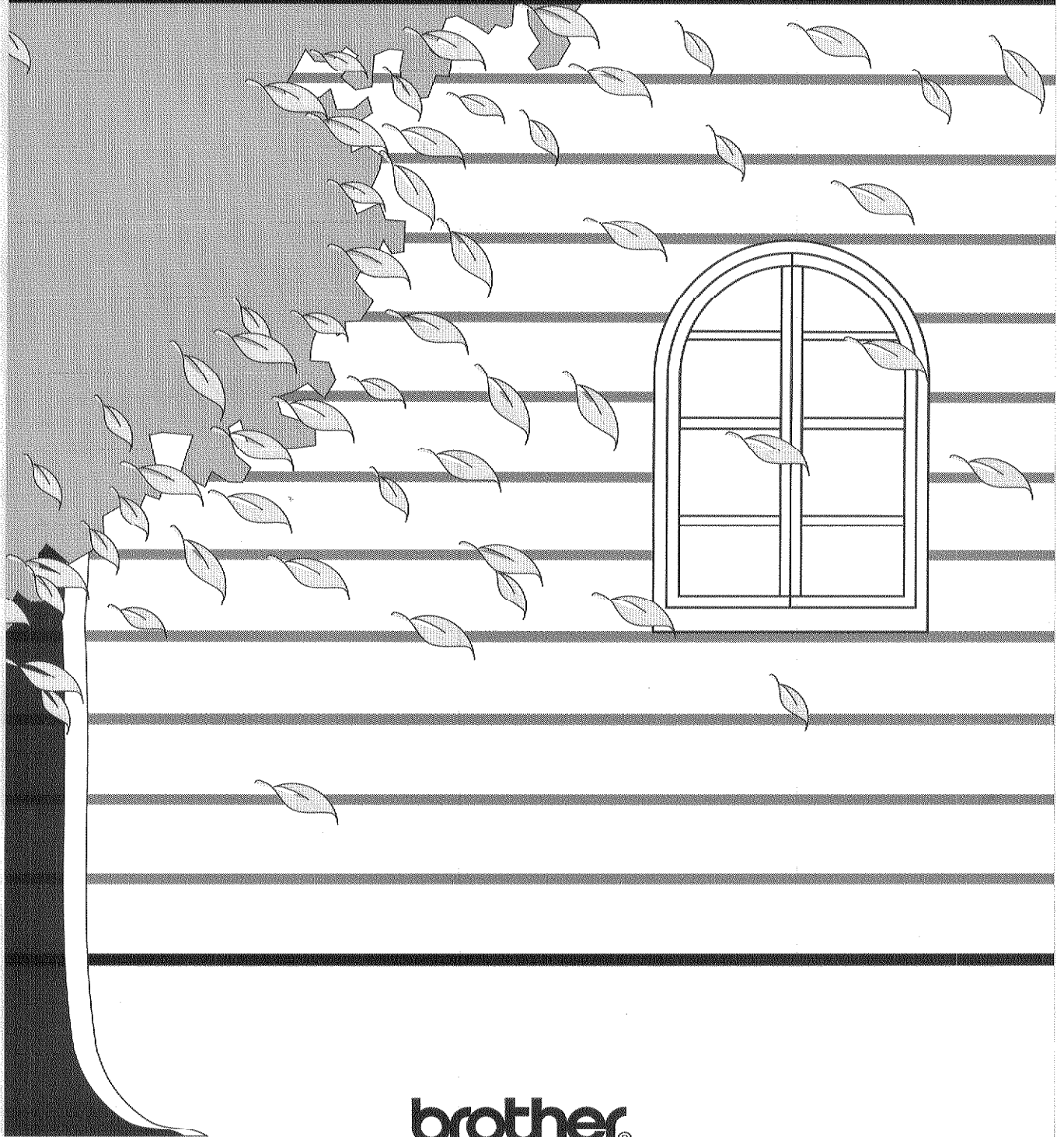


P-TOUCH PC

PROFESSIONAL LABELING SYSTEM

USER'S GUIDE



brother®

Congratulations

Thank you for purchasing the P-TOUCH PC EDITOR and the P-TOUCH PC Printer.

Your new system will help you design and print labels for any application. Extremely versatile, it can create characters of many styles and sizes, as well as barcodes and graphics. You will be able to store label data and formats into database files and import graphics and text from other applications.

In addition, by using the variety of tape cassettes available, you can print labels with different widths and exciting colors.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Important – About the interface cable

This printer has been certified to comply with FCC standards, which are applied to the U.S.A. only. A shielded interface cable should be used according to FCC 15.27(c). In addition, a grounded plug should be plugged into a grounded AC outlet after checking the rating of the local power supply for the printer to operate properly and safely.

Changes or modifications not expressly approved by Brother Industries, Ltd. could void the user's authority to operate the equipment.

This product is covered by one or more of the following patents.

USP4839742

USP4983058

EP315369

GB2223740

USP4922063

USP5009530

EP322918

USP4927278

USP5069557

EP322919

USP4966476

USP5120147

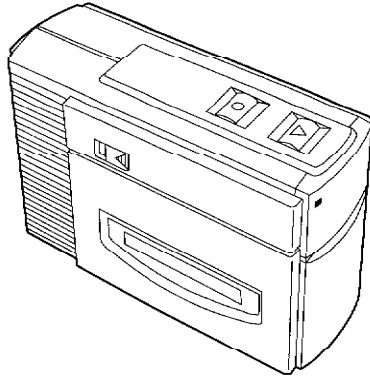
USP4976558

Table of contents

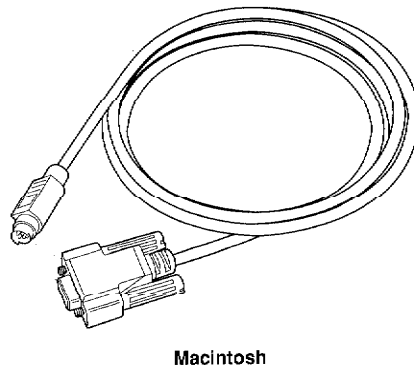
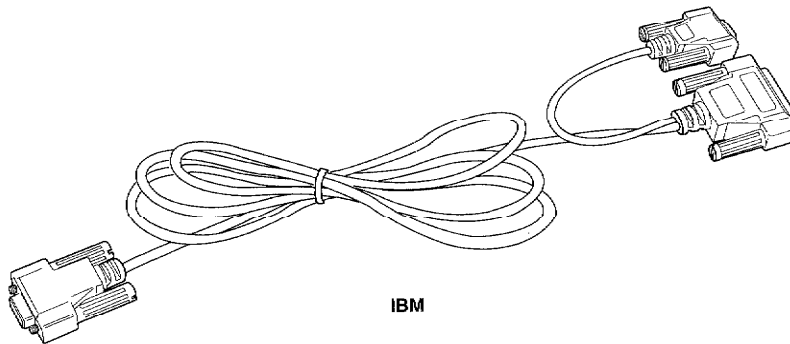
Unpacking	1
P-TOUCH PC Printer	1
Connection cables (for IBM and Macintosh compatible computers)	1
P-TOUCH PC Printer software.....	2
AC adaptor.....	2
Guarantee	2
Tape catalog	2
Order form.....	2
Laminated tape (one piece)	3
Precautions	4
Connecting the P-TOUCH PC Printer	5
Tape cassettes	6
Inserting a tape cassette.....	6
Label stick	9
Cleaning the print head and rollers	10
How to clean the print head and rollers.....	10
Troubleshooting	11
Specifications	12
Hardware.....	12
Software	13
Interface connector	14
Transmission controls	15
Commands	15
Escape sequences.....	16
Tape width and print area	18

Unpacking

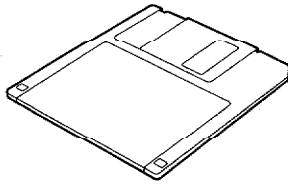
P-TOUCH PC Printer



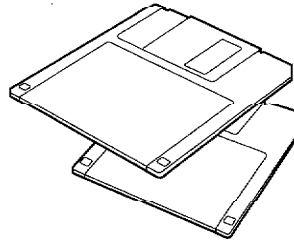
Connection cables (for IBM and Macintosh compatible computers)



P-TOUCH PC Printer software

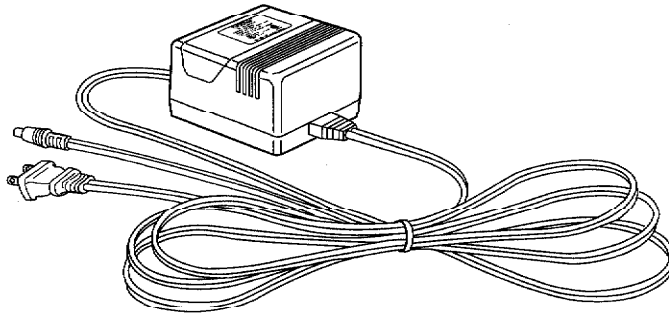


IBM



Macintosh

AC adaptor



This AC adaptor has been specially designed for use with your P-TOUCH PC Printer. Do not attempt to use it to power another electrical appliance, and never try to power your P-TOUCH PC Printer with another AC adaptor.

Guarantee

Please read this guarantee carefully and keep it in a safe place.

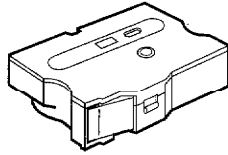
Tape catalog

The tape catalog gives you a list of the many different tapes that you can use with your P-TOUCH PC Printer.

Order form

Use this order form to order new tapes.

Laminated tape (one piece)



This tape is supplied so that you can start using your P-TOUCH PC Printer immediately. Consult the tape catalog to order the specific kind of tape that you may need.

Precautions

■ P-TOUCH PC Printer

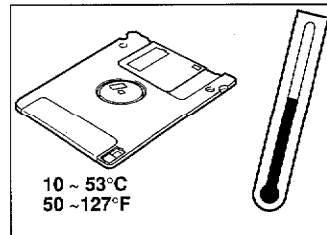
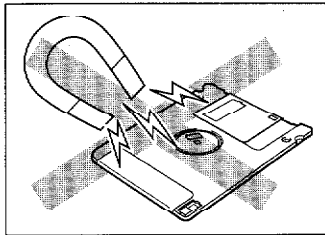
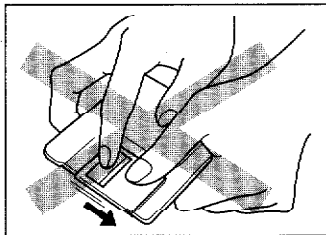
- To avoid injuries, do not touch the cutter's edges.
- Do not touch the printer head. The printer head becomes hot when working, and remains hot for a while after the power has been switched off.
- Do not place the printer too close to a source of electromagnetic interference such as a television set.
- Keep the printer out of direct sunlight.
- Avoid using the printer in extremely dusty places.
- Use the AC adaptor designed exclusively for the P-TOUCH PC Printer.
- Disconnect the AC adaptor from the wall outlet if you do not intend to use the printer for a long time.
- Do not clean the printer with alcohol or other organic solvents. Use only a soft, dry cloth.
- Do not leave any rubber or vinyl on the machine for an extended period of time. Doing so may cause staining.

■ Tape

- Do not pull on the tape. This may damage the tape cassette.
- After cutting a lettering tape, immediately remove the cut portion of the tape to avoid jamming the tape exit.

■ Floppy disks

- Never open the shutter or touch the magnetic material.
- Keep floppy disks away from magnets or other sources of magnetic field.
- Never expose the disk to extremely high or low temperatures.



Connecting the P-TOUCH PC Printer

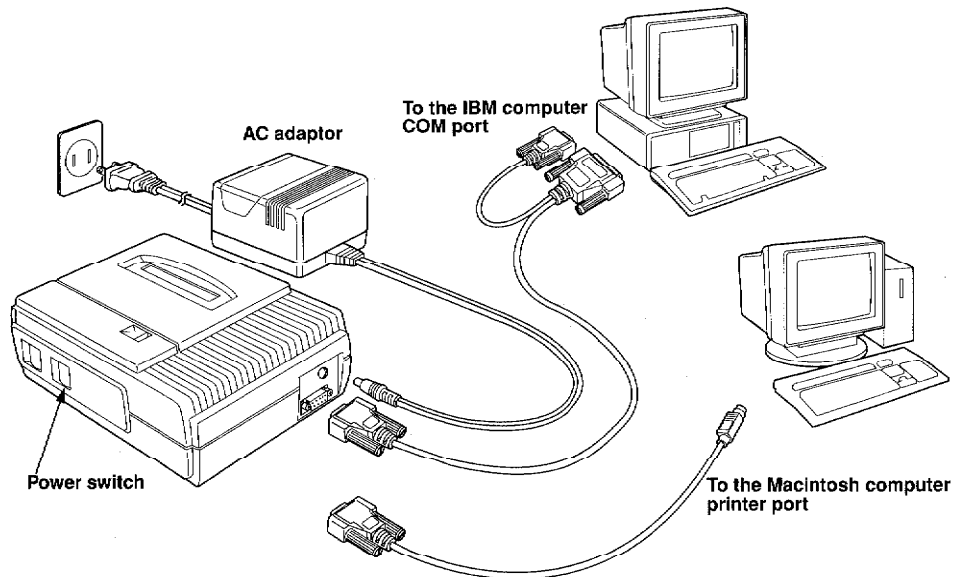
Warning: Before you make any connection, be sure to switch off the power to both the P-TOUCH PC Printer and the computer.

1. Connect the connection cable to the P-TOUCH PC Printer and to the COM connector (IBM) or printer connector (Macintosh) of your computer.

Note: (IBM only) The end of the cable with two connectors goes to the computer side. Use the connector that is compatible with the COM port of your computer, and leave the other connector unconnected.

2. Connect the AC adaptor to the P-TOUCH PC Printer and to an AC outlet.
3. Switch the P-TOUCH PC Printer on.
4. Switch the computer on.

Note: To switch the system off, switch the computer off first, then the P-TOUCH PC Printer and other peripherals.



Tape cassettes

A laminated tape cassette is supplied with the P-TOUCH PC Printer for temporary use.

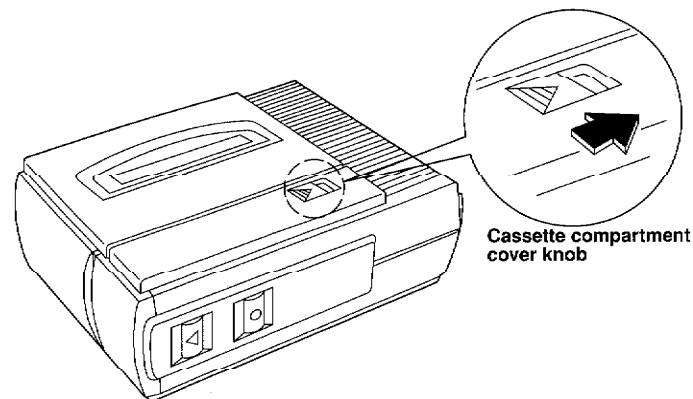
Other tapes are available in a wide range of background colors, type colors, and tape sizes. We encourage you to use this variety of tapes for color-coding and other style-intensive uses.

With this in mind, we have designed the P-TOUCH PC Printer to allow quick and easy insertion and changing of tape cassettes.

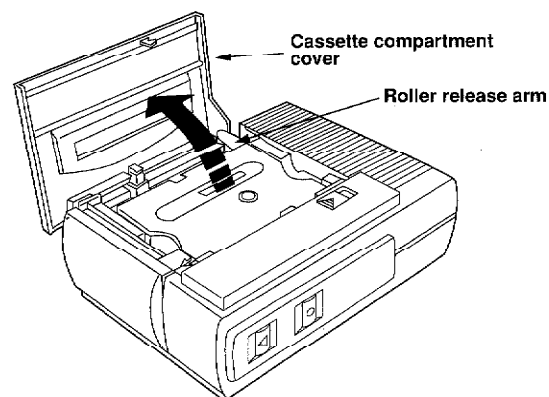
Inserting a tape cassette

Note: When you insert or remove a tape cassette, be sure to place the P-TOUCH PC Printer on a flat, stable surface.

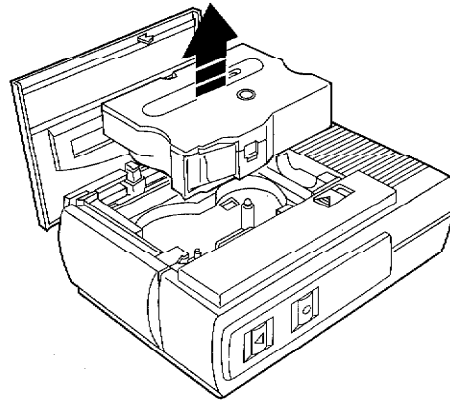
1. Flip the cassette compartment cover knob to release the cassette compartment cover.



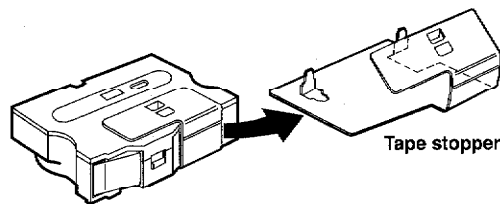
2. Lift the cover so you can easily reach the tape cassette.



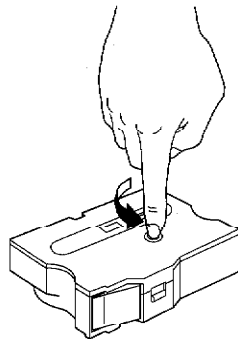
3. If there is a tape cassette already in the compartment, pull it straight up to remove it.



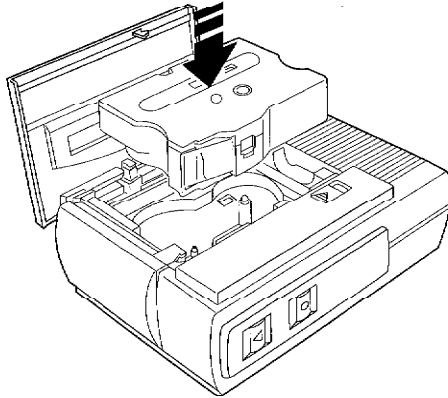
4. Remove the stopper from a new tape cassette.



5. If the tape inside the cassette is loose, use your finger to wind it in the direction of the arrow on the plastic tape cassette until it is taut.



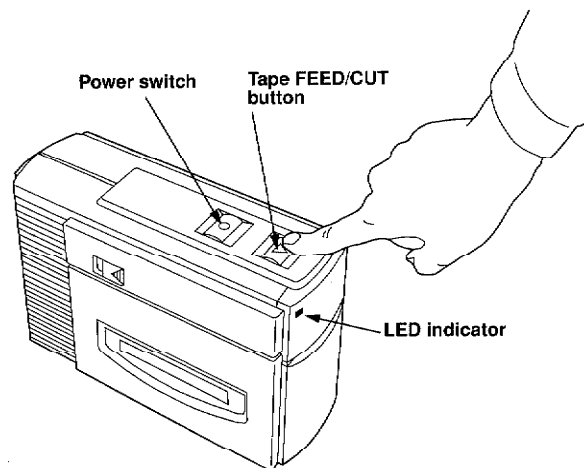
6. Insert the tape cassette firmly into the cassette compartment.



7. Shut the cassette compartment cover. The cover knob will automatically lock.
8. Put the P-TOUCH PC Printer in its working position (as shown below), and press power switch to turn the LED indicator on.

Note: The LED indicator is lit when the printer is powered and operation is normal. It flashes when an error is detected. See "Troubleshooting" on page 11 for details.

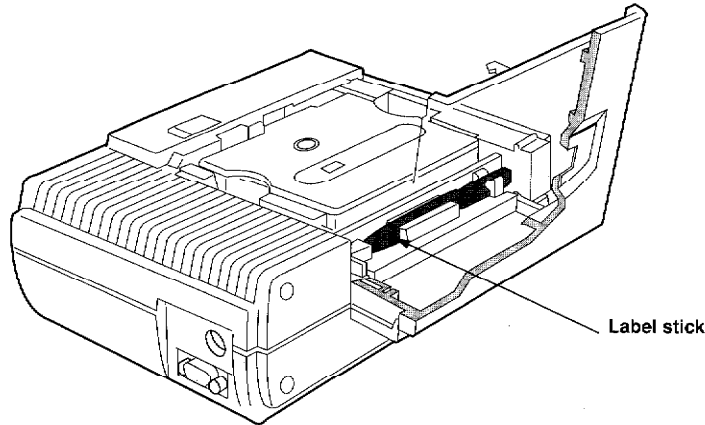
9. Press the tape FEED/CUT button to remove any slack from the tape.



Note: When you attempt solid black (or other color) printing, white spots may appear in characters or graphics. This is caused by a printer protection function and is not a sign of malfunction.

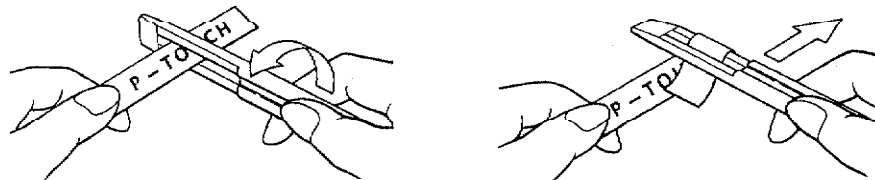
Label stick

The attached stick enables the label backing of the tape to be removed easily. You can also use it to rub instant lettering tapes.



■ To remove the tape backing

1. Hold the tape in the left hand with the printed surface upside, and the stick in the right hand.
2. Pass the tape halfway through the slot of the stick.
3. After turning the stick inward halfway, pull the stick to the right.



■ To transfer the label to paper

Instant lettering tapes act as rub-on character transfers. After creating a label, simply position the characters over a sheet of paper. By rubbing the instant lettering tape's non-printed side with the attached label stick, you can transfer the tape's contents directly onto paper.

Note: Hold the paper very firmly and do not allow it to move while rubbing the tape.

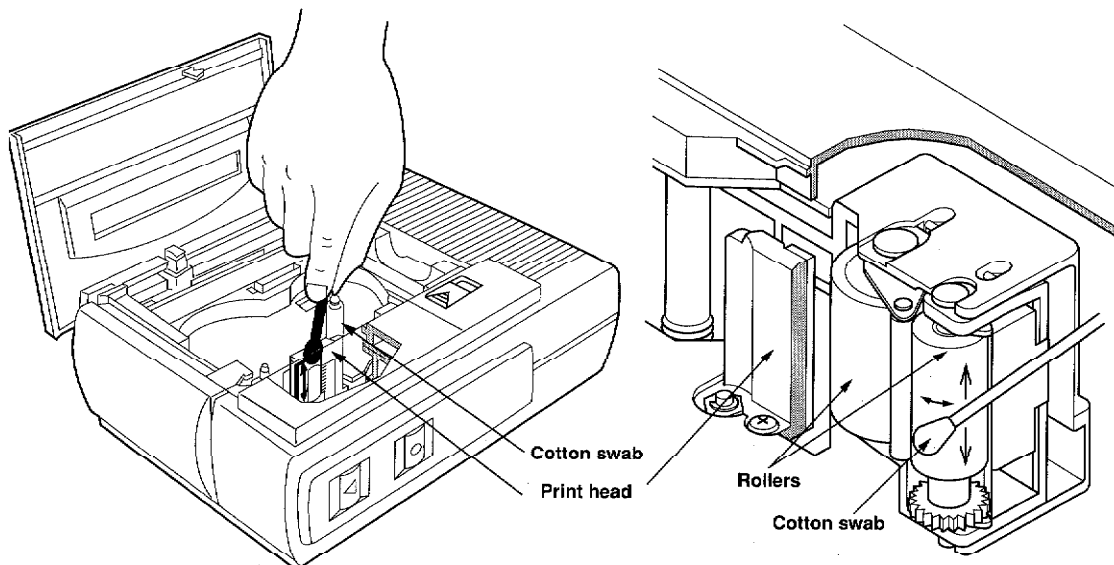
Cleaning the print head and rollers

Occasionally, specks of dust or dirt may attach themselves to this machine's print head or rollers. This is particularly likely when using the unit outdoors, or in very dusty environment. When this occurs, the print element obstructed by the dust cannot print, causing unprinted (blank) line to stretch across the label. Vertical lines indicate dirty rollers; horizontal lines indicate dirty print head.

Therefore, like a tape recorder, this machine's head and rollers may need to be cleaned from time to time.

How to clean the print head and rollers

1. Turn off the machine.
2. Open the cassette compartment cover and remove the tape cassette. The print head and rollers are located in the cassette compartment.
3. **Print head:** Wipe the print head gently with a dry cotton swab in the up-down direction.
Rollers: Wipe each roller vertically with a dry cotton swab while rotating the roller with your finger.
4. Again try a practice print. If dust still remains, dip the cotton swab in isopropyl (rubbing) alcohol and repeat step 3.
5. If none of the above works, contact your service representative.



Warning: Do not touch the printer head with your finger. The printer head becomes hot when working, and remains hot for a while after the power has been switched off.

Troubleshooting

Problem	Possible causes	Remedy
The printer does not print.	<ul style="list-style-type: none"> • The adaptor cable is not firmly connected. • The tape cassette is not properly inserted. • The cassette compartment cover is open. 	<ul style="list-style-type: none"> • Connect the adaptor cable firmly. • Insert the tape cassette properly. • Close the cover.
Zebra tape appears.	<ul style="list-style-type: none"> • Tape end 	<ul style="list-style-type: none"> • Install a new tape cassette, then press the Feed/Cut button or switch the printer off and on again.
The LED indicator is not lit.	<ul style="list-style-type: none"> • The adaptor cable is not firmly connected. 	<ul style="list-style-type: none"> • Connect the cable firmly. • If this does not solve the problem, contact your dealer.
The LED indicator flashes.	<ul style="list-style-type: none"> • Cutter error • No tape cassette • The tape cassette was replaced during data transmission • Tape end 	<ul style="list-style-type: none"> • Remove any jammed tape or adhesive from the cutter. • Press the Feed/Cut button or turn the printer off and on again. • Install a new tape cassette, then press the Feed/Cut button or switch the printer off and on again. • Press the Feed/Cut button or turn the printer off and on again. • Install a new tape cassette, then press the Feed/Cut button or switch the printer off and on again.
Lines appear on the printout	<ul style="list-style-type: none"> • The print head and/or the rollers are dirty. 	<ul style="list-style-type: none"> • Clean the print head and/or the rollers.

Specifications

Hardware

Main unit	Operation	Display: Switches:	LED (Power/Error) Power switch Feed and cut switch
	Printer	Printing system: Print head: Print speed:	Thermal copy laminating / thermal transfer 180 dpi, 128 dots Printing height: 18 mm 30 mm/s
	Power source	AC Adaptor	9V 2A
	Dimensions	82(W)×226(D)×167(H) mm	
	Weight	approximately 1.300 kg	
Interface		RS232C or equivalent (9-pin)	
Tape cassette		Type: Tape length:	Laminating 6, 9, 12, 18, 24 mm Non-laminating (thermal film tape) 24 mm Lettering 12 mm 15 m
Sensors		Tape: Cutter: Cassette:	Tape end sensor (photo sensor) Cut position sensor (leaf switch) Cassette sensors (×4) (mechanical sensors)

Power-on checks

When the power is turned on and the system initialized, if an error is detected, the LED is turned off, DTR is set to BUSY (no Xoff) and the power remains on.

External error detection

When an error caused by noise or other external factors is detected, the power is turned off.

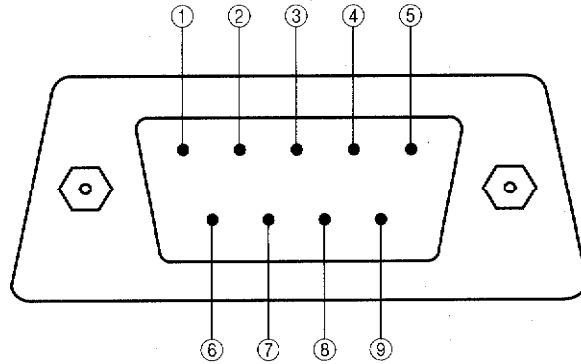
Software

Printing	Print type: Print condition:	Bit image only Auto tape cut: ON / OFF Left and right margins: small, medium, large, none
Buffer	*Print buffer (normal): **Reception buffer:	Approximately 30KB (27 cm) 512B
Transmission control	Baud rate: Busy output: Length: Parity:	9600 (fixed); data reception at 9600 bps Xon/off and DTR 8 bits (fixed) none (fixed)
Commands	CR LF FF CTRL-Z ETX ESC J ESC \$ ESC \ ESC * ESC @ ESC i S ESC i M ESC i D ESC i P	Carriage return Line feed Print command Print command with feed Same as CTRL-Z Line feed Absolute position assignment Relative position assignment Bit image selection Initialization Status request Mode specification Print density control Printing command for continuous page
Others	Tape cut ON / OFF Tape end detection Cutter error detection Tape type / Tape detection (with or without)	

*Print buffer: stores the print image that is printed by the thermal head

**Reception buffer: stores a received interface data temporarily until it is sent to the print buffer

Interface connector



Type	D-SUB 9 PIN	
Pins	①	CD carrier detection (input) ignored
	②	RXD reception data (input)
	③	TXD transmission data (output)
	④	DTR data terminal ready (output)
	⑤	GND signal earth
	⑥	DSR data set ready (input) ignored
	⑦	RTS transmission request (output) always on
	⑧	CTS transmission enabled (input) ignored
	⑨	Not connected

Items marked "ignored" are irrelevant and can be connected or left disconnected.

Transmission controls

Busy	<p>ON if one of the following is ON:</p> <ol style="list-style-type: none"> 1. Buffer busy ON if the remaining data area in the reception buffer is 256 bytes or less; OFF if the remaining space in the reception buffer is 384 bytes or more. 2. Printer busy ON during printing; OFF when not printing.
Busy output	<ol style="list-style-type: none"> 1. Entering busy condition: Outputs a Xoff (13h) and requests to stop data transmission. Turns off DTR and requests to stop data transmission. 2. Exiting busy condition: Outputs a Xon (11h) and allows data transmission. Turns on DTR and allows data transmission.

Commands

Name	Function	Hex code	Description
CR	Carriage return	0D	Moves to the beginning of the same line.
LF	Line feed	0A	Feeds line by 24 dots; does not move when the print buffer is empty; does not move to the beginning of line.
FF	Printing command	0C	Print the buffer data without ejecting; when the cut mode is set to ON, the tape is cut when the cutting position is reached; invalid when the print buffer is empty.
CTRL-Z	Printing command with feed	1A	Print the buffer data and ejects; when the cut mode is set to ON, the tape is cut after printing; when the print buffer is empty, feeds the tape and cuts it off.
ETX	Printing command with feed	03	Same as CTRL-Z.

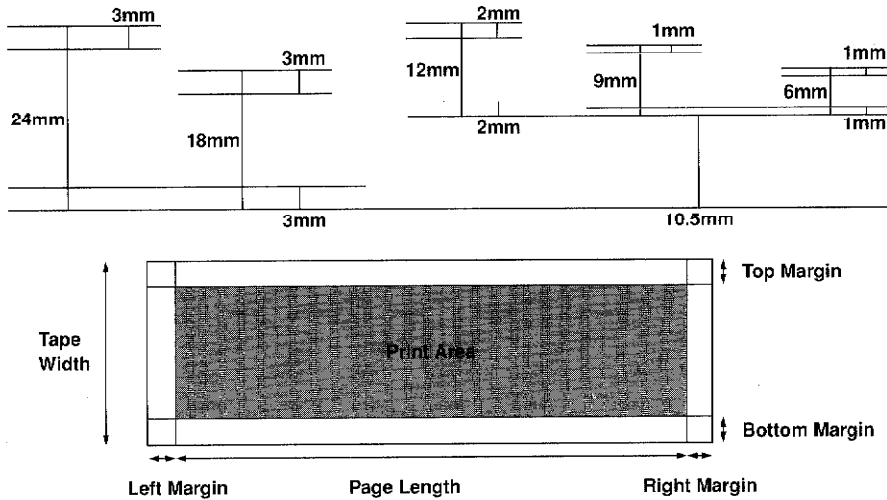
Escape sequences

Sequence	Function	Description
ESC+J+n	Line feed	Feeds line by 24 dots; invalid when the print buffer is empty; does not move to the beginning of line. Any value can be used for n.
ESC+\$+n1+n2	Absolute position	Moves by $n1+256 \times n2=N$ dots (1/60 inch) from the beginning of the line. $0 \leq n1 \leq 255$; $0 \leq n2 \leq 2$ The target position must be inside the page or else an error is detected.
ESC+\+n1+n2	Relative position	Moves by $n1+256 \times n2=N$ dots from the current position. N is a signed integer. For a negative number (-N), use 65536-N $0 \leq n1 \leq 255$; $0 \leq n2 \leq 255$ The target position must be inside the page or else an error is detected.
ESC+*+m+n1+n2 +data bytes	Selects bit image printing	Prints the bit image data "data byte". $m=39$ is the only valid value. Other values result in the command being ignored. $n1$ =total number of dots modulus 256. $n2$ =total number of dots/256 (integer). $(n1+256 \times n2) \times 3$ image bytes are required. Detects a print buffer error if the image extends beyond the page limits.
ESC+@	Initialization	Clears all data in the print buffer.
ESC+i+D+byte	Print density and barcode controls	bit 0 ~3: Print density control (default=3) 0: no change 1~5: five levels (other values invalid) bit 4 and 5: Barcode control (default=3) 0: no change 1: no barcode 2: barcode only 3: including barcode

Sequence	Function	Description
ESC+i+M+byte	Mode setting	<p>bit 0 ~ 4: Feed amount (default=large) 0 ~ 7 none 8 ~ 11 small 12 ~ 25 medium 26 ~ 31 large</p> <p>bit 6: Auto cut (default=ON) 0 OFF 1 ON</p> <p>bit 7: Mirror print (default=OFF) 0 OFF 1 ON</p> <p>This command should be set before sending data. Mirror printing is not possible with non-laminated (thermal film) tapes. Feed amount is automatically set to large with lettering tapes.</p>
ESC+i+P	Print command for continuous pages	Images longer than 27 cm can be printed continuously on connected pages; invalid when the print buffer is empty; prints even if the only data in the print buffer are spaces.
ESC+i+S	Status information request	<p>1~8 header: 80h, 20h, 42h, 30h, 30h, 30h, 00h, 00h</p> <p>9 error code bit0: no tape bit1: tape end bit2: cutter jam</p> <p>10 error code bit0: tape change error bit1: print buffer full bit2: transmission error bit3: reception buffer full</p> <p>11 tape width (1~127mm) 0: no tape</p> <p>12 tape type (0~127) 0: unidentified tape 1: laminated tape 2: lettering (iron copy) 3: Non-laminated (thermal film) tape</p> <p>13~15 00h (fixed)</p> <p>16 mode (same as for "Mode setting")</p> <p>17 print density (same as for "Print density and barcode controls")</p> <p>18~32 irrelevant</p>

Tape width and print area

The following illustration shows the relationship between the tape width and the print area.



The page maximum length is 1 m regardless of the tape width. Left and right margins are as follows:

None	Small	Medium	Large
29 dots	56 dots	86 dots	185 dots

Upper and lower margins are fixed. The following table shows the total height of the print area for different tapes.

Tape width (mm)	Print area (mm/dots)	Upper and lower margins (mm)	Dot positions	Printable lines (1 line=24 dots)
24	18.0/128	3	1~128	5 lines + 8 dots
18	12.0/85	3	1~85	3 lines + 13 dots
12	8.0/57	2	68~124	2 lines + 9 dots
9	6.9/49	1	61~109	2 lines + 1 dot
6	3.9/28	1	61~88	1 line + 4 dots

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Printed in Japan