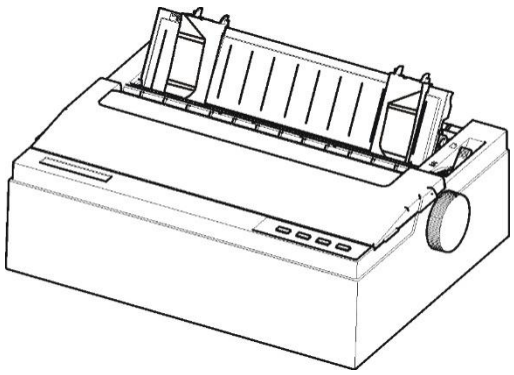
FUJITSU DL3100

DOT MATRIX PRINTER

USER'S MANUAL



FUJITSU

IMPORTANT NOTE TO USERS

READ THE ENTIRE MANUAL CAREFULLY BEFORE USING THIS PRODUCT. INCORRECT USE OF THE PRODUCT MAY RESULT IN INJURY OR DAMAGE TO USERS, BYSTANDERS OR PROPERTY.

While FUJITSU ISOTEC has sought to ensure the accuracy of all information in this manual, FUJITSU ISOTEC assumes no liability to any party for any damage caused by any error or omission contained in this manual, its updates or supplements, whether such errors or omissions result from negligence, accident, or any other cause. In addition, FUJITSU ISOTEC assumes no liability with respect to the application or use of any product or system in accordance with descriptions or instructions contained herein; including any liability for incidental or consequential damages arising therefrom. FUJITSU ISOTEC DISCLAIMS ALL WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN, WHETHER EXPRESSED, IMPLIED, OR STATUTOR.

FUJITSU ISOTEC reserves the right to make changes to any products described herein without further notice and without obligation.

USING THIS PRODUCT IN HIGH-RISK SITUATIONS

This Product is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use, and ordinary industrial use, but is not designed, developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is Secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter "High Safety Required Use"), including without limitation, nuclear reaction control in nuclear facility, aircraft flight control, air traffic control, mass transport control, medical life support system, missile launch control in weapon system. You shall not use this Product without securing the sufficient safety required for the High Safety Required Use. If you wish to use this Product for High Safety Required Use, please consult with our sales representatives in charge before such use.

EXPORT CONTROL

This manual contains technology which is subject to the Foreign Exchange and Foreign Trade Law of Japan. This manual should not be exported or transferred to foreign countries in any fromor method, or released to anyone other than the residents of Japan prior obtaining applicablelicense from your local government or authorities and/ or the Ministry of Economy, Trade and Industry of Japan in accordance with the above law.

Following notes for United States are valid for 100-120V model only.

Federal Communications Commission Radio Frequency Interference Statement for United States Users

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15B 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 harmful 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 measure:

- 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.

FCC warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTES

1. Testing of this equipment was performed on model number M33342A.
2. The use of an unshielded a non-shielded interface cable with the referenced device is prohibited. The length of the parallel interface cable should not exceed 2 meters. The length of the optional serial interface cable must be 15 meters (50 feet) or less.
3. The length of the power cord must be 3 meters (9.8 feet) or less.

Für den Anwender in Deutschland

Das Gerät ist nicht für die Benutzung im unmittelbaren Gesichtsfeld am Bildschirmarbeitsplatz vorgesehen. Um störende Reflexionen am Bildschirmarbeitsplatz zu vermeiden, darf dieses Produkt nicht im unmittelbaren Gesichtsfeld platziert werden.

The contents of this manual may be revised without prior notice and without obligation to incorporate changes and improvements into units already shipped.

Every effort has been made to ensure that the information included here is complete and accurate at the time of publication; however, Fujitsu Isotec Limited cannot be held responsible for errors and omissions.

Printer model specifications differ with the power supply input voltage (M33342A; 100-120 V or M33342B; 220-240 V) .

KA02100-Y890-01EN May 2018

© 2018 FUJITSU ISOTEC LIMITED

Printed in Japan. All rights reserved. No part of this manual may be reproduced or translated, stored in a database or retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Fujitsu Isotec Limited.

TRADEMARK ACKNOWLEDGEMENT

FUJITSU is a registered trademark and Fujitsu Creative Faces is a trademark of Fujitsu Limited. Centronics is a trademark of Centronics Data Computer Corporation. IBM PC and IBM 2390 are trademarks of International Business Machines Corporation. ESC/P2 is a trademark of Seiko Epson Corporation. Microsoft is a registered trademark and Windows are trademarks of Microsoft Corporation.

Other product names mentioned in this manual may also be trademarks of their respective companies.

ABOUT THIS MANUAL

Thank you for buying the FUJITSU DL3100 dot matrix printer. You can expect years of reliable service with very little maintenance. This manual explains how to use your printer to full advantage. It is written for both new and experienced printer users.

This manual describes how to install, set up, and use your printer and printer options. It also explains how to keep the printer in good working condition and what to do should something go wrong. Detailed procedures are provided for first-time users. Experienced users can skip some of the details, using the table of contents and chapter introductions to locate information.

This manual has several chapters, a glossary, and an index. CHAPTER A lists supplies and additional documentation and information available from your dealer or authorized Fujitsu representative. Fujitsu offices are listed at the end of the manual.

PRINTER MODELS AND OPTION

This manual covers model DL3100, a 80-column printer. Each model has a 100-120 (M33342A) & 220-240 (M33342B) power supply.
A LAN card, a Centronics parallel, RS232CSerial, can be installed only on printer models with the USB interfaces. You must specify these when purchasing the printer.

DL3100

- Basic specifications
  - Print line at 10 cpi: 80 columns (DL3100)
- Control Panel: LED type
- Interface: Standard model USB
  - Factory Option Parallel, Ethernet, RS232CSerial
- Alternative specification
  - Power supply:100-120 & 220-240

cpi: characters per inch

ORGANIZATION

This manual is organized as follows:

Chapter 1, Unpacking Guide, introduces the good location for place printer,unpacking the printer,the printer components, the explanation of symbols on the printer.

Chapter 2, Setting Up Printer, gives step-by-step procedures for setting up the printer for immediate use and identifies the main parts of the printer. If this is your first printer, you should read the entire chapter before attempting to use the printer.

Chapter 3, Paper Installation Guide, explains how to load and use paper with your printer.

Chapter 4, Control Panel Operation, covers basic printing operations. This chapter describes everyday operations from the printer's control panel, such as loading paper and selecting print features, in detail.

Chapter 5, Printer Setting Changes, describes how to change the printer's optional settings, such as print features, hardware options, and top-of-form. Most settings only affect print features such as the typestyle and page format. Note that certain settings directly affect hardware and software compatibility.

Chapter 6, Customized Form, explains the customization on the form length, TOF, bottom margin and left margin for single sheets and fanfold..

Chapter 7, Maintenance, explains basic maintenance procedures for this printer.

Chapter 8, Trouble-Shooting, describes problem-solving techniques. Before you contact your dealer for help, check the list of problems and solutions provided in this chapter.

At the end of this manual, you will find several chapters, a glossary. Chapter A gives order numbers for printer supplies.
Other chapters provide additional technical information about the printer.

CONVENTIONS

Special information, such as warnings, cautions, and notes, are indicated as follows:

WARNING

A WARNING indicates that personal injury may result if you do not follow a procedure correctly.

CAUTION

A CAUTION indicates that damage to the printer may result if you do notfollow a procedure correctly.

NOTE

A NOTE provides "how-to" tips or suggestions to help you perform a procedure correctly. NOTEs are particularly useful for first-time users.

For Experienced Users

If you are familiar with this printer or with dot matrix printers in general this information will help you use the manual effectively.

Warning symbols

Various graphic symbols are used in this manual. They serve as signs to help users of this product use the product safely and correctly as well as prevent damage and personal injury to the users or bystanders.The following tables show and explain each symbol. Be sure that you understand the meaning of each symbol before reading the manual.

⚠ WARNING	⚠ CAUTION
A WARNING indicates that death or serious personal injury may result if you do not follow a procedure correctly	A CAUTION indicates that personal injury or property damage may result if you do not follow a procedure correctly

Examples and explanations of graphic symbols	
	△ Indicates a warning or caution item. By itself, the image in this symbol suggests the meaning of the warning or caution (the example on the left is a caution of possible electric shock).
	⃠ Indicates a prohibited action. The image in or beside this symbol expresses the prohibited action (the example on the left indicates that disassembly is prohibited).
	● Indicates a direction that must be observed. The image in this symbol shows the direction (the example on the left shows the direction in which a power plug is disconnected from an outlet).
Caution: Hot	This symbol and accompanying statement indicate a risk of injury from a hot object.
Caution: Flammable	This symbol and accompanying statement indicate a risk of fire.
Do not touch	This symbol and accompanying statement indicate a risk of injury from touching part of the equipment.
Do not disassemble	This symbol and accompanying statement indicate a risk of injury, such as from electric shock, caused by disassembling the equipment.
General prohibited action	This symbol and accompanying statement indicate a general prohibited action.
General caution	This symbol and accompanying statement indicate a general caution.
Warning hands pinching	This symbol and accompanying statement indicate a risk of rolling your hands into the equipment.

Notes on Safety

WARNING

⚠ WARNING

Do not place a container containing water, such as a vase, potted plant, and drinking glass, or a metal object on or near the printer.
Otherwise, electric shock or fire may result.

Do not place the printer in a humid or dusty area, in an area with explosive fumes, an area with poor ventilation or close to a fire.
Otherwise, electric shock or fire may result.

Use only one of the power cords included with this product, for this product. Do not use any other power cord for this product.
Otherwise, electric shock or fire may result.

Do not use this product in an area exposed to a high level of moisture, such as a bathroom and shower room.
Otherwise, electric shock or fire may result.

⚠ WARNING

When mounting or removing ribbon, turn off the power to the printer and personal computer and disconnect their power plugs from the outlets beforeperforming the work.
Otherwise, electric shock may result.

Connect only Fujitsu-recommended ribbon.

Otherwise, electric shock or fire may result.

⚠ CAUTION

Do not block openings in the printer (e.g., ventilation openings)

If ventilation openings are blocked, heat accumulates inside the printer, possibly resulting in a fire.

Do not place a heavy object on the printer. Also, do not subject the printer to shocks.

Otherwise, the printer may become unbalanced, causing it to fall, and possibly resulting in personal injury.

Do not place the printer in an area exposed to strong vibration or an unstable area such as on a slope.

Otherwise, the printer may fall or topple, possibly resulting in personal injury.

Do not leave the printer in an area exposed to direct sunlight for a long time, such as inside a car under the sun or any other area subjected to high temperatures.

Otherwise, the printer surface heats up, possibly melting covers or resulting in other deformities, or the inside of the printer may become extremely hot, possibly resulting in fire.

Before moving the printer, be sure to disconnect the power plug from the outlet and disconnect all connected cables from the printer.

Otherwise, the power cord may be damaged, possibly resulting in electric shock or fire, or the printer may fall or topple, possibly resulting in personal injury.

Before connecting or disconnecting a printer cable, be sure to turn off the power to the printer and personal computer.

Performing that and related work without the power turned off may result in a personal computer or printer failure.

Notes about the printer in operation

WARNING

If the printer is making a strange noise, which indicates a problem, discontinue printer operation. Request your printer dealer to fix the problem.

Continued operation of the printer without repairs may result in electric shock or fire.

Do not use a power source whose voltage is other than that indicated. Also, an excessive number of plugged-in power cords must not be connected to a single outlet.

Otherwise, electric shock or fire may result.

Do not spill any liquid, such as water, on the printer.
Otherwise, electric shock or fire may result.

Do not damage or modify the power cord.

The power cord may be damaged by placing a heavy object on it, stretching it excessively, forcibly bending it, twisting it, or heating it, and this may result in electric shock or fire.

Do not use the power cord if it or the power plug is damaged or the plug does not fit securely in the outlet receptacle.

Using the power cord in that condition may result in electric shock or fire.

Do not insert the power cord into an outlet or turn on the power to the printer when any of its covers has been removed.

Otherwise, electric shock or fire may result.

Prevent foreign objects, such as metal shards and inflammable materials, from being inserted or dropped into any openings in the printer (e.g., ventilation openings).

Otherwise, electric shock or fire may result.

Do not disconnect the power plug from the outlet while the power to the printer is turned on.

Otherwise, the plug becomes deformed, possibly resulting in fire

Do not remove the main printer cover or the cover for the cable connectors except as necessary. To check and repair internal components, request your printer dealer to do so.

Some internal components use high voltage, and touching them may result in electric shock.

Do not modify the printer by yourself.

Otherwise, electric shock or fire may result.

Do not connect or disconnect the power plug with wet hands.

Otherwise, electric shock may result.

⚠ WARNING

If excessive heat, smoke, a strange odor, or a strange noise is coming the printer or any other abnormality is observed, immediately turn off the power to the printer by using the power switch, and be sure to disconnect the power plug from the outlet.

Then, after verifying the end of the abnormality (e.g., no more smoke is coming from the printer), request your printer dealer to make repairs. Do not repair the printer by yourself as doing so is dangerous.

Continued use of the printer when it is operating abnormally may result in electric shock or fire.

If a foreign object (e.g., water or other liquid, metal shard) has entered the printer, immediately turn off the power to the printer by using the power switch, and disconnect the power plug from the outlet. Then, contact your printer dealer.

Continued use of the printer in that condition may result in electric shock or fire.
Customers who use the printer near children should take especial care regarding this point.

If the printer is dropped or a cover is damaged, turn off the power to the printer by using the power switch, and disconnect the power plug from the outlet. Then, contact your printer dealer.

Continued use of printer in that condition may result in electric shock or fire.

Before performing cleaning, maintenance, or troubleshooting work on the printer, switch off the power switch, and be sure to disconnect the power plug from the outlet.

Performing that work on the printer without the power turned off may result in burns or electric shock.

If dust accumulates on or near the metal parts of the power plug, so wipe away that dust with a dry cloth.

Continued use of printer in that condition may result in fire.

Do not drop or strike the printer, such as by hitting it against something.

Otherwise, a failure may result

⚠ CAUTION

Insert the power plug completely into an outlet so that it is securely connected.

Otherwise, electric shock or fire may result.

Exercise caution to keep loose clothing, hair, neckties, etc. away from paper feed- or ejection openings, and tractors while the printer is operating.

Otherwise, personal injury may result.

When disconnecting the power plug from the outlet, pull it out while grasping the plug, not the cord.

If you pull it out while grasping the cord, the insulation may be damaged or the cable core may be exposed or damaged, possibly resulting in electric shock or fire.

Do not cover or wrap the printer with a cloth or anything else while it is operating.

Otherwise, heat accumulates, possibly resulting in fire.

Do not use the power cord with it bunched together.

Otherwise, heat accumulates, possibly resulting in fire.

If the printer operates when the front cover is unclosed, immediately turn the printer off, and unplug the power code from wall outlet.

Continued use of the printer in that condition, operation of the mechanism inside of the front cover may become a cause of an injury.

If the printer is not to be used for a long time, disconnect the power plug from the outlet for safety reasons.

Otherwise, electric shock or fire may result.

If a lightning storm is in nearby, disconnect the power plug from the outlet.

Leaving the plug connected to the outlet may result in damage to the printer or other property damage

⚠ CAUTION

The print head and internal frames become extremely hot during printer operation and remain so immediately afterwards. Do not touch these parts until sufficient time has passed to allow them to cool.

Otherwise, burns or personal injury may result.

Do not touch the paper feed- or ejection openings while the printer is operating.

Otherwise, personal injury may be result.

Do not touch the printer cable connectors or the metal part of the print head.

Otherwise, personal injury or a printer failure may result.

Do not touch the print head while it is moving.

Otherwise, burns or personal injury may result.

Note that continuous forms that are fed in the reverse direction continuously may come off the paper feed tractors.

Operate the printer with the paper thickness set to the appropriate paper thickness.

Use only an original ribbon cassette that is specified as suitable by Fujitsu.

Textile fibers accumulate on components inside the printer and parts of the roller, so clean these parts regularly.

Do not turn the ribbon feed knob in the reverse direction.

Otherwise, the ribbon may become jammed and stuck.

If printing is started with a slack ribbon, the ribbon may become tangled or the ribbon feed mechanism may become locked.

The print head is extremely hot immediately after printing. When replacing the ribbon, verify that the print head is sufficiently cool before setting the print head to the ribbon replacement position.

TABLE OF CONTENTS

CHAPTER 1 UNPACKING GUIDE 1-1
Selecting a good location 1-2
Unpacking the printer 1-3
Printer components 1-6
The explanation of symbols on the printer 1-8
CHAPTER 2 SETTING UP PRINTER 2-1
Install Ribbon 2-2
Install the single sheet feeder 2-5
Connecting the Interface Cable 2-6
Connecting the Power Supply 2-7
Installing the Printer Driver 2-8
CHAPTER 3 PAPER INSTALLATION GUIDE 3-1
Adjusting the Print Gap Lever 3-2
Friction Feed Handling 3-3
Tractor Feed Handling 3-4
Continuous Paper Placement 3-6
Tips on Paper Handling 3-7
CHAPTER 4 CONTROL PANEL OPERATION 4-1
LED Indicators 4-3
Control Panel Keys 4-4
Panel Operation 4-7
Online State 4-8
Setup State 4-9
Power-on State 4-11
CHAPTER 5 PRINTER SETTING CHANGES 5-1
System Setup 5-2
Paper Setup 5-4
Interface Setup 5-10
Character Setup 5-12
Other Setup 5-14
German (Deutsch) 5-15
Russian (Россия) 5-18
Italian (Italiano) 5-21
French (Français) 5-24
Spanish (Español) 5-27
Turkish (Türkce) 5-30
Portuguese (Português) 5-33
Black Mark Paramenters 5-36
Bidirectional Alignment 5-40
Restore Factory Default 5-44

Hex Dump 5-45
Self Test / Status Page 5-45
DLMENU 5-46
CHAPTER 6 CUSTOMIZED FORM 6-1
Customize Cut Sheet Form Length 6-2
Customize Cut Sheet TOF 6-4
Customize Cut Sheet Bottom Margin 6-5
Customize Cut Sheet Left Margin 6-5
Customize Fanfold Page Formatting Parameters 6-6
Customize Tear Position 6-7
CHAPTER 7 MAINTENANCE 7-1
Cleaning 7-2
Cleaning the Platen (Paper Rollers) 7-4
Replace the Ribbon 7-5
CHAPTER 8 TROUBLE-SHOOTING 8-1
Solving Problems 8-2
Print Quality Problems 8-2
Paper Handling Problems and Solutions 8-4
Operating Problems and Solutions 8-6
Printer Failures 8-7
Diagnostic Functions 8-8
Getting help 8-8
CHAPTER A SUPPLIES AND OPTIONS A-1
Supplies A-1
CHAPTER B PRINTER AND PAPER SPECIFICATIONS B-1
Physical Specifications B-1
Functional Specifications B-2
Performance Specifications B-5
Paper Specifications B-7
CHAPTER C COMMAND SETS C-1
ESC/P2 Emulation Command List C-2
IBM Emulation Command List C-27
CHAPTER D INTERFACE INFORMATION D-1
USB interface D-2
Parallel interface D-3
Serial interface D-6
Ethernet interface D-9
CHAPTER E CHARACTER SETS & CODE PAGES E-1
Character Sets E-1
Code Page Commands E-6
Code Page Tables E-8
CHAPTER F RESIDENT FONTS F-1

1

UNPACKING GUIDE

If this is your first printer, you should read the entire chapter before attempting to use the printer.

In this chapter, you will learn how to:

- Select a good location for the printer
- Unpacking the Printer
- Know the name of the printer components

SELECTING A GOOD LOCATION

This printer is suitable for most business, office, and home environments.
To obtain peak performance from the printer, select a location that meets
the following guidelines:

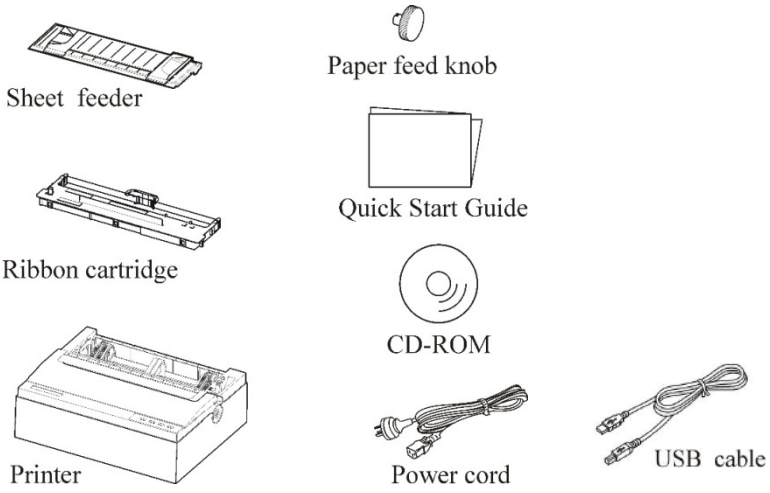
- Place the printer on a sturdy, level surface.
- Place the printer near a well-grounded AC power outlet.
- Ensure easy access to the front and rear of the printer by leaving several inches of space around the printer. Do not block the airvents on the front, left, and right sides of the printer.
- Do not place the printer in direct sunlight or near heaters.
- Make sure that the room is well-ventilated and free from excessive dust.
- Do not expose the printer to extremes of temperature and humidity.
- Use only the power cord supplied with the printer or recommended by your dealer. Do not use an extension cord.
- Do not plug the printer into a power outlet that is hared with heavy industrial equipment, such as motors, or appliances, or such as copiers or coffee makers. Such equipment often emits electrical noise or causes power degradation.

UNPACKING THE PRINTER

Unpack the printer as follows:

1. Place your packaged printer on a solid base.
2. Make sure that the “Up” symbols point in the correct direction.
3. Open the packaging, lift the printer out of the cardboard box and remove the remaining packaging material.
4. Check the printer for any visible transport damage and missing items. If you find any transport damage or if any accessories are missing, please contact your dealer. The following items are included:

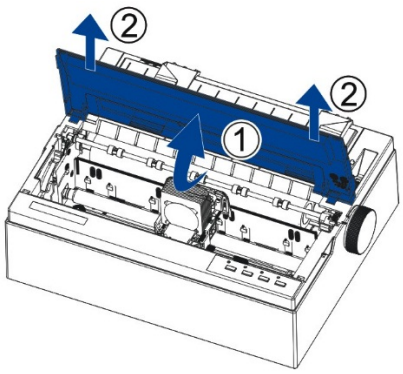
- Printer	- Paper feed knob
- Sheet feeder	- Power cord
- Ribbon cartridge	- USB cable
- CD-ROM	- Quick Start Guide



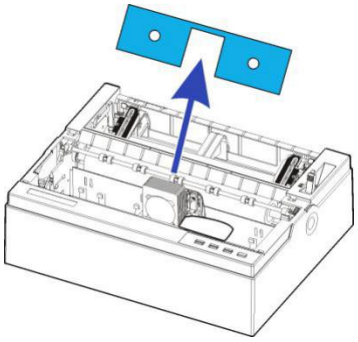
* Using different cable according to the different country.

Remove the packaging materials from the printer as follows:

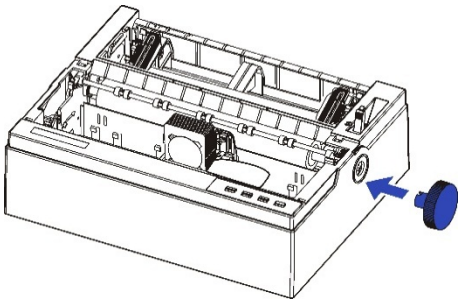
1.Open and remove the top covers of the printer following the below picture.



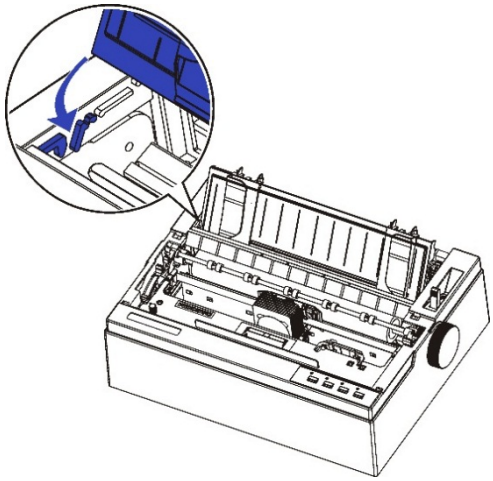
2.Remove the shipping cardboard from around the print head.



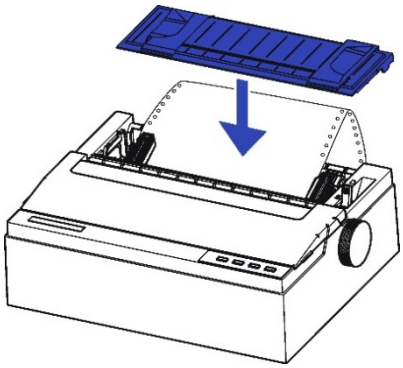
3.Rotate the paper feed knob to make it fix with the latch. And then press it to lock.



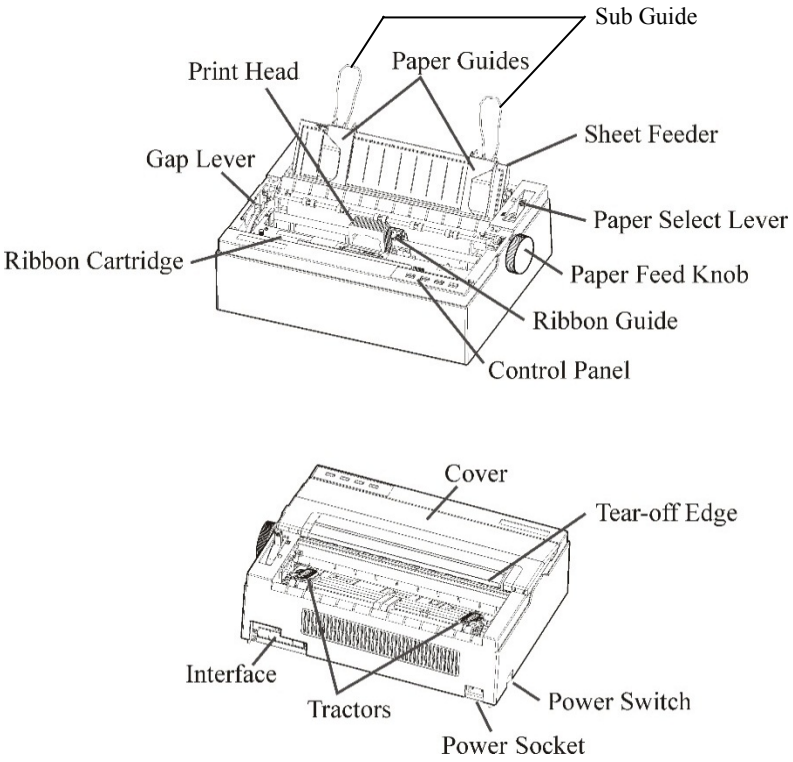
4.If you use the single sheet paper, tilt the sheet feeder slightly and push it to the corresponding positioning slot on both sides of the printer until it can no longer move forward.



If you use the continuous forms,remove the sheet feeder,install the sheet feeder downward after paper loading until you heard "click",the installation is in place.



PRINTER COMPONENTS



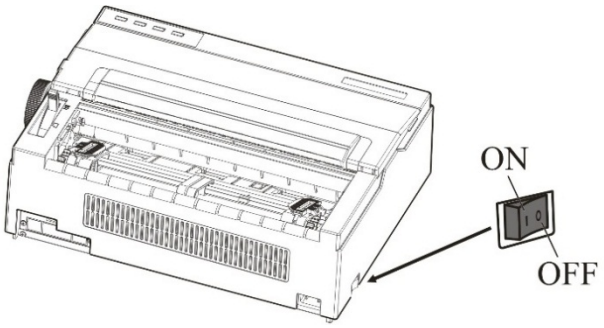
Please for the explanation of each parts, see the table of next page.

Component	Function
Gap Lever	Adjusts the print gap lever according to the thickness of paper
Paper Guides	Adjusts positioning of single sheet paper
Sub Guide	Pull the sub-guide out as required to the paper size
Sheet Feeder	Place the single paper, in order to load and eject.
Print Head	24-pin printing mechanism
Cover	When printer is in operation, ensure the printer's cover is closed to keep the noise level to a minimum, to ensure the user security when the printer is operated.
Tear-off Edge	Help to tear off printed pages without wasting paper.
Control Panel	Shows printer status, for printer setup, Each key on the control panel has different function, of course you also can get many new functions by pressing different keys at the same time or performing different combinations of keys.
Paper Select Lever	Two positions: = continuous forms; = single sheet paper
Paper Feed Knob	Manual feed or vertical positioning of paper
Power Switch	Power printer ON or OFF
Ribbon Cartridge	Install ribbon in the printer
Ribbon Guide	For guiding ribbon installation on print head
Tractors	For feeding and adjustment of continuous forms
Power Socket	Connects power cord to the printer
Interface	Connects interface cables from the host

THE EXPLANATION OF SYMBOLS ON THE PRINTER

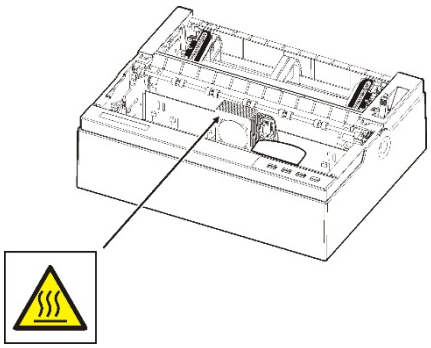
- Power Switch

Turms the printer power ON (Printable Condition) / OFF (Unprintable Condition).



- Print Head

The print head become extremely hot during printer operation and remain so immediately afterwards. Do not touch these parts until sufficient time has passed to allow them to cool.
Otherwise, burns or personal injury may result.



2

SETTING UP PRINTER

Your new printer is easy to install and set up.
This chapter tells you how to set up the printer and start printing right away.

In this chapter, you will learn how to:

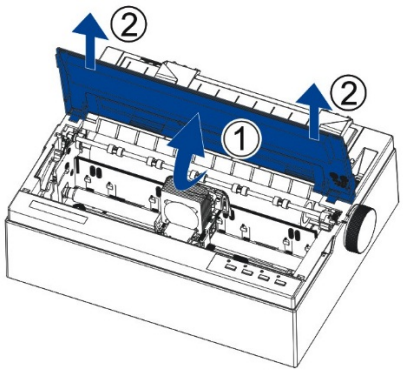
- Install Ribbon
- Install the single sheet feeder into the rear of the printer
- Connecting the Interface Cable
- Connecting the Power Supply
- Installing the Windows Driver

INSTALL RIBBON

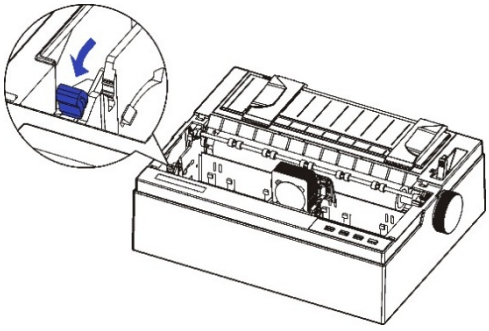
Installing the Ribbon cartridge

(HOT)	**CAUTION <HOT>** **The print head and metal frame is hot during printing or immediately after printing. Do not touch them until it cools down.**

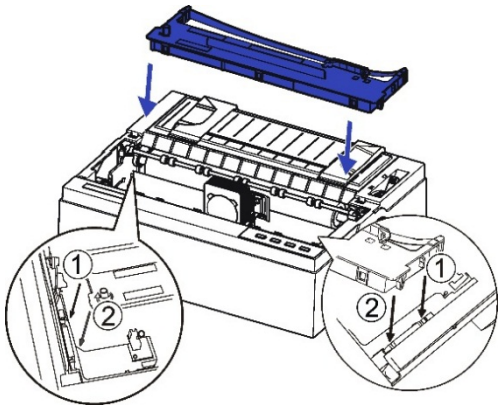
1. Ensure the power to the printer is off. Open the printer's cover backward and remove it upward.



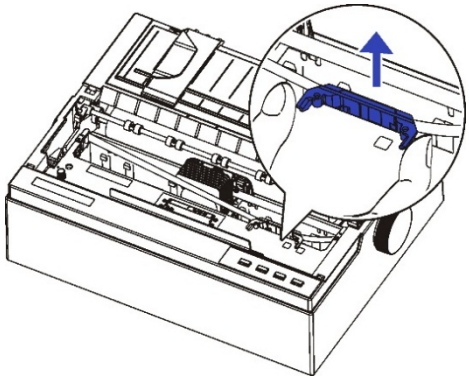
2. Adjust the lever forward to the maximum gear, that is "Ribbon" gear.



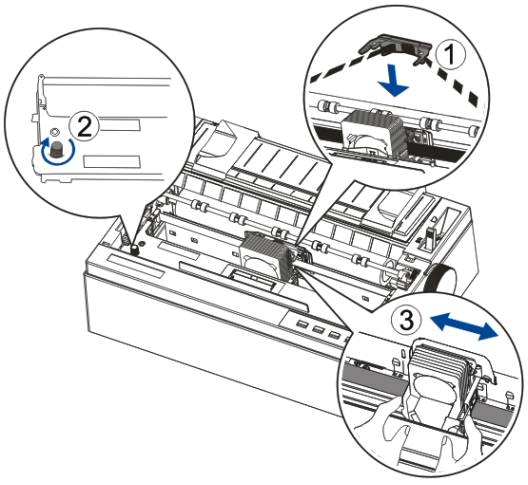
3. Install the recess positions ①-② on the ribbon cassette into the printer mounting. Press the ribbon frame to install it properly.



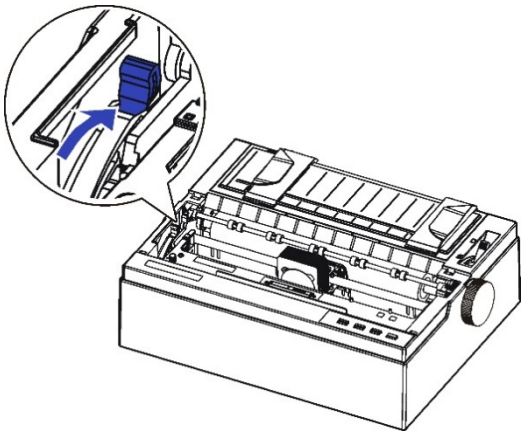
4. Pull out the ribbon guide stuck on the ribbon case with holding both ends of the ribbon guide.



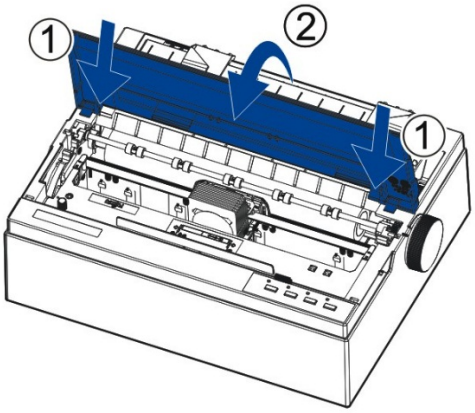
5. Install the ribbon guide stuck behind the print head, turn the ribbon cartridge knob in the clockwise direction and move the carriage left and right to ensure the carriage and ribbon fabric is taut.



6. Adjusting the print gap lever according to the paper thickness.



7. Close the printer's cover. When printer is in operation, ensure the printer's cover is closed to keep the noise level to a minimum, to ensure the user security when the printer is operated.



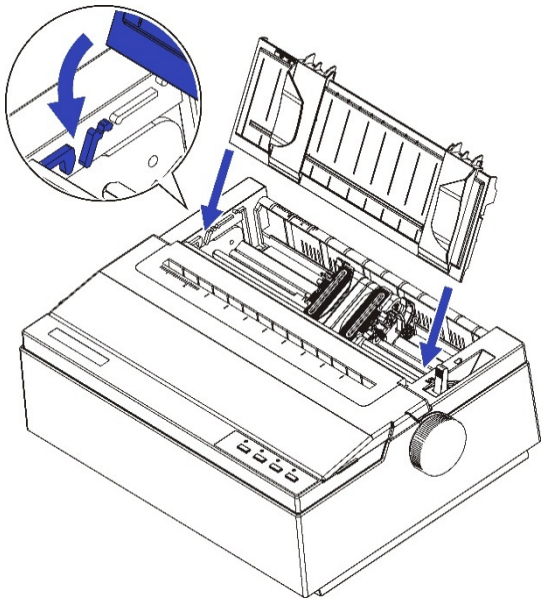
Notes on Ribbon Cartridge Removal:

1. Eject any paper loaded in the printer.
2. Turn off the printer power.
3. Open and remove the cover.
4. Set the gap lever to the most open position labeled "RIBBON".
5. Move the carriage to the middle. Be careful not to touch the print head if printing had just been performed, as the print head may be hot.
6. Remove the ribbon frame from the print head.
7. Use fingers to take hold of the handle on the ribbon cartridge firmly, and lift the cartridge upwards to unlatch it. Some force may be needed to unlatch the cartridge.

INSTALL THE SINGLE SHEET FEEDER

Install the single sheet feeder into the rear of the printer. If you intend to use this paper way, assure having removed the fanfold paper out of the rear tractor paper way by pressing [Load/Eject]Key.
Then switch the paper select lever to Single.

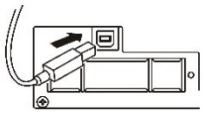
As shown in the picture below, unfold the Paper Guides first. Then Tilt the sheet feeder slightly and push it to the corresponding positioning slot on both sides of the printer until it can no longer move forward.



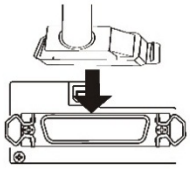
CONNECTING THE INTERFACE CABLE

The USB port is located at the rear of the printer.

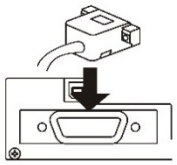
IMPORTANT: Make sure the printer and the computer are switched off before connecting or disconnecting the interface cable to prevent electrical damage to the interface ports.



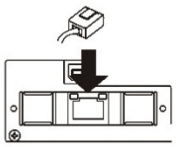
USB Connector



Centronics parallel Connector (Factory Option)



RS-232C Connector (Factory Option)



LAN Connector (Factory Option)

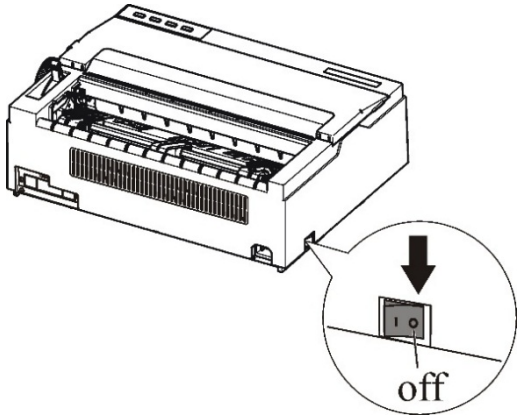
CONNECTING THE POWER SUPPLY

Checking the printer voltage

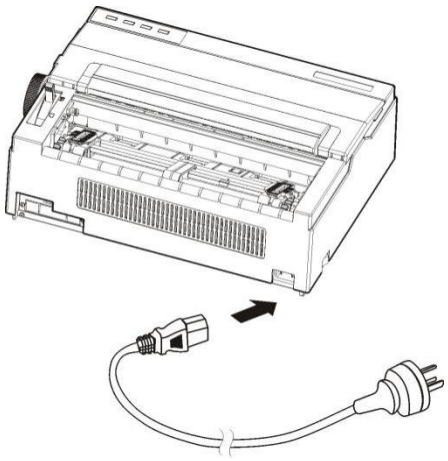
Make sure that the device has been set according to your country's power supply voltage. To do this, check the rating plate at the back of the printer. Contact your dealer if the setting is incorrect.

Never switch on the printer if the voltage setting is incorrect; This may result in electrical damage to the printer.

Make sure that the power switch is in the "O" (off) position.



Connect the power cord to the power inlet of the printer. Connect the power cord plug to a mains socket. Switch on the printer.



INSTALLING THE PRINTER DRIVER

A printer driver is required for using the printer in a Windows environment. Special printer drivers are provided with the DL3100 printer.

For information about how to install printer drivers, refer to ’Printer Driver Installation Giude’ or Readme.txt of the printer driver to be installed.

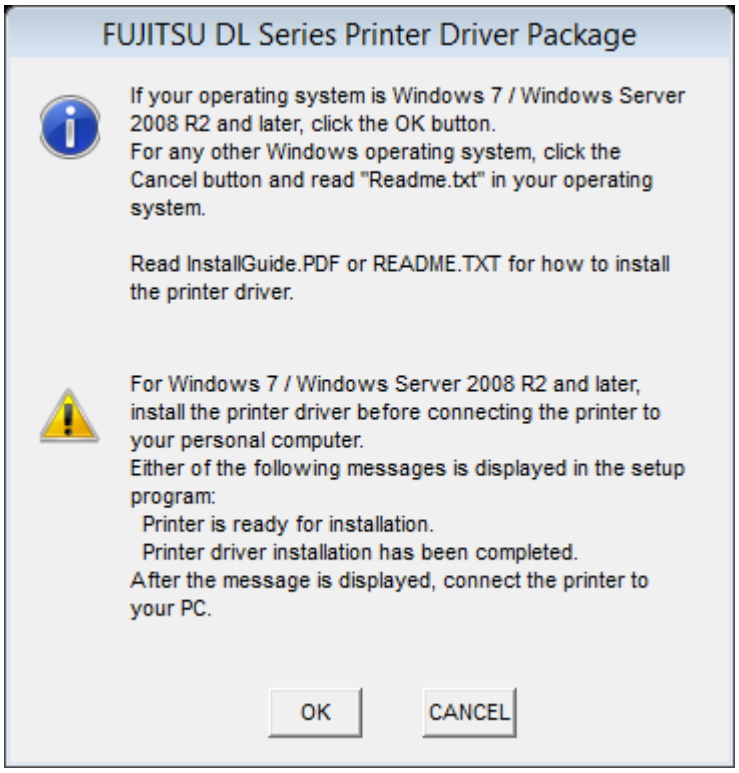
- These printer drivers run with ESC/P2 emulation.
  Be sure to specify ESC/P2 emulation for the printer mode.

- The DL3100 printer driver is a printer driver for monochrome printing.

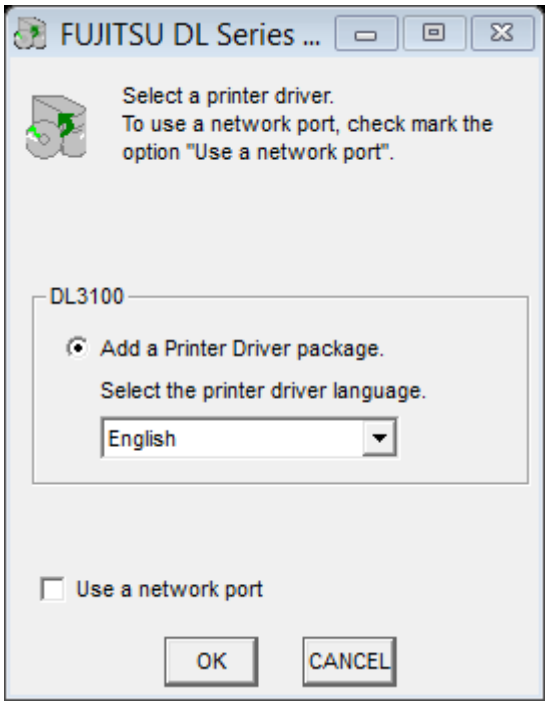
- The color data printing result may differ from its print preview or the monochrome data printing result.

Printer Driver Installation Giude can be opened from 'DL3100 SETUP DISK'.

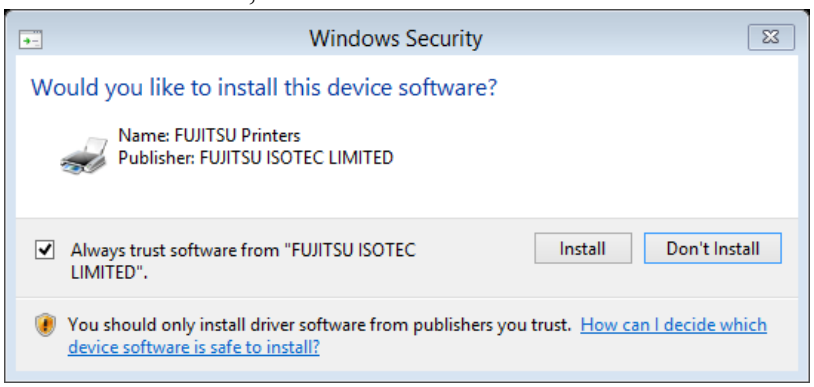
1. Select the installation document “dlsetup” in the driver folder, double click it. The following window will appears, click ”OK”.



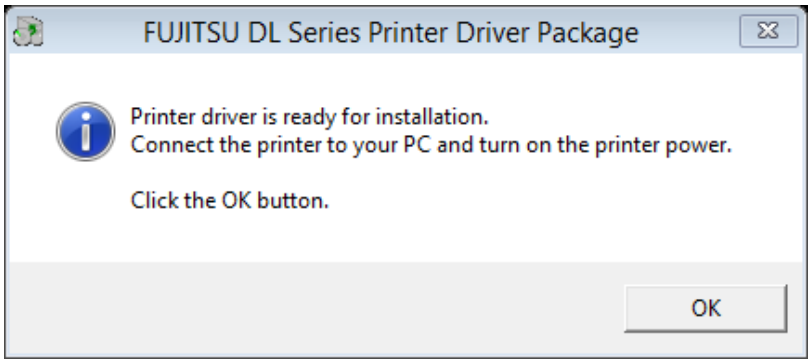
2. Select ”Add a Printer Driver package” and click ”OK” .



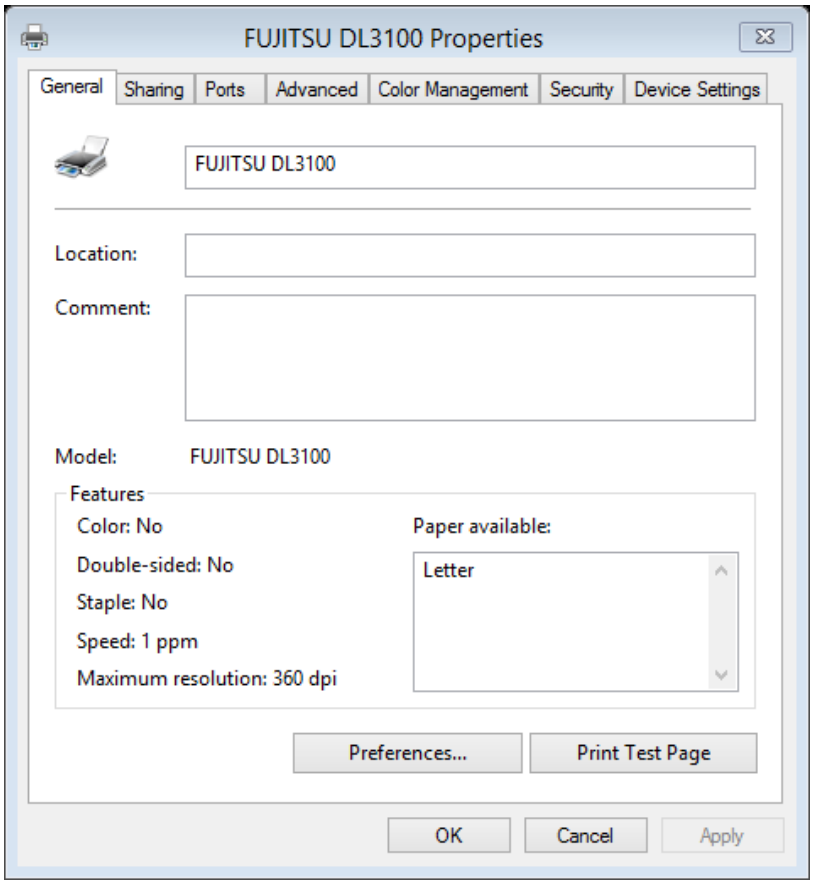
3. If the following window appears, choose the “Always trust software…….”, click “Install”.



4. Connect the printer to the computer and switch on the printer. When the printer power on, it will install the DL3100 driver automatically. When the installation is finished, click “ok”.



5. You can find you printer in the print device in your computer. Right click and then select the Printer properties. Click the “Print Test Page” can print the Driver Test Page.



3

PAPER INSTALLATION GUIDE

The printer can handle either single sheets or continuous forms. Single sheets, also called cut sheets, include envelopes and non-continuous, multipart forms. Continuous forms include labels and multipart forms fed into the printer using the forms tractors. The printer is able to print 1~5 plies multipart paper.

This chapter explains how your printer uses paper.

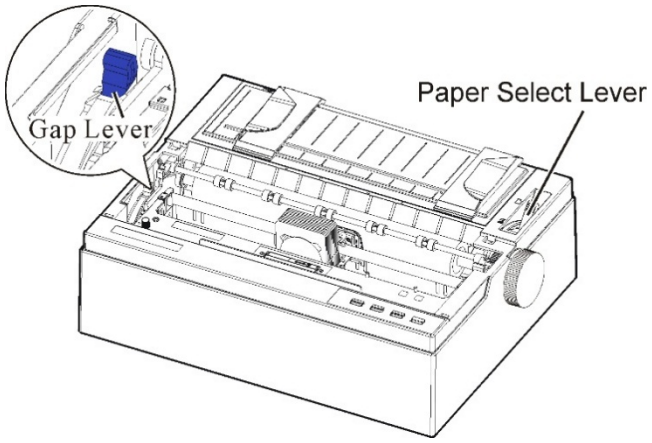
Topics covered are:

- Adjusting the Print Gap Lever
- Friction Feed Handling
- Tractor Feed Handling
- Continuous Paper Placement
- Tips on paper handling

ADJUSTING THE PRINT GAP LEVER

Remove any paper clip or staple. Do not load paper that has been folded or damaged, wrinkled, or curled.

The print gap lever is on the left side of the printer inside the top cover. Take care to adjust the print gap lever to a suitable position whenever you change the number of copies being printed. Using the wrong print gap may cause print head damage or paper jams.

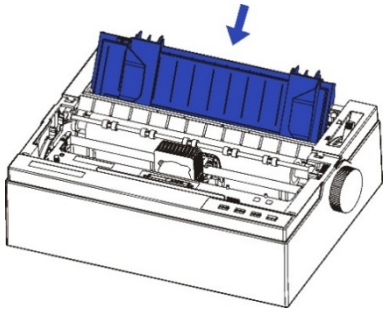


Paper type	Weight (g/m^2) / ply	Gap lever position
Single sheet 2-ply	45~70	1
3-ply	34~70	3
4-ply	34~70	4
5-ply	34~55	5
Change ribbon	---	RIBBON

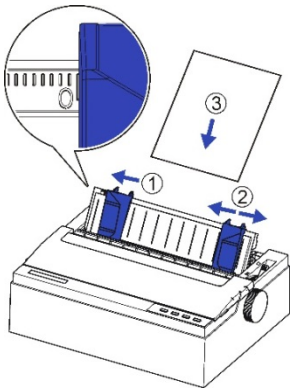
FRICTION FEED HANDLING

There are 2 paper feed modes: friction feed and tractor feed.

1. Raise the single sheet feeder until it locks into its mounting.



2. Move the paper select lever forward to "" for friction feed mode. Make sure that no paper is in the printer when you switch the paper path.
3. Adjust the print gap lever if necessary.
4. Align the left paper guide with the mark on the left of the single sheet feeder.
5. Adjust the right paper guide to the width of the paper used.
6. Insert a sheet of paper. Make sure that the bottom edge of the paper engages snugly with the platen. Please push the paper in manually if the paper does not feed in while the friction roller is running.

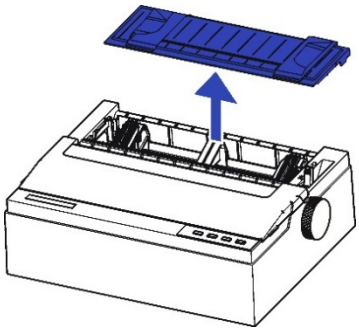


7. The paper should advance automatically to the print position. The printer is now ready to print in the online state.

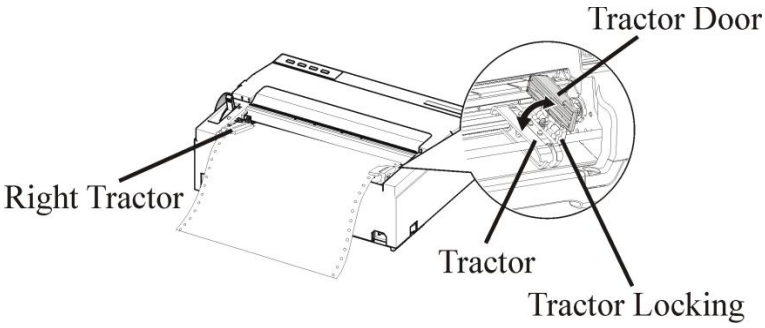
Attention: In case of aligning the guide to the position in the figure, the left end starting position is 0 mm. Adjust it to align to the printing position. Refer to CHAPTER B: PRINTER AND PAPER SPECIFICATIONS for the print area.

TRACTOR FEED HANDLING

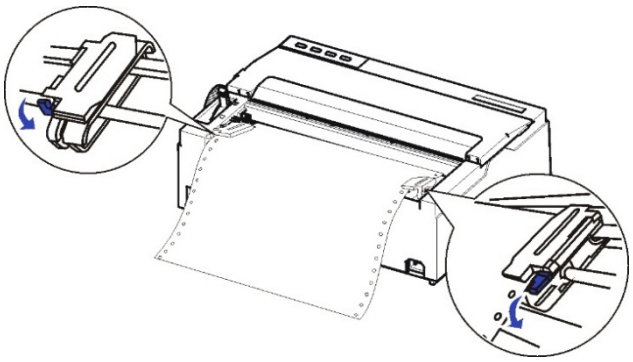
1. Remove the sheet feeder.



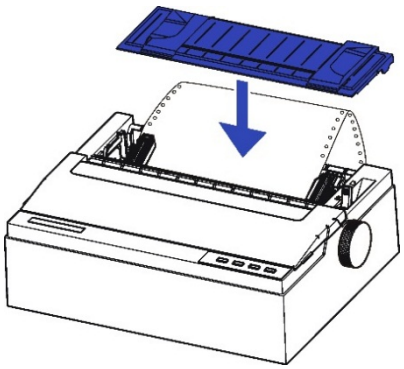
2. Move the paper select lever backward to " " for continuous paper position.
3. Adjust the print gap lever if necessary.
4. Raise the tractor doors and fit the first 3 paper holes onto the left tractor pins. Close the left tractor door. In the same way, install the paper on the right tractor.



5. Adjust the left and right tractor to the width of the paper until the paper is flat. Do not stretch the paper too taut.Press the tractor locking to lock the tractor.



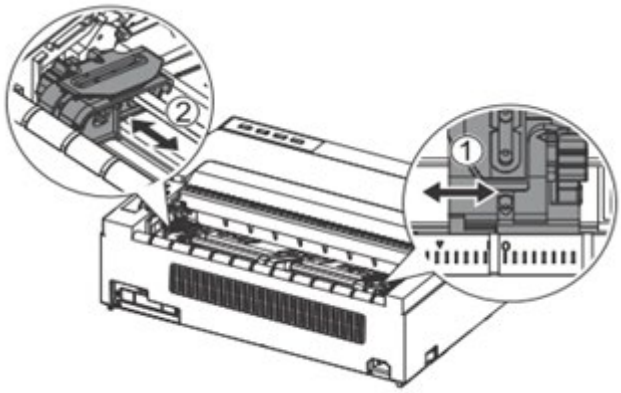
6. Installing the sheet feeder horizontally.



7. Press the [Load/Eject] key to load the paper to the starting print position. The printer is now ready to print in the online state.

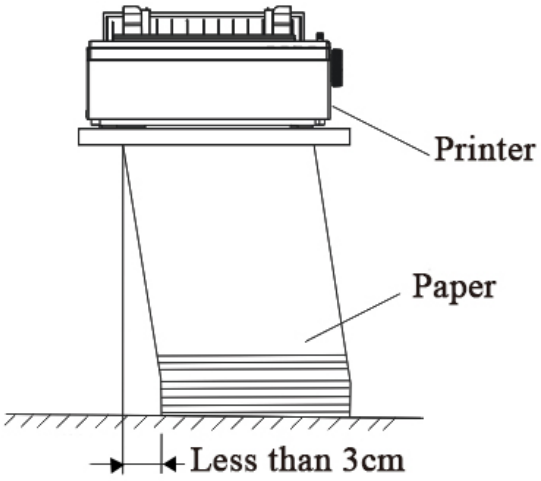
Attention: If you want to use continuous paper, make sure that the sheet feeder is not standing.If the sheet feeder is in state, it may hinder the continuous paper feed and cause a paper jam.

Attention: In case of aligning the guide to the position in the 0 mm, the left end starting position is 0 mm. Adjust it to align to the printing position. Refer to CHAPTER B: PRINTER AND PAPER SPECIFICATIONS for the print area.



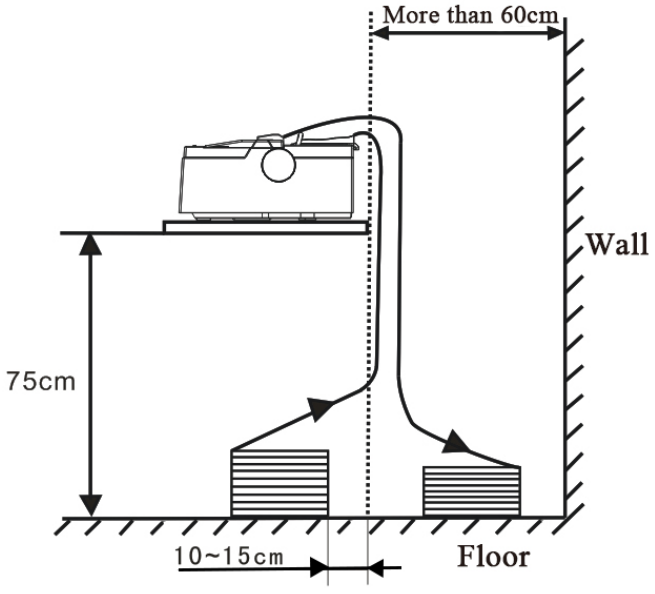
CONTINUOUS PAPER PLACEMENT

1. Place the printer on a solid base. The minimum suitable height of the solid base is 75 cm.
2. Left and right positioning: The direction of continuous paper should be parallel with the sheet feeder. The tolerance should be less than 3 cm.



Attention: If you want to use continuous paper, make sure that the sheet feeder is not standing.If the sheet feeder is in state, it may hinder the continuous paper feed and cause a paper jam.

3. Front and back positioning: The distance between the rear of printer and the wall should be more than 60cm. To avoid paper jam, the distance between the continuous paper and the edge of desk should be 10~15 cm.



TIPS ON PAPER HANDLING

General Tips

- Use high-quality paper. Do not use paper that is wrinkled or curled at the edges.
- Do not use paper with staples or metal parts.
- Do not use paper with unpredictable variations in thickness, such as paper with partial multilayers, paper with embossed printing, and labels with the backing sheet exposed.
- Store paper in a clean, dry environment.

4

CONTROL PANEL OPERATION

This chapter describes the following everyday printing operations:

- LED Indicators
- Control Panel Keys
- Panel Operation
- Online State
- Setup State
- Power-on State

There are 4 switches S1~S4 and 4 LEDs L1~L4. The meaning and application of each switch and LED are described below pages.

Attention: The LED may sometimes light when the platen knob rotates or the carrier moves, even when the power is OFF. Do not unplug or plug in the interface cable when the LED is lit.

LED INDICATORS

LED	Function
L1	Power/Paper Out (Red)
L2	Font1 (Orange)
L3	Font2 (Orange)
L4	Online (Green)

1.“Power/Paper Out” LED:

On: Power on

Flashing: Paper out, Energy saving mode.

Flashing + buzzer: Paper jam

2. **Font 1 and Font 2” LED**

Flashing together: Indicates continuous paper is at tear-off position; otherwise it indicates the selected font.
See table 4.1.

table 4.1

Font Selection Label	L2 State	L3 State
Tear Off	Blink	Blink
Draft	Off	Off
Draft Condensed	Off	On
Roman	Off	Blink
Sans Serif	On	Off
Courier	On	On
Prestige	On	Blink
Script	Blink	Off
Others (see Menu setting)	Blink	On

3. “Online” LED:

On: The printer is in online state and ready to receive data from the computer.

Off: The printer is in offline state and cannot receive data.

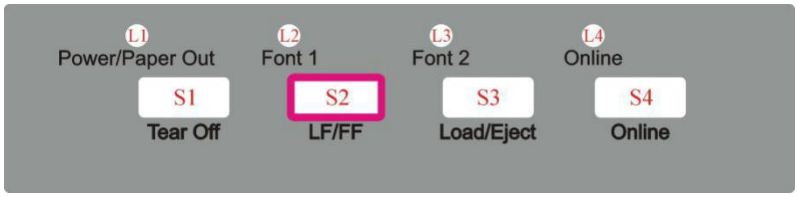
CONTROL PANEL KEYS

Switch	Label
S1	Tear off
S2	LF/FF
S3	Load/Eject
S4	Online

1.“Tear Off” Key:

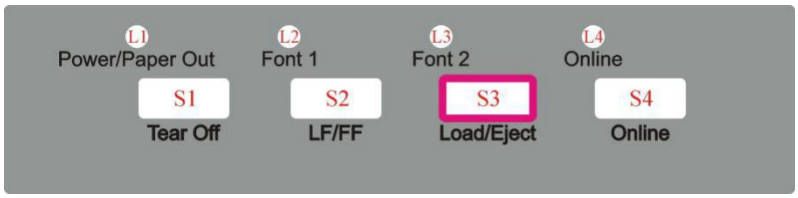
This is valid for tractor mode only. It feeds the form to the tear-off position. After tearing off the form, printing starts on the next TOF by pressing any key or receiving print data from the host.
When online, this key will move any loaded continuous paper to the tear-off position. When in setup state, this key is used to select the desired font.

2.“LF/FF” Key:



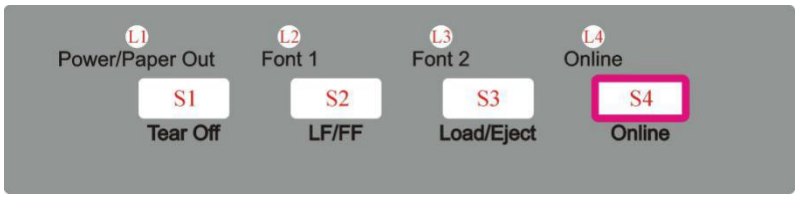
Pressing this key will feed paper one line forward. By holding down this key, the printer will initially feed a few lines, then perform a form feed (continuous paper mode) or eject the form (single sheet mode).

3.“Load/Eject” Key:



Load: Automatically loads the paper (according to path selection) when no paper is on the platen.
Eject: For rear tractor, it retracts the form from the platen to allow users to install cut sheets. (NOTE: Users have to toggle the path selection lever.) For cut sheets, it ejects the form on the platen.
When paper is loaded, pressing this key will eject the paper (single sheet mode) or park the paper (continuous paper mode). When paper is not loaded, pressing this key will load the paper to the starting print position.

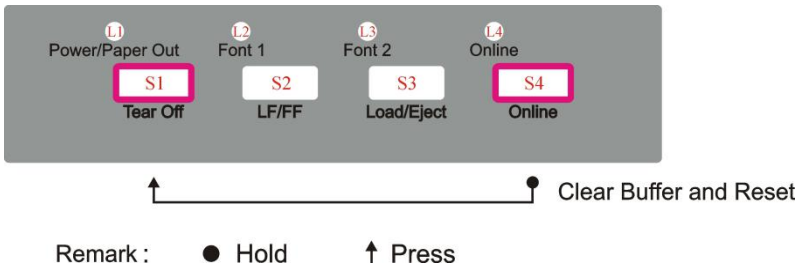
4.“Online” Key:



Toggles between Online and Offline states.

This key switches the printer between online and offline states. Printing is stopped when the printer is switched to offline state. When printer is switched to online state again, printing will resume.

5.“Clear Buffer and Reset” Key:



In offline state, press switch S1 while holding S4.
Clears the print buffer. beeps once upon completion
Pressing S1 longer initializes the printer to default settings.
Beeps 3 times upon completion.

PANEL OPERATION

There are 3 states of operation: Online, Setup and Power On.

In the Online state, the keys provide the following functions: Go to Tear Off position, Line Feed/Form Feed, Load/Eject, Clear Buffer and switch to offline state for accessing to Setup state.

In the Setup state, the keys provide font selection, micro feed and quiet mode printing.

To enter the Power On state, the user holds down a key or a combination of keys while powering up the printer. This state provides the following functions: Hex-dump, Main Menu setup, print Main Menu, print lift-time information, Customize Form.

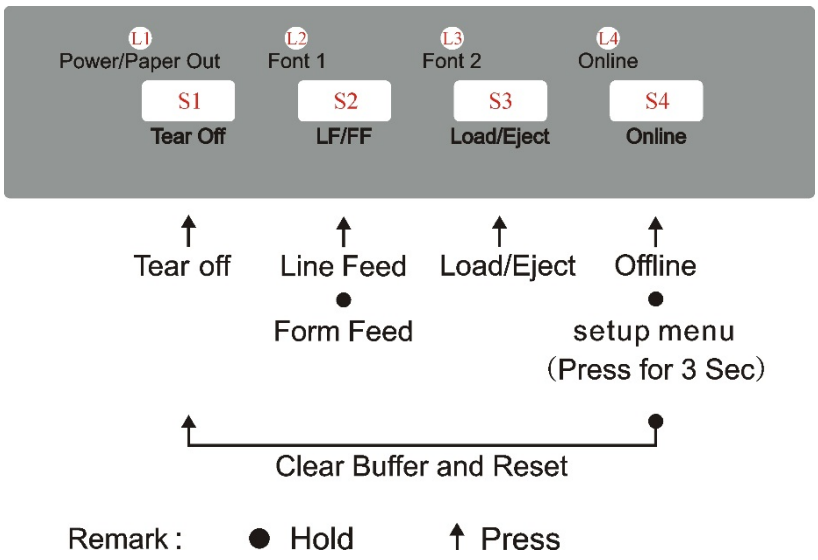
The followings describe the 3 states in details.

Legend:
[A] = press and hold switch A

{B} = press and then release switch B

[A]+ {B} = press switch B while holding A

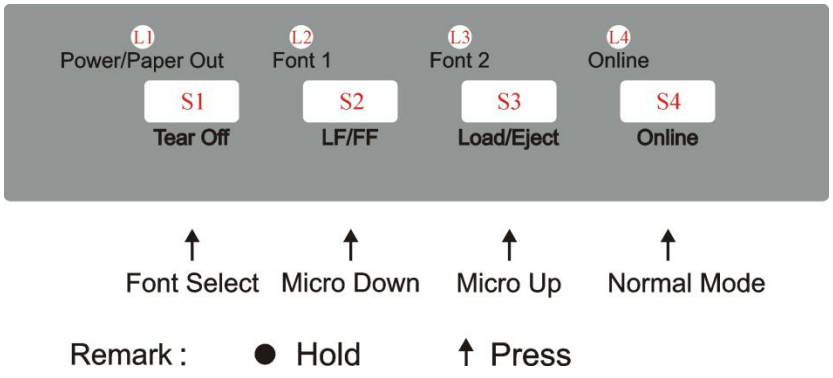
ONLINE STATE



Remark : ● Hold ↑ Press

Function Name	Switch Operation	LED	Function Description
Tear Off	{S1}	L2, L3 flash	This is valid for tractor mode only. It feeds the form to the tear-off position. After tearing off the form, printing starts on the next TOF by pressing any key or receiving print data from the host.
LF	{S2}	--	Feeds one line with every press of S2
FF	[S2]	--	Pressing this key will feed paper one line forward. By holding down this key, the printer will initially feed a few lines, then perform a form feed (continuous paper mode) or eject the form (single sheet mode).
Load/Eject	{S3}	--	Load: Automatically loads the paper (according to path selection) when no paper is on the platen. Eject: For rear tractor, it retracts the form from the platen to allow users to install cut sheets. (NOTE: Users have to toggle the path selection lever.) For cut sheets, it ejects the form on the platen.
Online	{S4}	L4 on or off	Toggles between Online(L4 on) and Offline states(L4 off).
Setup State	[S4]	L4 flash	Hold the S4 key for 3 seconds. Toggles to 3s Setup state. Indicated by flashing L4.
Clear Buffer and Reset	[S4]+{S1}	--	Clears the print buffer. Beeps once upon completion. Pressing S1 longer initializes the printer to default settings. Beeps 3 times upon completion.

SETUP STATE

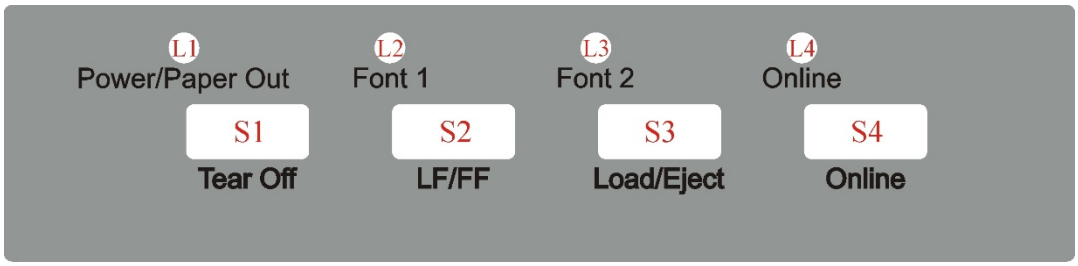


3 seconds setup state

Function Name	Switch Operation	LED	Function Description
Online state	{S4}	L4 on	Toggling to the Online state will cause the printer to go into a ready-to-print state. Any changes made in Setup state will be saved permanently. Lighting up L4 indicates the Online state.
Micro UP	{S3}	--	Press S3 to micro feed paper up.
Micro Down	{S2}	--	Press S2 to micro feed paper down.
Font Select	{S1}	L2, L3	Refer to Table 4.1 for details.

2 Seconds setup state

Hold the S3 key for 2 seconds,toggles to 2s Setup state. Indicated by flashing L1.In the 2 seconds setup state,Press S1(Tearoff button)can choose the silent mode, the buzzer will call, you can set the automatic silent mode,print once,print twice, and print thrice.

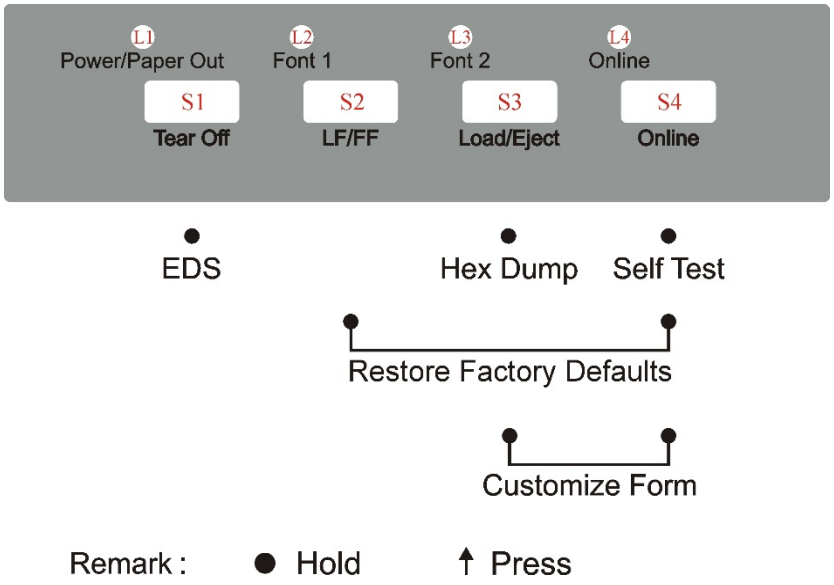


Quiet Mode

Remark : ● Hold ↑ Press

Function Name	Switch Operation	LED	Function Description
Automatically determines the number of prints based on the segmentation mode	{S1}	--	Press S1(Tearoff button)can choose the silent mode, the buzzer will call, you can set the automatic silent mode,print once,print twice, and print thrice.
print once (Segmentation is invalid)	{S1}	--	
print twice (Parity print)	{S1}	--	
print thrice (8 dots/group)	{S1}	--	

POWER-ON STATE



Function Name	Switch Operation	LED	Function Description
Hex Dump	[S3]	--	Beeps once to indicate going into hex dump mode: Prints data from host in hexadecimal representation. Pressing S4 suspends the printing. When the hex dump has finished, pressing S4 forces the printing of the last line of data, as any line termination control code from host has no function. Switch off the power to terminate the hex dump.
Menu Setup / EDS	[S1]	--	Allows for Main Menu setting changes. Please read the instructions printed on how to change settings when this mode is activated. Refer the Chapter5:Printer Setting Changes. (EDS: Electronic DIP Switch)
Self Test / Status Page	[S4]	--	Prints the printer settings and self-test pattern.
Restore Factory Defaults	[S2] + [S4]	--	Restore all settings to factory defaults. The carriage initializes and the printer beeps once after restoration.
Customize Form	[S3] + [S4]	--	To customize the margins and tear-off position, please refer Chapter 6 for details.

5

PRINTER SETTING CHANGES

In order to meet specific print requirements, the printer configurations may be changed as follows: Hold down the [Tear off] key while powering on the printer and then release the key when the print head starts to move. The printer will enter Main Menu setup state. Follow the instructions printed on how to make setting changes. When a new setting is saved, it is retained after the printer has been powered off.

The Printer Settings menu contains 8 sub-menus: System Setup, Paper Setup, Interface Setup, Character Setup, Other Setup, Bi-directional Alignment, BlackMark Mode.

This chapter describes the following operations:

- System Setup
- Paper Setup
- Interface Setup
- Character Setup
- Other Setup
- Black Mark Parameters
- Bidirectional Alignment

Note: Bold italic item is the default setting.

SYSTEM SETUP

System setup	Valid Settings	Function
Language	***English***, Deutsch, Россия, Italiano, Français, Español, Türkçe, Português	Allows user to select one of the following languages: English, German, Russian, Italian, French, Spanish and Turkish, Portuguese
Emulation	***ESC/P2,*** IBM	Selects the printer emulation. This should be the same as the host printer driver.
Auto CR (ESC/P2)	No, ***Yes***	Yes: LF = LF+CR; No: LF = LF (Applies to ESC/P2 emulation only)
Auto CR (IBM)	***No***, Yes	Yes: LF = LF+CR; No: LF = LF (Applies to IBM emulation only)
Auto LF	***No***, Yes	Yes: CR = CR+LF; No: CR = CR
Print Dir	***Bi-Dir***, Uni-Dir	Bi-Dir: Graphics and text are printed in both directions, resulting in faster printing speed. Uni-Dir: Graphics and text are printed from left to right, resulting in higher precision.
Form Line	Disable, ***Enabled***, Dashed, NoPrint	Disable: Grids in block graphics are disjoint, but grids by graphics commands or slanted grids (block graphics) are not affected. Enabled: Vertical grids are continuous in all line spacing. Dashed: Horizontal grids are printed in dotted lines and vertical grids are not affected. NoPrint: Grids are not printed. But nested grids (by graphical commands) above 2 levels deep are printed.
Zero	***0***, Ø	0: No-slashed Zero 0. Ø: Slashed Zero Ø.
LQ Text Quality	***LQ***, NLQ	The “LQ Text Quality” parameter is invalid when Font is set to Draft. When Font is set to another font other Draft, the “LQ Text Quality” parameter will determine whether to print in NLQ mode or LQ mode.
Change Pin#1:	***No,*** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	Defines the first broken / worn out pin. This pin will be substituted by an adjacent pin in the second pass printing. No: Not to substitution of the worn out pin.
Change Pin #2	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	Defines the first broken / worn out pin. This pin will be substituted by an adjacent pin in the second pass printing. No: Not to substitution of the worn out pin.

System setup	Valid Settings	Function
Power-Saving	OFF, ***1min,*** 2min, 5min, 10min	Defines the idle period before the printer gets into Save-energy Mode. OFF: The printer never goes into Save-energy Mode.
MultiPaper	Disable, ***Standard***, Enhance	Disable: The printer ignores the determination of paper thickness sensor; it keeps the impact force and the print speed unchanged. Standard: The printer increases the impact force and reduces the print speed. Enhance: The printer prints with even stronger impact force and slower print speed.
Impact	***Normal***, Heavy	Normal: The print speed is faster causing head hot easily and the impact force is weaker. Heavy: The print speed is reduced, resulting better thermal performance and copy capability.
Graphic Speed	***Normal***, Fast, Ultra	Selects different print quality and print speed for graphic.
Intrusion light mode	***No***, Yes	When intrusion light causes printer error, please set [YES] to continue printing.

PAPER SETUP

Paper Setup	Valid Settings	Function
Single FormLen	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, *11*, 12, 14, A4, B4, Define	Sets the page length in inches for single paper
Single Top	-1, 0, 1, ***1.8***, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, Define	Defines the separation in1/6 inches from the top edge of a single paper to the first print line.
Single Bottom	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Define	Defines the separation in inches from the bottom edge of a single paper to the last print line.
Single Left Mrg (1/90inch)	***0*****,** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,Define	Compensation value added to Single Left Mrg.
Single Top Mrg (1/180inch)	***0***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28	Compensation value added to Single Top.
Single Auto Load	Disable, 0.5sec, ***1sec***, 1.5sec, 2sec	Defines the setting time before a single sheet is loaded. Disable: Press the [Load/Eject] key manually to load a single sheet.
Fanfold FormLen	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Define	Sets the Page Length for fanfold.
Fanfold Top	-1, 0, 1, ***1.8***, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, Define	Defines the separation in 1/6inches from the top edge of a fanfold to the first print line.
Fanfold Bottom	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Define	Define the separation in inches from the bottom edge of a fanfold to the last print line.

Paper Setup	Valid Settings	Function
Fanfold Left Mrg (1/90inch)	***0***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, Define	Compensation value added to Fanfold Left Mrg.
Fanfold Top Mrg (1/180inch)	***0***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28	Compensation value added to Fanfold Top.
Fanfold Auto Load	No, ***Yes***	Yes: The printer loads paper to the first printing position automatically when using fanfold. No: Press the [Load/Eject] key to load paper when using fanfold.
Skip	***No***, Yes	Skips printing on perforation area. Only valid to fanfold. Yes: Blank lines between 2 pages. No: No blank lines between 2 pages.
Tear	Auto, ***Manual***, View, Auto@FF	Auto: Form Feed command from the host causes the printer to advance the paper to the tear-off position. Printing resumes on the TOF on next page. Manual: After the completion of a print job, press a panel key to advance the paper to the tear-off position. View: No incoming print data in 1~2 seconds after printing completed causes the printer to advance the paper by 2 lines. Printing resumes 2 lines below the torn edge. Auto@FF: a formfeed command is necessary to auto feed the form to tear position.
Paper End Detect	No***, Yes***	Yes: The printer stops printing if out of paper. No: The printer continues printing even out of paper.

Paper Setup	Valid Settings	Function
Compress	***Disable,*** 11:8, 13.6:8, Auto	Disable: No compression on the print line exceeding the printable width. Auto: The print squeezes an over-width print line (not exceeding 22" in contents) to the printable width. Other Compression Ratio: For example, a ratio of 11: 8 commands the printer to take this line compression ratio. **Remark: The compression is disabled after printer reset or loading a new page.
PaperCheck	Invalid, Anti-jam, ***Anti-skew***, Valid	Determines if the cut sheet is jammed or skew. Invalid: Disables the detection of both. Anti-jam: Detect paper jam only. Anti-Skew: Detect paper skew only. Valid: Enables the detection of both.
Buzzer	No, ***Yes***	No: Buzzer does not sound if out of paper. Yes: Buzzer sounds if out of paper.
Tear Position	***Invalid,*** Detect, Record	This printer saves the tear-off position before switched off. After switched on, the printer if any change in the tear-off position and determines the start printing position. Invalid: Printing starts from previously switched off position. Detect: If the tear-off position is unchanged or smaller, printing starts from TOF position. If larger, printing starts from previously switched off position. Record: If the tear-off position is unchanged, printing starts from TOF position. If changed, printing starts from previously switched off position.

Paper Setup	Valid Settings	Function
APW (Auto Paper Width detection)	***No,*** Yes	Yes: Measures the width of the paper automatically after loading the paper. No: Disables page width measurement. NOTE: The printer is equipped with a page width sensor called “APW”. If the sensor is defective, the “APW” setting will not appear in the menu; The [Power] LED blinks, [Font 1] and [Font 2] have no change, [Online] LED is off.
BlackMark	***No***, Yes	No: Disables paper width sensor. Yes: Enables paper width sensor. When “Yes” and online, pressing the [Tear Off] key advances the paper to the tear-off position. BlackMark commands: (also see section 5.7) • 1D 0C: Feeds paper to the print position designated by the black mark. Advance the paper to the tear-off position after printing. • 1C 28 4C 03 00 42 m: m = 0: feeds paper to the print position designated by the black mark. m = 1: feeds paper to the black mark tear-off position.
Width	***8.0inch***, PaperWidth	8.0inch: The maximum print width is 80 columns of 10cpi PICA characters. Paper Width: Sets the detected page width as print width. Enabling APW is required.
FormLen MicroAdj	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Fine tunes the form-length by n/360" (0.07mm) based on the default value. (Valid for single papers and fanfolds.)

Paper Setup	Valid Settings	Function
Bail mode	Invalid, ***Standard,*** Special	The bail mode presses the paper against the print platen during printing, but it is released for paper loading. Invalid: If you uninstall the lever or want to disable the function, set this setting to “invalid”. Standard: Release the lever for paper loading and lower the lever to press the paper against the platen during printing. Special: When the paper is in tear-off position, after the printer received printing data, the printer will judge whether tear-off was implemented first. If tear-off was implemented and printing position is in lever area, then the printer will press the lever; If tear-off was not implemented, the printer will not press the lever.
Roll Paper	***No***, Yes	In friction mode, [LF/FF] will not eject the paper and feed to next page. (Assume roll paper)
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic	Set the line feed correction quantity for single paper. (Correct the line feed deviation when the line feed is approximately 1 inch. If the printing position deviates in the upward direction, correct it in the + direction.) Regarding the correction quantity, A is larger than D. NOTE: The Restore function cannot reset those options which are handled by the Single LF Adj settings. Single LF Adj is correct when shipped.

Paper Setup	Valid Settings	Function
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic	Set the line feed correction quantity for continuous paper. (Correct the line feed deviation when the line feed is approximately 0.5 inch. If the printing position deviates in the upward direction, correct it in the + direction.) Regarding the correction quantity, A is larger than D. NOTE: The Restore function cannot reset those options which are handled by the Fanfold LF Adj settings. Fanfold LF Adj is correct when shipped.
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic	Set the line feed correction quantity for single carbonless copy paper. (Correct the line feed deviation when the line feed is approximately 1 inch. If the printing position deviates in the upward direction, correct it in the + direction.) Regarding the correction quantity, A is larger than D. NOTE: The Restore function cannot reset those options which are handled by the Single LF Adj Multi settings. Single LF Adj Multi is correct when shipped.
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic	Set the feed correction quantity for continuous carbonless paper. (Correct the line feed deviation when the line feed is approximately 0.5 inch. If the printing position deviates in the upward direction, correct it in the + direction.) Regarding the correction quantity, A is larger than D. NOTE: The Restore function cannot reset those options which are handled by the Fanfold LF Adj Multi settings. Fanfold LF Adj Multi is correct when shipped.

INTERFACE SETUP

Interface setup	Valid Settings	Function
PnP	No, ***Yes***	No: Disables plug and play for USB Yes: Enables plug and play.
USB ID	***No***, Yes	No: Disables USB ID. Yes: Enables USB ID

*The following options can only be set when carrying the RS232C Interface

Interface setup	Valid Settings	Function
Interface	***Share***,USB,Serial	Share: Printer can detect the type of input signal and activate the USB or RS232C serial port automatically. USB: The printer can only use USB port. Serial: The printer can only use RS232C serial port.
Baud Rate	***9600***,19200,38400, 4800,2400,1200, 115200	This parameter chooses the transmission rate of RS232C serial interfaces.
Data Bit	***8***,7	8: The number of each bit is 8. 7: The number of each bit is 7.
Parity Check	***None***,Odd,Even	None: Bidirectional transmission has no odd-even check. Odd: Bidirectional transmission uses Odd parity. Even: Bidirectional transmission uses Even check.
Stop Bit	***1***,2	1: Transmit data bytes use one stop bit. 2: Transmit data bytes use two stop bits.
Data Stream	No,Hardware, ***Xon/Xoff***	No: RS232C serial port has no flow control Hardware: RS232Cserial port flow control is hardware. Xon/Xoff: RS232Cserial port flow control is software.

* The following options can only be set when carrying the Parallel interface

Interface setup	Valid Settings	Function
Interface	***Share***,LPT,USB	Share: Printer can detect the type of input signal and activate USB port or LPT port automatically. LPT: Printer can only use LPT port. USB: Printer can only use USB port.
LPT Initial	NO,***Yes***	NO: Receive Initial, printer does not reset. Yes: Receive Initial, printer reset.
LPT ACK Ctrl	***Type 1***, Type 2, Type 3, Type 4, Type 5	The parameter chooses the width of parallel interface ACK signal.
LPT STORBE Ctrl	Rising,***Falling***	Rising: Rising edge is valid. Falling: Falling edge is valid.
LPT BI Model	SPP,***NIBBlE***	SPP: LPT Bidirectional mode is SPP. NIBBLE: LPT Bidirectional mode is NIBBLE

* The following options can only be set when carrying the Ethernet interface

Interface setup	Valid Settings	Function
Interface	***Share***,USB,Ethernet	Share: Printer can detect the type of input signal and activate USB port or LAN port automatically. USB: Printer can only use USB port. Ethernet: Printer can only use LAN port.
DHCP	Disable,***Enable***	Turn on or turn off DHCP, Disable indicates turn off, Enable indicates turn on
IP Addr	***0.0.0.0***	Printer IP address, IP address can be changed if required
Mask	***255.255.255.0***	Subnet Mask
Gate	***0.0.0.0***	Default Gateway

CHARACTER SETUP

Character setup	Valid Settings	Function
Character Table	Italic, ***Graphic***	Italic: Selects standard character sets. Please refer to Standard character set 2 table in Chapter E for details. Graphic: Selects IBM character sets. Please refer to IBM character set 2 table in Chapter E for details.
Character Group	Group 1, ***Group 2***	The interpretation of ASCII codes between 0x80~0x9F: Group 1: as control codes. Group 2: as printable characters.
Int'l Char Set	***USA***, France, Germany, UK, Denmark I, Sweden, Italy, Spain I, Japan, Norway, Denmark II, Spain II, LatinAm, Denmark, China	International character set selections
HS-Draft	***No***, Yes	Yes: Prints High Speed Draft when Draft font is selected.
Font	Daft, DraftCond, Roman, Sans Serif,***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir	Selects the font.
Pitch (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24, PS	Controls the characters per inch setting.

Character setup	Valid Settings	Function
Code Page	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861,CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama	Code page selections
15cpi Style	***Small***, Normal	Sets the height for 15CPI character. Small: prints in 1/8” height Normal: prints in full height
AGM (IBM)	***No***, Yes	Activates or deactivates the AGM (Alternative Graphics Mode) mode in IBM emulation

OTHER SETUP

Other setup	Valid Settings	Function
Form Length Ctrl	No, ***Yes***	No: Form length commands are invalid. Yes: Form length commands are valid.
Print Speed Ctrl	No, ***Yes***	No: Print speed commands are invalid. Yes: Print speed commands are valid.
Pitch Ctrl	No, ***Yes***	No: Ignores CPI commands Yes: CPI commands are valid
Font Ctrl	No, ***Yes***	No: Ignores font select commands Yes: font select commands are valid
Uni-Dir Ctrl	No, ***Yes***	No: Uni-Direction print commands are. Yes: Uni-Direction print commands are valid.

German (Deutsch)

Systemeinstellung	Gültige Werte
Sprache	English, ***Deutsch***, Россия, Italiano, Français, Español, Türkçe, Português
Emulation	***ESC/P2***, IBM
Auto CR (ESC/P2)	Nein, ***Ja***
Auto CR (IBM)	***Nein***, Ja
Auto LF	***Nein***, Ja
Druck Dir	***Bi-Dir***, Uni-Dir
Tabellenlinien	Gestrichelt, ***Verbunden***, Gepunktet, Deaktiviert
Null	***0***, Ø
Textqualität	***LQ***, NLQ
Ersetze 1. Nadel	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Ersetze 2. Nadel	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Energiesparmodus	Aus, ***1min***, 2min, 5min, 10min
Mehrlagiges Drucken	Ungültig, ***Standard***, Verstärkt
Impact Mode	***Normal***, Stark
Graphikgeschw.	***Normal***, Schnell, Ultra
Intrusion light mode	***Nein***, Ja

Papier Setup	Gültige Werte
Einzel Länge	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definiert
Einzel Ob Rand	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, Definiert
Einzel Unt Rand	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definiert
Einzel Li Rand	***0***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, Definiert
Einzel Ob Rand Fein	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Einzel Auto laden	Ungültig, 0.5sec, ***1sec***, 1.5sec, 2sec
Endlos Form länge	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definiert
Endlos Ob Rand	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, Definiert
Endlos Unt Rand	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definiert
Endlos Li Rand	***0***, 1, 2, 3, 4, 5, 6, 7,8,9,10, Definiert
Endlos Ob Rand Fein	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Endlos Auto Laden	Nein, ***Ja***

Papier Setup	Gültige Werte
Perforationssprung	***Nein***, Ja
Abreißen	Auto, ***Manuelles***, Kurz, Auto@FF
Papierendeerkennung	Nein, ***Ja***
Komprimieren	***Ungültig***, 11: 8, 13.6: 8, Auto
Papierhandhabung	Aus, Anti-Stau, ***Anti-Schräg***, Ein
Summer	Nein, ***Ja***
Abreißposition	***Nein***, Erkennen, Speichern
APW	***Nein***, Ja
BlackMark	***Nein***, Ja
Druckbreite	***8.0inch***, Papierbreite
FormLäng Fein	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Andruckbügelmodus	Ungültig, ***Standard***, Spezial
Rollenpapier	***Nein***, Ja
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Schnittstellen Setup	Gültige Werte
PnP	Nein, ***Ja***
USB ID	***Nein***, Ja

Zeicheneinstellung	Gültige Werte
Zeichentabelle	Italic, ***Graphic***
PC-Zeichensatz	Gruppe 1, ***Gruppe 2***
Land	***USA,*** Frankreich, Deutschland, U.K., Dänemark I, Schweden, Italien, Spanien I, Japan, Norwegen, Dänemark II, Spanien II, Lat-Amerika, Dänemark, China
HS-Draft	***Nein***, Ja
Schriftart	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script,OCR B, OCR A, Orator, Gothic, Souvenir
Laufweite (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24, PS

Zeichensatz	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
15cpi Stil	***Schmal,*** Normal
AGM (IBM)	***Nein***, Ja

Erweitertes Setup	**Gültige Werte**
Formularlänge Strg	Nein, ***Ja***
Geschwindigkeit Strg	Nein, ***Ja***
Laufweite Strg	Nein, ***Ja***
Font Strg	Nein, ***Ja***
Uni-dir Strg	Nein, ***Ja***

Russian (Россия)

обновление системы	Правильные значения
язык	English, Deutsch, ***Россия***, Italiano, Français, Español, Türkçe, Português
Эмуляция	***ESC/P2***, IBM
Авто CR (ESC/P2)	НЕТ, ***ДА***
Авто CR (IBM)	***НЕТ***, ДА
Авто LF	***НЕТ***, ДА
Направленние печати	***однонапрВ***, дВунапрВ
Контурная линия	отключен, ***Подключен***, лунктирная, безпечати
Нолb	***0***, Ø
Текст качества	***LQ***, NLQ
Замена 1. иглы	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Замена 2. иглы	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Экономный режим	выключено, ***1мин***, 2мин, 5мин, 10мин
Многослойная печать	недейств, ***Обычный,*** усилен
воздействия	***Нортально***, сильно
Скорость печати	***Норталь***, быстро, ультра
Intrusion light mode	***НЕТ***, ДА

Настройка страницы	Правильные значения
Длина форм лист	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, олределен
Сверху отступ Лист	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, олределен
Снизу отступ Лист	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, олределен
Слева отступ Лист	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, олределен
Верх отс. Л. Тонко	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Автом Загруз Лист	недейств, 0.5sec, ***1sec***, 1.5sec, 2sec
Длина форм Непрер	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, олределен
Сверху отступ Непрер	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, олределен
Снизу отступ Непрер	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, олределен
Слева отступ Непрер	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, олределен
Верх отс. Тонко Непр	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Автом загруз Непрер	НЕТ, ***ДА***

Настройка страницы	Правильные значения
Пропуск перфорации	***НЕТ***, ДА
Отрыв бумаги	*Авто*, ***ручной***, короткий, Авто@FF
Олредел конец бумаг	НЕТ, ***ДА***
Сжатие	***Недейств***, 11: 8, 13.6: 8, Auto
Обрашение с бумагой	Лодключен, Анти-застой, **Анти-склон**, отключен
Сигнал	НЕТ, ***ДА***
Позиции отрыва	**Лодключен**, олредение, запись
Олред ширины бумаги	***НЕТ***, ДА
черной метки	***НЕТ***, ДА
Ширина печати	***8.0inch***, Ширина бумаги
Микродлинформ бумаг	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Мод.лрижимн.Скоба	Недолустимо, **стандарт**, Слециалbно
Рулонная бумага	***НЕТ***, ДА
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Настройка интерфейс	Правильные значения
PnP	НЕТ, ***Да***
USB ID	***НЕТ***, Да

Настройка знаков	Правильные значения
Таблица знаков	Italic, ***Graphic***
Группа символов	Группа I, ***группа 2***
Набор знаков	***США***, франция, Германия, U.K., Дания I, Швеция, итапия, испания I, япония, Норвегия, Дания II, испания II, Лат Америка, Данияя, Китай
Bbl с o3ад pkopocтb	НЕТ, ***Да***
Шрифт	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir
Шаг (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24, PS

Настройка знаков	Правильные значения
Кодовая страница	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
Способ печатс 15 cpi	***Мепкий***, Обычный
AGM (IBM)	***НЕТ,*** Да

Другие настройки	Правильные значения
длина формуляр Ctrl	НЕТ, ***Да***
скорости Ctrl	НЕТ ***Да***
Шаг Ctrl	НЕТ, ***Да***
ШриФт Ctrl	НЕТ, ***Да***
однонаправленной Ctrl	НЕТ, ***Да***

Italian (Italiano)

Setup sistema	Impostazioni Valide
Linguaggio	English, Deutsch, Россия, ***Italiano***, Français, Español, Türkçe, Português
Emulazione	***ESC/P2***, IBM
Auto CR (ESC/P2)	No, ***Si***
Auto CR (IBM)	***No***, Si
Auto LF	***No***, Si
Direz.Stampa	***Bi-Dir***, Uni-Dir
Linee Formato	Disconnessa, ***Connessa***, riga aghi, Non stampa
Zero	***0***, Ø
Qualità di testo	***LQ,*** NLQ
Primo ago rotto	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Secondo ago rotto	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Risparmio Energia	OFF, ***1min***, 2min, 5min, 10min
Stampa multicopia	Non valido, ***Copia STD***, più impatto
Modo Impatto	***Normale***, Pesante
Veloc. Grafica	***Normale***, Veloce, Ultra
Intrusion light mode	***No***, Si

Imposta carta	Impostazioni Valide
Lunghezza Foglio	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definito
Margine Sup. Foglio	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, Definito
Margine Infer. Foglio	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definito
Regola foglio a SX	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Definito
Regola Sup. Foglio	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22, 23,24,25,26,27,28
Autocarica foglio	Non valido, 0.5sec, ***1sec***, 1.5sec, 2sec
Lungh. Mod. Continuo	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definito
Margine Superiore	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, Definito
Mar. Inf. Continuo	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definito
Regola a SX continuo	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Definito
Regola Sup. continuo	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22, 23,24,25,26,27,28
Autocarica continuo	No, ***Si***

Imposta carta	Impostazioni Valide
Salto Perforazione	***No***, Si
Strappo	Auto STP, ***STP manuale***, STP corto, Auto@FF
Vede fine carta	No, ***Si***
Comprime	***Non valido***, 11:8., 13.6:8, Auto
Gestione carta	Invalido, Non inceppa, ***Antiscivolo***, Valido, ,
Cicalino	No, ***Si***
Posizione STP	***Invalido***, Rileva, Registra
APW	***No***, Si
Segno nero riferim	***No***, Si
Larghezza stampa	***8.0inch***, Larghezza carta
Regola lung. Carta	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Barra rullini	Non valido, ***Standard***, Speciale
Rullo Carta	***No***, Si
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Setup IF	Impostazioni Valide
PnP	No, ***Si***
ID USB	***No***, Si

Imposta caratteri	Impostazioni Valide
Tabella Caratteri	Italico, ***Grafica***
Gruppo Carattere	Groupo 1, ***Group 2***
Set Carat. Int.	***USA***, Francia, Germania, Regno Unito, Danimarca I, Svezia, Italia, Spagna I, Giappone, Norvegia, Danimarca II, Spagna II, Danimarca, Porcellana
HS-Bozza	***No***, Si
Fonte	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir
Spaziatura (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24, PS

Imposta caratteri	Impostazioni Valide
Code Page	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
Stile 15 CPI	***Piccolo***, Normale
AGM (IBM)	***No,*** Si

Altri Setup	Impostazioni Valide
Comando lunghezza	No, ***Si***
Comando velocità	No, ***Si***
Comando Spaziatura	No, ***Si***
Comando Fonte	No, ***Si***
Comando stampa mono	No, ***Si***

French (Français)

Configuration Système	Paramètres Valides
Language	***English***, Deutsch, Россия, Italiano, ***Français***, Español, Türkçe, Português
Emulation	***ESC/P2***, IBM
RC-Auto (ESC/P2)	Non, ***Oui***
RC-Auto (IBM)	***Non***, Oui
SL-Auto	***Non,*** Oui
Dir Impr	***Bidir***, Unidir
Ligne forméà	Discontinue, ***Continue***, Pointillé, Non imprime
Zéro	***0***, Ø
Qualité du texte	***LQ,*** NLQ
Changer aiguille 1	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Changer aiguille 2	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Economie Energie	Non, ***1mn***, 2mn, 5mn, 10mn
Impr. multi-copies	Non, ***Standard***, Renforcé
Mode Impact	***Normal***, Fort
Vitesse graphiq	***Normal***, Rapide, Ultra
Intrusion light mode	***Non***, Oui

Réglage papier	Paramètres Valides
Feuille LongPage	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Définie
Bord Sup. Feuille	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37, 38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55, 56,57,58,59,60,61,62,63,64,65,66, Définie
Bord Inf. Feuille	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Définie
Marge Gauche Feuille	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Définie
Marge Haute Feuille	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Charg. Auto Feuille	Non, 0.5sec, ***1sec***, 1.5sec, 2sec
Listing LongPage	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Définie
Listing Bord Sup.	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37, 38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55, 56,57,58,59,60,61,62,63,64,65,66, Définie
Listing Bord infér.	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1,Définie
Listing Marge Gauche	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Définie
Listing Marge Haute	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Listing Charg. Auto	Non, ***Oui***

Réglage papier	Paramètres Valides
Saut perforation	***Non***, Oui
Coupe	Auto, ***Manuelle***, Courte, Auto@FF
Détect. Fin Papier	Non, ***Oui***
Condense	***Non***, 11:8, 13.6:8, Auto
Gestion Papier	Non, Bourrage, ***Anti-biais***, Oui,
Alarma	Non, ***Oui***
Position de Coupe	***Non***, Détecter, Enregistrer
APW	***Non***, Oui
Mode Repère Noir	***Non***, Oui
Largeur Impression	***8.0inch***, Larg.Papier
LongPag Micro-ajust	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Mode entrainement	Non Valid, ***Standard***, Spécial
Papier du rouleau	***Non,*** Oui
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Config Interface	Paramètres Valides
PnP	Non, ***Oui***
USB ID	Non, ***Oui***

Parametrage Caractere	Valid Settings
Table Caractère	Italic, ***Graphic***
Groupe Caractères	Groupe 1, ***Groupe 2***
Pays	***USA***, France, Allemagne, Royaume-Uni, Denmark I, Suède, Italie, Espagne I, Japon, Norvège, Denmark II, Espagne II, Ameriquelat, Denmark, Chine
HS-Draft	***Non***, Oui
Fonte	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir
Espacement (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24,PS

Parametrage Caractere	Valid Settings
Code Page	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
Style15cpi	***Petit***, Normal
AGM (IBM)	***Non***, Oui

Autre réglage	Paramètres Valides
Ctrl LongPage	Non, ***Oui***
Ctrl Vitesse Impr.	Non, ***Oui***
Ctrl Espacement	Non, ***Oui***
Ctrl Fonte	Non, ***Oui***
Ctrl Impr. Uni-Dir	Non, ***Oui***

Spanish (Español)

Menu. Sistema	Ajustes validos
Lenguage	***English***, Deutsch, Россия, Italiano, Français, ***Español,*** Türkçe, Português
Emulación	***ESC/P2***, IBM
Auto CR (ESC/P2)	No, ***Si***
Auto CR (IBM)	***No***, Si
Auto LF	***No,*** Si
Direccion Imp	***Bi-Dir***, Uni-Dir
Linea del Formato	Desconect, ***Conectado***, Línea Punto, Sin Impr.
Cero con barra	***0***, Ø
Sust. 1er pin roto	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Sust. 2do pin roto	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Modo Ahorro Energía	OFF, ***1min,*** 2min, 5min, 10min
Impr. Multi-Copias	Inválido, ***Cop. Normal***, Cop. Fuerte
Modo de Impacto	***Normal***, Fuerte
Imp.Grafica	***Normal***, Rapido, Ultra
Intrusion light mode	***No***, Si

Config. Papel	Ajustes validos
Tam. Hojas Sueltas	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definido
Margen Sup.Hoja S.	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38, 39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57, 58,59,60,61,62,63,64,65,66, Definido
Margen Inf.Hoja S.	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definido
Margen Izq. Hoja S.	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Definido
Margen. Sup. Hoja S.	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22, 23,24,25,26,27,28
Carga Auto. Hoja S.	Invalido, 0.5seġ, ***1seġ***, 1.5seġ, 2seġ
Tam. Papel Continuo	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definido
Mar. Sup. Pap. Con.	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38, 39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57, 58,59,60,61,62,63,64,65,66, Definido
Mar. Inf. Pap.Cont.	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definido
Marg. Iz. Pap. Cont.	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Definido
Marg. Sup. Pap. Cont.	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22, 23,24,25,26,27,28
Carga Auto. Hoja Su.	No, ***Si***
Salto perforación	***No***, Si

Config. Papel	Ajustes validos
Corte	Automatico, ***Manual***, Corto, Auto@FF
Detec. Fin de Papel	No, ***Si***
Condensado	***Inválido***, 11:8, 13.6:8, Auto
Manejo de Papel	Inválido, Anti-atasco, ***Anti-desvío***, Válido,
Alarma	No, ***Si***
Posición de Corte	***Inválido***, Detectar, Registrar
Det. Ancho de Papel	***No***, Si
Modo Marca Negra	***No***, Si
Ancho de Impresión	***8.0inch***, Ancho de Papel
Micro-Aju. Tam. Hoja	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Modo barra	Inválido, ***Estandar***, Espécial
Rollo de Papel	***No***, Si
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Conf. Interface	Ajustes validos
PnP	No, ***Si***
USB ID	***No***, Si

Menu. Carácter	Ajustes validos
Tabla de Caracter	Italico, ***Graficos***
Grupo de Caracter	Grupo 1, ***Grupo 2***
Juego Carácter Int.	***EEUU***, Francia, Alemania, Reino Unido, Dinamarca I, Suecia, Italia, España I, Japón, Noruega, Dinamarca II, España II, AméricaLat, Dinamarca, China
Alta Velocidad	No, ***Si***
Fuente	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir
Tamaño Letra (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24, PS

Pagina Codigos	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
Estilo15cpi	***Pequeno***, Normal
AGM (IBM)	***No***, Si

Config. Otros	**Ajustes validos**
Cmd. Long. de Hoja	No, ***Si***
Cmd. Vel. Impresión	No, ***Si***
Cmd. Tamaño Letra	No, ***Si***
Cmd.Fuente	No, ***Si***
Cmd. Imp. Uni-dir	No, ***Si***

Turkish (Türkce)

Sistem Ayar Durumu	Valid Settings
Lisan	English, Deutsch, Россия, Italiano, Français, Español, ***Türkçe,*** Português
Emülasyon	***ESC/P2***, IBM
Otom. Satırbaşı (ESC/P2)	Hayır, ***Evet***
Otom. Satırbaşı (IBM)	***Hayır***, Evet
Otom. Satır besleme	***Hayır***, Evet
Baskı Yönü	***Ÿki-Yöne***, Tek-Yöne
Kağıt satırı	Bağlı değil, ***Bağlandı***, Nokta satır, Baskı yok
Sıfır Sayısı	***0***, Ø
metin Kalite	***LQ,*** NLQ
Arızalı 1. iğne yed.	***Hayır***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Arızalı 2. iğne yed.	***Hayır***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Enerji tutumu modu	OFF, ***1min***, 2min, 5min, 10min
Çok katmanlı baskı	Geçersiz, ***Normal***, Güçlü
Vuruf modu	***Normal***, Güçlü
Grafik Hızı	***Normal***, Hızlı, Ultra
Intrusion light mode	***Hayır***, Evet

Kağıt Ayarı	Geçerli ölçüler
Tek-kağıt Form uzun	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Oto. Tanım.
Tek-kağıt Üst boşluk	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,3 9,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58 ,59,60,61,62,63,64,65,66, Oto. Tanım.
Tek-kağıt Altkenar	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Oto. Tanım.
Tek-kağıt Sol ayar	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Oto. Tanım.
Tek-kağıt Üst ayar	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,2 3,24,25,26,27,28
Tek-kağıt oto kağıt	Geçersiz, 0.5sec, ***1sec***, 1.5sec, 2sec
Sür. Form Kğt Uz.	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Oto. Tanım.
Sür.Form Kğt Üst	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,3 9,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58 ,59,60,61,62,63,64,65,66, Oto. Tanım.
Sür.Form Kğt Alt	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Oto. Tanım.
Sür.Form Kğt Sol	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Oto. Tanım.
Sür.Form Kğt üst	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,2 3,24,25,26,27,28

Kağıt Ayarı	Geçerli ölçüler
Sür. Form Oto Kğt	Hayır, ***Evet***
Delik atlama	***Hayır***, Evet
Kağıt kesme	Oto. kesim, ***Elle kesim***, Kısa kesim, Auto@FF
Sayfa sonu algı	Hayır, ***Evet***
Gnş Baskı sıkıştma	***Geçersiz***, 11:8, 13.6:8, Auto
Eğrilik önleme	Sıkışıklık, engel, ***Geçerli***, Geçersiz
Ikaz	Hayır, ***Evet***
Kğt Kesme Poz.Sakla	***Geçersiz***, Algılama, Hafıza kayıt
Kağıt gen.algı	***Hayır,*** Evet
Siyah Çizgi algı	***Hayır,*** Evet
Baskı Genişliği	***8.0inch***, Kağıt genişliği
Kğt uznlk ince ayar	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Basınç yay modu	Geçersiz, ***Standart***, Özel
Rulo kağıt	***Hayır,*** Evet
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Arabirim Ayarı	Geçerli ölçüler
PnP	Hayır, ***Evet***
USB Tanımı	***Hayır***, Evet

Karakter Ayarı	Geçerli ölçüler
Karakter Tablosu	Italic,***Graphic***
Karakter Grubu	Grup 1, ***Grup 2***
Karakter setleri	***Amerika,*** Fransa, Almanya, İngiltere, Danimarka I, İsveç, İtalya, İspanya I, Japonya, Norveç, Danimarka II, İspanya II, Ltn Amerika, Danimarka, Çin
YБk.HHz-Tasiak	***Hayır***, Evet
Yazı Tipi	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir
Karakter Aralık (cpi)	***10***, 12, 15, 16.6, 17.1, 20, 24, PS

Karakter Ayarı	Geçerli ölçüler
Kod Sayfası	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
15cpi Biçimi	***Küçük***, Normal
AGM (IBM)	***Hayır,*** Evet

Diğer Ayarlar	Geçerli ölçüler
Kğt Uzunluk Komutu	Hayır, ***Evet***
Baskı Hızı Komutu	Hayır, ***Evet***
Karak.Aralık Kont.	Hayır, ***Evet***
YazıTipi Komutu	Hayır, ***Evet***
Tekyön bask Komutu	Hayır, ***Evet***

Portuguese (Português)

Config. Sistema	Valores válidos
Linguagem	English, Deutsch, Россия, Italiano, Français, Español, Türkçe, ***Português***
Emulação	***ESC/P2***, IBM
Auto CR (ESC/P2)	Não, ***Sim***
Auto CR (IBM)	***Não***, Sim
Auto LF	***Não***, Sim
Direção Imp.	***Bi-Dir,*** Uni-Dir
Linha forma	Desativar, ***Ativar***, Tracejada, No Imprimir
Zero	***0***, Ø
Calidad del texto	***LQ***, NLQ
Substituição Pino 1	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Substituição Pino 2	***No***, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Poupança Energia	OFF, ***1min***, 2min, 5min, 10min
Impr.Multi-Copias	Desativo, ***Cop.Normal***, Cop.Forte
Modo de Impacto	***Normal***, Forte
Imp. Grafica	***Normal***, Rápido, Ultra
Intrusion light mode	***Não***, Sim

Config. Papel	Valores válidos
Tam.Folha Solta	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definido
Margem Topo Folha	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, Definido
Margem Inf. Folha	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definido
Margem Esq. Folha	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Definido
Margem Dir. Folha	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Carreg. Auto Folha	Desativo, 0.5sec, ***1sec***, 1.5sec, 2sec
Tam. Form. Cont.	2.5, 11/4, 3, 3.5, 11/3, 4, 5, 5.5, 6, 7, 8, 9, 10, ***11***, 12, 14, A4, B4, Definido
Mar. Topo Form. Cont.	-1,0,1,***1.8***,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58, 59,60,61,62,63,64,65,66, Definido
Mar. Inf. Form. Cont.	***0***, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, 1, Definido
Mar. Esq. Form. Cont.	***0***, 1, 2, 3, 4, 5, 6, 7, 8,9,10, Definido
Marg. Topo Form. Cont.	***0***,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Carreg. Auto Form	Não, ***Sim***

Config. Papel	Valores válidos
Salte perfuração	***Não***, Sim
Corte	Automático, ***Manual***, Corto, Auto@FF
Detec. Fim de Papel	Não, ***Sim***
Condensado	***Desativo***, 11:8, 13.6:8, Auto
Manuseio de Papel	Inválido, Anti-atola, ***Anti-desvio***, Válido
Cigarra	Não, ***Sim***
Posição de corte	***Inválido***, Detectar, Registrar
Det. Largura Papel	Não, ***Sim***
Modo Marca Preta	***Não,*** Sim
Largura impressão	***8.0inch***, largura do papel
Mic. -Aju. Tam. Hoja	-20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 ***0*** 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Modo de pressão	Invalido, ***Norma***, Especial
Rollo de Papel	***Não,*** Sim
Single LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Single LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic
Fanfold LF Adj Multi	Level+D, Level+C, Level+B, Level+A, Normal, Level-A, Level-B, Level-C, Level-D, Graphic

Conf. Interface	Valores válidos
PnP	Não, ***Sim***
ID USB	***Não,*** Sim

Config. Caráter	Valores válidos
Tabela de carateres	Itálic, ***Gráfico***
Grupo de Carateres	Group 1, ***Group 2***
Conj. Carateres Int.	***EUA,*** França, Alemanha, Reino Unido, Dinamarca I, Suécia, Itália, Espanha I, Japão, Noruega, Dinamarca II, Espanha II, América Lat, Dinamarca, China
Alta Velocidad	***Não***, Sim
Fonte	Draft, DraftCond, Roman, Sans Serif, ***Courier***, Prestige, Script, OCR B, OCR A, Orator, Gothic, Souvenir
Passo (cpi)	***10***, 12, 15, 16.6,17.1, 20, 24,PS

Config. Caráter	Valores válidos
Página de Código	***CP437***, CP737, CP850, CP851, CP852, CP857, CP858, CP860, CP861, CP863, CP864, Extend864, CP865, CP866, Bulgaria866, CP1250, CP1251, CP1252, CP1253, CP1254, 8859_1, 8859_1SAP, 8859_2, 8859_5, 8859_7, 8859_9, 8859_15, BRASCII, Abicomp, Roman8, CoaxTwinax, New437, NewDig850, OldCode860, Flarro863, Hebrew865, CP1257, Ukraine866, Kazakhst866, Kamenicky, Mazovia, Baltic775, CROASCII, Farsi, Urdu, GreekDEC, ELOT928, UK_ASCII, US_ASCII, Swedish, German, Portuguese, French, Italian, Norwegian, Spanish, SiemensTurk, DECTurkish, Tarama
Estilo 15cpp	***Pequeno***, Normal
AGM (IBM)	***Não***, Sim

Config. Outros	Valores válidos
Cmd. Tam. de Folha	Não, ***Sim***
Cmd. Vel. Impresso	Não, ***Sim***
Cmd. Passo	Não, ***Sim***
Cmd. Fonte	Não, ***Sim***
Cmd. Imp. Uni- dir	Não, ***Sim***

BLACK MARK PARAMENTERS

This printer uses tractors to load fanfold forms with pre-printed black marks.

The printer requires 3 parameters to print on paper with black marks:

1. Horizontal offset of black mark from the edge of page (called Black Mark Physical Horizontal Position); later on, this value facilitates the printer to locate its scanner preparing for identifying the black marks.
2. Vertical offset of the first print line from the black mark (called Distance Offset From Black Mark To Print Position); later on, the print makes use of this value to print the first line relative to the black mark.
3. Vertical offset of the tear-off edge from the black mark (called Distance Offset From Black Mark To Tear Position); this value informs the printer the tear-off position of the page.

Not to skip or change the order of setting the above 3 parameters.

The procedures to set the parameters:

1. Hold down the [Tear off] key while powering on the printer and then release the key when the print head starts to move. After loading paper, the printer prompts the Printer Settings

Printer Settings
[LF]=Next, [TEAR]=Back, [LOAD/EJECT]=OK, [ONLINE]=Exit, [ONLINE]+[LOAD/EJECT]=Save and restart the printer. System Setup

2. Press the **Next** or **Back** keys to scroll forward or backward the sub-menus till the printer shows:

BlackMark Mode

3. Press **OK** to go into the BlackMark menu. The printer prompts:

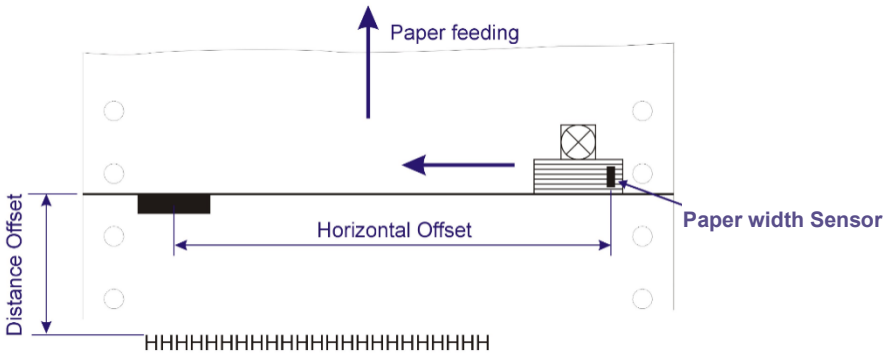
[Black Mark Adjustment Mode] [LF]= Next, [TEAR]= Back, [LOAD/EJECT]=OK, [ONLINE]=Exit, [ONLINE]+[LOAD/EJECT]= Save and restart the printer. Black Mark Physical Horizontal Position Press any key to eject the paper, and load paper with black mark in the Fanfold Path.

4. The last prompt above advises you to press any key to unload the dialog form. Then load a fanfold form with black mark.

5. Ensure to place the lever at position. Then press the [Load/Eject] key to load the black marked form. The top edge of the form will then align with the printer's tear-off blade. Press **Next** or **Back** until you see the black mark marginally exposed out of the tear-off blade. Then press **OK** to allow the printer to scan the horizontal offset of the black mark relative to the left edge of the page. (Meanwhile, the vertical position of the black mark is measured and recorded.)

When the printer fails to scan the horizontal offset (see the below picture), it prompts you to repeat the above procedures. If scanning is successful, it prompts:

Successfully setup black mark parameters. Distance Offset From Black Mark To Print Position



6. The last prompt above invites you to set the next parameter --- vertical offset of the first print line from the black mark. Like other setting dialogs, you have options:

1)to bypass this setting (by pressing **Next** or **Back**), (**WARNING**: Not to skip or change the order in Black Mark Setting.)

2)to accept the Distance Offset (by pressing **OK**),

3)to leave the subsequent settings (by press **Exit**),

4)to terminate the session and save modified parameter(s) (by pressing **Save and Restart**).

7. When you respond with "**OK**" to set the vertical offset, the printer prompts you to reload a black marked fanfold form:

Press any key to eject the paper, and load paper with black mark in the Fanfold Path.

The top edge of the form will then align with the printer's tear-off blade. Press **Next** or **Back** to feed or reverse-feed the paper till the desired first print line position is reached. (With the above measured vertical position, the printer will convert the next paper feeding to the TOF relative to the black mark.) Press **OK** to confirm the vertical offset. Then the print prompts the invitation for setting the tear-off position relative to the black mark:

Successfully setup black mark parameters. Distance Offset From Black Mark To Tear Position

8. When you respond with **OK** to set the tear-off position, the printer prompts you to reload a black marked fanfold form:

Press any key to eject the paper, and load paper with black mark in the Fanfold Path.

The printer reloads the form. By default the form stops 5.5 inches away from the printer's tear-off blade. Press **Next** or **Back** to feed or reverse-feed the paper till the desired tear-off position is reached. (With the above measured vertical position, the printer will convert the net paper feeding to the tear-off position relative to the black mark.) Press OK to confirm the tear-off offset relative to the black mark. Finally, press **Save and Restart** to save new settings and terminate the session.

BIDIRECTIONAL ALIGNMENT

When wiggling vertical grids appears in tabular reports, you should adjust the Bidirectional Alignment. The procedures to adjust bi-directional alignment across adjacent line grids:

1. Hold down the [Tear off] key while powering on the printer and then release the key when the print head starts to move. After loading paper, the printer prompts the Printer Settings.

Printer Settings
[LF]=Next, [TEAR]=Back, [LOAD/EJECT]=OK, [ONLINE]=Exit, [ONLINE]+[LOAD/EJECT]=Save and restart the printer.
System Setup

2. Press the **Next** or **Back** keys to scroll forward or backward the sub-menus till the printer shows:

Bi-directional Alignment

3. Press [Load/Eject] to confirm the current settings. Due to “Single paper text”, “Single paper graphy”and “Multiayer paper” are controlled by different instructions, the printer will print:

Bi-directional Alignment Single paper text

The printer waits for instructions:

A If you need a "Single paper text" bidirection test and longitudinal correction, press the [Load/Eject] button to confirm the current setting.

B If you need a “Single paper graphy” bidirection test and longitudinal correction,press [LF/FF] to select “Single paper graphy” and then press [Load/Eject]to confirm.

C If you need a “Mutilayer paper” bidirection test and longitudinal correction,press [LF/FF] to select “Mutilayer paper” and then press [Load/Eject]to confirm.

D If you need a “Parity Check” bidirection test and ongitudinal correction,press [LF/FF] to select “Parity Check” and then press [Load/Eject]to confirm.

Take “Single paper text” as an example:

Press [Load/Eject] to confirm the current settings, choose “Single paper text” bidirection test and longitudinal correction mode. Due to “Single paper text” bidirection test and longitudinal correction mode contains five modes: “LQ (360DPI)”, “NLQ (180DPI)”, “Draft (120DPI)”, “Hight Draft (80DPI) ”, “Dual density graph (240DPI)”. Now take “LQ (360DPI)” as an example, press [LF/FF] switch to “Single paper text” bidirection test and longitudinal correction mode. When set to “LQ (360DPI)” ,pess [Load/Eject] to confirm the current settings. The printer will print:

```
[TEAR] = -1，[LF] = +1， [LOAD/EJECT] = OK，[ONLINE] = Back，
[ONLINE] + [LOAD/EJECT] = Save and restart the printer，
Single paper text     LQ (360DPI)    -2
|    |    |    |    |    |    |    |    |    |    |    |    |    |
```

Each press on [LF/FF],the current value will add 1. Each press on [Teat Off],the current value will reduce 1.For example, Press [LF/FF] twice,then press [Load/Eject] to confirm,the printer will print:

```
Single paper text     LQ (360DPI)                          0
|    |    |    |    |    |    |    |    |    |    |    |    |    |
```

4. During the above steps, the printer will the status of the bidirection test and longitudinal correction mode, you can check the whether printing is aligned or not.

5. Correct the printing with [LF/FF] key and [Teat Off] key. Press [Tear Off] to adjust the second printing position to the left; Press [LF/FF] to adjust the second printing position to the right. The adjustment is +30 to -30, the unit is 1/1440 inches.

6. When the printing character "|" forms a continuous line, the bi-directional printing of this pattern has been corrected. Press [Load/Eject] key , the printer will indicates:

```
Save the parameter setting
( [LOAD/EJECT] or [ONLINE] = OK ,[LF] = Next)
    Yes
```

Press [LF/FF] or [Tear Off] to choose "Yes" or "No",then press [Load/Eject] or [Online] to confirm.

7. After exiting the bidirection test and longitudinal correction mode, select the printer parameter settings.

8. When you finishing the setting, you also can choose bidirection test and longitudinal correction,the printout is following:

Bi-directional Alignment:

Single paper text LQ (360DPI) -2:

Single paper text NLQ (180DPI) -2:

Single paper text Draft (120DPI) -1:

Single paper text High Draft (80DPI) 4:

Single paper text Dual density graph (240DPI) -1:

Single paper graphy LQ (360DPI) -2:

Single paper graphy NLQ (180DPI) -2:

Single paper graphy Draft (120DPI) -1:

Single paper graphy High Draft (80DPI) 4:

Single paper graphy Dual density graph (240DPI) -1:

Mutilayer paper LQ (360DPI) -2:

Mutilayer paper NLQ (180DPI) -2:

Mutilayer paper Draft (120DPI) -1:

Mutilayer paper High Draft (80DPI) 4:

Mutilayer paper Dual density graph (240DPI) -1:

Note:

a. The adjustment of Single paper text, Single paper graphyand Mutilayer paper is separate and does not affect each other, ensuring that the adjustment is consistent with the application.

b. In order to make the printer achieve the desired print effect, it is recommended that all items be adjusted to the best printing state when conducting bidirectional testing and longitudinal correction, instead of tuning one or two.

RESTORE FACTORY DEFAULT

The procedures to restore factory default settings:

1. Hold down the [Tear off] key while powering on the printer and then release the key when the print head starts to move. After loading paper, the printer prompts the Printer Settings

Printer Settings
[LF]=Next, [TEAR]=Back, [LOAD/EJECT]=OK, [ONLINE]=Exit, [ONLINE]+[LOAD/EJECT]=Save and restart the printer. System Setup

2. Press the Next or Back keys to scroll forward or backward the sub-menus till the printer shows:

Restore Factory Defaults

3. Press OK to go into restore factory default dialog. The printer prompts:

[Restore Factory Defaults] Restore factory settings ([LOAD/EJECT]=OK,[ONLINE]=Exit)? Yes

4. At this stage you have the option of OK to restore default setting or Exit to discard the restoration.
5. If input OK, the printer prints an asterisk "*" appending the "Yes" and prompts successful restoration:

Restore factory settings successfully

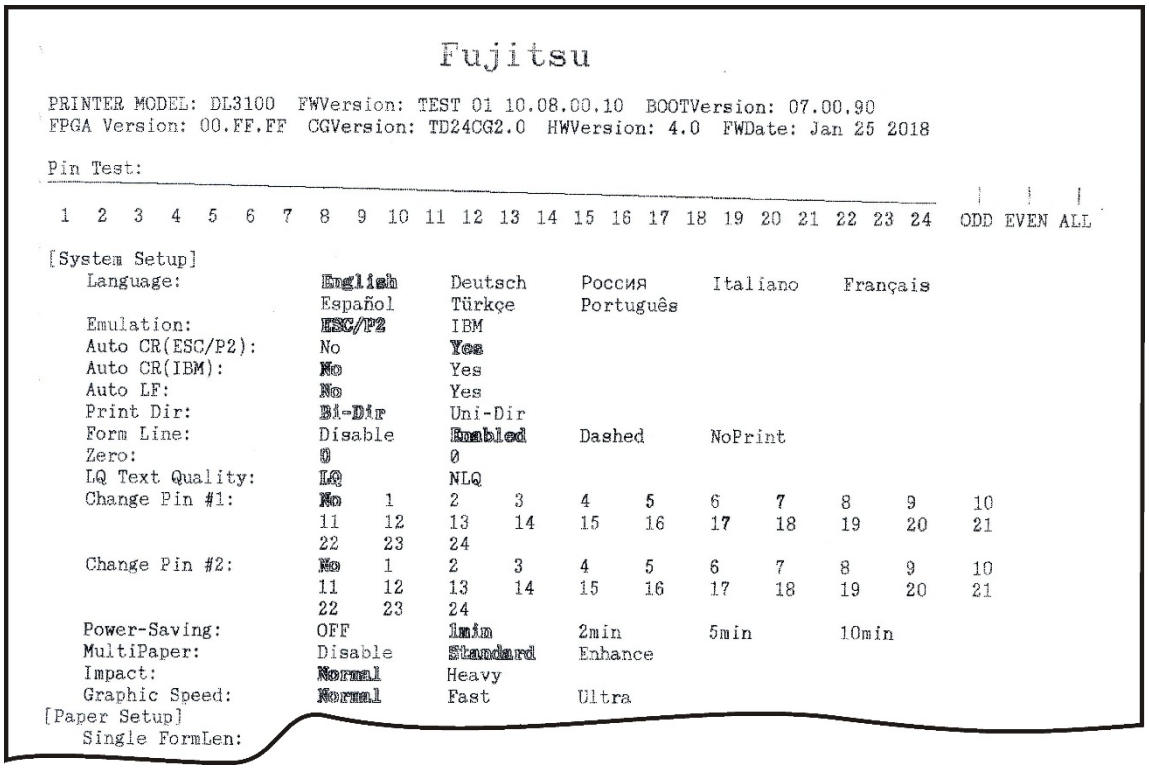
6.The printer beeps once to indicate successful restoration.

Hex Dump

Beeps once to indicate going into hex dump mode:
Prints data from host in hexadecimal representation.
Pressing S4 suspends the printing.
When the hex dump has finished, pressing S4 forces the printing of the last line of data, as any line termination control code from host has no function.
Switch off the power to terminate the hex dump.

Self Test / Status Page

Prints the printer settings and self-test pattern,show as follow picture.



Fujitsu

PRINTER MODEL: DL3100 FWVersion: TEST 01 10.08.00.10 BOOTVersion: 07.00.90
FPGA Version: 00.FF.FF CGVersion: TD24CG2.0 HWVersion: 4.0 FWDate: Jan 25 2018

Pin Test:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 ODD EVEN ALL

[System Setup]

Language:	**English**	Deutsch	Россия	Italiano	Français					
	Español	Türkçe	Português							
Emulation:	**ESC/P2**	IBM								
Auto CR(ESC/P2):	No	**Yes**								
Auto CR(IBM):	**No**	Yes								
Auto LF:	**No**	Yes								
Print Dir:	**Bi-Dir**	Uni-Dir								
Form Line:	Disable	**Enabled**	Dashed	NoPrint						
Zero:	**Ø**	Ø								
LQ Text Quality:	**LQ**	NLQ								
Change Pin #1:	**No**	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20	21
	22	23	24								
Change Pin #2:	**No**	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20	21
	22	23	24								
Power-Saving:	OFF	**1min**	2min	5min	10min						
MultiPaper:	Disable	**Standard**	Enhance								
Impact:	**Normal**	Heavy									
Graphic Speed:	**Normal**	Fast	Ultra								

[Paper Setup]
Single FormLen:

DLMENU

In the CDROM is a software utility called “DLMENU”.
This application enables a convenient, simple, and fast way to control your printer without touching any keys on the operation panel.

1. Start the tool installation by double clicking the “DLMENU Setup.exe”.
2. Connect the printer to the system using USB or Parallel cable.
3. Power up the printer.
4. Run the tool from the Windows Start menu by selecting All Programs, and then FUJITSU Printer Setup.
5. For more information on how to use the tool, go to the Help menu and select User Guide.

Note: Ensure to disconnect the DLMENU before sending the printing data,otherwise the data will not be printed or be printed in a incorrect way.

6

CUSTOMIZED FORM

This printer allows the customization on the form length, **TOF**, bottom margin and left margin for single sheets and fanfold.

Selecting the Define value(s) in section 5.2 (Paper Setup menu) allows the printer to take up the customized page formatting value(s).

The parameter setting procedures involve:

1. The printer prompts the dialogs and you follow the prompts.
2. Before every measurement or change, the print instructs you to unload the conversation form from the printer.
3. With the exception of measuring the form length for cut sheets, always set the lever to the tractors position .
4. For form length measurement, insert the customized form from the proper paper path.

The other six settings are actually done on general fanfold forms --- not the actual customized form. Fanfold paper gives direct visual results on the TOF, bottom and left margins even though cut sheets will be used in actual application.

This chapter describes the following operations:

- Customize Cut Sheet Form Length
- Customize Cut Sheet TOF
- Customize Cut Sheet Bottom Margin
- Customize Cut Sheet Left Margin
- Customize Fanfold Page Formatting Parameters

CUSTOMIZE CUT SHEET FORM LENGTH

1. Hold down both the [Online] and [Load/Eject] keys while powering on the printer and then release the keys when the carriage initializes and beeps once. After loading a form the printer prompts:

> Customize Form
>
> [LF]=Next, [TEAR]=Back, [LOAD/EJECT]=OK, [ONLINE]=Exit, [ONLINE]+[LOAD/EJECT]=Save and restart the printer.
>
> Single sheet

2. Press "**OK**" to start customizing all or part of 4 parameters for single sheet. The printer prompts:

> [Single sheet]
> Form Length

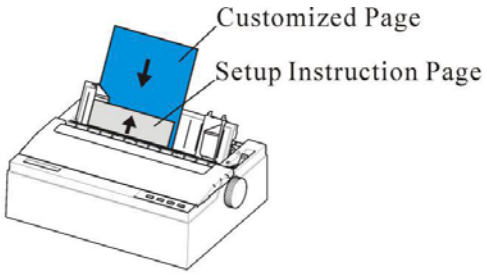
3. You may skip to other customized settings by pressing "**Next**" or "**Back**". Once you press "**OK**" to continue with form length measurement, the printer prompts:

   A. Press any key to clear the Setup Instructions Page from the printer. Insert the Customized Page into the corresponding paper path. Press[Load/Eject] to load and measure the page length.

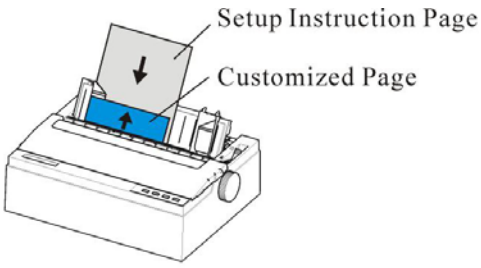
   B. The printer rolls over the entire Customized Page to measure its length. After measurement, press [Load/Eject] to load a blank Setup Instructions Page to report the measured value.

   C. Press [Load/Eject] to save the measured value. Repeat the above steps if the printed value is dissatisfactory.

Illustrations for above step 1 and step 2.



Remove Setup Instructions Page and insert Customized Page.



Insert a blank Setup Instructions Page to print out measured value.

4. Follow the given prompt to unload the conversation form. Load the customized form to allow the printer to scan the page length. After the measurement, load another conversation form to let the printer print out the measured length.

The measured form length is: 11.0Inch, approximately equal to 279mm, accuracy of plus or minus 0.1 inches. The measured value has been saved. Remeasure([LOAD/EJECT]=OK,[ONLINE]=Exit)? Yes

5.At this stage:
If [Load/Eject] is pressed, an asterisk "*" is appended to "Yes" and you should repeat the procedures for form length measurement as mentioned. Or, If you input "**Exit**", the printer saves the measurement value and proceeds with the next customized setting.

CUSTOMIZE CUT SHEET TOF

1. After you follow through all the steps in 6.1 or you input "**Next**" in step 3 in 6.1, the printer prompts:

Top Margin

2. You may skip to other customized settings by pressing "**Next**" or "**Back**". Once you press "**OK**" to continue with customization of cut sheet TOF, the printer prompts:

Press any key to eject current page, load paper in the Fanfold paper path, and then proceed as follows: [TEAR] = -(1/180) inch, [LF] = +(1/180) inch, [LOAD/EJECT] = OK, [ONLINE] = Exit, [ONLINE] + [LOAD/EJECT] = Save and restart the printer.

3. Follow the given prompt to unload the conversation form. Ensure the lever is at position. Then press the [Load/Eject] key to load fanfold paper from tractors. The top edge of the form initially aligns with the printer's tear-off blade. You may input **+/- 1/180**" to adjust the TOF position. When you get the desirable TOF, press **OK** or **Exit**. The printer prompts the customized TOF value:

The defined position is: 4.2 mm. Save the parameter settings ([LOAD/EJECT] or [ONLINE]=OK, [LF]=Next)? Yes

4. At this stage:
   If [Load/Eject]is pressed, an asterisk "*" is appended to "Yes" and you should repeat the procedures for form length measurement as mentioned. Or,
   If you input "**Exit**", the printer saves the measurement value and proceeds with the next customized setting.

CUSTOMIZE CUT SHEET BOTTOM MARGIN

1.After you follow through all the steps in 6.2 or you input "**Next**" twice in step 3 in 6.1, the printer prompts:

Bottom Margin

2. The remaining operations are nearly the same as described in section 6.2. The only difference is to input **+/- 1/180**" till you get the desirable bottom margin.

CUSTOMIZE CUT SHEET LEFT MARGIN

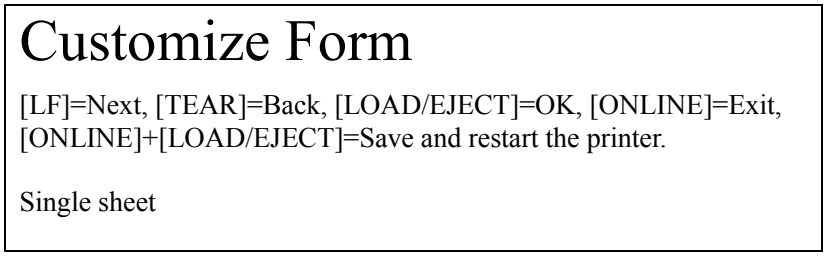
1.After you follow through all the steps in 6.3 or you input "**Next**" three times in step 3 in 6.1, the printer prompts:

Left Margin

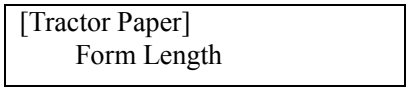
2.The remaining operations are nearly the same as described in section 6.2. The only difference is to input **+/- 1/180**" till you get the desirable left margin.

CUSTOMIZE FANFOLD PAGE FORMATTING PARAMETERS

The customizations of the form length, TOF, bottom and left margins for fanfold are exactly the same as describe. All you need is to bypass the Single Sheet menu under Customize Form. Follow step 1 in section 6.1:



Then hit "Next" instead to get into the fanfold parameter menus:



Refer section 6.1 to 6.4 for details on customizing the form length, TOF, bottom margin, and left margin for fanfold.

CUSTOMIZE TEAR POSITION

1. Press the [Online] and [Load/Eject] together when turning on the printer, release the buttons until the print head is reset and the sound is heard.

2. Put on paper, printer will load the paper will be transferred and printed automatically. If the printer exits the paper, please reload the paper flatly.

3. Because each column of the parameter has two or more items that can be selected, the printer prints out.

```
Customize Form

[LF]=Next, [TEAR]=Back, [LOAD/EJECT]=OK, [ONLINE]=Exit,
[ONLINE]+[LOAD/EJECT]=Save and restart the printer.

Single sheet
```

Then hit “Next” instead to get into the fanfold parameter menus:

```
[Tractor Paper]
      Form Length
```

The printer waits for input.
Press [LF/FF] button to select the setting item, until the current setting is "Tear Position", and the current setting is confirmed according to the [Load/Eject] button.
The printer will print the following:

4. Press any key to eject current page, load paper in the Fanfold paper path, and then proceed as follows:

```
[TEAR] = -(1/180) inch,    [LF] = +(1/180) inch,
[LOAD/EJECT] = OK,    [ONLINE] = Exit,
[ONLINE] + [LOAD/EJECT] = Save and restart the printer.
```

The printer returns the paper first,

a. If using the tractor paper, press [Load/Eject] to feed paper.

b. If using paper is single paper, move the paper feeding lever until the“ ” appears, Switch to tractor paper, then press [Load/Eject] button to Load the paper. When the loading paper is finished, the paper will automatically go to the tearing position, and then the paper can be adjusted. The functions of each button are as follows:
[Tear Off] :reduce 1/180 inch;
[LF/FF] : add 1/180 inch;
[Load/Eject] : Prompt save
[Online] : Prompt save

5. Press [Load/Eject] or [Online] ,the printer will print out:

```
The defined position is: 16.4mm.
Save the parameter settings
([LOAD/EJECT] or [ONLINE]=OK, [LF]=Next)?
    Yes
```

Press [LF/FF] to choose “Yes” or “No”, press [Load/Eject] or [Online] to confirm and pass to the next set.

7

MAINTENANCE

Your printer requires very little care. Occasional cleaning and replacement of the ribbon cartridge are all that is required.

Cleaning is recommended approximately every 6 months or 300 hours of operation, whichever is sooner.

Lubrication of the printer is not usually necessary.

If the print head carriage does not move smoothly back and forth, clean the printer in the manner described in this chapter. If the problem continues, contact your dealer to determine whether lubrication may be necessary.

The housing and the top cover of the printer help protect it against dust, dirt, and other contaminants. However, paper produces small particles that accumulate inside the printer. This section explains how to clean and vacuum the printer and how to clean the paper bail rollers.

It is easier to clean the printer when the cover is open.

This chapter describes the following content:

- Cleaning
- Cleaning the Platen(Paper Roller)
- Replace the ribbon

CLEANING

Cleaning and Vacuuming the Printer

	WARNING **To avoid any possibility of injury, before cleaning the printer, turn off the power to both the printer and the computer, and unplug the printer.**

	CAUTION<HOT> **The print head and metal frame is hot during printing or immediately after printing. Do not touch them until it cools down.**

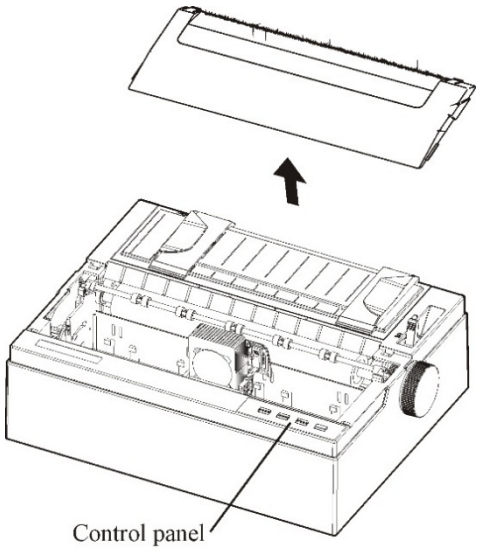
Use the following procedure to clean and vacuum the printer as required:

1. Remove any paper from the printer. Make sure that the power is off, and then disconnect the printer power cord.
2. Using a soft vacuum brush, vacuum the exterior of the printer. Also vacuum the cut sheet edge.
3. Use a soft, damp cloth to wipe the exterior of the printer, including the cover. A mild detergent may be used.

CAUTION

Do not use solvents, kerosene, or abrasive cleaning materials that may damage the printer.

4. Open the cover of the printer and remove the ribbon cartridge. Using a soft vacuum brush, gently vacuum the platen, the print head carriage and shaft, and surrounding areas. You can easily slide the print head to the left or right when the power is off. Be careful not to press too hard on the flat head cable that extends from the print head carriage.



Printer interior

5. Re-install the ribbon cartridge.

6. Remove the single sheet feeder and clean the form tractors and the surrounding areas.

7. Re-install the single sheet feeder.

CLEANING THE PLATEN (PAPER ROLLERS)

Clean the platen and paper bail rollers occasionally or when stains or smudges appear on the paper. Use a mild detergent as appropriate.
Use the platen cleaner recommended by your supplier and proceed as follows:

1. Apply a small amount of platen cleaner to a soft cloth. Avoid spilling liquid inside the printer.

CAUTION
Do not use alcohol to clean the platen. Alcohol maycause the rubber to harden.

2. Place the cloth against the platen and manually rotate the paper feed knob.

3. Repeat this procedure for each roller.

To dry the platen, place a dry cloth against the platen and the rollers and manually rotate the paper feed knob.

REPLACE THE RIBBON

There are two ways of replacing the ribbon. You can install a new ribbon cassette in the printer or refill the old ribbon cassette with new fabric. Chapter A lists order numbers for ribbon cassettes. The following procedure is for ribbon cassettes.

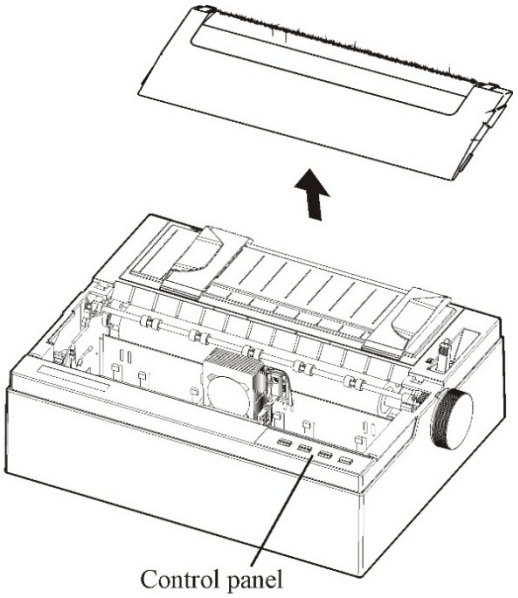
	CAUTION<HOT> **The print head and metal frame is hot during printing or immediately after printing. Do not touch them until it cools down.**

To replace the ribbon cassette:

1. Turn off the printer.

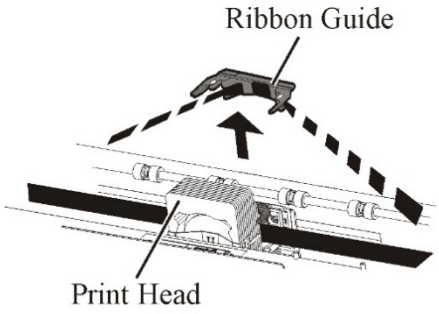
Note: If the power is turned off during or immediately after printing, turn on the power again. Verify that the print head has moved to the ribbon replacement position, and then turn off the power again.

2. Open the front cover of the printer. Please make sure that the printer head stops at the ribbon replacement position.



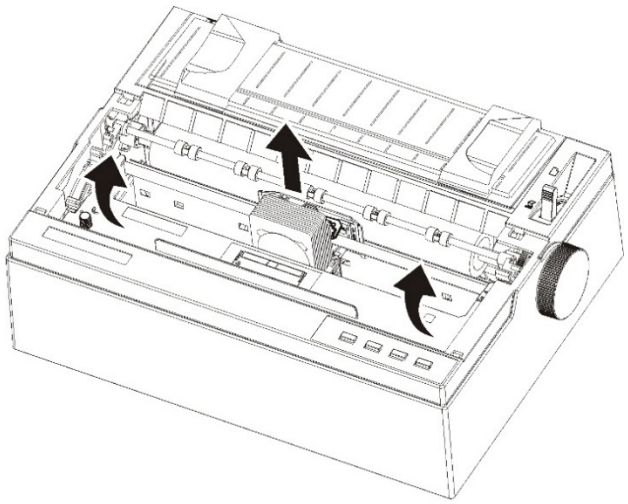
Preparing the printer to install the ribbon cartridge

3. Remove the ribbon guide



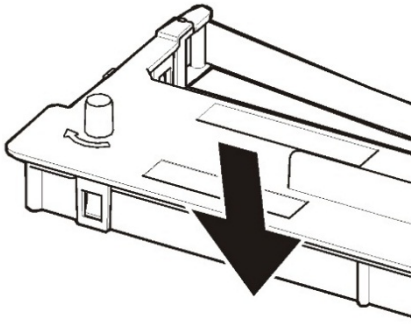
Removing the ribbon guide

4. To remove the ribbon cassette, pull the underside of ribbon cassette and carefully lift the cartridge out ofthe printer.



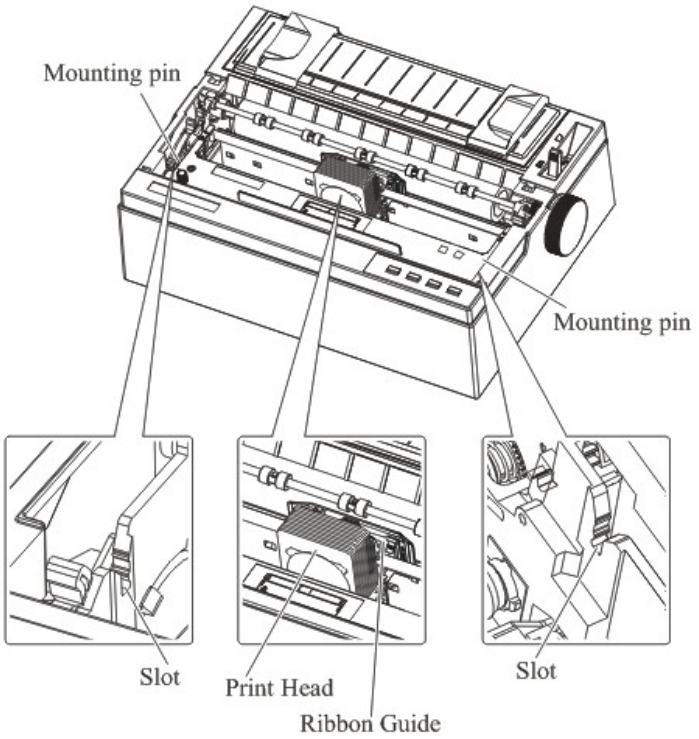
Removing the ribbon cassette

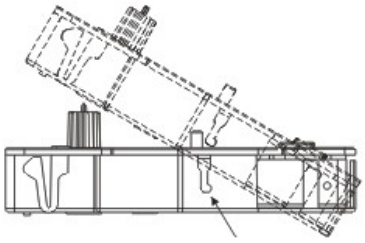
5. Remove the ribbon guide (blue part)from the ribbon cassette.
   Don’t turn the ribbon feed knob before installation



Preparing the ribbon cassette

6. Put the blue ribbon guide into the space in front of print head. And then place the mounting pins (both side of ribbon cassette) on the slot of the printer cover. And then push the ribbon cassette so that the ribbon cassette is installed horizontally.

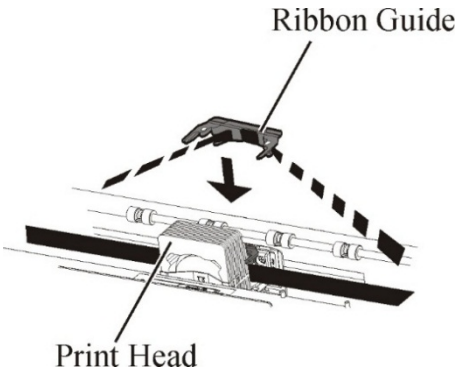




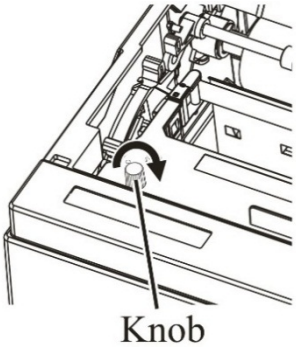
Push the ribbon cassette until it clicks.

Installing the ribbon cassette

7. Install the ribbon guide stuck behind the print head and fix the ribbon guide to the appropriate depth. Please make sure that the ribbon slack lightly. (If the ribbon is strained, it will quirk when installation.)



8. Turn the ribbon feed knob clockwise to take up any slack in the ribbon.



9. Close the front cover.

NOTE
A Fujitsu ribbon cassette is recommended. Don't use other cassettes.If other cassettes are used, operating problems or a damage of the print head may be caused.

8

TROUBLE-SHOOTING

Your printer is extremely reliable, but occasional problems may occur. You can solve many of these problems yourself, Using this chapter.

If you encounter problems that you cannot resolve, contact your dealer for assistance.

This chapter is organized as follows:

- Solving problems
- Print quality problems
- Paper handling problems
- Operating problems
- Printer failures
- Diagnostic functions
- Getting help

SOLVING PROBLEMS

Print Quality Problems

Poor print quality or other printing problems are often caused by incorrect printer setup or incorrect software settings. A gradual decrease in print quality usually indicates a worn ribbon. Table 8.1 identifies common print quality problems and suggests solutions.

Table 8.1 Print Quality Problems and Solutions

Problem	Solution
Printing is too light or too dark	● Make sure that the ribbon cartridge is properly installed and that the ribbon feeds smoothly. ● Replace the ribbon if necessary. ● Make sure that the print gap lever is set for the thickness of your paper.
Smears and stains appear on the page	● Make sure that the print gap lever is set for the thickness of your paper. ● Check for ribbon wear. Replace the ribbon if necessary. ● Check whether the tip of the print head is dirty. Clean the head with a soft cloth if necessary. ● The print head may need to be replaced.
The paper is blank.	● Make sure that the ribbon cartridge is properly installed. ● Make sure the gap lever is set corretly.
Printing is erratic or the wrong characters are printed. Many “?” or unexpected characters are printed	● Make sure that the interface cable is securely connected to both the printer and computer. ● Make sure that the printer driver selected in your software is the same as the emulation selected on the printer. ● If printer is equipped the RS232Cserial port, please check the parameters of Baud Rate, Data Bit, Parity Check, Stop Bit, Data Stream in the Interface Setup are matched to the setting of printer driver.

Problem	Solution
Printing is vertically misaligned (jagged).	● Use the printer's vertical alignment function to check the vertical print alignment. If necessary, adjust the print alignment.
The top margin is wrong.	● Check whether the application top margin setting and the setting of top margin is correct,and enter the margin setting again. ● Adjust the Top Margin setting in Page Setup menu if necessary.
Lines are double spaced instead of single spaced	● Change the Auto LF setting in the System Setup menu to No.
The printer overprints on the same line.	● Change the Auto CR setting in the System Setup menu to No.
The next print line starts where the previous line ended instead of at the left margin.	● Change the Auto CR setting in the System Setup menu to Yes.

Paper Handling Problems and Solutions

Table 8.2 describes common paper handling problems and suggests

Table 8.2 Paper Handling Problems and Solutions

Problem	Solution
Paper cannot be loaded or fed.	● Make sure that the paper select lever located on the top right of the printer is set correctly. Move the lever to the front for single sheets or to the rear for continuous forms. ● Make sure that the paper covers the paper-out sensor.
Paper jams while loading.	● Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path. ● Make sure that the Print Gap lever is set for the thickness of your paper. ● Make sure that the paper is not folded, creased, or torn. ● Make sure that the left and right tractors are set so that the continuous forms are stretched taut. ● When using continuous paper, user must keep the sheed feeder across, not upright.
Paper jams while printing.	● Turn off the printer and remove the jammed paper. Remove any obstructions from the paper path. ● Make sure that the Print Gap lever is set for the thickness of your paper. ● For continuous forms, make sure that the incoming and outgoing paper stacks are correctly placed. Paper should feed straight.
Paper slips off the forms tractors or the perforated holes of the paper tear during printing.	● Make sure that the forms tractors are positioned correctly for the width of your paper and that the perforated holes of the paper fit directly over the tractor pins.

Problem	Solution
An ejection error occurs even after the paper has been completely ejected. Or, printing continues even after the paper has run out.	● It is conceivable that the paper sensor is malfunctioning. In this case, carry out the following corrective action. 1) It is conceivable that the sensor is malfunctioning due to the effect of external light. In this case, change [Intrusion light mode] of Setup to [Yes]. 2) When using single paper, set [Single Form Length] to match the size of the paper used. 3) Press the [Load / Eject] switch when suction operation is not performed even if the single paper is set.
While printing on continuous paper is taking place, the paper separates from the tractor, or an error occurs in the paper feed operation.	● When setting the paper on the tractor, be careful not to apply an excessively high tension in the width direction of the paper.
When single paper is drawn in, the corners of the paper may become creased, or the paper may be drawn in obliquely.	● If the paper guide is at the rightmost end position, shift it slightly toward the left side before use.

Operating Problems and Solutions

Table 8.3 identifies common operating problems and suggests solutions.
If you cannot resolve a problem, contact your dealer.

Table 8.3 Operating Problems and Solutions

Problem	Solution
The power does not turn on.	● Check whether the mains voltage is correct. ● Make sure that the power cord is securely connected to both the printer and the mains power outlet. ● Make sure that the power outlet is functional. If not so, use other outlet. ● Turn the power off. Wait a minute and then turn the printer on again. If the printer still has no power, contact your dealer.
The printer is on but it will not print.	● Verify the printer Online light condition; If the Online light goes out, the printer is offline.Press the Online key can change to Online state. ● If you use the interface cable, make sure it is securely connected to both the printer and the computer. ● Make sure paper is loaded. ● Run the printer Status Page. If printing executes normally, the problem is caused by: the interface, the computer, incorrect printer settings, or incorrect software settings. ● Make sure that the printer driver selected in your software is the same as the emulation selected on the printer.
Paper select lever error	● If paper is loaded and the paper select lever is moved to the incorrect position, the printer turns offline, and the buzzer sounds continuously. Switch the paper select lever back to its correct position.

Printer Failures

A user cannot generally resolve a problem involving defective printer hardware. Power off and on again the printer to recover any fatal error. If the problem cannot be resolved, contact your dealer or service partner

Error Indications on LEDs

LED / Error Description	Power	Font1	Font2	Online	Buzzer Sound
Print head too hot	Flashing	No change	No change	Flashing	None
Paper select lever error	Flashing	No change	No change	Flashing	Continuous
Paper jam	Flashing	No change	No change	On	Once
Paper End	Flashing	No change	No change	Off	Once
Carriage initial position	Off	Off	Flashing	Flashing	Continuous
Paper sensor failure	Flashing	No change	No change	Off	Once
Paper width problem	Flashing	No change	No change	Off	None
Print head thermal sensor failure	Off	Flashing	Flashing	Flashing	None
WTD error	Off	Off	Off	Flashing	None

DIAGNOSTIC FUNCTIONS

The printer diagnostic functions are Self-Test page, hex-dump mode and print alignment adjustment.

- Self-Test page: Tells you whether the printer hardware is functioning correctly. If the printer hardware is functional, any problems you are having are probably caused by incorrect printer settings, incorrect software settings, the interface, or the computer.
- HEX-DUMP MODE: Allows you to determine whether the computer is sending the correct commands to the printer, and whether the printer is executing the commands correctly. This function is useful to programmers or others who understand how to interpret hex dumps.
- PRINTING ALIGNMENT ADJUSTMENT: Allows you to check and, if necessary, correct the printer's vertical line print alignment in bi-directional mode.

For details on using these functions, please refer to chapters 4 and 5.

GETTING HELP

If you are not able to correct a problem using this chapter, contact your dealer for assistance. Be prepared to provide the following information:

- Your printer model number, serial number, and date ofmanufacture. Look for this information on the rating label at the back of the printer.
- Description of the problem
- Type of interface you are using
- Names of your software packages
- List of the printer default settings. To print the default settings

A

SUPPLIES AND OPTIONS

This chapter lists the supplies and options available for the printer.

Contact your dealer for information on ordering any of these items.

SUPPLIES

Supplies	Order Number
Ribbon cassette Black ribbon	KA02100-0201

B

PRINTER AND PAPER SPECIFICATIONS

This chapter gives the physical, functional, and performance specifications for the printer.

It also gives detailed paper specifications.

PHYSICAL SPECIFICATIONS

Dimensions:

Height: 146mm

Width: 369mm

Length: 283.3mm

Weight: 5.48kg

(not include the knob and the sheet feeder)

AC power requirements:

AC 220V ~ 240V ±10%; 50/60 Hz

AC 100V ~ 120V ±10%; 50/60 Hz

Power consumption: 34 W (Test pattern is specified in standard ISO/IEC 10561.)

Power consumption of sleep mode: 1.4W

Interface: -Universal Serial Bus interface 2.0

- Parallel interface (Factory option)
- RS232C (Factory option)
- LAN (Factory option)

Data buffer size: up to 256K bytes

Download buffer: Maximum 128K bytes

Operating environment: 5 to 38°C

20% to 80% RH(no condensation)

Storage environment: -20 to 60°C

5% to 95% RH (no condensation)

Acoustic noise: Standard model:Approx 57dB(A)

Silent mode:Approx 54dB(A)

ISO 7779 (Bystander Position-Front)

Elevation information: It is only suitable for safe use at sea level of 2000 meters and below.

FUNCTIONAL SPECIFICATIONS

Print method Impact dot matrix with a 0.20 mm, 24-wire head

Print direction Bidirectional logic-seeking or unidirectional seeking

Character cell Horizontal × vertical

LQ (10cpi):	24 × 24 dots
NLQ (10cpi):	18 × 24 dots
Draft (10cpi):	12 × 24 dots
High speed draft (10cpi):	8 × 24 dots
LQ (12cpi):	30 × 24 dots
NLQ (12cpi):	15 × 24 dots
Draft (12cpi):	10 × 24 dots
High speed draft (12cpi):	10 × 24 dots
LQ (15cpi):	24 × 24 dots
NLQ (15cpi):	12 × 24 dots
Draft (15cpi):	8 × 24 dots
High speed draft (15cpi):	8 × 24 dots
LQ (17.1cpi):	21 × 24 dots
NLQ (17.1cpi):	11 × 24 dots
Draft (17.1cpi):	11 × 24 dots
High speed draft (17.1cpi):	11 × 24 dots
LQ (20cpi):	18 × 24 dots
NLQ (20cpi):	9 × 24 dots
Draft (20cpi):	9 × 24 dots
High speed draft (20cpi):	9 × 24 dots

Paper handling

Feed method : Friction / Push tractor

Paper pass : Cut sheet (Rear in Top out)

Fanfold paper (Rear in Top out)

Paper type 1 to 5-copies for tractor and paper table

Paper size

Cut sheet 3.75~10.5 inch (W) x 4.5~14.3 inch (L)
95~ 267 mm (W) x 114.3~364 mm (L)

Fanfold paper 3.75~10.5inch (W) x 4.5~22.0 inch (L)
95~267 mm (W) x 101.6 mm ~ (L)

Paper thicknes

Cut sheet/Fanfold paper: 0.065~0.14mm
Copy paper: 0.06~0.065mm
* Maximum Total 0.27mm

Page length 1 to 22 inches
Programmable in 1/360 inch

Number of copies Up to 5, including the original

Command sets (emulations) Epson ESC/P2
IBM 2390

Character sets 14 international character sets + one legal character set

Fonts

Draft	10, 12, 15, 17.1, 20 cpi
High Speed Draft	10 cpi
Roman	10, 12, 15, 17.1, 20cpi and proportional
OCR-A	10cpi in NLQ and LQ
OCR-B	10cpi in NLQ and LQ

Courier,Gothic, SanSerif, Prestige elite, Script,Orator,
bold *all in NLQ and LQ style and 10, 12, 15, 16.6, 17.1, 20cpi and proportional

Line spacing 2, 3, 4, 6, 8.or 12 lines per inch. Programmable in 1/360 inch

Character pitch 10, 12, 15, 17.1, 20cpi or Proportional. Programmable in 1/360 inch

Characters per line	10cpi:	80cpl
	12cpi:	96cpl
	15cpi:	120cpl
	17.1cpi:	136cpl
	20cpi:	160cpl

cpi: characters per inch
cpl: characters per line

PERFORMANCE SPECIFICATIONS

Print speed

Pitch	High speed draft	Draft	NLQ	LQ
10cpi	450(80dpi)	300(120dpi)	200(180dpi)	120(240dpi)
12cpi	360(120dpi)	360(120dpi)	240(180dpi)	120(360dpi)
15cpi	450(120dpi)	450(120dpi)	300(180dpi)	150(360dpi)
17.1cpi	340(180dpi)	340(180dpi)	340(180dpi)	170(360dpi)
20cpi	400(180dpi)	400(180dpi)	400(180dpi)	200(360dpi)

cpi: characters per inch
cps: characters per second

Line feed speed 41.6ms per line at 6 lines per inch
Form feed speed 4 inches per second
Ribbon life Up to 7 million characters

Certification Safety:

Model	Certification	Regulation	country
M33342A	UL	UL60950-1	United States
	CSA	CSA 60950-1 (for 100 to 120VAC)	Canada
M33342B	CE-LVD	EN60950-1 (for 220 to 240VAC)	Europe
	GS	EN60950-1 (for 220 to 240VAC)	Germany

EMI regulation:

Model	Certification	Regulation	country
M33342A	FCC	FCC Part15 Subpart B Class B (for 100 to 120VAC)	United States
	IC	ICES-003 Class B (for 100 to 120VAC)	Canada
M33342B	CE-EMC	EN55032, EN55032 Class A (for 220 to 240VAC)	Europe

Energy regulation:

Model	Certification	Regulation	country
M33342A	Energy star(ES2.0)	ENERGY STAR Program Requirements for Imaging Enquipment:Version 2.0 (for 100 to 120VAC)	United States
M33342B	Wnergy star(ES2.0)	ENERGY STAR Program Requirements for Imaging Enquipment:Version 2.0 (for 220 to 240VAC)	United States, Europe

Harmful material management

Model	Regulation	country
M33342A	REACH :Regulation(EC)No.1907/2006	Europe
M33342B	REACH :Regulation(EC)No.1907/2006	Europe
	German Chemical Prohibition Ordinance (ChemVerbotsV) revised version from 13.6.2003 I 867	Germany

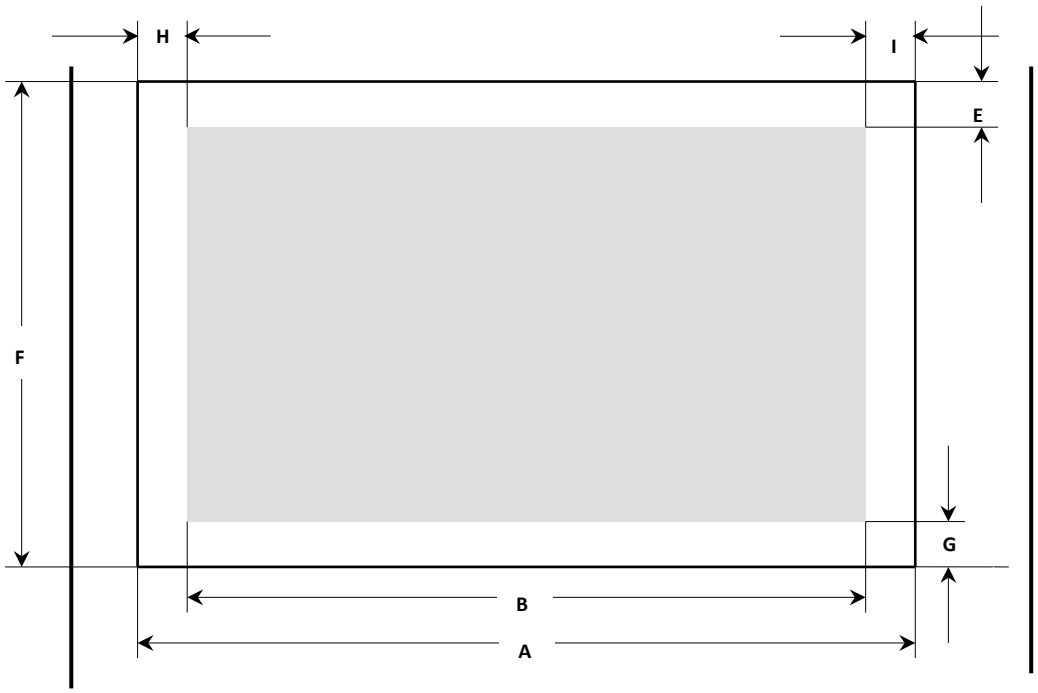
PAPER SPECIFICATIONS

Print Area

This section illustrates the recommended print area for single sheets and continuous forms.

Feeding paper by friction (single paper)

Printing area



Pos	Title	Min.		Max.	
		mm	Ins	mm	ins
A	Paper width	95	3.75	267	10.5
B	Printable width			203.2	8
E	Top margin	4.2	0.17	25.4	1
F	Page length	76	3	364	14.3
G	Bottom margin	4.2	0.17		
H	Left margin	3.0	0.12		
I	Right margin	3.0	0.12		

Paper specifications

Type of Paper	Number of Parts	Ream weight (kg)	Remark
Single sheet	**1P**	45,55,70	
Carbonless	**2P**	34,43,55,70*	Ream weight paper with * mark only can be used as the bottom layer under carbon paper.
	3P	34,43,55*,70*	
	4P	34,43*,55*,70*	
	5P	34,43*,55*	

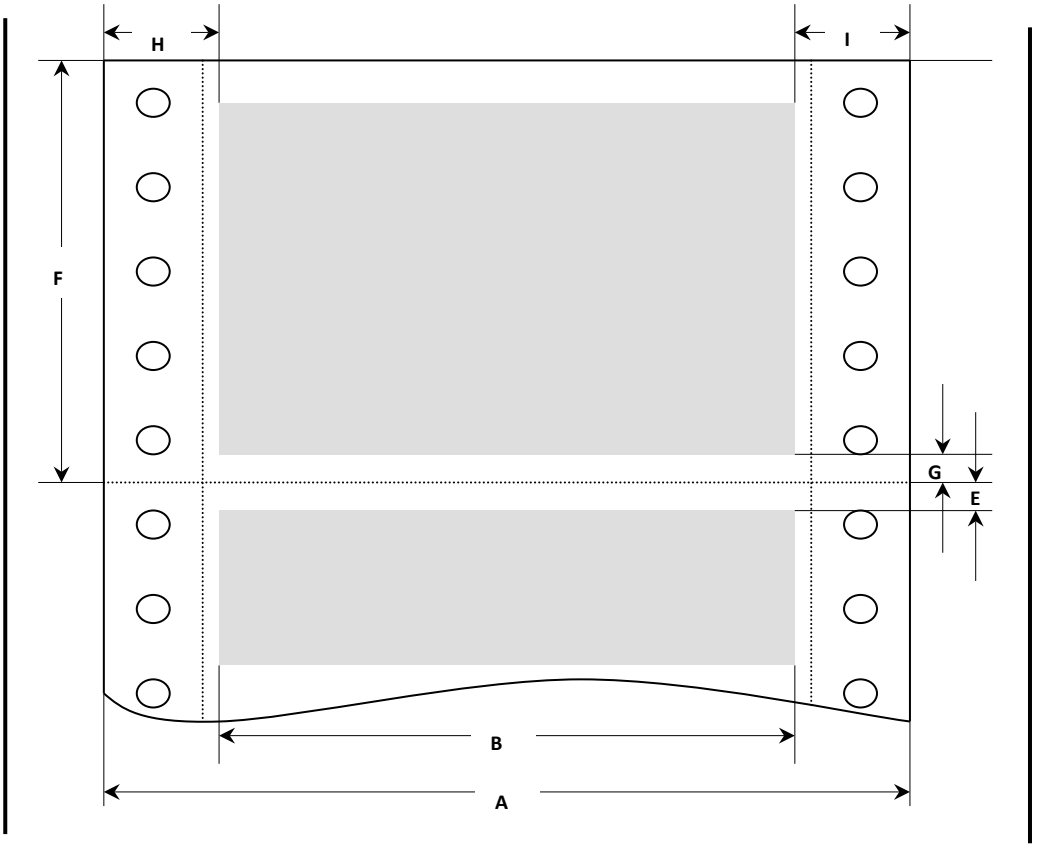
Attention 1: Ream weight means weight of 1000 sheets of full-sized paper (788*1091) (Kg).

Attention 2: The ream weight of carbonless paper and paper with double-size carbon at intervals will be different, because they are made by different factory. We will choose the paper that is close to the value in the table.

Attention 3: Add a carbon paper between papers with double-size carbon at intervals, it amount to a sheet, so amount of sheets is 3P.

Push/pull tractor paper feeding (continuous paper)

Printing area



Pos	Title	Min		Max	
		mm	inches	mm	inches
A	Paper width	95	3.75	267	10.5
B	Printable width			203.2	8.0
E	Top margin	0	0	25.4	1
F	Page length	101.6	4	363.2	22
G	Bottom margin	0	0		
H	Left margin (0 scale position)	12.7	0.5		
I	Right margin (0 scale position)	12.7	0.5		

Paper specifications

Type of Paper	Number of Parts	Ream weight (kg) The weight of square meters is shown in brackets. (g) Attention 1)	Remark
Single sheet	**1P**	45,55,70(52,64,81)	
Carbonless Attention 2)	**2P**	34,43,55,70*	Ream weight paper with * mark only can be used as the bottom layer under carbon paper.
	3P	34,43,55*,70*	
	4P	34,43*,55*,70*	
	5P	34,43*,55*	
Carbon-backed Attention 2)	**2P**	34,45,55,70*	
	3P	34,45,55*,70*	
	4P	34,45*,55*,70*	
	5P	34,45*,55*	
Carbon-interleaved Attention 3)	**2P**	30,40,45,55*,70*	
	3P	30,40,45,55*	

Attention 1: Ream weight means weight of 1000 sheets of full-sized paper (788*1091) (Kg). Basis weight means paper weight in gramps per square meter.

Attention 2: The ream weight of carbonless paper and paper with double-size carbon at intervals will be different, because they are made by different factory. We will choose the paper that is close to the value in the table.

Attention 3: Add a carbon paper between papers with double-size carbon at intervals, it amount to a sheet, so amount of sheets is 3P.

C

COMMAND SETS

This chapter describes printer commands and their parameters.

This printer has three resident command sets:

- ESC/P2 Emulation Command List
- IBM Emulation Command List

ESC/P2 EMULATION COMMAND LIST

Function	Command
Mechanical control	
Beeper	BEL
Turn unidirectional mode on/off n = 0 Bidirectional printing 1 Unidirectional printing **Notes** • Unidirectional printing provides better alignment of vertical lines, while bidirectional printing is faster.	ESC U (n)
Unidirectional mode (one line) Moves the print head to the extreme left position so the next line will print left to right **Notes** • This is a nonrecommended command; use the ESC U command instead.	ESC <
Moving the print position	
Carriage return	CR
Line feed	LF
Form feed	FF
Tab horizontally	HT
Tab vertically	VT
Backspace	BS
Set absolute horizontal print position (horizontal position) = ((nH × 256) + nL) × (defined unit) + (left margin) (0 ≤ nH ≤ 127, 0 ≤ nL ≤ 255) **Notes** • Set the defined unit with the ESC (U command. • The default defined unit setting for this command is 1/60 inch. • The new position is measured from the current left-margin position. • The printer ignores this command if the specified position is to the right of the right margin.	ESC $ (nL) (nH)

Function	Command
Set relative horizontal print position (horizontal position) = ((nH × 256) + nL) × (defined unit) +(current position) (0 ≤ nH ≤ 127, 0 ≤ nL ≤ 255) **Notes** • Set the defined unit with the ESC (U command. • The default defined unit for this command is 1/120 inch in draft mode, and 1/180 inch in LQ mode. • The new position is measured from the current position. • The printer ignores this command if it would move the print position outside the printing area.	ESC \ (nL) (nH)
Set absolute vertical print position (vertical position) = ((mH × 256) + mL) × (defined unit) + (top-margin position) (nL = 2, nH = 0,0 ≤ mL ≤ 255, 0 ≤ mH ≤ 127) **Notes** • Set the defined unit using the ESC (U command. • The default defined unit for this command is 1/60 inch. • The new position is measured in defined units from the current top-margin position. • Moving the print position below the bottom-margin position produces the following results: Continuous paper Moves the vertical print position to the top-margin position on the next page,single-sheet paper Ejects the paper	ESC (V (nL) (nH) (mL) (mH)

Function	Command
Set relative vertical print position (vertical position) = ((mH × 256) + mL) × (defined unit) + (top-margin position) (nL = 2, nH = 0,0 ≤ mL ≤ 255, 0 ≤ mH ≤ 127) **Notes** • Set the defined unit using the ESC (U command. • The default defined unit for this command is 1/60 inch. • The new position is measured in defined units from the current position. • Moving the print position below the bottom-margin position produces the following results: Continuous paper moves the vertical print position to the top-margin position on the next page,single-sheet paper Ejects the paper.	ESC (v (nL) (nH) (mL) (mH)
Advance print position Advances the vertical print position n/180 inch (0 ≤ n ≤ 255) **Notes** • ESC J does not affect the horizontal print position. • Moving the print position below the bottom-margin position produces the following results: Continuous paper moves the vertical print position to the top-margin position on the next page,single-sheet paper Ejects the paper.	ESC J (n)
Reverse paper feed Reverse feeds paper (moves the print position in the negative direction) n/180 inch. (0 ≤ n ≤ 255) **Notes** • Do not reverse-feed paper more than 1/2 inch; the vertical print position may not be accurate otherwise.	ESC j (n)

Function	Command
Selecting characters	
Select double-width printing (one line)	SO
Select double-width printing (one line)	ESC SO
Cancel double-width printing (one line)	DC4
Turn double-width printing on/off	ESC W (n)
n = 1 Turns on double-width	
0 Turns off double-width	
Turn double-height printing on/off	ESC w (n)
n = 1 Turns on double-height	
0 Turns off double-height	
Notes	
• This command does not affect line spacing.	
Select condensed printing	SI
Select condensed printing	ESC SI
Cancel condensed printing	DC2
Set intercharacter space	ESC SP
Select character style	ESC q (n)
Turns on/off outline and shadow printing, according to the parameters below:	
n = 0 Turn off outline/shadow printing	
1 Turn on outline printing	
2 Turn on shadow printing	
3 Turn on outline and shadow printing	
Copy ROM to RAM	ESC : NUL(n) (m)
Copies the data for the characters between 0 and 126 of the n typeface from ROM to RAM memory	
Parameter range	
$0 \leq n \leq 127$	
m = 0	
Select superscript/subscript printing	ESC S
Cancel superscript/subscript printing	ESC T
Select line/score	ESC (-
d1 = 1 Underline	
2 Strikethrough	
3 Overscore	
d2 = 0 Turn off scoring	
1 Single continuous line	
2 Double continuous line	
5 Single broken line	
6 Double broken line	

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>Turn underline on/off
n = 1 Turns underline on
0 Turns underline off</td><td>ESC –</td></tr>
<tr><td>Select double-strike printing</td><td>ESC G</td></tr>
<tr><td>Cancel double-strike printing</td><td>ESC H</td></tr>
<tr><td>Master Select
Selects any combination of several font attributes and enhancements by setting or clearing the appropriate bit in the n parameter, as shown below:
<table>
<tr><th>Bit</th><th>On/ Off</th><th>Hex</th><th>Dec</th><th>Function</th><th>Equivalent</th></tr>
<tr><td rowspan="2">0</td><td>Off</td><td>0</td><td>0</td><td>Selects 10 cpi</td><td>ESC P</td></tr>
<tr><td>On</td><td>1</td><td>1</td><td>Selects 12 cpi</td><td>ESC M</td></tr>
<tr><td rowspan="2">1</td><td>Off</td><td>0</td><td>0</td><td>Cancels proportional</td><td>ESC p 0</td></tr>
<tr><td>On</td><td>2</td><td>2</td><td>Selects proportional</td><td>ESC p 1</td></tr>
<tr><td rowspan="2">2</td><td>Off</td><td>0</td><td>0</td><td>Cancels condensed</td><td>DC2</td></tr>
<tr><td>On</td><td>4</td><td>4</td><td>Selects condensed</td><td>SI</td></tr>
<tr><td rowspan="2">3</td><td>Off</td><td>0</td><td>0</td><td>Cancels bold</td><td>ESC F</td></tr>
<tr><td>On</td><td>8</td><td>8</td><td>Selects bold</td><td>ESC E</td></tr>
<tr><td rowspan="2">4</td><td>Off</td><td>0</td><td>0</td><td>Cancels double-strike</td><td>ESC H</td></tr>
<tr><td>On</td><td>10</td><td>16</td><td>Selects double-strike</td><td>ESC G</td></tr>
<tr><td rowspan="2">5</td><td>Off</td><td>0</td><td>0</td><td>Cancels double-width</td><td>ESC W 0</td></tr>
<tr><td>On</td><td>20</td><td>32</td><td>Selects double-width</td><td>ESC W 1</td></tr>
<tr><td rowspan="2">6</td><td>Off</td><td>0</td><td>0</td><td>Cancels italics</td><td>ESC 5</td></tr>
<tr><td>On</td><td>40</td><td>64</td><td>Selects italics</td><td>ESC 4</td></tr>
<tr><td rowspan="2">7</td><td>Off</td><td>0</td><td>0</td><td>Cancels underline</td><td>ESC - 0</td></tr>
<tr><td>On</td><td>80</td><td>128</td><td>Selects underline</td><td>ESC - 1</td></tr>
</table>
Add the numbers of the features to be selected and send the total as the parameter n.</td><td>ESC ! (n)</td></tr>
</table>

Function	Command
Select italic font Cancel italic font Select bold font Cancel bold font Turn proportional mode on/off n = 0 Returns to current fixed character pitch 1 Selects proportional spacing **Notes** • Changes made to the fixed-pitch setting with the ESC P, ESC M, or ESC g commands during proportional mode take effect when the printer exits proportional mode. • The printer automatically switches to LQ printing when proportional spacing is selected.	ESC 4 ESC 5 ESC E ESC F ESC p (n)
Select 10 cpi Select 12 cpi Select 15 cpi	ESC P ESC M ESC g
Set horizontal motion index (HMI) Fixes the character width (HMI) according to the following formula: HMI = ((nH × 256)+ nL)/360inch 0 ≤ nH ≤ 4,0 ≤ nL ≤ 255, HMI ≤ 3.00 inches	ESC c (nL) (nH)
Select typeface Selects the typeface for LQ printing according to the following values: n=0 Roman 1 Sans serif 2 Courier 3 Prestige 4 Script 5 OCR-B 6 OCR-A	ESC k (n)

Function	Command
Select LQ ,NLQ or draft Selects either LQ, draft or NLQ printing according to the following values: n = 0 Draft printing 1 Letter-quality printing 2 Near Letter-quality printing	ESC x (n)
Select Draft/Super Draft Selects draft/super draft for ANK characters in accordance with the value for n. n = 00H draft setting 01H Super draft setting **Notes** • If super draft is specified draft (ESC x 0) should be selected	ESC y (n)
Select user-defined set Switches between normal and user-defined characters, as follows: n = 0 Normal (ROM) characters 1 User-defined (RAM) characters	ESC % (n)

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>Define user-defined characters
Sets the parameters for user-defined characters and then sends the data for those characters,as described below:
n = Character code of the first character to be user-defined
m = Character code of the last character to be user-defined
a0 = Space to the left of each proportional user-defined character
a1 = Actual width of user-defined characters
a2 = Space to the right of each proportional user-defined character
d1 . . . dk = Character data
(0 ≤ n ≤ 127,0 ≤ m ≤n)
LQ mode Draft mode
0 ≤ a1 ≤ 37 0 ≤ a1 ≤ 15
0 ≤ a0 + a1 + a2 ≤ 42 0 ≤ a0 +a1 + a2 ≤ 18
Normal characters Super/subscript characters
k = 3Xa1 k = 2Xa1
Notes
• The following maximum character widths are recommended. (heightXwidth)
<table>
<tr><th>Print quality</th><th>10cpi</th><th>12cpi</th><th>15cpi</th><th>Proportional</th></tr>
<tr><td>Draft Normal size</td><td>24x12</td><td>24x10</td><td>24x 8</td><td>Not Available</td></tr>
<tr><td>Draft Super/ subscript</td><td>16x12</td><td>16x10</td><td>16x 8</td><td>Not Available</td></tr>
<tr><td>LQ Normal size</td><td>24x36</td><td>24x30</td><td>24x24</td><td>24x42</td></tr>
<tr><td>LQ Super/ subscript</td><td>16x36</td><td>16x30</td><td>16x24</td><td>16x42</td></tr>
</table>
• Send the ESC % 1 command to switch to user-defined characters.
• Set n=m when only 1 character is defined.</td><td>ESC & NUL (n) (m) (a0 a1 a2.d1.d2 .. . . dk)</td></tr>
</table>

Function	Command
Select an international character set Selects the set of characters printed for specific character codes, as listed below: n = 0 USA 1 France 2 Germany 3 United Kingdom 4 Denmark I 5 Sweden 6 Italy 7 Spain I 8 Japan (English) 9 Norway 10 Denmark II 11 Spain II 12 Latin America **Notes** • The characters printed for each international character set are listed below:	ESC R (n)

n	Set name	Dec Hex	35 23	36 24	64 40	91 5B	92 5C	93 5D	94 5E	96 60	123 7B	124 7C	125 7D	126 7E
0	USA		#	$	@	[	\	]	^	`	{	|	}	~
1	France		#	$	à	°	ç	§	^	`	é	ù	è	¨
2	Germany		#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
3	UK		£	$	@	[	\	]	^	`	{	|	}	~
4	Denmark I		#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
5	Sweden		#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6	Italy		#	$	@	°	\	é	^	ù	à	ò	è	ì
7	Spain I		Pt	$	@	¡	Ñ	¿	^	`	¨	ñ	}	~
8	Japan (Eng)		#	$	@	[	¥	]	^	`	{	|	}	~
9	Norway		#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10	Denmark II		#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11	Spain II		#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú
12	Lat America		#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú

Function	Command
Assign character table Assigns the d2 registered character table to the d1 character table according to the following values (the d1 character table is one of the three tables selectable with the ESC t command):	ESC (t (nL) (nH) (d1) (d2) (d3)

d2	d3	Table name
0	0	Italic
1	0	PC437 (US)
3	0	PC850 (Multilingual)
4	0	PC851 (Greek)
7	0	PC860 (Portuguese)
8	0	PC863 (Canadian-French)
9	0	PC865 (Nordic)
10	0	PC852 (Eastern Europe)
11	0	PC857 (Turkish)
13	0	PC864 (Arabic)
13	7	ISO_8859_7
14	0	PC866 (Russian)
24	0	PC861 (Icelandic)
25	0	BRASCII (Braz Portuguese)
26	0	Abicomp (Braz Portuguese)
27	0	MAZOWIA (Poland)
28	0	KAMENICKY
29	7	ISO 8859-7 (Latin/Greek)
29	15	ISO 8859-15
32	0	Bulgaria
35	0	Roman 8
42	0	PC720
43	255	ISO 8859-1
44	0	PC858
45	0	PC771
46	255	ISO 8859-9
48	255	PC1250
49	0	PC1251
50	0	PC1252
51	0	PC1253
52	0	PC1254
55	0	PC1257
112	0	OCR-B
127	1	ISO 8859_1
127	2	ISO 8859-2 (ISO Latin 2)
60	255	CRO_ASCII
65	255	E_UK
66	255	E_US_ASCII
70	255	GREEK_DEC
72	255	E_SWEDEN
75	255	E_GERMAN
76	255	PORTUGUESE
79	255	COAX_TWINAX
82	255	E_FRANCE
89	255	E_ITALY
90	255	E_SPAINI
96	255	E_NORWAY

Function	Command

d2	d3	Table name
108	255	ELOT_928
114	255	TABLE_1252
115	255	TABLE_1253
116	255	TABLE_1254
129	255	NEW_437
131	255	NEW_DIG_850
142	255	TABLE_866
148	255	TABLE_737
149	255	TABLE_864
150	255	FARSI
151	255	URDO
152	255	OLD_CODE_860
153	255	FLARRO_863
154	255	TABLE_865
157	255	BULGARIA_866

Function	Command
Select character table Selects the character table to be used for printing from among the three character tables described below: n = 0 Character table 0 1 Character table 1 2 Character table 2 **Default** table 0 Italic table 1 PC437 table 2 User-defined characters **Notes** • Use the ESC (t command to assign any registered character table to any character table.	ESC t (n)
Data and memory control Initialize printer Cancel Line Delete last character in buffer Cancel MSB control Cancels any controls on the MSB (bit number 7) set by the ESC = or ESC > commands;printer then accepts all MSB data as is **Notes** • This is a nonrecommended command; most computer systems no longer require MSB control.	 ESC @ CAN DEL ESC #
Set MSB to 0 Sets the MSB (bit number 7) of all incoming data to 0 Notes • This is a nonrecommended command; most computer systems no longer require MSB control. • All data is affected, including graphics data.	ESC =

Function	Command
Set MSB to 1 Sets the MSB (bit number 7) of all incoming data to 1 **Notes** • This is a nonrecommended command; most computer systems no longer require MSBcontrol. • All data is affected, including graphics data.	ESC >
Setting the units Set unit Sets the unit to m/3600 inch. The printer uses this unit when moving the print position,setting the page length, and setting the top and bottom margins with the following commands: ESC (V, ESC (v, ESC \, ESC $, ESC (C, ESC (c (nL = 1, nH = 0,m = 5, 10, 20, 30, 40, 50, 60)	ESC (U (nL) (nH) (m)
Select 1/8 inch line spacing	ESC 0
Select 1/6 inch line spacing	ESC 2
Set n/180 inch line spacing Sets the line spacing to n/180 inch ($0 \leq n \leq 255$)	ESC 3 (n)

Function	Command
Set n/360 inch line spacing Sets the line spacing to n/360 inch (0 ≤ n ≤ 255)	ESC + (n)
Set n/60-inch line spacing Sets the line spacing to n/60 inch (0 ≤ n ≤ 85)	ESC A (n)
Set horizontal tabs Sets horizontal tab positions (in the current character pitch) at the columns specified by n1 to nk, as measured from the left-margin position (0 ≤ k ≤ 32,1 ≤ n ≤ 255,nk > n(k-1)) **Default** Every eight characters **Notes** • The values for n must be in ascending order; a value of n less than the previous n ends tab setting (like the NUL code). • Send an ESC D NUL command to cancel all tab settings. • The tab settings move to match any movement in the left margin. • A maximum of 32 horizontal tabs can be set.	ESC D (n1 n2 . . . nk NUL)
Set vertical tabs Sets vertical tab positions (in the current line spacing) at the lines specified by n1 to nk, as measured from the top-margin position (0 ≤ k ≤ 16,1 ≤ n ≤ 255,nk > n(k-1)) **Notes** • The values for n must be in ascending order; a value of n less than the previous n ends tab setting (just like the NUL code). • The tab settings move to match any subsequent movement in the top-margin position. • Send an ESC B NUL command to cancel all tab settings. • A maximum of 16 vertical tabs can be set.	ESC B (n1 n2 . . . nk NUL)

Function	Command
Setting the page format Set page length in defined unit (page length) = ((mH × 256) + mL) × (defined unit) (nL = 2, nH = 0,0 < ((mH × 256) + mL) × (defined unit) ≤ 22)	ESC (C (nL) (nH) (mL) (mH)
Set page format Sets the top and bottom margins in the defined units(set with the ESC (U command) according to the following formulas: (top margin) = ((tH × 256) + tL) × (defined unit) (bottom margin) = ((bH × 256) + bL) × (defined unit) (nL = 4, nH = 0, top margin < bottom margin, bottom margin < 22 inches) ((tH × 256) + tL) < ((bH × 256) + bL) ((bH × 256) + bL) × (defined unit) ≤ 22 **Default** Continuous paper: None Single-sheet paper: (top margin) = top-of-form position (bottom margin) = last printable line **Notes** • Measure both top and bottom margins from the top edge of the page. • Send this command before paper is loaded, or when paper is at the top-of-form position. Otherwise, the current print position becomes the top-margin position (this results in undesirable contradictions between the actual and logical page settings). • Changing the defined unit does not affect the current page-length setting.	ESC (c (nL) (nH) (tL) (tH) (bL) (bH)
Set page length in lines Sets the page length to n lines in the current line spacing (1 ≤ n ≤ 127, 0 < n × (current line spacing) ≤ 22 inches)	ESC C (n)
Set page length in inches Sets the page length to n inches (1 ≤ n ≤ 22)	ESC C NUL (n)

Function	Command
Set bottom margin Sets the bottom margin on continuous paper to n lines (in the current line spacing) from the top-of-form position on the next page. (0 < n ≤ 127, 0 < (current line spacing) × n < (page length))	ESC N (n)
Cancel bottom margin	ESC O
Set right margin Sets the right margin to n columns in the current character pitch, as measured from the left most printable column (1 ≤ n ≤ 255) (left margin) < (current pitch) × n ≤ (printable area width)	ESC Q (n)
Set left margin Sets the left margin to n columns in the current character pitch, as measured from the left most printable column (1 ≤ n ≤ 255) 0 ≤ (left margin) <(right margin)	ESC l (n)
Control-code character printing Print data as characters • Prints data bytes d1 through dk as characters, not control codes • The amount of data to be sent is calculated as follows: k = ((nH × 256) + nL) (0 ≤ nH ≤ 127, 0 ≤ nL ≤ 255)	ESC (^ (nL) (nH) (d1 . . . dk)
Enable printing of upper control codes Tells the printer to treat codes from 128 to 159 as printable characters instead of control codes	ESC 6
Enable upper control codes Tells the printer to treat codes from 128 to 159 as control codes instead of printable characters	ESC 7

Function	Command
Printing color and graphics Select graphics mode Selects graphics mode (allowing you to print raster graphics)(nL = 1,nH = 0,m = 1)	ESC (G (nL) (nH) (m)
Print raster graphics • Prints dot graphics in raster format (row by row, left to right) • Allows compression of graphics data during raster graphics printing; counters can be included with data to specify the number of times to repeat a particular byte of data • Parameters are used as described below: c = 0 Full graphics mode (noncompressed) 1 Compressed raster graphics (Run Length Encoding) mode v Vertical resolution in dpi - 720, 360, 180 (3600/v dpi) h Horizontal resolution in dpi - 720, 360, 180 (3600/h dpi) m Vertical dot count (rows of dot graphics) nL, nH Horizontal dot count (columns of dot graphics), according to the following formula: nH = INT(horizontal dot count)/256 nL = MOD(horizontal dot count)/256 k Total number of data bytes, according to the following formula: k = mX INT((nHX256)+nL + 7)/8) d During full graphics mode: Graphics data During RLE compressed raster graphics mode (ESC . 1): The first data byte is treated as a counter. Graphics data bytes then alternate with a data counter byte (run-length data compression), as follows: 0 ≤ (counter byte) ≤ 127 Counter specifies the number of data bytes following according to the formula below. (counter byte) + 1 = (number of data bytes to follow) or (counter byte) = (number of data bytes to follow) – 1 128 ≤ (counter byte) ≤ 255	ESC .c (v h m nL nH d1 d2 . . . dk)

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>
Counter specifies the number of times to repeat the next byte of data
according to the formula below.
256 – (counter byte) + 1 = (number of times to repeat next byte)
(counter byte) = 257 – (number of times to repeat next byte)

(c = 0 ,1,v = 5,10, 20,h = 5,10, 20,m = 1, 8, 24)
(0 ≤ nL ≤ 255,0 ≤ nH ≤ 127,0 ≤ d ≤ 255)

The following vertical and horizontal printing resolution combinations are available:
<table>
<tr><th>v</th><th>h</th><th>v(dpi)</th><th>h(dpi)</th><th>m</th></tr>
<tr><td>20</td><td>20</td><td>180</td><td>180</td><td>1,8 or 24</td></tr>
<tr><td>20</td><td>20</td><td>180</td><td>360</td><td>1,8 or 24</td></tr>
<tr><td>10</td><td>10</td><td>360</td><td>360</td><td>1,8 or 24</td></tr>
</table>
Stylus COLOR only
<table>
<tr><td>5</td><td>5</td><td>720</td><td>720</td><td>1(with special paper)</td></tr>
</table>

Notes
• Use only one image density and do not change this setting once in raster graphics mode.
• When MicroWeave is selected, the image height m must be set to 1.
• Special coated stock paper available from EPSON is required when printing raster graphics at 720 dpi.
• This command can be used only during graphics mode, entered by sending the ESC (G command.
• The final print position is the dot after the far right dot on the top row of the graphics printed with this command.
• Print data that exceeds the right margin is ignored.
• Do not specify the vertical movement in increments smaller than the current print density.
</td><td></td></tr>
</table>

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>Select bit image
Prints dot-graphics in 8, 24-dot columns, depending on the following parameters:
m Specifies the dot density (see table below)
nL, nH Specifies the total number of columns of graphics data that follow
(number of dot columns) = ((nH × 256) + nL)
nH = INT(number of dot columns)/256
nL = MOD(number of dot columns)/256
d1 . . . dk Bytes of graphics data; k is determined by multiplying the total number of columns times the number of bytes required for each column (see the table below)
(0 ≤ nL ≤ 255,0 ≤ nH ≤ 31)
m = 0, 1, 2, 3, 4, 6, 32, 33, 38, 39, 40
Dot density
<table>
<tr><th>m</th><th>Horizontal density (dpi)</th><th>Vertical density (dpi)</th><th>Adjacent dot printing</th><th>Dots per column</th><th>Bytes per column</th></tr>
<tr><td>0</td><td>60</td><td>60</td><td>Yes</td><td>8</td><td>1</td></tr>
<tr><td>1</td><td>120</td><td>60</td><td>Yes</td><td>8</td><td>1</td></tr>
<tr><td>2</td><td>120</td><td>60</td><td>No</td><td>8</td><td>1</td></tr>
<tr><td>3</td><td>240</td><td>60</td><td>No</td><td>8</td><td>1</td></tr>
<tr><td>4</td><td>80</td><td>60</td><td>Yes</td><td>8</td><td>1</td></tr>
<tr><td>6</td><td>90</td><td>60</td><td>Yes</td><td>8</td><td>1</td></tr>
<tr><td>32</td><td>60</td><td>180</td><td>Yes</td><td>24</td><td>3</td></tr>
<tr><td>33</td><td>120</td><td>180</td><td>Yes</td><td>24</td><td>3</td></tr>
<tr><td>38</td><td>90</td><td>180</td><td>Yes</td><td>24</td><td>3</td></tr>
<tr><td>39</td><td>180</td><td>180</td><td>Yes</td><td>24</td><td>3</td></tr>
<tr><td>40</td><td>360</td><td>180</td><td>No</td><td>24</td><td>3</td></tr>
</table>
</td><td>ESC * (m nL nH d1 . . . dk)</td></tr>
<tr><td>Reassign bit-image mode
Assigns the dot density used during the ESC K, ESC L, ESC Y, or ESC Z commands to the density specified by parameter m in the ESC * command
n = 75, 76, 89, 90(ASCII code of K,L,Y,Z)
m = 0, 1, 2, 3, 4, 6, 32, 33, 38, 39, 40, 71, 72, 73</td><td>ESC ? (n)(m)</td></tr>
</table>

Function	Command
Select 60-dpi graphics Prints bit-image graphics in 8-dot columns, at a density of 60 horizontal by 60 vertical dpi,according to the following parameters: nL, nH Specify the total number of columns (k) of graphics data following,according to the formula k = ((nH × 256) + nL) nH = INT(k/256) nL = MOD(k/256) d1 . . . dk Bytes of graphics data (0 ≤ nL ≤ 255,0 ≤ nH ≤ 31,0 ≤ d ≤ 255) **Notes** • The ESC * 0 command is identical to this command; use ESC * 0 instead of this command. • The dot density printed with this command can be redefined with the ESC ? command.	ESC K (nL nH d1 d2 . . . dk)
Select 120-dpi graphics Prints bit-image graphics in 8-dot columns, at a density of 120 horizontal by 60 vertical dpi,according to the following parameters: nL, nH Specify the total number of columns (k) of graphics data following,according to the formula k = ((nH × 256) + nL) nH = INT(k/256) nL = MOD(k/256) d1 . . . dk Bytes of graphics data (0 ≤ nL ≤ 255, 0 ≤ nH ≤ 31, 0 ≤ d ≤ 255) **Notes** • The ESC * 1 command is identical to this command; use ESC * 1 instead of this command. • The dot density printed with this command can be redefined with the ESC ? command.	ESC L (nL nH d1 d2 . . . dk)

Function	Command
Select 120-dpi, double-speed graphics Prints bit-image graphics in 8-dot columns, at a density of 120 horizontal by 60 vertical dpi,according to the following parameters: nL, nH Specify the total number of columns (k) of graphics data following, according to the formula k = ((nH × 256) + nL) nH = INT(k/256) nL = MOD(k/256) d1 . . . dk Bytes of graphics data (0 ≤ nL ≤ 255, 0 ≤ nH ≤ 31, 0 ≤ d ≤ 255) **Notes** • The ESC * 2 command is identical to this command; use ESC * 2 instead of this command. • The speed is double because consecutive horizontal dots cannot be printed; the printer ignores the second continuous horizontal dot. • The dot density printed with this command can be redefined with the ESC ? command.	ESC Y (nL nH d1 d2 . . . dk)
Select 240-dpi graphics Prints bit-image graphics in 8-dot columns, at a density of 240 horizontal by 60 vertical dpi,according to the following parameters: nL, nH Specify the total number of columns (k) of graphics data following,according to the formula k = ((nH × 256) + nL) nH = INT(k/256) nL = MOD(k/256) d1 . . . dk Bytes of graphics data (0 ≤ nL ≤ 255, 0 ≤ nH ≤ 31, 0 ≤ d ≤ 255) **Notes** • The ESC * 3 command is identical to this command; use ESC * 3 instead of this command. • The speed is double because consecutive horizontal dots cannot be printed; the printer ignores the second continuous horizontal dot. • he dot density printed with this command can be redefined with the ESC ? command.	ESC Z(nL nH d1 d2 . . . dk)

Function	Command
Barcode Space Adjustment 1. Description (1) Value of p_1 defines the adjust amount on the width of a space in barcode. (Use two's complement for negative values.) n Space Adjustment -3<FD>16 -3/360 inch -1<FE>16 -1/360 inch 0<00>16 0 (default) 1<01>16 1/360 inch 2<02>16 2/360 inch 3<03>16 3/360 inch (2) Positive and negative p_1 increase and decreases, respectively, the width of a space element. (3) "space width" is the total space occupied by a narrows space, a wide space and the gap between a character. (4) Power-on the printer, *INPRM, or reset command restore the default space width. (5) This command acts on subsequent received barcode commands. 2. Valid values n= <00>16, <01>16, <02>16, <03>16, <FD>16, <FE>16, (-3 ≤ P1 ≤ 3) **Notes** • < >16 = Hexadecimal	ESC e 5 n

Function	Command
Barcode Control 1. Description a. Define and print barcode. 2. Valid values a. b number of data, in byte = actual data +6 b. R (fixed) c. c defines type of barcode. (Invalid *c* causes no printing.)	ESC+DC4+b+R+c+w+h+a+ch1…+chn

c			Barcode Type
ASCII	Decimal	Hex	
1	49	31	Codabar(nw-7)
2	50	32	EAN 13
3	51	33	EAN 8
4	52	34	Code 3 to 9
5	53	35	Industrial 2 of 5
6	54	36	Interleaved 2 of 5
7	55	37	Matrix 2 of 5
A	65	41	UPC type A
B	66	42	CODE 128
a	97	61	UPC type A with check character

d. w width of narrow bar in 1/1440 inch unit.
Actual bar width is converted to 1/180 inch unit:

w	Narrow bar width
1~19	2 dot (2/180 inch)
20~27	3 dot (3/180 inch)
28	4 dot (4/180 inch)

e. h defines the narrow bar height in 1/1440 inch unit.
h ≤ 11 inch
For actual printout, a dot is 1/180 inch in height.
When the bar or the last portion is not a multiple of 24 dots, the initial height is shown below:

Narrow bar width	EAN 13 UPC-A	EAN 8	Others
2 dot (16/1440")	162dot (1296/1440")	130dot (1040/1440")	108dot (864/1440")
3dot (24/1440")	234dot (1872/1440")	2dot (1496/1440")	2dot (1080/1440")
4dot (32/1440")	312dot (2496/1440")	2dot (1992/1440")	2dot (1296/1440")

( ) Values in brackets are conversions in 1/1440 unit.

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>
f. a check digit and OCR control
<table>
<tr><th>Bit</th><th>Description</th><th>Value</th><th>Function</th></tr>
<tr><td rowspan="2">0</td><td rowspan="2">Indicate if the check digit is attached *1</td><td>0</td><td>Attached</td></tr>
<tr><td>1</td><td>Not attached</td></tr>
<tr><td rowspan="2">1</td><td rowspan="2">OCR (by default, OCR-B)</td><td>0</td><td>Printed</td></tr>
<tr><td>1</td><td>Blank</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">Position of flag characters for EAN, UPC. *3</td><td>0</td><td>Barcode’s left centererd.</td></tr>
<tr><td>1</td><td>Below barcode’s left side</td></tr>
</table>
*1 Bit 0 is ineffective for Codabar, by default without check digit. Usually define Bit 0 = 0 for EAN13, EAN8, UPC Type A, UPC Type A with check character.
*2 Reserve additional XX spaces to print the flag character if bit 1 = 0.
*3 EAN13, EAN8, UPC Type A, UPC Type A with check character can print it .
</td><td></td></tr>
</table>

Function	Command

g. (ch1)…(chn)

Max. character and character set for different type of barcodes.:

Type	**Encoded Characters**	***n* Character Length**
Codabar	Numbers: 0~9 Symbols: + - . $ / : Start/Stop : A,a,B,b,C,c,D,d, T,t,N,n,*,E,e	1≤n≤34 Start/Stop symbols, included.
EAN 13	Numbers: 0~9	n=12, fixed
EAN 8	Numbers: 0~9	n=7, fixed
Code 3 of 9	Numbers: 0~9 alphabet: A~Z symbol: + - . $ / : SPACE Start/Stop: *	Check Digit included 1≤n≤31
Industrial 2 of 5	Numbers: 0~9	Check Digit included
Interlieved2 of 5	Numbers: 0~9	1≤n≤32
UPC Type A	Numbers: 0~9	n=11 ,fixed
UPC Type A with checkcharacter	Numbers: 0~9	n=11 ,fixed
CODE 128	ASCII Code Start Code: A,B,C Code Set C:0~9	Check Digit included 1≤n≤62 Check Digit not attached 1≤n≤63 Code Set C:2n

3. Default value
4. Cancel this command
5. Co-relation with other commands
6. Others

a.Not printed if exceeds the right margin.

IBM EMULATION COMMAND LIST

Function	Command
Mechanical control	
Beeper	BEL
Beeper	ESC BEL
Turn unidirectional mode on/off n = 0 Bidirectional printing 1 Unidirectional printing	ESC U (n)
Moving the print position	
Carriage return	CR
Carriage return	ESC CR
Line feed	LF
Line feed	ESC LF
Form feed	FF
Form feed	ESC FF
Tab horizontally	HT
Tab horizontally	ESC HT
Tab vertically	VT
Tab vertically	ESC VT
Backspace	BS
Backspace	ESC BS
Automatic Line Feed n = 0 To end automatic line feed (LF) on carriage return (CR) (CR= CR) 1 To begin automatic line feed (LF) on carriage return (CR)(CR = CR+LF)	ESC 5 (n)
Move Current Print Position This command moves the current print position to the right in increments of 1/120 inch. Current Print Position = (nH × 256) + nL)	ESC d (nL) (nH)
Move Paper Vertically Advances the paper in a vertical movement a distance of n/216 inches relative to the current print position.	ESC J (n)
Reverse Line Feed	ESC]

Function	Command
Selecting characters Select double-width printing (one line) Select double-width printing (one line) Cancel double-width printing (one line) Cancel double-width printing (one line) Turn double-width printing on/off n = 1 Turns on double-width 0 Turns off double-width	 SO ESC SO DC4 ESC DC4 ESC W (n)
Enable printer The DC1 control code (ASCII 17) enables the printer to accept data for printing again after a disable printer instruction.	DC1
Disable printer Signals the printer to stop accepting data from the computer. This control code has no effect on the parallel interface.	DC3
Cancel Data Clears current line buffer of data already received to print on the current line	CAN
Disable printer This command stop the printer from accepting any data for printing or any control codes until it has received a DC1 code (enable printer).	ESC Q (n)

Function	Command

Set initial condition
Format 1BH 5BH 4BH n1 n2 init id parm1 parm2
Function Resets the printer to its initial state according to the following parameters.
n1 and n2 specify the number of mode bytes in the escape sequence.
Normally, n1 is 1, 3, or 4 and n2 is always 0. init, id, parm1, and parm2 are explained below.
 	
init: This parameter specifies which condition the printer should be initialized to.
The supported values of init are 00H, 01H,04H, 05H, FEH, and FFH.
When the init is any other value, it works as init=00H.
The following is the basic initial condition for each init values.
 	
init=00H;
The printer Condition is initialize to the user default setting.
The parm bytes overwrite the user default setting.
The download font is not cleared.
 	
init=01H;
The printer Condition is initialized to the user default setting.
The parm bytes overwrite the user default setting.
The download font is cleared.
 	
init=04H;
The printer Condition is initialized to the factory default setting.
The parm bytes overwrite the factory default setting.
The download font is not cleared.
 	
init=05H;
The printer Condition is initialized to the factory default setting.
The parm bytes overwrite the factory default setting.
The download font is cleared.
	ESC [K (n1) (n2) (init) (id) (parm1) (parm2)

Function	Command

init=FEH;
The printer condition is initialized to the user default setting.
The parm bytes overwrite the user default setting.
The values used for initialization are saved in NV RAM.
The download font is cleared.

init=FFH;
The printer Condition is initialized to the factory default setting.
The values used for initialization are saved in NV RAM.
The download font is cleared.

Id; This parameter specifies the parm conditions followed by this id.
The supported values of id are 03H, 16H, 23H, 24H, B1H and B4H.
If the id is any other value, the parm bytes are ignored. V03

id=03H, 16H, 23H, 24H
parm1 and parm2 are valid.
If the following parm are specified, these parm are ignored.
See the following parm 1 and 2 tables.

parm1

bit	ON	OFF	
7 : Discard byte	Ignore this byte	Process this byte	
6 : Reserved			
5 : Alarm	Enable	Disable	
4 : Auto CR	Auto CR after LF	No CR after LF	V03
3 : Auto LF	Auto LF after CR	No LF after CR	V03
2 : Form Length	12 inches	11 inches	
1 : Slashed Zero	Zero Slashed	Zero not slashed	
0 : Character Set	Set 2	Set 1	

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>parm2
<table>
<tr><th>bit</th><th>ON</th><th>OFF</th></tr>
<tr><td>7 : Discard byte</td><td>Ignore this byte</td><td>Process this byte</td></tr>
<tr><td>6 : Code Page</td><td>850</td><td>437</td></tr>
<tr><td>5 : Reserved</td><td></td><td></td></tr>
<tr><td>4 : Reserved</td><td></td><td></td></tr>
<tr><td>3 : Reserved</td><td></td><td></td></tr>
<tr><td>2 : Reserved</td><td></td><td></td></tr>
<tr><td>1 : Line Length</td><td>8.0 inches</td><td>9.4 inches</td></tr>
<tr><td>0 : Reserved</td><td></td><td></td></tr>
</table>
id = B1H, B4H V03
parm1 is valid.
parm1 is same as above parm1 of id = 03H, 16H, 23H, 24H.</td><td></td></tr>
<tr><td>Select Print Type Style
This command is used for varying the type style of the character and the number of line spacing. Use this printer command for:
• Italic print
• Single-high character
• Double-high character
• Single-wide character
• Double-wide character
• Single line feed
• Double line feed
• Shadow (for 239x Plus only)
• Outline (for 239x Plus only)

Notes
• You may combine these selections; for example,italic print with doublehigh,double-wide character, and double line feed.See the following table for m1, m3, and m4 selections.
<table>
<tr><th>m1</th><th>Dec</th><th>Hex</th></tr>
<tr><td>No Change</td><td>0</td><td>0</td></tr>
<tr><td>Start Italic Print</td><td>1</td><td>1</td></tr>
<tr><td>Stop Italic Print</td><td>2</td><td>2</td></tr>
<tr><td>Start Outline Print</td><td>4</td><td>4</td></tr>
<tr><td>Stop Outline Print</td><td>8</td><td>8</td></tr>
<tr><td>Start Shadow Print</td><td>16</td><td>10</td></tr>
<tr><td>Stop Shadow Print</td><td>32</td><td>20</td></tr>
</table>
m2=0</td><td>ESC [@ 4 0 (m1) 0 (m3) m4)</td></tr>
</table>

Function	Command

m3	Dec	Hex
No Change	0	0
Single-high Character	1	1
Double-high Character	2	2
Single Line Feed	16	10
Double Line Feed	32	20

m4	Dec	Hex
No Change	0	0
Single-wide Character	1	1
Double-wide Character	2	2
Single Line Feed	16	10
Double Line Feed	32	20

Select condensed printing — SI
Select condensed printing — ESC SI
Select superscript/subscript printing — ESC S
Cancel superscript/subscript printing — ESC T
Turn underline on/off — ESC - (n)
n = 1 Turns underline on
0 Turns underline off

Turn Overscore on/off — ESC _ (n)
n = 1 Turns Overscore on
0 Turns Overscore off

Select Font and Pitch — ESC [I 2 0 (fH fL)
This command allows you to vary the font and pitch type style within a file.

- The fH and fL variables identify the pitch and font typestyle you want to print. Follow table describe the fH and fL variables.

Decimal fH fL	Hex fH fL	Font and Pitch
0 11	00 0B	Courier 10CPI
1 235	01 EB	Courier 12CPI
1 236	01 EC	Courier 15CPI
1 237	01 ED	Courier 17CPI
1 238	01 EE	Courier 20CPI
1 30	01 1E	Courier 24CPI
0 171	00 AB	Courier PS
0 36	00 24	Gothic 10CPI
1 143	01 8F	Gothic 12CPI
1 142	01 8E	Gothic 15CPI
1 141	01 8D	Gothic 17CPI
1 140	01 8C	Gothic 20CPI
1 32	01 20	Gothic 24CPI
0 174	00 AE	Gothic PS

Function	Command

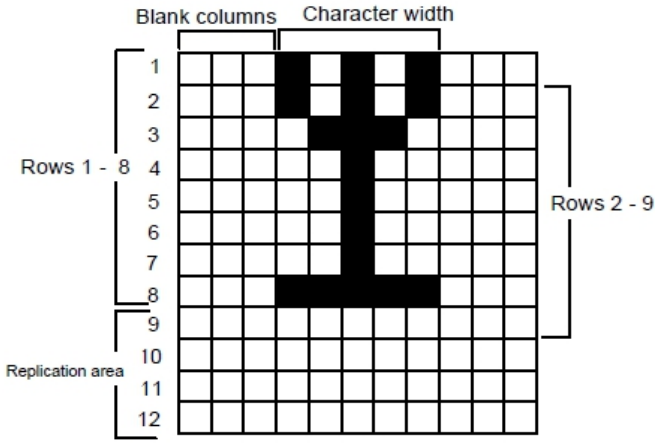
Decimal fH fL	Hex fH fL	Font and Pitch
0 12	00 0C	Prestige 10CPI
1 239	01 EF	Prestige 12CPI
1 240	01 F0	Prestige 15CPI
1 201	01 C9	Prestige 17CPI
1 202	01 CA	Prestige 20CPI
1 31	01 1F	Prestige 24CPI
0 164	00 A4	Prestige PS
0 25	00 19	Presentor 10CPI
1 208	01 D0	Presentor 12CPI
1 209	01 D1	Presentor 15CPI
1 210	01 D2	Presentor 17CPI
1 211	01 D3	Presentor 20CPI
1 35	01 23	Presentor 24CPI
0 199	00 C7	Presentor PS
0 5	00 05	Orator 10CPI
1 203	01 CB	Orator 12CPI
1 204	01 CC	Orator 15CPI
1 205	01 CD	Orator 17CPI
1 206	01 CE	Orator 20CPI
1 33	01 21	Orator 24CPI
0 198	00 C6	Orator PS
1 212	01 D4	Script 10CPI
1 213	01 D5	Script 12CPI
1 214	01 D6	Script 15CPI
1 215	01 D7	Script 17CPI
1 216	01 D8	Script 20CPI
1 36	01 24	Script 24CPI
0 200	00 C8	Script PS

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>Set Print Quality
This command sets the print quality to draft or letter quality. the value of n can be any of the following:
<table>
<tr><th>Decimal</th><th>Hex</th><th>Speed</th></tr>
<tr><td>0</td><td>0</td><td>No change</td></tr>
<tr><td>1~63</td><td>01~3F</td><td>High draft</td></tr>
<tr><td>64~127</td><td>40~7F</td><td>Draft</td></tr>
<tr><td>128~254</td><td>80~FE</td><td>LQ</td></tr>
<tr><td>255</td><td>FF</td><td>Default speed</td></tr>
</table></td><td>ESC [d 1 0 (n)</td></tr>
<tr><td>Score Select
This command selects several forms of overscore, underscore, and strikethrough.
To select loc:
<table>
<tr><th>loc</th><th>Underscore</th><th>Strikethrough</th><th>Overscore</th></tr>
<tr><td>Decimal</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>Hex</td><td>1</td><td>2</td><td>3</td></tr>
</table>
To select type:
<table>
<tr><th>type</th><th>Cancel score</th><th>Single line</th><th>Double line</th></tr>
<tr><td>Decimal</td><td>0</td><td>1</td><td>2</td></tr>
<tr><td>Hex</td><td>0</td><td>1</td><td>2</td></tr>
</table></td><td>ESC [- 2 0 (loc) (type)</td></tr>
</table>

Function	Command
Select double-strike printing	ESC G
Cancel double-strike printing	ESC H
Select character font This command enables you to select a font and choose the print quality.	ESC I (n)

n (HEX)	n (DEC)	Font and print quality
0	0	Normal (DRAFT) 10 cpi
8	8	Normal (DRAFT) 12 cpi
10	16	Normal (DRAFT) 17 cpi
2	2	Normal (LQ)10 cpi - Courier
0A	10	Normal (LQ)12 cpi - Prestige
12	18	Normal (LQ)17pi - Courier
3	3	Normal (LQ) Proportional-Couri
4	4	Downloaded 10 cpi DRAFT
0C	12	Downloaded 12 cpi DRAFT
14	20	Downloaded 17cpi DRAFT
6	6	Downloaded 10 cpi LQ
0E	14	Downloaded 12 cpi LQ
16	22	Downloaded 17 cpi LQ
7	7	Downloaded Proportional LQ

Function	Command
Select bold font	ESC E
Cancel bold font	ESC F
Turn proportional mode on/off n = 0 Returns to current fixed character pitch 1 Selects proportional spacing	ESC P
Select 10 cpi	DC2
Select 10 cpi	ESC DC2
Select 12 cpi	ESC :
Select character set 2 This command selects IBM character set II for use in subsequent printing operations.	ESC 6

Function	Command
Select character set 1 This command selects IBM Character set I for use in subsequent printing operations.	ESC 7
Define user-defined characters • This command enables you to define and download characters for printing. • Monospaced characters are designed on a grid eleven dots wide by twelve dots high. The width of proportionally spaced characters is specified in n5.  • n1 and n2 define the number of characters to be defined as follows: number of characters = ((n1+(n2*256)-2)/13. • n3 is the character code of the first character in the sequence to be defined. It is assumed that you are defining a sequence of characters whose code numbers increment by one for each character to be defined. • If bits 1 and 2 of n4 are 0 and bit 8 is set to 1, the bytes that make up the character definition define the top eight rows of the grid, the most significant bit representing the top dot, and the least significant bit representing the eighth dot down. Simply set a bit to 1 to print a dot in that position on the grid, or to 0 to print white space.	ESC = (n1) (n2) 20 (n3) (n4) (n5) data

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>
• If bits 1 and 2 of n4 are 00 and bit 8 is set to 0 the bytes that make up the character definition define rows 2 to 9 of the grid, the most significant bit representing the second dot, and the least significant bit representing the ninth dot down. Simply set a bit to 1 to print a dot in that position on the grid, or to 0 to print white space.
• If bits 1 and 2 of n4 are 01 the least significant bit of each data byte is replicated in rows 9 to 12 of the grid.
• If bits 1 and 2 of n4 are 10 the bits 1 to 4 of each data byte are replicated in rows 9 to 12 of the grid.
• Bits 5 to 7 of n5 specify the number of columns left blank to the left of the defined character in proportional spacing mode. Up to seven columns can be skipped.
• Bits 1 to 4 of n5 specify the width in columns of the defined character in proportional spacing mode.Up to fifteen columns can be used to define the character.
• Downloaded characters are selected using the Esc I command and then printed by sending the appropriate character codes.
</td><td></td></tr>
<tr><td>
Select Code Page
The digits 4 0 0 0 (decimal), 04 00 00 00 (hexadecimal) are constants.
See below table for the value of cH and cL
<table>
<tr><th></th><th colspan="2">Decimal</th><th colspan="2">Hex</th></tr>
<tr><th>CodePage</th><th>cH</th><th>cL</th><th>cH</th><th>cL</th></tr>
<tr><td>437</td><td>1</td><td>181</td><td>01H</td><td>B5H</td></tr>
<tr><td>737</td><td>2</td><td>225</td><td>02H</td><td>E1H</td></tr>
<tr><td>ISO_8859_7</td><td>3</td><td>45</td><td>03H</td><td>2DH</td></tr>
<tr><td>ISO_8859_1</td><td>3</td><td>51</td><td>03H</td><td>33H</td></tr>
<tr><td>850</td><td>3</td><td>82</td><td>03H</td><td>52H</td></tr>
<tr><td>851</td><td>3</td><td>83</td><td>03H</td><td>53H</td></tr>
<tr><td>852</td><td>3</td><td>84</td><td>03H</td><td>54H</td></tr>
<tr><td>857</td><td>3</td><td>89</td><td>03H</td><td>59H</td></tr>
<tr><td>858</td><td>3</td><td>90</td><td>03H</td><td>5AH</td></tr>
<tr><td>860</td><td>3</td><td>92</td><td>03H</td><td>5CH</td></tr>
<tr><td>861</td><td>3</td><td>93</td><td>03H</td><td>5DH</td></tr>
<tr><td>863</td><td>3</td><td>95</td><td>03H</td><td>5FH</td></tr>
<tr><td>864</td><td>3</td><td>96</td><td>03H</td><td>60H</td></tr>
<tr><td>865</td><td>3</td><td>97</td><td>03H</td><td>61H</td></tr>
<tr><td>866</td><td>3</td><td>98</td><td>03H</td><td>62H</td></tr>
<tr><td>869</td><td>3</td><td>101</td><td>03H</td><td>65H</td></tr>
<tr><td>USSR</td><td>42</td><td>114</td><td>2AH</td><td>72H</td></tr>
</table>
</td><td>ESC [T 4 0 0 0 (cH) (cL)</td></tr>
</table>

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>Setting the units
Set Vertical Units
The digits 4 0 0 0 (decimal), 04 00 00 00 (hexadecimal) are constants.
This command lets you set the size of the increments for the following commands:
• Set Line Spacing for Graphics (ESC 3)
• Move Paper Vertically (ESC J).
<table>
<tr><th>n1(Hex)</th><th>n2(Hex)</th><th>Unit</th></tr>
<tr><td>D8H</td><td>00H</td><td>1/216 inch</td></tr>
<tr><td>B4H</td><td>00H</td><td>1/180 inch</td></tr>
<tr><td>68H</td><td>01H</td><td>1/360 inch</td></tr>
</table>
</td><td>ESC [\ 4 0 0 0 (n1) (n2)</td></tr>
<tr><td>Select 1/8 inch line spacing
Select 7/72 inch line spacing
Select 1/6 inch line spacing
Set n/216 or n/180 inch line spacing
This command sets line spacing to n/216(AGM=No) or n/180(AGM=Yes) inches. It does not cause the form to move. It changes the vertical distance moved when a line feed command is received.</td><td>ESC 0
ESC 1
ESC 2
ESC 3 (n)</td></tr>
<tr><td>Set n/72 or n/60-inch line spacing
This command sets line spacing in n/72 inch (AGM=No) or n/60 inch(AGM=Yes) increments. To activate the line spacing, use the printer command Activate Line Spacing for Text (ESC 2).</td><td>ESC A (n)</td></tr>
<tr><td>Set horizontal tabs
This command sets up to 28 tabulation stops to be used with the printer command HT, Horizontal Tabulation.
n1.....n28 is used to set the tabulator stop positions.
• ESC D is terminated by a 0 entry.
• The first tabulation stop is at the leftmost column.
• Input the tabulation stops (n1.....n28) in ascending numerical order
• The printer command ESC R resets to the default horizontal tabulation stops, which are set at every eight positions beginning at column 9 (9, 17,25, and so on).
• The printer command HT, Horizontal Tabulation, activates the tabulationstops set by this printer command.
(1≤n≤255, 1≤k≤28)</td><td>ESC D n1....nk NULL</td></tr>
</table>

Function	Command
Set vertical tabs • Use ESC B to set the tabulation stops and to advance paper to the next tabulation stop (VT) to activate them. • ESC R (Set Default Tabulation Stops) will clear all vertical tab stops. • Set the tabulation stops in ascending order (n1.....n32). • The last digit in the sequence must be a 0 to terminate the command. (1≤n≤255, 1≤k≤32)	ESC B n1…nk NULL
Set Default Tab Stops	ESC R
Setting the page format	
Set top of form	ESC 4
Set page length in lines The value of n is the number of lines you want to set as the page length and works in conjunction with the current line spacing	ESC C (n)
Set page length in inches The value of n is the number of inches you want to set as the page length.	ESC C NUL (n)

Function	Command
Set bottom margin This command specifies the number of lines to be skipped at the bottom of each page, which creates a bottom margin.	ESC N (n)
Cancel bottom margin	ESC O
Set horizontal margins This command sets the left and right margins,n1 and n2 specify the number of the colums. • Use n1 to select the left margin position. • Use n2 to select the right margin position.	ESC X n1 n2
Control-code character printing Print Characters from a Code Page • This command enables you to print characters from the All Character Code table. • n1 and n2 specify the number of characters to be printed. • The number of characters printed is 256*n2+n1. • Control codes included in the character data are not executed.	ESC \ n1 n2
Print one character • This command enables you to print a single character from the All Character Code table. • A control code is not executed if the code is sent immediately following this instruction.	ESC ^

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>
Printing graphics
Select graphics mode
Use this command to select the mode and horizontal density for dot matrix graphics.
• nL and nH identify the number of bytes in mode and data.
• mode is the vertical wire count and the horizontal density in dots per inch.
Select mode from the following table.
<table>
<tr><th>Dec</th><th>Hex</th><th>Horizontal Density</th><th>Wires</th></tr>
<tr><td>0</td><td>0</td><td>60</td><td>8</td></tr>
<tr><td>1</td><td>1</td><td>120</td><td>8</td></tr>
<tr><td>2</td><td>2</td><td>120</td><td>8</td></tr>
<tr><td>3</td><td>3</td><td>240</td><td>8</td></tr>
<tr><td>8</td><td>8</td><td>60</td><td>24</td></tr>
<tr><td>9</td><td>9</td><td>120</td><td>24</td></tr>
<tr><td>11</td><td>0B</td><td>180</td><td>24</td></tr>
<tr><td>12</td><td>0C</td><td>360</td><td>24</td></tr>
</table>
• data is the bit-mapped graphics information. The printhead moves at half the speed of mode 2, giving better resolution.
</td><td>ESC [g nL nH mode data</td></tr>
<tr><td>
Select bit image
When AGM mode is selected, prints dot-graphics in 8, 24-dot columns, mode is the same as the mode value of the command ESC [g
• nL and nH identify the number of bytes in mode and data.
Select mode from the following table.
<table>
<tr><th>m(dec)</th><th>Horizontal density (dpi)</th><th>Wires</th></tr>
<tr><td>0</td><td>60</td><td>8</td></tr>
<tr><td>1</td><td>120</td><td>8</td></tr>
<tr><td>2</td><td>120</td><td>8</td></tr>
<tr><td>3</td><td>240</td><td>8</td></tr>
<tr><td>4</td><td>80</td><td>8</td></tr>
<tr><td>6</td><td>90</td><td>8</td></tr>
<tr><td>32</td><td>60</td><td>24</td></tr>
<tr><td>33</td><td>120</td><td>24</td></tr>
<tr><td>38</td><td>90</td><td>24</td></tr>
<tr><td>39</td><td>180</td><td>24</td></tr>
<tr><td>40</td><td>360</td><td>24</td></tr>
</table>
</td><td>ESC * mode nL nH data</td></tr>
</table>

Function	Command
Select 60 dpi graphics Use this command to print normal density bit images at 60 dots per inch (dpi) horizontally and 72 dpi vertically. • nL and nH identify the number of bytes in data. • data is the bit-mapped graphics information.	ESC K nL nH data
Select 120 dpi graphics Use this command to print normal density bit images at 120 dpi horizontally and 72 dpi vertically. • nL and nH identify the number of bytes in data. • data is the bit-mapped graphics information.	ESC L nL nH data
Select 120 dpi, double-speed graphics Use this command to print dual-density bit images at 120 dpi horizontally and 72 dpi vertically. • nL and nH identify the number of bytes in data. • data is the bit-mapped graphics information.	ESC Y nL nH data
Select 240 dpi graphics Use this command to print high-density bit images at 240 dpi horizontally and 72 dpi vertically. • nL and nH identify the number of bytes in data. • data is the bit-mapped graphics information	ESC Z nL nH data
Printing bar codes Set barcode data Must set the parameters/attributes in this command before the ESC [p command. Valid values: n1 = 6 n2 = 0 m = 0 ≤ m ≤ 4 s = -3 ≤ s ≤ 3 v1 = 0 ≤ v1 ≤ 255 v2 = 0 ≤ v2 ≤ 127 c = 0 ≤ c ≤ 255	ESC [f n1 n2 k m s v1 v2 c

<table>
<tr><th>Function</th><th>Command</th></tr>
<tr><td>

k: specifies barcode types

k(Hex)	Barcode Type
B1	CODABAR(NW7)
B2	EAN-13
B3	EAN-8
B4	CODE 39
B5	INDUSTRIAL 2 OF 5
B6	INTERLEAVED 2 OF 5
B7	UPC-A
B8	UPC-E
B9	POST-NET(Barcode)
BA	CODE128

m: specifies the module width.

m	Unit 1/120 inch	Width
0	2dots	0.015”
1	2dots	0.012”
2	2dots	0.015”
3	3dots	0.021”
4	4dots	0.026”

s: specifies the space adjustment value.
$-3 \leq s \leq 3$ (unit 1/360 inch)
v1,v2: specifies the height of barcode.
v1+v2*256 (unit 1/180 inch)
v1+v2*256≧288

c: check digit control

c	Check Digit
bit0	0: not computed. 1: compute and print check digit.
bit1	0: print human readable characters. 1: not printed.
bit2	Position of check digit (for EAN-13and UPC-A only) 0: Center 1: Below
bit3	Reserved
bit4	Reserved
bit5	Reserved
bit6	Reserved
bit7	Reserved

Print barcode
This command prints the barcode data.
Number of data: k=n1+n2*256
Barcode data: d1 d2…dk

</td><td>ESC [p n1 n2 d1 d2…dk</td></tr>
</table>

Function	Command
Stops printing. After printing, this command activates the buzzer and disables printing.	ESC j
Set n/216" or n/180" line spacing This command sets the line spacing to n/216". All subsequent line feed operations will move the print position n/216" down the page.if AGM mode is setting to Yes,this command sets the line spacing to n/180". n must be in the range 1 to 255.	ESC 3 (n)
Set n/72" or n/60" line spacing This command allows you to select a line spacing of n/72". Your selection does not take effect until you activate it with the Esc 2 command. if AGM mode is setting to Yes,this command sets the line spacing to n/60". n must be in the range 1 to 85. **Notes** If n is outside the range 1 to 85 the default line spacing, 1/6" is selected.	ESC A (n)
Move Paper Vertically Advances the paper in a vertical movement a distance of n/216 inches relative to the current print position. if AGM mode is setting to Yes,advances the paper in a vertical movement a distance of n/180 inches. n is a value from 0 to 255 (decimal) or 0 to FF (hex). **Notes** The existing line space setting is not affected.	ESC J (n)

D

INTERFACE INFORMATION

This printer can communicate with a computer through a Centronics parallel interface, a RS-232C serial interface, a USB interface, or a LAN interface. You can specify the interface selection mode so that the printer uses which interface or it can automatically select the interface from which it first recrives data.

This chapter provides information you may need for wiring your own interface cables or for programming computer-to-printer communications. Most users do not need the information in this chapter. To simply connect your printer to your computer, follow the instructions in Chapter 2

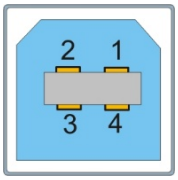
USB INTERFACE

USB interface pin assignment

Pin	Signal name	Description
1	VBUS	+5V power supply
2	D-	data
3	D+	data
4	S.GND	ground

Transmission mode: Full speed(Maximum 12 Mbps) / High speed (Maximum 480 Mbps)

USB interface connector diagram



Note:

1. Use a standard USB interface cable to connect the printer and the computer.
2. USB Maximum length 2m.

PARALLEL INTERFACE

$\overline{\text{STROBE}}$

Normally synchronous input signal is used to prompt that the data is sending to the port. Normal state is high logic level, while low logic level indicates DATA1 ~ DATA8 will read the current data. The minimum pulse width is 1 microsecond.

DATA1~DATA8

Signals to receive data sent from host. Logic 1 is high level and the minimum pulse width is 1.5 microseconds. DATA1 is least significant bit while DATA8 is most significant bit.

$\overline{\text{ACK}}$

Signal to request sending data from host. ACK acts as the output signal when the printer is ready for receiving new data after previous data is read and saved in DATA 1 ~ DATA8. Normal state is high logic level. After activating, it turns to low logic level. The pulse width is about 4 microseconds.

BUSY

Signal to indicate that the printer is not ready for receiving data. If the host ignores it and continues to send data, the data will be lost. The signal turns to high logic level in the following case:

- Buffer is full.
- Offline mode
- Error condition
- PRIME signal is activated.

The signal will be clear after INIT signal turns to high logic level and the printer initializes.

PE

Signal to indicate that the printer is out of paper. High logic level indicates paper out state.

SELECT

Signal to indicate online or offline state. High logic level indicates online state. If no mechanical defect and PE error, the signal turns to high logic level in the following case:

- Press [Online] if the printer is offline.
- The printer receives online command when it is set to offline by offline command.

The signal turns to low logic level in the following case:

- Press [Online] if the printer is online.
- The printer receives offline command.
- Defective condition
- Paper out

$\overline{\text{AFXT}}$ (Valid for Epson ESC/P2 emulation only)

When the signal is set to low logic level and CR control code is implemented, LF command will be added.

GND

Signal to ground.

F-GND

Signal to connect to the base of the printer.

+5V

Signal to connect to +5V output. For maintenance only. Max. load (current) is 50mA.

$\overline{\text{INIT}}$

Reset signal to indicate the printer is initialized. Normal state is high logic level while low logic level is effective. The minimum pulse width is 50 microseconds. It is necessary for the printer to initialize all the mechanical functions before this signal enters ready state, or it may cause damage to the printer.

$\overline{\text{FAULT}}$

Signal to indicate error condition. Low logic level is effective. The signal turns to low logic level in the following case:

- Paper out
- Error or defective condition

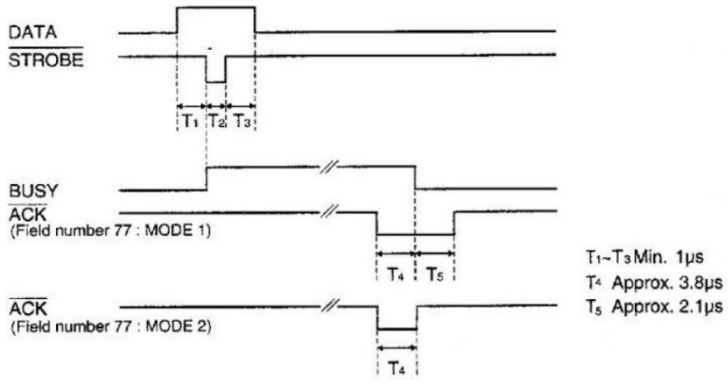
FUSE

Signal connect to +5V through 3.3KΩ resistance.

$\overline{\text{SLCTIN}}$ (Valid for Epson ESC/P2 emulation only)

When the signal is low logic level, no DC3 control code or DC1 control code is received.

Clock and signal logic level



Signal logic level

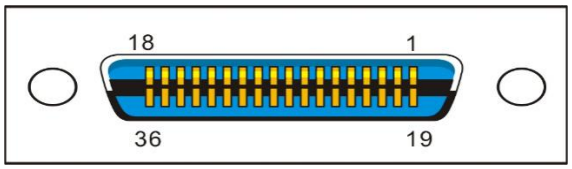
Input: high logic level: 2 ~ 5V

low logic level: 0 ~ 0.8V

Output: high logic level: 2.4 ~ 5V

low logic level: 0 ~ 0.4V

Parallel interface connector diagram



Note:

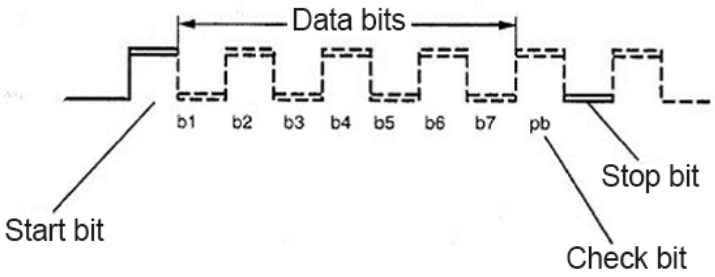
1. Use a standard parallel interface cable to connect the printer and the computer. The length should not exceed 2 meters. Connect the 25P plug to the computer, and connect the 36P plug to the printer.

SERIAL INTERFACE

RS-232C can be used as serial interface.

Settings

Data bit: 7 or 8
Buffer: 128K Max.
Baud Rate: 9600BPS, 19200BPS, 38400BPS, 300BPS, 600BPS, 1200BPS, 2400BPS, 4800BPS
Protocol: DTR Xon/Xoff
Stop bit: 1 or 2



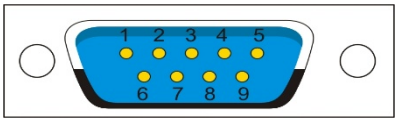
Error detection

Parity: None, odd, even
Frame error: The stop bit is not within the predetermined frame length after the start bit. Overflow error:Before the data sent from the host to the UART and ready for printing, send the data again.
Attention: If the above error occurs, print the corresponding error information. Image errors will also be printed as image data.

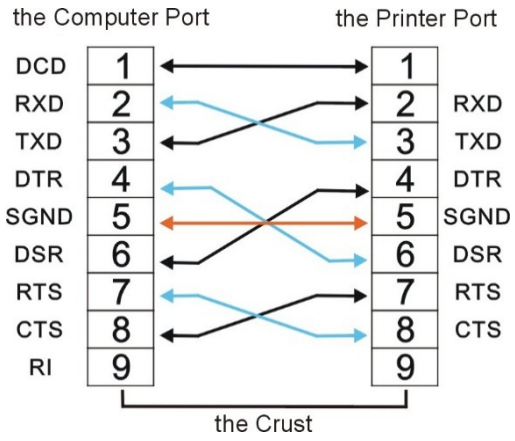
Serial interface pin assignment

Pin	Signal name	Description
1	Empty	Empty
2	RXD	Receive data
3	TXD	Send data
4	DTR	Data terminal ready
5	SGND	Signal ground
6	DSR	Data set ready
7	RTS	Request to send
8	CTS	Clear to send
9	Empty	Empty

Serial interface connector diagram



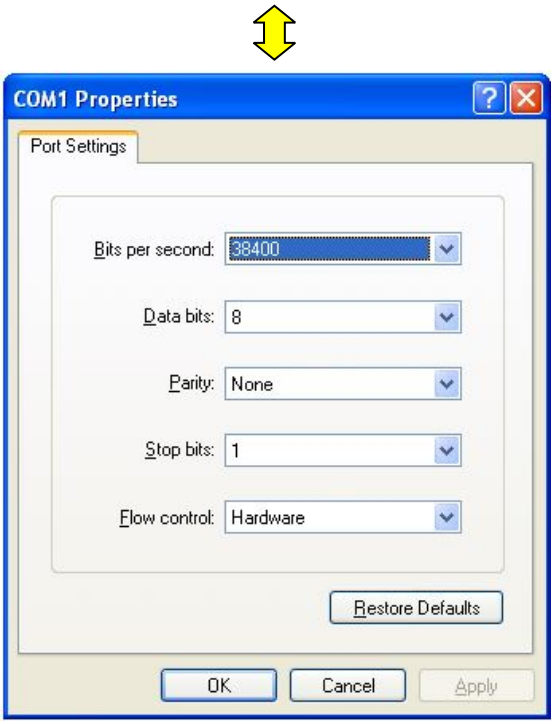
Serial interface wiring diagram



Note:

1. The serial cable length should not exceed 15 meters.
2. Make sure the “Interface Setup” selects serial interface and the settings are the same as PC communication port settings. Shown as below:

Interface:	Share	Share
Baud Rate:	38400	38400
Data Bit:	8	8
Parity Check:	None	None
Stop Bit:	1	1
Data Stream:	Hardware	Hardware



Signal description

The signal electrical level of the interface pin is defined as follow:

1 is low level (Mark) -25V~-3V

0 is high level(Space) +3V~+25V

DTR protocol(RS-232C)

Pin2(receiving data)

Receiving the serial data sent from the host with this line, so when no data is sent, the host must be set to MARK.

Pin4 DTR(Data terminal)

When the printer ready for receiving data，the signal is SPACE(high level), when the printer did not receive data, the signal is MARK(low level).

Pin 5 SGND(Signal ground lines)

Signal ground

XON/XOFF (RS-232C)

Pin2 RXD (Receiving data)

Receiving the serial data sent from the host with this line, so when no data is sent, the host must be set to MARK.

Pin3 TXD(Sending data)

Receiving the serial data sent from the host with this line, so when no data is sent, the host must be set to MARK.

Pin4 DTR(Data terminal)

When connecting to the printer, the signal sent from printer is SPACE (high level).

Pin 5 SGND(Signal ground lines)

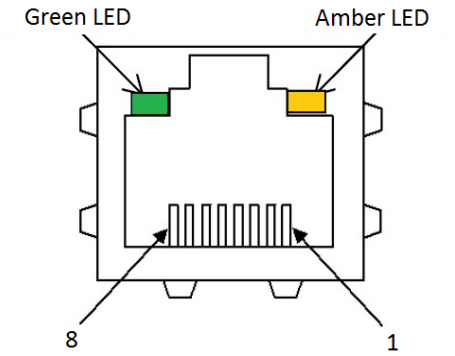
Signal ground

Pin 7 RTS(Request to send)

When connecting to the printer, the signal sent from printer is SPACE (high level).

ETHERNET INTERFACE

Connector pin alignment



Green LED: LINK/ACK
Amber LED: 100Mbps

No.	Signal line name	DIR	Function
1	TXO+	NIC-HUB	Transmit data +
2	TXO-	NIC-HUB	Transmit data -
3	RXI+	HUB-NIC	Receive data +
4	–	–	–
5	–	–	–
6	RXI-	HUB-NIC	Receive data -
7	–	–	–
8	–	–	–

Note :
Green LED: Led is on, indicates the link is connected.
Amber LED: Led is flashing, indicates the data is switching.

Ethernet I/O 10/100 Mulitprotocol

The Ethernet interface enables the printer to connect to local area networks. Its attributes are:

Hardware	LAN/Ethernet: RJ45, Ethernet 100BASE-TX with 100 Mbps (IEEE802.3u), 10BASE-T with 10 Mbps (IEEE802.3)
Supported operating Systems	Windows® 10 Windows Server® 2016 Windows® 8.1 Windows Server® 2012 R2 Windows® 8 Windows Server® 2012 Windows® 7 Windows Server® 2008 R2
Supported Protocols	TCP/IP
Setup	DLMENU

Ethernet TCP/IP

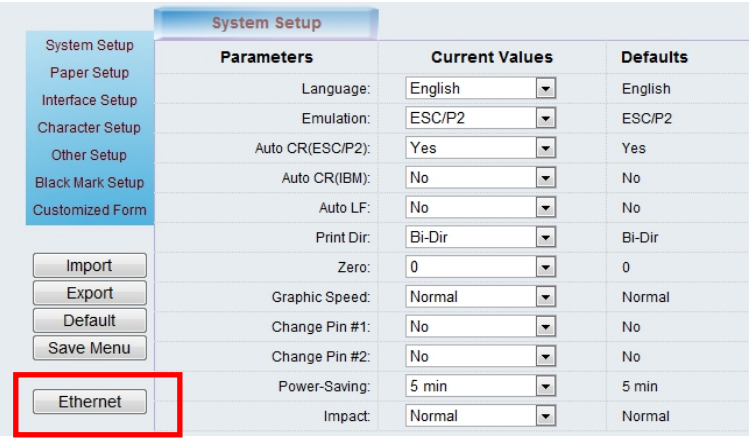
When using your printer in a local network with Ethernet connections and the TCP/IP protocol, you have to assign address information.

Address information for the Ethernet Port can only be made available by your network administrator, who has the necessary rights to install Printers on the network and/or make any changes.

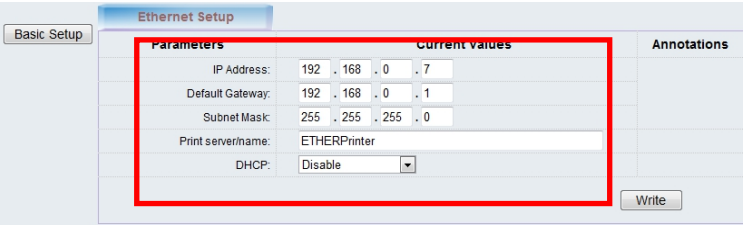
If you want to set the Ethernet port, you need to use USB to connect the DLMENU.

The use of Ethernet interface

1. Install Ethernet interface board into the printer. Connect PC and the printer using the network cable. Turn on the printer to connect DLMENU. The user interface is shown as below.

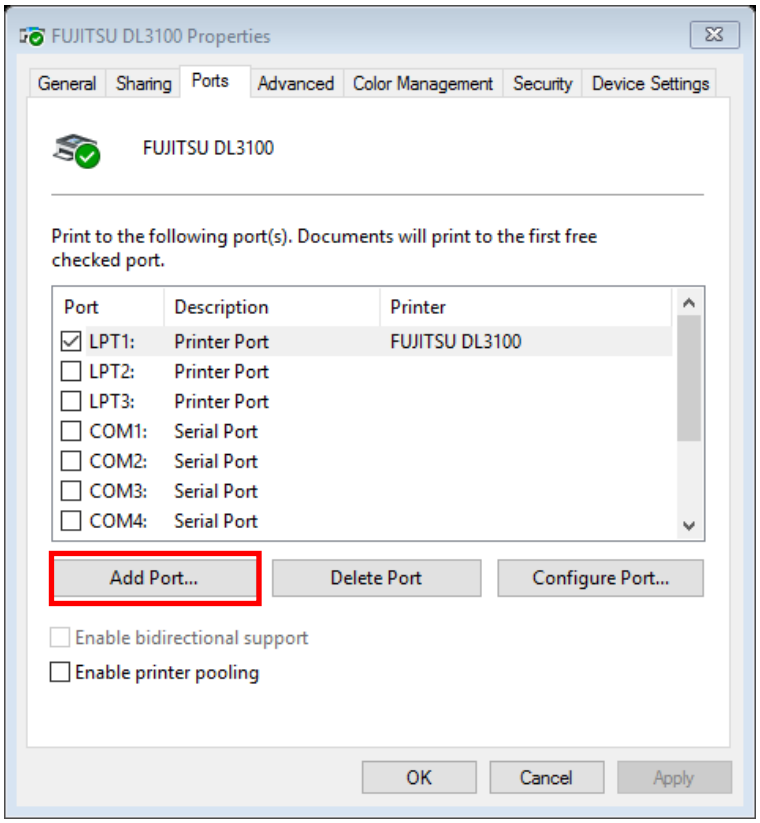


2. Click "Ethernet" in step 1 to display the parameter setup for Ethernet as below.

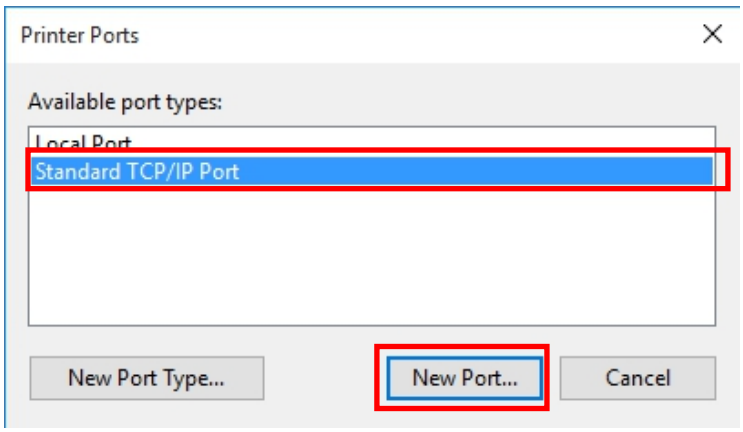


Parameters	Function
IP Address	Printer IP address can be changed when needed.
Default Gateway	Default Gateway
Subnet Mask	Subnet Mask
Print server name	Name of the print server
DHCP	Disable or Enable DHCP.

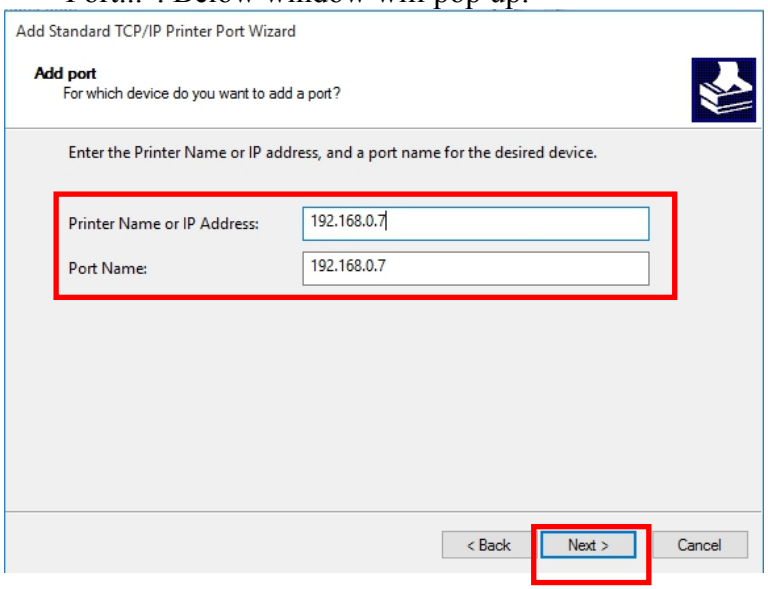
3. Set printer IP address to be the same net segment as PC IP address in step 2. Disconnect DLMENU after the Ethernet parameters are setup. The printer restarts automatically.
   Follow following instructions to add the print port in the driver.



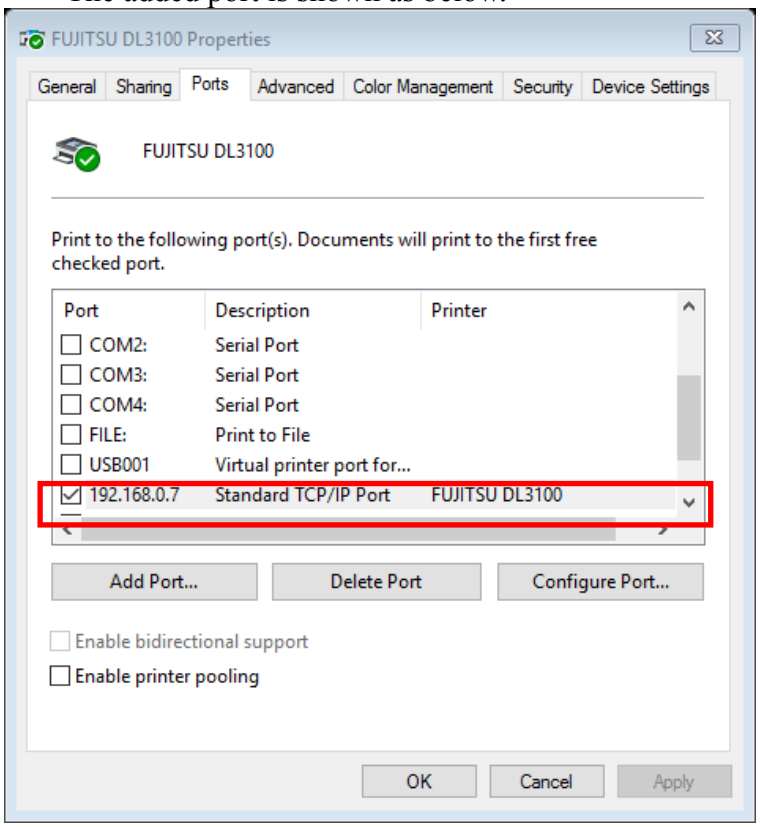
4. Click “Add Port…” in step 3. Below window will pop up.



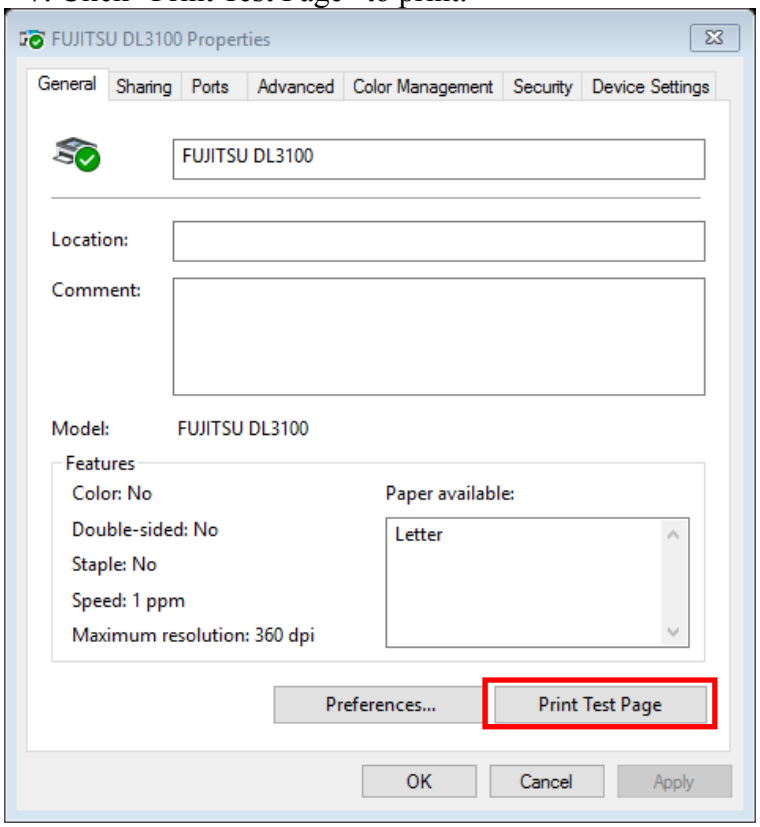
5. Select “Standard TCP/ Port”in step 4 and click “New Port...”. Below window will pop up.



6. Type in the printer IP address in step 5 and click “Next”.
   The added port is shown as below.



7. Click “Print Test Page” to print.



Note:

When DHCP is ON, two network cables should be connected with the router. One is connected to PC while the other one is connected to the printer. Enter the router interface through IE browser to view the IP address assigned to the printer, then repeat the above steps 3~6 to add the printer IP port into the drive port. Send the data to print when completed.

E

CHARACTER SETS & CODE PAGES

CHARACTER SETS

Standard character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	0	@	P	`	p	NUL			0	@	P	`	p
1		DC1	!	1	A	Q	a	q		DC1	!	1	A	Q	a	q
2		DC2	"	2	B	R	b	r		DC2	"	2	B	R	b	r
3		DC3	#	3	C	S	c	s		DC3	#	3	C	S	c	s
4		DC4	$	4	D	T	d	t		DC4	$	4	D	T	d	t
5			%	5	E	U	e	u			%	5	E	U	e	u
6			&	6	F	V	f	v			&	6	F	V	f	v
7	BEL		'	7	G	W	g	w	BEL		'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x	BS	CAN	(	8	H	X	h	x
9	HT		)	9	I	Y	i	y	HT		)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z	LF		*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	|	FF	FS	,	<	L	\	l	|
D	CR		-	=	M	]	m	}	CR		-	=	M	]	m	}
E	SO		.	>	N	^	n	~	SO		.	>	N	^	n	~
F	SI		/	?	O	_	o	⌂	SI		/	?	O	_	o	DEL

Standard character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	0	@	P	`	p	À	§		0	@	P	`	p
1		DC1	!	1	A	Q	a	q	È	ß	¡	1	A	Q	a	q
2		DC2	"	2	B	R	b	r	Ù	£	"	2	B	R	b	r
3		DC3	#	3	C	S	c	s	Ò	æ	#	3	C	S	c	s
4		DC4	$	4	D	T	d	t	ì	Ø	$	4	D	T	d	t
5			%	5	E	U	e	u	°	ø	%	5	E	U	e	u
6			&	6	F	V	f	v	£	¨	&	6	F	V	f	v
7	BEL		'	7	G	W	g	w	ì	Ä	'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x	¿	Ö	(	8	H	X	h	x
9	HT		)	9	I	Y	i	y	Ñ	Ü	)	9	I	Y	i	y
A	LF		*	:	J	Z	j	z	ñ	ä	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{	¤	ö	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	|	Ñ	ü	,	<	L	\	l	|
D	CR		-	=	M	]	m	}	Á	ß	-	=	M	]	m	}
E	SO		.	>	N	^	n	~	ã	é	.	>	N	^	n	~
F	SI		/	?	O	_	o	⌂	Ç	ÿ	/	?	O	_	o	DEL

IBM character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	0	@	P	‘	p	NUL		á	▒	└	╨	α	≡
1		DC1	!	1	A	Q	a	q		DC1	í	▓	┴	╤	β	±
2		DC2	"	2	B	R	b	r		DC2	ó	▓	┬	╥	Γ	≥
3		DC3	#	3	C	S	c	s		DC3	ú	│	├	╙	π	≤
4		DC4	$	4	D	T	d	t		DC4	ñ	┤	─	╘	Σ	⌠
5			%	5	E	U	e	u			Ñ	╡	┼	╒	σ	⌡
6			&	6	F	V	f	v			ª	╢	╞	╓	µ	÷
7	BEL		'	7	G	W	g	w	BEL		º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	╕	╚	╪	Φ	°
9	HT		)	9	I	Y	i	y	HT		⌐	╣	╔	┘	Θ	•
A	LF		*	:	J	Z	j	z	LF		¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	╗	╦	█	δ	√
C	FF	FS	,	<	L	\	l	|	FF	FS	¼	╝	╠	▄	∞	n
D	CR		-	=	M	]	m	}	CR		¡	╜	═	▌	Ø	2
E	SO		.	>	N	^	n	~	SO		«	╛	╬	▐	ε	■
F	SI		/	?	O	_	o	|	SI		»	┐	╧	▀	∩	SP

IBM character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	0	@	P	‘	p	Ç	É	á	▒	└	╨	α	≡
1		DC1	!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	β	±
2		DC2	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
6	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
7	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
9	HT		)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	•
A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
C	FF	FS	,	<	L	\	l	¦	î	£	¼	╝	╠	▄	∞	n
D	CR		-	=	M	]	m	}	ì	¥	¡	╜	═	▌	Ø	2
E	SO		.	>	N	^	n	~	Ä	Pt	«	╛	╬	▐	ε	■
F	SI		/	?	O	_	o	|	Å	ƒ	»	┐	╧	▀	∩	SP

OCR-A character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	0	@	P	`	p	NUL							
1		DC1	!	1	A	Q	a	q		DC1						
2		DC2	"	2	B	R	b	r		DC2						
3		DC3	#	3	C	S	c	s		DC3						
4		DC4	$	4	D	T	d	t		DC4						
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7	BEL		'	7	G	W	g	w	BEL							
8	BS	CAN	(	8	H	X	h	x	BS	CAN						
9	HT		)	9	I	Y	i	y	HT							
A	LF		*	:	J	Z	j	z	LF							
B	VT	ESC	+	;	K	[	k	{	VT	ESC						
C	FF	FS	,	<	L	\	l	|	FF	FS						
D	CR		-	=	M	]	m	}	CR							
E	SO		.	>	N	^	n	~	SO							
F	SI		/	?	O	_	o	■	SI							

OCR-A character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Ø	►	SP	0	@	P	`	p								
1	☺	◄	!	1	A	Q	a	q								
2	☻	↕	"	2	B	R	b	r								
3	♥	‼	#	3	C	S	c	s								
4	♦	¶	$	4	D	T	d	t								
5	♣	§	%	5	E	U	e	u								
6	♠	_	&	6	F	V	f	v								
7	•	↨	'	7	G	W	g	w								
8	◘	↑	(	8	H	X	h	x								
9	○	↓	)	9	I	Y	i	y								
A	■	→	*	:	J	Z	j	z								
B	♂	←	+	;	K	[	k	{								
C	♀	∟	,	<	L	\	l	|								
D	♪	↔	-	=	M	]	m	}								
E	♫	▲	.	>	N	^	n	~								
F	☼	▼	/	?	O	_	o	■								

OCR-B character set 1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL		SP	0	@	P	`	p	NUL							
1		DC1	!	1	A	Q	a	q		DC1						
2		DC2	"	2	B	R	b	r		DC2						
3		DC3	#	3	C	S	c	s		DC3						
4		DC4	$	4	D	T	d	t		DC4						
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7	BEL		'	7	G	W	g	w	BEL							
8	BS	CAN	(	8	H	X	h	x	BS	CAN						
9	HT		)	9	I	Y	i	y	HT							
A	LF		*	:	J	Z	j	z	LF							
B	VT	ESC	+	;	K	[	k	{	VT	ESC						
C	FF	FS	,	<	L	\	l	|	FF	FS						
D	CR		-	=	M	]	m	}	CR							
E	SO		.	>	N	^	n	~	SO							
F	SI		/	?	O	_	o	■	SI							

OCR-B character set 2

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Ø	►	SP	0	@	P	`	p								
1	☺	◄	!	1	A	Q	a	q								
2	☻	↕	"	2	B	R	b	r								
3	♥	‼	#	3	C	S	c	s								
4	♦	¶	$	4	D	T	d	t								
5	♣	§	%	5	E	U	e	u								
6	♠	_	&	6	F	V	f	v								
7	•	↨	'	7	G	W	g	w								
8	◘	↑	(	8	H	X	h	x								
9	○	↓	)	9	I	Y	i	y								
A	■	→	*	:	J	Z	j	z								
B	♂	←	+	;	K	[	k	{								
C	♀	∟	,	<	L	\	l	|								
D	♪	↔	-	=	M	]	m	}								
E	♫	▲	.	>	N	^	n	~								
F	☼	▼	/	?	O	_	o	■								

International Character Set Commands

Country	Basic Command
USA	<ESC>“R”CHR$(0)
FRANCE	<ESC>“R”CHR$(1)
GERMANY	<ESC>“R”CHR$(2)
UK	<ESC>“R”CHR$(3)
DENMARK 1	<ESC>“R”CHR$(4)
SWEDEN	<ESC>“R”CHR$(5)
ITALY	<ESC>“R”CHR$(6)
SPAIN 1	<ESC>“R”CHR$(7)
JAPAN	<ESC>“R”CHR$(8)
NORWAY	<ESC>“R”CHR$(9)
DENMARK 2	<ESC>“R”CHR$(10)
SPAIN 2	<ESC>“R”CHR$(11)
LATINAMERICA	<ESC>“R”CHR$(12)
DENMARK/NORWAY	<ESC>“R”CHR$(13)
CHINA	<ESC>“R”CHR$(16)

International character sets

Character Code (Hex)												
Character Set	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
0: U. S. A.	#	$	@	[	\	]	^	‘	{	¦	}	~
1: FRANCE	#	$	à	°	ç	§	^	‘	é	ù	è	¨
2: GERMANY	#	$	§	Ä	Ö	Ü	^	‘	ä	ö	ü	β
3: U. K.	£	$	@	[	\	]	^	‘	{	¦	}	~
4: DENMARK 1	#	$	@	Æ	Ø	Å	^	‘	æ	Ø	å	~
5: SWEDEN	#	¤	É	Ä	Ö	Å	Ü	é	ä	Ö	å	ü
6. ITALY	#	$	@	°	\	é	^	ù	à	ò	è	ì
7. SPAIN 1	Pt	$	@	¡	Ñ	¿	^	‘	¨	ñ	}	~
8. JAPAN	#	$	@	[	¥	]	^	‘	{	¦	}	~
9: NORWAY	#	¤	É	Æ	Ø	Å	Ü	é	æ	Ø	å	ü
10: DENMARK 2	#	$	É	Æ	Ø	Å	Ü	é	æ	Ø	å	ü
11: SPAIN 2	#	$	á	¡	Ñ	¿	é	‘	í	ñ	ó	ú
12: LATIN AMERICA	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú
13: DENMARK/NORWAY	#	$	@	[	\	]	^	‘	{	¦	}	~
16: CHINA	#	¥	@	[	\	]	^	‘	{	¦	}	~

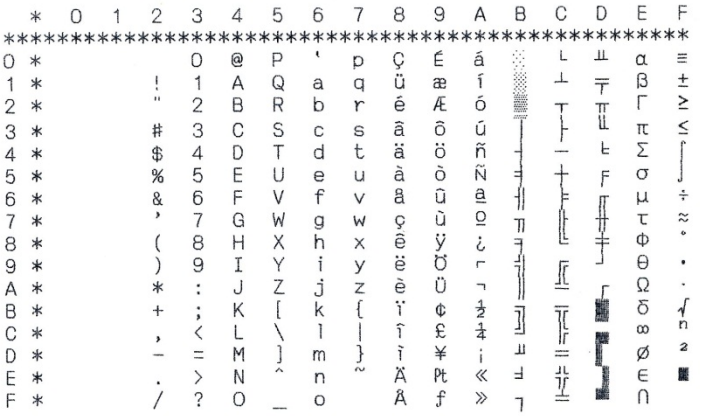
CODE PAGE COMMANDS

Code Page	ESC R Parameter
CP 437	80
CP 737	93
CP 850	82
CP 851	88
CP 852	87
CP 857	8D
CP 858	9E
CP 860	84
CP 861	94
CP 863	85
CP 864	8C
CP 864 Extended	95
CP 865	86
CP 866 Cyrillic	8E
CP 866 Bulgaria	9D
CP 1250	70
CP 1251	71
CP 1252	72
CP 1253	73
CP 1254	74
8859-1	25
8859-1 (SAP)	2B
8859-2	26
8859-5	2A
8859-7	2D
8859-9	2E
8859-15	2F
BRASCII	6D
Abicomp	6E
Roman8	4D
Coax/Twinax	4F
New-437	81
New-Dig 850	83
Old-Code 860	98
Flarro 863	99
865 Hebrew	9A

Code Page	ESC R Parameter
CP 1257	77
866 Ukraine	8F
866 Kazakhstan	90
Kamenicky	91
Mazovia	92
CP 775	A6
CRO-ASCII	3C
Arabic Farsi	96
Arabic Urdu	97
Greek DEC	46
Greek ELOT 928	6C
UK_ASCII	41
US_ASCII	42
Swedish	48
German	4B
Portuguese	4C
French	52
Italian	59
Norwegian	60
Spanish	5A
SiemensTurk	9B
DECTurkish	9C

CODE PAGE TABLES

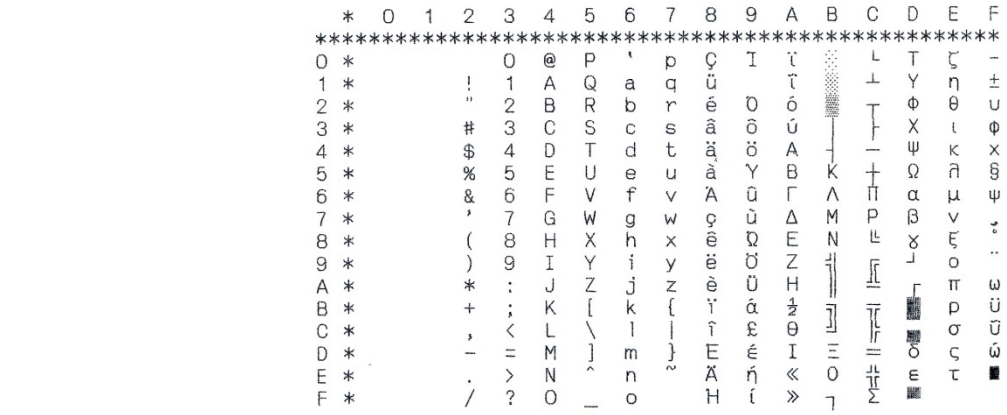
CP 437



CP 737

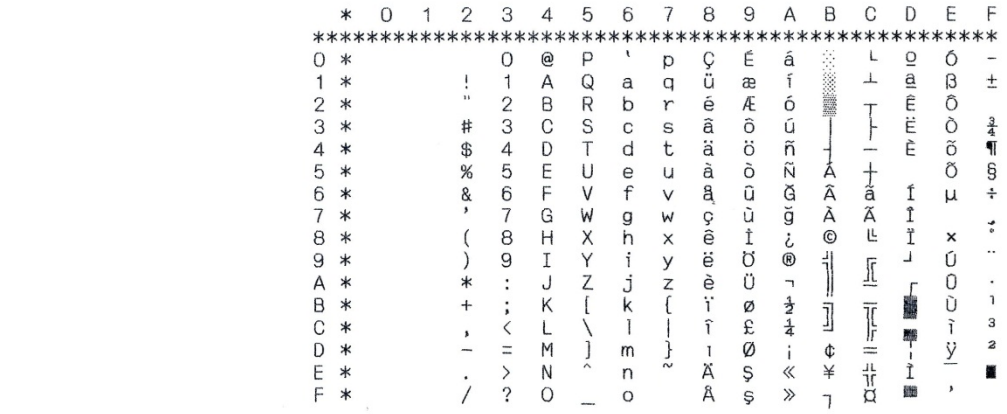
CP 850

CP 851

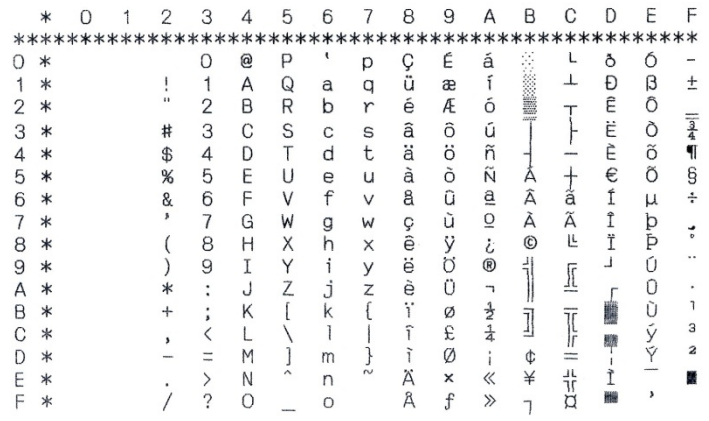


CP 852

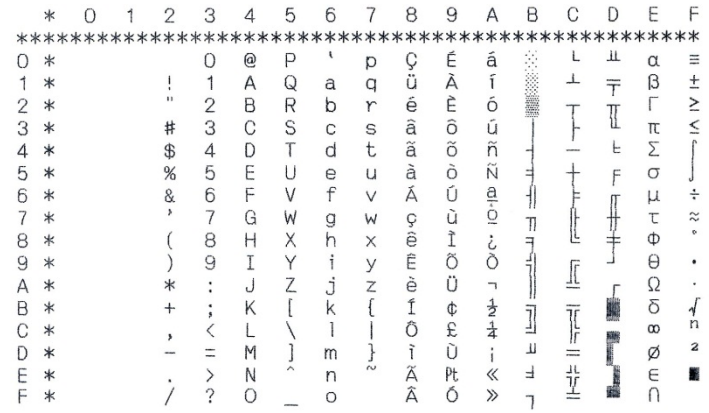
CP 857



CP 858



CP 860



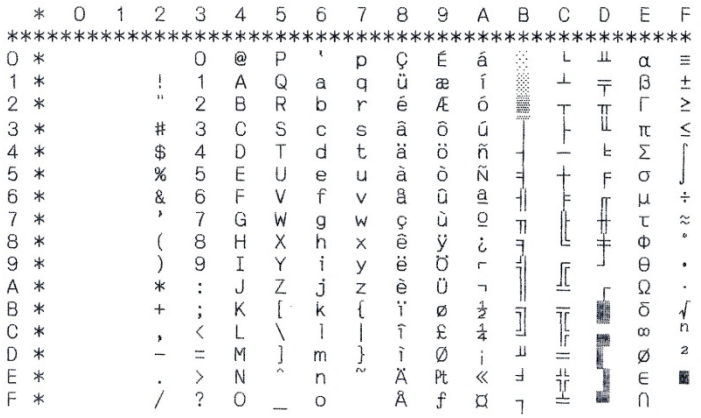
CP 861

CP 863

CP 864

Extend 864

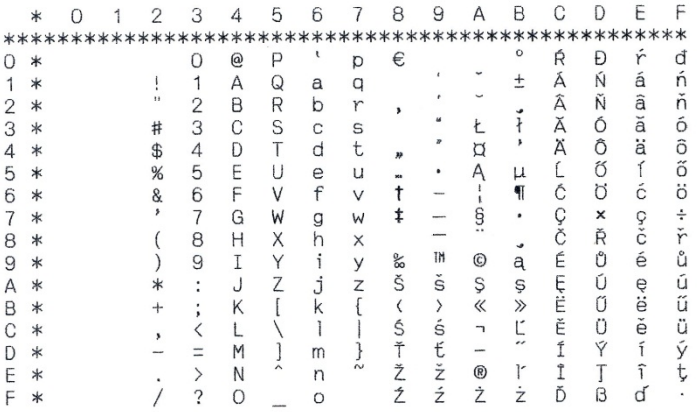
CP 865



CP 866

Bulgaria 866

CP 1250



CP 1251

CP 1252

CP 1253

CP 1254

8859-1

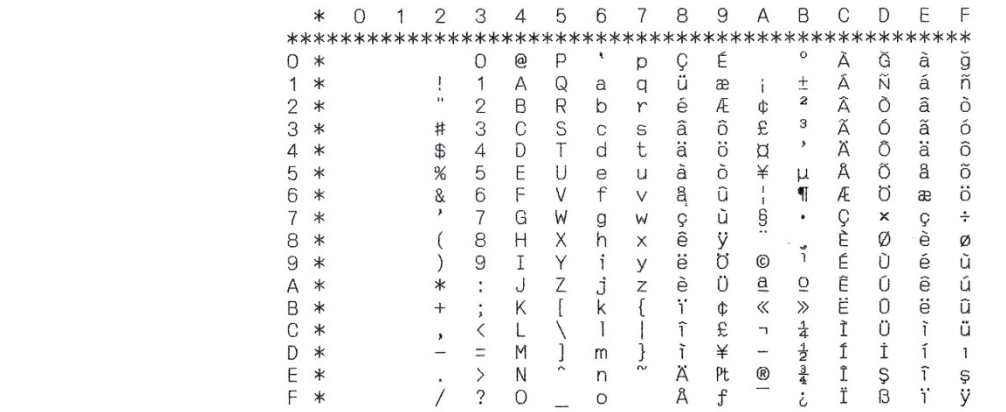
8859-1 (SAP)

8859-2

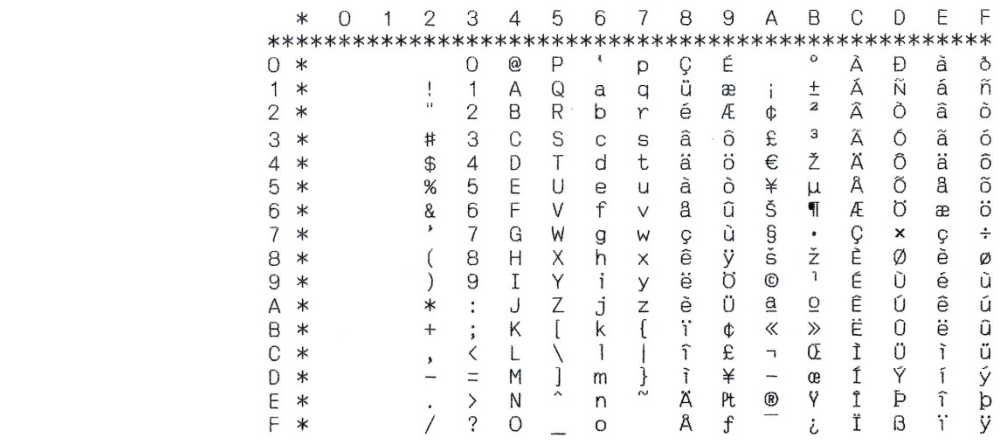
8859-5

8859-7

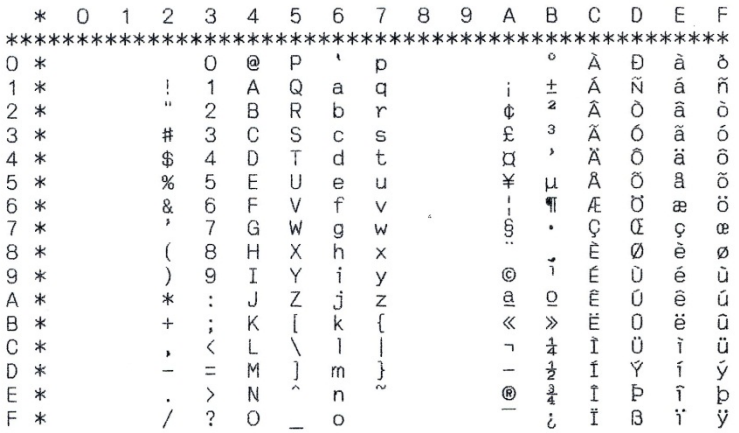
8859-9



8859-15

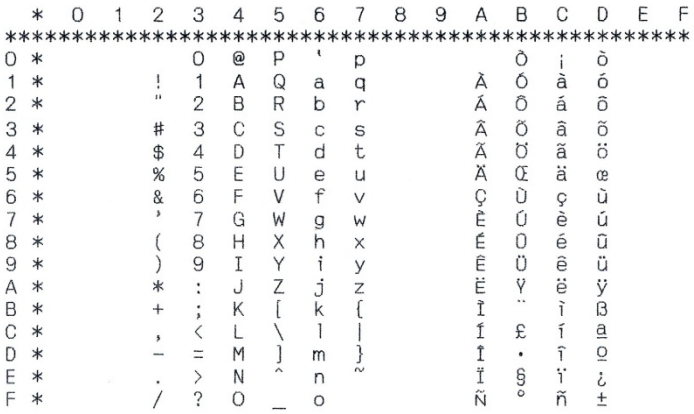


BRASCII



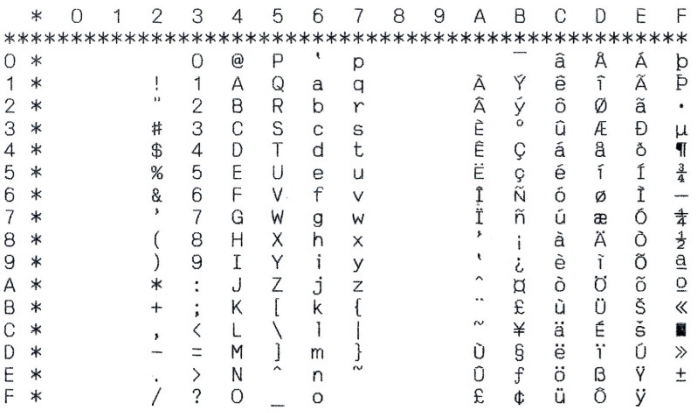
	*	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	*				0	@	P	‘	p				°	À	Đ	à	ð
1	*			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2	*			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3	*			#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4	*			$	4	D	T	d	t			¤	’	Ä	Ô	ä	ô
5	*			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6	*			&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7	*			’	7	G	W	g	w			§	·	Ç	Œ	ç	œ
8	*			(	8	H	X	h	x			¨	¸	È	Ø	è	ø
9	*			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A	*			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B	*			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C	*			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
D	*			-	=	M	]	m	}				½	Í	Ý	í	ý
E	*			.	>	N	^	n	~			®	¾	Î	Þ	î	þ
F	*			/	?	O	_	o				¯	¿	Ï	ß	ï	ÿ

Abicomp



	*	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	*				0	@	P	‘	p				Ð	¡	ð		
1	*			!	1	A	Q	a	q			À	Ő	à	ó		
2	*			"	2	B	R	b	r			Á	Õ	á	ô		
3	*			#	3	C	S	c	s			Â	Ŏ	â	õ		
4	*			$	4	D	T	d	t			Ã	Ŏ	ã	ö		
5	*			%	5	E	U	e	u			Ä	Œ	ä	œ		
6	*			&	6	F	V	f	v			Ç	Ù	ç	ù		
7	*			’	7	G	W	g	w			È	Ú	è	ú		
8	*			(	8	H	X	h	x			É	Ű	é	ű		
9	*			)	9	I	Y	i	y			Ê	Ü	ê	ü		
A	*			*	:	J	Z	j	z			Ë	Ÿ	ë	ÿ		
B	*			+	;	K	[	k	{			Ì	¨	ì	ß		
C	*			,	<	L	\	l	|		Í	£	í	ª		
D	*			-	=	M	]	m	}			Î	•	î	º		
E	*			.	>	N	^	n	~			Ï	§	ï	¿		
F	*			/	?	O	_	o				Ñ	°	ñ	±		

Roman 8

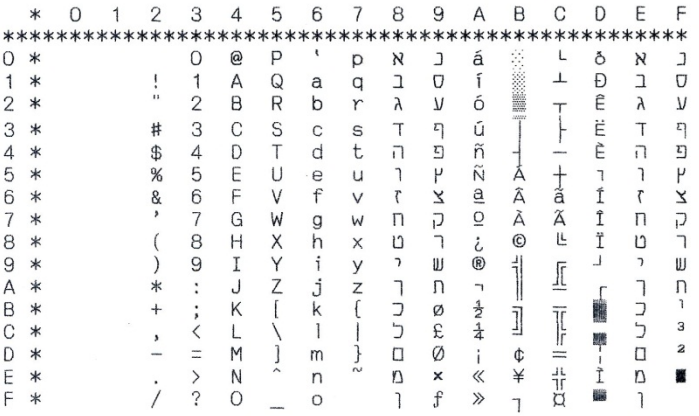


	*	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	*				0	@	P	‘	p				¯	â	Å	Á	þ
1	*			!	1	A	Q	a	q			À	Ý	ê	î	Ã	Þ
2	*			"	2	B	R	b	r			Â	ý	ô	Ø	ã	·
3	*			#	3	C	S	c	s			È	°	û	Æ	Ð	µ
4	*			$	4	D	T	d	t			Ê	Ç	á	ß	ð	¶
5	*			%	5	E	U	e	u			Ë	ç	é	í	Í	¾
6	*			&	6	F	V	f	v			Î	Ñ	ó	ø	Ì	
7	*			’	7	G	W	g	w			Ï	ñ	ú	æ	Ó	¼
8	*			(	8	H	X	h	x			´	¡	à	Ä	Ò	½
9	*			)	9	I	Y	i	y			‘	¿	è	ì	Õ	ª
A	*			*	:	J	Z	j	z			^	¤	ò	Ö	õ	º
B	*			+	;	K	[	k	{			¨	£	ù	Ü	Š	«
C	*			,	<	L	\	l	|		~	¥	ä	é	š	■
D	*			-	=	M	]	m	}			Ù	§	ë	ï	Ú	»
E	*			.	>	N	^	n	~			Û	ƒ	ö	ß	Ÿ	±
F	*			/	?	O	_	o				£	¢	ü	Õ	ÿ	

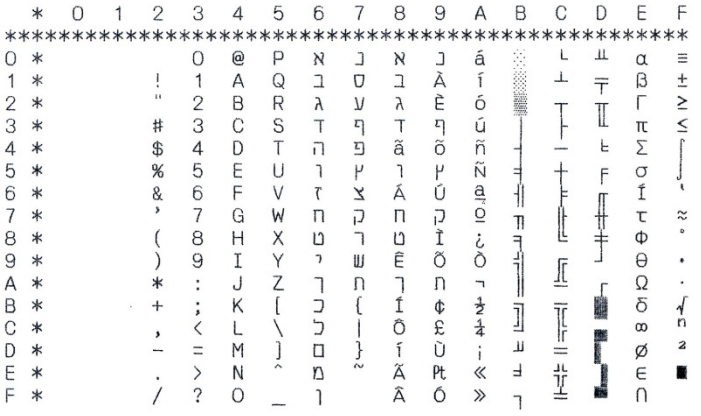
Coax/Twinax

New-437

New-Dig 850

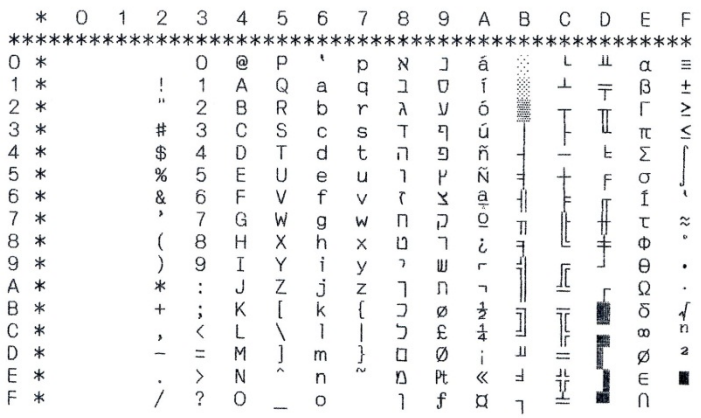


Old-Code 860



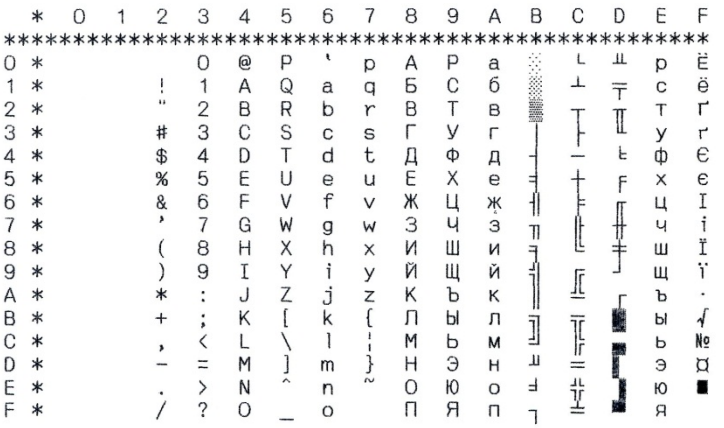
Flarro 863

Hebrew 865



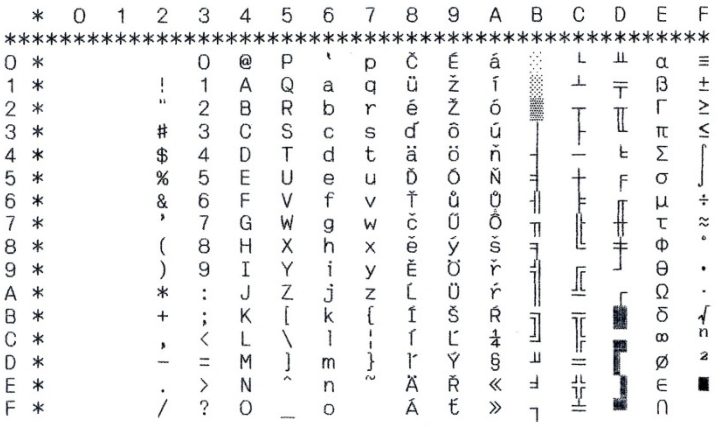
CP 1257

Ukraine 866



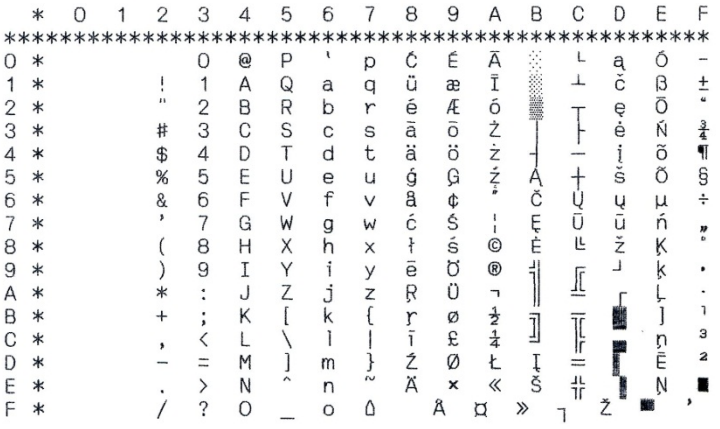
Kazakhstan 866

Kamenicky



Mazovia

Baltic 775

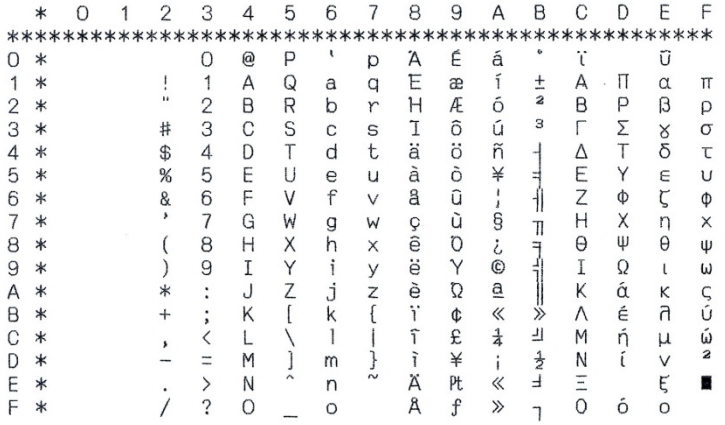


CRO-ASCII

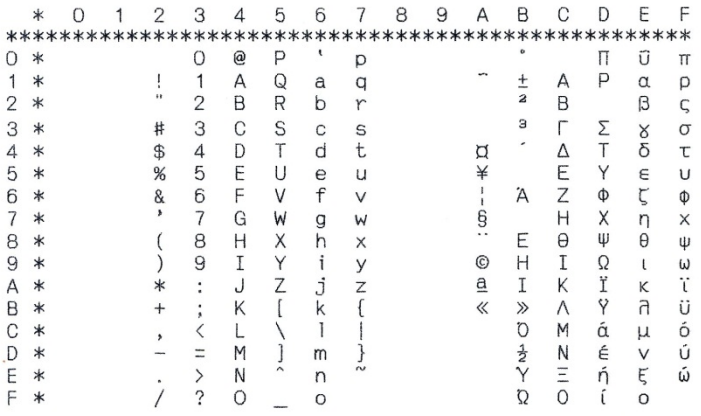
Farsi

Urdu

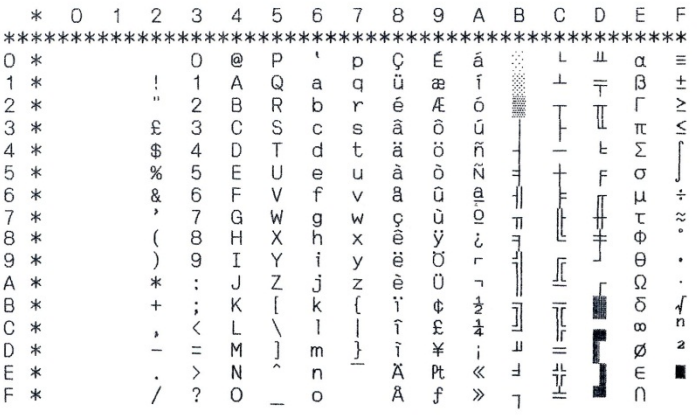
Greek DEC



ELOT 928

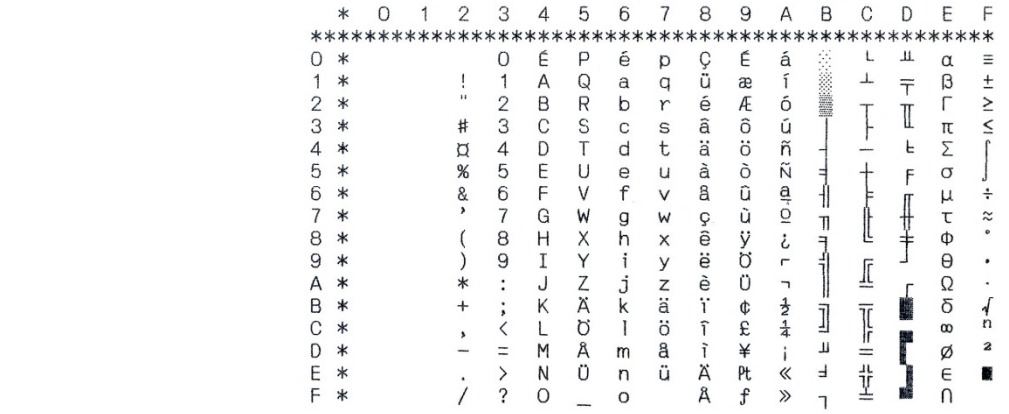


UK_ASCII



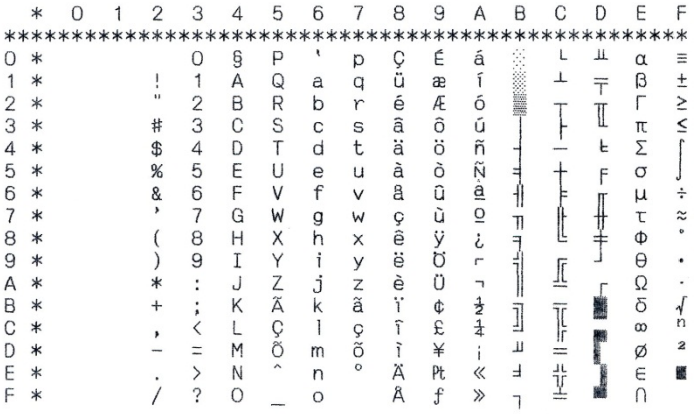
US_ASCII

Swedish

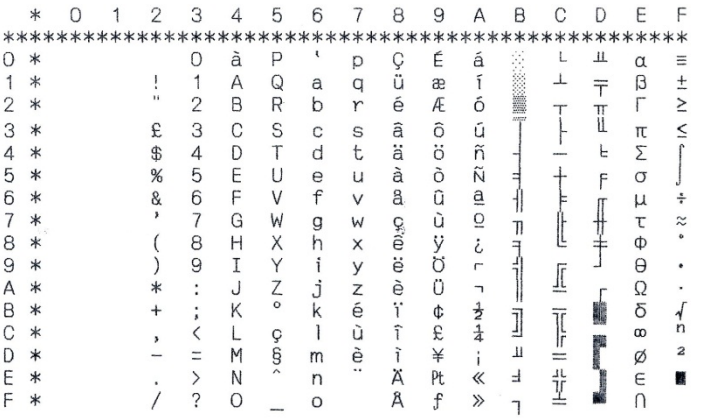


German

Portuguese

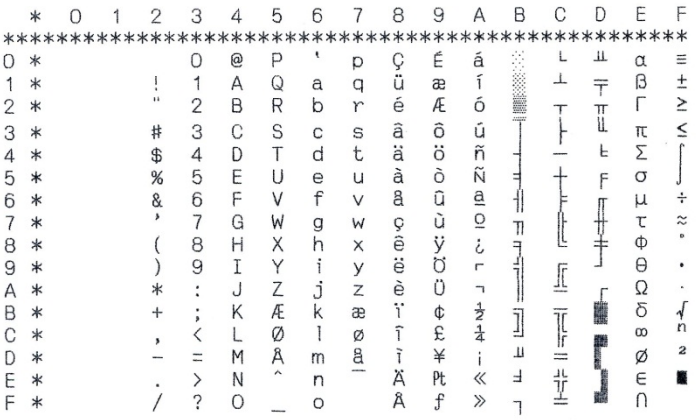


French

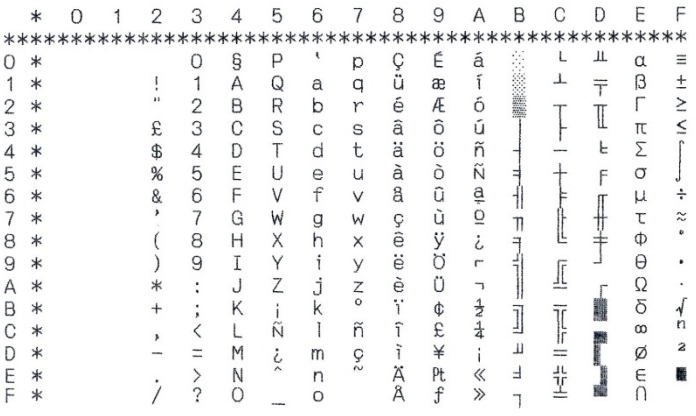


Italian

Norwegian

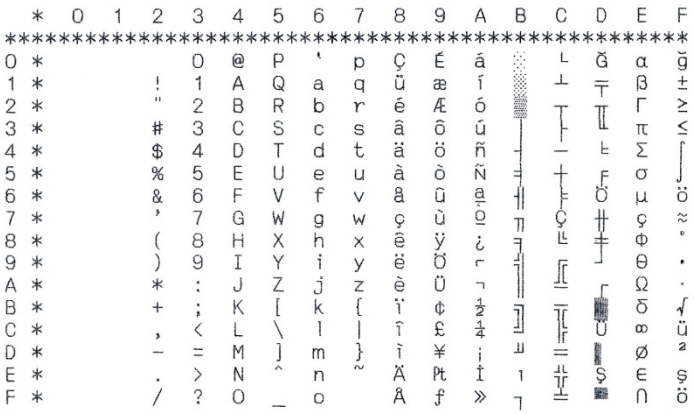


Spanish

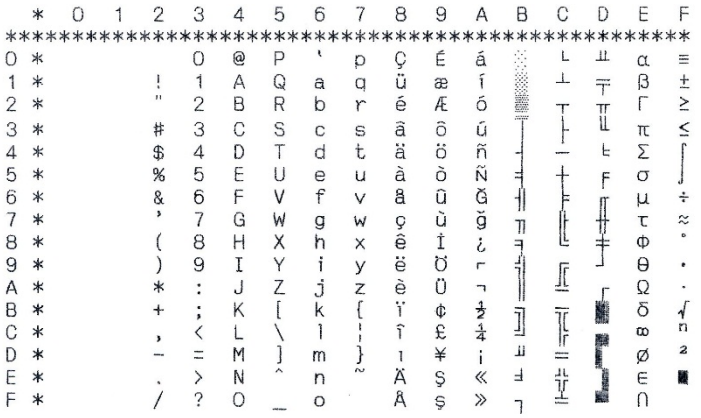


Siemens Turk

DEC Turkish



Tarama



F

RESIDENT FONTS

This chapter provides print samples of the printer's nineteen resident fonts.

Roman 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Sanserif 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Courier 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Prestige 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Script 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

OCR B 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

OCR A 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Orator 10

THE 24-WIRE DOT-MATRIX PRINTER PRINTS QUALITY CHARACTERS AND SYMBOLS USING A VAR IETY OF SIZES AND FONTS.

Draft 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Gothic 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

Souvenir 10

The 24-wire dot-matrix printer prints quality characters and symbols using a var iety of sizes and fonts.

KA02100-Y890-01EN