Quick Start Guide
SX5M / TXPSX5

Read this Quick Start manual before beginning.

For the best printing results, we recommend the use of SATO genuine labels and ribbons.

Contact your SATO authorized reseller for further details.

More information can be found on the internet at **www.satoamerica.com**

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1 General

1.1 Important Information

This quick start guide provides important information on how to setup your new SATO product. Be sure to read this quick start guide thoroughly before using this printer. It is an integral part of the product and should be kept in the immediate vicinity of the device and available to the operating staff.

1.2 Limitation of liability

The manufacturer will not be held liable for damage resulting from:
- Disregarding these instructions
- Unintended use of the printer
- Unauthorized technical modifications
- Use of unapproved consumables

1.3 Explanation of symbols

WARNING!
Indicates neglectful or erroneous use may cause irreparable damage to the product, serious injury to the operator or worse.

CAUTION!
Indicates a specific point where caution should be used. The graphic within the triangle will indicate the specific issue, i.e.; the sign on the left indicates a caution for potential electrical shock.

CAUTION!
Indicates a potentially hazardous situation which, if not avoided, may result in damage to your product or host equipment.

2　　Safety

This paragraph provides you with an overview of the important safety aspects associated with the operation of your printer.

Disregarding the operating instructions and safety regulations specified in this manual may result in considerable damage to your printer and endanger the operator.

2.1 Intended use

The printer should only be used for printing on materials recommended by the manufacturer.

WARNING!
Danger when device is used inappropriately!

Any use for purposes exceeding and/or deviating from the intended use of the device must be avoided.

Therefore, use the device only for its intended purpose and strictly adhere to all information provided in this manual.

No liability shall be assumed for any claims arising from damages resulting from the inappropriate use of this printer or its accessory's.

Damages resulting from inappropriate use shall be the sole responsibility of the operator.

CAUTION!

Do not disassemble the printer or alter it's components in any way.

Never attempt to service any internal component of your printer without permission of Technical Support. Attempting such will void your warranty and may cause serious personal injury.

2.2 Operating Tips

Your new SX5M / TXPSX5 Thermal Printer is a very durable and dependable piece of equipment, but we suggest you follow a few guidelines when installing using your printer.

- Do not operate in unstable locations such as an unsteady, slanted or extreme vibrating table. It may cause the equipment to shift from its desired location.

- Do not operate or store the printer in applications where high humidity with extreme condensation are prevalent. Be sure to follow the printer's environment operation requirements as defined in the later in this Quick Start Guide. Failure to follow these operating instructions may damage your printer and void your warranty.

- When moving the printer from a location, be sure to avoid potential shock or damage to your printer and its cabling by first powering off the printer, then unplug the printer from its power receptacle and disconnect the communication cable (if non-wireless).

- Do not insert or drop anything metallic or flammable into the openings of the printer, i.e.; cable outlet and vents.

- In the event that a foreign object should accidentally fall inside the printer, immediately turn off the power, unplug the printer from the power receptacle and contact SATO Technical Support before continuing to use your printer. Using your printer under such conditions may cause fire or electrical shock.

- Do not move or ship the printer with the media loaded inside. This will avoid damaging the components of your printer.

- The printer is heavy. If possible, seek assistance when attempting to move the printer from one location to another.

- We highly recommend allocating the printer to its own dedicated power outlet and source line. This avoids having the printer consuming power from the same source as another electric appliance which may consume power at various levels and creating a fluctuating power supply. Power surges may negatively impact your printer's performance and longevity.

- Avoid operating in direct sunlight as this product contains optical sensors. Prolonged direct sunlight may damage these sensors and cause erroneous operation. Ensure the printer cover is closed when operating.

DANGER!
To avoid possible electrical shock, do not operate the power switch or handle the power cable with a wet hand. Keep the power cable away from open flame or excessive heat. When disconnecting the power cable from its receptacle be sure to pull at the plugs receptacle end to avoid damaging the cable or ex- posing the operator to possible electrical shock.

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3   Transporting

3.1   Packing

It may be necessary to send the printer in for repair and these precautions must be taking anytime the printer is shipped in order to avoid damage during shipment.

1) Use only the original carton and packing materials the printer was shipped in. If original carton and packing materials were lost or worn out contact your reseller for purchase.
2) Do not use foam peanuts or crinkles.
3) Ship only the printer, do not ship accessories such as ribbon, tags or power cables.
4) Remove the front label support plate, and do not ship with the printer. Damage to the plate can occur if attached during shipping.
5) Print head must be in the up position during shipping.
6) Write the RMA number on the shipping label and leave a brief description of problem enclosed in the box.
7) When shipping your SX5 printer, be sure to use the **Velcro strap** and **rubber band** that was sent with your new printer to keep the print head carriage assembly locked down during transit. (see page 6.) If you do not have these items or the shipping instructions contact your reseller

3.2   Storage

When storing the printer for an extended period of time, protect it against influences such as extreme temperatures changes, direct sun exposure, and high levels of moisture.

4   Unpacking the printer

1   Open the carton

2   Unpack the accessories

3   Unpack the inserts and the printer from the carton

4   Remove the inserts

5   Remove the rubber band (A) and the Velcro strap (B) from inside the printer

> **CAUTION!**
> Do not discard these parts; they are needed for your printer's protection during shipping. Failure to use these parts in the event your printer needs to be sent to SATO for maintenance and/or repair will result in print head and armature damage. SATO will not be liable for any damage related to improper packaging.
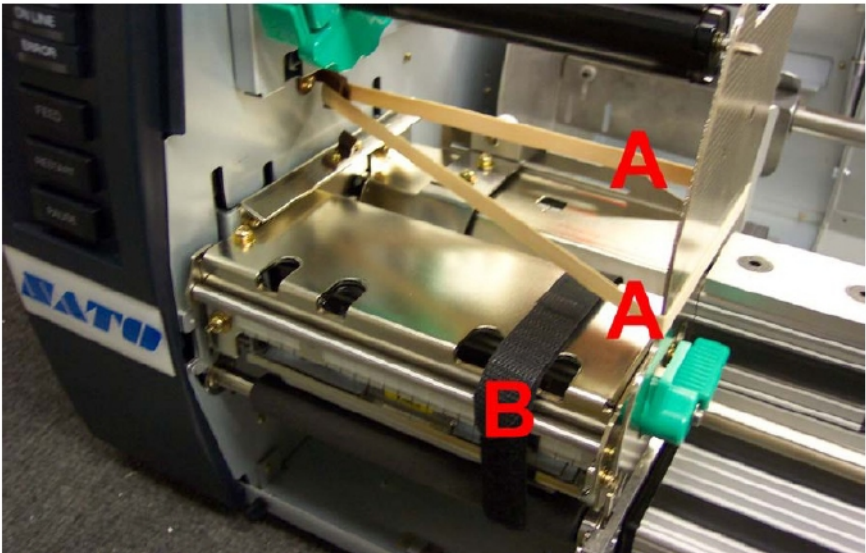

Fig. 1 Do not discard parts

5   Installation

Place the printer in a level place
If installed in a rough or slanting place, quality printing will not be available. It may cause malfunction and shorten the life of the printer.

Use a stable platform
Use a stable platform. Do not carry the printer with the media inside. Do not rock the printer.

Avoid high heat and humidity
Do not install in a place of high temperature or humidity. High temperature or humidity may cause malfunction.

Avoid dust
Dust may deteriorate the quality of printing. It may cause malfunction and shorten the life of the printer.

Avoid direct sunlight
Since this product is provided with optical sensors, direct sunlight may cause erroneous operation. Ensure that the cover is closed when printing.

Use a dedicated AC outlet
We highly recommend the printer having its own dedicated power outlet and source line. This will avoid having the printer in-line consuming power from the same source as another electric appliance which may consume power at various levels and thereby create power surges which may negatively impact your printer's performance and longevity.
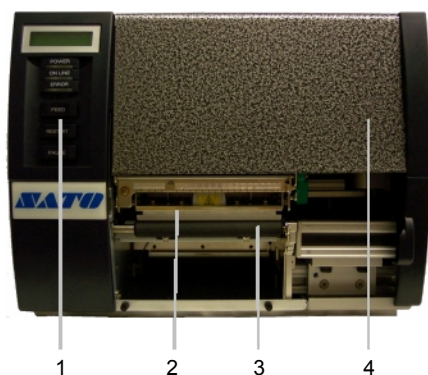
6   Overview

6.1 Parts and functions

1   Operation panel (display, buttons, LED)

2   Thermal Print head

3   Front roller

4   Front cover

Fig. 2 Printer main body, front
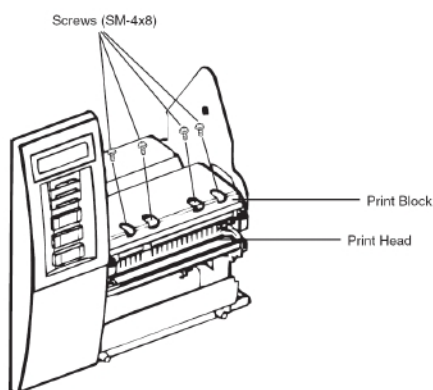

Fig. 3 Thermal print head

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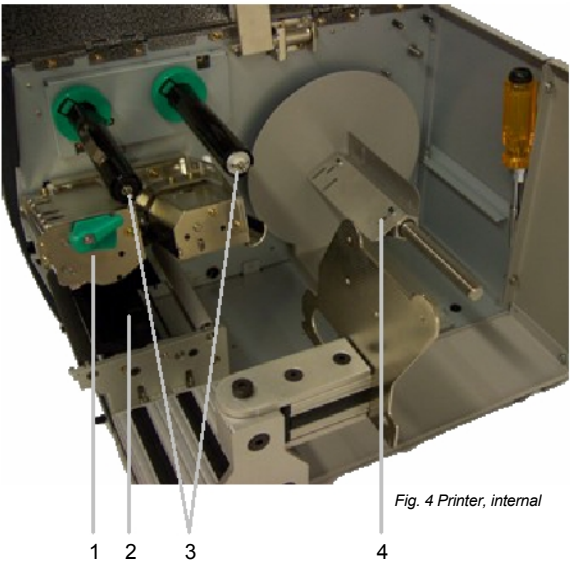*Fig. 4 Printer, internal*

1   2   3   4

1   Head Lever

2   Platen

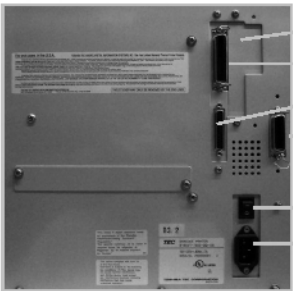3   Ribbon Shaft

4   Label Holder

Fig. 5 Printer main body, back

1   PCMCIA Card Slot (Option)
      USB Connector (Option)
      LAN Connector (Option)

2   Parallel Interface Connector
      (Centronics)

3   Serial Interface Connector
      (RS-232C)

4   Expansion I/O Interface Connector

5   Power Switch
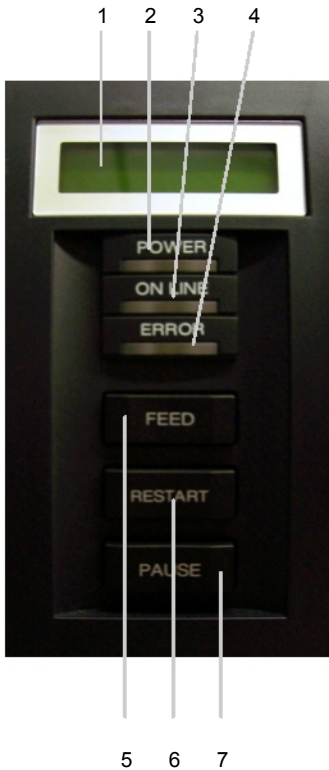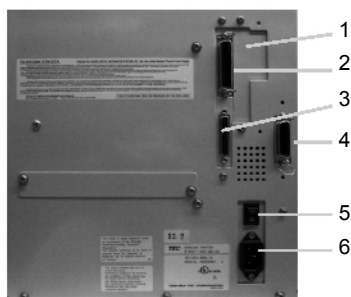
6   AC Power Inlet

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5   6   7

Fig. 6 Operation panel

1   LCD Message Display
When the power is turned on and it is ready to
print, ONLINE is displayed.
.

2   POWER LED (Green)
Lights when the power is turned on.

3   ON-LINE LED (Green)
- Flashes when communicating with a host
  PC.
- Lights while printing.

4   ERROR LED (Red)
Lights when the printer does not operate
correctly.

5   FEED key
Feeds paper.

6   RESTART key
Resets the printer when paused or when an
error occurs.

7   PAUSE key
Pauses printing.
Message display shows PAUSE and a
remaining count.

7 Setup and initial operation

7.1 Connecting the device

7.1.1 Connecting the interface cable

1 Connect the interface cable to the interface connector (1, 2, 3, 4) on the printer and your PC.

Fig. 7 Printer main body, back

7.1.2 Turning on the device

1 Connect the power cable to the power supply connector (6) on the printer and to your power outlet.

2 Press the POWER button on "I". The POWER LED lights up.

7.1.2 Turning off the device

2 Press the POWER button on "O". The POWER LED turns off.

7.1.4 Removing the power cable

1 Before removing the power cable, make sure to turn off the printer by pressing the POWER (5) button.

2 Pull the power cable from the power outlet

3 Pull the power cable from the printer.

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Setup and initial operation

7.2 Loading the ribbon

1 Open the front cover.
2 The new roll of ribbon should be mounted on the spool to the rear of the print head assembly.
3 The ribbon should be oriented so the shiny side faces up as it lays on top of the label stock. The dull side should face down, this is the transfer side.
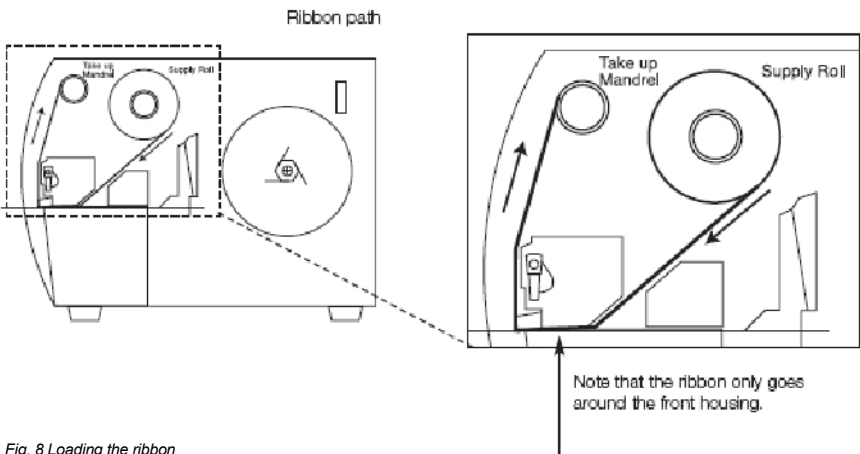
Ribbon path

Take up Mandrel   Supply Roll

Take up Mandrel   Supply Roll

Note that the ribbon only goes around the front housing.

Fig. 8 Loading the ribbon

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Setup and initial operation

7.3 Inserting media
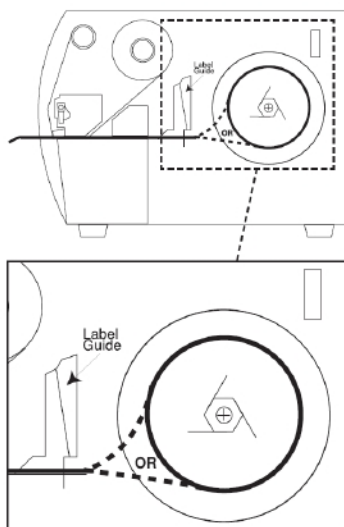

1   Open the front cover.

2   Slide the media stock in from the side of the printer. Do not push the media from behind.

3   Media stock should be pushed all the way onto the label shaft up against the round metal plate.

4   Follow the label path as shown.

Fig. 9 Label path

7.4 Adjusting label guide
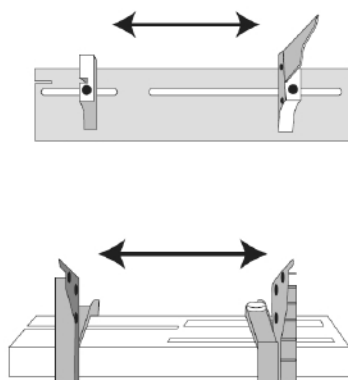

1   Open the front cover.

2   **SX5M**
    Loosen the thumb screw.

    TXPSX5
    Slide the outside and inside guides to the edge of the media on both sides.

3   **SX5M**
    Adjust the label guide so the guide is against the edge of the media on both sides.

Fig. 10 Label guides

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Setup and initial operation

7.5 Locating the sensor

1 Open the front cover.

2 You might have to slide the ribbon out of the way to view the sensor.

3 Looking down, the sensor is located between the two ribbon spindles at the base of the machine.

This knob needs to be loosened to move the sensor.
After positioning the sensor be sure to tighten to keep the sensor from moving.

Fig. 11 Sensor location
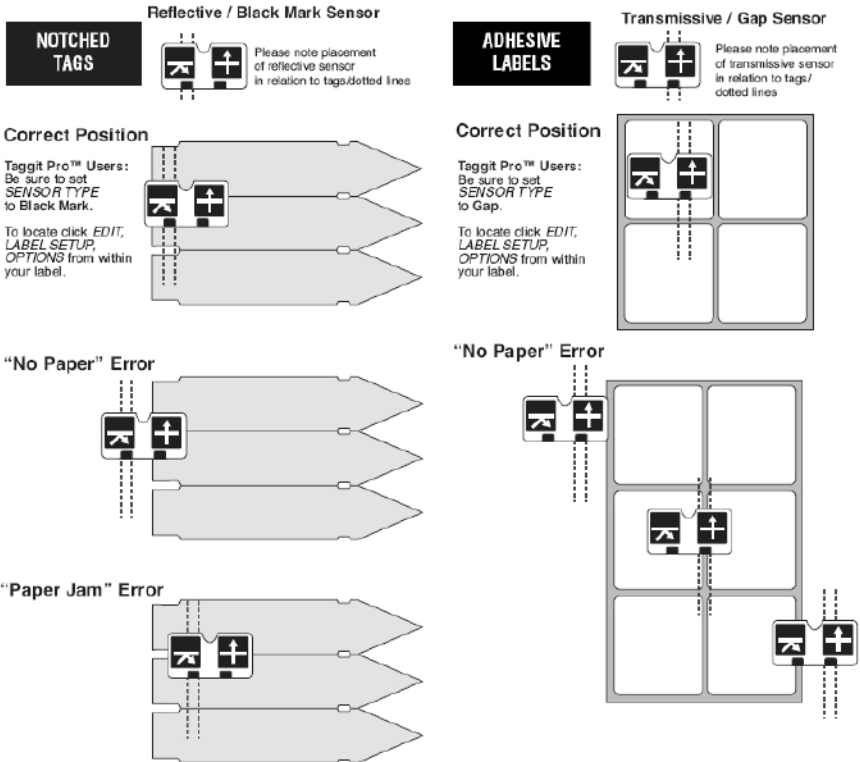
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7.6 Setting the sensor

Fig. 12 Sensor placement

8 Print head use and maintenance

Thermal print heads are sensitive and can be easily damaged if mishandled.

Care should be taken during the installation to avoid dropping the print head or otherwise impacting the printing element.

> **CAUTION!**
>
> The edge of the print head is the area where printing takes place. Use care to avoid damage when cleaning the print head as to only touch the element with the cleaner.

The print head is sensitive to contamination. Do not use media stock that has been contaminated by dirt, sand or has been dropped on the floor. Keep the labels in their original plastic bag when not in use.

The print head should be cleaned at least every 1000 labels or every roll of label stock used. Wipe the edge of the print head with a clean, soft lint-free cloth and isopropyl alcohol.

<div align="center">

If you require technical assistance please contact
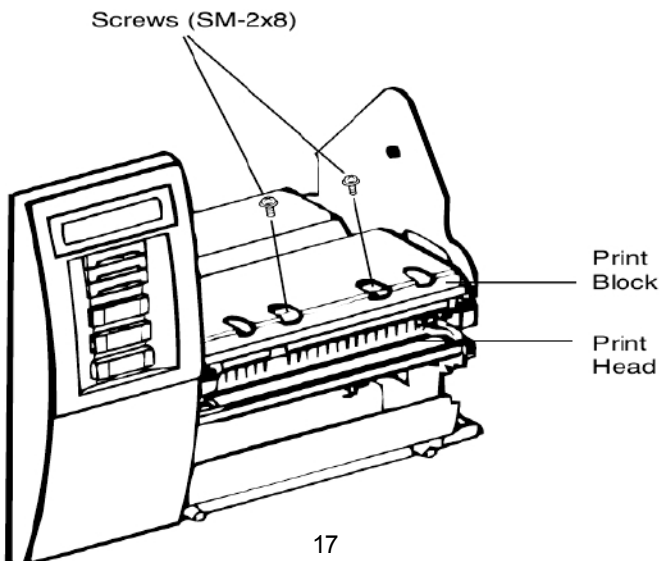SATO Technical Support at (800) 858-7425.

</div>

8.1 Print Head Replacement

Caution:
1. NEVER touch the printing element area except to clean it using a soft cloth with alcohol.
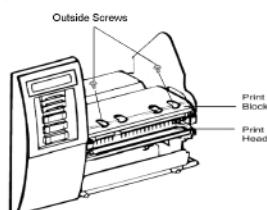2. NEVER touch the connector pins to avoid the failure of the print head by static electricity.

NOTE: *Do not remove the side cover screws or side cover during this procedure.*

1. There are four screws that hold the print head in place. Note: Using the magnetic screwdriver attached to the back of the printer remove only the two center screws as shown in the picture below.

2. Once the two screws are removed, drop the print head down and then pull out, remove the connections by pulling on the wires as close the connectors as possible straight back.

3. Replace the new print head, being careful to push the connections in tightly.

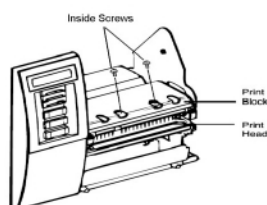4. Reinstall the screws into the print head and tighten lightly..

8.2   Print Head Alignment

After the print head is installed or after changing labels it may become necessary to re-align
the print head to get the best print quality. **Caution:** Do not over tighten the screws, they do
not need to be cranked down tight, they are small screws and can be damaged easily if not
careful.

1. Using a magnetic screwdriver start by loosing by one turn
the two outside screws on the front of the print head block as
shown on the left.

2. Adjustments are made one side at a time. Start by
loosing and sliding one of the inside screws on the side
that is printing poorly. Place the tip of the screwdriver in
the screw, loosen the screw one turn then without
removing the screwdriver rock the handle forward or
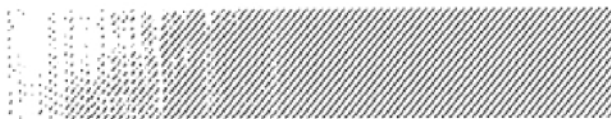backward depending on which way you want to move
the print head.

 Note: Pulling the screwdriver handle to the front moves
the print head on that side backward, pushing the
screwdriver handle toward the back moves the print head
on that side forward. Adjustment is done in very small
nudges. It helps to place your index finger on side of the
print head so you can feel the slightest movement.

Remember: When tightening snug the screws lightly, do not over tighten. When you have
moved one side, do a test print (see page 19) to see if you are moving the print head in the
right direction. If the print gets worst loosen that side again and go the opposite direction.

8.3　　　Test Print

TEST PRINT

1. *Make sure you have label stock in the printer and the print head is down.*
2. *Turn the power ON while holding down the PAUSE and FEED keys on the printer panel.*
3. *Press the FEED key three times (<4> TEST PRINT appears).*
4. *Press the PAUSE key (PRINT CONDITION appears).*
5. *Press the PAUSE key (ISSUE COUNT appears).*
6. *Press the RESTART key twice (ISSUE COUNT 5 appears).*
7. *Press the PAUSE key until (LABEL LENGTH 76mm appears).*
8. *Use the FEED key to input a smaller size. Use the RESTART key to input a larger size. Note: Set the label size accordingly: 1"= 25mm, 3/4" = 19mm, 9/16" = 14mm, 1/2" =12mm. Use these measurements to figure out different sizes.*
9. *After you have set the label press PAUSE until (<4> TEST PRINT appears).*
10. *Press the PAUSE key (PRINT CONDITION appears)*
11. *Press thee FEED key (SLANT LINE 3 DOT appears)*
12. *Press the PAUSE key. Five labels should print out.*

The left side of the print heads needs to be moved slightly forward.

The right side of the print heads needs to be moved slightly forward.

The print head is perfectly aligned.

9   Disposal

Dispose of the device as specified by the appropriate national regulations.

CAUTION!
Risk of environmental damage in case of inappropriate disposal!

Electric devices and their accessories are subject to special waste treatment and may only be disposed of by approved specialized waste disposal companies.

WEEE/RoHS Statement
SATO is committed to being a responsible corporate citizen in the world. We understand the importance of marketing, designing, manufacturing and distributing products that present a low burden to the environment.

Company-wide projects have been undertaken to implement both the Waste Electric and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS) initiatives.

10   Troubleshooting

Paper Jam / No Paper, Sensor Related Problems
1)   Check the label sensor to make sure it is lined up properly with the media stock you are using (See page 15 for positioning the feed gap sensor)
2)   Check the software sensor settings; should be set to Black Mark for tags, Gap for adhesive labels.
3)   The sensor may need recalibrating. See recalibrating the sensor as described below:

Recalibrating the Feed Gap Sensor.
1)   *Turn the printer off.*
2)   *Hold down the FEED and PAUSE key while turning the printer on until **<1> Diag.** appears on the screen.*
3)   *Press the FEED key until **<5>SENSOR ADJ.** appears in the window.*
4)   *Press the PAUSE key until **[Trans.]** appears in the window.*
5)   *Place a piece of adhesive backing paper under the sensor.*
6)   *Press and hold the RESTART key until an asterisk(*) appears to the right of the number.*
7)   *Now remove the adhesive backing paper and place a strip of plastic tag material under the sensor.*
8)   *Press the PAUSE key until **[Reflect]** appears in the window*
9)   *Hold down the RESTART key until an asterisk(*) appears to the right of the number.*
10) *Press the PAUSE key until only SENSOR ADJ. appears in the window, remove plastic tag material from under the sensor then turn the printer off then back on, the sensor should now be calibrated, line up the label material and try printing.*
11) The label stock may be shifting. If the label stock does not feed through the machine straight, it will walk out from underneath the label sensor causing a "paper jam" or "no paper" message. Make sure the media is loaded straight and that the label guide is in the proper position so the media feeds through the machine correctly.

Communication errors
Check cable connections to the printer and the computer.

Poor Print Quality
Clean the print head
1)   The print head should be cleaned at least every 1000 labels or every roll of label stock used. Wipe the edge of the print head with a clean, soft lint-free cloth and isopropyl alcohol.
2)   The temperature setting may need to be changed in the software or the machine.
3)   Print head may be out of alignment and may need to be adjusted.

If you continue to have problems please contact Technical Support at (800) 858-7425.

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Tech Support: (800) 858-7425

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