DS2200

USER MANUAL

Revision Tracking

Date	Chapter(s)	Notes	Rev
Aug. 2012		The DS2200 User Manual was completely restructured for better viewing on a Tablet-style reader.	A

If you find errors, inaccuracies, or any other issues or concerns with this document, please contact the OPEX Technical Writers via email at: GroupTechwriters@opex.com

From the President of OPEX Corporation

The DS2200 scanner offers an extremely flexible, efficient and ergonomic method for capturing images and data

Efficiency and transaction integrity are critical to payment processors. The OPEX DS2200 is engineered as a single station solution that satisfies both of these key issues. Its broad capabilities enable our clients to minimize document prep, thereby reducing labor and improving throughput and accuracy.

Sincerely,

OPEX CORPORATION

Dave Stevens
President/CEO

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In-line recognition
(MICR, OCR, barcodes,
mark detection)

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(optional)

Drop feeder

Uninterruptible Power Supply
(UPS)

Overview

With the DS2200, intermixed, different-sized documents can be scanned together without adjustment to the scanner feed. In a single step, the DS2200 can scan, capture, read MICR, print an audit ID, and sort transactions containing checks and other documents.

The DS2200 is a single-operator workstation that greatly reduces document preparation. With a single operator in contact with documents, opportunities to misplace or damage documents are reduced and the risk of confidential information being compromised is minimized. Moreover, the scanner's drop feeder reduces jams, eliminates the need to jog, and proficiently processes even the most damaged and prep-intensive documents.

Standard features include:

- CertainScan™ Image Capture Application

- Ultrasonic multifeed detection

- OpAssist™ input sensor

- Two sort trays

- Bottom audit ID printer with ink level indicator

- Optical MICR read

- Mark detection software

- OPEX standard barcode package

- OPEX OCR font set

- External PC w/Windows 7

- 17" touch screen monitor

Optional features include:

- ImageTools w/VRS Technology image enhancement

- Magnetic Ink Character Recognition (MICR)

- Top audit ID printer with ink level indicator

- 1-D & 2-D barcode recognition

- KeyAssist™ integrated keypad

- Reference ID software feature
- Image Edge software binarizer
- Integrated workstation/table

About this manual

The purpose of this manual is to instruct operators of the DS2200 in how to use the scanner to perform tasks. For more information on how to set up jobs, page types, audit trails and other functions of the machine, consult the *DS2200 CertainScan Manual.*

DS2200 specifications

Document Feeding	Auto feed Continuous drop feed Packet feed
Document Width	2.0" - 12.25"
Document Length	3.5" up to 18.25" in length
Scanning Speed	110 ppm / 220 ipm (Throughput speeds may vary depending on the specific application processing requirements and job setup)
Imprinting	Rear post-scan
Character Reading	OCR, OMR, barcodes, document type ID
Document Separation	2 output sort trays
Daily Duty Cycle	Unlimited
Dimensions (H x W x D)	17" x 54" x 23" (49" x 86" x 32" with optional, integrated Workstation)
Operator/Service clearance	3' all around
Sound level	Below 72 dB
AC requirements	100 - 240 VAC, 1.75 - 0.75 A, 47 - 63 Hz
Temperature requirements	Non-Operating: 0°F to 110°F Operating: 10°F to 100°F
Relative Humidity	Non-Operating: 0% to 85% Operating: 14% to 85% not to exceed 90%

How the DS2200 Works

The DS2200 scanner is controlled by a single, Windows 7 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 DS2200 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   The CertainScan software interfaces with the Controller and manages the non-machine related functions performed by the scanner. CertainScan provides an interface for setting up jobs, page types, and audit trails, and for running jobs. **This is the main interface with the machine.**
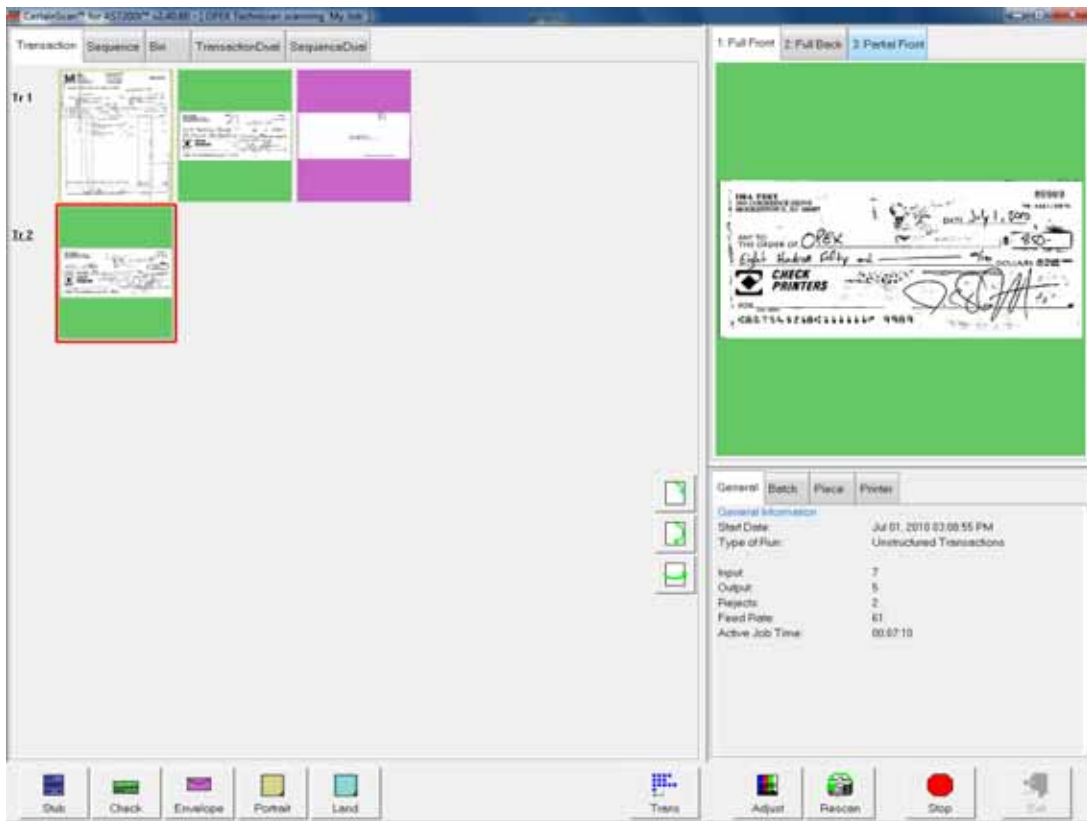
Jobs

A job is a collection of parameters the DS2200 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, such as: 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.

2 Operating the System

DS2200
User Manual

Overview

This chapter provides basic information on how to process documents with the DS2200. It covers safety precautions, user interface information, and how to run the machine.

Safety precautions

Follow these safety precautions to avoid injury when operating the DS2200. 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 DS2200 can become jammed and/or damaged by foreign objects. Also, keep hands, hair, loose clothing or jewelry away from the moving parts.

- 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 DS2200. Follow the directions for using and adjusting your chair and scanner. Using improper procedure can result in a potentially serious injury. The DS2200 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 DS2200 if you put these suggestions into practice. The scanner has been designed with

you in mind. If it is operated correctly, you should find your work experience comfortable and enjoyable.

Adjusting the (optional) workstation height

You can raise or lower the height of the workstation desk to fit your needs. Use the crank stored in the right front side of the desk to adjust the height of the workstation.

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Controls and Components

Data ports/connections (not shown)
See page 22 for
more detail

Sort trays

OpAssist
sensor

MICR reader,
CIS imagers and
audit trail printers
are located inside the scanner

Feed mode knob
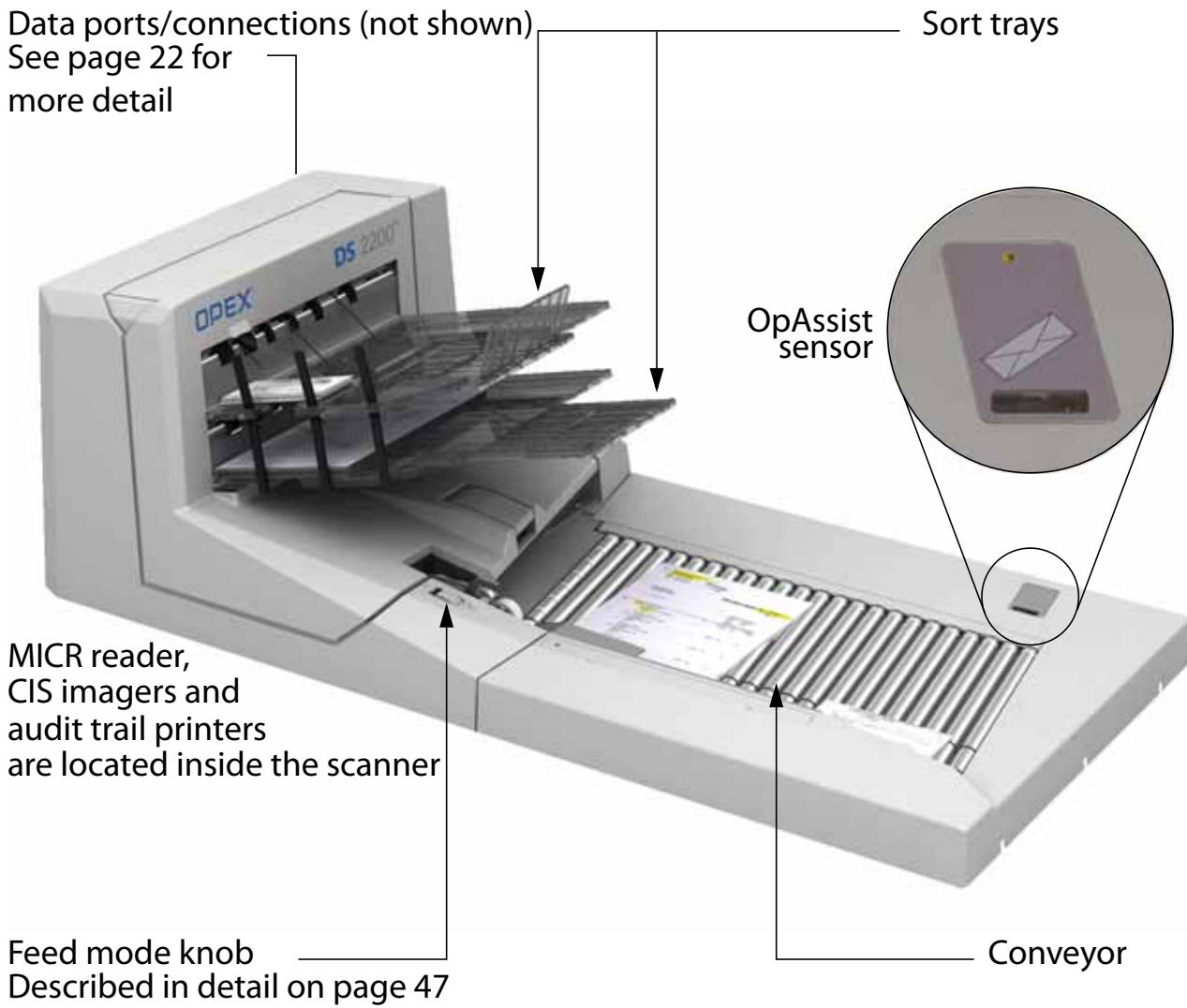Described in detail on page 47

Conveyor

Figure 1: Main components

Conveyor

The DS2200 allows for quick and easy feeding of mixed size documents - from business cards to documents as large as 12" x 25". Place documents onto the drop feeder for scanning into the DS2200. The DS2200's unique drop feed technology can handle the widest range of documents without fear of double feeds or document damage. Simply drop documents onto the conveyor, and it automatically aligns and flattens them regardless of variable sizes. Checks, invoices, correspondence, envelopes, and other documents can all be scanned intermixed with little or no preparation.

Sort trays

Documents are scanned and sorted into one of two selectable output trays. Pieces with magnetic MICR (such as checks) can be sorted to a separate tray for easy secondary processing.

Ultrasonic multifeed detection

The DS2200's ultrasonic multifeed detection protects against double-feeds by transmitting a sound wave from one side of the paper path and receiving it on the other. Overlapped documents are identified by changes in the sound waves and the system stops the conveyor when a double feed is detected.

OpAssist

The OpAssist feature allows you to perform certain functions on pieces, such as dropping out colors or rotating images. Trigger OpAssist by waving the document (or your hand) over the OpAssist sensor before scanning it.

CIS

The DS2200 uses two contact image sensors (CIS) to scan pieces. Each CIS scans a side of the document and can save images in either color or grayscale. The CIS is in near direct contact with the object to be scanned in order to scan to the proper focus. The CIS can scan up to 12" wide documents in either portrait or landscape mode.

MICR reader

The DS2200p can read MICR from checks optically and/or magnetically (magnetic MICR Reader is an option). The results are then compared to ensure superior accuracy.

Audit trail printers

The audit trail printers can be configured to automatically imprint sequence numbers, batch numbers, or other static information to the front and back of checks and documents. This provides quality auditing, compliance and research benefits to your process. The DS2200 comes with a bottom printer (standard); adding a top printer is optional.

Connections

The DS2200 has several connectors and ports for connecting the scanner to the CertainScan PC and other peripherals.

Parallel port

HDMI

AC power plug

Serial port

COM port

Main power switch
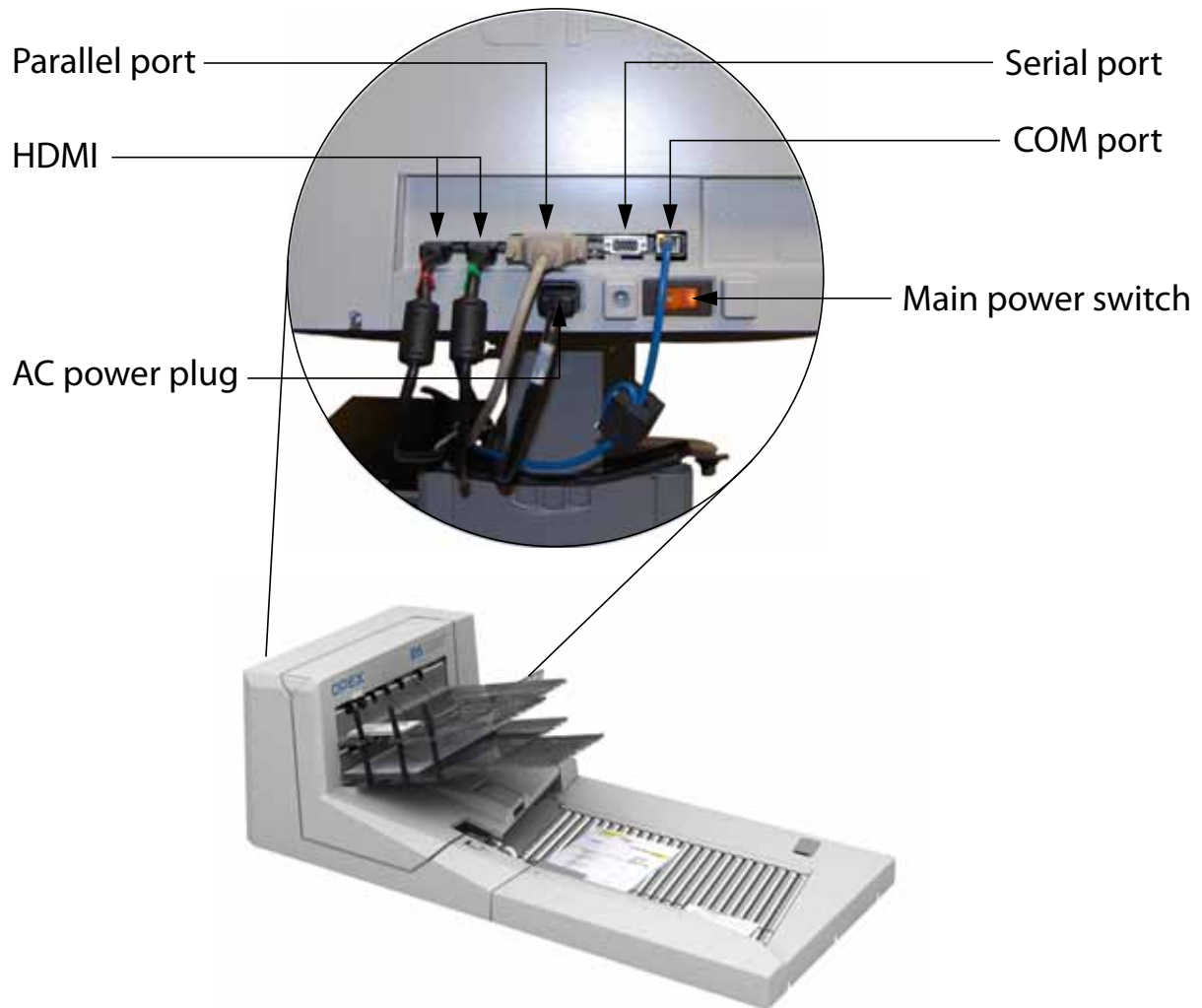
Figure 2: DS2200 back panel connections

COM (Ethernet)	The ethernet port is for OPEX technical support use only.
HDMI	The HDMI ports transfer data from the imagers to the Host PC.
Serial	9-pin connector used for transferring data one bit at a time. This connector should only be used for OPEX technical support.

Parallel	The parallel port carries information back and forth from the scanner to the PC.
AC Power	Insert the power cord here and connect the other end to an AC power outlet.
Main power switch	Turns the DS2200 on and off. The switch illuminates when power is on.

Getting Started

Power up the system:

If the DS2200 system is not already up and running, turn on the power:

1 Turn on the main power switch (see Figure 2).

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 DS2200 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 DS2200 CertainScan application.

Note: If you mistakenly close CertainScan, double-click the icon on the desktop to start it again.
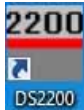
Log in to the system:

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 DS2200 Administrator for assistance.
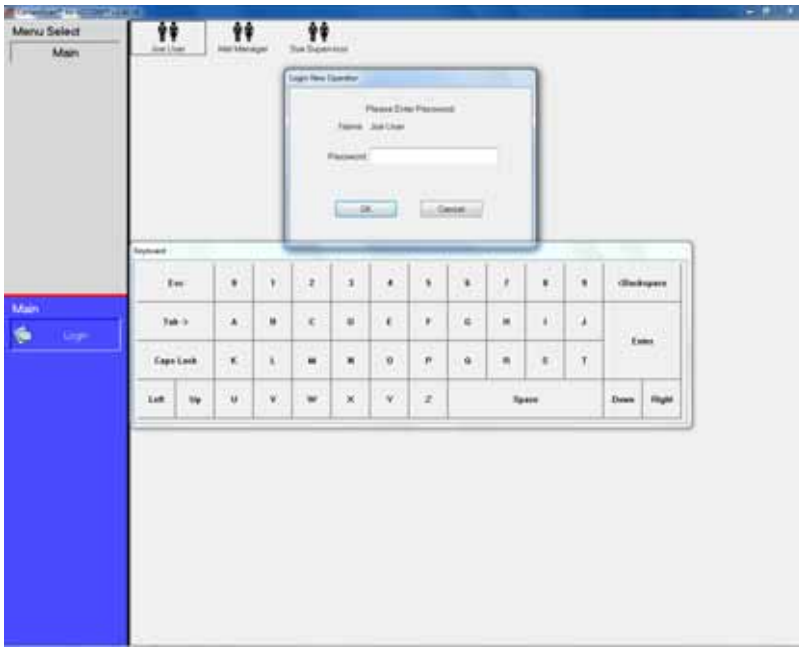
Figure 3: Login screen

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

Navigating the DS2200 CertainScan software

Use the CertainScan software to select jobs and process documents on the DS2200 system. The CertainScan interface consists of:

Title bar The title bar displays the name of the current operator and other pertinent information. Click the DS2200 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 DS2200 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 DS2200 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.
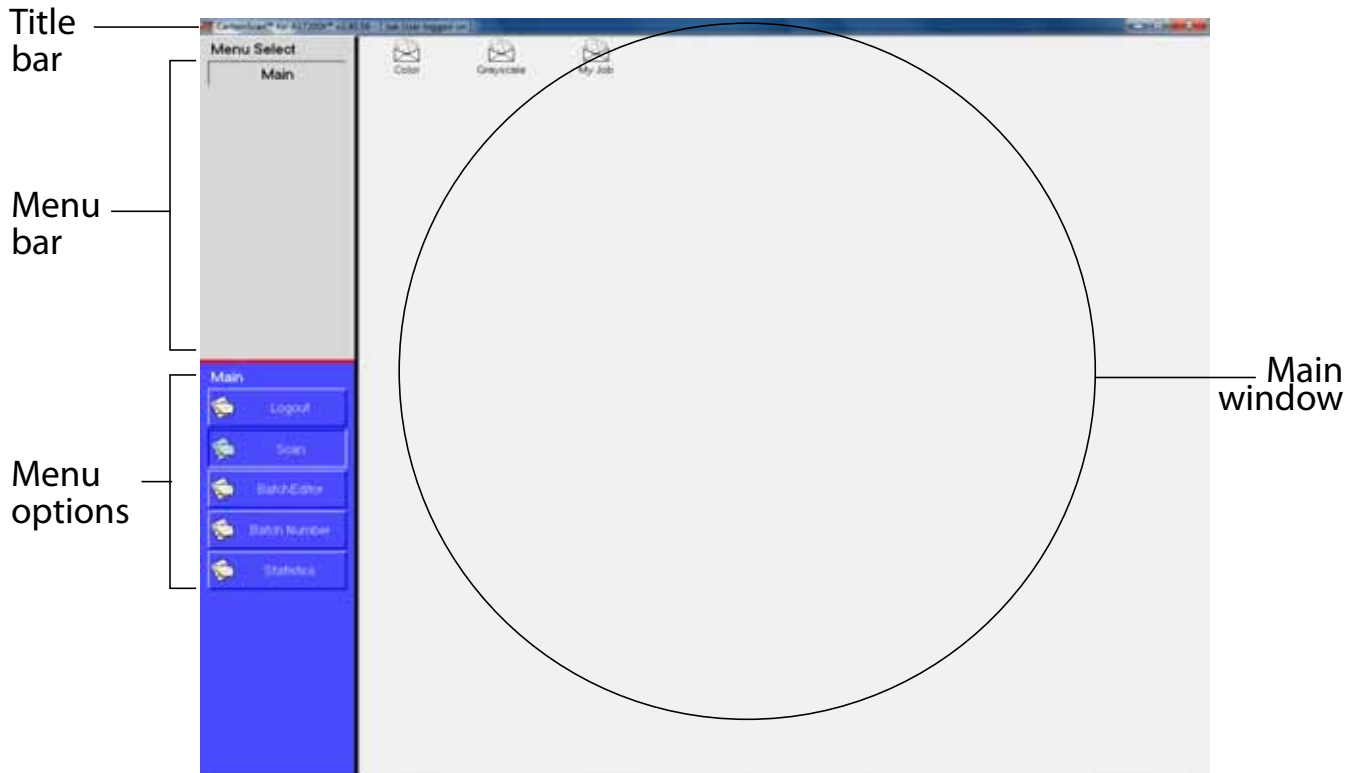
Figure 4: CertainScan interface

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 the CertainScan software to process documents.

Select a job:

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

2   Select the icon for the job you want to run.
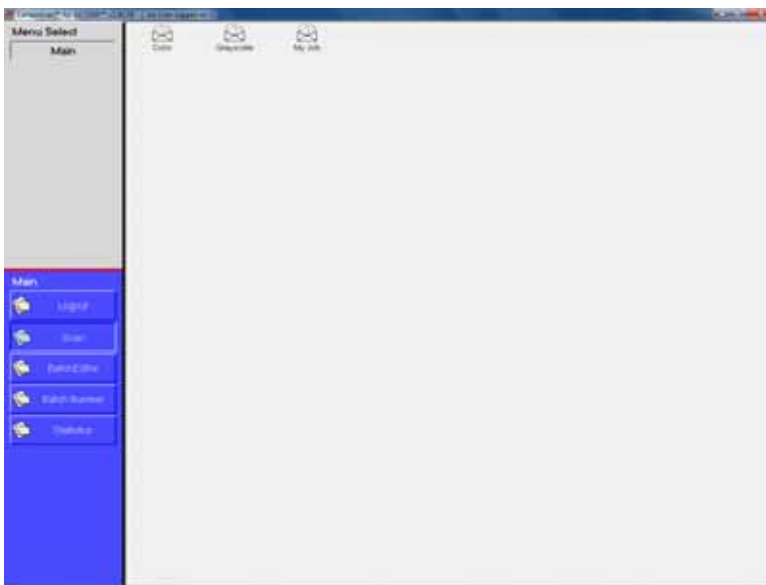
Figure 5: Main screen

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.
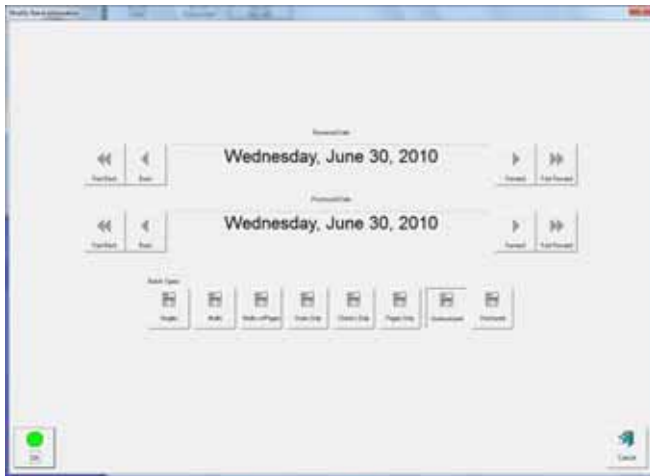
Figure 6: Batch information screen

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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 7:

Labels (clockwise): View tabs, Scroll thumbnails, View snippets, Preview window, Information window, Run buttons, Rotate image buttons, Page types, Thumbnails

Run screen buttons

● Go	Press **Go** to start the scanner.

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 for the current job.

Rotate the image of the selected document. Use the three rotate buttons to position the image as desired. These buttons will only be available if activated for the current job.

Adjust the settings in the Capture Parameters window to enhance the quality of the output images. See "Adjusting image quality" on page 51.

Press a **Rescan** button to replace a previously scanned image with a new one. See "Rescanning documents" on page 51 for more information.
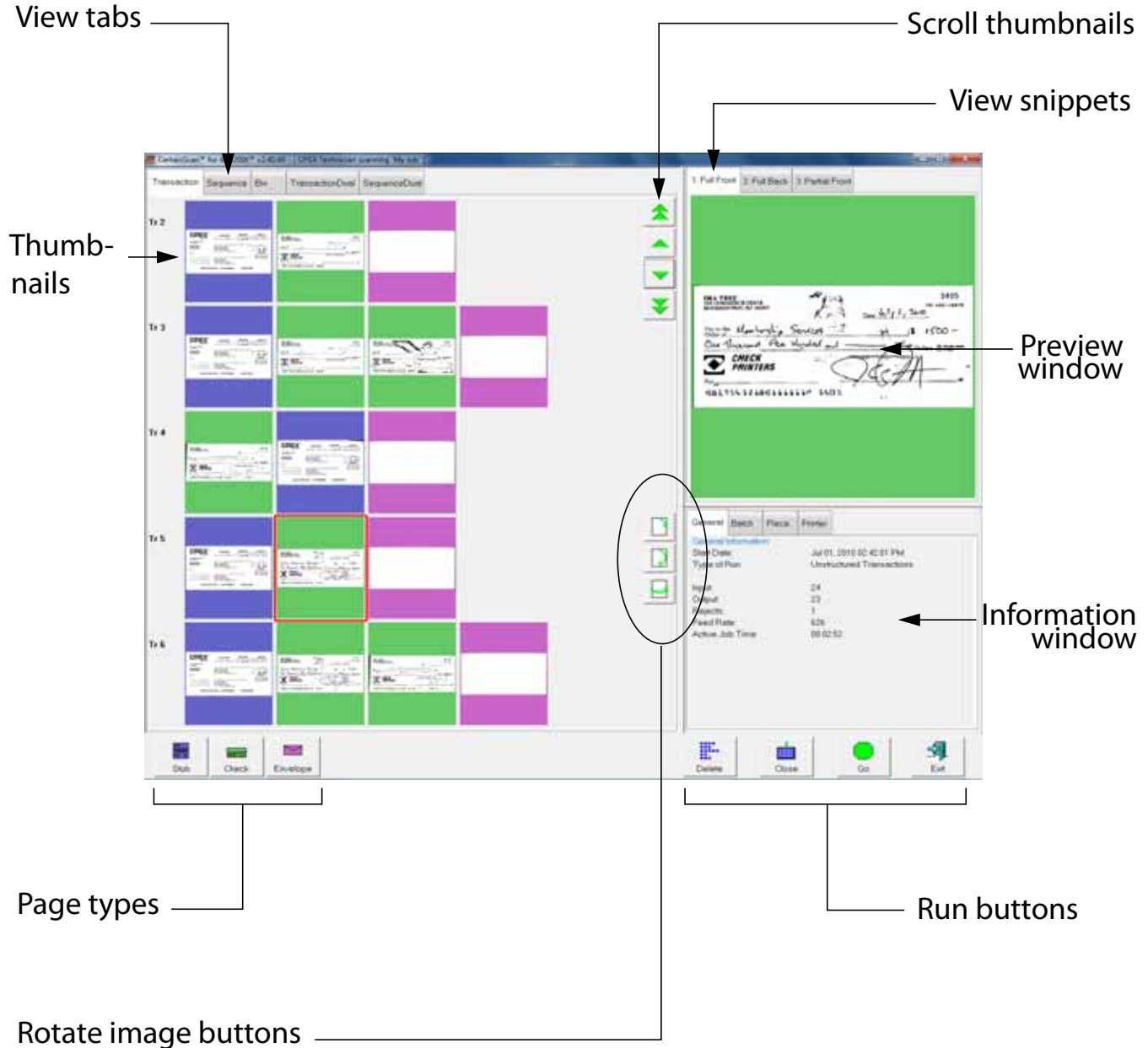
Delete a document from the batch. The **Delete** buttons, if enable in the current job, are only available when the machine is stopped. See "Deleting documents from the batch" on page 52.

Void the selected document or transaction. The **Void** buttons are only available if activated for the current job. See "Voiding documents and transactions" on page 53 for more information.

End the current **Transaction**. This button will only be available if it has been activated for the current job.

Start a **New Batch**. This button will only be available if it has been activated for the current job.

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 the machine. This does not end the current batch or transaction.

Close the current batch.

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.

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.
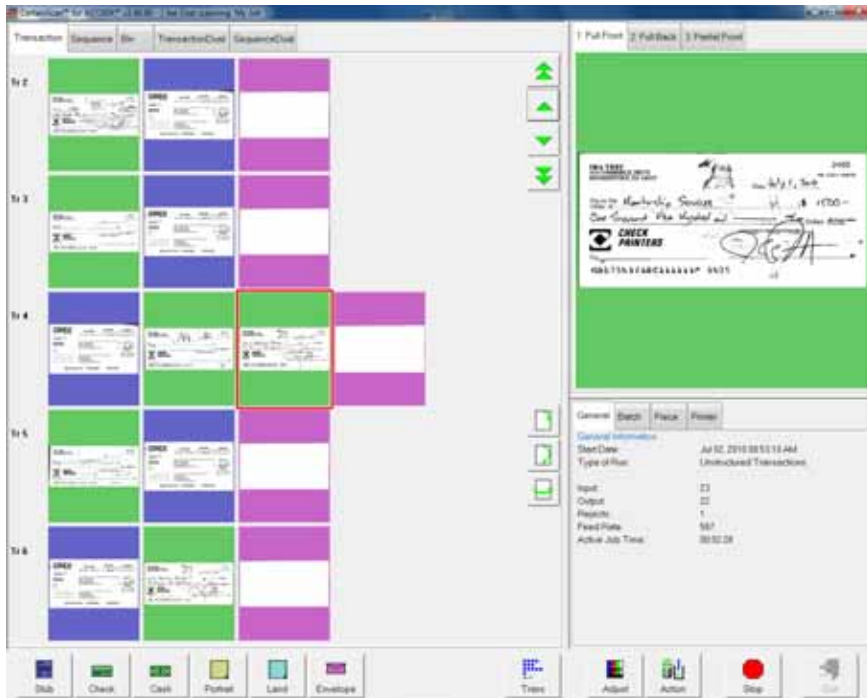
Sequence view

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.
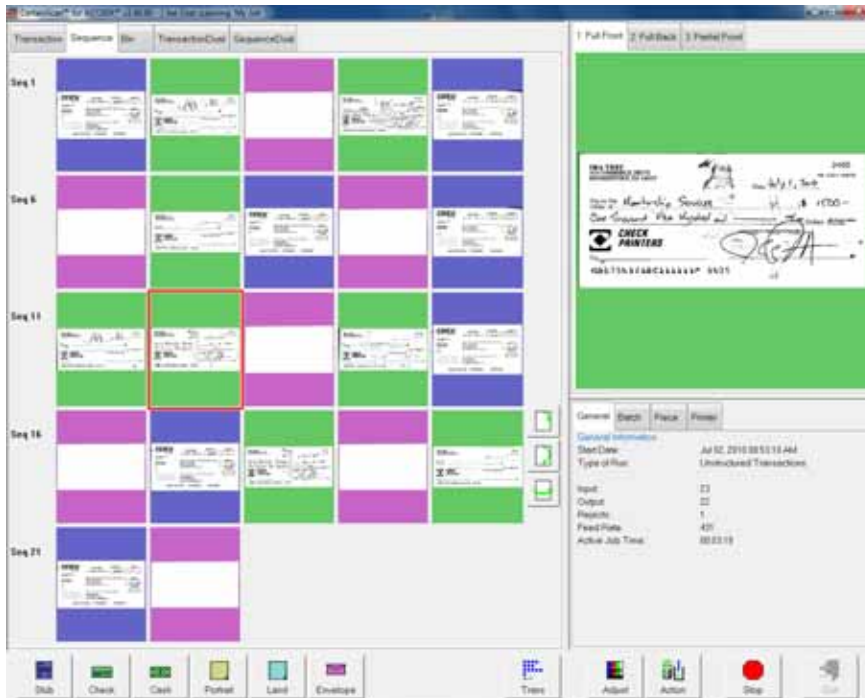
Bin view

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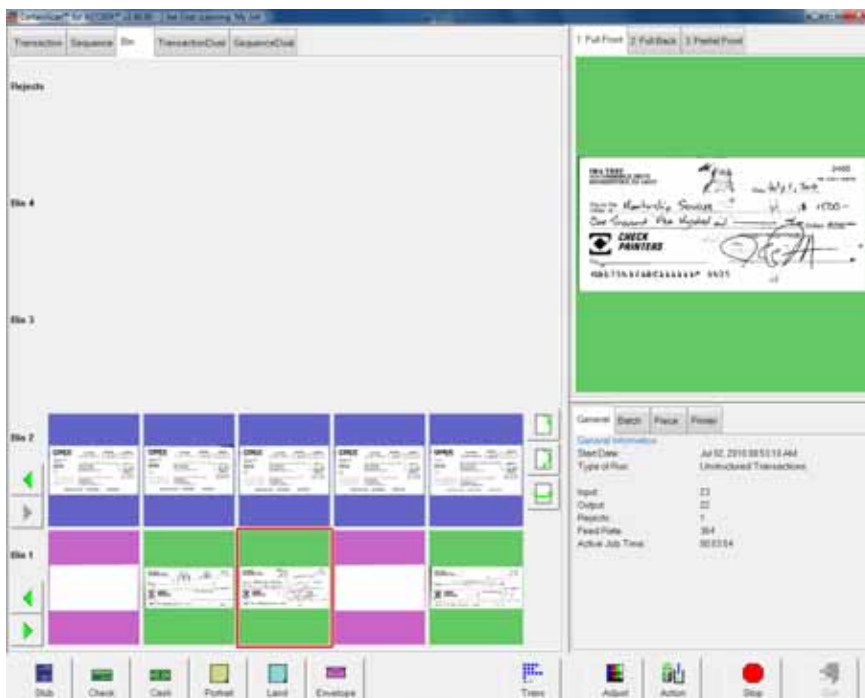
Dual transaction view

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
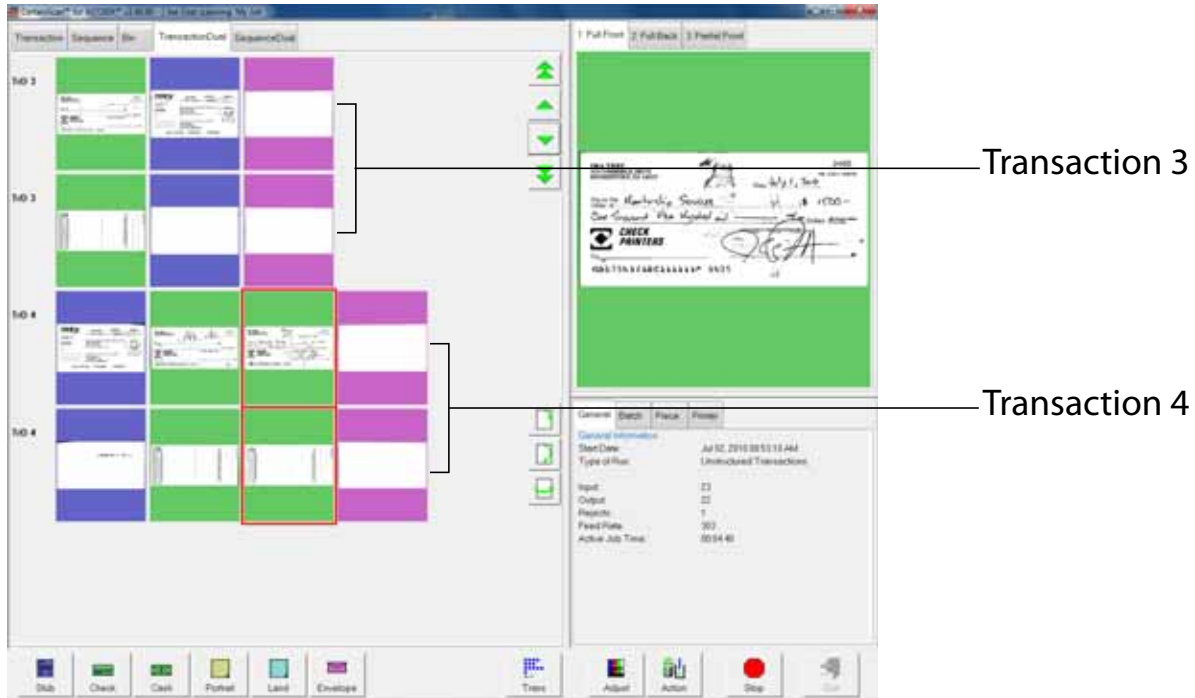
Dual sequence view

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

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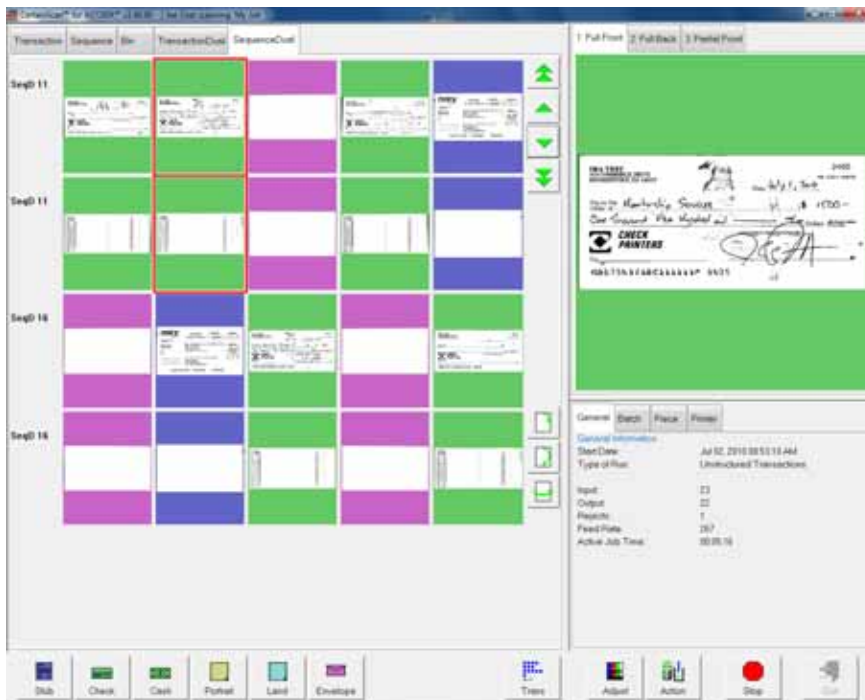
Each piece is displayed on two rows, one for each snippet

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 a 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:	0.07 (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.
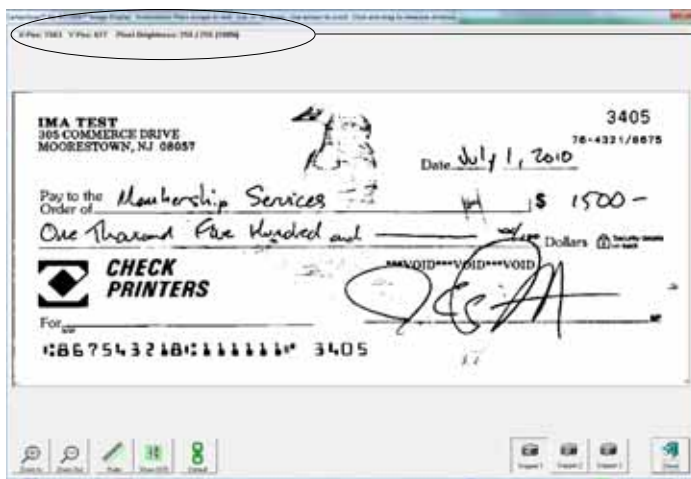
X,Y - axis position

Figure 8: Zoom screen

[Zoom In icon]	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 icon]	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 8.
[Show OCR icon]	Display the designated scan area for the OCR lines.
[Default icon]	Make this image the **Default** for this page type.
[Snippet 1 icon]	View any **Snippets** associated with the image. The snippets the system captures are set up in the Page Type Parameters.
[Close icon]	**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
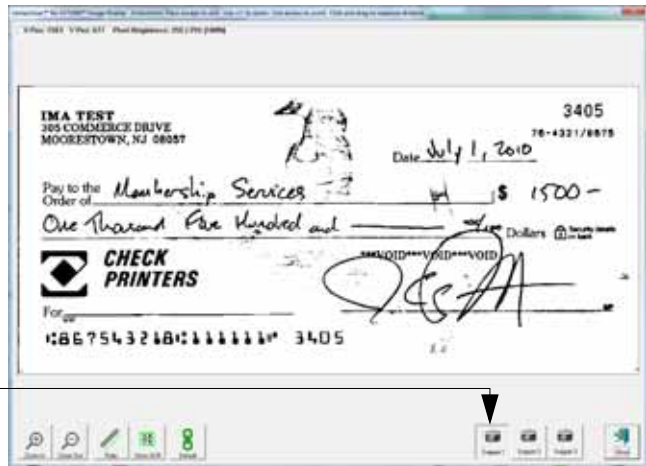
Press Snippet 2 to view the entire back image of the check

Press Snippet 3 to view the CAR region
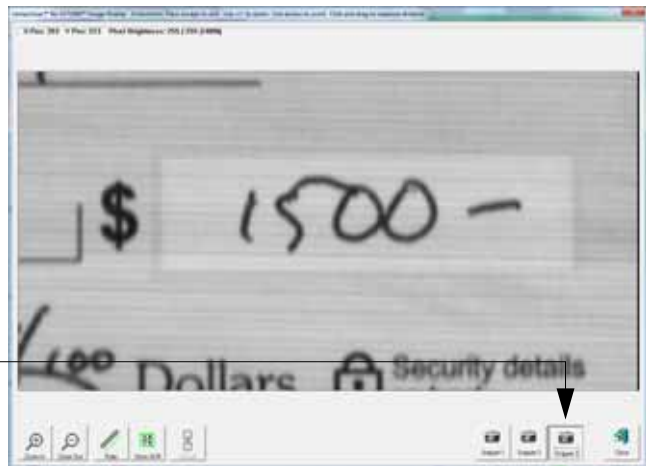
Figure 9: Viewing snippets

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Scanning documents

After you have selected a job, you are ready to scan documents. Before you do, here are a few things to remember:

Removing documents from an envelope

Documents that are tri-folded tend to have the top and bottom sections lifted up. Prior to dropping any tri-folded documents, flatten the ends, allowing for a smoother feed.
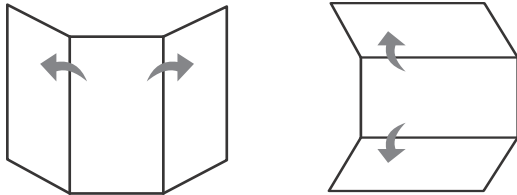
As documents are dropped onto the conveyor, it's important to drop them in such a way as to have the documents fully justify to the side rail prior to entering the feeder. The conveyor rollers are angled to assist in justifying the documents to the side rail as they are dropped. Drop the documents far enough back so that they will have time to straighten. If documents are not fully justified as they enter the feeder section, skew jams may occur. It should also be noted that enough space gap should be allotted between documents. At least ½ inch between documents will provide for proper image capture.

Examples: When dropping documents, give enough time for items to justify. The thick line indicates feeder entrance. The arrow indicates the paper path.

WRONG - In these 4 examples, the documents are dropped too close to the feeder to be justified

RIGHT - Documents should be as aligned as possible as they enter the feeder
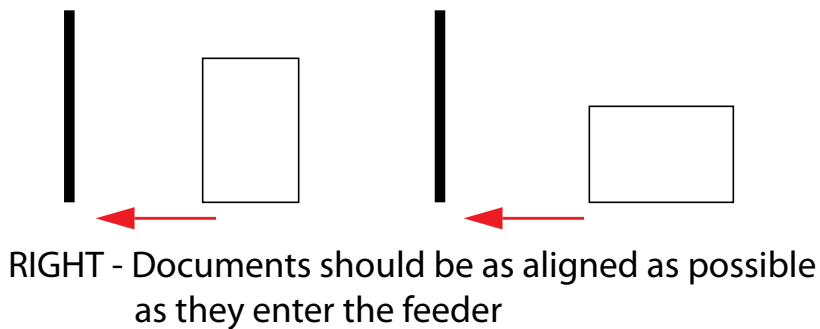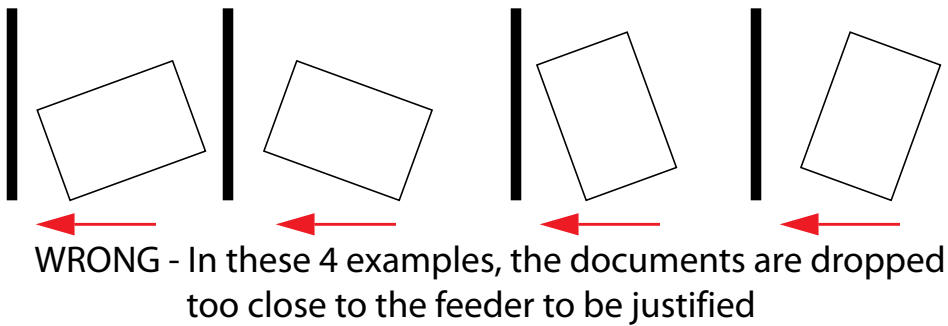
Skew

Skew is a term used to identify when a document is misaligned when scanned. Typically, a skewed document prevents the scanned image from being read properly.

Document skew is determined by the angle in which an item enters the scanner. The angle is calculated by a set of LED transmit and receiver parts that detect when one sensor is uncovered for a while. If the angle is greater than 2 degrees, then the system will jam for "too skewed". If it jams for 5 degrees or more, then the MICR section should be checked and documents remove.

To scan documents into the system:

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

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

Drop documents here

Figure 10: Ideal drop area

The DS2200 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).
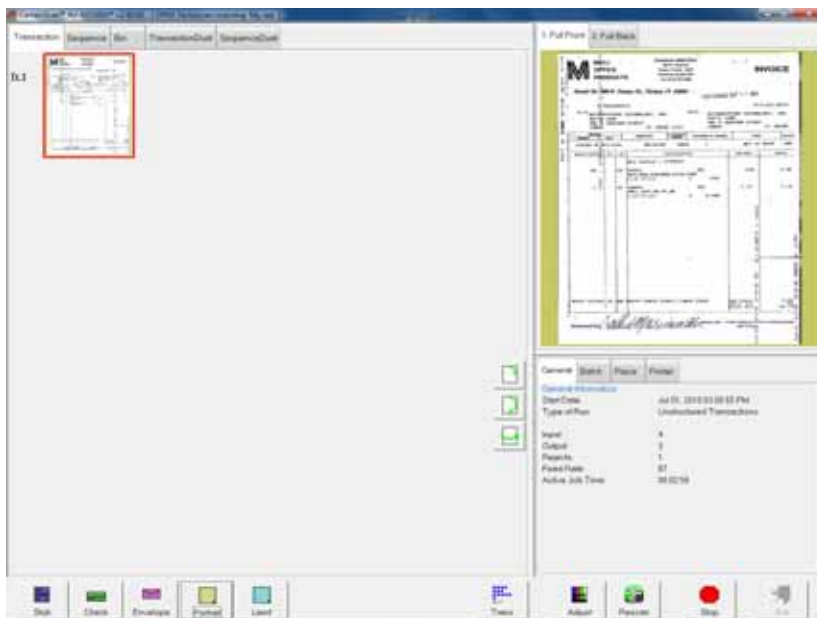
Note: The scanner will display the original, raw color capture in the Preview window first, then display the snippet as it is intended to be captured. Usually this transition will happen so quickly you will not notice,

however when scanning certain larger and/or color-intensive documents you may notice this changing of the snippets.

3   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.
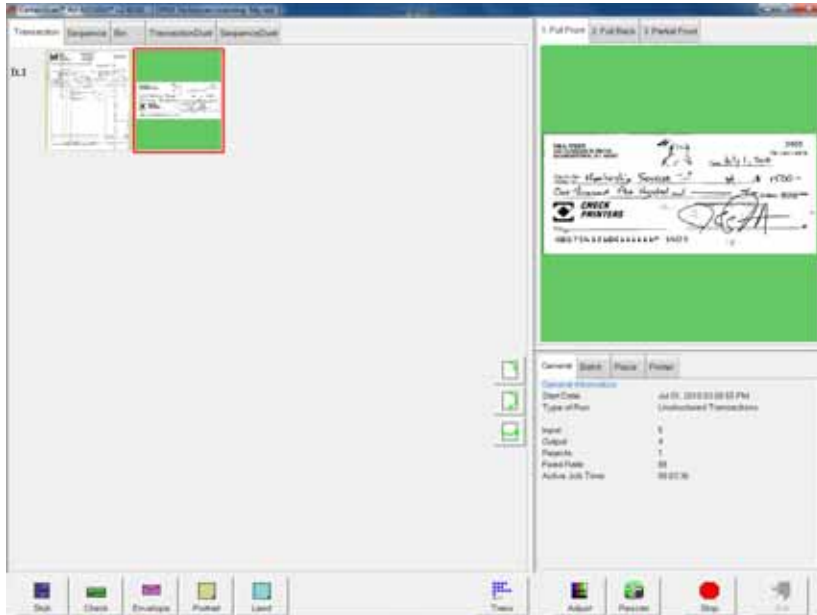
4   Place an envelope onto the conveyor. The system will recognize the document as an envelope. In this example, an envelope is set up as the transaction boundary and ends the current transaction.
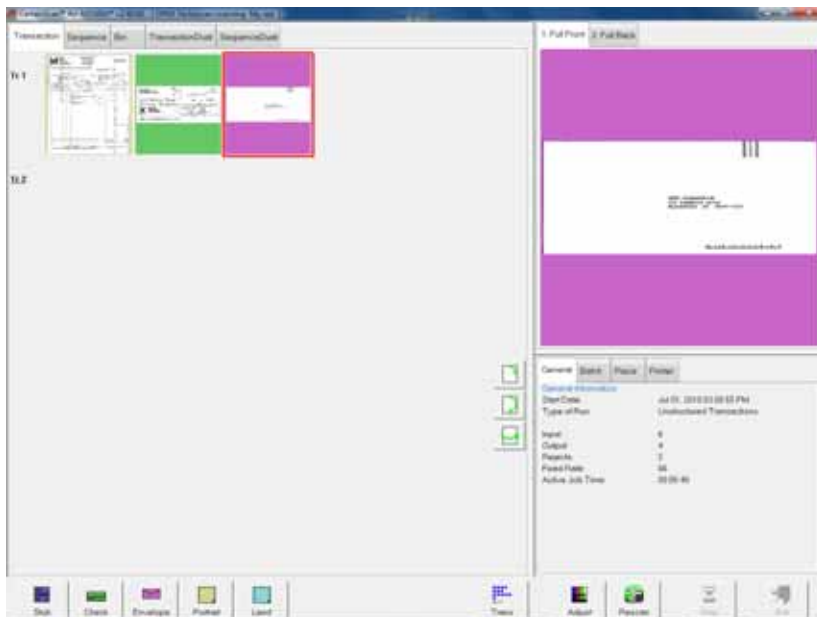
The next document scanned (in this example, another check) will start a new transaction.

New transaction
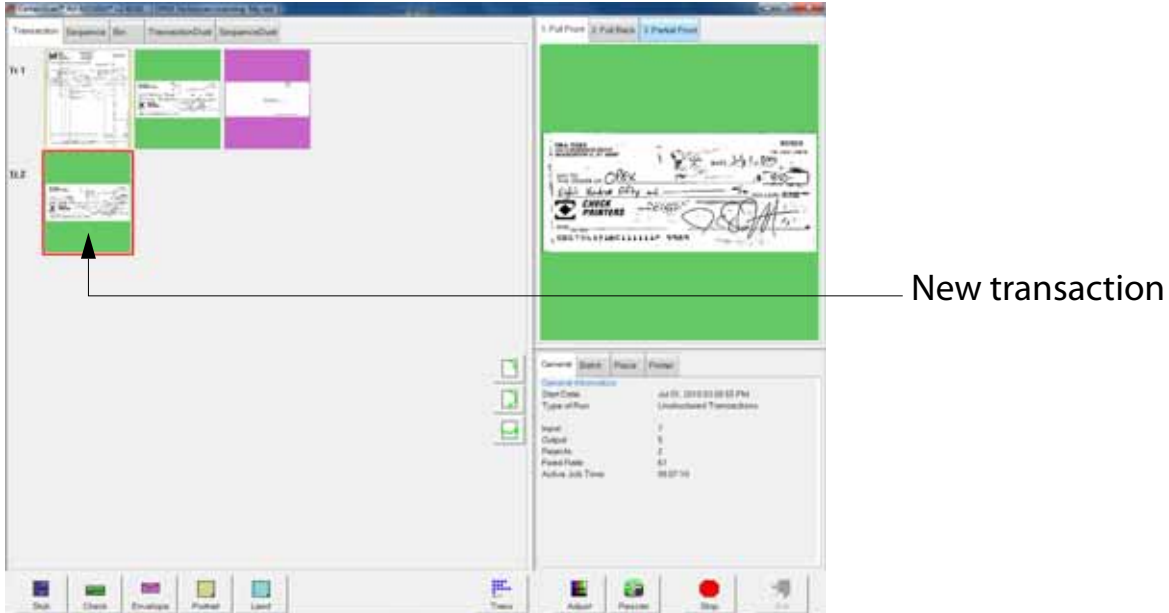
5 Continue to place your documents onto the conveyor. The DS2200 will scan and sort the documents depending on the current job's settings.

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 DS2200 will assume the documents are being fed face up, with the bottom edge towards you.

As the DS2200 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.

Stack feeding

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.

When the feeder detects a stack of paper of 6 or more pieces (depending on the thickness of the paper), the conveyor will stop to allow for the stack to pass through and will continue when the entire stack is fed. You can place more stacks on the conveyor when it stops, but keep in mind that the conveyor will only stop when the feeder encounters a stack of 6 or more pieces.

Make sure the second stack
has enough pieces to stop the conveyor, or the third stack
will run into the second and cause misfeeds and/or jams.

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 DS2200 Administrator or your OPEX Technician or Sales Engineer.

Feed Direction

CORRECT
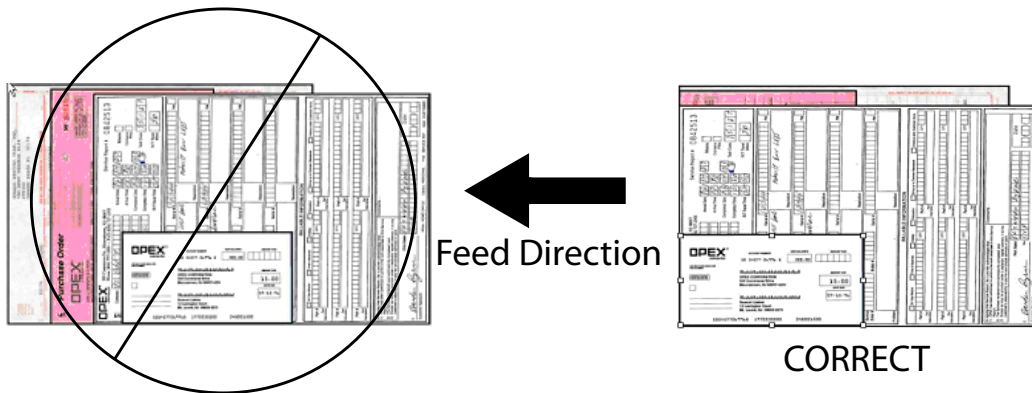
Scanning tips

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.

- 8-½ x 11" sheets can be scanned in portrait or landscape. The scanner is outfitted with 12" image sensors and can accommodate larger pieces of paper as well.

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

Drag fingers

- 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.

- To scan thicker documents, such as envelopes that would not match the profile of a regular envelope, slide the feed control knob to the left. This will disengage the retard pad and disable the scanner's ultrasonic multifeed detector and allow the piece into the system.

  Note: You should also disengage the feed control knob when scanning papers that are stapled together, or when scanning flimsy or damaged pieces.

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).
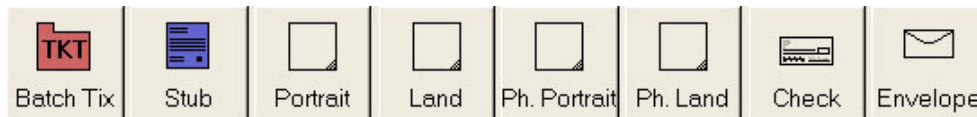
Figure 12: Sample page type buttons (structured job)

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.
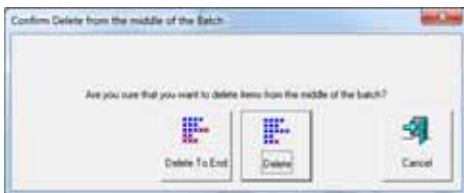
Figure 15: Confirm delete

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.
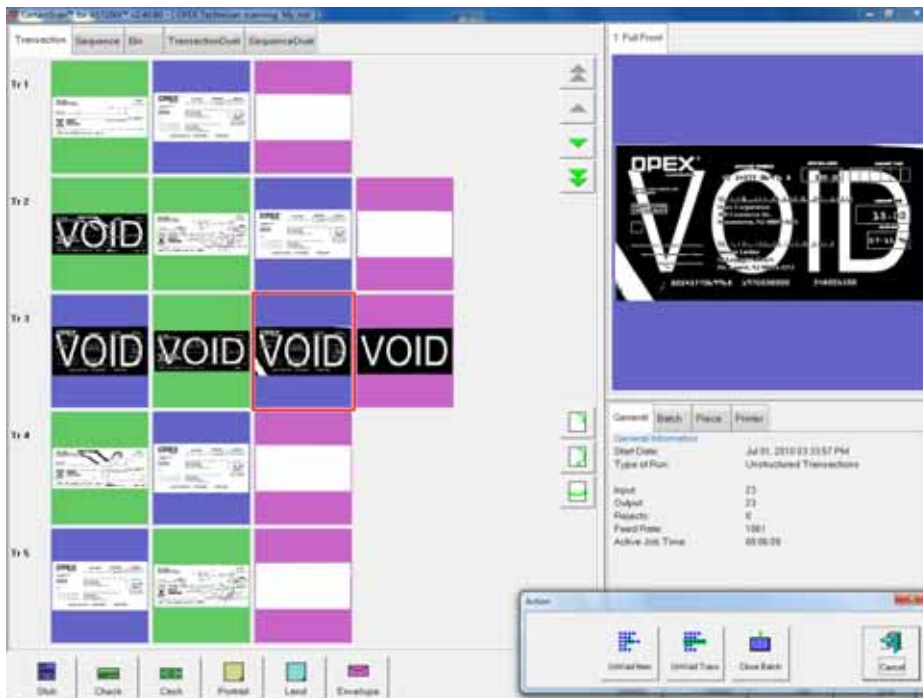
Figure 16: Voiding documents

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.
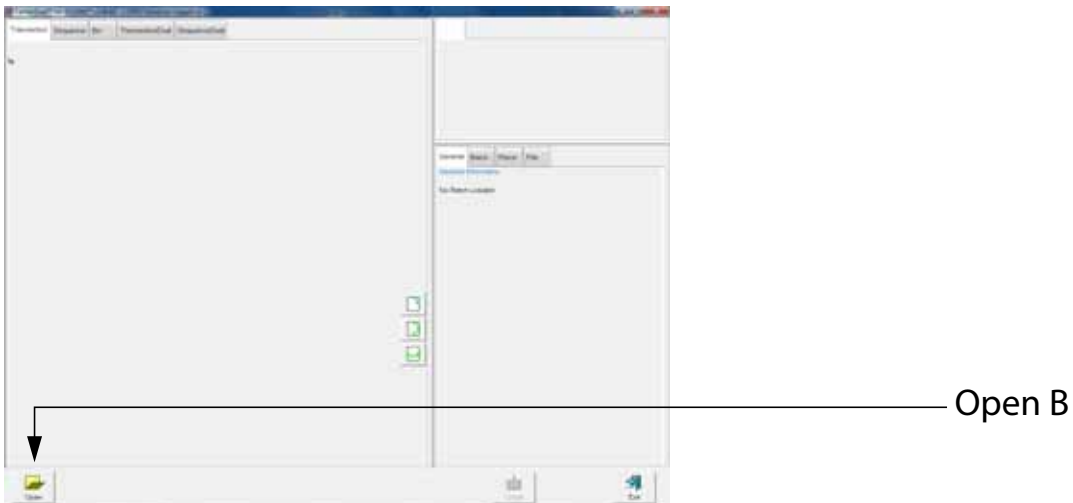
Open B

Figure 17: Batch Editor

2 Click the **Open** button.

3 Navigate to the directory on your network where your batches are saved (see your DS2200 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 29).
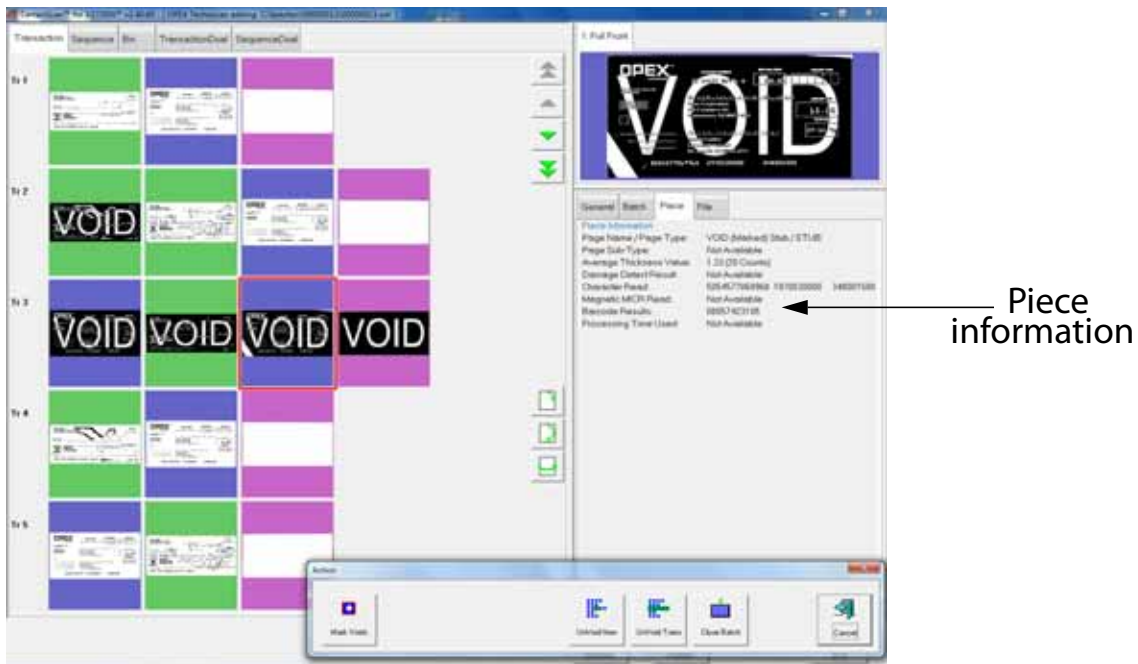
Figure 19: Viewing the batch

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 CertainScan, and that only an operator with a ManagerLevel account or an OPEX technician can fix the problem.

Consult your DS2200 Administrator if you receive this error message.

OpAssist

The OpAssist Document Tracking System provides an additional method for identifying and/or taking action on documents. Trigger the OpAssist 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 DS2200 Administrator for more information on how OpAssist works with your jobs.

The following functions are available as part of OpAssist:

Dropout   Similar to color select, this allows for operators 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 OpAssist 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 the operator triggers the OpAssist 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 the operator with OpAssist. That way, the system will recognize the checks the operator scans 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.

Override multifeed detection   The override MFD function allows the operator to disable multifeed detection for thicker pieces that may not pass through normally.

To trigger OpAssist, simply wave the document (or your hand) in front of the sensor as shown in Figure 20. The indicator light will blink and an audible tone will be heard, notifying you that OpAssist was activated. The document will be scanned and sorted according to job and page type parameters.

Note: When using the Page Sub-Type Select OpAssist function, the operator 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. For this reason, it may be best NOT to assign a default page sub-type for the page type you use this OpAssist function on.

Figure 20: Triggering OpAssist

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)
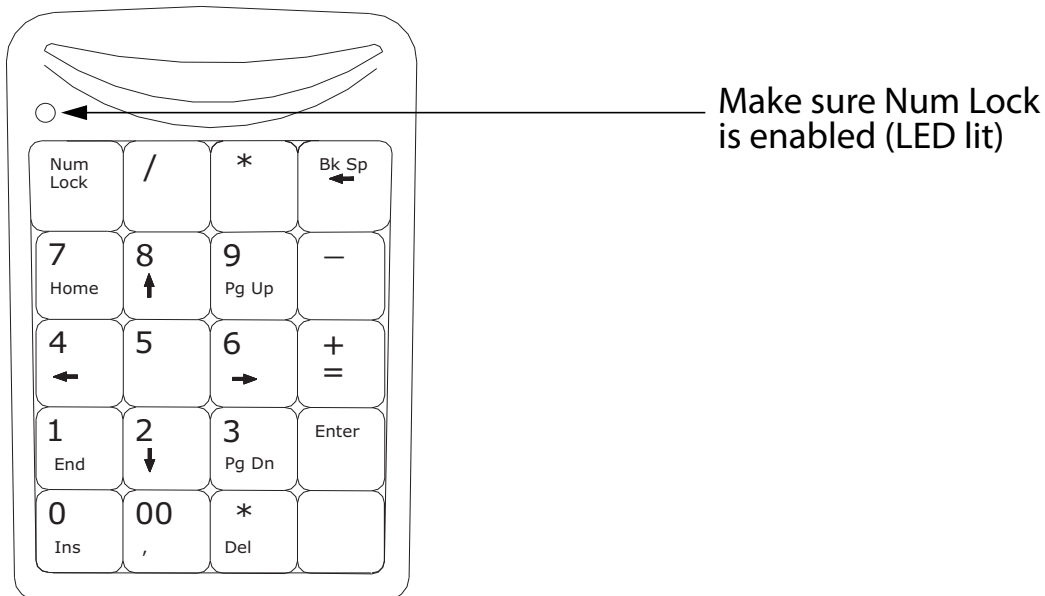
Figure 21: External keypad

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).

Scanner area

To open the scanner cover, lift the latch up. The cover will swing to the open position. Remove any paper or debris caught in the scanner area.

To close the scanner cover, push the cover back down and press down on the latch to secure the lid.

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

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.

Figure 22: Clearing the output bins

3 Operational Maintenance

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Calibrating the Touchscreen 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 From the Windows desktop, double-click on the touch screen icon to open the monitor control panel.

2 Select **Calibration**.
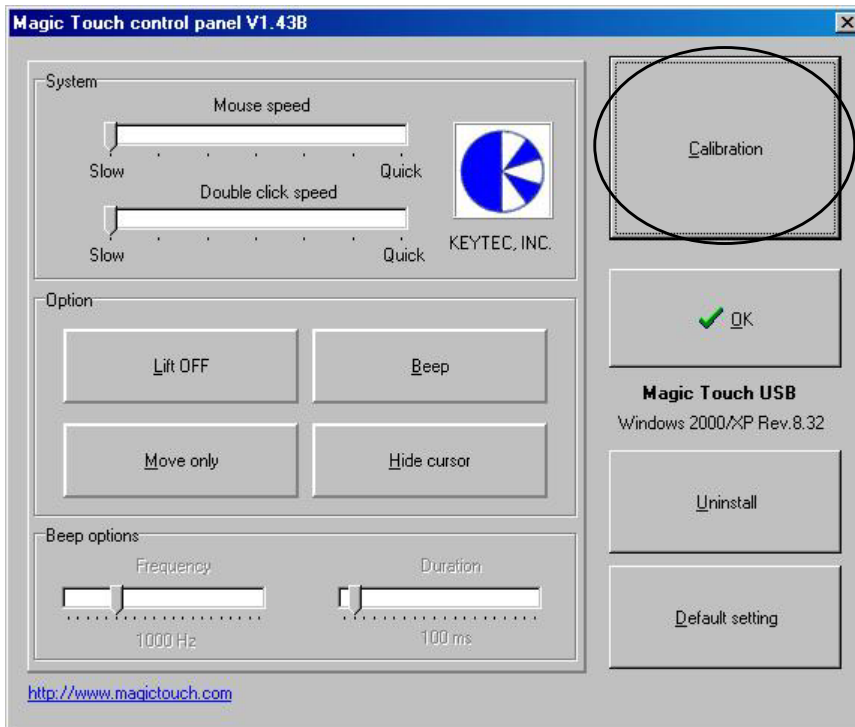
3 In the calibration screen, make sure **5 Points** is selected, then click **GO!**
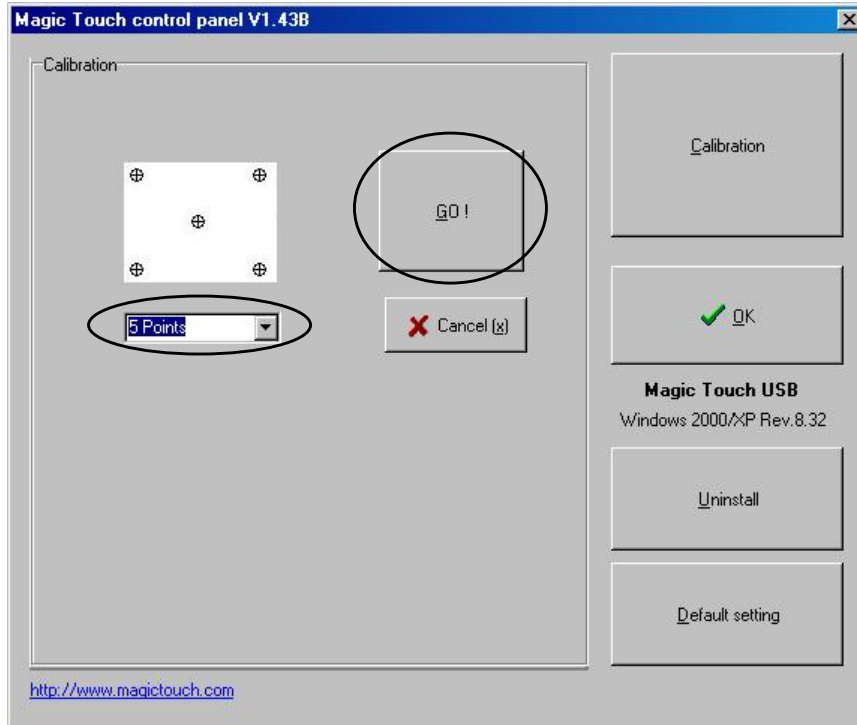
4 Follow the calibration procedure as instructed, using the stylus provided. To ensure proper calibration, make sure to hold the stylus on each center point for at least one full second. **Please do not use fingers, pens, pencils, etc**.

5 When calibration is complete, log in to CertainScan and test the touchscreen controls to ensure they are working properly.

Removing/Replacing the Printer Cartridge

The scanner's imprinter and HP ink cartridge are accessible when the transport area 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. In sealed containers, the DS2200 printer cartridges have a shelf life of two years from the date of manufacture.

To remove/replace a printer cartridge:

1 Open the clamshell as described on page 60.

2 To replace the back printer cartridge:

    a. Press on the left side of the printer access plate (as shown in Figure 23) to open release the latch and access the printer.
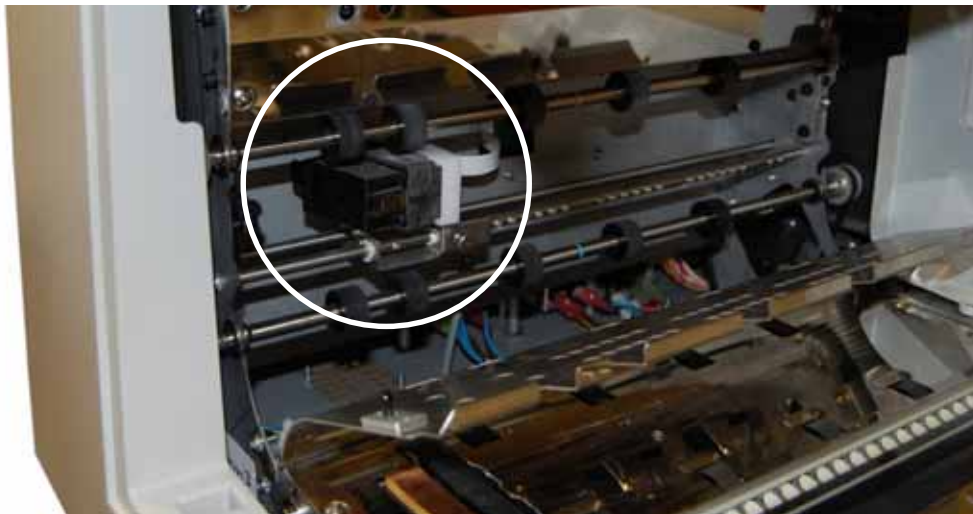
Figure 23: Open the back printer access plate

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

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 DS2200 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 DS2200 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 transport assemblies

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

2 Check the clamshell area once a shift. Open the clamshell door (Figure 24) and clear the area of paper debris, dust, envelope flaps, etc.

Figure 24: Transport area

3   Vacuum dust and debris from the stacker bins.

4   Vacuum dust and debris from the conveyor rollers.

Contact image sensor

The glass contact image sensors should be cleaned at the beginning or end of each shift, or as needed. If you see 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.

The contact image sensors are located underneath the scanner cover. Apply Windex (the recommended glass cleaner) to a lint-free rag and wipe 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.
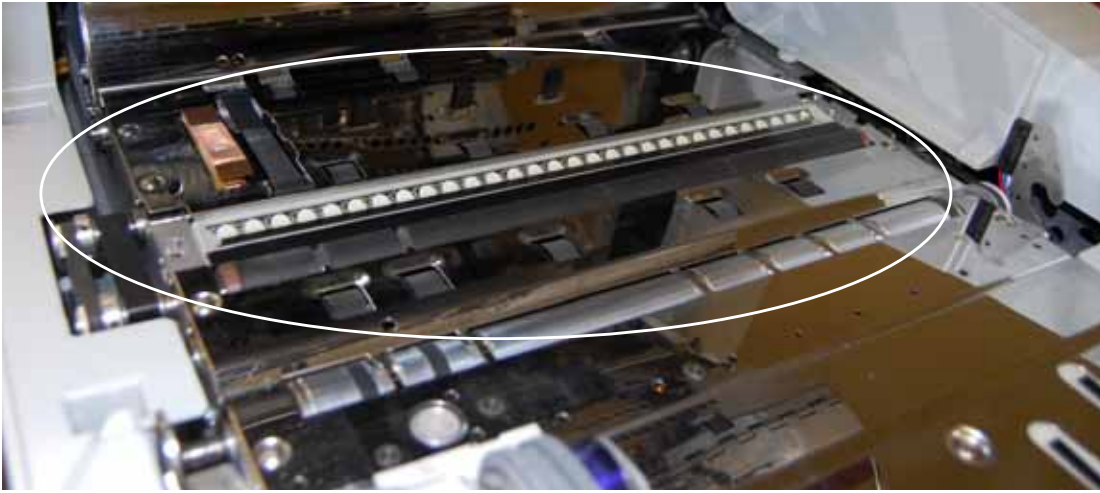
Feed assembly

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. Clean the feed mechanisms on a weekly basis.

Lift the tab on the top of the feed assembly to clean the retard pad underneath. Also clean the feed rollers that lead up to the feeder.

Statistics

4

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DS2200 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 DS2200 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.
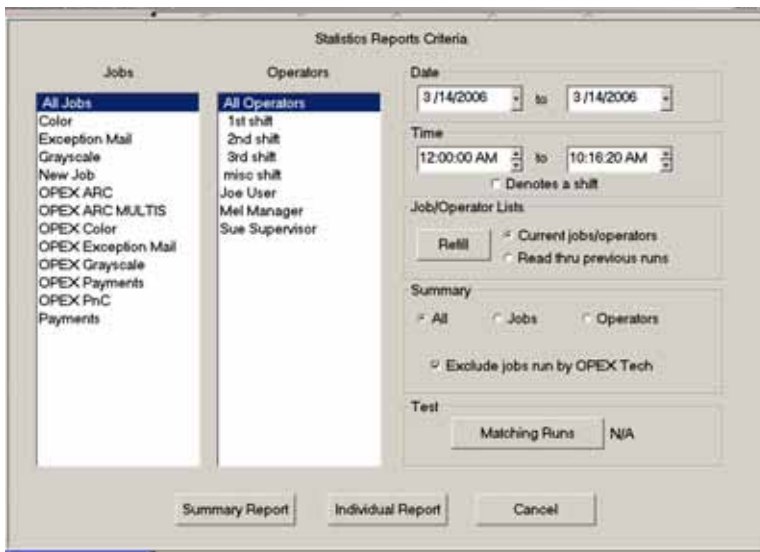
Figure 25: Statistics Reports Criteria screen

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 25:

- 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 26, 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 26, 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 26 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%
```

Figure 26: 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 DS2200 is currently feeding. The formula for the Feed Rate is: $$\text{Feed Rate} = \frac{\text{Input} * 7200}{\text{Active Job Time (seconds)}}$$
Output Rate	Number of pieces per hour the DS2200 is processing. The formula for the Output Rate is: $$\text{Output Rate} = \frac{\text{Output} * 7200}{\text{Active Job Time (seconds)}}$$
Jam Clear Time	Average time the DS2200 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 DS2200 per hour. The formula for the Reference Feed Rate is: $$\text{Reference Feed Rate} = \frac{\text{Input} * 7200}{\text{Run Time (seconds)} + (\text{Jams} * \text{Ref. Jam Clear Time (seconds)})}$$

Table 3: Overall System Performance Measures terms (continued)

Term	Definition
Reference Output Rate	Number of pieces processed by the DS2200. The formula for the Reference Output Rate is: $$\text{Reference Output Rate} = \frac{\text{Output} * 7200}{\text{Run Time (seconds)} + (\text{Jams} * \text{Ref. Jam Clear Time (seconds)})}$$
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 DS2200 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 DS2200 was halted for a jam.
Idle Time	Time the Operator was in the Run Job window, but the DS2200 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.

Table 5: Reasons for rejected items (continued)

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.
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.

Table 5: Reasons for rejected items (continued)

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 the host 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

Duplicate Batch Detected	A batch could not be started because a batch with the same name already exists.
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 the host 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.
Feed Entry Multifeed Sensor Blocked	The Feed Entry MultiFeed Sensor is blocked.
Feed Input Multifeed Sensor Blocked	The Feed Input MultiFeed Sensor is blocked.
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 the host 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.

Table 6: Reasons for jams (continued)

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 the host 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.
Double Detected	The Multifeed Sensor indicates that two pieces are being fed together.
MFD Skew Angle Exceeded Sensor Blocked	The MFD Skew Angle Exceeded Sensor is blocked.
MFD Skew Damage Exceeded Sensor Blocked	The MFD Skew Damage Exceeded Sensor is blocked.
Out Of Bounds Sensor Blocked	The Out Of Bounds Sensor is blocked.
Out of Bounds Detected	A piece is too tall for the imager.
Justification Sensor Blocked	The Justification Sensor is blocked.
Feed Singulation Defeat Button Stuck	The override feed control button is stuck in a down position.

Table 6: Reasons for jams (continued)

Skew 9 Sensor Blocked	The Skew 9 Sensor is blocked.
Skew 8 Sensor Blocked	The Skew 8 Sensor is blocked.
Skew 7 Sensor Blocked	The Skew 7 Sensor is blocked.
Skew 6 Sensor Blocked	The Skew 6 Sensor is blocked.
Skew 5 Sensor Blocked	The Skew 5 Sensor is blocked.
Skew 4 Sensor Blocked	The Skew 4 Sensor is blocked.
Post Feed MFD Trail Sensor Blocked	The Post Feed MFD Trail Sensor is blocked.
Stepper Stall Detected	A Stepper Motor has stalled.
Pre Crush Roller Sensor Blocked	The Pre Crush Roller Sensor is blocked.
Feed Entry RX Present Sensor Blocked	The Feed Entry RX Present Sensor is blocked.
Fan Failure Detected	A fan has stopped functioning.

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.

Table 7: Reasons for stops (continued)

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.