Model 711 Digital Conversion Station

Intended Use

The 3M™ Model 711 Digital Conversion Station is designed to read barcode labels on library items (for example, books, video cassettes, etc.) and convert that information to be read to a 3M Brand Digital Identification D1 Tag. It is designed for use in the library environment. The barcode label information is read through the use of a laser scanner. This information from the barcode is processed by a computer and then transferred to a radio frequency identification (RFID) reader. This information is then read onto a 3M Brand Digital Identification D1 Tag. Only 3M Brand Digital Identification D1 Tags are to be used with the Model 711 Digital Conversion Station. The use of other materials could lead to poor performance and unsafe conditions.

Quick Start Guide

This Quick Start Guide will help you unpack and set up your Conversion Station, and will help you become familiar with your system as quickly as possible. Please read through this document before you begin.

To access the complete operator procedures and all reference and troubleshooting information for the Conversion Station, refer to the on-line help found by clicking the Help button in the software application.

Explanation of Labels and Symbols

 - Refer to accompanying documents.

 - Risk of electric shock. Refer all servicing to manufacturer.

Warning Statements and Safety Instructions

⚠ WARNING

- This equipment contains high voltage. Risk of electric shock. Do not remove protective panels. Only certified 3M technicians should service this equipment.
- Make sure power is off before disconnecting monitor. If power is not off, the monitor will be damaged.
- Possibility of personal injury. The operation of the Conversion Station involves repeated body movements. To minimize any possibility of injury, avoid prolonged repetitive movements, rest when becoming fatigued, and, when possible, alternate job functions with other people. Avoid any awkward reaching for library items.
- Possibility of Conversion Station tipping over. The Conversion Station should not be moved with library items stacked on top.
- Do not use cabinet as a step.
- Do not climb on Conversion Station.
- Possibility of unsafe handling and disposal of components of the Conversion Station. Any batteries, circuit boards, etc., must be handled and disposed of in accordance with local disposal regulations.
- Possibility that disposal of the product could generate a hazard to the environment. To avoid hazard to the environment with the disposal of the product, follow local disposal regulations.

⚠ CAUTION

- This product contains laser devices. Do not allow the scanner laser beam to reflect off a shiny, mirror-like surface into anyone's eyes. Observe the labels on the unit.
- Possibility of personal injury. The Conversion Station weighs 153 pounds (70 Kg). Attempting to lift the Conversion Station may cause personal injury. To avoid any possibility of injury, the Conversion Station should not be lifted but should be moved on its wheels.
- Using controls or adjustments or performing procedures other than those specified herein may result in hazardous laser light exposure.
- For your safety, the Conversion Station should be unpacked and set up by two people.

EMC Compliance USA and Canada

FCC Radio Frequency Rules and Regulations

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

FCC Intentional Radiator Certification

FCC ID:

This equipment contains an intentional radiator approved by the FCC under the FCC ID number shown above. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NO MODIFICATIONS. Modifications to this device shall not be made without the written consent of The 3M Company. Unauthorized modifications may void the authority granted under Federal Communications Commission Rules permitting the operation of this device.

Industry Canada Radio Frequency Rules and Regulations

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe A respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

CANADA:

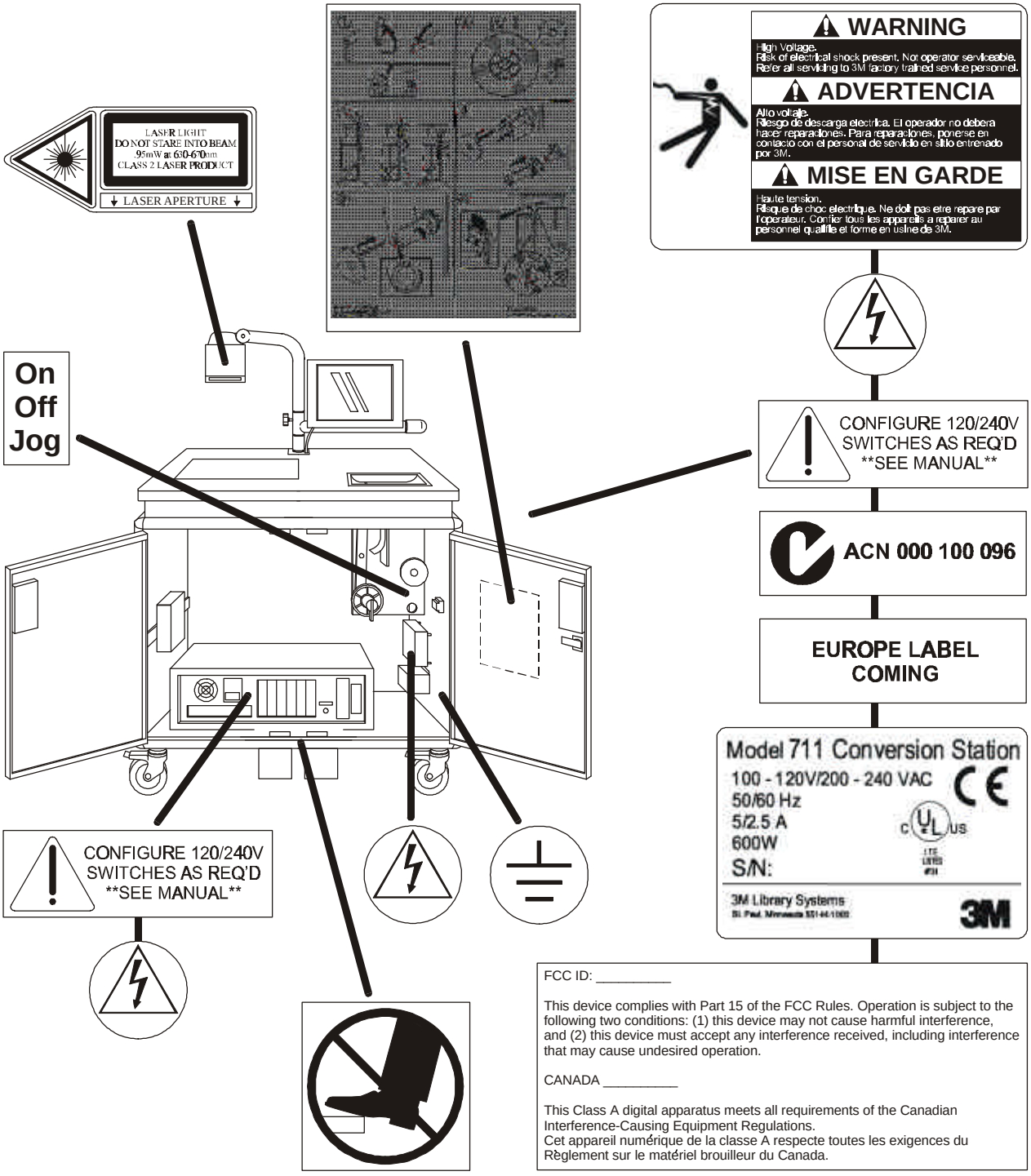
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

EMC Compliance Europe

Conformity assessment and marking requirements to be determined.

Conformity assessment in progress at time of publication.

Safety Label Locations



FCC ID: _____

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CANADA _____

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

Before You Begin

Before You Start Unpacking the Conversion Station

- Review all of the Warning and Caution Statements and Safety Instructions on pages 2 through 5.
- Be very careful when removing the Conversion Station from the shipping crate. You will remove the machine from the shipping crate using a ramp. Be very careful when moving the machine down the ramp and onto the floor.

Before You Start Setting up the Conversion Station

- **DO NOT PLUG THE CONVERSION STATION INTO AC POWER.**

Major Steps Involved in the Conversion Process

Here is an overview of the major steps involved:

- Unpack, set up, and start up the Conversion Station.
- Load the D1 tag dispenser.
- Set the library parameters in the software.
- Review the online documentation.
- Create a conversion plan.
- Train operators and set schedules.

Unpacking

1. Unlatch the shipping crate (**Figure 1**). Conversion Stations are shipped unlocked with the keys attached inside the front doors.

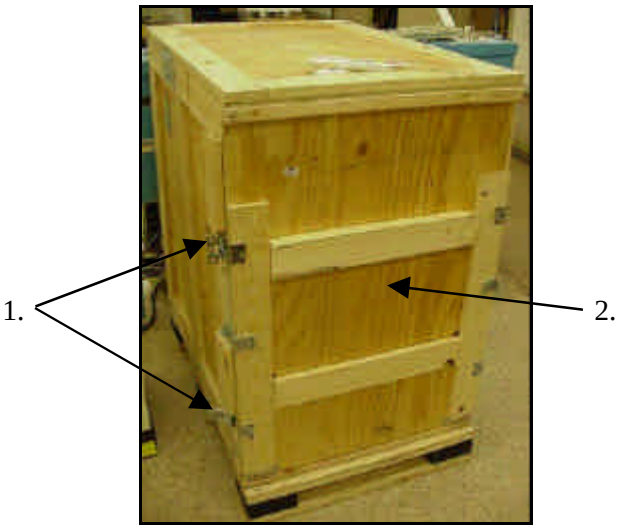


Figure 1: Unopened Crate

2. Remove the side of the crate. The side you remove will be used as a ramp.
3. Set the ramp onto the pallet so that the pins on one end of the ramp align with holes on the pallet.

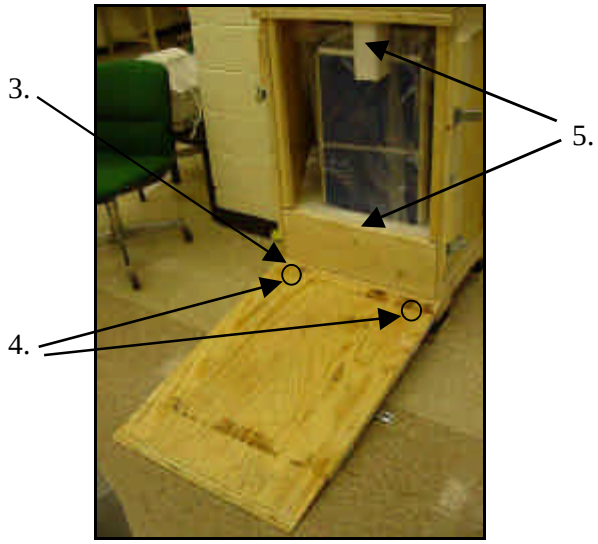


Figure 2: Crate Opened and Ramp Installed on Pallet

4. Insert the pins into the holes on the ramp (**Figure 2**).
5. Remove the wood and foam supports (**Figure 2**).

NOTE: Be careful when moving the machine out of the crate and down the ramp. For maximum safety, two people are recommended, one on either side of the machine.

6. The plastic covering on the machine is secured with tape. Grasp the tape and plastic covering, and slowly pull the machine out of the shipping crate (**Figure 3**).

Figure 3: Removing Conversion Station and Backing Down Ramp

Setup

1. Lock all four wheels by pushing down on the locking levers (**Figure 4**).

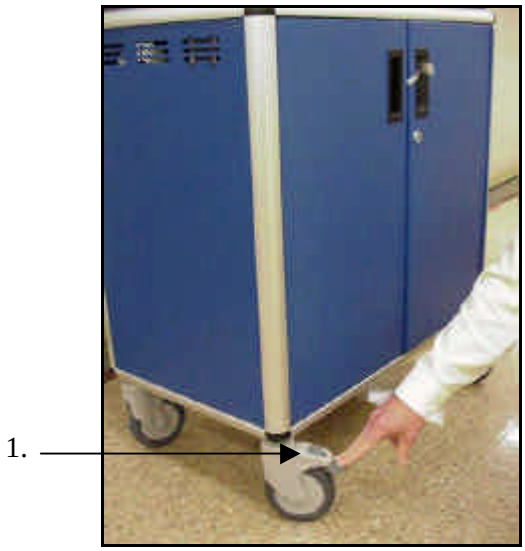


Figure 4: Locking the wheels

2. Remove the plastic covering from the machine.
3. Open the right front door of the machine.

4. To open the left front door, pull down on the pins to release the door (**Figure 5**).

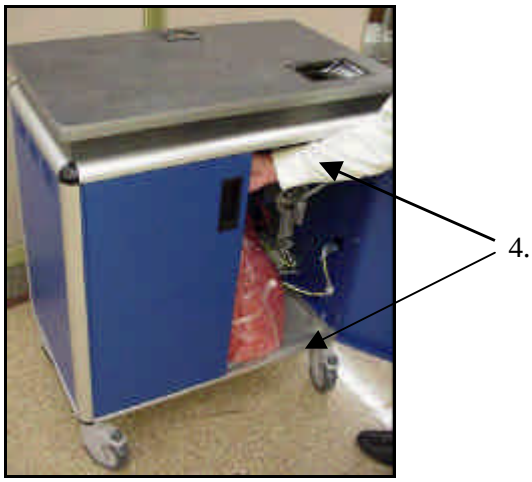


Figure 5: Releasing upper and lower pin on the left front door

5. Unpack the support mast with scanner and monitor (**Figure 6**).

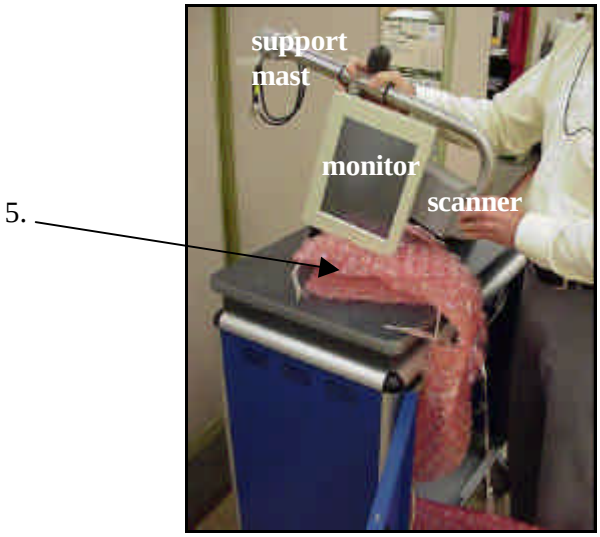


Figure 6: Unpacking support mast with scanner and monitor

6. Insert the black scanner cable into the mast hole (**Figure 7**).

Figure 7: Inserting black scanner cable into mast hole

7. Insert the gray video cable into the mast hole (**Figure 8)**.
   a) Position the gray video cable in the mast hole slot.

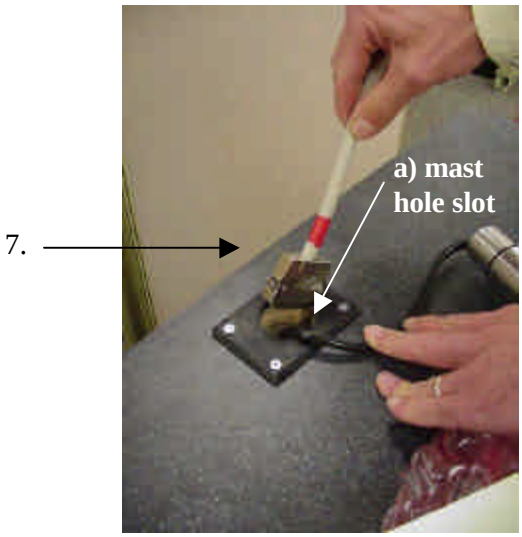


Figure 8: Inserting gray video cable connector into mast hole

8. Stand at the back of the Conversion Station and grasp the support mast (**Figure 9**).

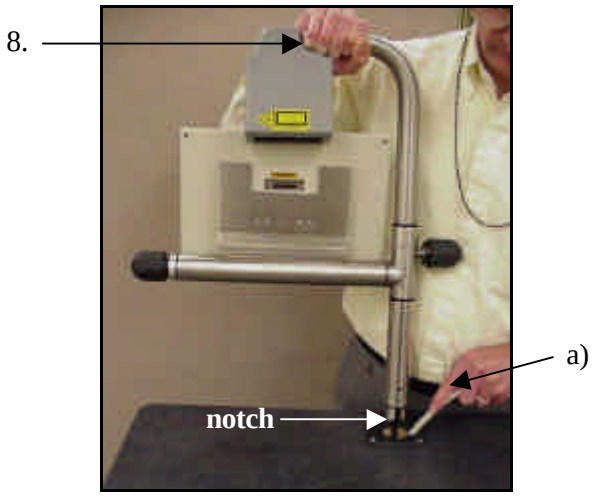


Figure 9: Inserting support mast into mast hole, gray video cable held in mast hole slot

a) The bottom of the support mast has a notch.
   - With the notch facing the front of the unit, insert the support mast in the mast hole.
   - The notch fits over a pin located inside the cabinet.
   - Make sure the mast is seated on the pin.

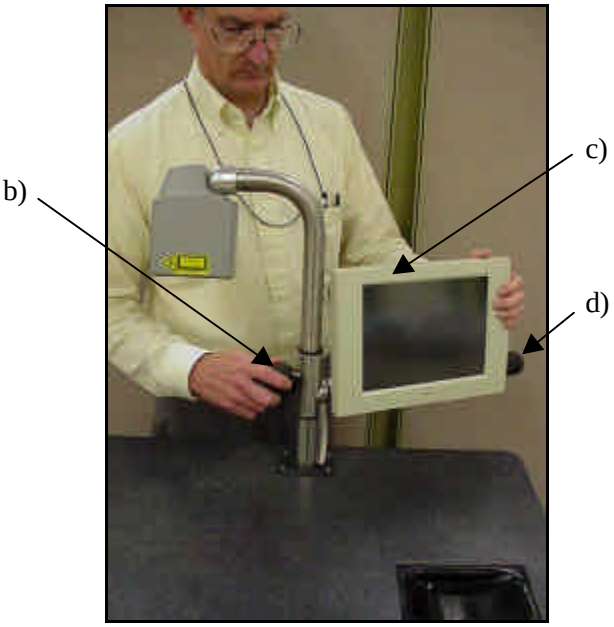


Figure 10: Rotating the support mast with monitor facing toward front of unit

b) Twist the black knob next to the support mast one rotation to loosen the knob (**Figure 10**).

c) Position the monitor and tighten the black knob next to the support mast.

d) Change the angle of the monitor by loosening the black knob next to the monitor.

WARNING: BEFORE CONTINUING, MAKE SURE THE POWER TO THE CONVERSION STATION IS OFF.

9. Connect the gray video cable (50-pin connector) to the connector located in the back of the monitor (**Figure 11**).

   a) Push any excess cable down inside the cabinet.

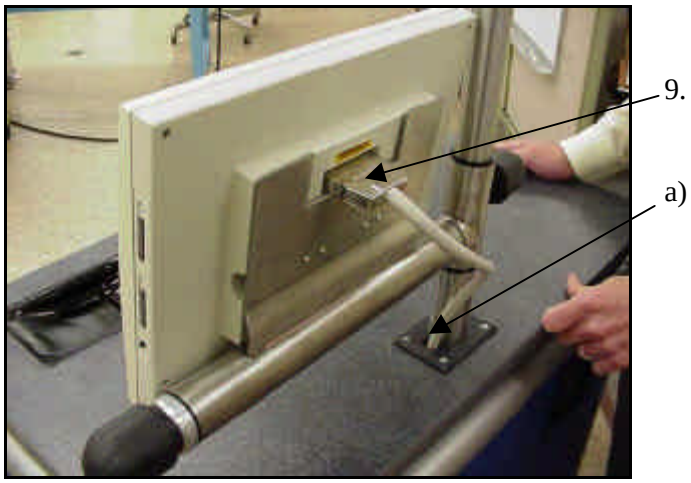


Figure 11: Gray video cable connected to monitor

10. Inside the conversion station cabinet (**Figure 12**):

   a) Connect the black scanner cable to the Scanner Power connector (Com 4) on the computer. Tighten screws (2).

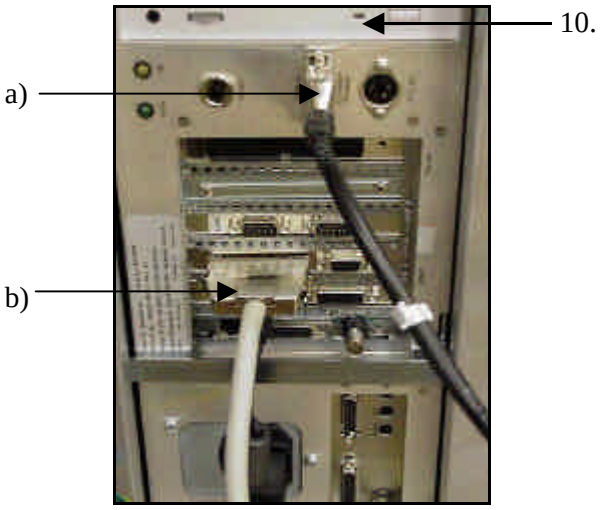


Figure 12: Computer cable connections

   b) Connect the gray video cable to the video connector (Video) on the computer (**Figure 12**).

c) Connect the mouse cable to the computer.

d) Connect the keyboard to the keyboard connector on the computer.

e) Connect the AC power cord to the AC power connector located on the outside lower right hand side of the Conversion Station (**Figure 13**).

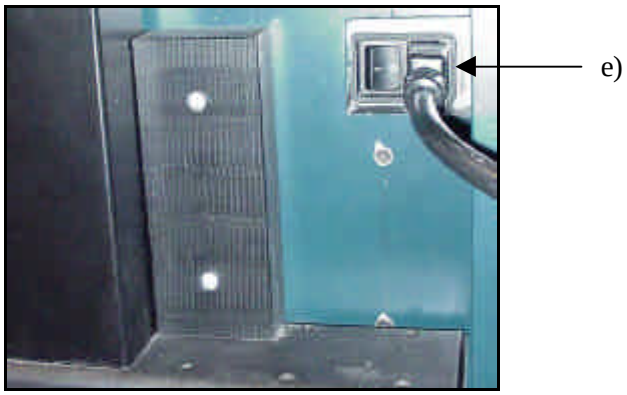


Figure 13: AC power cord connected

11. Ensure that the voltage selector switch on the computer is set to the local operating voltage (115 or 230 VAC) (**Figure 14**).

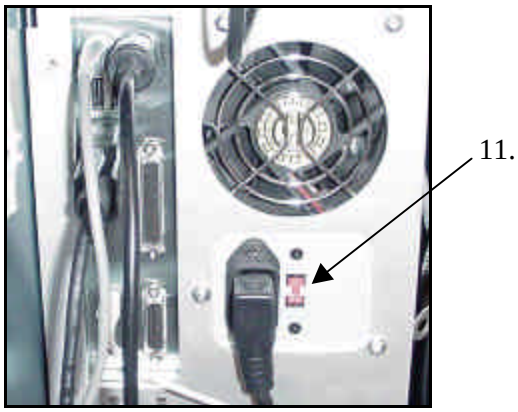


Figure 14: Voltage selector switch

Startup

1. Unlock the four wheels.
2. Move the Conversion Station near a power outlet and plug it in. Be sure the tag dispenser switch is **OFF** (middle position).
3. Turn **ON** the Conversion Station power switch located on the lower right side of the station.
4. Push the monitor **ON/OFF** switch to turn on the monitor.
5. The computer initializes and displays the main conversion screen.
6. If power does not come on, check that the circuit breaker located inside the cabinet on the lower right side is in the **ON** (up) position. Make sure each end of the power cord is securely connected.

Loading the D1 Tag Dispenser

1. Make sure the tag dispenser switch to the right of the supply roll shaft is set to the **OFF** (middle) position before loading the tag dispenser (**Figure 15**).

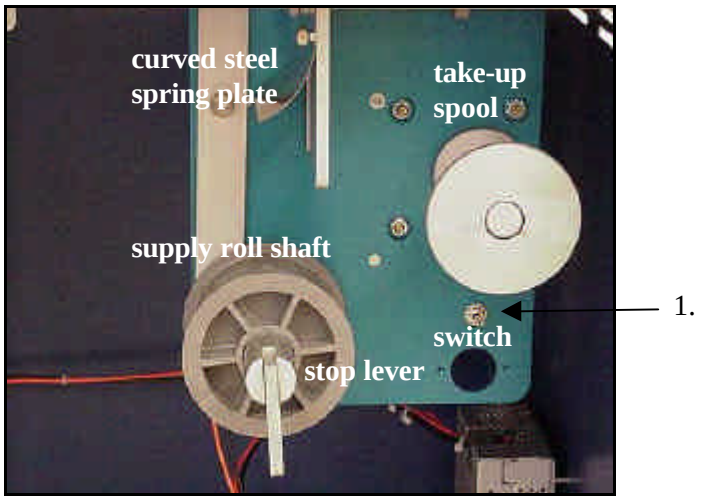


Figure 15: D1 Tag Dispenser

2. Rotate the supply roll shaft until the stop lever is in the **UP** position (**Figure 16**).

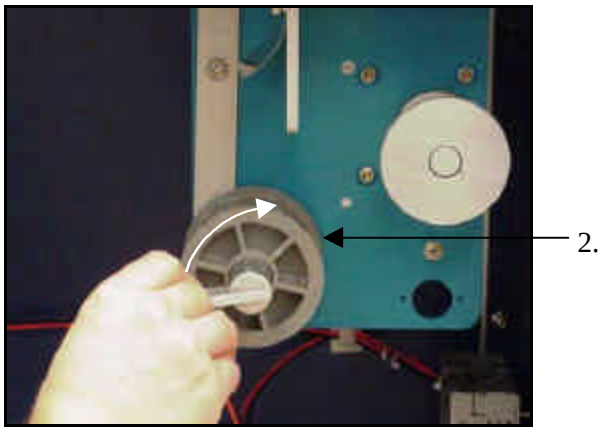


Figure 16: Rotating Supply Shaft Stop Lever To Up Position

3. Release the stop lever so that it drops down into a horizontal (straight out) position (**Figure 17**).
4. Remove the two plastic core inserts from the supply roll shaft (**Figure 17**).

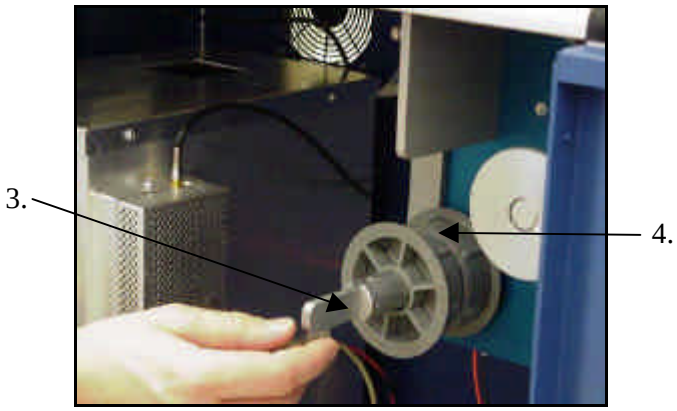


Figure 17: Releasing Stop Lever into Horizontal Position

a) Install the core inserts on each end of the D1 roll (**Figure 18**).

b) Remove tape from D1 roll.

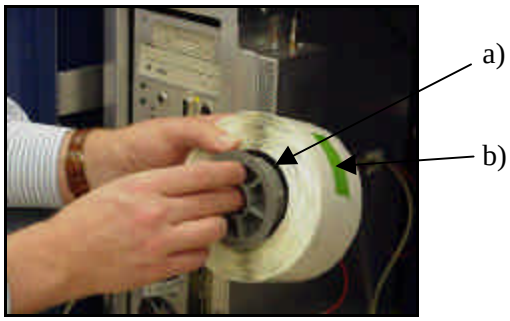


Figure 18: Installing Plastic Core Inserts on Ends of D1 Roll

5. Install the roll of D1 tags onto the supply roll shaft, with the leader coming from the left side of the roll (**Figure 19**).

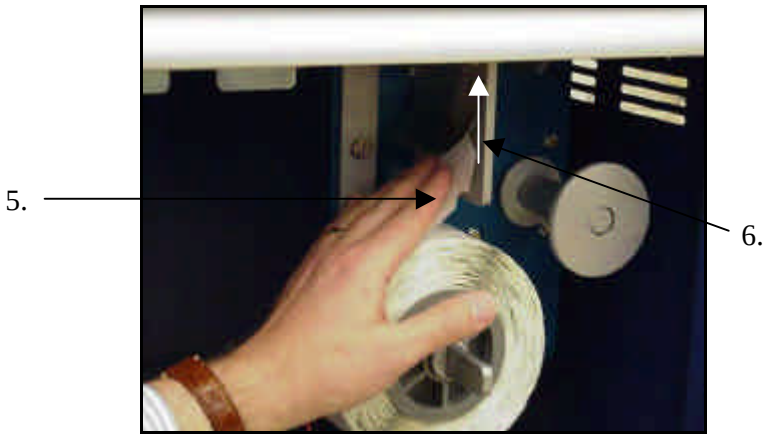


Figure 19: Leader Coming Off Left Side, Threading Leader Up Under Curved Spring Plate

6. Thread the leader of the D1 roll of tags up through the tag feed area (under the curved steel spring plate) (**Figure 19**).
7. The leading edge of the leader should come up through the top of the Conversion Station (**Figure 20**).

Figure 20: Threading the Leader Up Through Tag Feed Area

8. Put a slight upward bend in the leader. The upward bend will help the leader pass on the side of the guide plate toward the take-up spool (**Figure 21**).

Figure 21: Putting a Slight Upward Bend in Leader

9. Push the leader back down into the slot of the tag feeder opening on the same side of the wire spring as it was when it came up through the opening (**Figure 22**).

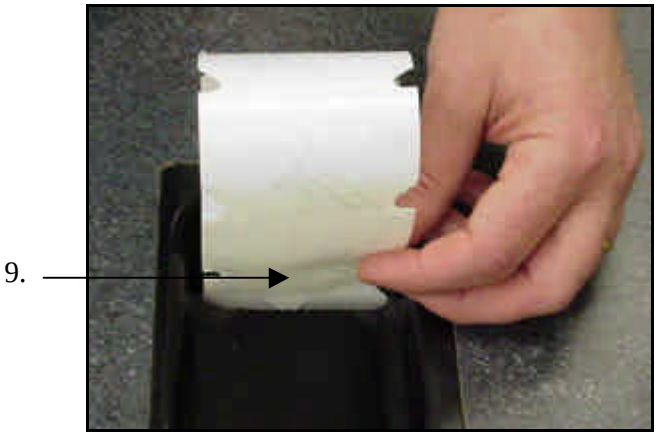


Figure 22: Pushing Leader Down into Slot of Feeder Opening

10. Review the threading procedure shown below (**Figure 23**) and (**Figure 24**):
    a) The leader threads up through the tag feed area under the curved steel spring plate;
    b) back down into the slot of the tag feeder opening on the same side of the wire spring;
    c) down toward the take-up spool on the side of the guide plate toward the take-up spool.

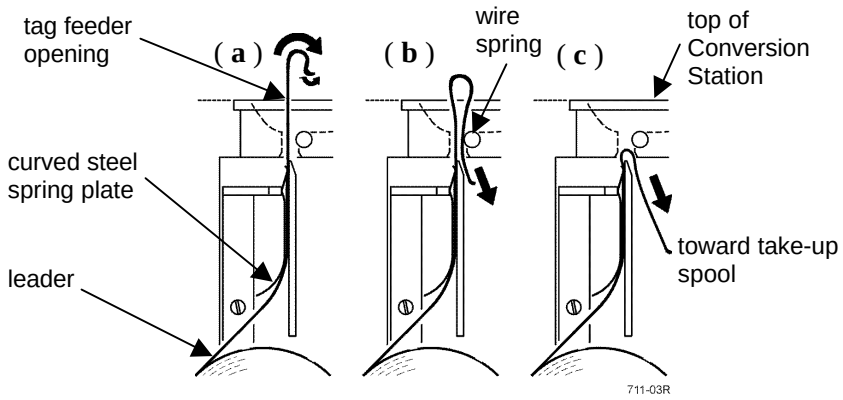


Figure 23: Leader Diagram

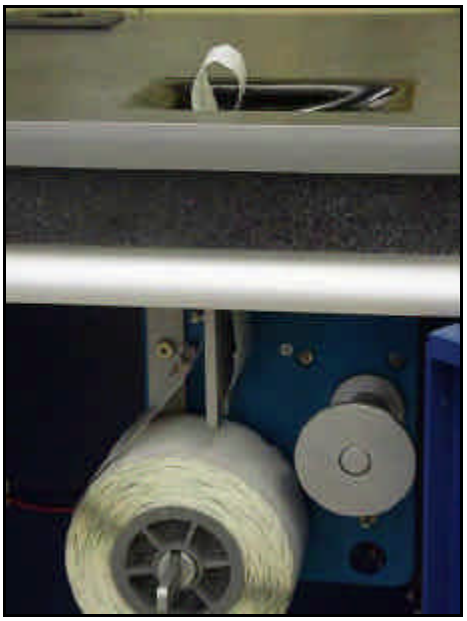


Figure 24: Leader Threaded Correctly

11. Remove the take-up spool end-plate (**Figure 25**).

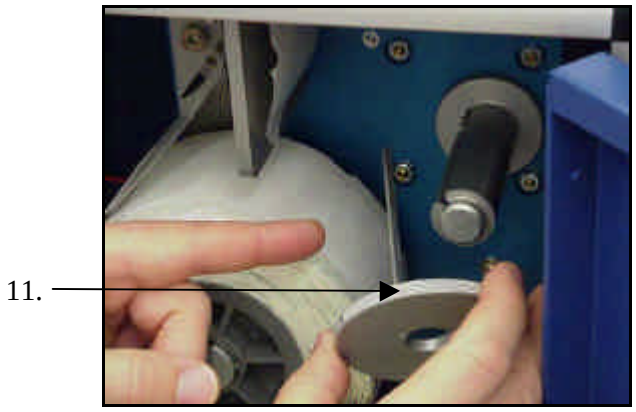


Figure 25: Removing the End-Plate

12. Make sure the slot in the take-up spool is at or near the top of the spool (**Figures 25** and **26**).

    a) To position the slot, rotate the take-up spool by pushing down on the tag dispenser switch until the crimp slot is at or near the top.

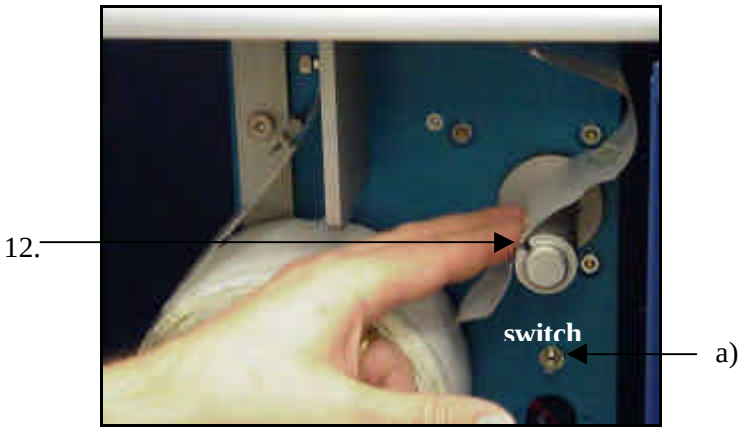


Figure 26: Guiding Leader Around Take-Up Spool

    b) Rotate the take-up spool (clockwise) and make sure the spool is locked into position.

    c) Guide the leader around the take-up spool and reinstall the end-plate.

    - The leader should be clamped into the slot in the take-up spool (**Figure 27**).

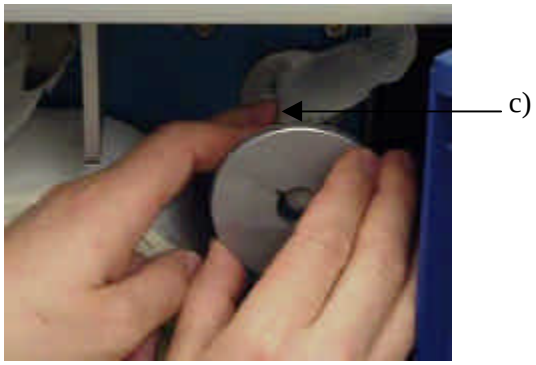


Figure 27: Leader Clamped in Crimp Slot

13. Rotate the stop lever (counter-clockwise) on the supply roll shaft until the stop lever is in the **DOWN** position (**Figure 28**).

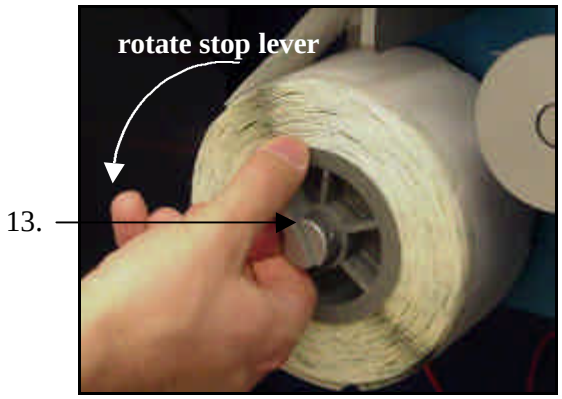


Figure 28: Rotating the Stop Lever to Down Position

14. Place the tag dispenser switch in the **ON** (up) position (Figure 29).

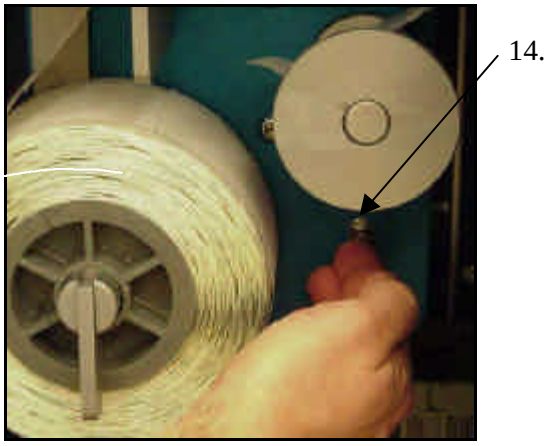


Figure 29: Setting the Tag Dispenser Switch to ON

15. The dispenser automatically initializes and the dispenser motor operates until a tag is dispensed through the feeder opening (**Figure 30**).

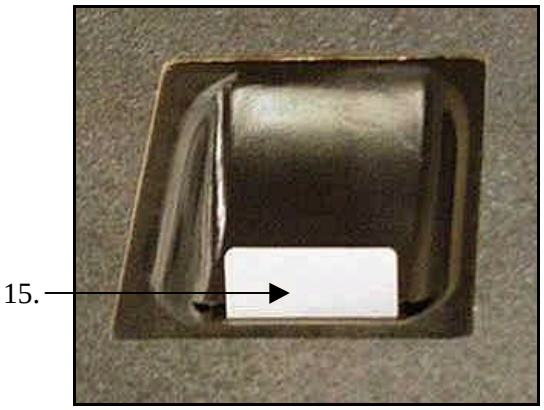


Figure 30: Tag Dispensed Through Feeder Opening

Note: If the leader is excessively long, the motor may stop automatically. Restart the motor by turning the dispenser switch **OFF** (middle position) and then **ON** again. Normal operation should resume when advancing the second tag.

Setting Library Parameters

1. At the main Conversion Station screen, touch the **Settings** button. The staff settings menu appears. At this menu, set the following:

   Volume: The volume of the speaker can be changed by touching the screen and sliding the controller right or left.

   Select Language: Select the language for the conversion menu.

   Items Converted: This is a counter for the number of items converted. The counter can be reset.

2. Continue to set library parameters by touching the **Admin** button.

3. Using the keyboard, enter the Administrator's password. The Administrative Setting menu appears. Library and branch settings provide library identification to be written to the tag.

   Library Name: To add a new library or to edit or remove a library from the drop-down list box, select the appropriate button. Use the mouse or touch the screen to make a selection. Use the keyboard to type in the library name.

   Library ID: To add a new library ID or to edit or remove a library ID from the drop-down list box, select the appropriate button. Use the mouse or touch the screen to make a selection. Use the keyboard to type in the library ID.

   Branch Name: To add a new branch name or to edit or remove a branch name from the drop-down list box, select the appropriate button. Use the mouse or touch the screen to make a selection. Use the keyboard to type in the branch name.

   Branch ID: To add a new branch ID or to edit or remove a branch ID from the drop-down list box, select the appropriate button. Use the mouse or touch the screen to make a selection. Use the keyboard to type in the branch ID.

   Set Maximum Quantity: Set this quantity for the maximum number of items that can be in a set. A set is a group of items identified by one bar code. Each item in a set will be tagged.

   Manual Barcode Entry: Select this item so that bar codes can be manually entered. Manual barcode entry is done by touching the barcode button on the main Conversion Station screen.

   Tag Placement Reminders: Use the drop-down list box to select tag placement reminders. The visible reminder displays the tag placement on the screen. An audible reminder is a sound informing you when a tag has been written and needs to be placed in an item. It is recommended that both audible and visible reminders be selected.

   Allowed Conversion Types: Click the check box for the type of material that will be converted. This will set the list of items to be converted that is displayed on the main Conversion Station screen. Uncheck to not include. Select conversion type and it will be highlighted.

   OK: Select **OK** to apply settings.

   Cancel: Cancels any entries and exits this screen.

   Help: Displays the electronic help documentation for the conversion station.

4. After completing the Administrative Settings, touch the **OK** button. Additional Setup and Settings information can be found by selecting the Help button on the main Conversion Station screen.

   You are now ready to start the conversion process for books.

Tag Conversion of a Book

With a roll of D1 tags installed in the Conversion Station and library parameters set, you may start operator training or the conversion process. Follow this procedure to convert a book barcode to a D1 tag.

1. Select conversion type as "**Book**."
2. Scan the barcode.
3. With the book's bar code facing up, slide the book under the scan line so that the bar code can be read. An audible beep is heard when the bar code is successfully read.
4. Program the D1 tag.
5. Remove the D1 tag from the tag dispenser feeder area and place it on or slightly above the surface of the read/write area on the left side of the work surface.

   The audible beep or tag placement sound indicates that the tag has been successfully programmed.

   The touch screen display will indicate **Adhere tag. Remove this item, then scan next item**.
6. Place the tag on the inside back cover as specified on the screen. For books, the tags are to be alternately placed high, middle, and low in the book.
   - For low placement, the bottom edge of the tag is to be one inch (2 to 3 cm) up from the bottom of the inside back cover. This is indicated by a single low-pitched beep.
   - For middle placement, the bottom edge of the tag is to be three inches (7 to 8 cm) up from the bottom of the inside back cover. This is indicated by two mid-pitched beeps.
   - For high placement, the bottom edge of the tag is to be 5 inches (12 to 13 cm) up from the bottom of the inside back cover. This is indicated by three high-pitched beeps.

     Place tags as close as possible to the spine of the book without bending or creasing the tag when the book is shut. This will ensure proper operation.

Online Documentation

The Digital Conversion Station has extensive online documentation that contains procedures, troubleshooting, and reference material. The online operator's documentation should be reviewed as the conversion process continues.

To access online documentation, select the **Help** button.

Conversion Planning

Conversion Suggestions

A conversion coordinator should be designated to direct and monitor the conversion effort. The coordinator should have a method for tracking conversion status, training operators, and managing the logistics of conversion.

Don’t crowd the conversion area. Conversion cannot proceed if multiple D1 tags are sensed or if the operator position/location is crowded.

Use two-person teams. Use of two-person teams reduces errors and improves productivity.

One team member can move items while the other can do the actual conversion. Frequent task switching keeps both team members fresh.

Plan the overall material flow. Use carts or other aids to move materials into and away from the conversion station.

Plan the material flow to minimize library disruption. For example, do one section at a time and move the conversion station as needed.

Convert books that need to be returned to the shelves. Convert all books that are returned to or used inside the library before putting books back onto the shelves.

CAUTION: Make sure the power cord does *not* present a hazard.

Conversion Station Administrator's Password Sheet

Conversion Station Software

The Conversion Station software allows the system administrator and computer coordinator to:

- convert bar code information to D1 tags
- set parameters for conversion
- access on-line help documentation

There are two levels of access to the Conversion Station:

- Library Administrator – This level is password protected.
- Staff – This level is not password protected.

The Conversion Station software allows staff to make limited configuration changes. The library administrator and computer support staff can make additional advanced configuration changes.

Password Information

All information and access for system administrators is password protected. To access this information:

1. From the main Conversion Station screen, select **Settings**.
2. From the Staff Settings menu, select **Admin**. The Administrator's Password dialog box appears.
3. In the *Password* field, type **admin** (use the computer keyboard located inside the Conversion Station cabinet) and select OK.

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