



# **Smart Check System Model 888 Smart Sorter Models 773, 775 Sort Bin Model 777**

Pre-release Documentation

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**Staff Guide**

**3M Library Systems**

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[www.3M.com/library](http://www.3M.com/library)

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78-8123-9011-6 Rev. 1

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# Safety Information

## Introduction

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We provide important safety information and warnings to assist you in understanding and avoiding potential harm to yourself, and possible damage to equipment, during the installation and use of the 3M™ Smart Check/Smart Sorter/Sort Bins.

- Although this manual describes potential hazards you may encounter during the operation of this product, we cannot predict all of the possible hazards and this list should not be a substitute for your judgment and experience.
- Before you use this equipment, please read and observe all safety information and instructions in this manual.
- If you are unsure about any of the potential hazards discussed, please contact your supervisor immediately.

Read, understand, and follow all safety information contained in these instructions prior to using the 3M™ Smart Check and Smart Sorter systems. Retain these instructions for future reference.

## Intended Use Statement

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The 3M™ Smart Check/Smart Sorter system is an ATM-style self-return system intended for use by library patrons when returning library materials, and by library staff when receiving returned materials.



The system is designed for use in an indoor library environment and has not been evaluated for other locations or uses.

## Safety Message Format

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Safety messages are designed to alert you to potential hazards that can cause personal injury to you or others

Each safety message box contains:

- a **safety alert symbol** ();
  - one of two signal words: WARNING or CAUTION;
- a **safety label symbol** ();
  - and a safety message.

In addition to the symbols and words, each safety message:

- Identifies the hazard.
- Describes what you can and should do to avoid the risk of exposure to the hazard.
- Conveys the probable consequences of not avoiding the hazard.

The signal words, safety label symbols, and their meanings are shown below:

**DANGER** Indicates a potentially hazardous situation, which, if not avoided, will result in death or serious injury.




**WARNING** Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.








**CAUTION** Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury or property damage.






The  (Information) icon is used in this manual to draw your attention to other important information

## Safety Messages








 <b>DANGER</b>	
 <p>Service Personnel Warning</p> <p>Disconnect power before servicing. Unit contains high voltage electrical circuits that must be discharged and checked for voltage prior to servicing. Service should be performed only by 28 factory trained service personnel.</p> 	<p><b>To reduce the risks associated with hazardous voltage (electric shock) which, if not avoided, will result in death or serious injury:</b></p> <ul style="list-style-type: none"><li>• Resensitizer module contains hazardous voltage -- read accompanying documentation.</li></ul>

 <b>WARNING</b>	
	<p><b>To reduce the risks associated with hazardous voltage (electric shock) which, if not avoided, could result in death or serious injury:</b></p> <ul style="list-style-type: none"><li>• No user serviceable parts inside.</li><li>• Do not attempt to service or repair.</li><li>• Do not use if power cord is damaged.</li><li>• Read accompanying documentation.</li></ul>

 <b>WARNING</b>	
<p><b>To reduce the risks associated with fire or explosion related to insertion of non-authorized items, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"><li>• Install security procedures and equipment appropriate to conditions.</li><li>• Comply with applicable building codes and insurance concerns.</li></ul>	

 <b>CAUTION</b>	
	<p><b>To reduce the risks associated with pinching of hands and/or entanglement, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"><li>• Keep hands, long hair, and loose articles of clothing or jewelry away from any of the moving drive sprockets and conveyer belts.</li></ul>

 **CAUTION**

	<p><b>To reduce the risks associated with skin abrasion and/or entanglement, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Keep hands, long hair, and loose articles of clothing or jewelry away from resensitizer moving drive sprockets, sorter moving drive sprockets, and conveyor belts.</li> </ul>
	<p><b>To reduce the risks associated with pinching of hand, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Keep hands, long hair, and loose articles of clothing or jewelry away from transverse sweep belt.</li> <li>• Prevent unauthorized access to product.</li> </ul> <p><b>To reduce the risks associated with crushing of hand and/or skin abrasion and/or entanglement which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Keep hands, long hair, and loose articles of clothing or jewelry away from moving transverse sweep conveyor belts.</li> </ul>
	<p><b>To reduce the risks associated with entanglement with rotating couplers, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Keep hands, long hair, and loose articles of clothing or jewelry away from moving drive sprockets and belts.</li> </ul>
	<p><b>To reduce the risks associated with falling, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Do not lean on the surface of the book bin.</li> </ul>
	<p><b>To reduce the risks associated with crushing and/or pinching of hand, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Keep hands away from the entry cove sliding door.</li> </ul>
	<p><b>To reduce the risks associated with tripping, which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Stay clear of the Sorter feet extensions.</li> </ul>
	<p><b>To reduce the risks associated with pinching of hand which, if not avoided, may result in minor or moderate injury:</b></p> <ul style="list-style-type: none"> <li>• Keep hands away from sliding printer rail.</li> </ul>





## CAUTION

**To reduce the risks associated with environmental contamination from the incorrect disposal of various parts of this machine, which, if not avoided, may result in minor or moderate injury:**

- Follow recommended disposal procedures for laser devices in accordance to federal, state and local requirements.
- Follow recommended disposal procedures for lithium batteries in accordance to federal, state and local requirements.
- Circuit boards contain lead. Dispose of in accordance to federal, state and local requirements.

**To reduce the risks associated with explosion due to incineration of lithium batteries, which, if not avoided, may result in minor or moderate injury:**

- Follow recommended disposal procedures for lithium batteries in accordance to federal, state and local requirements.

**To reduce the risks associated with exposure to laser light, which, if not avoided, may result in minor or moderate injury:**

- Do not reuse the laser device in another application.



## IMPORTANT NOTES

**Belts can be made to operate by service personnel when Smart Check is pulled out for service.**

- Service personnel are expected to secure the area during service.
- Rope off area to protect patrons or non-service personnel.

When the Smart Check is resting on its castors, the unit may begin to roll.

# Regulatory Compliance

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## USA

### 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 (for Smart Check Model 888 only)

**FCC ID: DGFLSD888**

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.

## Canada

### Industry Canada Radio Frequency Rules and Regulations (for Smart Check Model 888 only)

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.

**Canada: Pending**

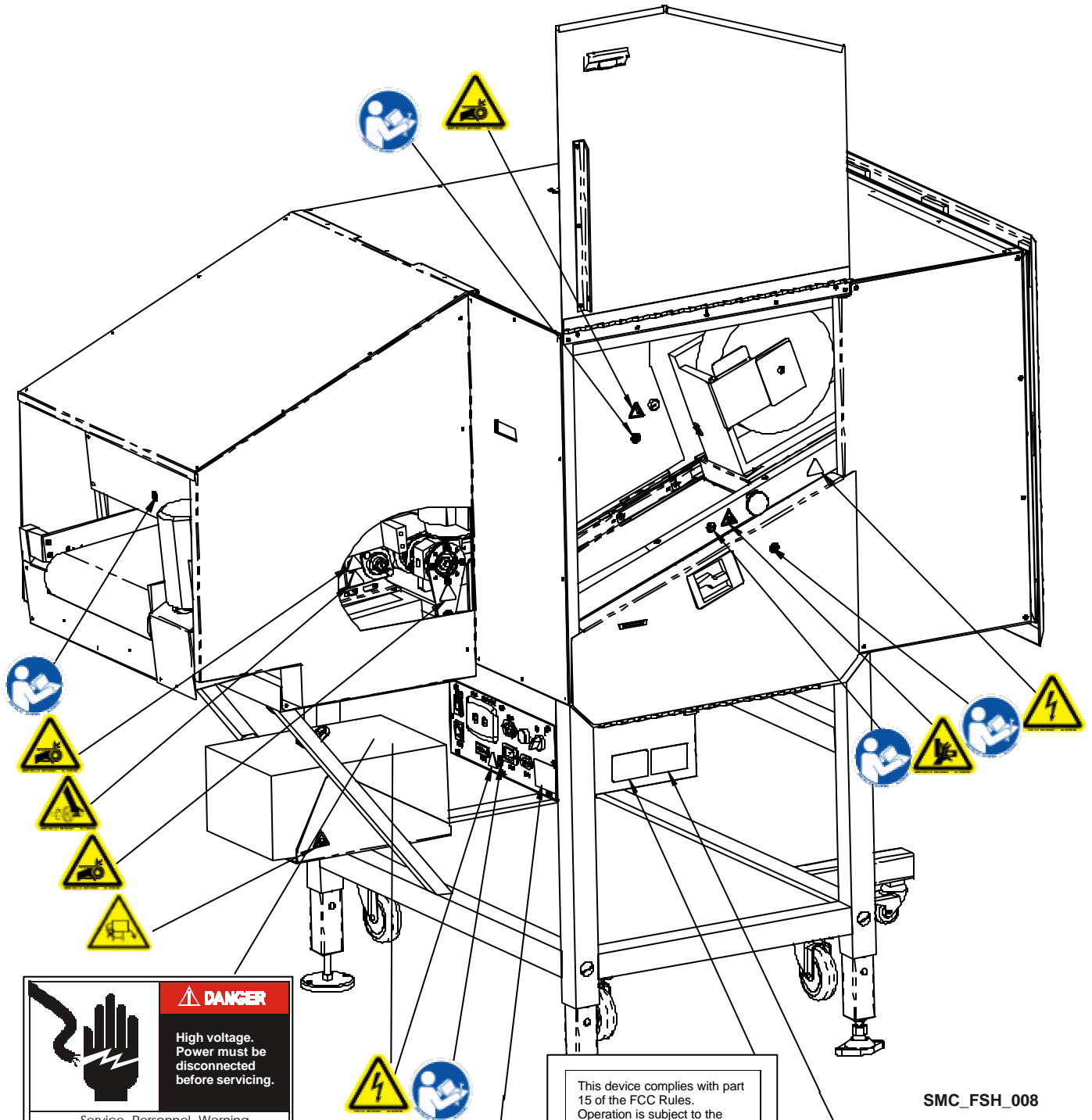
## Europe

This equipment complies with the requirements of the RTTE and EMC directives.

## Safety Label Locations

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# Model 888 Smart Check



**DANGER**

High voltage. Power must be disconnected before servicing.

Service Personnel Warning

Disconnect power before servicing. Unit contains high voltage electrical circuits that must be discharged and checked for voltage prior to servicing. Service should be performed only by 3M factory trained service personnel.

**3M Smart Check Model 888**

220 - 240 V~  
50/60 Hz  
3 A

FCC ID: DGF-LSD888  
CANADA: \_\_\_\_\_

S/N: 888XXXX

**3M Library Systems**  
St. Paul, Minnesota 55144

CE, UL, N1108, 3

This device complies with part 15 of the FCC Rules. Operation is subject to the following 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.

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

C'est appareil numerique de la classe respecte toutes les exigences du Reglement sur le material brouiller du Canada.

This product complies with 21 CFR Subchapter J, IEC 60825-1:1997 and EN 60825-1:1996

SMC\_FSH\_008

# Introduction

## System Overview

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Welcome to the 3M™ Smart Check™ System!

Please take the time to read through this guide to help you understand how your Smart Check system works. Keep this guide accessible when the system is in use as it will serve as a reference guide should questions arise.

The Smart Check system allows library patrons to check in books on their own. The system emulates the check-in procedures performed by a librarian.

## Preparing your Library for the Smart Check System

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A number of requirements must be met for the installation and operation of the Smart Check system. These requirements include adequate space and environmental conditions, electrical power connection, connection to the automated circulation system (ACS), and staff training.

### Staff Preparation and Training

The introduction of patron self-service will fundamentally change how your library circulates items. Since patrons will be able to process their own routine check-ins, your staff will have more time to respond to patrons with more complicated problems or information requests. Because the new system will affect the nature of their work, the entire library staff should be involved in the preparation for installation. The staff will help to identify the library functions that can be enriched with the added resources and time made available by the Smart Check system.

A key element of introducing any new processes or systems into your library is a successful staff training program. Your Smart Check system will be much more effective with the active cooperation and participation of your entire library staff. We recommend that you use the guides provided with the system as texts for periodic training.

### Preparing Library Patrons for the Smart Check System

To prepare library patrons for using the Smart Check system, thoroughly review the Smart Check system documentation. Then, consider scheduling patron orientation sessions to demonstrate the process for checking in items from your library using the Smart Check system.

A librarian may need to monitor the new machine to assist patrons who are unfamiliar with the system for an extended period of time.

# Components

## Smart Check Components

### Receipt Printer

The receipt printer prints patron receipts and extends them through the receipt printer slot.

### Touchscreen

The touchscreen acts as the patron interface for the Smart Check system, and also can be used to access the administrative functions.

### Cove Light

The cove light illuminates the cove area.

### Cove Door

The cove door separates the public accessible cove area from the inside the Smart Check cabinet. The cove door automatically opens when a valid library item is detected and closes once it is secured inside the system.

### Front Conveyor System

The front conveyor system transports library items from the cove area to the tunnel belt. It includes the front conveyor belt and LED sensors.

### Barcode Scanners

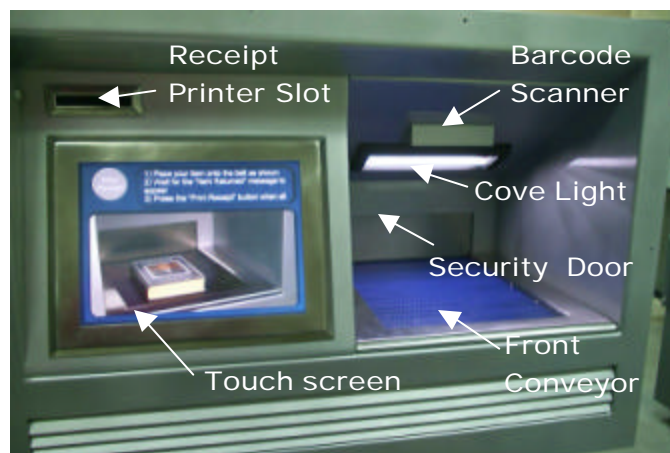
The barcode scanners read barcode labels on library items and communicate the barcode numbers to the Smart Check computer. The Smart Check system's bar code scanners can read up to eight different bar code formats.

There are two barcode scanners in the Smart Check system – one in the cove area and a second near the end of the front conveyor belt.

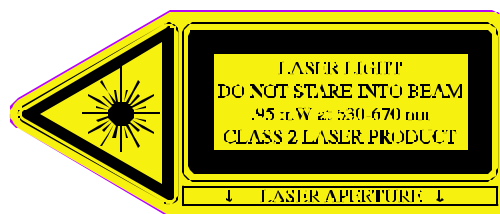
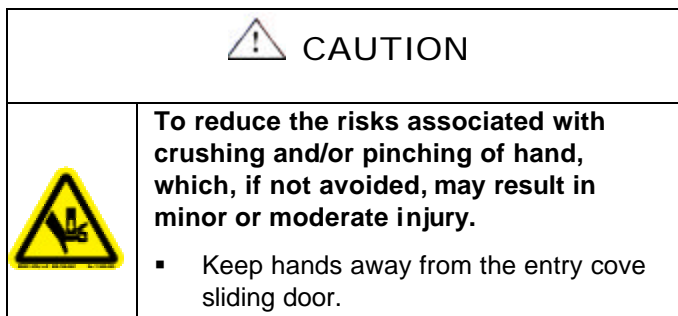
### RFID System

The Smart Check system's RFID system detects RFID tags installed in library items and communicates the tag information to the Smart Check computer.

The RFID system consists of an two RFID antennas, one positioned under the front conveyor belt, one at the front and one at the back (not shown in picture).



Front view



SMC\_SC\_006

## Tunnel Belt System

The tunnel belt system transports library items from the front conveyor belt to the Smart Sorter system (if connected) and sensitizes security strips installed in library items. The tunnel belt system includes the tunnel conveyor belt and belt motor, a tunnel sensitizer, and LED sensors (not shown in picture).

## Smart Check System Computer

The Smart Check system computer controls the functions of the Smart Check system and communicates library item information to the library's Automated Circulation System (ACS).

## Staff Printer

The staff printer prints receipts for items on hold. These receipts are printed when an item is returned that has been put on hold by another patron.

The staff printer also prints exceptions and errors from the Smart Check system.

## Communication

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This system sends and receives information from the library's automated circulation system (ACS). The information is exchanged in a manner consistent with 3M's Standard Interface Protocol: SIP-2, SIP-2X or NCIP (NISO Circulation Interchange Protocol).

This system also communicates with patrons by leading them through the process of checking in materials via on-screen graphics and text and optional sounds. The Smart Check System displays correction instructions to help the patron solve problems. If this fails, the system instructs the patron to ask for help at the circulation desk.

## Barcodes

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### Bad or Unreadable Barcodes

When the scanner tries to read a bar code that is not configured on the system, or if the bar code is unreadable (damaged or incomplete), an error screen appears and the patron is instructed to seek help at the front desk.

### Bar Code Formats

The Smart Check system identifies library materials by reading bar codes on the items. Several bar code formats have been developed. The Smart Check system is pre-programmed to read the following bar code formats:

- Codabar
- Code 39
- Plessey
- Telepin Alphanumeric
- Code 128

If your library uses a bar code format not included with the Smart Check software, you may specify a bar code format to replace one of the bar code formats listed above.

### Bar Code Placement

Consistent bar code placement on all of your library material is necessary for easy and consistent patron use.



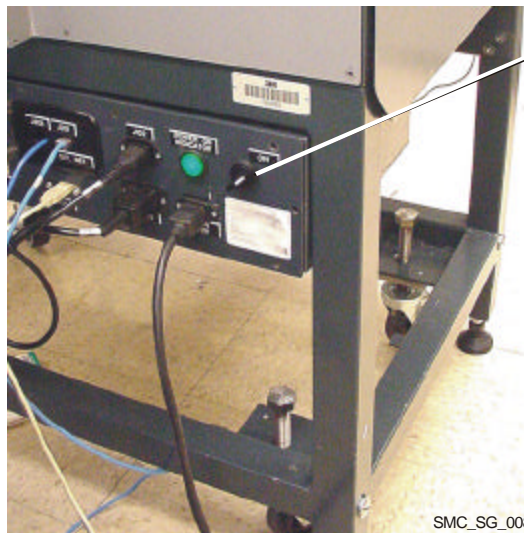
# Using the Smart Check System

## Starting the Smart Check System

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- 1 Turn ON the power switch on the Smart Sorter (if attached).

- 2 Turn ON the power switch on the back panel of the Smart Check system.
  - The computer should start and Smart Check software will load.

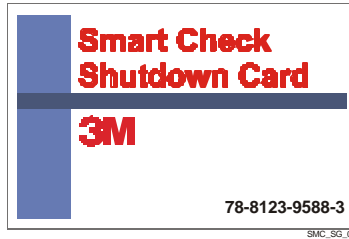


- 3 The touch screen should be **ON**, the Smart Check program should be running, and the Smart Check startup screen should be displayed.
  - **Note:** your startup screen may look different than the one shown here.

## Shutting down the Smart Check system

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- 1 Hold the **Smart Check Shutdown Card** on the front conveyor belt of the Smart Check system so that one of the sensors is blocked.



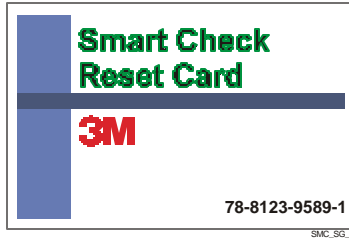
- 2 The **System is shutting down** message appears on the touch screen.
  - Smart Check software and Microsoft Windows™ will shut down.
- 3 Turn **OFF** the power switch on the back panel of the Smart Check system.
- 4 Turn **OFF** the power switch on the Smart Sorter (if attached).

# Resetting the Smart Check System

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The Smart Check system can only be reset when an error code screen is displayed. The reset command resets the Smart Check software

- 1 Hold the **Smart Check Reset Card** on the front conveyor belt of the Smart Check system so that one of the sensors is blocked.



- 2 The Smart Check program is reset.
  - The **System is resetting** message appears while the software is resetting.

- 4 After a successful reset, the main patron screen should appear on the touch screen and the system should be ready to use.

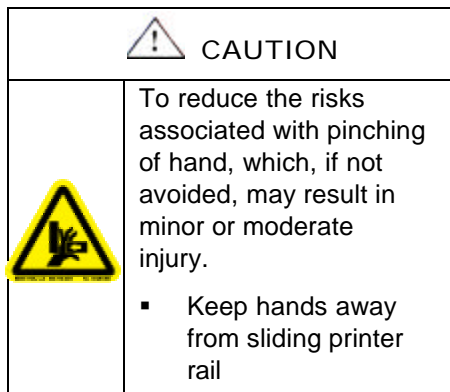
# Performing general maintenance

## Replacing the receipt printer paper roll

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Use the following steps to replace a roll of printer paper on the Smart Check System. Note that the printer paper can be replaced when the system is running. The Smart Check screen will display a message indicating that receipts are unavailable to the Patron as the printer is in service.

- 1 Open the side door on the Smart Check system.





- 2 Turn the **locking knob** to release the slide mechanism and slide the printer back for access.
  - If there is any remaining paper left in the printer, it will be automatically ejected.
- 3 Lift the latch on the side of the printer spindle and open the printer spindle door (Figure 1).
- 4 Remove the empty printer roll from the spindle.
- 5 Place a new roll of printer paper (part # ) on the printer spindle. (See **Error! Reference source not found..**)

- 6** Feed the paper from the top of the roll, under the tension roller, and into the paper feed mechanism.
  - a** The paper feed mechanism automatically feeds the paper into the printer and cuts the paper.
  - b** Once the paper has been cut, a small blank receipt will be left at the front of the printer.
  
- 7** Remove the blank receipt from the front of the printer.
  - This helps ensure that the printer can be pushed back into position without jamming the receipt slot.

**8** Close the printer spindle door.

**9** Slide the printer back into position (all the way to the front) and be sure it is locked in place.

 <b>CAUTION</b>	
	<p>To reduce the risks associated with pinching of hand, which, if not avoided, may result in minor or moderate injury.</p> <ul style="list-style-type: none"><li>• Keep hands away from sliding printer rail.</li></ul>

**10** Close the side door on the Smart Check system.

## Replacing the staff printer's paper roll

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- 1** Press the cover open button on the top of the printer.
- 2** Remove the old roll and replace the paper roll as shown.
- 3** Pull a small amount of paper out (as shown) of the front of the printer.
- 4** Close the printer cover.
- 5** Tear off the paper as shown.

## Cleaning the Housing

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- 1 Use a damp cloth to wipe off external covers and doors.
- 2 Use an air canister to clean interior components of the Smart Check System and the Smart Sorter™ System.
  - Air cleaner canisters are available at most office supply stores.

## Cleaning the Touchscreen Monitor

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Use glass cleaner and a clean cloth to wipe off fingerprints and dirt from the touchscreen.

- The touchscreen should be cleaned daily.

## Cleaning the Sensors

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Use an air canister to clean the sensors on the conveyor belts of the Smart Check System and the Smart Sorter™ System.

- Air cleaner canisters are available at most office supply stores.



# Obtaining Service and Supplies

## Printer Paper and other Supplies

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To order printer paper and other supplies in the U.S., call 1-800-328-0067, option 2. Outside of the U.S., call your local 3M office. The following supplies are recommended:

- Printer paper (part # )

## Contacting Support

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To contact 3M to request a service call, installation, software support, or to provide Service Agreement information, in the U.S. call 1-800-328-0067, option 1. Outside of the U.S., contact your local 3M office.

## 3M Library Systems Website

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The 3M Library Systems Web site – [www.3M.com/library](http://www.3M.com/library)

For additional information, refer to [www.3m.com/library](http://www.3m.com/library) and select the link under "Product Literature and Related Information" at the bottom of the page. This directs you to a documentation links page containing a link for "Smart Check Systems" where applicable documents are located.