AS-SERIES | OPERATOR MANUAL

OPEX®

CORPORATION
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SOFTWARE v2.40

From the President of OPEX Corporation

The AS-Series offers an extremely flexible and efficient method to capturing images and data

The AS-Series is OPEX's inaugural line of image scanner devices. Although we have been capturing images of documents and checks with our IEM product for over 10 years, until now we have not had the ability to capture images of various size documents. With the versatility of the AS-Series scanner, the customer has the ability to capture the necessary information in a single touch, eliminating the prep process associated with other scanning devices.

The AS3600i/AS3690i is either mounted to an OPEX Model 51 or Model 60 Rapid Extraction Desk for processing mail from envelope to image. The AS3600t/AS3690t provides a solution for scanning processes that exclude mail or remittance.

Whatever the application, the key to this process is YOU, the AS-Series OPERATOR. We've gone to great lengths to design our equipment to be user friendly, and believe that you will be pleased with the final result.

Thank you for taking the time to familiarize yourself with the contents of this manual. We trust that you will enjoy using the AS-Series scanner and that it will make your job more enjoyable and productive.

Sincerely,

OPEX CORPORATION

Mark Stevens
President/CEO

Table of Contents

Appendix A
Statistics

Glossary

Index

Chapter

Introduction

1

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Sort bins

Touch-screen PC monitor

Printer

PC controller

In-line recognition:
MCR, OCR, BCR,
OMR, thickness detect

Model 51 Rapid Extraction Desk
(optional)

Semi-automatic
document feeder

Drop feeder

Overview

AS-Series systems are high-speed, color scanners that serves to reduce the costs and time involved in processing documents. By scanning paper documents and converting them into electronic files, the AS-Series scanner makes processing mail and other paper documents as simple as pressing a few buttons. In just one step, the system can identify, prepare, capture, orient, read, create an audit trail, and sort your documents for you.

About the AS3690

The AS3690 system can process up to 5400 pieces of mail per hour. It can scan unfolded legal size sheets, envelopes, checks and stubs, to business cards. It will maintain transaction boundaries automatically, indicating the beginning and end of a group of documents in a transaction.

Other features of the AS3690 include:

- PC controller, running Windows XP
- Color 17" LCD display with touch-screen controls
- Duplex scanner up to 300 DPI
- Selectable color drop-out
- Drop feeder with semi-automatic packet feeder
- Front and back audit trail printers
- Double-feed, length, skew, thickness, and envelope detection
- Image enhancement
- In-line recognition of barcodes, magnetic ink character recognition (MICR), optical mark-sense recognition (OMR) and optical character recognition (OCR)
- Six output trays (four fully sortable bins, one thick mail bin, one reject bin)
- Paper size - Maximum 8.5" x 14" (Legal size). Minimum 2" x 3.5"

AS3690 specifications

Speed	Up to 90 pages/minute
Paper & Envelope Specifications	Length: 3.5" to 14"
	Height: 2" to 8.5"
	Thickness: Up to 1/16"
Sound Level	Below 72 dB
Duty Cycle	32,400 pages per day
Operator/Service Clearance	3' all around
Electrical	USA: 120 VAC, 3.5 AMPS, 60 Hz
	EUROPE: 240 VAC, 2 AMPS, 50 Hz

About the AS3600

The AS3600 system can process up to 3600 pieces of mail per hour. It can scan unfolded legal size sheets, envelopes, checks and stubs, to business cards. It will maintain transaction boundaries automatically, indicating the beginning and end of a group of documents in a transaction.

Other features of the AS3600 include:

- PC controller, running Windows XP
- Color 15" LCD display with touch-screen controls
- Duplex scanner up to 300 DPI
- Selectable color drop-out
- Drop feeder with semi-automatic packet feeder
- Front and back audit trail printers
- Double-feed, length, skew, thickness, and envelope detection
- Image enhancement
- In-line recognition of barcodes, magnetic ink character recognition (MICR), optical mark-sense recognition (OMR) and optical character recognition (OCR)
- Six output trays (four fully sortable bins, one thick mail bin, one reject bin)
- Paper size - Maximum 8.5" x 14" (Legal size). Minimum 2" x 3.5"

AS3600 specifications

| Speed	Up to 60 pages/minute
Paper & Envelope Specifications	Length: 3.5" to 14"
	Height: 2" to 8.5"
	Thickness: Up to 1/16"
Sound Level	Below 72 dB
Duty Cycle	25,000 pages per day
Operator/Service Clearance	3' all around
Electrical	USA: 120 VAC, 3.5 AMPS, 60 Hz
	EUROPE: 240 VAC, 2 AMPS, 50 Hz

How the AS-Series Scanners Work

The AS-Series system is controlled by a single, Windows XP Professional driven PC. The operator interacts with the system via the CertainScan software, and simply drops documents onto the drop feeder. The system scans the items based on the current job parameters. The scanner can capture MICR and OCR information, print audit trails on the documents, and sort them to a specified bin.

Software

The scanner uses two software applications which control the system:

INtime Controller The INtime Controller runs in the background of the CertainScan software and controls all machine related functions, such as monitoring sensors, triggering gates, and turning motors on and off. The INtime Controller runs in its own real-time operating system, called INtime. **You do not need to access the INtime controller and should never close the INtime window**.

CertainScan CertainScan interfaces with the Controller and manages the non-machine related functions performed by the scanner. The CertainScan software provides an interface for setting up jobs, page types, and audit trails, and for running jobs. **This is the main interface with the machine**.
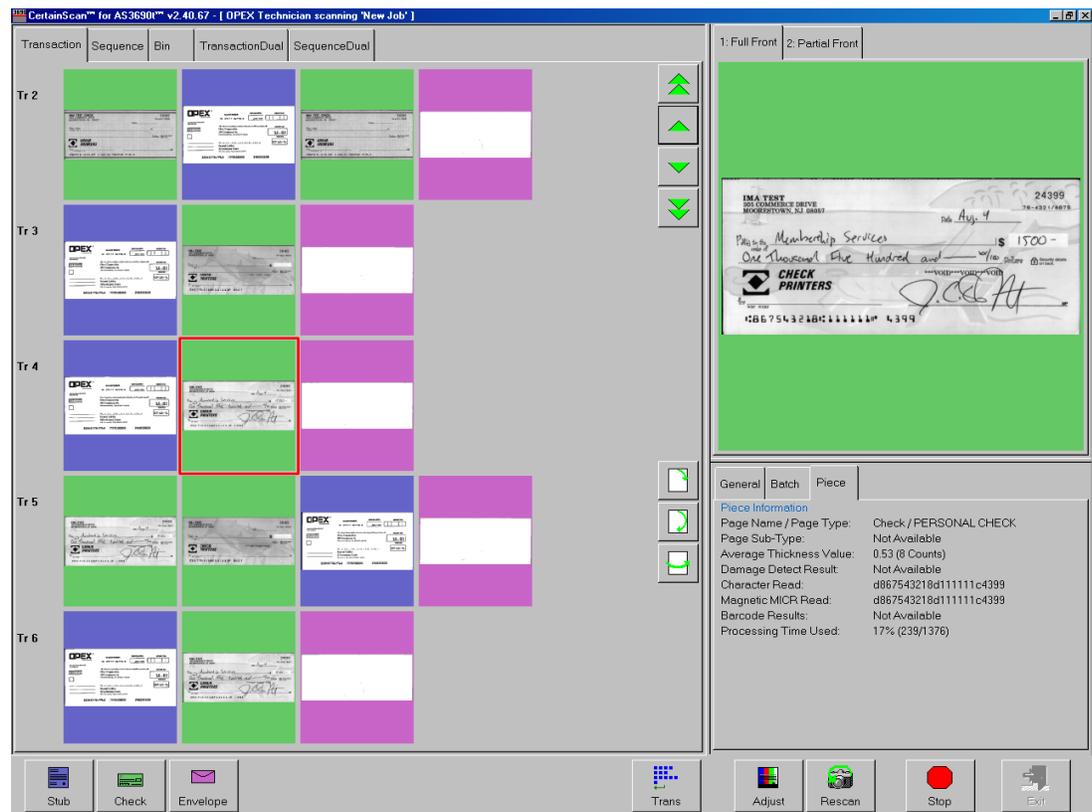
Jobs

A job is a collection of parameters AS-Series scanners use for scanning documents. The jobs you set up allow you to process documents in a similar manner from run to run.

The scanner captures images of documents and stores the information it collects in batches, which consist of one or more transactions. The definition of a transaction can vary from customer to customer, and even from job to job. A transaction may consist of several page types. For example, a check, a stub (or remittance piece), and an envelope.

Structured vs. Unstructured jobs

Structured jobs require you to scan documents in a particular order. For example, when running a structured job, the machine may prompt you to scan a batch ticket first, then a stub, then a check, and/or another document, and finally an envelope to signify the end of the transaction. If a page type is scanned out of sequence or if the system is expecting a certain page type, the system will alert you.

In an unstructured job, you can scan any of the expected page types in any sequence. The only restriction is that the transaction boundary, in most cases an envelope, is scanned last in the transaction. The transaction boundary tells the system the current transaction is complete and the next transaction will begin.

Page types

The term "page type" is used to specify a collection of criteria that a piece must meet to be classified as a certain type of document; i.e., length, height, barcode, mark detect, MICR, etc. The system uses the page type parameters set up by your System Administrator to classify documents that come into the system. When the scanner processes documents in a job, it gathers data (such as length and width) on each item and compares the item to the page types you have designated for that job. This is how the system identifies each document scanned into the system. The system then collects the appropriate data from the document and sorts it according to the current job parameters.

Chapter

Operating the System

2

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Overview

Chapter 2: "Operating the System" provides basic information on how to process documents with the AS-Series scanner. Refer to Chapter 2 for safety precautions, user interface information, and how to run the machine.

NOTE: This manual describes operation of the AS-Series scanner. If you have a Model 51 or Model 60 Rapid Extraction Desk installed, refer to the RED Operator Guide before proceeding with this manual.

Safety precautions

Follow these safety precautions to avoid injury when operating the scanner. Failure to follow these precautions may result in severe personal injury or damage to the machine.

- **Be careful when working with AC power.** Electrical wiring can be hot any time the machine is plugged in. Failure to use caution may result in electric shock or death.

- **Do not set liquids (such as drinks) on the scanner that could spill into the machine.**

- **Keep loose objects away from any exposed, moving parts of the machine.** The moving parts of the scanner can become jammed and/or damaged by foreign objects. Also, keep hands, hair, loose clothing or jewelry away from the moving parts.

- **Do not lift the feeder arm while the machine is running.**

- **Do not attempt to clean the machine while it is running.** A cloth (or similar material) should never be used to clean moving parts such as belts or rollers. The use of such material on moving mechanisms can result in damage to the machine or severe personal injury.

- **Do not use flammable, high pressure, "canned air" to clean paper scraps and dust from the machine.**

- **Do not move the machine while the power is on.** Unplug the machine from the power source first.

Ergonomics

As in any occupation which requires you to perform the same motion repeatedly during the course of you work, it is important to consider how you perform your task. Always use proper operating procedures when operating the scanner. Follow the directions for using and adjusting your chair and scanner. Using improper procedure can result in a potentially serious injury. The AS-Series scanner has been designed for safe operation by over 95% of the user population. Operation by individuals with limited reach capability or who cannot follow the suggestions listed should be avoided or limited in duration.

To reduce possible risks, we strongly urge you to follow these suggestions:

- Maintain an upright body posture. Avoid the tendency to slump in your chair. The angle between your torso and thighs should always be close to 90 degrees.

- Adjust the seat height on your chair or the height of the scanner so that your elbow is approximately even with the top of the work surface when your arms are near your sides and your feet are flat on the floor. If this cannot be achieved with normal chair and scanner adjustments, a footrest for shorter operators or scanner leg extensions for taller operators should be used.

- Adjust your chair position to allow your torso to touch the front edge of the scanner work surface. Chairs with arm rests that prevent this body position should not be used.

- If the touch screen is used frequently during processing, adjust the touch screen position to minimize your reach movements to the frequently touched areas.

- Your position should allow you to comfortably reach the frequent work pick-up area(s) and the frequently touched areas of the screen without extending either arm fully or changing your posture.

- Occasionally change the angle of your posture and, if possible, vary your tasks to create short breaks from the most repetitive motions.

- If possible, avoid operating the machine for longer than a single 8-hour shift.

While no suggestions can guarantee completely against work-related injuries, you will certainly increase your comfort and safety while operating the AS-Series if you put these suggestions into practice. The AS-Series scanner has been designed with you in mind. If it is operated correctly, you should find your work experience comfortable and enjoyable.

Main controls and system components

The list below describes many of the controls and components of the AS-Series scanner. Refer to Figure 1 on page 2-4.

Main power switch   The main power switch is located on the electrical box under the stacker bins as shown in Figure 1. This is the main "on/off" switch for the AS-Series system. For more info on turning the AS-Series system on and off, see page 2-5.

UPS (Uninterrupted Power Supply)   The APC UPS provides backup battery power to the AS-Series PC to complete transactions or save work should the site's AC power supply be interrupted.

Touchscreen monitor   Use the monitor to log in and out of the AS-Series system. The monitor's touchscreen controls should be used to operate the system and run jobs.

Keyboard/mouse   Typically, the keyboard and mouse are only used for setting up jobs and for use with other software. Use the touchscreen monitor for running jobs and operating the machine.

KeyAssist keypad   Perform many of the common Run screen functions with the keypad as an alternative to touching the monitor. The KeyAssist keypad is an option and may or may not be installed on your system.

IdAssist indicator   The blue IdAssist indicator LED will light up when running a job that includes IdAssist. Also, when the operator triggers IdAssist the LED will go out briefly, indicating to the operator that IdAssist has been activated.

Conveyor   Place documents onto the drop feeder for scanning into the AS-Series system.

Retard pad switch   Engage and disengage the retard pad. The retard pad allows you to drop small stacks of documents (up to 1/8") onto the conveyor and scan them into the system.

Audit trail printers   The audit trail printers are located behind the sort bins. Audit trails can be applied to the front and/or back of each scanned document.

Sort bins   Scanned documents are sorted into one of six selectable output bins.
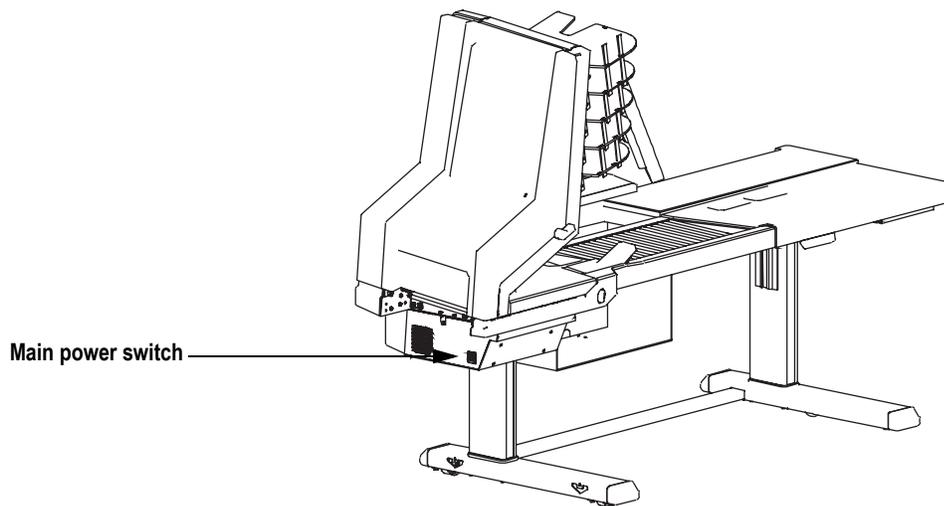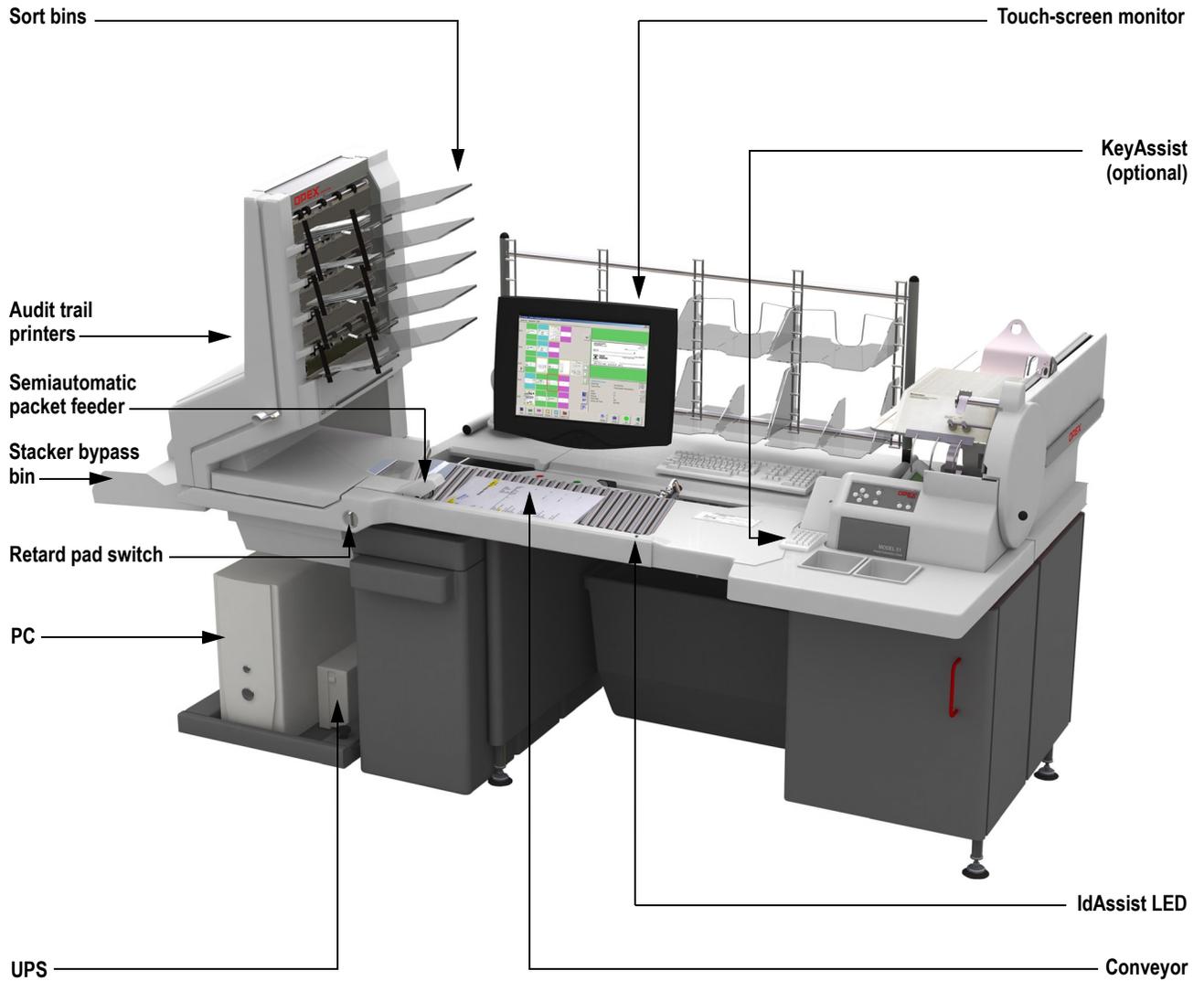
Sort bins

Touch-screen monitor

KeyAssist
(optional)

Audit trail
printers

Semiautomatic
packet feeder

Stacker bypass
bin

Retard pad switch

PC

IdAssist LED

UPS

Conveyor

Main power switch

FIGURE 1:   Main controls and components

Getting Started

Power up the system:

If the scanner is not already up and running, turn on the power:

1 Turn on the main power switch (see Figure 1).

2 Press the power button on the UPS. The monitor will turn on and the computer will begin to boot up.

3 Log in to Windows with your Windows/network user name and password. If your scanner is not connected to a network, you may not have to log in to Windows first. Proceed to step 4.

Once the computer has finished booting Windows, it will launch the AS-Series CertainScan application.

NOTE: If you mistakenly close CertainScan, double-click the icon on the desktop to start it again (the AS3690i/AS3690t icon is shown below).

Log in to the system:

4 On the vertical menu bar, select the icon for your user account.

NOTE: If you do not have your own user account, ask your AS-Series Administrator for assistance.
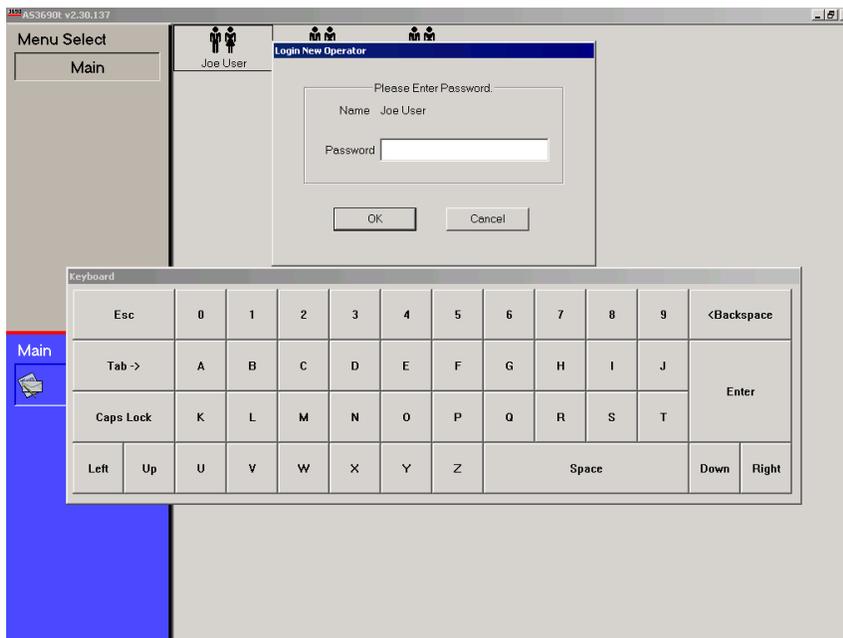
FIGURE 2: Login screen

5 Enter your password via the on-screen keyboard or computer keyboard. Press **OK**.

Navigating CertainScan

Use CertainScan to set up and process jobs on the AS-Series system. The CertainScan interface consists of:

Title bar   The title bar displays the name of the current operator and other pertinent information. Click the AS-Series icon in the title bar to access the Windows functions (Restore, Move, Size, Minimize, Maximize, Close), as well as the following menus:

- The **Diagnostics** menu contains the AS-Series system options. These options are used by OPEX technicians to evaluate system performance.
- The **Help** menu accesses the About screen, which provides version information for the CertainScan software.

Menu bar   The vertical menu bar provides access to the main system functions. Select a category from the menu bar and make selections from the main window or the menu options bar.

Menu options   The menu options provide subcategories for the selections in the menu bar. The menu options bar will change based on the current menu bar selection.

Main window   View and adjust settings and parameters in the main window.
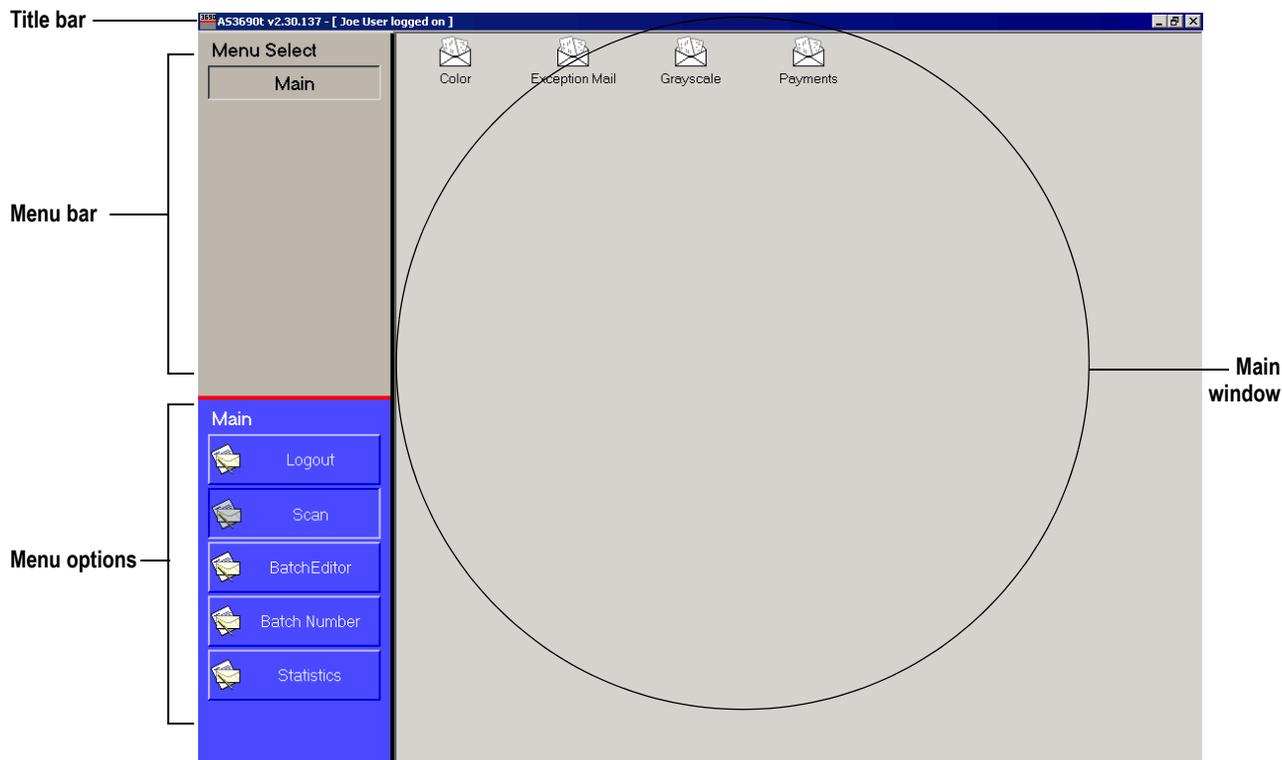

FIGURE 3:   CertainScan interface

Running Jobs

Now that you have logged into the system and taken some time to familiarize yourself with the main controls and components, you are ready to begin operating the machine. This section will give you a general outline of how to use CertainScan to process documents.

Select a job:

1 Select **Main** in the menu bar.

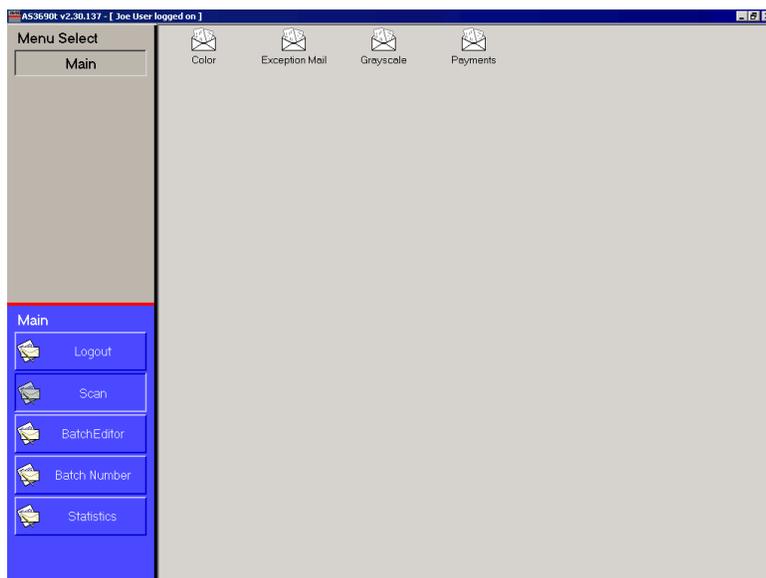**2** Select the icon for the job you want to run.

FIGURE 4: Main screen

NOTE: Depending on how the job is set up, the Batch Information screen may appear. Use the Batch Information screen to select a "received" date, a "processed" date, and the type of batch you want to run.
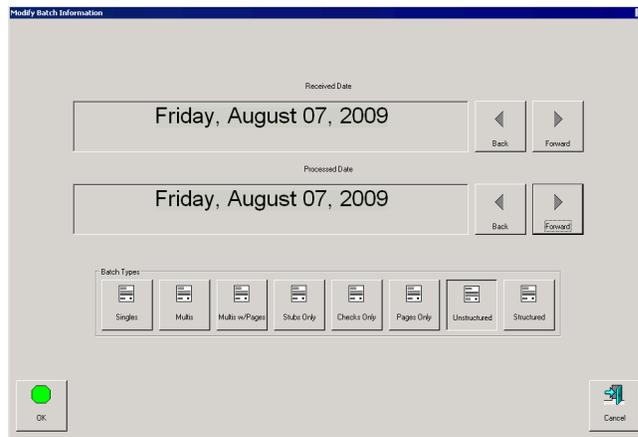

FIGURE 5: Batch information screen

Using the Run screen

The Run screen will appear after you select a job. This is the main screen you will use for scanning documents.
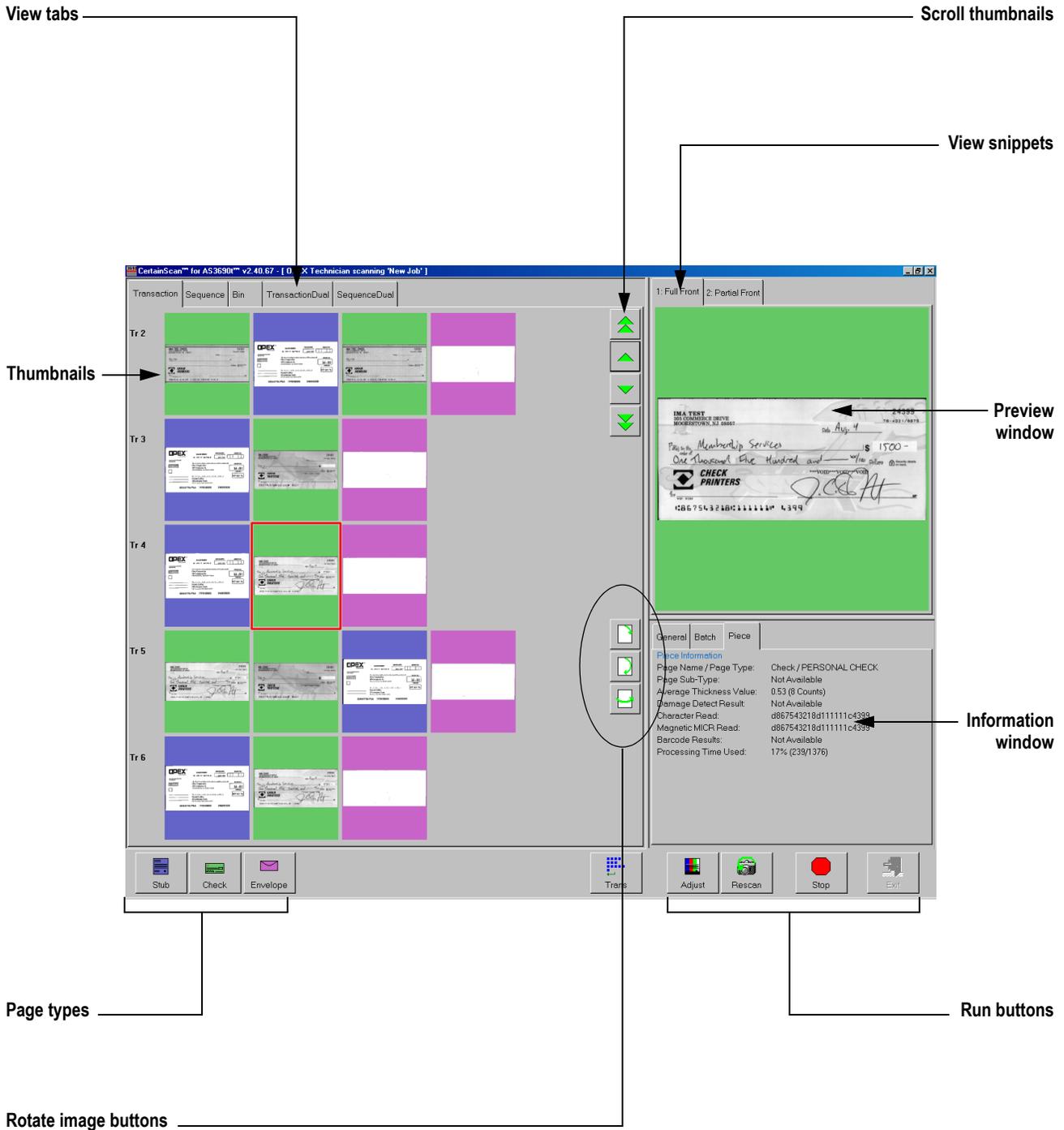

FIGURE 6:   Run screen

Run screen buttons

|	
Go	Press **Go** to start the scanner.
Stub	The **Page Type** buttons allow the operator to designate the page type of the next document. The **Page Type** buttons will only be available if they have been activated in the general page type parameters. See "Assigning a page type" on page 2-21 for more information.
	Rotate the image of the selected document. Use the three buttons to rotate the image front-to-back, top-to-bottom, or 90°. These buttons will only be available if activated as described in "General page type parameters" on page A-2.
Adjust	**Adjust** the settings in the Capture Parameters window to enhance the quality of the output images. See "Adjusting image quality" on page 2-23.
Rescan	Press a **Rescan** button to replace a previously scanned image with a new one. See "Rescanning documents" on page 2-23 for more information.
Delete	**Delete** a document from the batch. This is only available when the machine is stopped. See "Deleting documents from the batch" on page 2-24.
Void Item	**Void** the selected document or transaction. The **Void** buttons are only available if activated in the batch parameters as described on page A-40. See "Voiding documents and transactions" on page 2-25 for more information.
Trans	End the current **Transaction**. This button will only be available if it has been activated in the batch parameters. See page A-32 for more information.
New Batch	Start a **New Batch**. This button will only be available if it has been activated in the batch parameters. See page A-40 for more information.
Action	Press the **Action** button to access the **Rescan**, **New Batch**, and **Void** buttons. The **Action** button only appears if two or more of these buttons (**Rescan**, **New Batch**, **Void**) are enabled.
Stop	**Stop** the machine. This does not end the current batch or transaction.
Close	**Close** the current batch.
Exit	**Exit** the current job and close the Run screen.

Run screen views

The tabs near the top of the Run screen change how the thumbnails are arranged. You can view the thumbnails by transaction, by the order each piece was scanned (sequence) or by the bin the piece was sorted to. You can select one of the dual transaction or sequence views, which display two thumbnails for each piece.

NOTE: The dual transaction and dual sequence views will only work properly if the page types in your job are set up to include a "secondary" thumbnail. See page A-3 for more details.
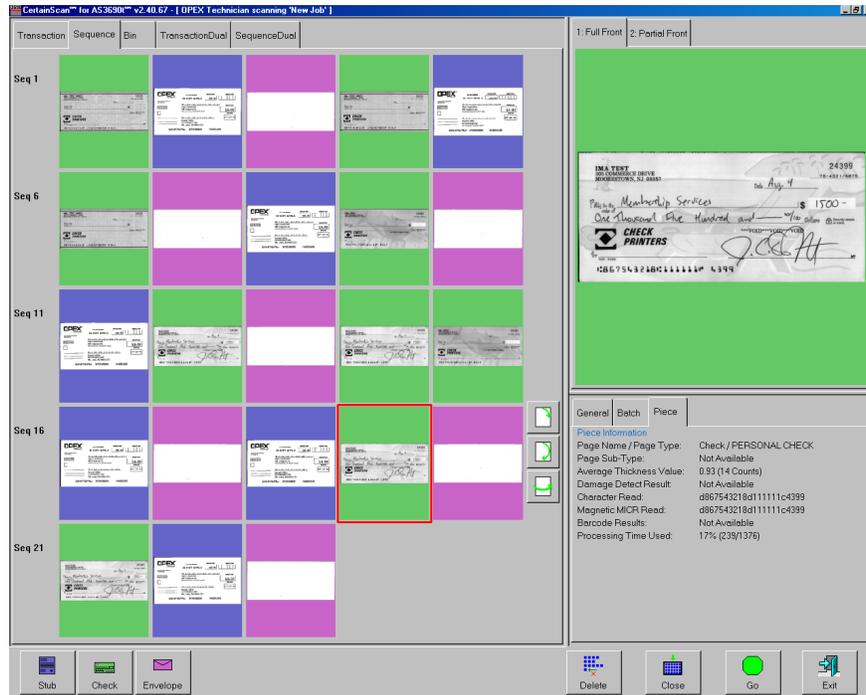
Transaction view

The transaction view groups thumbnails by transaction. All of the pieces in a transaction are displayed in a single row from left to right in the order they were scanned. One thumbnail is displayed for each piece.
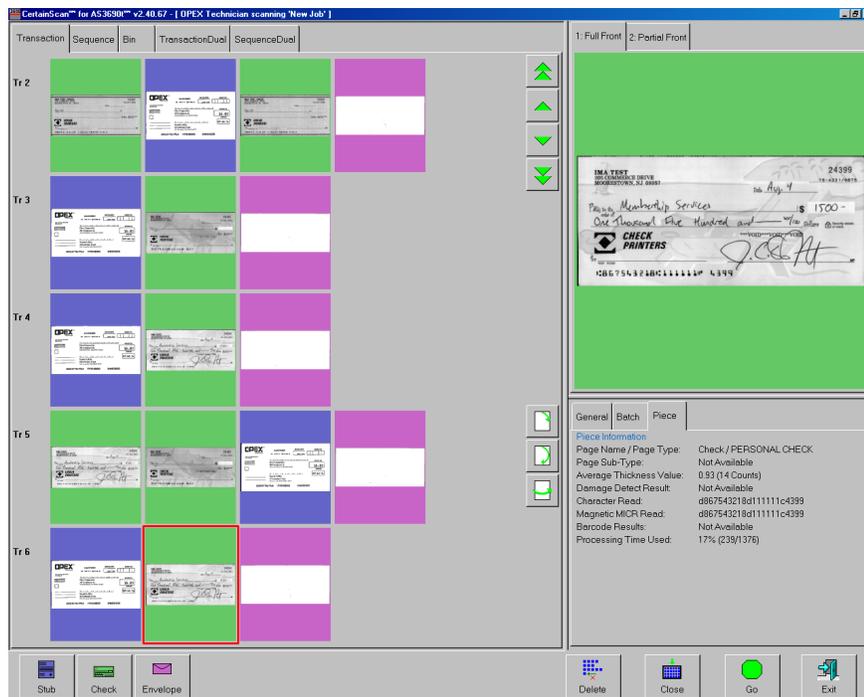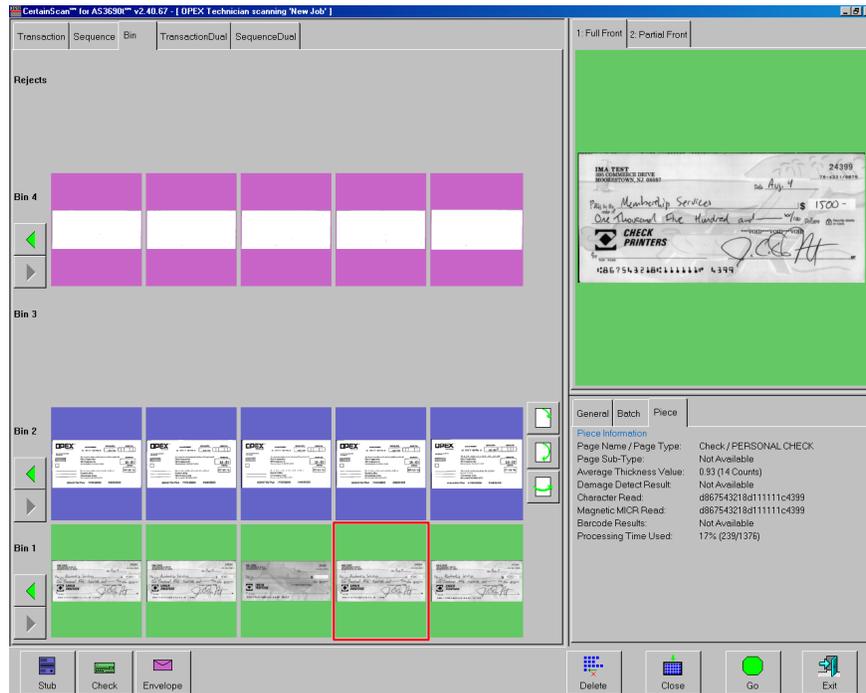
Sequence view

The sequence view displays all of the pieces in the order they were scanned from left to right. A new row will start after the fifth piece.

Bin view

The bin view arranges the thumbnails by the bin they were sorted to.

Dual transaction view

The dual transaction view shows 2 thumbnails for each piece, grouped by transaction. The first row will show one snippet; the following row will show the other.

Transaction 3

Transaction 4

Dual sequence view

The dual sequence view shows 2 thumbnails for each piece, grouped by the order they were scanned.

Each piece is displayed on two rows, one for each snippet

Information window

The Information window is in the lower right corner of the Run screen. Select the tabs in the Information window to display the following:

The **General Information** tab displays job information such as the start time and operator name. The General Information will not change depending on the document.

The **Piece Information** tab provides information about the selected thumbnail. Piece information may include the bin the piece was sorted to, size dimensions, and page type.

Batch Information includes data such as the transaction number, pages in the batch, and the date and time the batch was created, received, and processed.

The **Printer** tab (not shown) provides information on the status of the ink jet audit trail printers. Check the printer tab if audit trails are not printing correctly.

NOTE: Touch or click in the Information window to bring up the detailed view.

General Information

Start Date Displays the date before pressing **Go**, displays the time after
Type of Run Default job setting or selected by operator at the start of the batch
Input Total pages scanned during the current run
Output Total pages to be saved in the batch
Rejects Pieces that have been rejected during the current run
Feed Rate Pages/hour
Active Job Time Total time for the current run

```
General | Batch | Piece

General Information
Start Date:            Jul 20, 2009 09:48:59 AM
Type of Run:           Unstructured Transactions

Input:                 24
Output:                23
Rejects:               1
Feed Rate:             336
Active Job Time:       00:05:56
```

Piece Information

Page Name/Page Type Selected in Job Setup
Page Sub-Type Page type sub-category (if available for current page type)
Average Thickness Value Thickness of the piece as determined by the system
Damage Detect Results Indicator for whether damage was found on the piece
Character Read Combined results of magnetic and optical MICR reads
Barcode Results Up to 3 per page
Processing Time Used Time used for each piece

```
General | Batch | Piece

Piece Information
Page Name / Page Type:    OPEX Stub / STUB
Page Sub-Type:            Not Available
Average Thickness Value:  0.87 (13 Counts)
Damage Detect Result:     Not Available
Character Read:           5054577069968 1970030000    348001500
Barcode Results:          08057423305
Processing Time Used:     10% (129/1197)
```

Batch Information

Batch File Format How the system stores batch information
Batch Number System assigned or from a batch ticket
Batch Sequence Number System assigns to each page scanned
Scan Sequence Number Each page scanned is tracked even if it is later deleted
Pages in Batch System assigned
Batch Creation Date Date (and time) the batch was created
Batch Received Date System assigned or selected by operator at batch start
Batch Processing Date System assigned or selected by operator at batch start

```
General | Batch | Piece

Batch Information
Batch File Format:        ODI (ASCII) v01.30
Batch Number:             000145
Batch Sequence Number:    16
Scan Sequence Number:     16
Pages in Batch:           23
Batch Creation Date:      7/20/2009 9:49:12 AM
Batch Received Date:      8/3/2009
Batch Processed Date:     8/3/2009
```

Preview/Zoom windows

The Preview window provides a large image of a scanned document. View an image in the Preview window by selecting its thumbnail.

Touch the image in the Preview window to open the Zoom screen, where you can enlarge or reduce the image and view any associated snippets.

NOTE: Touch the screen at another center point to re-center the zoom. You can re-center the zoom before or after enlarging or reducing the image.
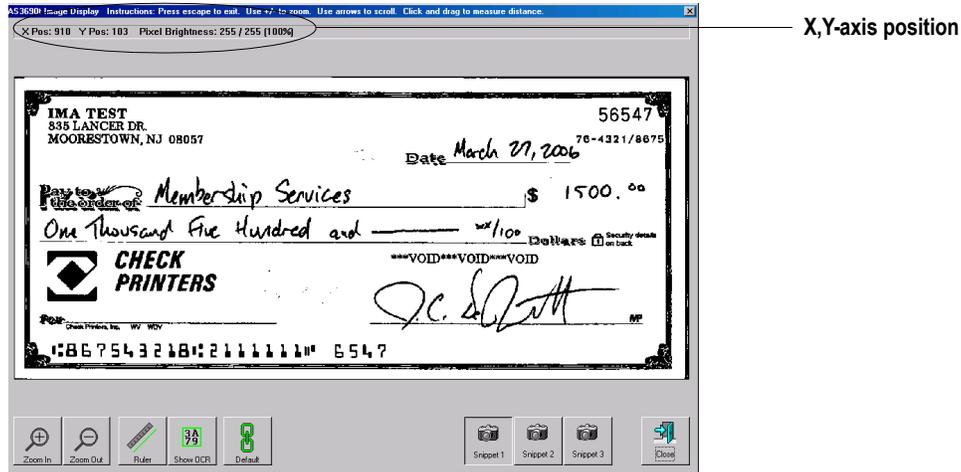
FIGURE 7: Zoom screen

Zoom In	The **Zoom In** and **Zoom Out** buttons enlarge and reduce the image in the Zoom screen. Re-center the zoom by touching the new center on the monitor or use the mouse. You can also use the + and - keys on the keyboard to zoom in and out.
Ruler	Use the **Ruler** function to measure distance from one place to another on the image. Use the mouse to click the Ruler button, then click and hold the left mouse button on one location while you drag the cursor to the other location. Notice that as you move the cursor from place to place, its exact position is indicated in the field as noted in Figure 7.
Show OCR	Display the designated scan area for the OCR lines.
Default	Make this image the **Default** for this page type.
Snippet 1	View any **Snippets** associated with the image. The snippets the system captures are set up in the Page Type Parameters.
Close	**Close** the Zoom window.

Press the **Snippet #** buttons to view the snippets associated with the selected page type. For example, if you are scanning checks, your system may be set up to capture images of specific parts of the check, such as the back of the check or the CAR region.

Press Snippet 1 to view the entire front image of the check

Press Snippet 2 to view the entire back image of the check

Press Snippet 3 to view the CAR region
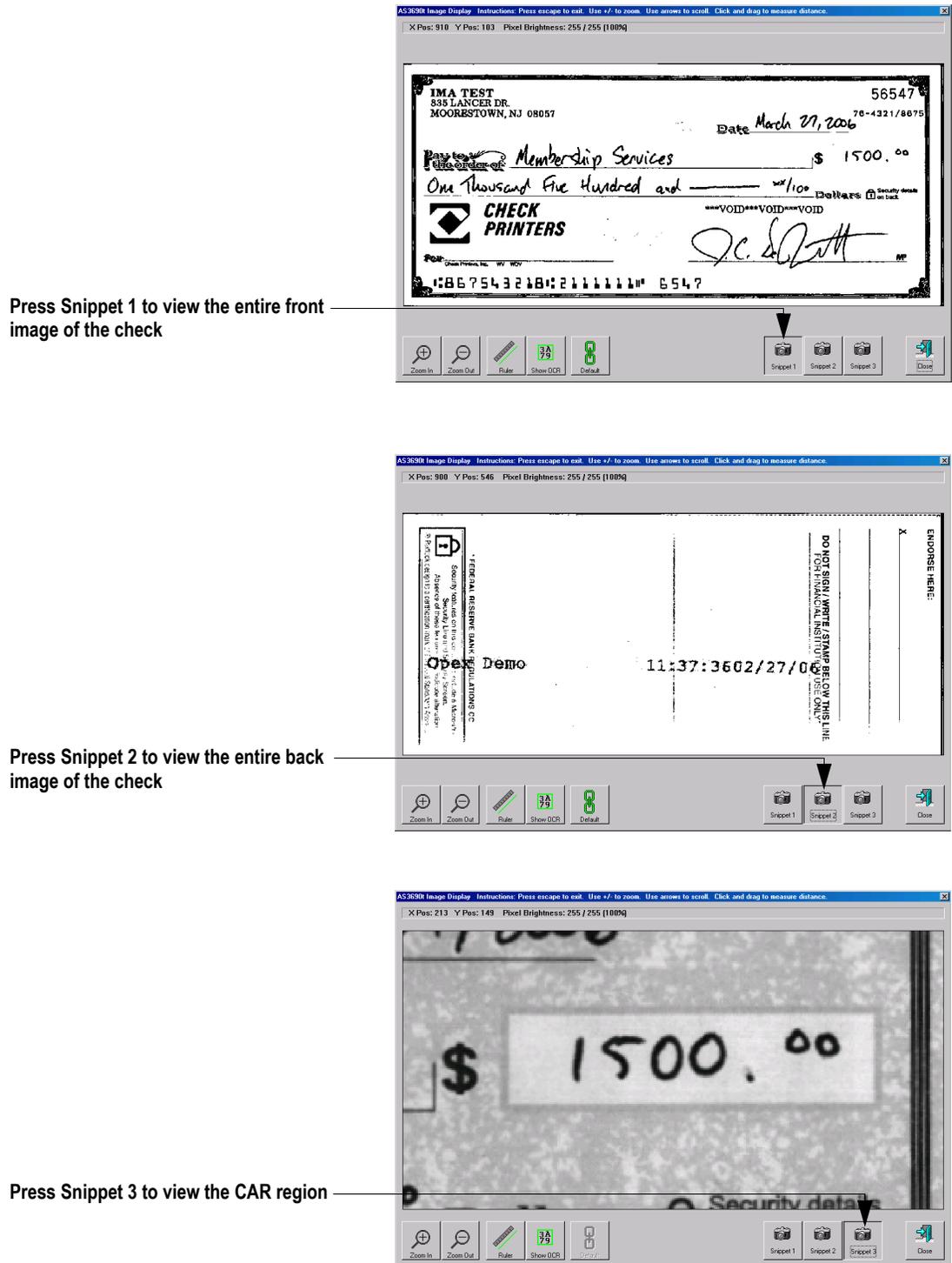
FIGURE 8: Viewing snippets

Scanning documents

After you have selected a job, you are ready to scan documents.

1 Press **Go** on the Run screen.

2 Set the retard pad switch to the desired position. To send a small stack of documents through the scanner at once, engage the retard pad switch. To send thicker documents through one at a time, set the switch to the Off position as shown in Figure 9.

> **NOTE:** When engaged, the retard pad will separate each page on the stack. The top sheet of the stack must be the first page to reach the retard pad. This will prevent pages feeding out of order or possibly jamming the feeder.

> **NOTE:** Turn the retard pad off to feed torn or damaged documents.

Retard pad is off
in this position
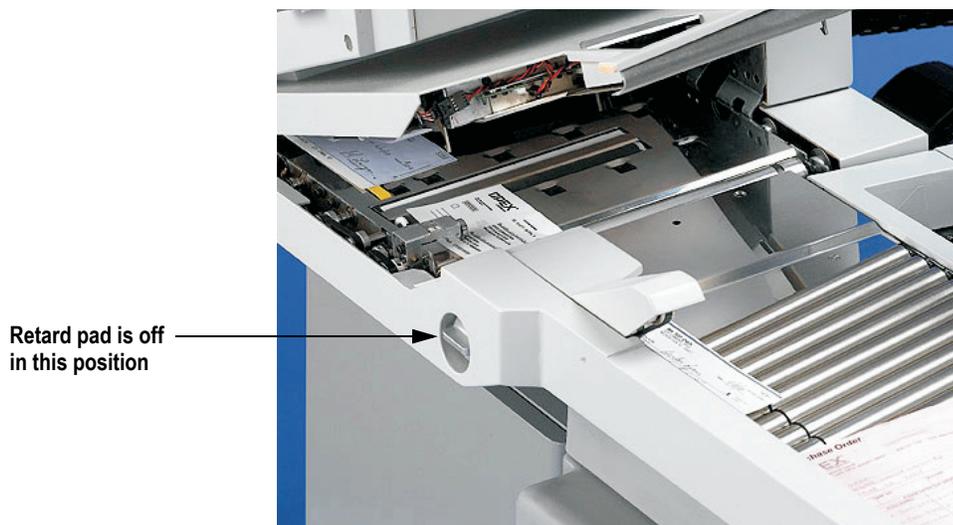
FIGURE 9: Adjust the retard pad switch

3 Place the first document onto the conveyor as shown in Figure 10.

Drop documents here
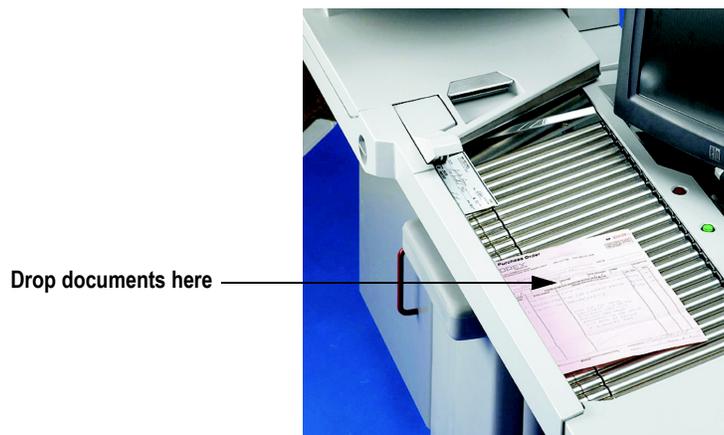
FIGURE 10: Ideal drop area

The system will scan the document and place a thumbnail of the image in the transaction window. A large image of the document will appear in the Preview window. In this example, the system recognizes 8.5 × 11 sheets of paper as belonging to the "Portrait" page type. This is the default for any page of this size which contains no other significant identifier (such as a barcode or MICR line).
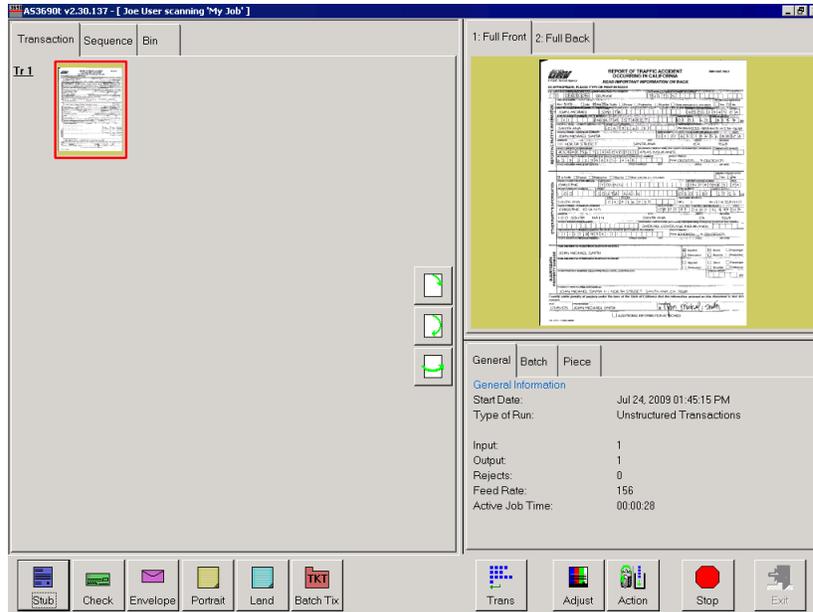
4 Place the next document you want to scan onto the conveyor. In this example, the document is a check. The system recognizes the check by the presence of a MICR line at the bottom.
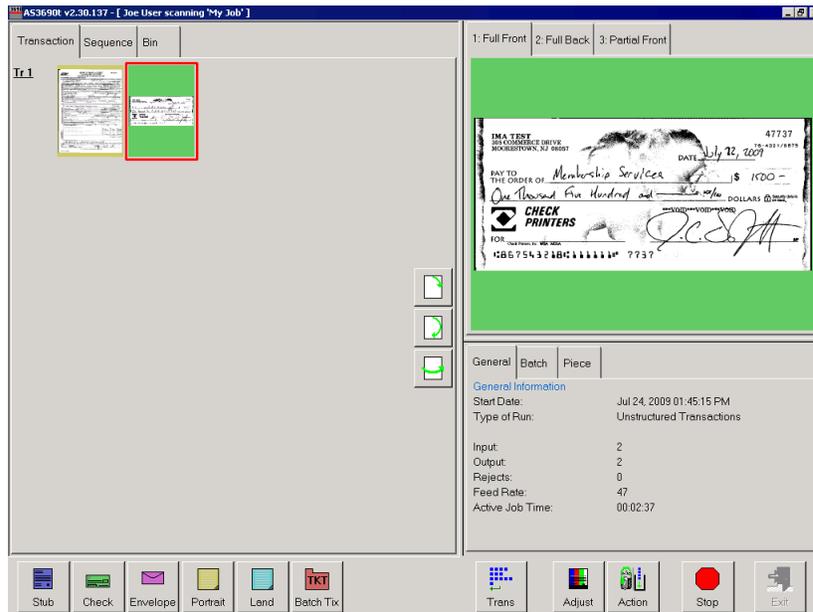
5 Place an envelope onto the conveyor. The system will recognize the document as an envelope. In this example, an envelope is set up as the transaction boundary and ends the current transaction.
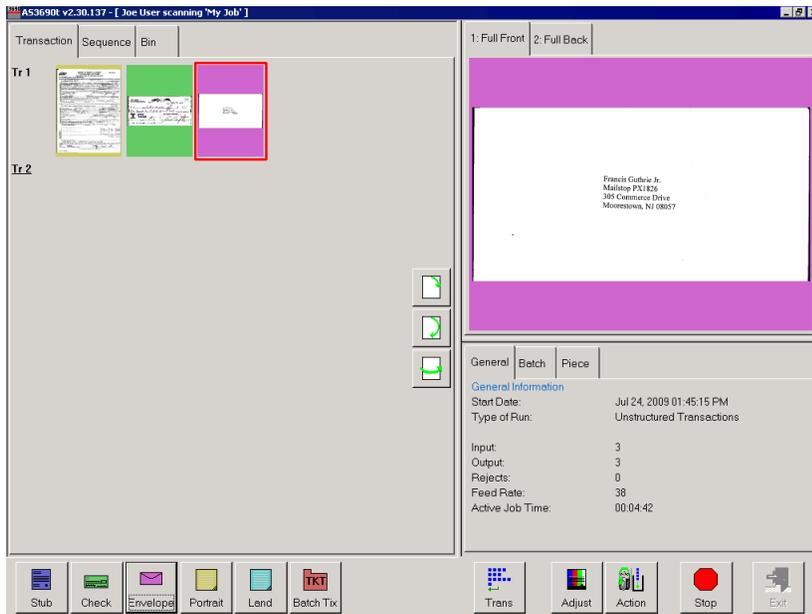
The next document scanned (in this example, another check) will start a new transaction.
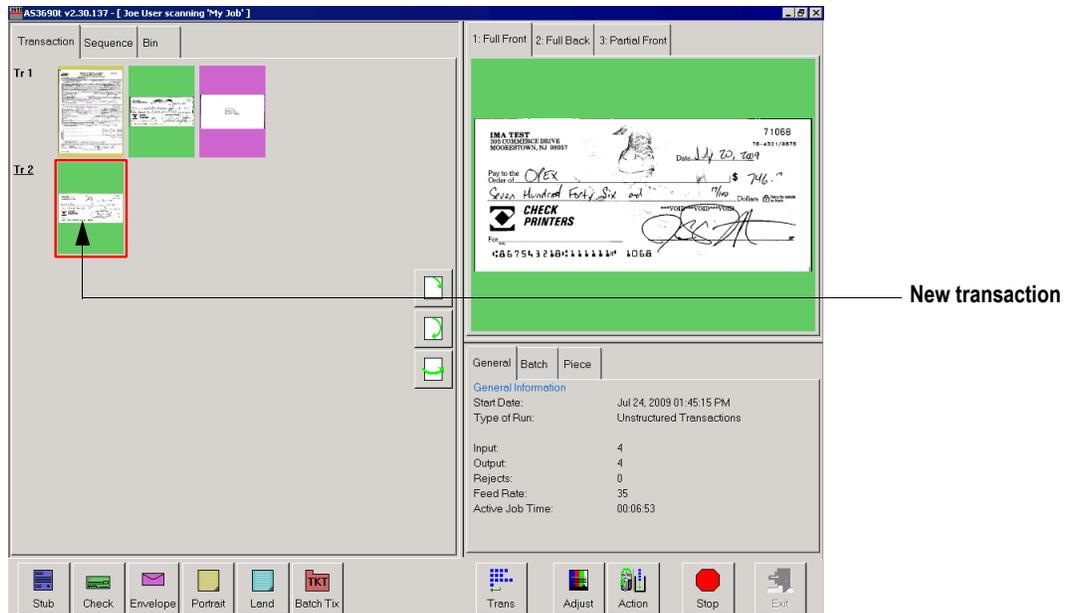
6 Continue to place your documents onto the conveyor. The system will scan and sort the documents depending on the current job's settings.

NOTE: Unfold any folded pages so they lay flat on the conveyor. Folded pages will not be scanned correctly and may jam the system.

NOTE: Feed documents with the correct side up. When searching for/reading MICR lines, OCR lines, and mark boxes, the scanner will assume the documents are being fed face up, with the bottom edge towards you.

As the scanner processes documents, check to make sure:

- Documents are being scanned properly.
- All critical information (MICR line, OCR line, etc.) is being collected properly.
- Documents are being sorted to the correct bin.

Scanning tips

Make use of these techniques for properly handling paper and feeding documents:

- Make sure documents are unfolded and place them on the conveyor directly in front of the point of extraction. This will give the machine a chance to justify each page dropped against the common edge and will assist in deskewing the document before it reaches the feeder. For maximum effect, the paper should be unfolded so that it is flat and makes contact with the conveyor rollers and feed rings.

- Packets of paper (2-20+ sheets of paper) can be placed on the conveyor. The conveyor rollers will carry the packet over to the packet feeder where the top piece will be singulated from the top of the stack and fed into the scanner. The feeder will continue to pull the top page from the stack until the last page is fed. The retard pad switch needs to be engaged for the feeder to perform separation. However, if documents are torn or damaged, they may be damaged further with the retard pad engaged.

Since the feeder pulls from the top of the stack, the lead sheet in the stack must be the first to reach the feeder. If the bottom piece reaches the feeder first, a paper misfeed is likely to occur. There are techniques for learning to drop packets of paper consistently and effectively. The documents do not have to be perfectly

aligned as long as the lead sheet is the top sheet. Review these techniques with your AS-Series Administrator or your OPEX Technician or Sales Engineer.

Feed Direction

CORRECT
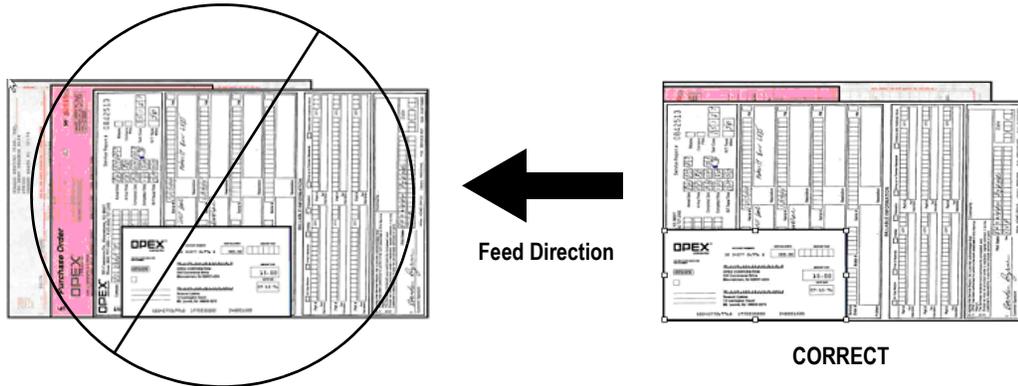
- The Drag Finger can be used to help create drag on paper larger then 8" wide. This helps prevent pages from skewing when positioned in front of the feeder. This flexible piece of rubber will improve performance when feeding packets of paper. The finger can also be depressed to move it out of the paper path, if necessary.

- Checks and remits should be dropped in the same orientation as if you were reading them. Other landscape pages can also be automatically detected if their page width or height is unique.

Assigning a page type

You can manually assign a page type to a document by pressing the appropriate page type button. These buttons are only available if they have been activated in the current job. Press a page type button to assign the page type to the next document you scan.

FIGURE 11: Sample page type buttons (unstructured job)

NOTE: Depending on the job's settings, you may have to assign a page type to some (or all) documents you scan. In this case, the page type button will stay depressed until you click another button, and the system will process each document as this page type.

In a structured job, the page type buttons will also indicate which page types the system expects to see next. For example, if the job expects to see either a batch ticket or a stub to start a transaction, their corresponding page type buttons will appear in color (as shown in Figure 12).
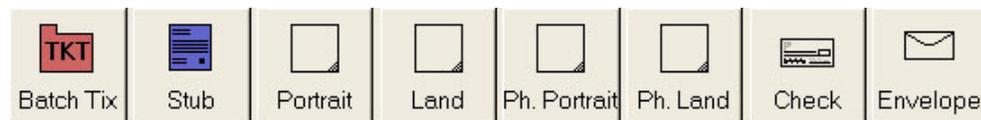
FIGURE 12: Sample page type buttons (structured job)

Page type locking

Depending on the job setup, the operator may also have the ability to apply a page type override to several documents. With page type locking enabled, the operator can press the page type button twice and "lock" the page type button down. Once the button is "locked," all the subsequent pieces will be classified as this page type until the end of the transaction or when the lock is released.

A red box around a page type button indicates that the lock is in place.

FIGURE 13: "Locked" page type button

Assigning page sub-types

If one or more of the page types in the current job also contain sub-types, you must assign the document a sub-type **before** scanning it into the system. To assign a page sub-type:

1 While running a job, press the appropriate page type button. For example, if you are scanning cash into the system, press the **Cash** page type button.

2 Select from the available page sub-types.
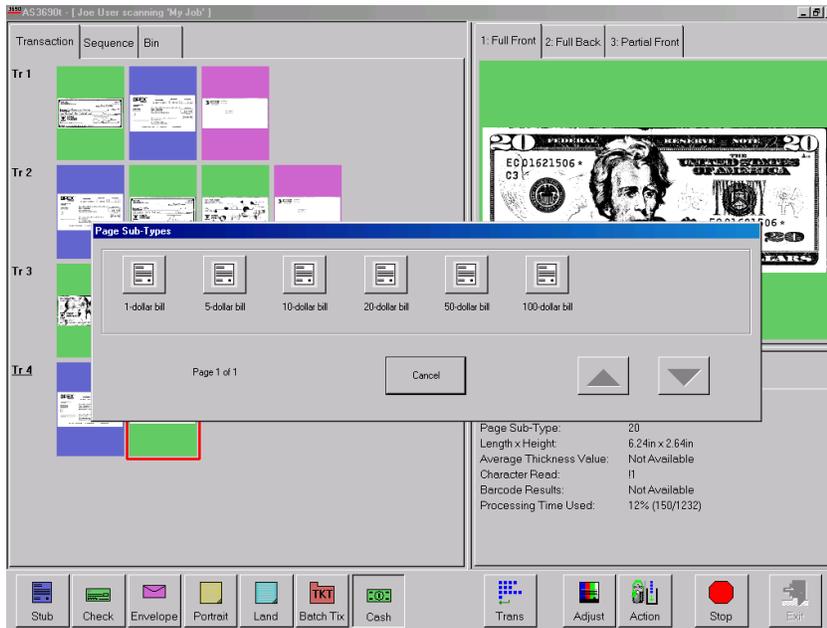
FIGURE 14: Assigning a page sub-type

3 Scan the document.

NOTE: If you do not assign a page sub-type before you scan an eligible document, the system will assign the default page sub-type to the document. For example, if you are scanning cash and you have the 1-dollar bill set up as the default, all the cash you scan will be classified as 1-dollar bills unless you assign another sub-type as described.

Adjusting image quality

Fine-tune the quality of the document images by pressing **Adjust** on the Run screen. The Adjust Capture Parameters screen will appear, where you can modify the brightness and dropout colors for the images.
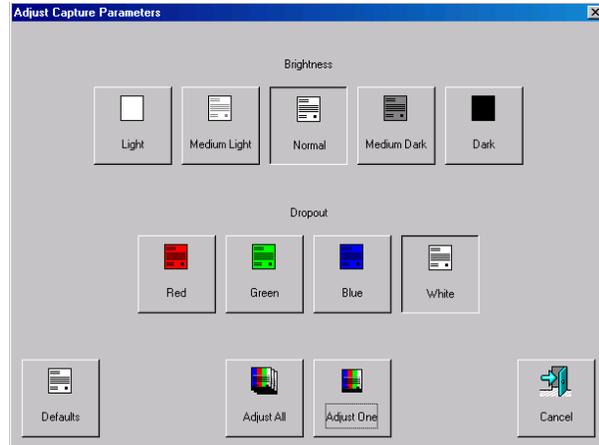
Table 1 describes the Adjust Capture Parameters screen buttons.

TABLE 1: Adjust Capture Parameters screen buttons

Brightness	Adjust the brightness of the document images from **Light** to **Dark**. Press a button to adjust the brightness. The default is **Normal**.
Dropout	Remove a dropout color (**Red**, **Green**, **Blue**, or **White**) from the document image. The color you select will appear as white. The default is **White**. **NOTE:** To use this feature, the documents must be printed with a specific dropout color.
Adjust All/ Adjust One	Select **Adjust All** to apply these changes to all the documents in the current job, or **Adjust One** to make the adjustments only to the next document scanned.
Defaults	Return to the default capture parameters.

Rescanning documents

If you are not pleased with a particular image, you can rescan the document while the job is running. To rescan a document:

1 Select the document's thumbnail.

2 Take the document out of the sort bin.

3 Press **Rescan** to replace the document in the batch.

 NOTE: If an audit trail was printed on the document the first time it was scanned, press **Rescan NP** (no printing) to replace the document in the batch. This way, no additional audit trails will be printed on the document.

4 Drop the document onto the drop feeder.

5 Verify that the image is acceptable.

NOTE: The **Rescan** buttons will only be available if activated for the current job.

Deleting documents from the batch

When the machine is stopped, you can delete documents from the batch. Press the **Delete** button to delete a document image.

NOTE: The **Delete** button will only be present if activated for the current job.

The action of the **Delete** button depends on the setting of the **Allow Delete** job parameter:

- If the parameter is set to **Delete Last Item**, you will only be able to delete the most recently scanned document image from the batch. Press **Delete** to delete the last image.

- If the **Allow Delete** parameter is set to **Delete To End Of Batch**, you can also choose a document thumbnail and delete all the documents scanned after the selected document. When the **Delete** button is pressed, the Confirm Delete window (Figure 15) will appear.
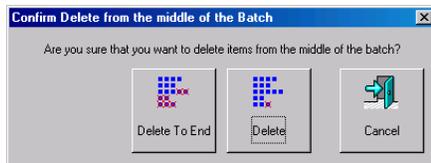
FIGURE 15: Confirm delete

NOTE: It is not possible to delete a single document image from the middle of the batch. If you need to delete an image from the middle of the batch, you must also delete all the images to the end of the batch as well.

Voiding documents and transactions

The void functions allow you to mark a scanned document or transaction as invalid by placing a VOID stamp over the document's image(s). Use the void functions, for example, as an alternative to the delete functions if you would like to keep a record of the fact that a document was scanned into the system and later deemed invalid.

NOTE: The **Void** buttons will only be present if activated for the current job.

To mark a document as void, highlight the document's thumbnail and press **Void Item** to void only the selected document, or **Void Transaction** to void the selected document and all other documents that are part of the transaction. The VOID stamp will appear over the image and the document will be designated as void in the batch file. Press **UnVoid Item** to remove the VOID stamp.
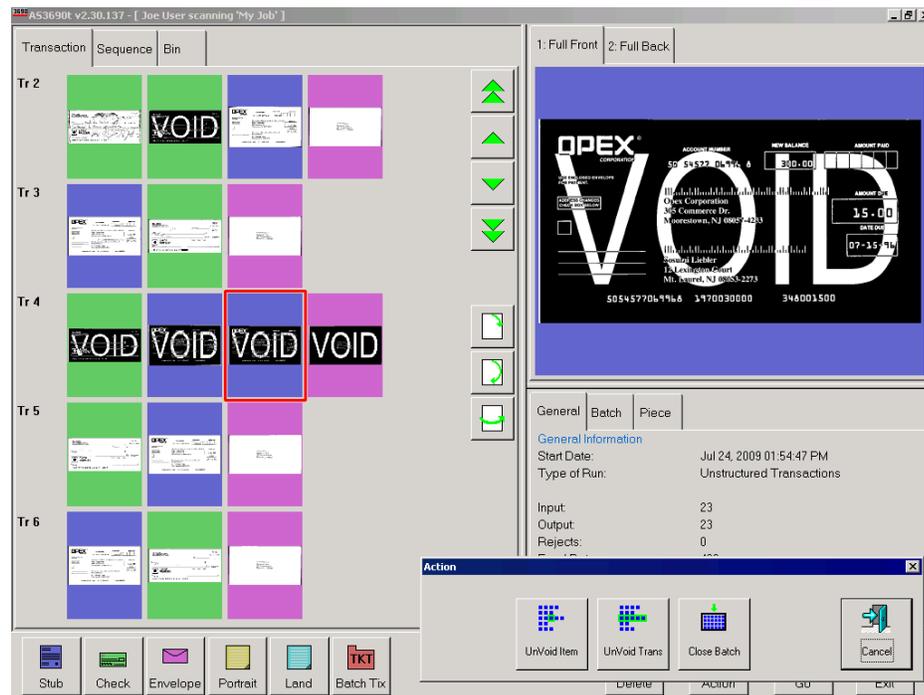
FIGURE 16: Voiding documents

Starting a new batch

There are three ways to start a new batch:

- Press the **New Batch** button while the job is running to begin a new batch with the next scanned document.
- Press the **Close Batch** button, then scan the new batch ticket or the first document of the new batch.
- Scan a batch ticket. If the New Batch Mode parameter is set to Auto, scanning a batch ticket will start a new batch.

NOTE: The **New Batch** button will only be available if activated for the current job.

Ending the job

When you have finished scanning documents, press **Stop** to put the system in standby mode. From standby mode, you can restart the job, **Delete** the last scanned document, view thumbnails, or **Exit** the job and return to the Scan screen.

NOTE: You can also press the **Close Batch** button to close the current batch and exit the job when prompted.

Viewing/editing the batch

Use the Batch Editor to:

- Display previous document images (by batch)
- Delete images from prior batches
- Void/un-void documents from prior batches
- Assign page sub-types

To access the Batch Editor:

1 Select **Main** in the menu bar and **Batch Editor** in the options bar.
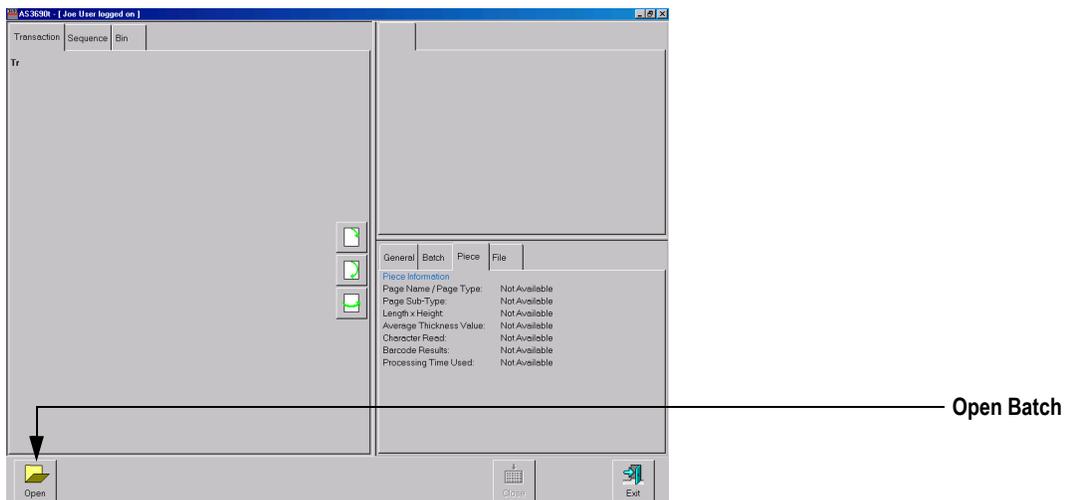
Open Batch

FIGURE 17: Batch Editor

2 Click the **Open** button.

3 Navigate to the directory on your network where your batches are saved (see your AS-Series Administrator). The batches are saved in folders by their batch number. Open the folder for the batch you want to view and double-click on the .odi, .oxi, or .dat file to view the batch.

> **NOTE:** If you do not know the batch number you are looking for, try to use the date the batch's folder was last modified for reference.
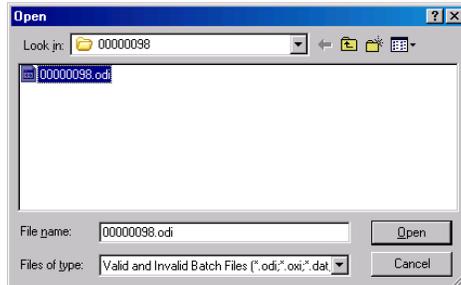
FIGURE 18: Opening the batch

4 View, delete, and void the document thumbnails in the same way as in the Run screen (see "Using the Run screen" on page 2-8).
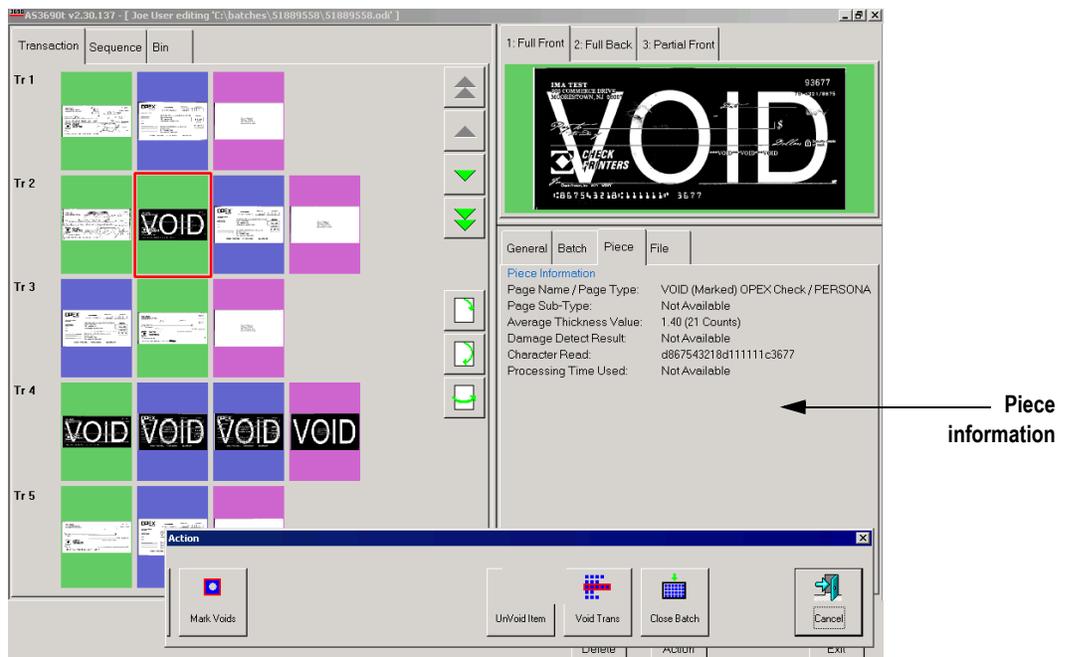
FIGURE 19: Viewing the batch

When voiding documents and transactions in the Batch Editor, check the **Mark Voids** button (shown in Figure 19) to mark the images in the resulting batch file as void.

> **NOTE:** View the piece information data on the Run screen to determine if the image was marked (as VOID in the batch file) or unmarked. From the batch editor you can decide whether or not to mark the voided images in the resulting batch file by using the **Mark Voids** button.

Using Batch Editor to fix incomplete batches

If there is a problem with the machine and/or CertainScan does not close properly during a run, a batch may not be closed and saved properly. If this is the case, the operator will be notified that a temporary batch file exists when restarting Certain-Scan, and that only an operator with a ManagerLevel account or an OPEX technician can fix the problem.
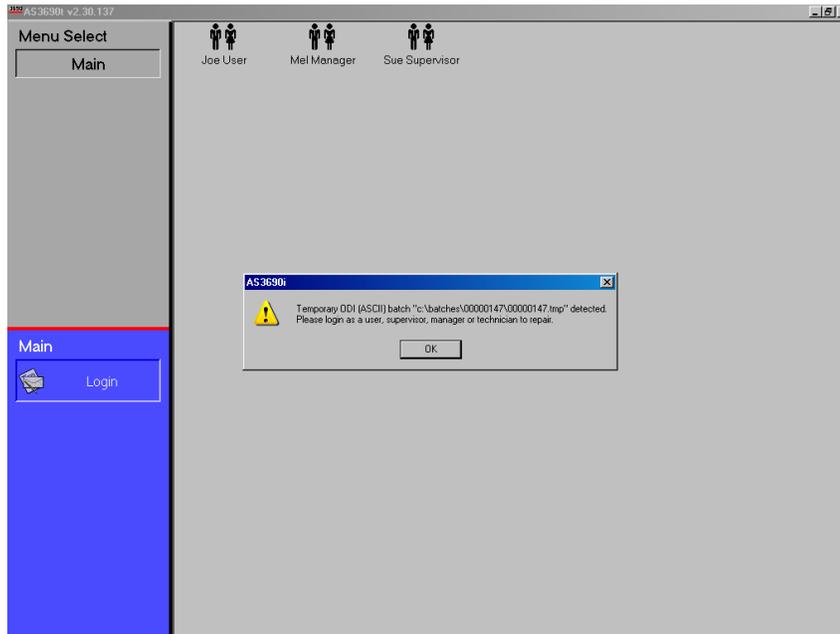
FIGURE 20: Incomplete batch notification

Consult your AS-Series Administrator if you receive this error message.

IdAssist

The IdAssist Document Tracking System provides an additional method for identifying and/or taking action on documents. Trigger the IdAssist function associated with the job by dropping documents in the right front corner of the conveyor, reducing the wait time associated with using the touchscreen monitor.

Consult your AS-Series Administrator for more information on how IdAssist works with your jobs.

The following functions are available as part of IdAssist:

Color   The color select trigger identifies documents that are to be scanned in color without having to touch the screen. This is very useful in a color select job, when you need to tell the system which documents to scan in color and which documents to scan normally.

Dropout   Similar to color select, this allows for you to trigger a specified color dropout for a document (red, green or blue).

Transaction boundary   Use the transaction boundary trigger instead of the **Transaction** button on the run screen. The transaction boundary trigger will start a new transaction with the document that triggers the sensor.

Automatic rotation of document   Tell the system to rotate the resulting image automatically.

Page type determination requirement   Use the IdAssist function to identify a page type. This function is very useful if you have two page types that are identical in every way or if there are multiple sets of identical page types. In these cases, the page types can be set up so that the only way one of the page types will be identified will be if you trigger the IdAssist function. For example, in a job with two identical documents, a check and a money order page type, the check and money order can have the same exact attributes with the only distinction being that money orders must have been triggered by IdAssist. That way, the system will recognize the checks you scan normally as belonging to the check page type.

Page sub-type selection   The page sub-type selection function is useful in jobs that have a page type with many page sub-types. Use the trigger to bring up the page sub-type selection screen so you can choose from among the available sub-types.

Operation

To trigger IdAssist, simply drop the document in front of the sensor as shown in Figure 21. The indicator light will blink, notifying you that IdAssist was activated. The document will be scanned and sorted according to job's parameters.

NOTE: When using the Page Sub-Type Select IdAssist function, you must select the sub-type before the document enters the scanner. If a page sub-type is not selected, the document will be assigned the default page sub-type. If no default page sub-type has been assigned, the document will be rejected.

Drop documents here to trigger IdAssist

IdAssist LED/sensor
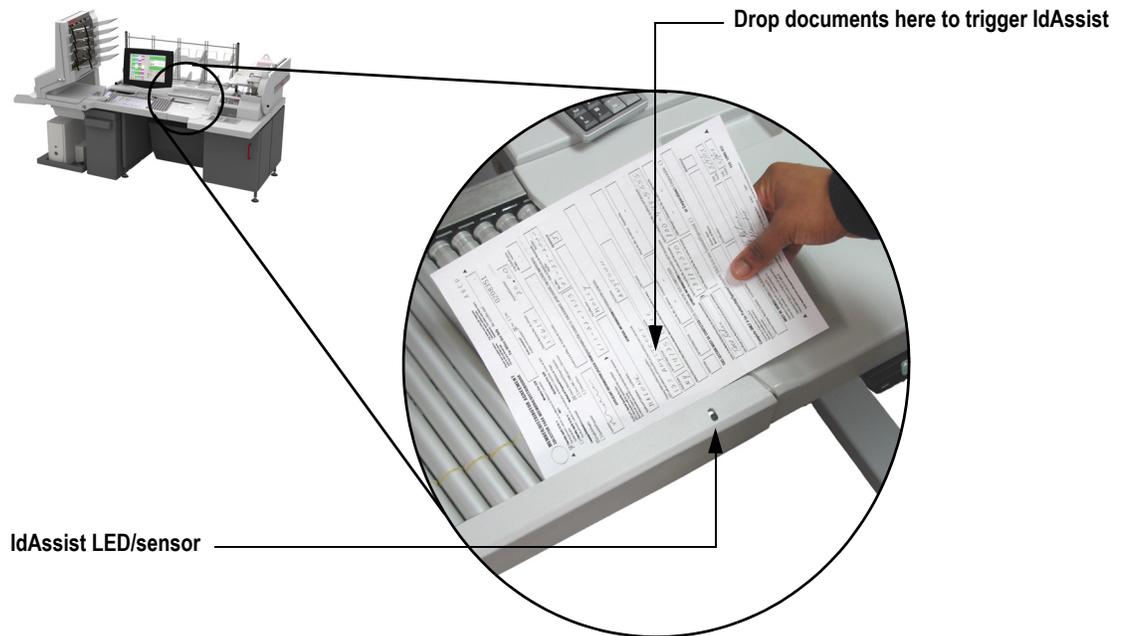
FIGURE 21: Triggering IdAssist

KeyAssist

KeyAssist, a purchasable option, allows you to use the keys on an external keypad to perform specific functions in the Run screen, such as selecting a page type, starting and stopping jobs, and rotating images. This feature alleviates the repetitive motion of reaching to touch the monitor.

Make sure Num Lock is enabled (LED lit)
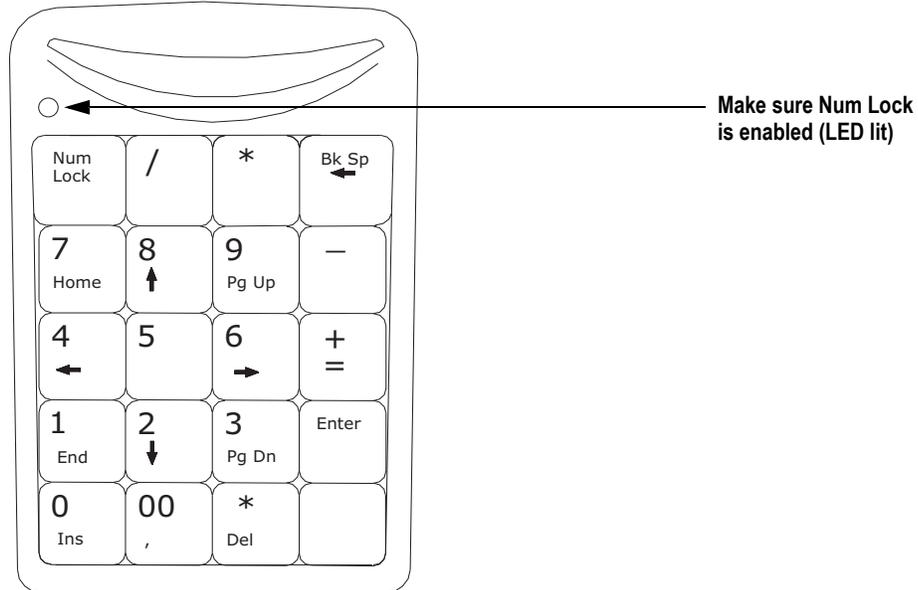
FIGURE 22: External keypad

The KeyAssist feature will not work with structured jobs, as they require page types in a specific order. Also, you cannot use KeyAssist with Reference ID in the same job.

Use the keypad to activate many of the more common Run screen functions:

Key	Function
1-8	selects page types 1-8 (and page sub-types, when the sub-type select screen is displayed)
0	selects a new transaction
+	starts/stops the track
/	rotates the piece 90 degrees clockwise
*	rotates the piece 180 degrees
-	flips the front and back images (if the page type is set up to scan front and back images)

Clearing Paper Jams

During normal operation of the machine, you may encounter an error message halting the scanner. The prompt on the machine will offer you two options: to **CONTINUE** or to **CANCEL**. The error message is informing you of a paper jam or a sensor error. In this case, check the machine for paper jams as described here. After you clear the jam or ensure that the track is clear, press the **Continue** button.

NOTE: The scanner may also reject documents that are misfed, skewed, or because the document was not properly identified. In these cases, the scanner will stop after all the paper in the track has been sent to the reject bin. If the paper doesn't clear into the reject bin after selecting **Continue**, then you need to open the cover(s) and remove the paper(s).

To open the scanner cover:

1 Place your left hand on the latch.

2 Depress the latch to release the cover. The cover will swing to the open position.

Depress the latch
to release the cover
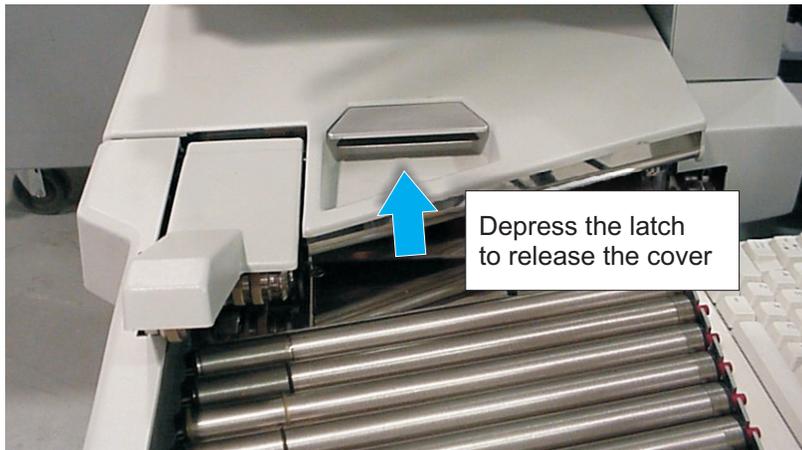
3 Clear any jammed papers in this area.

To close the scanner cover:

Hold the cover and press the latch back to the closed position until you hear the cover latches click into place.

NOTE: Close the scanner cover gently. Slamming the cover down can damage the image sensors.

To open the stacker transport cover:

1 Place your left hand on the latch and turn it counterclockwise.

CAUTION DO NOT OPEN OR CLOSE THE COVER BY APPLYING PRESSURE TO THE STACKER COVER.

2 When the latch releases, gently push open the left side using the handle.

HANDLE
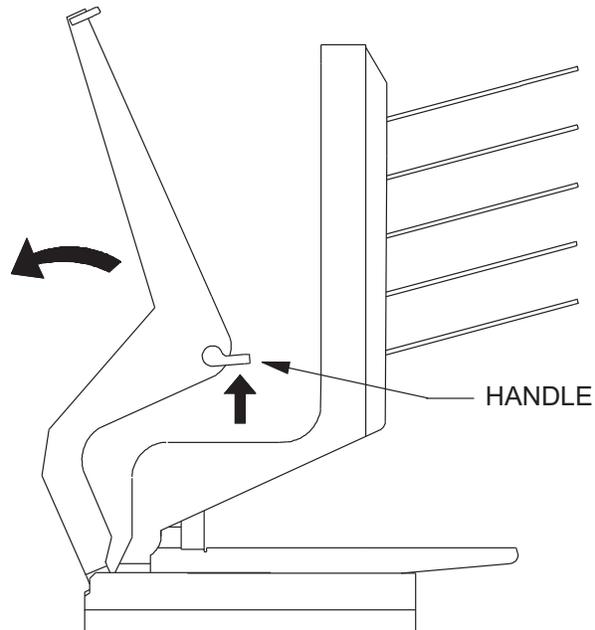
FIGURE 23: Opening the stacker transport cover

3 Clear any jammed papers in this area.

To close the stacker transport cover:

1 Hold onto the latch and gently pull the cover closed.

2 When the cover reaches the closed position, rotate the latch clockwise until you hear the lock snap into place.

Clearing the bins

When removing the paper from the output bins, pull the piece from the side of the bins. The trays have been designed to allow access to the smallest of pages in the bins.

Remove paper
from the side
of the bins
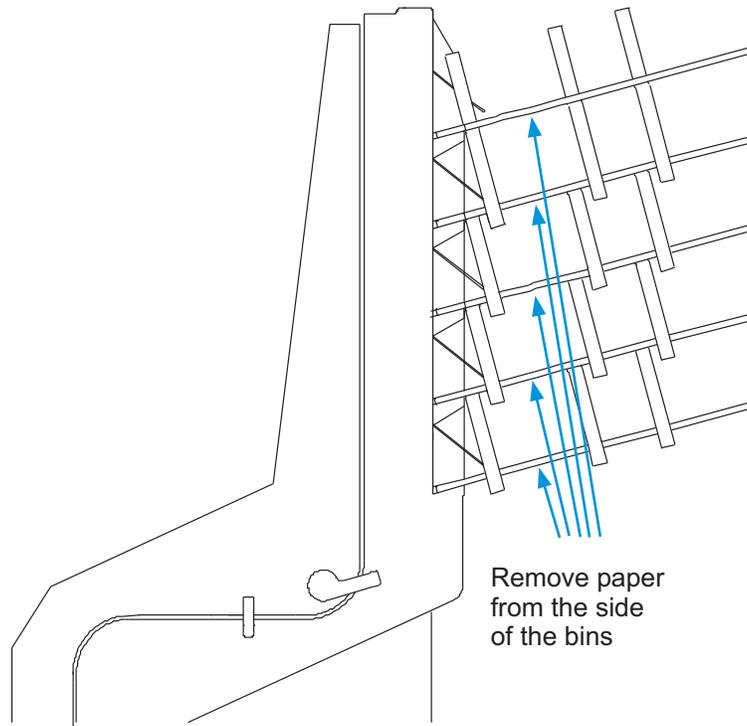
FIGURE 24: Clearing the output bins

Chapter

Operational Maintenance

3

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Calibrating the Touch Screen Monitor

The monitor is calibrated for its touch sensitivity before it leaves OPEX. However, you may need to recalibrate, especially if it is in use for an extended period of time.

To calibrate the monitor:

1 Go to **Start > Settings > Control Panel**.

- The Control Panel window appears.

2 Double-click **Elo Touchscreen**.

FIGURE 25: Elo Touchscreen Icon

3 Click **Align**.

4 Follow the instructions on the screen, using the monitor (not the mouse) to touch the three targets.

- The Check Video Alignment dialog box appears.

NOTE: Make sure you touch the monitor's surface. Do not use the mouse to perform this step, as you are calibrating the monitor to touch.

5 Touch around the screen, making sure the cursor follows where you touch.

6 If the test was successful, touch **Yes**.

7 If the test was not successful, you are prompted to repeat the test. Complete Steps 3 through 6 again.

8 When finished, touch **OK** to close the Elo Touchscreen Properties window.

Removing/Replacing the Printer Cartridge

The scanner's imprinter and HP ink cartridge are accessible when the stacker cover is open. When you remove a cartridge, pay close attention to the position and orientation of the cartridge so it can be replaced properly.

When you install a new printer cartridge, first check the expiration date of the new cartridge you plan to use. The AS-Series printer cartridges in sealed containers have a shelf life of two years from the date of manufacture.

To remove/replace a printer cartridge:

1   Pull the tab on the rear of the printer cartridge and rotate outward, as shown in the figure below.

Rear view of printer carriage
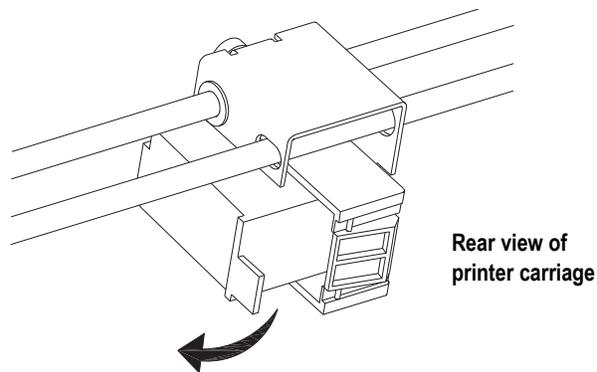
2   Remove the cartridge.

3   Insert the new cartridge by tipping the front end of the cartridge in first, and then pushing in the rear of the cartridge until it "clicks" into place.

Adjusting the Printer Carriage Position

You can adjust the vertical print position on documents by moving the printer carriage. The printer carriage is fixed to a shaft with detents that position the printer so it sprays ink through the holes in the paper guide. A thumb screw holds the printer in the detents. If you do not position the printer in a detent, the thumb screw sticks out, preventing you from closing the paper guide.

To adjust the carriage position, loosen the thumb screw, slide the carriage to a new detented position on the shaft, and then retighten the thumb screw.

Loosen thumb screw to move carriage along detent shaft
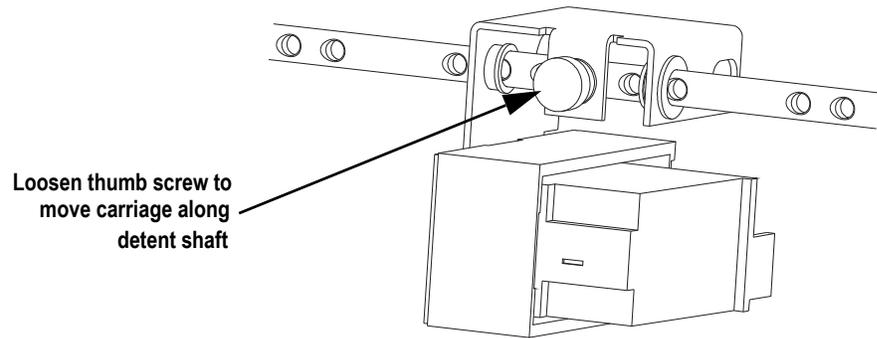
Cleaning the System

When properly maintained, the AS-Series will continue to operate efficiently and smoothly. However, over time, dust and dirt buildup can degrade the performance, resulting in problems such as skewing, double feeds, document hesitation and damage. The conveyor, stacker assembly, feed assembly (feed belts, idler pulleys, pre-feed tire, retard pad) and the CIS (contact image sensor) require regular cleaning.

Regular and scheduled maintenance will ensure that the AS-Series continues to function properly, with minimum downtime and maximum efficiency. This maintenance procedure consists of debris/dust removal and general cleaning.

⚠ CAUTION

Be careful when working with cleaners. A cleaner-soaked cloth or similar material should never be used to clean moving objects. For example, do not clean belts or rollers when the motors are running. The use of a cloth or a similar material on moving mechanisms can result in severe personal injury. If a belt, roller, pulley, or a similar part needs to be cleaned, hand-crank it during cleaning or clean it while stationary.

Conveyor and stacker assemblies

1 Stop all jobs and ensure that all motors are stopped.

2 Check the stacker cover once a shift. The stacker cover should be opened and cleared of paper debris, dust, envelope flaps, etc.

   NOTE: The cover needs to be closed before scanning can begin again.

3 Vacuum dust and debris from the conveyor rollers and the stacker assembly (see Figure 26).
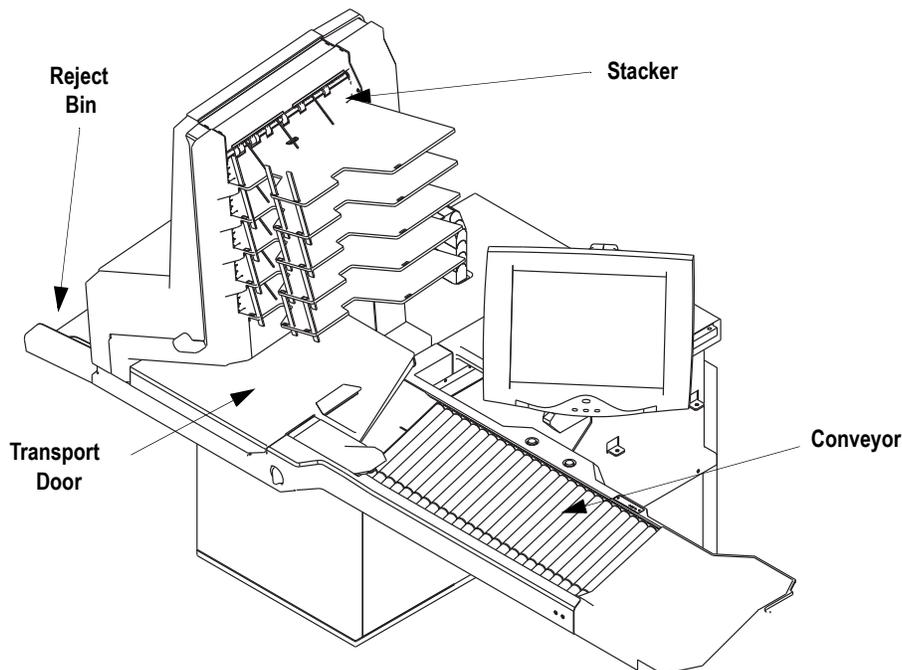
FIGURE 26: Conveyor and Stacker Assembly

Feed assembly

Black lines on the image can be caused by dirt (toner, ink, white out, glue, etc.) transferred from the paper to the rollers and feeder (belts and pad).

1 Stop all jobs and ensure that all motors are stopped.

2 Lift the feed arm assembly up (hinged on the left side) and loosen the thumb screw on the back side (see Figure 27).

3 Disengage the cover by sliding it forward away from the hinge and remove it.
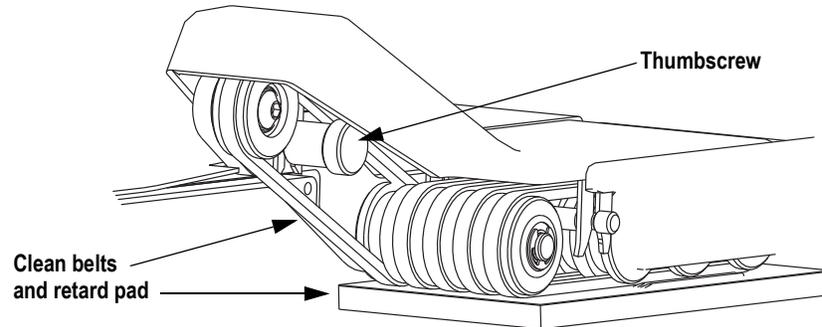
FIGURE 27: Belts and retard pad location

4 While holding the Feed arm upright, vacuum dust and debris from belts and pulleys.

5 On a weekly basis or if the dirt buildup on the pulleys appears excessive, clean the top side of the feed belts (see Figure 28). To do this:

a. Spray a mild detergent onto a lint-free cloth and wipe the belts clean.

b. Rotate the belts manually to ensure that the entire surface area is cleaned. While manually rotating the belts, check the idler pulleys for dirt buildup.
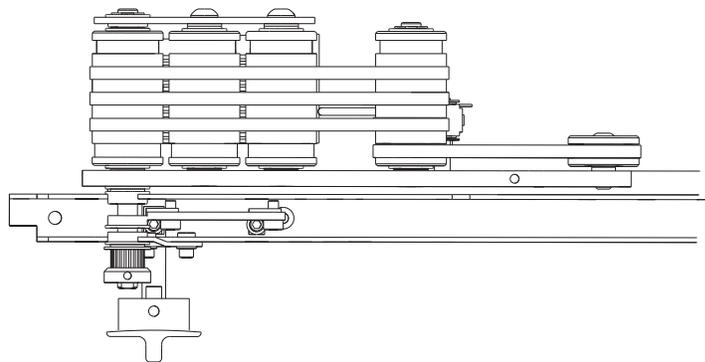
FIGURE 28: Feed Belt Assembly

Ink can also get transferred to the retard pad making it slick. When the feeder knob is in the upright position, the pad can be removed and cleaned easily.

6 Turn the feeder knob to the upright position (see Figure 29).

Feeder knob up =
Retard Pad engaged

Feeder knob down =
Retard Pad disengaged
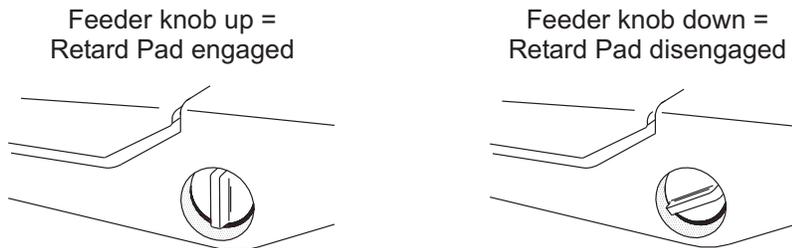
FIGURE 29: Feeder knob position

7 Lift the retard pad out of the AS-Series.

8 Spray a mild detergent onto a lint-free cloth.

9 Wipe the retard pad thoroughly, including inside the grooves.

Retard Pad removed
for cleaning
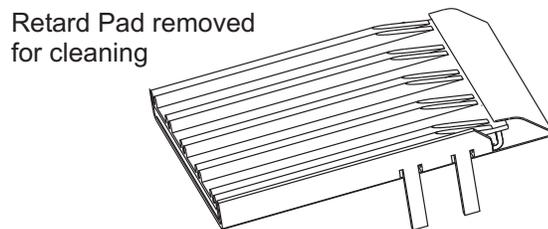
FIGURE 30: Clean the retard pad

- Clean the retard pad once per shift or if build-up on the pad causes feed problems.

10 Hold the feed arm in an upright position and return the retard pad to its proper location.

11 While holding the Feed arm in the upright position, vacuum dust and debris from the pre-feed nip roller and flexible finger area.

12 Spray a mild detergent onto a lint-free cloth and clean the pre-feed nip roller and finger.

Retard
Pad

NIP
Roller

Flexible
Finger
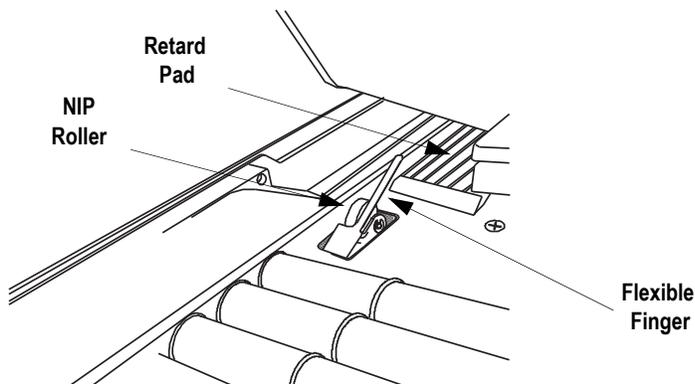
13 Mount the Feeder cover and tighten the thumb screw.

14 Lower the feed assembly down to operating position.

Contact image sensor

1 Stop all jobs and ensure that all motors are stopped.

2 Open the Transport Door using the metal handle.

3 Using glass cleaner and a lint-free cloth, clean the upper and lower CIS glass.
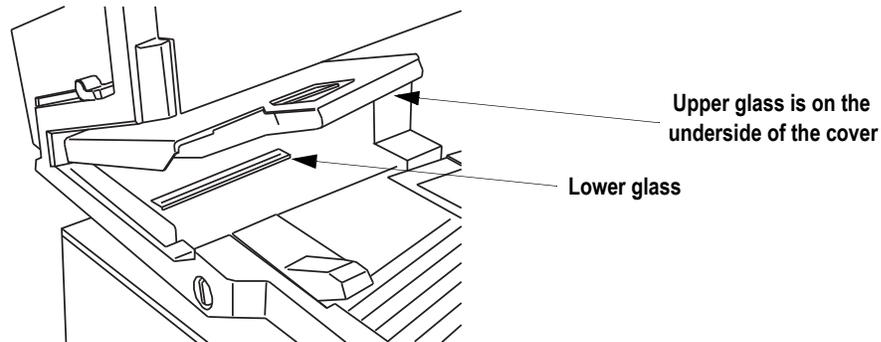
FIGURE 31: Cleaning the Contact Image Sensor glass surfaces

- Windex (the recommended glass cleaner) can be applied to a lint-free rag and wiped on the imager glass top (front camera) and bottom (back camera). The top camera (not viewable in this picture) is on the underside of the cover directly above the bottom camera.

The glass should be cleaned at the beginning or end of each shift, or as needed. If the operator sees lines appearing on the image previewed on the screen, then it is likely there is a speck (toner, white out, paper, glue, etc.) attached to the glass obstructing the view. Wipe the glass clean and the line should not appear on the image when the piece is scanned again. Be sure to clean the top camera glass if the line appears on the front side of the image.

Thickness detect rollers

1 The Thickness Detect mechanism is located inside the Transport assembly. Open the Transport Door and look to the left side.
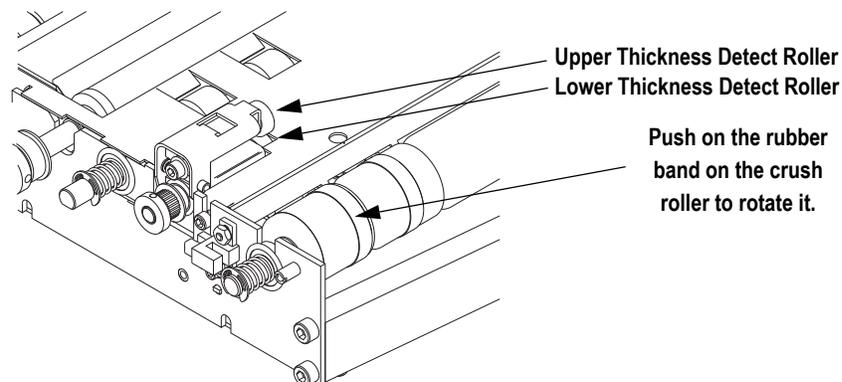
2 Clean the surface of the upper thickness detect roller with isopropyl alcohol. Rotate the roller as required to ensure that the entire surface is cleaned.

3 The upper roller is held by a roller arm that is hinged on the left side. Lift the upper roller to provide access to the lower roller (do not attempt to force it beyond the stop). Remove any deposits from the lower roller by scraping with a fingernail or nonmetallic implement. The lower roller can be rotated by rotating the crush roller. Push on the rubber band on the crush roller. Rotate as required to enable removal of deposits from the entire surface of the lower thickness detect roller.

Appendix

Statistics

A

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AS-Series Statistics

CertainScan provides you with tools to:

- Create statistics reports
- Back up statistics
- Restore statistics

NOTE: Operators with User, Supervisor, and Manager-level accounts have access to the Report functions.
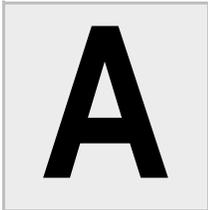
Creating statistic reports

Use the statistics reports to evaluate the efficiency of jobs you have run. The AS-Series can generate:

- **Individual Reports** - Provide information on each job run. When you select the criteria for generating individual reports, if more than one job run fits the criteria, a separate report is created for each run.
- **Summary Reports** - Provide information on a job range defined in the Statistics Reports Criteria window.

The Individual Report and the Summary Report are very similar. Both have the following sections:

- General Information
- Overall System Performance Measures
- Performance Details

To create a statistics report:

1 In the Menu bar, click **Main**, then **Statistics** in the Options menu.
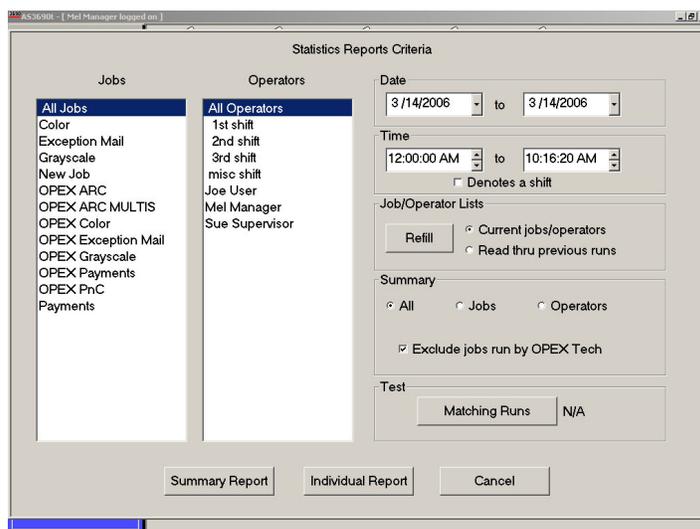
FIGURE 32: Statistics Reports Criteria screen

2 For this exercise, click the **Summary Report** button at the bottom of the screen.

3 In the Statistics Reports Criteria window, set the parameters for the report as shown in Figure 32:

- Jobs - select the job(s) for which you want to run a statistics report.
    - You can select several individual jobs for a single report, however, if you click **All Jobs**, it automatically deselects the individual jobs (since they would be included in the "All Jobs" category).
- Operators - select the operator(s) and/or the shift for which you want to run a statistics report.
    - You can select several individual operators for a single report, however, if you click **All Operators**, it automatically deselects the individual operators (since they would be included in the "All Operators" category).
    - Clicking any one of the **Shift** options will select all operators during that scheduled shift. The default setting, **All Operators**, includes all shifts.
- Date - set the start and end date for the report. In Figure 33, the Summary report was run for a single day, but virtually any range can be selected.
- Time - set the start and end time for the report. In Figure 33, these parameters were set to include the 3rd shift (12:00 AM-8:00 AM) and the first shift (8:00 AM to 4:00 PM).
- Job/Operator Lists - select one of the radio buttons:
    - **Current jobs/operators** - To use the job names and operators currently stored in the Controller's memory (as shown in the Jobs and Operators lists).
    - **Read thru previous runs** - To find runs deleted from the current list of jobs and operators. For example, if a job file was deleted from the Job Name frame, it is still stored in the stats file. You can access it by selecting this radio button, then clicking the **Refill** button.

4 In the Summary section, select one of the radio buttons:
- **All** - to generate a statistics report for every job run that matches the selected criteria
- **Jobs** - to generate a statistics report sorted by job name(s)
- **Operators** - to generate a statistics report sorted by Operator name(s)
- Check the box to exclude jobs run by the OPEX Technician in your report.

5 Click the Test **Matching Runs** button to see how many jobs have been run that match the criteria selected above. If **N/A** appears to the right of the button, then there are no jobs to report that match the criteria listed.
- If a number appears after the **Matching Runs** button, clicking **Ok** will generate a statistics report for the selected criteria.

6 Click **Ok**. The statistics report will appear. Figure 33 shows the report for the above criteria.

```
-------------------------------------------------------------------------------
            OPEX Scan Summary Report For OPEX Breadboard Serial Number 0000

Job Name:                          All   Start Time:          03/15/05 12:00:00 AM
Operator:                          All   End Time:            03/14/06 05:15:00 PM
Run Type:                        Mixed   Transactions:                        120
Jobs Included:                      29   Jobs Ended:                           28
-------------------------------------------------------------------------------
                       OVERALL SYSTEM PERFORMANCE MEASURES
Input:                             217   Jam Rate:                   10 input/jam
Output:                     201 (92.6%)  Rejects:                       16 (7.4%)

Feed Rate:                      315 /hr  Reference Feed Rate:            279 /hr
Output Rate:                    291 /hr  Reference Output Rate:          258 /hr
Jam Clear Time:                   4 sec  Reference Jam Clear Time:        20 sec
-------------------------------------------------------------------------------
                              PERFORMANCE DETAILS
                                  JOB TIME
              Active Job Time:                                  00:41:20
                     Run Time:             00:39:38    (95.9%)
                     Jam Time:             00:01:42     (4.1%)
              Idle Time:                                        00:24:25

OUTPUT
         Sorted Pieces                          201    100.0%

REJECTS
         Does Not Match Expected Page Types       6     37.5%
         Batch Ticket Expected                    1      6.3%
         Ran Out of Time Processing Image         3     18.8%
         Detected a Duplicate Batch               2     12.5%
         Jamsorts                                 4     25.0%
```

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FIGURE 33: Statistics Report window

The tool bar across the bottom of the Statistics Report window shows:

- **Left/Right Arrows** - use to move through the content of your report(s). If unneeded, the arrows are disabled (grey).
- **Printer button** - click to open the printer dialogue window, where you can select a printer (if one is connected) to print your report.
- **Export button** (the letter E) - click to automatically back-up the report to the location specified by the **Params > Config > Statistics Settings > StatsExportFilename** parameter.
- **Exit button** (red stop sign) - click to close the Statistics Report window.

General Information statistics

The following table lists the terms that appear in the General Information section of the statistics report.

TABLE 2: General Information Statistic terms

Term	Definition
Job Name	Name of job reported. If you are creating a summary report for two or more jobs, **All** appears in this field.
Operator	Name of operator included in report. If you are creating a summary report for two or more operators, **All** appears in this field.
Run Type	Type of run determined by setting the **Default Batch Type** Batch parameter. Can be: • **Singles** • **Multis** • **Stub Only** • **Check Only** • **Multis With Pages** • **Unstructured Transactions** • **Page Only** • **Structured Transactions** • **Mix** The **Default Batch Type** parameter can also be set in the Modify Batch Information window that appears when first starting a job, if the **Prompt Operator for Process & Recv Dates** Batch parameter is set to **Yes**.
Start Time	Time first job in the specified time window started.
End Time	Time the last job in the specified time window stopped.
Jobs Included	(Summary Report only) Lists the number of jobs included in the report.
Jobs Ended	(Summary Report only) Lists the number of jobs that ended in the specified time window.

Overall System Performance Measures statistics

The table below lists the terms that appear in the Overall System Performance Measures section of the statistics report.

TABLE 3: Overall System Performance Measures terms

Term	Definition
Input	Number of pieces fed into the machine.
Output	Number of pieces successfully processed by the machine. This number is figured by subtracting the number of rejects from the number of pieces input.
Jam Rate	Number of jams per run. The formula for the Jam Rate is: $$\text{Jam Rate} = \frac{\text{Input}}{\text{Jams}}$$
Rejects	Number of pieces rejected.
Feed Rate	Number of pieces per hour the AS-Series is currently feeding. The formula for the Feed Rate is: $$\text{Feed Rate} = \frac{\text{Input} * 3600}{\text{Active Job Time (seconds)}}$$
Output Rate	Number of pieces per hour the AS-Series is processing. The formula for the Output Rate is: $$\text{Output Rate} = \frac{\text{Output} * 3600}{\text{Active Job Time (seconds)}}$$
Jam Clear Time	Average time the AS-Series was halted while the Operator was clearing a jam. The formula for the Jam Clear Time is: $$\text{Jam Clear Time (seconds)} = \frac{\text{Jam Time (seconds)}}{\text{Jams}}$$
Reference Feed Rate	Number of pieces fed into the AS-Series per hour. The formula for the Reference Feed Rate is: $$\text{Reference Feed Rate} = \frac{\text{Input} * 3600}{\text{Run Time (seconds)} + (\text{Jams} * \text{Ref. Jam Clear Time (seconds)})}$$
Reference Output Rate	Number of pieces processed by the AS-Series. The formula for the Reference Output Rate is: $$\text{Reference Output Rate} = \frac{\text{Output} * 3600}{\text{Run Time (seconds)} + (\text{Jams} * \text{Ref. Jam Clear Time (seconds)})}$$
Reference Jam Clear Time	Estimated time it takes to clear a jam. This number is fixed at 20 seconds.

Performance Details statistics

The following table list the terms that appear in the Performance Details section of the statistics report.

NOTE: All times noted in the formulas in this table are in seconds. For example, if the Active Job Time appears as "00:01:49" then that means one minute (60 seconds) plus 49 seconds, or 109 seconds.

TABLE 4: Performance Details terms

Term	Definition
Active Job Time	Time the AS-Series was either actively running or was halted due to a jam. Active Job Time is broken down by: • **Run Time** • **Jam Time**
Run Time	Total run processing time.
Jam Time	Total time the AS-Series was halted for a jam.
Idle Time	Time the Operator was in the Run Job window, but the AS-Series was not processing pieces.

The Rejects section lists the reasons for the rejected documents and how many documents were rejected for each reason.

TABLE 5: Reasons for rejected items

Length Too Long	Results when an image is longer than the maximum allowable image size of the system or when outsorting is set to reject an image longer than a defined length.
Length Too Short	Results when outsorting is set to reject an image shorter than a defined length.
Gap Too Small	Results when the gap between pieces is shorter than the minimum feed gap defined in the machine parameters.
Too Thin	Results when out sorting is set to reject a piece thinner than a defined minimum allowable thickness.
Too Thick	Results when out sorting is set to reject a piece thicker than a defined maximum allowable thickness.
Unable to Capture Image	Results when the imager fails to capture the image within the period of time that it is expected to.
Unable to Process Image	Results when an image fails processing due to a failure other than running out of processing time.
Blank Image Detected	Results when a job is set to reject blank pages and the piece was determined to be a blank page.
Does Not Match Expected Page Types	Results when the system could not match a piece to any of the page types in a particular job.
Bad MICR Read	Results when the result from the combined MICR read does not have sufficient valid characters or a valid checksum.

TABLE 5: Reasons for rejected items (Continued)

Batch Ticket Expected	Results when a piece is identified as something other than a batch ticket when the system is expecting a batch ticket.
Stub Expected	Results when a piece is identified as something other than a stub when the system is expecting a stub.
Check Expected	Results when a piece is identified as something other than a check when the system is expecting a check.
Page Expected	Results when a piece is identified as something other than a page when the system is expecting a page.
Envelope Expected	Results when a piece is identified as something other than an envelope when the system is expecting an envelope.
Money Order Expected	Results when a piece is identified as something other than a money order when the system is expecting a money order.
Cash Expected	Results when a piece is identified as something other than cash when the system is expecting cash.
Check Listing Expected	Results when a piece is identified as something other than a check listing when the system is expecting a check listing.
Batch Limit Detected	Results when the maximum transactions, pieces, stubs, or checks as defined in the batch parameters has been reached.
Last Transaction Not Complete	Results when the current transaction does not fit the defined transaction criteria and a piece is identified as a page type that defines a new transaction.
Current Transaction Already Complete	Results when a transaction has met its defined criteria and a new piece that is not defined to start a new transaction is identified.
Batch Ticket Not Expected	Results when a piece is identified as a batch ticket after valid pieces are already included in the batch unless auto batch mode is in use.
Ran Out of Time Processing Image	Results when the software has run out of the time that it has available to process a particular image. The amount of time it has available depends upon track speed.
Could Not Detect Document Edges	Results when image processing is unable to detect the edges of a document that has been scanned.
No Page Sub-Type Selected	Results when a piece is identified as one with page sub-types and no default page sub-type has been specified and the operator did not make a page sub-type selection.
ScanLink Plug-in Requested a Reject	Results when the ScanLink plug-in has requested that the piece be rejected.
ScanLink Plug-in Timed Out	Results when CertainScan has not received a response back from the ScanLink Plug-in within the required amount of time.
Could Not Create a Batch	Results when the software was unable to create a batch due to an inability to open and write a new file or an error within the system.
Detected a Duplicate Batch	Results when the software has detected a duplicate batch either via the used batch list or by finding batches in the batch directories with the same batch number.

TABLE 5: Reasons for rejected items (Continued)

Failed Saving Image	Results when there is an error trying to add or rescan a piece to a batch.
Magnetic MICR Response Missing	Results when the software does not receive a response from the magnetic MICR when it is expecting one.
Cannot Process Printer Data	Results when there is an error in sending the audit trail information down to the printer.
Required Item Expected	Results when an item is of the wrong priority to be scanned in the current location within a transaction. (Structured batches only.)
Only One Item of this Type Expected	Results when only one item of the scanned item's priority is allowed, and that required item is already present within the batch. (Structured batches only.)
New Transaction Required	Results when a new transaction must be started in order to add this item to the batch. (Structured batches only.)
Jamsorts	All input pieces immediately following a reject when the job parameter "Stop Machines for Rejects" is set to something other than 'No' until the reject is cleared. All input pieces immediately following a jam until the jam is cleared.

The Jams section lists the reasons for the jams that occur.

TABLE 6: Reasons for jams

Too Many Consecutive Rejects	Results when the number of consecutive rejects is greater than the machine parameter maximum consecutive reject count.
Software Problem Detected	Results when the controller receives invalid information from CertainScan or there is an assert or exception within the controller.
Vertical Turn Sensor Missing	Results when the controller is expecting to see a piece pass by the vertical turn sensor but it has not within the time period that we are expecting it.
Stacker Entry Sensor Missing	Results when the controller is expecting to see a piece pass by the stacker entry sensor but it has not within the time period that we are expecting it.
Bin 2 Gate Sensor Missing	Results when the controller is expecting to see a piece pass by the bin 2 gate sensor but it has not within the time period that we are expecting it.
Bin 3 Gate Sensor Missing	Results when the controller is expecting to see a piece pass by the bin 3 gate sensor but it has not within the time period that we are expecting it.
Bin 4 Gate Sensor Missing	Results when the controller is expecting to see a piece pass by the bin 4 gate sensor but it has not within the time period that we are expecting it.
Bin 5 Gate Sensor Missing	Results when the controller is expecting to see a piece pass by the bin 5 gate sensor but it has not within the time period that we are expecting it.
Unexpected Piece at Stacker Entry Sensor	Results when a piece is detected at the stacker entry sensor that the software was not expecting. This is usually caused by a piece that was intended to go to the stacker bypass bin but did not make the correct decision in time. A gate that did not fire properly can also cause it.

TABLE 6: Reasons for jams (Continued)

Unexpected Piece at Bin 2 Sensor	Results when a piece is detected at the bin 2 sensor that the software was not expecting. A gate that did not fire properly usually causes this to occur.
Unexpected Piece at Bin 3 Sensor	Results when a piece is detected at the bin 3 sensor that the software was not expecting. A gate that did not fire properly usually causes this to occur.
Unexpected Piece at Bin 4 Sensor	Results when a piece is detected at the bin 4 sensor that the software was not expecting. A gate that did not fire properly usually causes this to occur.
Unexpected Piece at Bin 5 Sensor	Results when a piece is detected at the bin 5 sensor that the software was not expecting. A gate that did not fire properly usually causes this to occur.
Invalid Piece Complete Response	Results when an invalid piece id is received from CertainScan upon piece completion.
Piece Thickness Sensor Null Below Minimum	Results when the thickness sensor is lower than the minimum null defined in the machine parameters.
Piece Thickness Sensor Null Above Maximum	Results when the thickness sensor is greater than the maximum null defined in the machine parameters.
Piece Thickness Sensor Runout Problem	Results when the thickness sensor runout is greater than the maximum runout defined in the machine parameters.
Missing Piece at Straight Through Path	Results when the piece was supposed to go to the stacker bypass bin but didn't.
Batch Manager has an Internal Error	Results when there is an internal error within Batch Manager.
Detected a File Write Error	Results when the software detects a problem with writing image or batch files to the specified directories.
ScanLink Plug-in Failed	Results when there is a failure sending information to the ScanLink plug-in.
ScanLink Plug-in Requested a Jam	Results when the ScanLink Plug-in has requested a jam.
Host to Controller Report Missing	Results when the controller is expecting piece information from CertainScan and does not receive it within the expected time window. This is frequently caused by pushing the system to its limits or by something causing the system to get out of sync.
Jam Caused by Reject	Results whenever a reject other than Jamsorts occurs. Thus every reject other than Jamsorts is counted as a jam under this category. The Job Parameter "Stop Machines for Rejects" must be set to something other than "No" for rejects to jam the machine. Otherwise, rejects will be directed to the reject bin and processing will continue.

The Stops section lists the following:

TABLE 7: Reasons for stops

Feeder Jammed	Results when the lower skew detect sensor has been blocked for a specified period of time. Both the feed jammed time and feed streaming time define this period.
Upper Skew Detect Sensor Blocked	Results when the upper skew detect sensor is blocked by something when the system is attempting to start up.
Middle Skew Detect Sensor Blocked	Results when the middle skew detect sensor is blocked by something when the system is attempting to start up.
Lower Skew Detect Sensor Blocked	Results when the lower skew detect sensor is blocked by something when the system is attempting to start up.
System Entry Sensor Blocked	Results when the system entry sensor is blocked by something when the system is attempting to start up.
Vertical Turn Sensor Blocked	Results when the vertical turn sensor is blocked by something when the system is attempting to start up.
Stacker Entry Sensor Blocked	Results when the stacker entry sensor is blocked by something when the system is attempting to start up.
Bin 2 Gate Sensor Blocked	Results when the bin 2 gate sensor is blocked by something when the system is attempting to start up.
Bin 3 Gate Sensor Blocked	Results when the bin 3 gate sensor is blocked by something when the system is attempting to start up.
Bin 4 Gate Sensor Blocked	Results when the bin 4 gate sensor is blocked by something when the system is attempting to start up.
Bin 5 Gate Sensor Blocked	Results when the bin 5 gate sensor is blocked by something when the system is attempting to start up.
Stacker Door Open	Results when the stacker door is detected to be open during a run or when the system is attempting to start up.
Transport Door Open	Results when the transport door is detected to be open during a run or when the system is attempting to start up.
ScanLink Plug-in Requested a Stoppage	Results when the ScanLink Plug-in has requested a stoppage.
Too Skewed	Results when a piece is detected to be too skewed to pass through the system safely.

Glossary

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Audit Trail   User-definable information printed on documents and/or displayed on document images.

Barcode   A series of bars and spaces arranged in a predetermined pattern to represent elements of data.

Batch   One or more transactions. Information on pieces is grouped and sent to the user in batches.

Bitonal   Image format where every pixel is either black or white.

Category   Grouping of similar parameters.

CertainScan   Operator's main interface with the machine. Software that interfaces with the INtime Controller to manage the system's non machine-related functions.

Checksum   A character included within a barcode whose value is based on other characters within the data string. It is used to perform a mathematical check to ensure the data is accurately read.

DLL   Dynamic Link Library. Plug-ins supplied by third-party vendors.

Document   Any single sheet of paper processed by the AS-Series.

Dropout   Removing a selected color from a document image. The AS-Series can remove red, green, blue, or white from document images.

Grayscale   Image format where all pixels are processed as a shade of gray (i.e., gray level). Gray levels range from 0 (black) to 255 (white).

INtime Controller   Software that controls all machine-related functions. Runs in the background of CertainScan.

Job   A profile of parameter settings you use for processing documents. When you run documents through the AS-Series, you must specify which job to run. Jobs allow you to process pieces in a similar manner from run to run.

Julian Dates   A number representing a date. In the Julian Calendar, each day is assigned a three-digit number. January 1st would be 001, January 2nd would

be 002, on up to December 31st which is 365. Every fourth year (leap year) has 366 days. Customers often use Julian dates to keep track of late payments.

MICR   Magnetic Ink Character Recognition. Used by the scanner to read the magnetic ink letters, numbers, and symbols found on documents such as checks and batch tickets.

Multi   A transaction consisting of one or more stubs followed by one or more checks.

OCR   Optical Character Recognition. Used by the scanner to identify letters, numbers, and symbols on documents.

Operator   The person running the machine.

Page Sub-Type   Group of page types that allow operators to further classify documents. A page type may have several sub-types associated with it.

Page Type   A collection of criteria that a piece must meet to be classified as a certain type of document. i.e., length, height, barcode, mark detect, MICR, etc.

Each job includes one or more page types. Once you have defined a page type, you can set up a job to process pieces that match that page type profile in a consistent way. For example, the page type "Check" contains parameters that match the profile of a personal check. When you run a personal check, the AS-Series recognizes it as a "Check" page type, and processes the personal check as it does all other "Check" page types. The AS-Series comes with predefined default page types, which you can use as templates for new page types specific to the customer's needs.

Piece   Any single sheet of paper processed by the AS-Series.

Print field   items that make up an audit trail

Single   A transaction consisting of a document and a check.

Skew   Deviations from straight lines in scanned images.

Snippet   An image captured from a scanned document. Each document may have several snippets associated with it.

Special Item   For each job, this is the piece responsible for signaling the beginning or end of a transaction.

Symbology   The schema how barcode data is encoded into physical bars and spaces. Generally speaking, symbologies can be divided into two major categories: width-modulated and height-modulated. Except these used in postal applications, most symbologies encode the data into the different widths of the bars. All the bars have the same height. The contrary holds true for height-modulated symbologies: all bars have the same width, and the data is encoded into different length of the bars.

Transaction   Defined by the customer, and can be defined in a number of ways. For example: Check(s) and stub(s), with or without attachments, and an envelope (e.g., in a payments job it can contain singles, multis, mixed, check only, etc.)

Transaction Boundary   A term used to indicate the beginning or end of a single or group of page types in a transaction. Typically, a specific page type is used to identify this boundary either at the beginning or end of a transaction.

Transaction Sorting   A term used to indicate jobs in which prior documents within a transaction determine the sorting of later documents.

Unstructured Transaction   A transaction that can contain any number of pieces and page types. There is no structured order for feeding these pieces other than the "Special Item" page type. This must always be first or last, according to how it is set up to signal the next transaction.

Index

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Index