TOSHIBA

Barcode Printers

Owner's Manual

B-SX8T-TS12-QM-R

TABLE OF CONTENTS

1. PRODUCT OVERVIEW

1.1 Introduction

Thank you for choosing the TOSHIBA B-SX8T series thermal printer. This Owner's Manual contains from general set-up through how to confirm the printer operation using an online test print, and should be read carefully to help gain maximum performance and life from your printer. For most queries, refer to this manual and keep it safe for future reference. Contact your Toshiba Tec representative for further information concerning this manual.

1.2 Features

This printer has the following features:

• Various kinds of interface

Various kinds of interface are provided:

<Standard>	**<Option>**
• Parallel	• Serial
• USB	• Expansion I/O
• LAN	

• Superior hardware

Clear print quality is realised by an 12 dots/mm (305 dpi) print head, at a printing speed of 76.2 mm/sec. (3 inches/sec.), 101.6 mm/sec. (4 inches/sec.), or 203.2 mm/sec. (8 inches/sec.)

• Heavy-duty enclosure

As the enclosure is made of metal, the printer can be used in an industrial environment such as a factory.

• A variety of options

The following optional devices are available:

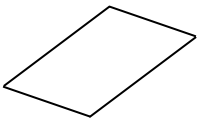
- Cutter module
- Strip module
- Serial interface board
- Metal Supply Cover (Future option)
- Expansion I/O board
- Real Time Clock

1.3 Accessories

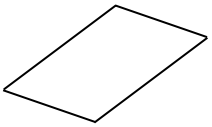
When unpacking the printer, make sure all the following accessories are supplied with the printer.

> ***NOTE***:
> *As a power cord is not supplied with this printer, purchase one that meets each country's safety standard. For details, refer to* ***APPENDIX 3***.

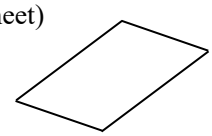
☐ Supply Loading Instructions



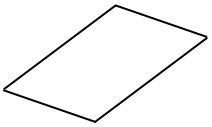
☐ Safety Information



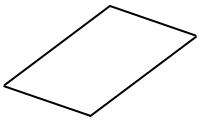
☐ Quality Control Report (1 sheet)



☐ Warranty Disclaimer Sheet (1 sheet)



☐ QSG (1 sheet)



☐ Print Head Cleaner (1 pc.)

☐ Media Holder (2 pcs.)

☐ Supply Holder Frame (L) (1 pc.)

☐ Supply Holder Frame (R) (1 pc.)

☐ Supply Shaft (1 pc.)

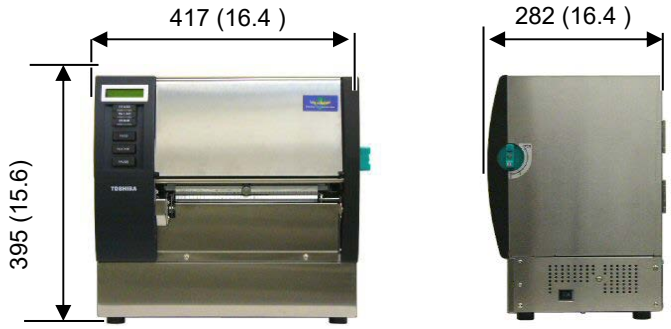
☐ Supply Holder Base (1 pc.)

☐ Wing Bolt (2 pcs.)

1.4 Appearance

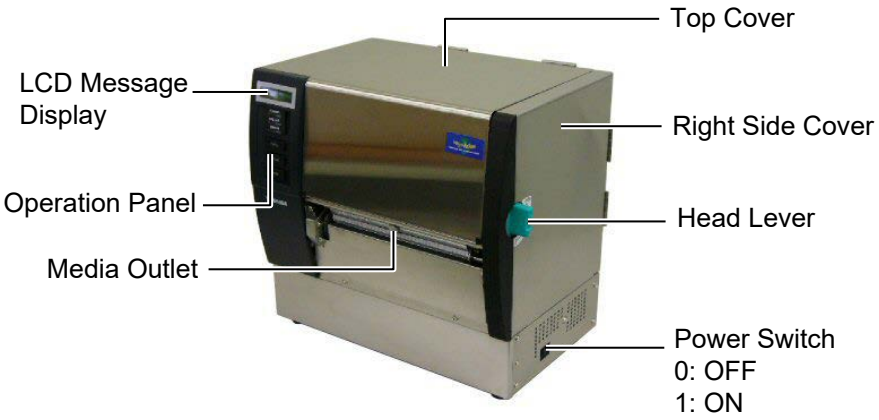
The names of the parts or units introduced in this section are used in the following chapters.

1.4.1 Dimensions

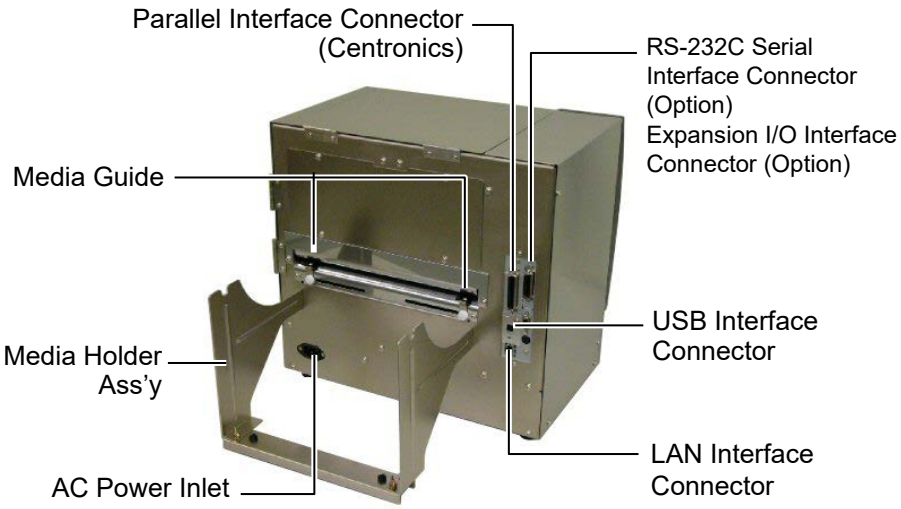


Dimensions in mm (inches)

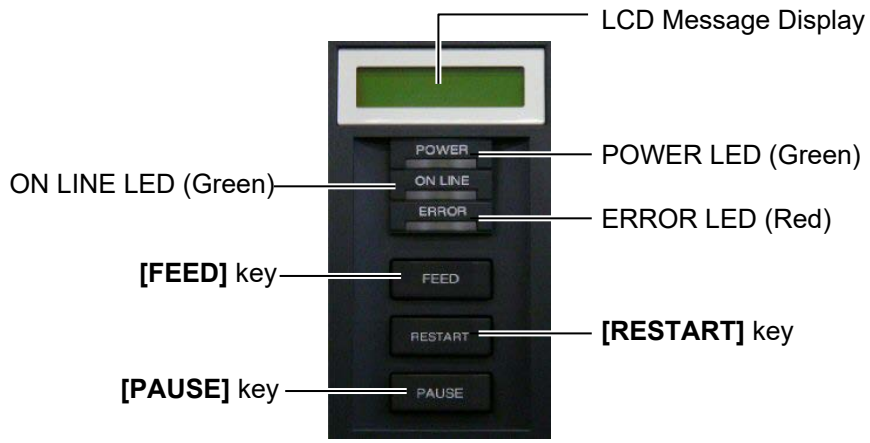
1.4.2 Front View



1.4.3 Rear View



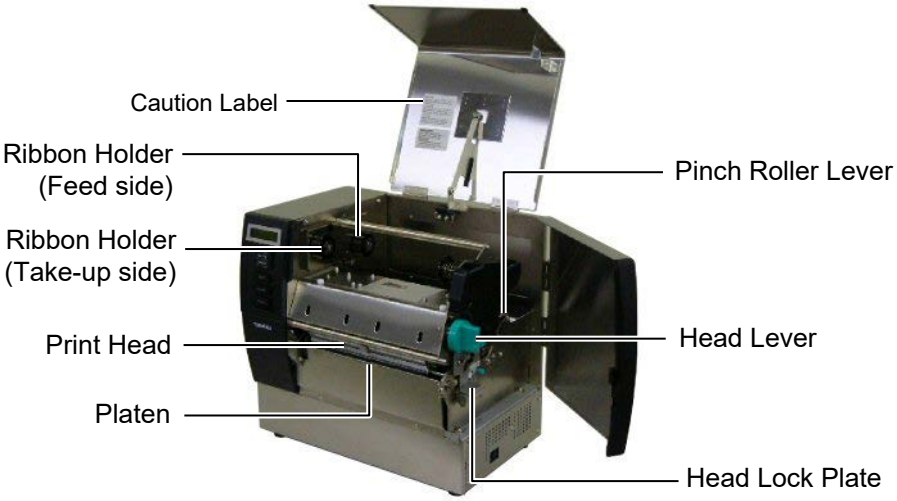
1.4.4 Operation Panel



See **Section 3.1** for further information about the Operation Panel.

1.4.5 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 moving parts, be sure to load the media once the printer has stopped moving completely.* *3. To avoid injury, be careful not to trap your fingers while opening or closing the cover.*



1.5 Options

Option Name	Type	Usage
Cutter module	B-SX208-QM-R	A cutter which cuts the media one by one.
Strip module	B-SX908-H-QM-R	This module peels off a printed label from the backing paper at the media outlet.
Serial Interface Board	B-SA704-RS-QM-R	Installing this PC board provides an RS232C interface port.
Expansion I/O Board	B-SA704-IO-QM-R	Installing this board in the printer allows a connection with an external device with the exclusive interface.
Real Time Clock	B-SA704-RTC-QM-R	This module holds the current time: year, month, day, hour, minute, second
Metal Supply Cover (Future Option)	B-SX908-MC-QM-R	This option is intended to protect a media roll from dirt or dust.

NOTE:
To purchase the optional kits, contact the nearest authorised Toshiba Tec representative or Toshiba Tec Head Quarters.

2. PRINTER SETUP

2. PRINTER SETUP

This section outlines the procedures to setup your printer prior to its operation. The section includes precautions, loading media and ribbon, 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.	2.1 Installation
Assembling the supply holder frame	Assemble the supply holder stand, and attach it to the rear of the printer.	2.2 Assembling the Supply Holder Frame
Connecting the power cord	Connect a power cord to the power inlet of the printer, then, to an AC outlet.	2.3 Connecting the Power Cord
Loading the media	Load a label stock or tag stock.	2.4 Loading the Media
Media sensor position alignment	Adjust the position of feed gap sensor or black mark sensor according to the media to be used.	2.4 Loading the Media
Loading the ribbon	In case of thermal transfer printing, load the ribbon.	2.5 Loading the Ribbon
Connecting to a host computer	Connect the printer to a host computer or a network.	2.6 Connecting the Printer to Your Host Computer
Turning the power ON	Turn on the printer power.	2.7 Turning the Power ON
Setting the operating environment	Set the printer parameters in the system mode.	
Installing the printer driver	If necessary, install the printer driver in your host computer.	
Print test	Make a print test in your operating environment and check the print result.	
Position and Print Tone Fine adjustment	If necessary, fine adjust the print start position, cut/strip position, print tone, etc.	
Automatic threshold setting	If the print start position cannot be detected properly when pre-printed label is used, set the threshold automatically.	
Manual threshold setting	If the print start position cannot be detected properly even an automatic threshold setting is performing, manually set the threshold.	

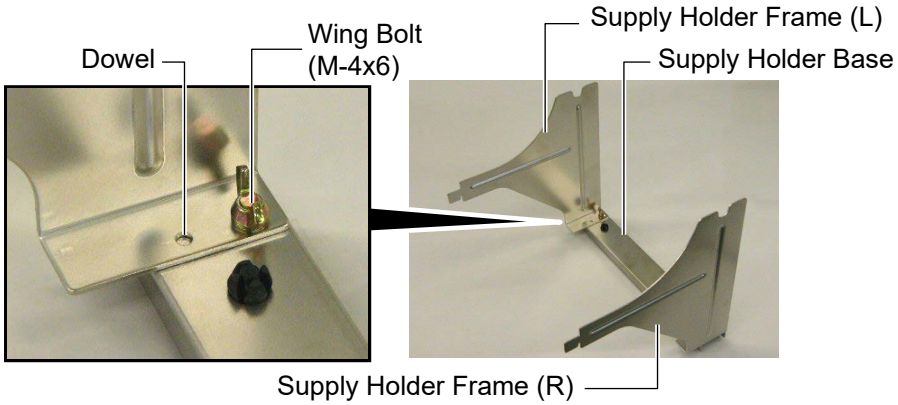
2.1 Installation

To insure the best operating environment, and to assure the safety of the operator and the equipment, observe the following precautions.

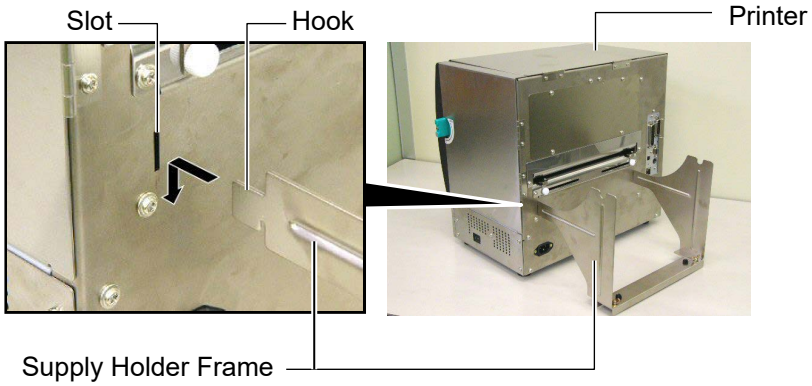
- Operate the printer on a stable, level, operating surface in a location free from excessive humidity, high temperature, dust, vibration or direct sunlight.
- Keep your work environment static free. Static discharge can cause damage to delicate internal components.
- Make sure that the printer is connected to a clean source of AC Power and that no other high voltage devices that may cause line noise interference are connected to the same mains.
- Assure that the printer is connected to the AC mains with a three-prong power cable that has the proper ground (earth) connection.

2.2. Assembling the Supply Holder Frame

1. Assemble the Supply Holder Frame (L) and Supply Holder Frame (R) to the Supply Holder Base using the two M-4X6 Wing Bolts supplied, as shown below.



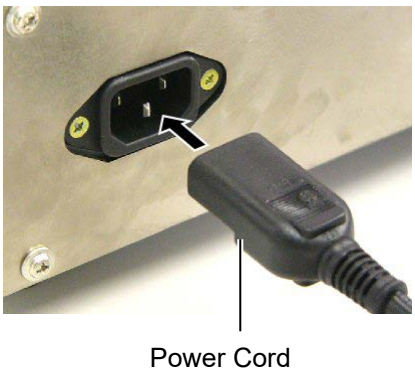
2. Attach the assembled Supply Holder Frame to the rear of the printer by inserting the hooks of the Frame into the two slots in the rear of the printer, as shown below.



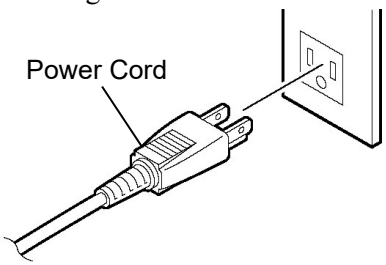
2.3 Connecting the Power Cord

> ***CAUTION!***
>
> *As a Power Cord is not supplied with the printer, purchase an approved on that meets the safety standard of each country. (Refer to **APPENDIX 3**.)*

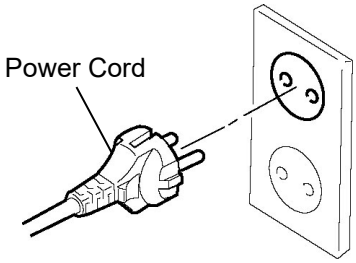
1. Make sure that the printer Power Switch is in the OFF (O) position. Connect the Power Cord to the printer as shown in the figure below



2. Plug the other end of the Power Cord into a grounded outlet as shown in the figure below.



[Example of US Type]



[Example of EU Type]

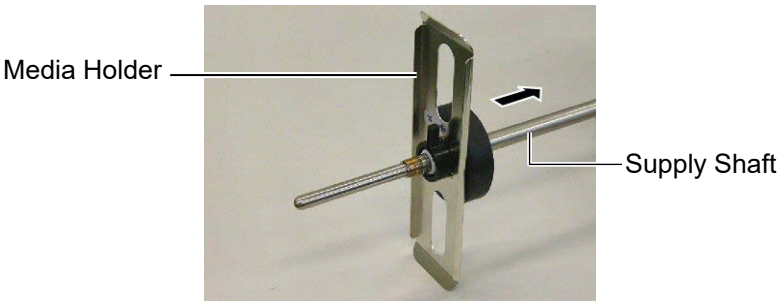
2.4 Loading the Media

WARNING!

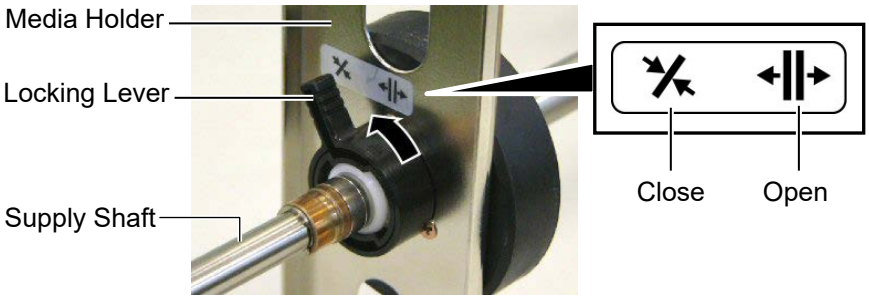
1. *Do not touch any moving parts. To reduce the risk of fingers, jewellery, clothing, etc., being drawn into the moving parts, be sure to load the media once the printer has stopped moving completely.*
2. *The Print Head becomes hot immediately after printing. Allow it to cool before loading the media.*
3. *Care must be taken not to pinch your fingers when opening or closing the Top Cover or Right Side Cover.*
4. *Be careful not to pinch your fingers by the Supply Holder Frame or Media Holders when loading the media.*

The following procedure shows the steps to properly load the media into the printer so that it feeds straight and true through the printer.
Use the same procedure when replacing the media, also.
The printer prints both labels and tags.

1. Install one of the Media Holders onto the Supply Shaft.



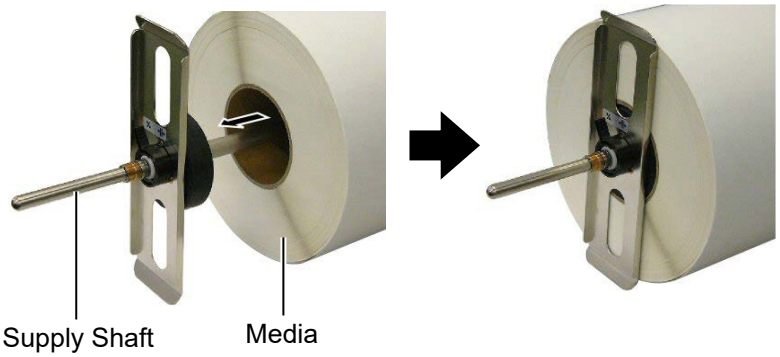
2. Turn the Locking Lever of the Media Holder to “Close” position to fix the Supply Shaft with the Media Holder.



NOTE:

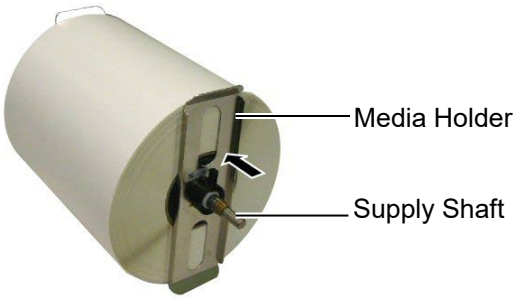
For the specification of available media, refer to ***Section 7.1 Media****.*

3. Place a media roll onto the Supply Shaft and push the media against the Media Holder.

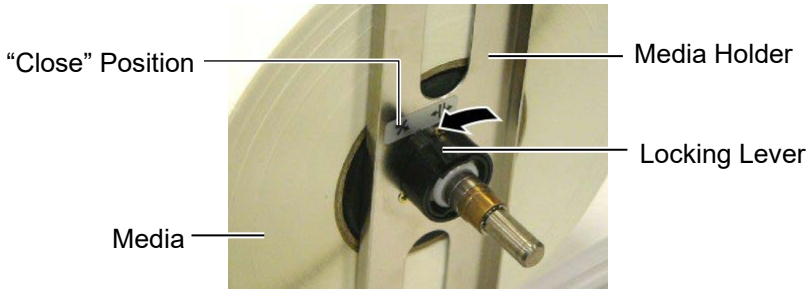


2.4 Loading the Media (Cont.)

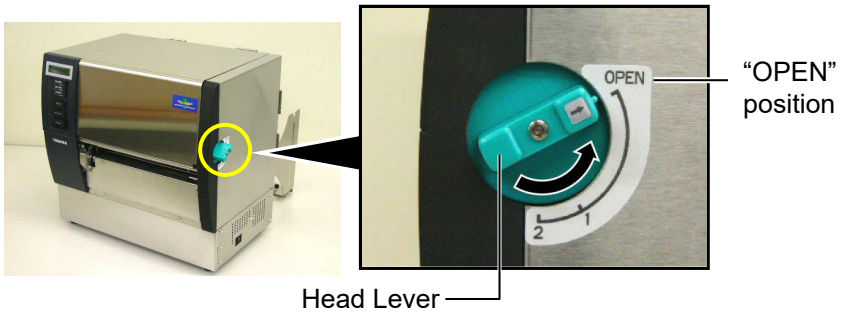
4. Install the other Media Holder onto the Supply Shaft from the opposite side.



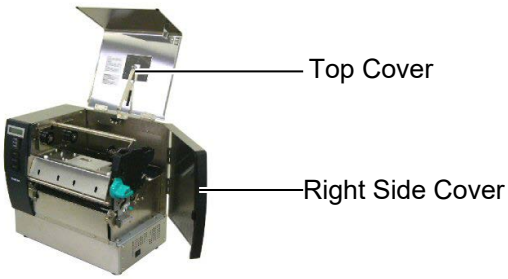
5. Turn the Locking Lever of the Media Holder to the “Close” position.



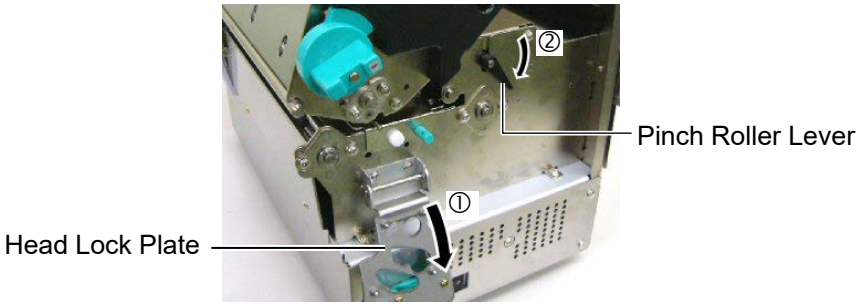
6. Set the Head Lever to the “OPEN” position.



7. Open the Top Cover and the Right Side Cover.



8. Open the Head Lock Plate (①), and turn the Pinch Roller Lever clockwise (②) to release the Pinch Roller.

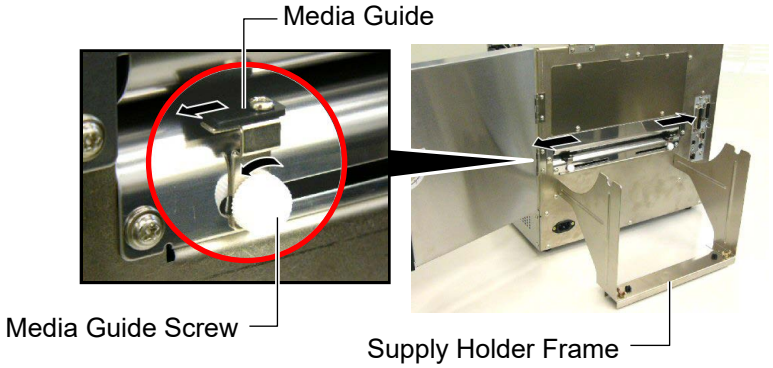


2.4 Loading the Media (Cont.)

WARNING!

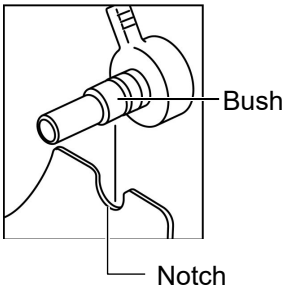
Be careful not to pinch your fingers or hands by the Supply Holder Frame or Media Holders when loading the media.

9. Loosen the Media Guide Screws on the printer back, and move the Media Guides outside.

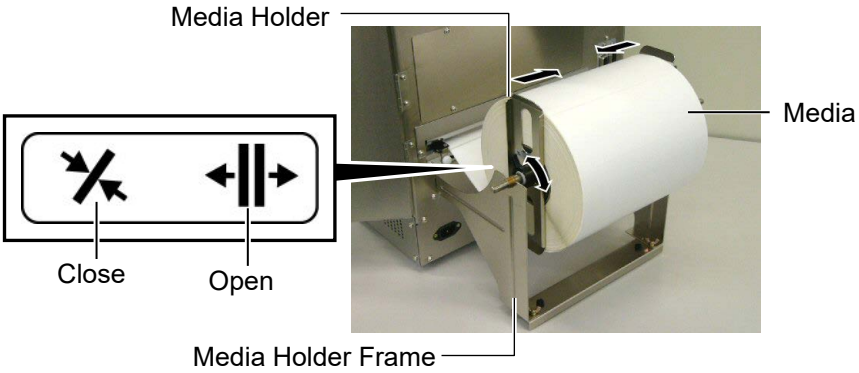


NOTE:

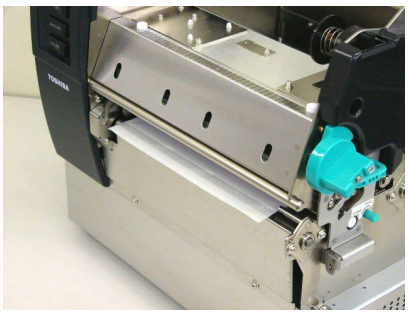
Place the bushes of the Supply Shaft into the notches of the Supply Holder Frame securely.



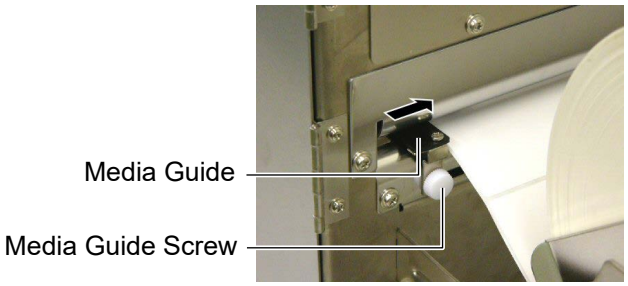
10. Place the assembled Media Holder onto the Supply Holder Frame, and feed the media between the two Media Guides.
Turn the Locking Lever of the Media Holder to the "Open" position, and push the Media Holders toward the centre to place the media at the centre on the Supply Shaft. Then, lock the position of the media by returning the Locking Levers to the "Close" position.



11. Feed the media until it extends past the Platen.



12. Move the Media Guides inside, causing the media to be automatically centred. Then, tighten the Media Guide Screws to secure the Media Guides.



2.4 Loading the Media (Cont.)

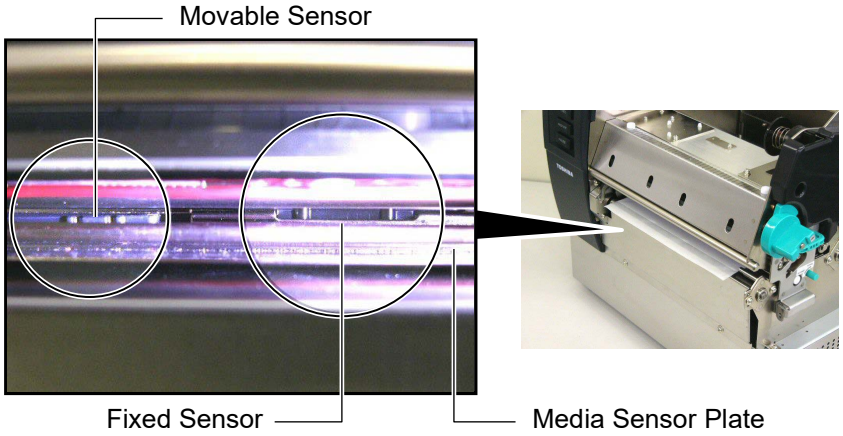
NOTES:

1. *When using the Movable sensor, choose the Movable sensor for the parameter setting in the system mode. The Fixed sensor has been selected as default.*
2. *The position of the movable sensor should be adjusted before loading the ribbon. Otherwise, the sensor is covered by the ribbon, causing the sensor position adjustment to be disabled.*

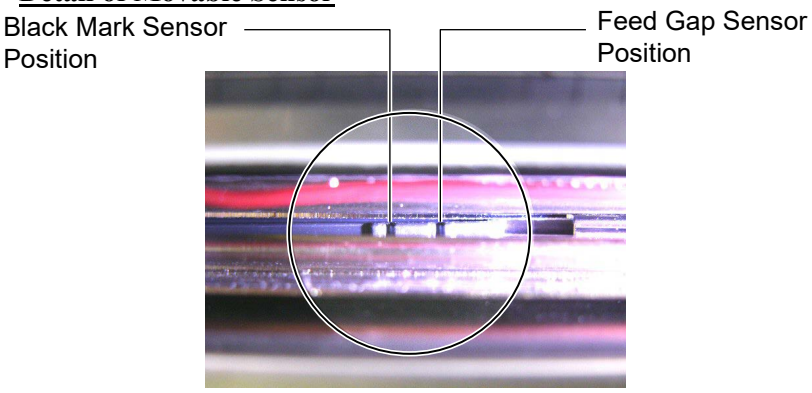
13. After loading the media, it may be necessary to set the position of the Media Sensor used to detect the print start position for label or tag printing.

This printer is equipped with two media sensors: Fixed sensor and Movable sensor. Each of them is comprised of a Feed Gap Sensor and a Black Mark Sensor.

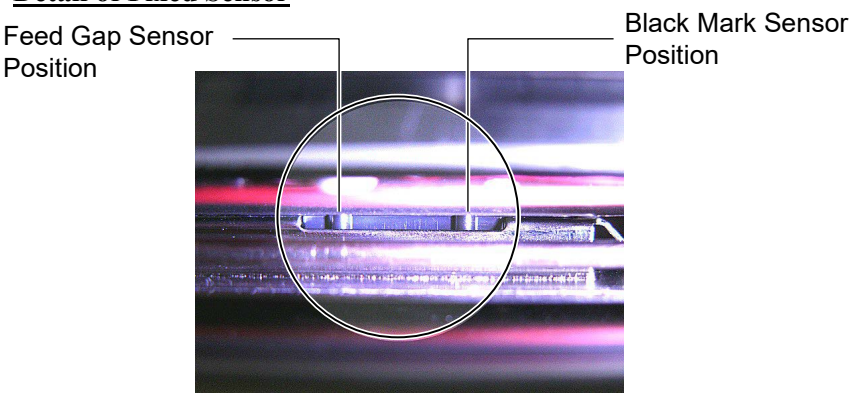
Fixed sensor:	This sensor is positioned at the centre of the printer unit. It is intended for detecting gaps between labels or black marks marked at the centre.
Movable sensor:	The position of this sensor is adjustable. It is intended for detecting gaps between labels, black marks, notches, etc. that are not positioned at the centre of the media.



Detail of Movable Sensor



Detail of Fixed Sensor



2.4 Loading the Media (Cont.)

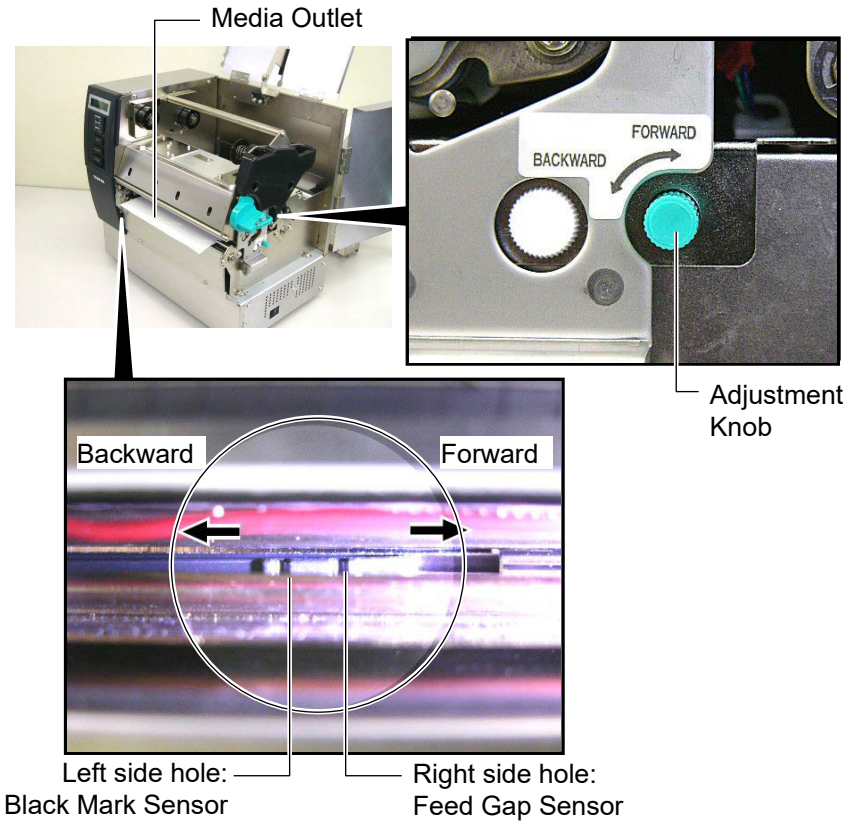
NOTE:
Adjustment Knob
Forward: Moves toward the centre of the printer.
Backward: Moves away from the centre of the printer.

The following procedures show how to adjust the position of the movable sensor.

Feed Gap Sensor position adjustment

When using a label stock without black marks, the Feed Gap Sensor is used to detect the print start position.

Looking inside of the Media Outlet, move the Movable Sensor by rotating the Adjustment Knob until the Feed Gap Sensor aligns with a gap. (The right side hole indicates the position of the Feed Gap Sensor.)



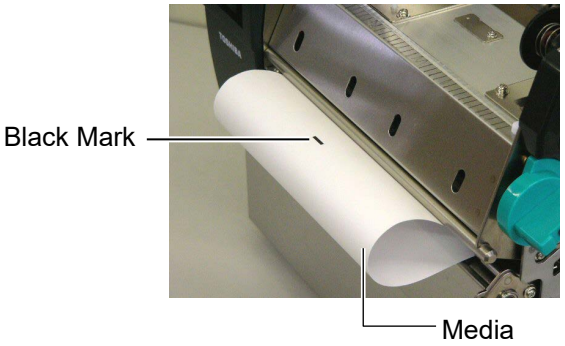
2.4 Loading the Media (Cont.)

> ***NOTE:***
> *Be sure to set the Black Mark Sensor to detect the centre of the black mark, otherwise a paper jam or no paper error may occur.*

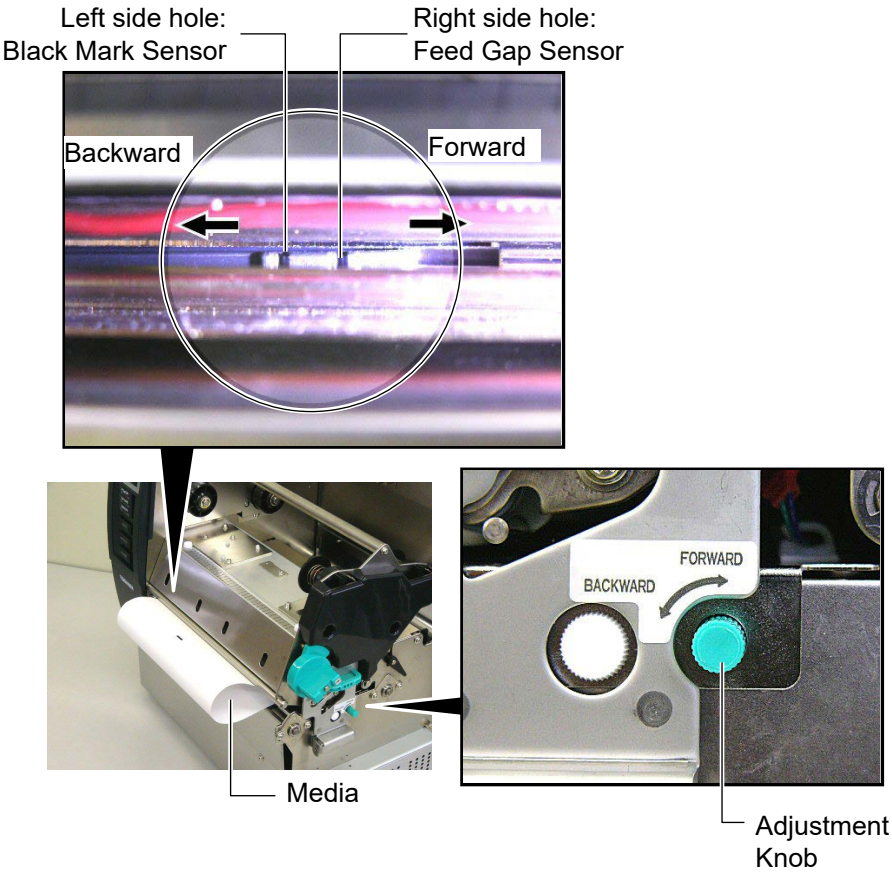
Black Mark Sensor position adjustment

When using media with black marks, the Black Mark Sensor is used to detect the print start position.

(1) Pull the media about 500 mm out of the front of the printer, turn the media back on it's self and feed it under the print head.



(2) Move the Movable Sensor by rotating the Adjustment Knob, until the Black Mark Sensor aligns with a black mark. (The left side hole indicates the position of the Black Mark Sensor).



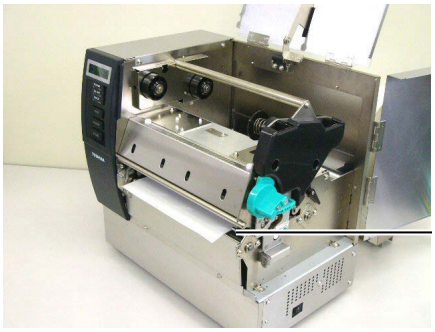
2.4 Loading the Media (Cont.)

14. There are three issue modes available on this printer. How to set the media for each mode is provided below.

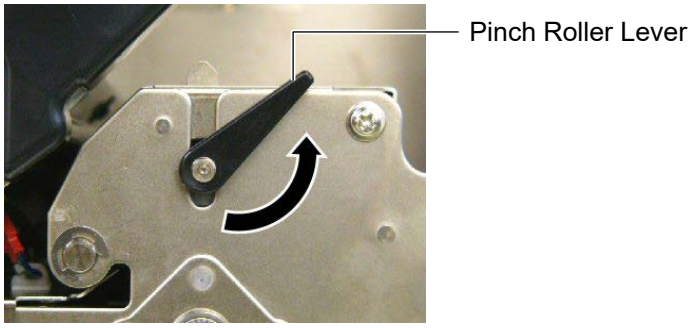
Batch mode

In the batch mode, the media is continuously printed and fed until the number of labels/tags specified in the issue command have been printed.

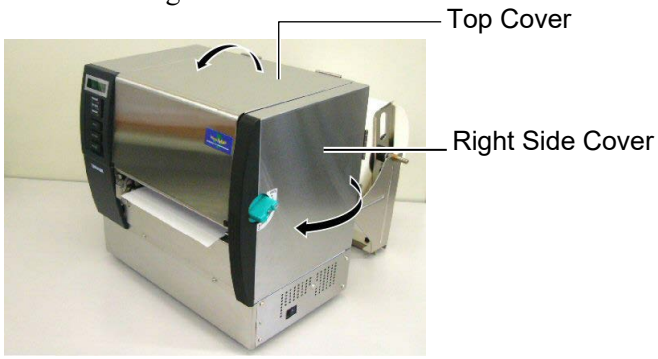
(1) Pull the media past the media outlet.



(2) Turn the Pinch Roller Lever counterclockwise to lock the Pinch Roller.



(3) Close the Top Cover and Right Side Cover.

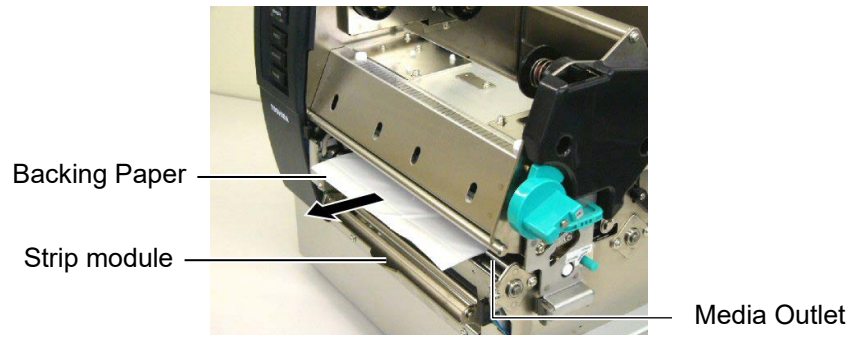


2.4 Loading the Media (Cont.)

Strip mode (Option)

When the optional Strip Module is fitted, a label is automatically removed from the backing paper at the Strip Plate as each label is printed.

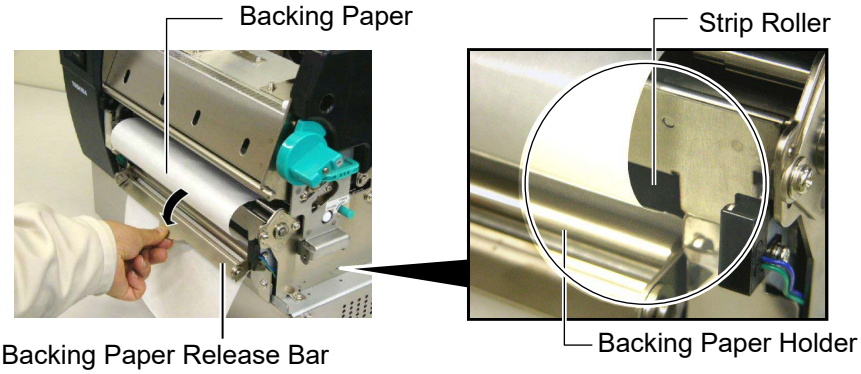
(1) Pull out the backing paper past the Media Outlet.



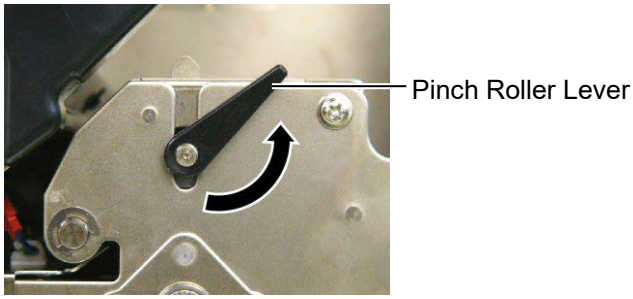
WARNING!

When the Backing Paper Release Bar is released, it is automatically closed by the spring. Care must be taken not to pinch your fingers or hands.

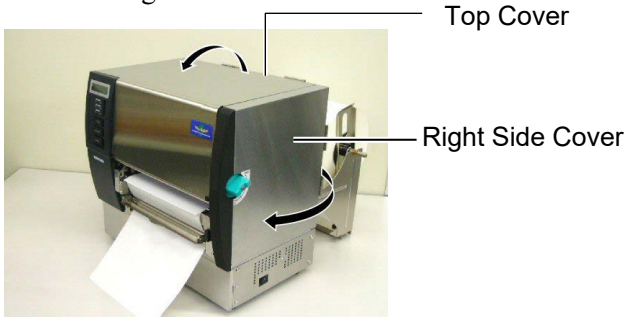
(2) While holding down the Backing Paper Release Bar, and pass the backing paper between the Backing Paper Holder and the Strip Roller. Then, release the Backing Paper Release Bar.



(3) Turn the Pinch Roller Lever counterclockwise to lock the Pinch Roller.



(4) Close the Top Cover and Right Side Cover.



2.4 Loading the Media (Cont.)

WARNING!

The cutter is sharp, so care must be taken not to injure your fingers when handling the cutter.

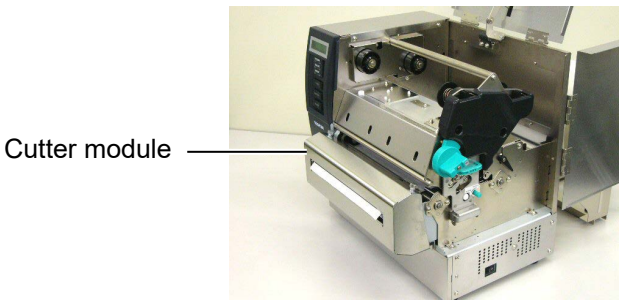
CAUTION!

1. *When using a label stock, be sure to cut the gaps. Cutting labels will cause the glue to stick to the cutter, which may affect the cutter quality and shorten the cutter life.*
2. *Use of tag paper which thickness exceeds specified value may affect the cutter life. For the specification of the media, refer to* ***Section 7.1 Media****.*

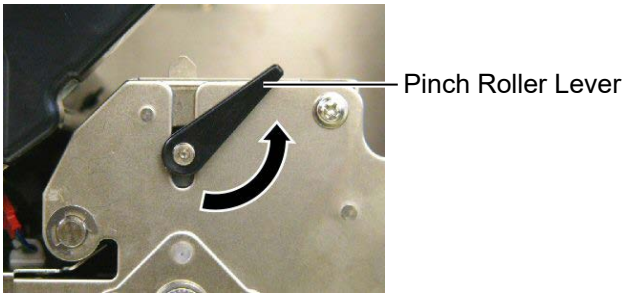
Cut mode (Option)

When the optional Cutter Module is fitted, the media is automatically cut.

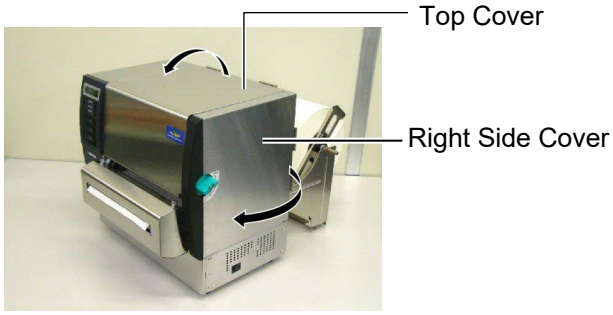
(1) Insert the leading edge of the media into the Media Outlet of the Cutter Module.



(2) Turn the Pinch Roller Lever counterclockwise to lock the Pinch Roller.

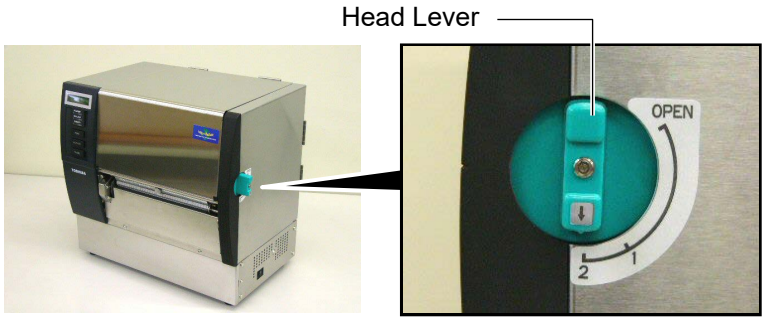


(3) Close the Top Cover and Right Side Cover.



2.4 Loading the Media (Cont.)

15. Change the print head pressure according to the thickness of the media to be used, by using the Head Lever.



Position	Media type or thickness
1	**Label or Thin media** If a clear print cannot be obtained, change the position to ②.
2	**Tag paper or Thick paper** If a clear print cannot be obtained, change the position to ①.

16. If the loaded media is direct thermal media (with a chemically treated surface), the media loading procedure is now completed.

If the media is normal media, it is also necessary to load a ribbon. Refer to **Section 2.5 Loading the Ribbon**.

2.5 Loading the Ribbon

WARNING!

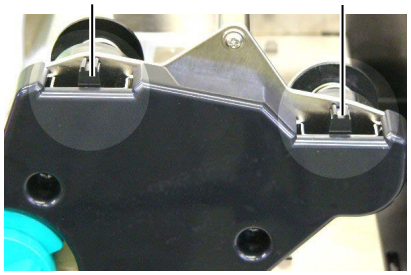
1. *Do not touch any moving parts. To reduce the risk of fingers, jewellery, clothing, etc., being drawn into the moving parts, be sure to load the ribbon once the printer has stopped moving completely.*
2. *The print head becomes hot immediately after printing. Allow it to cool before loading the ribbon.*
3. *To avoid injury, be careful not to trap your fingers while opening or closing the cover.*

CAUTION!

Be careful not touch the Print Head Element when opening the Top Cover. Failure to do this may cause missing dots by static electricity or other print quality problems.

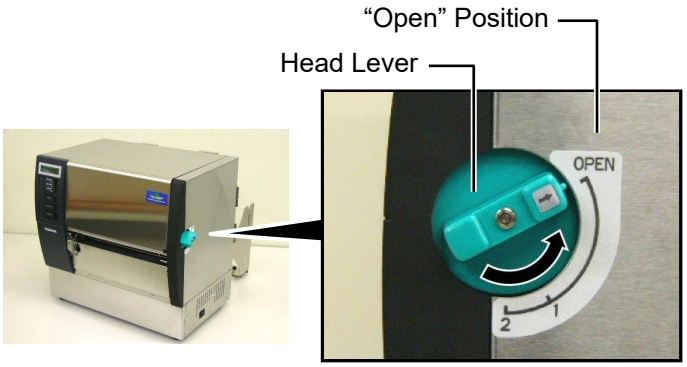
***NOTE**:*
Do not change the Ribbon Holder Adjustment Lever positions. Doing so will change the adjustment.

Ribbon Holder Adjustment Lever

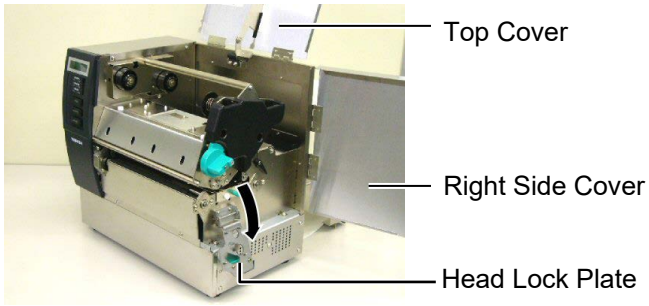


There are two types of media available for printing on: these are thermal transfer media (normal media) and direct thermal media (with a chemically treated surface). DO NOT LOAD a ribbon when using a direct thermal media.

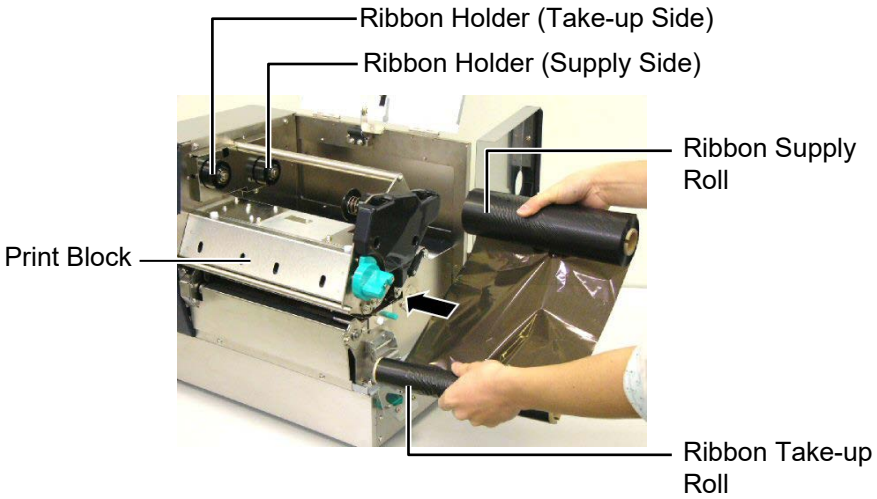
1. Set the Head Lever to the "OPEN" position.



2. Open the Top Cover, Right Side Cover, and the Head Lock Plate.

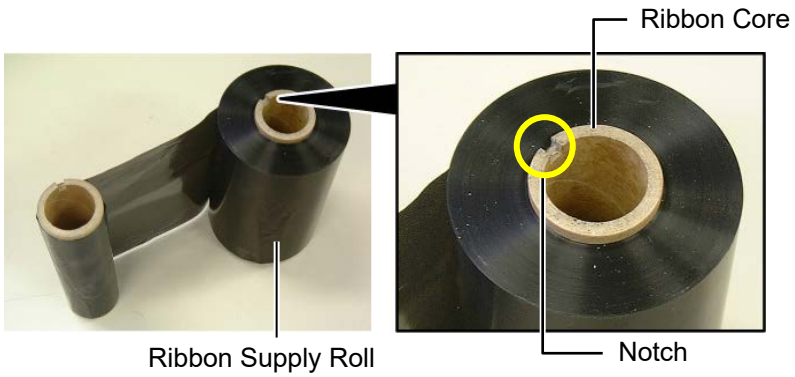


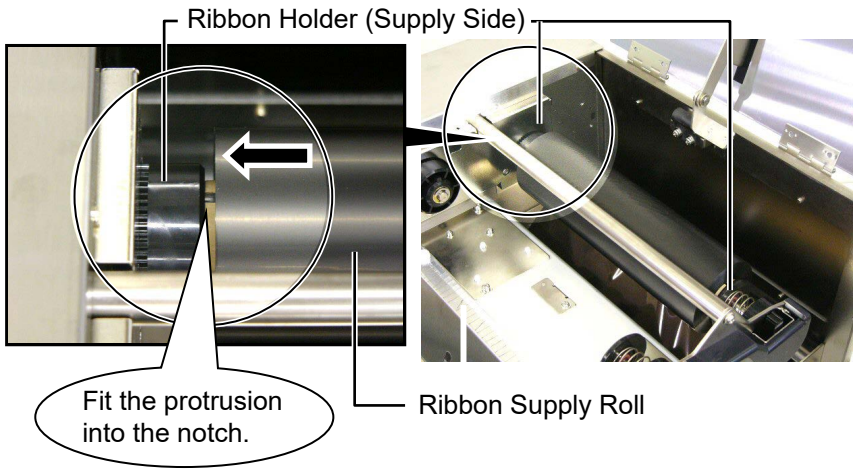
3. Leaving plenty of slack between the ribbon spools, insert the ribbon under the Print Block.



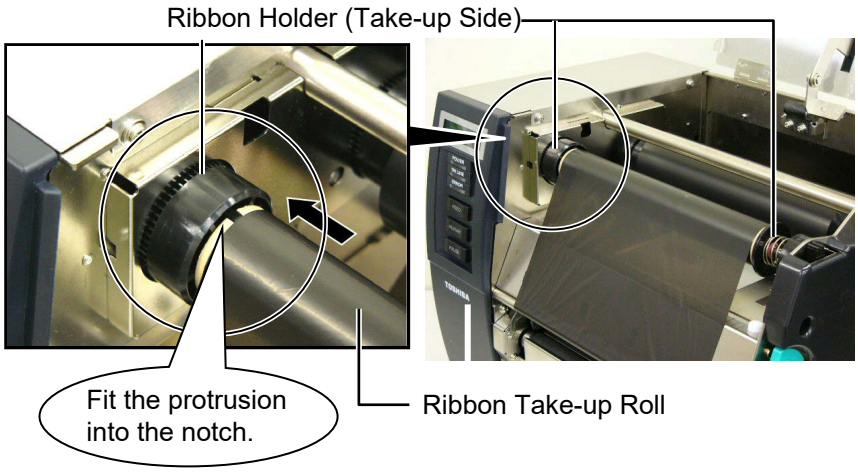
2.5 Loading the Ribbon (Cont.)

4. Fit the core of the Ribbon Supply Roll into the Ribbon Holders (Supply side), aligning the notch of the ribbon core with the protrusion of the Ribbon Holder.





5. Fit the core of the Ribbon Take-up Roll into the Ribbon Holders (Take-up side), aligning the notch of the ribbon core with the protrusion of the Ribbon Holder.

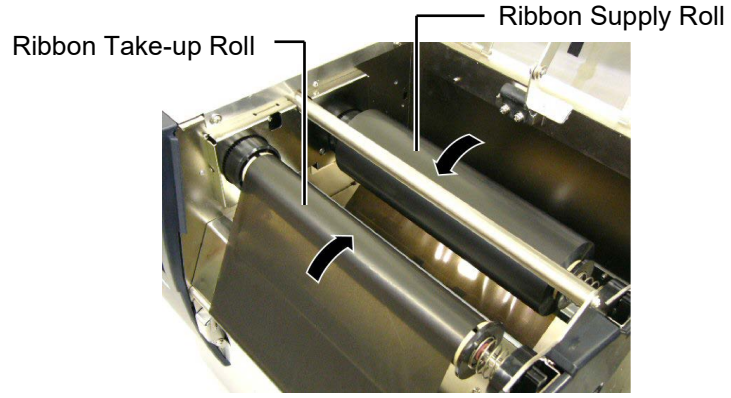


2.5 Loading the Ribbon (Cont.)

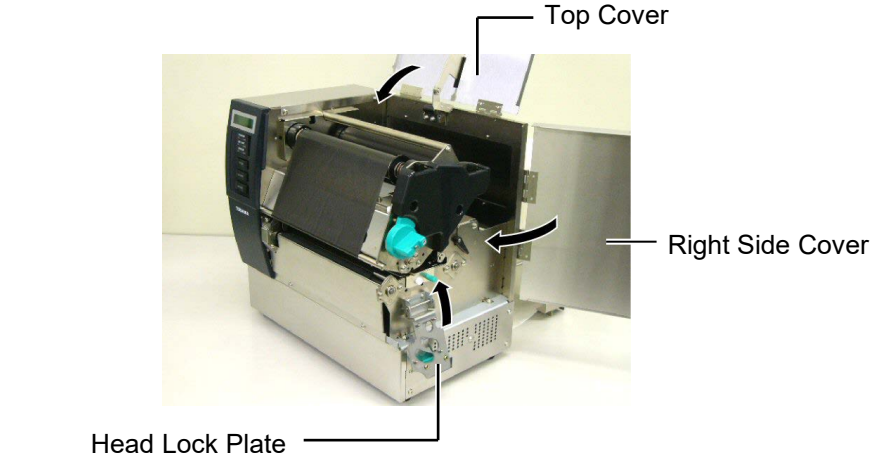
NOTES:

1. *Be sure to remove any slack in the ribbon when printing. Printing with a wrinkled ribbon will lower the print quality.*
2. *When a ribbon end is detected, "RIBBON ERROR" message will appear on the display and the ERROR LED will illuminate.*
3. *When disposing of the ribbons, follow the local rules.*
4. *For the specification of available ribbon, refer to* ***Section 7.2 Ribbon****.*
5. *When using a non transparent ribbon, choose the Non trans ribbon for the parameter setting in the system mode. Transparent ribbon has been selected as default.*

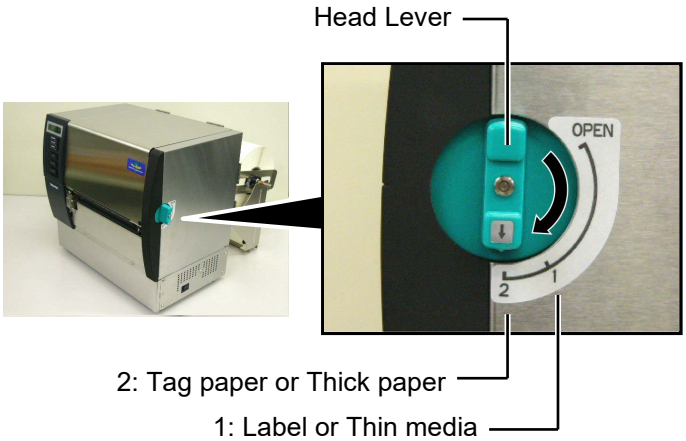
6. Take up any slack in the ribbon. Wind the leading tape onto the ribbon take-up roll until the ink ribbon can be seen from the front of the printer.



7. Close the Head Lock Plate, Right Side Cover, and Top Cover.



8. Turn the Head Lever to the Position 1 or 2. For the difference between Position 1 and Position 2, refer to **Section 2.4**.



2.6 Connecting the Printer to Your Host Computer

> ***CAUTION!***
> *Do not directly connect the LAN cable which is wired outside of a building to the LAN port provided on this product, as the LAN port on this product is intended for indoor connection. To connect such LAN cable to the product, be sure to use any communication equipment, like a router, a hub, or a modem which is located within the same building as the product.*

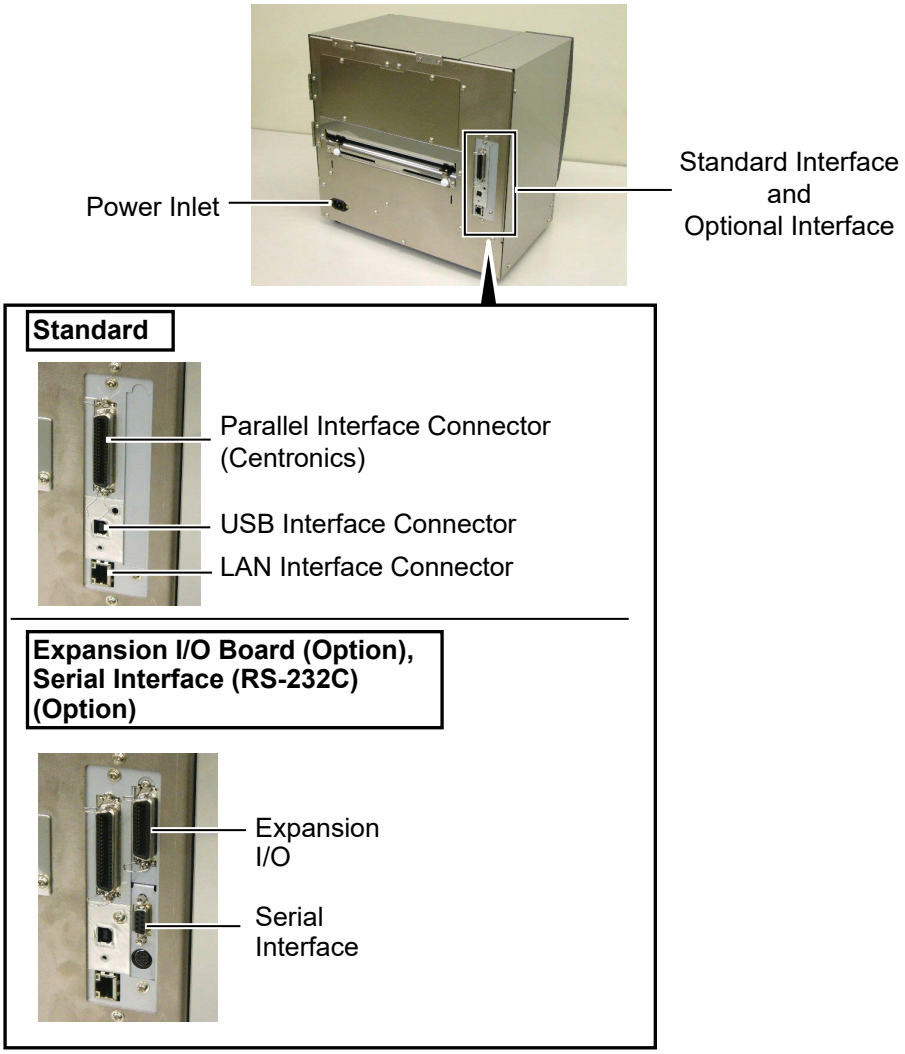
The following paragraphs outline how to connect your host computer to the printer, and will also show how to make cable connections to other devices. Depending on the system configuration you use to print labels, there are 5 possibilities for connecting the printer to your host computer. These are:

- A parallel cable connection between the printer's standard parallel connector and your host computer's parallel port (LPT).
- An Ethernet connection using the standard LAN board.
- A USB cable connection between the printer's standard USB connector and your host computer's USB port. (Conforming to USB 2.0 Full Speed)
- A serial cable connection between the printer's optional RS-232C serial connector and one of your host computer's COM ports. <Option>

For details of each interface, refer to **APPENDIX 2**.

After connecting the necessary interface cables, set an operating environment of the printer.

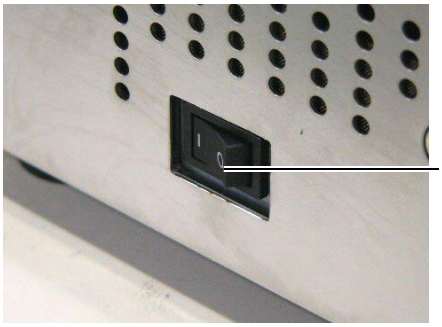
The diagram below shows all the possible cable connections to the current version of the printer.



2.7 Turning the Printer ON

When the printer is connected to your host computer it is good practice to turn the printer ON before turning on your host computer and turn OFF your host computer before turning off the printer.

1. To turn ON the printer power, press the Power Switch as shown in the diagram below. Note that (**|**) is the power ON side of the switch.



2. Check that the ON LINE message appears in the LCD Message Display and that the ON LINE and POWER LED (Green) are illuminated.

CAUTION!

Use the power switch to turn the printer On/Off. Plugging or unplugging the Power Cord to turn the printer On/Off may cause fire, an electric shock, or damage to the printer.

NOTES:

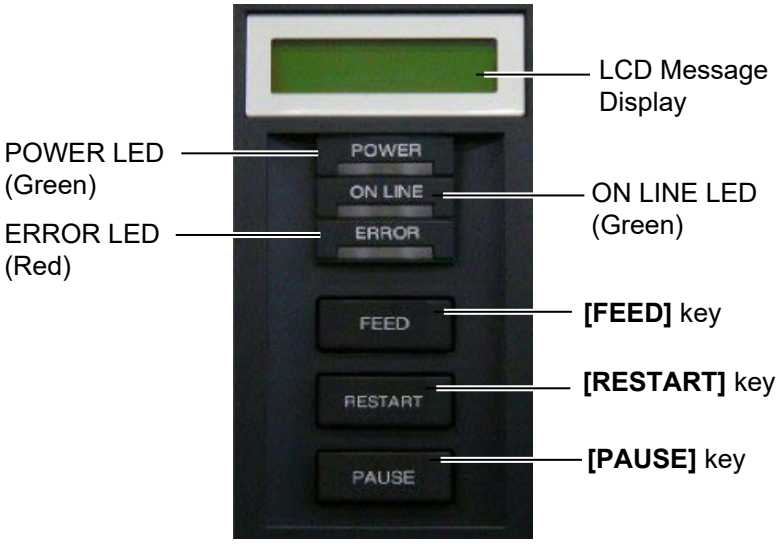
1. *If a message other than ON LINE appears on the display or the ERROR LED (Red) is illuminated, go to* ***Section 5.1, Error Messages****.*
2. *To turn OFF the printer power turn the Power Switch to the "O" side position.*

3. ON LINE OPERATION

This chapter describes usage of the keys on the Operation Panel in On Line mode.
When the printer is in On Line mode and connected to a host computer, the normal operation of printing images on labels or tags can be accomplished.

3.1 Operation Panel

The figure below illustrates the Operation Panel and key functions.



The LCD Message Display shows messages in alphanumeric characters and symbols to indicate the printer's current status. Up to 32 characters can be displayed on two lines.

There are three LEDs on the Operation Panel.

LED	Illuminates when…	Flashes when…
POWER	The printer is turned on.	-----
ON LINE	The printer is ready to print.	The printer is communicating with your computer.
ERROR	Any error occurs with the printer.	The ribbon is nearly over. (See NOTE 1.)

NOTES:

1. *Flashes only when the Ribbon Near End Detection function is selected.*
2. *Use the **[RESTART]** key to resume printing after a pause, or after clearing an error.*

There are three keys on the operation panel.

PAUSE	Used to stop printing temporarily.
RESTART	Used to restart printing.
FEED	Used to feed media.

3.2 Operation

When the printer is turned on, the "ON LINE" message appears on the LCD Message Display. It is shown during standby or normal printing.

1. The printer is turned on, standing by, or printing.

```
ON LINE
B-SX8T    V1.0A
```

2. If any error occurs during printing, an error message appears. The printer stops printing automatically. (The number on the right side shows the remaining number of media to be printed.)

```
NO PAPER    125
B-SX8T    V1.0A
```

> ***NOTE:***
> *For the meaning of error messages and actions to be taken, refer to* ***Section 5 TROUBLESHOOTING*** *and* ***APPENDIX 1****.*

3. To clear an error, press the **[RESTART]** key. The printer resumes printing.

```
ON LINE
B-SX8T    V1.0A
```

4. If the **[PAUSE]** key is pressed during printing, the printer stops printing temporarily. (The number on the right side shows the remaining number of media to be printed.)

```
PAUSE       52
B-SX8T    V1.0A
```

5. When the **[RESTART]** key is pressed, the printer resumes printing.

```
ON LINE
B-SX8T    V1.0A
```

3.3 Reset

A reset operation clears the print data sent from the computer to the printer, and returns the printer to an idle condition.

1. The printer is turned on, standing by, or printing.

```
ON LINE
B-SX8T     V1.0A
```

2. To stop printing, or clear the data sent from the computer, press the **[PAUSE]** key. The printer stops printing.

```
PAUSE       52
B-SX8T     V1.0A
```

> ***NOTE:***
> *If the* ***[RESTART]*** *key is held for less than 3 seconds when the printer is in an error or pause state, the printer restarts printing. However, when a communication error or command error occurs, the printer returns to an idle condition.*

3. Press and hold the **[RESTART]** key for 3 seconds or longer.

```
<1>RESET
```

4. Press the **[PAUSE]** key. The data sent from the computer will be cleared, and the printer returns to an idle condition.

```
ON LINE
B-SX8T     V1.0A
```

4. MAINTENANCE

WARNING!

1. *Be sure to disconnect the power cord before performing maintenance. Failure to do this may cause an electric shock.*
2. *To avoid injury, be careful not to pinch your fingers while opening or closing the cover and print head block.*
3. *The print head becomes hot immediately after printing. Allow it to cool before performing any maintenance.*
4. *Do not pour water directly onto the printer.*

This chapter describes how to perform routine maintenance.
To ensure the continuous high quality operation of the printer, refer to the following table and perform a regular maintenance routine.

Cleaning cycle	Frequency
High throughput	Every day
Every ribbon roll or media roll	Once

4.1 Cleaning

To maintain the printer performance and print quality, clean the printer regularly, or whenever the media or ribbon is replaced.

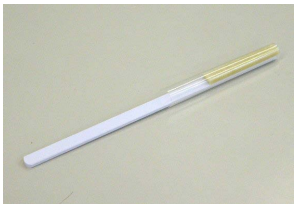
4.1.1 Print Head/Platen

CAUTION!

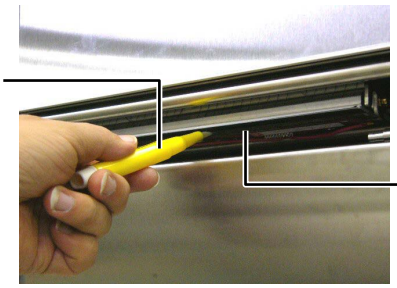
1. *Do not use any volatile solvent including thinner and benzene, as this may cause discoloration to the cover, print failure, or breakdown of the printer.*
2. *Do not touch the Print Head Element with bare hands, as static may damage the Print Head.*
3. *Be sure to use a Print Head Cleaner. Failure to do this may shorten the Print Head life.*

NOTE:

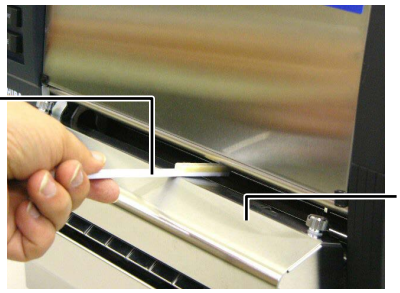
1. *A Print Head Cleaner (P/No. 24089500013) is available from your authorised Toshiba Tec service representative.*
2. *When an optional Cutter Module is fitted, clean the print head using the Print Head Cleaner supplied with the Cutter Module, as the picture shows.*



1. Turn off the power and unplug the printer.
2. Set the Head Lever to the “OPEN” position.
3. Open the Top Cover and Right Side Cover.
4. Open the Head Lock Plate.
5. Remove the ribbon and media from the printer.
6. Clean the Print Head Element with a Print Head Cleaner, or a cotton swab or soft cloth slightly moistened with absolute ethyl alcohol.

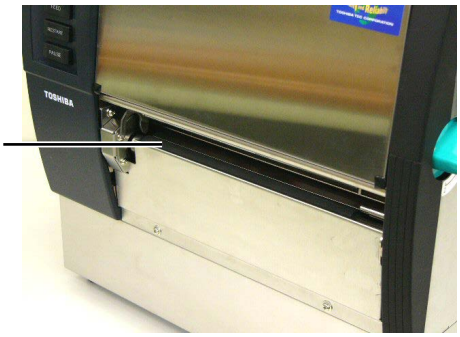


When the Cutter Module is fitted.



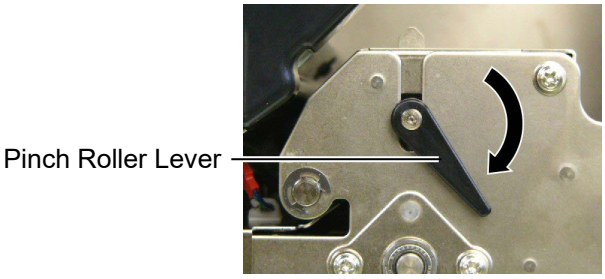
4.1.1 Print Head/Platen (Cont.)

7. Wipe the Platen with a soft cloth slightly moistened with absolute ethyl alcohol

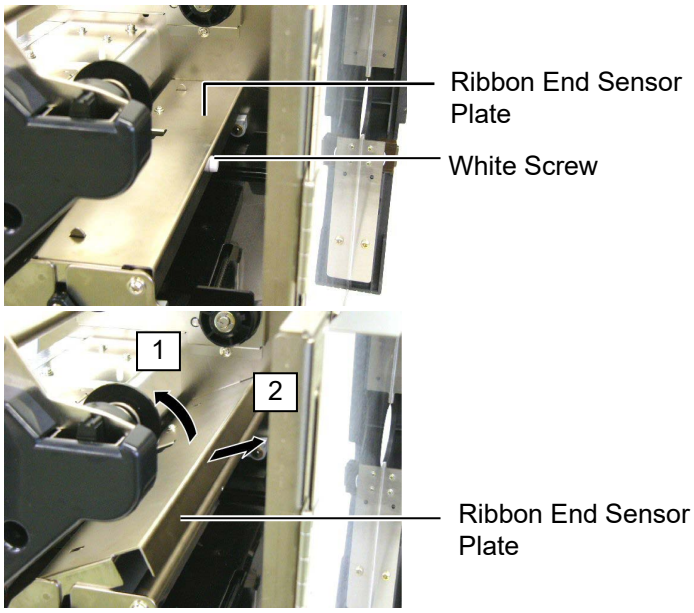


4.1.2 Pinch Roller

1. Turn off the power and unplug the printer.
2. Set the Head Lever to the "OPEN" position.
3. Open the Top Cover and Right Side Cover.
4. Open the Head Lock Plate.
5. Turn the Pinch Roller Lever clockwise to release the Pinch Roller.

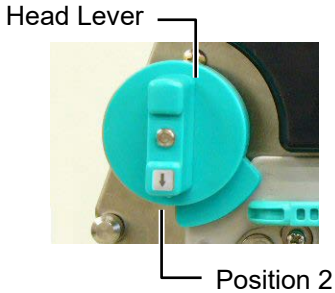


6. Remove the ribbon and media from the printer.
7. Set the Head Lever to the Position 2.
8. Remove the White Screw and detach the Ribbon End Sensor Plate in the direction of the arrows.



NOTE:

Be sure to set the Head Lever to Position 2, otherwise the Pinch Roller cannot be removed.



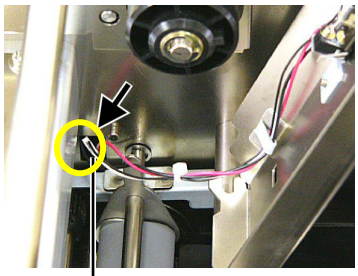
CAUTION!

Do not pull hard on the Ribbon End Sensor Plate. Doing so may damage the Ribbon End Sensor Harness, causing a printer failure.

4.1.2 Pinch Roller (Cont.)

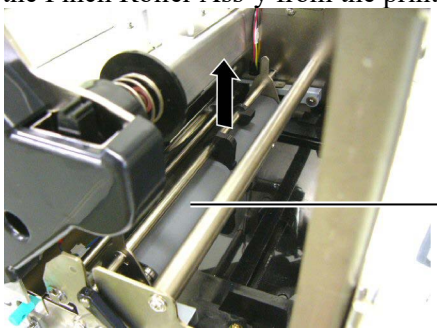
CAUTION!

When re-installing the Pinch Roller Ass'y on the printer, remove the slack of the Ribbon End Sensor Harness as far as possible by pushing it into the opening (indicated by the arrow). Failure to do this may cause the harness to be caught by the Ribbon End Sensor Plate, resulting in a printer failure.



Ribbon End Sensor Harness

9. Take out the Pinch Roller Ass'y from the printer.

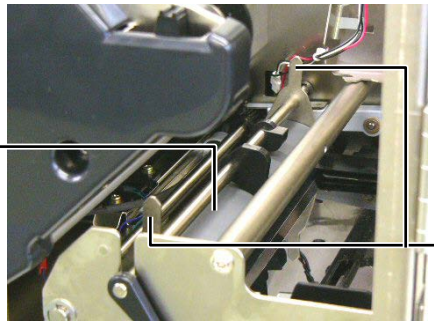


Pinch Roller Ass'y

10. Wipe the Pinch Roller Ass'y with a soft cloth slightly moistened with absolute ethyl alcohol.

Pinch Roller Ass'y

11. After cleaning the Pinch Roller Ass'y, place it in position, and raise the both Pinch Roller Plates.



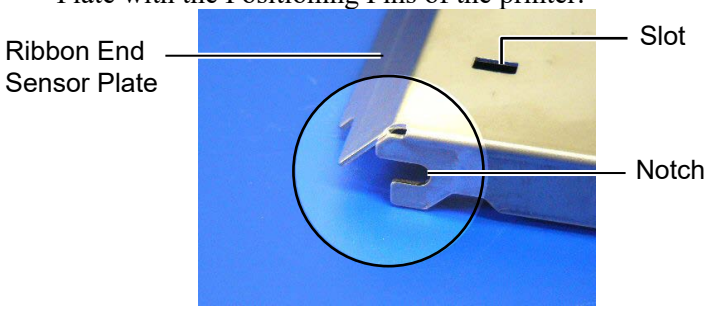
Pinch Roller Ass'y

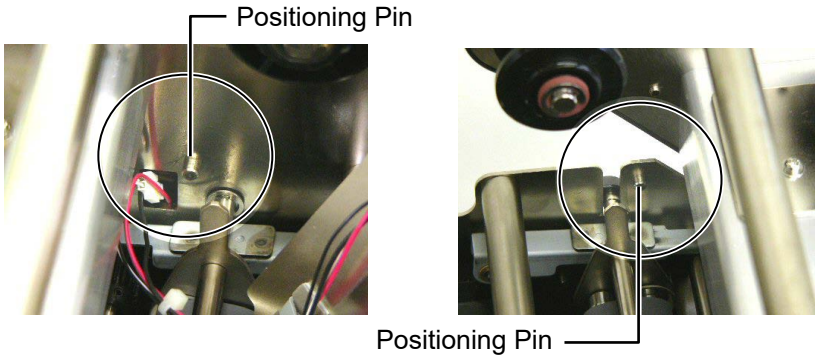
Pinch Roller Plate

4.1.2 Pinch Roller (Cont.)

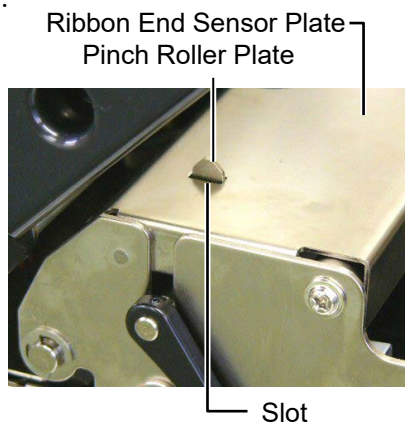
12. Attach the Ribbon End Sensor Plate to the printer.

(1) Engage the notches on the both sides of the Ribbon End Sensor Plate with the Positioning Pins of the printer.





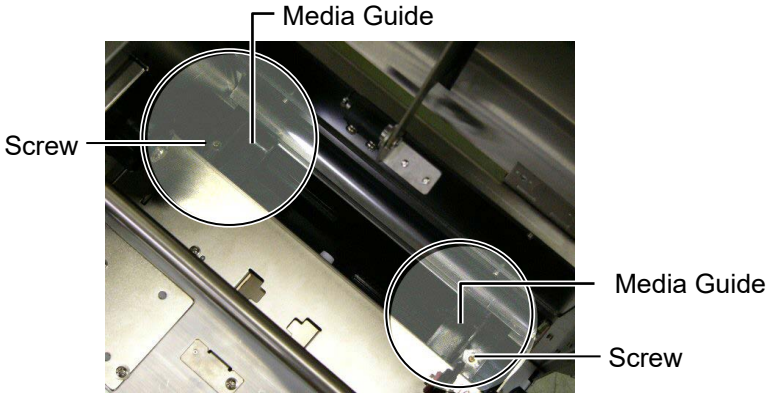
(2) Fit the tip of the Pinch Roller Plates into the slot in the Ribbon End Sensor.



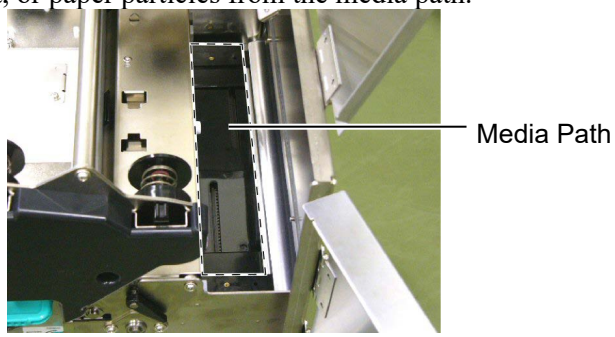
4.1.3 Under the Media Guides

> ***NOTE:***
> *Be careful not to lose the removed screws.*

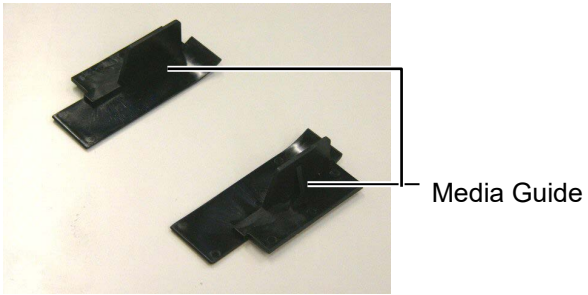
1. Turn off the power and unplug the printer..
2. Set the Head Lever to the “OPEN” position
3. Open the Top Cover and Right Side Cover.
4. Open the Head Lock Plate.
5. Turn the Pinch Roller Lever clockwise to release the Pinch Roller.
6. Remove the ribbon and media from the printer.
7. Remove the screws to detach the Media Guide.



8. Remove the jammed media, if any.
9. Wipe dirt, dust, or paper particles from the media path.



10. Wipe off dust and adhesive on the Media Guides with a soft cloth moistened with alcohol.



11. Re-install the Media Guides using the screws.

4.1.4 Covers and Panels

CAUTION!

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

Wipe the covers and panels with a dry soft cloth or a cloth slightly moistened with mild detergent solution.

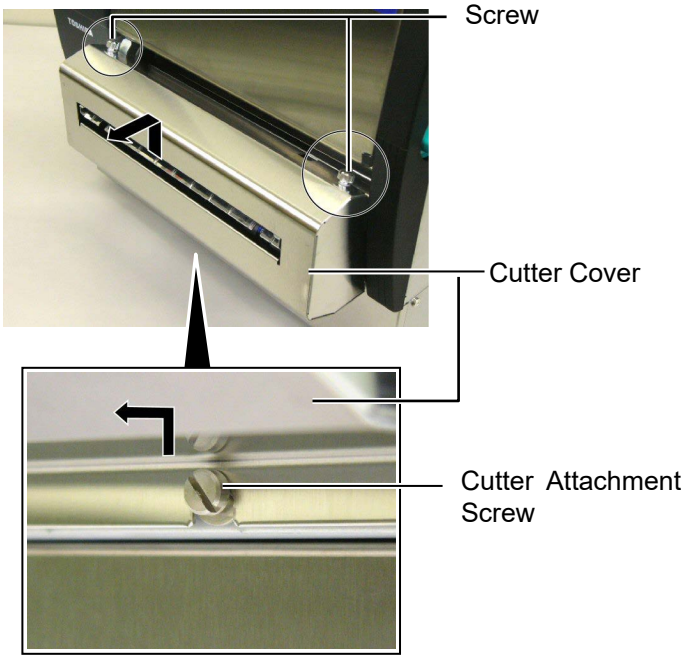
4.1.5 Optional Cutter Module

WARNING!

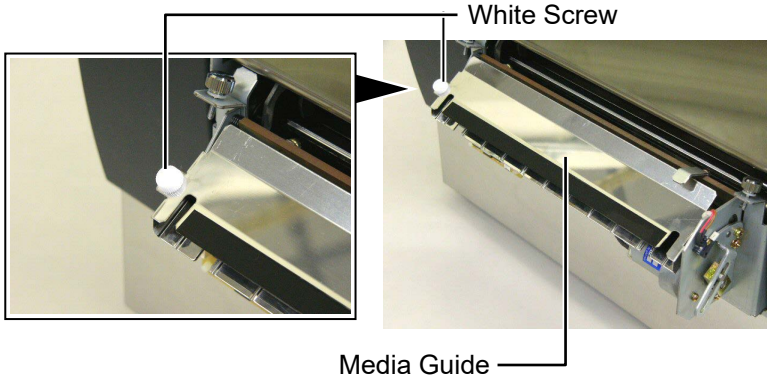
1. *Be sure to turn the power off before cleaning the cutter unit.*
2. *As the cutter blade is sharp, care should be taken not to injure yourself when cleaning.*

1. Loosen the two screws and remove the Cutter Cover.

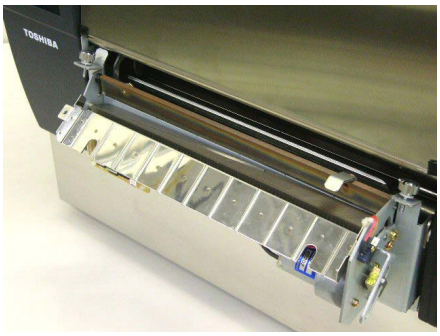
As the bottom of the Cutter Cover is fitted onto the Cutter Attachment Screw, slightly lift and detach the Cutter Cover.



2. Remove the White Screw to detach the Media Guide.

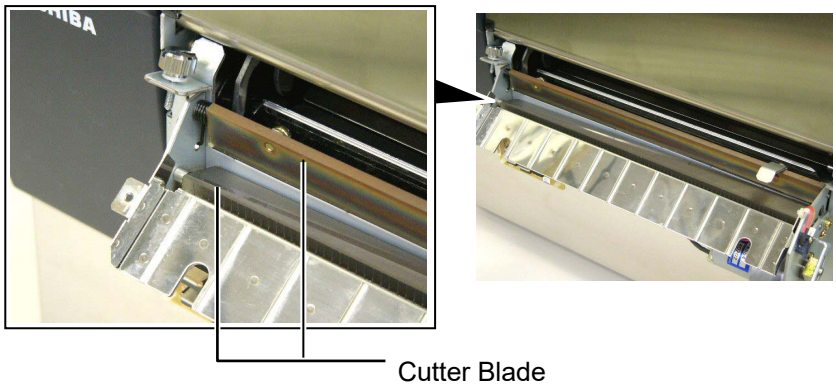


3. Remove jammed media, if any.

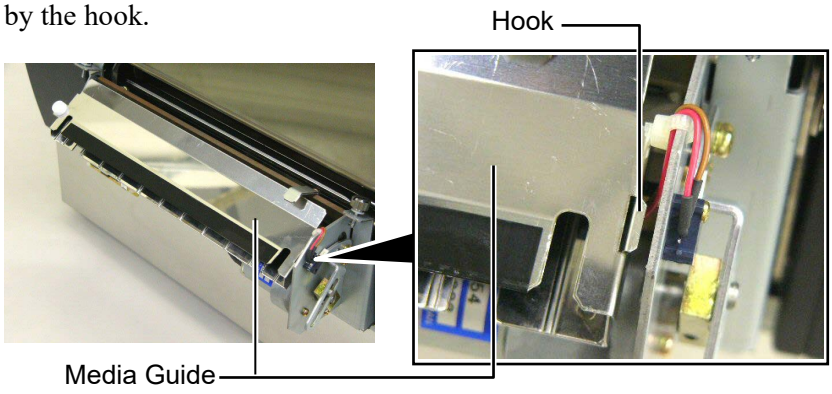


4.1.5 Optional Cutter Module (Cont.)

4. Clean the Cutter Blade with a cotton swab moistened with absolute ethyl alcohol.



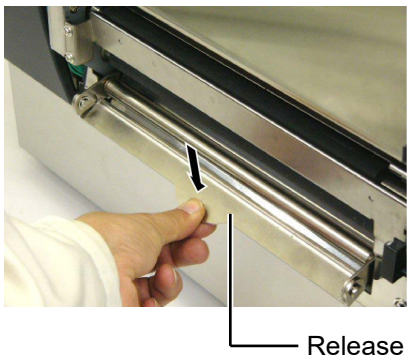
5. Reassemble in the reverse order of removal. Secure the Media Guide by the hook.



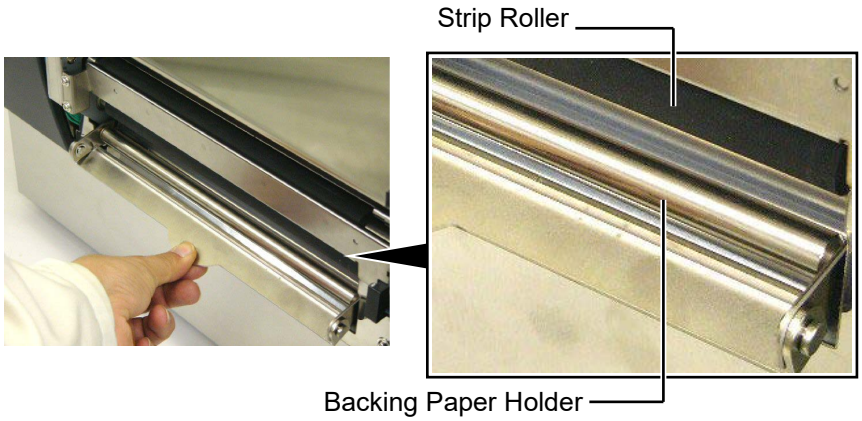
4.1.6 Optional Strip Module

WARNING!
Care must be taken not to pinch your fingers or hands.

1. Press down the Backing Paper Release Bar to open the Strip Unit.



2. Remove jammed media or backing paper, if any.
3. Wipe the Backing Paper Holder and the Strip Roller with a soft cloth slightly moistened with absolute ethyl alcohol.



5. TROUBLESHOOTING

This chapter lists the error messages, possible problems, and their solutions.

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

5.1 Error Messages

NOTES:
1. *If an error is not cleared by pressing the* ***[RESTART]*** *key, turn the printer off and then on.*
2. *After the printer is turned off, all print data in the printer is cleared.*
3. *"****" indicates the number of unprinted media. Up to 9999 (in pieces).*

Error Messages	Problems/Causes	Solutions
HEAD OPEN	The Print Head or Pinch Roller is opened in Online mode.	Turn the Head Lever and Pinch Roller Lever to the lock position.
HEAD OPEN ****	A feed or an issue was attempted with the Print Head or Pinch Roller opened.	Turn the Head Lever and Pinch Roller Lever to the lock position. Then press the **[RESTART]** key.
COMMS ERROR	A communication error has occurred.	Make sure the interface cable is correctly connected to the printer and the host, and the host is turned on.
PAPER JAM ****	1. The media is jammed in the media path. The media is not fed smoothly.	1. Remove the jammed media, and clean the Platen. Then reload the media correctly. Finally press the **[RESTART]** key. ⇒ **Section 5.3.**
	2. A wrong Media Sensor is selected for the media being used.	2. Turn the printer off and then on. Then select the Media Sensor for the media being used. Finally resend a print job.
	3. The Black Mark Sensor is not correctly aligned with the Black Mark on the media.	3. Adjust the sensor position. Then press the **[RESTART]** key. ⇒ **Section 2.4**.
	4. Size of the loaded media is different from the programmed size.	4. Replace the loaded media with one that matches the programmed size then press the **[RESTART]** key, or turn the printer off and then on, select a programmed size that matches the loaded media. Finally resend the print job.
	5. The Feed Gap Sensor cannot distinguish a print area from a label gap.	5. For details, contact your service representative.

5.1 Error Messages (Cont.)

Error Messages	Problems/Cause	Solutions
CUTTER ERROR **** (When an optional cutter module is installed.)	The media is jammed in the cutter.	Remove the jammed media. Then press the **[RESTART]** key. If this does not solve the problem, turn off the printer, and call a Toshiba Tec authorised service representative. ⇒ **Section 4.1.5**.
NO PAPER ****	1. The media has run out.	1. Load new media. Then press the **[RESTART]** key. ⇒ **Section 2.4**.
	2. The media is not loaded properly.	2. Reload the media correctly. Then press the **[RESTART]** key. ⇒ **Section 2.4**.
	3. The media is slack.	3. Take up any slack in the media.
NO RIBBON ****	The ribbon has run out.	Load a new ribbon. Then press the **[RESTART]** key. ⇒ **Section 2.5**.
RIBBON ERROR ****	The ribbon is not fed properly.	Remove the ribbon, and check the status of the ribbon. Replace the ribbon, if necessary. If the problem is not solved, turn off the printer, and call a Toshiba Tec authorised service representative.
EXCESS HEAD TEMP	The Print Head has overheated.	Turn off the printer, and allow it to cool down (about 3 minutes). If this does not solve the problem, call a Toshiba Tec authorised service representative.
HEAD ERROR	There is a problem with the Print Head.	The Print Head is required to be replaced. Call a Toshiba Tec authorised service representative.
SYSTEM ERROR	1. The printer is used in a location where it is subject to noise. Or, there are power cords of other electrical appliances near the printer or interface cable.	1. Keep the printer and the interface cables away from the source of noise.
	2. The Power Cord of the printer is not grounded.	2. Ground the Power Cord.
	3. The printer shares the same power source with any other electrical appliances.	3. Provide an exclusive power source for the printer.
	4. An application software used on your host computer has an error or malfunction.	4. Confirm the host computer operates properly.
FLASH WRITE ERR.	An error has occurred in writing to the flash ROM.	Turn the printer off, and then on again.
FORMAT ERROR	An error has occurred in formatting the flash ROM.	Turn the printer off, and then on again.
FLASH CARD FULL	Saving failed because of an insufficient capacity of the flash ROM.	Turn the printer off, and then on again.
EEPROM ERROR	Data cannot be read from/written to a backup EEPROM properly.	Turn the printer off, and then on again.
RFID WRITE ERROR	The printer did not succeed in writing data onto an RFID tag after having retried for a specified times.	Press the **[RESTART]** key.

5.1 Error Messages (Cont.)

Error Messages	Problems/Cause	Solutions
RFID ERROR	The printer cannot communicate with the RFID module.	Turn the printer off, and then on again.
SYNTAX ERROR	While the printer is in the Download mode for upgrading the firmware, it receives an improper command, for example, a Issue Command.	Turn the printer off, and then on again.
POWER FAILURE	A momentary power failure has occurred.	Check the power source which supplies power to the printer. If the rating is not correct, or if the printer shares the same power outlet with other electrical appliances that consume large amounts of power, change the outlet.
LOW BATTERY	The voltage of the Real Time Clock Battery is 1.9V or less.	Hold down the **[RESTART]** key until "<1>RESET" is displayed. If you would like to keep using the same battery even after "LOW BATTERY" error occurs, set the Low battery check function to OFF, and set the date and time to the real time. As long as the power is on, the Real Time Clock will function. However, once the power is turned off, the date and time will be reset. Call a Toshiba Tec authorised service representative for replacement of the battery.
Other error messages	A hardware or software problem may have occurred.	Turn the printer off and then on. If this does not solve the problem, turn off the printer again, and call a Toshiba Tec authorised service representative.

5.2 Possible Problems

This section describes problems that may occur when using the printer, and their causes and solutions.

Possible Problems	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 correctly.	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. ⇒ **Section 2.4**.
	2. The printer is in an error condition.	2. Solve the error in the message display. (See **Section 5.1** for more detail.)
Pressing the **[FEED]** key in the initial state results in an error.	A feed or an issue was attempted not on the following default conditions. Sensor type: Feed gap sensor Printing method: Thermal transfer Media pitch: 76.2 mm	Change the print condition by using the printer driver or a print command so that it corresponds to your printing conditions. Then, clear the error state by pressing the **[RESTART]** key.

5.2 Possible Problems (Cont.)

Possible Problems	Causes	Solutions
Nothing is printed on the media.	1. The media is not loaded properly.	1. Load the media properly. ⇒ **Section 2.4**.
	2. The ribbon is not loaded properly.	2. Load the ribbon properly. ⇒ **Section 2.5**.
	3. The ribbon and media are not matched.	3. Select an appropriate ribbon for the media type being used.
The printed image is blurred.	1. The ribbon and media are not matched.	1. Select an appropriate ribbon for the media type being used.
	2. The Print Head is not clean.	2. Clean the print head using a Print Head Cleaner or a cotton swab slightly moistened with ethyl alcohol.
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. ⇒ **Section 4.1.5.**
	3. The cutter blade is dirty.	3. Clean the cutter blade. ⇒ **Section 4.1.5**.
The optional Strip Module does not remove labels from the backing paper.	Label stock is too thin or the glue is too sticky.	Refer to **Section 7.1 Media** and change the label

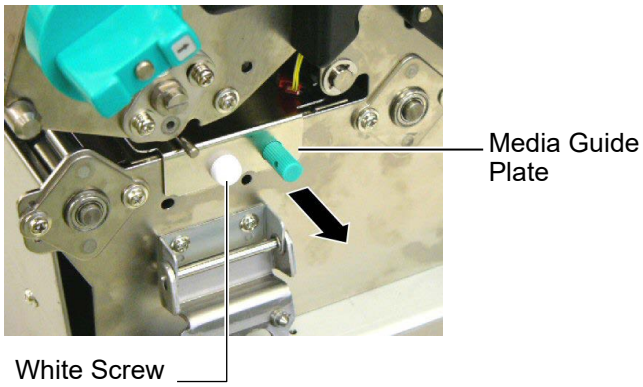
5.3 Removing Jammed Media

This section describes in detail how to remove jammed media from the printer.

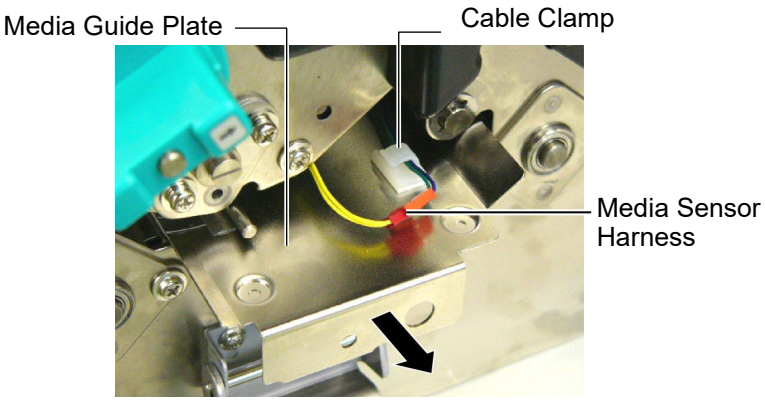
> ***CAUTION!***
> *Do not use any tool that may damage the Print Head.*

> ***NOTE:***
> *If you get frequent jams in the cutter, contact a Toshiba Tec authorised service representative.*

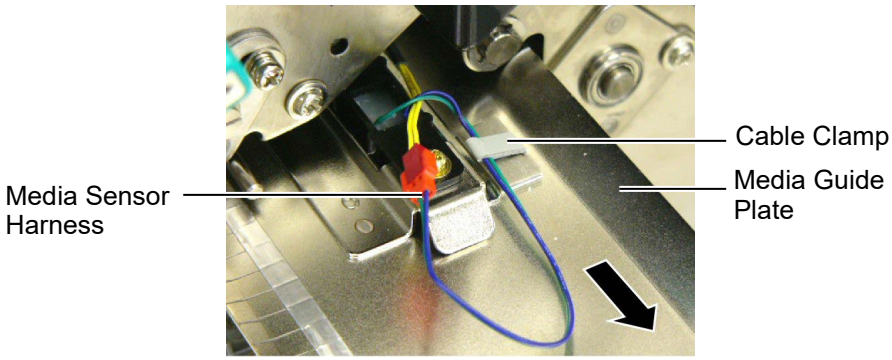
1. Turn off and unplug the printer.
2. Set the Head Lever to the "OPEN" position.
3. Open the Top Cover and Right Side Cover.
4. Open the Head Lock Plate.
5. Remove the White Screw and slightly pull the Media Guide Plate. As three Cable Clamps that fasten the Media Sensor Harness are attached to Media Guide Plate, release the harness in the following order.



6. When the Media Guide Plate is slightly pulled, the first Cable Clamp can be seen. Release the Media Sensor Harness from the Cable Clamp, and pull the Media Guide Plate to the half.

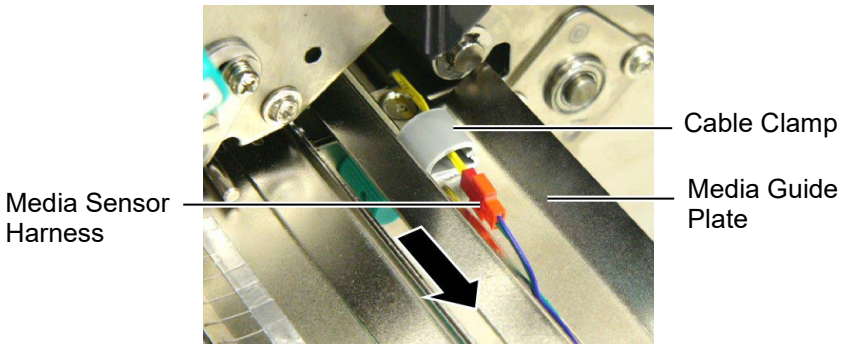


7. The second Cable Clamp is attached to the centre of the Media Guide Plate. Release the Media Sensor Harness from the Cable Clamp, and pull the Media Guide Plate.

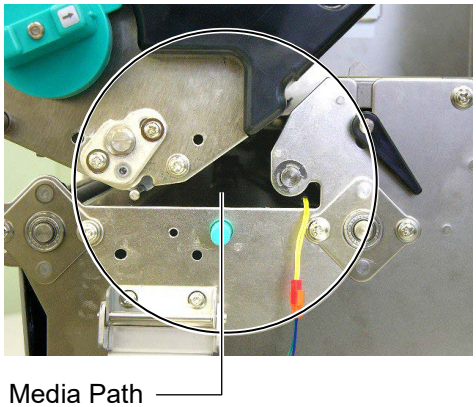


5.3 Removing Jammed Media (Cont.)

8. Release the Media Sensor Harness from the last Cable Clamp attached at the end of the Media Sensor Plate. Then, remove the Media Guide Plate from the printer.



9. Remove jammed media from the media path. DO NOT USE any sharp implements or tools as these could damage the printer



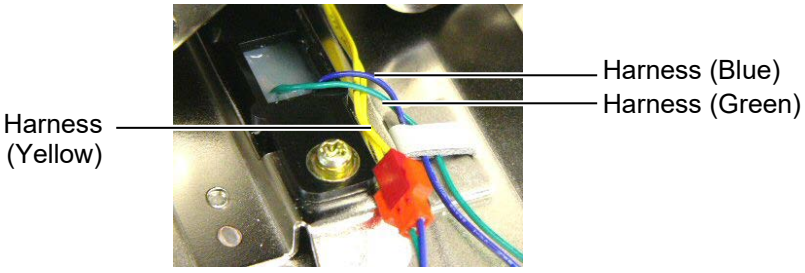
10. Clean the Print Head and Platen, then remove any further dust or foreign substances.

11. Clean the Media Guides (Refer to **Section 4.1.3**)

12. Paper jams in the Cutter Unit can be caused by wear or residual glue from label stock on the cutter. Do not use non-specified media in the cutter.

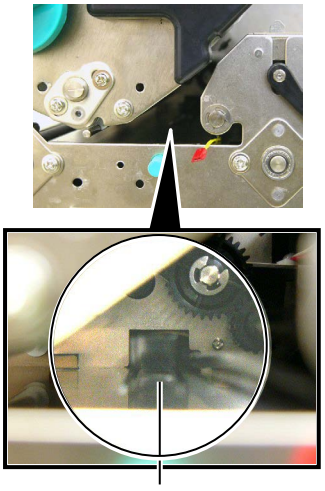
13. Re-install the Media Guide Plate on the printer in the reverse order of removal. At this time do not forget to fasten the Media Sensor Harness by the Cable Clamps.

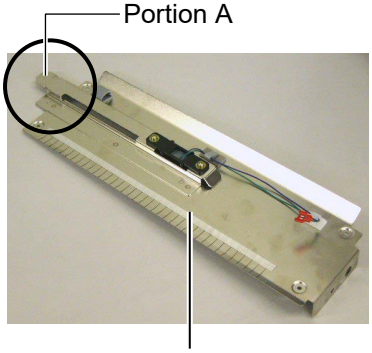
When fastening the harness by the centre Cable Clamp, place the blue and green harnesses over the yellow harness, and remove the slack of the harnesses, as shown in the picture below.



NOTE:

When re-installing the Media Guide Plate, insert the Movable Media Sensor into the portion A of the Media Guide Plate.





6. PRINTER SPECIFICATIONS

6. PRINTER SPECIFICATIONS

This section describes the printer specifications.

Item \ Model		B-SX8T-TS12-QM-R
Dimension (W × D × H)		416 mm × 289 mm × 395 mm (16.4” × 11.4” × 15.6”)
Weight		55 lb (25 kg) (Media and ribbon are not included.)
Operating temperature range		5°C to 40°C (41°F to 104°F)
Relative humidity		25% to 85% RH (no condensation)
Power supply		Universal power source AC100V to 240V, 50/60Hz±10%
Input voltage		AC100 to 240V, 50/60Hz ±10%
Power consumption	During a print job	3.5A (100V) to 1.4A (240V), 170W rating
	During standby	0.45A (100V) to 0.31A (240V), 20W (100V) to 10W (240V)
Resolution		12 dots/mm (305 dpi)
Printing method		Thermal transfer or Thermal direct
Printing speed		76.2 mm/sec. (3 inches/sec.) 101.6 mm/sec (4 inches/sec.) 203.2 mm/sec (8 inches/sec.)
Available media width (including backing paper)		101.6 mm to 225.0 mm (4 inch to 8.9 inches) 101.6 mm to 160.0 mm (Printing speed: 8 inches/sec.)
Maximum effective print width		213.3 mm (8 inches)
Issue mode		Batch, Strip (option), and Cut (option)
LCD Message display		16 characters × 2 lines

Item \ Model	B-SX8T-TS12-QM-R
Available barcode types	JAN8, JAN13, EAN8, EAN8+2 digits, EAN8+5 digits, EAN13, EAN13+2 digits, EAN13+5 digits, UPC-E, UPC-E+2 digits, UPC-E+5 digits, UPC-A, UPC-A+2 digits, UPC-A+5 digits, MSI, ITF, NW-7, CODE39, CODE93, CODE128, EAN128, Industrial 2 to 5, Customer Bar Code, POSTNET, KIX CODE, RM4SCC (ROYAL MAIL 4STATE CUSTOMER CODE), GS1 DataBar
Available two-dimensional code	Data Matrix, PDF417, QR code, Maxi Code, Micro PDF417, CP Code
Available font	Times Roman (6 sizes), Helvetica (6 sizes), Presentation (1 size), Letter Gothic (1 size), Prestige Elite (2 sizes), Courier (2 sizes), OCR (2 types), Gothic (1 size), Outline font (4 types), Price font (3 types)
Rotations	0°, 90°, 180°, 270°
Standard interface	Parallel interface (Centronics, Bidirectional 1284 Nibble mode) USB interface (V2.0 Full speed) LAN interface (10/100BASE)
Optional equipment	Serial interface board (RS-232C) (B-SA704-RS-QM-R) Cutter module (B-SX208-QM-R) Strip module (B-SX908-H-QM-R) Expansion I/O board (B-SA704-IO-QM-R) Real time clock (B-SA704-RTC-QM-R) Metal Supply Cover (B-SX908-MC-QM-R, future option)

NOTES:

- *Data Matrix™ is a trademark of International Data Matrix Inc., U.S.*
- *PDF417™ is a trademark of Symbol Technologies Inc., US.*
- *QR Code is a trademark of DENSO CORPORATION.*
- *Maxi Code is a trademark of United Parcel Service of America, Inc., U.S.*

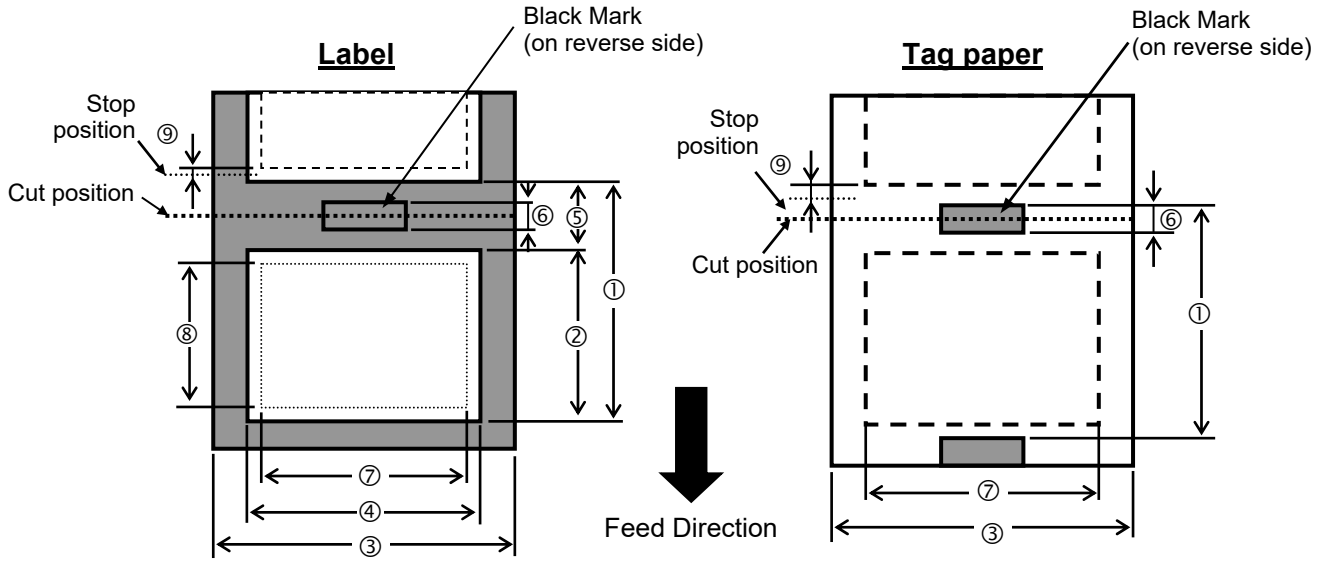
7. SUPPLY SPECIFICATIONS

7.1 Media

Make sure that the media being used is approved by Toshiba Tec. The warranty does not apply when a problem is caused by using media that is not approved by Toshiba Tec.
For information regarding Toshiba Tec approved media, contact a Toshiba Tec authorised service representative.

7.1.1 Media Type

Two types of media can be loaded for this thermal transfer and direct thermal printer: label or tag. The table below shows size and shape of the media available for this printer.



[Unit: mm]

Item \ Label dispensing mode		Batch mode	Strip mode	Cut mode
① Media pitch	Label	10.0 – 1368.0	25.4 – 1368.0	38.0 - 1368.0
	Tag paper	10.0 – 1368.0	-----	25.4 – 1368.0
② Label length		7.5 – 1366.0	22.9 – 1366.0	25.0 – 1362.0
③ Media width/backing paper width		101.6 – 225.0		
④ Label width		98.6 – 222.0		
⑤ Gap length		2.5 – 20.0	2.5 – 20.0	6.0 – 20.0
⑥ Black mark length (Tag paper)		2.5 – 10.0		
⑦ Maximum effective print width		10.0 – 213.3		
⑧ Effective print length	Label	5.5 – 1364.0	20.9 – 1364.0	23.0 – 1364.0
	Tag paper	8.0 – 1364.0	-----	23.4 – 1364.0
⑨ Print speed up/slow down area		1.0		
Thickness	Label	0.13 – 0.17		
	Tag paper	0.1 – 0.17		
Maximum outer roll diameter		Ø200		
Roll direction		Inside		
Inner core diameter		Ø76.2±0.3		

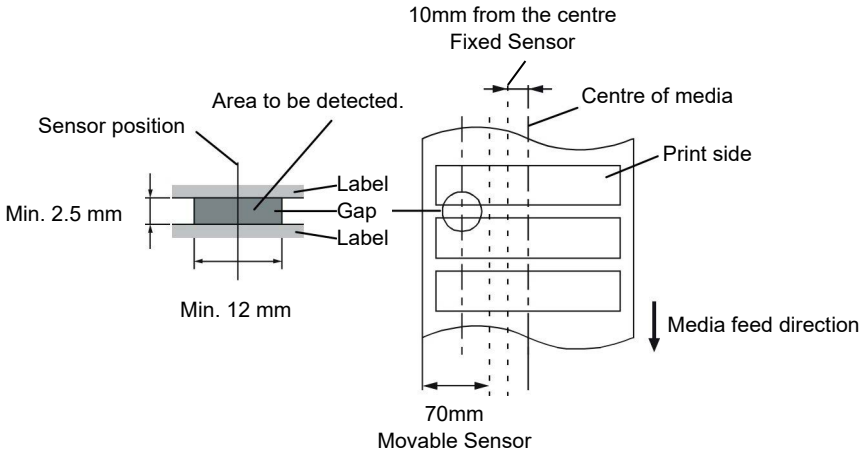
NOTES:

1. *To ensure print quality and print head life use only Toshiba Tec specified media.*
2. *The ratio of a label length to a gap length must be a minimum of 3 to 1 (3:1).*
3. *Backing paper must be wider than a label; the distance between the edge of the backing paper and that of a label should be at least 1.5 mm.*
4. *When using a label stock in cut mode, be sure to cut the gaps. Cutting labels will cause the glue to stick to the cutter, which may affect the cutter performance and shorten the cutter life.*
5. *To tear off printed media in batch issue easier, set the Auto Forward Wait function (FORWARD WAIT parameter) to ON in the system mode. When this function is effective, the printer stops feeding the printed media past the strip shaft. In case of a label stock, however, if a next label is issued without tearing off the printed label, the label may peel while it is fed backward, causing a printer failure.*

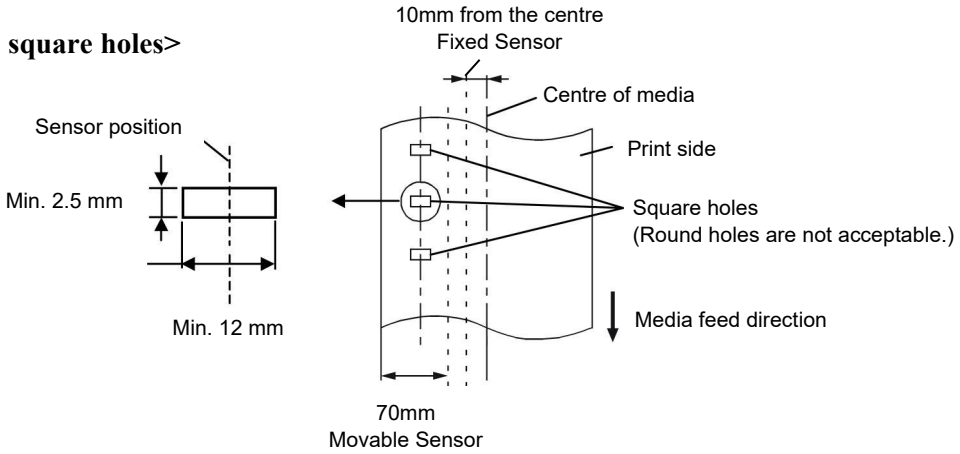
7.1.2 Detection Area of the Transmissive Sensor

The detection range of the Transmissive Sensor of the movable sensor is 70 mm from the media edge.
The Transmissive Sensor of the fixed sensor is positioned at 10 mm from the centre of media.
The Transmissive Sensor detects a gap between labels, as illustrated below.

<Label>

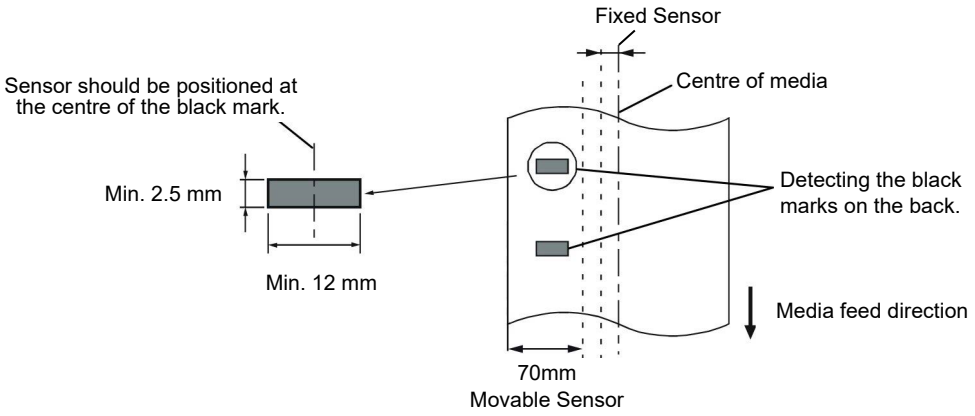


<Tag paper with square holes>



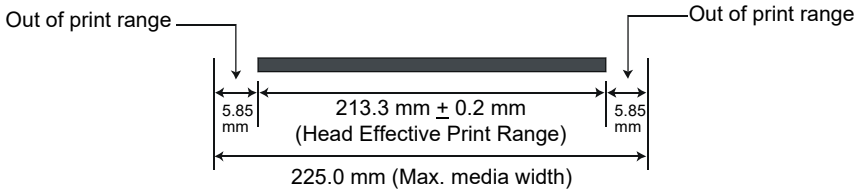
7.1.3 Detection Area of the Reflective Sensor

The detection range of the Reflective Sensor of the movable sensor is 70 mm from the media edge.
The Reflective Sensor of the fixed sensor is positioned at the centre of media.
The reflection factor of the Black Mark must be 10% or lower with a waveform length of 950 nm.
The Reflective Sensor should be aligned with the centre of the Black Mark.

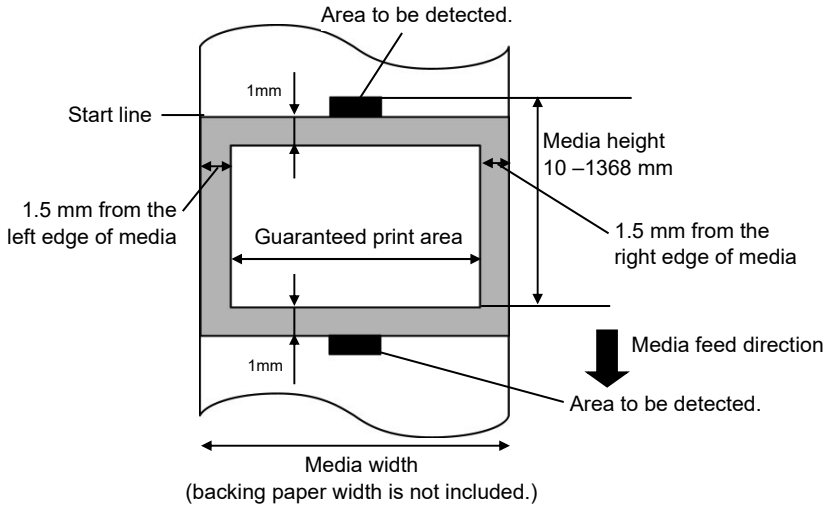


7.1.4 Effective Print Area

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



The figure below shows the effective print area on the media.



NOTES:

1. *Be sure not to print on shaded area in the above figure. Printing this area may cause ribbon wrinkles, resulting in a poor print quality of the guaranteed print area.*
2. *The centre of media is positioned at the centre of the Print Head.*
3. *Print quality in the 3-mm area from the print head stop position (including 1-mm non-printable area for print speed slow down) is not guaranteed.*

7.2 Ribbon

Make sure that the ribbon being used is approved by Toshiba Tec. The warranty does not apply to any problem caused by using non-approved ribbons.
For information regarding Toshiba Tec approved ribbon, contact a Toshiba Tec service representative.

Type	Spool type
Width	115 – 224 mm 115 – 160 mm (Printing speed: 8 inches/sec.)
Length	300 m (within ∅72 mm)
Outside Diameter	∅72 mm (max.)

NOTES:

1. *To ensure print quality and print head life use only Toshiba Tec specified ribbons.*
2. *Too much difference in width between media and ribbon may cause ribbon wrinkles. To avoid ribbon wrinkles use a ribbon for proper media width shown in the above table. Do not use a ribbon that is narrower than media.*
3. *When discarding ribbons, follow the local rule.*

7.3 Recommended Media and Ribbon Types

(1) Media type

Media type	Description
Vellum paper and labels	General use for low cost applications.
Coated paper	Matt coated paper General use including applications that require small letters and/or symbols. Glossy coated paper Used where a high-grade finish is required
Plastic films	Synthetic film (Polypropylene, etc.) This water-proof and solvent-resistant material has high physical strength and low-temperature resistance, but poor heat resistance (dependant upon material). This material can be used for labels stuck to recyclable containers, so it can be recycled in the same process. PET film This water-proof and solvent-resistant material has high physical strength, and low-temperature resistance as well as heat resistance. This material is used for many applications, especially where high durability is required. Mode/serial plate labels, caution labels, etc. Polyimide This material gives the best performance on heat resistance (greater than PET film). It is often used for PCB labels as it can withstand passage through a solder bath.

(2) Ribbon type

Ribbon type	Description
Smear-less ribbon (Wax resin ribbon)	Good match for coated paper. The printed image will resist water and light rubbing.
Scratch and solvent resistance ribbon	Very good match for plastic films (synthetic paper, PET, polyimide, etc.) Scratch and solvent resistance Heat resistance with PET and polyimide.

(3) Combination of Media and Ribbon

Media type / Ribbon type	Vellum paper and label	Coated paper	Plastic films
Smear-less ribbon (wax-resin ribbon)		○	
Scratch/solvent resistance ribbon			○

○: Good match

7.4 Care/Handling of Media and Ribbon

CAUTION!

Be sure to carefully review and understand the Supply Manual. Use only media and ribbons that meet specified requirements. Use of non-specified media and ribbons may shorten the head life and result in problems with barcode readability or print quality. All media and ribbons should be handled with care to avoid any damage to the media, ribbons or printer. Read the guidelines in this section carefully.

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

For further information, contact your local distributor or your media and ribbon manufacturers.

APPENDIX 1 MESSAGES AND LEDS

APPENDIX 1 MESSAGES AND LEDS

Appendix 1 describes the LCD messages displayed on the operation panel.

Symbols in the message

1: ❍: The LED is illuminated. ⊙: The LED is flashing. ●: The LED is unlit.
2: ****: the number of unprinted media. Up to 9999 (in pieces)
3: ###: Flash memory card remaining memory for PC save area: 0 to 3072 (in K bytes)
4: &&&&: Remaining flash memory capacity for storing writable characters 0 to 3072 (in K bytes)

No.	LCD Message	LED Indication			Printer Status	Restoration by RESTART key Yes/No	Acceptance of Status Request Reset Command Yes/No
		POWER	ON LINE	ERROR			
1	ON LINE	❍	❍	●	Online mode	-----	Yes
	ON LINE	❍	⊙	●	Online mode (communicating)	-----	Yes
2	HEAD OPEN	❍	●	●	The print head or pinch roller is opened in online mode.	-----	Yes
3	PAUSE ****	❍	●	●	Pause state	Yes	Yes
4	COMMS ERROR	❍	●	❍	A parity, overrun, or framing error has occurred during a communication by RS-232C.	Yes	Yes
5	PAPER JAM ****	❍	●	❍	A paper jam has occurred during paper feed.	Yes	Yes
6	CUTTER ERROR****	❍	●	❍	A problem has occurred at the cutter module.	Yes	Yes
7	NO PAPER ****	❍	●	❍	The media has run out, or the media is not loaded properly.	Yes	Yes
8	NO RIBBON ****	❍	●	❍	The ribbon has run out.	Yes	Yes
9	HEAD OPEN ****	❍	●	❍	A feed or an issue was attempted with the print head or pinch roller opened. (Except when the **[FEED]** key is pressed.)	Yes	Yes
10	HEAD ERROR	❍	●	❍	The print head has a problem.	Yes	Yes
11	EXCESS HEAD TEMP	❍	●	❍	The print head is overheated.	No	Yes
12	RIBBON ERROR****	❍	●	❍	The ribbon has been torn. A problem has occurred with the sensor that determines the torque for the ribbon motor.	Yes	Yes
13	SAVING ####&&&&	❍	❍	●	In writable character or PC command save mode	-----	Yes
14	FLASH WRITE ERR.	❍	●	❍	An error has occurred in writing to the flash ROM.	No	Yes
15	FORMAT ERROR	❍	●	❍	An error has occurred in formatting the flash ROM.	No	Yes
16	FLASH CARD FULL	❍	●	❍	Saving failed because of an insufficient capacity of the flash ROM.	No	Yes
17	Display of error message (See Note.)	❍	●	❍	A command error has occurred in analyzing the command.	Yes	Yes
18	POWER FAILURE	❍	●	❍	A momentary power failure has occurred.	No	No
19	INTIALIZING…	❍	●	●	The flash ROM is being initialised.	-----	-----
20	EEPROM ERROR	❍	●	❍	Data cannot be read from/written to a backup EEPROM properly.	-----	-----

No.	LCD Message	LED Indication			Printer Status	Restoration by RESTART key (Yes/No)	Acceptance of Status Request Reset Command (Yes/No)
		POWER	ON LINE	ERROR			
21	SYSTEM ERROR	❍	●	❍	When the following abnormal operations are performed, a system error occurs: (a) Command fetch from an odd address (b) Access to word data at an odd address (c) Access to long-word data at an odd address (d) Access to the area of 80000000H to FFFFFFFFH in the logic space in user mode. (e) An undefined instruction in an area other than a delay slot was decoded. (f) An undefined instruction in a delay slot was decoded. (g) An instruction to rewrite a delay slot was decoded.	No	No
22	100BASE LAN INITIALIZING…	❍	●	●	100 Base LAN Board is being initialised.	-----	-----
23	DHCP CLIENT INITIALIZING…	❍	●	●	The DHCP client is being initialized. *When the DHCP function is enabled.	-----	-----
24	LOW BATTERY	❍	●	❍	The voltage of the Real Time Clock Battery is 1.9V or less.	No	Yes
25	RFID WRITE ERROR	❍	●	❍	The printer did not succeed in writing data onto an RFID tag after having retried for a specified times.	Yes	Yes
26	RFID ERROR	❍	●	❍	The printer cannot communicate with the RFID module.	Yes	Yes

NOTE: *When an error message listed above appears on the LCD message display, refer to* ***Section 5 TROUBLESHOOTING*** *for solution.*

NOTE: Description of Command Error

- *If a command error is found in a command received, 16 bytes of the command error, starting from the command code, will be displayed. (However, [LF] and [NUL] will not be displayed.)*

Example 1

[ESC] T20 G30 [LF] [NUL]

└——— Command error

The following message appears.

```
T20G30
B-SX8T    V1.0A
```

Example 2

[ESC] XR; 0200, 0300, 0450, 1200, 1, [LF] [NUL]

└——— Command error

The following message appears.

```
XR;0200,0300,045
B-SX8T    V1.0A
```

Example 3

[ESC] PC001; 0A00, 0300, 2, 2, A, 00, B [LF] [NUL]

└——— Command error

The following message appears.

```
PC001;0A00,0300,
B-SX8T    V1.0A
```

- *When the error command is shown, "? (3FH)" appears for codes other than codes 20H to 7FH and A0H to DFH.*
- *For details, refer to the **B-SX6T/SX8T Series External Equipment Interface Specification**.*

APPENDIX 2 INTERFACE

APPENDIX 2 INTERFACE

NOTE:
To prevent radiation and reception of electrical noise, the interface cables must meet the following requirements:

- *In case of a parallel interface cable or serial interface cable, fully shielded and fitted with metal or metallised connector housings.*
- *Keep as short as possible.*
- *Should not be bundled tightly with power cords.*
- *Should not be tied to power line conduits.*
- *A parallel interface cable to be used should conform to IEEE1284.*

■ Parallel interface (Centronics)

Mode: Conforming to IEEE1284
Compatible mode (SPP mode), Nibble mode

Data input method: 8 bit parallel

Control signal:

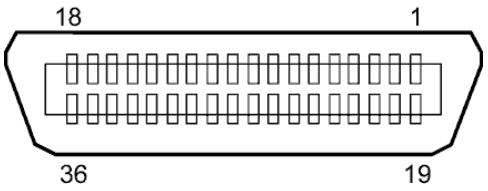
SPP Mode	Nibble Mode
nStrobe	HostClk
nAck	PtrClk
Busy	PtrBusy
Perror	AckDataReq
Select	Xflag
nAutoFd	HostBusy
nInit	nInit
nFault	nDataAvail
nSelectIn	IEEE1284Active

Data input code: ASCII code
European 8 bit code
Graphic 8 bit code
JIS8 code
Shift JIS Kanji code
JIS Kanji code
UTF-8

Receive buffer: 1M byte

Connector:

PIN No.	Signal	
	SPP Mode	Nibble Mode
1	nStrobe	HostClk
2	Data 1	Data 1
3	Data 2	Data 2
4	Data 3	Data 3
5	Data 4	Data 4
6	Data 5	Data 5
7	Data 6	Data 6
8	Data 7	Data 7
9	Data 8	Data 8
10	nAck	PtrClk
11	Busy	PtrBusy
12	PError	AckDataReq
13	Select	Xflag
14	nAutoFd	HostBusy
15	NC	NC
16	0V	0V
17	CHASSIS GND	CHASSIS GND
18	+5V (For detection)	+5V (For detection)
19	TWISTED PAIR GND(PIN1)	TWISTED PAIR GND(PIN1)
20	TWISTED PAIR GND(PIN2)	TWISTED PAIR GND(PIN2)
21	TWISTED PAIR GND(PIN3)	TWISTED PAIR GND(PIN3)
22	TWISTED PAIR GND(PIN4)	TWISTED PAIR GND(PIN4)
23	TWISTED PAIR GND(PIN5)	TWISTED PAIR GND(PIN5)
24	TWISTED PAIR GND(PIN6)	TWISTED PAIR GND(PIN6)
25	TWISTED PAIR GND(PIN7)	TWISTED PAIR GND(PIN7)
26	TWISTED PAIR GND(PIN8)	TWISTED PAIR GND(PIN8)
27	TWISTED PAIR GND(PIN9)	TWISTED PAIR GND(PIN9)
28	TWISTED PAIR GND(PIN10)	TWISTED PAIR GND(PIN10)
29	TWISTED PAIR GND(PIN11)	TWISTED PAIR GND(PIN11)
30	TWISTED PAIR GND(PIN31)	TWISTED PAIR GND(PIN31)
31	nInit	nInit
32	nFault	NDataAvail
33	0V	0V
34	NC	NC
35	NC	NC
36	nSelectIn	IEEE1284Active

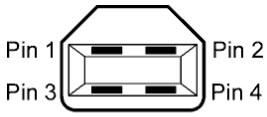


IEEE1284-B Connector

■ 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

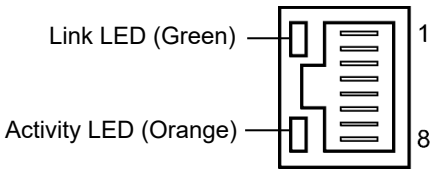
Pin No.	Signal
1	VCC
2	D-
3	D+
4	GND



Series B Plug

■ LAN

Standard: IEEE802.3 10BASE-T/100BASE-TX
Number of ports: 1
Connector: RJ-45
LED status: Link LED
Activity LED



LED	LED Status	LAN status
Link	ON	10Mbps link or 100Mbps link is detected.
	OFF	No link is detected. ** Communication cannot be made while the Link LED is off.*
Activity	ON	Communicating
	OFF	Idle

LAN cable: 10BASE-T: UTP category 3 or category 5
100BASE-TX: UTP category 5
Cable length: Segment length Max. 100 m

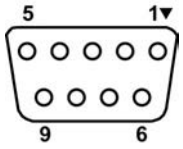
> ***NOTES:***
> *When a generally-used twisted pair Ethernet (TPE) or UTP cable is used, a communication error may occur depending on your operating environment. In such case, you may be requested to use a shielded twisted pair cable.*

APPENDIX 2 INTERFACE

■ Serial interface (Option: B-SA704-RS-QM-R)

Type: RS-232C
Communication mode: Full duplex
Transmission speed: 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps, 115200 bps
Synchronization: Start-stop synchronization
Start bit: 1 bit
Stop bit 1 bit, 2 bit
Data length: 7 bit, 8 bit
Parity: None, EVEN, ODD
Error detection: Parity error, Framing error, Overrun error
Protocol: Unprocedure communication
Data input code: ASCII code, European character 8 bit code, graphic 8 bit code, JIS8 code, Shift JIS Kanji code, JIS Kanji code
Receive buffer: 1M byte
Connector:

Pin No.	Signal
1	N.C
2	TD (Transmit Data)
3	RD (Received Data)
4	DSR (Data Set Ready)
5	SG (Signal Ground)
6	DTR (Data Terminal Ready)
7	CTS (Clear to Send)
8	RTS (Request to Send)
9	N.C



APPENDIX 2 INTERFACE

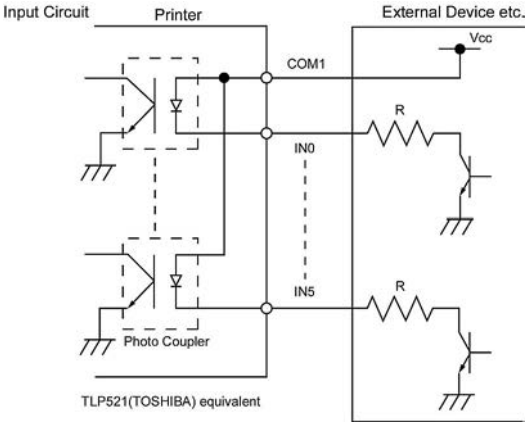
■ Expansion I/O Interface (Option: B-SA704-IO-QM-R)

Input Signal IN0 to IN5
Output Signal OUT0 to OUT6
Connector (External Device Side) FCN-781P024-G/P or equivalent
Connector (Printer Side) FCN-685J0024 or equivalent

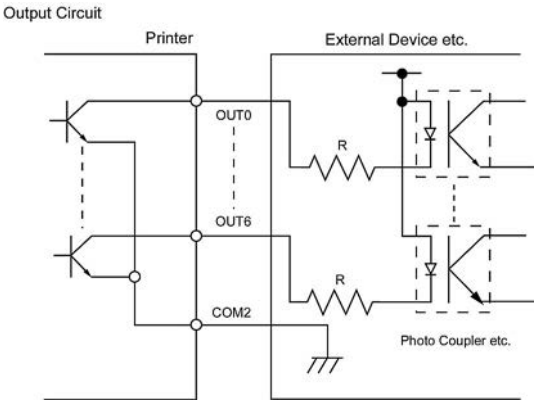
Pin	Signal	I/O	Function	Pin	Signal	I/O	Function
1	IN0	Input	FEED	13	OUT6	Output	
2	IN1	Input	PRINT	14	N.C.	-----	
3	IN2	Input	PAUSE	15	COM1	Common (Power)	
4	IN3	Input		16	N.C.	-----	
5	IN4	Input		17	N.C.	-----	
6	IN5	Input		18	N.C.	-----	
7	OUT0	Output	FEED	19	N.C.	-----	
8	OUT1	Output	PRINT	20	N.C.	-----	
9	OUT2	Output	PAUSE	21	COM2	Common (Ground)	
10	OUT3	Output	ERROR	22	N.C.	-----	
11	OUT4	Output		23	N.C.	-----	
12	OUT5	Output	POWER ON	24	N.C.	-----	

N.C.: No Connection

Input Circuit



Output Circuit



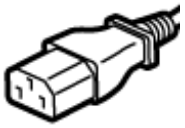
Operating environment Temperature: 0 to 40 °C
Humidity: 20 to 90% (No Condensation)

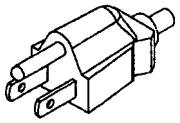
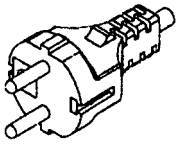
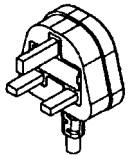
APPENDIX 3 POWER CORD

APPENDIX 3 POWER CORD

Power Cord Instruction

1. For use with 100 – 125 Vac mains power supply, select a power cord rated Min. 125V, 10A.
2. For use with 200 – 240 Vac mains power supply, select a power cord rated Min. 250V.
3. Select a power cord with the length of 4.5m or less.
4. The power cable plug connected to the AC adapter must be able to be inserted into an ICE-320-C14 inlet. Refer to the following figure for the shape.



Country/Region	North America	Europe	United Kingdom	Australia
Power Cord Rated (Min.) Type Conductor size (Min.)	 125V, 10A SVT No. 3/18AWG	 250V H05VV-F 3 x 0.75 mm^2	 250V H05VV-F 3 x 0.75 mm^2	 250V AS3191 approved, Light or Ordinary Duty type 3 x 0.75 mm^2
Plug Configuration (locally approved type) Rated (Min.)	 125V, 10A	 250V, 10A	 250V, *1	 250V, *1

*1 At least, 125% of the rated current of the product.

Barcode Printers
Owner's Manual
B-SX8T-TS12-QM-R

Toshiba Tec Corporation

1-11-1, OSAKI, SHINAGAWA-KU, TOKYO, 141-8562, JAPAN

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