TOSHIBA

TOSHIBA 2ST LABEL PRINTER

# DB-EA4D SERIES

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

TOSHIBA

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, then contact your authorized TOSHIBA TEC representative for assistance.

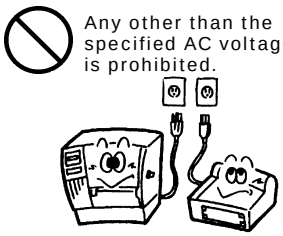
## Meanings of Each Symbol

This symbol indicates warning items (including cautions).
Specific warning contents are drawn inside the △ symbol.
(The symbol on the left indicates a general caution.)

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".)

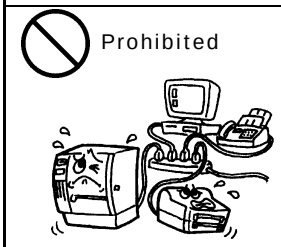
This symbol indicates actions which must be performed.
Specific instructions are drawn inside or near the ● symbol.
(The symbol on the left indicates "disconnect the power cord plug from the outlet".)

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

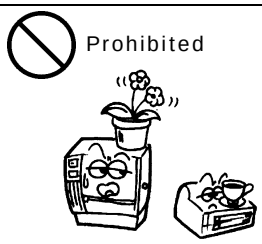



Do not use voltages other than the voltage (AC) specified on the rating plate, as this may cause **fire** or **electric shock**.

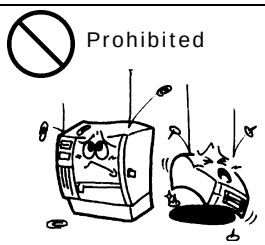

Do not plug in or unplug the power cord plug with wet hands as this may cause **electric shock**.



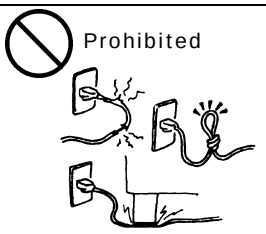

If the machines share the same outlet with any other electrical appliances that consume large amounts of power, the voltage will fluctuate widely each time these appliances operate. Be sure to provide an exclusive outlet for the machine as this may cause **fire** or **electric shock**.



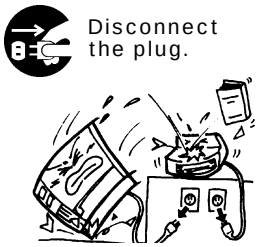

Do not place metal objects or water-filled containers such as flower vases, flower pots or mugs, etc. on top of the machines. If metal objects or spilled liquid enter the machines, this may cause **fire** or **electric shock**.



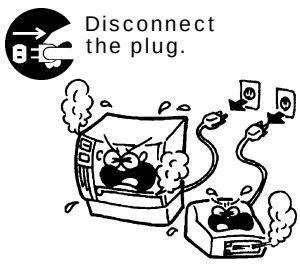

Do not insert or drop metal, flammable or other foreign objects into the machines through the ventilation slits, as this may cause **fire** or **electric shock**.



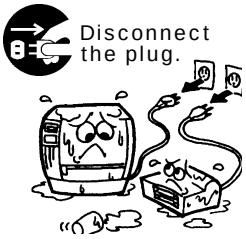

Do not scratch, damage or modify the power cords. Also, do not place heavy objects on, pull on, or excessively bend the cords, as this may cause **fire** or **electrical shock**.



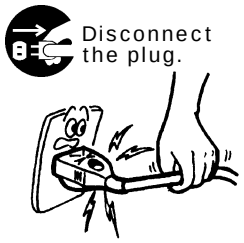

If the machines are dropped or their cabinets damaged, first turn off the power switches and disconnect the power cord plugs from the outlet, and then contact your authorized TOSHIBA TEC representative for assistance. Continued use of the machine in that condition may cause **fire** or **electric shock**.



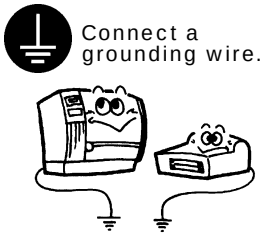

Continued use of the machines in an abnormal condition such as when the machines are producing smoke or strange smells may cause **fire** or **electric shock**. In these cases, immediately turn off the power switches and disconnect the power cord plugs from the outlet. Then, contact your authorized TOSHIBA TEC representative for assistance.



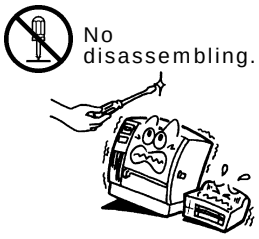

If foreign objects (metal fragments, water, liquids) enter the machines, first turn off the power switches and disconnect the power cord plugs from the outlet, and then contact your authorized TOSHIBA TEC representative for assistance. Continued use of the machine in that condition may cause **fire** or **electric shock**.



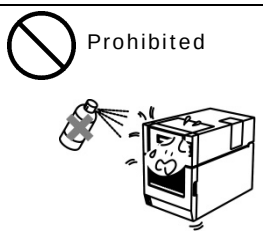

When unplugging the power cords, be sure to hold and pull on the plug portion. Pulling on the cord portion may cut or expose the internal wires and cause **fire** or **electric shock.**




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. 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 machines are 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 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.
- Ensure the printer is operated on a level surface.
- 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 machines, as these items may become unbalanced and fall causing **injury**.
- Do not block the ventilation slits of the machines, as this will cause heat to build up inside the machines 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 the machine on a stable and level surface.

## Request Regarding Maintenance

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

## Résumé des précautions

La sécurité personnelle lors de la manipulation ou de l'entretien du matériel est extrêmement importante. Les avertissements et précautions nécessaires à la manipulation en toute sécurité du matériel sont inclus dans ce manuel. Les avertissements et précautions contenus dans ce manuel doivent être lus et assimilés avant toute manipulation ou entretien.
Ne tentez pas d'effectuer des réparations ou des modifications sur ce matériel. Si une erreur se produit qui ne peut être résolue en suivant les instructions de ce manuel, coupez le courant, déconnectez le câble secteur et contactez votre revendeur agréé TOSHIBA TEC pour une assistance technique.

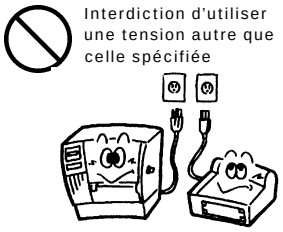
## Explication des symboles

Ce symbole signale une mise en garde (ou des précautions).
Le dessin à l'intérieur du symbole △ précise quelle est l'action à exécuter.
(Le symbole ci-contre indique une précaution d'ordre général.)

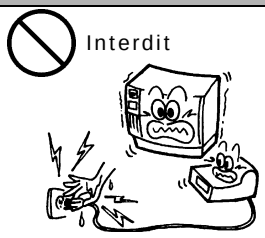
Ce symbole signale une action interdite (interdiction).
Le dessin à l'intérieur ou prés du symbole ⃠ précise quelle est l'action interdite.
(Le symbole ci-contre indique "Ne pas démonter".)

Ce symbole indique une action à effectuer.
Le dessin à l'intérieur du symbole ● précise quelle est l'action à exécuter.
(Le symbole ci-contre indique "Retirer la fiche secteur de la prise".)

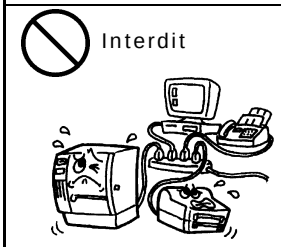
**ATTENTION** Indique un danger de **mort** ou de **blessures graves** si l'équipement est utilisé en négligeant ces instructions.



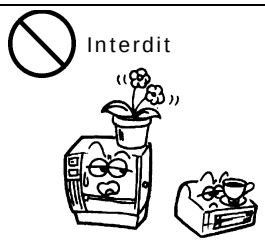

Ne faites pas fonctionner la machine avec une tension électrique différente de celle indiquée sur la plaquette des caractéristiques. Ceci pourrait provoquer un **incendie** ou une **électrocution**.



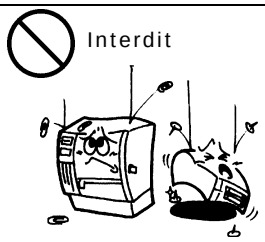

Ne branchez pas et ne débranchez pas la fiche secteur avec les mains mouillées. Vous risqueriez une **électrocution**.



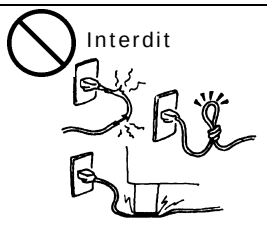

Si la machine partage une même prise avec d'autres appareils consommant beaucoup d'électricité, il y aura des fluctuations de tension importantes lorsque ces appareils fonctionnent. Pour éviter tout risque **d'incendie** ou de **choc électrique**, ne branchez pas d'autres appareils à la même prise que la machine.




Ne placez pas d'objets métalliques ou de récipients contenant un liquide (vases, pots de fleurs, tasses, etc.) sur la machine. Un objet métallique ou un liquide peut provoquer un **incendie** ou une **électrocution** s'il pénètre accidentellement dans la machine.



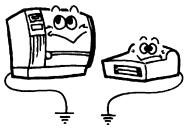
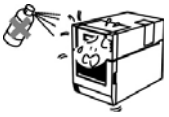

N'introduisez pas et ne faites pas tomber de pièces métalliques, de matières inflammables ou d'autres objets dans les ouvertures d'aération de la machine. Ils pourraient provoquer un **incendie** ou une **électrocution**.




N'essayez pas de réparer ou de modifier vous-même la machine. Ceci pourrait provoquer un **incendie** ou une **électrocution**. Pour toute question sur les réparations, adressez-vous à votre revendeur (ou au service après-vente).


Si des corps étrangers (fragments de métal, eau, liquides) pénètrent à l'intérieur de la machine, commencez par positionner le bouton marche/arrêt sur arrêt et par déconnecter le câble secteur de la prise murale. Ensuite, contactez votre revendeur agréé TOSHIBA TEC pour une assistance technique.
Une utilisation prolongée de l'imprimante dans ces conditions peut être source d'incendie ou de choc électrique.


Pour débrancher le câble d'alimentation, tirez-le par la prise. Ne tirez pas directement sur le câble. Ceci pourrait sectionner et exposer les fils internes du câble et causer un **incendie** ou une **électrocution**.

| | |
|---|---|
| Connectez un fil de terre.<br>  | Assurez-vous que votre installation est correctement reliée à la terre. Une mauvaise installation peut provoquer un début d'incendie ou un choc électrique. |
| Démontage interdit<br>  | Ne pas retirer les capots, réparer ou modifier l'imprimante par vous-même. Vous pouvez recevoir un choc électrique ou vous blessé par des bords tranchants dans l'imprimante. |
| Interdit<br>  | Ne pas utiliser de spray nettoyant contenant du gaz inflammable pour nettoyer ce produit, ceci pourrait provoquer un feu. |
| Interdit<br>  | Faire attention au couteau de l'imprimante. |

**PRECAUTION** Indique un risque de **blessures** ou de **dommages** si l'équipement est utilisé en négligeant ces instructions.

## Précautions

Les précautions suivantes vous permettront d'avoir un fonctionnement correct de l'imprimante.

- Evitez les endroits qui présentent les conditions défavorables suivantes:
  * Température hors des spécifications
  * Exposition directe au soleil
  * Humidité élevée
  * Alimentation secteur partagée avec d'autres dispositifs.
  * Vibrations excessives
  * Poussière/Gaz
- Nettoyez le couvercle en l'essuyant au moyen d'un chiffon sec ou d'un chiffon imbibé de détergent.
  NE JAMAIS UTILISER DE DILUANT NI D'AUTRES SOLVANTS VOLATILES sur les capots en plastique.
- Utilisez des étiquettes et des rubans recommandés par TOSHIBA TEC.
- N'entreposez pas les films et media à un endroit où ils seraient exposés à la lumière directe du soleil, à des températures élevées, à une humidité importante, à de la poussière ou à des gaz.
- Assurez-vous d'utiliser l'imprimante sur une surface plane.
- Toute information mémorisée dans la mémoire de l'imprimante peut être perdue lors d'une erreur d'impression.
- Evitez d'utiliser cet équipement sur la même ligne secteur que des appareils de forte puissance ou susceptibles d'émettre des interférences.
- Eteignez l'imprimante lors des interventions à l'intérieur ou lors des nettoyages.
- Assurez-vous de garder l'environnement de travail à l'abri de l'électricité statique.
- Ne placez pas d'objets lourds sur la machine. Ils pourraient tomber et blesser quelqu'un.
- Ne bouchez pas les ouvertures d'aération de la machine. La chaleur s'accumulerait à l'intérieur et pourrait provoquer un **incendie**.
- Ne vous appuyez pas contre l'imprimante Celle-ci peut tomber et vous pouvez être blessé.
- Débranchez l'imprimante lorsqu'elle n'est pas utilisée pendant une longue période.
- Placez la machine sur une surface stable.
- RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UN TYPE INCORRECT. Mettez au rebut les batteries usagées conformément aux instructions du fabricant.

## Au sujet de la maintenance

- Faites appel à nos services de maintenance.
  Après avoir reçu le matériel, prenez contact avec votre revendeur agréé TOSHIBA TEC pour une visite de maintenance annuelle, de manière à effectuer un nettoyage complet de l'intérieur de la machine.
  Autrement, la poussière qui s'accumule à l'intérieur de la machine peut être source d'incendie ou de mauvais fonctionnement.
  Le nettoyage est particulièrement nécessaire avant les saisons humides ou pluvieuses.
- Nos services de maintenance effectuent les vérifications périodiques et les autres opérations nécessaires à maintenir la qualité et la performance des imprimantes. Prévenant de ce fait les problèmes.
  Pour tous détails, consultez votre revendeur agréé TOSHIBA TEC.
- Utilisations d'insecticides et d'autres produits.
  N'exposez pas les machines aux insecticides ou à d'autres solvants volatiles, dans la mesure où cela peut endommager les capots ou entraîner un écaillage de la peinture.

**CE Compliance (for EU only)**
This product complies with the requirements of EMC and Low Voltage and R&TTE Directives including their amendments.

***VORSICHT:***

- *Schallemission: unter 70dB (A) nach DIN 45635 (oder ISO 7779)*
- *Die für das Gerät Vorgesehene Steckdose muß in der Nähe des Gerätes und leicht zugänglich sein.*

Centronics is a registered trademark of Centronics Data Computer Corp.
Microsoft is a registered trademark of Microsoft Corporation.
Windows is a trademark of Microsoft Corporation.

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 rotection 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 sed 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.

(for USA only)

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

"This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations."
"Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada."

(for CANADA only)

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

**IP20**

< For EU Only >
TOSHIBA TEC Europe Retail Information Systems S.A.
Rue de la Célidée 33 BE-1080 Brussels

**Waste Recycling information for users:**

Following information is only for EU-member states:

The use of the crossed-out wheeled bin symbol indicates that this product may not be treated as general household waste.
By ensuring this product is disposed of correctly you will help prevent potential negative consequences for the environment 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 the product.

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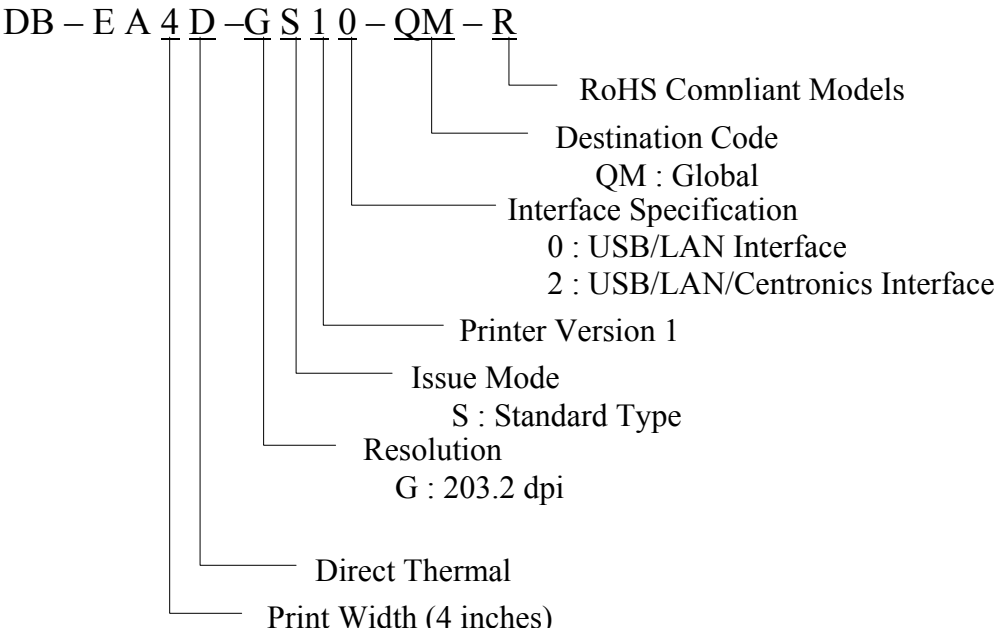
# 1. INTRODUCTION

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

***NOTE:***
*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%;<br>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°Ç: 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)<br>Cut mode (Available only when cutter module is installed.) |
| 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)<br>IEEE802.3 (LAN 10 Base-T/100 Base-TX) |
| | DB-EA4D-GS12-QM-R | USB I/F (V2.0 High Speed)<br>IEEE802.3 (LAN 10 Base-T/100 Base-TX)<br>IEEE1284 Interface (SPP, Nibble mode) |

# 2.2 MEDIA SPECIFICATIONS

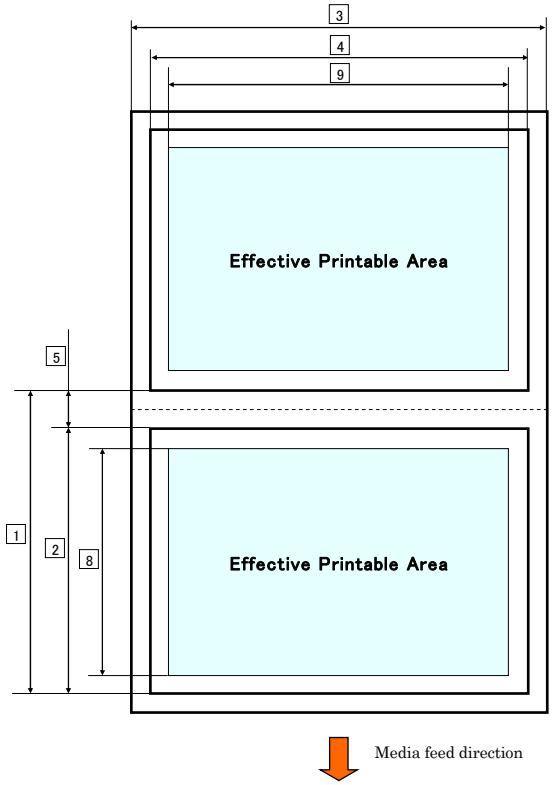
## 2.2.1 Media Size & Shape

[unit: mm]

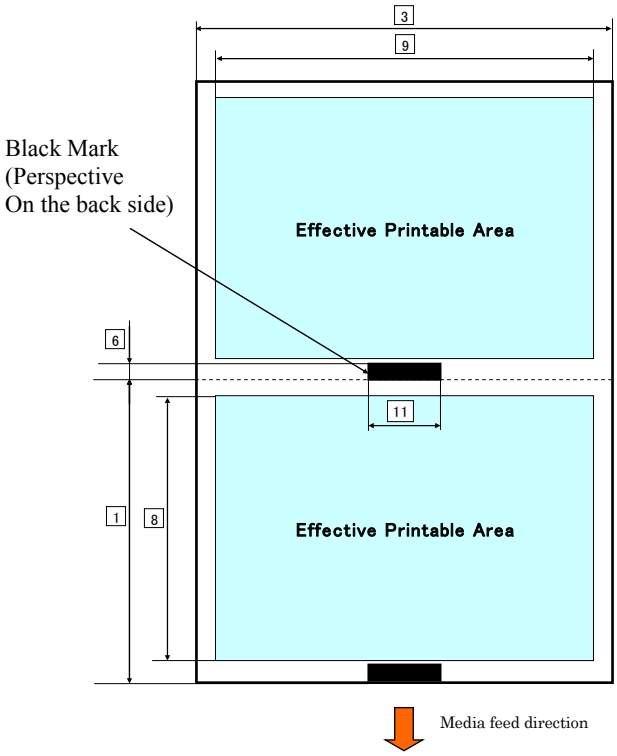
| | | | Batch Mode | Cut Mode |
|---|---|---|---|---|
| 1 | Media Length | Label | 40.0-554.8 | |
| | | Tag | | |
| | | Perforation | | |
| | | Receipt | | |
| | | Cut sheet | 120.0-554.8 | |
| 2 | Label Length | | 37.0-551.8 | |
| 3 | Media Width (see *NOTE* 4.) | Label | 58.0-130.0 | 58.0-121.0 |
| | | Tag | | |
| | | Perforation | | |
| | | Receipt | | |
| | | Cut sheet | | |
| 4 | Label Width | | 55.0-127.0 | 55.0-118.0 |
| 5 | Gap Length | | 3.0-20.0 | 6.0-20.0 |
| 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 | | |
| | | Cut sheet | 116.0-547.8 | |
| 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 | |

*NOTE:*
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.*

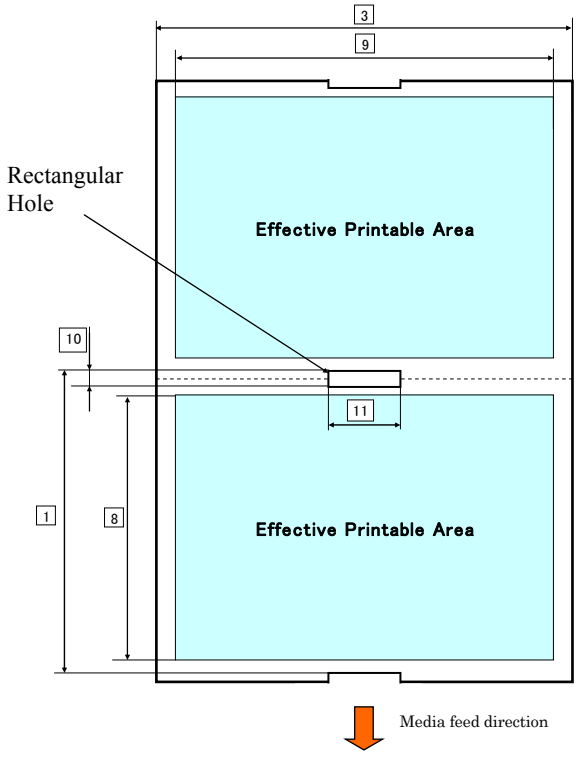
<Label Paper>



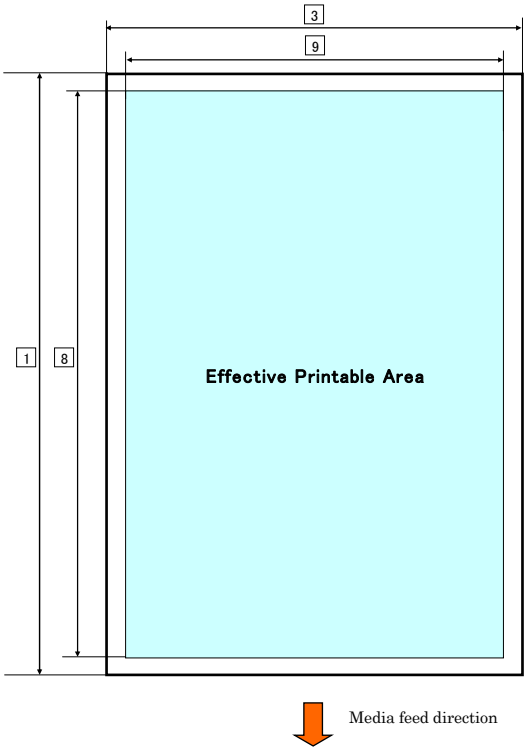

<Tag & Receipt Paper with BM>




<Perforation Paper with a hole>



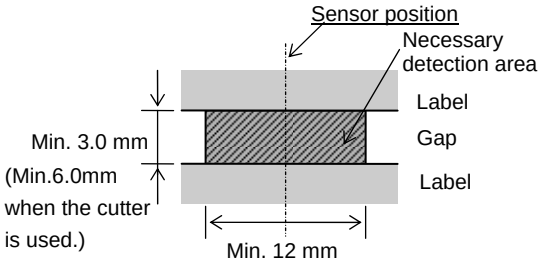

<Cut Sheet Paper>



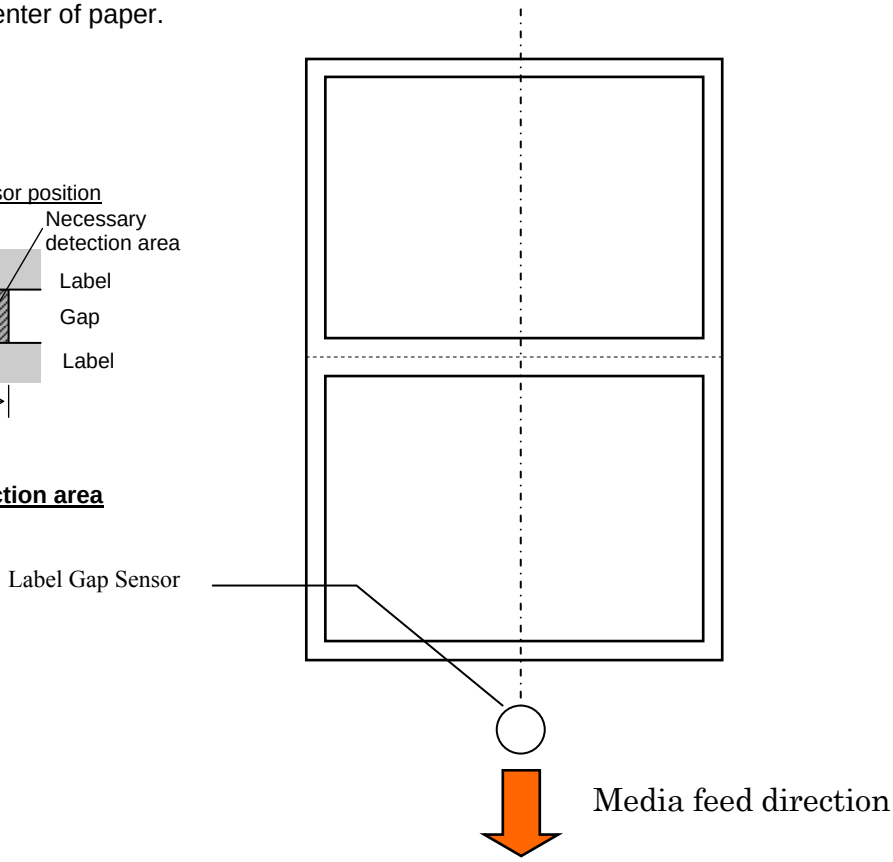
### 2.2.2 Detection Area of the Transmissive Sensor(Label Gap Sensor)

Label Gap Sensor can be used at center of paper.

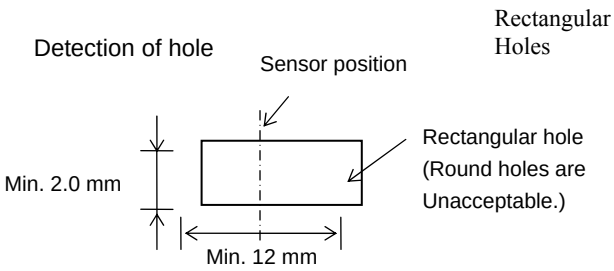
**<Label Paper>**



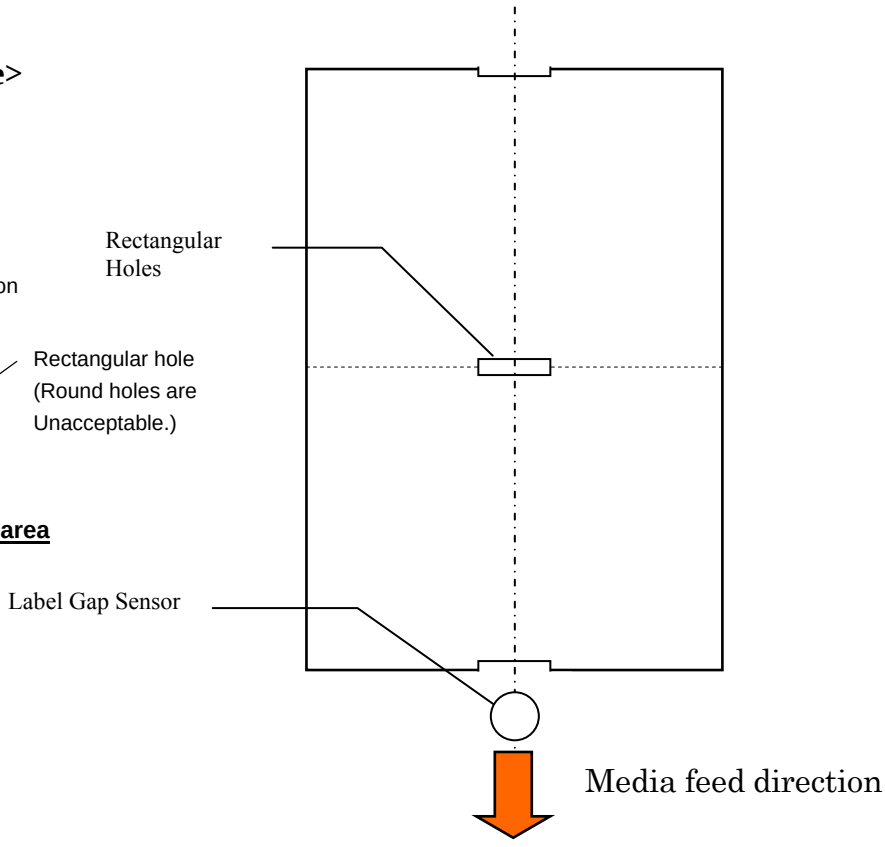

**Magnified view of detection area**



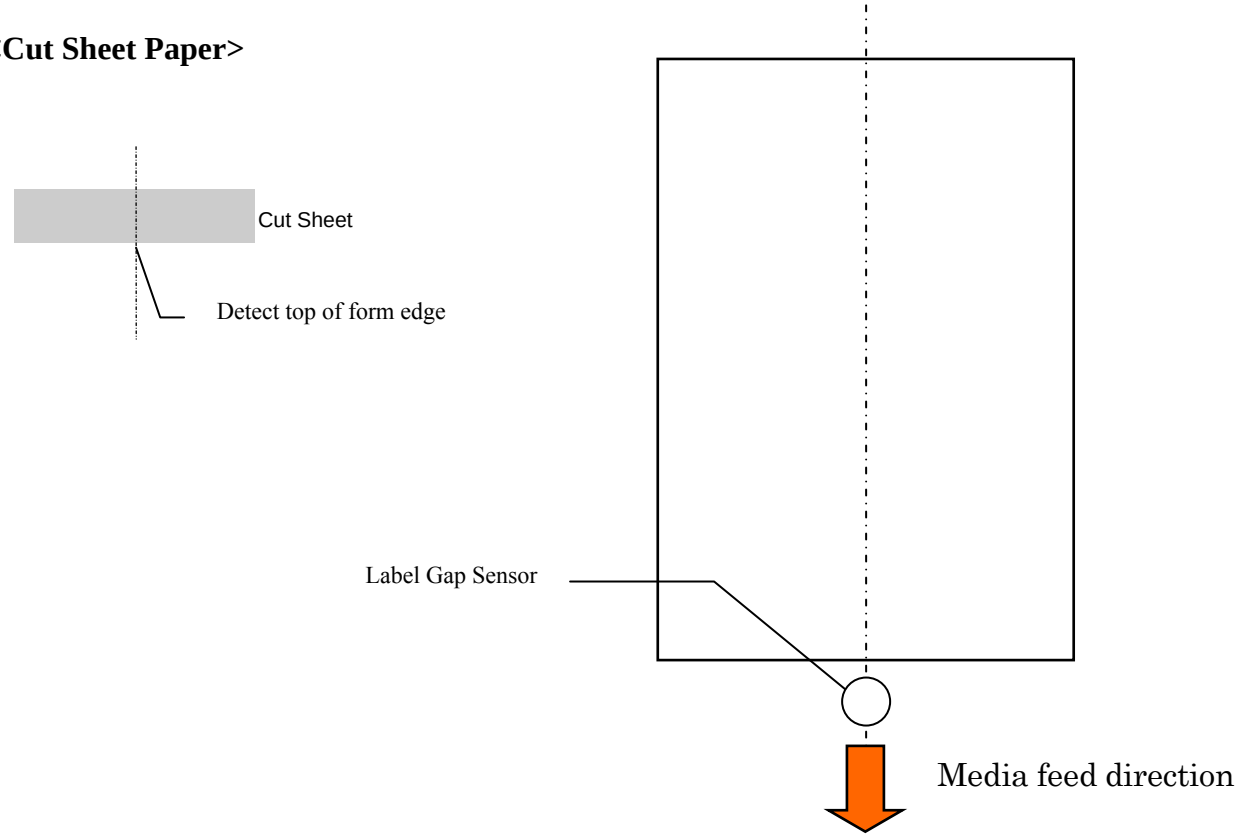

**<Perforation Paper with a hole>**




**Magnified view of detection area**



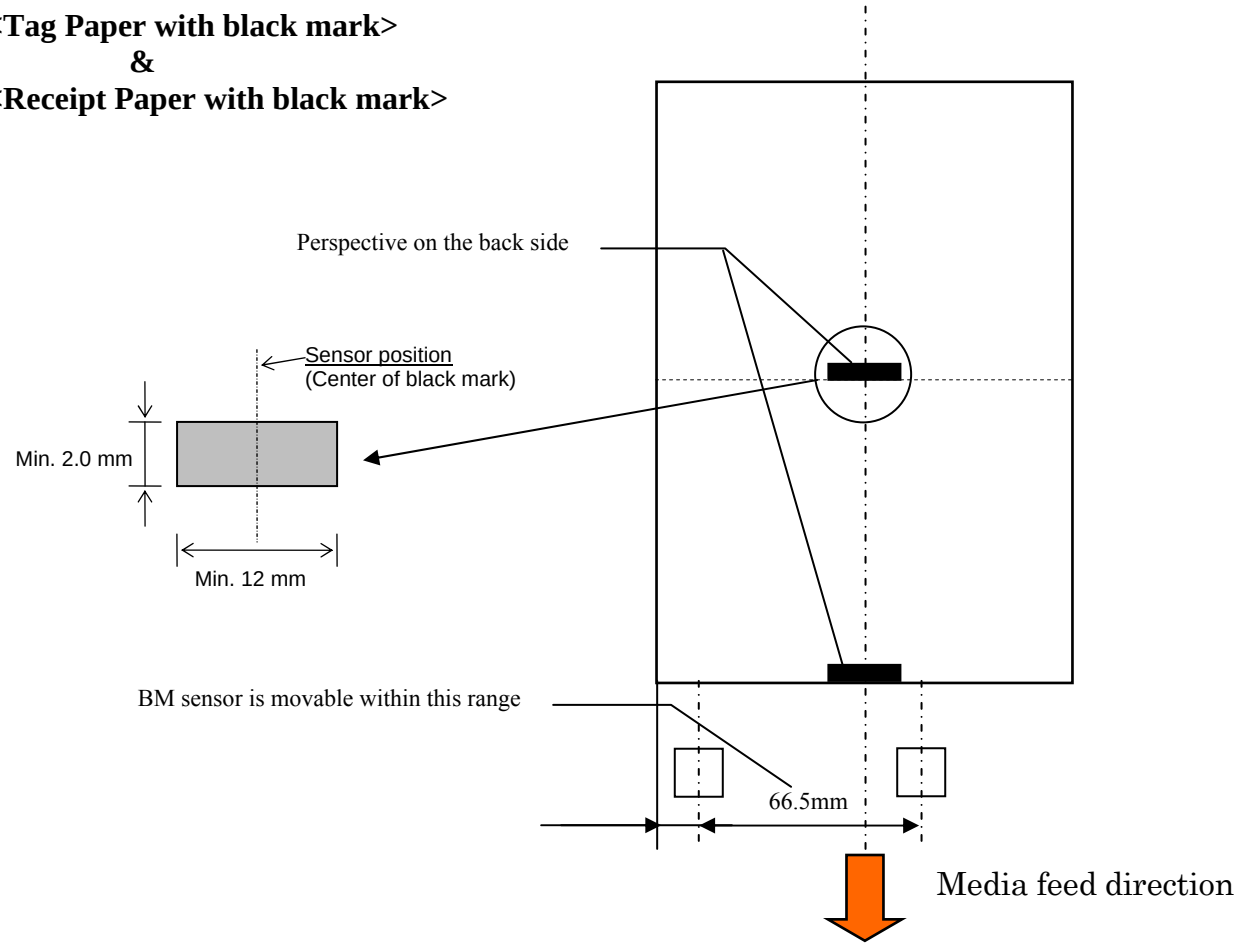
**<Cut Sheet Paper>**




### 2.2.3 Detection Area of the Reflective Sensor(BM Sensor)

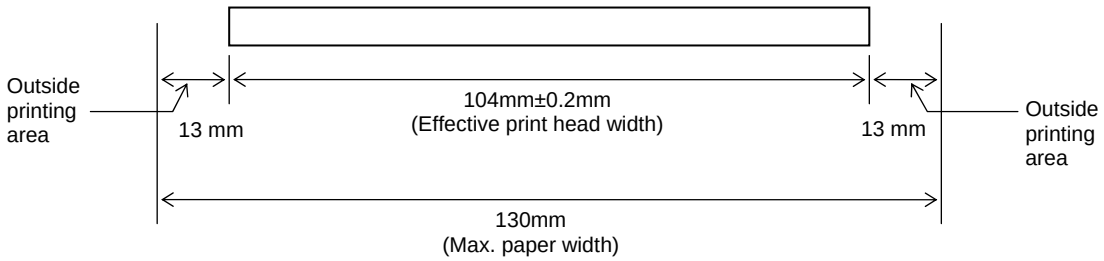
BM sensor is movable in the range from 6.0mm to 66.5mm on the left side.

**<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.



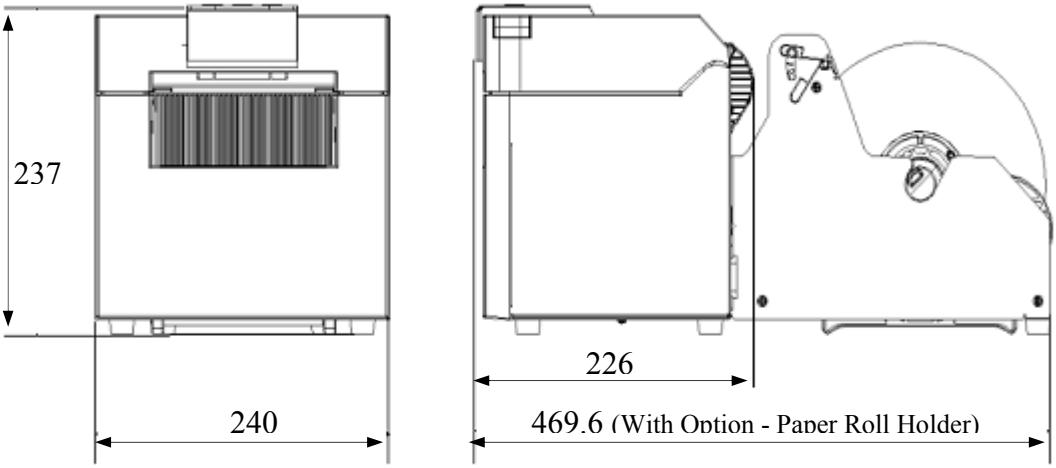

## 2.3 OPTIONS

| Option Name | Type | Description |
|---|---|---|
| Rotary Cutter | DB-EA204-RC-QM-R | A rotary cutter used to repeatedly cut media |
| 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

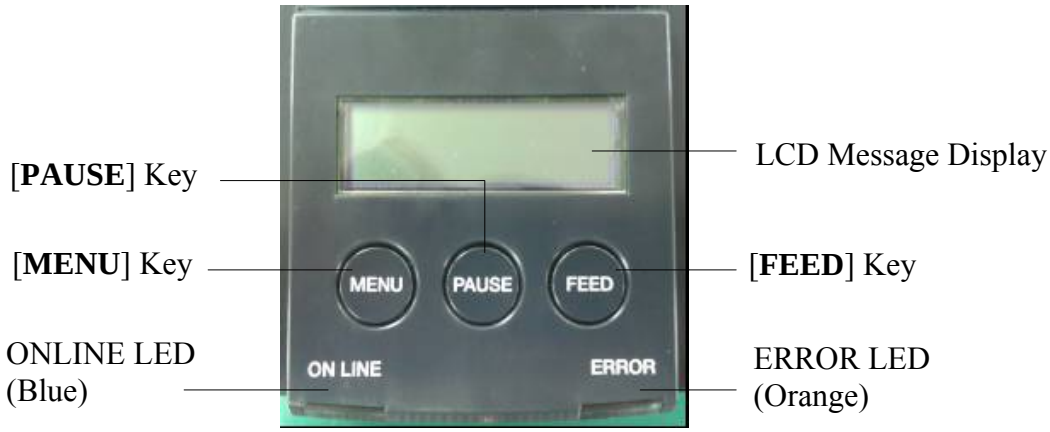



All dimension in mm

## 3.2 FRONT VIEW


## 3.3 REAR VIEW

## 3.4 OPERATION PANEL




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

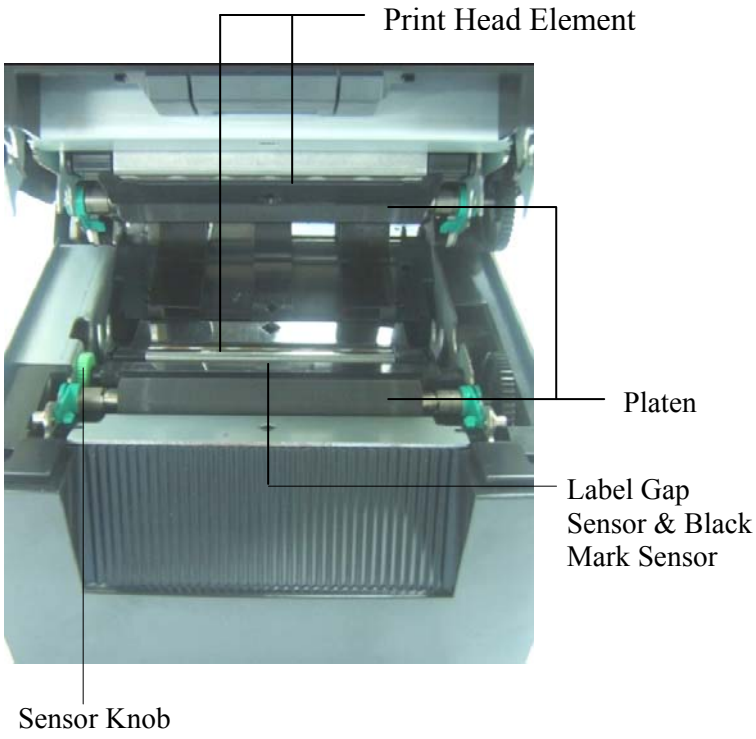
## 3.5 INTERIOR

***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.*

***AVERTISSEMENT***

1. *Ne touchez pas à la tête d'impression ou autour juste après l'impression. Vous pouvez être brûlé puisque la tête d'impression devient très chaude pendant l'impression..*
2. *Ne touchez à aucune pièce en mouvement. Assurezvous d'avoir bien arrêté l'imprimante avant de charger le média, afin de réduire le risque d'avoir vos doigts.*
3. *Pour éviter la blessure, soyez prudent de ne pas coincer vos doigts pendant que vous ouvrez ou fermez le boîtier.*



# 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<br>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.<br>USB, Parallel and Ethernet interface signal are ready to host.<br>Mechanical activities are valid. |
| On | Off | PAUSE | The printer is in PAUSE state and No error.<br>USB, Parallel and Ethernet interface signal are ready to host.<br>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.

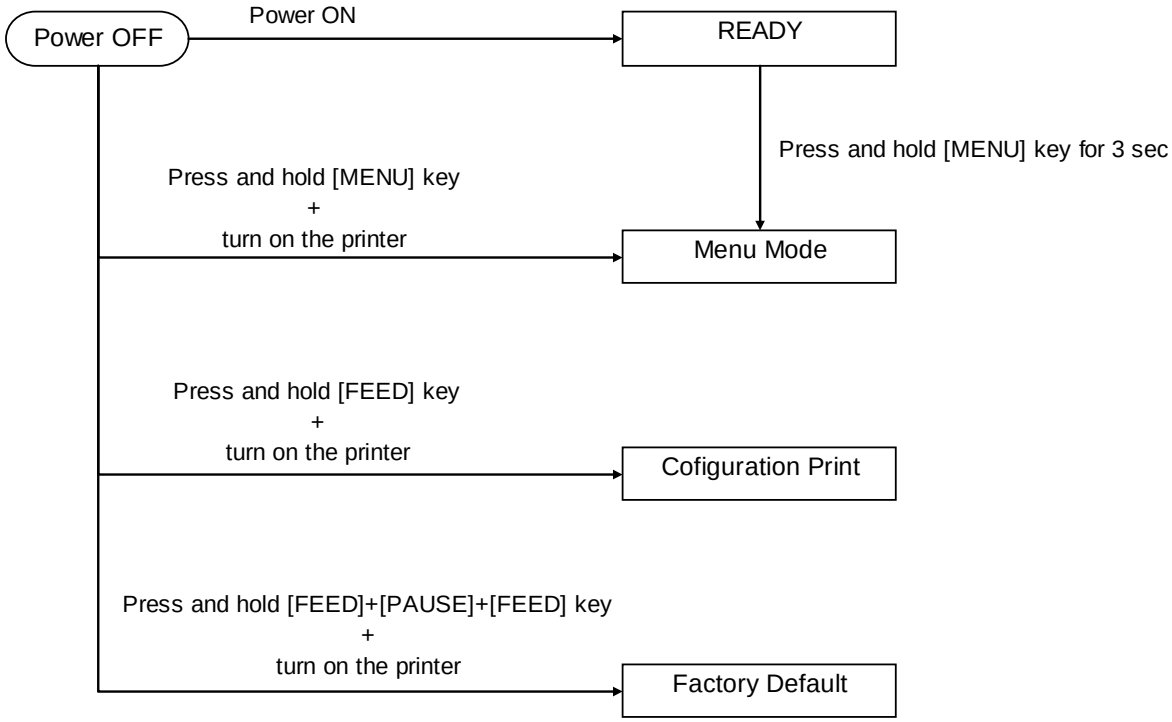
- Press FEED Key when Black Mark Mode is selected and paper is loaded,
  When Rotary cut is set to "OFF",
  - If paper is present at TOF (stand by) position, Paper is fed to next BM TOF position.
  - If paper is present at Manual cut position, Paper is fed to next Manual cut position.
  - If paper is 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.<br>Press FEED Key |
   |---|

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

   | Printer Config.<br>Printing… |
   |---|

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

   | Printer Config.<br>Completed |
   |---|

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

   | READY |
   |---|

*NOTE:*
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<br>Press FEED Key |
   |---|

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

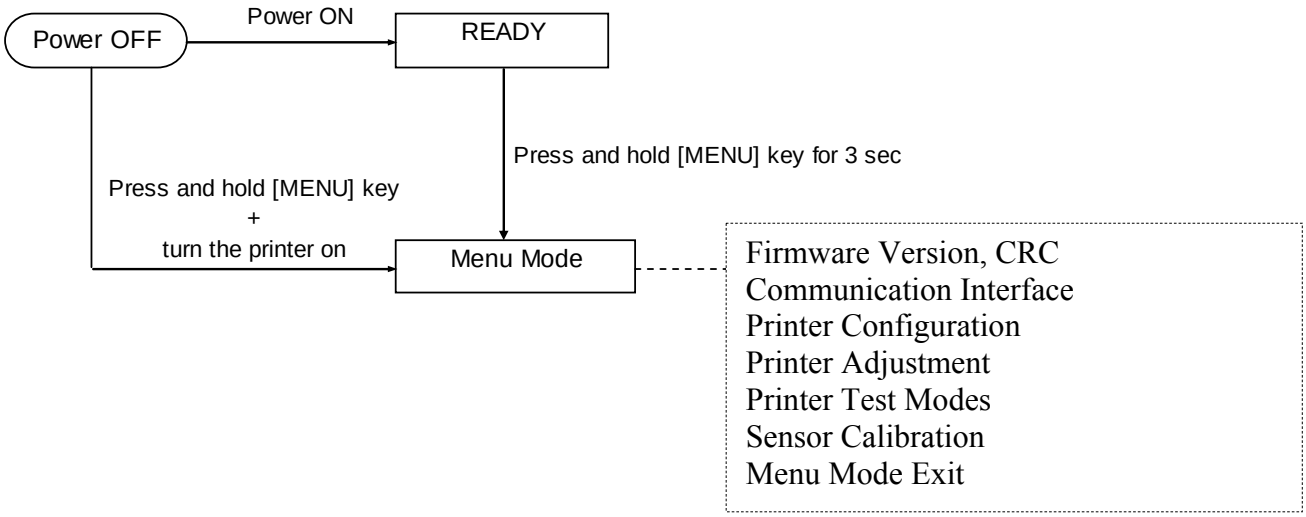
   | Default Set<br>DO NOT POWER OFF |
   |---|

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

   | Default Set<br>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<br>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 | Fuction |
|---|---|
| [MENU] | Shift the next menu downward |
| | Increase a value |
| [PAUSE] | Shift the next menu upward |
| | Decrease a value |
| [FEED] | Enter menu |
| | Save the setting |

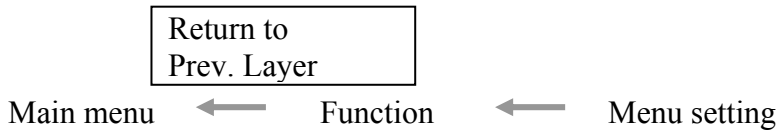
*NOTE:*
*Please refer to Appendix II for Menu Mode Tree of this 2ST Printer.*

Key Function

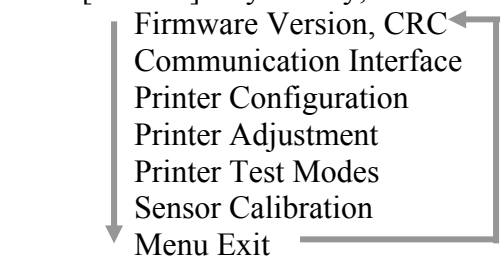
1. Press [**FEED**] Key shortly, it shifts the selection mode as shown below.

Main menu → Funtion → Menu setting → Acknowledge

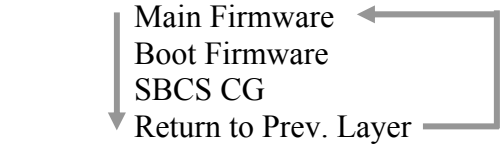
2. Press [**FEED**] Key shortly, it shifts the selection mode when a message appears on the LCD, as shown below.



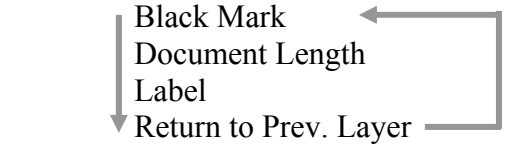

3. Press [**MENU**] Key shortly, it shifts to the next selection mode in order, as shown below.




Function selection mode

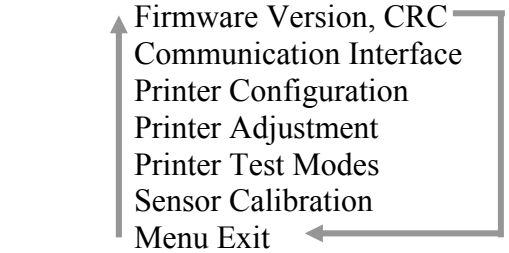



Menu setting selection mode

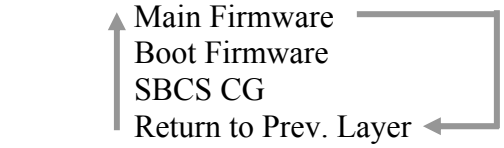



4. Press [**PAUSE**] Key shortly, it shifts to the previous selection mode in order, as shown below.

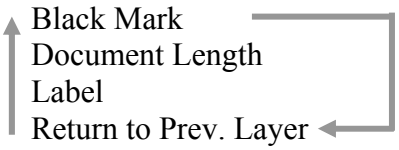
Main menu selection mode




Function selection mode



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<br>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<br>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<br>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

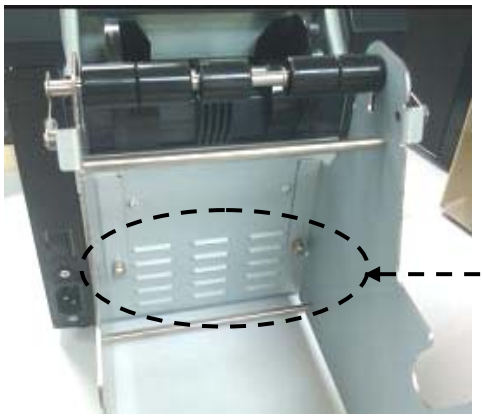
| ***WARNING!*** |
| --- |
| *Turn the POWER SWITCH to OFF before installing the roll paper holder unit.*<br><br>***AVERTISSEMENT!***<br>*Mettez l'interrupteur sur la position éteinte avant d'installer l'unité rouleau de support de papier* |

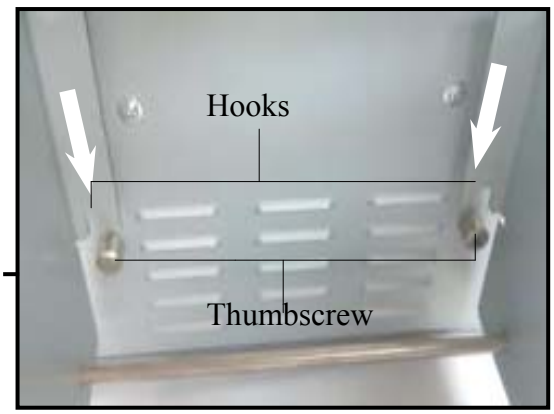
*NOTE:*
*1. Roll paper holder is required when using roll type media.*
*2. To purchase roll paper holder, please contact your authorized TOSHIBA TEC representative or TOSHIBA TEC Head Quarter.*
*3. Refer to the installation manual of roll paper holder upon purchased.*

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.



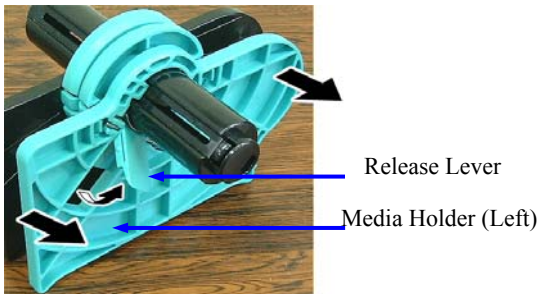


### 5.1.2 Paper Set

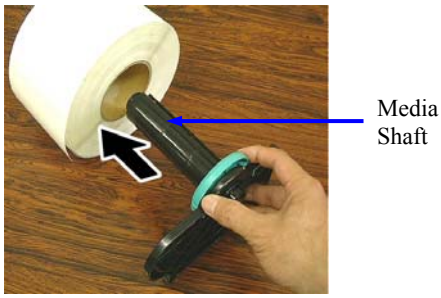
*NOTE:*
*Maximum paper width of 128mm is applied when Paper Roll Holder Option installed.*

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

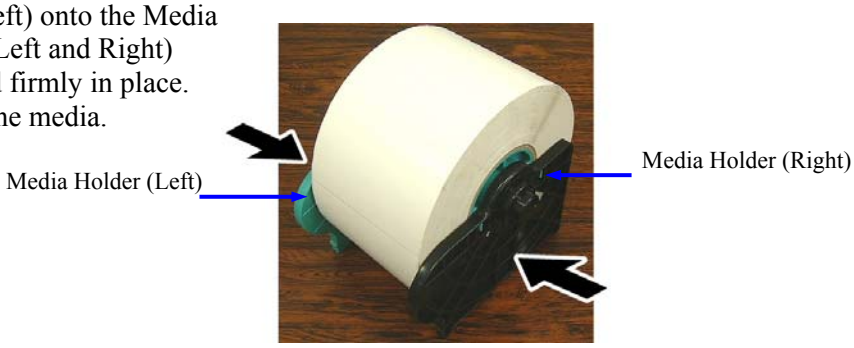
2. Raise the Release Lever and remove the Media Holder (Left) as shown below.




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



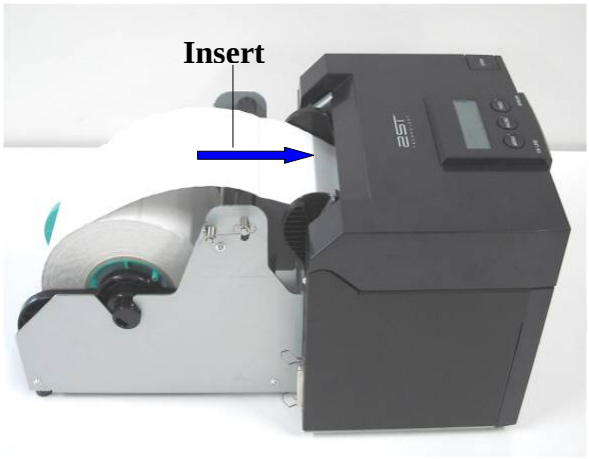

4. Assemble the Media Holder (Left) onto the Media Shaft. Push the Media Holder (Left and Right) against the media until it is held firmly in place. This will automatically center the media.




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.*

***AVERTISSEMENT!***

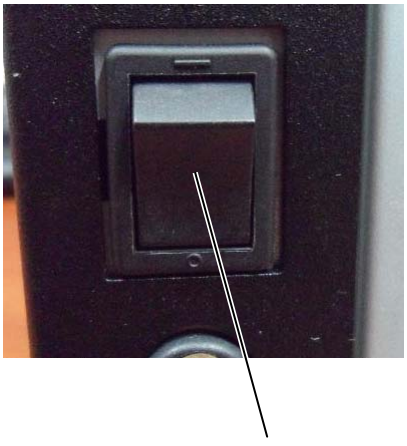
*Mettez l'interrupteur sur la position éteinte avant de brancher le cordon d'alimentation ou les câbles*

*NOTE:*
*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.*

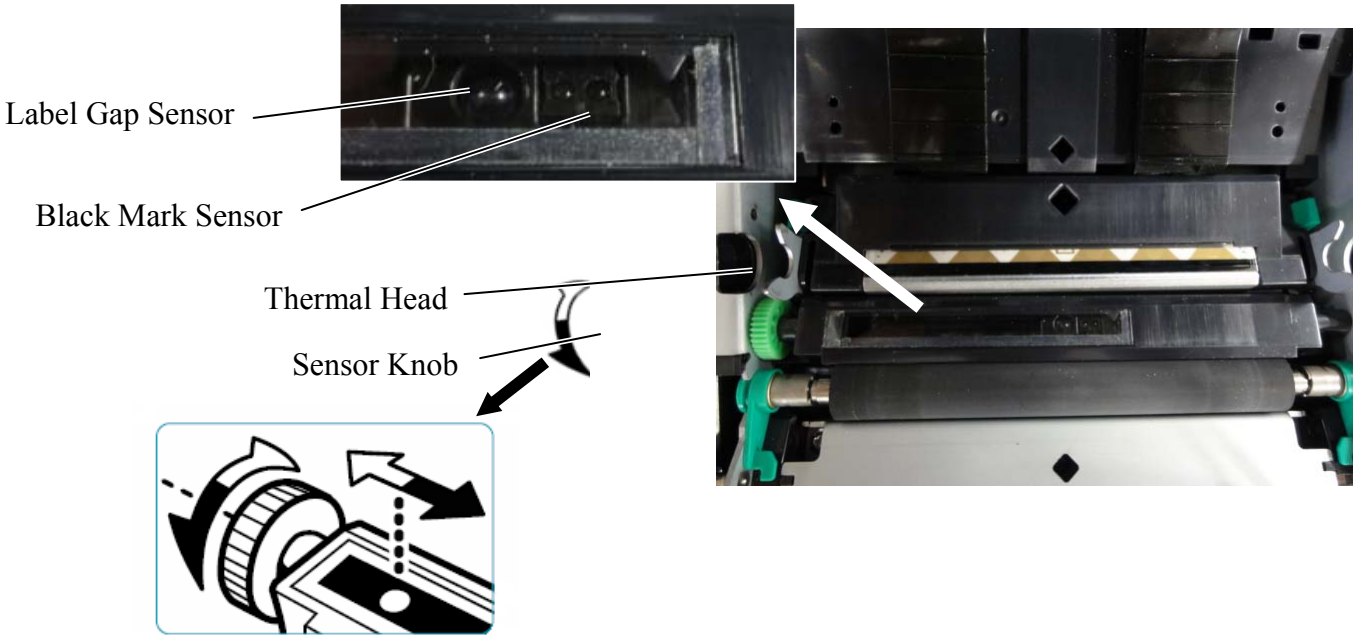
The host computer must have either USB port, LAN port or Centronics parallel port. To communicate with host computer, an USB cable, LAN cable or Centronics cable is required. *(Refer to Appendix I for more details.)*


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



# 5.3 SETTING THE SENSOR POSITION

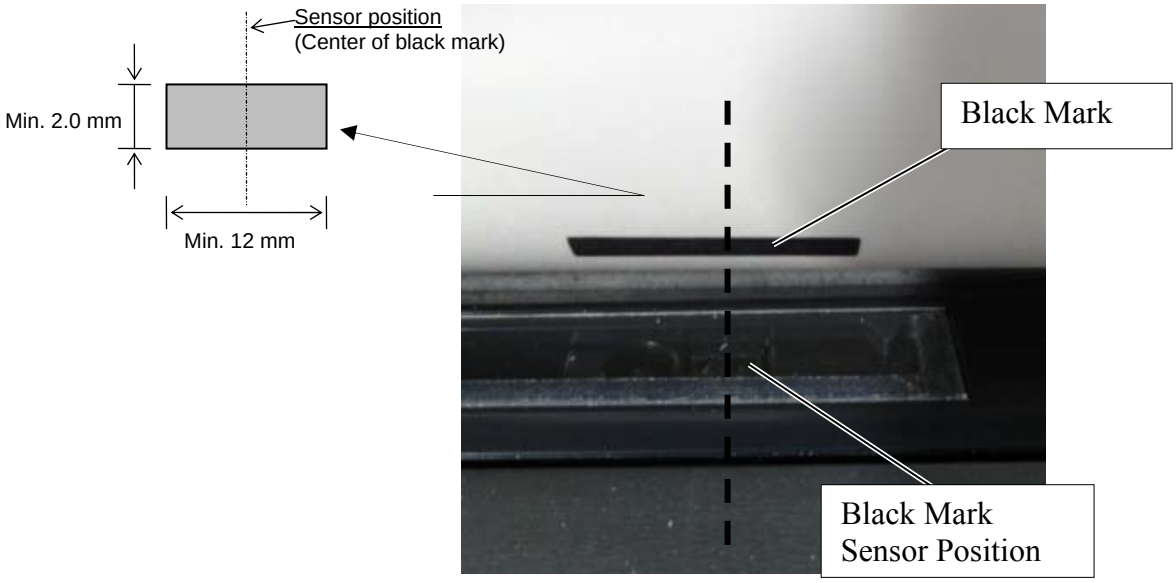
| ***WARNING!*** |
| --- |
| *Be careful when handling the print head as it becomes very hot.*<br>***AVERTISSEMENT!***<br>*Soyez prudent lorsque vous manipulez la tête d'impression puisqu'elle devient chaude.* |




## 5.3.1 SETTING THE BLACK MARK SENSOR POSITION

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

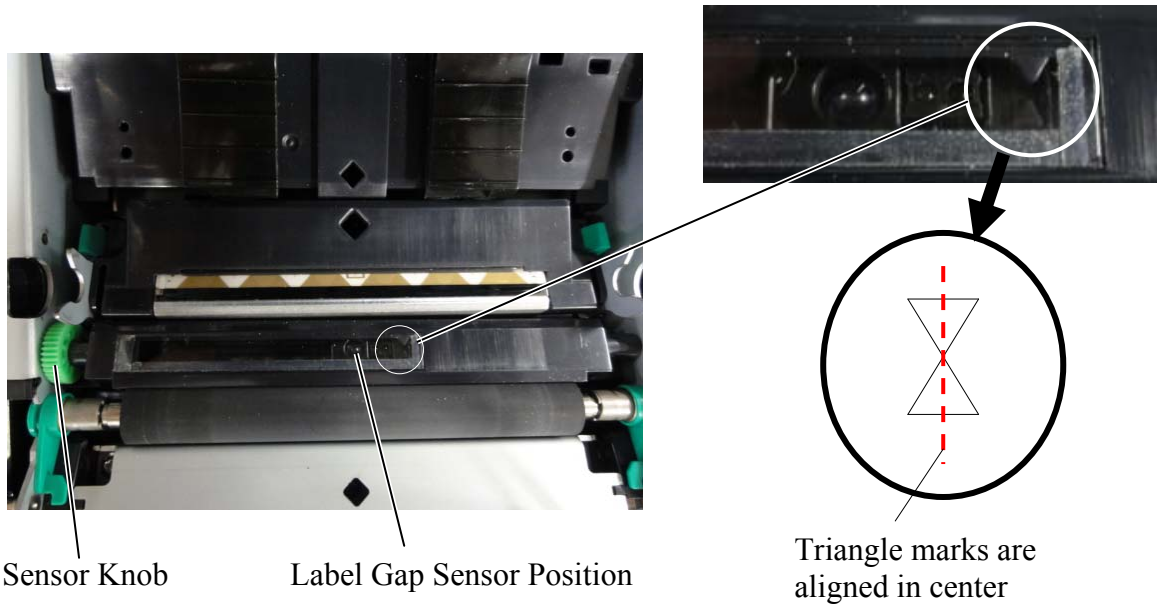
- Open the top cover and fold over the end of the tag paper.
- Rotate sensor knob to move black mark sensor horizontally until the black mark sensor is aligned at the center of black mark on tag paper.
- Black mark sensor is movable within the area of 6.0 – 66.5mm from the left of tag paper.



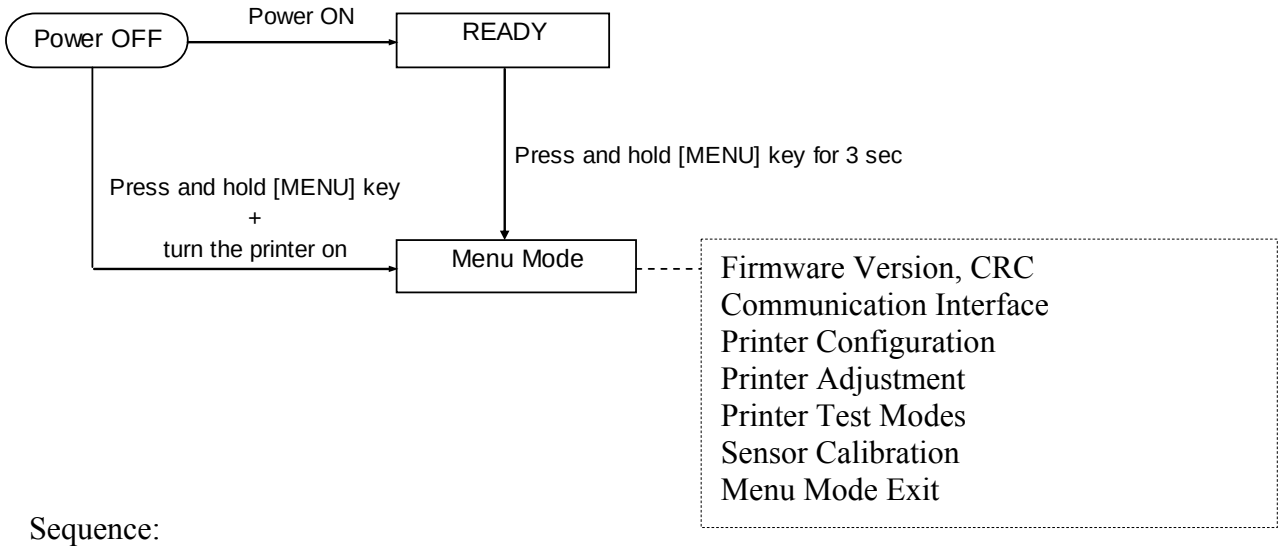
### 5.3.2 SETTING THE LABEL GAP SENSOR POSITION

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<br>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.

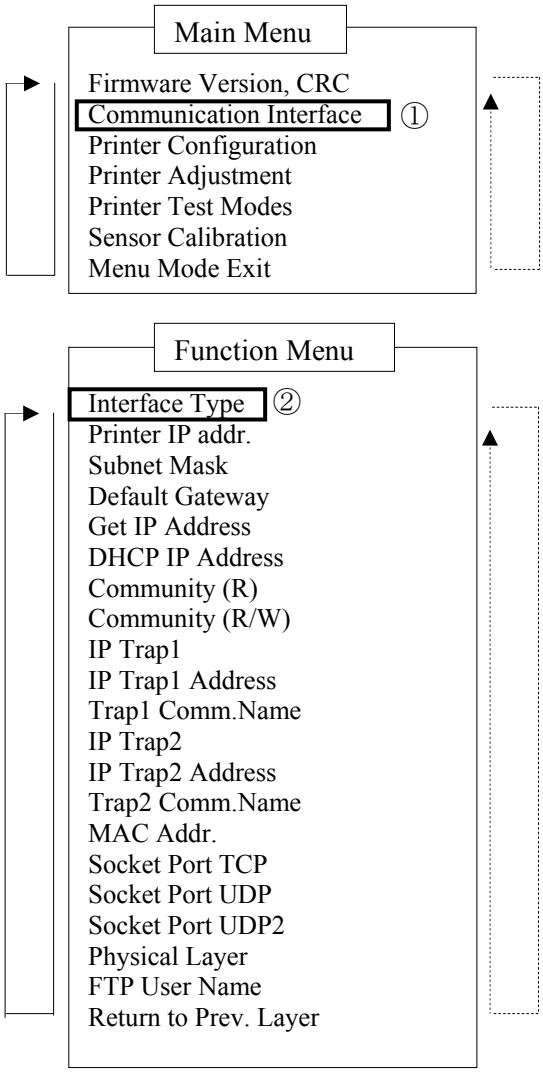
   | Parallel |
   |---|
   | Accepted |

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"




*NOTE:*
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 |

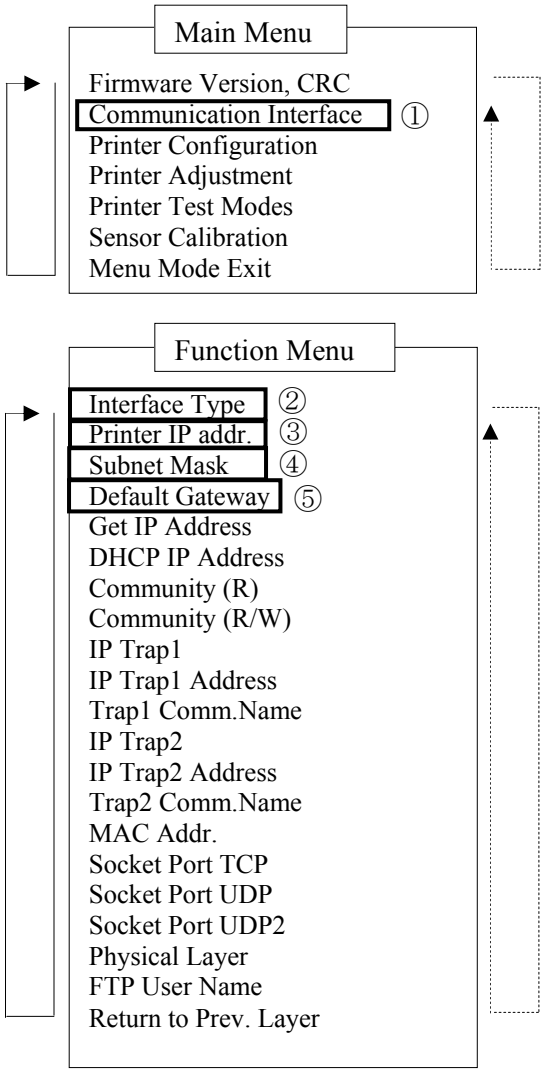
   Blink slowly

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 |




*NOTE:*
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.

```
Subnet Mask.
255.255.255.0
```
   Blink slowly

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

```
XX.XX.XX.XX
Accepted
```

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

```
Subnet Mask
XX.XX.XX.XX
```

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

```
Default Gateway
0. 0. 0. 0
```
    Blink slowly

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

```
XX.XX.XX.XX
Accepted
```

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

```
Default Gateway
XX.XX.XX.XX
```

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.

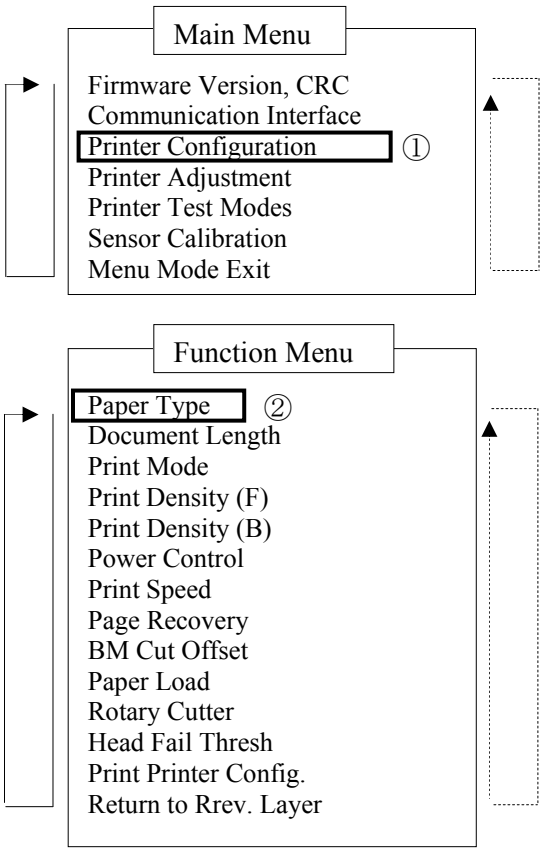
   | Paper Type |
   |---|
   | Label * |

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”

*NOTE:*
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.*

***AVERTISSEMENT!***

*Soyez prudent lorsque vous manipulez la tête d'impression puisqu'elle devient chaude.*
*Soyez prudent de ne pas coincer vos doigts pendant que vous ouvrez ou fermez le boîtier de dessus.*

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:

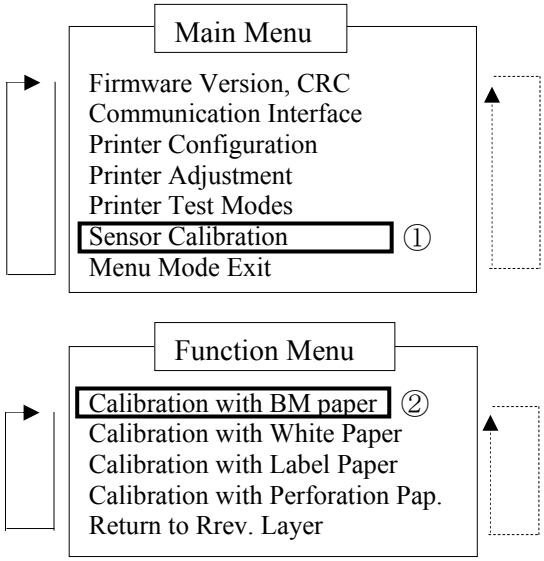
2ST printer supports 4 categories of sensor calibration functions. Refer to the following table.

| 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… |

*NOTE:*
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.

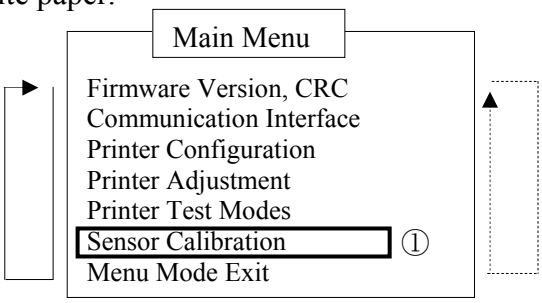
### 5.7.2 SENSOR CALIBRATION WITH WHITE PAPER

This mode performs Sensor level adjustment test with white paper.

Sequence:

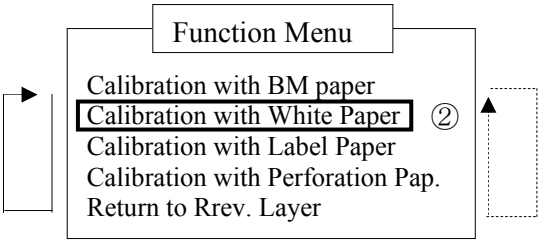
1. Select "Sensor Calibration" in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

   | 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… |

*NOTE:*
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.

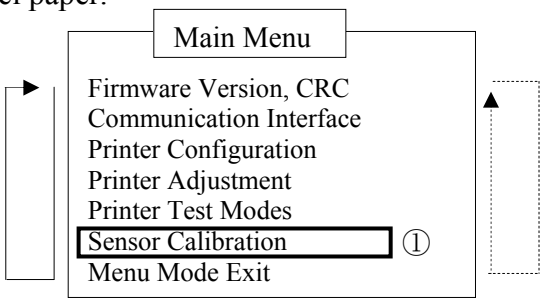
### 5.7.3 SENSOR CALIBRATION WITH LABEL PAPER

This mode performs Sensor level adjustment test with label paper.

Sequence:

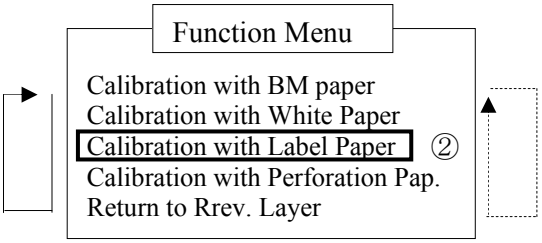
1. Select "Sensor Calibration" in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

   | 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… |

*NOTE:*
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.

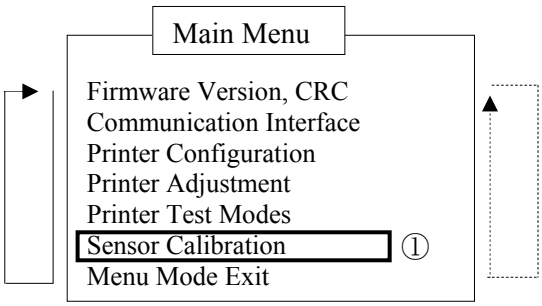
### 5.7.4 SENSOR CALIBRATION WITH PERFORATION PAPER

This mode performs Sensor level adjustment test with perforation paper.

Sequence:

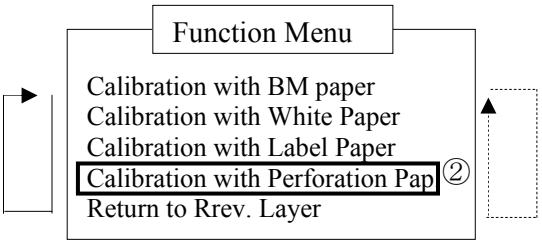
1. Select "Sensor Calibration" in main menu of Menu Mode,
   And Press [FEED] key shortly.
   A message appears on the LCD, as shown below.

   | 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… |

*NOTE:*
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

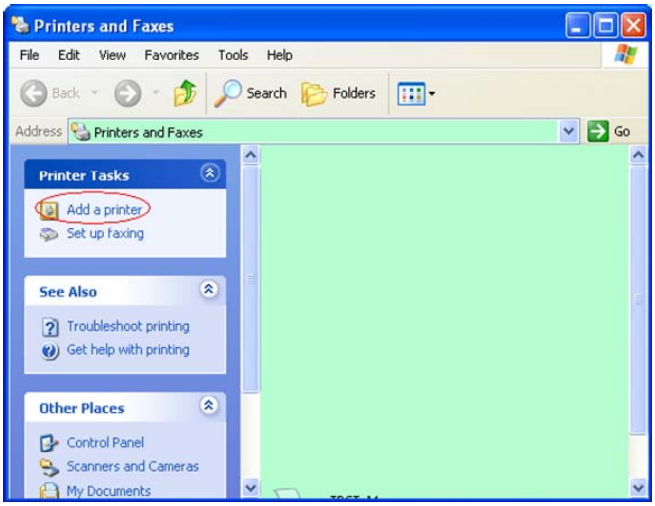
OS: Windows 2000(English) / XP Professional (English)
Language: English
Printer I/F: DB-EA4D-GS10-QM-R: USB (Printer Class), LAN(TCP/IP)
DB-EA4D-GS12-QM-R: USB (Printer Class), LAN(TCP/IP),Parallel

## 5.8.2 DRIVER INSTALLATION GUIDE BY USING USB & PARALLEL

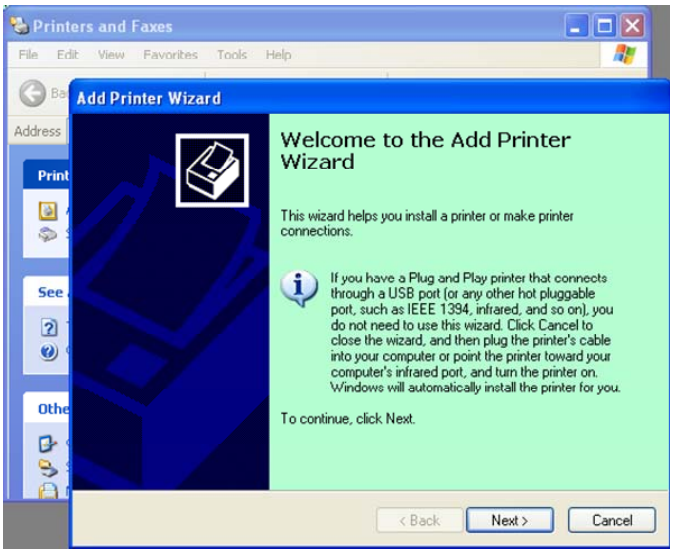
1.**Install by Plug-N-Play by USB**
Connect the printer by USB cable when powered on, and the windows OS will detect a new hardware, then go on 2.3 (“Hardware Wizard”) and follow the steps to proceed the installation.

**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.

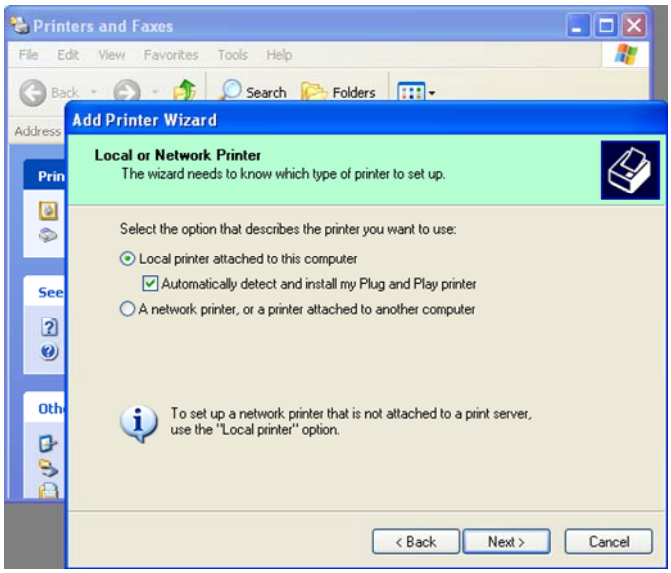
2.Install via **“Add Printer”**.
Open **“Printers and Faxes”**,
Click **“Add a printers”**.




3.Click **“ Next”**



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

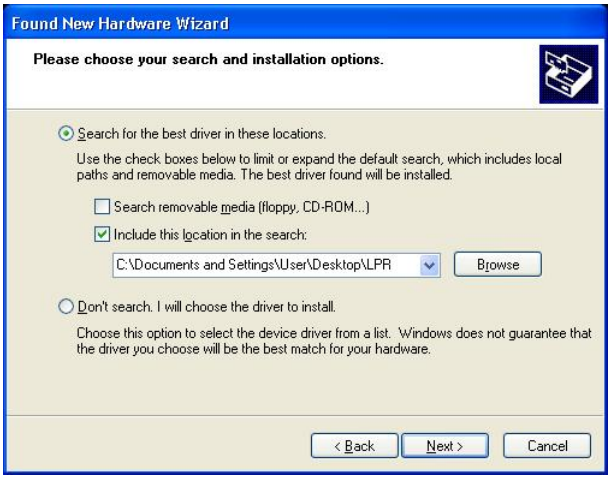



5.PC will detect new hardware and open **"Hardware Wizard"**

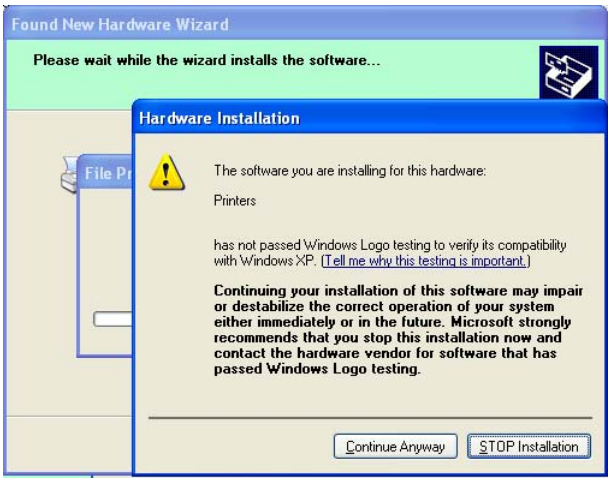
6.When the New Hardware Wizard ask whether to connect to Windows Update, Select **" No, not this time"** and click **"Next"**.


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"**

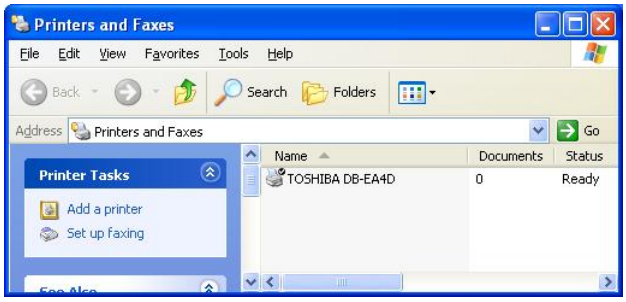



9.The OS will give windows logo testing warning, just ignore and click **"Continue Anyway"**



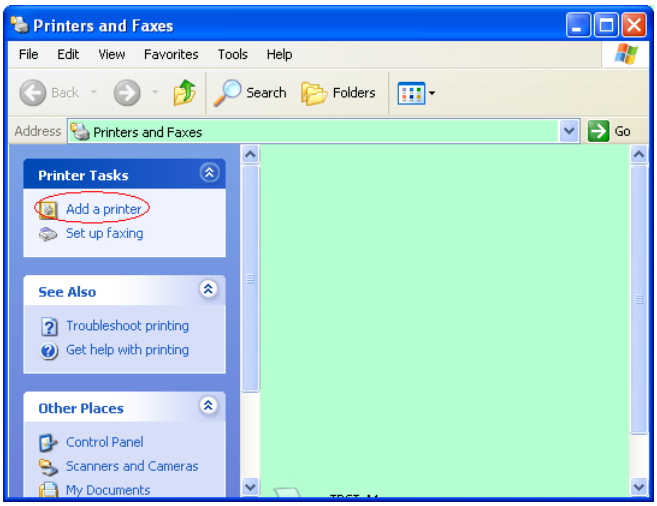

10. After OS copied the driver files into system, Click **"Finish"** to complete installation

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



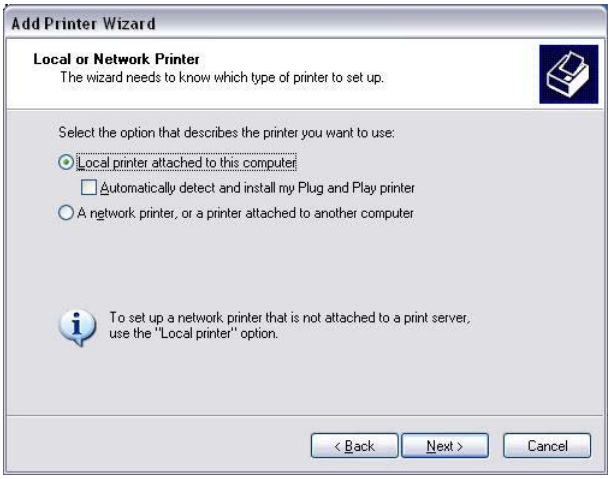

### 5.8.3 DRIVER INSTALLATION GUIDE BY USING LAN

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




2. Click **" Next"**.

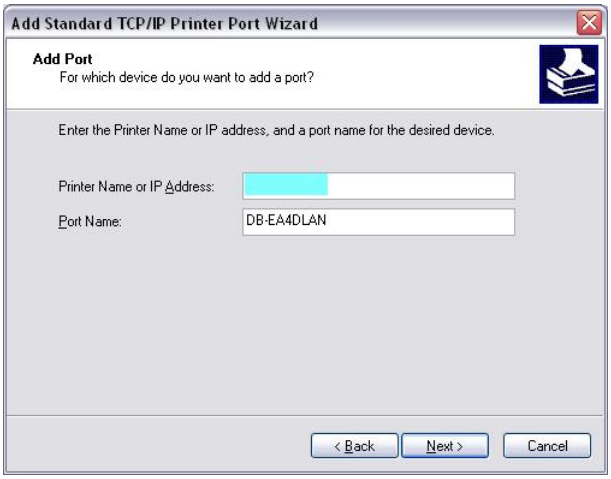
3. Select **" Local printer attached to this computer"**, and Click **"Next"**.




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”**.

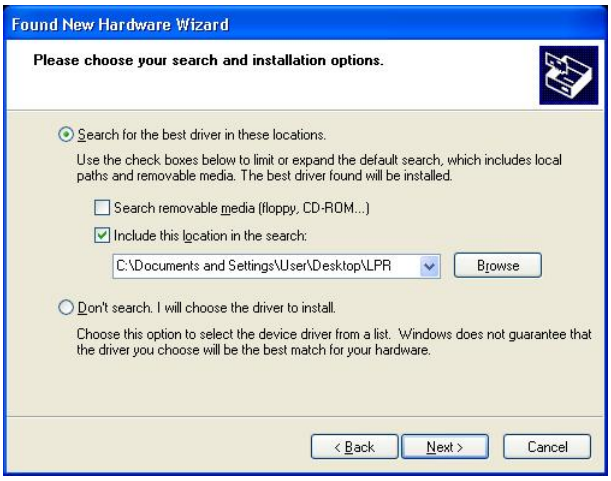



7. Click **“Finich”**.

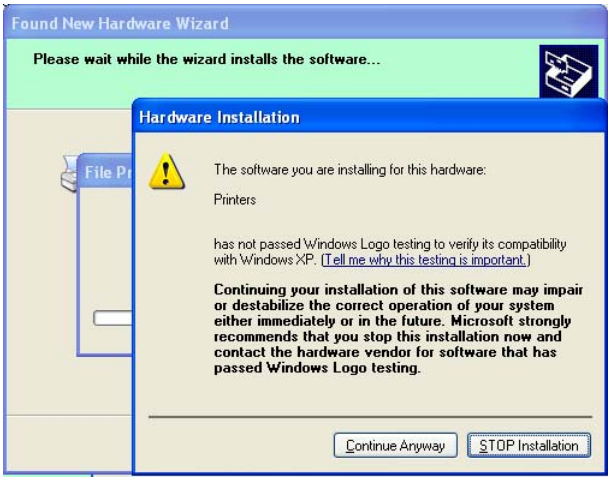

8. When the New Hardware Wizard ask whether to connect to Windows Update, Select **“ No, not this time”** and click **“Next”**.

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"**

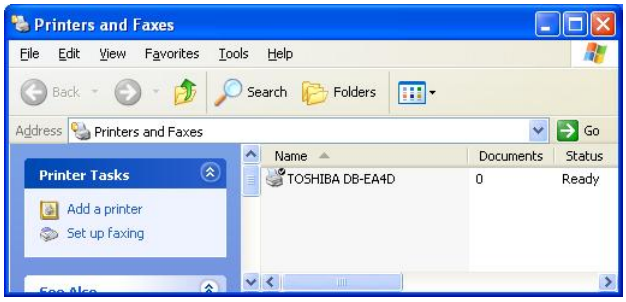



11. The OS will give windows logo testing warning, just ignore and click **"Continue Anyway"**



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.<br>vvvvv: 5 digits for the version number<br>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.<br>vvvvv: 5 digits for the version number<br>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.<br>vvvvv: 5 digits for the version number<br>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.<br>vvvvv: 5 digits for the version number<br>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*<br>Ethernet<br>Parallel | Select the interface type.<br>Note) If Parallel option is not installed, "Parallel" is not displayed. |
| Printer IP Addr. | XXX.XXX.XXX.XXX<br>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<br>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<br>XXX: No.000-255 | Set the subnet mask for Ethernet. This setting is valid, if Ethernet is selected for Interface Type. |
| Socket Port | XXXX<br>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<br>Document Length<br>Label*<br>Perforation<br>Cut Sheet | Select a type of paper.<br>This setting is used for normal printing. Refer to the chapter "Paper Type Control".<br>Note) In Printer Test modes, this printer has individual setting of Paper Type. |
| Document Length | XXX/203 inch<br>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"<br>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*<br>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*<br>High | Select a type of power consumption.<br>(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<br>6.0ips<br>5.0ips<br>4.0ips*<br>3.0ips | Select printing speed.<br>If Variable is selected, the printing speed depends on the duty of the printing data.<br>If other speeds are selected, the printing speed is fixed to the selected speed.<br>Note) The message of Variable is not displayed (can not be selected), if Rotary Cutter is not Off. |
| Max. Variable | 6.0ips*<br>5.0ips<br>4.0ips<br>3.0ips | Select maximum printing speed of "Variable".<br>If Variable is selected in Print Speed, this setting is valid for the maximum printing speed for Variable. |
| Page Recovery | Off*<br>On | Select an error page recovery mode on or off.<br>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".<br>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*<br>Manual | Select the paper loading mode Auto or Manual.<br>If "Auto" is selected, paper is loaded automatically when PE sensor detects paper in PE state.<br>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*<br>Manual<br>Auto | Select the Rotary Cutter option.<br>If "Manual" is selected, the printer requires Cut command is sent. If Cut command is sent, paper is cut at the end of page.<br>If "Auto" is selected, the printer cuts paper every at the end of page without Cut command.<br>Cut position:<br>Label: between Gap (see 3.1.2)<br>BM: Black mark (see 3.2.2)<br>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".<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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<br>Document Length<br>Label*<br>Perforation | Select a type of paper.<br>This setting is used in Printer Test modes.<br>Refer to the chapter "Paper Type Control" |
| | Form Length | XXX/203 inch<br>XXX: 560-1260*-4434 | Set Label length in n/203 inch.<br>This length is used for the label length in Label mode.<br>Set Document length in n/203 inch. This length is used for the page length in Document Length mode.<br>This setting is used in Printer Test modes.<br>Refer to the chapter "Label Mode" and "Document Length Mode" |
| | Paper Width | 58mm<br>80mm<br>4inch*<br>5.1inch | Set a type of the paper width. This width is used for Test modes and Print Printer Configuration.<br>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.<br>Refer to the Chapter "Rolling ASCII print test" |
| H Print Test Simplex | It performs H print on 1ST side.<br>Refer to the Chapter "H print test" |
| Dot Check Test Simplex | It performs Dot Check print on 1ST side.<br>Refer to the Chapter "Dot check pattern print test" |
| Graphics Test Simplex | It performs Graphics print on 1ST side.<br>Refer to the Chapter "Graphics print test" |
| Rolling ASCII Duplex | It performs Rolling ASCII print on 1ST and 2ST sides both.<br>Refer to the Chapter "Rolling ASCII print test" |
| H Print Test Duplex | It performs H print on 1ST and 2ST sides both.<br>Refer to the Chapter "H print test" |
| Dot Check Test Duplex | It performs Dot Check print on 1ST and 2ST sides both.<br>Refer to the Chapter "Dot check pattern print test" |
| Graphics Test Duplex | It performs Graphics print on 1ST and 2ST sides both.<br>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<br>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<br>Completed |

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

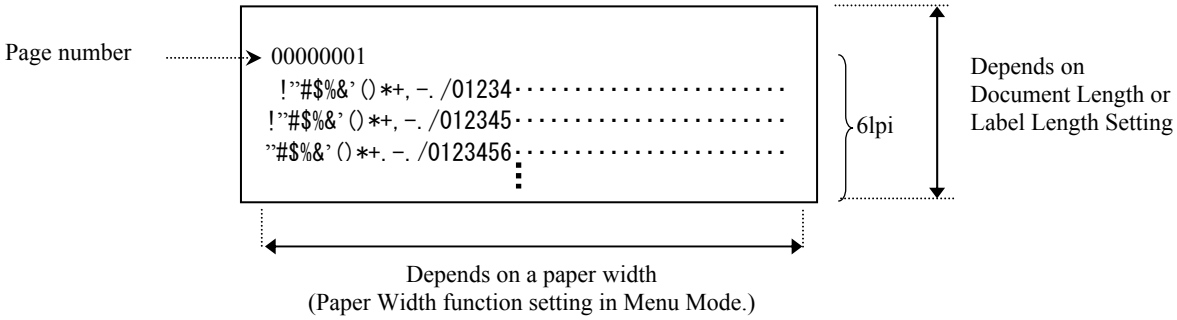
   If detects errors or warnings during performing each printing test, an error message appears the same as Online Mode as shown below.
   e.g.)

| | |
|---|---|
| ERROR<br>PAPER JAM | Rolling ASCII<br>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.



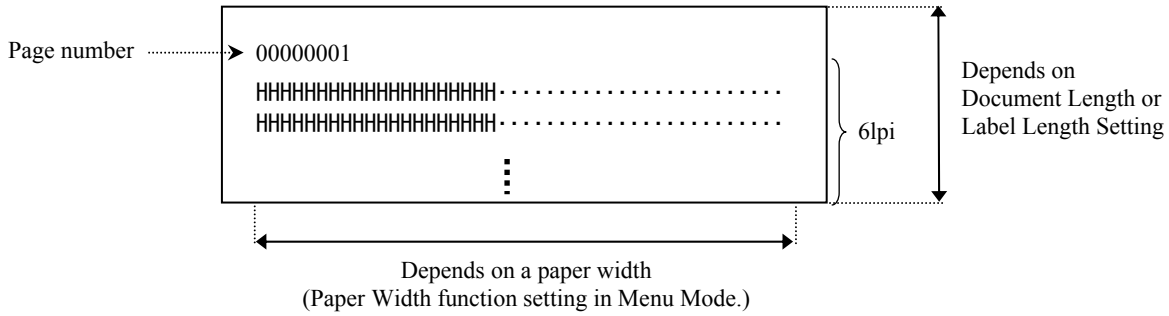

If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to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



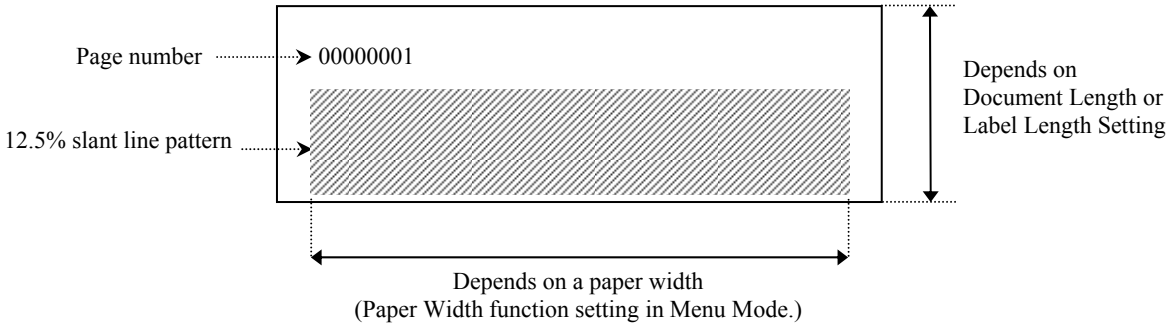

If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to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



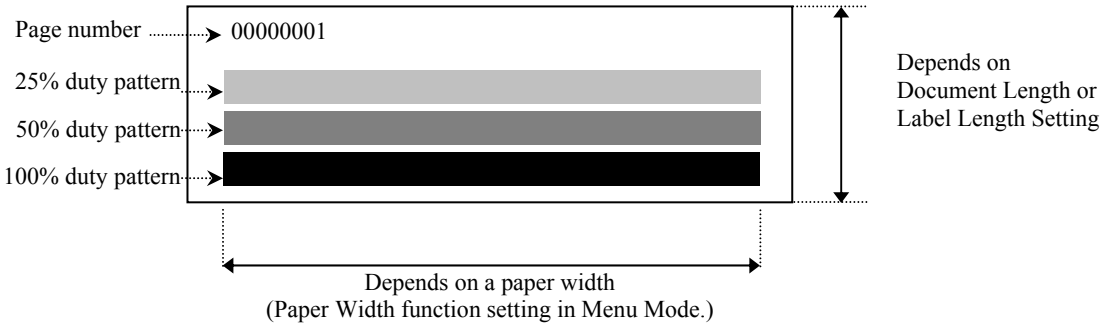

If the setting of paper type is Black Mark Mode, the paper is cut at the next Black Mark (w/ Cutter) or fed to the next Black Mark to cut at manual cut position (w/o Cutter). If the paper type is Document Length Mode, the paper is cut at the end of the page (w/ Cutter) or fed to the end of the page to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

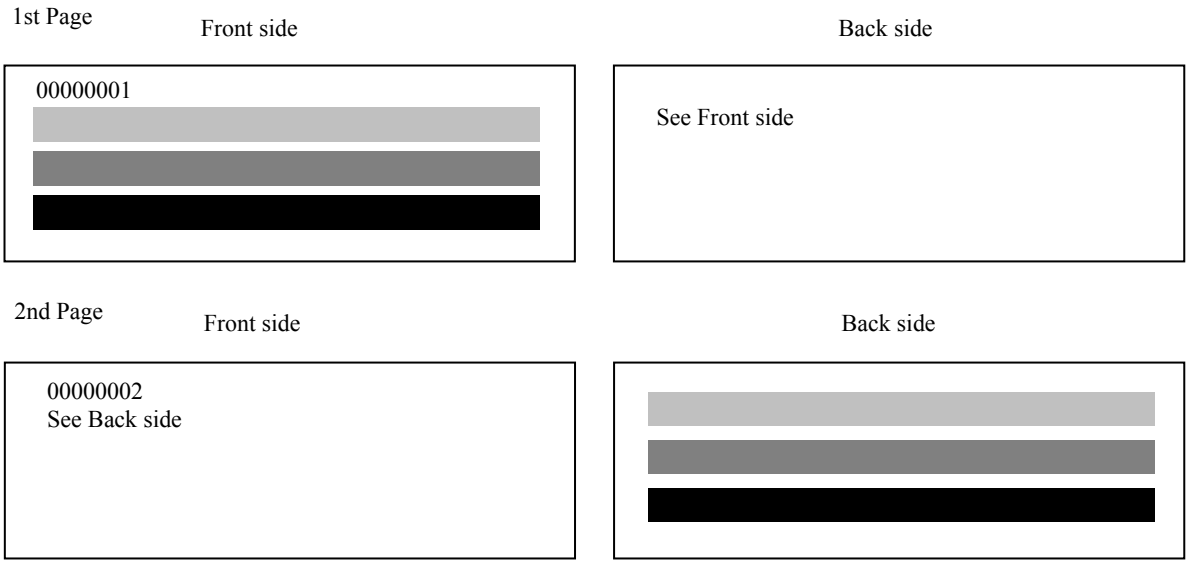
## 4. Graphics print test

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.*

***AVERTISSEMENT:***
*Utilisez uniquement un papier conforme aux spécifications requises. L'utilisation du papier non spécifié pourra réduire la durée de vie de l'imprimante, entraînant des problèmes avec la qualité d'impression, la panne du bac d'alimentation en papier ou raccourcir la vie du coupeur. Tout papier doit être manipulé avec soin pour éviter tout dommage quelconque. Lisez attentivement cette directive.*

- 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.*

***AVERTISSEMENT!***

*Soyez prudent lorsque vous manipulez la tête d'impression puisqu'elle devient chaude*

## 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.*

***AVERTISSEMENT!***

1. *Rassurez-vous de débrancher le câble d'alimentation avant d'effectuer tout entretien.*
2. *NE VERSEZ PAS DE L'EAU directement sur l'imprimante.*

***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.*

***ATTENTION :***

1. *N'utilisez aucun objet pointu pour pour nettoyer la tête d'impression et le plateau. Le faire pourrait les endommager, entraînant une mauvaise qualité d'impression ou des points manquants.*
2. *N'utilisez jamais un solvant organique comme les diluants ou le benzène pour nettoyer. L'utilisation de pareils solvants pourrait entraîner la décoloration des boîtiers, une mauvaise qualité d'impression, ou la panne de l'imprimante*
3. *Ne touchez pas le composant de la tête d'impression, l'électricité statique accumulée pourra endommager la tête d'impression*

*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.*

***AVERTISSEMENT!***

1. *NE VERSEZ PAS DE L'EAU directement sur l'imprimante.*
2. *N'APPLIQUEZ PAS de nettoyant ou détergent directement sur un boîtier.*
3. *N'UTILISEZ JAMAIS LE DILUANT OU AUCUN AUTRE SOLVANT sur les boîtiers en plastique.*
4. *NE nettoyez pas les boîtiers avec de l'alcool, ceci pourrait entraîner leur décoloration, la perte de leur forme ou présenter des faiblesses structurelles.*

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.*

***AVERTISSEMENT!***

*N'utilisez aucun outil qui pourrait endommager la tête d'impression.*

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.*

***AVERTISSEMENT!***

*Si vous ne pouvez pas résoudre un problème avec les actions décrites à cette section, n'essayez pas de réparer l'imprimante. Éteignez et débranchez l'imprimante. Puis, contactez un représentant de service autorisé de TOSHIBA TEC pour 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<br>Remove jammed paper<br>Close the print upper block<br>➔ Section 7.3 |
| | | | 2. Label gap sensor is not correctly aligned | 2. Ajust the sensor position correctly.<br>➔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.<br>➔ 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 “<br>➔ 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<br>➔ Section 5.3.1 |
| ERROR HEAD TEMPERATURE | On | Blink fast | 1. Thermal head temperature is high | 1. Wait for a few minutes<br>If does not solve the problem,<br>Call a TOSHIBA TEC authorized service representative |
| | | | 2. Thermal head is damaged | 2. Turn the printer off and then on.<br>If does not solve the problem,<br>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.<br>If does not solve the problem,<br>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.<br>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<br>➔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.<br>➔ |
| 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".<br>(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

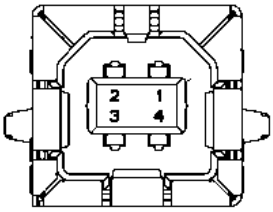
| Problem | Causes | Solutions |
|---|---|---|
| The printer will not turn on. | 1. The Power Cord is disconnected | 1. Plug in the Power Cord. |
| | 2. The AC outlet is not functioning | 2. Test with a power cord from another electric appliance. |
| | 3. The fuse has blown or the circuit breaker has 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

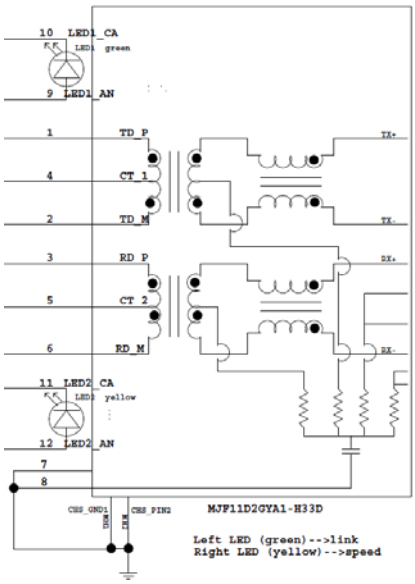
| Pin No. | Signal |
|---|---|
| 1 | VBUS |
| 2 | D- |
| 3 | D+ |
| 4 | GND |
| Shell | Shield |




### 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

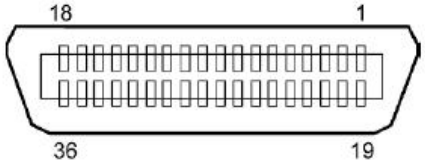
| Pin No. | Signal |
|---|---|
| 1 | TD+ |
| 2 | TD- |
| 3 | RD+ |
| 4 | TCT |
| 5 | RCT |
| 6 | RD- |
| 7 | FG |
| 8 | FG |
| 9 | 3.3V |
| 10 | LED1 |
| 11 | LED2 |
| 12 | 3.3V |



## 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 -----<br>Calibration Succeeded |
| | | Calibration with White Paper | Calibration Performing... | Failed 12345 Sensors -----<br>Calibration Succeeded |
| | | Calibration with Label Paper | Calibration Performing... | Failed 12345 Sensors -----<br>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<br>Failed 12345<br>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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