TOSHIBA

TOSHIBA 2ST Label Printer

DB-EA4D SERIES

Owner’s Manual
Mode d’emploi
Bedienungsanleitung
Manual de instrucciones
Gebruikershandleiding
Manuale Utente
Manual do Utilizador

TOSHIBA 2ST Label Printer

DB-EA4D SERIES

Owner's Manual

Safety Summary

Personal safety in handling or maintaining the equipment is extremely important. Warnings and Cautions necessary for safe handling are included in this manual. All warnings and cautions contained in this manual should be read and understood before handling or maintaining the equipment.
Do not attempt to effect repairs or modifications to this equipment. If a fault occurs that cannot be rectified using the procedures described in this manual, turn off the power, unplug the machine, and then contact your authorised TOSHIBA TEC CORPORATION representative for assistance.

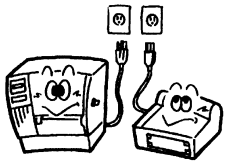
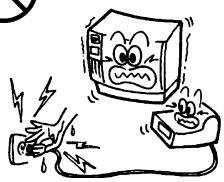
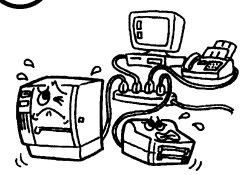
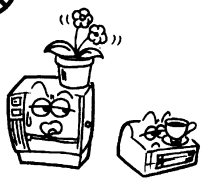
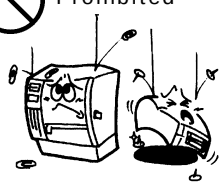
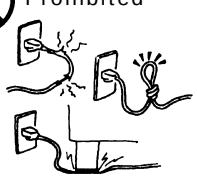
Meanings of Each Symbol

WARNING	This symbol indicates a potentially hazardous situation which, if not avoided, could result in death, serious injury, or serious damage, or fire in the equipment or surrounding objects.
CAUTION	This symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, partial damage to the equipment or surrounding objects, or loss of data.
PROHIBITED	This symbol indicates prohibited actions (prohibited items). Specific prohibited contents are drawn inside or near the ⃠ symbol. (The symbol on the left indicates “no disassembling”.)
MUST be Performed	This symbol indicates actions which must be performed. Specific instructions are drawn inside or near the □ symbol. (The symbol on the left indicates “disconnect the power cord plug from the outlet”.)

NOTE: Indicates information to which you should pay attention when operating the machine.

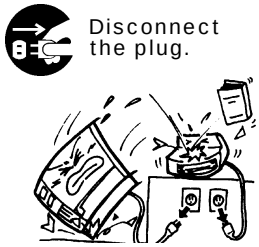
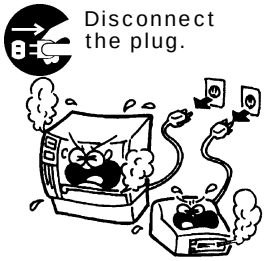
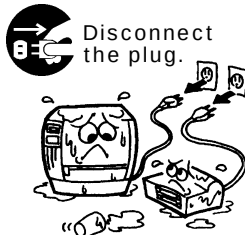
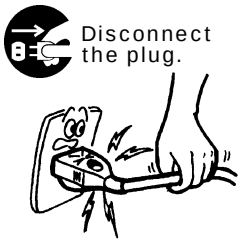
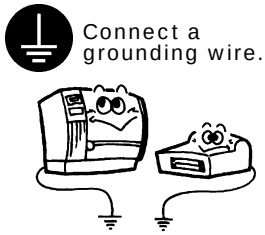
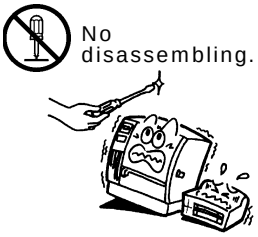
WARNING

This indicates that there is the risk of **death** or **serious injury** if the machine is improperly handled contrary to this indication.

Any other than the specified AC voltage is prohibited. 	Do not use voltages other than the AC voltage specified on the rating plate, as this may cause **fire** or **electric shock**.
Prohibited 	Do not plug in or unplug the power cord with wet hands as this may cause **electric shock**.
Prohibited 	If the machine share the same electrical outlet with any other appliance that consumes a large amount of power, the voltage will fluctuate widely each time these appliances operate. Be sure to provide an exclusive outlet for the machine as this may cause **fire** or **electric shock**.
Prohibited 	Do not place metal objects or water-filled containers such as flower vases, flower pots or mugs, etc. on top of the machine. If metal objects or spilled liquid enter the machine, this may cause **fire** or **electric shock**.
Prohibited 	Do not insert or drop metal, flammable or other foreign objects into the machine through the ventilation slits, as this may cause **fire** or **electric shock**.
Prohibited 	Do not scratch, damage or modify the power cords. Also, do not place heavy objects on, pull on, or excessively bend the power cords, as this may cause **fire** or **electrical shock**.

Safety Precautions

ENGLISH VERSION

 If the machine is dropped or their cabinet damaged, first turn off the power switch and disconnect the power cord plug from the outlet, and then contact your authorised TOSHIBA TEC CORPORATION representative for assistance. Continued use of the machine in that condition may cause fire or electric shock.	 Continued use of the machine in an abnormal condition such as when the machine is producing smoke or strange smells may cause fire or electric shock. In these cases, immediately turn off the power switches and disconnect the power cord plug from the outlet. Then, contact your authorised TOSHIBA TEC CORPORATION representative for assistance.
 If foreign objects (metal fragments, water, liquids) enter the machine, turn off the power switch and disconnect the power cord plug from the outlet, and then contact your authorised TOSHIBA TEC CORPORATION representative for assistance. Continued use of the machine in that condition may cause **fire** or **electric shock**.	 When unplugging the power cords, be sure to hold and pull on the plug. Pulling on the cord may cut or expose the internal wires and cause **fire** or **electric shock**.
 Ensure that the equipment is properly grounded. Extension cables should also be grounded. **Fire** or **electric shock** could occur on improperly grounded equipment.	 Do not remove covers, repair or modify the machine by yourself. Contact your authorised TOSHIBA TEC CORPORATION representative for assistance. You may be **injured** by high voltage, very hot parts or sharp edges inside the machine.
 Do not use a spray cleaner containing flammable gas for cleaning this product, as this may cause a **fire**.	 Care must be taken not to injure yourself with the printer paper cutter.

CAUTION	This indicates that there is the risk of personal **Injury** or **damage** to objects if the machine is improperly handled contrary to this indication.

Precautions

The following precautions will help to ensure that this machine will continue to function correctly.

- Try to avoid locations that have the following adverse conditions:
  * Temperatures out of the specification
  * Direct sunlight
  * High humidity
  * Shared power source
  * Excessive vibration
  * Dust/Gas
- The cover should be cleaned by wiping with a dry cloth or a cloth slightly dampened with a mild detergent solution. NEVER USE THINNER OR ANY OTHER VOLATILE SOLVENT on the plastic covers.
- USE ONLY TOSHIBA TEC CORPORATION SPECIFIED paper and ribbons.
- DO NOT STORE the paper or ribbons where they might be exposed to direct sunlight, high temperatures, high humidity, dust, or gas.
- Any data stored in the memory of the printer could be lost during a printer fault.
- Try to avoid using this equipment on the same power supply as high voltage equipment or equipment likely to cause mains interference.
- Unplug the machine whenever you are working inside it or cleaning it.
- Keep your work environment static free.
- Do not place heavy objects on top of the machine, as these items may become unbalanced and fall causing **injury**.
- Do not block the ventilation slits of the machine, as this will cause heat to build up inside the machine and may cause **fire**.
- Do not lean against the machine. It may fall on you and could cause **injury**.
- Unplug the machine when it is not used for a long period of time.
- Place and operate the machine on a stable and level surface.
- Do not use this product in locations where use may be forbidden, for example,in an aeroplane or a hospital. If you do not know the forbidden areas, please referto and follow the airline company or medical institution guidelines. Flight instruments or medical equipment may be affected, causing a serious accident.
- Since this product uses extremely low power compared with mobile phones, itcannot possibly interfere the pacemakers and defibrillators. However, if the useof this product should be likely to have affected the pacemaker or defibrillator, immediately stop using the product and contact your TOSHIBA TEC sales agent.
- This product communicates with other devices by radio. Depending on the installation location, orientation, environment, etc., its communication performance may deteriorate or devices installed near by may be affected.
- Keep away from microwave devices. Communication performance may deteriorate or a communication error may occur due to radio interference emitted from the microwave device.
- Since the Bluetooth and wireless LAN use the same radio frequency band, each radio wave may interfere with each other when they are used at the same time, causing a deterioration of communication performance or a disconnection of network. If there is any problem with connection, please stop using either Bluetooth or wireless LAN.
- To avoid injury, be careful not to catch or jam your fingers while opening or closing the cover.
- Do not touch moving parts. To reduce the risk that fingers, jewelry, clothing, etc., be drawn into the moving parts, turn off the power switch to stop movement.
- Keep away from flame or other sources of heat. Failure to do this may cause fire or machine failure.
- During lightning, turn off and keep away from the machine because of danger of electric shock and machine failure.
- Avoid locations subject to rapid change in temperature as this causes condensation, causing electric shock or machine failure.
- Do not damage the print head, platen or strip roller with a sharp object. Doing so may cause machine failure.
- Do not touch or contact the print head element with a hard object. Doing so may cause machine failure.
- RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Request Regarding Maintenance

- Utilize our maintenance services.
  After purchasing the machine, contact your authorised TOSHIBA TEC CORPORATION representative for assistance once a year to have the inside of the machine cleaned. Dust will build up inside the machine and may cause a **fire** or a **malfunction**. Cleaning is particularly effective before humid rainy seasons.
- Our preventive maintenance service performs periodic checks and other work required to maintain the quality and performance of the machine, preventing accidents beforehand.
  For details, please consult your authorised TOSHIBA TEC CORPORATION representative.
- Using insecticides and other chemicals
  Do not expose the machine to insecticides or other volatile solvents. This will cause the cabinet or other parts to deteriorate and may cause the paint to peel.

Notes

- This manual may not be copied in whole or in part without the prior written permission of TOSHIBA TEC.
- The contents of this manual may be changed without notification.
- Please refer to your local Authorised Service representative with regard to any queries you may have in this manual.
- In case of the re-export of this printer, please make sure that necessary certifications in the countries where printer is used shall be obtained by the user before re-export.

Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment.

This product is designed for commercial usage and is not consumer product.

For the EU only

CE compliance:
This product is labelled with the CE mark in accordance with the provisions of the applicable European Directives, notably the Low Voltage Directive 2014/35/EU, the Electromagnetic Compatibility Directive 2014/30/EU, the RoHS Directive 2011/65/EU, (EU) 2015/863 for this product and the electric accessories.
CE marking is the responsibility of TOSHIBA TEC GERMANY IMAGING SYSTEMS GmbH, Carl-Schurz-Str. 7, 41460 Neuss, Germany, phone +49-(0)-2131-1245-0.
For a copy of the related CE Declaration of Conformity, please contact your dealer or TOSHIBA TEC.

Warning:
This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

The following information is for EU-member states only:
Disposal of products
(based on EU-Directive 2012/19/EU)
Directive on Waste electrical and electronic equipment – WEEE)

The use of the symbol indicates that this product may not be disposed as unsorted municipal waste and has to be collected separately. Integrated batteries and accumulators can be disposed of with the product. They will be separated at the recycling centers.
The black bar indicates that the product was placed on the market after August 13, 2005.
By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environmental and human health, which could otherwise be caused by inappropriate waste handling of this product.
For more detailed information about the take-back and recycling of this product, please contact your supplier where you purchased this product.

For U.S.A and Canada only

FCC Notice
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

(for USA only)

California Proposition 65 Warning: USA-California only

WARNING:

This Product can expose you to Phthalate(s) known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to
https://www.p65warnings.ca.gov/product

For Canada only

CAN ICES-3 (A) / NMB-3 (A)
This Class A digital apparatus complies with Canadian ICES-003.

For Australia only

TABLE OF CONTENTS

Page

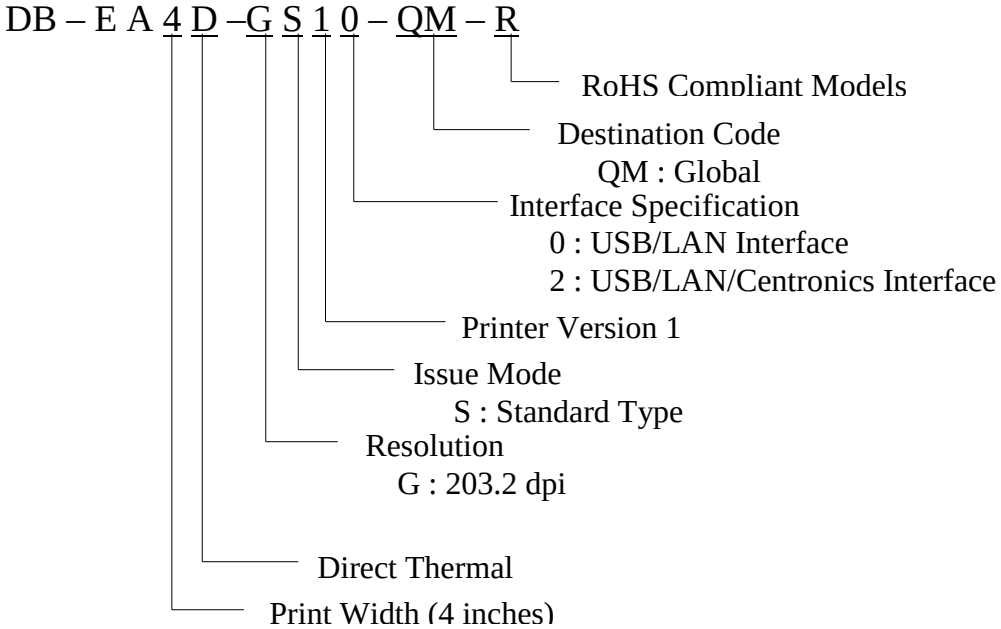
1. INTRODUCTION

Thank you for choosing the TEC DB-EA4D Series 2ST 4-inch label printer. This new generation high performance high quality printer is equipped with the latest hardware including the newly developed This manual contains general set-up and maintenance information and should be read carefully to help gain maximum performance and life from your printer. For most queries please refer to this manual and keep it safe for future reference.

1.1 Applicable Model

- DB-EA4D-GS10-QM-R
- DB-EA4D-GS12-QM-R

Model name description



1.2 Accessories

When unpacking the printer, please check that the following accessories are supplied with the printer.

- Quick Installation Manual (Doc. No: EO1-33092)
- Safety Precaution Sheet (Doc. No: EO2-33038)
- Power Cord

NOTES:

1. *Check for damage or scratches on the printer. However, please note that TOSHIBA TEC shall have no liability for any damage of any kind sustained during transportation of the product.*
2. *Keep the cartons and pads for future transportation of the printer.*

2. SPECIFICATIONS

2.1 Printers Specifications

Item		
Supply voltage		AC 100 – 120V, 50/60 Hz ± 10%; AC 220 – 240V, 50 Hz ± 10%
Power consumption		100V – 240V 3.3A – 1.4A (Dual side, Print Ratio 14% Duty Slant Pattern, 6 inc/sec.)
Operating temperature		0 - 40°C (In case 0°C-5°C□: Max Speed: 4 inch/sec.)
Relative humidity		25 - 85% (No condensation)
Print head		Line thermal 8 dots per mm (203.2 dots per inch)
Printing methods		Line thermal printing (Direct thermal method)
Print speeds		Max 6 inch/sec. (Dual side printing mode)
Maximum print width		104mm
Dispensing modes		Batch mode(Continuous)
Message display		16 characters x 2 lines
Dimensions		240 mm (width) x 237 mm (height) x 226 mm (depth), with Paper hopper 470 mm (depth)
Weight		Printer: 7.5kg(without media)
Interfaces	DB-EA4D-GS10-QM-R	USB I/F (V2.0 High Speed) IEEE802.3 (LAN 10 Base-T/100 Base-TX)
	DB-EA4D-GS12-QM-R	USB I/F (V2.0 High Speed) IEEE802.3 (LAN 10 Base-T/100 Base-TX) IEEE1284 Interface (SPP, Nibble mode)

2.2 Media Specifications

2.2.1 Media Size & Shape

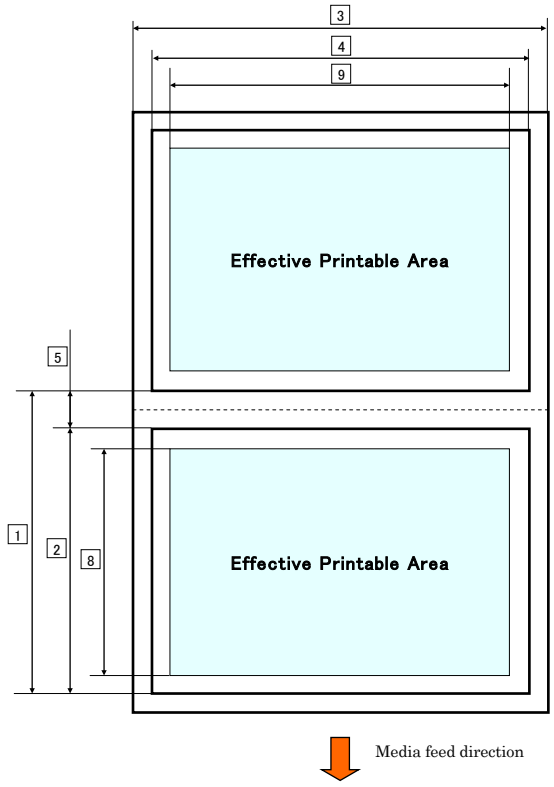
[unit:mm]

			Batch Mode
1	Media Length	Label	40.0-554.8
		Tag	
		Perforation	
		Receipt	
2	Label Length		37.0-551.8
3	Media Width (see *NOTE* 4.)	Label	58.0-130.0
		Tag	
		Perforation	
		Receipt	
4	Label Width		55.0-127.0
5	Gap Length		3.0-20.0
6	Black Mark Length		2.0-10.0
7	Effective Print Width		104.0+/-0.2
8	Effective Print Length	Label	33.0-547.8
		Tag	36.0-547.8
		Perforation	
		Receipt	
9	Black Mark Width		Min 12.0
10	Hole Length		2.0-10.0
11	Hole Width		Min 12.0
	Paper Thickness		0.06-0.22
	Maximum Effective length for continuous print		547.8
	Maximum Outer Roll Diameter		Dia 203.2(8")
	Roll Direction		Outside Label
	Inner Core Diameter		Dia 38.0, 42.0, 76.2+/-0.3

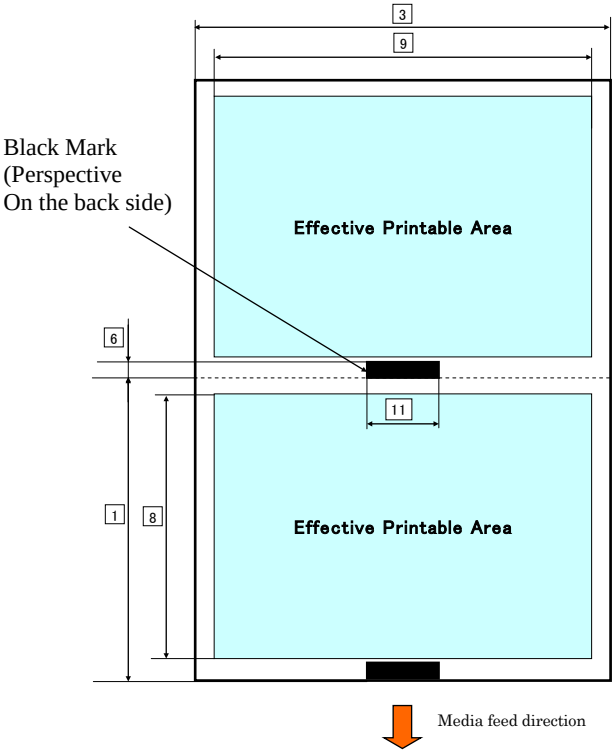
NOTES:

1. *To ensure print quality and print head life, use only TOSHIBA TEC specified media.*
2. *When marking black marks on the label rolls, they should be marked at the gaps.*
3. *In the case of using perforation paper with rectangular hole, printer cannot do backfeed.*
   If send the data to printer one by one, printer skip 2nd page without printing after printing first data on first page. After that, the printer prints 2nd data on 3rd page.
   If send all pages data to printer at one time, the printer can print without skipping a page.
4. *Maximum paper width of 128mm is applied when Paper Roll Holder Option installed.*

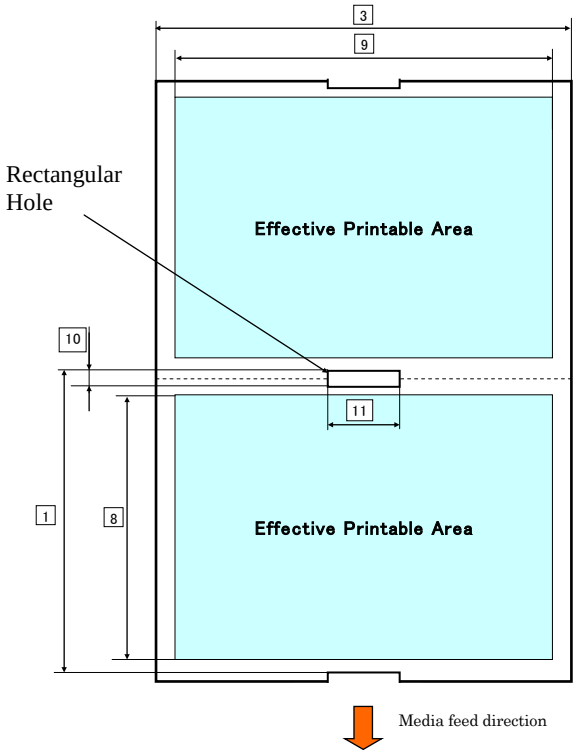
<Label Paper>



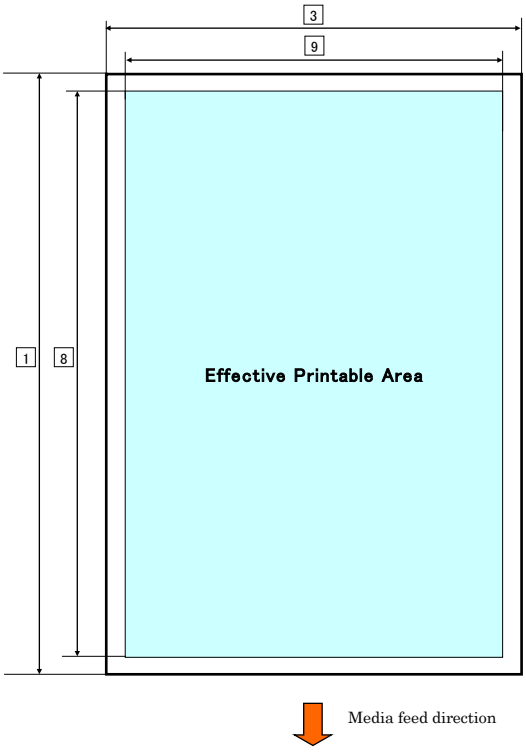
<Tag & Receipt Paper with BM>



<Perforation Paper with a hole>



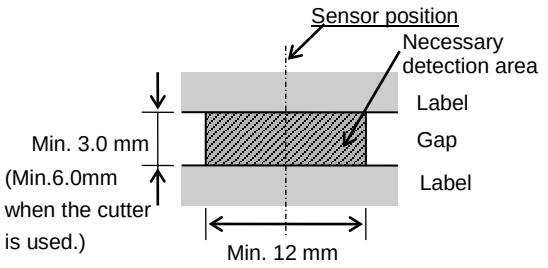
<Cut Sheet Paper>



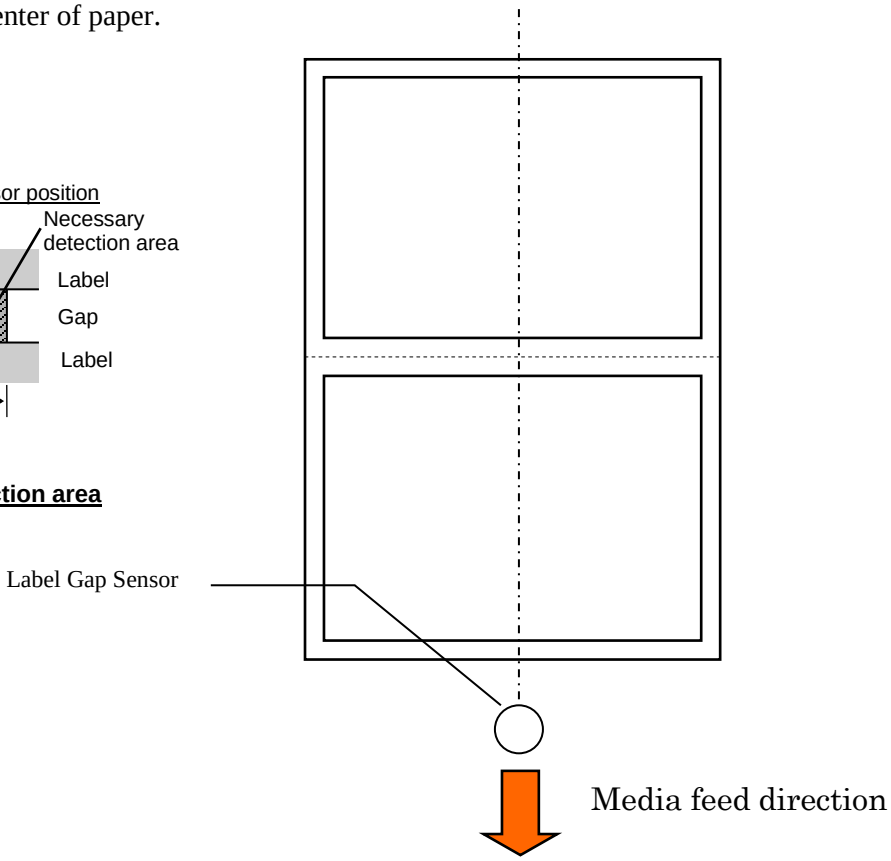
2.2.2 Detection Area of the Transmissive Sensor(Label Gap Sensor)

Label Gap Sensor can be used at center of paper.

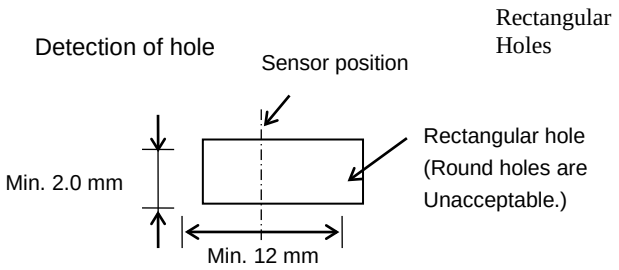
<Label Paper>



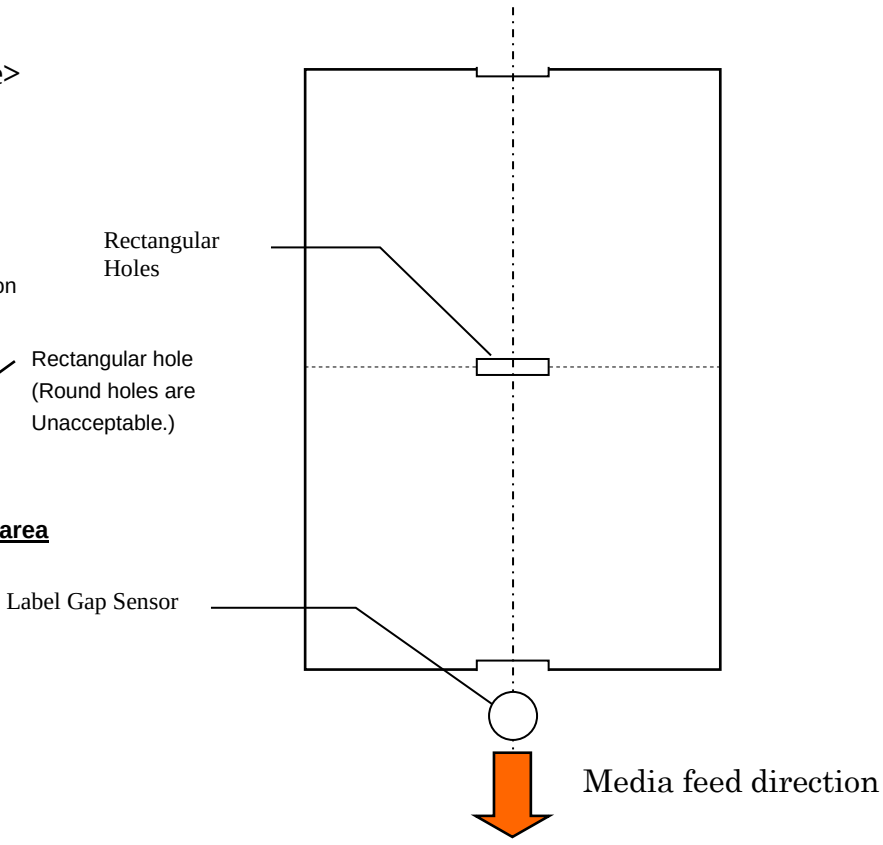
Magnified view of detection area



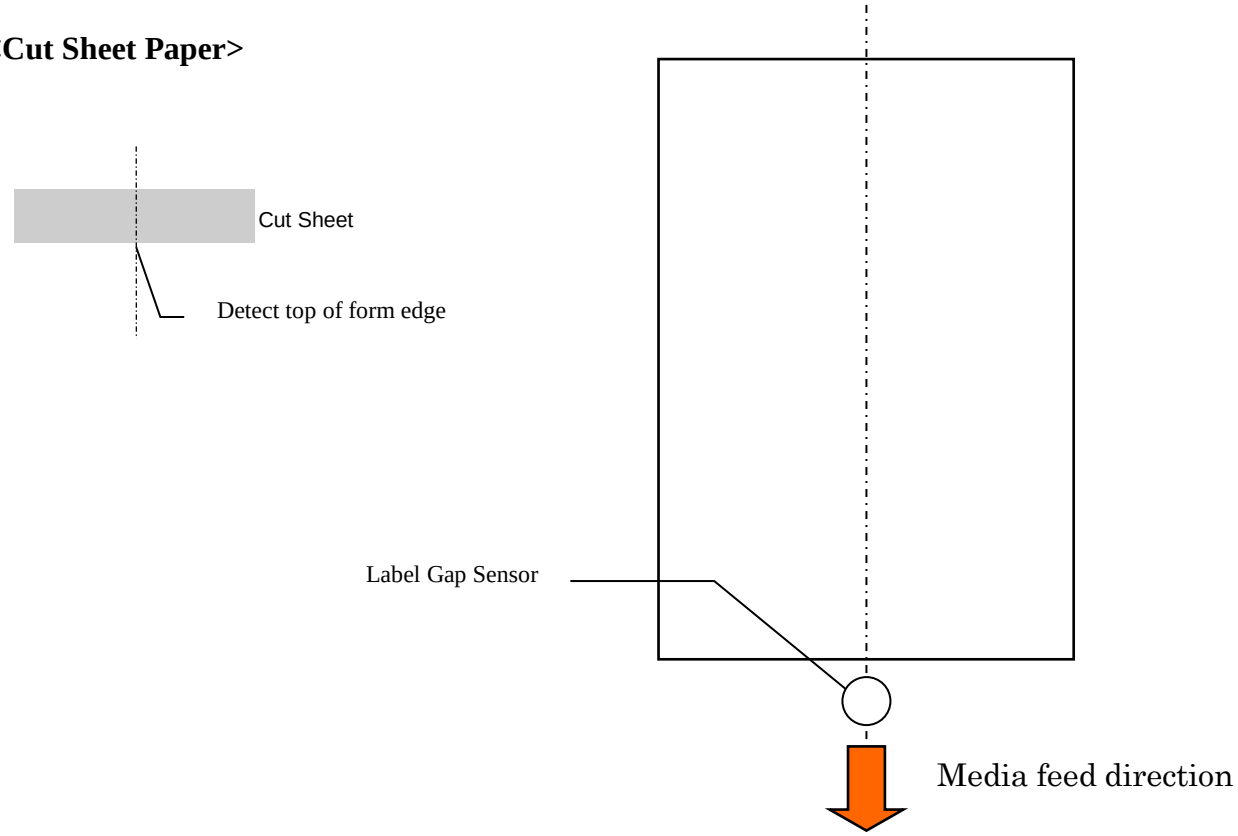
<Perforation Paper with a hole>



Magnified view of detection area



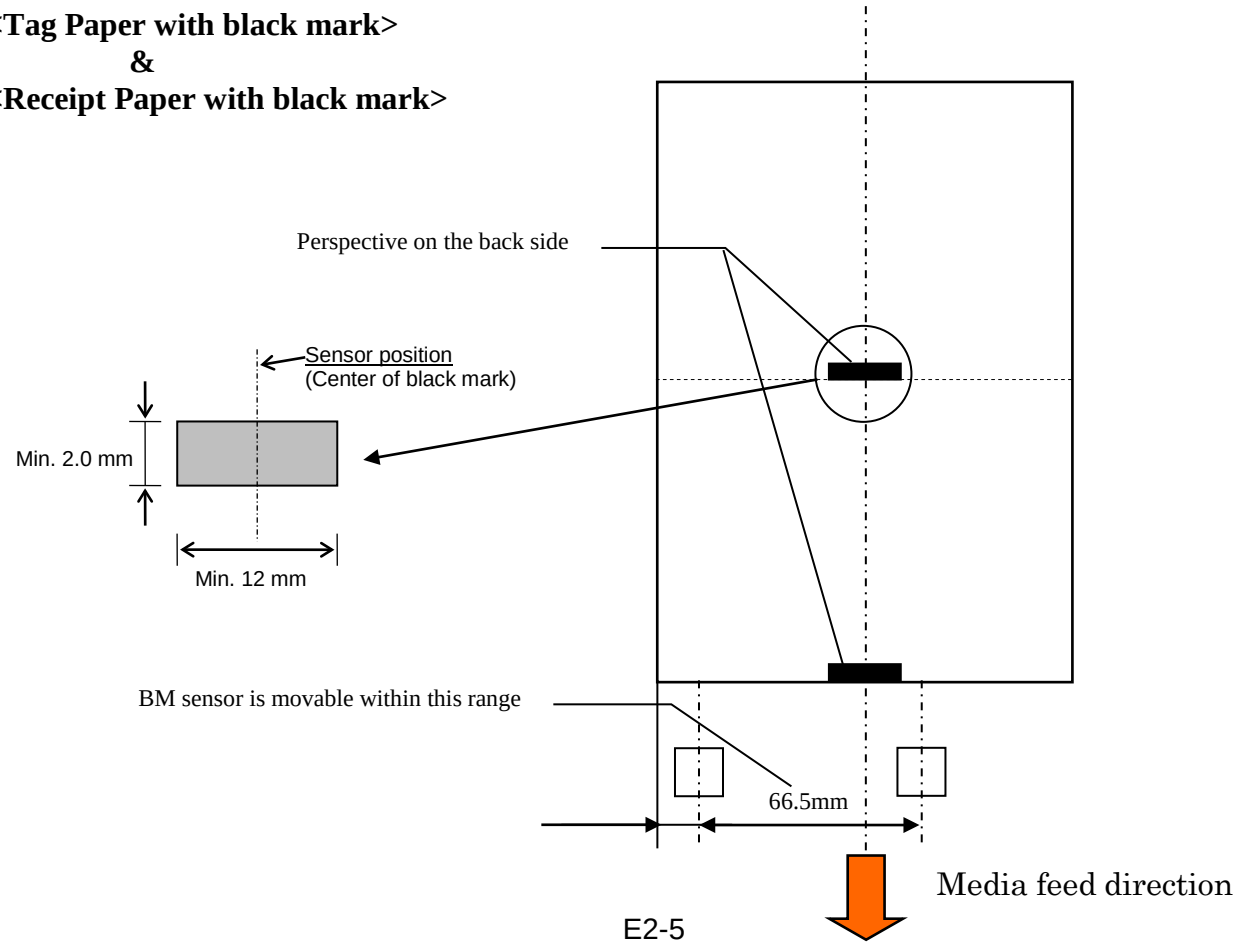
<Cut Sheet Paper>



2.2.3 Detection Area of the Reflective Sensor(BM Sensor)

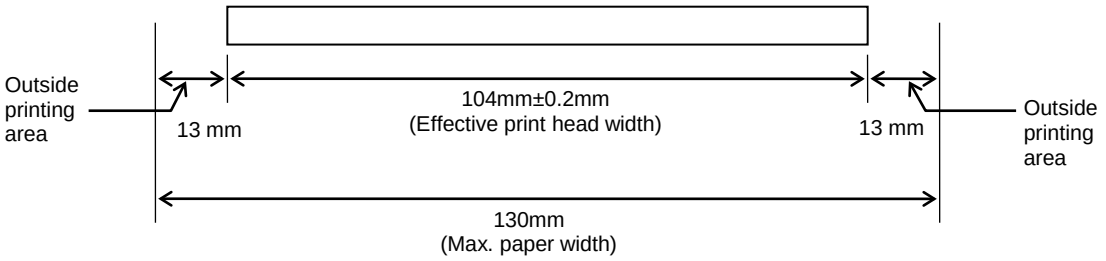
BM sensor is movable in the range from 6.0mm to 66.5mm on the left side.

<Tag Paper with black mark>
&
<Receipt Paper with black mark>



2.2.4 Effective Print Area of Paper

The figure below illustrates the relation between the head effective print width and media width.



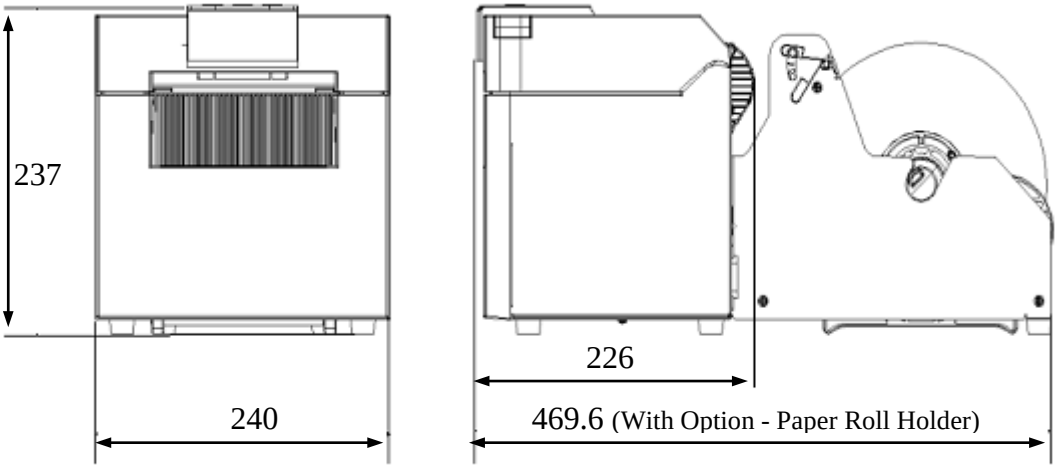
2.3 OPTIONS

Option Name	Type	Description
Paper Roll Holder	DB-EA904-PH-QM-R	A media roll hanger for media roll with an outer roll diameter up to 203.2mm (8”) and inner core diameter up to 76.2mm (3”).

NOTE:
To purchase the Optional KIT, please contact your authorized TOSHIBA TEC representative or TOSHIBA TEC Head Quarter.

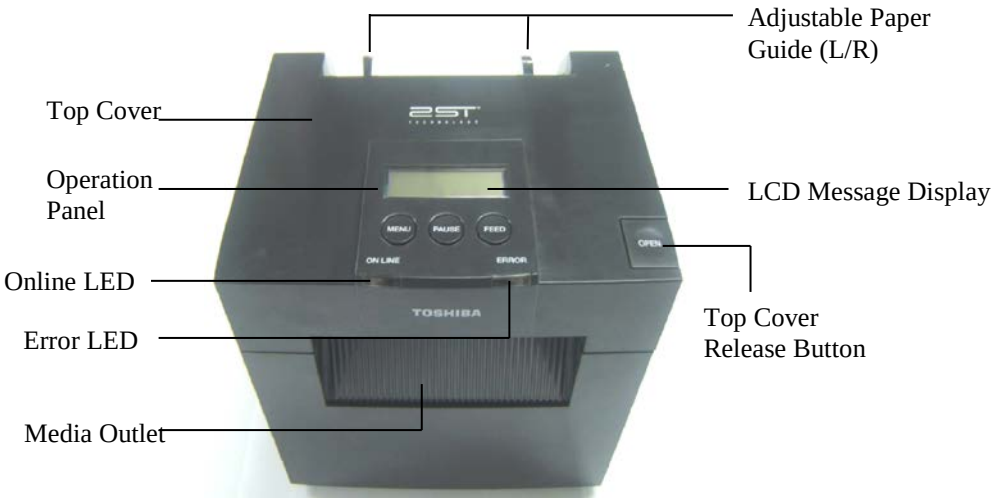
3. APPEARANCE

3.1 Dimensions



All dimension in mm

3.2 Front View



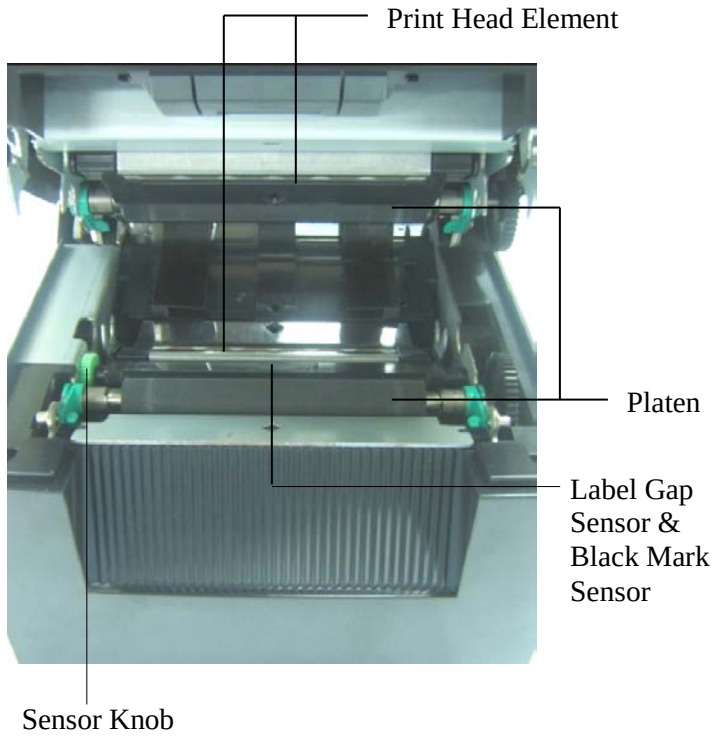
3.3 Rear View

3.4 Operation Panel

(Refer to Section 4 for further information about the Operation Panel.)

3.5 Interior

WARNING!
1. *Do not touch the Print Head or around it just after printing. You may get burned as the Print Head becomes very hot during printing.* 2. *Do not touch any moving parts. To reduce the risk of fingers, jewellery, clothing, etc., being drawn into the printer.* 3. *To avoid injury, be careful not to trap your fingers while opening or closing the cover.*



4. BASIC FUNCTIONS OF OPERATION PANEL

4.1 LED Indication

4.1.1 Power (ONLINE) LED

1. Indicate power on state.
2. Light when the printer power is on.
3. Blink slowly when the printer detects warnings.
4. Blink fast when the printer is in IPL mode.

4.1.2 Error LED

1. Indicate error state.
2. Light when the printer detects fatal error.
3. Blink slowly when the printer detects no paper or cover open.
4. Blink fast when the printer detects normal error.

4.1.3 Indication of LED and Meaning

Printer Status	Online LED	Error LED
No Error and No Warning	ON	OFF
Fatal Error	ON	ON
Paper Empty or Cover Open	ON	Blinks Slowly
Normal Error	ON	Blinks Fast
Warning	Blinks Slowly	OFF
IPL Mode	Blinks Fast	OFF

4.2 Keys On The Normal Mode

4.2.1 MENU Key

This key enters Menu Mode.

1. Press and hold [**MENU**] Key for 3 seconds when the printer is in READY or PAUSE state. This key is not activated during the printer is in ERROR state, processing mechanical activities or the data is in buffer.

2. To start Menu Mode, a message appears on the LCD, as shown below.

Menu Mode Press FEED Key

If press [**MENU**] Key during indicates above message, the printer returns to Online Mode.

(Refer to Section 4.3.3 "Menu Mode" in detail explanation of Menu Mode.)

4.2.2 PAUSE Key

This key switches between READY/PAUSE states when the key is pressed alternately.
USB, Parallel and Ethernet interface are kept ready to host during READY or PAUSE state.

This key is not activated during the printer is in ERROR state.

- Press [**PAUSE**] Key during mechanical activities, the printer stops after printing and feeding the page of data in buffer and then changes to PAUSE state.
- Press [**PAUSE**] Key in PAUSE state, it changes to READY state.

Ready and Busy

LED		LCD	Condition
POWER	ERROR		
On	Off	READY	The printer is in READY state and No error. USB, Parallel and Ethernet interface signal are ready to host. Mechanical activities are valid.
On	Off	PAUSE	The printer is in PAUSE state and No error. USB, Parallel and Ethernet interface signal are ready to host. Stops and pauses mechanical activities.

In “READY” state or three errors condition (LABEL ERROR / BM ERROR / PERFORATION ERROR), if this key is pressed and hold more than 1 sec, loaded paper will be parked (unloaded) to the paper parking position.
The message on the LCD is displayed “Parking . . .” during paper parking (unloading).
If paper parking is completed, the message on the LCD is displayed “PARK”.

- In this state, if [**FEED**] key is pressed, paper is loaded and “READY” is displayed on the LCD.

If paper parking is not completed even if loaded paper is fed in reverse with max. 20”, the same message as previous is displayed on the LCD. (“READY”)

- In this state, if [**FEED**] key is pressed, paper is loaded and “READY” is displayed on the LCD.

4.2.3 FEED Key

This key feeds or loads paper.
This key is not activated during the printer is in an ERROR state and processing mechanical activities.

- Press [**FEED**] Key when Document Length Mode is selected and paper is loaded, the printer feeds paper.

- Press [**FEED**] Key when Label Mode is selected and paper is loaded,
  When Rotary cut is set to "OFF",
  - If paper is present at TOF (stand by) position, Paper is fed to next Label TOF position.
  - If paper is present at Manual cut position, Paper is fed to next Manual cut position.
  - If paper is present at other position (e.g. just printing is done), Paper is fed to next Manual cut position.

  When Rotary cut is set to not "OFF",
  - Paper is fed to Label TOF position.

- Press FEED Key when Black Mark Mode is selected and paper is loaded,
  When Rotary cut is set to "OFF",
  - If paper is present at TOF (stand by) position, Paper is fed to next BM TOF position.
  - If paper is present at Manual cut position, Paper is fed to next Manual cut position.
  - If paper is present at other position (e.g. just printing is done), Paper is fed to next Manual cut position.

  When Rotary cut is set to not "OFF",
  - Paper is fed to BM TOF position.

- Press FEED Key when Perforation Mode is selected and paper is loaded,
  When Rotary cut is set to "OFF",
  - If paper is present at TOF (stand by) position, Paper is fed to next Perforation TOF position.
  - If paper is present at Manual cut position, Paper is fed to next Manual cut position.
  - If paper is present at other position (e.g. just printing is done), Paper is fed to next Manual cut position.

  When Rotary cut is set to not "OFF",
  - Paper is fed to Perforation TOF position.

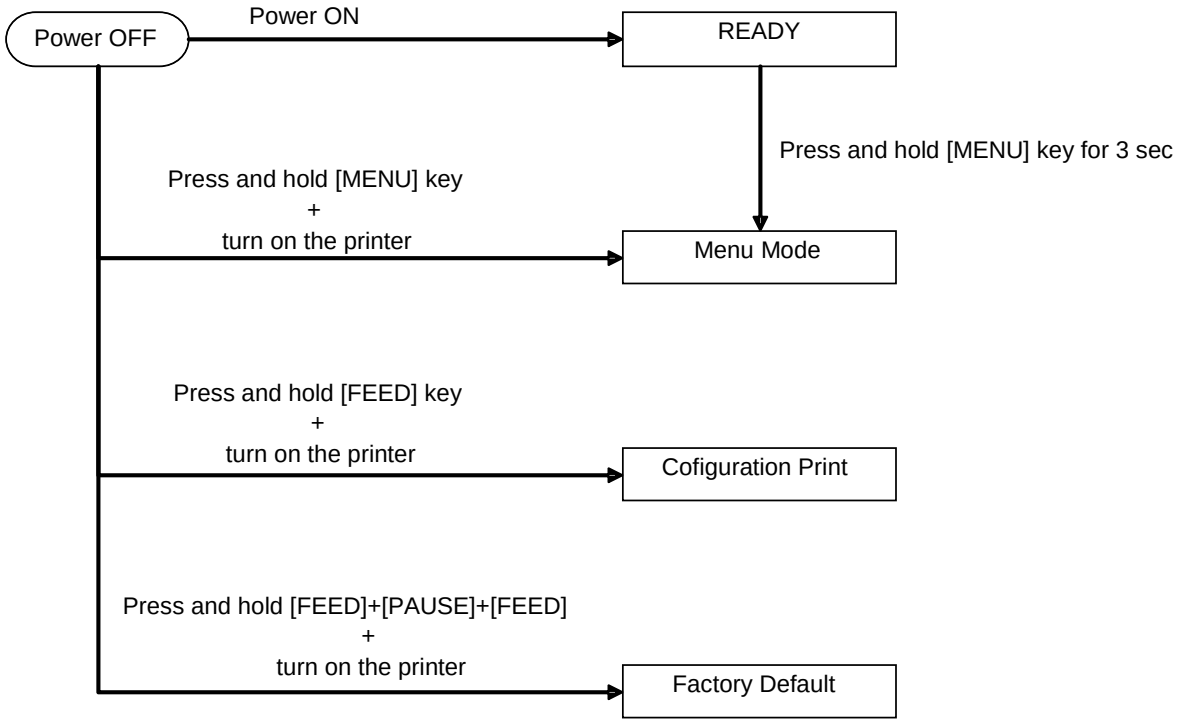
- Press [**FEED**] Key when Cut Sheet Mode is selected and paper is loaded, the printer feeds paper to eject.

- In case of Paper Load setting is Manual and no paper is set in the printer, press [**FEED**] Key after paper is set manually and PE sensor detects paper. Then the printer loads paper to TOF position in each mode.

- Press [**FEED**] Key when "PARK" is displayed on the LCD, the printer loads paper.

4.3 Special Functions

2ST PRINTER has following Special Functions.



1. Configuration Print
   Power On + [**FEED**] Key

2. Default EEPROM
   Power On + [**MENU**]+ [**PAUSE**] + [**FEED**] Key

3. Menu Mode

4.3.1 Configuration Print

Configuration Print Mode performs list printing of settings in Menu Mode.
It is premised on use of more than 58mm width size paper in this mode.

Sequence:

1. Press and hold [**FEED**] Key, then turn the printer on.
   All I/F are in BUSY state during this mode.
   And a message appears on the LCD, as shown below.

Print Config. Press FEED Key

2. Press [**FEED**] Key shortly, it enters Configuration Print Mode and print printer configuration in the same time.

Printer Config. Printing…

3. A message appears on the LCD, As shown below

Printer Config. Completed

4. Press [**FEED**] Key shortly or long.
   After reset printer, a message appears on the LCD, as shown below.

READY

NOTES:

1. *If Cut Sheet mode is selected as the paper type, can not perform configuration print. Please change paper type and try again.*
2. *All keys are invalid during printing printer configuration.*

4.3.2 Factory Default

This mode re-stores EEPROM to the default value. It changes function menus in Category "Communication Interface" and "Printer Configuration" back to the default. In case of LAN moel, Ethernet Parameters (e.g. Printer IP Address etc.) will be returned to the default.

(Please see Section 4.3.3 "Menu Mode" in detail explanation of Category and default setting in Menu Mode.)

Sequence:

1. Press and hold [**MENU**]+ [**PAUSE**] + [**FEED**] Key, and turn the printer on.
   ① All I/F are in BUSY state during this mode.
   ② And a message appears on the LCD, as shown below.

Factory Default Press FEED Key

2. Press [**FEED**] Key shortly to enter FACTORY DEFAULT.

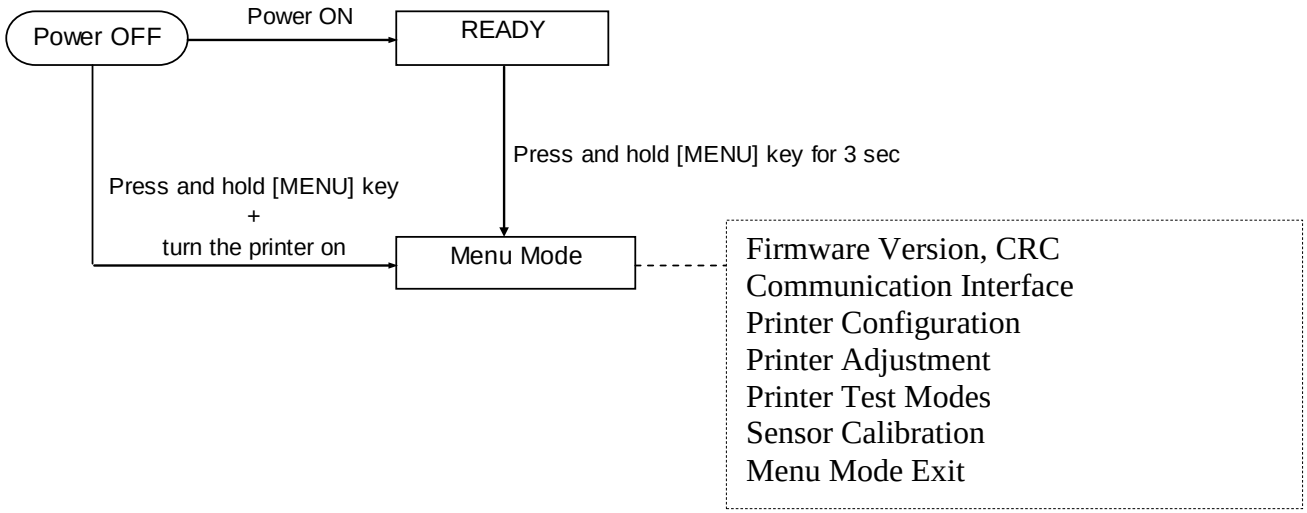
Default Set DO NOT POWER OFF

3. After reset printer, a message appears on the LCD, as shown below.

Default Set Completed

NOTE:
1. All keys are invalid during performing setup default.

4.3.3 Menu Mode



Sequence:

1. There are two different ways to enter Menu Mode.
   a) When the printer is powered off,
      press and hold [**MENU**] key
      and turn the printer on.
   b) When the printer is on and in READY
   or PAUSE state,
      press and hold [**MENU**] Key for three seconds.

2. All I/F are in BUSY state during this mode.
   And a message appears on the LCD, as shown below.

Menu Mode
Press FEED Key

3. During the above message is displayed,
   a) Press [**FEED**] Key shortly, it enters the Menu Mode.
   b) Press [**MENU**] Key shortly, it exits this mode and shifts to READY state.
   c) Press [**FEED**] Key long (around 3 seconds), it exits this mode and shifts to READY state.

Key function in Menu Mode

Key	Function
[MENU]	Shift the next menu downward
	Increase a value
[PAUSE]	Shift the next menu upward
	Decrease a value
[FEED]	Enter menu
	Save the setting

NOTE:
Please refer to Appendix II for Menu Mode Tree of this 2ST Printer.

Key Function

1. Press [**FEED**] Key shortly, it shifts the selection mode as shown below.

Main menu → Funtion → Menu setting → Acknowledge

2. Press [**FEED**] Key shortly, it shifts the selection mode when a message appears on the LCD, as shown below.

Return to Prev. Layer

Main menu ← Function ← Menu setting

3. Press [**MENU**] Key shortly, it shifts to the next selection mode in order, as shown below.

Firmware Version, CRC
Communication Interface
Printer Configuration
Printer Adjustment
Printer Test Modes
Sensor Calibration
Menu Exit

Function selection mode

Main Firmware
Boot Firmware
SBCS CG
Return to Prev. Layer

Menu setting selection mode

Black Mark
Document Length
Label
Return to Prev. Layer

4. Press [**PAUSE**] Key shortly, it shifts to the previous selection mode in order, as shown below.

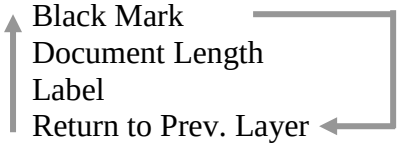
Main menu selection mode

Firmware Version, CRC
Communication Interface
Printer Configuration
Printer Adjustment
Printer Test Modes
Sensor Calibration
Menu Exit

Function selection mode

Main Firmware
Boot Firmware
SBCS CG
Return to Prev. Layer

Menu setting selection mode



5. Press [**FEED**] Key to exit the Menu Mode, when a Menu Exit message in Menu Mode appears on the LCD.
6. If “Accepted” appears on the second line of the LCD as shown below in Acknowledge stage, a setting is re-stored in the printer.

XXXX Accepted

To return Function state, press [**FEED**] Key shortly. If [**FEED**] Key is pressed long (around 3 sec), it exits the Menu Mode and shifts to READY state.

EXIT MENU MODE

When exit Menu Mode, the printer will not be initialized:
If “Accepted” is not shown on the LCD in Menu Mode.

When exit Menu Mode, the printer will be initialized:
If “Accepted” is shown on the LCD even once in Menu Mode,
If "Print Printer Configuration" is performed in Menu Mode,
If any "Printer Test Modes" is performed in Menu Mode, or
If any "Printer Adjustment" is performed in Menu Mode.

FUNCTION

“OOOOOOOO” is a selected function name.
“XXXXXXX” is a current setting of a selected function.

MENU SETTING

OOOOOOOO XXXXXXXX

“OOOOOOOO” is a selected function name.
“XXXXXXX” is a setting of a selected function.

Press [**FEED**] Key when it shows what you want to define on the LCD, "*" is appeared in the end of the defined value on the LCD, as shown above.
And “Accepted” appears on the LCD, as shown below. The new setting is stored in the printer.

XXXX Accepted

NOTE:
Please refer to Appendix II for Menu Mode Tree of this 2ST Printer.

5. PRINTER SETUP

This section outlines the procedures to setup your printer prior to its operation. The section includes precautions, loading medi, connecting cables, setting the operating environment of the printer, and performing an online print test.

Setup Flow	Procedure	Reference
Installation	After referring to the Safety Precautions in this manual, install the printer on a safe and stable location.	5.1 Installation
Connecting the power cord	Connect a power cord to the power inlet of the printer, then, to an AC outlet.	5.2 Connecting the Power Cord and Cables
Connecting to a host computer	Connect the printer to a host computer or a network.	5.2 Connecting the Power Cord and Cables
Media sensor position alignment	Adjust the position of label gap sensor or black mark sensor according to the media to be used.	5.3 Setting The Sensor Position
Enter Menu Mode	Press and hold [MENU] key and turn on the printer power.	5.4 Menu Mode
Interface Setting	Select interface mode in Menu mode	5.5 Interface Setting
Paper Type Setting	Select paper type in Menu mode	5.6 Paper Type Setting
Sensor Calibration	Load a label stock or tag stock.	5.7 Sensor Calibration
Installing the printer driver	If necessary, install the printer driver in your host computer.	5.8 Printer Driver Installation
Print test	Make a print test in your operating environment and check the print result.	5.8 Printer Driver Installation
Position and Print Tone Fine adjustment	If necessary, fine adjust the print start position, cut/strip position, print tone, etc.	5.9 Parameter Setting In Menu Mode

5.1 Installation

WARNING!
Turn the POWER SWITCH to OFF before installing the roll paper holder unit.

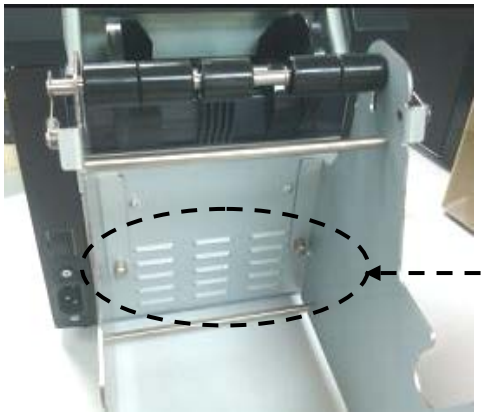
NOTES:

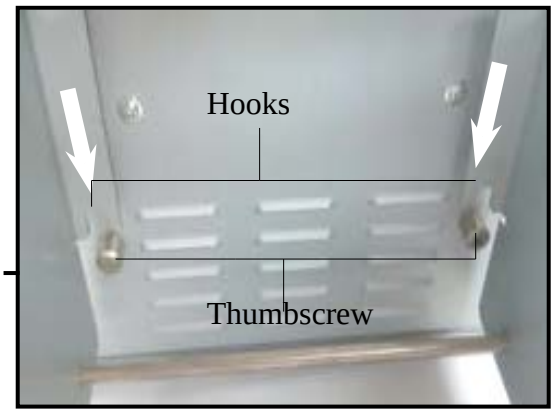
1. *Roll paper holder is required when using roll type media.*
2. *To purchase roll paper holder, please contact your authorized TOSHIBA TEC representative or TOSHIBA TEC Head Quarter.*
3. *Refer to the installation manual of roll paper holder upon purchased.*

DB-EA904-PH–QM-R(Option)

5.1.1 Installing Roll Paper Holder

To assembly the Paper Roll Holder Module to DB-EA4D printer, by attach the hooks on Side Plate to the thumbscrews behind the printer as shown in picture.



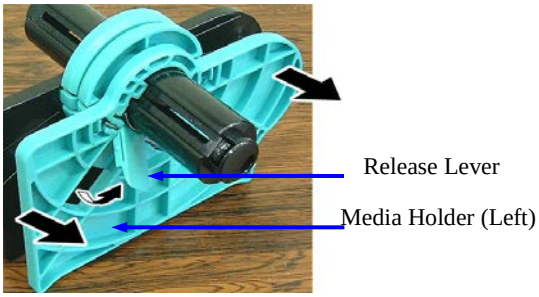


5.1.2 Paper Set

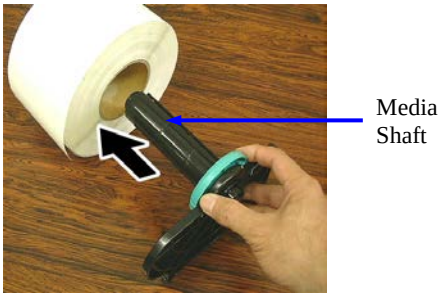
NOTE:
Maximum paper width of 128mm is applied when Paper Roll Holder Option installed.

1. Load media on Paper Roll Holder Module,
   First take out the Media Holder Unit from Hopper Unit.

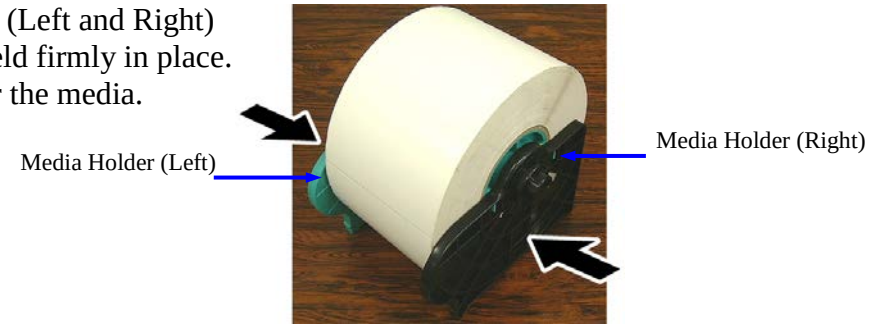
2. Raise the Release Lever and remove
   the Media Holder (Left) as shown below.



3. Insert the Media Shaft into the core of a media roll.



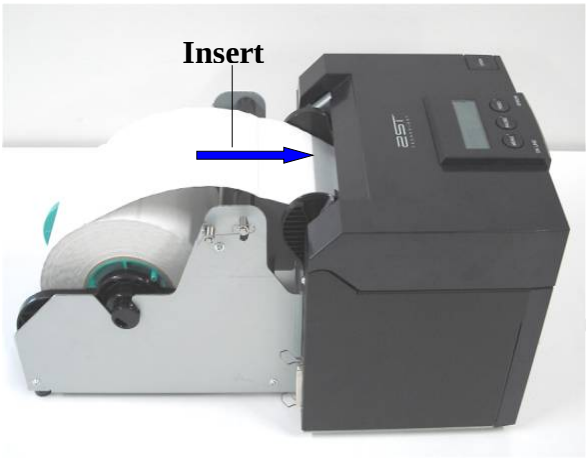
4. Assemble the Media Holder (Left) onto the Media Shaft. Push the Media Holder (Left and Right) against the media until it is held firmly in place. This will automatically center the media.



5. Fold the Release Lever to lock the Media Holder (Left). Place the Media Holder Unit back to Hopper Unit. The Paper Roll Holder Module is ready to be used.

6. Set roll paper to roll paper holder as right picture.

7. Inset the paper correctly until touching to platen.



5.2 Connecting The Power Cord And Cables

WARNING!
Turn the POWER SWITCH to OFF before connecting the power cord or cables.

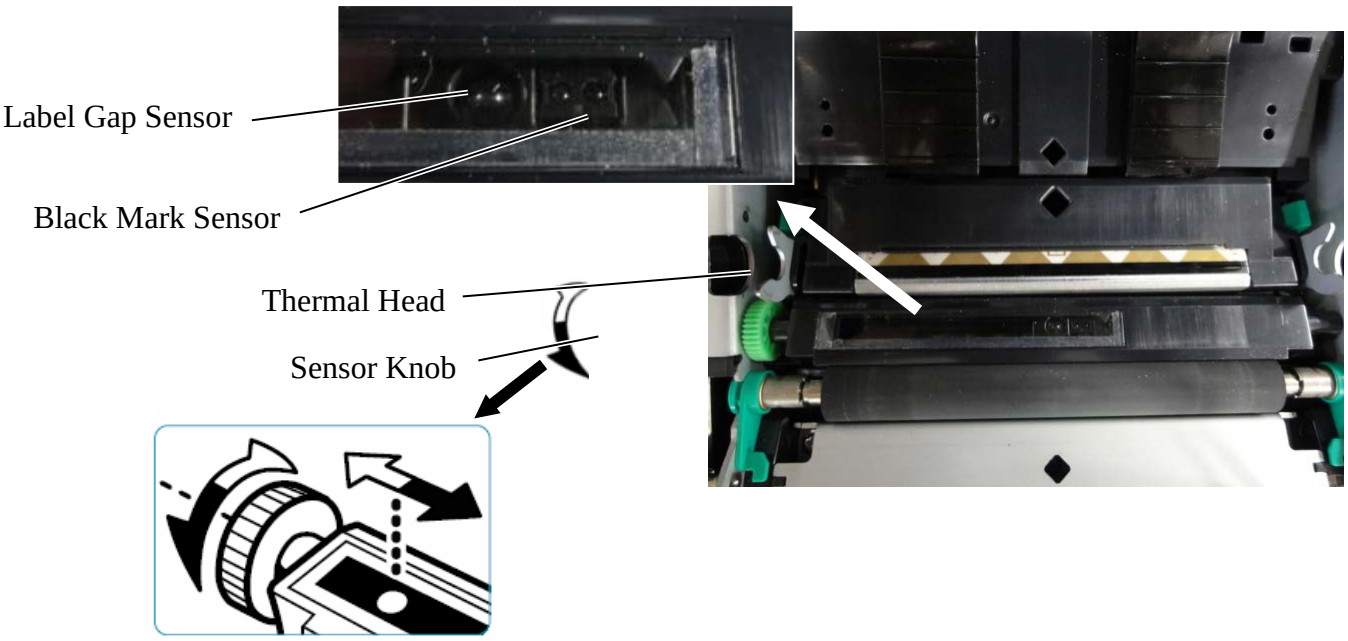
NOTES:
To prevent radiation and reception of electrical noise, the interface cables must meed the following requirements:
1. *Fully shielded and fitted with metal or metalised connector housings.*
2. *Kept as short as possible.*
3. *Should not be bundled tightly with power cords.*
4. *Should not be tied to power line conduits.*

The host computer must have either USB port, LAN port or Centronics parallel port. To communicate with host computer, an USB cable, LAN cable or Centronics cable is required. *(Refer to Appendix I for more details.)*

Power Switch
(—): Power On
(O): Power Off

5.3 Setting The Sensor Position

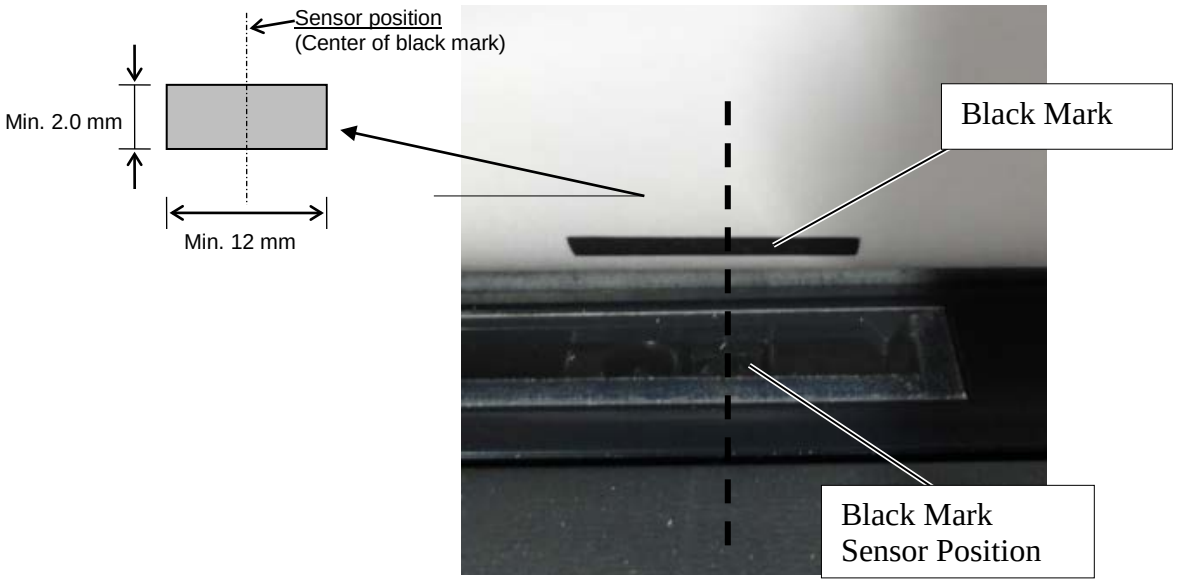
WARNING!
Be careful when handling the print head as it becomes very hot.



5.3.1 Setting The Black Mark Sensor Position

Black mark sensor position to be adjusted while using Black Mark paper by following procedure:

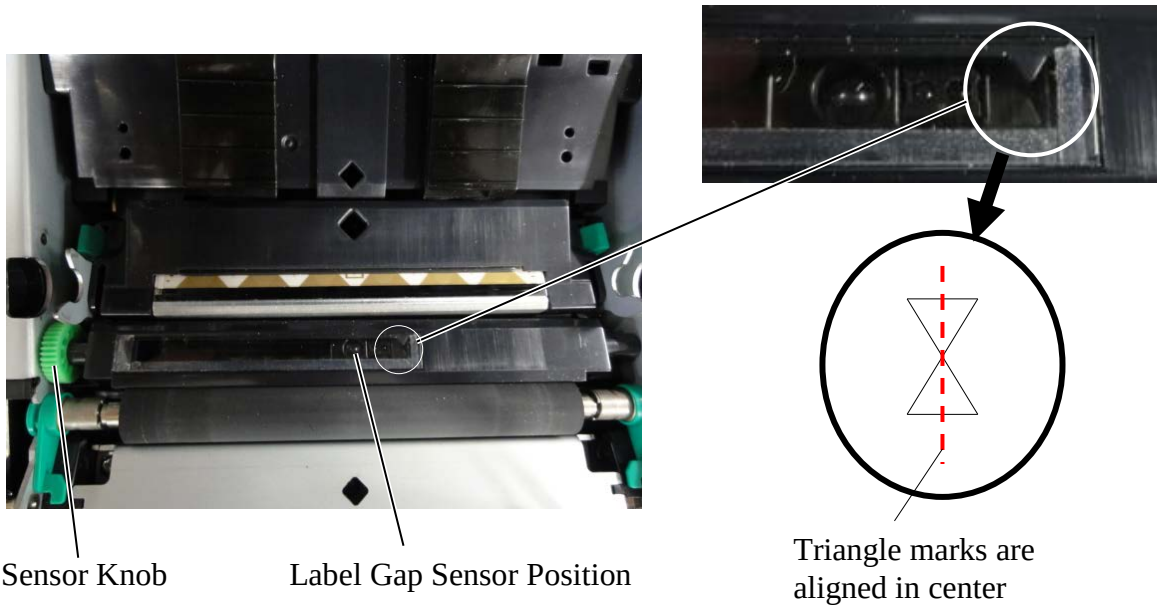
- Open the top cover and fold over the end of the tag paper.
- Rotate sensor knob to move black mark sensor horizontally until the black mark sensor is aligned at the center of black mark on tag paper.
- Black mark sensor is movable within the area of 6.0 – 66.5mm from the left of tag paper.



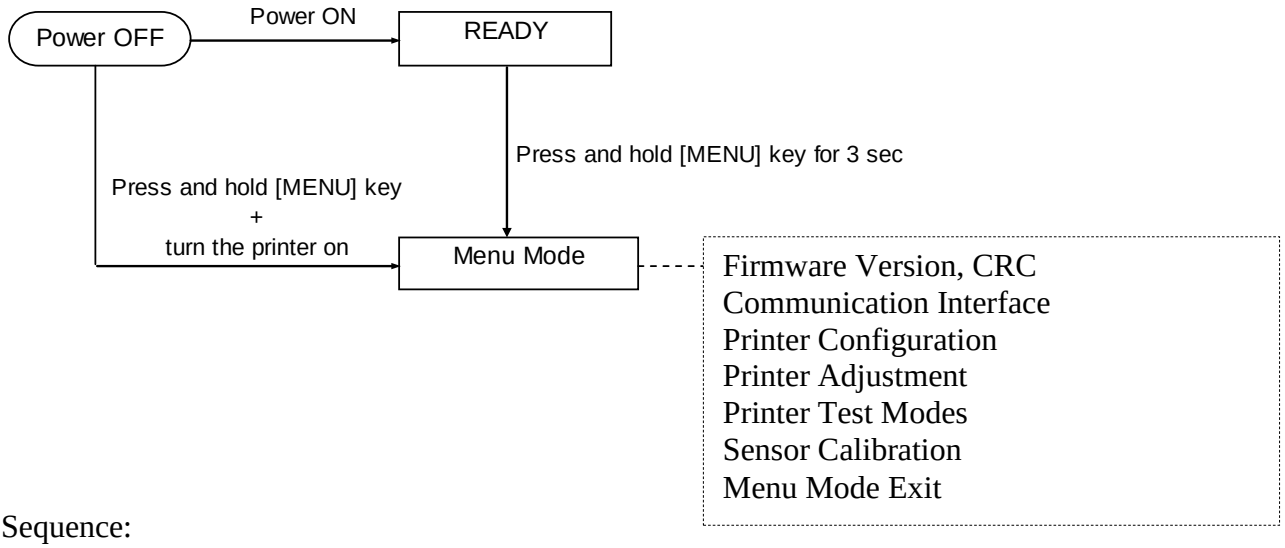
5.3.2 Setting The Label Gap Sensor Position

Label gap sensor position to be adjusted while using label paper, white paper, cut sheet paper or perforation paper(with rectangular hole),using following procedure:

- Open the top cover.
- Rotate the sensor knob to move label gap sensor horizontally until two triangle marks on the sensor cover are aligned.
- Minimum gap dimension between labels are: 3.0mm for batch mode and 6.0mm for cut mode.



5.4 Menu Mode



Sequence:

4. There are two different ways to enter Menu Mode.
   a) When the printer is powered off,
      press and hold [**MENU**] key
      and turn the printer on.
   b) When the printer is on and in READY
   or PAUSE state,
      press and hold [**MENU**] Key for three seconds.

5. All I/F are in BUSY state during this mode.
   And a message appears on the LCD, as shown below.

Menu Mode Press FEED Key

6. During the above message is displayed,
   a) Press [**FEED**] Key shortly, it enters the Menu Mode.
   b) Press [**MENU**] Key shortly, it exits this mode and shifts to READY state.
   c) Press [**FEED**] Key long (around 3 seconds), it exits this mode and shifts to READY state.

Key function in Menu Mode

Key	Function
[MENU]	Shift the next menu downward
	Increase a value
[PAUSE]	Shift the next menu upward
	Decrease a value
[FEED]	Enter menu
	Save the setting

NOTE:
Please refer to Appendix II for Menu Mode Tree of this 2ST Printer.

5.5 Interface Setting

If use “Parallel interface” and “Ethernet interface”, perform below sequence.
(Default Setting: USB)

5.5.1 Parallel Interface Setting

Sequence:

1. Select “Communication Interface” in main menu of Menu Mode.
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Interface Type USB ← Default Setting

2. Press [FEED] key shortly,
   A message appears on the LCD, as shown below.

Interface Type USB *

3. Select “Parallel”,
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.
   A setting is re-stored in the printer.

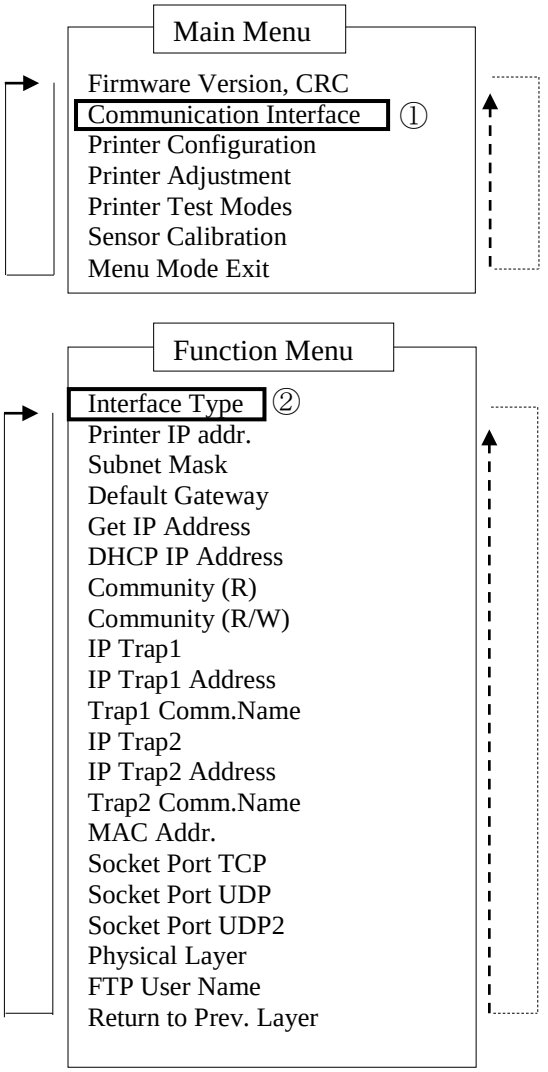
Parallel Accepted

4. Press [FEED] key shortly.
   A message appears on the LCD, as shown below

Interface Type Parallel

5. Select “Return to Prev. Layer” in function menu
   Of Communication Interface.
   And press [FEED] key shortly.

6. Go to “5.6 Paper Type Setting”



NOTES:

1. *Press [MENU] key shortly,*
   it shifts the selection mode as ⟶ arrow.
2. *Press [PAUSE] key shortly,*
   it shifts the selection mode as - - -▸ arrow.
3. *Press [FEED] key shortly,*
   Enter menu or save setting value

5.5.2 Ethernet Interface Setting

Sequence:

1. Select "Communication Interface" in main menu of Menu Mode.
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Interface Type
USB ← Default Setting

2. Press [FEED] key shortly,
   A message appears on the LCD, as shown below.

Interface Type
USB *

3. Select "Ethernet",
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.
   A setting is re-stored in the printer.

Ethernet
Accepted

4. Press [FEED] key shortly.
   A message appears on the LCD, as shown below

Interface Type
Ethernet

5. Select " Printer IP addr." in function menu of Communication Interface.
   And press [FEED] key shortly,
   A message appears on the LCD, as shown below.

Printer IP Addr.
192.168.1.1

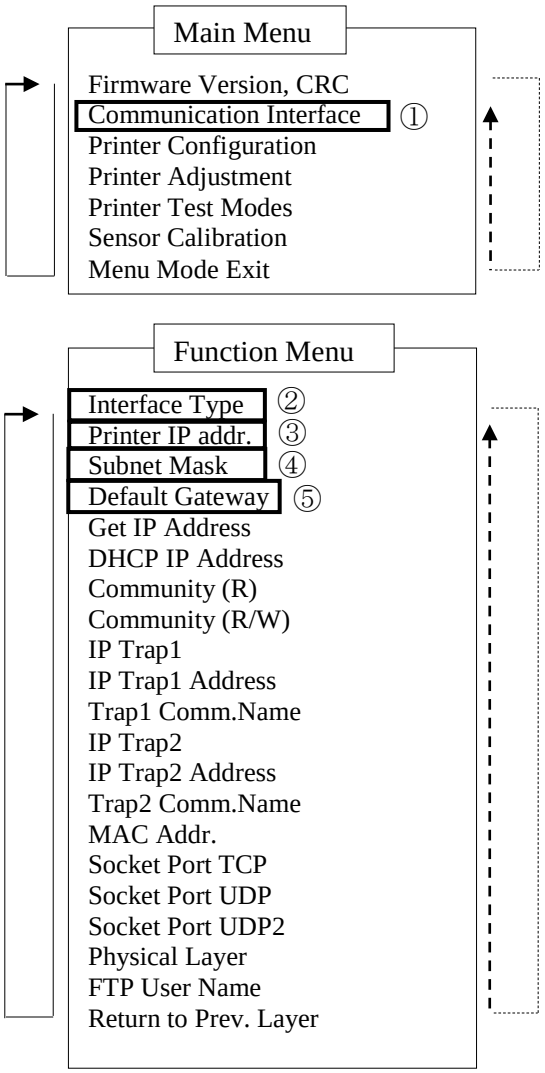
   Blink slowly

6. Set IP address.
   A message appears on the LCD,
   as shown below
   [MENU] key : Increase value
   [PAUSE] key : Decrease value
   [FEED] : Shift next address

XX.XX.XX.XX
Accepted

7. Press [FEED] key shortly.
   A message appears on the LCD, as shown below

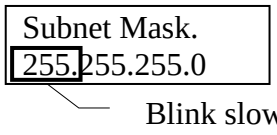
Printer IP Addr.
XX.XX.XX.XX



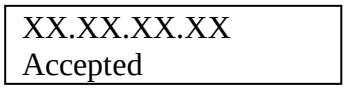
NOTES:

1. *Press [MENU] key shortly, it shifts the selection mode as ⟶ arrow.*
2. *Press [PAUSE] key shortly, it shifts the selection mode as - - -▸ arrow.*
3. *Press [FEED] key shortly, Enter menu or save setting value*

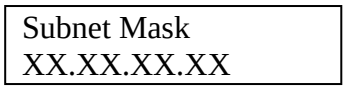
8. Select " Subnet Mask." in function menu of Communication Interface.
   And press [FEED] key shortly,
   A message appears on the LCD, as shown below.



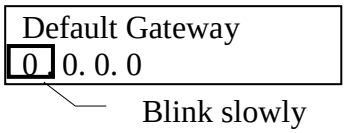
9. Set Subnet Mask
   A message appears on the LCD, as shown below.
   [MENU] key : Increase value
   [PAUSE] key : Decrease value
   [FEED] : Shift next address



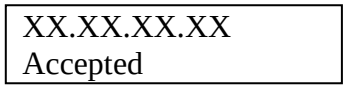
10. Press [FEED] key shortly.
    A message appears on the LCD, as shown below



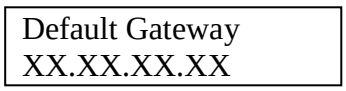
11. Select "Default Gateway." in function menu of Communication Interface.
    And press [FEED] key shortly,
    A message appears on the LCD, as shown below.



12. Set Subnet Mask
    A message appears on the LCD, as shown below.
    [MENU] key : Increase value
    [PAUSE] key : Decrease value
    [FEED] : Shift next address



13. Press [FEED] key shortly.
    A message appears on the LCD, as shown below



14. Select "Return to Prev. Layer" in function menu
    Of Communication Interface.
    And press [FEED] key shortly.

15. Go to "5.6 Paper Type Setting"

5.6 Paper Type Setting

If use “BM Paper”, “White Paper” ,“Perforation Paper” or “Cut Sheet Paper”,
Perform below sequence.
(Default Setting: Label)

Sequence:

1. Select “Printer Configuration” in main menu of Menu Mode.
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.

   Paper Type
   Label ← Default Setting

2. Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

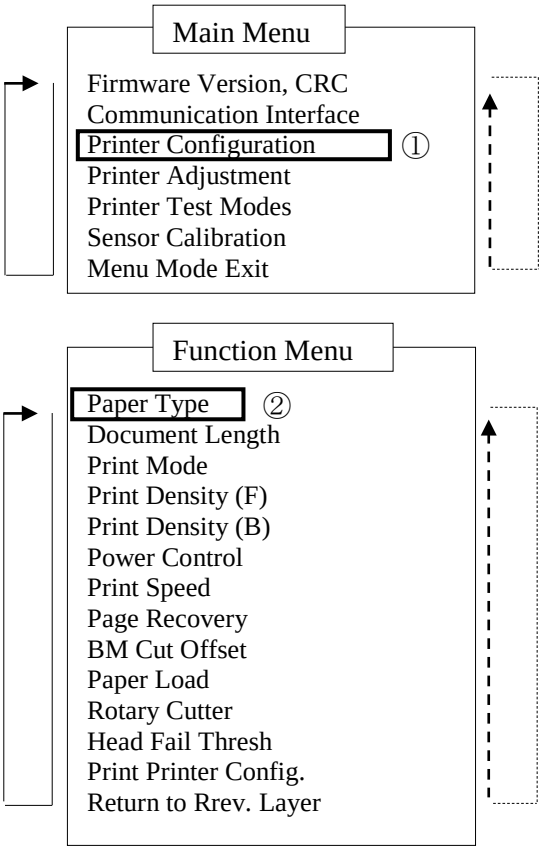
   Paper Type
   Label *

3. Select “Black Mark”, “Document Length”,
   “Perforation” or “Cut Sheet”.
   Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

   XXXX ← Selected Paper Type Name
   Accepted

4. And press[FEED] key shortly.
   A message appears on the LCD, as shown below.

   Paper Type
   XXXX ← Selected Paper Type Name



5. Select “Return to Prev. Layer” in function menu
   Of Printer Configuration.
   And press [FEED] key shortly.

6. Go to “5.7 Sensor Calibration”

NOTES:

1. *Press [MENU] key shortly,*
   it shifts the selection mode as ⟶ arrow.
2. *Press [PAUSE] key shortly,*
   it shifts the selection mode as - - -▸ arrow.
3. *Press [FEED] key shortly,*
   Enter menu or save setting value

5.7 Sensor Calibration

WARNING!
Be careful when handling the print head as it becomes very hot. *Be careful not to trap and injured your finger when opening or closing the Top Cover.*

It is necessary to perform sensor calibration prior to paper loading if using an non-specified paper by TOSHIBA TEC, by following the below procedure:

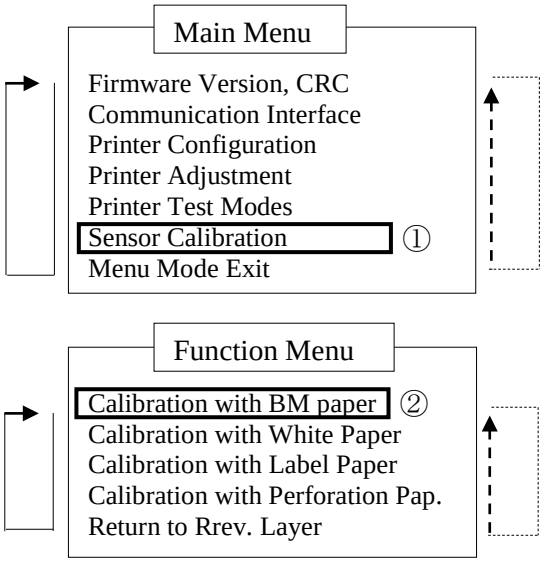
2ST printer supports 4 categories of sensor calibration functions. Refer to the following table.

Function	Description
Calibration with BM Paper	It performs sensor calibration with black mark paper.
Calibration with White Paper	It performs sensor calibration without black mark paper and label paper.
Calibration with Label Paper	It performs sensor calibration with label paper.
Calibration with Perforation Paper	It performs sensor calibration with Perforation paper.

NOTE:
If PE sensor detects paper end during this mode, paper will be ejected. This adjusted value is used for Cut Sheet Mode as well.

5.7.1 Sensor Calibration With Black Mark

This mode performs Sensor level adjustment test with Black Mark paper.



Sequence:

1. Select “Sensor Calibration” in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Calibration with BM Paper

2. Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Remove paper Press FEED key

3. Remove paper and roll paper.

4. Press [**FEED**] Key shortly.
   A message appears shortly on the LCD, as shown below.

Calibration Performing…

NOTES:
1. *Press [MENU] key shortly, it shifts the selection mode as ⟶ arrow.*
2. *Press [PAUSE] key shortly, it shifts the selection mode as - - -▶ arrow.*
3. *Press [FEED] key shortly, Enter menu or save setting value*

5. After the calibration with no paper was performed, a message appears on the LCD as shown below.

Set BM paper Press FEED key

6. Set the roll paper with Black Mark or fan-hold paper with black mark in the printer.
   And insert the paper into the printer without thermal print head unit open.
7. Press [**FEED]** Key shortly.
8. Starts loading and feeding a paper, and starts the calibration with BM paper.
   A message appears on the LCD as shown below.

Calibration Performing…

9. Depends on calibration the result, a message appears on the LCD as shown below.In case of succeeded sensor calibration

Calibration Succeeded

10. In case of failed sensor calibration

Failed 12345 - - X - -

    1: Paper End Sensor 2: Exit Sensor
    3: TOF Sensor 4: BM Sensor 5: Label Sensor
    - : No Error X : Failure

11. Press and hold [**FEED]** Key for three seconds to exit Menu Mode.

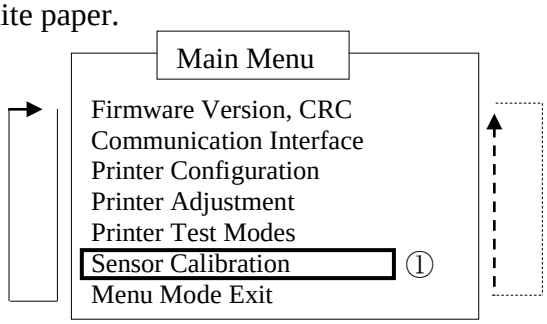
5.7.2 Sensor Calibration With White Paper

This mode performs Sensor level adjustment test with white paper.

Sequence:

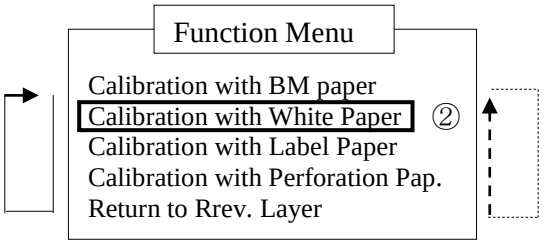
1. Select “Sensor Calibration” in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Calibration with
BM Paper



2. Select “Calibration with White Paper”.
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Remove paper
Press FEED key



3. Remove paper and roll paper.

4. Press [**FEED**] Key shortly.
   A message appears shortly
   on the LCD, as shown below.

Calibration
Performing…

NOTES:
1. *Press [MENU] key shortly,*
   it shifts the selection mode as ⟶ *arrow.*
2. *Press [PAUSE] key shortly,*
   it shifts the selection mode as - - - ▸ *arrow.*
3. *Press [FEED] key shortly,*
   Enter menu or save setting value

5. After the calibration with no paper was performed, a message appears on the LCD as shown below.

Set BM paper
Press FEED key

6. Set white paper in the printer.
   And insert the paper into the printer without thermal print head unit ope
   n.
7. Press [**FEED]** Key shortly.
8. Starts loading and feeding a paper, and starts the calibration with white paper.
   A message appears on the LCD as shown below.

Calibration
Performing…

9. Depends on calibration the result, a message appears on the LCD as shown below.In case of succeeded sensor calibration

Calibration
Succeeded

10. In case of failed sensor calibration

Failed 12345
- - x - -

    1: Paper End Sensor 2: Exit Sensor
    3: TOF Sensor 4: BM Sensor 5: Label Sensor
    - : No Error X : Failure

11. Press and hold [**FEED]** Key for three seconds to exit Menu Mode.

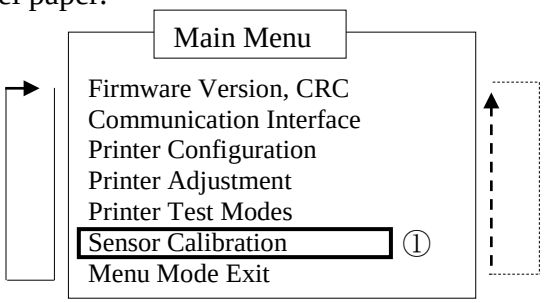
5.7.3 Sensor Calibration With Label Paper

This mode performs Sensor level adjustment test with label paper.

Sequence:

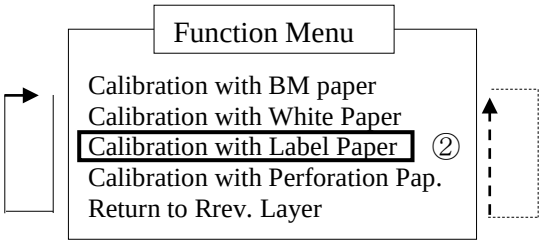
1. Select “Sensor Calibration” in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Calibration with
BM Paper



2. Select “Calibration with Label Paper”.
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Remove paper
Press FEED key



3. Remove paper and roll paper.

4. Press [**FEED**] Key shortly.
   A message appears shortly
   on the LCD, as shown below.

Calibration
Performing…

> ***NOTES:***
> *1. Press [MENU] key shortly,*
> *it shifts the selection mode as ⟶ arrow.*
> *2. Press [PAUSE] key shortly,*
> *it shifts the selection mode as - - -▶ arrow.*
> *3. Press [FEED] key shortly,*
> *Enter menu or save setting value*

5. After the calibration with no paper was performed, a message appears on the LCD as shown below.

Set BM paper
Press FEED key

6. Set lable paper in the printer.
7. And insert the paper into the printer without thermal print head unit open.
8. Press [**FEED]** Key shortly.
   Starts loading and feeding a paper, and starts the calibration with label paper.
   A message appears on the LCD as shown below.

Calibration
Performing…

9. Depends on calibration the result, a message appears on the LCD as shown below.In case of succeeded sensor calibration

Calibration
Succeeded

10. In case of failed sensor calibration

Failed 12345
- - x - -

    1: Paper End Sensor 2: Exit Sensor
    3: TOF Sensor 4: BM Sensor 5: Label Sensor
    - : No Error X : Failure

11. Press and hold [**FEED]** Key for three seconds to exit Menu Mode.

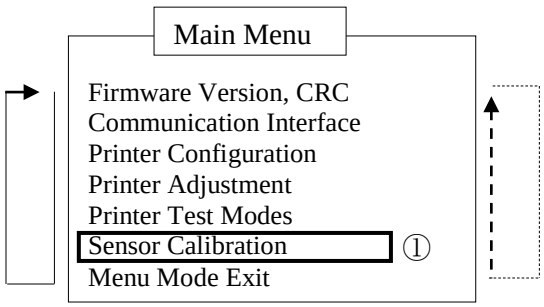
5.7.4 Sensor Calibration With Perforation Paper

This mode performs Sensor level adjustment test with perforation paper.

Sequence:

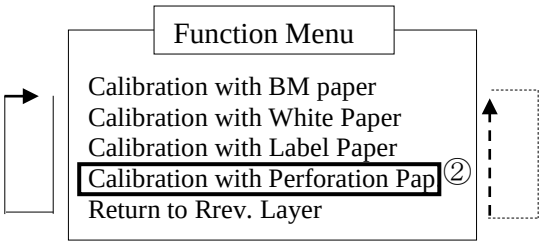
1. Select “Sensor Calibration” in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Calibration with
BM Paper



2. Select “Calibration with Perforation Paper”.
   And press [FEED] key shortly.
   A message appears on the LCD, as shown below.

Remove paper
Press FEED key



3. Remove paper and roll paper.

4. Press [**FEED**] Key shortly.
   A message appears shortly
   on the LCD, as shown below.

Calibration
Performing…

NOTES:
1. *Press [MENU] key shortly,*
   it shifts the selection mode as ⟶ *arrow.*
2. *Press [PAUSE] key shortly,*
   it shifts the selection mode as - - -▶ *arrow.*
3. *Press [FEED] key shortly,*
   Enter menu or save setting value

5. After the calibration with no paper was performed, a message appears on the LCD as shown below.

Set BM paper
Press FEED key

6. Set white paper in the printer.
   And insert the paper into the printer without thermal print head unit open.
7. Press [**FEED]** Key shortly.
8. Starts loading and feeding a paper, and starts the calibration with perforation paper. A message appears on the LCD as shown below.

Calibration
Performing…

9. Depends on calibration the result, a message appears on the LCD as shown below.In case of succeeded sensor calibration

Calibration
Succeeded

10. In case of failed sensor calibration

Failed 12345
- - x - -

    1: Paper End Sensor 2: Exit Sensor
    3: TOF Sensor 4: BM Sensor 5: Label Sensor
    - : No Error X : Failure

11. Press and hold [**FEED]** Key for three seconds to exit Menu Mode.

5.8 Printer Driver Installation

5.8.1 System Requirement

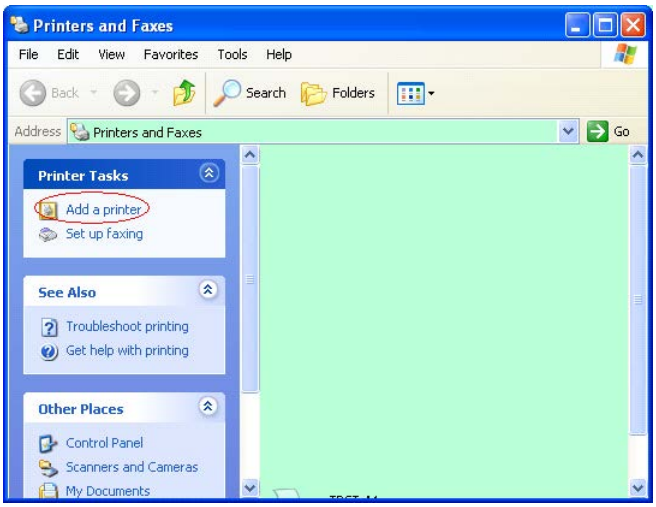
OS: Windows 2000(English) / XP Professional (English)
Language: English
Printer I/F: DB-EA4D-GS10-QM-R: USB (Printer Class), LAN(TCP/IP)
DB-EA4D-GS12-QM-R: USB (Printer Class), LAN(TCP/IP),Parallel

5.8.2 Driver Installation Guide By Using Usb & Parallel

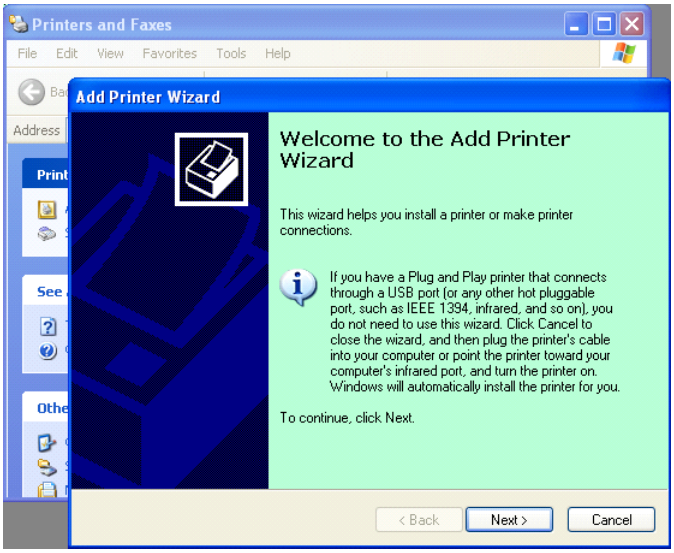
1. **Install by Plug-N-Play by USB**
   Connect the printer by USB cable when powered on, and the windows OS will detect a new hardware, then go on 2.3 (“Hardware Wizard”) and follow the steps to proceed the installation.

   Install by Plug-N-Play by Parallel
   Connect the printer by Parallel cable when powered on, and the windows OS will detect a new hardware, then go on 2.3 (“Hardware Wizard”) and follow the steps to proceed the installation.

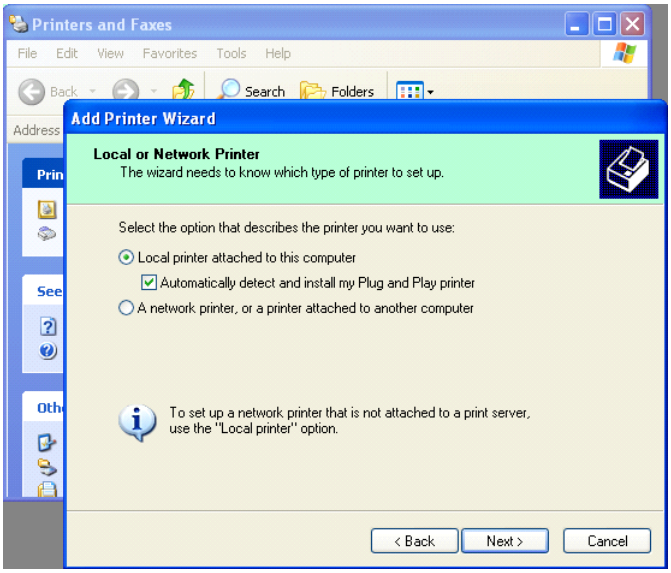
2. Install via **“Add Printer”**.
   Open **“Printers and Faxes”**,
   Click **“Add a printers”**.



3. Click **“ Next”**.



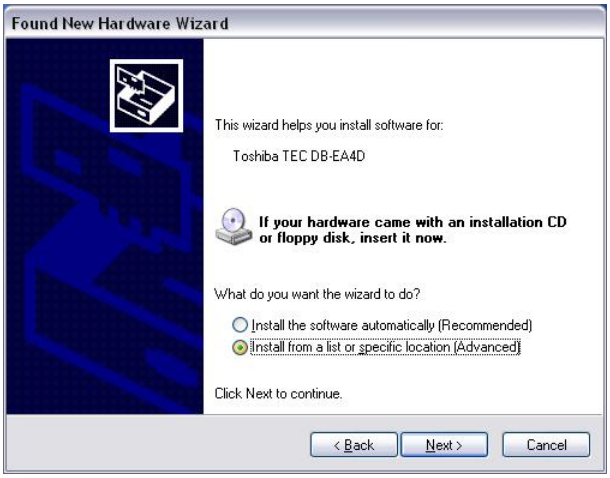
4. Select **"Local printer"** and **"Automatically detect and install my Plug and Play printer"**, Click **" Next"**.



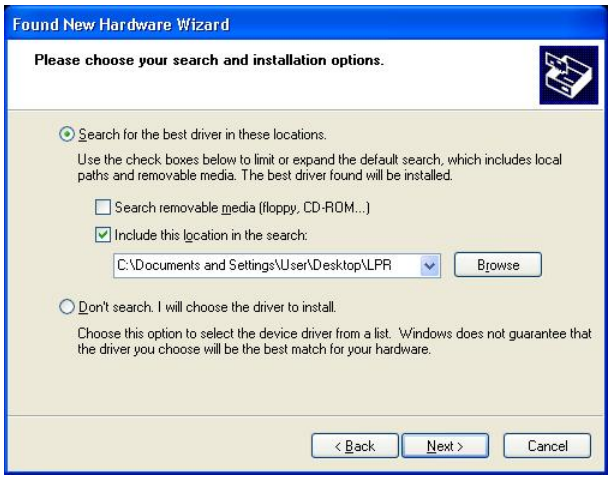
5. PC will detect new hardware and open **"Hardware Wizard"**

6. When the New Hardware Wizard ask whether to connect to Windows Update, Select **" No, not this time"** and click **"Next"**.

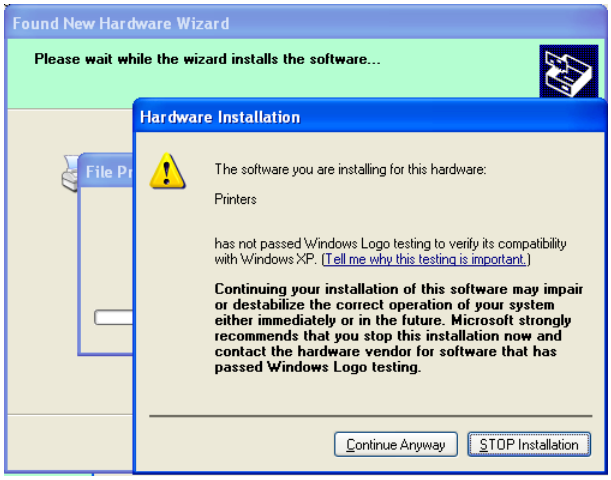
7. Select **"Install from a list of specific location(Advanced)"** and click **"Next"**.



8. Select **"Search for the best driver in these locations"**, and then tick on "**Include this location in the search"**, Browse for the printer driver file location and click **"Next"**.

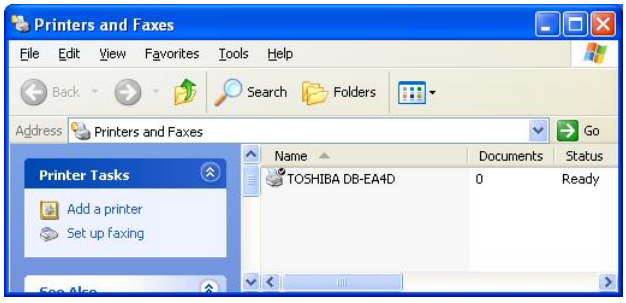


9. The OS will give windows logo testing warning, just ignore and click **"Continue Anyway"**.



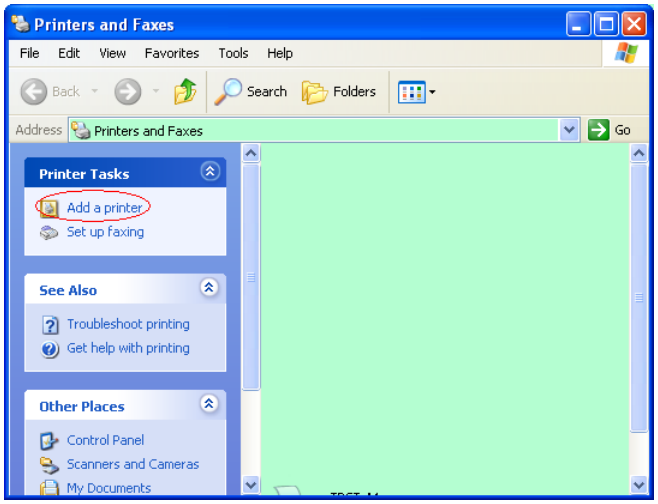
10. After OS copied the driver files into system, Click **"Finish"** to complete installation.

11. After installation, you'll see TOSHIBA DB-EA4Din the Printers and Faxes folder.

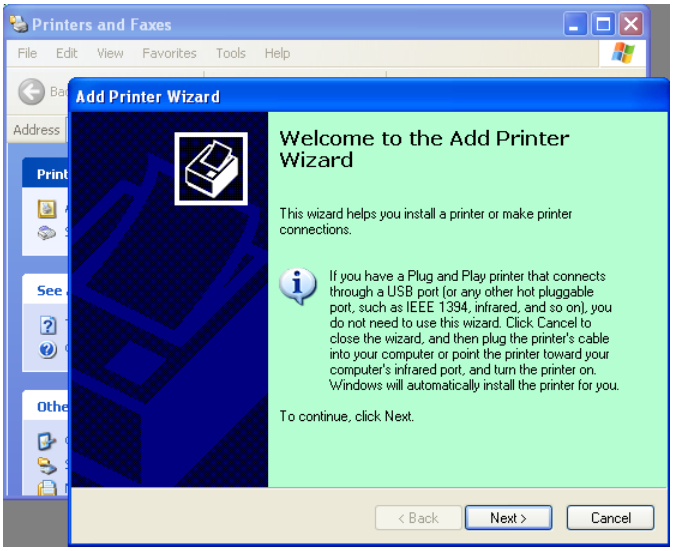


5.8.3 Driver Installation Guide By Using LAN

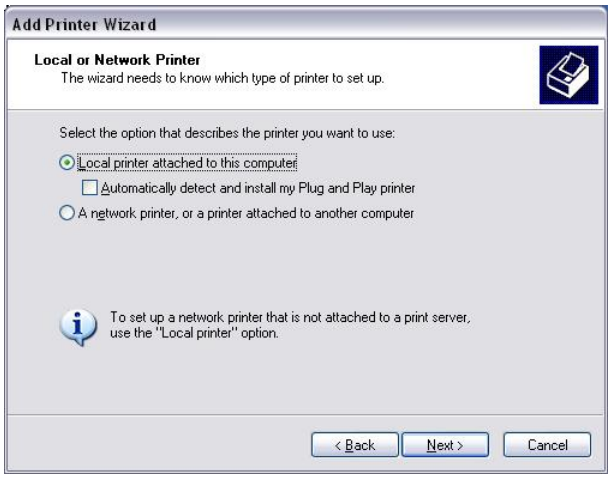
1. Open **"Printers and Faxs"**, click **"Add a Printers".**



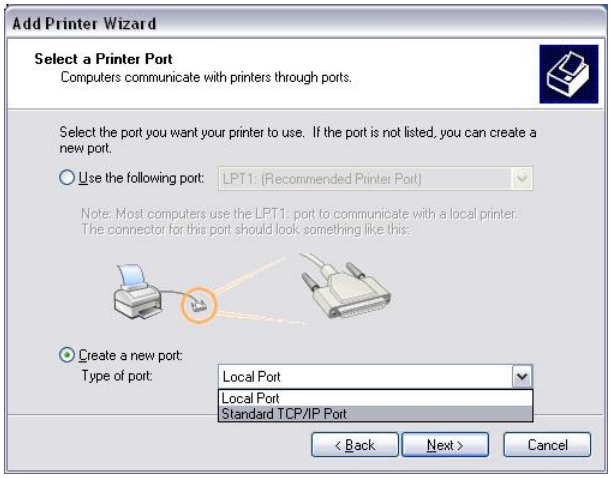
2. Click **" Next"**.



3. Select **“ Local printer attached to this computer”**, and Click **“Next”**.

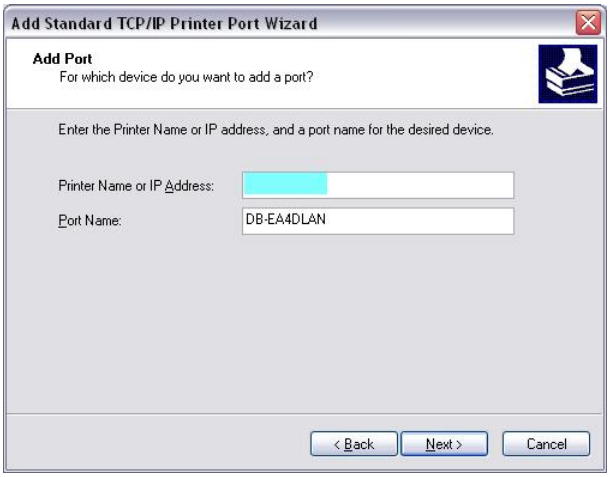


4. Select “Create a new port:” and “Standard TCP/IP Port”, and click “Next”.

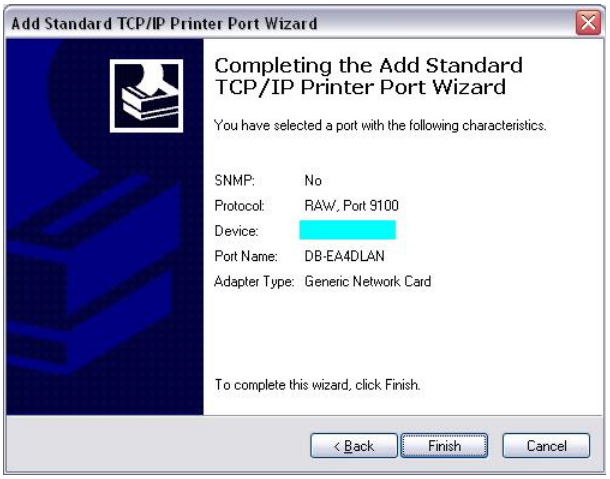


5. Click “ Next”.

6. Input printer IP address to **“Printer Name or IP Adress:”**, and click **“Next”**.

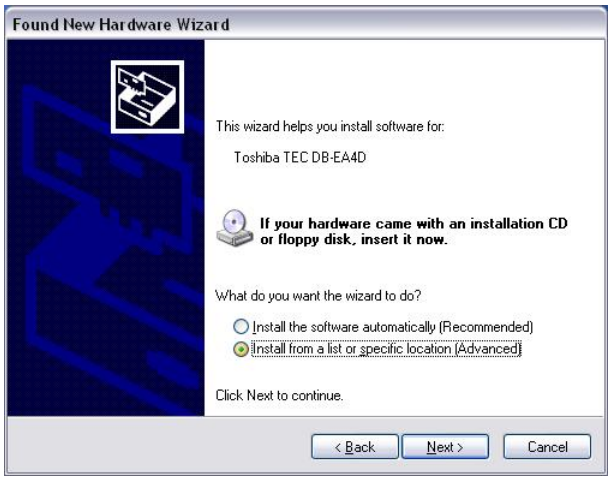


7. Click **“Finich”**.

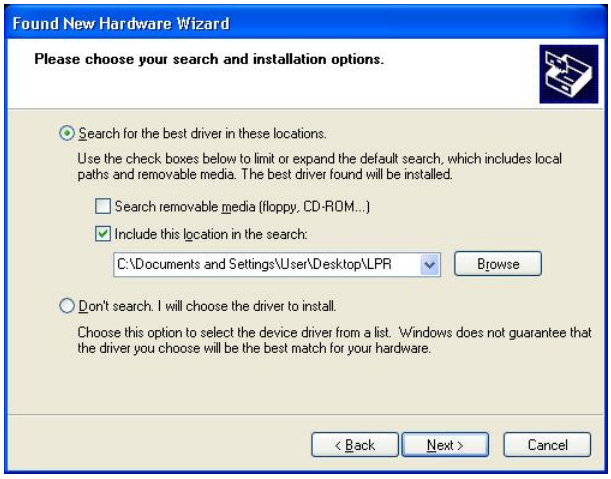


8. When the New Hardware Wizard ask whether to connect to Windows Update,
Select **“ No, not this time”** and click **“Next”**.

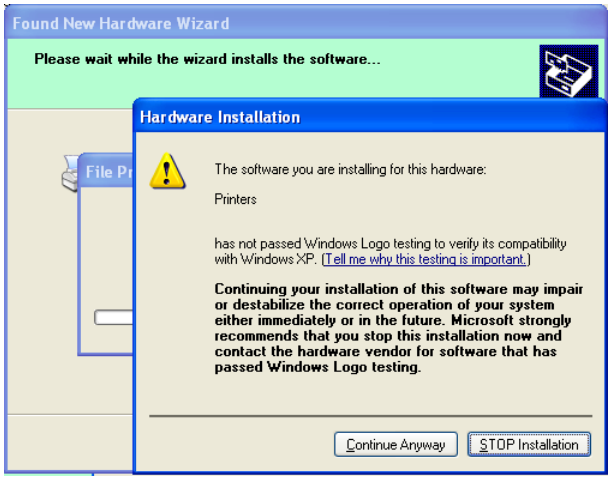
9. Select **"Install from a list of specific location(Advanced)"** and click **"Next"**.



10. Select "**Search for the best driver in these locations"**, and then tick on "**Include this location in the search"**, Browse for the printer driver file location and click "**Next"**.

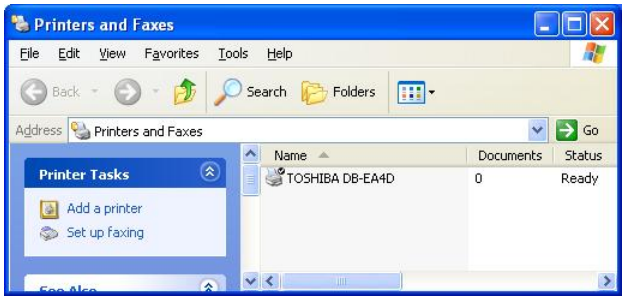


11. The OS will give windows logo testing warning, just ignore and click **"Continue Anyway"**.



12. After OS copied the driver files into system, Click **"Finish"** to complete installation.

13. After installation, you'll see TOSHIBA DB-EA4Din the Printers and Faxes folder.



5.9 Parameter Setting In Menu Mode

5.9.1 Category "Firmware Version, CRC"

This category indicates Version Nnumber and CRC of Firmware. Not changeable in this category.

Function	Description
Main Firmware	Display the version number and CRC of the installed main firmware on the second line of the LCD as below. vvvvv: 5 digits for the version number cccc: 4 digits for CRC
FTP Firmware	Display the version number and CRC of the installed FTP firmware on the second line of the LCD as below. vvvvv: 5 digits for the version number cccc: 4 digits for CRC
Boot Firmware	Display the version number and CRC of the installed boot firmware on the second line of the LCD as below. vvvvv: 5 digits for the version number cccc: 4 digits for CRC
SBCS CG	Display the version number and CRC of the installed SBCS CG on the second line of the LCD as below. vvvvv: 5 digits for the version number cccc: 4 digits for CRC

5.9.2 Category "Communication Interface"

User can select communication interface function menu in this category.
(: Default setting of the function)*

Function	List of Menu	Description
Interface Type	USB* Ethernet Parallel	Select the interface type. Note) If Parallel option is not installed, "Parallel" is not displayed.
Printer IP Addr.	XXX.XXX.XXX.XXX XXX: No.000-255	Set the printer IP address for Ethernet. This setting is valid, if Ethernet is selected for Interface Type.
Gate IP Addr.	XXX.XXX.XXX.XXX XXX: No.000-255	Set the gate IP address for Ethernet. This setting is valid, if Ethernet is selected for Interface Type.
Subnet Mask	XXX.XXX.XXX.XXX XXX: No.000-255	Set the subnet mask for Ethernet. This setting is valid, if Ethernet is selected for Interface Type.
Socket Port	XXXX XXXX: No.	Set the socket port for Ethernet. This setting is valid, if Ethernet is selected for Interface Type.
Mac Address	-	Display the Mac address on the second line of the LCD.

5.9.3 Category "Printer Configuration"

User can select printer configuration function menu in this category.
(: Default setting of the function)*

Function	List of Menu	Description
Paper Type	Black Mark Document Length Label* Perforation Cut Sheet	Select a type of paper. This setting is used for normal printing. Refer to the chapter "Paper Type Control". Note) In Printer Test modes, this printer has individual setting of Paper Type.
Document Length	XXX/203 inch XXX: 560-1260*-4434	Set Document length in n/203 inch. This length is used as the form length in Document Length and Cut Sheet mode of Paper Type for normal printing. Refer to the chapter "Document Length Mode" Note) In Printer Test modes, this printer has individual setting of Form Length. If this length is smaller than 960 (120mm), it will be handled as 960 (120mm) in Cut Sheet mode.
Print Mode	Others* Receipt	Select a print mode Others (Label, Tag etc) or Receipt. Printer can be selected proper setting of strobe time for thermal head by this setting.
Print Density(F)	(-15) - 0- 7* - (+15)	Set the density of printing for front side head (-: light / +: dark)
Print Density(B)	(-15) - 0- 7* - (+15)	Set the density of printing for back side head (-: light / +: dark)
Power Control	Low* High	Select a type of power consumption. (Low (T.B.D W) / High (T.B.D W))

5.9.3 Category “Printer Configuration”(Cont)

Function	List of Menu	Description
Print Speed	Variable 6.0ips 5.0ips 4.0ips* 3.0ips	Select printing speed. If Variable is selected, the printing speed depends on the duty of the printing data. If other speeds are selected, the printing speed is fixed to the selected speed. Note) The message of Variable is not displayed (can not be selected), if Rotary Cutter is not Off.
Max. Variable	6.0ips* 5.0ips 4.0ips 3.0ips	Select maximum printing speed of “Variable”. If Variable is selected in Print Speed, this setting is valid for the maximum printing speed for Variable.
Page Recovery	Off* On	Select an error page recovery mode on or off. If on is selected, the page data which error was occurred is kept and it will be printed on the first page after loading paper.
BM Cut Offset	(-59) – (+5)* - (+59)	Set the BM (Black Mark) cut offset in 10/203”. The origin (offset value = 0x00) of cut position is the edge of a black mark on the side of the paper feed direction. The default position (+5) is the center of BM at BM width is 12.5mm (0.5”).
Paper Load	Auto* Manual	Select the paper loading mode Auto or Manual. If “Auto” is selected, paper is loaded automatically when PE sensor detects paper in PE state. If “Manual” is selected, paper is loaded manually when PE sensor detects paper in PE state and **FEED** Key is pressed.

5.9.3 CATEGORY "PRINTER CONFIGURATION"(Cont)

Function	List of Menu	Description
Rotary Cutter	Off* Manual Auto	Select the Rotary Cutter option. If "Manual" is selected, the printer requires Cut command is sent. If Cut command is sent, paper is cut at the end of page. If "Auto" is selected, the printer cuts paper every at the end of page without Cut command. Cut position: Label: between Gap (see 3.1.2) BM: Black mark (see 3.2.2) Document length: TOF (see 3.3.2)
Head Fail Thresh	0 - 10* - 50 - 100	Select the threshold to define "Thermal Head Warning" or "Thermal Head Error". If "0" is selected, no warning message or errors are indicated even though any failure elements of thermal print head are found at the time of Power ON the printer. If any number is selected except "0", the number is used for the threshold to define whether "Thermal Head Warning" or "Thermal Head Error" is indicated. e.g. If "12" of failure elements of thermal print head are found and "10" is set as this parameter, "Thermal Head Error" is indicated. If "8" of failure elements of thermal print head are found and "10" is set as this parameter, "Thermal Head Warning" is indicated.
Print Printer Config.	-	Perform to print the current settings of the printer configuration.

5.9.4 Category "Printer Adjustment"

User can select printer adjust function menu in this category.
(: Default setting of the function)*

Function	List of Menu	Description
Top Margin	(-15) - 0* - (+15)	Adjust the top margin of paper in 1/203". This value is valid for except Label mode. The purpose of this adjustment is to eliminate the difference between the theoretical position and the actual position which is caused by the fixing sensors position and other factors.
Label Top Margin	(-15) - 0* - (+15)	Adjust the top margin of paper in 1/203". This value is valid for the Label mode. The purpose of this adjustment is to eliminate the difference between the theoretical position and the actual position which is caused by the fixing sensors position and other factors.
BM Cut Position	(-15) - 0* - (+15)	Adjust the cut position in 1/203". This value is valid for the BM mode. The purpose of this adjustment is to eliminate the difference between the theoretical position and the actual position which is caused by the fixing sensors position and other factors.
Label Cut Pos.	(-15) - 0* - (+15)	Adjust the cut position in 1/203". This value is valid for the Label mode. The purpose of this adjustment is to eliminate the difference between the theoretical position and the actual position which is caused by the fixing sensors position and other factors.
Perfo. Cut Pos.	(-15) - 0* - (+15)	Adjust the cut position in 1/203". This value is valid for the Perforation mode. The purpose of this adjustment is to eliminate the difference between the theoretical position and the actual position which is caused by the fixing sensors position and other factors.

5.9.5 Category "Printer Test Mode"

User can select printer configuration function menu in this category.
(: Default setting of the function)*

Function		List of Menu	Description
Test Mode Configuration	Paper Type	Black Mark Document Length Label* Perforation	Select a type of paper. This setting is used in Printer Test modes. Refer to the chapter "Paper Type Control"
	Form Length	XXX/203 inch XXX: 560-1260*-4434	Set Label length in n/203 inch. This length is used for the label length in Label mode. Set Document length in n/203 inch. This length is used for the page length in Document Length mode. This setting is used in Printer Test modes. Refer to the chapter "Label Mode" and "Document Length Mode"
	Paper Width	58mm 80mm 4inch* 5.1inch	Set a type of the paper width. This width is used for Test modes and Print Printer Configuration. This setting is used in Printer Test modes.

It is selectable print test functions in this category. Refer to the following table.
This category performs printing tests.

Function	Description
Rolling ASCII Simplex	It performs Rolling ASCII print on 1ST side. Refer to the Chapter "Rolling ASCII print test"
H Print Test Simplex	It performs H print on 1ST side. Refer to the Chapter "H print test"
Dot Check Test Simplex	It performs Dot Check print on 1ST side. Refer to the Chapter "Dot check pattern print test"
Graphics Test Simplex	It performs Graphics print on 1ST side. Refer to the Chapter "Graphics print test"
Rolling ASCII Duplex	It performs Rolling ASCII print on 1ST and 2ST sides both. Refer to the Chapter "Rolling ASCII print test"
H Print Test Duplex	It performs H print on 1ST and 2ST sides both. Refer to the Chapter "H print test"
Dot Check Test Duplex	It performs Dot Check print on 1ST and 2ST sides both. Refer to the Chapter "Dot check pattern print test"
Graphics Test Duplex	It performs Graphics print on 1ST and 2ST sides both. Refer to the Chapter "Graphics print test"

Keys during performing each printing test

[**MENU**] Key : Invalid
[**PAUSE**] Key : Valid and same as online mode
[**FEED**] Key : Short press: Valid and same as online mode
Long press: Stop printing for exit Test Print

Sequence:

1. Set paper and select print test function from the Printer Test Mode in Menu Mode.
2. Press [**FEED**] Key shortly.
3. Performs a printing test.
   During performing a printing test, a message appears on the LCD, as shown below.
   e.g.)

Rolling ASCII Printing…

If you want to stop performing:
During performing a printing test, press **FEED** Key long, then the printer stops printing.
A message appears on the LCD, as shown below.
e.g.)

Rolling ASCII Completed

And then, press **FEED** Key shortly. The printer returns to the selection of Menu Mode.

If detects errors or warnings during performing each printing test, an error message appears the same as Online Mode as shown below.
e.g.)

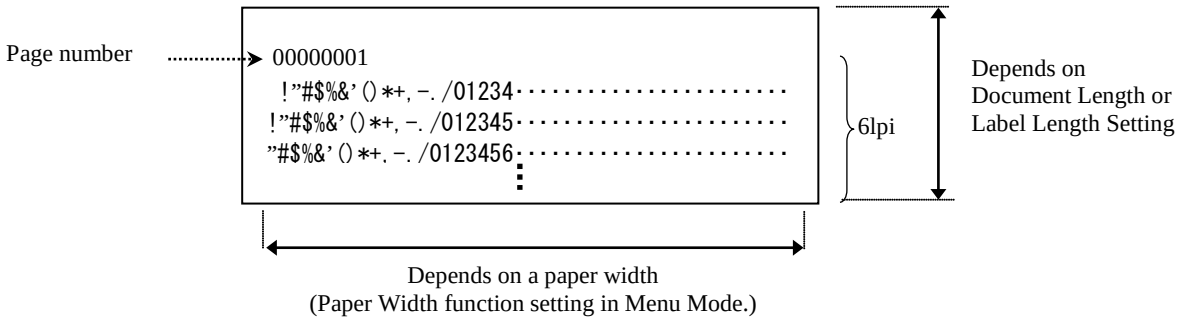
ERROR PAPER JAM

Rolling ASCII PAPER NEAR

1. Rolling ASCII print test

This mode performs rolling ASCII print test repeat, and page number is printed on the top left corner of the page.

The print result as follows.



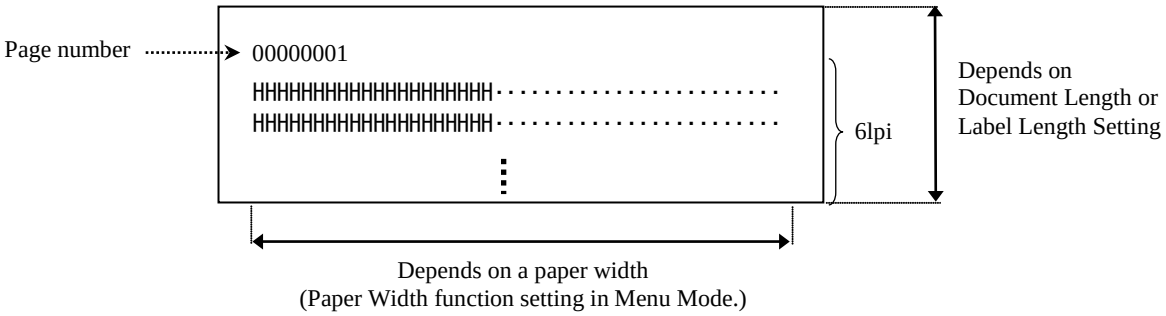
If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to cut at manual cut position (w/o Cutter). If the paper type is Label Mode, the paper is cut at the next gap (w/ Cutter) or fed to the next gap to cut at manual cut position (w/o Cutter).

The following settings of Menu Mode are valid in Rolling ASCII print test.
Paper Type, Form Length, Paper Width, Paper Density, Power Control, Maximum Speed, Page Recovery (only Online mode), BM Cut Offset, Label Cut Offset, Top Margin, Label Top Margin, BM Cut Position and Label Cut Pos, Paper Load.

2. H print test

This mode performs rolling H print test repeat, and page number is printed on the top left corner of the page.

The print result as follows.



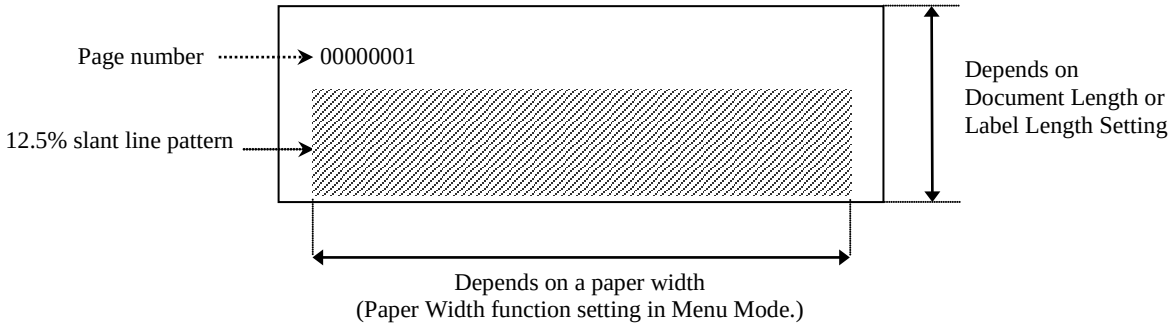
If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to cut at manual cut position (w/o Cutter). If the paper type is Label Mode, the paper is cut at the next gap (w/ Cutter) or fed to the next gap to cut at manual cut position (w/o Cutter).

The following settings of Menu Mode are valid in H print test.
Paper Type, Form Length, Paper Width, Paper Density, Power Control, Maximum Speed, Page Recovery (only Online mode), BM Cut Offset, Label Cut Offset, Top Margin, Label Top Margin, BM Cut Position and Label Cut Pos, Paper Load.

3. Dot check pattern print test

This mode performs rolling Dot check pattern print test repeat, and page number is printed on the top left corner of the page.

The print result as follows.



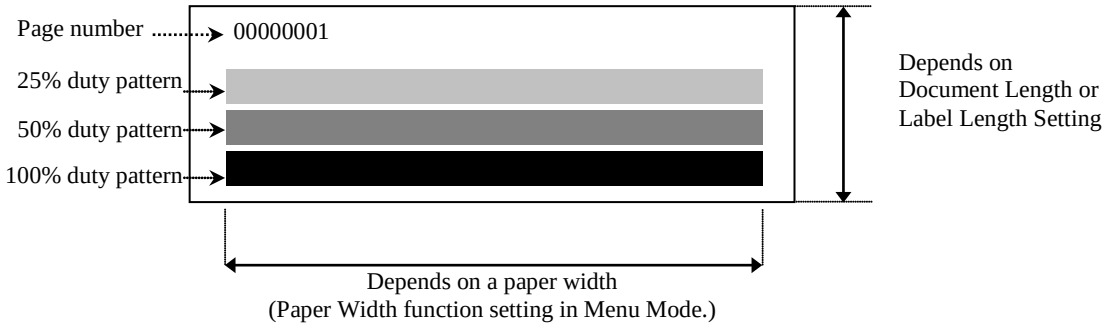
If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to cut at manual cut position (w/o Cutter). If the paper type is Label Mode, the paper is cut at the next gap (w/ Cutter) or fed to the next gap to cut at manual cut position (w/o Cutter).

The following settings of Menu Mode are valid in Dot check pattern print test.
Paper Type, Form Length, Paper Width, Paper Density, Power Control, Maximum Speed, Page Recovery (only Online mode), BM Cut Offset, Label Cut Offset, Top Margin, Label Top Margin, BM Cut Position and Label Cut Pos, Paper Load.

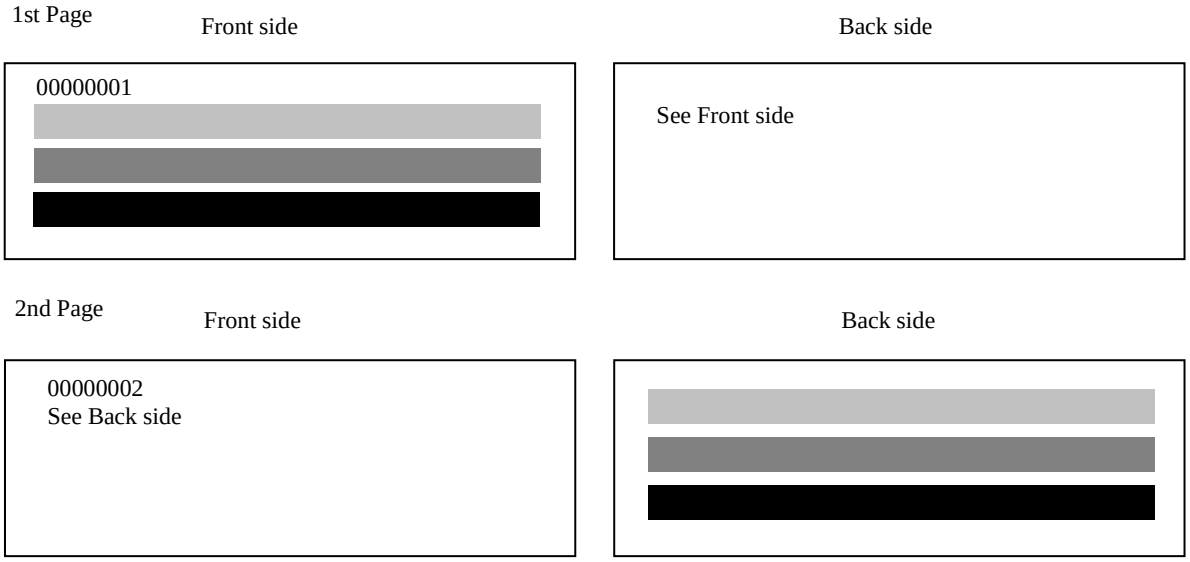
4. Graphics print test

This mode performs rolling Graphics print test repeat, and page number is printed on the top left corner of the page. The print result as follows.

Simplex printing



Duplex printing



If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to cut at manual cut position (w/o Cutter). If the paper type is Label Mode, the paper is cut at the next gap (w/ Cutter) or fed to the next gap to cut at manual cut position (w/o Cutter).

The following setting of Menu Mode is valid in Graphics print test.
Paper Type, Form Length, Paper Width, Paper Density, Power Control, Maximum Speed, Page Recovery (only Online mode), BM Cut Offset, Label Cut Offset, Top Margin, Label Top Margin, BM Cut Position and Label Cut Pos, Paper Load.

6. CARE/HANDLING OF THE PAPER

CAUTION:

Use only paper that meets specified requirements. Use of non-specified paper may shorten the head life of the printer, resulting in problems with print quality, cause a paper feed failure or shorten the cutter life. All paper should be handled with care to avoid any damage to the paper. Read the following guideline carefully.

- Do not store the paper for longer than the manufacture's recommended shelf life.
- Store paper rolls on the flat end, do not store them on the curve sides as this might flatten that side causing erratic media advance and poor print quality.
- Store the paper in plastic bags and always reseal after opening. Unprotected paper can get dirty and the extra abrasion from the dust and dirt particles will shorten the print head life.
- Store the paper in a cool, dry place. Avoid areas where they would be exposed to direct sunlight, high temperature, high humidity, dust or gas.
- Contact with chemicals or oil may discolor or erase the printed image.
- Rubbing the paper hard with nail or hard object may discolor the paper.
- The paper end should not be pasted to the core.
- The thermal paper used for direct thermal printing must not have specifications that exceed Na^+ 800ppm, K^+ 250ppm and Cl^- 500ppm.
- Some ink used on pre-printed labels may contain ingredients that can shorten the print head's product life. Do not use labels pre-printed with ink that contain hard substances such as carbonic calcium ($CaCO_3$) and kaolin (Al_2O_3, $2SiO_2$, $2H_2O$).

For further information please contact your authorized TOSHIBA TEC representative or paper manufacturer.

7. GENERAL MAINTENANCE

WARNING!
Be careful when handling the print head as it becomes very hot.

7.1 Cleaning

WARNING!
1. Be sure to disconnect the power cord prior to performing any maintenance. *2. DO NOT POUR WATER directly onto the printer.*

CAUTION:

1. *Do not use any sharp objects to clean the print head and platen. Doing so may damage them, causing poor print quality or missing dots.*
2. *Never use organic solvents like thinners or venzene for cleaning. Using such solvents may discolor the covers, cause poor print quality or printer failure.*
3. *Do not touch the print head element as static build-up may damage the print head.*

NOTE:

Please purchase the Print Head Cleaner from the authorized TOSHIBA TEC service representative.

To help retain the high quality and performance of your printer it should be regularly cleaned. The greater the usage of the printer, the more frequent the cleaning.
(i.e. low usage = weekly; high usage = daily).

1. Turn the power off.
2. Open the top cover.
3. Remove the paper.
4. Clean the print head element with print head cleaner or cotton swab/soft cloth slightly moistened with ethyl alcohol.
5. Clean the platen with soft cloth moistened with absolute ethyl alcohol.
6. Remove dust, paper particles or glue from the detection area of the sensors and paper path with a dry soft cloth.

7.2 Covers

WARNING!
1. DO NOT POUR WATER directly onto the printer. *2. DO NOT APPLY cleaner or detergent directly onto any cover.* *3. NEVER USE THINNER OR OTHER VOLATILE SOLVENT on the plastic coverts.* *4. DO NOT clean the covers with alcohol as it may cause them to discolor, loose their shape or develop structural weakness.*

The covers should be cleaned with an electrostatic free cleaner or cloth for automated office equipment; by wiping with dry or slightly dampened with a mild detergent solution.

7.3 Removing Jammed Paper

WARNING!
Do not use any tool that may damage the print head.

1. Turn the power off.

2. Open the Top Cover and remove the media paper.

3. Remove the jammed paper from the printer. DO NOT USE any sharp implements or tools as these could damage the printer.

4. Clean the Print Head and Platen; remove any further dust or foreign substances.

5. Close the Top Cover, and power on to load the media again.

8. TROUBLESHOOTING

WARNING!
If a problem cannot be solved by taking actions described in this chapter, do not attempt to repair the printer, Turn off and unplug the printer. Then contact an authorized TOSHIBA TEC service representative for assistance.

8.1 Error Messages

Error Messages	LED		Problems/Causes	Recovery
	Online	Error		
ERROR PAPER EMPTY	On	Blink slowly	No paper is detected	Load paper
ERROR COVER OPEN	On	Blink slowly	The thermal print head unit is opened	Close the print upper block
ERROR PAPER JAM	On	Blink fast	1. The media is jammed in the media path.	1. Open the print upper block Remove jammed paper Close the print upper block ➔ Section 7.3
			2. Label gap sensor is not correctly aligned	2. Ajust the sensor position correctly. ➔Section 5.3.2
ERROR CAM MOTOR JAM	On	Blink fast	The sensor detects com motor position error	Turn the printer off and then on.
ERROR CUTTER JAM	On	Blink fast	1. Detects jam on cutter	1. Turn the printer off and remove jam paper. ➔ Section 7.3
			2. The Cutter Cover is not attached properly.	2. Attach the Cutter Cover properly
ERROR UNABLE TO LOAD	On	Blink fast	The media is not correctly inserted to printer.	Insert the media correctly.
ERROR LABEL	On	Blink fast	The printer cannot detect Label gap .	Check media type and specification, And perform “Sensor Calibration “ ➔ Section 5.4 and 5.7.3
READY LABEL PAGE OVER	On	Blink fast	The print data is over label length which printer measured.	Adjust print data length within label length.
ERROR BLACK MARK	On	Blink fast	1. The printer cannot detect Black Mark	1. Check the media type and black mark specification
			2. The black mark sensor is not correctly aligned with black mark on the media	2. Adjust the sensor position ➔ Section 5.3.1
ERROR HEAD TEMPERATURE	On	Blink fast	1. Thermal head temperature is high	1. Wait for a few minutes If does not solve the problem, Call a TOSHIBA TEC authorized service representative
			2. Thermal head is damaged	2. Turn the printer off and then on. If does not solve the problem, Call a TOSHIBA TEC authorized service representative

8.1 Error Messages (Cont.)

Error Messages	LED		Problems/Causes	Recovery
	Online	Error		
ERROR EEPROM	On	On	EEPROM access is not available.	Turn the printer off and then on. If does not solve the problem, Call a TOSHIBA TEC authorized service representative
READY NONE CG	Blink slowly	Off	During printer Power ON, the value of Check code in CG Data and ROM are different. (It is possible to print on Online Mode without CG)	Downloaded the correct CG Data by IPL.
READY COOLING DOWN	Blink slowly	Off	Thermal head temperature is high	The printer automatically starts printing the data again. Wait for a few minutes.
READY 24V ANOMALY	Blink slowly	Off	When the printer detects power voltage low.	Turn the printer off and then on
READY SENSOR ADJ. FAIL	Blink slowly	Off	The sensor calibration is not successful	Perform sensor calibration successfully ➔Section 5.7
ERROR PERFORATION	On	Blink fast	The printer cannot detect rectangular hole of perforation paper.	Ceck the media type and perforation paper's specification
READY PERFO. PAGE OVER	On	Blink fast	The print data is over perforation paper length which the printer measured	Adjust the print data length within perforation paper length which the printer measured
READY CUT SHEET OVER	On	Blink fast	The print data is over cut sheet length	Adjust the print data length within cut sheet length
ERROR THERMAL HEAD	On	On	During printer Power ON, failure elements of thermal print head are found and the number of failure exceeds the setting of "Heal Fail Thresh".	When no failure element is detected on thermal print head at POR (after problematic thermal print head is replaced.) When the setting of "Head Fail Thresh" is larger than the number of failure elements of thermal print head. ➔
READY THERMAL HEAD	Blink slowly	Off	During printer Power ON, failure elements of thermal print head are found and the number of failure within the setting of "Heal Fail Thresh". (It is possible to print on Online Mode if this message is displayed.)	When no failure element is detected on thermal print head at POR (after problematic thermal print head is replaced.) When the setting of "Head Fail Thresh" is set to "0".

8.2 Possible Problems

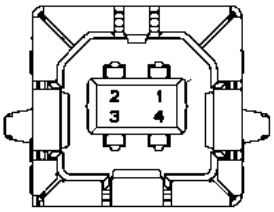
Problem	Causes	Solutions
The printer will not turn on.	1. The Power Cord is disconnected	1. Plug in the Power Cord.
	2. The AC outlet is not functioning	2. Test with a power cord from another electric appliance.
	3. The fuse has blown or the circuit breaker has tripped.	3. Check the fuse or breaker.
The media is not fed.	1. The media is not loaded properly.	1. Load the media properly.
	2. The printer is in an error condition.	2. Solve the error in the message display.
The printed image is blurred.	1. The print head is not clean	1. Clearn the print head using ➔Section 7.1
	2. Print energy is not proper for the media	2. Ajust pint density ➔Section 5.6.3
Dots missing in the print.	1. The print head is not clean.	1. Clearn the print head. ➔ Section 7.1
	2. Print energy is not proper for the media	2. Ajust pint density ➔ Section 5.6.3
The optional cutter module does not cut.	1. The Cutter Unit is not closed properly.	1. Close the Cutter Unit properly.
	2. The media is jammed in the Cutter.	2. Remove the jammed paper.
	3. The cutter blade is dirty.	3. Clean the cutter blade.

APPENDIX I INTERFACE

USB Interface

Standard: Conforming to V2.0 Full speed
Transfer type: Control transfer, Bulk transfer
Transfer rate: Full speed (12M bps)
Class: Printer class
Control mode: Status with the receive buffer free space information
Number of ports: 1
Power source: Self power
Connector: Type B

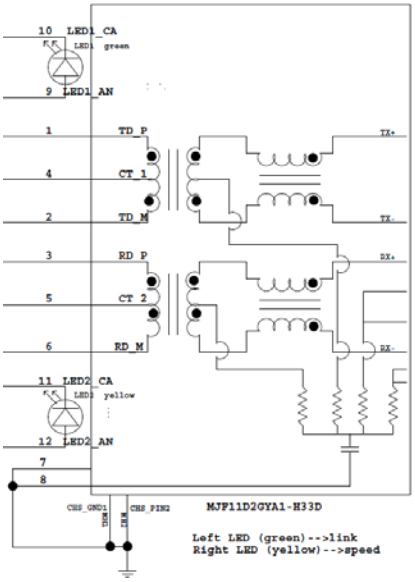
Pin No.	Signal
1	VBUS
2	D-
3	D+
4	GND
Shell	Shield



LAN

Standard: IEEE802.23 10Base-T/100Base-TX
Number of ports: 1
Connector: Magnetic Integrated Connector
LAN cable: 10BASE-T: UTP category 3 or category 5
100BASE-TX: UTP category 5
Cable length: Segment length Max. 100m

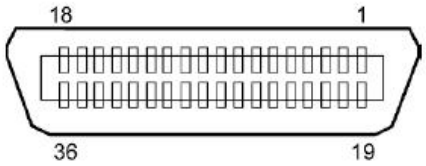
Pin No.	Signal
1	TD+
2	TD-
3	RD+
4	TCT
5	RCT
6	RD-
7	FG
8	FG
9	3.3V
10	LED1
11	LED2
12	3.3V



Parallel Interface (Centronics)

Mode: Conforming to IEEE1284
Compatible mode (SPP mode), Nibble mode
Data input method: 8 bit parallel

Pin No.	Signal	In/Out	Pin No.	Parallel	In/Out
1	nSTORBE	In	19	Signal GND	
2	DATA0	In	20	Signal GND	
3	DATA1	In	21	Signal GND	
4	DATA2	In	22	Signal GND	
5	DATA3	In	23	Signal GND	
6	DATA4	In	24	Signal GND	
7	DATA5	In	25	Signal GND	
8	DATA6	In	26	Signal GND	
9	DATA7	In	27	Signal GND	
10	nACK	Out	28	Signal GND	
11	BUSY	Out	29	Signal GND	
12	PE	Out	30	Signal GND	
13	SELECT	Out	31	nINIT	In
14	nAUTOFEED	Out	32	nERROR	Out
15	NC		33	Signal GND	
16	Signal GND		34	NC	
17	Chassis GND		35	NC	
18	+5V DC	Out	36	nSELECT IN	In



Power Connector

Mode: J13 B8P-VR (LF)(SN) , JST

Pin No.	Signal
1	27V
2	27V
3	GND
4	GND
5	5V
6	GND
7	(27V Power Save)
8	N.C.

APPENDIX II MENU MODE TREE

MENU MODE
Press FEED Key

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Firmware Version, CRC	Boot Firmware Ver.xxxxxx.xxxx			
	FTP Firmware Ver.xxxxxx.xxxx			
	Main Firmware Ver.xxxxxx.xxxx			
	SBCS CG Ver.xxxxxx.xxxx			
	Return to Prev. Layer			
Communication Interface	Interface Type xxxxxx	Interface Type USB	USB Accepted	
		Interface Type Ethernet	Ethernet Accepted	
		Interface Type Parallel	Parallel Accepted	*If Parallel option is not installed, this message is not displayed.
		Return to Prev.Layer		
	Printer IP Addr. xxx.xxx.xxx.xxx	Printer IP Address xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx Accepted	
	Subnet Mask xxx.xxx.xxx.xxx	Subnet Mask xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx Accepted	
	Default Gateway xxx.xxx.xxx.xxx	Default Gateway xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx Accepted	
	Get IP Address xxxxx	Get IP Address xxxxx	xxxxx Accepted	
	DHCP IP Address xxx.xxx.xxx.xxx	DHCP IP Address xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx Accepted	
	Community (R) xxxxxxxxxxxxxxxx			
	Community (R/W) xxxxxxxxxxxxxxxx			
	IP Trap1 xxxxx	IP Trap1 xxxxx	xxxxxxx Accepted	
	IP Trap1 Address xxx.xxx.xxx.xxx	IP Trap1 Address xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx Accepted	
	Trap1 Comm.Name xxxxxxxxxxxxxxxx			

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Communication Interface	IP Trap2 xxxxx	IP Trap2 xxxxx	xxxxxxx Accepted	
	IP Trap2 Address xxx.xxx.xxx.xxx	IP Trap2 Address xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx Accepted	
	Trap2 Comm.Name xxxxxxxxxxxxxxxx			
	MAC Addr. xx:xx: xx:xx:xx:xx			
	Socket Port TCP xxxx	Socket Port TCP xxxx	xxxx Accepted	
	Socket Port UDP xxxx	Socket Port UDP xxxx	xxxx Accepted	
	Socket Port UDP2 xxxx	Socket Port UDP2 xxxx	xxxx Accepted	
	Physical Layer xxx.xxx.xxx.xxx			
	FTP User.Name xxxxxxxxxxxxxxxx			
	Return to Prev. Layer			
Printer Configuration	Paper Type xxxxxx	Paper Type Black Mark	Black Mark Accepted	
		Paper Type Document Length	Document Length Accepted	
		Paper Type Label	Label Accepted	
		Paper Type Perforation	Perforation Accepted	
		Paper Type Cut Sheet	Cut Sheet Accepted	
		Return to Prev.Layer		
	Document Length xxxx/203inch	Document Length 560/203inch	560/203inch Accepted	
		Document Length xxxx/203inch	xxxx/203inch Accepted	
		Document Length 4434/203inch	4434/203inch Accepted	
		Return to Prev. Layer		

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Printer Configuration	Print Mode xxxx	Print Mode Others	Others Accepted	
		Print Mode Receipt	Receipt Accepted	
		Return to Prev. Layer		
	Print Density(F) xxx	Print Density(F) -15	-15 Accepted	
		Print Density(F) xxx	xxx Accepted	
		Print Density(F) 0	0 Accepted	
		Print Density(F) xxx	xxx Accepted	
		Print Density(F) +15	+15 Accepted	
		Return to Prev. Layer		
	Print Density(B) xxx	Print Density(B) -15	-15 Accepted	
		Print Density(B) xxx	xxx Accepted	
		Print Density(B) 0	0 Accepted	
		Print Density(B) xxx	xxx Accepted	
		Print Density(B) +15	+15 Accepted	
		Return to Prev. Layer		
	Power Control xxxx	Power Control Low	Low Accepted	
		Power Control High	High Accepted	
		Return to Prev. Layer		

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Printer Configuration	Print Speed xxxips	Print Speed Variable	Variable Accepted	
		Print Speed 6.0ips	6.0ips Accepted	
		Print Speed 5.0ips	5.0ips Accepted	
		Print Speed 4.0ips	4.0ips Accepted	
		Print Speed 3.0ips	3.0ips Accepted	
		Return to Prev. Layer		
	Max. Variable xxxips	Max. Variable 6.0ips	6.0ips Accepted	
		Max. Variable 5.0ips	5.0ips Accepted	
		Max. Variable 4.0ips	4.0ips Accepted	
		Max. Variable 3.0ips	3.0ips Accepted	
		Return to Prev. Layer		
	Page Recovery xxx	Page Recovery Off	Off Accepted	
		Page Recovery On	On Accepted	
		Return to Prev. Layer		
	BM Cut Offset xx	BM Cut Offset -59	00 Accepted	
		BM Cut Offset 00	22 Accepted	
		BM Cut Offset 05	29 Accepted	
		BM Cut Offset xx	xx Accepted	
		BM Cut Offset 59	59 Accepted	
		Return to Prev. Layer		
	Paper Load xxxxxx	Paper Load Auto	Auto Accepted	
		Paper Load Manual	Manual Accepted	
		Return to Prev. Layer		

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Printer Configuration	Rotary Cutter xxx	Rotary Cutter Off	Off Accepted	
		Rotary Cutter Manual	Manual Accepted	
		Rotary Cutter Auto	Auto Accepted	
		Return to Prev. Layer		
	Head Fail Thresh xxx	Head Fail Thresh 0	0 Accepted	
		Head Fail Thresh xx	xx Accepted	
		Head Fail Thresh 50	50 Accepted	
		Head Fail Thresh xx	xx Accepted	
		Head Fail Thresh 100	100 Accepted	
		Return to Prev. Layer		
	Print Printer Config.		Printer Config. Printing...	Printer Config. Completed
	Return to Prev. Layer			
Printer Adjustment	Top Margin xxx	Top Margin -15	-15 Accepted	
		Top Margin xxx	xxx Accepted	
		Top Margin 0	0 Accepted	
		Top Margin xxx	xxx Accepted	
		Top Margin +15	+15 Accepted	
		Return to Prev. Layer		
Printer Adjustment	Label Top Margin xxx	Label Top Margin -15	-15 Accepted	
		Label Top Margin xxx	xxx Accepted	
		Label Top Margin 0	0 Accepted	
		Label Top Margin xxx	xxx Accepted	
		Label Top Margin +15	+15 Accepted	
		Return to Prev. Layer		

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Printer Adjustment	BM Cut Position xxx	BM Cut Position -15	-15 Accepted	
		BM Cut Position xxx	xxx Accepted	
		BM Cut Position 0	0 Accepted	
		BM Cut Position xxx	xxx Accepted	
		BM Cut Position +15	+15 Accepted	
		Return to Prev. Layer		
	Label Cut Pos. xxx	Label Cut Pos. -15	-15 Accepted	
		Label Cut Pos. xxx	xxx Accepted	
		Label Cut Pos. 0	0 Accepted	
		Label Cut Pos. xxx	xxx Accepted	
		Label Cut Pos. +15	+15 Accepted	
		Return to Prev. Layer		
	Perfo. Cut Pos. xxx	Perfo. Cut Pos -15	-15 Accepted	
		Perfo. Cut Pos xxx	xxx Accepted	
		Perfo. Cut Pos 0	0 Accepted	
		Perfo. Cut Pos xxx	xxx Accepted	
		Perfo. Cut Pos +15	+15 Accepted	
		Return to Prev. Layer		
Printer Test Modes	Test Mode Configuration	Paper Type xxxxxx	Paper Type Black Mark	Black Mark Accepted
			Paper Type Document Length	Document Length Accepted
			Paper Type Label	Label Accepted
			Paper Type Perforation	Perforation Accepted
			Return to Prev. Layer	

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Printer Test Modes	Test Mode Configuration	Form Length xxxx/203inch	Form Length 560/203inch	560/203inch Accepted
			Form Length xxxx/203inch	xxxx/203inch Accepted
			Form Length 4434/203inch	4434/203inch Accepted
			Return to Prev. Layer	
		Paper Width xxxxxx	Paper Width 58mm	58mm Accepted
			Paper Width 80mm	80mm Accepted
			Paper Width 4inch	4inch Accepted
			Paper Width 5.1inch	5.1inch Accepted
			Return to Prev. Layer	
	Rolling ASCII Simplex		Rolling ASCII Printing...	Rolling ASCII Completed
	H Print Test Simplex		H Print Test Printing...	H Print Test Completed
	Dot Check Test Simplex		Dot Check Test Printing...	Dot Check Test Completed
	Graphics Test Simplex		Graphics Test Printing...	Graphics Test Completed
	Rolling ASCII Duplex		Rolling ASCII Printing...	Rolling ASCII Completed
	H Print Test Duplex		H Print Test Printing...	H Print Test Completed
	Dot Check Test Duplex		Dot Check Test Printing...	Dot Check Test Completed
	Graphics Test Duplex		Graphics Test Printing...	Graphics Test Completed
	Return to Prev. Layer			
Sensor Calibration	Sensor Calibration	Calibration with BM Paper	Calibration Performing...	Calibration Succeeded
				Failed 12345 Sensors -----
		Calibration with White Paper	Calibration Performing...	Calibration Succeeded
				Failed 12345 Sensors -----
		Calibration with Label Paper	Calibration Performing...	Calibration Succeeded
				Failed 12345 Sensors -----

APPENDIX II MENU MODE TREE (Cont.)

Main menu	*Function*	*Menu setting*	*Acknowledge*	*Result*
Sensor Calibration	Sensor Calibration	Calibration with Perforation Pap.	Calibration Performing...	Calibration Succeeded Failed 12345 Sensors - - - - -
		Return to Prev. Layer		
	Return to Prev. Layer			
Menu Exit				

1 Paper End Sensor
2 Exit Sensor
3 TOF Sensor
4 BM Sensor
5 Label Sensor
-: No Error
x: Failure

[redacted]

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