

# **Intelligent Library System (ILS) 2.6 User Guide**

# Intelligent Library System 2.6 (ILS) User Guide

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Released February 15, 2006.

Published by:

Checkpoint Systems Inc.

101 Wolf Drive

Thorofare, NJ 08086

1st Edition - January 5, 2006

Part number: 7305198

For use with *Checkpoint's* Intelligent Library System Version 2.6.

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## Document revision information

Rev	Description	Date	Author
00	Initial Draft	1/5/06	M. Reeves
01	Edits	2/15/06	M. Reeves

## Document Conventions



**Caution:** This is a Caution or Warning icon. When it appears, the corresponding text indicates a cautionary statement by which you must abide.



**Note:** This is a Note icon. When it appears, the corresponding text indicates a helpful note or tip when using the feature.

The following usage conventions are used throughout the Intelligent Library System User Manual.

**Button Name** - This describes a button or selection on the screen. For example, the <DONE> button is represented in this document as **Done**.

**Key Name** - This describes a keystroke on a keyboard. For example **Ctrl** represents the Control key on a keyboard.

# Important Information to our Users in North America

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Checkpoint Systems, Inc., offers Radio Frequency Identification Products that have been FCC certified or verified to 47 CFR Part 15 Subparts B/C and/or 47 CFR Part 18. Appropriately, one of the following labels will apply to the approval:

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- OR -

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) including this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation, which may include intermittent decreases in detection and/or intermittent increases in alarm activity.

- OR -

**NOTE:** This equipment has been tested and found to comply with the limits for a miscellaneous type ISM device, pursuant to Part 18 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio communications reception, which can be determined by turning the equipment off and on, please contact Checkpoint Systems, Inc., at 1 (800) 257-5540 for further assistance.

## Equipment Safety Compliance Statement

Checkpoint Systems Radio Frequency Identification products have been designed to be safe during normal use and, where applicable, certain components of the system or accessory sub-assemblies have been certified, listed or recognized in accordance with one or more of the following Safety standards: UL 1012, UL 1037, UL 1310, UL 60950-1, CSA C22.2 No. 205, CSA C22.2 No. 220, CSA C22.2 No. 223, CSA C22.2 No. 60950-1. Additional approvals may be pending.

**WARNING:** Changes or modifications to Checkpoint's Radio Frequency Identification (RFID) equipment not expressly approved by the party responsible for assuring compliance could void the user's authority to operate the equipment in a safe or otherwise regulatory compliant manner.

## Important Information to our Users in Europe

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NOTE: Certain Radio Frequency Identification (RFID) equipment have been tested and found to conform with the CE emission and immunity requirement in Europe. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Under unusual circumstances, interference from external sources may degrade the system performance, which may include intermittent decreases in detection and/or intermittent increases in alarm activity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment experiences frequent interference from external sources or does cause harmful interference to radio communications reception, which can be determined by turning the equipment off and on, please contact a Checkpoint Systems representative for further assistance.

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**WARNING:** Changes or modifications to Checkpoint's Radio Frequency Identification equipment not expressly approved by the party responsible for assuring compliance could void the user's authority to operate the equipment in a safe or otherwise regulatory compliant manner.

# TABLE OF CONTENTS

---

<b>Introduction.....</b>	<b>1-1</b>
Library Network Topology .....	1-3
Single Branch .....	1-3
Single Server, Multi-Branch Architecture .....	1-4
Peer-to-Peer Communication .....	1-4
Document Overview .....	1-5
Intended Audience .....	1-5
Related Documentation .....	1-5
System Overview .....	1-6
How RF Query Circuits .....	1-6
How ILS Maintains the Library's Collection Database .....	1-6
Patron Checkout and Check-In .....	1-7
Staff Checkout and Check-In .....	1-7
Book Return Check-In .....	1-7
Inventory Collection .....	1-9
Exit Monitoring .....	1-10
Programming Circuits .....	1-10
Off-line Processing .....	1-10
Components .....	1-11
Intelligent Circulation Circuit .....	1-11
ILS Intelligent Sensor .....	1-12
Local Security Controller .....	1-12
Staff Station Reader .....	1-13
Patron Self-Checkout Station II .....	1-13
Portable Reader .....	1-14
Intelligent Library Controller .....	1-15
Exception Ticket Printer .....	1-15
CheckVIEW .....	1-16
ILS Remote Monitor .....	1-16
Circulation Circuit Programming Station .....	1-16
CheckPASS .....	1-17
<b>Application Server.....</b>	<b>2-1</b>
Check System Status .....	2-2
Self-Checkout Station Status .....	2-2
Host Status .....	2-4
Interrogator Status .....	2-4
This section cannot be hidden from view. ....	2-5
Edit Interrogator .....	2-5
Exit Alarms .....	2-6

Scheduling Checkout Cache Synchronization and Host Reconnections . . . . .	2-6
Synchronizing the Checkout Cache . . . . .	2-8
Downloading Inventory from the Portable Reader . . . . .	2-10
Generating Reports . . . . .	2-11
Specifying a Time Period for Any Report . . . . .	2-12
Checkout Discrepancy Report . . . . .	2-14
Patron Discrepancy Report . . . . .	2-15
Generic Reports . . . . .	2-18
Exit Alarm Report . . . . .	2-21
Check In Report . . . . .	2-23
Working with the Bridge Interface . . . . .	2-25
Changing the Op Mode of a Staff Station Reader . . . . .	2-25
Creating Staff Station Reader Groups . . . . .	2-25
Changing the Op Mode of Multiple Staff Station Readers . . . . .	2-26
Maintenance . . . . .	2-26
Display System Information . . . . .	2-27
<b>Patron Self-Checkout Station.....</b>	<b>3-1</b>
Overview . . . . .	3-1
Beginning a Self-Checkout Station Session . . . . .	3-2
Presenting a Patron ID Card, Step 1 . . . . .	3-3
Scanning Items for Checkout, Step 2 . . . . .	3-5
Viewing Items that Could Not be Checked Out . . . . .	3-7
Finishing Checkout, Step 3 . . . . .	3-8
Loading Roll Paper . . . . .	3-8
Powering On the Self-Checkout Station . . . . .	3-10
Powering Off the Self-Checkout Station . . . . .	3-11
<b>Portable Reader .....</b>	<b>4-1</b>
Overview . . . . .	4-1
Inventory Wand LED Indicators . . . . .	4-2
Charging the Inventory Wand Battery . . . . .	4-3
Maintaining the Portable Data Terminal . . . . .	4-4
Charging the Portable Data Terminal . . . . .	4-4
Using the Serial Charging Cable to charge the battery . . . . .	4-4
Using the Universal Cable Cup to charge the battery . . . . .	4-5
Powering On and Off the Portable Data Terminal . . . . .	4-6
Using the Portable Data Terminal . . . . .	4-7
Turning On/Off Backlight . . . . .	4-7
Checking the Status of the Batteries . . . . .	4-7
Performing a Reset . . . . .	4-10

Performing a Soft Reset .....	4-10
Performing a Hard Reset .....	4-10
Collecting Inventory Data .....	4-12
Transferring Inventory Data .....	4-16
Searching the Inventory .....	4-17
Preparing an Item Search List File .....	4-17
Transferring the Search List File .....	4-18
Importing the Search List File .....	4-19
Scanning for Inventory .....	4-22
Conducting Shelf Order Search .....	4-25
Selecting or Creating a Shelf Order Search File .....	4-25
Transferring the Shelf Order File .....	4-25
Importing Shelf Order File .....	4-26
Shelf Order Search Window .....	4-29
Shelf Order Results .....	4-31
Creating a New Search List .....	4-32
Creating a File from Shelf Order Results .....	4-32
Viewing Shelf Order Results .....	4-33
Saving Custom Search Files .....	4-34
<b>ILS Remote Monitor.....</b>	<b>5-1</b>
Installing Web Site Certificate on a Client Computer .....	5-2
Verifying Successful Certificate Installation .....	5-3
Setting Hyperlink on Client's Computer .....	5-4
Setting Up and Managing User Accounts .....	5-5
Adding a User Account .....	5-5
Modifying a User Account .....	5-6
Removing a User Account .....	5-7
Unlocking a Locked Account .....	5-7
Using ILS Remote Monitor .....	5-8
Launching ILS Remote Monitor in a Single Server, Multi-Branch Environment .....	5-8
Using ILS Remote Monitor in a Peer-to-Peer Environment .....	5-9
Changing Branch Views .....	5-9
Viewing Status .....	5-10
Viewing and Printing Reports .....	5-11
Uploading Portable Reader inventory files .....	5-12
Logging out .....	5-12
<b>Exception Ticket Printer .....</b>	<b>6-1</b>
Introduction .....	6-1
Printer Layout .....	6-2
Control Panel .....	6-3

Using the Exception Ticket Printer .....	6-3
Setting the Printer's Cut Type .....	6-4
Inserting Paper .....	6-5
Running a Self-Test .....	6-6
Installing the Cover .....	6-6
Installing a Power Switch Cover .....	6-6
Installing a Connector Cover .....	6-6
Error Codes .....	6-7
Troubleshooting .....	6-8
Removing Jammed Paper .....	6-8
Removing an Autocutter Jam .....	6-8
Cleaning the Print Head .....	6-9
Specifications .....	6-9
<b>CheckVIEW.....</b>	<b>7-1</b>
Staff Computer Requirements .....	7-2
Using CheckVIEW in Monitor Mode .....	7-3
Using CheckVIEW in Host Mode .....	7-4
Adding/Removing Self-Checkout Stations to CheckVIEW .....	7-4
Reinstalling Missing Files .....	7-6
Uninstalling CheckVIEW .....	7-6
Using CheckVIEW to Shut Down a Self-Checkout Station .....	7-6
<b>Circulation Circuit Programmer .....</b>	<b>8-1</b>
Overview .....	8-1
What is included .....	8-1
How it works .....	8-1
Programming Circulation Circuits .....	8-2
Configuring the CCP .....	8-2
Programming Circuits for RFID Items Only .....	8-2
Programming Continuously .....	8-2
Programming Circuits for RFID and Barcode Items .....	8-5
Removing the CCP Software .....	8-6
Troubleshooting .....	8-7
Label Printing Error .....	8-7
Fault appears when printing .....	8-7
Resetting the Printer .....	8-7
LabelView does not find *.inf file .....	8-7
Configuring the Print Driver .....	8-8
Configuring the Print Driver Port .....	8-8
<b>Affixing Circulation Circuits.....</b>	<b>9-1</b>
Types of Circulation Circuits .....	9-1



Applying Circulation Circuits to Books .....	9-2
Applying Circulation Circuits to Video Cassettes .....	9-3
Applying Circulation Circuits to CDs and DVDs .....	9-4
To place barcode labels on CDs .....	9-4
To place Circulation Circuits on Jewel Case CD cases .....	9-4
To place content Circulation Circuits on CDs and DVDs .....	9-5
To place Circulation Circuits on DiscMate DVD cases .....	9-6
To place Circulation Circuits on DiscMate CD cases: .....	9-7
Applying Circulation Circuits to Audio Material .....	9-8
To place Circulation Circuits on Audio Cases with Tapes on Both Inside Sections: .....	9-8
Applying Circulation Circuits to Kits .....	9-8
<b>Using DiscMate.....</b>	<b>10-1</b>
Overview .....	10-1
LEDs on the Intelligent Unlocking Station .....	10-2
Using the Standard Unlocking Station .....	10-2
Using the Intelligent Unlocking Station .....	10-3
Intelligent Unlocking Station Case Insertion Diagram .....	10-4
Linking Procedure .....	10-5
Configuring Hardware to Link Media .....	10-5
Circuit Linking Hardware Diagram .....	10-6
Linking Electronic Media with Confirmation .....	10-7
Linking Electronic Media Continuously .....	10-8
Removing Linked Media .....	10-10
DVD Linking Reports .....	10-11
Accessing and Printing Linking Reports .....	10-11
Type of Reports .....	10-12
Linking Summary Report .....	10-12
Check-out Detail Report .....	10-13
Staff Check-In Exception Report .....	10-13
Drop Box Exception Report .....	10-13
<b>CheckPASS .....</b>	<b>11-1</b>
Using CheckPASS .....	11-2
<b>Troubleshooting Guide.....</b>	<b>12-1</b>
Contact Technical Support .....	12-1
Self-Checkout Station Scenarios .....	12-1
Valid Patron ID Not Recognized .....	12-1
Nothing Happens After an Item is Scanned .....	12-2
Graphics Display Incorrectly or Not at All .....	12-2
Printer Does Not Print .....	12-2
Printer Status of Unknown .....	12-3

Touch Screen Does Not Respond .....	12-3
Self-Checkout Station Fails to Start .....	12-4
Application Server Scenarios .....	12-4
Self-Checkout Station Not Displaying .....	12-4
Trouble Printing a Report .....	12-4
Error Message Displays when Running a Report .....	12-5
Exit Alarms Do Not Occur .....	12-5
Host Status Incorrectly Reports Offline .....	12-5
Exit Interrogator Scenarios .....	12-5
Exit Alarms Do Not Occur .....	12-5
No Sound Occurs for an Exit Alarm .....	12-6
Incorrect Exit Alarm .....	12-6
Staff Station Reader Scenarios .....	12-6
Valid Circuit Not Recognized .....	12-6
Scanned Item Does Not Display on Monitor .....	12-7
Recovery Procedures .....	12-8
Restarting the Self-Checkout Station .....	12-8
Restarting the Complete System .....	12-8
Restarting the Intelligent Library Controller program .....	12-8
CheckVIEW Troubleshooting .....	12-9
Solution 1 - IP Address used on Staff computer .....	12-9
Solution 2 - Correct default settings on Self-Checkout Station .....	12-9
System Connection Diagram .....	12-11
<b>System Maintenance.....</b>	<b>13-1</b>
Intelligent Library Controller System Maintenance .....	13-1
Transaction Database Maintenance .....	13-2
Synchronize Offline Transactions .....	13-3
Backup Transaction Database .....	13-4
Purge the Transaction Database .....	13-5
Compact the Transaction Database .....	13-7
Reboot the Application Server .....	13-8
Backup the Application Server .....	13-11
Backup .....	13-11
Restore .....	13-12
Load Paper into Patron Self-Checkout Station Printer .....	13-13
Safety Warnings .....	13-15
Specifications .....	13-16
Mechanical .....	13-16
Electrical .....	13-16
Interfaces .....	13-16
Peripherals .....	13-16
Environmental .....	13-16

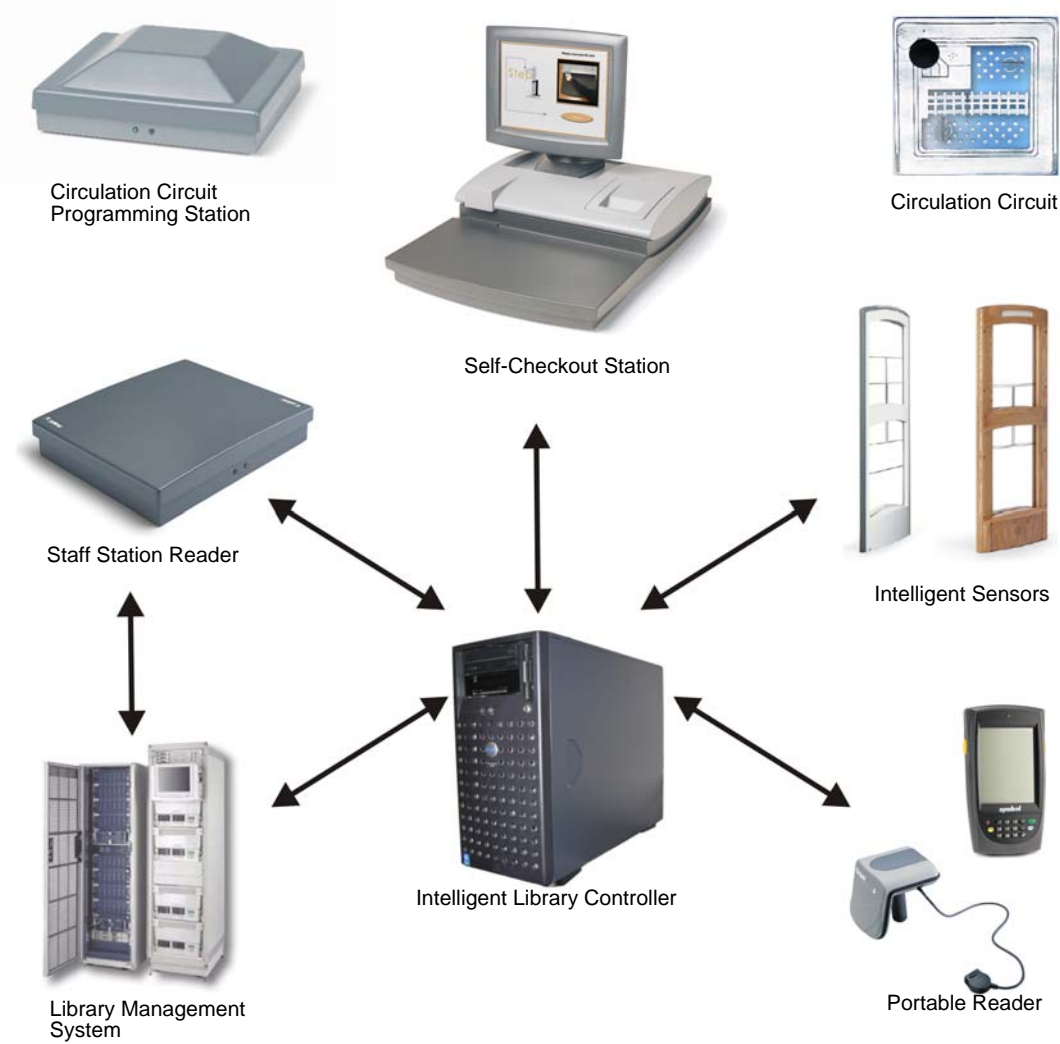
## INTRODUCTION

The Intelligent Library System 2.6 (ILS) is an integrated security tracking and database system that maintains a library's collection using Radio Frequency Identification (RFID) to wirelessly coordinate the subscription status of library materials. This protects collections, streamlines operations, and improves patron service. When using ILS, libraries reduce losses, enhance staff productivity, increase circulation flow, and improve patron satisfaction. ILS operates in conjunction with the library's Library Management System (LMS) or Automated Circulation System (ACS).


ILS includes the following components:

- Circulation Circuit (inventory tag)
- Patron Identification Card
- Intelligent Sensor
- Patron Self-Checkout Station
- Staff Station Reader
- Intelligent Library Controller (Application Server)
- Portable Reader (optional)
- Exception Ticket Printer (optional)
- ILS Remote Monitor (optional)
- CheckVIEW (optional)
- CheckPASS (optional)
- Circulation Circuit Programming Station (optional)
- DiscMate (optional)

The following configuration illustrates an example of the ILS components and connections in a typical ILS setup.



**Figure 1.1** Sample Intelligent Library System Components

 Note: Your specific ILS configuration may not include one or more of the components shown.

# Library Network Topology

In addition to supporting the Single Branch topology, ILS Version 2.6 supports the following library topologies:

- “Single Branch”
- “Single Server, Multi-Branch Architecture”
- “Peer-to-Peer Communication”

Figure 1.2 depicts the library network topologies supported by ILS Version 2.6.

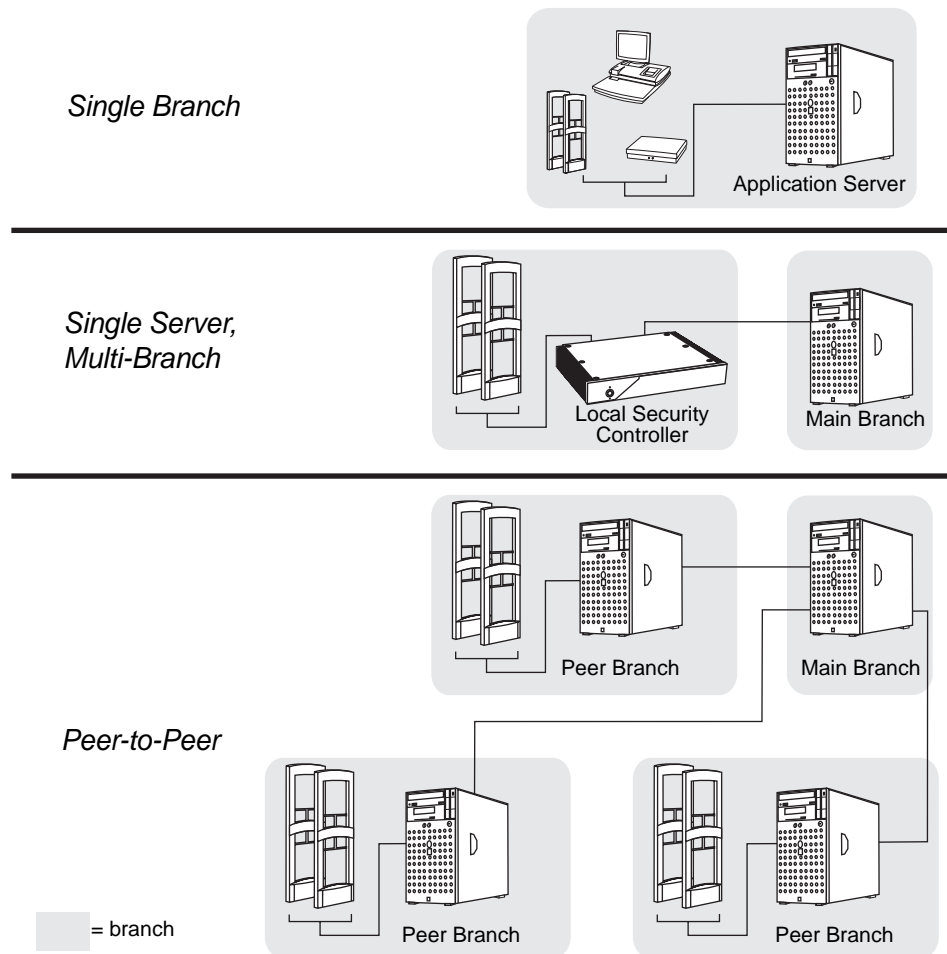


Figure 1.2 Library Network Topologies Supported by ILS Version 2.5

## Single Branch

The Single Branch scenario represents the current implementation of ILS, where one Application Server controls all of the components within a single branch library.

## Single Server, Multi-Branch Architecture

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New with this release, ILS Version 2.6 enables a single server to manage the circulation of not only its only branch but multiple remote branches as well, granting the administrator greater power and ease to manage the entire system. In this scenario, Local Security Controllers are used to assist the Application Server.

The Local Security Controller (LSC) is a combination hardware and software solution for a multi-branch ILS deployment. The LSC assists the Intelligent Library Controller in maintaining the response speed of Exit Interrogators, managing the connection between the Exit Interrogators at the branch and the remote Application Server to provide maximum caching performance. The LSC also enables the intelligent sensors to operate (with limitations) if the main server is down. This scenario is normally used with libraries containing up to 20 branches.

## Peer-to-Peer Communication

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New with this release is the ability to run a library's security and inventory management system from any ILS Server. This enables a granular redundant system that is crash resistant because each node can run the entire system, as well as, holding a complete copy of the checkout cache database at any time.

The main Application Server communicates to each node (peer server) the latest circulation database in a configurable matter of time (from seconds to hours or even daily); meaning circulation records are nearly always up to date. This means that exit gates (intelligent sensors) are updated throughout the day at every branch. This allows a patron to walk to another branch (for example on a college campus) and their library material will respond with the correct check-in or checkout status. This scenario is normally used for libraries containing more than 20 branches.

# Document Overview

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This manual provides a general overview of the ILS technology and illustrates the use and operation of each component.

This manual has been designed for the librarian and administrator and contains all the information necessary to take full advantage of the system capabilities. The Intelligent Library System enhances your library experience because of the system's inherent ease of use and efficiency.

This manual is organized into chapters, with each chapter describing a system peripheral, such as the Self-Checkout Station. Each peripheral is designed with a specific system role in mind. For example, patrons typically use the Self-Checkout Station, while Library staff use the Portable Reader. Read the sections that apply to your role for ILS system operation.

This manual is divided into the following chapters that cover system peripherals and important ILS tasks.

- Introduction (See [page 1-1](#))
- Application Server (See [page 2-1](#))
- Self-Checkout Station (See [page 3-1](#))
- Portable Reader (See [page 4-1](#))
- ILS Remote Monitor (See [page 5-1](#))
- CheckVIEW (See [page 7-1](#))
- Exception Ticket Printer (See [page 6-1](#))
- CheckPASS (See [page 11-1](#))
- Tagging procedures (See [page 9-1](#))
- Troubleshooting Guide (See [page 12-1](#))
- System Maintenance Guide (See [page 13-1](#))

## Intended Audience

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This document is intended for library staff and administrators as well as Checkpoint Systems field service staff. The library staff includes librarians, support staff, and temporary staff. The Field Service staff is comprised of the Checkpoint installers and technical support personnel. These audiences need to understand the basic functions, operations, and procedures related to the ILS.

## Related Documentation

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The following documents provide additional ILS and related information.

- Release Notes
- Circulation Circuit Programming Station User Manual

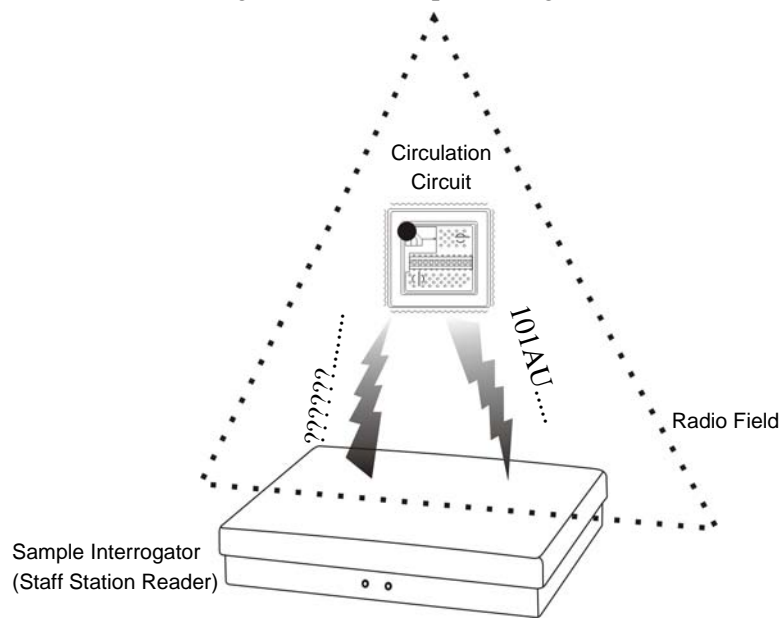
# System Overview

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The following sections describe how the Intelligent Library System interacts with a library's circulation system to maintain its collection.

## How RF Query Circuits

The Intelligent Library components - Self-Checkout Station, Intelligent Sensor, Staff Station Reader, and Portable Reader - all use a Radio Frequency (RF) antenna and transceiver system (interrogator) which detects and reads the Intelligent Circulation Circuits. Communications occur when an interrogator's radio field is triggered by a circuit passing through it. When energized, the circuit presents the programmed item-specific information to the interrogator for further processing.



**Figure 1.3** Circulation Circuit Interrogated

The data, routed by the Intelligent Library Controller, is compared to the Library Management System (LMS) database, in order to identify the checkout status of an item.

## How ILS Maintains the Library's Collection Database

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The Intelligent Library Controller is the communications gateway between the ILS subsystems and the library's Library Management System (LMS) so that the check-in, self-checkout, inventory management, and security activities can all be accomplished.

All library materials including books, CD/DVD materials, videotapes, and cassettes are tagged with a permanent RFID Circulation Circuit™ (inventory tag). This tag contains information that uniquely identifies the item within the library circulation database. Patron cards identify patrons when the card is scanned at the Self-Checkout Station. The card stores coded information unique to the individual patron that identifies the user to the Library Management System. The patron can then be validated as eligible or ineligible to use the library checkout privilege.



## **Patron Checkout and Check-In**

Patrons use Self-Checkout Stations to checkout library materials. Self-Checkout Stations include a patron card reader, an RFID Circulation Circuit interrogator, a touch screen monitor, and a printer in one compact unit. This provides the patron with library transaction capability without any librarian assistance. A patron scans the RFID Patron Card and library materials, identifying the patron and linking the library materials to the individual through a communications session with the Library Management System via the Intelligent Library Controller.

When the patron checks out materials, the patron and checked out item information is stored in both the LMS and ILS databases, allowing ILS to operate in both on- and off-line modes. When materials are checked out from a Self-Checkout Station, the ILS asks the patron to checkout items from the LMS. If privileges are granted then a checkout request to the LMS is generated for each item.

If the patron is checking in library materials, the ILS makes a check-in request to the LMS, which updates its database and reports the result back to the ILS.

## **Staff Checkout and Check-In**

The library staff typically uses a Staff Station Reader in situations where a patron needs help from a librarian or when a librarian is checking in or checking out library materials. The Staff Station Reader interrogates tags and functions the same as current bar code scanners used in Library Management Systems.

## **Book Return Check-In**

The Staff Station Reader can also be integrated into a book return slot. When library materials are placed in the book return, the tags on the items are read and sent to the LMS. The LMS then updates its database and passes back the transaction status to the ILS.

## Checkout Process

Diagrammed here is how library materials are checked out.



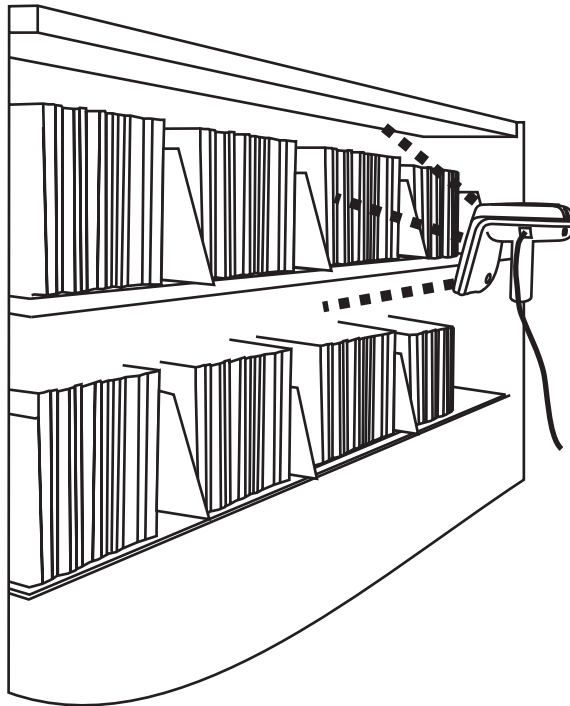
**Figure 1.4** Check Out Flow

- 1** The Circulation Circuit, encoded with the necessary information, is wirelessly read by either the Self-Checkout Station or the Staff Station Reader.
- 2** The Station or Reader communicates with the Intelligent Library Controller which, after successful verification, communicates back to the Station or Reader that the book is checked out.
- 3** When exiting the library, the book passes through the Intelligent Sensors which verifies the status of the book and allows it to exit the library without triggering an alarm.

## Inventory Collection

You can use the Portable Reader to inventory the library's contents or to find individual items. The unit is a battery powered hand-held device that interrogates RFID Circulation Circuits as you walk by tagged items, when the unit detection head is within a ten-inch (25 cm) radius.

The Portable Reader searches for specified items using its search function. Single or multiple item IDs can be uploaded to the data terminal and when a scanned ID matches, the user receives an audible alert and the ID is displayed on the data terminal.



**Figure 1.5** Portable Reader Taking Inventory

The Item Identifiers on the tagged articles are read and stored in a Portable Data Terminal which can be downloaded in real-time to the Intelligent Library Controller using the wireless data-terminal option or downloaded after the inventory is completed as a batch file using the standard data terminal. The inventory data is then communicated to the Library Management System, which compares the information from the Portable Reader to item information in the circulation database.

## Exit Monitoring

The Intelligent Sensor protects exit/entry aisles against unchecked library materials leaving the secured area by determining whether tagged items have checked (authorized/no alarm) or unchecked (unauthorized/alarm) events.

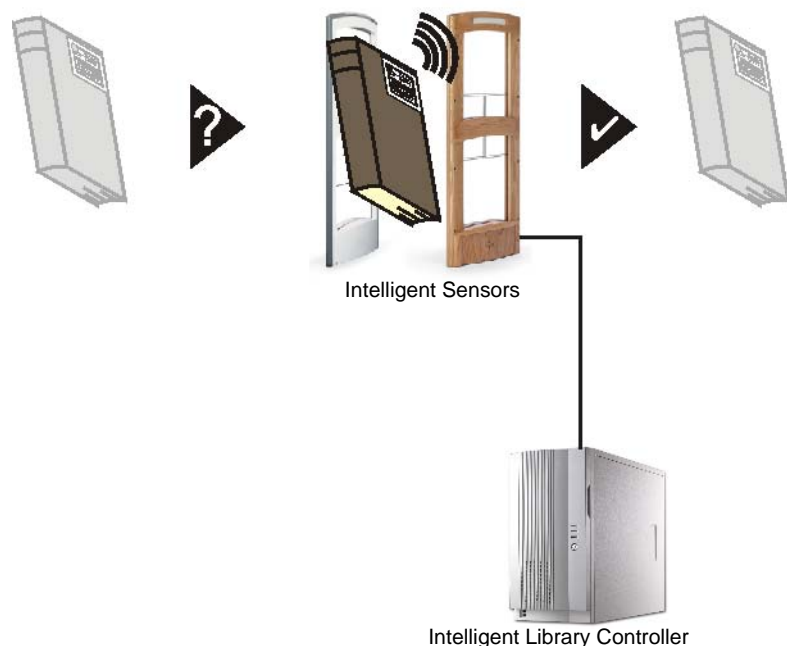


Figure 1.6 Exit Monitoring

## Programming Circuits

The optional Circulation Circuit Programming Station allows libraries to read and create their own RFID Circulation Circuit tags and print barcode labels. This can also be used to convert library materials with barcodes to RFID tags programmed with the barcode value. A tag format file (created by Checkpoint field service staff using the Tag Designer software) is used to program the tags in a compatible format. Tags are programmed by passing them over the Circulation Circuit Programming Station. See [“Circulation Circuit Interrogated”](#) on page 1-6 for an illustration of this process.

## Off-line Processing

The Off-line Processing feature enables the Intelligent Library Controller and Self-Checkout Stations to continue operating when disconnected from the library’s circulation system. While the circulation system is offline, the Intelligent Library Controller records significant events on the system, which are then reported to the circulation server when synchronization reoccurs. For example, at the time of synchronization, the due date is sent to the circulation server.

When Off-line Processing is turned on, the word ON appears next to Off-line Processing. The feature is turned on or off by Checkpoint field service personnel by setting a table parameter on the Intelligent Library Controller. If using the Bridge Interface ([“ILS Without an LMS Connection”](#)), Off-line Processing should never be turned on.

## ILS Without an LMS Connection

It is possible for ILS to operate without an active Library Management System (LMS) interconnection using the ILS Bridge Interface feature. The Bridge Interface feature allows libraries with non-supported circulation vendors or no circulation systems to use the security and Staff Station Reader functionality of the ILS.

With the Bridge Interface, the user of the ILS Control program monitors and changes the operation mode (check-in or checkout) of the Staff Station Readers. A library that is using the Bridge Interface can use a Staff Station Reader for checkout, but cannot use a Self-Checkout Station.

## Components

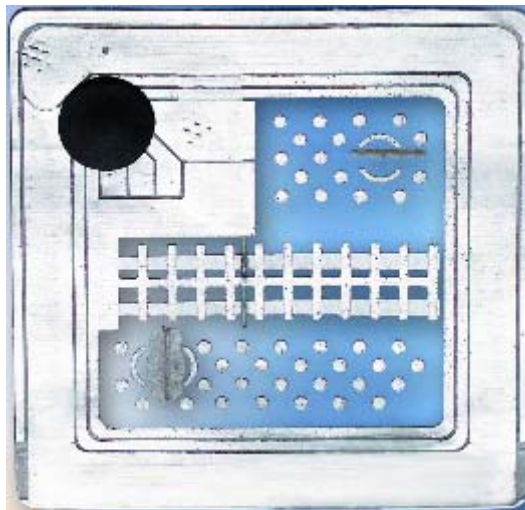
---

The following sections describe in detail each of the ILS system components.

### Intelligent Circulation Circuit

---

The Intelligent Circulation Circuit is an advanced RFID integrated circuit bonded to a label which is then attached to library material.



**Figure 1.7** Intelligent Circulation Circuit

The circuit stores 96 programmable bits of information about an item that can be read on a single Radio Frequency, 13.56 MHz, up to a distance of 4 feet (1.2 m). The circuit allows for the reading of multiple circuits using an anticollision algorithm, as well as error detection and correction methods.

## ILS Intelligent Sensor

---

The ILS Intelligent Sensor (exit gates) provides security at library exits and corrals by generating a radio field that gathers circuit information from a distance up to 24 inches (61 cm). Two intelligent sensors form a secure aisle up to 48 inches (122 cm) wide for circuit detection range. Additionally, the sensor communicates back to the Library Management System via the Intelligent Library Controller in real-time, determining whether an item has been checked out. If items in the interrogation field are not properly checked out, an alarm sounds and the book title appears on an exit alarm screen.

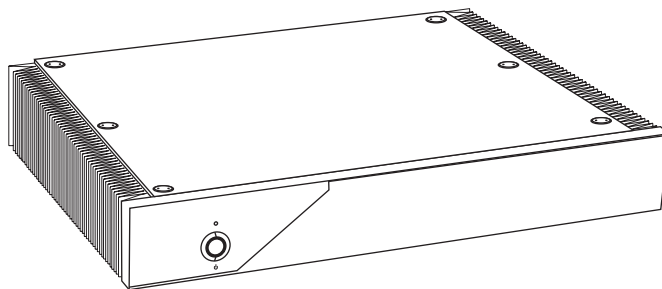


**Figure 1.8** ILS Intelligent Sensors

## Local Security Controller

---

The Local Security Controller (LSC) is a combination hardware and software solution for a single server, multi-branch ILS deployment. The LSC assists the Intelligent Library Controller in maintaining the response speed of Intelligent Sensors (exit gates), managing the connection between the Exit Interrogators at the branch and the remote Application Server to provide maximum caching performance. The LSC also enables the exit gates to operate (with limitations) if the main server is down. This scenario is normally used with libraries containing up to 20 branches.



**Figure 1.9** Local Security Controller

## Staff Station Reader

---

The Staff Station Reader functions as an interface to ILS and circulation activities for library personnel. The Staff Station Reader reads RFID Circulation Circuits (tags) when a book is placed on the reader at up to 12 inches (30 cm) from the reader in a vertical direction. The Staff Station Reader communicates through data links with both the Library Management System and ILS, providing library staff the ability to perform typical functions with both the library system and RFID tagged items. For example, library staff can find the status of RFID tagged items that have been processed by ILS.



Figure 1.10 ILS Staff Station Reader

## Patron Self-Checkout Station II

---

The Self-Checkout Station enables a library patron to checkout library materials without the assistance of the library staff. The system may report messages if there is a problem conducting the checkout transaction; for example, overdue fines have locked the patron's account.



Figure 1.11 ILS Self-Checkout Station

The Self-Checkout Station supports multiple languages simultaneously. When programmed, a language selection screen is presented to the patron to select a language for the self-checkout transaction.

A typical scenario for a patron to check out a book is as follows.

- 1 A patron arrives at the Self-Checkout Station and selects a language (if using multiple languages).
- 2 The patron is identified by the system with their patron ID card.
- 3 The system confirms the patron's eligibility to conduct a transaction through validation of the patron ID card.
- 4 The patron is led through the transaction process by communication with the system through a touch screen monitor. The patron checks out items by passing them one at a time over a short-range wireless interrogator that is located in the Self-Checkout Station.
  - a The short-range interrogator generates a radio field, which activates and interrogates the tagged item.
  - b The interrogated item ID is passed to the Intelligent Library Controller.
  - c The Intelligent Library Controller determines the item status and actions that can be taken via communications with the Library Management System.
  - d The Intelligent Library Controller updates the Self-Checkout Station, which notifies the patron about their transaction status.
- 5 After the patron scans all the items to be checked out, the patron touches **Done** and receives a receipt for the transaction, listing all materials checked out and the respective due dates.

## Portable Reader

---

The Portable Reader provides inventory management functions, such as inventory reconciliation and item search. The device consists of a hand-held, rechargeable battery operated wand that generates a radio field that scans RFID tagged items. The wand is attached with cabling to a data terminal, which can be carried in one hand or strapped onto the wrist, storing information read by the wand. The data stored in the terminal can be downloaded to the Intelligent Library Controller in real-time either with the standard data terminal or wirelessly.



The wand can also be used for item searches and shelf order checking. Item information is uploaded to the data terminal, allowing you to scan the ID. Once found, an audible alert sounds and the ID displays.



Figure 1.12 ILS Portable Reader

## Intelligent Library Controller

---

The Intelligent Library Controller software:

- Functions as the communications gateway between the Intelligent Library subsystems and the Library Management System
- Identifies and configures all peripheral Intelligent Library sub-systems
- Tracks and directs all ILS transactions

The Intelligent Library Controller operates whether the Library Management System is on-line or off-line. In off-line mode, the server tracks whether an item is being checked out, checked in, and determines whether tagged items going through secured areas are authorized. If unauthorized items are detected by the system, the server signals the Intelligent Sensor (the gates) to alarm. Any transactions that occur independent of the Library Management System are updated when the ILS system comes back on-line.

The Intelligent Library Controller interfaces to the Library Management System and other subsystem components using the 3M<sup>®</sup> protocol (SIP2) over an Ethernet Network Interface Card (NIC). The Ethernet NIC uses the TCP/IP protocol and session and the physical cable is 10BaseT.

## Exception Ticket Printer

---

New in ILS Version 2.6 is the option to automatically print a hold receipt for library material at designated book drops. This means that when library material is returned via a book drop, if the library material is designated with a hold, a printer automatically prints a receipt. This frees library staff from having to manually check-in each item for its hold status. Instead, a staff member just checks the print receipt and then secures the receipt with the item on hold.

One exception ticket printer can service multiple interrogators. This means that a receipt might print at the exception ticket printer near Drop Box A for a book that is returned at Drop Box B.

## **CheckVIEW**

---

New in Version 2.6 is the CheckVIEW utility, enabling library staff to remotely monitor up to four different Self-Checkout Stations at one time from any computer within the library. This enables library staff to manage issues such as:

- Patrons who are having difficulty using the touch screen
- Stations that may have hardware or system problems
- Viewing the patrons' check out list to reconcile any discrepancies concerning availability

Staff members can use their mouse and keyboard to assist patrons by assuming control of a specific Self-Checkout Station window to step a patron through a checkout procedure.

## **ILS Remote Monitor**

---

New in Version 2.6, ILS Remote Monitor is an optional utility that allows library staff operating in a single server, multi-branch or peer-to-peer environment to view the status of other branches on the network from any computer on that network. This enables a staff member to monitor system status, identify a troublesome Self-Checkout Station, print a pre-run report, or transfer files.

The ILS Remote Monitor works on any computer (with a web browser) that is connected to the library network.

## **Circulation Circuit Programming Station**

---

The optional Circulation Circuit Programming Station programs Circulation Circuits, either with the retrospective item identifier from the existing barcode or when new materials are added to the collection. This reduces the time it takes to convert a library collection from barcode to RFID Circulation Circuits as well as add additional materials.

The Circulation Circuit Programming Station enables the library to easily link new materials into ILS instead of waiting several weeks for pre-programmed tags. In addition, the Circulation Circuit Programming Station can be integrated into an optional portable

workstation that allows the library staff to program Circulation Circuits while moving around the library.



**Figure 1.13** Circulation Circuit Programmer

When adding a new item to the collection and programming the Circulation Circuit, the library can also print a barcode label. In many cases, libraries will continue to support the use of barcodes in addition to the RFID inventory Circulation Circuits, mainly for compatibility with other branch libraries still using barcodes.

Using the Circulation Circuit Programming Station software application, libraries program the Circulation Circuits by passing them over the tag programming surface. After programming the Circulation Circuit, the application automatically reads, verifies, and displays the data that was written to the Circulation Circuit. Refer to [“Affixing Circulation Circuits” on page 9-1](#) for instructions on how to attach circuits to library materials.

There is separate Circulation Circuit Programmer User Guide available that describes the usage of this product.

## CheckPASS

---

CheckPASS is an optional utility (new in Version 2.6) that allows library patrons to pay library fees at a Self-Checkout Station, without staff assistance. Outside of the ILS product, patrons use a self-service unit to add cash to their account balances. Within ILS, patrons are reminded of outstanding library fees when they attempt to check out materials. They can then pay with the touch of a button at the Self-Checkout Station. Patrons save time and library staff is freed to perform other tasks.

See [“CheckPASS” on page 11-1](#) for further information.

## Notes

## APPLICATION SERVER

The Application Server hardware hosts the Intelligent Library Controller software, which is the core-processing component of the Intelligent Library System. The Intelligent Library Controller performs many functions, including:

- Storing transactions performed at the Self-Checkout Stations
- Downloading inventory data from the ILS Portable Reader
- Generating reports
- Connecting to the Library Management System (LMS)

In addition, the Intelligent Library Controller provides a single station for system configuration and diagnostics. If the LMS becomes unavailable, the Intelligent Library Controller can support automated checkout functions without the LMS, using a feature known as Off-Line Processing. Off-Line Processing is a site-specific option, so it may not be available to you.

This chapter describes the Application Server and its components and how they operate within the ILS. It also provides information on:

- Checking system, host, interrogator, and exit alarm status ([page 2-2](#))
- Scheduling Checkout Cache Synchronization and Host Reconnections ([page 2-6](#))
- Synchronizing the Checkout Cache ([page 2-8](#))
- Downloading inventory information from the Portable Reader ([page 2-10](#))
- Generating, saving, and printing reports, including Checkout Discrepancy, Patron Discrepancy, Exit Alarm, Check-In Exception, and Generic reports ([page 2-11](#))
- Communicating and coordinating data exchange with Local Security Controllers at remote branches ([page 2-25](#))
- Working in Bridge Mode ([page 2-25](#))

# Check System Status

The Intelligent Library Controller provides current information on the status of the ILS system and ILS Portable Reader. You also use it to generate reports.

The four main sections of the Intelligent Library Controller window include:

- Self-Checkout Station Status (page 2-2)
- Host Status (page 2-4)
- Interrogator Status (page 2-4)
- Exit Alarms (page 2-6)

With the exception of the Interrogator Status section, these sections can be displayed or hidden from view.

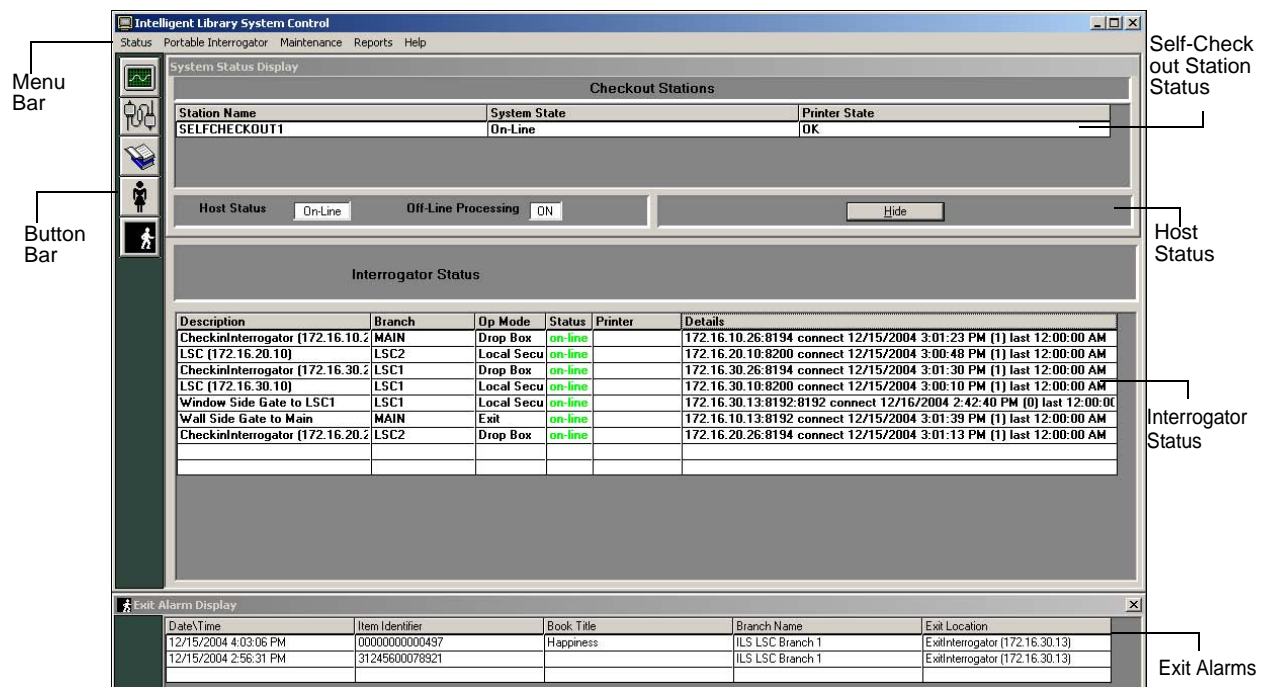


Figure 2.1 Intelligent Library Controller window

You navigate using the menu bar or the button bar. The button bar provides shortcut buttons to the most commonly-used features. Use the Hide button to hide or show individual areas of the window.

## Self-Checkout Station Status

The Self-Checkout Station Status section displays information about the operational state of the Self-Checkout Stations, including:

- **Station Name**  
Displays the name of each Self-Checkout Station.

- **System State**  
Identifies whether or not the Self-Checkout Station is connected (on-line) or not connected (off-line) to the LMS.
- **Printer State**  
Displays messages about the printer, including: OK, out of paper, I/O error, and so on. These messages are generated by Windows.

Checkout Stations		
Station Name	System State	Printer State
SELFCHECK1	On-Line	OK

Figure 2.2 System Status Section

To display the System Status Section:

- ▶ Click **System Status** in the button bar. See [Figure 2.3](#).

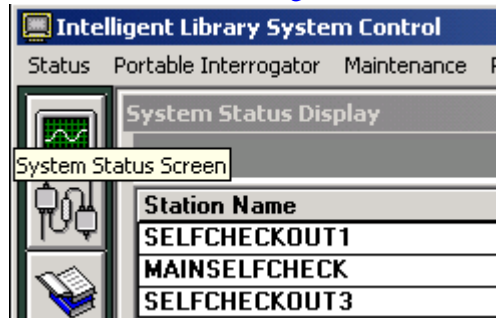


Figure 2.3 System Status Button

OR

- ▶ Select **Status > System Status Display** in the menu bar. See [Figure 2.4](#).

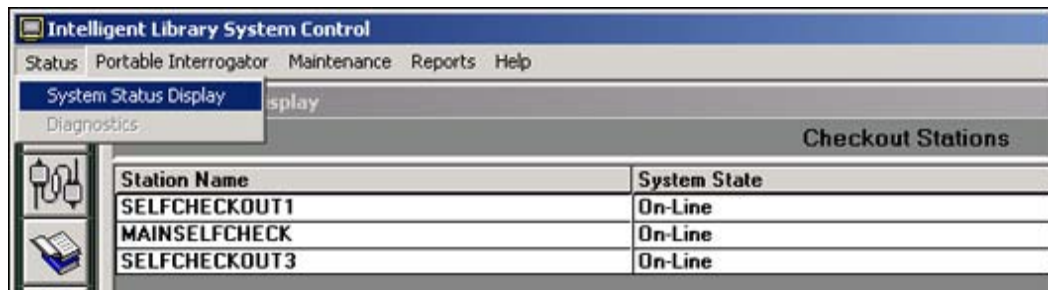


Figure 2.4 System Status Menu Selection

## Host Status

The Host Status section notifies you if the host (Library Management System) is on-line or off-line and whether or not Off-Line Processing is enabled.



Figure 2.5 Host Status Area

The Off-Line Processing feature allows a library to configure the Intelligent Library Controller and Self-Checkout Stations so they can continue to operate while the LMS is off-line. While the LMS is off-line, the Intelligent Library Controller records significant events (such as check-ins and checkouts) and reports them to the LMS later, during cache synchronization.

Off-Line Processing must be enabled on an Application Server that uses the Bridge Interface. The Bridge Interface allows libraries with non-supported circulation vendors, or no LMS at all, to use the ILS security and Staff Station reader features. See [“Working with the Bridge Interface” on page 2-25](#) for more information.

This feature is optional and may or may not be enabled (allowed) at your site.

- If Off-Line Processing is enabled, the Off-Line Processing status is ON.
- If Off-Line Processing is disabled, the Off-Line Processing status is OFF.

## Interrogator Status

The Interrogator Status section shows information about interrogators (Self-Checkout Stations, Staff Station Readers, and Intelligent Sensor exit gates), including:

Interrogator Status					
Description	Branch	Op Mode	Status	Printer	Details
CheckinInterrogator [172.16.10.2]	LSC	Drop Box	on-line		172.16.10.26:8194 connect 11/3/2004 3:20:37 PM (1) last 12:00:00 AM
LSC [172.16.10.20]	LSC	Local Secu	on-line		172.16.10.20:8200 connect 11/3/2004 3:20:44 PM (1) last 12:00:00 AM
LSC 2 Gate	LSC	Local Secu	on-line		LSC 2 Gate:8192 connect 11/3/2004 4:26:47 PM (0) last 12:00:00 AM
Tag Pad [172.16.10.15]	MAIN	Tag Pad	on-line		172.16.10.15:8196 connect 11/3/2004 3:20:40 PM (1) last 12:00:00 AM
CheckinInterrogator [172.16.10.1]	MAIN	Drop Box	on-line	DropBox	172.16.10.16:8194 connect 11/3/2004 3:20:45 PM (1) last 12:00:00 AM
A ExitInterrogator [172.16.10.13]	MAIN	Exit	on-line		172.16.10.13:8192 connect 11/3/2004 3:20:46 PM (1) last 12:00:00 AM

Figure 2.6 Interrogator Status Section

- **Description**  
The IP address, port number, and the location of the interrogator.
- **Branch**  
The library branch at which the interrogator resides.
- **Op Mode**  
Used in bridge mode to denote the function of the interrogator, including Check In, Checkout, Drop Box, or Exit. If your site does not use the Bridge Interface, the Op Mode denotes the function of the interrogator, including Drop Box, Exit, or Tag Pad.



- **Status**  
Operational status of the interrogator (on-line or off-line).
- **Details**  
Shows a history of connections for each interrogator, including IP address, port number, whether the connection was a connect or disconnect, connection date, and connection time. The number in parentheses (#) shows how many reconnections were attempted. (A high number of attempts may indicate network problems.)

This section cannot be hidden from view.

## Edit Interrogator

To view or edit the information for an individual interrogator:

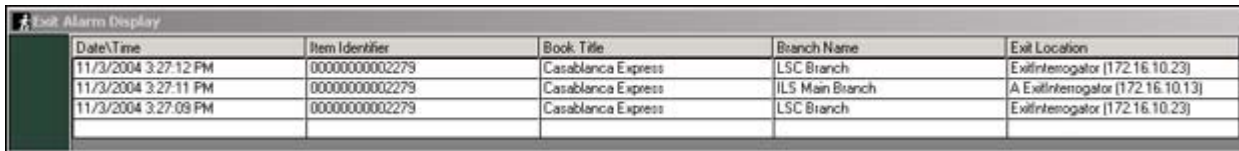
- 1 In the Intelligent Library System Control window, select **Maintenance > Edit Interrogators**.
- 2 Type the **ILS username** and **password** in the ILS Login window. The default username is **ils** and the default password is **maint**. The Edit Interrogator window displays:

**Figure 2.7** Edit Interrogator Window

- 3 If necessary, use the drop-down list boxes to select the desired **Interrogator (desc.)** and **Branch** (Figure 2.7). In the example above, SELFCHECKOUT1 will be assigned to the Main branch.
- 4 Make the desired modifications, and click **Save**. For example, you can change the description of the component in the Description drop-down menu by typing over the existing description. Click **Cancel** to clear any changes you do not wish to save.
- 5 **Close** the Edit Interrogator window by clicking the **X**.

## Exit Alarms

The Exit Alarms section displays information about each exit alarm that has occurred, including:



Date\Time	Item Identifier	Book Title	Branch Name	Exit Location
11/3/2004 3:27:12 PM	0000000002279	Casablanca Express	LSC Branch	ExitInterrogator (172.16.10.23)
11/3/2004 3:27:11 PM	0000000002279	Casablanca Express	ILS Main Branch	A ExitInterrogator (172.16.10.13)
11/3/2004 3:27:09 PM	0000000002279	Casablanca Express	LSC Branch	ExitInterrogator (172.16.10.23)

Figure 2.8 Exit Alarms Section

- Date and time of exception
- Item identifier
- Book Title of the exception
- Branch at which the exception occurred
- Exit location is the exit gate at which the exception occurred

## Scheduling Checkout Cache Synchronization and Host Reconnections

Use Task Scheduler to schedule Checkout Cache Synchronization and Host Reconnections to execute automatically at the desired time. It is recommended that they occur once each day, during non-circulation hours.

For an explanation of Checkout Cache Synchronization, see [“Synchronizing the Checkout Cache” on page 2-8](#). You should schedule this task to occur once each day.

Host reconnection refers to re-establishing the Application Server’s connection with the Library Management System. Various tasks that the LMS performs (such as backup) can cause it to close its connection to the Application Server. You should schedule the reconnection to happen after the LMS performs these types of tasks.

To display the Task Scheduler and schedule the tasks:

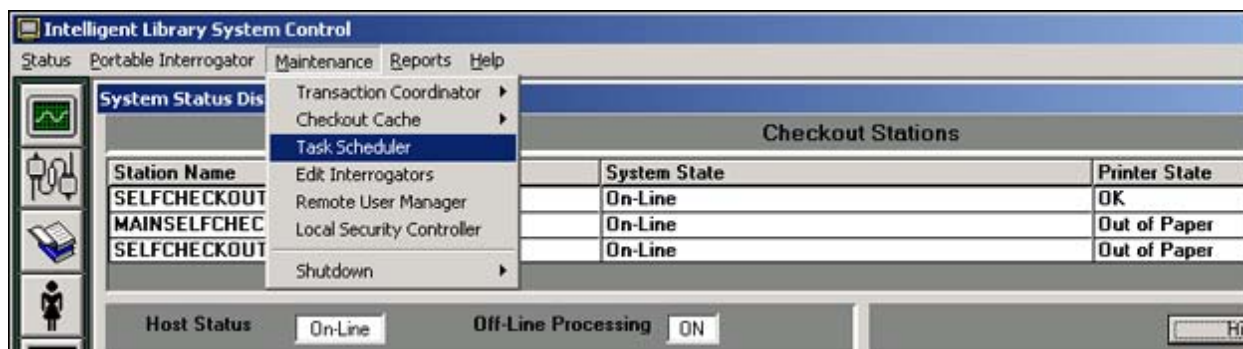
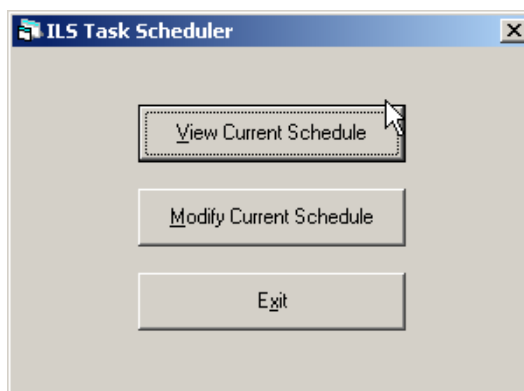


Figure 2.9 Task Scheduler Navigation

- 1 Select **Maintenance > Task Scheduler**.



**Figure 2.10** Task Scheduler Menu

- 2 In the ILS Task Scheduler window, click **View Current Schedule** or **Modify Current Schedule**, depending on which task you want to perform. View Current Schedule does not allow you to change the schedule.
- 3 Type the **ILS username** and **password** in the ILS Login window. The default username is **ils** and the default password is **maint**.
- 4 Click **OK** to log in to the Task Scheduler. The Task Scheduler window displays:



**Figure 2.11** Task Scheduler dialog box (Modify)

- 5 In the ILS Task Scheduler dialog box, enter the following information:
  - a Type a **Task ID** number. Valid Task ID numbers are:
    - 3200 = Checkout Cache Synchronization
    - 3201 = Host Reconnect
    - 3401 = Transaction Purge (marks for deletion records older than 14 days in Transaction database)
    - 3402 = Transaction Compact (deletes marked records in Transaction database)

- b Click the **Disable Task** checkbox to override the scheduled time that the task should run. The task will not run until you clear the checkbox.
- c Enter a **name** for the task.
- d Select whether the task should be run **Weekly/Daily** or **Monthly**.  
If you select Monthly, enter the day of the month on which the task should run.
- e For each day of the week that you want the task to run, enter a **time** to start the task.  
If you do not want the task to run on a particular day, leave that day's time field empty or clear it, as needed.



Note Be sure to schedule Checkout Cache Synchronization to occur soon after the checkout cache file is transferred from the LMS to the Application Server by the library staff.

You can scroll to different tasks using the arrows at the bottom of the window.

- f To save your changes, click **Save**, then click **Close** at the bottom of the dialog box.  
To ignore changes, click **Cancel**.

## Synchronizing the Checkout Cache

Under normal conditions, you schedule the Checkout Cache to synchronize automatically. However, Field Service personnel may ask you to perform this task manually or they may perform the task themselves.

Checkout cache synchronization works as follows:

- 1 Each night, the library staff generates a list of item identifiers of checked-out material from the LMS. The library staff transfers this checkout cache file to the C:\inetpub\ftproot directory on the Application Server.
- 2 Checkout Cache Synchronization should be scheduled to occur after the checkout cache file is transferred to the Application Server.
- 3 When the Checkout Cache synchronizes, the Application Server deletes its own, older version of the checkout cache file, and uses the newly transferred file as its new checkout cache file.

To manually synchronize the Checkout Cache:

- 1 If have not already done, transfer the latest checkout cache file from the LMS to the Application Server.

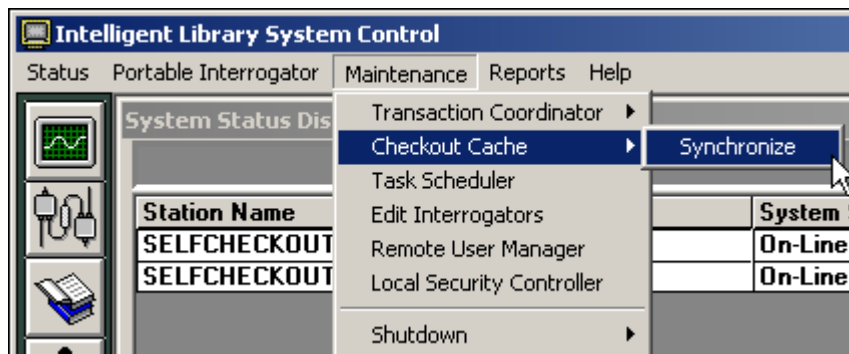
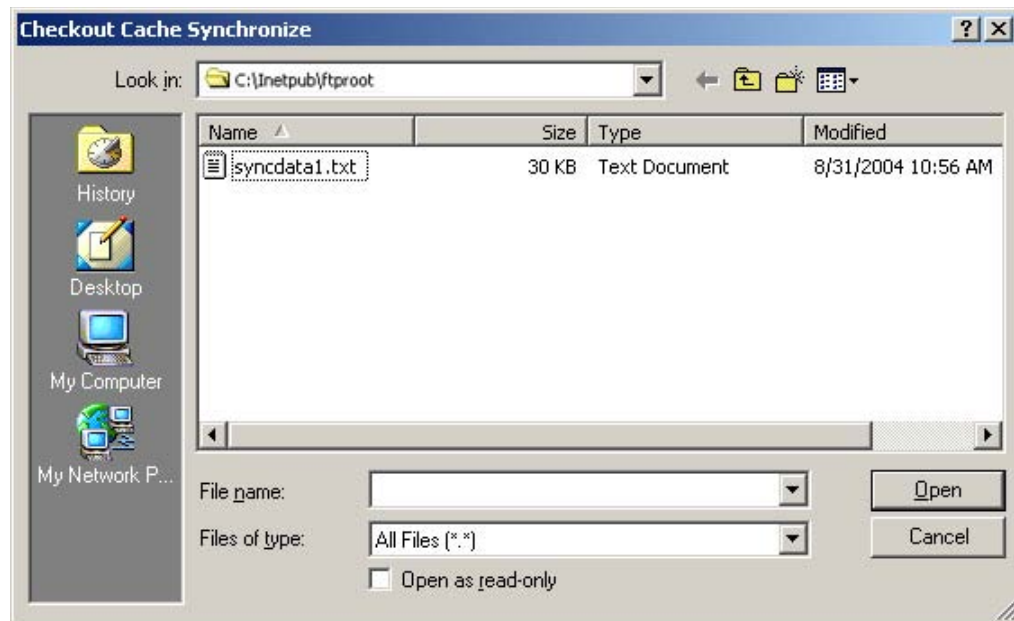


Figure 2.12 Synchronize Checkout Cache

- 2 From the menu, select **Maintenance > Checkout Cache > Synchronize**.

- 3 Type a **user name** and **password** in the ILS Login dialog box and click **OK**. The default username is **ils** and the default password is **maint**. The Checkout Cache Synchronize window displays.



**Figure 2.13** Checkout Cache file location

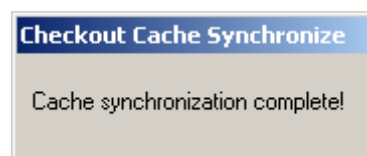
- 4 In the Checkout Cache Synchronize window, navigate to and select the checkout cache file (the one that was downloaded from the LMS), usually located at c:\InetPub\FTPROOT. The name of the file is customizable for each library.
- 5 Click **Open** to start the synchronization.

When Checkout Synchronization begins, a “cache synchronization in progress” message displays.



**Figure 2.14** Cache synchronization in progress message

A message displays when the process is successfully completed.



**Figure 2.15** Cache synchronization complete message

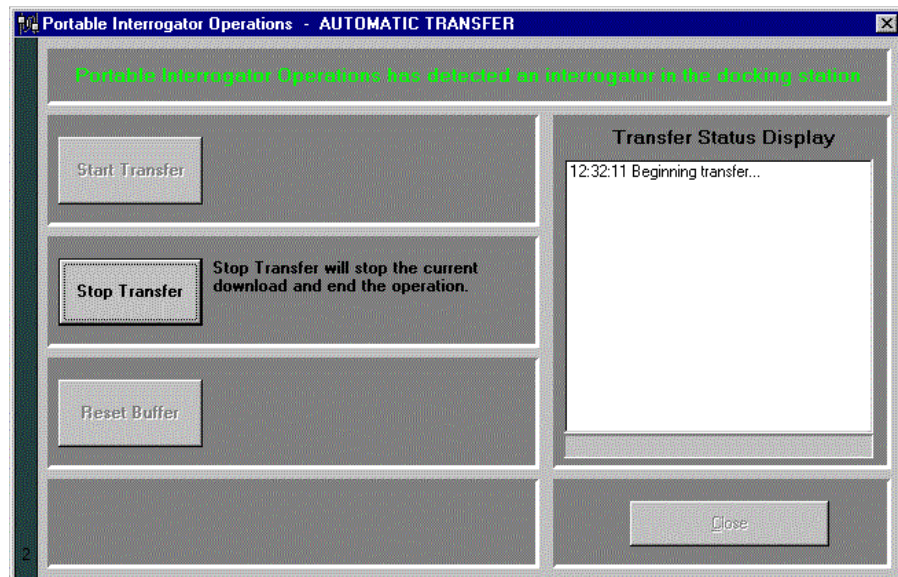
## Downloading Inventory from the Portable Reader

---

Downloading inventory information is a two-step process. First, you download the information from the Portable Reader to the Intelligent Library Controller. Then the Intelligent Library Controller converts the information to the inventory file format used by the LMS and copies it to a directory from which the LMS accesses it (using FTP).

To download inventory information from the Portable Reader to the Intelligent Library Controller:

- 1 Dock the Portable Data Terminal in its docking station. Inventory transfer begins immediately.



**Figure 2.16** Portable Reader Operations Screen - Automatic Transfer

- 2 Once complete, click **Close** to close the window. The inventory file is now ready to be uploaded by the LMS.

# Generating Reports

---

This section describes the ILS reports provided by the Intelligent Library Controller and gives instructions for generating them. Available reports include:

- **Checkout Discrepancy Report**  
Use this report only if your site allows off-line processing. This report lists off-line checkout events that were rejected by the LMS after it returned to on-line processing. See [“Checkout Discrepancy Report” on page 2-14](#).
- **Patron Discrepancy Report**  
Use this report only if your site allows off-line processing. This report lists off-line patron status events that were rejected by the LMS after it returned to on-line processing. Before you can successfully generate this report, you must use the Offline Synchronize function (see [“Synchronize Offline Transactions” on page 13-3](#)) to move off-line transactions into the transaction database. See [“Patron Discrepancy Report” on page 2-15](#).
- **Generic Reports**  
You specify this report’s parameters to create custom reports. See [“Generic Reports” on page 2-18](#).
- **Exit Alarm Report**  
This report lists items that caused an alarm at specified exits. See [“Exit Alarm Report” on page 2-21](#).
- **Check In Report**  
This report lists items that failed to check in or that require special handling. See [“Check In Report” on page 2-23](#).

After generating a report, you can view or print it. If you generate a report for a specific branch, you can save, view, or print it; or view later from an ILS Remote Monitor at another location. You cannot generate Intelligent Library Controller reports when using ILS Remote Monitor. See [“Using ILS Remote Monitor” on page 5-8](#) for further details.

You can navigate to the most commonly requested reports (Checkout Discrepancy, Patron Discrepancy, and Exit Alarm) by using the buttons on the button bar, as well as the Reports menu.

## Specifying a Time Period for Any Report

You can specify a time period in one of three ways:

- “Choose a Time Period”
- “Use the Calendar”
- “Enter the From and To information” yourself

### Choose a Time Period

- 1 Choose the time period by using the drop-down list labelled Time Period of Interest. Choices include: Today, Yesterday, This Week, Last Week, This Month, Last Month, and All Data.
- 2 Enter a **From** and **To** time, or leave the fields blank to accept the default times:

From = 12:00:00 A.M.

To = 11:59:59 P.M.

**Specific Report: Check In Report**

The transaction table contains information from the last (unknown) days.

**Description**  
This report will provide a list of items that failed to check in, or special handling is required

**Required**

Time Period of Interest: [Dropdown]

	Date	Time
From	[Text]	[Text]
To	[Text]	[Text]

**Optional**

Select the station: [Dropdown: All available]

Branch: [Dropdown: All]

**Generate Report**      **Close**

Figure 2.17 Time Period fields



## Use the Calendar

- 1 Click **From** (or **To**) to display the calendar form.



Figure 2.18 Calendar

- 1 Select the **month** and **year** from the drop-down lists.
- 2 Select the **day** from the calendar table.
- 3 Specify the **time**. Enter the time yourself, or select the time by pressing the up-down arrow buttons at the end of the field. Click **Now** to use the current time.
- 4 Click **OK**.

## Enter the From and To information

- ▶ In the **From** and **To** fields, enter the date and time yourself. Valid date and time formats include:
  - Date: MM/DD/YY or MM/DD/YYYY
  - Time: HH:MM AM or PM

## Checkout Discrepancy Report

Use this report only if your site allows off-line processing. This report lists off-line checkout events that were rejected by the LMS after it returned to on-line processing. Before you can successfully generate this report, you must use the Offline Synchronize function (see [“Synchronize Offline Transactions” on page 13-3](#)) to move off-line transactions into the transaction database.

When the LMS returns on-line, use the Offline Synchronize function (see [“Synchronize Offline Transactions” on page 13-3](#)) to move off-line transactions into the transaction database.

To generate the Checkout Discrepancy Report:

- 1 In the Intelligent Library System Control window, select **Reports > Checkout Discrepancy**, or click the **Checkout Discrepancy Report** button.

**Specific Report: Checkout Discrepancy List**

The transaction database contains data from the last 29 days.

**Description**  
This report will provide a list of check out's that occurred but were later rejected by the host database. These checkouts occurred while the host system was unavailable.

**Required**  
Time Period of Interest: [Dropdown]  
From: [Date] [Time]  
To: [Date] [Time]

**Optional**  
Search for Specific ID Item ID: [Text Box]  
Branch: [All] [Dropdown]

Generate Report Close

Figure 2.19 Checkout Discrepancy List window

- 2 In the Specific Report: Checkout Discrepancy List window, enter the **time period** for which to run the report. See [“Specifying a Time Period for Any Report” on page 2-12](#) for details on the different ways to enter time criteria.
- 3 If desired, enter the **Item ID** of the specific item for which you are searching for which you are searching.
- 4 If desired, restrict the report to a specific branch by selecting that branch in the **Branch** drop-down list box. If selected, you will have the ability to save the report for viewing/printing in ILS Remote Monitor.

5 Click **Generate Report**. The report displays.

Branch	Patron Identifier	Transaction Date	Item Identifier	Title	Station Name	Final Transaction Date	Screen Message
ILS Main Branch	23456789012344	12/1/2004 4:57:05 PM	76543210123443	132CheckinInterrogator	CheckinInterrogator (17:	12/1/2004 4:57:05 PM	132CheckinInterrogator
ILS Main Branch	23456789012344	12/8/2004 4:58:13 PM	76543210123447	232SelfCheck (SELFCH	SelfCheck (SELFCHECK	12/8/2004 4:58:13 PM	232SelfCheck (SELFCH
ILS Main Branch	23456789012344	12/4/2004 4:58:13 PM	76543210123413	232SelfCheck (SELFCH	SelfCheck (SELFCHECK	12/4/2004 4:58:13 PM	232SelfCheck (SELFCH
ILS Main Branch	23456789012344	12/3/2004 4:57:11 PM	76543210123421	232CheckinInterrogator	CheckinInterrogator (17:	12/3/2004 4:57:11 PM	232CheckinInterrogator
ILS Main Branch	23456789012344	12/9/2004 4:58:15 PM	76543210123415	232SelfCheck (SELFCH	SelfCheck (SELFCHECK	12/9/2004 4:58:15 PM	232SelfCheck (SELFCH
ILS Main Branch	23456789012344	12/2/2004 4:57:09 PM	76543210123433	132CheckinInterrogator	CheckinInterrogator (17:	12/2/2004 4:57:09 PM	132CheckinInterrogator
ILS Main Branch	23456789012344	12/4/2004 4:56:35 PM	76543210123435	032SelfCheck (SELFCH	SelfCheck (SELFCHECK	12/4/2004 4:56:35 PM	032SelfCheck (SELFCH
ILS Main Branch	23456789012344	12/8/2004 4:57:08 PM	76543210123443	132CheckinInterrogator	CheckinInterrogator (17:	12/8/2004 4:57:08 PM	132CheckinInterrogator
ILS Main Branch	23456789012344	12/12/2004 4:57:39 PM	87654321012343	032CheckinInterrogator	CheckinInterrogator (17:	12/12/2004 4:57:39 PM	032CheckinInterrogator
ILS Main Branch	23456789012344	12/3/2004 4:57:05 PM	76543210123441	132CheckinInterrogator	CheckinInterrogator (17:	12/3/2004 4:57:05 PM	132CheckinInterrogator
ILS Main Branch	23456789012344	12/12/2004 4:58:18 PM	76543210123447	232SelfCheck (SELFCH	SelfCheck (SELFCHECK	12/12/2004 4:58:18 PM	232SelfCheck (SELFCH
ILS Main Branch	23456789012344	12/2/2004 4:58:36 PM	87654321012345	232Window Side Gate t	Window Side Gate to LS	12/2/2004 4:58:36 PM	232Window Side Gate t

Figure 2.20 Sample Checkout Discrepancy Report

6 Resolve any discrepancies using the Library Management System.

The Checkout Discrepancy Report contains the following fields.

Table 2.1 Checkout Discrepancy Report Field Names and Data Description

Field Name	Possible Field Data	Data Description
Branch	Name of branch	The branch at which the discrepancy occurred.
Patron Identifier	ID Number	The patron ID number in this transaction.
Transaction Date	Date/Time	Date and time of the transaction.
Item Identifier	ID Number	The item number in this transaction.
Title	Book title	Book title.
Station Name	Name of Station	Station where the transaction occurred.
Final Transaction Date	Date/Time	The date and time that an off-line incomplete transaction was synchronized.
Screen Message	Text Message	Message returned from the LMS for this transaction.

## Patron Discrepancy Report

Use this report only if your site allows off-line processing. This report lists off-line patron status events that were rejected by the LMS after it returned to on-line processing. Before you can successfully generate this report, you must use the Offline Synchronize function (see [“Synchronize Offline Transactions” on page 13-3](#)) to move off-line transactions into the transaction database.

To generate the Patron Discrepancy Report:

- 1 When the LMS returns to an on-line state, use the Offline Synchronize function (see [“Synchronize Offline Transactions” on page 13-3](#)) to move off-line transactions into the transaction database.

- In the Intelligent Library System Control window, select **Reports > Patron Status Discrepancy**, or click the **Patron Status Discrepancy Report** button. The Patron Status Discrepancy window displays:

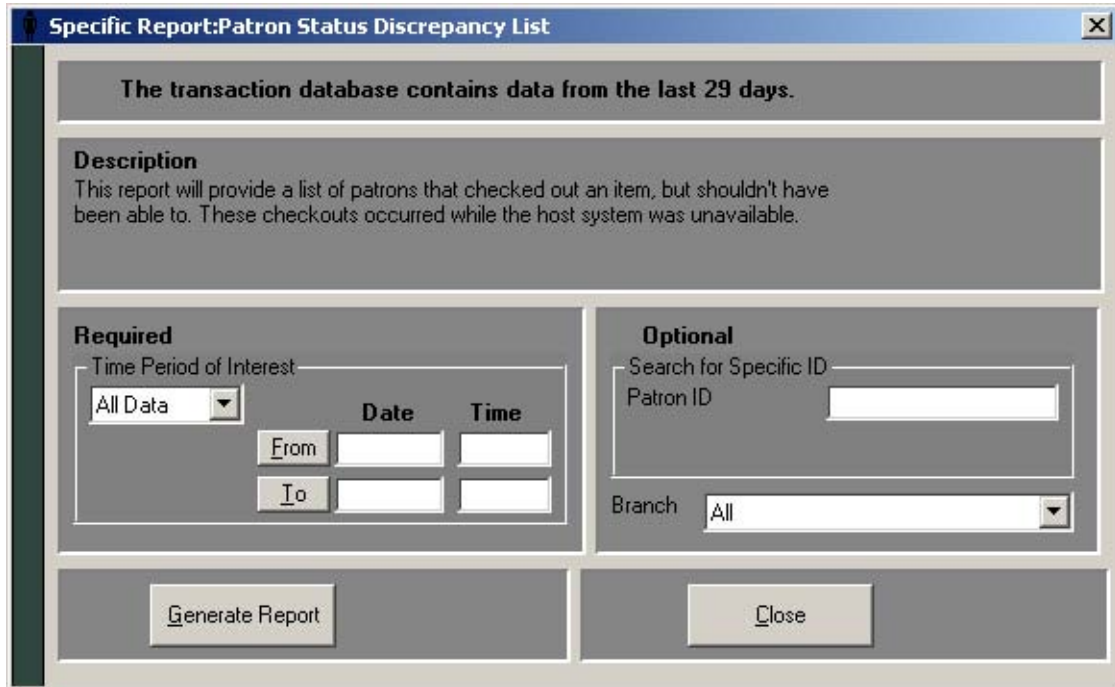


Figure 2.21 Patron Status Discrepancy List window

- In the Specific Report: Patron Discrepancy List window, enter the **time period** for which to run the report. See [“Specifying a Time Period for Any Report”](#) on page 2-12 for details on the different ways to enter time criteria.
- If desired, enter the **Patron ID** for which you are searching.
- If desired, restrict the report to a specific branch by selecting that branch in the **Branch** drop-down list box. If selected, you will have the ability to save the report for viewing/printing in ILS Remote Monitor.
- Click **Generate Report**. The report displays.

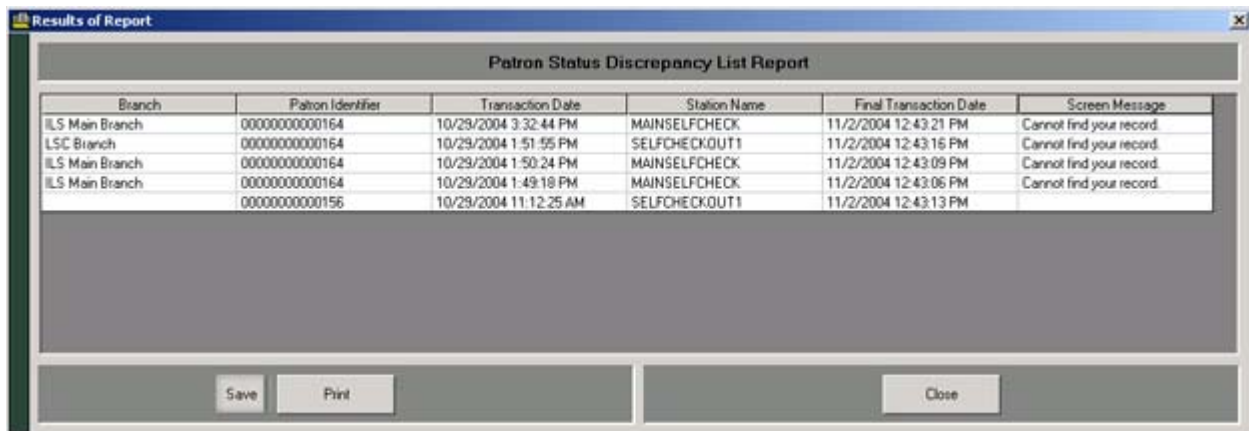


Figure 2.22 Sample Patron Discrepancy Report

**7** Resolve any discrepancies using the Library Management System.

The Patron Discrepancy Report contains the following fields.

**Table 2.2** Patron Discrepancy Report Field Names and Descriptions

<b>Field Name</b>	<b>Possible Field Data</b>	<b>Data Description</b>
Branch	Name of branch	The branch at which the discrepancy occurred.
Patron Identifier	ID Number	The patron ID number in this transaction.
Transaction Date	Date/Time	Date and time of the transaction.
Station Name	Name of Station	Station where the transaction occurred.
Final Transaction Date	Date/Time	The date and time that an off-line incomplete transaction was synchronized.
Screen Message	Text Message	Message returned from the LMS for this transaction.

## Generic Reports

The Intelligent Library Controller stores all activity, such as patron validation, checkout, check-in, and exit alarms, as a transaction. You can generate custom reports from these activities, which list specific transactions and transaction counts.

To generate a Generic Report:

- 1 In the Intelligent Library System Control window, select **Reports > Generic Report**. The Generic Report window displays:

The screenshot shows a window titled "Transaction Coordinator Report Generator". At the top, it states "The transaction table contains information from the last 10 days." Below this is a section for "Report Criteria: Click the down arrow for each category and highlight your choice." The criteria include: "Select Time Range" with a dropdown menu, "From" and "To" buttons, "Date" and "Time" input fields, "Select Branch" with a dropdown menu (set to "All"), "Select the station....." with a dropdown menu (set to "All Stations"), "Select the type of transaction....." with a dropdown menu (set to "All Types"), "Select online or offline transactions....." with a dropdown menu (set to "Both Online/Offline"), and "Select the desired report....." with a dropdown menu (set to "All Transactions List"). At the bottom, there are "Optional" fields for "Patron ID-" and "Item ID-". At the very bottom are "Generate" and "Close" buttons.

Figure 2.23 Generic Report window

- 2 In the Transaction Coordinator Report Generator window, enter the **time period** for which to run the report. This is the only required field. See [“Specifying a Time Period for Any Report”](#) on page 2-12 for details on the different ways to enter time criteria.
- 3 In the drop-down lists, select:
  - a A particular Self-Checkout Station, or keep the default All Stations.
  - b A particular type of transaction, or keep the default All Types. Choices include: Check In, Check Out, Patron Status, or Item Information.
  - c The type of processing, or keep the default Both Online/Offline.



The Generic Report contains the following fields.

**Table 2.3** User Specified - Report for All Transaction List Field Names and Descriptions

Field Name	Possible Field Data	Data Description
Branch	Branch	Name of the branch.
Transaction date	Date/Time	Date and time of the transaction.
Station Name	Name of Interrogator	Name of the interrogator where the transaction occurred.
Status	Completed	The transaction was successfully completed on-line.
	Offline-Complete	The transaction was an off-line incomplete transaction that was subsequently successfully completed online during off-line synchronization.
	Offline-Incomplete	The transaction was not completed on-line.
	Discrepancy	The transaction was an off-line incomplete transaction that was subsequently rejected during off-line synchronization.
OffLine-OnLine	Offline	Transaction completed off-line.
	Online	Transaction completed on-line to the LMS.
Transaction Type	Patron Status	Patron scans their ID card at a Patron Self-Checkout Station.
	Checkin	An item automatically checked in to the LMS.
	Checkout	An item is scanned at the Patron Self-Checkout Station.
	ItemStatus	An item is scanned at the circulation desk.
	ExitAlarm	An item generated an alarm at an exit because it was not checked out.
Final Transaction Date	Date/Time	The date and time that an off-line incomplete transaction was synchronized.
Item Identifier	ID Number	The item number in this transaction.
Patron Identifier	ID Number	The patron ID numbers in this transaction.
Item Status	Checked Out	The item is checked out.
	Checked In	The item is checked in.
	Status Unavailable	The item's status is unknown.

**8** You can view the reports on the screen, print them, or return to the previous screen.



## Exit Alarm Report

This report lists items that caused an alarm at specified exits.

To generate an Exit Alarm Report:

- 1 In the Intelligent Library System Control window, select **Reports > Exit Alarm**, or click on the Exit Alarm Report button. The Exit Alarm Report window displays:

**Specific Report: Exit Alarm Report**

The transaction table contains information from the last (unknown) days.

**Description**  
This report will provide a list of items that alarmed at an exit location..

**Required**  
Time Period of Interest: [Dropdown]  
Date: [From] [To] [Time: ] [Time: ]

**Optional**  
Search for Specific Branch: [All] [Dropdown]

[Generate Report] [Close]

Figure 2.25 Exit Alarm Report window

- 2 In the Specific Report: Exit Alarm Report window, enter the **time period** for which to run the report. See [“Specifying a Time Period for Any Report”](#) on page 2-12 for details on the different ways to enter time criteria.
- 3 If desired, restrict the report to a specific branch by selecting that branch in the **Branch** drop-down list box. If selected, you will have the ability to save the report for viewing/printing in ILS Remote Monitor.

4 Click **Generate Report**. The report displays:

Transaction Date	Item Identifier	Book Title	Branch Name	Exit Location
10/28/2004 12:03:30 PM	0000000002741	The Plumbat Affair	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 12:03:30 PM	0000000000208	National Health and Medical Research	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 1:02:01 PM	0000000000232	John Updike	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 1:02:01 PM	0000000000208	National Health and Medical Research	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 1:12:45 PM	0000000002741	The Plumbat Affair	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 2:43:09 PM	1901000024428	The Pleasures of Sailing	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 3:18:01 PM	03123456789009	Book title	ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 4:34:27 PM	31901687654336		ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 4:34:27 PM	31901687654321		ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 4:34:27 PM	31901687654330		ILS Main Branch	ExitInterrogator (172.16.10.13)
10/28/2004 4:34:28 PM	31901687654337		ILS Main Branch	ExitInterrogator (172.16.10.13)

**Figure 2.26** Sample Exit Alarm Report

The Generic Report contains the following fields.

**Table 2.4** Exit Alarm Report Field Names and Descriptions

Field Name	Possible Field Data	Data Description
Transaction date	Date/Time	Date and time of transaction
Item Identifier	ID Number	The item number in this transaction
Book Title	Book title	Name of the book.
Branch	Name of branch	The branch at which the discrepancy occurred.
Exit Location	Name of the exit and/or IP Address	Name of the exit

## Check In Report

This report lists items that failed to check-in or that require special handling.

To generate the Check In Report:

- 1 In the Intelligent Library System Control window, select **Reports > Check In**. The Check In Report window displays:

**Specific Report: Check In Report**

The transaction table contains information from the last (unknown) days.

**Description**  
This report will provide a list of items that failed to check in, or special handling is required

**Required**  
Time Period of Interest  
Date Time  
From  
To

**Optional**  
Select the station  
All available  
Branch All

Generate Report Close

**Figure 2.27** Check In Report window

- 2 In the Specific Report: Check In Report window, enter the **time period** for which to run the report. See [“Specifying a Time Period for Any Report”](#) on page 2-12 for details on the different ways to enter time criteria.
- 3 If desired, select a particular **check-in station**, or keep the default All available.
- 4 If desired, restrict the report to a specific branch by selecting that branch in the **Branch** drop-down list box. If selected, you will have the ability to save the report for viewing/printing in ILS Remote Monitor.

5 Click **Generate Report**. The report displays:

Branch	Transaction Date	Check In Location	Item Id	Title	Location	checked	e-D	Alert	Screen Message
ILS Main Branch	10/21/2004 4:15:0	Checkininterogato	00000000000000	No Match	ifeasid	No	Off	N	This item has no in
ILS Main Branch	10/22/2004 9:34:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 9:38:4	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 12:40:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 12:45:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 12:45:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 1:28:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 1:30:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 1:38:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 1:38:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 1:58:4	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 2:16:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in
ILS Main Branch	10/22/2004 2:25:0	Checkininterogato	00000000000000	No Match	ifeasid	No	On	N	This item has no in

**Figure 2.28** Sample Check In Report

The Check In Report contains the following fields.

**Table 2.5** Check In Report Field Names and Descriptions

Field Name	Possible Field Data	Data Description
Branch	Name of branch	Name of branch at which check-in occurred
Transaction Date	Date/Time	Date and time of the transaction.
Check-in Location	Name of location	Location of the check-in station.
Item ID	ID Number	The item identifier number in this transaction.
Title	Item title	Title of the item checked-in.
Location	Name of location	Location of check-in.
Checked-In	Y	Item was checked in
	N	Item was not checked-in.
OFFLine-Online	OffLine	Transaction completed off-line.
	OnLine	Transaction completed on-line to the LMS.
Alert	Y	An exit alarm was issued.
	N	An exit alarm was not issued.
Screen Message	Text of Message	The specific error message received from the LMS for this transaction.

## Working with the Bridge Interface

The Bridge Interface allows libraries with non-supported circulation vendors, or no LMS at all, to use the ILS security and Staff Station reader features. Self-Checkout Stations are not available when using Bridge mode.

You can change the operation mode of the Staff Station Readers programmed as a tag pad to either check-in or checkout materials during normal operations. You can also group individual tag pads together so that you can quickly change a group to either check-in or checkout personalities.

### Changing the Op Mode of a Staff Station Reader

In Bridge mode, you can change the function of the Staff Station Reader to become either a check-in or checkout device.

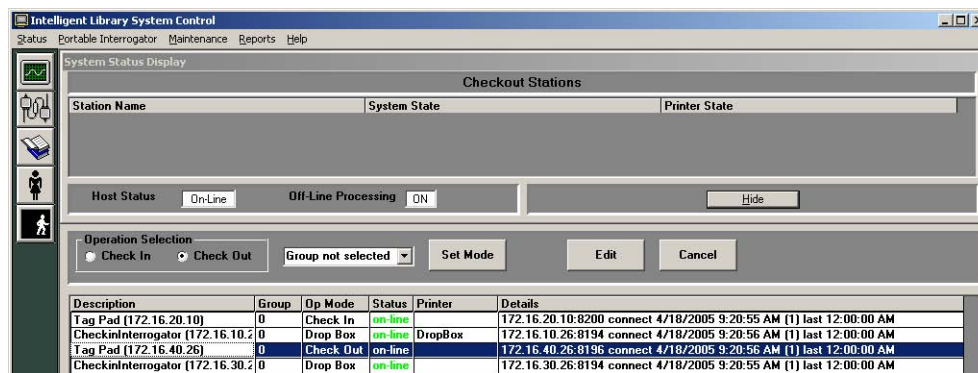


Figure 2.29 Bridge Mode

- 1 On the Intelligent Library Controller in the Interrogator Status area, select a **Staff Station Reader**. The description should indicate if the device is a Staff Station Reader (tag pad).
- 2 In the Operation Selection field, select either **Check In** or **Check Out**, as desired.
- 3 Click **Set Mode**. The Staff Station Reader highlighted changes its Op Mode, from either Check In to Check Out or vice versa, which you verify in the Op Mode column.
- 4 Click **Save** to save your changes.
- 5 Repeat the procedure to change the personality back.

### Creating Staff Station Reader Groups

Staff Station Readers can be grouped together so that you can quickly change the personality for a group of Staff Station Readers to either check-in or checkout.

- 1 On the Intelligent Library Controller in the Interrogator Status area, select a **Staff Station Reader**.

- 2 Click **Edit**. The Edit Interrogator window displays.

The screenshot shows a window titled "Edit Interrogator" with a close button (X) in the top right corner. The window contains the following fields and controls:

- Description:** A text box containing "CheckinInterrogator (172.16.10.26)".
- Group number ( 0 = none ):** A text box containing "1".
- Op Mode:** A dropdown menu showing "Drop Box".
- Status:** A text box containing "on-line".
- Printer:** A dropdown menu showing "DropBox".
- Details:** A text box containing "172.16.10.26:8194 connect 4/18/2005 9:20:56 AM [1] last 12:00:00 AM".
- Buttons:** "Save" and "Cancel" buttons at the bottom right.

**Figure 2.30** Edit Interrogator Window

- 3 Type a **Group number** in the Group number dialog box.
- 4 Click **Save**.
- 5 Close the window using the top right-hand corner **X**.
- 6 Click **Save** on the main window to save your changes.
- 7 Repeat step 2 through step 6 for each Staff Station Reader you wish to assign to a group. You can create multiple groups.

## Changing the Op Mode of Multiple Staff Station Readers

Once you have assigned multiple Staff Station Readers to a group number (accomplished at [“Creating Staff Station Reader Groups”](#)), you can now alter the check-in or checkout personality of a group with one operation.

- 1 On the Intelligent Library Controller in the Operation Selection area, select the function desired, either **Check In** or **Check Out**.
- 2 From the drop-down menu next to Operation Selection, select the **Group number** desired, for example all Staff Station Readers in Group 1.
- 3 Click **Set Mode**. All the Staff Station Readers in Group 1 change to reflect the new check-in or checkout personality selected.
- 4 Click **Save** to save your changes.

## Maintenance

See [“Intelligent Library Controller System Maintenance”](#) on page 13-1 for information on maintaining the Application Server.

# Display System Information

To display copyright and version information about ILS:

- 1 In the Intelligent Library System Control window, select **Help > About ILS**.

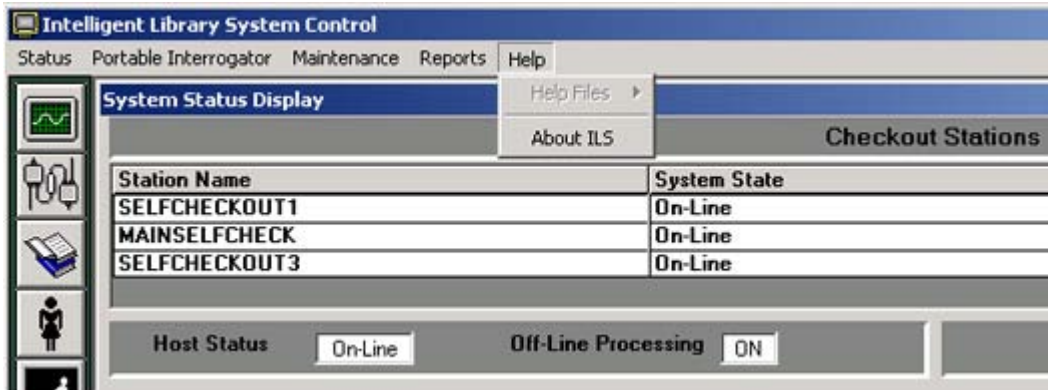


Figure 2.31 Help About Navigation

- 2 Click **System Info** to see a detailed listing of all components and their versions.



Figure 2.32 Help About ILS window

## Notes



## PATRON SELF-CHECKOUT STATION

The Self-Checkout Station enables library patrons to check out library materials without the assistance of library staff. The Self-Checkout Station guides patrons smoothly through the checkout process with step-by-step instructions to assist in checking out materials properly. The process is quick, efficient, and (if available) delivers a printed receipt listing the checked out materials and their due dates.

The Self-Checkout Station delivers data, item identification and its checkout status, to the Library Management System, which processes the information and updates the library records. The processing occurs almost instantaneously, allowing a speedy and efficient checkout.



Note: The Self-Checkout Station is the same as the CheckStation II.

### Overview

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There are three steps to checking out library material:

- [“Presenting a Patron ID Card, Step 1”](#) - Identify yourself with your library card
- [“Scanning Items for Checkout, Step 2”](#) - Check out materials
- [“Finishing Checkout, Step 3”](#) - Finish and collect your receipt (if available)

The windows on the Self-Checkout Station reflect this order, showing Step 1, Step 2, and Step 3, identifying the checkout process.

The following pages details the process a patron uses to check out library material.



Note: The sample windows shown in this chapter may differ slightly than the windows shown on your library's Self-Checkout Station. Your library may have a different Self-Checkout Station model, operating environment, welcome logo, or other windows.

## Beginning a Self-Checkout Station Session

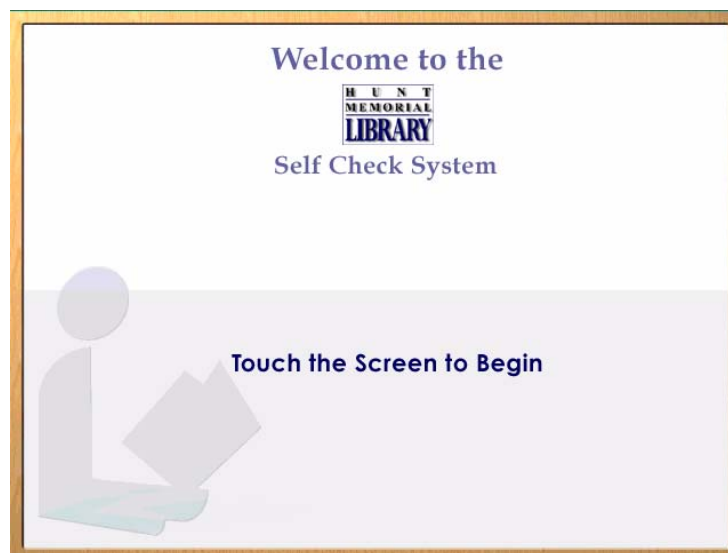
---

If the Self-Checkout Station is configured to use multiple languages, the first window shown is the ILS multiple language welcome window.



**Figure 3.1** ILS Multiple Language Welcome window

If configured to use a single language, the first window shown is the ILS single language welcome window.



**Figure 3.2** ILS Single Language Welcome window

- 1 Touch the screen or select a language to begin the checkout process.
  - Some libraries support multiple institutions. If so, you are presented with a multiple institution selection window in which you select the correct institution.
- 2 After you have removed your finger, the image changes to the Patron Identification window.

## Presenting a Patron ID Card, Step 1

---

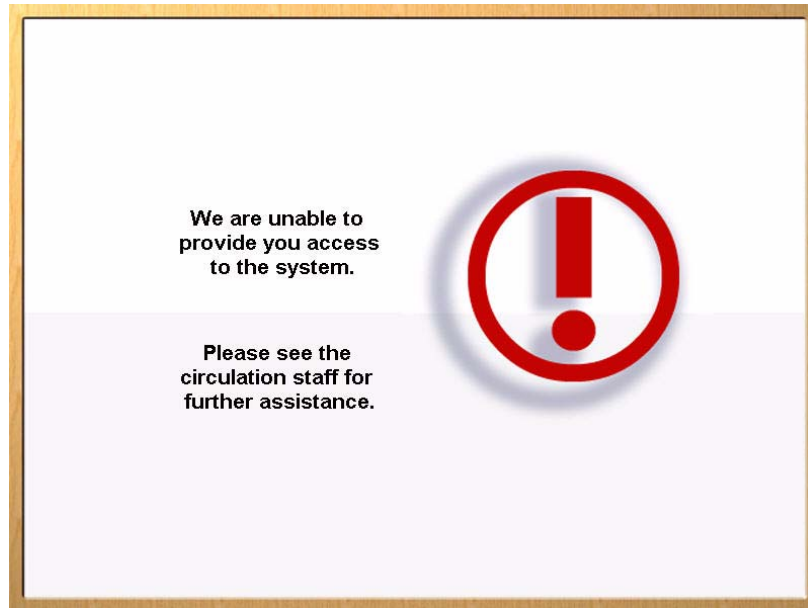
Have your patron ID card ready and follow the instructions shown on the window, seen here.



**Figure 3.3** Patron Identification window

- 1 On the right side of the window, you are given visual instructions on how to present your patron ID card for authorization. Your ID card may be different than the type of ID card illustrated in the sample Patron Identification window; if so, simply follow the visual instructions on the Patron Identification window specific to your institution.
- 2 If you have been authorized to check out items, the Item Entry window is displayed.
- 3 If your site uses the optional CheckPASS feature that allows library patrons to pay library fees at a Self-Checkout Station, and if you owe fees to the library, you are prohibited from checking out library material until the fee is paid. See [“CheckPASS” on page 11-1](#) for details.

- 4 If you have not been authorized, the Patron Identification Failure window appears.



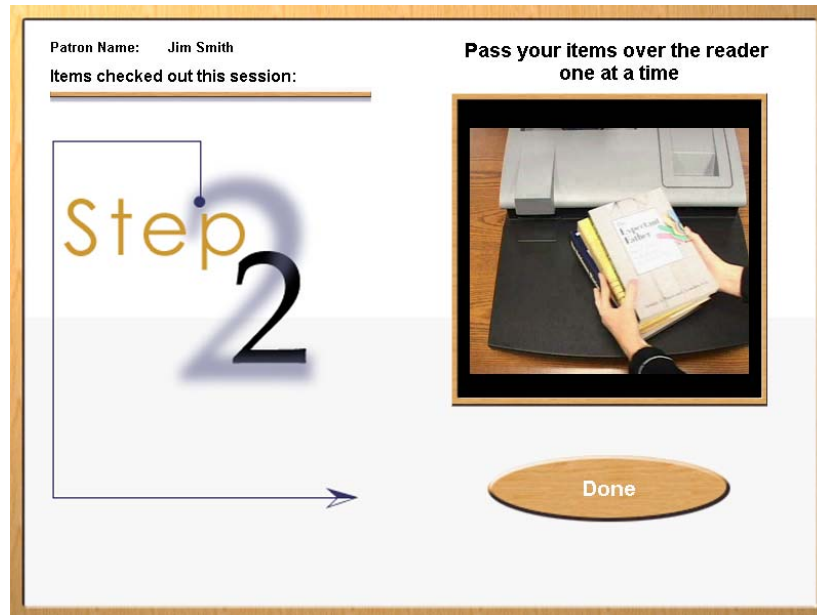
**Figure 3.4** Patron Identification Failure window

Contact the librarian desk for further assistance. After a short period the Welcome window is displayed again allowing normal checkout procedure.

## Scanning Items for Checkout, Step 2

---

Once authorized for checkout, the window advances and instructions appear on how to check out each item. On the left side of the window, the patron's name displays at the top. Once you have checked out items, a list of those items displays as shown in the Items Identification window - Item List shown below.



**Figure 3.5** Item Identification window - Begin

- 1 Take one (or more) of the items you wish to check out and slowly pass it over the surface area of the item identification pad. You do not need to slide it on the pad in order for the item to be identified. Simply move the item over the pad in a smooth fashion, about 4 inches (10 cm) above the pad area.

- Repeat the above step for each item you want to check out. As you pass the item over the pad, the system identifies each item and lists it on the left side of the window. Some institutions may provide additional information along with the item name.

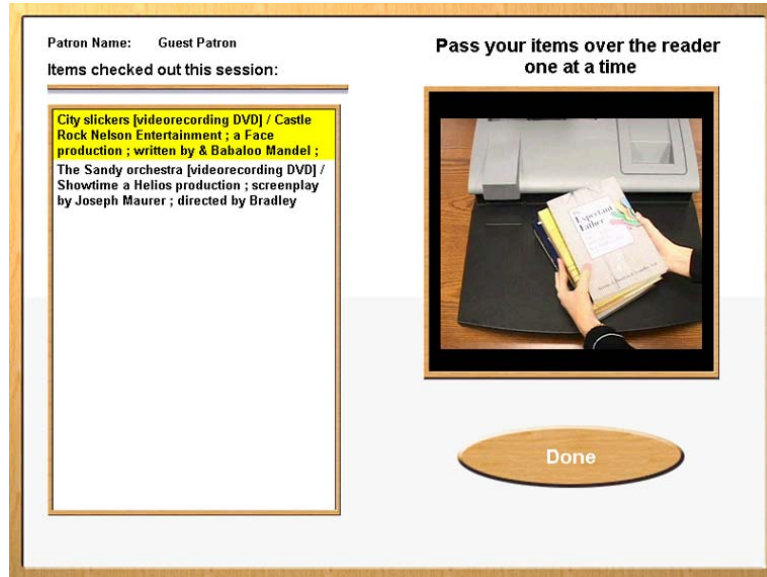


Figure 3.6 Items Identification window - Item List

At anytime in the checkout process you may touch **Done** to complete your checkout session. The **Done** button is on the right bottom of the window.

If you have checked out more items than can display on the window, the list automatically scrolls to show the most recent items at the top of the list. To see items that have already scrolled off the bottom of the list, touch the **Down Arrow**. Press the **Up Arrow** to see the most recent items checked out.

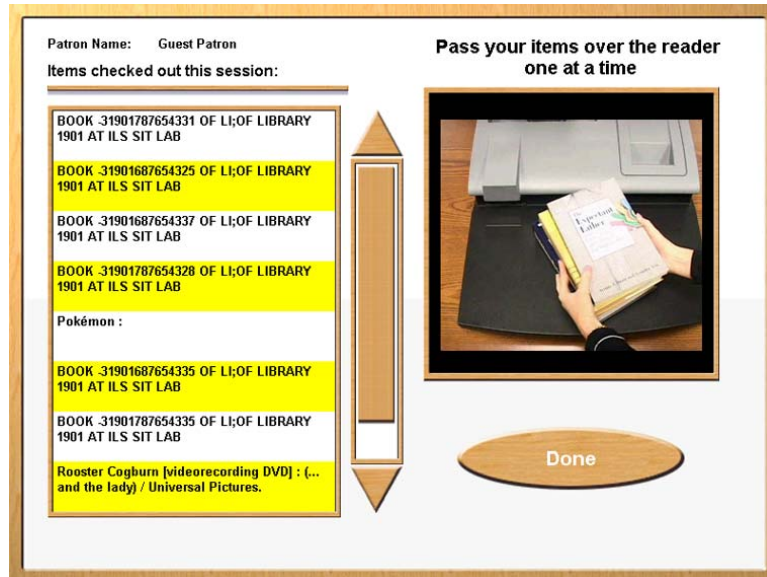
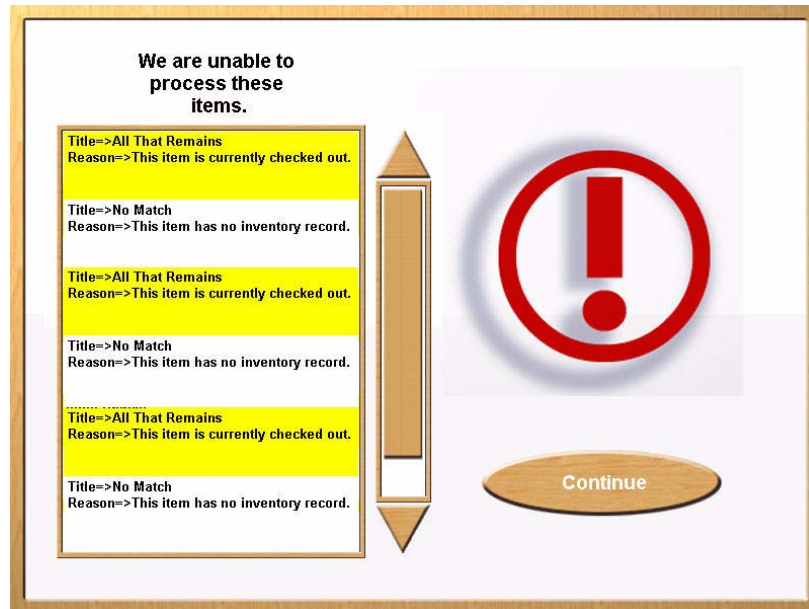


Figure 3.7 Items Identification window - Scroll

- Press **Done** to end your session.

## Viewing Items that Could Not be Checked Out

If any item you tried to check out is not accepted, a message appears indicating the system was unable to process the item. Listed are the title (if available) of the item and the reason for denied access. If the title is not available, No Match appears next to Title.



**Figure 3.8** Item Identification window - Failure

If numerous items have been rejected so that all cannot be fully displayed on the left, a scroll bar appears to the right of the list. To see items that have already scrolled off the bottom of the list, touch the **Down Arrow**. Press the **Up Arrow** to see the most recent items.

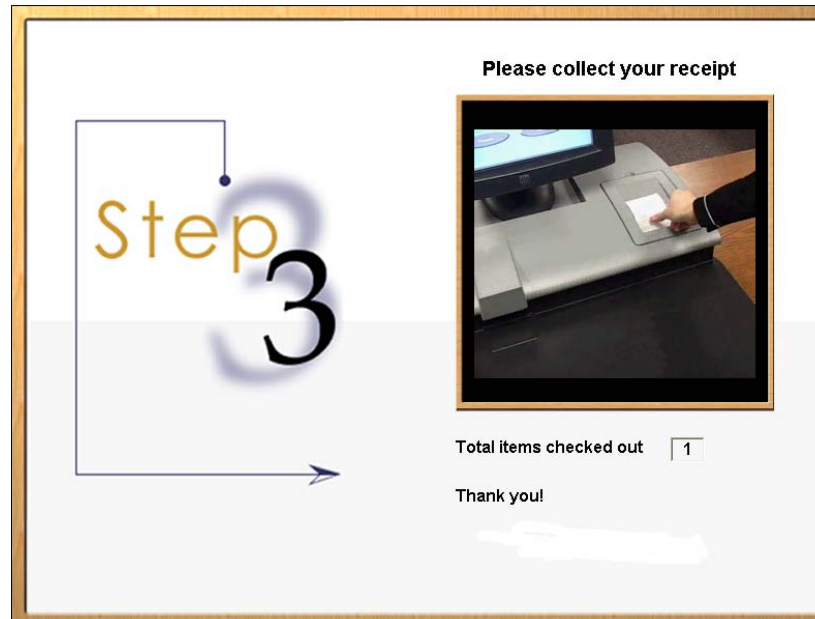
Contact your librarian for assistance with items that were not successfully checked out. You may continue with the check out of additional items by returning to the Item Identification window.

Press **Continue** to continue your session.

## Finishing Checkout, Step 3

---

The Step 3 window displays when you have finished checking out all your items and touched **Done**. The window instructs you to collect your printed receipt and shows you the total number of items checked out.



**Figure 3.9** End Session window

Collect the printed receipt from the receipt dispenser. Your receipt lists the items you have checked out as well as the return due date for each item.



Note: Some institutions may not provide a printed receipt.

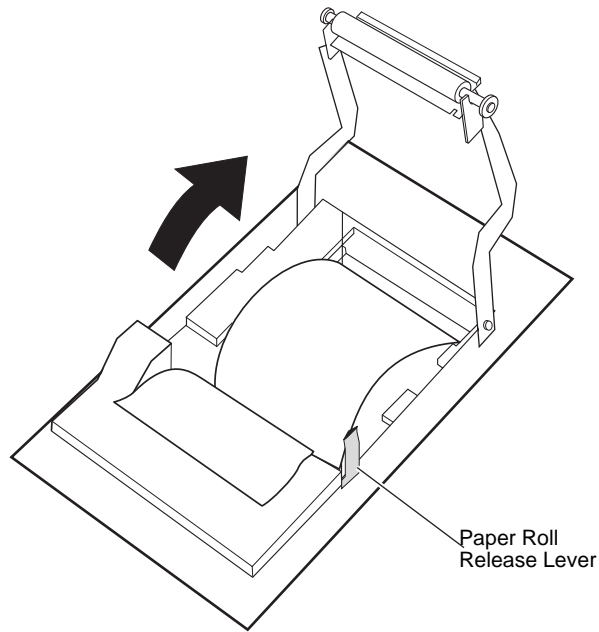
## Loading Roll Paper

---

When the paper runs low or out, follow these directions for replacing the roll paper for the Self-Checkout Station's printer.

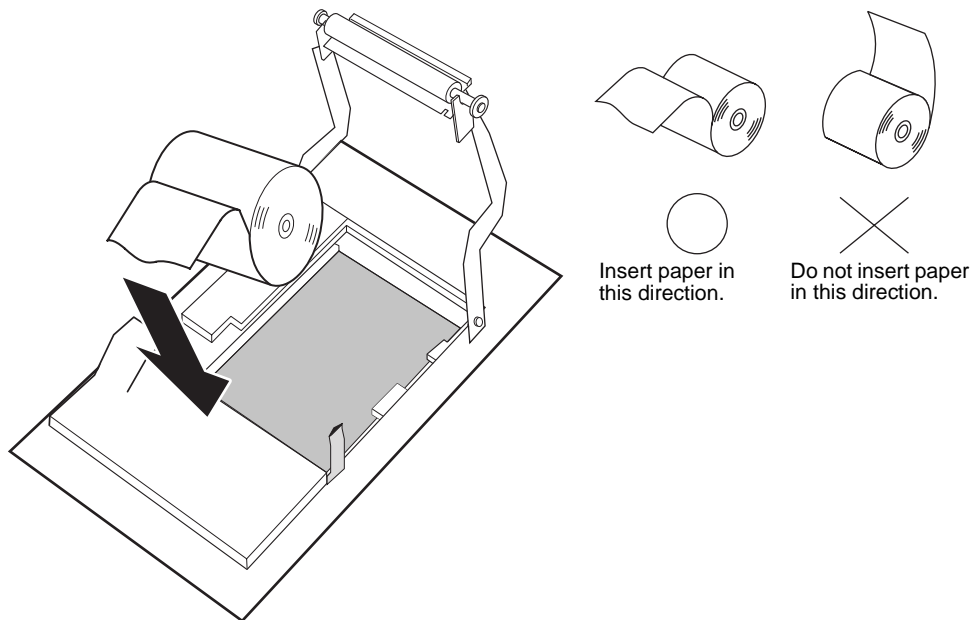


- 1 Remove the printer cover on the Self-Checkout Station.



**Figure 3.10** Paper Roll Release

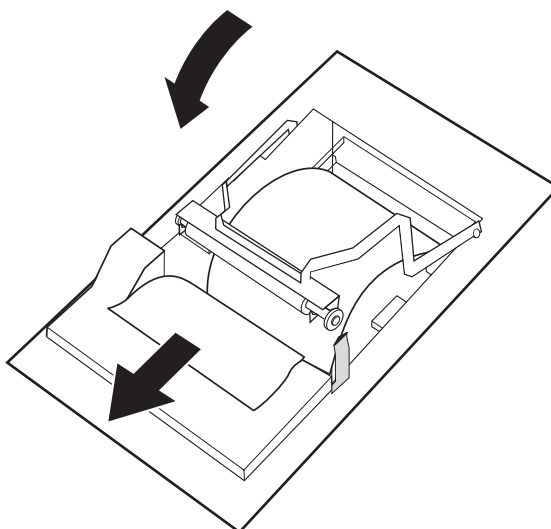
- 2 Press the paper roll release lever to the front of the unit and swing the paper guide up and away from the printer.



**Figure 3.11** Insert Paper

- 3 Remove the empty roll and lower in the new roll, with the paper facing the correct direction.

- 4 Pull the paper out a bit, as seen below in [Figure 3.12, “Lower the Paper Guide.”](#)



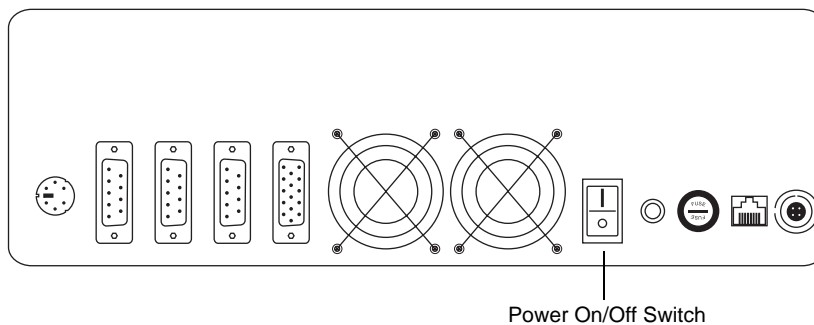
**Figure 3.12** Lower the Paper Guide

- 5 Rotate the paper guide back down until you position the guide in between the main roll and the paper fed underneath the paper guide.
- 6 Once the paper guide clicks into place, the paper cutter should activate and partially cut the paper. If not, then reseal the paper guide again. If the cutter still fails to activate, reboot the Self-Checkout Station and try again.

## Powering On the Self-Checkout Station

---

The following procedure powers on a Self-Checkout Station:



**Figure 3.13** Turning On the Self-Checkout Station

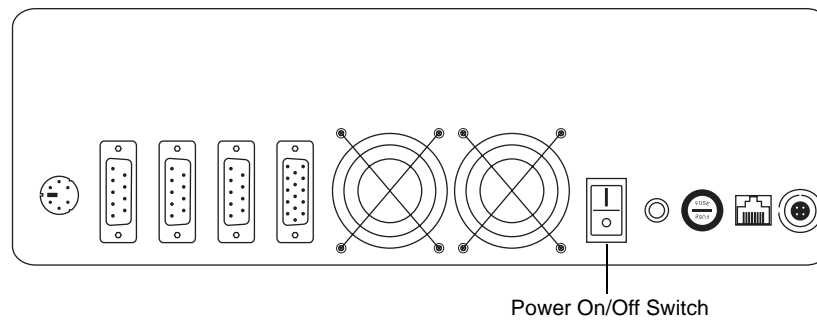
- 1 On the back panel of the Self-Checkout Station, flip on the power switch.
- 2 The Self-Checkout Station starts, logs in, and launches the CheckPC program automatically.

## Powering Off the Self-Checkout Station

---

The following procedure shuts down a Self-Checkout Station using CheckVIEW:

- 1 Launch CheckVIEW on the library staff's computer by clicking **Start > Programs > Checkpoint Systems > CheckVIEW Monitor** from the library staff's computer.
- 2 Access the specific Self-Checkout Station by selecting **View** from the menu and then select one of the **Display (1-4)** options for the desired Self-Checkout Station.
- 3 On the keyboard, press **CTRL + SHIFT + DEL**.
- 4 Click **Shut down**. The Self-Checkout Station enters a shut down sequence until it states that Self-Checkout Station can be turned off.



**Figure 3.14** Turning Off the Self-Checkout Station

- 5 Go to the Self-Checkout Station and turn off the power switch.

## Notes

## PORTABLE READER

### Overview

---

The Portable Reader is an easy-to-use wireless long range reader that changes how library staff take inventory. The Portable Reader combines convenience with versatility, using a lightweight, handheld portable data terminal connected to an extendable inventory wand. This makes it easy to read items in hard-to-reach areas, and, because of the sophisticated antenna design and electronics, the Portable Reader becomes a very long-range reader. This is very useful for taking inventory or trying to locate materials that have not been shelved properly.

The Portable Reader consists of two units:

- An inventory wand
- A portable data terminal

The handheld inventory wand, using a built-in antenna to scan for circulation circuits, connects to a Portable Data Terminal (PDT), which stores the information retrieved from and accessed by the wand. The PDT enables data to be uploaded or downloaded from the Intelligent Library Controller, providing both inventory and searching capability.

The Portable Reader enables a fast, efficient and accurate method for taking inventory of library materials.

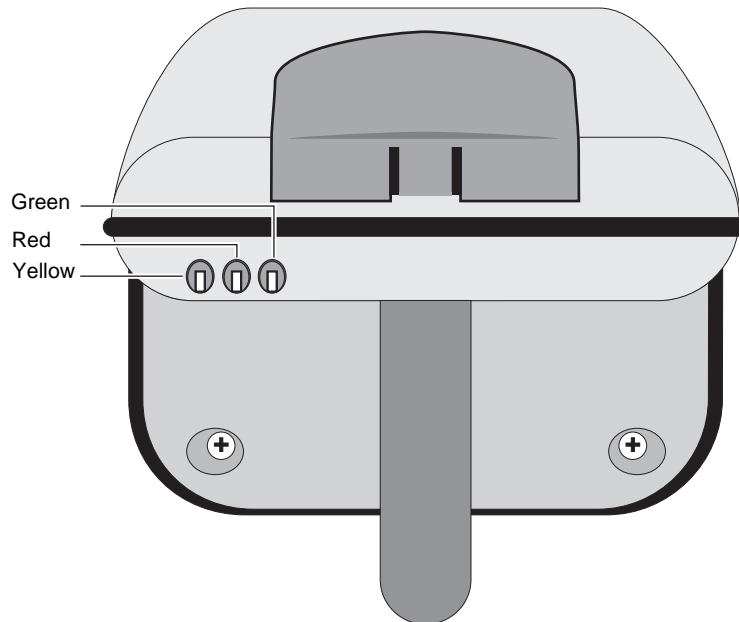


Figure 4.1 Portable Reader

## Inventory Wand LED Indicators

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The inventory wand uses three LED lights:



**Figure 4.2** Wand LED Indicators

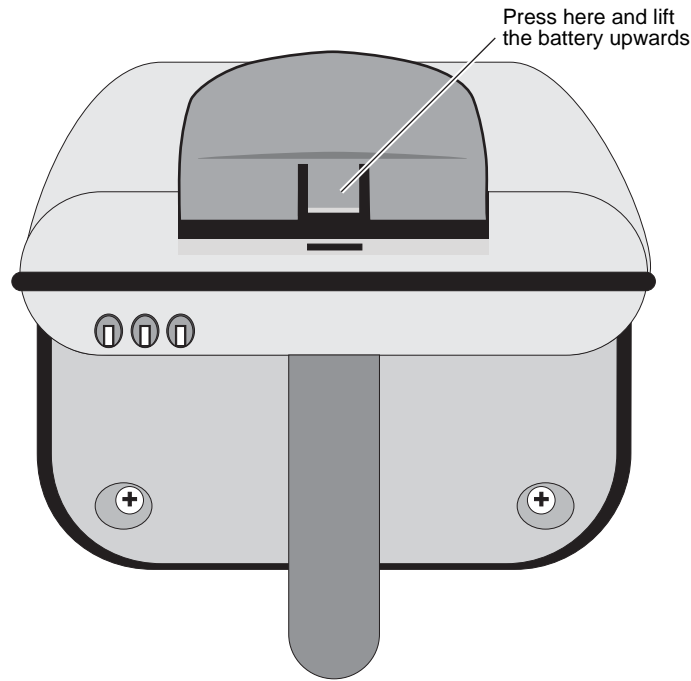
**Table 4.1** Wand LED Indicators

LED	Description
Green	The power is on
Red	Circulation circuit is being read
Yellow	Low battery condition

## Charging the Inventory Wand Battery

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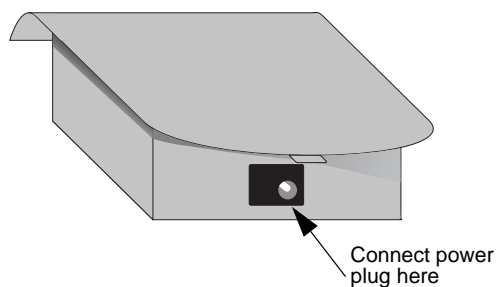
Prior to using the inventory wand for any significant inventory collection or inventory search session, ensure that its battery is fully charged to guarantee that the entire collection is inventoried all at once.



**Figure 4.3** Extracting Inventory Wand battery

To extract the battery from the inventory wand:

- 1 Rotate the inventory wand so that the antenna is facing away from you as shown in [“Extracting Inventory Wand battery”](#).
- 2 Press the tab in the middle of the battery and lift it carefully upwards.
- 3 Once disconnected, rotate the battery until you see the power connection jack.



**Figure 4.4** Inventory Wand power plug connection

- 4 Using the cable from the battery charger, connect the battery to the battery charger and plug the adapter into an outlet to begin charging. The estimated charging time is 4 to 6 hours.

There is an LED indicator on the battery charger that indicates when the battery is completely charged.

- 5 When charging completes, disconnect the power plug. Insert the front of the battery (with the tab) first into the wand's battery receptacle, then rotate the back of battery down until it clicks into place.

## Maintaining the Portable Data Terminal

---

This section details how to charge and turn on and off the portable data terminal.

### Charging the Portable Data Terminal

---

Before using your terminal for the first time, charge the battery fully using the CRD 2800 cradle or synchronization cable. Your terminal is equipped with a memory backup battery that automatically charges from the main lithium-ion battery. This backup battery retains data in memory when the terminal's battery is removed, and takes several hours to charge when you first use your terminal.



**Note:** If you remove your lithium-ion battery before the backup battery is fully charged, data may be lost. For this reason DO NOT remove the battery within the first ten hours of use.

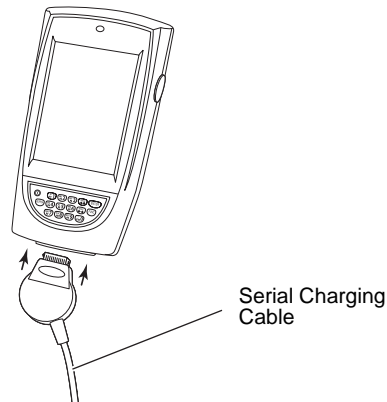
When battery voltage is low, a warning message displays indicating the battery needs to be charged.

There are two methods to charging the PDT:

- 1 Using the Serial Charging Cable
- 2 Using the Universal Cable Cup

#### Using the Serial Charging Cable to charge the battery

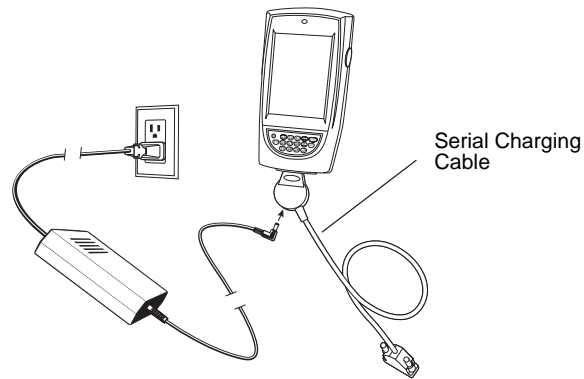
- 1 Insert the cable into the bottom of the terminal.



**Figure 4.5** Insert Synchronization Cable



- 2 Plug the power cable into a wall outlet and plug the other end into the battery charging receptacle on the side of the synchronization cable.

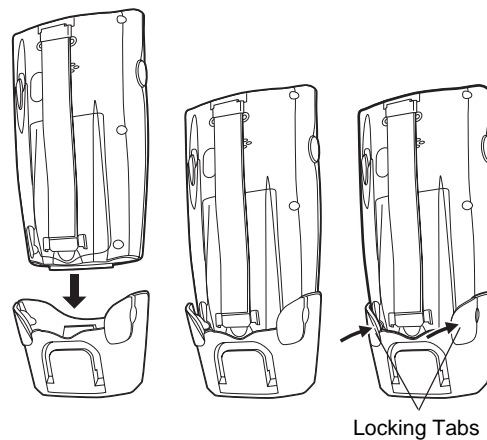


**Figure 4.6** Battery charging with serial charging cable

## Using the Universal Cable Cup to charge the battery

To charge the battery using the Universal Cable Cup:

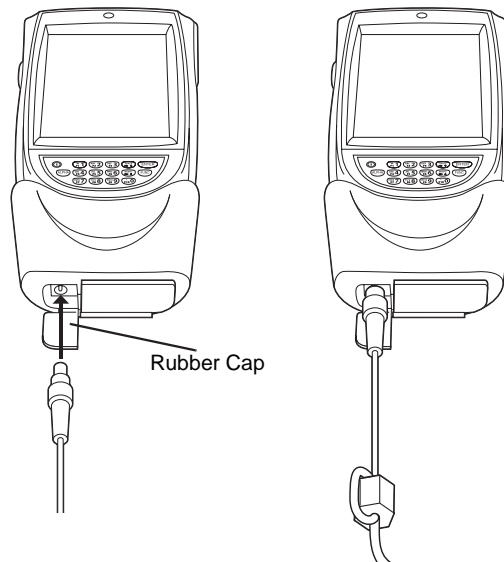
- 1 On the cable cup, ensure the locking tabs are in the open position (up).
- 2 Insert the PDT into the cable cup.
- 3 Press down on the two locking tabs.



**Figure 4.7** Insert PDT into cable cup

- 4 Lightly pull on the cable cup to ensure that it is securely attached to the terminal.

- 5 Open the rubber cap covering the power port.



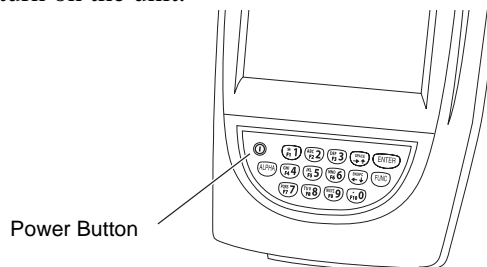
**Figure 4.8** Connecting power cable

- 6 Plug the power connector into the power port. The battery is fully charged after approximately 2 1/2 hours.

## Powering On and Off the Portable Data Terminal

---

- 1 To turn on the PDT, press the red power button on the lower left-hand side of the terminal to turn on the unit.



**Figure 4.9** Powering On the Portable Data Terminal



Note: When not using the Portable Data Terminal within a set amount of time, the device enters a Power Save mode, meaning the device powers down. To turn it back on press the red power button. You are returned to the last window presented prior to shut off.

- 2 To turn off the unit, press and hold the power button until the screen turns grey, then press the power again.

# Using the Portable Data Terminal

In this chapter the word tap is used instead of click because the stylus supplied is used to tap the touch screen. There are no double-clicks on the Portable Data Terminal unit as all actions are accomplished by a single tap. The stylus is stored in a silo on the back of the Portable Data Terminal.

Please refer to the **Symbol Portable Data Terminal Series Quick Reference Guide** for more information regarding use of this device.

## Turning On/Off Backlight

Use the key combinations below to adjust the backlight.

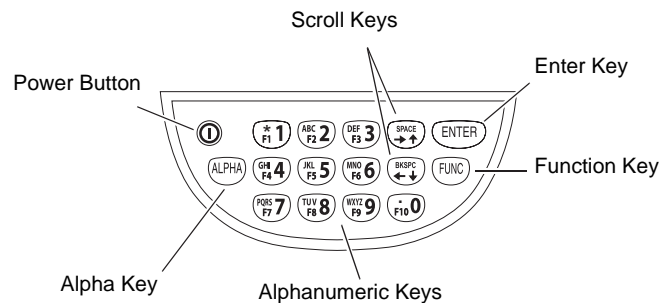


Figure 4.10 Backlight On/Off

Table 4.1 Remote User Manager Access Privileges

Keys	Description
Press and hold	Turns the display backlight and keypad backlight on and off. When both backlights (display and keypad) are off, the backlights turn on in the following order when the button is held: <ul style="list-style-type: none"> <li>• First the display backlight turns on, continue to hold, then the keypad backlight turns on.</li> <li>• When either backlight is on, the backlights turn off when the power button is pressed and held.</li> </ul>
Press  +	Decrease display backlight (decrease brightness).
Press  +	Increase display backlight (increase brightness).



Note: The backlight turns off after a configurable amount of time. You can alter the setting in **Start > Settings > System > Backlight**.

## Checking the Status of the Batteries

It may become necessary to check the status of the Portable Data Terminal's battery power. Use the following procedure:

- 1 Tap the **Start** icon in the upper left hand corner of the window.
- 2 Tap the **Settings** menu item.

3 Tap the **System** tab at the bottom of the Settings Panel window.



Figure 4.11 Settings Window

4 Tap the **Power** icon. The Battery Status window displays. This window shows you the power status of both the main and the backup batteries.

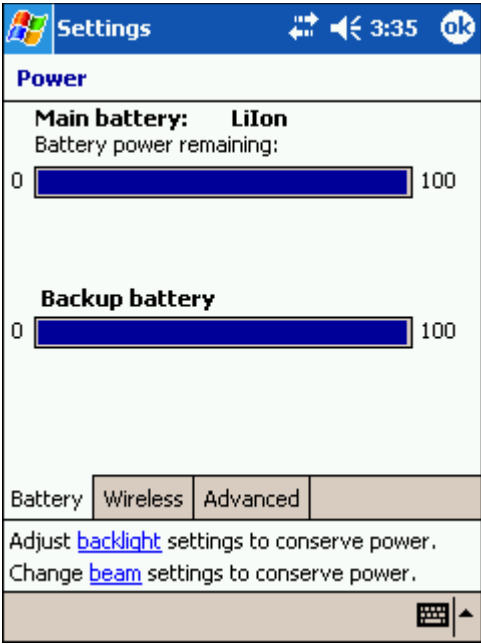
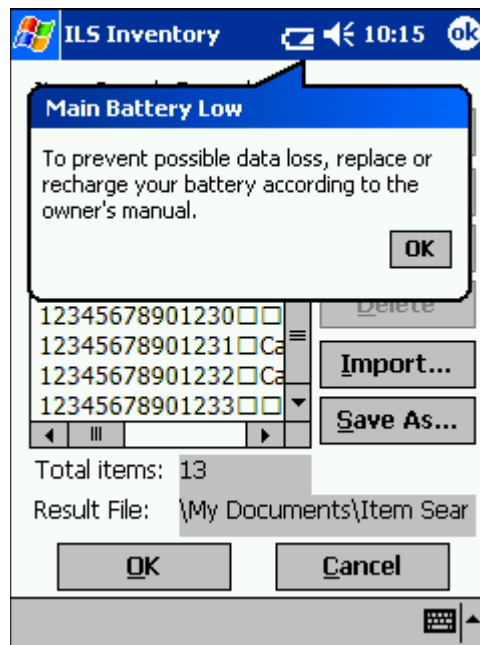


Figure 4.12 Battery Status

A warning displays if either battery is low.



**Figure 4.13** Low Battery Warning

## Performing a Reset

---

If your PDT stops responding to input from buttons or the screen, reset it by performing a soft or hard reset. Only perform a hard reset if a soft reset fails to clear the problem.

### Performing a Soft Reset

A soft reset restarts the terminal and saves all stored records and entries.



Caution

Files that remain open during a warm boot may not be retained. DO NOT perform a soft reset if the terminal is suspended. Press the power button to wake the terminal.

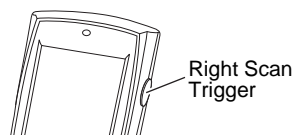


Figure 4.14 Soft reset buttons

- ▶ To perform a soft reset, press **ENTER** and **FUNC** keys while holding down either the left or right scan trigger and then releasing the keys.

The unit resets, during which the display shows a startup screen.

### Performing a Hard Reset

A hard reset restarts your Portable Data Terminal terminal and erases all stored records and entries, including any extra programs installed in the Main Memory such as the ILS Inventory program. Therefore, never perform a hard reset unless a soft reset does not solve your problem.



Note:

You can restore any data previously synchronized with your computer during the next ActiveSync operation.



Caution:

With a hard reset, the current date and time, formats, preferences, and other settings are restored to their factory default settings.

To perform a hard reset:

- 1 Remove the hand strap above the locking screw by sliding the end of the strap towards the bottom of the unit.

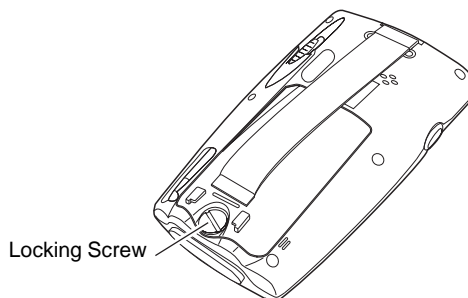
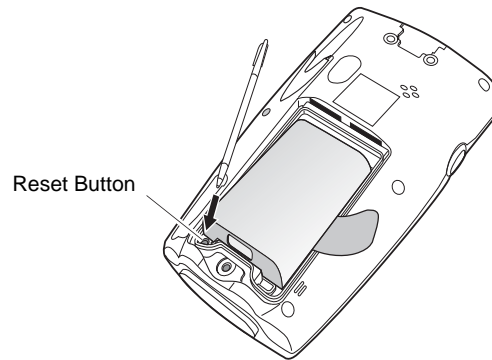


Figure 4.15 Locking screw

- 2 Turn the locking screw counterclockwise until the cover releases from the terminal and lift the battery door away from the terminal.



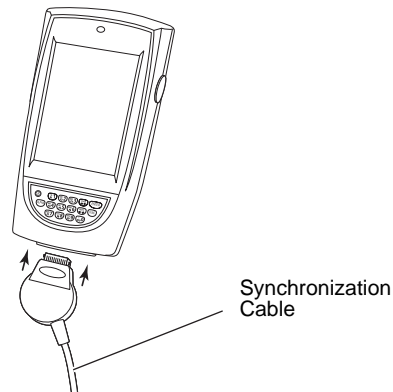
- 3 While holding down the **FUNC** button, use the tip of the stylus (or similar object without a sharp tip) to gently press the **Reset** button.
- 4 Release the **FUNC** button.
- 5 Replace the battery cover and hand strap and press the **ⓘ** button. As the terminal initializes its unique Flash File system, the Symbol splash screen displays for about a minute.
- 6 Follow the prompts when **Aligning the Screen** appears to perform an initial setup of the terminal.

## Collecting Inventory Data

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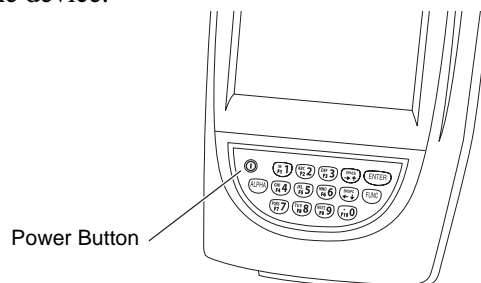
Now that the Portable Data Terminal has been initialized, you are ready to begin collecting inventory information.

- 1 Connect the synchronization cable from the inventory wand to the Portable Data Terminal.



**Figure 4.16** Attaching Synchronization Cable to Portable Data Terminal

- 2 Turn on the Portable Data Terminal by pressing the **red button** in the lower-left hand corner of the device.



**Figure 4.17** Powering On the Portable Data Terminal



Once you have powered on the Portable Data Terminal, you are presented with the ILS Inventory main menu window.

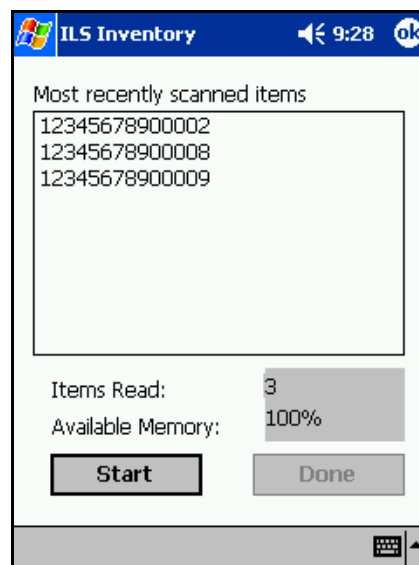


**Figure 4.18** ILS Inventory Main window



Note: If you do not see the main ILS Inventory window, tap the Start button in the upper-left hand corner of the screen. Tap on the ILS Inventory menu item in the start menu to launch the program.

**3** Tap **Inventory Collection** located in the center of the screen.



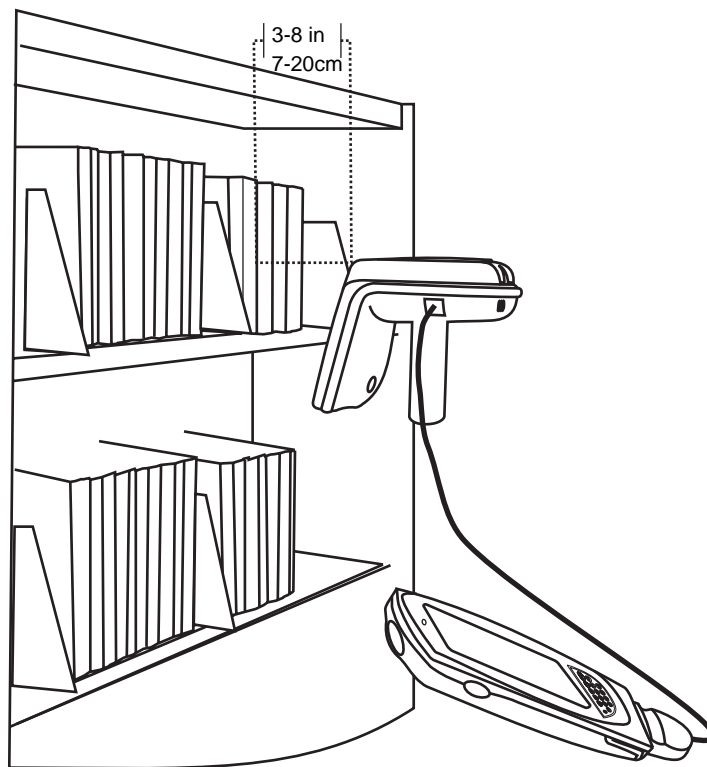
**Figure 4.19** Inventory Collection

**4** Tap **Start** located in the bottom-left hand corner of the screen.

**5** If a previous inventory collection file was not transferred to the ILS Server, you will be asked if you want to add (append) to the file.

- Selecting **Yes** continues the previous inventory collection and new items are added to the file.
- If you select **No**, you are asked to confirm that you do not wish to keep the existing data. Tap **OK** if sure and a new inventory file is created. Tap **Cancel** to append to the file (as if you had selected Yes).
- If you want to transfer the previous file after selecting Yes, you can immediately tap **Done** to initiate a file transfer.

**6** Begin scanning for items.



**Figure 4.20** Scanning Books

Hold the wand in your hand about three inches (7 cm) from the material you wish to scan. Notice that the red light on the wand blinks, indicating that the wand is detecting circulation circuits. The wand detects Circulation Circuits up to a distance of 8 inches (20 cm); therefore, it is important to keep the wand focused on the intended inventory items to avoid unwanted data from being collected.

Alternatively, you can use the barcode scanner of the PDT to scan for barcodes. Press either the left or right scan trigger button to activate the barcode scanner, which beams from the front of the PDT.



**Figure 4.21** Inventory Collection In Progress

Once you begin scanning, the following information displays in the ILS Inventory screen:

- **Most recently scanned items**  
The bar code number for that circuit displays on the Portable Data Terminal in the Most Recently Scanned Items field.
  - **Items Read**  
Field displays the total number of inventory tags read over time.
  - **Available Memory**  
Field displays the percentage of memory still available.
- 7 Once completed scanning, tap **Done**. See [“Transferring Inventory Data” on page 4-16](#) for instructions on data transfer.

# Transferring Inventory Data

Once you complete scanning inventory, follow these instructions to transfer the data.



Note: If you wish to continue the inventory collection after you have pressed **Done**, press **Cancel** to prevent file transfer and re-enter inventory collection mode.

- 1 After you have finished collecting inventory by tapping **Done**, a dialog window displays asking if you want to transfer the data collected. Tap **OK** to do so.
- 2 Unplug the cable from the bottom of the Portable Data Terminal.
- 3 Dock the Portable Data Terminal into the cradle. A Transferring window displays on the Portable Data Terminal while data is transferring to the Intelligent Library Controller.

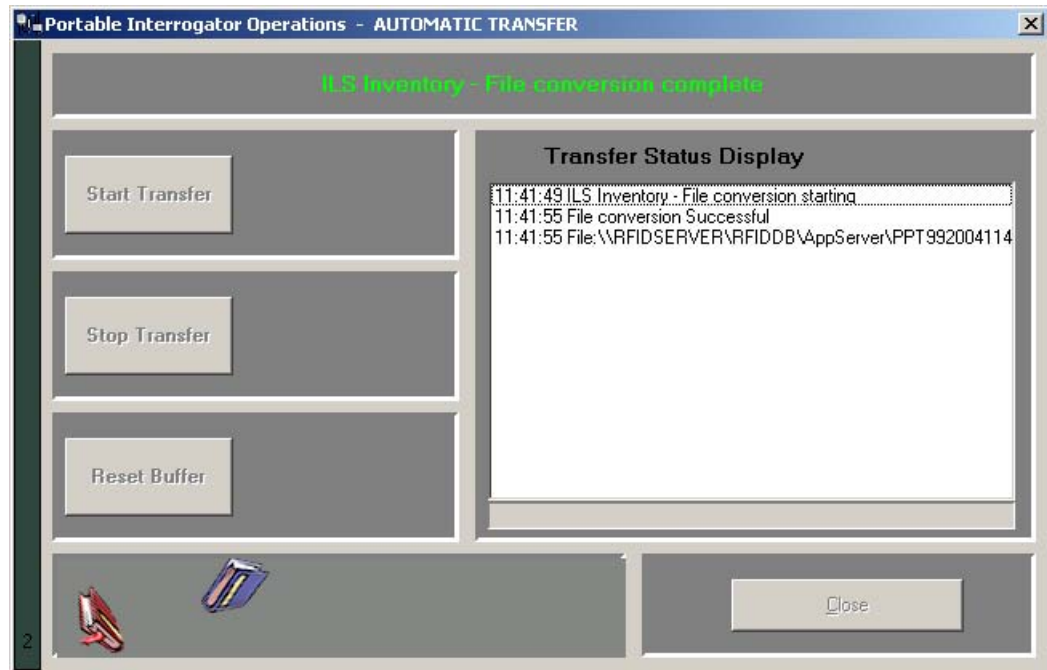


Figure 4.22 Portable Interrogator Operations

- 4 Once the transfer is completed, the Intelligent Library Controller displays the Portable Reader Operations window. The inventory you transferred is converted by the Intelligent Library Controller to a text file containing the list of barcodes. The file name and location is displayed in the Transfer Status Display window. When the process is finished, click **Close** on the Portable Interrogator Operations window.

The Intelligent Library Controller then converts the information to the inventory file format used by the LMS and copies it to a directory from which the LMS can copy it (using FTP).

- 5 The Portable Data Terminal displays Transfer Complete. Tap **OK** to return to the ILS Inventory Main window.

You may begin another inventory collection by selecting **Start**. Or, exit to the main window by clicking **OK** found at the top-right of the screen.

# Searching the Inventory

---

Use this function to search for missing or desired materials. Library material must have a circulation circuit attached to it for this function to succeed. Also, it is helpful if scanning for more than one item that you prepare an Item Search List file before searching.

## Preparing an Item Search List File

---

An Item Search List file contains the barcodes you wish to find. The file uses the .psl file extension and can be created:

- By formatting a report from the circulation system
- By formatting an Inventory Search or Shelf Order Search file conducted with the Portable Reader
- Using a text editor (like Notepad) to manually enter item information

Create the file in the following manner:

- 1 Gather your barcode data of missing items. If you have conducted an Inventory Search, you can use this file by changing the extension to “.psl” and following the formatting identified in step 2.

If you are producing a report from your circulation system, ensure that it follows the parameters explained in the step 2.

- 2 Enter the data by typing or copying and pasting the data into a simple text editor, like Notepad, shown in the figure below: “[Sample PSL File](#)”.

- The barcode numbers must be in a single row, with a return at the end of each line.
- If you wish the call number and book title to appear associated with that barcode, you must separate the information with a pipe symbol “|”.
- You can also have just a call number or just a book title appear as well with the associated barcode. If you want just a Book Title to appear with that barcode, you must include two pipes sequentially to account for the empty call title column.

If your data resides in a more complex spreadsheet program like Microsoft Excel®, it is not recommended that you copy the data from Excel and paste it into your text editor as the correct pipe symbol is not used to separate data. However, you can manually alter the file if you choose to paste the data from a spreadsheet.

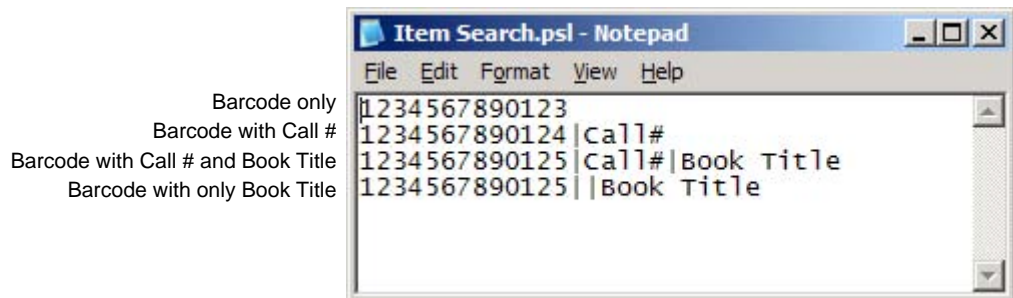
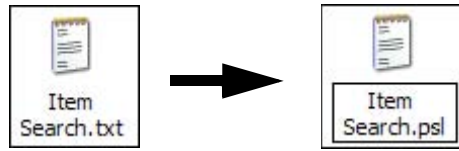


Figure 4.23 Sample PSL File

- 3 Once the data is entered, save with a descriptive name and close the file. Note the location where you saved the file.

- 4 Navigate to the location of your file and change the extension of the file to PSL. For example, “Item Search.txt” becomes “Item Search.psl”.



**Figure 4.24** PSL File Name Change

The next section informs you how to transfer this file to the Portable Data Terminal using the docking station.

## Transferring the Search List File

To transfer a search list file (or files) from the Intelligent Library Controller to your Portable Data Terminal

- 1 Place the search file (for example, Item Search.psl) in the synchronization directory for your Portable Data Terminal. There should be a shortcut to this directory on the desktop of the Intelligent Library Controller.
- 2 Once the file is in the correct location, dock the Portable Data Terminal and the file(s) is automatically transferred.
- 3 Once the file(s) has been transferred remove the Portable Data Terminal from its cradle.
- 4 If ILS Inventory is not running on your Portable Data Terminal, launch the program by tapping the **Start** button in the upper-left hand corner of the screen, then tap **ILS Inventory**.

## Importing the Search List File

To import the search list file:

- 1 From the main screen of ILS Inventory, tap **Item Search**. The Item Search window displays.

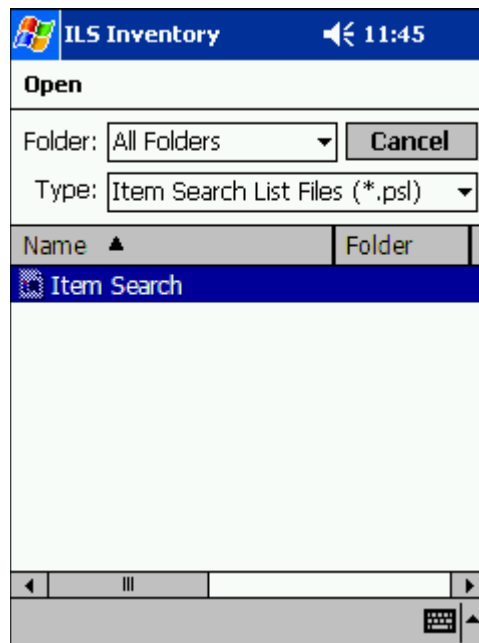


Figure 4.25 Search List File

- 2 Follow either instruction for importing barcodes:
  - a If you are searching for a single barcode, you can input the number directly into the Item Search Barcode field. Tap **Add** when finished and the barcode number appears below.

The name of the search result file is stated in the Result File field (for example, “search2.\*” in the example above) unless you use the Save As to enter a different name. See [“Saving Custom Search Files”](#) on page 4-34 for details.

- b If you have created a search file, tap **Import**. The Import window displays.



**Figure 4.26** Search File Import

- c Ensure that Item Search List Files (\*.psl) is selected as the type, using the down arrow at right to select the type of file displayed. Your search file appears below in the Name field (the example shows “Item Search” already highlighted).
- d Tap the **file name** (for example, you would tap **Item Search**, shown above), and the file imports automatically. If the import is successful, you are returned to the Item Search window. If unsuccessful, double-check that the format of the file is a plain text file that uses the extension \*.psl. See [“Preparing an Item Search List File” on page 4-17](#) for more details about preparing the file.



- 3 In the Item Search window, the Barcodes field displays the barcodes that will be used in searching for items.

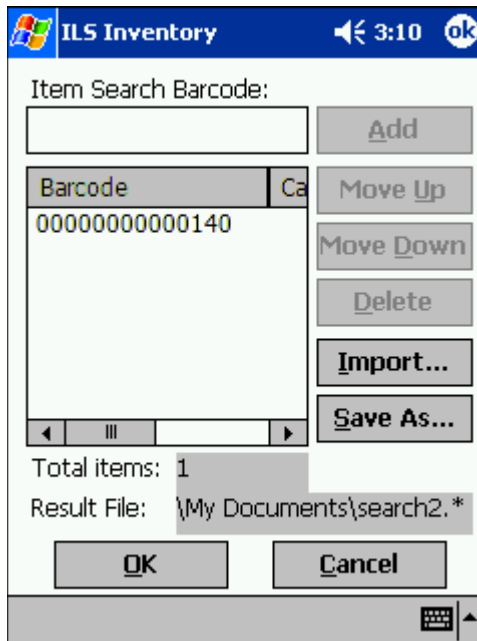


Figure 4.27 Item Search Input

If you need to move or delete a particular barcode, highlight it and select the appropriate action at right.

- 4 Tap **OK**. You see the ILS Inventory window.

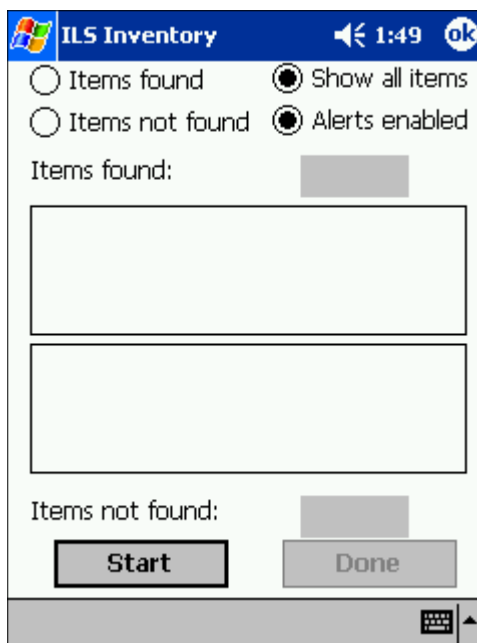


Figure 4.28 Inventory Search

- 5 Tap **Start** to begin your inventory search.

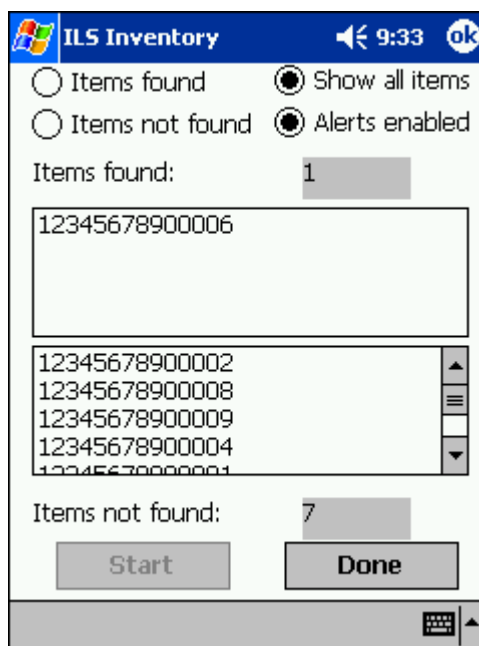
## Scanning for Inventory

There are several ways to view information on the Search Mode window.

- **View 1 - Items Found**  
Indicates all of the barcodes that were found.
- **View 2 - Items Not Found**  
Indicates all of the barcodes that the system has not yet found.
- **View 3 - Show All Items**  
Shows both the Items Found and the Items Not Yet Found. This is the default selection.
- **Alerts Enabled**  
When the Alerts enabled is selected, an alert displays and sound occurs for each item found. The search mechanism stops temporarily, allowing you to locate the item found on the shelf. To disable this feature, tap it.

- 1 Tap a different view at any time to change.
- 2 Use the inventory wand to scan for barcodes, sweeping back and forth. See [“Scanning Books” on page 4-14](#) for a details.

Notice that the barcode display field(s) reflects changes in the status of the search items, depending on the search option you chose. Items found (the field above) are listed as you find them. Items not found (the field below) are removed from the list as you find them.



**Figure 4.29** Item Search window

Notice that the red light on the wand flickers when it finds circulation circuits. It is important to keep the wand focused on the intended inventory items to avoid unwanted data from being collected.



Note: While the red light may flash when the scanner detects any tag, a barcode only displays in the Items found list if it matches an item present in your Search Items list.

- 3 When a barcode is found; the barcode, shelf location, and title of the item (if all configured in your search file) display. Retrieve the item, if necessary, and tap **Continue** to resume the search.

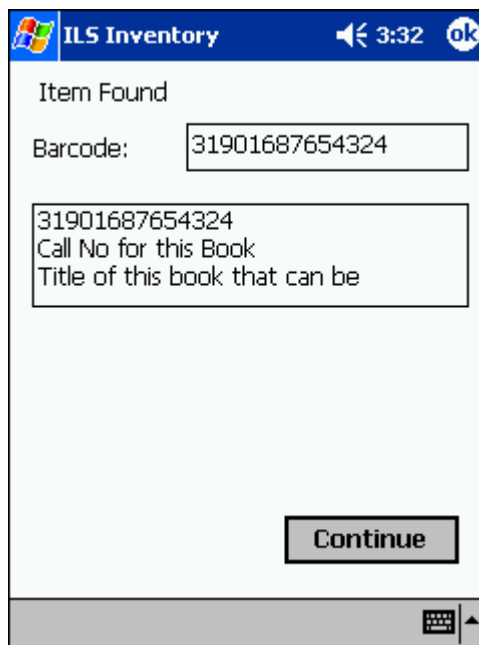


Figure 4.30 Item Found Alert

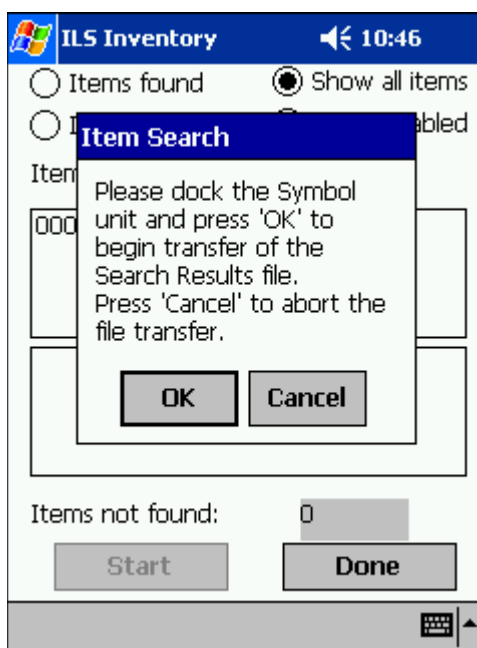
- 4 When finished, tap **Done** at the bottom of the screen. If all of the items are found, an alert window notifies you.



Figure 4.31 All Items Found

- 5 Tap **OK** to continue and the Item Search result files are generated.

A dialog box displays asking you to dock the Portable Data Terminal to transfer the Search Results file.



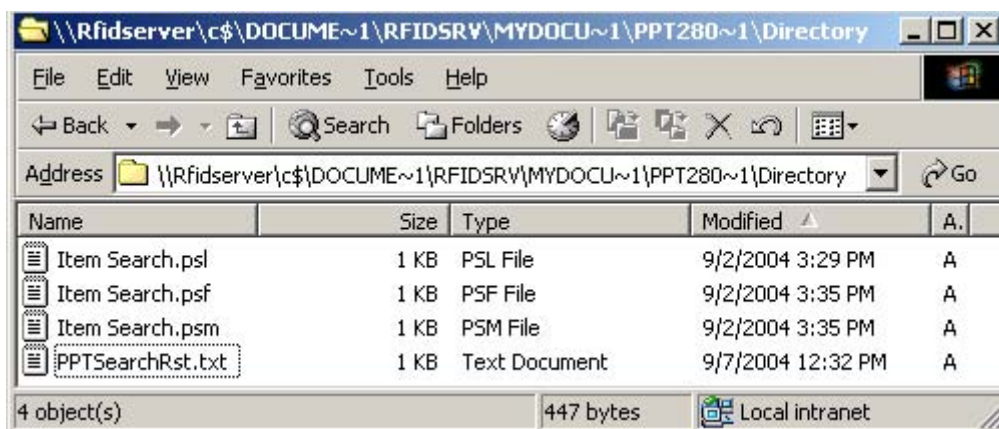
**Figure 4.32** Portable Data Terminal Docking

- 6 Tap **OK** and place the Portable Data Terminal into the docking station to begin the transfer.



Note: In Wireless mode the file transfer is automatic. If you would like to abort the file transfer, tap **Cancel**. You are returned to the Item Search window.

The Search Results files are transferred to the configured directory on the Intelligent Library Controller. Refer to [“Transferring Inventory Data” on page 4-16](#) for details.



**Figure 4.33** Sample search results directory

The “PPTSearchRst.txt” file lists all of the barcodes searched. If a barcode was found, the date and time of the search are listed. If the barcode was not found, the date and time are not listed.

Two additional files are also created to list the items found and the items not found.

- The Items Found file uses the file extension \*.psf.
- The Items Not Found file uses the file extension \*.psm.

These files may be used to perform another search, or may be processed as results of the search on the circulation system.

Every time you upload the results of an Item Search, the search results file “PPTSearchRst.txt” is overwritten with the new data automatically. Thus, if you wish to retain the previous data, save the file elsewhere before synchronizing.

## Conducting Shelf Order Search

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Use Shelf Order Search to verify the contents of a shelf against a shelf order list generated by the Library Management System. Items scanned are compared to the shelf order list to determine if they are in order, not in the list, or not found. This enables verification and sorting of the shelf contents.

### Selecting or Creating a Shelf Order Search File

A Shelf Order Search file is identified by a \*.pso file extension and is transferred from the Intelligent Library Controller to the Portable Data Terminal. To select or create a Shelf Order file:

- 1 Create the file by running a Shelf Order report on the circulation system or by creating a Shelf Order file manually.
- 2 See [“Preparing an Item Search List File” on page 4-17](#) for details on how to format the file, as you configure the file using the exact same methodology as in preparing a Search List file, only you use the “.pso” extension when saving the file.

### Transferring the Shelf Order File

To transfer a Shelf Order file:

- 1 To transfer a shelf order file (or files) from the Intelligent Library Controller to your Portable Data Terminal, place the file (for example, Shelf Order.pso) in the synchronization directory for your Portable Data Terminal. There should be a shortcut to this directory on the desktop of the Intelligent Library Controller.
- 2 Once the file is in the correct location, dock the Portable Data Terminal and the file is automatically transferred.
- 3 Once the file(s) has been transferred, remove the Portable Data Terminal from its cradle.
- 4 If ILS Inventory is not running on your Portable Data Terminal, launch the program by tapping the **Start** button in the upper-left hand corner of the screen, then tap **ILS Inventory**.

## Importing Shelf Order File

To import a Shelf Order file:

- 1 From the main screen of ILS Inventory, tap **Shelf Order**. The Shelf Order window displays.

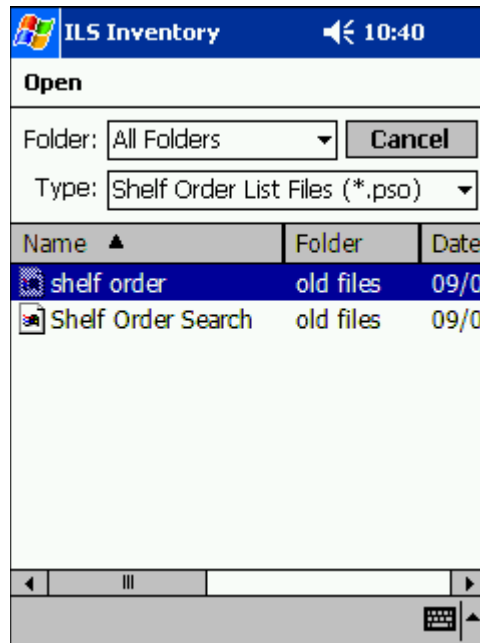


Figure 4.34 Shelf Order Window

- 2 Follow either instruction for importing a shelf order list:
  - a If you are checking a single barcode, you can input the number directly into the Shelf Order Barcode field. Tap **Add** when finished and the barcode number appears below.

The name of the search result file is stated in the Result File field (for example, "sorder1.\*" in the example above) unless you use the Save As to enter a different name. See ["Saving Custom Search Files" on page 4-34](#) for details.

- b If you have created a shelf order search file, tap **Import**. The Import window displays.



**Figure 4.35** Search File Import

- c Ensure that Shelf Order List Files (\*.pso) is selected as the type, using the down arrow at right to select the type of file displayed. Your search file appears below in the Name field (the example shows “shelf order” already highlighted).
- d Tap the **file name** (for example, you would tap **shelf order**, shown above), and the file imports automatically. If the import is successful, you are returned to the Shelf Order Barcode window. If unsuccessful, double-check that the format of the file is a plain text file that uses the extension \*.pso. See [“Preparing an Item Search List File” on page 4-17](#) for more details about preparing the file.

- 3 In the Shelf Order Barcode window, the Barcodes field displays the barcodes that are used in searching for items.

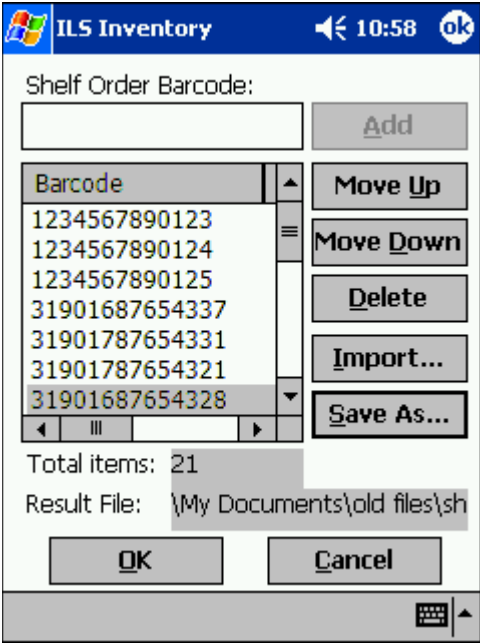


Figure 4.36 Item Search Input

If you need to move or delete a particular barcode, highlight it and select the appropriate action at right.

- 4 Tap **OK**. You are taken to the ILS Inventory window.



Figure 4.37 Shelf Order Start