# TOSHIBA

**Barcode Printers** 

# **Owner's Manual**

# B-852-TS22-QP-R B-852-TS22-QQ-R



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# 1. PRODUCT OVERVIEW

## 1.1 Introduction

Thank you for choosing the TOSHIBA B-852 series label/tag printer. This Owner's Manual contains from general set-up through how to confirm the printer operation using a 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

The B-852 printer has the following features:

- An 8.3-inch wide print head is installed in such a compact body that the size of the printer body (except the Supply Holder Unit) is about 1/3 of the B-SX6T or B-SX8T printer.
- The print head block which can be fully opened realizes great operability.
- Various kinds of media can be used since the black mark sensors are located above and under the media passage, respectively, and the media sensors can be moved from the center to the left edge of the media.
- When the optional interface board is installed, Web functions such as remote maintenance and other advanced network functions are available.
- Superior hardware, including the specially developed 11.8 dots/mm (300 dots/inch) thermal print head which will allow very clear print at a printing speed of 50.8 mm/sec. (2 inches/sec.) or 101.6 mm/sec. (4 inches/sec.).
- Besides the optional cutter module, there is also an optional Expansion I/O Interface Board, Serial Interface Board, and Real Time Clock.

### 1.3 Unpacking

#### NOTES:

- Check for damage or scratches on the printer. However, note that Toshiba Tec shall have no liability for any damage of any kind sustained during transportation of the product.
- Keep the cartons and pads for future transportation of the printer.

Unpack the printer as per the Unpacking Instructions supplied with the printer.

## 1.4 Accessories

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

□ Power Cord QQ (1 pc.)



□ Print Head Cleaner (1 pc.)



□ Supply Holder Frame (L) (1 pc.)

**CAUTION!** Be sure to use Toshiba Tec approved print head cleaner. Failure to do this may shorten the print head life.



 $\Box \text{ Supply Holder Base (1 pc.)}$ 



 $\Box$  Cable Clamp (1 pc.)



Supply Loading Instructions (1 sheet)



Quality Control Report (1 sheet) (QQ)







□ Supply Holder Unit (1 pc.)



 $\Box Supply Holder Frame (R)$ (1 pc.)



□ Wing Bolt M-4x6 (2 pcs.)



 $\Box$  Screw (1 pc.)



- □ Safety Information (1 sheet)
- U Warranty Disclaimer Sheet (1sheet) (QQ)

## 1.5 Appearance

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





Supply Holder Frame

### 1.5.4 Operation Panel



See Section 3.1 for further information about the Operation Panel.

### 1.5.5 Interior



# 1.6 Options

<b>Option Name</b>	Туре	Description
Cutter module	B-7208-QM-R	A stop and cut swing cutter.
Expansion I/O interface board	B-SA704-IO-QM-R	Installing this board in the printer allows a connection with an external device with the exclusive interface, such as the keyboard module.
Serial Interface board	B-SA704-RS-QM-R	Installing this PC board provides an RS232C interface port.
Real time clock	B-SA704-RTC-QM-R	This module holds the current time: year, month, day, hour, minute, second

NOTE:

Available from your nearest Toshiba Tec representative or Toshiba Tec Head Quarters.

# 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.



### 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 threeprong power cable that has the proper ground (earth) connection.
- Do not operate the printer with the cover open. Be careful not to allow fingers or articles of clothing to get caught into any of the moving parts of the printer especially the optional cutter mechanism.
- Make sure to turn off the printer power and to remove the power cord from the printer whenever working on the inside of the printer such as changing the ribbon or loading the media, or when cleaning the printer.
- For best results, and longer printer life, use only Toshiba Tec recommended media and ribbons.
- Store the media and ribbons in accordance with their specifications.
- This printer mechanism contains high voltage components; therefore you should never remove any of the covers of the machine as you may receive an electrical shock. Additionally, the printer contains many delicate components that may be damaged if accessed by unauthorised personnel.
- Clean the outside of the printer with a clean dry cloth or a clean cloth slightly dampened with a mild detergent solution.
- Use caution when cleaning the thermal print head as it may become very hot while printing. Wait until it has had time to cool before cleaning. Use only the Toshiba Tec recommended print head cleaner to clean the print head.
- Do not turn off the printer power or remove the power plug while the printer is printing or while the ON LINE lamp is blinking.

### 2.2 Assembling the Accessories

### 2.2.1 Assembling the Supply Holder Frame

### NOTE:

Make sure that the two small flanges at each end of the Supply Holder Base fit into the small rectangular holes at the bottom of the Supply Holder Frames before tightening the Wing Bolts. The following procedure outlines the steps required to assemble the Supply Holder Frame and attach the frame to the B-852 printer in preparation for loading the media.

**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.



Wing Bolt

Supply Holder Base

Hook

### NOTE:

After attaching the supply holder frame to the printer, make sure that it is assembled firmly.

**2.** Attach the assembled Supply Holder Frame to the rear of the B-852 printer by inserting the hooks of the Frame into the two slots in the rear of the printer as shown in the figure below.



Hook

### 2.3 Connecting the Power Cord

### CAUTION!

- Make sure that the printer power switch is turned to the off position O before connecting the power cord to prevent possible electric shock or damage to the printer.
- Use only the power cord supplied with the printer. Use of any other cord may cause electric shock or fire.
- 3. Connect the power cord to a three-prong outlet only, with the third prong being a good ground (earth) connection.

**1.** Make sure that the printer power switch is in the off position.



2. Connect the Power Cord to the printer as shown in the figure below.



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





[Example of US Type (QQ model)]

[Example of EU Type (QP model)]

NOTES:

### 2.4 Loading the Media

The following procedure will outline the steps required to install the media onto the Supply Holder Unit and adjust its position in the Supply Holder Frame at the rear of the B-852 printer. The procedure will then show the steps to properly load the media into the printer so that it feeds straight and true through the printer.

### 2.4.1 Installing the Media onto the Supply Holder Unit

1. The Non-removable Supply Holder is the one that slides in

2. Do not turn the Supply Holder

Locking Knob anti-clockwise

too far, or it may come off the

the wide slot while the Removable Supply Holder is the one that slides in the

narrow slot.

Supply Holder.

The figure below shows the assembled Supply Holder Unit and the paragraphs that follow show the step-by-step procedures to disassemble the Supply Holder Unit, install the media onto the Supply Shaft, then reassembling the Supply Holder Unit so that the auto centering mechanism will automatically center the media on the Supply Shaft.



Disassembling the Supply Holder Unit

- **1.** Position the Supply Holder Unit as shown in the above diagram so that the Non-removable Supply Holder is at the right.
- **2.** Rotate the Green Supply Holder Locking Knob in the direction of arrow ① (counterclockwise) to loosen the Removable Supply Holder.
- **3.** Slide the Removable Supply Holder in the direction of arrow 2 to remove it from the Supply Shaft.
- **4.** Rotate the green Supply Holder Locking Knob in the direction of arrow ③ (counterclockwise) to loosen the Non-removable Supply Holder.
- **5.** Slide the Non-removable Supply Holder all the way to the end of the Supply Shaft until it stops.

### 2.4.1 Installing the Media onto the Supply Holder Unit (Cont.)

### WARNING!

If you turn the Removable Supply Holder side down after loading the media, the media may drop by weight. You might be injured by the dropped media.

### CAUTION!

When installing the media roll, do not push on the Non-removable Supply Holder as this will result in the media roll not being properly centred.

### NOTES:

1. This Supply Holder accepts four sizes of media core: 38 mm, 40 mm, 42 mm and 76.2 mm.. When using a media roll of 38 mm, 40 mm, or 42 mm, remove the spacers from the Supply Holders by pushing both hooks of the Spacer. Keep the removed Spacers safe.



- Use only inside wound label stock. Outside wound label stock may not feed properly. Use outside wound label stock at your own risk.
- 3. Do not over-tighten the green Supply Holder Locking Knob.

The diagram below, and the steps that follow, show the procedures for installing the Media onto the Supply Shaft and reassembling the Supply Holder Unit. Be sure to follow the step-by-step procedure exactly or the auto centering mechanism may not work properly.



Installing the Media and reassembling the Supply Holder

- **1.** Place the media roll onto the Supply Shaft with the media feeding from the bottom as shown in the diagram above. ①
- **2.** Align the tab of the Removable Supply Holder with the Slot in the Supply Shaft, then reinstall the Removable Supply Holder by sliding it onto the Supply Shaft as shown in the figure above.
- **3.** Holding the reassembled Supply Holder Unit in your right hand, apply pressure only to the reinstalled Removable Supply Holder to push it in the direction of arrow ②, causing the auto centering mechanism to center the media on the Supply Shaft.
- Tighten the green Supply Holder Locking Knob for the Removable Supply Holder by turning it in the direction of arrow ③.
- **5.** Tighten the green Supply Holder Locking Knob for the Non-removable Supply Holder by turning it in the direction of arrow ④.

### 2.4.2 Installing the Supply Holder Unit onto the Supply Holder Frame

### NOTE:

Make sure that the brass bushings of the Supply Shaft are seated into the notches so that the entire Supply Holder Unit rotates smoothly.

### CAUTION!

The reassembled Supply Holder Unit and media roll may be quite heavy, so be careful not to pinch your fingers when installing the Supply Holder Unit onto the Supply Holder Frame.

2.4.3 Loading Media into the Printer

#### WARNING!

The Top Cover can be opened during the operation for control purposes only. It should be closed during normal operation. **1.** Insert the assembled Supply Holder Unit into the rear notches of the Supply Holder Frame as shown in the diagram below.



**2.** Now feed the media from the bottom of the media roll into the media slot at the rear of the printer as shown.

The following paragraphs outlines how to properly install the media into the printer from the Supply Holder Unit that has been installed in the previous steps.

**1.** Raise the Top Cover as shown in the diagram below.

Top Cover



# 2.4.3 Loading Media into the Printer (Cont.)

### WARNING!

- 1. The Print Head may become hot. Do not touch the Print Head.
- 2. Risk of injuries. Do not touch moving parts. Disconnect the mains before maintenance of ribbon and media.

#### CAUTION!

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

- **2.** Release the Print Head Block by pressing down on the Head Block Release Lever ① as shown below.
- **3.** Raise the Print Head Block to its fully open position as shown by the arrow <sup>(2)</sup> in the above diagram.



- **4.** Release the locking levers on the two paper guides as shown in the figure below.
- **5.** Grasp the right hand Paper Guide and move it to the right to open the Paper Guides wide enough to accept the media.
- **6.** Feed the media between the two guides.
- **7.** Feed the paper under the Upper Sensor Ass'y and pull the paper until it extends past the Platen. (until it extends past the cutter outlet when the optional cutter is attached.)
- **8.** Grasp the right Paper Guide and move it to the left to close both Paper Guides and automatically center the media.
- **9.** Press the Paper Guide Locking Levers to lock the Paper Guides in place.



2.4.3 Loading Media into the printer (Cont.)10. After loading the media, don't forget to move the Supply Holder Unit to the forward notch of the Supply Roll Frame as shown below.



**11.** If you are using labels or thick tag paper, then it may be necessary to increase the head pressure by lowering the Head Pressure Adjust Lever in the figure below.



### NOTE: Head Pressure Adjust Lever Position

Lever position	Head pressure	Available media
ЦР	Low	•Thin tag paper
UF	LOW	<ul> <li>Narrow media</li> </ul>
		•Label
	Lliab	<ul> <li>Thick tag paper</li> </ul>
DOWN	riigii	•Wide media
		•Full width media
When using full width media, be sure to turn the Head Pressure		
Adjust Lever to DOWN, regardless of the thickness.		
Figure 11 is the state of the state of the first indication of the state of the sta		

• For all kinds of media except the full width media, turn the Head Pressure Adjust Lever to UP, if the print quality is to be ensured.

If the print tone is light when using thin tag paper, turn the Head

### 2.5 Setting Sensor Positions

# 2.5.1 Setting the Feed Gap Sensor

After loading the media, as outlined in the previous paragraphs, it will usually be necessary to set the Media Sensors used to detect the print start position for label or tag printing.

- **1.** With the Print Head Block raised as described in **section 2.4.3**, pass the labels under the Upper Sensor Ass'y as shown in the figure below.
- Rotate the Green Sensor Adjust Gear to move the Sensor Ass'y to the left or right to center the arrow (↑) over the label.
- **3.** With the sensor set to the center of the labels, it will be guaranteed to detect the gap between labels even if the labels are round.



### 2.5.2 Setting the Black Mark Sensor

- If the Black Mark is printed on the top of the tag media then simply rotate the Green Sensor Adjust Gear to move the Sensor Ass'y so that the Black Mark Indicator ( ♦ is directly in line with the Black Mark on the top of the paper.
- **2.** If the Black Mark is printed on the bottom of the tag media then fold the media back to be able to see the Black Mark and its relationship to the Sensor Ass'y as shown in the figure below.



## 2.6 Loading the Ribbon

### WARNING!

- The Print Head may become hot. Do not touch the Print Head.
- The Top Cover can be opened during the operation for control purposes only. It should be closed during normal operation.
- Risk of injuries. Do not touch moving parts. Disconnect the mains before maintenance of ribbon and media.

- 1. Raise the Top Cover and release and raise the Print Head Block as described in section 2.4.3, steps 1 and 2.
- **2.** Hold the Ribbon Supply Roll in your left hand and the Ribbon Take up Roll in your right hand.
- **3.** Install the Ribbon Supply Roll into the Print Head Block as shown in the figure below and described in the following paragraphs.
- **4.** Step **1**, engage the end of the Ribbon Supply Roll Core to the Ribbon Core Guide ① and push to compress the Ribbon Spring.
- Step 2, engage the opposite end of the Ribbon Supply Roll Core to the Green Ribbon Winding Core <sup>(2)</sup> releasing pressure to relax the Ribbon Spring.
- **6.** Rotate the Green Ribbon Winding Core to lock the Ribbon Supply Roll into position. ③



NOTE:

Be sure to remove any slack in the ribbon. Printing with a wrinkled ribbon will lower the print quality.

- **7.** Repeat steps **4** through **6** with the Ribbon Take up Roll, locking it in place also.
- **8.** Take up any slack in the ribbon by rotating the green Ribbon Winding Core on the take up in the direction of arrow ①.
- **9.** Close the Print Head Block and lock it in place by pressing at locations ② and ③ in the figure below.



Green Ribbon Winding Core

### 2.7 Connecting the Cables to Your Printer

### CAUTION!

Do not directly connect the LAN cable 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.

#### NOTE:

When using the Parallel interface, fix the Parallel Interface Cable to the printer back with the supplied Cable Clamp and the SMW-3x8 screw.

Parallel Interface Cable



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.



Expansion I/O and Serial I/F (Option)
Expansion I/O Connector
Serial I/F Connector

### 2.8 Turning the Printer ON/OFF

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.

2.8.1 Turning ON the Printer

### 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.

# 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.



NOTE:

If an error message appears in the display instead of the ON LINE message or the ERROR LED lamp is illuminated, go to **Chapter 5.1, Error Messages**.

### 2.8.2 Turning OFF the Printer

- **2.** Check that the ON LINE message appears in the LCD Message Display and that the ON LINE and POWER LED lights are illuminated.
- **1.** Before turning off the printer power switch verify that the ON LINE message appears in the LCD Message Display and that the ON LINE LED light is on and is not flashing.
- **2.** To turn OFF the printer power press the power switch as shown in the diagram below. Note that (O) is the power OFF side of the switch.

### CAUTION!

- Do not turn off the printer power while the media is being printed as this may cause a paper jam or damage to the printer.
- Do not turn off the printer power while the ON LINE light is blinking as this may cause damage to your computer.



Power Switch

# 3. ON LINE MODE

This chapter describes usage and purpose 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, 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 status. Up to 16 characters can be displayed on one line.

LED	Illuminates when	Flashes when
POWER	The printer is turned on	
ON LINE	The printer is ready to The printer is	
	print.	communicating with
		your computer.
ERROR	Any error occurs with the	
	printer.	

#### There are three keys on the Operation Panel.

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

### NOTE:

Use the **[RESTART]** key to resume printing after a pause condition, or after clearing an error.

### 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.



**2.** If any error occurs during printing, an error message appears. The printer stops printing automatically. (The number on the right column shows the number of unprinted media.)

NO PAPER 125

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



**4.** If the **[PAUSE]** key is pressed during printing, the printer stops printing temporarily. (The number on the right column shows the number of unprinted media.)



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



### 3.3 Reset

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

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

ON LINE

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

PAUSE 52

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

# 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 or jam your fingers while opening or closing the cover and Print Head Block.
- 3. The Print Head may become hot. Do not touch the Print Head.
- 4. Do not pour water directly onto the printer.

## 4.1 Cleaning

### 4.1.1 Print Head / Platen / Sensors

### CAUTION!

- Do not allow any hard objects to touch the print head or platen, as this may cause damage to them.
- 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.
- Do not touch the print head element with bare hands, as static may damage the print head.
- Be sure to use the print head cleaner enclosed with this printer. Failure to do this may shorten the print head life.

**NOTE:** Purchase the Print Head Cleaner from the authorised Toshiba Tec service representative. This chapter describes how to perform normal maintenance. To maintain the printer performance and quality print, clean the printer regularly, or whenever media or ribbon is replaced.

The following sections describe periodic cleaning of the unit.

- **1.** Turn off the printer. Open the Top Cover.
- **2.** Press the Head Block Release Lever to release the Print Head Block.
- **3.** Raise the Print Head Block and remove the ribbon.
- 4. Clean the Print Head Element with the supplied Print Head Cleaner.



- 5. Hold the Sensor Lift Tab and lift the Upper Sensor Ass'y.
- 6. Wipe the Feed Gap Sensor and Black Mark Sensor with a dry soft cloth.
- **7.** Wipe the Platen with a soft cloth slightly moistened with ethyl alcohol.



Sensor Lift Tab

Feed Gap Sensor and Black Mark Sensor



### 4.1.2 Covers and Panels

### **CAUTION!**

Do not use any volatile solvent including thinner and benzene, as this may cause discoloration or distortion of the cover. Wipe the Cover and Front Panel with a dry soft cloth. Wipe off dirt with a soft cloth slightly moistened with water.



### 4.1.3 Optional Cutter Module

### WARNING!

- Be sure to turn the power off before cleaning the Cutter Module.
- The Cutter is sharp, so care should be taken not to injure yourself when cleaning.
- **1.** Remove the Plastic Head Screw and to detach the Cutter Cover.
- 2. Remove the jammed paper and trash, if any.
- **3.** Clean the Cutter Blade with a dry cloth.



# 5. TROUBLESHOOTING

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

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 authorised Toshiba Tec service representative for assistance.

# 5.1 Error Messages

NOTES:

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

Error Messages	Problems/Causes	Solutions	
HEAD OPEN	The print head block is opened in Online	Close the print head block. Then press	
	Mode.	the <b>[RESTART]</b> key.	
HEAD OPEN ****	Feed or printing has been attempted with	Close the print head block. Then press	
	the Print Head Block open.	the <b>[RESTART]</b> key.	
COMMS ERROR	A communication error has occurred.	Make sure the interface cable is firmly	
		connected to the computer, and the	
		computer is turned on.	
PAPER JAM ****	1.The media is jammed at the media	1. Remove the jammed media, and	
	path. The media is not fed smoothly.	clean the Platen. Then reload the	
		media properly. Finally press the	
		[RESTART] key.	
		$\Rightarrow$ Section 5.3.	
	2. A wrong media sensor is selected for	2. Turn the printer off and then on.	
	the media being loaded.	Then select the media sensor	
		supporting the media being loaded.	
		Finally resend the print job.	
3. The Black Mark Sensor is not		3. Adjust the sensor position. Then	
to the Black Mark on the media.		$\rightarrow$ Section 2.5	
	A Size of the loaded media is not	$\rightarrow$ Section 2.5.	
consistent with the programmed size		4. Further printer off and then off. Perplace the loaded media with one	
	consistent with the programmed size.	which matches the programmed size	
		or select a programmed size that	
		matches the loaded media Finally	
		resend the print job.	
	5. The Feed Gap Sensor cannot	5. For details, contact your service	
	distinguish the print area from a label	representative.	
gap.		L	
CUTTER ERROR ****	The media is jammed in the Cutter.	Remove the jammed media. Then press	
(Only when the Cutter		the <b>[RESTART]</b> key. If this does not	
Module is installed on		solve the problem, turn off the printer,	
the printer.)	and call an authorised service		
representative.		representative.	
		$\Rightarrow$ Section 4.1.3	

# 5.1 Error Messages (Cont.)

Error Messages	Problems/Cause	Solutions
NO PAPER ****	1. The media has run out.	1. Load new media. Then press the
		[RESTART] key.
		$\Rightarrow$ Section 2.4
	2. The media is not loaded properly.	2. Load the media properly. Then press
		the <b>[RESTART]</b> key.
		$\Rightarrow$ Section 2.4
	3. The media is slack.	3. Take up any slack in the media.
RIBBON ERROR ****	1. The ribbon is not fed properly.	1. 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 an authorised service
		representative.
	2. The ribbon has run out.	2. Load a new ribbon. Then press the
		[RESTART] key.
		$\Rightarrow$ Section 2.6
EXCESS HEAD TEMP	The print head is overheated.	Turn off the printer, and allow it to cool
		down (about 3 minutes). If this does not
		solve the problem, call an authorised
		service representative.
HEAD ERROR	There is a problem with the Print Head.	Replace the Print Head. Then press the
		[RESTART] key.
POWER FAILURE	A momentary power failure has	Check the power source which supplies
	occurred.	correct or if the printer shares the same
		power outlet with other electrical
		appliances that consume large amounts
		of power, change the outlet.
SYSTEM ERROR	1. The printer is used in a location where	1. Keep the printer and the interface
	it is subject to noise. Or, there are	cables away from the source of noise.
	power cords of other electrical	
	appliances near the printer or	
	2 The Power Cord of the printer is not	2 Ground the Power Cord
	grounded	2. Ground the rower cord.
	3. The printer shares the same power	3. Provide an exclusive power source for
	source with any other electrical	the printer.
	appliances.	
	4. An application software used on your	4. Confirm the host computer operates
	host computer has an error or	properly.
	malfunction.	
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	Turn the printer off, and then on again.
	flash ROM.	
FLASH CARD FULL	Saving failed because of an insufficient	Turn the printer off, and then on again.
	Data cannot be read from/written to a	Turn the printer off and then on again
	backup EEPROM properly.	run die printer on, and dien on agaili.

Error Messages	Problems/Cause	Solutions
SYNTAX ERROR	While the printer is in the Download mode for upgrading the firmware, it receives an improper command, for example, an Issue Command.	Turn the printer off, and then on again.
LOW BATTERY	The voltage of the Real Time Clock Battery is 1.9V or less.	Hold down the <b>[RESTART]</b> 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 authorized service representative for replacement of the battery.
Other error messages	Hardware or software problems 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.

# 5.1 Error Messages (Cont.)

# 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	1. The Power Cord is disconnected.	1. Plug in the Power Cord.
turn on.	2. The AC outlet is not functioning correctly.	2. Make sure that the power is supplied using 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.
		$\Rightarrow$ 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]	A feed or an issue was attempted not on	Change the print condition by using the
key in the initial state	the following default conditions.	printer driver or a print command so that
results in an error.	Sensor type: Feed gap sensor it corresponds to your printing	
	Printing method: Thermal transfer	conditions. Then, clear the error state by
	Media pitch: 76.2 mm	pressing the <b>[RESTART]</b> key.

# 5.2 Possible Problems (Cont.)

Possible Problems	Causes	Solutions
Nothing is printed on	1. The media is not loaded properly.	1. Load the media properly.
the media.		$\Rightarrow$ Section 2.4.
	2. The ribbon is not loaded properly.	2. Load the ribbon properly.
		$\Rightarrow$ Section 2.6
	3. A print head is not installed properly.	3. Install the Print Head properly. Close
		the Print Head Block.
	4. The ribbon and media are not	4. Select an appropriate ribbon for the
	matched.	media type being used.
The printed image is	1. The ribbon and media are not	1. Select an appropriate ribbon for the
blurred.	matched.	media type being used.
	2. The Print Head is not clean.	2. Clean the print head using the
		supplied Print Head Cleaner.
		$\Rightarrow$ Section 4.1.1
The Cutter does not	1. The Cutter Cover is not attached	1. Attach the Cutter Cover properly.
cut.	properly.	
	2. The media is jammed in the Cutter.	2. Remove the jammed paper.
		$\Rightarrow$ Section 4.1.3
	3. The Cutter Blade is dirty.	3. Clean the Cutter Blade.
		$\Rightarrow$ Section 4.1.3

### 5.3 Removing Jammed Media

CAUTION!

Do not scratch the Print Head or Platen using a sharp instrument, as this may cause media feed failure or damage to the printer. This section describes in detail how to remove jammed media from the printer.

Remove the jammed media from under the Upper Sensor Ass'y as follows:

- **1.** Open the Top Cover.
- **2.** Push the Head Block Release Lever to release and raise the Print Head Block.
- **3.** Lift the Upper Sensor Ass'y, and remove the jammed media.



Upper Sensor Ass'y

### NOTE:

If you get frequent jams in the Cutter, contact a Toshiba Tec authorised service representative.

- 4. Clean the Platen and sensors as described in Section 4.1.1.
- **5.** Media jams in the Cutter Module can be caused by wear or residual glue from label stock on the Cutter Blade. Do not use non-specified media with the Cutter.

# 6. PRINTER SPECIFICATIONS

This section describes the printer specifications.

Model		B-852-TS22-QQ-R	B-852-TS22-QP-R
Dimension (W $\times$ D $\times$ H)385 mm $\times$ 181 mm* $\times$ 243 mm (15.2" $\times$ 7.1"* $\times$ 9.6")*: Depth is 16.8" (427 mm) when the supply holder is in		$.2" \times 7.1"* \times 9.6")$ ne supply holder is installed.	
Weight		34.4 lb (15.6 kg) (Media and ribbon	are not included.)
Operating temper	ature range	5°C to 40°C (41°F to 104°F)	
Relative humidity	7	25% to 85% RH (no condensation)	
Input voltage		AC100 – 120V, 60 Hz	AC220 – 240V, 50 Hz
Power	During a print job	2.5 A, 190 W maximum	1.1 A, 217 W maximum
consumption	During standby	0.16 A, 15 W maximum	0.1 A, 20 W maximum
Resolution	·	11.8 dots/mm (300 dpi)	
Printing method		Thermal transfer or Thermal direct	
Printing speed 50.8mm/sec. (2 inches/sec.) 101.6 mm/sec (4 inches/sec.)			
Available media width     100 mm to 242 mm (3.9 inches to 9.5 inches)       (including backing paper)		inches)	
Maximum effectiv	ve print width	8.5" (216.8 mm)	
Issue mode Batch Cut (Cut mode is enabled installed)		Batch Cut (Cut mode is enabled only when installed)	n the optional cutter module is
LCD Message display 16 characters × 1 line			

Item	B-852-TS22-QQ-R	B-852-TS22-QP-R	
Available barcode types	JAN8, JAN13, EAN8, EAN8+2 dig	its, 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, CO	ODE128, EAN128, Industrial 2 to	
	5, Customer Bar Code, POSTNET,	KIX CODE, RM4SCC (ROYAL	
	MAIL 4STATE CUSTOMER COD	E), GS1 DataBar	
Available two-dimensional code	Data Matrix, PDF417, QR code, Ma	axi Code, Micro PDF417, CP Code	
Available font	Times Roman (6 sizes), Helvetica (6 sizes), Presentation (1 size),		
	Letter Gothic (1 size), Prestige Elite	e (2 sizes), Courier (2 sizes), OCR	
	(2 types), Gothic (1 size), Outline for	ont (4 types), Price font (3 types)	
Rotations	0°, 90°, 180°, 270°		
Standard interface	Parallel interface (Centronics, Bidir	ectional 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-7208-QM-R)		
	Expansion I/O board (B-SA704-IO-	QM-R)	
	Real time clock (B-SA704-RTC-QM	M-R)	
NOTEO			

#### NOTES:

• Data Matrix<sup>™</sup> is a trademark of International Data Matrix Inc., U.S.

• PDF417<sup>™</sup> 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 that will be 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.



Feed Direction

[Unit: mm]

Item	Label dispensing mode	Batch mode	Cut mode		
		15.0	Label: 38.0		
	a pitch	15.0	Tag: 25.4		
<sup>②</sup> Label length		Min. 12.5	Min. 32.0		
3 Width including	g backing paper	100.0- 242.0	100.0 - 235.0		
④ Gap length		2.5 - 20.0	6.0 - 20.0		
⑤ Black mark leng	gth (Tag paper)	2.0 - 10.0			
© Effective print	width	216.8	216.8±0.2		
⑦ Print speed up/s	slow down area	1.0			
<sup>®</sup> Black mark leng	gth (Label)	2.0 - 20.0	2.0 - 20.0 $6.0 - 20.0$		
Max. print length		640.0			
Maximum effectiv	e length for on the fly issue	320.0			
Max. outer roll dia	meter	φ230			
Thickness	Label + backing paper	0.13 - 0.18			
	Tag	0.08 - 0.18			

### NOTES:

- 1. To ensure print quality and print head life use only Toshiba Tec specified media.
- 2. When using the cutter ensure that label length <sup>(2)</sup> plus inter-label gap length <sup>(4)</sup> exceeds 38 mm. (i.e. label pitch should be greater than 38 mm.)
- 3. When marking black marks on label rolls, the following requirements must be satisfied. When the gap length is less than 4 mm: The black mark length should be longer than the gap length. When the gap length is 4 mm or more: The black mark should not overlap the gap for more than 4 mm and the following label. Black marks should be printed on reverse side of the gaps. Also, they should contact or overlap the preceding label's bottom end line.
- 4. "On the fly issue" means that the printer can feed and print without stopping between labels.

### 7.1.2 Detection Area of the Transmissive Sensor

The transmissive sensor is movable from the center to the left edge of media. The transmissive sensor detects a gap between labels, as illustrated below.



### 7.1.3 Detection Area of the Reflective Sensor

The reflective sensor is movable from the center to the left edge 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 center 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 the 1.5-mm wide area from the media edges (shaded area in the above figure).

2. The center of media is positioned at the center of the print heads.

## 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 sales representative.

Туре	Spool type
Width	120 – 220 mm
	Recommended width is 120, 160 and 220 mm.
Length	300 m
Outside Diameter	φ72 mm (max.)

The table below shows the correlation between ribbon width and media width (backing paper is not included).

Ribbon width	Media width
120 mm	100 – 110 mm
160 mm	110 – 150 mm
220 mm	150 – 242 mm

### NOTES:

1. To ensure print quality and print head life use only Toshiba Tec specified ribbons.

2. To avoid ribbon wrinkles use a ribbon that is wider than the media by 10 mm or more. However, too much difference in width between the two may cause wrinkles.

## 7.3 Recommended Media and Ribbon Types

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.				

Ribbon type	Description
Vellum wax ribbon	This ribbon is mainly used for vellum paper and labels. It has a very
	high ink density to cope with uneven printing surface
Standard wax ribbon	Good match for coated paper (Matt coat and glossy coat).
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.

### 7.3 Recommended Media and Ribbon Types (Cont.)

#### Combination of Media and Ribbon

Media type Ribbon type	Vellum paper and label	Coated paper	Plastic films
Vellum wax ribbon	0		
Standard wax ribbon		0	
Smear-less ribbon (wax- resin ribbon)		0	
Scratch/solvent resistance ribbon			0

O: Good match

# 7.4 Care/Handling of the Media and Ribbon

### CAUTION!

Be sure to read carefully and understand the Supply Manual. Use only media and ribbons which 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 guideline in this section carefully.

- Do not store the media and 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<sup>+</sup> 800 ppm, K<sup>+</sup> 250 ppm and Cl<sup>-</sup> 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<sub>3</sub>) and kaolin (Al<sub>2</sub>O<sub>3</sub>, 2SiO<sub>2</sub>, 2H<sub>2</sub>O).

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

# **APPENDIX 1 MESSAGES AND LEDS**

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

### Symbols in the message

1: Q: The LED is illuminated. O: 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 895 (in K bytes)

4: &&&&: Remaining flash memory capacity for storing writable characters 0 to 3147 (in K bytes)

		LE	D Indica	tion		Restoration	Acceptance of
No.	LCD Message	POWER	ONLINE	ERROR	Printer Status by RESTAR key Yes/N		Reset Command Yes/No
	ON LINE	Ο	0	•	In online mode		Yes
1	ON LINE	О	۲	•	In online mode (The printer in communication)		Yes
2	HEAD OPEN	О	•	•	The print head block is opened in online mode.		Yes
3	PAUSE ****	Ο	•	•	The printer is paused.	Yes	Yes
4	COMMS ERROR	0	●	0	A parity, overrun, or framing error has occurred during communication through the RS-232C.	Yes	Yes
5	PAPER JAM ****	Ο	•	0	The media is jammed during paper feed.	Yes	Yes
6	CUTTER ERROR****	О	•	0	A problem has occurred with the cutter module.	Yes	Yes
7	NO PAPER ****	0	•	o	The media has run out, or the media is not loaded on the supply holder properly.	Yes	Yes
8	RIBBON ERROR****	О	•	o	The ribbon has run out, or has been torn. A problem has occurred with the sensor that determines the torque for the ribbon motor.	Yes	Yes
9	HEAD OPEN ****	О	•	Ο	Feed or printing was attempted with the print head block open.	Yes	Yes
10	HEAD ERROR	Ο	•	Ο	There is a problem with the print head	Yes	Yes
11	EXCESS HEAD TEMP	Ο	•	0	The print head is overheated.	No	Yes
12	SAVING ###&&&&	О	0	•	In writable character or PC command save mode		Yes
13	FLASH WRITE ERR.	0	۲	0	An error has occurred while writing to flash memory.	No	Yes
14	FORMAT ERROR	О	•	О	An erase error has occurred in formatting the flash memory.	No	Yes
15	FLASH CARD FULL	0	•	0	Data cannot be stored because the flash memory.	No	Yes
16	POWER FAILURE	Ο	•	Ο	A power failure has occurred.	No	No
17	MEM. INTIAL	Ο	•	•	A flash memory card is being initialised.		
18	EEPROM ERROR	О	•	0	Data cannot be read from/written to a backup EEPROM properly	No	No

		LE	D Indica	tion		Restoration	Acceptance of
No.	LCD Message	POWER	ONLINE	ERROR	Printer Status by RE key Y		Status Request Reset Command Yes/No
19	SYSTEM ERROR	О	•	0	<ul> <li>When the following abnormal operations are performed, a system error occurs:</li> <li>(a) Command fetch from an odd address</li> <li>(b) Access to word data at an odd address</li> <li>(c) Access to long-word data at an odd address</li> <li>(d) Access to the area of 80000000H to FFFFFFFFH in the logic space in user mode.</li> <li>(e) An undefined instruction in an area other than a delay slot was decoded.</li> <li>(f) An instruction to rewrite a delay slot was decoded.</li> <li>(g) An instruction to rewrite a delay slot was decoded.</li> </ul>	No	No
20	LAN INITIAL	0	•	•	100BASE LAN is being initialised.		
21	DHCP INITIAL	0	•	•	DHCP CLIENT is being initialised.		
22	LOW BATTERY	О	•	0	The voltage of the Real Time Clock Battery is 1.9V or less	No	Yes
23	Display of error message (See Notes.)	0	•	0	A command error has occurred in analyzing the command.	Yes	Yes

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

<b>NOTES:</b> • If a command error is found in the 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 <u>E</u> 30 [LF] [NUL] Command error <i>The following message appears.</i>
T20E30
Example 2 [ESC] XR; 0200, 0300, 0450, 1200, <u>1</u> , [LF] [NUL] Command error
The following message appears.
XR;0200,0300,045 Example 3
[ESC] PC001; 0 <u>A</u> 00, 0300, 2, 2, A, 00, B [LF] [NUL] Command error
The following message appears.
When the error command is shown, "? (3FH)" appears for codes other than codes 20H to 7FH and A0H to
• For details, refer to the <b>B-852 Series External Equipment Interface Specification</b> .

# **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:	o bit parallel				
Control signal:	SPP Mode	Nibble Mode			
	nStrobe	HostClk			

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
Receive buffer:	1M byte

Connector:

PIN	Signal			
No.	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		



### 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

Segment length Max. 100 m



### ■ LAN

Standard: Number of ports:	IEEE802.3 10BASH 1	E-T/100B	ASE-TX			
Connector:	RJ-45	LED	LED Status	LAN status		
LED status:	Link LED	Link	ON	10Mbps link or 100Mbps link is detected.		
	Activity LED		OFF	No link is detected.		
				* Communication cannot be made while		
Link LED				the Link LED is off.		
		Activity	ON	Communicating		
			OFF	Idle		
Activity LED (Orang						
LAN cable:	10BASE-T: UTP category 3 or category 5 100BASE-TX: UTP category 5					

### NOTES:

Cable length:

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.

### ■ 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)	5 1
4	DSR (Data Set Ready)	00000
5	SG (Signal Ground)	0000
6	DTR (Data Terminal Ready)	9 6
7	CTS (Clear to Send)	
8	RTS (Request to Send)	
9	N.C	

### ■ Wireless LAN (Option: B-SA704-WLAN-QM-R)

Standard:	Conforming to IEEE802.11a, IEEE802.11b, and IEEE802.11g
Protocol:	IP (RFC791), ICMP (RFC792), UDP (RFC768), TCP (RFC793,896), ARP
	(RFC826), HTTPD (RFC1866), TELNET, FTPD (RFC959), DHCP (RFC2131),
	SNMP
Security protocol:	WEP (64 bits/128 bits/152 bits) or AES, AES-OCB (128 bits)
	TKIP (only when using WPA, WPA-PSK)
	TWSL (unique encryption)
Antenna:	Chip type, diversity antenna
Parameter setting:	via HTTP
Default IP address:	192.168.10.21
Default subnet mask:	255.255.255.0

#### NOTES:

MAC address of the Wireless LAN module will be necessary when setting the MAC address filtering function of an access point. Ask a service person of your nearest Toshiba Tec service representative.

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

Input Signal	IN0 to	N5			
Output Signal	OUT(	to C	UT	6	
Connector	FCN-7	81P02	24-G	/P or equi	valent
(External Device Side)					
Connector	FCN-	685J(	002	4 or equi	valent
(Printer Side)		~		¥/0	-

Pin	Signal	<i>I/O</i>	Function	Pin	Signal	1/0	Function
1	INO	Input	FEED	13	OUT6	Output	1
2	IN1	Input	PRINT	14	N.C.		
3	IN2	Input	PAUSE	15	СОМ1	Common (Power)	
4	IN3	Input		16	<i>N.C.</i>		
5	IN4	Input		17	<i>N.C.</i>		
6	IN5	Input		18	N.C.		
7	Ουτθ	Output	FEED	19	<i>N.C.</i>		
8	<b>OUT1</b>	Output	PRINT	20	N.C.		
9	OUT2	Output	PAUSE	21	СОМ2	Common (Ground)	
10	OUT3	Output	ERROR	22	N.C.		
11	OUT4	Output		23	<i>N.C.</i>		
12	OUT5	Output	POWER ON	24	N.C.		

N.C.: No Connection





Operating environment

Input Circuit

Output Circuit

Temperature: 0 to 40 °C Humidity: 20 to 90% (No Condensation) Barcode Printers Owner's Manual B-852-TS22-QP-R B-852-TS22-QQ-R

# **Toshiba Tec Corporation**

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